Commissioners Court -- JANUARY 3, 2023 NOTICE OF A MEETING OF THE COMMISSIONERS COURT OF HAYS COUNTY, TEXAS



This Notice is posted pursuant to the Texas Open Meetings Act. (VERNONS TEXAS CODES ANN. GOV. CODE CH.551). The Hays County Commissioners Court will hold a meeting at **9:00 A.M.** on JANUARY 3, 2023, in the Hays County Courthouse, Room 301, San Marcos, Texas. An Open Meeting will be held concerning the following subjects:

- A. CALL TO ORDER
- B. INVOCATION
- C. PLEDGE OF ALLEGIANCE Pledge of Allegiance to the American Flag & Pledge of Allegiance to the Texas Flag
- D. ROLL CALL
- Ε.

PUBLIC COMMENTS

At this time 3-MINUTE comments will be taken from the audience on Non-Agenda related topics. To address the Court, please submit a Public Participation/ Witness Form to the County Clerk. Please Complete the Public Participation/ Witness Form in its Entirety. NO ACTION MAY BE TAKEN BY THE COURT DURING PUBLIC COMMENTS.

F.

PRESENTATIONS & PROCLAMATIONS

- 1. Recognition of Kate Johnson for her distinguished years of service to the Hays County Historical Commission. SHELL
- 2. Adopt a Proclamation declaring January 16, 2023 as Dr. Martin Luther King, Jr. Day. INGALSBE
- 3. Ceremonial Swearing In of all newly and re-elected officials to Hays County offices; and approval and acceptance of official bonds for each office. **INGALSBE**
- G.

CONSENT ITEMS

The following may be acted upon in one motion. A Commissioner, the County Judge, or a Citizen may request items be pulled for separate discussion and/or action.

- 1. Approve payments of County invoices. VILLARREAL-ALONZO
- 2. Approve the payment of Juror checks. VILLARREAL-ALONZO
- 3. Approve the payment of United Healthcare claims. VILLARREAL-ALONZO
- 4. Approve Commissioners Court minutes of November 22, 2022. BECERRA/CARDENAS
- Approve the payment of the January 15, 2023 payroll disbursements in an amount not to exceed \$3,345,000 effective January 15, 2023 and post totals for wages, withholdings, deductions and benefits on the Hays County website once finalized. BECERRA/TENORIO
- 6. Approve and confirm the appointment of Stephen Hrncir as Deputy Constable Bailiff in the Hays County Constable Precinct 1 Office, effective date January 3, 2023. **INGALSBE/PETERSON**
- 7. Authorize the execution of documents related to the BRIC (Building Resilient Infrastructure and Communities) grant application. BECERRA/T.CRUMLEY

- 8. Approve Utility Permits. SHELL/SMITH/BORCHERDING
- 9. Authorize the County Judge to execute a Contract Amendment with AMG Printing related to Election Form Printing Services pursuant to RFP 2020-P08. BECERRA/DOINOFF
- 10. Approve the nomination of County Judge Becerra to serve on the Texas Conference of Urban Counties' Policy Committee for the 2022-2023 biennium. BECERRA
- 11. Approve renewal of RFP 2020-P01 HVAC Maintenance and Repair Services with JM Engineering, LLC. with a proposed 5% price increase. BECERRA/T.CRUMLEY
- 12. Approve specifications for IFB 2023-B12 RM 12 @ RM 3237 and authorize Purchasing to solicit for bids and advertise. SHELL/BORCHERDING
- 13. Approve specifications for IFB 2023-B11 Darden Hill @ Sawyer Ranch Roundabout and authorize Purchasing to solicit for bids and advertise. SMITH/BORCHERDING

Н.	ACTION ITEMS							
Ι.	ROADS							

- 1. Discussion and possible action to award a contract for IFB 2023-B02 RM 2770 Roadway Improvements with Hunter Industries, Ltd. in the amount of \$635,948.76. SMITH/BORCHERDING
- 2. Discussion and possible to grant variances to Hays County road construction standards and to the adopted fire code for Moon Ridge subdivision in Precinct 3. SHELL/BORCHERDING
- Discussion and possible action to accept the maintenance bond rider extension from DNT Construction, Inc. until June 30, 2023 for Shadow Creek subd., Phase 9, Section 2 (maintenance bond #1848963 in the amount of \$180,609.38). COHEN/BORCHERDING
- 4. Discussion and possible action to consider the acceptance of vegetative coverage and release of the revegetation bond #PB03016800715M in the amount of \$31,129.80 for 6 Creeks subdivision, Phase 1, Section 8A. SHELL/BORCHERDING
- J.

SUBDIVISIONS

- 1. PLN-2078-PC; Hold a Public Hearing followed by discussion and possible action regarding Hawk Ridge, Ph 1, Blk B, Lots, 11, 17 & 18, Replat. SMITH/PACHECO
- 2. PLN-2122-NP; Discussion and possible action regarding the 272 AC Fitzhugh Subdivision, Final Plat. SHELL/PACHECO
- K.

MISCELLANEOUS

- 1. Discussion and possible action to temporarily suspend the Hays County Salary Exception Policy pending finalization of the current market study. SHELL/MILLER/DORSETT
- 2. Discussion and possible action regarding setting the required bond amounts for certain newly elected County Officials to be sworn in to office January 2023. BECERRA
- 3. Discussion and possible action to authorize the Criminal District Attorney's Office to hire the First Assistant District Attorney slot 0780-001 at the 25th percentile, and three Attorney V positions 0784-003, 004 & 005 at the 19.38th percentile; authorize a \$10,000.00 annual salary increase for two Court Chief Attorney V positions 0784-001 and 013; and a \$400.00 monthly salary stipend for one Attorney V position 0784-007 effective January 1, 2023. BECERRA/HIGGINS

- 4. Discussion and possible action authorizing the County Judge to execute a Texas Workforce Commission Information Release Contract for the Hays County Constable, Pct. #3 Office. SHELL/MONTAGUE
- 5. Discussion and possible action to authorize a salary exception at the 50th percentile for the Full Time Deputy Fire Marshal, slot 0984-002 and increase the Part Time Deputy Fire Marshal, slot 0984-001 to 24 hours a week at \$25.00 per hour and amend the budget accordingly. BECERRA/MIKE JONES
- Discussion and possible action to authorize a salary exception at the 50th percentile for the Bookkeeper, slot 0450-001 in the Courts Division at the Hays County Clerk's Office effective Jan 9, 2023. BECERRA/CARDENAS
- 7. Discussion and possible action to authorize the execution of an engagement letter with Davis Kaufman PLLC for \$65,000.04 related to the 87th legislative session of the Texas Legislature and authorize a discretionary exemption pursuant to Texas Local Government Code 262.024 (a)(4) and amend the budget accordingly. SHELL/INGALSBE
- 8. Discussion and possible action authorizing the County Judge to execute a Professional Services Agreement with Dr. Brandy Miller regarding psychological evaluations for the Hays County Sheriff's Office. INGALSBE/CUTLER
- L.

EXECUTIVE SESSIONS

The Commissioners Court will announce that it will go into Executive Session, if necessary, pursuant to Chapter 551 of the Texas Government Code, to receive advice from Legal Counsel to discuss matters of land acquisition, litigation and personnel matters as specifically listed on this agenda. The Commissioners Court may also announce it will go into Executive Session, if necessary, to receive advice from Legal Counsel regarding any other item on this agenda.

- 1. Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property associated with Parks and Open Space Projects being considered by Hays County. Possible discussion and/or action may follow in open court. **BECERRA**
- Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property located at 2400 N IH 35, San Marcos. Possible discussion and/or action may follow in open court. INGALSBE
- 3. Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property located at 101 Thermon Drive, San Marcos. Possible discussion and/or action may follow in open court. **INGALSBE**
- 4. Executive Session pursuant to Sections 551.071 and 551.087 of the Texas Government Code: consultation with counsel and deliberation regarding economic development negotiations associated with Project Midnight Blue. Possible discussion and/or action may follow in open Court. BECERRA
- Executive Session pursuant to sections 551.071 & 551.074 of the Texas Government Code: deliberation regarding the structure, employment, and duties of all positions within Countywide Operations, Emergency Services, Human Resources, the Budget Office, and the County Judge's Office. Possible discussion and/or action may follow in open court. BECERRA/INGALSBE
- Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property owned by Hays County located at 401 Veterans Drive, Kyle in Pct.3. Possible discussion and/or action may follow in open court. SHELL
- Μ.

STANDING AGENDA ITEMS

The Commissioners Court utilizes Standing Agenda Items to address issues that are frequently or periodically discussed in court. This section allows the Court to open the item when a need for discussion arises.

- 1. Discussion and possible action related to the burn ban. **BECERRA**
- 2. Discussion related to the Hays County inmate population, to include current population counts and costs. **BECERRA**

- 3. Discussion of issues related to the Hays County Jail, and the planning of projects pertaining to the public safety facilities needs within the County. Possible action may follow. INGALSBE/CUTLER
- 4. Discussion and possible action regarding Hays County's use of federal or other grant funding related to COVID-19 response including but not limited to the American Rescue Plan Act (ARPA) and the Emergency Rental Assistance Program (ERAP). **BECERRA**

N. ADJOURNMENT

Posted by 5:00 o'clock P.M. on the 30th day of December, 2022 COMMISSIONERS COURT, HAYS COUNTY, TEXAS

Hays County encourages compliance with the Americans with Disabilities Act (ADA) in the conduct of all public meetings. To that end, persons with disabilities who plan to attend this meeting and who may need auxiliary aids such as an interpreter for a person who is hearing impaired are requested to contact the Hays County Judge's Office at (512) 393-2205 as soon as the meeting is posted (72 hours before the meeting) or as soon as practical so that appropriate arrangements can be made. While it would be helpful to receive as much advance notice as possible, Hays County will make every reasonable effort to accommodate any valid request regardless of when it is received. Braille is not available.



Agenda item request form: F. 1.

Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

Commissioner Shell

Agenda Item

Recognition of Kate Johnson for her distinguished years of service to the Hays County Historical Commission. SHELL

Summary



Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

Commissioner Ingalsbe Commissioner Ingalsbe

Agenda Item

Adopt a Proclamation declaring January 16, 2023 as Dr. Martin Luther King, Jr. Day. INGALSBE

Summary

Please refer to the attached proclamation.

MLK Proclamation

Attachments



PROCLAMATION DECLARING JANUARY 16, 2023 AS DR. MARTIN LUTHER KING, JR. DAY

STATE OF TEXAS	§
	§
COUNTY OF HAYS	§

WHEREAS, the people of the United States will observe the federal holiday honoring Dr. Martin Luther King, Jr. on January 16, 2023 to celebrate the birthday of this significant civil rights leader who inspired profound and lasting change in our nation; and

WHEREAS, local, state and national organizations will remember this great man by living the theme of the 2023 holiday: "Black Resistance," adopted from the Association for the Study of African American Life and History. The sentiment behind this theme seeks to highlight the ways in which black people have used various forms of resistance to tirelessly struggle against oppression; and

WHEREAS, the citizens of San Marcos and Hays County each year commemorate the contributions of Dr. Martin Luther King, Jr. to our nation, our state and to the people of Hays County with special observances, programs, and celebrations; and

WHEREAS, The Dunbar Heritage Association is inviting the public to observe the holiday on January 14 and 16, in honor of the 21st anniversary of hosting the celebration and in honor of Dr. King's 94th birthday; and

WHEREAS, the celebration will include the MLK Kids' Event on January 14 and conclude on January 16 with the 21st annual grand March and Celebration which starts with a Wreath-laying Ceremony at the LBJ/MLK Crossroads Memorial, followed with a march through town, and concludes with a program at the Hays County Courthouse.

WHEREAS, the purpose of this holiday is to encourage all Americans to fulfill Martin Luther King's vision of freedom, equality, and opportunity for all people;

NOW, THEREFORE, BE IT RESOLVED that the Hays County Commissioners Court does hereby proclaim January 16, 2023 as

"DR. MARTIN LUTHER KING, JR. DAY"

AND DO HEREBY CALL upon all citizens to honor the memory of Martin Luther King, Jr. and to participate in local observances that commemorate his important contributions to our nation.

ADOPTED THIS THE 3rd DAY OF JANUARY, 2023

Ruben Becerra Hays County Judge

Debbie Gonzales Ingalsbe Commissioner, Pct. 1 Michelle Gutierrez Cohen Commissioner, Pct. 2

Lon A. Shell Commissioner, Pct. 3 Walt Smith Commissioner, Pct. 4

ATTEST:

Elaine H. Cárdenas, MBA, PhD Hays County Clerk



Agenda item request form: F. 3.

Hays County Commissioners Court

Commissioner Ingalsbe

Date: 01/03/2023 Requested By: Sponsor:

Agenda Item

Ceremonial Swearing In of all newly and re-elected officials to Hays County offices; and approval and acceptance of official bonds for each office. **INGALSBE**

Summary



Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

Elaine H. Cardenas Judge Becerra

Agenda Item

Approve Commissioners Court minutes of November 22, 2022. BECERRA/CARDENAS

Summary

Minutes 11-22-2022

Attachments



NOVEMBER 22, 2022

STATE OF TEXAS * COUNTY OF HAYS *

ON THIS THE 22nd DAY OF NOVEMBER A.D., 2022, THE COMMISSIONERS' COURT OF HAYS COUNTY, TEXAS, MET IN REGULAR MEETING. THE FOLLOWING MEMBERS WERE PRESENT, TO-WIT:

RUBEN BECERRA DEBBIE GONZALES INGALSBE MARK JONES LON A. SHELL WALT SMITH ROXANNE RODRIGUEZ COUNTY JUDGE COMMISSIONER, PCT. 1 COMMISSIONER, PCT. 2 COMMISSIONER, PCT. 3 COMMISSIONER, PCT. 4 CHIEF DEPUTY CLERK

Clerk's Note: For complete transcript go to Hays County Website https://hayscountytx.com/commissioners-court/court-video/ Transcript can be translated into any language through Google.com.

THE FOLLOWING PROCEEDINGS WERE HAD, THAT IS:

Jim Davis, Grace Bible Church San Marcos, gave the invocation. Judge Becerra led the court in the Pledge of Allegiance to the United States and Texas flags. Judge Becerra called the meeting to order.

PUBLIC COMMENTS

Harvey Jenkins made a public comment regarding a statement received from the Hays County Appraisal District. Sam Benavides made a public comment thanking the court for the public defender's office and to show support of a public defender's office. Elle Cross made a public comment thanking the court for the public defender's office. Amy Kamp made a public comment thanking the court for the public defender's office. Nicola Ladkin, coordinator of Captive Hays, thanked the court for a program that will assist cats in Hays County. Erica Galian made a public comment in support of a public defender's office. Pastor Jessica Cane made a public comment in support of the public defender's office. Rodrigo Amaya made a public comment in support of the public defender's office and the election results, and explained his concerns with Constable Precinct 1. Dan Lyon made a public comment about the private prison and taxes owed on his property. Roxanne Rodriguez, Chief Deputy, read aloud emailed public comments from the following: Jimmie Kitchen, former Hays County employee, about the lack of a cost of living raise increase since 2013; and Sam Brannon regarding partial manual counts and election integrity. Commissioner Smith took the opportunity to congratulate the Dripping Springs High School Volleyball team for winning the 6A State Championship and wished the Tigers good luck in the playoffs this week.

Recognition and appreciation of Jennifer Scott, Executive Assistant of Precinct 2 Commissioner Jones, and her years of service to Hays County.

Commissioner Jones recognized Jennifer Scott and thanked her for everything she has done the past 12 years. Tammy Crumley, Countywide Operations, thanked Jennifer Scott. Jennifer Doinhoff, Elections Administrator, thanked Jennifer Scott. Laureen Chernow, former Communications Manager, thanked Jennifer Scott. Mike Jones, Emergency Services, thanked Jennifer Scott. Marcus Pacheco, Director of Development Services, thanked Jennifer Scott. Carrie Jones thanked Jennifer Scott. Commissioners Ingalsbe, Shell and Smith thanked Jennifer Scott.

Presentation and update regarding the Limited Tax Bonds, Series 2022 bond sale from Hays County's Financial Advisor Dan Wegmiller with Specialized Public Finance, Inc. (SPFI).

Dan Wegmiller reviewed a handout given to the court that summarized what occurred during the transaction when applying for bond ratings. He stated the County's rate has upgraded to AA+. We also received a high number of bids which reflects our credit quality. Commissioner Shell and Commissioner Ingalsbe thanked Wegmiller and the Auditor's office for their work. Commissioner Jones clarified that we will not get below 4%. Dan Lyon made a public comment regarding the credit quality of Hays County and the debt owed. No action taken.

38262 Approve payments of County invoices.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve payments of County invoices

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38263 Approve the payment of Juror checks.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve the payment of Juror checks.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38264 Approve the payment of United Healthcare claims.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve the payment of United Healthcare claims.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38265 Approve Commissioners Court Minutes of November 15, 2022.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve Commissioners Court Minutes of November 15, 2022.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38266 Approve the payment of the November 30, 2022 payroll disbursements in an amount not to exceed \$4,775,000.00 effective November 30, 2022 and post totals for wages, withholdings, deductions and benefits on the Hays County website once finalized.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve the payment of the November 30, 2022 payroll disbursements in an amount not to exceed \$4,775,000.00 effective November 30, 2022 and post totals for wages, withholdings, deductions and benefits on the Hays County website once finalized.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38267 Approve the reappointment of Commissioner Lon Shell to the Tax Increment Reinvestment Zone (TIRZ) Number 5 (Downtown) Board of Directors for a two-year term expiring on December 31, 2024.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve the reappointment of Commissioner Lon Shell to the Tax Increment Reinvestment Zone (TIRZ) Number 5 (Downtown) Board of Directors for a two-year term expiring on December 31, 2024.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

Clerk's Note Agenda Item #G-7 RE: Approve the reappointment of Joshua Harper and Stacey Morgan to the Board of Emergency Services District #2, a two year term ending December 31, 2024. - WAS PULLED.

Clerk's Note Agenda Item #G-8 RE: Approve the reappointment of Scott Stevens, Jim Weatherford and Paul Kaskie to the Board of Emergency Services District #8, a two year term ending December 31, 2024. - WAS PULLED.

Clerk's Note Agenda Item #G-9 RE: Approve the reappointment of Dennis Lane and Robert Luddy to the Board of Emergency Services District #1, a two year term ending December 31, 2024. - WAS PULLED.

Clerk's Note Agenda Item #G-10 RE: Approve the reappointment of Jennifer Rodriguez and Kenneth Eshelman to the Board of Emergency Services District #6, a two year term ending December 31, 2024. - WAS PULLED.

Clerk's Note Agenda Item #G-11 RE: Approve the reappointment of Eric Holen and Susan Meckel to the Board of Emergency Services District #5, a two-year term ending December 31, 2024. - WAS PULLED.

38268 Amend the Transportation Department's operating budget for increased cost related to vehicles approved during the FY23 budget process.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to amend the Transportation Department's operating budget for increased cost related to vehicles approved during the FY23 budget process.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38269 Authorize the Office of Emergency Services to accept and utilize insurance proceeds for Water & Earth Technologies to repair Low Water Crossing equipment located at Fitzhugh Road (CR 101) at Fitzhugh Creek.; authorize a discretionary exemption pursuant to Texas Local Government Code, Ch. 262.024(a)(7)(D) and amend the budget accordingly.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the Office of Emergency Services to accept and utilize insurance proceeds for Water & Earth Technologies to repair Low Water Crossing equipment located at Fitzhugh Road (CR 101) at Fitzhugh Creek.; authorize a discretionary exemption pursuant to Texas Local Government Code, Ch. 262.024(a)(7)(D) and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38270 Authorize the Commissioner Pct. 2 to utilize community program expense funds for community event stickers valued at \$176.40 for the Constable Precinct 5 Office.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the Commissioner Pct. 2 to utilize community program expense funds for community event stickers valued at \$176.40 for the Constable Precinct 5 Office.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

Clerk's Note Agenda Item #G-15 RE: Authorize the submission of a grant application to the Federal Emergency Management Agency (FEMA) Building Infrastructure and Communities (BRIC) program in the amount of \$20,000 for Arc GIS Safety Indoor Mapping. - WAS PULLED.

38271 Approve the reappointment of Susan Kimball and Walt Smith to the board of directors for the Dripping Springs Tax Incremental Reinvestment Zones No. 1 and No. 2, two year term ending December 31, 2024.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve the reappointment of Susan Kimball and Walt Smith to the board of directors for the Dripping Springs Tax Incremental Reinvestment Zones No. 1 and No. 2, two year term ending December 31, 2024

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38272 Authorize the submission of a grant application to the Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities (BRIC) program in the amount of \$68,748.00 for low water crossing barriers.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the submission of a grant application to the Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities (BRIC) program in the amount of \$68,748.00 for low water crossing barriers.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38273 Authorize the submission of a grant application to the Texas Veterans Commission, Veterans County Service Officer program in the amount of \$150,000.00.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the submission of a grant application to the Texas Veterans Commission, Veterans County Service Officer program in the amount of \$150,000.00.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38274 Authorize execution of an Amended Interlocal Agreement regarding the Dripping Springs Tax Increment Reinvestment Zone Number One and Tax Increment Reinvestment Zone Number Two.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize execution of an Amended Interlocal Agreement regarding the Dripping Springs Tax Increment Reinvestment Zone Number One and Tax Increment Reinvestment Zone Number Two.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38275 Authorize the Sheriff's Office to procure a credit card in an amount not to exceed \$5,000.00 from the County depository bank.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the Sheriff's Office to procure a credit card in an amount not to exceed \$5,000.00 from the County depository bank.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38276 Authorize the purchase of items from BJ's Tees valued at \$1,274.94 for the continuing education safety program for the Transportation Department.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the purchase of items from BJ's Tees valued at \$1,274.94 for the continuing education safety program for the Transportation Department.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38277 Amend the Sheriff's Drug Forfeiture Fund for the purchase of additional vehicle equipment for a K-9 Unit valued at \$7,258.00.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to amend the Sheriff's Drug Forfeiture Fund for the purchase of additional vehicle equipment for a K-9 Unit valued at \$7,258.00.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38278 Authorize the Sheriff's Office to accept a \$500.00 donation from Bethany Lutheran Church and amend the budget accordingly.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the Sheriff's Office to accept a \$500.00 donation from Bethany Lutheran Church and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra

5 - 0 Passed - Unanimously

38279 Approve out of state travel for Deputy Stefan Haltermann and Deputy Christopher Adams to attend the Explosive Handlers and Breaching Course on February 6-10, 2023 in Byhalia, Mississippi.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve out of state travel for Deputy Stefan Haltermann and Deputy Christopher Adams to attend the Explosive Handlers and Breaching Course on February 6-10, 2023 in Byhalia, Mississippi.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38280 Authorize the execution of Amendment No. 7 to the Department of State Health Services (DSHS), Public Health Emergency Preparedness grant.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the execution of Amendment No. 7 to the Department of State Health Services (DSHS), Public Health Emergency Preparedness grant.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38281 Approve specifications for RFP 2023-P01 Traffic Signal Maintenance and authorize Purchasing to solicit for bids and advertise.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve specifications for RFP 2023-P01 Traffic Signal Maintenance and authorize Purchasing to solicit for bids and advertise.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38282 Accept a proposal from CT Electric to repair and/or replace all parking lot lights at the new Elections/IT Building located at 120 Stagecoach Trail in the amount of \$5,825.00.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to accept a proposal from CT Electric to repair and/or replace all parking lot lights at the new Elections/IT Building located at 120 Stagecoach Trail in the amount of \$5,825.00.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38283 Approve specifications for IFB 2023-B07 Precinct 2 Office - Parking Lot Expansion and authorize Purchasing to solicit for bids and advertise.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve specifications for IFB 2023-B07 Precinct 2 Office - Parking Lot Expansion and authorize Purchasing to solicit for bids and advertise.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38284 Approve and execute the Sheriff's Office Equitable Sharing and Agreement Certification in accordance with the statues and guidelines that govern the Federal Equitable Sharing Program.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve and execute the Sheriff's Office Equitable Sharing and Agreement Certification in accordance with the statues and guidelines that govern the Federal Equitable Sharing Program.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38285 Authorize the County Auditor to process necessary expenditures related to incoming Elected Officials following Texas Local Government Code and Hays County Policies & Procedures.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the County Auditor to process necessary expenditures related to incoming Elected Officials following Texas Local Government Code and Hays County Policies & Procedures.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38286 Authroize the Information Technology Department to purchase one new Dell Latitude 5530 Laptop valued at \$1,370.97 for the Justice of the Peace, Pct. 2 Office utilizing the JP Technology Fund and amend the budget accordingly.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the Information Technology Department to purchase one new Dell Latitude 5530 Laptop valued at \$1,370.97 for the Justice of the Peace, Pct. 2 Office utilizing the JP Technology Fund and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38287 Approve out of state travel for Development Manager, Michael Berlad, to attend the MyGovernmentOnline National Conference on December 13th - December 15th 2022 in New Orleans, Louisiana.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to approve out of state travel for Development Manager, Michael Berlad, to attend the MyGovernmentOnline National Conference on December 13th - December 15th 2022 in New Orleans, Louisiana.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38288 Authorize the purchase of additional Christmas Lights for the Historic Courthouse grounds not to exceed \$5,000.00 and amend the budget accordingly.

Dan Lyon made a public comment regarding the high costs of Christmas lights. He asked if we could potentially have the lights donated and volunteers to help put up the lights.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the purchase of additional Christmas Lights for the Historic Courthouse grounds not to exceed \$5,000.00 and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38289 Authorize the County Judge to execute an Amended and Restated Development Agreement between Hays County and Half-Ton, LLC, originally approved by the Hays County Commissioners Court on July 13, 2021.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the County Judge to execute an Amended and Restated Development Agreement between Hays County and Half-Ton, LLC, originally approved by the Hays County Commissioners Court on July 13, 2021.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38290 Authorize the Information Technology Department to accept one UltraSharp 34" Curved USB-C Hub Monitor from Dell Technologies as part of their Seed Program and amend the budget accordingly.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the Information Technology Department to accept one UltraSharp 34" Curved USB-C Hub Monitor from Dell Technologies as part of their Seed Program and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra

5 - 0 Passed - Unanimously

38291 Discussion and possible action to authorize the County Judge to execute a Professional Services Agreement between Hays County and BGE, Inc. to perform a corridor study regarding the possible extension of William Pettus Road from Hwy. 21 west to FM 110 in Precinct 1.

Harvey Jenkins, Rodrigo Amaya and Dan Lyon made public comments against the cost of this study. Commissioner Ingalsbe gave clarification on the study and what is involved. Commissioner Jones stated CAMPO has already funded the study from William Pettus Road to 130 and this scope of work will get the project "shovel ready". Jerry Borcherding. Director of Transportation, spoke on the item and stated BGE was the best company for continuity through an RFQ process. Erin Gonzales, Director of Transportation with BGE, spoke on the selection by Caldwell County and CAMPO. Gonzales gave additional information regarding the project and stated this gets the project through schematics.

A motion was made by Commissioner Ingalsbe, seconded by Commissioner Jones to authorize the County Judge to execute a Professional Services Agreement between Hays County and BGE, Inc. to perform a corridor study regarding the possible extension of William Pettus Road from Hwy. 21 west to FM 110 in Precinct 1.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38292 Discussion and possible action to authorize the County Judge to execute a Contract Amendment No. 3 in the amount of \$31,000.00 to the Professional Services Agreement between Hays County and Doucet & Associates, Inc. for design services on the Old Bastrop Road project in Precinct 1, as part of the Hays County Road Bond Program; authorize a discretionary exemption pursuant to Texas Local Government Code Ch. 262.024(a)(4).

Harvey Jenkins asked the court for clarification on this item. Commissioner Ingalsbe stated this is for planned modification of two new roadways accommodating an RV park that were not previously planned for.

A motion was made by Commissioner Ingalsbe, seconded by Commissioner Jones to authorize the County Judge to execute a Contract Amendment No. 3 in the amount of \$31,000.00 to the Professional Services Agreement between Hays County and Doucet & Associates, Inc. for design services on the Old Bastrop Road project in Precinct 1, as part of the Hays County Road Bond Program; authorize a discretionary exemption pursuant to Texas Local Government Code Ch. 262.024(a)(4).

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38293 Discussion and possible action to authorize the County Judge to execute a Professional Services Agreement between Hays County and Halff Associates, Inc. to provide right-of-way acquisition services for the RM 12 safety improvements near the intersection of Skyline Drive in Precinct 3.

A motion was made by Commissioner Shell, seconded by Commissioner Smith to authorize the County Judge to execute a Professional Services Agreement between Hays County and Halff Associates, Inc. to provide right-of-way acquisition services for the RM 12 safety improvements near the intersection of Skyline Drive in Precinct 3.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38294 Discussion and possible action to authorize the County Judge to execute an Interlocal Agreement between Hays County and the City of Buda relating to the County's RM 967 rehabilitation project between South Main Street near the Union Pacific Railroad Crossing and the I-35 Southbound Frontage Road and amend the budget accordingly.

A motion was made by Commissioner Smith, seconded by Commissioner Jones to authorize the County Judge to execute an Interlocal Agreement between Hays County and the City of Buda relating to the County's RM 967 rehabilitation project between South Main Street near the Union Pacific Railroad Crossing and the I-35 Southbound Frontage Road and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38295 Discussion and possible action to authorize the County Judge to execute a Utility Reimbursement Agreement in the amount of \$650,918.29 in eligible reimbursement costs with Guadalupe-Blanco River Authority for utility relocations on the widening of FM 621 project in Precinct 1, as part of the Hays County Road Bond Program.

A motion was made by Commissioner Ingalsbe, seconded by Commissioner Jones to authorize the County Judge to execute a Utility Reimbursement Agreement in the amount of \$650,918.29 in eligible reimbursement costs with Guadalupe-Blanco River Authority for utility relocations on the widening of FM 621 project in Precinct 1, as part of the Hays County Road Bond Program.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38296 Discussion and possible action to call for a public hearing on December 6, 2022 to establish a 3-way stop location on High Mesa Drive at the intersection with Cowpoke Circle in the Cedar Oaks Mesa subdivision.

A motion was made by Commissioner Shell, seconded by Commissioner Smith to call for a public hearing on December 6, 2022 to establish a 3-way stop location on High Mesa Drive at the intersection with Cowpoke Circle in the Cedar Oaks Mesa subdivision.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38297 Discussion and possible action to select Raba-Kistner, Inc. to provide CE&I (Construction, Engineering, & Inspection) services for the FM110 Grading Project.

A motion was made by Commissioner Ingalsbe, seconded by Commissioner Jones to select Raba-Kistner, Inc. to provide CE&I (Construction, Engineering, & Inspection) services for the FM110 Grading Project.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38298 Discussion and possible action to call for a public hearing on December 6, 2022 to establish a 3-way stop location on Longbow Lane at the intersection with Indian Princess in the Woodcreek North subdivision.

A motion was made by Commissioner Shell, seconded by Commissioner Jones to call for a public hearing on December 6, 2022 to establish a 3-way stop location on Longbow Lane at the intersection with Indian Princess in the Woodcreek North subdivision.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38299 Discussion and possible action to call for a public hearing on December 6, 2022 to establish a "No Parking" zone along the west side (school side) of Sunbright Blvd. between Vista Gardens Drive and the entrance-only drive for Sunfield Elementary School.

A motion was made by Commissioner Jones, seconded by Commissioner Ingalsbe to call for a public hearing on December 6, 2022 to establish a "No Parking" zone along the west side (school side) of Sunbright Blvd. between Vista Gardens Drive and the entrance-only drive for Sunfield Elementary School.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38300 Discussion and possible action to consider the acceptance of road construction & surface drainage improvements, release of the subdivision bond #SUR0074087 in the amount of \$1,465,590.88, and acceptance of the 2-year maintenance bond #258323Y in the amount of \$243,560.78 for Hymeadow subd., Section 3, Phase 3.

A motion was made by Commissioner Ingalsbe, seconded by Commissioner Jones for acceptance of road construction & surface drainage improvements, release of the subdivision bond #SUR0074087 in the amount of \$1,465,590.88, and acceptance of the 2-year maintenance bond #258323Y in the amount of \$243,560.78 for Hymeadow subd., Section 3, Phase 3.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra

5 - 0 Passed - Unanimously

38301 Discussion and possible action to accept the maintenance bond rider extensions from DNT Construction until May 7, 2023 for Sunfield subd: Phase 2, Section 8 - bond #1060750 in the amount of \$188,961.00, Phase 2, Section 11 - bond #1060751 in the amount of \$231,755.6, Phase 3, Section 2 - bond #PB03016800273M in the amount of \$32,600.00, Phase 3, Section 4 - bond #PB03016800240M in the amount of \$22,000.00, Phase 3 "Roadway Extension" - bond #PB03016800210 in the amount of 30,350.00; and until May 8, 2023 for Sunfield subd:Phase 2, Section 12 - bond #PB03016800417M in the amount of \$90,377.95.

A motion was made by Commissioner Jones, seconded by Commissioner Ingalsbe to accept maintenance bond rider extensions from DNT Construction until May 7, 2023 for Sunfield subd: Phase 2, Section 8 - bond #1060750 in the amount of \$188,961.00, Phase 2, Section 11 - bond #1060751 in the amount of \$231,755.6, Phase 3, Section 2 - bond #PB03016800273M in the amount of \$32,600.00, Phase 3, Section 4 - bond #PB03016800240M in the amount of \$22,000.00, Phase 3 "Roadway Extension" - bond #PB03016800210 in the amount of 30,350.00; and until May 8, 2023 for Sunfield subd:Phase 2, Section 12 - bond #PB03016800417M in the amount of \$90,377.95.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38302 PLN-1917-PC; Call for a Public Hearing on December 6th 2022, followed by discussion and possible action regarding the Rolling Oaks, Section 3, Lot 4A, Replat.

A motion was made by Commissioner Shell, seconded by Commissioner Jones to call for a Public Hearing on December 6th 2022, followed by discussion and possible action regarding the Rolling Oaks, Section 3, Lot 4A, Replat.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38303 PLN-2061-NP Prairie Lakes Subdivision, Phases 3-6, Preliminary Plan. Discussion and possible action to approve the preliminary plan.

A motion was made by Commissioner Jones, seconded by Commissioner Ingalsbe to approve the preliminary plan of PLN-2061-NP Prairie Lakes Subdivision, Phases 3-6.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38304 Discussion and possible action to authorize the County Judge to execute the Hays County American Rescue Plan Recovery Grant Agreement between Hays County and Wimberley Education Foundation regarding recovery assistance for direct or indirect impacts of COVID-19 and amend the budget accordingly.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the County Judge to execute the Hays County American Rescue Plan Recovery Grant Agreement between Hays County and Wimberley Education Foundation regarding recovery assistance for direct or indirect impacts of COVID-19 and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra

5 - 0 Passed - Unanimously

38305 Discussion and possible action to authorize the County Judge to execute the Hays County American Rescue Plan Recovery Grant Agreement between Hays County and Hill Country Rally for Kids regarding recovery assistance for direct or indirect impacts of COVID-19 and amend the budget accordingly.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the County Judge to execute the Hays County American Rescue Plan Recovery Grant Agreement between Hays County and Hill Country Rally for Kids regarding recovery assistance for direct or indirect impacts of COVID-19 and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra

5 - 0 Passed - Unanimously

38306 Discussion and possible action to authorize the County Judge to execute the Hays County American Rescue Plan Recovery Grant Agreement between Hays County and Dripping Springs Education Foundation regarding recovery assistance for direct or indirect impacts of COVID-19 and amend the budget accordingly.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the County Judge to execute the Hays County American Rescue Plan Recovery Grant Agreement between Hays County and Dripping Springs Education Foundation regarding recovery assistance for direct or indirect impacts of COVID-19 and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38307 Discussion and possible action to authorize the County Judge to execute the Hays County American Rescue Plan Recovery Grant Agreement between Hays County and Burke Center for Youth regarding recovery assistance for direct or indirect impacts of COVID-19 and amend the budget accordingly.

A motion was made by Commissioner Smith, seconded by Commissioner Shell to authorize the County Judge to execute the Hays County American Rescue Plan Recovery Grant Agreement between Hays County and Burke Center for Youth regarding recovery assistance for direct or indirect impacts of COVID-19 and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38308 Discussion and possible action to authorize the County Judge to execute the Hays County American Rescue Plan Recovery Grant Agreement between Hays County and Kyle Area Senior Zone (KASZ) regarding recovery assistance for direct or indirect impacts of COVID-19 and amend the budget accordingly.

Betty Conley, President of KASZ, and Ellen Ermis, Communications Coordinator of KASZ, thanked the court for their support.

A motion was made by Commissioner Ingalsbe, seconded by Commissioner Jones to authorize the County Judge to execute the Hays County American Rescue Plan Recovery Grant Agreement between Hays County and Kyle Area Senior Zone (KASZ) regarding recovery assistance for direct or indirect impacts of COVID-19 and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38309 Discussion and possible action on a recommended interim community cat management policy to move toward the recommendations of the completed feasibility study conducted by national experts, Team Shelter USA.

Jordan Powell, Assistant General Counsel, reviewed the policy draft and recommended edits provided by Shari Boyett. Shari Boyett, Animal Advocate Advisor & Community Liaison, made her recommendations on the policy.

A motion was made by Judge Becerra, seconded by Commissioner Ingalsbe to accept a recommended interim community cat management policy to move toward the recommendations of the completed feasibility study conducted by national experts, Team Shelter USA with the edits.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38310 Discussion and possible action to authorize the County Judge to execute a Professional Service Agreement in the amount of \$45,000.00 related to RFP 2022-P11 Community Health Assessment between Hays County and Initium Health and amend the budget accordingly.

Vickie Dorsett, Budget Officer, requested the court add to amend the budget accordingly. Tammy Crumley, Director of Countywide Operations, stated the County only received one bid but feels they are a good company. They will be assessing a Community Health assessment including Mental Health resources.

A motion was made by Commissioner Ingalsbe, seconded by Commissioner Shell to authorize the County Judge to execute a Professional Service Agreement in the amount of \$45,000.00 related to RFP 2022-P11 Community Health Assessment between Hays County and Initium Health and amend the budget accordingly.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38311 Approve renewal of IFB 2021-B12 Countywide Dumpsters with Waste Connections Lone Star, Inc.

A motion was made by Commissioner Jones, seconded by Commissioner Shell to approve renewal of IFB 2021-B12 Countywide Dumpsters with Waste Connections Lone Star, Inc.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

38312 Discussion and possible action to authorize a salary exception at the 50th percentile for the Bookkeeper, slot 0450-001 in the Courts Division at the Hays County Clerk's Office effective December 1. 2022.

Shari Miller, Director of Human Resources, spoke on the qualifications of the applicant and gave her recommendations. Commissioner Smith asked about the status of the salary study and if an increase was likely once the findings were released. Roxanne Rodriguez, Chief Deputy Clerk, gave clarification on the item. Judge Becerra stated he supports this increase.

A motion was made by Judge Becerra, seconded by Commissioner Shell to authorize a salary exception at the 50th percentile for the Bookkeeper, slot 0450-001 in the Courts Division at the Hays County Clerk's Office effective December 1. 2022.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38313 Discussion and possible action to consider the release of the performance and payment bond (101147623) in the amount of \$59,627.01 for IFB 2020-B01 Hays Multilayer Well.

A motion was made by Commissioner Shell, seconded by Commissioner Smith to release the performance and payment bond (101147623) in the amount of \$59,627.01 for IFB 2020-B01 Hays Multilayer Well.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra

5 - 0 Passed - Unanimously

38314 Discussion and possible action to award contract RFP 2022-P12 Pet Resource Center - Project Coordinator to Austin Pets Alive and authorize staff and General Counsel to negotiate a contract.

A motion was made by Commissioner Shell, seconded by Commissioner Ingalsbe to award contract RFP 2022-P12 Pet Resource Center - Project Coordinator to Austin Pets Alive and authorize staff and General Counsel to negotiate a contract.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

38315 Discussion and possible action to authorize the Information Technology Director to execute equipment quotes for ordering new or replacement Polycom Desk Phones through 8x8, Inc., the County's phone vendor.

Jeff McGill, Director of Information Technology, gave clarification on the item.

A motion was made by Commissioner Ingalsbe, seconded by Commissioner Jones to authorize the Information Technology Director to execute equipment quotes for ordering new or replacement Polycom Desk Phones through 8x8, Inc., the County's phone vendor.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra

5 - 0 Passed - Unanimously

38316 Discussion and possible action to authorize the County Judge to execute an agreement between Hays County and Neighborhood Defender Service, Inc regarding the operation of the public defenders' office in Hays County.

Cyrus Gray III made a public comment on the shortcomings of the Hays County jail system. He thanked the court for signing this contract. Shannon Fitzpatrick gave thanks for this item. Commissioner Shell stated the draft is in the back-up and that there were two bids received. Commissioner Ingalsbe spoke on the item and thanked the community advocates that helped her better understand as well as the other departments involved. Commissioner Smith stated he supports this item.

A motion was made by Commissioner Shell, seconded by Commissioner Ingalsbe to authorize the County Judge to execute an agreement between Hays County and Neighborhood Defender Service, Inc regarding the operation of the public defenders' office in Hays County.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

Clerk's Note: Executive Session began at 12:00 p.m. and resumed back into open court at 1:08 p.m.

38317 Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property associated with Parks and Open Space Projects being considered by Hays County. Possible discussion and/or action may follow in open court.

A motion was made by Commissioner Jones, seconded by Commissioner Shell to authorize the County Judge to execute an interlocal agreement between Hays County and the City of Buda, related to multiple projects to be utilized for parkland purposes by the City of Buda, as discussed and presented in Executive Session and amend the budget accordingly to come from the Park Bonds Fund.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

A motion was made by Commissioner Shell, seconded by Commissioner Jones to authorize County Judge to execute an Interlocal Agreement between Hays County and the City of wood Creek related to improvements to be utilized for parkland purposes within the city of Woodcreek, as discussed and presented in Executive Session and amend the budget to fund the project costs of \$200,000 from the parks and open space bond funds.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra 5 - 0 Passed - Unanimously

Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property located at 101 Thermon Drive, San Marcos. Possible discussion and/or action may follow in open court.

No action taken.

Executive Session pursuant to 551.071 of the Texas Government Code: consultation with counsel regarding the County's Reinvestment Zone Policy; and regarding Tax Increment Reinvestment Zone (TIRZ) #2 in Kyle. Possible action may follow in open court.

No action taken.

38318 Executive Session pursuant to Sections 551.071 and 551.074 of the Texas Government Code deliberation regarding employment and duties of the Administrative position within the Hays County Commissioner Precinct 2 Office. Possible discussion and/or action may follow in open court.

A motion was made by Commissioner Jones, seconded by Commissioner Ingalsbe to authorize the Commissioner Precinct 2 office to double fill the Executive Assistant position slot 0277-003 for the month of December, 2022 and assignment of additional equipment needed for the training purposes.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property located at 2400 N IH 35, San Marcos. Possible discussion and/or action may follow in open court.

No action taken.

38319 Executive Session pursuant to Sections 551.071 and 551.074 of the Texas Government Code deliberation regarding employment and duties of for all positions funded for the Pre-trial Services Department. Possible discussion and/or action may follow in open court.

A motion was made by Commissioner Shell, seconded by Commissioner Ingalsbe to authorize a salary exception up to the 75th percentile for the Pretrial Services Director effective upon date of hiring utilizing ARPA Funding.

AYE: Commissioner Ingalsbe, Commissioner Jones, Commissioner Shell, Commissioner Smith, Judge Becerra **5 - 0 Passed - Unanimously**

Clerk's Note Agenda Item #M-1 RE: Discussion and possible action related to the burn ban. - WAS PULLED

Clerk's Note Agenda Item #M-2 RE: Discussion related to the Hays County inmate population, to include current population counts and costs. - WAS PULLED

Clerk's Note Agenda Item #M-3 RE: Discussion of issues related to the Hays County Jail, and the planning of projects pertaining to the public safety facilities needs within the County. Possible action may follow. - WAS PULLED

Clerk's Note Agenda Item #M-4 RE: Discussion and possible action regarding Hays County's use of federal or other grant funding related to COVID-19 response including but not limited to the American Rescue Plan Act (ARPA) and the Emergency Rental Assistance Program (ERAP). - WAS PULLED

ADJOURNMENT

A motion was made by Commissioner Jones, seconded by Judge Becerra to adjourn court at 1:10 p.m.

I, ELAINE H. CÁRDENAS, COUNTY CLERK and EXOFFICIO CLERK OF THE COMMISSIONERS' COURT, do hereby certify that the foregoing contains a true and accurate record of the proceedings had by the Hays County Commissioners' Court on NOVEMBER 22, 2022.



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ELAINE H. <u>CÁRDENAS</u>, COUNTY CLERK AND <u>EXOFFICIO</u> CLERK OF THE COMMISSIONERS' COURT OF HAYS COUNTY, TEXAS



Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

Judge Becerra

Agenda Item

Approve the payment of the January 15, 2023 payroll disbursements in an amount not to exceed \$3,345,000 effective January 15, 2023 and post totals for wages, withholdings, deductions and benefits on the Hays County website once finalized. **BECERRA/TENORIO**

Summary



Hays County Commissioners Court

Date: 01/03/2023	
Requested By:	Constable Peterson
Sponsor:	Commissioner Ingalsbe

Agenda Item

Approve and confirm the appointment of Stephen Hrncir as Deputy Constable Bailiff in the Hays County Constable Precinct 1 Office, effective date January 3, 2023. **INGALSBE/PETERSON**

Summary

Pursuant to Local Government Code Chapter 86 Subchapter B 86.011 (a) The Commissioner's Court shall approve and confirm the appointment of a Deputy Constable.

Sec. 86.011. APPOINTMENT OF DEPUTY CONSTABLE.

(a) An elected constable who desires to appoint a deputy must apply in writing to the commissioners court of the county and show that it is necessary to appoint a deputy in order to properly handle the business of the constable's office that originates in the constable's precinct. The application must state the name of the proposed deputy. The commissioners court shall approve and confirm the appointment of the deputy only if the commissioners court determines that the constable needs a deputy to handle the business originating in the precinct.

(b) Each deputy constable must qualify in the manner provided for deputy sheriffs.

(c) The constable is responsible for the official acts of each deputy of the constable. The constable may require a deputy to post a bond or security. A constable may exercise any remedy against a deputy or the deputy's surety that a person may exercise against the constable or the constable's surety.

Attachments

(d) A person commits an offense if the person:

(1) serves as a deputy constable and the person has not been appointed as provided by Subsection (a); or

(2) is a constable and issues a deputyship without the consent and approval of the commissioners court.

(e) An offense under Subsection (d) is punishable by a fine of not less than \$50 or more than \$1,000.

Please refer to the attached bio.

Bio-Hrncir Oath Documents Stephen Hrncir -

Stephen is from San Antonio, Texas. Travis is married he has two grown children. Stephen served in the United States Marine Corps Reserves. He started his Law Enforcement career with Garden Ridge Police. In 2001 he went to work for the New Braunfels Police Dept. and retired with twenty yrs of service.

Stephen has over 2053 hours Texas Commission on Law Enforcement

Training Licenses/Certification: Masters Peace Officer License Firearms Instructor Less Lethal Instructor Field Training Officer

We welcome Stephen Hrncir to the Constables Office as a Bailiff Deputy

DEPUTATION

THE STATE OF TEXAS COUNTY OF HAYS

I, **DAVID PETERSON, CONSTABLE PCT. 1** in and for the County of Hays and State of Texas, having full confidence in <u>STEPHEN HRNCIR</u>, do hereby, with the consent of the Honorable Commissioners' Court of Hays County, nominate and appoint **HIM/HER** my true and lawful deputy, in my name, place and stead, to do and perform any and all acts and things pertaining to the office of **CONSTABLE PCT. 1** for said County and State, hereby ratifying and confirming any and all such acts and things lawfully done in the premises by virtue hereof.

Witness my hand, this the <u>**3RD**</u> day of <u>**JANUARY**</u>, 2023.

DAVID PETERSON, CONSTABLE PCT. 1 HAYS COUNTY, TEXAS

Before me, the undersigned authority, in and for Hays County, Texas, on this day personally appeared **DAVID PETERSON**, known to me to be the person whose name is subscribed to the foregoing deputation, and acknowledged to me that **he** executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office at San Marcos, Texas, this the **3RD day of JANUARY**, **2023**.

ELAINE H. CARDENAS, HAYS COUNTY CLERK

OATH OF OFFICE

I, **<u>STEPHEN HRNCIR</u>**, solemnly swear (or affirm) that I will faithfully execute the duties of the office of **DEPUTY CONSTABLE PCT. 1** for the County of Hays, State of Texas, and will to the best of my ability preserve, protect, and defend the Constitution and Laws of the United States and of this State, so help me God.

Subscribed and sworn to before me on this the ______ **3RD day of _JANUARY** , 2023.

DEBBIE INGALSBE, COMMISSIONER PCT. 1 HAYS COUNTY, TEXAS

BY:

The State of Texas

Statement of Elected/Appointed Officer

(Pursuant to Tex. Const. Art. XVI, § (b), amended 2001)

I, STEPHEN HRNCIR, do solemnly swear (or affirm), that I have not directly or indirectly paid, offered, promised to pay, contributed, or promised to contribute any money or thing of value, or promised

any public office or employment as a reward to secure my appointment or confirmation so help me God.

UNDER PENALTIES OF PERJURY, I DECLARE THAT I HAVE READ THE FOREGOING STATEMENT AND THAT THE FACTS STATED THEREIN ARE TRUE.

Date: JANURARY 3RD, 2023

Affiant's Signature

DEPUTY CONSTABLE PCT. 1 Position to which Appointed

HAYS COUNTY, TEXAS

SWORN to and subscribed before me by Affiant on this the 3rd day of January, 2023.

Signature of Person Administering Oath

Printed Name: DEBBIE INGALSBE Title: COMMISSIONER PCT. 1 HAYS COUNTY,TEXAS



Hays County Commissioners Court

Sponsor:	Judge Becerra
Requested By:	T.CRUMLEY
Date: 01/03/2023	

Agenda Item:

Authorize the execution of documents related to the BRIC (Building Resilient Infrastructure and Communities) grant application. BECERRA/T.CRUMLEY

Summary:

The Hays County BRIC (Building Resilient Infrastructure & Communities) application was approved in Commissioners Court on 11/22/2022. The Texas Department of Emergency Management (TDEM) oversees the initial round of grant application review and has requested additional documentation regarding this application. This documentation consists of an SF-424 form and Grants terms and conditions. This is a standard form required for use as a cover sheet for submission of pre-applications and applications.

Fiscal Impact: Amount Requested: N/A Line Item Number: N/A

Budget Office:

Source of Funds: N/A Budget Amendment Required Y/N?: N/A Comments: N/A

Auditor's Office: Purchasing Guidelines Followed Y/N?: N/A G/L Account Validated Y/N?: N/A New Revenue Y/N?: N/A Comments:

SF-424 Terms and Conditions Attachments

Application for	Federal Assista	nce SF	-424			
* 1. Type of Submission: Preapplication Application Changed/Corrected Application		* 2. Typ Ne Cc Re	e of Application: w ontinuation evision	*	If Revision, select appropriate letter(s): Other (Specify):	
* 3. Date Received: 4. Applicant Identifie			cant Identifier:			
5a. Federal Entity Identifier:]	5b. Federal Award Identifier:	
State Use Only:					1	
6. Date Received by	v State:		7. State Application	n Id	dentifier:	
8. APPLICANT INF	ORMATION:					
* a. Legal Name: 🛛 🖁	Hays County			_		
* b. Employer/Taxpayer Identification Number (EIN/TIN): * c. Organizational DUNS: 74-6002241506 0974948840000						
d. Address:						
* Street1: Street2: * City: County/Parish:	712 S. Stagec San Marcos	oach T	rail, Ste 1045			
* State: Province:	* State: TX: Texas					
* Country:	USA: UNITED S	TATES		_		
* Zip / Postal Code:	78666-5999			_		
e. Organizational	Unit:					
Department Name:]	Division Name:	
f. Name and contact information of person to be contacted on matters involving this application:						
Prefix: Middle Name: * Last Name: Bee Suffix:	cerra]	* First Nan	ne:	Ruben	
Title:						
Organizational Affilia	ation:					
* Telephone Number: 512392205 Fax Number:						
* Email: judge.b	ecerra@co.hays	.tx.us				

Application for Federal Assistance SF-424	
* 9. Type of Applicant 1: Select Applicant Type:	
B: County Government	
Type of Applicant 2: Select Applicant Type:	
Type of Applicant 3: Select Applicant Type:	
* Other (specify):	
* 10. Name of Federal Agency:	
TDEM (Texas Department of Emergency Management)	
11. Catalog of Federal Domestic Assistance Number:	
CFDA Title:	
* 12. Funding Opportunity Number:	
* Title:	
Low Water Crossing Barriers	
13. Competition Identification Number:	
Title:	
14. Areas Affected by Project (Cities, Counties, States, etc.):	
Add Attachment Delete Attachment View Attachment	
* 15. Descriptive Title of Applicant's Project:	
Hays County Mitigation plan update	
Attach supporting documents as specified in agency instructions.	
Add Attachments View Attachments	

Application	for Federal Assistance S	F-424					
16. Congressional Districts Of:							
* a. Applicant	Tx-25			* b. Progra	am/Project Tx-25		
Attach an additional list of Program/Project Congressional Districts if needed.							
			Add Attachment	Delete Att	tachment Viev	v Attachment	
17. Proposed	Project:						
* a. Start Date:	08/01/2023			* b.	End Date: 08/31	/2024	
18. Estimated	Funding (\$):						
* a. Federal		51,561.00					
* b. Applicant							
* c. State							
* d. Local		17,187.00					
* e. Other							
* f. Program Ind	come						
* g. TOTAL		68,748.00					
* 19. Is Applic	ation Subject to Review By Sta	ate Under Exec	utive Order 12372	Process?			
a. This ap	olication was made available to	the State unde	r the Executive Ord	ler 12372 Proce	ess for review on		
b. Program	n is subject to E.O. 12372 but h	nas not been sel	lected by the State	for review.			
🔀 c. Progran	n is not covered by E.O. 12372						
* 20. Is the Ap	plicant Delinquent On Any Fe	deral Debt? (If '	"Yes," provide exp	lanation in atta	chment.)		
Yes	No						
If "Yes", provid	de explanation and attach						
			Add Attachment	Delete Att	tachment Viev	v Attachment	
21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code. Title 218. Section 1001)							
X ** I AGREI	E						
** The list of co specific instruct	ertifications and assurances, or ions.	an internet site v	where you may obta	iin this list, is co	ontained in the anno	uncement or agency	
Authorized Representative:							
Prefix:		* First	: Name: Ruben				
Middle Name:							
* Last Name:	Becerra						
Suffix:							
* Title: Ha	ays County Judge						
* Telephone Nu	mber: 512393-2205			Fax Number:			
* Email: judge.becerra@co.hays.tx.us							
* Signature of Authorized Representative: * Date Signed:							

This Agreement (consisting of these terms and conditions and all exhibits) is made and entered into by and between the Texas Division of Emergency Management (TDEM), an agency of the State of Texas, hereinafter referred to as "TDEM," and the award recipient,

, hereinafter referred to as the "Subrecipient." Furthermore, TDEM and the Subrecipient are collectively hereinafter referred to as the "Parties." All subawards made under this agreement are subject to the same terms and conditions below.

Subrecipient may not assign or transfer any interest in this award without the express, prior written consent of TDEM and/or DHS/FEMA or other awarding agency.

a. The term Recipient and pass-through entity have the same meaning as "Grantee," as used in governing statutes, regulations, and DHS/FEMA guidance.

b. A Recipient is also a "non-federal entity" for administration purposes.

c. A Subrecipient is also known as a "Subgrantee" as used in governing statutes regulations and DHS/ FEMA guidance.

d. A Subrecipient is also a "non-federal entity" for administration purposes.

e. The "Grant" referred to in this agreement is an awardto the Subrecipient passed through from TDEM to the Subrecipient.

f. Certifying Official will be the Mayor, Judge, or Executive Director authorized to execute these grant terms and conditions, and to submit changes of Subrecipient Agents.

- g. Projects and any subsequent versions for those projects accepted by the Subrecipient and subsequently obligated or deobligated by DHS/FEMA are considered subawards to this grant agreement.
- h. TDEM uses contractors to administer subawards, both in communication with Subgrantees and the awarding agency. A Subgrantee's point of contact for all awards will be the regional Recovery or Mitigation Coordinator followed by the regional contractor. Subgrantees should update their primary points of contact with every new award in addition to each time a contact may change.
 - A. <u>Standard of Performance</u>. Subrecipient shall perform all activities as approved by TDEM. Any change to a project shall receive prior written approval by TDEM and, if required, by FEMA or other awarding agency. Subrecipient shall perform all activities in accordance with all terms, provisions and requirements set forth in this Grant, including but not limited to the following Exhibits:
 - 1. Assurances Non-Construction Programs, hereinafter referred to as "Exhibit A"
 - 2. Assurances Construction Programs, hereinafter referred to as "Exhibit B"
 - 3. Certifications for Grant Agreements, hereinafter referred to as "Exhibit C"
 - 4. State of Texas Assurances, hereinafter referred to as "Exhibit D"
 - 5. Environmental Review Certification, hereinafter referred to as "Exhibit E"
 - 6. Additional Grant Conditions, hereinafter referred to as "Exhibit F"
 - 7. Additional Grant Certifications, hereinafter referred to as "Exhibit G"
 - 8. Request for Information and Documentation referred to as "Exhibit H"

B. **Failure to Perform**. In the event Subrecipient fails to implement and complete the project(s) approved and awarded, or comply with any provision of this Grant, Subrecipient shall be liable to TDEM for an amount not to exceed the award amount of this Grant and may be barred from applying for or receiving additional DHS/FEMA grant program funds

or any other grant program funds administered by TDEM until repayment to TDEM is made and any other compliance or audit finding is satisfactorily resolved, in addition to any other remedy specified in this Grant. Failure to timely implement and complete projects may reduce future funding in additional DHS/FEMA and/or other grant programs administered by TDEM.

- C. **<u>Funding Obligations</u>**. TDEM shall not be liable to Subrecipient for any costs incurred by Subrecipient that are not allowable costs.
 - 1. Notwithstanding any other provision of this Grant, the total of all payments and other obligations incurred by TDEM under this Grant shall not exceed the total cumulative award amounts listed on the Subawards (projects and subsequent versions).
 - 2. Subrecipient shall contribute the match funds listed on the subaward.

Subrecipient shall refund to TDEM any sum of these Grant funds that has been determined by TDEM or DHS/FEMA to be an overpayment to Subrecipient or that TDEM determines has not been spent by Subrecipient in accordance with this Grant. No refund payment(s) shall be made from local, state or federal Grant funds unless repayment with Grant funds is specifically permitted by statute or regulation. Subrecipient shall make such refund to TDEM within thirty (30) calendar days after TDEM requests such refund. If the subrecipient is unable to refund the amount due at the time of request, they may request offset funds from other open projects under the same award or request a payment plan. If a subrecipient does not provide the amount requested within 30 calendar days, TDEM will first offset the amount with any available funds within the same award and may pursue other remedies to receive payment in full.

- D. <u>Performance Period</u>. The performance period for this Grant is listed on the subaward letter for each project. All projects shall be completed within the performance period AND all reimbursement requests shall be submitted to TDEM within 60 days of the end of the performance period. Subrecipient shall have expended all Grant funds and submitted reimbursement requests, invoices and any supporting documentation to TDEM within 60 days of the end of the performance period. TDEM shall not be obligated to reimburse expenses incurred after the performance period or submitted after the deadline.
- E. <u>Uniform Administrative Requirements. Cost Principals and Audit Requirements</u>. Except as specifically modified by law or this Grant, Subrecipient shall administer this Grant through compliance with the most recent version of all applicable laws and regulations, including but not limited to DHS program legislation, Federal awarding agency regulations, and the terms and conditions of this Grant. A non-exclusive list is provided below [not all may apply in every project]:
 - Public Law 93-288, as amended (Stafford Act)
 - 44 CFR, Emergency Management and Assistance
 - Disaster Mitigation Act of 2000
 - OMB Regulations 2 CFR, Grant and Agreements
 - Executive Order 11988, Floodplain Management
 - Executive Order 11990, Protection of Wetlands
 - Executive Order 12372, Intergovernmental Review of Programs and Activities
 - Executive Order 12549, Debarment and Suspension
 - Executive Order 12612, Federalism

- Executive Order 12699, Seismic Design
- Executive Order 12898, Environmental Justice
- Coastal Barrier Resources Act, Public Law 97-348
- Single Audit Act, Public Law 98-502
- Sandy Recovery Improvement Act publications
- Disaster Recovery Reform Act of 201816 U.S.C. § 470, National Historic Preservation Act
- 16 U.S.C. § 1531, Endangered Species Act References
- FEMA program publications, guidance and policies
- F. <u>State Requirements for Grants</u>. Subrecipient shall comply with all other federal, state, and local laws and regulations applicable to this Grant including but not limited to the laws and the regulations promulgated in Texas Government Code, Chapter 783, Uniform Grant and Contract Management, (UGMS) at:_

http://www.window.state.tx.us/procurement/catrad/ugms.pdf

and the program State Administrative Plan, available at:

https://grants.tdem.texas.gov

Subrecipient shall, in addition to the assurances and certifications, comply and require each of its subcontractors employed in the completion of the project to comply with all applicable statutes, regulations, executive orders, OMB circulars, terms and conditions of this Grant and the approved application.

Grant funds may not be awarded to or expended by any entity which performs political polling. This prohibition does not apply to a poll conducted by an academic institution as part of the institution's academic mission that is not conducted for the benefit of a particular candidate or party.

Grant funds may not be expended by a unit of local government unless the following limitations and reporting requirements are satisfied:

- 1. Texas General Appropriations Act, Art. IX, Parts 2 and 3, except there is no requirement for increased salaries for local government employees;
- 2. Texas Government Code Sections 556.004, 556.005, and 556.006, which prohibits using any money or vehicle to support the candidacy of any person for office, influencing positively or negatively the payment, loan, or gift to a person or political organization for a political purpose, and using Grant funds to influence the passage or defeat of legislation including not assisting with the funding of a lobbyist, or using Grant funds to pay dues to an organization with a registered lobbyist;
- 3. Texas Government Code Sections 2113.012 and 2113.101, which prohibits using Grant funds to compensate any employee who uses alcoholic beverages on active duty and Subrecipient may not use Grant funds to purchase an alcoholic beverage and may not pay or reimburse any travel expense for an alcoholic beverage;
- 4. Texas General Appropriations Act, Art. IX, Section 6.13, which requires Subrecipient to make every effort to attain key performance target levels associated with this Grant, including performance milestones, milestone time frames, and related performance reporting requirements; and
- 5. General Appropriations Act, Art. IX, Sections 7.01 and 7.02, and Texas Government Code §2102.0091, which requires that this Grant may only be expended if Subrecipient timely completes and files its reports.

G. Restrictions and General Conditions.

1. <u>Use of Funds</u>. DHS/FEMA Grant funds may only be used for the purposes set forth in this Page 3 of 20

Grant, and shall be consistent with the statutory authority for this Grant. Grant funds may not be used for matching funds for other Federal grants/cooperative agreements, lobbying, or intervention in Federal regulatory or adjudicatory proceedings. In addition,

Federal funds may not be used to sue the Federal government or any other government entity.

- 2. <u>Federal Employee Prohibition</u>. Federal employees are prohibited directly benefiting from any funds under this Grant.
- 3. <u>Points of Contacts</u>. Within 10 calendar days of any change, Subrecipient shall notify TDEM of any change in designated of Subrecipient Agents as submitted during the execution of this agreement, and any subsequent changes submitted by Subrecipient. In the event a Subrecipient hires a consultant to assist them with managing its Public Assistance grants, they must be listed on the Designated Subrecipient Agent Form. TDEM will direct all correspondence to the Subrecipient but will cc: the consultant on all email exchanges. The Subrecipient will be responsible for sharing written communications with the consultant. The Subrecipient will remain the primary point of contact and must be included in all decision-making activities.
- <u>DUNS Number.</u> Subrecipient confirms its Data Universal Numbering Systems (DUNS) Number is accurate and is registered on Sams.gov. The DUNS Number is the nine digit number established and assigned by Dun and Bradstreet, Inc., at 866/705-5711 or <u>http://fedgov.dnb.com/webform</u>
- 5. <u>Central Contractor Registration and Universal Identifier Requirements</u>. Subrecipient maintains that it has registered on the System for Award Management (SAM) at <u>www.sam.gov</u> or other federally established site for contractor registration, and entered TDEM-required information. Subrecipient shall keep current, and then review and update the information at least annually. Subrecipient shall keep information current in the SAM database until the later of when it submits this Grant's final financial report or receives final Grant award payment. Subrecipient agrees that it shall not make any subaward agreement or contract related to this Grant without first obtaining the vendor/subawardee's mandatory DUNS number. See Section §200.32 of OMB 2 C.F.R.
- 6. <u>Reporting Total Compensation of Subrecipient Executives</u>. 2 C.F.R. §200.331; see FEMA Information Bulletin 350.
 - a. Applicability and what to report: Subrecipient shall report whether Subrecipient received \$25 million or more in Federal procurement contracts or financial assistance subject to the Transparency Act per 2 C.F.R. §200.331. Subrecipient shall report whether 80% or more of Subrecipient's annual gross revenues were from Federal procurement contracts or Federal financial assistance. If Subrecipient answers "yes" to both questions, Subrecipient shall report, along with Subrecipient's DUNS number, the names and total compensation (see 17 C.F.R. §229.402(c)(2)) for each of Subrecipient's five most highly compensated executives for the preceding completed fiscal year.
 - b. Where and when to report: Subrecipient shall report executive total compensation at <u>www.sam.gov</u> or other federally established replacement site. By signing this Grant, Subrecipient certifies that, if required, Subrecipient's jurisdiction has already registered, entered the required information, and shall keep information in the SAM database current, and update the information at least annually for each year until the later of when the jurisdiction submits its final financial report or receives final payment. Subrecipient agrees that it shall not make any subaward agreement or contract without first obtaining the subawardee's mandatory DUNS number.
- 7. <u>Debarment and Suspension</u>. Subrecipient shall comply with Executive Order 12549 and 12689, which provide protection against waste, fraud, and abuse by debarring or
suspending those persons deemed irresponsible in their dealings with the Federal government.

- 8. <u>Direct Deposit</u>. A completed direct deposit form from Subrecipient shall be provided to TDEM, prior to receiving any payments under the provisions of this grant. The direct deposit form is currently available at grants.tdem.texas.gov under Resources/Public Assistance.
- 9. Property Management and Inventory. Subrecipient shall maintain property/inventory records which, at minimum, shall include a description of the property, a serial number or other identification number, the source of property, who holds title, the acquisition date, the cost of the property, the percentage of Federal participation in the cost of the property, the location, use and condition of the property, and any ultimate disposition data including the date of disposal and sale price of the property Subrecipient shall develop and implement a control system to prevent loss, damage or theft of property funded under this Grant.
- 10. <u>Site Visits</u>. DHS/FEMA and/or TDEM, through its authorized representatives, have the right at all reasonable times to make site visits to review project accomplishments and management control systems and to provide such technical assistance as may be required. If any site visit is made by DHS/FEMA on the premises of Subrecipient or a contractor under this Grant, Subrecipient shall provide and shall require its contractors to provide all reasonable facilities and assistance for the safety and convenience of the government representatives in the performance of their duties. All site visits and evaluations shall be performed in such a manner that will not unduly delay the work.

H. Procurement and Contracting.

- 1. <u>Procurements.</u> Subrecipient shall comply with all applicable federal, state, and local laws and requirements, including but not limited to proper competitive solicitation processes where required, for any procurement which utilizes federal funds awarded under this Grant in accordance with 2 C.F.R. 200. 318-326 and Appendix II to Part 200 (A-C) and (E-J)
- <u>Contract Provisions.</u> All contracts executed using funds awarded under this Grant shall contain the contract provisions listed under 2 C.F.R. 200.326 and Appendix II (A), Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.
- 3. Procurement activities must follow the most restrictive of Federal, State and Local procurement regulations:
 - a. Procurement by micro purchase
 - b. Procurement by small purchase
 - c. Procurement by sealed bid
 - d. Procurement by competitive proposal
 - e. Procurement by non-competitive proposal, <u>solely</u> when the award of a contract is unfeasible under the other methods

The State must be contacted for approval to use a noncompetitive procurement method. Failure to follow eligible procurement methods will result in ineligible costs. Other types of agreements for services must have State approval prior to use or execution. A copy of the local procurement policy must be provided to the State before initial payment.

The **cost plus a percentage of cost** and **percentage of construction** cost methods of contracting **are ineligible**.

<u>Must</u> perform **cost/price analysis** for every procurement action in excess of the Simplified Acquisition Threshold.

Must negotiate profit as a separate element where required.

- 4. Evidence of non-debarment for vendors must be documented through <u>http://www.sam.gov/portal/public/SAM</u> and_ <u>http://www.window.state.tx.us/procurement/prog/vendor_performance/debarred/</u> and submitted for review.
- 5. Comply with rules related to underutilized businesses (small and minority businesses, women's enterprises and labor surplus firms) at 2 CFR 200.321
- I. <u>Monitoring.</u> Subrecipient will be monitored periodically by federal, state or local entities, both programmatically and financially, to ensure that project goals, objectives, performance requirements, timelines, milestone completion, budget, and other program-related criteria are met.

TDEM, or its authorized representative, reserves the right to perform periodic desk/officebased and/or on-site monitoring of Subrecipient's compliance with this Grant and of the adequacy and timeliness of Subrecipient's performance pursuant to this Grant. After each monitoring visit, if the monitoring visit reveals deficiencies in Subrecipient's performance under this Grant, a monitoring report will be provided to the Subrecipient and shall include requirements for the timely correction of such deficiencies by Subrecipient. Failure by Subrecipient to take action specified in the monitoring report may be cause for suspension or termination of this Grant pursuant to the Suspension and/or Termination Section herein.

J. <u>Audit</u>.

- <u>Audit of Federal and State Funds</u>. Subrecipient shall arrange for the performance of an annual financial and compliance audit of funds received and performances rendered under this Grant as required by the Single Audit Act (OMB 2 C.F.R. 200.501, formerly A- 133). Subrecipient shall comply, as applicable, with Texas Government Code, Chapter 783, the Uniform Grant Management Standards (UGMS), the State Uniform Administrative Requirements for Grants and Cooperative Agreements.
- 2. <u>Right to Audit</u>. Subrecipient shall give the United States Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), the Comptroller General of the United States, the Texas State Auditor, TDEM, or any of their duly authorized representatives, access to and the right to conduct a financial or compliance audit of Grant funds received and performances rendered under this Grant. Subrecipient shall permit TDEM or its authorized representative to audit Subrecipient's records. Subrecipient shall provide any documents, materials or information necessary to facilitate such audit.
- Subrecipient's Liability for Disallowed Costs. Subrecipient understands and agrees that it shall be liable to TDEM for any costs disallowed pursuant to any financial or compliance audit(s) of these funds. Subrecipient further understands and agrees that reimbursement to TDEM of such disallowed costs shall be paid by Subrecipient

from funds that were not provided or otherwise made available to Subrecipient pursuant to this Grant or any other federal contract.

- 4. <u>Subrecipient's Facilitation of Audit</u>. Subrecipient shall take such action to facilitate the performance of such audit(s) conducted pursuant to this Section as TDEM may require of Subrecipient. Subrecipient shall ensure that this clause concerning the authority to audit funds received indirectly by subcontractors through Subrecipient and the requirement to cooperate is included in any subcontract it awards.
- 5. <u>State Auditor's Clause</u>. Subrecipient understands that acceptance of funds under this Grant acts as acceptance of the authority of the State Auditor's Office to conduct an audit or investigation in connection with those funds. Subrecipient further agrees to cooperate fully with the State Auditor's Office in the conduct of the audit or investigation, including providing all records requested. Subrecipient shall ensure that this clause concerning the State Auditor's Office's authority to audit funds and the requirement to cooperate fully with the State Auditor's Office is included in any subgrants or subcontracts it awards. Additionally, the State Auditor's Office shall at any time have access to and the rights to examine, audit, excerpt, and transcribe any pertinent books, documents, working papers, and records of Subrecipient relating to this Grant.

K. Retention and Accessibility of Records.

- <u>Retention of Records</u>. Subrecipient shall follow its own internal retention policy, or the state's retention policy, whichever is stricter. At a minimum, the subrecipient shall maintain fiscal records and supporting documentation for all expenditures of this Grant's funds pursuant to the applicable OMB 2 C.F.R. Subpart D Post Federal Award Requirements, §200.333-337, and this Grant. Subrecipient shall retain these records and any supporting documentation for a minimum of three (3) years from the later of the completion of this project's public objective, submission of the final expenditure report, any litigation, dispute, or audit. Records shall be retained for three (3) years after any real estate or equipment final disposition. The DHS or TDEM may direct Subrecipient to retain documents or to transfer certain records to DHS/FEMA custody when DHS/FEMA determines that the records possess long term retention value.
- Access to Records. Subrecipient shall give the United States Department of Homeland Security, the Comptroller General of the United States, the Texas State Auditor, TDEM, or any of its duly authorized representatives, access to and the right to examine all books, accounts, records, reports, files, other papers, things or property belonging to or in use by Subrecipient pertaining to this Grant including records concerning the past use of DHS/FEMA funds. Such rights to access shall continue as long as the records are retained by Subrecipient.

L. Changes. Amendments. Suspension or Termination

- <u>Modification</u>. DHS/FEMA or TDEM may modify this Grant after an award has been made. Once notification has been made in writing, any subsequent request for funds indicates Subrecipient's acceptance of the changes to this Grant. Any alteration, addition, or deletion to this Grant by Subrecipient is not valid.
- 2. Effect of Changes in Federal and State Laws. Any alterations, additions, or deletions to this Grant that are required by changes in federal and state laws, regulations or policy are automatically incorporated into this Grant without written amendment to this Grant and shall become effective upon the date designated by such law or regulation. In the event DHS/FEMA or TDEM determines that changes are necessary to this Grant after an award has been made, including changes to the period of performance or terms and conditions, Subrecipient shall be notified of the changes in writing. Once notification has Page 8 of 20

been made, any subsequent request for funds will indicate Subrecipient's acceptance of the changes to this Grant.

- 3. <u>Suspension</u>. In the event Subrecipient fails to comply with any term of this Grant, TDEM may, upon written notification to Subrecipient, suspend this Grant, in whole or in part, withhold payments to Subrecipient and prohibit Subrecipient from incurring additional obligations of this Grant's funds.
- 4. <u>Termination</u>. TDEM shall have the right to terminate this Grant, in whole or in part, at any time before the end of the Performance Period, if TDEM determines that Subrecipient has failed to comply with any term of this Grant. TDEM shall provide written notice of the termination and include:
 - a. The reason(s) for such termination;
 - b. The effective date of such termination; and
 - c. In the case of partial termination, the portion of this Grant to be terminated.
 - d. Appeal may be made to the Deputy Chief of the Texas Division of Emergency Management Recovery & Mitigation.
- M. <u>Enforcement</u>. If Subrecipient materially fails to comply with any term of this Grant, whether stated in a federal or state statute or regulation, an assurance, in a state plan or application, a notice of award, or elsewhere, TDEM or DHS/FEMA may take one or more of the following actions, as appropriate in the circumstances:
 - 1. Increased monitoring of projects and require additional financial and performance reports
 - 2. Require all payments as reimbursements rather than advance payments
 - 3. Temporarily withhold payments pending correction of the deficiency
 - 4. Disallow or deny use of funds and matching credit for all or part of the cost of the activity or action not in compliance;
 - 5. Request DHS/FEMA to wholly or partially de-obligate funding for a project
 - 6. Temporarily withhold cash payments pending correction of the deficiency by subrecipient or more severe enforcement action by TDEM or DHS/FEMA;
 - 7. Withhold further awards for the grant program
 - 8. Take other remedies that may be legally available

In taking an enforcement action, TDEM will provide Subrecipient an opportunity for a hearing, appeal, or other administrative proceeding to which Subrecipient is entitled under any statute or regulation applicable to the action involved.

The costs of Subrecipient resulting from obligations incurred by Subrecipient during a suspension or after termination of this Grant are not allowable unless TDEM or DHS/FEMA expressly authorizes them in the notice of suspension or termination or subsequently.

Other Subrecipient costs during suspension or after termination which are necessary and not reasonably avoidable are allowable if:

- The costs result from obligations which were properly incurred by Subrecipient before the effective date of suspension or termination, are not in anticipation of it, and in the case of a termination, are non-cancellable; and
- The costs would be allowable if this Grant were not suspended or expired normally at the end of the funding period in which the termination takes effects.

The enforcement remedies identified in this section, including suspension and termination, do not preclude Subrecipient from being subject to "Debarment and Suspension" under E.O.

12549. 2 C.F.R., Appendix II to Part 200, (I).

- N. <u>Conflicts of Interest</u>. The subrecipient will maintain written standards of conduct covering conflicts of interest and governing the actions of its employees engaged in the selection, award and administration of contracts and will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest or personal gain.
- O. <u>Closing of this Grant</u>. TDEM will close each subaward after receiving all required final documentation from the Subrecipient. If the close out review and reconciliation indicates that Subrecipient is owed additional funds, TDEM will send the final payment automatically to Subrecipient. If Subrecipient did not use all the funds received, TDEM will recover the unused funds.

At the completion and closure of all Subrecipient's projects (subawards), TDEM will request the Subrecipient to Certify the completion of all projects (subawards) in accordance with the grant terms and conditions to state there are no further claims under this subgrant. The closeout of this Grant does not affect:

- 1. DHS/FEMA or TDEM's right to disallow costs and recover funds on the basis of a later audit or other review;
- 2. Subrecipient's obligation to return any funds due as a result of later refunds, corrections, or other transactions;
- 3. Records retention requirements, property management requirements, and audit requirements, as set forth herein; and
- 4. Any other provisions of this Grant that impose continuing obligations on Subrecipient or that govern the rights and limitations of the parties to this Grant after the expiration or termination of this Grant.
- P. <u>Notices.</u> All notices and other communications pertaining to this agreement shall be delivered in electronic format and/or writing and shall be transmitted by fax, e-mail, personal hand-delivery (and receipted for) or deposited in the United States Mail, as certified mail, return receipt requested and postage prepaid, to the other party.

EXHIBIT A ASSURANCES - NON-CONSTRUCTION PROGRAMS See Standard Form 424B

As the duly authorized representative of Subrecipient, I certify that Subrecipient:

- Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this Grant.
- 2. Will give the Department of Homeland Security, the Texas Division of Emergency Management, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to this Grant and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
- Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest or personal gain.
- 4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
- 6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686 and 44 C.F.R. Part 19), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290dd-3 and 290ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which agreement for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
- 7. Will comply or has already complied with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
- Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
- Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §§74), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction sub-agreements.
- 10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the

program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.

 Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190 as amended by 42 U.S.C. 4311 et seq. and Executive Order (EO) 11514) which establishes national policy goals and procedures to protect and enhance the environment, including protection against natural disasters. To comply with NEPA for DHS grant-supported activities, DHS-FEMA requires the environmental aspects to be reviewed and evaluated before final action on the application; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood

(c) protection of wetlands pursuant to EO (1990; (d) evaluation of nood hazards in floodplains in accordance with EO (1988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C.

§§1451 et seq.); (f) comply with the Clean Air Act of 1977, (42 U.S.C. §§7401 et seq. and Executive Order 11738) providing for the protection of and enhancement of the quality of the nation's air resources to promote public health and welfare and for restoring and maintaining the chemical, physical, and biological integrity of the nation's waters; (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93- 205).

- Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
- Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
- 14. Will comply with P.L. 93-348, 45 C.F.R. 46, and DHS Management Directive 026-044 (Directive) regarding the protection of human subjects involved in research, development, and related activities supported by this Grant. "Research" means a systematic investigation, including research, development, testing, and evaluation designed to develop or contribute to general knowledge. See Directive for additional provisions for including humans in the womb, pregnant women, and neonates (Subpart B); prisoners (Subpart C); and children (Subpart D). See also state and local law for research using autopsy materials.
- 15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) which requires the minimum standards of care and treatment for vertebrate animals bred for commercial sale, used in research, transported commercially, or exhibited to the public according to the Guide for Care and Use of Laboratory Animals and Public Health Service Policy and Government Principals Regarding the Care and Use of Animals.
- Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.), which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
- Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133 (now OMB 2 C.F.R. 200.500), "Audits of States, Local Governments, and Non-Profit Organizations."
- Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, grant guidance, and policies governing this Grant.

EXHIBIT B ASSURANCES - CONSTRUCTION PROGRAMS See Standard Form 424D

As the duly authorized representative of Subrecipient, I certify that Subrecipient:

- Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of project described in this Grant.
- 2. Will give the Department of Homeland Security, the Texas Division of Emergency Management, the Comptroller General of the United States and, if appropriate, the State, the right to examine all records, books, papers, or documents related to this Grant and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
- 3. Will not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure nondiscrimination during the useful life of this Grant.
- Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
- 5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progressive reports and such other information as may be required by the awarding agency or State.
- 6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- 7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest or personal gain.
- Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards of merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
- Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
- Will comply with all Federal statutes relating to nondiscrimination. These 10. include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681 1683, and 1685-1686 and 44 C.F.R. Part 19), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29) U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C.

§§290dd-3 and 290ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statue(s) under which agreement for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statue(s) which may apply to the agreement.

- 11. Will comply or has already complied with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
- Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
- Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327- 333) regarding labor standards for federally- assisted construction sub-agreements.
- 14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
- 15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) as amended by 42 U.S.C. 4311 et seq. and Executive Order (EO) 11514 which establishes national policy goals and procedures to protect and enhance the environment, including protection against natural disasters; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) comply with the Clean Air Act of 1977, (42 U.S.C. §§7401 et seq. and Executive Order 11738) providing for the protection of and enhancement of the quality of the nation's air resources to promote public health and welfare and for restoring and maintaining the chemical, physical, and biological integrity of the nation's waters; (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
- Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
- Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq).
- 18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133 (now OMB 2 C.F.R. 200.500), "Audits of States, Local Governments, and Non-Profit Organizations."
- Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, grant guidance and policies governing this Grant.

Exhibit C

Certifications for Grant Agreements

The undersigned, as the authorized official, certifies the following to the best of his/her knowledge and belief.

- A. No Federal appropriated funds have been paid or will be paid by or on behalf of the undersigned to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee or a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- B. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee or a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL Disclosure of Lobbying Activities, in accordance with its instructions.
- C. The undersigned shall require that the language of this certification prohibiting lobbying be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
- D. As required by Executive Order 12549, Debarment and Suspension, and implemented at 28 C.F.R. Part 67, for prospective participants in primary covered transactions, as defined at 28 C.F.R. Part 67, Section 67.510. (Federal Certification), the Subrecipient certifies that it and its principals and vendors:
 - Are not debarred, suspended, proposed for debarment, declared ineligible, sentenced to a denial of Federal benefits by a State or Federal court, or voluntarily excluded from covered transactions by any Federal department or agency. Subrecipient can access debarment information by going to <u>www.sam.gov</u> and the State Debarred Vendor List at:_ <u>www.window.state.tx.us/procurement/prog/vendor_performance/debarred</u>.
 - 2 Have not within a three-year period preceding this Grant been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction, violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - 3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (D)(2) of this certification;
 - 4. Have not within a three-year period preceding this Grant had one or more public transactions (Federal, State, or local) terminated for cause or default; or
 - 5. Where Subrecipient is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this Grant. (Federal Certification).
- E. Federal funds will be used to supplement existing funds, and will not replace (supplant) funds that have been appropriated for the same purpose. Subrecipient may be required to supply documentation certifying that a reduction in non-federal resources occurred for reasons other than the receipt or expected receipt of federal funds.
- F. Subrecipient will comply with 2 C.F.R. Part 180, Subpart C as a condition of receiving grant funds and Subrecipient will require such compliance in any subgrants or contract at the next tier.
- G. Subrecipient will comply with the Drug-free Workplace Act, in Subpart B of 2 C.F.R. Part 3001.
- H Subrecipient is not delinquent on any Federal debt. Examples of relevant debt include delinquent payroll and other taxes, audit disallowances, and benefit overpayments. See OMB Circular A-129 and form SF-424, item number 17 for additional information and guidance.
- I. Subrecipient will comply with all applicable requirements of all other federal laws, executive orders, regulations, program and administrative requirements, policies and any other requirements governing this Grant.
- J. Subrecipient understands that failure to comply with any of the above assurances may result in suspension, termination or reduction of funds in this Grant.

EXHIBIT D

State of Texas Assurances

As the duly authorized representative of Subrecipient, I certify that Subrecipient:

- 1. Shall comply with Texas Government Code, Chapter 573, by ensuring that no officer, employee, or member of the Subrecipient's governing body or of the Subrecipient's contractor shall vote or confirm the employment of any person related within the second degree of affinity or the third degree of consanguinity to any member of the governing body or to any other officer or employee authorized to employ or supervise such person. This prohibition shall not prohibit the employment of a person who shall have been continuously employed for a period of two years, or such other period stipulated by local law, prior to the election or appointment of the officer, employee, or governing body member related to such person in the prohibited degree.
- 2. Shall insure that all information collected, assembled, or maintained by the Subrecipient relative to a project will be available to the public during normal business hours in compliance with Texas Government Code, Chapter 552, unless otherwise expressly prohibited by law.
- 3. Shall comply with Texas Government Code, Chapter 551, which requires all regular, special, or called meetings of governmental bodies to be open to the public, except as otherwise provided by law or specifically permitted in the Texas Constitution.
- 4. Shall comply with Section 231.006, Texas Family Code, which prohibits payments to a person who is in arrears on child support payments.
- 5. Shall not contract with or issue a license, certificate, or permit to the owner, operator, or administrator of a facility if the Subrecipient is a health, human services, public safety, or law enforcement agency and the license, permit, or certificate has been revoked by another health and human services agency or public safety or law enforcement agency.
- 6. Shall comply with all rules adopted by the Texas Commission on Law Enforcement pursuant to Chapter 1701, Texas Occupations Code, or shall provide the grantor agency with a certification from the Texas Commission on Law Enforcement that the agency is in the process of achieving compliance with such rules if the Subrecipient is a law enforcement agency regulated by Texas Occupations Code, Chapter 1701.
- Shall follow all assurances. When incorporated into a grant award or contract, standard assurances contained in the application package become terms or conditions for receipt of grant funds. Administering state agencies and subrecipients shall maintain an appropriate contract administration system to ensure that all terms, conditions, and specifications are met. (See UGMS Section _.36 for additional guidance on contract provisions).
- 8. Shall comply with the Texas Family Code, Section 261.101, which requires reporting of all suspected cases of child abuse to local law enforcement authorities and to the Texas Department of Child Protective and Regulatory Services. Subrecipient shall also ensure that all program personnel are properly trained and aware of this requirement.
- 9. Shall comply with all federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352), which prohibits discrimination on the basis of race, color, or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps and the Americans with Disabilities Act of 1990 including Titles I, II, and III of the Americans with Disability Act which prohibits recipients from discriminating on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities, 44 U.S.C. §§ 12101-12213; (d) the Age Discrimination Act of 1974, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to the nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290dd-3 and 290ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3001 et seq.), as amended, relating to nondiscrimination in the sale, rental, or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to this Grant.
- Shall comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally assisted construction subagreements.
- 11. Shall comply with requirements of the provisions of the Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (P.L. 91-646), which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
- 12. Shall comply with the provisions of the Hatch Political Activity Act (5 U.S.C. §§7321-29), which limit the political activity of employees whose principal employment activities are funded in whole or in part with Federal funds.
- 13. Shall comply with the minimum wage and maximum hours provisions of the Federal Fair Labor Standards Act and the Intergovernmental Personnel Act of 1970, as applicable.

- 14. Shall insure that the facilities under its ownership, lease, or supervision which shall be utilized in the accomplishment of the project are not listed on the Environmental Protection Agency's (EPA) list of Violating Facilities and that it will notify the Federal grantor agency of the receipt of any communication from the Director of the EPA Office of Federal Activities indicating that a facility to be used in the project is under consideration for listing by the EPA (EO 11738).
- 15. Shall comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, Public Law 93-234. Section 102(a) requires the purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any Federal financial assistance for construction or acquisition proposed for use in any area that has been identified by the Secretary of the Department of Housing and Urban Development as an area having special flood hazards.
- 16. Shall comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved state management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1977, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
- 17. Shall comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
- Shall assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
- 19. Shall comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) which requires the minimum standards of care and treatment for vertebrate animals bred for commercial sale, used in research, transported commercially, or exhibited to the public according to the Guide for Care and Use of Laboratory Animals and Public Health Service Policy and Government Principals Regarding the Care and Use of Animals.
- 20. Shall comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residential structures.
- 21. Shall comply with the Pro-Children Act of 1994 (Public Law 103-277), which prohibits smoking within any portion of any indoor facility used for the provision of services for children.
- 22. Shall comply with all federal tax laws and are solely responsible for filing all required state and federal tax forms.
- 23. Shall comply with all applicable requirements of all other federal and state laws, executive orders, regulations, and policies governing this program.
- 24. And its principals are eligible to participate and have not been subjected to suspension, debarment, or similar ineligibility determined by any federal, state, or local governmental entity and it is not listed on a state or federal government's terrorism watch list as described in Executive Order 13224. Entities ineligible for federal procurement have Exclusions listed at https://www.sam.gov/portal/public/SAM/.
- 25. Shall adopt and implement applicable provisions of the model HIV/AIDS workplace guidelines of the Texas Department of Health as required by the Texas Health and Safety Code, Ann., Sec. 85.001, et seq.

EXHIBIT E

Environmental Review

As the duly authorized representative of Subrecipient, I certify that Subrecipient:

- 1. shall assess its federally funded projects for potential impact to environmental resources and historic properties.
- shall submit any required screening form(s) as soon as possible and shall comply with deadlines established by TDEM. Timelines
 for the Environmental Planning and Historic Preservation (EHP) review process will vary based upon the complexity of the project
 and the potential for environmental or historical impact.
- 3. shall include sufficient review time within its project management plan to comply with EHP requirements. Initiation of any activity prior to completion of FEMA's EHP review will result in a non-compliance finding and TDEM will not authorize or release Grant funds for non-compliant projects.
- 4. as soon as possible upon receiving this Grant, shall provide information to TDEM to assist with the legally-required EHP review and to ensure compliance with applicable EHP laws and Executive Orders (EO) currently using the FEMA EHP Screening Form OMB Number 1660-0115/FEMA Form 024-0-01 and submitting it, with all supporting documentation, to TDEM for review. These EHP requirements include but are not limited to the National Environmental Policy Act, the National Historic Preservation Act, the Endangered Species Act, EO 11988 Floodplain Management, EO 11990 Protection of Wetlands, and EO 12898 Environmental Justice. Subrecipient shall comply with all Federal, State, and local EHP requirements and shall obtain applicable permits and clearances.
- 5. shall not undertake any activity from the project that would result in ground disturbance, facility modification, or purchase and use of sonar equipment without the prior approval of FEMA. These include but are not limited to communications towers, physical security enhancements involving ground disturbance, new construction, and modifications to buildings.
- 6. shall comply with all mitigation or treatment measures required for the project as the result of FEMA's EHP review. Any changes to an approved project description will require re-evaluation for compliance with EHP requirements before the project can proceed.
- 7. if ground disturbing activities occur during project implementation, Subrecipient shall ensure monitoring of ground disturbance and if any potential archeological resources are discovered, Subrecipient shall immediately cease construction in that area and notify FEMA and the appropriate State Historical Preservation Office.

EXHIBIT F

Additional Grant Conditions

- 1. Additional damage requiring a new Public Assistance project to be written must be reported within 60 days following the Project Scoping meeting with the State-Federal team (or FEMA process equivalent).
- 2. All work must be done prior to the approved project completion deadline assigned to each Project (POP). For projects written at 100% complete, documentation must be submitted within 90 days of the Recovery Scoping Meeting (or FEMA process equivalent) or within 90 days of the work completion date (both Hazard Mitigation and Public Assistance), whichever is later, regardless of whether the project has been obligated. Should additional time be required, a time extension request must be submitted which: a.) Identifies the projects requiring an extension. b.) Explains the reason for an extension. c.) Indicates the percentage of work that has been completed. d.) Provides an anticipated completion date. e) Provides detailed milestones documenting expected progress. The reason for an extension must be based on extenuating circumstances or unusual project requirements that are beyond the control of your jurisdiction/organization. Failure to submit a time extension request 90 days prior to the end of the period of performance may result in reduction or withdrawal of federal funds for approved work.
- 3. Any significant change to a project's approved Scope of Work must be reported and approved through TDEM and FEMA before starting the project. Failure to do so will jeopardize grant funding. The Subrecipient shall submit requests for cost overruns requiring additional obligations to TDEM, who will forward to FEMA for review and approval prior to incurring costs. Approval of these requests is not guaranteed and is subject to funding availability. Costs incurred prior to approval of any scope or budget/cost changes may be denied.
- 4. The Project Completion and Certification Report must be submitted to TDEM within 60 days of all approved work being completed for each project. If any project requires the purchase of insurance as a condition of receiving federal funds, a copy of the current policy must be attached to this report, or Duplication of Benefits form certifying other funds were received to complete the project.
- 5. A cost overrun appeal on small (\$128,900) Public Assistance projects must be reported to the Texas Division of Emergency Management (TDEM) within 60 days of completing the last small project in order to be considered for additional funding.
- 6. Appeals may be filed on any determination made by FEMA or TDEM. All appeals must be submitted to TDEM within 60 days from receiving written notice of the action you wish to appeal. Should you wish to appeal a determination contained in the project application, the 60 days will start the day the application is signed. Appeals for Alternative Projects will be subject to the terms of the signed agreement for the Alternative Project.
- 7. Public Assistance program projects will not receive funding until all of the requirements identified in the comments section of the Project Worksheet are met.
- 8. You may request a payment of funds on projects by initiating a Request for Reimbursement (RFR) in TDEM's Grant Management System (GMS) or an Advance of Funds Request (AFR), and including documentation supporting your request. Small Public Assistance projects are paid upon obligation and will be initiated by TDEM personnel. Payments for open projects must be requested at least quarterly if expenditures have been made in that quarter.
- 9. Subrecipients will be required to submit quarterly progress reports (QPR) for open large projects and all Hazard Mitigation Grant Program projects using TDEM's GMS. Your assigned Public Assistance and/or Mitigation Coordinator will coordinate the due date for your specific reporting. Reports shall record all

information in an accurate and timely manner for each quarter. Detailed information regarding each item of information required is available on the form in GMS. Public Assistance program small projects are typically exempt from quarterly reporting, however TDEM reserves the right to require QPRs on any smalls requiring a POP extension. The first quarterly report will be due at the end of the first full quarter following the quarter in which the project was obligated. No quarterlies are required for projects that Subrecipient has initiated a closeout request and has provided a certificate of completion. Failure to submit required quarterly reports for two or more quarters can result in withholding or deobligation of funding for Subrecipients until all reports are submitted and up-to-date.

- 10. Subrecipients expending \$750,000 or more in total Federal financial assistance in a fiscal year will be required to provide an audit made in accordance with OMB Uniform Guidance; Cost Principles, Audit, and Administrative Requirements for Federal Awards, Subpart F. A copy of the Single Audit must be submitted to your cognizant State agency or TDEM within nine months of the end of the subrecipient's fiscal year. Consult with your financial officer regarding this requirement. If not required to submit a single audit, a letter must be sent to TDEM certifying to this.
- 11. Subrecipients will not make any award to any party which is debarred or suspended, or is otherwise excluded from participation in the Federal assistance programs (EO 12549, Debarment and Suspension). Subrecipient must maintain documentation validating review of debarment list of eligible contractors.
- 12. Subrecipients must keep record of equipment acquired by federal funds for the life cycle of the equipment. A life cycle for most equipment will be three years, but could be longer. If the fair market value of a piece of equipment is valued over \$5,000, FEMA will have the right to a portion of proceeds if equipment is sold. If the fair market value of a piece of equipment is less than \$5,000, the property can either be retained, sold or designated as surplus with no further obligation to FEMA.
- 13. TDEM will be using the FEMA Public Assistance Delivery Model to facilitate the writing of project worksheets (Portal). Subrecipient will be responsible for establishing and maintaining an active account in the Portal and to provide and upload timely, all information requested that is needed to write accurate project worksheets. The Portal will provide the Subrecipient visibility of the entire project writing process.
- 14. TDEM requires the use of its Grant Management System (GMS) for Subrecipient grant management functions. Subrecipient will access GMS to initiate Requests for Reimbursements (RFR), Advance of Funds Requests (AFR), Time Extensions, Scope and Cost change requests, Quarterly Progress Reports, Project Closeouts, Appeals, and other items deemed necessary by TDEM. Requested forms and processes may be adjusted and changed to accommodate GMS processes and requirements. Subrecipient agrees to monitor GMS as necessary to properly manage and complete awarded projects under this agreement.
- 16.2 CFR 200.210(a)(15), 2 CFR 200.331(a)(1)(xiii) and (a)(4) make reference to indirect cost rates. The Subrecipient may use the negotiated Indirect Cost Rate approved by its cognizant agency, or may use the 10% de minimis rate of modified total direct costs (MTDC) (as per § 200.414) when receiving Management Costs.

EXHIBIT G

Match Certification
Additional Grant Certifications

Subrecipient certifies that it has the ability to meet or exceed the cost share required for all subawards (Projects) and amendments (versions) under this Grant Agreement.

Duplication of Program Statement

Subrecipient certifies there has not been, nor will there be, a duplication of benefits for this project.

Match Certification

Federal Debt Disclosure

Subrecipient certifies that it is not delinquent on any Federal Debt.

For Hazard Mitigation Projects Only:

Maintenance Agreement

Applicant certifies that if there is a Maintenance Agreement needed for this facility copy of that agreement will be provided to TDEM.

Environmental Justice Statement

Federal Executive Order 12898 compliance requirements – If there are any concentrations of low income or minority populations in or near the HMGP project:

1. Applicant certifies that the HMGP project result will not result in a disproportionately high or adverse effect on low income or minority populations.

OR

2. Applicant certifies that action will be taken to ensure achievement of environmental justice for low income and minority populations related to this HMGP project.

Formal Request for Information Policy

Timelines for providing complete and accurate information and documentation are crucial to the success of the overall Grant Program and to the timely completion and closure of awarded projects. TDEM has developed a framework to support this endeavor following a progressive series of communications for the subrecipient, referred to as Request for Information (RFI). TDEM will work with subrecipients throughout the Formal RFI process as communication is the key to success.

Scope: This policy will be applied to Public Assistance and Hazard Mitigation projects for management and closeout activities after obligation. This policy will address nonresponsive and inadequate responses to request for information. The timelines outlined below represent a single 30-day period, containing three milestones.

Generally, this 30-day RFI Timeline begins after TDEM sufficiently documents communication (minimum of two GMS documented forms of outreach) with the subrecipient that has been escalated up to the Regional Unit Chief regarding the requested documentation. However, nothing limits the ability of TDEM to issue either a First or Second Request.



RFI Timelines

First Formal Communication

Second Formal Communication

The TDEM Regional Unit Chief will issue a readreceipt, high importance email to the subrecipient's Authorized Agent(s) highlighting previous requests and allowing thirty calendar days to provide the requested information.

TDEM staff will issue a formal reminder through a letter signed by the Unit Chief which is then emailed to the subrecipient's Authorized Agent(s) and Certifying Official informing them of the final ten business days remaining to provide the requested information. The Assistant Chief is to be copied on the email for visibility. **Final Action**

If the RFI is not sufficiently answered, the Unit Chief will verbally contact the subrecipient's Authorized Agent(s) informing them of TDEM's intent to proceed with deobligation of funds or other remedies deemed appropriate by TDEM. Deobligation requires any previously paid funds to be returned to TDEM within thirty calendar days, per the State Administrative Plan.

Please initial by each Exhibit, acknowledging you have received them, understand them, and agree to abide by them.

 Assurances – Non-Construction Programs, hereinafter referred to as "Exhibit A"
 Assurances – Construction Programs, hereinafter referred to as "Exhibit B"
 Certifications for Grant Agreements, hereinafter referred to as "Exhibit C"
 State of Texas Assurances, hereinafter referred to as "Exhibit D"
 Environmental Review Certification, hereinafter referred to as "Exhibit E"
 Additional Grant Conditions, hereinafter referred to as "Exhibit F"
 Additional Grant Certifications, hereinafter referred to as "Exhibit G"
 Request for Information and Documentation referred to as "Exhibit H"

Please sign below to acknowledged acceptance of the grant and all exhibits in this agreement, and to abide by all terms and conditions.

Signature of Certifying Official

Date

Printed Name and Title



Agenda item request form: G. 8.

Hays County Commissioners Court

Date: 01/03/2023	
Requested By:	
Sponsor:	
Co-Sponsor:	

Jerry Borcherding Commissioner Shell Commissioner Smith

Agenda Item

Approve Utility Permits. SHELL/SMITH/BORCHERDING

Summary

TRN-2022-4992-UTL	PEC to install two new poles along the ROW of McGregor Lane and an overhead electric line crossing.
TRN-2022-5261-UTL	WTCPUA to bore across Trail Driver for a residential water line service inside a 3" casing.
TRN-2022-5292-UTL	Frontier to install approx. 4,866' of 1.25" HDPE fiber line via method of bore across Park S Drive.
TRN-2022-5293-UTL	Frontier to install approx. 19,338' of 1.25" HDPE fiber line at 36" minimum depth along Sandstone Trail, Shellstone Trail, Travetine Trail, Jasper Trail, etc.
TRN-2022-5555-UTL	Frontier to install approx. 1,821' of 1.25" HDPE fiber and 3-1.25" Ducts, 3-2'x3' HH's, and 9-17"x30" HHs via method of bore along Indian Creek Lane.
TRN-2022-5573-UTL	Frontier to install approx. 10,274' of 1.25" HDPE fiber line via method of bore along Moss Rose Lane and intersecting roads.
TRN-2022-5549-UTL	Crystal Clear to relocate a Crystal Clear 4" water line that crosses El Camino Way Dr. New line location will be ~91' from old line location. Existing water line to be abandoned in place.
TRN-2022-5554-UTL	PEC to upgrade the existing distribution line to 3-795AAC to accommodate forecasted increases in energy demands in the area. The poles will be re-spanned with a majority of the work taking place along Nutty Brown Road in easements on private properties and in a small portion of Hays County ROW.

Attachments

Permit Location Map Site Plan Permit Detail Site Plan Location Map Site Plan Permit Permit Site Plan Permit Site Plan Permit Site Plan Permit Site Plan Permit Location Map Site Plan Permit Location Map Site Plan



Hays County Transportation Department

2171 Yarrington Rd, Suite 200, Kyle Texas 78640 (P) 512-393-7385 (Web) <u>www.hayscountytx.com</u>

UTILITY PERMIT APPROVAL LETTER

** Notification must be given IN WRITING at least 24 hours before work begins and proper traffic control must be implemented throughout the work zone. **

The utility company or any of its representatives, engineers, contractors, or authorized agents agree to use Best Management Practices to minimize erosion and sedimentation resulting from the proposed installation AND will insure that traffic control measures complying with applicable portions of the Texas Manual of Uniform Traffic Control Devices will be installed and maintained during installation.

General Special Provisions:

1. Construction of this line will begin on or after 7/1/2022.

Utility Company Information:				
Name: PEC				
Address: 9115 Circle Drive A	Austin I X			
Phone: 8302258158				
Contact Name: Jeff Nieme	yer			
Engineer / Contractor Information	:			
Name: Pedernales Electric	Cooperative			
Address: 9115 Circle Drive A	Austin 78736			
Phone: 8302258158				
Contact Name: Jeff Nieme	yer			
Hays County Information:				
Utility Permit Number: TRN	N-2022-4992-UT	Ľ		
Type of Utility Service: high	n voltage electr	ic		
Project Description:	-			
Road Name(s): 2600 McGr	egor Road, , , ,	, , ,		
Subdivision:	-			
Commissioner Precinct:				
What type of $cut(s)$ will		<u> </u>		—
you be using ?	Boring	Trenching	X Overhead	∐ N/A
Authoriza	tion by Hays Co	ounty Transportatio	on Department	

The above-mentioned permit was approved in Hays County Commissioners Court on .

12/28/2022







Hays County Transportation Department

2171 Yarrington Rd, Suite 200, Kyle Texas 78640 (P) 512-393-7385 (Web) <u>www.hayscountytx.com</u>

UTILITY PERMIT APPROVAL LETTER

** Notification must be given IN WRITING at least 24 hours before work begins and proper traffic control must be implemented throughout the work zone. **

The utility company or any of its representatives, engineers, contractors, or authorized agents agree to use Best Management Practices to minimize erosion and sedimentation resulting from the proposed installation AND will insure that traffic control measures complying with applicable portions of the Texas Manual of Uniform Traffic Control Devices will be installed and maintained during installation.

General Special Provisions:

1. Construction of this line will begin on or after 9/1/22.

Utility Company Information:

o enreg	Name:				
	Address: TX				
	Phone:				
	Contact Name:				
Engine	eer / Contractor Informatio	n:			
	Name:				
	Address: TX				
	Phone:				
	Contact Name:				
Hays C	County Information:				
	Utility Permit Number: TR	N-2022-5261-UTI	_		
	Type of Utility Service:				
	Project Description:				
	Road Name(s): Trail Drive	er St, , , , , , , ,			
	Subdivision:				
	Commissioner Precinct:				
	What type of cut(s) will you be using ?	X Boring	Trenching	Overhead	🗌 N/A
	Authoriz	ation by Hays Co	ounty Transportation	on Department	
	The shove-mentioned	d narmit was an	proved in Havs Cou	inty Commissioner	s Court on

12/28/2022





Map Document: G:\Projects\WTCPUA\GIS\MXD\Mapbooks\2022\290 SYS-2022.mxd; Updated: 4/8/2022 8:41:15 AM





KYLE CITY LIMITS

PROPOSED WORK LOCATION

KYLE CITY VICINITY MAP



CONDUIT DESIGN

PROJECT TOTALS					
PICKUP POINT:	FRONTIER HUB 2020				
PATH LENGTH:	2" BORE FOR 4,866'				
MATERIALS: - - - - -	4,866' OF 1.25" HDPE (1) 3'X3' HANDHOLES (14) 17"X30" HANDHOLES (3) 24"x36" HANDHOLES (4) 30"X48" HANDHOLES				
<u>SHEET INDEX</u> - - - - - - - - - - - - - - -	CVR-COVER CONDUIT SHEET 1-2 GENERAL NOTES C.O.B. GEN NOTES ESC NOTES CONTACT SHEET TCPS DTL-DETAIL SHEETS 1-3 CONDUIT SHEETS CROSS SECTIONS				







VICINITY MAP- SHEET LAYOUT



PROPOSED WORK LOCATIONS

SHEET 1: -WINDY HILL RD -PARK SOUTH DR - BRANCHVIEW DR

SHEET 2: -BRANCHVIEW DR -PARK SOUTH DR SHEET 3: -PARK SOUTH DR



JOB ID: 5286718 COUNTY TITLE: CONDUIT DESIGN

STREET ADDRESS:

CITY/STATE: KYLE, TX

FTR ENGINEER: XXX

FTR INSPECTOR:



DRAWN BY: XXX

EST. #:

SHEET #: PLAN SHEET



GENERAL NOTES

FRONTIER COMMUNICATIONS

CONSTRUCTION SPECIFICATIONS

- Contact Frontier Engineer sixty (60) days prior to need of service in order to confirm compliance, order materials, and schedule work forces.
- FRONTIER COMMUNICATIONS, INCORPORATED RESERVES THE RIGHT TO REFUSE ANY CONDUIT, PULL BOXES, MANHOLES, OR UTILITY BOXES THAT DEVIATED FROM PLANS AND SPECIFICATIONS.
- CHANGES OR DEVIATIONS FROM THIS PLAN MUST BE • APPROVED BY FRONTIER.
- CONTACT THE FRONTIER INSPECTOR 48 HOURS BEFORE TRENCHING AND UPON COMPLETION OF YOUR SUBSTRUCTURES TO SCHEDULE THE FINAL INSPECTION.
- FRONTIER INSPECTOR SHALL BE PRESENT ON SITE WHEN CONTRACTOR NEEDS TO ACCESS ANY FRONTIER FACILITY.
- All conduit risers bends to have a minimum thirty-six (36) inch radius.
- All horizontal ninety degree bends (90°) shall have a radius of • not less than 12.5 feet and all vertical ninety degree bends (90°) shall have a radius of not less than three feet. No more than two (2) ninety degree (90°) horizontal bends shall be placed in any single run unless otherwise specified. Contact Frontier engineer concerning any required deviations.
- All conduit must be proven using a mandrel no less than $\frac{1}{2}$ " smaller than the conduit to be accepted. Mule tape shall be placed in all conduits proven. Wall to wall measurements must be taken with a mule tape.
- Accurate AS-BUILTS shall be provided to the Frontier inspector assigned to this project. AS-BUILTS shall include conduit section measurements, wall to wall footages, stations and offsets of AS-BUILT Frontier structures, and the cover to the top of the Frontier underground structure placed. Copy of the AS-BUILT conduit work order must be provided to the Frontier inspector assigned to your project.
- Contact MTCS 909-798-4400 at the inspection office for coordination of inspection

- Place temporary conduit cap on end of all conduits terminated • outside of a building.
- Place temporary conduit caps on all conduit ends exposed during • construction to prevent dirt and debris from entering conduit.
- Place temporary conduit caps on all exposed conduit ends at end • of each work day.
- Minimum separation from other utilities shall be a minimum of 12". • Conduit placed in same trench with primary power conduit must be separated by no less than twelve inches (12") of well-packed sand or three inches (3") of concrete. Minimum cover shall be no less than thirty (30") inches measured from the final grade of the street flow line to the top of Frontier structure unless noted otherwise. Ducts placed in the driven portion of the roadway must have no less than 48 inches (48") of cover to top of pipe measured at flow line of roadway.
- Frontier will not install cables not contained in conduit. •
- Provide source of ground at the telephone backboard location: (1) • #6 insulated copper wire (solid preferred) to power system ground. - (1) #6 insulated copper wire (solid preferred) to metallic structure such as UFER ground or building steel. - (1) #6 insulated copper wire (solid preferred) to metallic water pipe bonded to previously described permanent metallic structure. Leave adequate wire to extend six feet beyond the base of backboard. NOTE: THE FOLLOWING MUST NOT BE USED FOR GROUND SOURCES: ROOF TRUSSES, FLOOR JOINTS, BRACES, SPRINKLER SYSTEM PIPES, METAL ELECTRICAL DISTRIBUTION CONDUIT, AND HORIZONTAL STEEL MEMBERS LESS THAN 3/6" THICK.
- Provide cable racking and pulling irons as described in • attachments.
- Three to six weeks will be needed from the date of final inspection • for Frontier to start placing facilities. All paperwork and easements must also be completed, if applicable.
- Manholes to be adjusted to final grade as shown on the approved grading plan.
- Actual footages of conduit are needed to order materials. •

GENERAL NOTES CONTINUED

GEN	IERAL NOTES :	RIGHT OF WA
1.	ALL INSTALLATION WILL BE DONE SO BY DIRECTIONAL BORE ONLY AND NO	CONDUIT
2	UNNECESSARY PAVE CUTS WILL BE MADE. UTILITIES SHOWN LOCATED BY RECORD MAPS/FIELD OBSERVATIONS. EXACT	UNDERGROU
<u> </u>	LOCATIONS TO BE VERIFIED BEFORE CONSTRUCTION BEGINS.	AERIAL CA
3. 4.	ALL PROPOSED FACILITIES SHALL BE PLACED OUTSIDE EDGE OF PAVEMENT. PLACE ALL HDPE PARALLEL DUCT AT A RUNNING ALIGNMENT OF 5FT FROM	EDGE OF PAV
Б	RIGHT OF WAY (R/W), UNLESS STATED OTHERWISE.	CENTERLINE
5.	PRE-EXISTING UTILITIES.	WATER (
6.	ALL UTILITY MEASUREMENTS WILL BE RECORDED AS DISTANCE FROM EDGE OF	
7.	ALL WORK SHALL CONFORM WITH CITY OF BUDA 2017 UNIFIED DEVELOPMENT	
	CODE (THE "UDC") SUBSECTION 4.04.01 FOR "TREE PRESERVATION AND MITIGATION" WHEN APPLICABLE TO BUILD LOCATION.	SEWER
8.	ALL UTILITIES SHOWN OWNED BY CITY OF KYLE. ALL OTHER WATER FACILITIES	FIRE HYDF
	ARE UNDER PRIVATE JURISDICTION OUTSIDE OF CITY.	FLOWER
		HANDHO
		MANUO

- UTILITY V
- UTILITY ME
- UTILITY MA

LE	GEND
<u>Y (R/W)</u>	
<u>Г (F)</u>	XX'
ND (UG)	
ABLE	
<u>'EMENT</u>	
Ξ (C/L)	
<u>(W)</u>	W
IN (SD)	STRM
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RANT	\bigotimes
POT	FP
DLE	
LE	MH
ALVE	\bigotimes
ETER	
NHOLE	\bigcirc

CONTACTS

NORTH TEXAS

SR MANAGER: STEPHEN HIGGINS

COORDINATOR: GREG HAMMONS (BLUESTREAK, ERVIN CABLE, FUTURE) CMIII: CORY WEAVER (FUTURE) CMIII: BRANDON LEAL (BLUESTREAK, ERVIN CABLE)

SOUTH TEXAS

SR MANAGER: ANDY CRENSHAW

COORDINATOR: JOSH MAY (HOUSLEY-COLLEGE STATION, BRYAN; SDT-AUSTIN; FUTURE-AUSTIN) (979) 402-7446 CMIII: JOSEPH JARMUSCH, (956) 328-6644

COORDINATOR: STEVE CORTESE (HOUSLEY-SAN ANGELO, BROWNWOOD) CMIII: MARKUS WATSON

COORDINATOR: EDWARD WILLIAMS (FUTURE-GULF; HP-GULF; SDT-GULF; HOUSLEY-VALLEY) CMIII: BRADLEY CONNER

24" x 36" FRP FLARED BOX ASSEMBLY 18" to 36" DEPTHS ARMORCAST. FIBERGLASS ARMORCAST PRODUCTS COMPANY A6001974 ARMOCAST LOGO COVER LIFT PIN STANDARD MARKING BOLT DOWN POLYMER CONCRETE COVER WITH NON-SKID SURFACE POLYMER CONCRETE FRAME FIBERGLASS FLARED BOX

24"W x 36"L FRP FLARED BOX ASSEMBLIES Specify Depth Below

DESCRIPTION	NOMINAL SIZE	RATING	ANSI	PART NUMBER	APPROX.P WEIGHT	ALLE
Box & Cover	24" x 36" x 18"	10K	8	A6001974AX18	173 05.	5
Assembly	24" x 36" x 18"	20K	15	A6001974TAX18	242 lbs.	5
Box & Cover	24" x 35" x 24"	10K	8	A6001974AX24	174 lbs.	5
Assembly	24" x 36" x 24"	20K	15	A6001974TAX24	241 lbs.	5
Box & Cover	24" x 36" x 30"	10K	8	A6001974AX30	207 Ibs.	5
Assembly	24" x 36" x 30"	20K	15	A6001974TAX30	276 lbs.	5
Box & Cover	24" x 36" x 36"	10K	8	A6001974AX36	210 lbs.	5
Assembly	24" x 36" x 36"	20K	15	A6001974TAX36	260 lbs.	5

COMPONENTS

DESCRIPTION	W x L x D	RATING	ANSI	PART NUMBER	APPROX I WEIGHT	ALLE
Replacement	24" x 36"	10K	8	A6001975	95 lb6.	20
Covers	24" x 36"	20K	15	A6001975T	157 lb6.	20
	24" x 36" x 18"	10K/20K	8/15	A6001974X18	78 lbs.	5
Replacement	24" x 36" x 24"	10K/20K	8/15	A6001974X24	79 lbs.	5
Doxes	24" x 36" x 30"	10K/20K	8/15	A6001974X30	112 lbs.	5
	24" x 36" x 36"	10K/20K	8/15	A6001974X36	115 lbs.	5
Extensions	24" x 36" x 8"	10K/20K	8/15	A6001974EX8	50 lbs.	5
18" Boxes Only	24" x 36" x 16"	10K/20K	8/15	A6001974EX16	62 lbs.	3

· For sizes not shown please contact Armorcast Products for more information

www.armorcastprod.com Tel: (818) 982-3600 Fax: (818) 982-7742

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NOMINAL DIMENSIONS	RG&E COCE NO	DESCRIPTION	APPROX. W
17"x.30"x18"	04-0936	BOX AND COVER ASSEMBLY	184
17"x30"x18"	04-0928	BOX ONLY	132
17"x30"x3"	Q4-0117	3" EXTENSIONS	-17
	04-3720	LD ONLY	52

DESIGN LOADS STATIC DESIGN LOAD OF 8000 LBS. OVER A 10" X 10" AREA.

FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

4/25/36 072016#1LPGE_31.4xg = 2408_Amon_Precard











FIBER DISTRIBUTION HUB

TYPICAL 3'x3' DISTRIBUTION TUB







DIRECTIONAL BORE DETAILS



PUBLIC R/W TRENCH DETAIL

Fre				
JOB ID: 5286718 CITY CO	UNTY	DATE:	8/17/2	2
TITLE: CONDUIT DESIGN	1			
STREET ADDRESS:				
CITY/STATE: KYLE, TX				
FTR ENGINEER: XXX				
FTR INSPECTOR:				
	DRAWN E XXX	BY:		
	EST.#:		S	SHEET #:
LUCK GROVE				DTL 3





CITY OF AUSTIN TRAFFIC CONTROL DETAIL

Frontier		
COMMUNICATIONS		
JOB ID: 5286718 CITY COL	JNTY DATE:	8/17/22
TITLE: CONDUIT DESIGN		
STREET ADDRESS:		
CITY/STATE: KYLE, TX		
FTR ENGINEER: XXX		
FTR INSPECTOR:		
	DRAWN BY: XXX	
	EST.#:	SHEET #:
LUCK GROVE		DTL 5




DATE: FILE:

	LEGEND					
<u>~~~~</u>	Type 3 Barricade		Channelizing Devices			
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)			
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)			
-	Sign	\bigcirc	Traffic Flow			
\bigcirc	Flag		Flagger			

Posted Speed	Formula	Minimum Desirable Taper Lengths X X			Suggester Spacin Channe Dev	d Maximum ng of lizing ices	Minimum Sign Spacing "x"	Suggested Longitudinal Buffer Space
*		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	Distance	"B"
30		150′	165′	180′	30′	60′	120′	90′
35	$L = \frac{WS}{60}$	205′	225′	245′	35′	70′	160′	120′
40	00	265′	295′	320′	40′	80′	240′	155′
45		450′	495′	540′	45′	90′	320′	195′
50		500′	550′	600′	50′	100′	400′	240′
55	L = W S	550′	605′	660′	55′	110′	500′	295′
60	L "J	600′	660′	720'	60′	120′	600′	350′
65		650′	715′	780′	65′	130′	700′	410′
70		700′	770′	840′	70′	140′	800′	475′
75		750′	825′	900′	75′	150′	900′	540′

* Conventional Roads Only

XX Taper lengths have been rounded off.

L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

		TYPICAL U	JSAGE	
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	1	1		

GENERAL NOTES

- 1. Flags attached to signs where shown are REQUIRED.
- 2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
- 3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
- 4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
 See TCP(5-1) for shoulder work on divided highways, expressways and
- freeways. 7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D
- "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

	Texas Department	nt of Trai	nsportatio	n	Traffic Operations Division Standard
CW20-1D 48" X 48" (Flags-	TRAFFIC CONVEN SHOU TCP	CON TION LDEF (1-	TROL IAL RO WOR	PL/ OAD K	AN ,
See notes I & ()	FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
	© TxDOT December 1985	CONT	SECT JOB		HIGHWAY
	2-94 4-98 8-95 2-12 1-97 2-18	DIST	COUNT	Y	SHEET NO.
	151				



No warranty of any for the conversion is governed by the "Texas Engineering Practice Act". purpose whotseever. TXDOI assumes no responsibility nots or finctions tracilles or dominas resulting for DISCLAIMER: The use of this standard kind is made by TXDDT for any of this standard to other for

LEGEND											
<i></i>	Туре	Type 3 Barricade				Channelizing Devices (CD)s)		
þ	Heav	Heavy Work Vehicle									
┏	Autor Assis (AFA[mated stance))	Flagg Devi	er Ce	M	ŀ	Portable Changeable Message Sign (PCMS)				
<u> </u>	Sign				$\langle \zeta \rangle$		Traf	fic Flow			
\bigtriangleup	Flag				L	С	Flag	ger			
Formula	D Tap	Minimur Vesirab Ver Lend XX	n le gths	Suggested Ma Spacing o Channelizin Devices		iximum of ng	Minimum Sign Spacing	Suggested S [.] Longitudinal Buffer Space D		topping Sight istance	
	10' Offset	11' Offset	12' Offset	On Tap	a Der	0 Tar	n a ngent	Distance	"B"		
	150′	165′	180′	3	0′		60′	120′	90′	2	200′
$L = \frac{WS}{60}$	205′	225′	245′	3	5′		70′	160′	120′	2	250'
00	265′	295′	320′	4	0′		80′	240′	155′	н) (505 <i>1</i>
	450 <i>'</i>	495′	540′	4	5′		90′	320′	195′	1.1	360 <i>'</i>
	500′	550′	600′	5	0′	1	00′	400′	240′	4	25′
L = W S	550'	605′	660′	5	5′	1	10′	500′	295′	4	95′
L 113	600′	660′	720′	6	0′	1	20′	600′	350′	ц.)	70′
	650′	7151	780′	6	5′	1	30′	700′	410′	e	645 <i>′</i>
	700′	770′	840′	7	0′	1	40′	800′	475'		'3O'
	750′	825′	900′	7	5′	1	50′	900′	540′	8	320'

* Conventional Roads Only

XX Taper lengths have been rounded off. L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	1	✓		

1. Flags attached to signs where shown are REQUIRED.

2. AFADs shall only be used in situations where there is one lane of approaching traffic in the direction to be controlled.

3. Adequate stopping sight distance must be provided to each AFAD location for approaching traffic. (See table above).

4. Each AFAD shall be operated by a qualified/certified flagger. Flaggers operating AFADs shall not leave them unattended while they are in use.

5. One flagger may operate two AFADs only when the flagger has an unobstructed view of both AFADs and of the approaching traffic in both directions.

6. When pilot cars are used, a flagger controlling traffic shall be located on each approach. AFADs shall not be operated by the pilot car operator.

7. All AFADs shall be equipped with gate arms with an orange or fluorescent red-orange flag attached to the end of the gate arm. The flag shall be a minimum of 16" square. 8. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or

work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA. 9. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to

those shown in order to protect wider work spaces. 10. Flaggers should use two-way radios or other methods of communication to control traffic. 11. Length of work space should be based on the ability of flaggers to communicate. 12. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain stopping sight distance to the AFAD. 13. Channelizing devices on the center line may be omitted when a pilot car is leading traffic and approved by the Engineer.

14. The R1-7aT "WAIT ON STOP" sign and the R1-8aT "GO ON SLOW" sign shall be installed at the AFAD location on separate supports or they may be fabricated as one 48" x 30" sign. They shall not obscure the face of the STOP/SLOW AFAD. 15. The R10-6 "STOP HERE ON RED" arrow sign shall be offset so as not to obscure the lenses of the AFAD.

Traffic Operations Texas Department of Transportation Standard							
TRAFFIC CONTROL PLAN AUTOMATED FLAGGER ASSISTANCE DEVICES (AFADS)							
	ICP	(1)	-6) - 18	8		
FILE:	tcp1-6-18.dgn	DN:		СК: [w:	CK:	
© TxDOT	February 2012	CONT	SECT	JOB		HIGHWAY	
0.10	REVISIONS						
2-18		DIST		COUNTY		SHEET NO.	
156							



LE	GEND
RIGHT OF WAY (R/W)	
CONDUIT (F)	XX"
UNDERGROUND (UG)	
AERIAL CABLE	
EDGE OF PAVEMENT (EOP)	
CENTERLINE (C/L)	
WATER (SD)	·
STORM DRAIN (STRM)	STRM
SEWER (S)	
FIRE HYDRANT	•
FLOWERPOT	FP
HANDHOLE	
MANHOLE	MH
UTILITY VALVE	\otimes
UTILITY METER	
UTILITY MANHOLE	Ô

AT HANDHOLE LOCATIONS 1: DIG BORE PIT, PLACE 3'x3' HANDHOLE

AT HANDHOLE LOCATIONS 2-3, 9-12: DIG BORE PIT, PLACE 17"x30" HANDHOLE

AT HANDHOLE LOCATIONS 4, 8: DIG BORE PIT, PLACE 24"x36" HANDHOLE

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AT HANDHOLE LOCATIONS 5-7: DIG BORE PIT, PLACE 30"x48" HANDHOLE

Frontier					
JOB ID: 5286718 CITY CO	UNTY	DATE:	8/17/	22	
TITLE: CONDUIT DESIGN	l				
STREET ADDRESS: WINDY	HILL RI	C			
CITY/STATE: KYLE, TX					
FTR ENGINEER: XXX					
FTR INSPECTOR:					
	DRAWN I XXX	BY:			
	EST. #:			SHEET #:	
LUCK GROVE				1	





LE	GEND
RIGHT OF WAY (R/W)	
CONDUIT (F)	xx
UNDERGROUND (UG)	
AERIAL CABLE	
EDGE OF PAVEMENT (EOP)	
CENTERLINE (C/L)	
WATER (SD)	
STORM DRAIN (STRM)	STRM
SEWER (S)	
FIRE HYDRANT	\bullet
FLOWERPOT	FP
HANDHOLE	
MANHOLE	MH
UTILITY VALVE	\otimes
UTILITY METER	
UTILITY MANHOLE	Ô

AT HANDHOLE LOCATIONS 13, 15, 17: DIG BORE PIT, PLACE 17"x30" HANDHOLE

AT HANDHOLE LOCATIONS 14, 16: DIG BORE PIT, PLACE 24"x36" HANDHOLE

N

Frontier COMMUNICATIONS					
JOB ID: 5286718 CITY COU	JNTY	DATE:	8/17/	/22	
TITLE: CONDUIT DESIGN					
STREET ADDRESS: BRANC	HVIEW	DR			
CITY/STATE: KYLE, TX					
FTR ENGINEER: XXX					
FTR INSPECTOR:					
	DRAWN I XXX	BY:			
EST. #: SHEET #:					
LUCK GROVE				2	





LEGEND				
RIGHT OF WAY (R/W)				
CONDUIT (F)				
UNDERGROUND (UG)				
AERIAL CABLE				
EDGE OF PAVEMENT (EOP)				
CENTERLINE (C/L)				
WATER (SD)				
STORM DRAIN (STRM)	STRM			
SEWER (S)				
FIRE HYDRANT	•			
FLOWERPOT	FP			
HANDHOLE				
MANHOLE	MH			
UTILITY VALVE	\otimes			
UTILITY METER				
UTILITY MANHOLE	Ô			

AT HANDHOLE LOCATIONS 18-22: DIG BORE PIT, PLACE 17"x30" HANDHOLE

Frontier					
JOB ID: 5286718 CITY COU	INTY	DATE:	8/17/	/22	
TITLE: CONDUIT DESIGN					
STREET ADDRESS: PARK S		DR			
CITY/STATE: KYLE, TX					
FTR ENGINEER: XXX					
FTR INSPECTOR:					
DRAWN BY: XXX					
	EST. #:			SHEET #:	
LUCK GROVE				3	

CROSS SECTION LOOKING NORTH AT PARK SOUTH DR





Frontier							
COMP	IUNICATI	UNS					
JOB ID: 5286718 CITY COU	JNTY DATE:	8/17/22					
TITLE: CONDUIT DESIGN	l						
STREET ADDRESS:							
CITY/STATE: KYLE, TX							
FTR ENGINEER: XXX							
FTR INSPECTOR:							
DRAWN BY: XXX							
	EST.#:	SHEET #:					
LUCK GROVE		TYPICAL 1 A					

CROSS SECTION LOOKING NORTH AT BRANCHVIEW DR





Frontier						
COMM	1UNICATI	ONS				
JOB ID: 5286718 CITY COU	UNTY DATE:	8/17/22				
TITLE: CONDUIT DESIGN	1					
STREET ADDRESS:						
CITY/STATE: KYLE, TX						
FTR ENGINEER: XXX						
FTR INSPECTOR:						
DRAWN BY: XXX						
	EST.#:	SHEET #:				
LUCK GROVE		TYPICAL 2 A				

CROSS SECTION LOOKING WEST AT WINDY HILL RD





Fre	ont		ŗ
JOB ID: 5286718 CITY COL		: 8/17/2	22
TITLE: CONDUIT DESIGN			
STREET ADDRESS:			
CITY/STATE: KYLE, TX			
FTR ENGINEER: XXX			
FTR INSPECTOR:			
	DRAWN BY: XXX		
	EST. #:		SHEET #:
LUCK GROVE			TYPICAL 3 A



Hays County Transportation Department

2171 Yarrington Rd, Suite 200, Kyle Texas 78640 (P) 512-393-7385 (Web) <u>www.hayscountytx.com</u>

UTILITY PERMIT APPROVAL LETTER

** Notification must be given IN WRITING at least 24 hours before work begins and proper traffic control must be implemented throughout the work zone. **

The utility company or any of its representatives, engineers, contractors, or authorized agents agree to use Best Management Practices to minimize erosion and sedimentation resulting from the proposed installation AND will insure that traffic control measures complying with applicable portions of the Texas Manual of Uniform Traffic Control Devices will be installed and maintained during installation.

General Special Provisions:

1. Construction of this line will begin on or after 9/1/2022.

Utility	Company Information: Name: Frontier Communi Address: 7979 N Belt Line Phone: 2144822354 Contact Name: Brandon L	cations Rd Irving TX .eal			
Engine	eer / Contractor Informatio Name: Blue Streak Teleco Address: 3200 Gardenbro Phone: 8179335885 Contact Name: Jesse Land	n: mmunications ok Dr Farmers B caster	ranch TX 75234		
Hays (County Information: Utility Permit Number: TR Type of Utility Service: FIE Project Description: Road Name(s): PARK S D Subdivision: Commissioner Precinct:	N-2022-5292-UT BER OPTIC R, WINDY HILL I	'L RD, BRANCHVIEW I	DR,,,,,	
	What type of cut(s) will you be using ?	X Boring	Trenching	Overhead	🗌 N/A
	Authoriz The above-mentione	ation by Hays Co d permit was ap	ounty Transportatio proved in Hays Cou	on Department unty Commissioner	s Court on .

09/21/2022



Hays County Transportation Department

2171 Yarrington Rd, Suite 200, Kyle Texas 78640 (P) 512-393-7385 (Web) <u>www.hayscountytx.com</u>

UTILITY PERMIT APPROVAL LETTER

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General Special Provisions:

1. Construction of this line will begin on or after 9/1/2022.

Utility Company Information: Name: Frontier Communications Address: 7979 N Belt Line Rd Irving TX Phone: 2144822354 Contact Name: Brandon Leal

Engineer / Contractor Information:

Name: Blue Streak Telecommunications Address: 3200 Gardenbrook Dr Farmers Branch TX 75234 Phone: 8179335885 Contact Name: Jesse Lancaster

Hays County Information:

Utility Permit Number: TRN-2022-5293-UTL
Type of Utility Service: FIBER OPTIC
Project Description:
Road Name(s): SHELLSTONE TRL, SANDSTONE TRL, TRAVERTINE TRL, JASPER TRL, VERMILLION
MARBLE TRL, ETC., , ,
Subdivision:
Commissioner Precinct:

What type of cut(s) will	× Boring	Trenching	X Overhead	□ N/A
you be using ?				

Authorization by Hays County Transportation Department

The above-mentioned permit was approved in Hays County Commissioners Court on .

09/21/2022



BUDA CITY LIMITS

PROPOSED WORK LOCATION

BUDA CITY VICINITY MAP



CONDUIT DESIGN

PROJECT TOTALS						
PICKUP POINT:	FRONTIER HUB 2016					
PATH LENGTH:	2" BORE FOR 19,338'					
<u>MATERIALS:</u> - - - - -	19,338' OF 1.25" HDPE (71) 17"X30" HANDHOLES (46) 30"x48" HANDHOLES (5) 2'X3' HANDHOLES (1) 3'X3' HANDHOLES					
<u>SHEET INDEX</u> - - - - - - - - - - - - - -	CVR-COVER CONDUIT SHEET 1-2 GENERAL NOTES C.O.B. GEN NOTES ESC NOTES CONTACT SHEET TCPS DTL-DETAIL SHEETS 1-7 CONDUIT SHEETS					



CITY OF BUDA ENGINEERING DEPARTMENT

SIGNATURE



EST. #:

LUCK GROVE

SHEET #:

CVR





VICINITY MAP- SHEET LAYOUT

PROPOSED WORK LOCATIONS

SHEET 1: -HILLSIDE TER -SHELLSTONE TRL -TRAVERTINE TRL -SANDSTONE TRL SHEET 2: -TRAVERTINE TRL -JASPER TRL -VERMILLION MARBLE TRL SHEET 3: -VERMILLION MARBLE TRL -JASPER TRL SHEET 4: -DOLOMITE TRL -FLAGSTONE TRL -SANDSTONE TRL -STONEFIELD TR

SHEET 5: -FOSSILSTONE TRL -TRAVERTINE TRL -STONEFIELD TRL -RED MORGANITE TRL

SHEET 6: -STONEFIELD TRL -CORALSTONE TRL -BRECCIA CV -SANDSTONE TRL -ALABASTER DR

SHEET 7: -RED MORGANITE TRL -SANDSTONE TRL -CORALSTONE TRL



JOB ID: 5286715 COUNTY TITLE: CONDUIT DESIGN

STREET ADDRESS:

CITY/STATE: BUDA, TX

FTR ENGINEER: XXX

FTR INSPECTOR:



DRAWN BY: XXX

EST. #:

SHEET #: PLAN SHEET



GENERAL NOTES

FRONTIER COMMUNICATIONS

CONSTRUCTION SPECIFICATIONS

- Contact Frontier Engineer sixty (60) days prior to need of service in order to confirm compliance, order materials, and schedule work forces.
- FRONTIER COMMUNICATIONS, INCORPORATED RESERVES THE RIGHT TO REFUSE ANY CONDUIT, PULL BOXES, MANHOLES, OR UTILITY BOXES THAT DEVIATED FROM PLANS AND SPECIFICATIONS.
- CHANGES OR DEVIATIONS FROM THIS PLAN MUST BE • APPROVED BY FRONTIER.
- CONTACT THE FRONTIER INSPECTOR 48 HOURS BEFORE TRENCHING AND UPON COMPLETION OF YOUR SUBSTRUCTURES TO SCHEDULE THE FINAL INSPECTION.
- FRONTIER INSPECTOR SHALL BE PRESENT ON SITE WHEN CONTRACTOR NEEDS TO ACCESS ANY FRONTIER FACILITY.
- All conduit risers bends to have a minimum thirty-six (36) inch radius.
- All horizontal ninety degree bends (90°) shall have a radius of • not less than 12.5 feet and all vertical ninety degree bends (90°) shall have a radius of not less than three feet. No more than two (2) ninety degree (90°) horizontal bends shall be placed in any single run unless otherwise specified. Contact Frontier engineer concerning any required deviations.
- All conduit must be proven using a mandrel no less than $\frac{1}{2}$ " smaller than the conduit to be accepted. Mule tape shall be placed in all conduits proven. Wall to wall measurements must be taken with a mule tape.
- Accurate AS-BUILTS shall be provided to the Frontier inspector assigned to this project. AS-BUILTS shall include conduit section measurements, wall to wall footages, stations and offsets of AS-BUILT Frontier structures, and the cover to the top of the Frontier underground structure placed. Copy of the AS-BUILT conduit work order must be provided to the Frontier inspector assigned to your project.
- Contact MTCS 909-798-4400 at the inspection office for coordination of inspection

- Place temporary conduit cap on end of all conduits terminated • outside of a building.
- Place temporary conduit caps on all conduit ends exposed during • construction to prevent dirt and debris from entering conduit.
- Place temporary conduit caps on all exposed conduit ends at end • of each work day.
- Minimum separation from other utilities shall be a minimum of 12". • Conduit placed in same trench with primary power conduit must be separated by no less than twelve inches (12") of well-packed sand or three inches (3") of concrete. Minimum cover shall be no less than thirty (30") inches measured from the final grade of the street flow line to the top of Frontier structure unless noted otherwise. Ducts placed in the driven portion of the roadway must have no less than 48 inches (48") of cover to top of pipe measured at flow line of roadway.
- Frontier will not install cables not contained in conduit. •
- Provide source of ground at the telephone backboard location: (1) • #6 insulated copper wire (solid preferred) to power system ground. - (1) #6 insulated copper wire (solid preferred) to metallic structure such as UFER ground or building steel. - (1) #6 insulated copper wire (solid preferred) to metallic water pipe bonded to previously described permanent metallic structure. Leave adequate wire to extend six feet beyond the base of backboard. NOTE: THE FOLLOWING MUST NOT BE USED FOR GROUND SOURCES: ROOF TRUSSES, FLOOR JOINTS, BRACES, SPRINKLER SYSTEM PIPES, METAL ELECTRICAL DISTRIBUTION CONDUIT, AND HORIZONTAL STEEL MEMBERS LESS THAN 3/6" THICK.
- Provide cable racking and pulling irons as described in • attachments.
- Three to six weeks will be needed from the date of final inspection • for Frontier to start placing facilities. All paperwork and easements must also be completed, if applicable.
- Manholes to be adjusted to final grade as shown on the approved grading plan.
- Actual footages of conduit are needed to order materials. •

GENERAL NOTES CONTINUED

GEN	IERAL NOTES :	RIGHT OF WA
1.	ALL INSTALLATION WILL BE DONE SO BY DIRECTIONAL BORE ONLY AND NO	CONDUIT
	UNNECESSARY PAVE CUTS WILL BE MADE.	
2.	UTILITIES SHOWN LOCATED BY RECORD MAPS/FIELD OBSERVATIONS. EXACT	
_	LOCATIONS TO BE VERIFIED BEFORE CONSTRUCTION BEGINS.	AERIAL CA
3.	ALL PROPOSED FACILITIES SHALL BE PLACED OUTSIDE EDGE OF PAVEMENT.	EDGE OF PAVE
4.	PLACE ALL HDPE PARALLEL DUCT AT A RUNNING ALIGNMENT OF 5FT FROM	(EOP)
5	RIGHT OF WAY (R/W), UNLESS STATED OTHERWISE.	CENTERLINE
5.	ALL FARALLEL DUCT WILL REMAIN DISTANCE OF SET OR GREATER FROM PRE-EXISTING LITHITIES	
6	ALL UTILITY MEASUREMENTS WILL BE RECORDED AS DISTANCE FROM EDGE OF	WATER (\
0.	PAVEMENT UNLESS OTHERWISE SPECIFIED.	SEWER (
7.	ALL WORK SHALL CONFORM WITH CITY OF BUDA 2017 UNIFIED DEVELOPMENT	
	CODE (THE "UDC") SUBSECTION 4.04.01 FOR "TREE PRESERVATION AND	FIRE HYDR
	MITIGATION" WHEN APPLICABLE TO BUILD LOCATION.	
		FLOWERF

HANDHO

MANHO

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UTILITY ME

UTILITY MAN

LE	GEND	
<u>AY (R/W)</u>		
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CITY OF BUDA GENERAL CONSTRUCTION NOTES

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE 1. ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS. THE CITY OF BUDA MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

2. THESE PLANS, PREPARED BY THE CITY OF BUDA DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS HAT MAY NOR OR HEREAFTER BE INCORPORATED INTO THESE PLANS.

3. CONTRACTOR SHALL CONTACT THE CITY OF BUDA'S ENGINEER (512-312-0084) A MINIMUM OF TWO WORKING DAYS IN ADVANCE OF BLOCKING TRAFFIC LANES AND A MINIMUM OF SIX WORKING DAYS IN ADVANCE OF SCHEDULED DETOURING OF TRAFFIC LANES.

CONTRACTOR TO GIVE NOTICE TO ALL AUTHORIZED INSPECTORS. 4. SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR TO ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK. REQUIRED PERMITS THAT CAN BE ISSUED TO CONTRACTOR TO BE OBTAINED AT HIS EXPENSE.

CONTRACTOR TO COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES. 5. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.

CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, 6. CONTROL POINTS, AND PROJECT ENGINEERING REFERENCE POINT, REESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PUBLIC LAND SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO OWNER.

7. CONTRACTOR TO CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES. DUST CONTROL SHALL BE ACHIEVED BY THE APPLICATION OF WATER BY AN APPROVED SPRINKLER IN AMOUNTS SUFFICIENT TO CONTROL THE DUST TO THE SATISFACTION OF THE ENGINEER (NO SEPARATE PAY).

8. BURNING IS NOT ALLOWED ON THIS PROJECT.

9. DEMOLITION PERMITS (IF NEEDED) ARE TO BE OBTAINED BY THE CONTRACTOR.

10. ACQUISITION OF RIGHT OF WAY AND/OR EASEMENT IS THE RESPONSIBILITY OF THE CITY OF BUDA.

11. THE CONTRACTOR IS TO OBTAIN PERMIT PRIOR TO PERFORMING ANY WORK IN THE PUBLIC RIGHT-OF-WAY.

12. CONTRACTOR SHALL REPAIR ALL STREET CROSSINGS. DRIVEWAYS AND DITCHES TO THEIR ORIGINAL CONDITION OR BETTER. STREET CROSSINGS SHALL BE REPAIRED WITHIN 10 WORKING DAYS AFTER CROSSING IS MADE, UNLESS PRIOR APPROVAL IS OBTAINED TO THE CONTRARY. 13. ALL DAMAGE CAUSED DIRECTLY OR INDIRECTLY TO THE STREET SURFACE OR SUBSURFACE OUTSIDE OF THE PAVEMENT CUT AREA SHALL BE REGARDED AS PART OF THE STREET CUT REPAIR. THIS INCLUDES ANY SCRAPES, GOUGES, CUTS, CRACKING, DEPRESSIONS AND/OR ANY OTHER DAMAGE CAUSED BY THE CONTRACTOR DURING THE EXECUTION OF THE WORK. THESE AREAS WILL BE INCLUDED IN THE TOTAL AREA OF REPAIR. THE AREAS OF REPAIR SHALL BE SAW CUT IN STRAIGHT, NEAT LINES PARALLEL TO THE UTILITY TRENCH. ALL REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE AND SHALL MEET ALL CITY TESTING REQUIREMENTS AND SPECIFICATIONS.

14. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATION OF THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENTS PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 EAST 6TH STREET. ASUTIN. TX.)

15. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS. THROUGHOUT THE CONSTRUCTION, AND AT THE COMPLETION OF THE CONSTRUCTION, 16. THE CONTRACTOR IS TO ENSURE THAT DRAINAGE OF STORM WATER RUNOFF IS NOT BLOCKED. 17. ALL EXCESS EXCAVATED MATERIAL AND SOIL IS TO BECOME PROPERTY OF CONTRACTOR AND TO BE REMOVED FROM SITE. (NO SEPARATE PAY.) 18. ALL CULVERTS REMOVED FROM CONSTRUCTION SHALL BE REPLACED TO ORIGINAL GRADE; ROAD DITCH SHALL BE GRADED TO PROVIDE FOR AN EVEN GRADE AND SECTION BETWEEN EXISTING CULVERTS. ALL CULVERTS SHALL BE CLEAN AND FREE OF DEBRIS DURING AND AFTER CONSTRUCTION.

19. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE CITY OF BUDA AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS AND TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PRIVATE PROPERTY, WHICH OCCURRED AS A RESULT OF ANY PORTION OF THIS PROJECT. ANY DAMAGE TO PRIVATE PROPERTY SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. THE CONTRACTOR SHALL COORDINATE ALL REPAIRS TO PRIVATE PROPERTY WITH THE PROPERTY OWNER. CONTRACTOR SHALL PAY AND/OR SETTLE WITH PRIVATE PROPERTY OWNER FOR ALL COSTS RELATED TO ANY DAMAGE. THE CITY OF BUDA WILL NOT PROVIDE SEPARATE PAY FOR REPAIR OF ANY DAMAGES. **REIMBURSEMENTS OR SETTLEMENTS.**

CITY OF BUDA EROSION AND SEDIMENTATION CONTROL NOTES

THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION 1. CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).

2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN'S ENVIRONMENTAL CRITERIA MANUAL AS ADOPTED BY THE CITY OF BUDA.

IF TREES DO NOT EXIST WITHIN THE PROJECT LIMITS, 3. THEN TREE PROTECTION WILL NOT BE REQUIRED.

A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE 4. CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE CONTRACTOR SHALL NOTIFY THE CITY OF BUDA ENGINEERING DEPARTMENT, 312-0084, AT LEAST THREE DAYS PRIOR TO THE MEETING DATE.

5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE PLAN MAY BE REQUIRED BY THE INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.

6. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR THE MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHED SIX (6) INCHES.

PERMANENT EROSION CONTROL:

- 1. ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW. A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK) AND BETWEEN THE CURB AND **RIGHT-OF-WAY LINE.**
- 2. THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE AS SPECIFIED IN THE CITY OF AUSTIN STANDARD SPECIFICATION 604S, AS ADOPTED BY THE CITY OF BUDA.

DUST CONTROL:

1. DUST CONTROL METHODS ARE REQUIRED AS PER CITY OF AUSTIN'S **ENVIRONMENTAL CRITERIA MANUAL SECTION 1.4.5.D AS ADOPTED** BY THE CITY OF BUDA.

CONTACTS

NORTH TEXAS

SR MANAGER: STEPHEN HIGGINS

COORDINATOR: GREG HAMMONS (BLUESTREAK, ERVIN CABLE, FUTURE) CMIII: CORY WEAVER (FUTURE) CMIII: BRANDON LEAL (BLUESTREAK, ERVIN CABLE)

SOUTH TEXAS

SR MANAGER: ANDY CRENSHAW

COORDINATOR: JOSH MAY (HOUSLEY-COLLEGE STATION, BRYAN; SDT-AUSTIN; FUTURE-AUSTIN) (979) 402-7446 CMIII: JOSEPH JARMUSCH, (956) 328-6644

COORDINATOR: STEVE CORTESE (HOUSLEY-SAN ANGELO, BROWNWOOD) CMIII: MARKUS WATSON

COORDINATOR: EDWARD WILLIAMS (FUTURE-GULF; HP-GULF; SDT-GULF; HOUSLEY-VALLEY) CMIII: BRADLEY CONNER





DATE: FILE:

	LEGEND					
<u>~~~~</u>	Type 3 Barricade		Channelizing Devices			
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)			
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)			
-	Sign	\bigcirc	Traffic Flow			
\bigcirc	Flag		Flagger			

Posted Speed	Formula	Minimum Suggested Maximu Desirable Spacing of Taper Lengths Channelizing X X Devices		d Maximum ng of lizing ices	Minimum Sign Spacing "x"	Suggested Longitudinal Buffer Space		
*		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	Distance	"B"
30		150′	165′	180′	30′	60′	120′	90′
35	$L = \frac{WS}{60}$	205′	225′	245′	35′	70′	160′	120′
40	00	265′	295′	320′	40′	80′	240′	155′
45		450′	495′	540′	45′	90′	320′	195′
50		500′	550′	600′	50′	100′	400′	240′
55	L = W S	550′	605′	660′	55′	110′	500′	295′
60	L "J	600′	660′	720'	60′	120′	600′	350′
65		650′	715′	780′	65′	130′	700′	410′
70		700′	770′	840′	70′	140′	800′	475′
75		750′	825′	900′	75′	150′	900′	540′

* Conventional Roads Only

XX Taper lengths have been rounded off.

L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

		TYPICAL U	JSAGE	
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	1	1		

GENERAL NOTES

- 1. Flags attached to signs where shown are REQUIRED.
- 2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
- 3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
- 4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
 See TCP(5-1) for shoulder work on divided highways, expressways and
- freeways. 7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D
- "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

	Texas Department	nt of Trai	nsportatio	n	Traffic Operations Division Standard
CW20-1D 48" X 48" (Flags-	TRAFFIC CONVEN SHOU TCP	CON TION LDEF (1-	TROL IAL RO WOR	PL/ OAD K	AN ,
See notes I & ()	FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
	© TxDOT December 1985	CONT	SECT JOB		HIGHWAY
	2-94 4-98 8-95 2-12 1-97 2-18	DIST	COUNT	Y	SHEET NO.
	151				



No warranty of any for the conversion is governed by the "Texas Engineering Practice Act". purpose whotseever. TXDOI assumes no responsibility nots or finctions tracilles or dominas resulting for DISCLAIMER: The use of this standard kind is made by TXDDT for any of this standard to other for

LEGEND											
<i></i>	Туре	Type 3 Barricade					Channelizing Devices (CD:)s)	
þ	Heav	y Work	Vehi	cle			Truci Atter	k Mounted nuator (*	d FMA)		
┏	Autor Assis (AFA[mated stance))	Flagg Devi	er Ce	M	ŀ	Portable Changeable Message Sign (PCMS)				
<u> </u>	Sign				$\langle \zeta \rangle$		Traf	fic Flow			
\bigtriangleup	Flag				L	С	Flag	ger			
Formula	D Tap	Minimur Vesirab Ver Leno XX	n le gths	Suggested Max Spacing of Channelizin Devices		ng Spacing		Suggested S Longitudinal Buffer Space D		Stopping Sight Distance	
	10' Offset	11' Offset	12' Offset	On Tap	a Der	0 Tar	n a ngent	Distance	"B"		
	150′	165′	180′	3	0′		60′	120′	90′	2	200′
$L = \frac{WS}{60}$	205′	225′	245′	3	5′		70′	160′	120′	2	250'
00	265′	295′	320′	4	0′		80′	240′	155′	н) (505 <i>1</i>
	450 <i>'</i>	495′	540′	4	5′		90′	320′	195′	1.1	360 <i>'</i>
	500′	550′	600′	5	0′	1	00′	400′	240′	4	25′
L = W S	550'	605′	660′	5	5′	1	10′	500′	295′	4	95′
L 113	600′	660′	720′	6	0′	1	20′	600′	350′	ц.)	70′
	650′	7151	780′	6	5′	1	30′	700′	410′	e	645 <i>′</i>
	700′	770′	840′	7	0′	1	40′	800′	475'		'3O'
	750′	825′	900′	7	5′	1	50′	900′	540′	8	320'

* Conventional Roads Only

XX Taper lengths have been rounded off. L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE					
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY	
	1	✓			

1. Flags attached to signs where shown are REQUIRED.

2. AFADs shall only be used in situations where there is one lane of approaching traffic in the direction to be controlled.

3. Adequate stopping sight distance must be provided to each AFAD location for approaching traffic. (See table above).

4. Each AFAD shall be operated by a qualified/certified flagger. Flaggers operating AFADs shall not leave them unattended while they are in use.

5. One flagger may operate two AFADs only when the flagger has an unobstructed view of both AFADs and of the approaching traffic in both directions.

6. When pilot cars are used, a flagger controlling traffic shall be located on each approach. AFADs shall not be operated by the pilot car operator.

7. All AFADs shall be equipped with gate arms with an orange or fluorescent red-orange flag attached to the end of the gate arm. The flag shall be a minimum of 16" square. 8. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or

work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA. 9. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to

those shown in order to protect wider work spaces. 10. Flaggers should use two-way radios or other methods of communication to control traffic. 11. Length of work space should be based on the ability of flaggers to communicate. 12. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain stopping sight distance to the AFAD. 13. Channelizing devices on the center line may be omitted when a pilot car is leading traffic and approved by the Engineer.

14. The R1-7aT "WAIT ON STOP" sign and the R1-8aT "GO ON SLOW" sign shall be installed at the AFAD location on separate supports or they may be fabricated as one 48" x 30" sign. They shall not obscure the face of the STOP/SLOW AFAD. 15. The R10-6 "STOP HERE ON RED" arrow sign shall be offset so as not to obscure the lenses of the AFAD.

Traffic Operations Texas Department of Transportation Standard						
TRAFFIC CONTROL PLAN AUTOMATED FLAGGER ASSISTANCE DEVICES (AFADS)						
	ICP	(1)	-6) - 18	8	
FILE:	tcp1-6-18.dgn	DN:		СК: [w:	CK:
© TxDOT	February 2012	CONT	SECT	JOB		HIGHWAY
0.10	REVISIONS					
2-18		DIST		COUNTY		SHEET NO.
156						

24" x 36" FRP FLARED BOX ASSEMBLY 18" to 36" DEPTHS ARMORCAST. FIBERGLASS ARMORCAST PRODUCTS COMPANY A6001974 ARMOCAST LOGO COVER LIFT PIN STANDARD MARKING BOLT DOWN POLYMER CONCRETE COVER WITH NON-SKID SURFACE POLYMER CONCRETE FRAME FIBERGLASS FLARED BOX

24"W x 36"L FRP FLARED BOX ASSEMBLIES Specify Depth Below

DESCRIPTION	NOMINAL SIZE	RATING	ANSI	PART NUMBER	APPROX.P WEIGHT	ALLE
Box & Cover	24" x 36" x 18"	10K	8	A6001974AX18	173 05.	5
Assembly	24" x 36" x 18"	20K	15	A6001974TAX18	242 lbs.	5
Box & Cover	24" x 35" x 24"	10K	8	A6001974AX24	174 lbs.	5
Assembly	24" x 36" x 24"	20K	15	A6001974TAX24	241 lbs.	5
Box & Cover	24" x 36" x 30"	10K	8	A6001974AX30	207 Ibs.	5
Assembly	24" x 36" x 30"	20K	15	A6001974TAX30	276 lbs.	5
Box & Cover Assembly 24" x 36" x 36" 24" x 36" x 36"	10K	8	A6001974AX36	210 lbs.	5	
	24" x 36" x 36"	20K	15	A6001974TAX36	260 lbs.	5

COMPONENTS

DESCRIPTION	W x L x D	RATING	ANSI	PART NUMBER	APPROX I WEIGHT	ALLE
Replacement	24" x 36"	10K	8	A6001975	95 lb6.	20
Covers	24" x 36"	20K	15	A6001975T	157 lb6.	20
-	24" x 36" x 18"	10K/20K	8/15	A6001974X18	78 lbs.	5
Replacement	24" x 36" x 24"	10K/20K	8/15	A6001974X24	79 lbs.	5
Doxes	24" x 36" x 30"	10K/20K	8/15	A6001974X30	112 lbs.	5
	24" x 36" x 36"	10K/20K	8/15	A6001974X36	115 lbs.	5
Extensions	24" x 36" x 8"	10K/20K	8/15	A6001974EX8	50 lbs.	5
18" Boxes Only	24" x 36" x 16"	10K/20K	8/15	A6001974EX16	62 lbs.	3

· For sizes not shown please contact Armorcast Products for more information

www.armorcastprod.com Tel: (818) 982-3600 Fax: (818) 982-7742

102



NOMINAL DIMENSIONS	RG&E COCE NO	DESCRIPTION	APPROX. W
17"x.30"x18"	04-0936	BOX AND COVER ASSEMBLY	184
17"x30"x18"	04-0928	BOX ONLY	132
17"x30"x3"	04-0117	3" EXTENSIONS	-17
	04-3720	LD ONLY	52

DESIGN LOADS STATIC DESIGN LOAD OF 8000 LBS. OVER A 10" X 10" AREA.

FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

4/25/36 072016#1LPGE_31.4xg = 2408_Amon_Prevant











FIBER DISTRIBUTION HUB

TYPICAL 3'x3' DISTRIBUTION TUB







DIRECTIONAL BORE DETAILS



PUBLIC R/W TRENCH DETAIL







CITY OF AUSTIN TRAFFIC CONTROL DETAIL

Frontier COMMUNICATIONS					
JOB ID: 5286715 COUNTY	DATE:	7/25/22			
TITLE: CONDUIT DESIGN	l				
STREET ADDRESS:					
CITY/STATE: BUDA, TX					
FTR ENGINEER: XXX					
FTR INSPECTOR:					
	DRAWN BY:				
	XXX				
	EST. #:	SHEET #:			
LUCK GROVE		DTL 5			







LEGEND				
RIGHT OF WAY (R/W)				
CONDUIT (F)	XX*			
UNDERGROUND (UG)				
AERIAL CABLE				
EDGE OF PAVEMENT (EOP)				
CENTERLINE (C/L)				
WATER (W)				
SEWER (S)				
FIRE HYDRANT	$\mathbf{\Theta}$			
FLOWERPOT	FP			
HANDHOLE				
MANHOLE	MH			
UTILITY VALVE	\otimes			
UTILITY METER				
UTILITY MANHOLE	Ô			

AT HANDHOLE LOCATIONS 98: DIG BORE PIT, PLACE 2'x3' HANDHOLE

AT HANDHOLE LOCATIONS 83-87,92-95, 99-103: DIG BORE PIT, PLACE 17"x30" HANDHOLE

AT HANDHOLE LOCATIONS 90-91, 96-97, 122-123: DIG BORE PIT, PLACE 30"x48" HANDHOLE

N

Frontier COMMUNICATIONS					
JOB ID: 5286715 COUNTY		DATE:	7/25/	/22	
TITLE: CONDUIT DESIGN					
STREET ADDRESS: TRAVE	RTINE 1	RAIL			
CITY/STATE: BUDA, TX					
FTR ENGINEER: XXX					
FTR INSPECTOR:					
DRAWN BY: XXX					
	EST. #:			SHEET #:	
LUCK GROVE				2	





LE	GEND
RIGHT OF WAY (R/W)	
CONDUIT (F)	XX*
UNDERGROUND (UG)	
AERIAL CABLE	
EDGE OF PAVEMENT (EOP)	
CENTERLINE (C/L)	
WATER (W)	·
SEWER (S)	
FIRE HYDRANT	$\mathbf{\Theta}$
FLOWERPOT	FP
HANDHOLE	
MANHOLE	MH
UTILITY VALVE	\otimes
UTILITY METER	
UTILITY MANHOLE	Ô

AT HANDHOLE LOCATIONS 104-105: DIG BORE PIT, PLACE 30"x48" HANDHOLE

AT HANDHOLE LOCATIONS 106-112: DIG BORE PIT, PLACE 17"x30" HANDHOLE

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Frontier				
JOB ID: 5286715 COUNTY		DATE:	7/25/2	22
TITLE: CONDUIT DESIGN				
STREET ADDRESS: VERMI	LLION M	ARBLE	TRAIL	-
CITY/STATE: BUDA, TX				
FTR ENGINEER: XXX	_			
FTR INSPECTOR:				
DRAWN BY: XXX				
	EST. #:			SHEET #:
LUCK GROVE			:	3



MATCH LINE A SEE SHEET # 1



LE	GEND
RIGHT OF WAY (R/W)	
CONDUIT (F)	
UNDERGROUND (UG)	
AERIAL CABLE	
EDGE OF PAVEMENT (EOP)	
CENTERLINE (C/L)	
WATER (W)	T
SEWER (S)	
FIRE HYDRANT	•
FLOWERPOT	FP
HANDHOLE	
MANHOLE	MH
UTILITY VALVE	\otimes
UTILITY METER	
UTILITY MANHOLE	O

AT HANDHOLE LOCATIONS 9-18: DIG BORE PIT, PLACE 30"x48" HANDHOLE

AT HANDHOLE LOCATIONS 113-121: DIG BORE PIT, PLACE 17"x30" HANDHOLE



Frontier					
JOB ID: 5286715 COUNTY		DATE:	7/25/	22	
TITLE: CONDUIT DESIGN	TITLE: CONDUIT DESIGN				
STREET ADDRESS: DOLON	/ITE TR/	AIL			
CITY/STATE: BUDA, TX					
FTR ENGINEER: XXX					
FTR INSPECTOR:	FTR INSPECTOR:				
DRAWN BY: XXX					
	EST. #:			SHEET #:	
LUCK GROVE				4	



LE	GEND
RIGHT OF WAY (R/W)	
CONDUIT (F)	
UNDERGROUND (UG)	
AERIAL CABLE	
EDGE OF PAVEMENT (EOP)	
CENTERLINE (C/L)	
WATER (W)	T
SEWER (S)	
FIRE HYDRANT	•
FLOWERPOT	FP
HANDHOLE	
MANHOLE	MH
UTILITY VALVE	\otimes
UTILITY METER	
UTILITY MANHOLE	O

AT HANDHOLE LOCATIONS 49-53, 55-60, 62-68: DIG BORE PIT, PLACE 17"x30" HANDHOLE

AT HANDHOLE LOCATIONS 54, 61: DIG BORE PIT, PLACE 2'x3' HANDHOLE

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Frontier				
JOB ID: 5286715 COUNTY		DATE:	7/25/	/22
TITLE: CONDUIT DESIGN				
STREET ADDRESS: FOSSIL	STONE	TRAIL		
CITY/STATE: BUDA, TX				
FTR ENGINEER: XXX				
FTR INSPECTOR:				
DRAWN BY: XXX				
	EST. #:			SHEET #:
LUCK GROVE				5



15	CEND
LL RIGHT OF WAY (R/W)	
CONDUIT (F)	XX'
UNDERGROUND (UG)	
AERIAL CABLE	
EDGE OF PAVEMENT (EOP)	
CENTERLINE (C/L)	
WATER (W)	
SEWER (S)	·
FIRE HYDRANT	$\mathbf{\Theta}$
FLOWERPOT	FP
HANDHOLE	
MANHOLE	MH
UTILITY VALVE	\otimes
UTILITY METER	
UTILITY MANHOLE	Ô

AT HANDHOLE LOCATIONS 22-24, 37-40, 42-44: DIG BORE PIT, PLACE 17"x30" HANDHOLE

AT HANDHOLE LOCATIONS 19-21, 25-28: DIG BORE PIT, PLACE 30"x48" HANDHOLE

AT HANDHOLE LOCATIONS 41: DIG BORE PIT, PLACE 2'x3' HANDHOLE

N

Frontier				
JOB ID: 5286715 COUNTY		DATE:	7/25/	/22
TITLE: CONDUIT DESIGN				
STREET ADDRESS: STONE	FIELD 1	RAIL		
CITY/STATE: BUDA, TX				
FTR ENGINEER: XXX				
FTR INSPECTOR:				
DRAWN BY: XXX				
	EST. #: SHEET #:			
LUCK GROVE				6



	GEND
RIGHT OF WAY (R/W)	
CONDUIT (F)	XX
UNDERGROUND (UG)	
AERIAL CABLE	
EDGE OF PAVEMENT (EOP)	
CENTERLINE (C/L)	
WATER (W)	
SEWER (S)	·
FIRE HYDRANT	•
FLOWERPOT	FP
HANDHOLE	HH
MANHOLE	MH
UTILITY VALVE	\otimes
UTILITY METER	
UTILITY MANHOLE	Ô

AT HANDHOLE LOCATIONS 32-36, 45-48: DIG BORE PIT, PLACE 17"x30" HANDHOLE

AT HANDHOLE LOCATIONS 29-31: DIG BORE PIT, PLACE 30"x48" HANDHOLE

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Frontier					
JOB ID: 5286715 COUNTY		DATE:	7/25/22		
TITLE: CONDUIT DESIGN	1				
STREET ADDRESS: RED M	ORGAN	ITE TRA	AIL		
CITY/STATE: BUDA, TX					
FTR ENGINEER: XXX					
FTR INSPECTOR:					
	DRAWN E XXX	BY:			
	EST. #:		SHEET #:		
LUCK GROVE			7		



Hays County Transportation Department

2171 Yarrington Rd, Suite 200, Kyle Texas 78640 (P) 512-393-7385 (Web) <u>www.hayscountytx.com</u>

UTILITY PERMIT APPROVAL LETTER

** Notification must be given IN WRITING at least 24 hours before work begins and proper traffic control must be implemented throughout the work zone. **

The utility company or any of its representatives, engineers, contractors, or authorized agents agree to use Best Management Practices to minimize erosion and sedimentation resulting from the proposed installation AND will insure that traffic control measures complying with applicable portions of the Texas Manual of Uniform Traffic Control Devices will be installed and maintained during installation.

General Special Provisions:

1. Construction of this line will begin on or after 1/2/2023.

Utility Company Information:

Na	ame:				
Ac	ddress: TX				
Ph	none:				
Co	ontact Name:				
Engineer	/ Contractor Information	:			
Na	ame: Future Infrastructur	e LLC			
Ac	ddress: 555 S Town East B	lvd Mesquite T	X 75149		
Pł	10ne: 4697850696				
Сс	ontact Name: Tim Knoll				
Hays Cou	inty Information:				
Ut	tility Permit Number: TRN	-2022-5555-UTL	-		
Ту	/pe of Utility Service: FIBE	R			
Pr	oject Description:				
Ro	oad Name(s): ,,,,,,,				
Su					
Co	ommissioner Precinct:				
W yc	/hat type of cut(s) will ou be using ?	X Boring	Trenching	Overhead	🗌 N/A
	Authorizat	tion by Hays Co	unty Transportatio	n Department	

The above-mentioned permit was approved in Hays County Commissioners Court on .

12/27/2022

FRONTIER COMMUNICATION CONSTRUCTION SPECIFICATIONS

- Contact Frontier Engineer CORY RIGGS (310) 210-988 sixty (60) days prior to need of service in order to confirm compliance,order materials,and schedule work forces. NOTE; FRONTIER COMMUNICATIONS,INCORPORATED, RESERVES THE RIGHT TO REFUSE ANY CONDUIT, PULL BOXES, MANHOLES, OR UTILITY BOXES THAT DEVIATE FROM PLANS AND SPECIFICATIONS.
- 2. All conduit riser bends to have a minimum thirty-six (36) inch radius.
- 3. All horizontal ninety (90) degree bends shall have a minimum radius OF 7.5 feet and all vertical ninety (90) degree bends shall have a minimum radius of three feet. No more than two ninety (90) degree horizontal bends shall be placed in any single run unless otherwise specified. Contact the Frontier engineer concerning any required deviations.
- 4. All conduit must be proven using a mandrel no less than a 1/2" smaller than the conduit placed. Wall to wall measurements must be taken with a measured tape and a 3/8" polypropylene pull rope in each duct. An accurate wall to wall measurement of conduit placed must be As-built on an approved Frontier construction plan. A copy of the As-built conduit work order must be provided to the Frontier inspector assigned to your project.
- 5. Place weatherproof caps on all terminated conduits.
- 6. Approved plastic conduit (PVC Sch. 40,TYPE-C or HDPE (2") is to be used in underground construction unless otherwise specified.
- 7. Conduit terminated on a pole must be PVC Sch. 80. Location of riser on pole will be called out by engineering on the construction plan.
- 8. Conduit placed in same trench with primary power conduit must be separated by a minimum of twelve (12) inches of well-packed sand or three inches of concrete, and have a minimum of thirty-six (36) inches of cover when placed behind curb face. All street crossings and conduits placed in the driven portion of the roadway must have a minimum of forty-eight (48) inches of cover to top of pipe. CONTACT THE FRONTIER INSPECTOR 48 HOURS BEFORE TRENCHING AND UPON COMPLETION OF YOUR SUBSTRUCTURES TO SCHEDULE THE FINAL INSPECTION.

PERMITTING AGENCY:

HAYS COUNTY

CONSTRUCTION PACKAGE

FDH - 200 CEDAR DR INDIAN CREEK LN & POPLAR DR MOUNTAIN CITY, TX 78610

BLDG C/L CONC CSW DWY EOC EOP ETW HH MH NTS



EX. POLES

PICK UP POINT:

PATH FOOTAGE: BORE = 2,542' MATERIALS: (3) NEW 2'X3' HH (9) NEW 17"X30" HH 1,821' OF 1-1.25" DUCT 721' OF 3-1.25" DUCTS



Know what's below. Call before you dig. -HDPE AND PVC FOOTAGES DO NOT INCLUDE SWEEPS -ACTUAL FOOTAGES OF HDPE AND PVC WILL BE NEEDED TO ORDER MATERIALS. PLEASE INCLUDE MEASURED TAPE IN ALL PVCS. -FRONTIER INSPECTOR SHALL BE PRESENT ON SITE WHEN CONTRACTOR NEEDS TO ACCESS ANY EXISTING FRONTIER FACILITY.

NTS

ABBREVIATIONS

3	BUILDING	PED	PEDESTAL (UTILITY)
	CENTER LINE	PVC	POLYVINYL CHLORIDE
С	CONCRETE	P/L	PROPERTY LINE
	CONCRETE SIDEWALK	RR	RAILROAD
	DRIVEWAY	R/W	RIGHT OF WAY
	EDGE OF CURB	SL	STREET LIGHT
	EDGE OF PAVEMENT	W-BLDG	WALL TO BUILDING
	ETW LINE	W-P	WALL TO POLE
	HANDHOLE	W-W	WALL TO WALL
	MANHOLE	P.U.E.	PUBLIC UTILITY EASEMENT
	NOT TO SCALE	C/G	CURB WITH GUTTER

um	Cr

	LEGEND
0	New Trench
-6-	New Bore
	Existing Gas
	Existing Water
	Existing Telephone
	Existing Sewer
	Existing Storm Drain
	Existing Electric
0	Existing Manhole
	Existing Handhole (2'x3' or 17"x30")
	DSLAM
\boxtimes	X-CONNECT
	POWER PEDESTAL
	TELCO PEDESTAL
	3' X 5' PULL BOX
\otimes	POLE
















Hays County Transportation Department

2171 Yarrington Rd, Suite 200, Kyle Texas 78640 (P) 512-393-7385 (Web) <u>www.hayscountytx.com</u>

UTILITY PERMIT APPROVAL LETTER

** Notification must be given IN WRITING at least 24 hours before work begins and proper traffic control must be implemented throughout the work zone. **

The utility company or any of its representatives, engineers, contractors, or authorized agents agree to use Best Management Practices to minimize erosion and sedimentation resulting from the proposed installation AND will insure that traffic control measures complying with applicable portions of the Texas Manual of Uniform Traffic Control Devices will be installed and maintained during installation.

General Special Provisions:

1. Construction of this line will begin on or after 12/31/2022.

Utility Company Information:

Name: Frontier Communications Address: 2611 45th St Dickinson TX Phone: 5812290876 Contact Name: DARRIN ALBRECHT

Engineer / Contractor Information:

Name: Future Infrastructure LLC Address: 555 S Town East Blvd Mesquite TX 75149 Phone: 4697850696 Contact Name: Tim Knoll

Hays County Information:

Utility Permit Number: TRN-2022-5573-UTL Type of Utility Service: fiber Project Description: Road Name(s): ,,,,,, Subdivision: Commissioner Precinct:

What type of cut(s) will	X Boring	Trenching	☐ Overhead	□ N/A
you be using ?				

Authorization by Hays County Transportation Department

The above-mentioned permit was approved in Hays County Commissioners Court on .

MartBet

Engineering Technician 12/27/2022

Signature

Date

FRONTIER COMMUNICATION CONSTRUCTION SPECIFICATIONS

- Contact Frontier Engineer CORY RIGGS at (805) 928-7642 sixty (60) days prior to need of service in order to confirm compliance,order materials,and schedule work forces. NOTE; FRONTIER COMMUNICATIONS,INCORPORATED, RESERVES THE RIGHT TO REFUSE ANY CONDUIT, PULL BOXES, MANHOLES, OR UTILITY BOXES THAT DEVIATE FROM PLANS AND SPECIFICATIONS.
- 2. All conduit riser bends to have a minimum thirty-six (36) inch radius.
- 3. All horizontal ninety (90) degree bends shall have a minimum radius of 12.5 feet and all vertical ninety (90) degree bends shall have a minimum radius of three feet. No more than two ninety (90) degree horizontal bends shall be placed in any single run unless otherwise specified. Contact the Frontier engineer concerning any required deviations.
- All conduit must be proven using a mandrel no less than a 1/2" smaller than the conduit placed. Wall to wall measurements must be taken with a measured tape and a 3/8" polypropylene pull rope in each duct. An accurate wall to wall measurement of conduit placed must be As-built on an approved Frontier construction plan. A copy of the As-built conduit work order must be provided to the Frontier inspector assigned to your project.
 Place weatherproof caps on all terminated conduits.
- 6. Approved plastic conduit (PVC Sch. 40, TYPE-C or HDPE (2") is to be used in underground construction unless otherwise specified.
- 7. Conduit terminated on a pole must be PVC Sch. 80. Location of riser on pole will be called out by engineering on the construction plan.
- 8. Conduit placed in same trench with primary power conduit must be separated by a minimum of twelve (12) inches of well-packed sand or three inches of concrete, and have a minimum of thirty-six (36) inches of cover when placed behind curb face. All street crossings and conduits placed in the driven portion of the roadway must have a minimum of forty-eight (48) inches of cover to top of pipe. CONTACT THE FRONTIER INSPECTOR 48 HOURS BEFORE TRENCHING AND UPON COMPLETION OF YOUR SUBSTRUCTURES TO SCHEDULE THE FINAL INSPECTION.

PERMITTING AGENCY: HAYS COUNTY

PICK UP POINT: TX DOT R/W PATH FOOTAGE: BORE = 10274'

<u>MATERIALS:</u> (24) NEW 17"X30" HH (9) NEW 2'X3' HH (25) NEW 11"X11"X16" DROP BOX 10091' OF (1)-1.25" DUCT 183' OF (2)-1.25" DUCTS



Know what's below. Call before you dig.

CONSTRUCTION PACKAGE

FDH - 2131 HONEYCOMB CIR MOSS ROSE LN & FM 150 W DRIFTWOOD, TX 78640 BLDG C/L CONC CSW DWY EOC EOP ETW HH MH NTS



VICINITY MAP NTS

-HDPE AND PVC FOOTAGES DO NOT INCLUDE SWEEPS -ACTUAL FOOTAGES OF HDPE AND PVC WILL BE NEEDED TO ORDER MATERIALS. PLEASE INCLUDE MEASURED TAPE IN ALL PVCS. -FRONTIER INSPECTOR SHALL BE PRESENT ON SITE WHEN CONTRACTOR NEEDS TO ACCESS ANY EXISTING FRONTIER FACILITY.

ABBREVIATIONS

	BUILDING	PED	PEDESTAL (UTILITY)
	CENTER LINE	PVC	POLYVINYL CHLORIDE
;	CONCRETE	P/L	PROPERTY LINE
	CONCRETE SIDEWALK	RR	RAILROAD
	DRIVEWAY	R/W	RIGHT OF WAY
	EDGE OF CURB	SL	STREET LIGHT
	EDGE OF PAVEMENT	W-BLDG	WALL TO BUILDING
	ETW LINE	W-P	WALL TO POLE
	HANDHOLE	W-W	WALL TO WALL
	MANHOLE	P.U.E.	PUBLIC UTILITY EASEMENT
	NOT TO SCALE		

1	
1	
~	

LEGEND			
— 0 —	New Trench		
—®—	New Bore		
	Existing Gas		
	Existing Water		
	Existing Telephone		
	Existing Sewer		
	Existing Storm Drain		
	Existing Electric		
0	Existing Manhole		
	Existing Handhole (2'x3' or 17"x30")		
	DSLAM		
\mathbb{X}	X-CONNECT		
	POWER PEDESTAL		
	TELCO PEDESTAL		
	3' X 5' PULL BOX		
\otimes	POLE		



















FROM NEW DROP BOX #6 TO NEW DROP BOX #7



















CURVE	RADIUS	LENGTH	DELTA
C1	3'	4'	81°

CURVE	RADIUS	LENGTH	DELTA			EX. DRIV
C1	3'	5'	90°			
			1			
					EX. DRIVEWAY	
	-					
				BORE AND PLACE 133' OF 1-1.25" DUCT		
				FROM NEW HH#27 TO NEW DROP BOX #2	1 \	
1 - C						OSELN
						MOSS ROOM
						44+00
Knov	what's l	elow.				
	Jall bet	ore you a	dig.	PROP. 11"X11"X16" DROP BOX #21		
				PARCEL: R97179		
				APN: R97179	45+00	
				EX. DRIVEWAY		EX. STREER SIGN STA 44+65
						EX. PED BORE
						STA 44+67 FROM
				46:00	5.	STA 44+66
				EIN ST F		PROP. 2'X3' HH #27
				S ROSE	$+ \cdot \setminus \setminus \setminus$	22 11' STA 44+78
				MOSS	\langle , \rangle	1-3
			,	EX.CUL	' <u>ert</u> \\\\	
				6. 41 ⁺⁰⁰ EX. DRIV		
					_ \ \	
	\wedge	RIN	60	STA 46+79		
	ST Z			X 30. BORE AND P	<u>ACE 194' OF 1-1.25" DUCT</u>	
	IN F			FROM NEW F	H #27 TO NEW HH #28	
	K		8 I X	STA 47+72		
			$\langle \rangle$	EX.CULVERT FROM NEW HH #28 T	D MATCH LINE U-U	11'- PARCEL: F
		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	FRIN	EX. DRIVEWAY PARCEL: R97169		
				APN: R97169	EX. DRIVEWAY	
		,				25'-1
						50' - 1
						REOFER
						MATCH LINE V-V
						SEE SHEET TO S
						١















**Hays County Transportation Department** 

2171 Yarrington Rd, Suite 200, Kyle Texas 78640 (P) 512-393-7385 (Web) <u>www.hayscountytx.com</u>

## UTILITY PERMIT APPROVAL LETTER

## ** Notification must be given IN WRITING at least 24 hours before work begins and proper traffic control must be implemented throughout the work zone. **

The utility company or any of its representatives, engineers, contractors, or authorized agents agree to use Best Management Practices to minimize erosion and sedimentation resulting from the proposed installation AND will insure that traffic control measures complying with applicable portions of the Texas Manual of Uniform Traffic Control Devices will be installed and maintained during installation.

General Special Provisions:

1. Construction of this line will begin on or after 1/16/2023.

Utility Company Information:

Address: 2370 FM 1979 San Marcos TX

Phone: Contact Name: Stephanie Olson-Haseloff

Engineer / Contractor Information:

Name: ProDirt Services LLC
Address: TX
Phone:
Contact Name: Zach Cason

Hays County Information:

Utility Permit Number: TRN-2022-5549-UTL Type of Utility Service: 4 in water line Project Description: Road Name(s): El Camino Way Dr,,,,,, Subdivision: Commissioner Precinct:

What type of cut(s) will	Boring	X Trenching	☐ Overhead	□ N/A
you be using ?				

Authorization by Hays County Transportation Department

The above-mentioned permit was approved in Hays County Commissioners Court on .

Mart Bill
P

Engineering Technician

12/28/2022

Signature

# Location Map





-awing Name: N:_Projects\321 - Century Land Holdings\321.014 - Cottonwood Creek Phase 2 Section 3 (64 Units)\CDs\Off-Site\321.014_OS-WATR LN B.dwg User: mkalb Oct 14, 2022 - 10:4



**Hays County Transportation Department** 

2171 Yarrington Rd, Suite 200, Kyle Texas 78640 (P) 512-393-7385 (Web) <u>www.hayscountytx.com</u>

## UTILITY PERMIT APPROVAL LETTER

## ** Notification must be given IN WRITING at least 24 hours before work begins and proper traffic control must be implemented throughout the work zone. **

The utility company or any of its representatives, engineers, contractors, or authorized agents agree to use Best Management Practices to minimize erosion and sedimentation resulting from the proposed installation AND will insure that traffic control measures complying with applicable portions of the Texas Manual of Uniform Traffic Control Devices will be installed and maintained during installation.

General Special Provisions:

1. Construction of this line will begin on or after 1/2/2023.

Utility Company Information:

Name: Pedernales Electric Cooperative
Address: 9115 Circle Dr Austin TX
Phone:
Contact Name: Eric Villanueva

Engineer / Contractor Information:

0	
	Name:
	Address: TX
	Phone:
	Contact Name:
Hays (	County Information:
-	Utility Permit Number: TRN-2022-5554-UTL
	Type of Utility Service: 795AAC
	Project Description:
	Road Name(s): County Line Rd, , , , , ,
	Subdivision:
	Commissioner Precinct:

What type of cut(s) will	Boring	X Trenching	X Overhead	□ N/A
you be using ?				

Authorization by Hays County Transportation Department

The above-mentioned permit was approved in Hays County Commissioners Court on .

12/28/2022



Distribution Line exists on Nutty Brown Rd: GPS (30.208536, -97.974112) to GPS (30.197956, -97.971746)











accuracy, freedom from error, or as to any results generated through it's use.





#### Hays County Commissioners Court

Date: 01/03/2023	
Requested By:	Jennifer Doinoff
Sponsor:	Judge Becerra

#### Agenda Item:

Authorize the County Judge to execute a Contract Amendment with AMG Printing related to Election Form Printing Services pursuant to RFP 2020-P08. **BECERRA/DOINOFF** 

#### Summary:

On September 8, 2020, the Commissioners Court approved a contract with AMG Printing for Election Printing Services as a result of formal solicitation RFP 2020-P08.

The Election's Office is requesting to add an item to the current contract, Colored Office Envelopes with window @ \$0.11 per envelope.

Fiscal Impact: Amount Requested: N/A Line Item Number: 001 & 002-655-00.5461

#### Budget Office:

Source of Funds: General Fund & Election Contract Fee Fund Budget Amendment Required Y/N?: No Comments: N/A

#### Auditor's Office:

Purchasing Guidelines Followed Y/N?: Yes, Request For Proposal 2020-P08 Election Form Printing Services G/L Account Validated Y/N?: Yes, Printing Services New Revenue Y/N?: N/A Comments:

(PE) Amendment 1 to Contract RFP 2020-P08

Attachments

## First Amendment to the Election Form Printing Services Agreement (RFP 2020-P08 Election Form Printing Services)

1. This Amendment to the Election Form Printing Services Agreement (the "First Amendment), attached as *Exhibit "A"* and executed September 8, 2020 (the "Agreement"), is made this 3rd day of January 3, 2023, by and between **Hays County**, **Texas ("Client")** and **AMG Printing** ("Contractor"). The above-cited parties are collectively referred to as "the parties to this Agreement" or "the parties."

2. This Agreement shall be amended as follows:

- a. Addition of new item:
  - Colored Office Envelopes with Window: \$0.11 per envelope

3. Except for the above modifications set forth in this First Amendment, all other terms and conditions of the Agreement shall remain unaffected and shall continue in full force and effect in accordance with its terms.

HAYS COUNTY, TEXAS	AMG PRINTING
By:	By: Amb Provint
Printed Name:	Printed Name: Cearon Gootales
Title:	Title: Deeredut
Dated:	Dated:
	ATTEST: Elaine Cardenas Hays County Clerk



### Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

Agenda Item

Judge Becerra

Approve the nomination of County Judge Becerra to serve on the Texas Conference of Urban Counties' Policy Committee for the 2022-2023 biennium. BECERRA

Summary

Resolution

Attachments



### **RESOLUTION OF HAYS COUNTY, TEXAS COMMISSIONERS COURT**

The Commissioners Court of Hays County, Texas meeting in regular session on the 3rd day of January 2023 considered the following resolution:

**WHEREAS**, The Texas Conference of Urban Counties was established in 1975 to represent the interests of the urban counties in Texas and is reliant on member participation to continue to be effective in impacting state policy decisions; and

**WHEREAS**, Hays County has found participation in the Urban Counties to be of great benefit to Hays County and to urban counties in general; and

**WHEREAS**, the Texas Conference of Urban Counties membership has recognized the value of including county commissioners' courts in the nominating process for the Policy Committee; and

**WHEREAS**, Hays County wishes to ensure that the Urban Counties Policy Committee has members who have the full support of their respective commissioners' courts; and

**WHEREAS**, Ruben Becerra has expressed an interest in serving on the Policy Committee to represent the interest of Hays County in the policy development process of the Texas Conference of Urban Counties.

**NOW, THEREFORE** be it resolved, that the Commissioners Court of Hays County hereby nominates Ruben Becerra to serve on the Policy Committee for the 2022-2023 biennium.

RESOLVED, this 3rd day of January 2023, by the Hays County Commissioners Court.

Ruben Becerra Hays County Judge

Debbie Gonzales Ingalsbe Commissioner, Pct. 1

Lon A. Shell Commissioner, Pct. 3 Michelle Gutierrez Cohen Commissioner, Pct. 2

Walt Smith Commissioner, Pct. 4

ATTEST:

Elaine H. Cárdenas, MBA, PhD Hays County Clerk



#### Hays County Commissioners Court

Date: 01/03/2023	
Requested By:	Tammy Crumley
Sponsor:	Judge Becerra

#### Agenda Item:

Approve renewal of RFP 2020-P01 HVAC - Maintenance and Repair Services with JM Engineering, LLC. with a proposed 5% price increase. BECERRA/T.CRUMLEY

#### Summary:

RFP 2020-P01 is scheduled to expire on January 11, 2023, and JM Engineering LLC would like to renew its contract for one additional year with a proposed 5% increase in pricing.

Fiscal Impact: Amount Requested: N/A Line Item Number: Multiple

Budget Office: Source of Funds: General Fund Budget Amendment Required Y/N?: No

Comments: N/A

#### Auditor's Office:

Purchasing Guidelines Followed Y/N?: Yes, Request for Proposal 2020-P01 HVAC Maintenance and Repair County Wide G/L Account Validated Y/N?: TBD upon service New Revenue Y/N?: N/A Comments:

Attachments

Renewal Price Contract Renewal

#### RFP 2020-P01 HVAC - Maintenance & Repair Services, Countywide Renewal 2 - Proposed Price Increse - 5%

#### **Repair Services Pricing**

#### Experienced, Licensed Air Conditioning & Heating Tech

	Curre	ent Pricing	Proposed 5%
Monday through Friday - Regular Hours	\$	86.44	\$ 90.76
After Scheduled Working Hours	\$	108.74	\$ 114.18
Weekends	\$	108.74	\$ 114.18
Holidays	\$	108.74	\$ 114.18

Expereinced Tech Helper									
	Curr	ent Pricing	Р	roposed 5%					
Monday through Friday - Regular Hours	\$	67.49	\$	70.86					
After Scheduled Working Hours	\$	84.38	\$	88.60					
Weekends	\$	84.38	\$	88.60					
Holidays	\$	84.38	\$	88.60					

#### Preventative Maintenance Pricing

	Original Contract					5% Proposed Price Increase									
Building		Spring PM		Winter PM	Fil	ter Changes	Total PM		Spring PM		Winter PM	Fi	Iter Changes		Total PM
Juvenile Detention Center	\$	4,304.12	\$	4,304.12	\$	2,057.15	\$ 10,665.39	\$	4,519.33	\$	4,519.33	\$	2,160.01	\$	11,198.67
Public Safety Building - Sheriff	\$	3,117.88	\$	3,117.88	\$	1,011.98	\$ 7,247.74	\$	3,273.77	\$	3,273.77	\$	1,062.58	\$	7,610.13
Government Center - Countywide	\$	9,530.58	\$	9,530.58	\$	7,962.78	\$ 27,023.94	\$	10,007.11	\$	10,007.11	\$	8,360.92	\$	28,375.14
Courthouse - Countywide	\$	2,771.28	\$	2,771.28	\$	1,128.48	\$ 6,671.04	\$	2,909.84	\$	2,909.84	\$	1,184.90	\$	7,004.59
Local Health Department - Countywide	\$	2,952.02	\$	2,952.02	\$	1,131.74	\$ 7,035.78	\$	3,099.62	\$	3,099.62	\$	1,188.33	\$	7,387.57
Yarrington Complex - Countywide	\$	6,173.28	\$	6,173.28	\$	1,647.91	\$ 13,994.47	\$	6,481.94	\$	6,481.94	\$	1,730.31	\$	14,694.19
Driftwood Road Department - Countywide	\$	341.26	\$	341.26	\$	106.53	\$ 789.05	\$	358.32	\$	358.32	\$	111.86	\$	828.50
Wimberley Road Department - Countywide	\$	331.21	\$	331.21	\$	-	\$ 662.42	\$	347.77	\$	347.77	\$	-	\$	695.54
WIC - Kyle - Countywide	\$	1,025.87	\$	1,025.87	\$	321.67	\$ 2,373.41	\$	1,077.16	\$	1,077.16	\$	337.75	\$	2,492.08
Precinct 2 Office - Countywide	\$	4,350.92	\$	4,350.92	\$	1,344.64	\$ 10,046.48	\$	4,568.47	\$	4,568.47	\$	1,411.87	\$	10,548.80
Precinct 3 Office - Countywide	\$	3,012.83	\$	3,012.83	\$	1,053.61	\$ 7,079.27	\$	3,163.47	\$	3,163.47	\$	1,106.29	\$	7,433.23
Precinct 4 Office - Countywide	\$	2,231.42	\$	2,231.42	\$	717.40	\$ 5,180.24	\$	2,342.99	\$	2,342.99	\$	753.27	\$	5,439.25
Precinct 5 Office - Countywide	\$	2,384.91	\$	2,384.91	\$	733.99	\$ 5,503.81	\$	2,504.16	\$	2,504.16	\$	770.69	\$	5,779.00
Kyle Depot - Countywide	\$	1,046.13	\$	1,046.13	\$	427.32	\$ 2,519.58	\$	1,098.44	\$	1,098.44	\$	448.69	\$	2,645.56
Jacob's Well - Countywide	\$	335.59	\$	335.59	\$	105.23	\$ 776.41	\$	352.37	\$	352.37	\$	110.49	\$	815.23
Dalhstrom Nature Preserve - Countywide	\$	165.60	\$	165.60	\$	96.47	\$ 427.67	\$	173.88	\$	173.88	\$	101.29	\$	449.05
New Public Safety Building	\$	14,330.68	\$	14,330.68	\$	10,289.01	\$ 38,950.37	\$	15,047.21	\$	15,047.21	\$	10,803.46	\$	40,897.89
Rainbow Room	\$	682.14	\$	682.14	\$	-	\$ 1,364.28	\$	716.25	\$	716.25	\$	-	\$	1,432.49
Elections/IT Building	\$	2,363.02	\$	2,363.02	\$	885.39	\$ 5,611.43	\$	2,481.17	\$	2,481.17	\$	929.66	\$	5,892.00
Yearly Preventative Maintenance Totals	\$	61,450.74	\$	61,450.74	\$	31,021.30	\$ 153,922.78	\$	64,523.28	\$	64,523.28	\$	32,572.37	\$	161,618.93


**OFFICE OF THE COUNTY AUDITOR** 

Hays County Purchasing 712 S. Stagecoach Trail, Ste. 1071 San Marcos, Texas 78666 512-393-2273

Marisol Villarreal-Alonzo, CPA County Auditor marisol.alonzo@co.hays.tx.us

Stephanie Hunt Assistant County Auditor stephanie.hunt@co.hays.tx.us

December 21, 2022

JM Engineering, LLC 1314 Hillridge Drive Round Rock, TX 78665

RE: Annual contract renewal

The annual contract for HVAC – Maintenance and Repair Services County Wide, RFP 2020-P01 is scheduled to expire on January 11, 2023. This letter will serve as official notice that Hays County would like to exercise its second (2nd) option to renew the existing contract for one (1) additional year effective January 12, 2023 – January 11, 2024, provided all other terms and conditions remain unchanged and in full force and effect as provided in the current contract with the proposed 5% increase. If you are in agreement with the renewal terms, please acknowledge below and return one original to the Hays County Purchasing Office at the address listed above. Upon approval by the Hays County Commissioners Court, a fully executed copy will be returned to you for your files.

Please email <u>purchasing@co.hays.tx.us</u> if you wish to make modifications to the contract or have any questions. Thank you.

Sincerely,

Marisol Villarreal-Alonzo, CPA Hays County Auditor

Signature Printed Name

Approved by the Hays County Commissioners Court on:

ppring Company Date

Jate

Ruben Becerra Hays County Judge



### Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

Jerry Borcherding Commissioner Shell

#### Agenda Item

Approve specifications for IFB 2023-B12 RM 12 @ RM 3237 and authorize Purchasing to solicit for bids and advertise. SHELL/BORCHERDING

#### Summary

Hays County issues this Invitation for Bid (IFB) to solicit bids to secure a contractor to adjust the existing traffic signal at RM 12 at RM 3237 in Wimberley, TX. As part of the traffic signal improvements, the project will also include widening of the pavement and the lengthening of the existing culverts to allow for the installation of a dedicated left turn and right turn lane on RM 12 onto RM 3237 and a dedicated right turn lane and dedicated left turn lane on RM 3237 onto RM 12.

Attachments

IFB 2023-B12 RM 12@ RM 3237 Project Manual



# HAYS COUNTY PROJECT CONSTRUCTION MANUAL

FOR RM 12 at RM 3237 Intersection

> CSJ: 0285-03-059 CSJ: 0805-04-030

Bid No. IFB 2023-B12

Bid Date: JANUARY 26, 2023 Bid Time: 11:00 AM (CST)

Hays County, Texas Purchasing Department 712 South Stagecoach Trail, Suite 1071 San Marcos, TX 78666



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Attachment B – Geotechnical Report

(Bound Separately) (Bound Separately)

Attachment C – Contributing Zone Plan

Attachment D – Disadvantaged Business Enterprise (DBE) Commitment Agreement Form (Bound Separately)

# Appendices

Appendix A – Quality Assurance Program for Construction Projects

- Appendix B Guide Schedule of Sampling and Testing
- Appendix C AASHTO Accredited Laboratories

# SECTION 1 IFB SUBMITTAL CHECKLIST

# **IFB Submittal Checklist**

This checklist is provided for convenience and identifies documents that must be submitted with the bid/proposal in order to be considered responsive. Any bids/proposals received without these requisite documents may be deemed nonresponsive and may not be considered for contract award.

### The following forms MUST be returned for the bid/proposal to be considered responsive:

- _____1. Completed Bid Form
- _____2. Completed Schedule of Rates and Prices
- _____ 3. Vendor References Completed
- _____4. Bid Bond for 5% of total bid amount
- 5. Disadvantaged Business Enterprise (DBE) Commitment Agreement Form

## **Required Forms by Hays County:**

- _____1. Conflict of Interest Questionnaire Completed and Signed
- _____2. Certificate of Interested Parties Form 1295 filed online with the Texas Ethics Commission and Signed
- _____ 3. Code of Ethics for Hays County Signed
- _____4. Hays County Practices Related to Historically Underutilized Businesses Signed
- _____ 5. Hays County House Bill 89 Verification Signed and Notarized
- _____ 6. Hays County Purchasing Department Senate Bill 252 Certification Signed
- _____7. Vendor/Bidder's Affirmation Completed and Signed
- 8. Related Party Disclosure Form Completed and Signed
- 9. Debarment & Licensing Certification Signed and Notarized
- _____10. State of Texas Child Support Business Ownership Form Completed and Signed
- _____11. FHWA 1273 Certification Completed and Signed
- 12. Appendix II to Part 200 Contract Provisions for Non-Federal Entity Contracts Under Federal Awards Completed and Signed
- _____13. System for Award Management (<u>www.SAM.gov</u>) Entity Registration Page
- _____ 14. Any addenda applicable to this solicitation

### Hays County will accept bids, by the stated due date by one of the following methods:

- 1. Electronic Submission of Bid Packet through BidNet Direct and one (1) hard copy in a delivered to the Hays County Purchasing Office, OR
- 2. One (1) original proposal and one (1) digital copy on a thumb drive are in a sealed envelope with the Solicitation Number and Respondent's Name on the outermost envelope, addressed to:

Hays County Purchasing, 712 S Stagecoach Trail, Suite 1071, San Marcos, TX 78666

# SECTION 2 INVITATION FOR BIDS

# PUBLIC NOTICE HAYS COUNTY INVITATION FOR BIDS

Hays County will be accepting sealed Bids for:

### RM 12 AT RM 3237 INTERSECTION, BID NO. IFB 2023-B12

Sealed Bids will be received by Hays County, through either hardcopy at the Purchasing Office, Hays County Government Center, 712 South Stagecoach Trail, Suite 1071, San Marcos, TX 78666 or electronically through www.bidnetdirect.com/hayscounty (the BidNet Direct website) until 11:00 AM local time on THURSDAY, JANUARY 26, 2023, at which time and place the bids will be publicly opened and read. Bids received after the time and date set for submission will be returned unopened.

Issuing Office:	Hays County Auditor
	Purchasing Office
	712 S. Stagecoach Trial, Suite 1071
	San Marcos, TX 78666
	Plans, Specifications, and Bidding documents for pre-qualified
	bidders and interested non-bidders may be secured from the
	websites:
	www.bidnetdirect.com/hayscounty,
	http://www.txsmartbuy.com/sp,
	https://www.sanmarcostx.gov/Bids.aspx
Responses to Solicitation:	Sealed bids marked with Solicitation Number and Respondent Name on the outermost envelope: One (1) original and one (1) digital copy on a thumb drive
	OR
	Electronic bid packets can be submitted through BidNet Direct and one (1) hard copy is required to be received.
Deadline for Responses:	In issuing office or submitted to BidNet Direct no later than: THURSDAY, JANUARY 26, 2023; 11:00 AM, Central Time (CT) Any bid may be withdrawn prior to the above scheduled time for the opening of the bids or authorized postponement thereof. Any bid received after the time and date specified shall not be accepted.
Pre-Bid Meeting:	A non-mandatory Virtual Pre-Bid Conference will be held on WEDNESDAY, JANUARY 11, 2023, at 11:00 AM through
	WEDNESDAT, JANUART 11, 2025, at 11:00 AW through Microsoft Teams
	See link: Join Microsoft Teams Meeting or
	contact <u>purchasing@co.hays.tx.us</u> for a calendar appointment.
Bonding Requirements:	Bid Bond in the amount not less than five percent (5%) of the total
	amount of the bid, issued by an acceptable surety company, must
	accompany each bid as a guarantee that the successful bidder will
	enter a proper contract and execute bonds and guaranties within ten
	(10) days after the date contract documents are received by the
	awarded contractor.
	Performance and Payment Bonds (100% of Contract Price) will be required as stated in the bidding documents.

#### **DETAIL SUMMARY**

Other Requirements:	To submit Proposals for this Contract, prospective bidder shall, on THURSDAY, JANUARY 26, 2023, meet the following requirements:
	(1) be qualified via "Confidential Questionnaire" by the Texas Department of Transportation (TxDOT) for bidding on State projects or within the 90-day grace period for the preparation of a new qualification statement, or have submitted the Confidential Questionnaire and have it on file with TxDOT at least 14 days before the date proposals are to be opened;
	(2) not on the TxDOT list of currently debarred/sanctioned contractors; and
	(3) provide suitable evidence of prior experience for similar work and be able to provide written documentation of successfully completed similar contracts.
	(4) SYSTEM FOR AWARD MANAGEMENT (SAM): Respondent and its Principals may not be debarred or suspended nor otherwise on the Excluded Parties List System (EPLS) in SAM. Include verification that the company as well as the company's principals are not listed (are not debarred) through the System for Award Management ( <u>www.SAM.gov</u> ). Enclose a printout of the Entity Registration Page.
Initial Contract Term:	142 working days
Optional Contract Terms:	None.
Designated Contact:	Hays County Purchasing Department Email: <u>purchasing@co.hays.tx.us</u>
Questions & Answers:	Questions regarding this solicitation must be made in writing and submitted to the designated contact above no later than <b>WEDNESDAY, JANUARY 18, 2023, at 5:00 PM</b> , CT.
	Telephone inquiries will not be accepted. Questions will be accepted in writing to <u>purchasing@co.hays.tx.us</u> .
	Answers to questions will be provided in the form of an addendum after the question deadline has passed. All addenda will be posted on BidNet Direct and ESBD websites.
Addenda	Any interpretations, corrections or changes to this IFB and specifications will be made by addenda. Sole issuing authority of addenda shall be vested in the Hays County Purchasing Office. It is the Respondent's responsibility to acknowledge receipt of all addenda with bid submission.
Contact with County Staff:	Upon issuance of this solicitation, employees and representatives of Hays County, other than the Purchasing Office staff identified as the Designated Contact above, will not discuss the contents of this solicitation with any Respondent or its representatives. Failure of a Respondent or any of its representatives to observe this restriction may result in disqualification of any related offer. This restriction does not preclude discussions between affected parties for the purpose of conducting business unrelated to this procurement.

# **Anticipated Schedule of Events**

January 05, 2023	Issuance of IFB
January 11, 2023	Pre-Bid Meeting Online (11:00 AM, CT)
January 18, 2023	<b>Deadline for Submission of Questions (5:00 PM, CT)</b>
January 26, 2023	Deadline for Submission of Bids (11:00 AM, CT)
	Late bids will not be accepted
March, 2023	Anticipated Contract Award Date

# SECTION 3 BID INSTRUCTIONS / REQUIREMENTS

# **BID INSTRUCTIONS / REQUIREMENTS**

THE CONTRACT BID INSTRUCTION SHALL BE AS SET FORTH IN SECTION 13 TECHNICAL SPECIFICATIONS.

**SECTION 4 BID FORM / SCHEDULE OF RATES AND PRICES / CONFLICT OF INTEREST QUESTIONNAIRE / CERTIFICATE OF INTEREST PARTIES / CODE OF ETHICS FOR HAYS COUNTY /** HAYS COUNTY PRACTICES RELATED TO HISTORICALLY UNDERUTILIZED **BUSINESSES /** HAYS COUNTY HOUSE BILL 89 VERIFICATION / HAYS COUNTY PURCHASING DEPARTMENT SENATE BILL 252 **CERTIFICATION / VENDOR REFERENCES / VENDOR/BIDDER'S AFFIRMATION / RELATED PARTY DISCLOSURE FORM / DEBARMENT AND LICENSING CERTIFICATION / CHILD SUPPORT STATEMENT /** STATE OF TEXAS CHILD SUPPORT BUSINESS OWNERSHIP FORM / **CONTRACTOR'S ASSURANCE (SUBCONTRACTS-FEDERAL AID PROJECTS) REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION** CONTRACTS (FHWA 1273) / FHWA 1273 CERTIFICATION / **APPENDIX II TO PART 200 - CONTRACT PROVISIONS FOR NON-FEDERAL** ENTITY CONTRACTS UNDER FEDERAL AWARDS

# **BID FORM**

#### **PROJECT IDENTIFICATION**

Project No. IFB 2023-B12 RM 12 at RM 3237 Intersection

#### THIS BID IS SUBMITTED TO:

Electronically: Bid Packets can be submitted through BidNet Direct: www.bidnetdirect.com/hayscounty,

#### Manually:

Hays County Purchasing Department Attn: Stephanie Hunt 712 South Stagecoach Trail, Suite 1071 San Marcos, Texas 78666

The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with COUNTY in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

BIDDER accepts all of the terms and conditions of the Invitation for Bids and Bid Instructions/Requirements, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the day of Bid opening. BIDDER will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within 10 working days after the date of COUNTY's Notice of Award.

This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm, or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over COUNTY.

BIDDER will complete the work in accordance with the Contract Documents and the accompanying Schedule of Rates and Prices and will pay not less than the Prevailing Wage Rates for Hays County, Texas. The work will be completed within 142 working days from the date for commencing work as set forth in the "Notice to Proceed" to be issued by the COUNTY.

Bid Form Communications concerning this Bid shall be addressed to the address of BIDDER indicated below:

SUBMITTED ON		, 20	
State Contractor Licens	e Number		
IF BIDDER is:			
<u>An Individual</u>			
Ву	(Individual's Name)		(SEAL)
	(Signature)		
doing business as Business address:			
Phone Number: Email:	Fa	x Number:	
A Partnership			
Зу	(Firm Name)		(SEAL)
	(General Partner)		
	(Signature)		
Business address:			
Phone Number:	Fa	x Number:	

# A Corporation

By		(SEAL)
5	(Corporate Name)	
	(State of Incorporation)	
Ву	(Name of Person Authorized to Sign)	(SEAL)
	(Signature)	
(Corporate Seal)		
<b>A</b>		
Attest:	(Secretary)	
Business Address		
Phone Number:	Fax Number:	
Email:		
Date of Qualification to	Do Business is	

# A Joint Venture

By		(SEAL)	
J	(Name)	、 , ,	
	(Address)		
	(Signature)		
Bv			
	(Name)		
	(Address)		
	(Signature)		

Phone & Fax Numbers, Email & mailing addresses for receipt of official communications:

(Each joint venturer must sign. The manner for signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner above.)

#### **PROJECT:** IFB 2023–B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

Full compensation for compliance with each and every provision of the Request for Bids, the Bid, the Specifications, and the Contract will be considered as included in the unit prices for the work set forth below, and no separate payment will be made for compliance with each and every provision of the Request for Bids, the Bid, the Specifications, and the Contract, unless separate payment is expressly provided for therein.

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUNT	r bid
1	0100 6002	PREPARING ROW	18	STA		\$	-
2	0104 6017	REMOVING CONC (DRIVEWAYS)	280	SY		\$	-
3	0105 6030	REMOVING STAB BASE & ASPH PAV (8"–14")	700	SY		\$	-
4	0110 6001	EXCAVATION (ROADWAY)	4073	CY		\$	-
5	0132 6003	EMBANKMENT (FINAL)(ORD COMP)(TY B)	83	CY		\$	-
6	0160 6003	FURNISHING AND PLACING TOPSOIL (4")	3991	SY		\$	-
7	0162 6002	BLOCK SODDING	3991	SY		\$	-
8	0168 6001	VEGETATIVE WATERING	161	MG		\$	-
9	0247 6366	FL BS (CMP IN PLC)(TY A GR 5)(FNAL POS)	828	CY		\$	-
10	0310 6001	PRIME COAT (MULTI OPTION)	1152	GAL		\$	-
11	0354 6188	PLANE ASPH CONC PAV (MICRO-MILLING (1")	4594	SY		\$	-
12	0400 6008	CUT & RESTORE ASPH PAVING	40	SY		\$	-

#### **PROJECT:** IFB 2023–B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUN	t bid
13	0401 6001	FLOWABLE BACKFILL	63	CY		\$	Ι
14	0402 6001	TRENCH EXCAVATION PROTECTION	202	LF		\$	-
15	0416 6030	DRILL SHAFT (TRF SIG POLE) (24 IN)	12	LF		\$	-
16	0416 6031	DRILL SHAFT (TRF SIG POLE) (30 IN)	12	LF		\$	-
17	0416 6032	DRILL SHAFT (TRF SIG POLE) (36 IN)	14	LF		\$	-
18	0420 6002	CL A CONC (MISC)	1	CY		\$	-
19	0432 6002	RIPRAP (CONC)(5 IN)	39	CY		\$	-
20	0450 6052	RAIL (HANDRAIL)(TY F)	18	LF		\$	-
21	0460 6004	CMP (GAL STL 30 IN)	9	LF		\$	-
22	0464 6003	RC PIPE (CL III)(18 IN)	355	LF		\$	_
23	0464 6005	RC PIPE (CL III)(24 IN)	183	LF		\$	-
24	0464 6007	RC PIPE (CL III)(30 IN)	173	LF		\$	_

#### **PROJECT:** IFB 2023-B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUN	Г BID
25	0464 6080	RC PIPE (ARCH) (CL V) (DES 3)	44	LF		\$	-
26	0466 6132	HEADWALL (CH – PW – S) (DIA= 30 IN)	2	EA		\$	-
27	0467 6359	SET (TY II) (18 IN) (RCP) (4: 1) (P)	22	EA		\$	_
28	0467 6390	SET (TY II) (24 IN) (RCP) (4: 1) (C)	8	EA		\$	_
29	0467 6409	SET (TY II) (30 IN) (CMP) (6: 1) (C)	2	EA		\$	-
30	0467 6540	SET (TY II) (DES 3) (RCP) (3: 1) (C)	1	EA		\$	-
31	0467 6542	SET (TY II) (DES 3) (RCP) (4: 1) (C)	1	EA		\$	-
32	0474 6023	PRE-CAST TRNCH DRAIN(W/OUT CONC PVMNT)	78	LF		\$	-
33	0479 6004	ADJUSTING MANHOLES (SANITARY)	5	EA		\$	-
34	0480 6001	CLEAN EXIST CULVERTS	1	EA		\$	-
35	0496 6004	REMOV STR (SET)	10	EA		\$	-
36	0496 6007	REMOV STR (PIPE)	464	LF		\$	-

#### **PROJECT:** IFB 2023-B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUN	t bid
37	0500 6001	MOBILIZATION	1	LS		\$	-
38	0502 6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	6	МО		\$	-
39	0506 6001	ROCK FILTER DAMS (INSTALL) (TY 1)	50	LF		\$	-
40	0506 6002	ROCK FILTER DAMS (INSTALL) (TY 2)	77	LF		\$	-
41	0506 6011	ROCK FILTER DAMS (REMOVE)	127	LF		\$	-
42	0506 6020	CONSTRUCTION EXITS (INSTALL) (TY 1)	5	SY		\$	-
43	0506 6024	CONSTRUCTION EXITS (REMOVE)	5	SY		\$	-
44	0506 6038	TEMP SEDMT CONT FENCE (INSTALL)	2836	LF		\$	-
45	0506 6039	TEMP SEDMT CONT FENCE (REMOVE)	2836	LF		\$	-
46	0508 6001	CONSTRUCTING DETOURS	420	SY		\$	-
47	0512 6009	PORT CTB (FUR & INST)(LOW PROF)(TY 1)	1020	LF		\$	-
48	0512 6010	PORT CTB (FUR & INST)(LOW PROF)(TY 2)	440	LF		\$	-

#### **PROJECT:** IFB 2023-B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUN	t bid
49	0512 6033	PORT CTB (MOVE)(LOW PROF)(TY 1)	540	LF		\$	Ι
50	0512 6034	PORT CTB (MOVE)(LOW PROF)(TY 2)	360	LF		\$	-
51	0512 6057	PORT CTB (REMOVE)(LOW PROF)(TY 1)	1020	LF		\$	-
52	0512 6058	PORT CTB (REMOVE)(LOW PROF)(TY 2)	440	LF		\$	_
53	0530 6004	DRIVEWAYS (CONC)	167	SY		\$	-
54	0530 6005	DRIVEWAYS (ACP)	1216	SY		\$	-
55	0531 6010	CURB RAMPS (TY 7)	2	EA		\$	-
56	0560 6001	MAILBOX INSTALL-S (TWG-POST) TY 1	2	EA		\$	-
57	0585 6002	RIDE BONUS/DAMAGES (ITEM 341)	2000	DOL		\$	-
58	0618 6023	CONDT (PVC) (SCH 40) (2")	223	LF		\$	-
59	0618 6029	CONDT (PVC) (SCH 40) (3")	117	LF		\$	-
60	0618 6047	CONDT (PVC) (SCH 80) (2") (BORE)	55	LF		\$	_

#### **PROJECT:** IFB 2023–B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUN	r bid
61	0618 6054	CONDT (PVC) (SCH 80) (3") (BORE)	480	LF		\$	Ι
62	0620 6007	ELEC CONDR (NO.8) BARE	1015	LF		\$	-
63	0620 6008	ELEC CONDR (NO.8) INSULATED	700	LF		\$	-
64	0620 6009	ELEC CONDR (NO.6) BARE	19	LF		\$	-
65	0620 6010	ELEC CONDR (NO.6) INSULATED	37	LF		\$	-
66	0624 6008	GROUND BOX TY C (162911)W/APRON	2	EA		\$	-
67	0624 6010	GROUND BOX TY D (162922)W/APRON	4	EA		\$	-
68	0628 6120	ELC SRV TY D 120/240 060(NS)AL(N)PS(U)	1	EA		\$	-
69	0644 6001	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	12	EA		\$	-
70	0644 6004	IN SM RD SN SUP&AM TY10BWG(1)SA(T)	8	EA		\$	-
71	0644 6031	IN SM RD SN SUP&AM TYS80(1)SA(T-2EXT)	2	EA		\$	-
72	0644 6035	IN SM RD SN SUP&AM TYS80(1)SA(U-2EXT)	1	EA		\$	-

#### **PROJECT:** IFB 2023-B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUI	NT BID
73	0644 6037	IN SM RD SN SUP&AM TYS80(1)SA(U–WC)	1	EA		\$	Ι
74	0644 6076	REMOVE SM RD SN SUP&AM	20	EA		\$	-
75	0658 6047	INSTL OM ASSM (OM-2Y)(WC)GND	38	EA		\$	-
76	0662 6063	WK ZN PAV MRK REMOV (W)4"(SLD)	8562	LF		\$	-
77	0662 6075	WK ZN PAV MRK REMOV (W)24"(SLD)	66	LF		\$	_
78	0662 6095	WK ZN PAV MRK REMOV (Y)4"(SLD)	8369	LF		\$	-
79	0666 6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	632	LF		\$	Ι
80	0666 6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	137	LF		\$	_
81	0666 6054	REFL PAV MRK TY I (W)(ARROW)(100MIL)	7	EA		\$	-
82	0666 6078	REFL PAV MRK TY I (W)(WORD)(100MIL)	7	EA		\$	-
83	0666 6090	REF PAV MRK TY I (W)(MED NOSE)(100MIL)	1	EA		\$	-
84	0666 6141	REFL PAV MRK TY I (Y)12"(SLD)(100MIL)	220	LF		\$	-

#### **PROJECT:** IFB 2023-B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

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BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUNT	BID
85	0666 6167	REFL PAV MRK TY II (W) 4" (BRK)	43	LF		\$	Η
86	0666 6170	REFL PAV MRK TY II (W) 4" (SLD)	3233	LF		\$	-
87	0666 6178	REFL PAV MRK TY II (W) 8" (SLD)	632	LF		\$	-
88	0666 6182	REFL PAV MRK TY II (W) 24" (SLD)	137	LF		\$	_
89	0666 6184	REFL PAV MRK TY II (W) (ARROW)	7	EA		\$	-
90	0666 6192	REFL PAV MRK TY II (W) (WORD)	7	EA		\$	_
91	0666 6207	REFL PAV MRK TY II (Y) 4" (SLD)	4608	LF		\$	-
92	0666 6212	REFL PAV MRK TY II (Y) 12" (SLD)	220	LF		\$	-
93	0666 6300	RE PM W/RET REQ TY I (W)4"(BRK)(100MIL)	43	LF		\$	-
94	0666 6303	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL)	3233	LF		\$	-
95	0666 6315	RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL)	4608	LF		\$	_
96	0672 6007	REFL PAV MRKR TY I-C	44	EA		\$	-
97	0672 6009	REFL PAV MRKR TY II-A-A	210	EA		\$	_

#### **PROJECT:** IFB 2023–B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

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BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUNT	BID
98	0677 6001	ELIM EXT PAV MRK & MRKS (4")	7270	LF		\$	-
99	0680 6001	INSTALL HWY TRF SIG (FLASH BEACON)	1	EA		\$	-
100	0680 6002	INSTALL HWY TRF SIG (ISOLATED)	1	EA		\$	_
101	0680 6004	REMOVING TRAFFIC SIGNALS	1	EA		\$	-
102	0682 6001	VEH SIG SEC (12")LED(GRN)	9	EA		\$	-
103	0682 6002	VEH SIG SEC (12")LED(GRN ARW)	3	EA		\$	-
104	0682 6003	VEH SIG SEC (12")LED(YEL)	9	EA		\$	-
105	0682 6004	VEH SIG SEC (12")LED(YEL ARW)	4	EA		\$	-
106	0682 6005	VEH SIG SEC (12")LED(RED)	9	EA		\$	-
107	0682 6006	VEH SIG SEC (12")LED(RED ARW)	1	EA		\$	-
108	0682 6018	PED SIG SEC (LED)(COUNTDOWN)	2	EA		\$	-
109	0682 6051	BACKPLATE W/REFL BRDR(3 SEC)ALUM	7	EA		\$	-
110	0682 6052	BACKPLATE W/REFL BRDR(4 SEC)ALUM	1	EA		\$	_

#### **PROJECT:** IFB 2023-B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

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BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUNT	BID
111	0682 6053	BACKPLATE W/REFL BRDR(5 SEC)ALUM	2	EA		\$	-
112	0684 6007	TRF SIG CBL (TY A)(12 AWG)(2 CONDR)	55	LF		\$	_
113	0684 6028	TRF SIG CBL (TY A)(14 AWG)(2 CONDR)	384	LF		\$	_
114	0684 6031	TRF SIG CBL (TY A)(14 AWG)(5 CONDR)	1142	LF		\$	-
115	0684 6033	TRF SIG CBL (TY A)(14 AWG)(7 CONDR)	552	LF		\$	-
116	0686 6029	INS TRF SIG PL AM (S)1 ARM(28')	1	EA		\$	-
117	0686 6043	INS TRF SIG PL AM(S)1 ARM(40')LUM	1	EA		\$	Ι
118	0687 6001	PED POLE ASSEMBLY	2	EA		\$	-
119	0688 6001	PED DETECT PUSH BUTTON (APS)	2	EA		\$	-
120	0688 6003	PED DETECTOR CONTROLLER UNIT	1	EA		\$	-
121	0690 6021	REMOVAL OF TIMBER POLES	1	EA		\$	-
122	0690 6045	REPLACE OF FLASHER CABINET	1	EA		\$	-
123	0690 6051	REMOVAL OF SIGNAL POLE ASSM	1	EA		\$	_

#### **PROJECT:** IFB 2023–B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

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BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUNT E	3ID
124	0690 6081	INSTL DOWN GUY AND ANCHOR W/GUARD	2	EA		\$	Ι
125	1004 6001	TREE PROTECTION	12	EA		\$	_
126	3076 6003	D-GR HMA TY-B PG64-22 (EXEMPT)	635	TON		\$	-
127	3076 6048	D-GR HMA TY-B PG76-22	636	TON		\$	-
128	3076 6072	D-GR HMA TY-D PG76-22 (EXEMPT)	48	TON		\$	_
129	3081 6008	TOM-C PG76-22 SAC-B	396	TON		\$	-
130	3084 6001	BONDING COURSE	691	GAL		\$	-
131	3085 6001	UNDERSEL COURSE	1155	GAL		\$	-
132	6001 6002	PORTABLE CHANGEABLE MESSAGE SIGN	3	EA		\$	-
133	6054 6002	COAXIAL CABLE	84	LF		\$	-
134	6185 6005	TMA (MOBILE OPERATION)	30	DAY		\$	-
135	6292 6001	RVDS (PRESENCE DETECTION ONLY)	4	EA		\$	-
136	6292 6002	RVDS(ADVANCE DETECTION ONLY)	3	EA		\$	_

#### **PROJECT:** IFB 2023–B12 RM 12 AT RM 3237 INTERSECTION **CONTRACTOR**:

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BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUNT BID
137	6384 6014	TRENCH (COMM)	157	LF		\$ -
138	6384 6015	DIRECTIONAL BORE (COMM)	1380	LF		\$ -
139	6384 HC01	INNERDUCT (COMM)	1537	LF		\$ -
140	6384 HC02	HANDHOLE (COMM) (ZAYO) (49 5/8" x 32 1/8" x 36")	2	EA		\$ -
141	6384 HC03	HANDHOLE (COMM) (FRONTIER) (36" x 60" x 36")	2	EA		\$ -
142	6384 HC04	HANDHOLE (COMM) (FRONTIER) (48" x 60" x 36")	1	EA		\$ -
143	7232 6015	ENCASEMENT FOR 6" SEWR LINE (BORE OR OC)	45	LF		\$ -
144	7251 6001	SUBSURFACE UTIL LOCATE (OUTSIDE RDBD)	4	EA		\$ -
145	7251 6002	SUBSURFACE UTIL LOCATE (WITHIN RDBD)	4	EA		\$ -

TOTAL AMOUNT OF BID

_____ Dollars and _____ Cents _____ \$____

### NOTE: THE COURT MAY EITHER REJECT ALL BIDS OR AWARD A CONTRACT TO THE LOWEST AND/OR BEST BID.

Acknowledgment of Addenda

Addendum No. 1:

Addendum No. 2:

Addendum No. 3:

Addendum No. 4:

CONFLICT OF INTEREST QUESTIONNAIRE For vendor doing business with local governmental entity	FORM CIQ
This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.	OFFICE USE ONLY
This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).	Date Received
By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. <i>See</i> Section 176.006(a-1), Local Government Code.	
A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.	
1 Name of vendor who has a business relationship with local governmental entity.	
<ul> <li>Check this box if you are filing an update to a previously filed questionnaire. (The law recompleted questionnaire with the appropriate filing authority not later than the 7th busines you became aware that the originally filed questionnaire was incomplete or inaccurate.)</li> </ul>	equires that you file an updated as day after the date on which
Name of local government officer about whom the information is being disclosed.	
Name of Officer	
<ul> <li>Describe each employment or other business relationship with the local government officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with Complete subparts A and B for each employment or business relationship described. Attact CIQ as necessary.</li> <li>A. Is the local government officer or a family member of the officer receiving or I other than investment income, from the vendor?</li> <li>Yes</li> <li>No</li> <li>B. Is the vendor receiving or likely to receive taxable income, other than investment</li> </ul>	t income, from or at the direction
of the local government officer or a family member of the officer AND the taxable local governmental entity?	income is not received from the
5 Describe each employment or business relationship that the vendor named in Section 1 m other business entity with respect to which the local government officer serves as an o ownership interest of one percent or more.	naintains with a corporation or officer or director, or holds an
6 Check this box if the vendor has given the local government officer or a family member as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.0	of the officer one or more gifts 003(a-1).
Signature of vendor doing business with the governmental entity	Date

# CONFLICT OF INTEREST QUESTIONNAIRE For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/ Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

#### Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

#### Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

### **Certificate of Interested Parties**

In 2015, the Texas Legislature adopted <u>House Bill 1295</u>, which added 2252.908 to the Texas Government Code and applies to all contracts entered into on or after January 1, 2016. Section 2252.908 (b)(1)(2) applies only to a contract of a governmental entity or state agency that requires an action or vote by the governing body of the entity or agency before the contract may be signed or that has a value of at least \$1 million. In addition, pursuant to Section 2252.908 (d), a governmental entity or state agency may not enter into a contract described by Subsection (b) with a business entity unless the business entity, in accordance with this section and rules adopted under this section, submits a disclosure of interested parties to the governmental entity or state agency.

With regard to Hays County purchases, a vendor that is awarded a contract or purchase approved by Hays County Commissioner's Court is required to electronically complete a Form 1295 through the Texas Ethics Commission website

(https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm) and submit a signed and notarized copy of the form to the County. A contract, including County issued purchase order (if applicable), will not be enforceable or legally binding until the County receives and acknowledges receipt of the properly completed Form 1295 from the awarded vendor.

CERTIFICATE OF INTE	RESTED PARTIES		I	FORM 1295
Complete Nos. 1 - 4 and 6 if the Complete Nos. 1, 2, 3, 5, and 6	ere are interested parties. if there are no interested parties.		OFFIC	CE USE ONLY
Name of business entity filing form, entity's place of business.	and the city, state and country of the b	usiness		File
2 Name of governmental entity or stat which the form is being filed.	e agency that is a party to the contract	t for	×+	
3 Provide the identification number us and provide a description of the serv	sed by the governmental entity or state vices, goods, or other property to be pr	e agency to tr rovided und	ack of ider the contr	ntify the contract, act.
4 Name of Interested Party	City, State, Country (place of business)		of Interest	(check applicable)
	, O'			
	and.			
	Nn			
	Å.			
	2			
Check only if there is the linteres	ted Party.			
6 UNSWORN DECLARATION My name is	, and my da	te of birth is		
My address (street) L declare under penalty of perjury that the for	egoing is true and correct.	,(state	, ) (zip cod	, e) (country)
Executed in County,	State of , on the day	y of(mon	, 20 th) (y	 year)
	Signature of authorize	ed agent of con (Declarant)	tracting busi	ness entity
ADI	DADDITIONAL PAGES AS NEC	ESSARY		

Γ

# CODE OF ETHICS FOR HAYS COUNTY

Public employment is a public trust. It is the policy of Hays County to promote and balance the objective of protecting government integrity and the objective of facilitating the recruitment and retention of personnel needed by Hays County. Such a policy implemented by prescribing essential standards of ethical conduct without creating unnecessary obstacles to entering public services.

Public servants must discharge their duties impartially so as to assure fair competitive access to governmental procurement by responsible contractors. Moreover, they should conduct themselves in such a manner as to foster public confidence in the integrity of the Hays County procurement organization.

To achieve the purpose of this article, it is essential that those doing business with Hays County also observe the ethical standards prescribed here.

It shall be a breach of ethics to attempt to influence any public employee, elected official or department head to breach the standards of ethical conduct set forth in this code.

It shall be a breach of ethics for any employee of Hays County or a vendor doing business with the county to participate directly or indirectly in a procurement when the employee or vendor knows that:

The employee or any member of the employee's immediate family, or household has a substantial financial interest pertaining to the procurement. This means ownership of 10% or more of the company involved and/or ownership of stock or other interest or such valued at \$2500.00 or more.

A business or organization in which the employee, or any member of the employee's immediate family, has a financial interest pertaining to the procurement.

Gratuities: It shall be a breach of ethics to offer, give or agree to give any employee of Hays County or for any employee to solicit, demand, accept or agree to accept from a vendor, a gratuity of consequence or any offer of employment in connection with any decision approval, disapproval, recommendation, preparation or any part of a program requirement or purchase request influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or controversy, any particular matter pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefore pending before this government.

Kickbacks: It shall be a breach of ethics for any payment, gratuity or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor for any contract for Hays County as an inducement for the award of a contract or order.

Contract Clause: The prohibition against gratuities and kickbacks prescribed above shall be conspicuously set forth in every contract and solicitation therefore.

Any effort to influence any employee, elected official, or department head to violate the standards of the code is grounds to void the contract. Please certify, by your signature below, that you understand the ethics policy of Hays County and in no way will attempt to violate the code.

SIGNATURE:	 	 
PRINT NAME & TITLE:		

COMPANY NAME: _____

# Hays County Practices Related to Historically Underutilized Businesses

### 1. STATEMENT OF PRACTICES

Hays County will strive to ensure that all businesses, regardless of size, economic, social or ethnic status have an equal opportunity to participate in the County's procurement processes. The County is committed to promote full and equal business opportunity for all businesses to supply the goods and services needed to support the mission and operations of county government, and seeks to encourage the use of certified historically underutilized businesses (HUB's) through the use of race, ethnic and gender neutral means. It is the practice of Hays County to involve certified HUBs to the greatest extent feasible in the County's procurement of goods, equipment, services and construction projects while maintaining competition and quality of work standards. The County affirms the good faith efforts who recognize and practice similar business standards.

### 2. DEFINITIONS

<u>Historically underutilized businesses (HUBs)</u>, also known as a disadvantaged business enterprise (DBE), are generally business enterprises at least 51% of which is owned and the management and daily business operations are controlled by one or more persons who is/are socially and economically disadvantaged because of his/her identification as a member of certain groups, including women, Black Americans, Mexican Americans, and other Americans if Hispanic origin, Asian Americans and American Indians.

<u>Businesses</u> include firms, corporations, sole proprietorships, vendors, suppliers, contractors, subcontractors, professionals and other similar references when referring to a business that provides goods and/or services regardless of the commodity category.

<u>Certified HUB's</u> include business enterprises that meet the definition of a HUB and who meet the certification requirements of certification agencies recognized by Hays County, as expressed below.

<u>Statutory bid limit</u> refers to the Texas Local Government Code provision that requires competitive bidding for many items valued at greater than \$50,000.

### 3. GUIDELINES

- a. Hays County, its contractors, their subcontractors and suppliers, as well as all vendors of goods, equipment and services, shall not discriminate on the basis of race, color, creed, gender, age, religion, national origin, citizenship, mental or physical disability, veteran's status or political affiliation in the award and/or performance of contracts. All entities doing business or anticipating doing business with the County shall support, encourage and implement affirmative steps toward a common goal of establishing equal opportunity for all citizens and businesses of the County.
- b. Vendors and/or contractors desiring to participate in the HUB program must successfully complete the certification process with the State of Texas or Texas Unified Certification Program. The vendor or contractor is also required to hold a current valid certification (title) from either of these entities.
- c. Vendors and/or contractors must be registered with the State Comptroller's web-based HUB directory and with the Comptroller's Centralized Master Bidder's List (CMBL). Hays
County will solicit bids from certified HUB's for state purchasing and public works contracts.

- 4. Hays County will actively seek and encourage HUBs to participate in all facets of the procurement process by:
  - a. Continuing to increase and monitor a database of certified HUB vendors, professionals and contractors. The database will be expanded to include products, areas of expertise and capabilities of each HUB firm.
  - b. Continuing to seek new communication links with HUB vendors, professionals and contractors to involve them in the procurement process.
  - c. Continuing to advertise bids on the County's website and in the newspapers including newspapers that target socially and economically disadvantaged communities.
- 5. As prescribed by law, the purchase of one or more items costing in excess of the statutory bid limit must comply with the competitive bid process. Where possible, those bids will be structured to include and encourage the participation of HUB firms in the procurement process by:
  - a. Division of proposed requisitions into reasonable lots in keeping with industry standards and competitive bid requirements.
  - b. Where feasible, assessment of bond and insurance requirements and the designing of such requirements to reasonably permit more than one business to perform the work.
  - c. Specifications of reasonable, realistic delivery schedules consistent with the County's actual requirements.
  - d. Specifications, terms and conditions reflecting the County's actual requirements are clearly stated, and do not impose unreasonable or unnecessary contract requirements.
- 6. A HUB practice statement shall be included in all specifications. The County will consider the bidder's responsiveness to the HUB Practices in the evaluation of bids and proposals. Failure to demonstrate a good faith effort to comply with the County's HUB practices may result in a bid or proposal being considered non-responsive to specifications.
- 7. Nothing in this practice statement shall be construed to require the County to award a contract other than to the lowest responsive bidder as required by law. This practice is narrowly tailored in accordance with applicable law.

Please sign for acknowledgement of the Hays County HUB Practices:

## Hays County House Bill 89 Verification

I, ______ (Person name), the undersigned representative of ______ (Company or Business name, hereafter referred to as Company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

- 1. Does not boycott Israel currently; and
- 2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.001, Texas Government Code:

- 1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and
- 2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.

 Signature of Company Representative
 Date

 On this _____ day of ______, 20____, personally appeared

 ______, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

 NOTARY SEAL

Notary Public in and for the State of Texas

(if other than Texas, Write state in here _____)

Date

## Hays County Purchasing Department Senate Bill 252 Certification

Pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that the company named below is not listed on the website of the Comptroller of the State of Texas concerning the listing of companies that are identified under Section 806.051, Section 807.051 or Section 2253.153. I further certify that should the above-named company enter into a contract that is on said listing of companies on the website of the Comptroller of the State of Texas which do business with Iran, Sudan or any Foreign Terrorist Organization, I will immediately notify the Hays County Purchasing Department.

**Company Name** 

Print Name of Company Representative

Signature of Company Representative

Date

## CERTIFICATION CHECK PERFORMED BY HAYS COUNTY PURCHASING:

On this day, the Purchasing Representative for Hays County in San Marcos, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051 or Section 2253.253 and I have ascertained that the above-named company is not contained on said listing of companies which do business with Iran, Sudan or any Foreign Terrorist Organization.

Print Name of Hays County Purchasing Representative

Signature of Hays County Purchasing Representative

Date

Solicitation Number

## **VENDOR REFERENCES**

Please list three (3) references of current customers who can verify the quality of service your company provides. The County prefers customers of similar size and scope of work to this proposal/bid. **This form must be returned with your bid/proposal.** 

Company Name:
Address:
Contact Person and Title:
Phone Number:
Email:
Scope & Duration of Contract:
REFERENCE TWO
Company Name:
Address:
Contact Person and Title:
Phone Number:
Email:
Scope & Duration of Contract:
REFERENCE THREE
Company Name:
Address:
Contact Person and Title:

Phone Number: _____

Email: _____

Scope & Duration of Contract: _____

## Vendor/Bidder's Affirmation

- Vendor/Bidder affirms that they are duly authorized to execute this Contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to price, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other person engages in this type of business prior to the official opening of this bid.
- 2. Vendor/Bidder hereby assigns to Purchaser any and all claims for overcharges associated with this Contract which arise under the antitrust laws of the United States, 15 USCA Section 1 et seq., and which arise under the antitrust laws of the State of Texas, Tex. Bus. & Com. Code, Section 15.01, et seq.
- 3. Pursuant to 262.0276 (a) of the Texas Local Government Code, Vendor/Bidder, hereby affirms that Vendor/Bidder:

_____ Does not own taxable property in Hays County, or;

_____ Does not owe any ad valorem taxes to Hays County or is not otherwise indebted to

Hays County

Name of Contracting Company

If taxable property is owned in Hays County, list property ID numbers:

Signature of Company Official Authorizing Bid/Offer

Printed Name

Email Address

Title

Phone

# **Related Party Disclosure Form**



Hays County strives to provide financial transparency to its taxpayers. Completion of this form will allow for added transparency into the procurement process by disclosing Vendor relationships with current or former Hays County employees. The existence of a relationship may not present a legal or ethical conflict for a Vendor. However, disclosure will allow for consideration of potential conflicts and/or ways to eliminate conflicts.

A Vendor who Employs any of the following is required to disclose the relationship on this form:

- Current Hays County employee (including elected or appointed official)(Complete Section A)
- Former Hays County employee who has been separated from Hays County for no less than four (4) years (including elected or appointed official) (Complete Section B)
- Person related within the 2nd degree of consanguinity or affinity to either of the above⁽¹⁾ (Complete Section C)

If no known relationships exist, complete Section D.

<u>This form is required to be completed in full and submitted with the proposal package.</u> A submitted proposal package that does not include this completed form will be considered non-responsive and will not be eligible for an award.

Section A: Current Hays County Empl	<u>oyee</u>		
Employee Name	Title		
Section B: Former Hays County Emplo	oyee		
Employee Name	Title	Da	ate of Separation from County
Section C: Person Related to Current or Former Hays County Employee			
Employee or Former Employee Name	e Tit	le	
Name of Related Person	Tit	le	Relationship
Section D: No Known Relationships If no relationships in accordance with the above exist or are known to exist, provide a written explanation below:			

Attach additional pages if necessary.

I, the undersigned, hereby certify that the information provided is true and complete to the best of my knowledge.

Name of Vendor

Signature of Certifying Official

Title of Certifying Official

Printed Name of Certifying Official

Date

⁽¹⁾A degree of relationship is determined under Texas Government Code Chapter 573. (as outlined below)

Relationship of Consanguinity				
	1st Degree	2nd Degree	<b>3rd</b> Degree*	4th Degree*
Person	child or parent	grandchild, sister, brother or grand- parent	great-grandchild, niece, nephew, aunt,* uncle* or great-grandparent	great-great- grandchild, grandniece, grandnephew, first cousin, great aunt,* great uncle* or great- great-grandparent
* An aunt, uncle, great aunt or great uncle is related to a person by consanguinity only if he or she is the sibling of the person's parent or grandparent.				

	Relationship of Affinity				
	1st Degree	2nd Degree			
Person	spouse, mother-in-law, father-in-law, son-in- law, daughter-in-law, stepson, stepdaughter, stepmother or stepfather	brother-in-law, sister-in-law, spouse's grandparent, spouse's grandchild, grandchild's spouse or spouse of grandparent			

"Vendor" shall mean any individuals or entity that seeks to enter into a contract with Hays County.

"Employs" shall mean any relationship wherein Vendor has made arrangements to compensate an individual, directly or by way of a business organization in which the individual has a sharehold or ownership interest, even if that arrangement is contractual and/or on an hourly-charge basis.

## DEBARMENT AND LICENSING CERTIFICATION

#### § STATE OF TEXAS § §

### **COUNTY OF HAYS**

I, the undersigned, being duly sworn or under penalty of perjury under the laws of the United States and the State of Texas, certifies that Firm named herein below and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a federal, state or local governmental entity with commission of any of the offenses enumerated in paragraph (1)(b) of this certification;
- d. Have not within a three-year period preceding this application/proposal had one or more public (federal, state or local) transactions terminated for cause or default;
- e. Are registered and licensed in the State of Texas to perform the professional services which are necessary for the project; and
- f. Have not been disciplined or issued a formal reprimand by any State agency for professional accreditation within the past three years.

Name of Firm

Signature of Certifying Official

Title of Certifying Official

Printed Name of Certifying Official

Date

Where the Firm is unable to certify to any of the statements in this certification, such Firm shall attach an explanation to this certification.

SUBSCRIBED and sworn to before me the undersigned authority by on this the day of _____, 20___, on behalf of said Firm.

> Notary Public in and for the State of Texas (if other than Texas, Write state in here _____ )

My commission expires:

# CHILD SUPPORT STATEMENT

Under Section 231.006, Family Code, the vendor or applicant certifies that the individual or business entity named in this contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate.

## State of Texas Child Support Business Ownership Form

County:	Project Name:
TxDOT CSJ:	LG Project Number:

Business Entity Submitting Bid:_____

Section 231.006, Family Code, requires a bid for a contract paid from state funds to include the names and social security number of individuals owning 25% or more of the business entity submitting the bid.

1. In the spaces below please provide the names and social security number of individuals owning 25% or more of the business.

Name	Social Security Number

- 2. Please check the box below if no individual owns 25% or more of the business.
  - ( ) No individual own 25% or more of the business.

Except as provided by Section 231.302(d), Family Code, a social security number is confidential and may be disclosed only for the purpose of responding to a request for information from an agency operating under the provisions of Part A and D to Title IV of the Federal Social Security Act (42 USC Section 601-617 and 651-699).

Under Section 231.006, Family Code, the vendor or applicant certifies that the individual or business entity named in this contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate.

The information collected on this form will be maintained by	With few exceptions, you
are entitled on request to be informed about the information collected about you. Under Sections	552.021 and 552.023 of
the Texas Government Code, you also are entitled to receive and review the information. Under	Section 559.004 of the
Government Code, you are also entitled to have information about you corrected that you believe	e is incorrect.

Signature

Date

**Printed Name** 

IF THIS PROJECT IS A JOINT VENTURE,

ALL PARTIES TO THE JOINT VENTURE MUST PROVIDE A COMPLETED FORM.

# **CONTRACTOR'S ASSURANCE**

(Subcontracts-Federal Aid Projects)

By signing this proposal, the contractor is giving assurances that all subcontract agreements will incorporate the Standard Specification and Special Provisions to Section 9.9., Payment Provisions for Subcontractors, all subcontract agreements exceeding \$2,000 will incorporate the applicable Wage Determination Decision, and all subcontract agreements will incorporate the following:

Special Provision	Certification of Nondiscrimination in Employment
Special Provision	Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)
Special Provision	Standard Federal Equal Employment Opportunity
Construction	Construction Specifications (Executive Order 11246)
Form FHWA 1273	Required Contract Provisions Federal-aid Construction Contracts (Form FHWA 1273 must also be physically attached to subcontracts and all lower-tier subcontracts)
Special Provision	Nondiscrimination (Include provisions of Sections 3.1 – 3.6 in all subcontracts and agreements for materials)
Special Provision	Cargo Preference Act Requirements in Federal-Aid Contracts
Special Provision	Disadvantaged Business Enterprise in Federal-Aid Contracts

#### REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

#### ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

#### I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid designbuild contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

**II. NONDISCRIMINATION** (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements. 1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women. d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

#### 6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

#### 8. Reasonable Accommodation for Applicants /

**Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not

discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

#### 10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;

(2) Assessing sanctions;

(3) Liquidated damages; and/or

(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and nonminority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and nonminority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

#### **III. NONSEGREGATED FACILITIES**

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

#### IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

#### 1. Minimum wages (29 CFR 5.5)

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

#### 2. Withholding (29 CFR 5.5)

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federallyassisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

#### 3. Payrolls and basic records (29 CFR 5.5)

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### 4. Apprentices and trainees (29 CFR 5.5)

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

**9. Disputes concerning labor standards.** As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor

set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

#### 10. Certification of eligibility (29 CFR 5.5)

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

# V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1 of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this section. 29 CFR 5.5.

* \$27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990). **3. Withholding for unpaid wages and liquidated damages.** The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this section. 29 CFR 5.5.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1 through 4 of this section. 29 CFR 5.5.

#### **VI. SUBLETTING OR ASSIGNING THE CONTRACT**

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

 the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or

equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on longstanding interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

#### **VII. SAFETY: ACCIDENT PREVENTION**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance

with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

# VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federalaid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

#### 18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

#### IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

#### X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

#### 1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

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#### 2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

#### 3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<u>https://www.sam.gov/</u>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

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#### Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

# XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier

subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

#### XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7. ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B) This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

## FHWA 1273 CERTIFICATION

I have read, understand, and agree to comply with the FHWA 1273. Checking "YES" indicates acceptance, while checking "NO" denotes non-acceptance.

	YES	NO	
Authorized Signature:			
Printed Name and Title:			
Respondent's Tax ID:		Telephone:	

If Respondent is a Corporation or other legal entity, please attach a corporate resolution or other appropriate official documentation that states that the person signing this Solicitation Response is an authorized person to sign for and legally bind the corporation or entity.

## Appendix II to Part 200 – Contract Provisions for Non-Federal Entity Contracts Under Federal Awards

In addition to other provisions required by the Federal agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.

(A) Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by <u>41</u> <u>U.S.C. 1908</u>, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

(B) All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

(C) Equal Employment Opportunity. Except as otherwise provided under <u>41 CFR Part 60</u>, all contracts that meet the definition of "federally assisted construction contract" in <u>41 CFR Part 60-1.3</u> must include the equal opportunity clause provided under <u>41 CFR 60-1.4(b)</u>, in accordance with Executive Order 11246, "Equal Employment Opportunity" (<u>30 FR 12319</u>, <u>12935</u>, <u>3 CFR Part</u>, <u>1964-1965</u> Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at <u>41 CFR part 60</u>, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

(D) Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

(E) Contract Work Hours and Safety Standards Act (<u>40 U.S.C. 3701-3708</u>). Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with <u>40 U.S.C. 3702</u> and <u>3704</u>, as supplemented by Department of Labor regulations (<u>29 CFR Part 5</u>). Under <u>40 U.S.C. 3702</u> of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of <u>40 U.S.C. 3704</u> are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

(F) Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under <u>37 CFR § 401.2 (a)</u> and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the

requirements of <u>37 CFR Part 401</u>, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

(G) Clean Air Act (<u>42 U.S.C. 7401-7671q</u>.) and the Federal Water Pollution Control Act (<u>33 U.S.C. 1251-1387</u>), as amended -Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (<u>42 U.S.C.</u> <u>7401-7671q</u>) and the Federal Water Pollution Control Act as amended (<u>33 U.S.C. 1251-1387</u>). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

(H) Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see <u>2 CFR 180.220</u>) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at <u>2 CFR 180</u> that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

(I) Byrd Anti-Lobbying Amendment (<u>31 U.S.C. 1352</u>) - Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by <u>31 U.S.C. 1352</u>. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

(J) Procurement of recovered materials (§ 200.323) - A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at <u>40 CFR part 247</u> that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

(K) Prohibition on certain telecommunications and video surveillance services or equipment (§200.216)

- (a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:
  - (1) Procure or obtain;

(2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in <u>Public Law 115-232</u>, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment. (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country. (b) In implementing the prohibition under <u>Public Law 115-232</u>, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.
(c) See <u>Public Law 115-232</u>, section 889 for additional information.

(d) See also <u>§ 200.471</u>.

(L) (§ 200.322) Domestic preferences for procurements -

(a) As appropriate and to the extent consistent with law, the non-Federal entity should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award.

(b) For purposes of this section:

(1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(2) "Manufactured products" means items and construction materials composed in whole or in part of nonferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

I have read, understand, and agree to comply with the Federal Affirmations specified above. Checking "YES" indicates acceptance, while checking "NO" denotes non-acceptance.

YES NO	
Authorized Signature:	
Printed Name and Title:	
Respondent's Tax ID:	Telephone:

If Respondent is a Corporation or other legal entity, please attach a corporate resolution or other appropriate official documentation that states that the person signing this Solicitation Response is an authorized person to sign for and legally bind the corporation or entity.

# SECTION 5 STANDARD FORM OF CONTRACT

## STANDARD FORM OF CONTRACT

## STATE OF TEXAS

## HAYS COUNTY

**THIS STANDARD FORM OF CONTRACT** (the "Contract") is by and between HAYS COUNTY, TEXAS, a political subdivision of the State of Texas (hereinafter called "County") and ______ (hereinafter called "Contractor").

The County and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

### Article 1. Work

Contractor shall complete all Work as specified or indicated in the Contract Documents. The "Project" is generally described as follows:

Project No. IFB 2023-B12 – RM 12 at RM 3237 Intersection

## Article 2. Engineer of Record

The Project has been designed by <u>RPS INFRASTRUCTURE, INC.</u>, who is hereinafter called the "Engineer of Record" and who is to act as the County's design professional.

## Article 3. Contract Time

The Work shall be Substantially Completed in 142 working days (the "Contract Time"). Following Substantial Completion, the Contractor shall proceed expeditiously with adequate forces and shall achieve Final Completion within the time specified in the Special Conditions.

## Article 4. Contract Price

County shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraph 4.1 below (the "Contract Price"):

4.1 For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in the Bid Form Schedule of Rates and Prices, and as totaled below:

TOTAL OF ALL UNIT PRICES_		\$ (dollars)
	(incent words)	

(insert words)

As provided in the Standard Specifications, estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by the Engineer of Record.

## Article 5. Contractor's Representations

In order to induce County to enter into this Contract, Contractor makes the following representations:

- 5.1 Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents including the "technical data".
- 5.2 Contractor has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.
- 5.3 Contractor is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.
- 5.4 Contractor has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site which have been identified. Contractor acknowledges that such reports and drawings are not Contract Documents and may not be complete for Contractor's purposes. Contractor acknowledges that the County and Engineer of Record do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site.
- 5.5 Contractor has correlated the information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- 5.6 Contractor has given Engineer of Record written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Engineer of Record is acceptable to Contractor, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

- 5.7 Contractor represents and agrees that there are no obligations, commitments, or impediments of any kind that will limit or prevent performance of its obligations under the Contract Documents.
- 5.8 Contractor warrants, represents, and agrees that if (i) it is a corporation or limited liability company, then it is a corporation duly organized, validly existing and in good standing under the laws of the State of Texas, or a foreign corporation or limited liability company duly authorized and in good standing to conduct business in the State of Texas, that it has all necessary corporate power and has received all necessary corporate approvals to execute and deliver this Contract, and the individual executing the Contract on behalf of Contractor has been duly authorized to act for and bind Contractor; or (ii) if it is a partnership, limited partnership, or limited liability partnership, then it has all necessary partnership power and has secured all necessary approvals to execute and deliver this Contract and perform all its obligations under the Contract Documents; and the individual executing this Contractor has been duly authorized to act for and bind Contractor has been duly authorized and endeliver this Contract and perform all its obligations under the Contract Documents; and the individual executing this Contractor.
- 5.9 Neither the execution and delivery of this Contract by Contractor nor the performance of its obligations under the Contract Documents will result in the violation of any provision, if a corporation, of its articles of incorporation or by-laws, if a limited liability company, of its articles of organization or regulations, or if a partnership, by any partnership agreement by which Contractor is bound, or any agreement by which Contractor is bound or to the best of the Contractor's knowledge and belief, will conflict with any order or decree of any court or governmental instrumentality relating to Contractor.
- 5.10 Except for the obligation of the County to pay Contractor the Contract Price pursuant to the terms of the Contract Documents, and to perform certain other obligations pursuant to the terms and conditions explicitly set forth in the Contract Documents, County shall have no liability to Contractor or to anyone claiming through or under Contractor by reason of the execution or performance of this Contract. Notwithstanding any obligation or liability of County to Contractor, no present or future partner or affiliate of County or any agent, officer, director, or employee of County, or of the various departments comprising Hays County, or anyone claiming under County has or shall have any personal liability to Contractor or to anyone claiming through or under Contractor by reason of the execution or performance of the execution or performance of the contractor or to anyone claiming under County has or shall have any personal liability to Contractor or to anyone claiming through or under Contractor by reason of the execution or performance of this Contract.

## Article 6. Contract Documents

The "Contract Documents," which comprise the entire agreement between the County and Contractor concerning the Work, consist of the following:

6.1	This Standard Form of Contract
6.2	Performance Bond
6.3	Payment Bond
6.4	Maintenance Bond
6.5	Certificate of Insurance
6.6	Wage Rates
6.7	Standard Specifications
6.8	Special Provisions
6.9	Special Conditions
6.10	Technical Specifications
6.11	Plan Drawings
6.12	Addenda numbers to, inclusive
6.13	Contractor's Bid Form
6.14	Documentation submitted by Contractor prior to Notice of Award.
6.15	The following which may be delivered or issued after the Effect Contract and are not attached hereto: All Written Amendm

6.15 The following which may be delivered or issued after the Effective Date of the Contract and are not attached hereto: All Written Amendments and other documents amending, modifying or supplementing the Contract Documents pursuant to applicable sections in the Standard Specifications.

The documents listed in paragraphs 6.2 et seq. above are attached to this Contract (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Article 6. The Contract Documents may only be amended, modified or supplemented as provided in the Standard Specifications.

### Article 7. Miscellaneous

- 7.1 Terms used in this Contract which are defined in the Standard Specifications will have the meanings indicated in the Standard Specifications.
- 7.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 7.3 The County and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.
- 7.4 Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the County and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken position.
- 7.5 Each party to this Contract hereby agrees and acknowledges that venue and jurisdiction of any suit, right, or cause of action arising out of or in connection with this Contract shall lie exclusively in Hays County, Texas. Furthermore, this Contract shall be governed by and construed in accordance with the laws of the State of Texas, excluding, however, its choice of law rules.
- 7.6 The parties to this Contract agree that during the performance of the services under this Contract they will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The parties to this Contract will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship.
- 7.7 This Contract is for the sole and exclusive benefit of the parties hereto, and nothing in this Contract, express or implied, is intended to confer or shall be construed as conferring upon any other person any rights, remedies or any other type or types of benefits.

- 7.8 Each party to this Contract acknowledges that it and its counsel have reviewed this Contract and that the normal rules of construction are not applicable and there will be no presumption that any ambiguities will be resolved against the drafting party in the interpretation of this Contract.
- 7.9 Each party to this Contract, in the performance of this Contract, shall act in an individual capacity and not as agents, employees, partners, joint ventures or associates of one another. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purposes whatsoever.
- 7.10 Nothing in this Contract shall be deemed to waive, modify or amend any legal defense available at law or in equity to County, its past or present officers, employees, or agents or employees, nor to create any legal rights or claim on behalf of any third party. County does not waive, modify, or alter to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.
- 7.11 To the extent, if any, that any provision in this Contract is in conflict with Tex. Gov't Code 552.001 et seq., as amended (the "Public Information Act"), the same shall be of no force or effect. Furthermore, it is expressly understood and agreed that County, its officers and employees may request advice, decisions and opinions of the Attorney General of the State of Texas in regard to the application of the Public Information Act to any items or data furnished to County as to whether or not the same are available to the public. It is further understood that County's officers and employees shall have the right to rely on the advice, decisions and opinions of the Attorney General, and that County, its officers and employees shall have no liability or obligation to any party hereto for the disclosure to the public, or to any person or persons, of any items or data furnished to County by a party hereto, in reliance of any advice, decision or opinion of the Attorney General of the State of Texas.
- 7.12 County and Contractor have signed this Contract in triplicate. One counterpart each has been delivered to the County, Contractor and Engineer of Record. All portions of the Contract Documents have been signed, initialed or identified by County and Contractor or identified by Engineer of Record on their behalf.
- 7.13 This Contract and the Contract Documents represent the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either oral or written. This Contract may be amended only by written instrument signed by each party to this Contract. NO OFFICIAL, EMPLOYEE, AGENT, OR REPRESENTATIVE OF THE COUNTY HAS ANY AUTHORITY, EITHER EXPRESS OR IMPLIED, TO AMEND THIS CONTRACT, EXCEPT PURSUANT TO SUCH EXPRESS AUTHORITY AS MAY BE GRANTED BY THE HAYS COUNTY COMMISSIONERS COURT.

This Contract will be effective on "Effective Date" of the Contract).	, 20 (which is the
COUNTY	CONTRACTOR
By: Ruben Becerra, Hays County Judge	By: Title:
	[CORPORATE SEAL]
Attest	Attest
### SECTION 6 WAGE RATES

# Texas Department of Transportation

The wage rates listed herein are those predetermined by the Secretary of Labor and State Statue and listed in the United States Department of Labor's (USDOL) General Decisions dated **02-25-2022** and are the minimum wages to be paid accordingly for each specified classification. To determine the applicable wage rate zone, a list entitled "TEXAS COUNTIES IDENTIFIED BY WAGE RATE ZONES" is provided in the contract. Any wage rate that is not listed herein and not in the USDOL's general decision, must be submitted to the Engineer for approval. IMPORTANT NOTICE FOR STATE PROJECTS: only the controlling wage rate zone applies to the contract. Effective 02-25-2022.

CLASS. #	CLASSIFICATION DESCRIPTION	ZONE TX02 *(TX20220002)	ZONE TX03 *(TX20220003)	ZONE TX04 *(TX20220004)	ZONE TX05 *(TX20220005)	ZONE TX06 *(TX20220006)	ZONE TX07 *(TX20220007)	ZONE TX08 *(TX20220008)	ZONE TX24 *(TX20220024)	ZONE TX25 *(TX20220025)	ZONE TX27 *(TX20220027)	ZONE TX28 *(TX20220028)	ZONE TX29 *(TX20220029)	ZONE TX30 *(TX20220030)	ZONE TX37 *(TX20220037)	ZONE TX38 *(TX20220038)	ZONE TX42 *(TX20220042)
1428	Agricultural Tractor Operator						\$12.69					\$12.35			\$11.75		
1300	Asphalt Distributor Operator	\$14.87	\$13.48	\$13.88	\$15.72	\$15.58	\$15.55	\$15.72	\$13.28	\$15.32	\$15.62	\$14.36	\$14.25	\$14.03	\$13.75	\$14.06	\$14.40
1303	Asphalt Paving Machine Operator	\$13.40	\$12.25	\$12.35	\$13.87	\$14.05	\$14.36	\$14.20	\$13.26	\$13.99	\$14.68	\$12.92	\$13.44	\$12.53	\$14.00	\$14.32	\$12.99
1106	Asphalt Raker	\$12.28	\$10.61	\$12.02	\$14.21	\$11.65	\$12.12	\$11.64	\$11.44	\$12.69	\$12.05	\$11.34	\$11.67	\$11.40	\$12.59	\$12.36	\$11.78
1112	Batching Plant Operator, Asphalt																
1115	Batching Plant Operator, Concrete																
1214	Blaster																
1615	Boom Truck Operator						\$18.36										
1444	Boring Machine Operator																
1305	Broom or Sweeper Operator	\$11.21	\$10.33	\$10.08	\$11.99		\$11.04	\$11.62		\$11.74	\$11.41	\$10.30		\$10.23	\$10.60	\$12.68	\$11.05
1144	Communications Cable Installer																
	Concrete Finisher, Paving and	<b>0</b> 40 55	<b>0</b> 40.40	<b>0</b> 40.40	<b>6</b> 40.05	<b>6</b> 10.01	<b>0</b> 40 50	¢ 4 0 77	<b>A</b> 10.11		<b>*</b> 10.01	<b>*</b> 40.00	<b>6</b> 40.04	<b>*</b> 40.00	<b>6</b> 40 <b>7</b> 0	<b>.</b>	<b>*</b> 10.00
1124	Structures Concrete Pavement Finishing Machine	\$13.55	\$12.46	\$13.16	\$12.85	\$12.64	\$12.56	\$12.77	\$12.44	\$14.12	\$13.04	\$13.38	\$12.64	\$12.80	\$12.79	\$12.98	\$13.32
1318	Operator				\$16.05		\$15.48			\$16.05		\$19.31				\$13.07	
1315	Concrete Paving, Curing, Float, Texturing Machine Operator											\$16.34				\$11.71	
1333	Concrete Saw Operator				\$14.67					\$14.48	\$17.33					\$13.99	
1399	Concrete/Gunite Pump Operator																
1344	Crane Operator, Hydraulic 80 tons or less				\$18.22		\$18.36			\$18.12	\$18.04	\$20.21			\$18.63	\$13.86	
1345	Crane Operator, Hydraulic Over 80 Tons																
1342	Crane Operator, Lattice Boom 80 Tons or Less	\$16.82	\$14.39	\$13.85	\$17.27		\$15.87			\$17.27		\$14.67			\$16.42	\$14.97	\$13.87
1242	Crane Operator, Lattice Boom Over				¢00 50		¢10.20			¢00.50		¢17.40			¢05 40	¢15.00	
1343	Crawler Tractor Operator	\$13.06	\$16.63	\$13.62	\$20.52		\$19.30 \$15.67	-		\$20.52 \$14.07	¢13.15	\$17.49 \$13.38			\$20.13 \$14.60	\$13.60 \$13.68	\$13.50
1351	Crusher or Screen Plant Operator	φ13.90	φ10.03	φ13.0z	φ14.20		φ1 <b>3</b> .07			φ14.07	φ13.13	φ13.30			φ1 <del>4</del> .00	φ13.00	φ13.30
1446							\$11.67										
1445	Directional Drilling Operator				\$20.32		\$17.24										
1139	Electrician	\$20.96		\$19.87	\$19.80		\$26.35		\$20.27	\$19.80		\$20.92				\$27 11	\$19.87
1100	Excavator Operator, 50,000	φ20.00		¢10.01	φ10.00		φ20.00		φ20.21	ψ10.00		φ20.02				φ27.11	φ10.07
1347	pounds or less	\$13.46	\$12.56	\$13.67	\$17.19		\$12.88	\$14.38	\$13.49	\$17.19		\$13.88			\$14.09	\$12.71	\$14.42
13/18	Excavator Operator, Over 50,000		\$15.23	\$13.52	\$17.04		\$17.71			\$16.00	\$18.80	\$16.22				\$1/ 53	\$13.52
1150	Flagger	\$9.30	\$9.10	\$8.50	\$10.28	\$8.81	\$9.45	\$8 70		\$10.06	\$9.71	\$9.03	\$8.81	\$9.08	\$9.90	\$10.33	\$8.10
1151	Form Builder/Setter Structures	\$13.52	\$12.30	\$13.38	\$12.91	\$12.71	\$12.40	\$12.38	\$12.26	\$13.84	\$12.98	\$13.07	\$13.61	\$12.82	\$14.73	\$12.23	\$12.25
1160	Form Setter Paving & Curb	\$12.36	\$12.00	\$13.93	\$11.83	\$10.71	\$12.94	¢12.00	ψ.2.20	\$13.16	\$12.50	\$11.33	\$10.69	¢12.02	\$13.33	\$12.20	\$13.93
	Foundation Drill Operator, Crawler	¢12.00	¢12.110	\$10.00	\$11.00	¢.0	¢ 12.0 1			<i><i></i></i>	¢12.01	\$11.00	<i><i><i>ϕ</i></i> 10.00</i>		÷10.00	¢12.01	<i><i><i>ϕ</i> 10.00</i></i>
1360	Mounted				\$17.99					\$17.99						\$17.43	
1000	Foundation Drill Operator,		¢10.00	¢00.05	¢04 54		¢16.00			¢04.07	¢00.00	¢00.76		¢17 E4	¢01.00	¢15.00	¢00.05
1303	Front End Loader Operator,		90.01¢	¢∠∠.05	¢∠1.51		\$10.93			ֆ∠1.07	<b></b> φ20.20	¢∠U.76		¢17.54	ə∠1.39	\$10.89	φzz.05
1369	3 CY or Less	\$12.28	\$13.49	\$13.40	\$13.85		\$13.04	\$13.15	\$13.29	\$13.69	\$12.64	\$12.89			\$13.51	\$13.32	\$12.17
1070	Front End Loader Operator,	¢40.77	¢40.00	¢40.00	¢14.00		640.04	¢40.00	¢40 57	¢44 70	¢40.75	£40.00			£40.40	ድላሳ ላማ	¢40.00
1372	Joint Scalor	\$12.77	\$13.69	\$12.33	\$14.96		\$13.21	\$12.86	\$13.57	\$14.72	\$13.75	\$12.32			\$13.19	\$13.17	\$13.02
1329		¢40.00	¢0.00	¢40.00	¢40 F4	¢10 71	¢40.50	¢10.04	¢40 50	¢40.70	¢40.45	¢40.00	¢40.05	¢40.00	640 F4	¢44.00	¢40.45
11/2		\$10.30	\$9.86	\$10.08	\$10.51	\$10.71	\$10.50	\$10.24	\$10.58	\$10.72	\$10.45	\$10.30	\$10.25	\$10.03	\$10.54	\$11.02	\$10.15
11/5	Laborer, Utility	\$11.80	\$11.53	\$12.70	\$12.17	\$11.81	\$12.27	\$12.11	\$11.33	\$12.32	\$11.80	\$11.53	\$11.23	\$11.50	\$11.95	\$11.73	\$12.37

CLASS. #	CLASSIFICATION DESCRIPTION	ZONE TX02	ZONE TX03	ZONE TX04	ZONE TX05	ZONE TX06	ZONE TX07	ZONE TX08	ZONE TX24	ZONE TX25	ZONE TX27	ZONE TX28	ZONE TX29	ZONE TX30	ZONE TX37	ZONE TX38	ZONE TX42
		*(TX20220002)	*(TX20220003)	*(TX20220004)	*(TX20220005)	*(TX20220006)	*(TX20220007)	*(TX20220008)	*(TX20220024)	*(TX20220025)	*(TX20220027)	*(TX20220028)	*(TX20220029)	*(TX202220030)	*(TX20220037)	*(TX20220038)	*(TX20220042)
1346	Loader/Backhoe Operator	\$14.18	\$12.77	\$12.97	\$15.68		\$14.12			\$15.18	\$13.58	\$12.87		\$13.21	\$14.13	\$14.29	\$12.90
1187	Mechanic	\$20.14	\$15.47	\$17.47	\$17.74	\$17.00	\$17.10			\$17.68	\$18.94	\$18.58	\$17.00	\$16.61	\$18.46	\$16.96	\$17.47
1380	Milling Machine Operator	\$15.54	\$14.64	\$12.22	\$14.29		\$14.18			\$14.32	\$14.35	\$12.86			\$14.75	\$13.53	\$12.80
1390	Fine Grade	\$17.49	\$16.52	\$16.88	\$17.12	\$18.37	\$18.51	\$16.69	\$16.13	\$17.19	\$18.35	\$17.07	\$17.74	\$17.47	\$17.08	\$15.69	\$20.01
1393	Motor Grader Operator, Rough	\$16.15	\$14.62	\$15.83	\$16.20	\$17.07	\$14.63	\$18.50		\$16.02	\$16.44	\$15.12	\$16.85	\$14.47	\$17.39	\$14.23	\$15.53
1413	Off Road Hauler			\$10.08	\$12.26		\$11.88			\$12.25		\$12.23			\$13.00	\$14.60	
1196	Painter, Structures					\$21.29	\$18.34						\$21.29			\$18.62	
1396	Operator	\$16.42		\$13.10	\$13.55		\$19.17	\$12.01		\$13.63	\$14.60	\$13.17		\$16.65	\$10.54	\$11 18	\$13.10
1443	Percussion or Rotary Drill Operator	ψ10. <del>1</del> 2		¢10.10	φ10.00		φ10.17	ψ12.01		ψ10.00	ψ14.00	φ10.11		φ10.00	φ10.0+	φ11.10	φ10.10
1202	Piledriver															\$14.95	
1202	Pipelaver		\$11 87	\$14 64	\$13 17	\$11 17	\$12 79		\$11.37	\$13.24	\$12.66	\$13.24	\$11 17	\$11.67		\$12.12	\$14 64
1384	Reclaimer/Pulverizer Operator	\$12.85		<i>\</i>	\$11.90		\$12.88		<b></b>	\$11.01	<i><i><i>ϕ</i>.2.00</i></i>	\$10.46	<b></b>			<i></i>	
1500	Reinforcing Steel Worker	\$13.50	\$14.07	\$17.53	\$16.17		\$14.00			\$16.18	\$12.74	\$15.83		\$17.10		\$15.15	\$17.72
1402	Roller Operator, Asphalt	\$10.95		\$11.96	\$13.29		\$12.78	\$11.61		\$13.08	\$12.36	\$11.68			\$11.71	\$11.95	\$11.50
1405	Roller Operator, Other	\$10.36		\$10.44	\$11.82		\$10.50	\$11.64		\$11.51	\$10.59	\$10.30		\$12.04	\$12.85	\$11.57	\$10.66
1411	Scraper Operator	\$10.61	\$11.07	\$10.85	\$12.88		\$12.27	·	\$11.12	\$12.96	\$11.88	\$12.43		\$11.22	\$13.95	\$13.47	\$10.89
1417	Self-Propelled Hammer Operator																
1194	Servicer	\$13.98	\$12.34	\$14.11	\$14.74		\$14.51	\$15.56	\$13.44	\$14.58	\$14.31	\$13.83		\$12.43	\$13.72	\$13.97	\$14.11
1513	Sign Erector																
1708	Slurry Seal or Micro-Surfacing Machine Operator																
1341	Small Slipform Machine Operator									\$15.96							
1515	Spreader Box Operator	\$12.60		\$13.12	\$14.71		\$14.04			\$14.73	\$13.84	\$13.68		\$13.45	\$11.83	\$13.58	\$14.05
1705	Structural Steel Welder															\$12.85	
1509	Structural Steel Worker						\$19.29									\$14.39	
1339	Subgrade Trimmer																
1143	Telecommunication Technician																
1145	Traffic Signal/Light Pole Worker						\$16.00										
1440	Trenching Machine Operator,						¢18.48										
1440	Trenching Machine Operator,						φ10. <del>4</del> 0										
1437	Light																
1609	Truck Driver Lowboy-Float	\$14.46	\$13.63	\$13.41	\$15.00	\$15.93	\$15.66			\$16.24	\$16.39	\$14.30	\$16.62	\$15.63	\$14.28	\$16.03	\$13.41
1612	Truck Driver Transit-Mix				\$14.14					\$14.14							
1600	Truck Driver, Single Axle	\$12.74	\$10.82	\$10.75	\$13.04	\$11.61	\$11.79	\$13.53	\$13.16	\$12.31	\$13.40	\$10.30	\$11.61		\$11.97	\$11.46	\$10.75
1606	Truck Driver, Single or Tandem Axle	¢11.00	¢44.50	¢11.05	¢10.05		¢11.00		¢14.00	¢10.60	¢44.45	¢10.00		¢12.00	¢11.60	¢11.40	¢11.10
1000	Truck Driver, Tandem Axle Tractor with	\$11.33	\$14.53	\$11.95	\$12.95		\$11.00		\$14.00	\$12.0Z	\$11.45	\$12.20		\$13.06	\$11.00	<b>\$11.40</b>	φ11.1U
1607	Semi Trailer	\$12.49	\$12.12	\$12.50	\$13.42		\$12.81	\$13.16		\$12.86	\$16.22	\$12.50			\$13.80	\$12.27	\$12.50
	Tunneling Machine Operator,																
1441																	
1442	i unneiing Machine Operator, Light		<b>644.00</b>		<b>644.00</b>		64F 07		¢40 74	<b>644.04</b>					A40 70		
1706		<b>#10.00</b>	\$14.02	A44 40	\$14.86	644 F-	\$15.97	¢40 77	\$13.74	\$14.84	640.00	<b>644 00</b>	<b>***</b>	<b>#40.00</b>	\$13.78	644 OT	¢44.70
1520	VVOIK ZONE BARRICAGE SERVICER	\$10.30	\$12.88	\$11.46	\$11.70	\$11.57	\$11.85	\$10.77		\$11.68	\$12.20	\$11.22	\$11.51	\$12.96	\$10.54	\$11.67	\$11.76

Notes:

*Represents the USDOL wage decision.

Any worker employed on this project shall be paid at the rate of one and one half (1-1/2) times the regular rate for every hour worked in excess of forty (40) hours per week.

For reference, the titles and descriptions for the classifications listed here are detailed further in the AGC of Texas' *Standard Job Classifications and Descriptions for Highway, Heavy, Utilities, and Industrial Construction in Texas* posted on the AGC's Web site for any contractor.

#### TEXAS COUNTIES IDENTIFIED BY WAGE RATE ZONES: 2, 3, 4, 5, 6, 7, 8, 24, 25, 27, 28, 29, 30, 37, 38, 42

County Name	Zone	County Name	Zone	County Name	Zone	County Name	Zone
Anderson	28	Donley	37	Karnes	27	Reagan	37
Andrews	37	Duval	30	Kaufman	25	Real	37
Angelina	28	Eastland	37	Kendall	7	Red River	28
Aransas	29	Ector	2	Kenedy	30	Reeves	8
Archer	25	Edwards	8	Kent	37	Refugio	27
Armstrong	2	El Paso	24	Kerr	27	Roberts	37
Atascosa	7	Ellis	25	Kimble	37	Robertson	7
Austin	38	Erath	28	King	37	Rockwall	25
Bailey	37	Falls	28	Kinney	8	Runnels	37
Bandera	7	Fannin	28	Klebera	27	Rusk	4
Bastrop	7	Favette	27	Knox	37	Sabine	28
Baylor	37	Fisher	37	Lamar	28	San Augustine	28
Bee	27	Flovd	37	Lamb	37	San Jacinto	38
Bell	7	Foard	37	Lampasas	7	San Patricio	29
Bexar	7	Fort Bend	38	LaSalle	30	San Saha	37
Blanco	, 27	Franklin	28	Lavaca	27	Schleicher	37
Borden	37	Freestone	28		27	Scurry	37
Bosque	28	Frio	20	Leon	28	Shackelford	37
Bowie	20	Gaines	37	Liberty	20	Shelby	28
Brozorio	20	Galvecton	29	Limostono	20	Shormon	20
Diazona Brozoo	30 7	Carzo	30	Linesione	20	Sherman	57
Diazos Draviator	/	Galza	37	Lipscomb	37	Sillin	4
Brewster	8	Gliespie	27	Live Oak	27	Somervell	28
Briscoe	37	Glasscock	37	Liano	21	Starr	30
Brooks	30	Gollad	29	Loving	3/	Stephens	37
Brown	37	Gonzales	27	LUDDOCK	2	Sterling	37
Burleson	(	Gray	37	Lynn	37	Stonewall	37
Burnet	27	Grayson	25	Madison	28	Sutton	8
Caldwell	7	Gregg	4	Marion	28	Swisher	37
Calhoun	29	Grimes	28	Martin	37	Tarrant	25
Callahan	25	Guadalupe	7	Mason	27	Taylor	2
Cameron	3	Hale	37	Matagorda	27	Terrell	8
Camp	28	Hall	37	Maverick	30	Terry	37
Carson	2	Hamilton	28	McCulloch	37	Throckmorton	37
Cass	28	Hansford	37	McLennan	7	Titus	28
Castro	37	Hardeman	37	McMullen	30	Tom Green	2
Chambers	38	Hardin	38	Medina	7	Travis	7
Cherokee	28	Harris	38	Menard	37	Trinity	28
Childress	37	Harrison	42	Midland	2	Tyler	28
Clay	25	Hartley	37	Milam	28	Upshur	4
Cochran	37	Haskell	37	Mills	37	Upton	37
Coke	37	Hays	7	Mitchell	37	Uvalde	30
Coleman	37	Hemphill	37	Montague	37	Val Verde	8
Collin	25	Henderson	28	Montaomerv	38	Van Zandt	28
Collingsworth	37	Hidalgo	3	Moore	37	Victoria	6
Colorado	27	Hill	28	Morris	28	Walker	28
Comal	7	Hocklev	37	Motlev	37	Waller	38
Comanche	37	Hood	28	Nacogdoches	28	Ward	37
Concho	37	Hopkins	28	Navarro	28	Washington	28
Cooke	37	Houston	28	Newton	28	Webb	3
Corvell	7	Howard	37	Nolan	37	Wharton	27
Cottle	, 37	Hudspeth	8	Nueces	29	Wheeler	37
Crane	37	Hunt	25	Ochiltree	20	Wichita	5
Crockett	8	Hutchinson	37	Oldham	37	Wilbarger	37
Crochy	0	Irion	57	Orango	20	Willow	20
Ciuboroon	2	look	2	Dala Dinto	30 20	Williamaan	30 7
Dellem	0 27	Jack	20	Pailo Pililo Donala	20	Williamson	7
Dallan	37	Jackson	27	Parloa	20	VVIISOIT Winkler	27
Dallas	25	Jasper	28	Parker	25		37
Dawson	37	Jeit Davis	8 QQ	Parmer	31	vvise	25
Deat Smith	37	Jetterson	38	Pecos	8	VVOOD	28
Delta	25	JIM Hogg	30	POIK	28	roakum	37
Denton	25	Jim Wells	27	Potter	2	Young	37
DeWitt	27	Johnson	25	Presidio	8	∠apata	30
Dickens	37	Jones	25	Rains	28	Zavala	30
Dimmit	30			Randall	2		

### SECTION 7 PERFORMANCE BOND

#### **PERFORMANCE BOND**

#### STATE OF TEXAS COUNTY OF

KNOW ALL MEN BY THESE PRESENTS: That _____

______of the City of ______

County of ______, and State of ______, as principal, and

authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto Hays County (County), in the penal sum of

_Dollars

(\$_____) for the payment whereof, the said Principal and Surety bind themselves, their heirs, administrators, executors, successors, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written Agreement with the County, dated the ______day of ______, 20_____(the "Agreement"), to which the said Agreement, along with the Contract Documents referenced therein are hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform said Agreement and shall in all respects duly and faithfully observe and perform all and singular the covenants, conditions and agreements in and by the Agreement agreed and covenanted by the Principal to be observed and performed, and according to the true intent and meaning of said Agreement and the Contract Documents hereto annexed, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein.

SURETY, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or to the work performed thereunder, or to the Contract Documents referenced therein, shall in anyway affect the obligations on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms on the Agreement, or to the work to be performed thereunder.

IN WITNESS WHEREOF, the	said Principal and Surety have signed and sealed this instrument
this day of	, 20
PRINCIPAL	SURETY
SIGNATURE	SIGNATURE
NAME & TITLE	NAME & TITLE
ADDRESS	ADDRESS
( )	()
PHONE NUMBER	PHONE NUMBER
The name and address of the Resident A	Agency of Surety is:
( )	
PHONE NUMBER	SIGNATURE OF LICENSED LOCAL RECORDING AGENT appointed to countersign on behalf of Surety (Required by Art. 21.09 of the Insurance Code)
*****	***************
I,	, having executed Bonds
SIGNATURE	
for	do hereby affirm I have
NAME OF SUKETY	

verified that said Surety is now certified with Authority from either: (a) the Secretary of the Treasury of the United States if the project funding includes Federal monies; or (b) the State of Texas if none of the project funding is from Federal sources; and further, said Surety is in no way limited or restricted from furnishing Bond in the State of Texas for the amount and under conditions stated herein.

### SECTION 8 PAYMENT BOND

#### **PAYMENT BOND**

#### STATE OF TEXAS COUNTY OF _____

KNOW AL	L MEN BY THESE PRESE	ENTS: That		
	of the C	City of		
County of(hereinafter referred	l to as the "Principal"), and	_, and State of	,	as Principal
authorized under the to as the "Surety"), a in the penal sum of	e laws of the State of Texas t are held and firmly bound u	o act as Surety on t nto Hays County, (	oonds for principals (here hereinafter referred to as	einafter referred the "County"),
				Dollars
(\$	) for the payment whe s, executors, successors and	ereof, the said Prin assigns, jointly and	ncipal and Surety bind the discover and severally, by these presented as the several sever	emselves, their sents:
WHEREAS the day	s, the Principal has entered in y of	nto a certain writte _, 20,	n agreement with the Co to	unty, dated
"Agreement"), whic to and made a part h	ch said Agreement and the Co hereof as fully and to the san	ontract Documents ne extent as if copi	(hereinafter referred incorporated therein are ed at length herein.	to as the hereby referred

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the Work provided for in said Agreement, then, this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein.

SURETY, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or to the Work performed thereunder, or to the other Contract Documents accompanying the same, shall in anyway affect its obligation on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms of the Agreement, or to the work to be performed thereunder or to the other Contract Documents accompanying the same.

this day of	, 20
PRINCIPAL	SURETY
SIGNATURE	SIGNATURE
NAME & TITLE	NAME & TITLE
ADDRESS	ADDRESS
() PHONE NUMBER	() PHONE NUMBER
The name and address of the Resident.	Agency of Surety is:

( ) PHONE NUMBER

SIGNATURE OF LICENSED LOCAL RECORDING AGENT appointed to countersign on behalf of Surety (Required by Art. 21.09 of the Insurance Code)

### SECTION 9 CERTIFICATE OF INSURANCE

#### _ _ . . .

CERT	IFICATE OF I	NSURANCE						
TO: DATE:								
		Project No.:						
(COUNTY)		Type of						
		Project:						
(ADDRESS)								
THIS IS TO CERTIFY THAT								
is, at the date of this certificate, insured by this Company with respect to the business operations hereinafter described for the types of Insurance and in accordance with the provisions of the standard policies used by this Company, and further hereinafter described. Exceptions to the standard policy noted on reverse side hereof.								
	TYPE OF INSU	RANCE						
POLICY NO.	EFFECTIVE	EXPIRES	LIMI	S OF LIABILITY				
Workmen's Compensation								
			1 Person	\$				
Public Liability			1 Accident	<u> </u>				
Liability			1 Accident	ֆ Տ				
Property Damage			17 tooldont	Ψ				
Builder's Risk								
Automobile								
Other								
The foregoing Policies (do) (do not)	) cover all sub-c	contractors.						
Locations Covered:								
Descriptions of Operations Covered:								

The above policies either in the body thereof or by appropriate endorsement provide that they may not be changed or canceled by the insurer in less than five days after the insured has received written notice of such change or cancellation.

Where applicable local laws or regulations require more than five days actual notice of change or cancellation to the assured, the above policies contain such special requirements, either in the body thereof or by appropriate endorsement thereto attached.

(Name of Insurer)

Ву:_____

Phone No. ( )

Title:

### SECTION 10 GENERAL CONDITIONS

### **General Conditions**

THE CONTRACT GENERAL CONDITIONS SHALL BE AS SET FORTH IN THE STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES, ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION NOVEMBER 1, 2014, INCLUSIVE OF ITEMS 1L – 9L GENERAL REQUIRMENTS AND COVENANTS, AND APPLICABLE SPECIAL PROVISIONS (SEE SECTION 13 TECHNICAL SPECIFICATIONS).

### SECTION 11 SPECIAL CONDITIONS

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XXXXXXXXXXX	

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#### SPECIAL CONDITIONS

#### I. County

Hays County, a political subdivision of the State of Texas, acting through its County Judge, or his designee, agents or employees, whom Contractor has entered into the Agreement and for whom the Work is to be performed, is referred to as "County". The County shall be contacted through its Purchasing Department for contract related subjects and through the County Engineer's office for design and construction related subjects:

Purchasing Department	County Engineer
Hays County	Hays County
712 South Stagecoach Trl, Ste 1071	2171 Yarrington Road
San Marcos, TX 78666	San Marcos, TX 78667

#### II. Program Manager

**<u>HNTB Corporation.</u>** is the County's Program Manager for the Project. The Program Manager represents the County and oversees the planning, design, review, and coordination of the design and construction phases of the Project.

#### III. General Engineering Consultant (GEC)

**<u>HNTB Corporation</u>** is the consulting engineering firm representing and assisting the County in the design, review, and coordination of the design and construction phases of the project, including oversight of the construction engineering and inspection services performed on the Project.

#### **IV.** The Construction Inspector

**<u>Pape-Dawson Engineers, Inc.</u>** is the "Construction Inspector" referred to herein and in the Contract Documents. The Construction Inspector will be responsible for performing construction engineering and inspection services on the Project.

#### V. Engineer of Record

**<u>RPS</u>** Infrastructure, Inc.</u> is the County's design professional, who shall provide professional engineering services as defined in the Texas Government Code Chapter 2254, Subchapter A, and referred to as the "Engineer of Record" in Article 2 of the "Standard Form of Contract" contained in the Contract Documents. Nothing contained in the Contract Documents shall create any contractual or agency relationship between the Engineer of Record and the Contractor.

#### VI. Insurance

The Contractor will carry Workmen's Compensation Insurance, Public Liability and Property Damage Insurance, and Automobile Insurance sufficient to provide adequate protection against damage claims which may arise from operations under the Contract Documents, in compliance with the following:

Contractors Insurance: Without limiting any of the other obligations or liabilities of the Contractor, during the term of the Agreement and prior to Final Completion, the Contractor

and each subcontractor, at their own expense, shall purchase and maintain the herein stipulated minimum insurance with companies duly approved to do business in the State of Texas and satisfactory to the County. Certificates of each policy shall be delivered to the County before any work is started, along with a written statement from the issuing company stating that said policy shall not be canceled, non-renewed or materially changed without 30 days advance written notice being given to the County. Prior to the effective date of cancellation, Contractor must deliver to the County a replacement certificate of insurance or proof of reinstatement. A model Certificate of Insurance is illustrated herein. Coverage shall be of the following types and not less than the specified amounts:

- (a) workers' compensation as required by Texas law, with the policy endorsed to provide a waiver of subrogation as to the County; employer's liability insurance of not less than \$500,000 for each accident, \$500,000 disease--each employee, \$500,000 disease-policy limit.
- (b) commercial general liability insurance, including independent contractor's liability, completed operations and contractual liability covering, but not limited to, the liability assumed under the indemnification provisions of the Contract Documents, fully insuring Contractor's (or subcontractor's) liability for injury to or death of County's employees and third parties, extended to include personal injury liability coverage with damage to property of third parties, with minimum limits as set forth below:

General Aggregate	\$1,000,000
Operations Aggregate	\$1,000,000
Personal and Advertising Injury	\$600,000
Each Occurrence	\$600,000
Fire Damage (any one fire)	\$50,000
Medical Expense (any one person)	\$5,000

The policy shall include coverage extended to apply to completed operations, asbestos hazards (if this project involves work with asbestos) and XCU (explosion, collapse and underground) hazards. The completed operations coverage must be maintained for a minimum of one year after Final Completion and acceptance of the Work, with evidence of same filed with County.

(c) comprehensive automobile and truck liability insurance, covering owned, hired and non-owned vehicles, with a combined bodily injury and property damage minimum limit of \$600,000 per occurrence; or separate limits of \$250,000 for bodily injury (per person), \$500,000 bodily injury (per accident) and \$100,000 for property damage. Such insurance shall include coverage for loading and unloading hazards.

"Umbrella" Liability Insurance: The Contractor shall obtain, pay for and maintain umbrella liability insurance during the contract term, insuring Contractor for an amount of not less than \$1,000,000 per occurrence combined limit for bodily injury and property damage that follows form and applies in excess of the primary liability coverages required herein above. The policy shall provide "drop down" coverage where underlying primary insurance

coverage limits are insufficient or exhausted. County and Project Engineer shall be named as additional insured.

Policy Endorsements and Special Conditions

- (a) Each insurance policy to be furnished by Contractor shall include the following conditions by endorsement to the policy:
  - (1) name the County, the Program Manager/GEC, the County's Representatives, the Construction Inspector and the Engineer of Record as an additional insured to all applicable coverage;
  - (2) each policy shall require that 30 days prior to the cancellation, non-renewal or any material change in coverage, a notice thereof shall be given to County by certified mail.
- (3) the term "County" shall include all authorities, boards, bureaus, commissions, divisions, departments and offices of the County and individual members, employees and agents thereof in their official capacities, and/or while acting on behalf of the County;
- (4) the "Program Manager" represents and assists the County in the planning, design, review, and coordination of the design and construction phases of the project.
- (5) the policy phrase "other insurance" shall not apply to the County where the County is an additional insured on the policy; and
- (6) all provisions of the Contract Documents concerning liability, duty and standard of care together with the indemnification provision, shall be underwritten by contractual liability coverage sufficient to include such obligations within applicable policies.
- (b) Insurance furnished by the Contractor shall also be in accordance with the following requirements:
  - (1) any policy submitted shall not be subject to limitations, conditions or restrictions deemed inconsistent with the intent of the insurance requirements to be fulfilled by Contractor. The County's decision thereon shall be final;
  - (2) all policies are to be written through companies duly licensed to transact that class of insurance in the State of Texas; and
  - (3) all liability policies required herein shall be written with an "occurrence" basis coverage trigger.
- (c) Contractor agrees to the following:
  - (1) Contractor hereby waives subrogation rights for loss or damage to the extent same are covered by insurance. Insurers shall have no right of recovery or subrogation against the County, it being the intention that the insurance policies shall protect all parties to the Agreement and be primary coverage for all losses covered by the policies;
  - (2) companies issuing the insurance policies and Contractor shall have no recourse against the County for payment of any premiums or assessments for any deductibles, as all such premiums and deductibles are the sole responsibility and risk of the Contractor;

- (3) approval, disapproval or failure to act by the County regarding any insurance supplied by the Contractor (or any subcontractors) shall not relieve the Contractor of full responsibility or liability for damages and accidents as set forth in the contract documents. Neither shall the bankruptcy, insolvency or denial of liability by the insurance company exonerate the Contractor from liability; and
- (4) no special payments shall be made for any insurance that the Contractor and subcontractors are required to carry; all are included in the contract price and the contract unit prices.

Any of such insurance policies required under the Contract Documents may be written in combination with any of the others, where legally permitted, but none of the specified limits may be lowered thereby.

The Contractor shall furnish the County with satisfactory proof that it has provided adequate insurance coverage in amounts and by approved carriers as required by the Contract Documents.

#### VII. Record ("As-Built") Drawings

The Contractor shall mark all changes and revisions on all of its copies of the working drawings during the course of the Project as they occur. Upon completion of the Project and prior to Final Acceptance and Payment, the Contractor shall submit to the Construction Inspector one set of its working drawings, dated and signed by the Contractor and its project superintendent and labeled as "As-Built", that shows all changes and revisions outlined above and that shows field locations of all above ground appurtenances including, but not limited to valves, fire hydrants and manholes. These as-built drawings shall be forwarded to the GEC and then to the County and become the property of the County. Each appurtenance shall be located by at least two (2) horizontal distances measured from existing, easily identifiable, immovable appurtenances such as fire hydrants or valves. Property pins can be used for as-builts tie-ins provided no existing utilities as previously described are available. Costs for delivering as-built drawings shall be subsidiary to other bid items.

#### VIII. Limit of Financial Resources

The County has a limited amount of financial resources committed to this Project; therefore, it shall be understood by Contractor that the County may be required to change and/or delete any items which it may feel is necessary to accomplish all or part of the scope of work within its limit of financial resources. Contractor shall be entitled to no claim for damages or anticipated profits on any portion of work that may be omitted. At any time during the duration of the Project, the County reserves the right to omit any work from the Contract Documents. Unit prices for all items previously approved in the Contract Documents shall be used to delete or add work per change order.

#### IX. Limits of Work and Payment

It shall be the obligation of the Contractor to complete all work included in the Contract Documents, so authorized by the County, as described in the Contract Documents and Technical Specifications. Any question arising as to the limits of work shall be left up to the interpretation of the Engineer and/or Inspector.

#### X. State Sales Tax

On a contract awarded by a governmental entity for the construction of a publicly-owned improvement in a street right-of-way or other easement which has been dedicated to the public and to the Organization which qualifies for exemption pursuant to the provisions of Article 20.04 (F) of the Texas Limited Sales, Excise and Use Tax Act, the Contractor can probably be exempted in the following manner:

The Contractor may buy tax-free any materials incorporated into the project by issuing a resale certificate in lieu of paying the sales tax at the time of purchase. The Contractor may then accept an exemption certificate from the City for the materials.

Even with a separated contract, the rental of equipment and the purchase of items which do not ultimately become part of the physical structure will still be subject to state and local sales taxes.

#### XI. Completion of Work on Time

The Contractor agrees that time is of the essence and that the definite value of damages which would result from delay would be incapable of ascertainment and uncertain, so that for each day of delay beyond the number of days herein agreed upon for the Substantial Completion of the Work specified in the Contract Documents and contracted for, after due allowance for such extension of time as is provided for under the provisions of the Contract, the County may withhold permanently from the Contractor's total compensation, not as penalty but as liquidated damages, the sum as specified in Special Specification 000-001L per working day.

Furthermore, it is agreed by the Contractor that the time period between Substantial Completion and Final Completion shall be no longer than <u>20</u> working days. This separate time period shall be for completion of the Punch List, as set forth in Item 5L Control of Work of the Contract, Final Completion and Acceptance. In the event that Contractor fails to attain Final Completion on or before the expiration of the above said time period, the Contractor shall be subject to the remedies set forth in the Contract Documents. More specifically, the Contractor shall be subject to the terms set forth in Special Provision 008-HC01 under Article 8.7, Default of Contract. In addition to exercising its rights and remedies under the Contract Documents, the County may also exercise any remedy that may be available to it under the law or in equity.

#### XII. Layout and Construction Stakes

All construction staking shall be performed by the Contractor at the Contractor's expense.

The Contractor shall coordinate with design engineer to identify all necessary elements for station development as well as identify the trees, shrubs, and grass areas designated to remain within the construction limits to prevent damage to these items.

#### XIII. Safety

The Contractor must use methods of construction that meet or exceed Occupational Safety and Health Administration Standards and any other local, state or federal regulations for safety that are in effect. The Contractor will have a trench safety plan prepared and sealed by Contractor's registered professional engineer.

#### XIV. Maintenance Bond Term & Amount - OMITTED

No Maintenance Bond is required.

#### XV. Safety Restrictions - Work Near High Voltage Lines

The following procedures shall be followed for work near high voltage lines on the Project.

- (a) A warning sign not less than five (5) inches by seven (7) inches, painted yellow with black letters that are legible at twelve (12) feet shall be placed inside and outside vehicles such as cranes, derricks, power shovels, drilling rigs, pile drivers, hoisting equipment or similar apparatus. The warning sign shall read as follows: "Warning-Unlawful to Operate This Equipment Within Six Feet of High Voltage Lines".
- (b) Equipment that may be operated with ten (10) feet of high voltage lines shall have an insulating cage guard around the boom or arm (except backhoes or dippers), and insulator links on the lift hook connections.
- (c) When necessary to work within six (6) feet of high voltage electrical lines, notify the power company. The electric company will erect temporary mechanical barriers, de-energize the line, or raise or lower the line. All such work done by the power company shall be at the expense of the contractor. The contractor shall maintain an accurate log of all such calls to the electric company.
- (d) No person shall work within six (6) feet of high voltage lines without protection measures having been taken as outlined in Paragraph C.

#### XVI. Erosion Control

Contractor shall comply with all laws prohibiting the pollution of any lake, stream, river, or wetland by the dumping of any refuse, rubbish, dredge material, or debris therein.

The Contractor will file the Notice of Intent (NOI) and the Notice of Termination (NOT) as the Project's operator. All required Permits and Notices shall be posted by the Contractor at the Project site.

Contractor shall apply temporary and/or permanent erosion and sedimentation controls, as specified in the plans or directed to disturbed roadside areas, fifteen feet and beyond from road pavement, prior to initiating road base operations. Following asphalt paving of road pavement, apply temporary and/or permanent erosion and sedimentation controls to remaining disturbed areas, as specified in the plans or as directed.

Contractor shall be responsible for the maintenance of all temporary and permanent water quality and erosion control measures proposed under the Storm Water Pollution Prevention Plan (SWPPP) or the Water Pollution Abatement Plan (WPAP) for the duration of the Project construction. Upon completion of construction and before the Construction Inspector issues the Certificate of Completion, Contractor shall be responsible for the removal of all temporary measures and the cleaning and resetting of all permanent measures. All costs associated with this work shall be considered subsidiary to other bid items and no additional compensation shall be allowed.

Contractor shall take special precautions during all periods of heavy rainfall and at all locations where storm water, groundwater and/or mud and debris may enter the sewer systems. All mud, stones, and debris that enter the sewer systems due to Contractor's operations, or Contractor's neglect, shall be cleaned from the system by Contractor. It shall be Contractor's responsibility to see that such storm water, groundwater and debris do not enter the sewer system. All costs for such work shall be merged in the unit prices bid and no additional compensation shall be allowed.

If it is necessary in the prosecution of the Work to interrupt existing surface drainage, sewers, or under drainage, temporary drainage shall be provided until permanent drainage work is completed. The construction of all temporary drainage installations shall be considered as incidental to the construction of the Work. Drainage ways shall be kept clear or other satisfactory provisions made for drainage.

Contractor shall be responsible for and shall take all reasonable and necessary precautions to preserve and protect all existing tile drains, sewers, and other subsurface drains, or parts thereof, which may be continued in service without change. Contractor shall repair, at its own expense, any and all damage to such facilities resulting from negligence or carelessness on the part of its operations.

The Construction Inspector shall be responsible for the monitoring and inspection of the erosion control measures by completion of the Construction Pollution Prevention Plan Inspection and Maintenance Report, as required for coverage under the Texas Pollutant Discharge Elimination System (TPDES) General Construction Permit (TXR150000).

#### XVII. Discovery of Hazardous Materials

If, during the course of the Work, the existence of hazardous material, including asbestos containing material, is observed in the work area, the Contractor shall immediately notify the County in writing. The Contractor shall not perform any work pertinent to the hazardous material prior to receipt of special instructions from the County. Asbestos containing material includes transit pipe.

#### **XVIII.** Submittals – Certificate of Compliance

The Contractor shall submit to the Construction Inspector a Certificate of Compliance from the manufacturer and/or supplier of each and every specified material or manufactured equipment item. The said certificate shall state that the material or the item of equipment to be furnished has been manufactured with materials in accordance with the applicable sections of all required codes, specifications, and standards as required by the specifications.

#### XIX. Unavailability of Materials

If the Contractor is unable to furnish or use any of the materials or equipment specified because of any order by a governmental agency limiting the manufacture or use, or because of the supply situation in the general market for such material or equipment, the Contractor shall offer substitutes therefor. The substitutes shall be suitable for the purpose, considering the factors of quality, serviceability, appearance, and maintenance. No substitute shall be used until the Engineer has approved it.

No consideration will be given to the use of substitutes on account of market conditions unless the Contractor demonstrates that, for the item in question, the Contractor placed its order without delay, that it has shown due diligence in attempting to locate the item as specified, and that the unavailability is due to market conditions in general throughout the particular industry.

If substitutes are used in the Work, the compensation to be paid to the Contractor shall be subject to review and adjustment. As a general principle, if the Engineer shall determine that the substitute will be less satisfactory, the Contractor shall allow a credit to the County; only under unusual circumstances shall there be an increase in compensation to the Contractor on account of substitution. The basis upon which the amount of price and adjustments will be founded shall be the cost of the appropriate items at the time the bids for the Project were opened.

#### XX. Traffic Control

Access shall be provided for residents and emergency vehicles at all times. When it becomes necessary to restrict access, the Contractor shall notify all applicable agencies (i.e. Fire Department, E.M.S., Public Works, etc.) a minimum of five (5) working days in advance of the proposed restrictions. At the end of each day, two lanes of traffic shall be opened to the public, unless otherwise stated in the Contract Documents.

The Contractor shall coordinate with other contractors working in the area.

#### XXI. Temporary Traffic Handling Devices

The Contractor shall furnish, erect and maintain all necessary barricades, lights, warning signs and temporary pavement markings as shown on the Plans and/or in accordance with the Texas Manual on Uniform Traffic Control Devices and with the Specifications in the Contract Documents. In addition, the Contractor shall provide flag-persons and take necessary precautionary measures for the protection of persons, property and the Work, when deemed necessary by the Country or the Construction Inspector.

The Construction Inspector shall be responsible for the monitoring and inspection of the traffic control measures by completion of the Traffic Control Devices Inspection Report (TCDIR), and the Contractor shall be responsible for compliance with the terms of the TCDIR procedures.

#### XXII. Roadway Signs

All permanent and temporary roadway signage designated in the Contract Documents shall be in accordance with the Texas Manual on Uniform Traffic Control Devices.

#### XXIII. Project Signs

The Contractor shall erect at the site of construction, and maintain during construction, signs satisfactory to the County identifying the Project and indicating that the government is participating in the development of the Project. Two project signs will be required for the Project. The two said signs shall be 8' X 4' and made out of white 10 mm corrugated plastic with pressure sensitive vinyl lettering to include: Hays County / TxDOT Partnership Program with the Hays County Seal, the Project's name, and a brief description relating to the estimated date of completion, contact phone number, website address and the appropriate Hays County Commissioner's name and precinct number. Furnishing, installing and maintaining these signs shall be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling". Proofs of sign shall be submitted to the Inspector for approval prior to fabrication.

#### XXIV. Permits

The Contractor shall be responsible for obtaining any and all required construction permits. Contractor agrees to comply with all conditions of the permits and to maintain copies of the permits at the site at all times while the Work is in progress. The County shall be responsible for obtaining Section 404 permits from the U.S. Army Corps of Engineers as part of the Project design. When Contractor-initiated changes in the construction method changes the impacts to waters of the U.S., Contractor shall be responsible for obtaining new or revised Section 404 permits.

#### XXV. Landscape Restoration

If not designated as a specific pay item in bid package, the Contractor shall take the means necessary to protect all trees, shrubbery and sod. Protection, removal and replacement of existing landscaping will be in accordance with the Contract Documents.

#### XXVI. Existing Fencing

All fences encountered during construction within the right-of-way (ROW) shall be removed by the Contractor under "Preparing Right-of-Way." Permanent fencing, designating the ROW, will be provided by others, unless otherwise shown in the Contract Documents. The Contractor will be required to coordinate preparing ROW operations and fence removal and installations with the landowners as needed.

#### XXVII. Easements

Any easements, both temporary and permanent, required for the Project will be provided by the County as shown in the Contract Documents. Other easements required or desirable by the Contractor shall be arranged by the Contractor at its sole expense. The easements shall be cleaned after use and restored to their original conditions, or better by the Contractor. In the event additional work is required by the Contractor, it shall be the Contractor's responsibility to obtain written permission from the property owners involved for the use of additional property required. No additional payment will be allowed for this item.

#### XXVIII. Limits of Contractor's Operation

The Contractor shall limit construction operations to within the ROW or the easement unless otherwise directed by the County or its authorized representative.

#### XXIX. Maintenance of Pedestrian Walkways

The Contractor will be required to maintain clear walkways for pedestrians during construction in a manner to provide access in the most convenient and safest manner consistent with essential construction operations. Specifically, the following will be enforced.

Pedestrian traffic may be blocked at a location where work is actually in progress. Signs, barricades, and warning devices must be placed at nearest crosswalks approaching the construction site from every direction advising pedestrians of the blockage and advising them to use alternate routes.

Access to doorways and pedestrian entrances must be maintained at all times during hours that access is needed by business. Paving by sections or providing temporary access may be required.

No more than one corner of any intersection may be under construction at any one time. Work must be completed and opened for use by pedestrians before starting work on any other corner of an intersection.

The Contractor will be expected to diligently pursue construction from start to completion at every location to avoid prolonged and unnecessary disruptions to pedestrian traffic.

This work shall be considered incidental and not a separate pay item, unless provided otherwise in the Contract Documents.

#### XXX. Spoil

All excavated material unfit for backfill, waste material accumulated on the job, and any material surplus to that needed in the prosecution of the Work shall be removed from the site by the Contractor and properly and legally disposed of at its expense, unless otherwise directed by the Inspector. THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE COUNTY, ALL OF ITS OFFICERS, AGENTS, AND EMPLOYEES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY CHARACTER RESULTING FROM ITS ARRANGEMENTS FOR THE DISPOSAL OF SPOIL. This shall be incidental and not a separate pay item.

#### XXXI. Materials Testing

Quality Control testing of all materials, construction items or products incorporated in the work shall be performed by the Contractor at the Contractor's expense.

Quality Assurance sampling and testing for acceptance will be performed by the Inspector in accordance with the Quality Control (QC) / Quality Assurance (QA) program outlined in Appendix A. The cost of such tests will be incurred by the County and coordinated by the Construction Inspector through funds made available to the Construction Inspector

under his/her agreement with the County for the professional services related to construction engineering and inspection on the Project.

The Inspector shall furnish for review by the GEC, not later than 10 days after receipt of notice to proceed, a Quality Control Plan consisting of plans, procedures, and organization necessary to produce an end product which complies with the contract documents. The Inspector will be allowed the latitude to develop standards of control subject to approval by the County. As a minimum, the plan shall include description of the type and frequency of inspection staffing, materials handling and construction procedures, calibration and maintenance of equipment, production process control, and testing deemed necessary to assure quality as specified by the Contract Documents.

#### XXXII. Pre-Construction Conference

Before the Project work order is issued, a pre-construction conference shall be held with representatives of the County and the Contractor. The Contractor shall plan to submit a schedule of operations at the pre-construction conference, unless otherwise notified. See Section XXXVI-Prosecution and Progress for additional construction schedule requirements.

#### XXXIII. Weight Tickets

The Contractor will be responsible for providing asphalt and aggregate tickets for quantity verifications on all asphaltic concrete used for the Project.

#### XXXIV. Confined Space Entry Program

It shall be the responsibility of the Contractor to implement and maintain a variable "Confined Space Entry Program" which must meet OSHA requirements for all its employees and subcontractors at all times during construction. OSHA defines all active sewer manholes, regardless of depth, as "permit required confined spaces". Contractors shall submit an acceptable "Confined Space Entry Program" for all applicable manholes and maintain an active file for these manholes. The cost of complying with this program shall be subsidiary to the pay items involving work in confined spaces.

#### XXXV. Tree and Plant Protection

Scope: Provide complete protection and maintenance of existing trees, shrubs, and grass areas designated to remain within construction limits and/or right-of-way.

Coordination: Coordinate protection of existing trees, shrubs and grass areas with other trades so as to prevent damage to these items.

Payment for Damages: If existing trees, shrubs or grass areas are destroyed, killed or badly damaged as a result of construction observations, Contract sum will be reduced by the amount of assessed damages. Damages will be evaluated by the Construction Inspector, using the following:

Trees: International Shade Tree Conference Standards and following formula – measurement of a cross section of tree trunk will be made at a point 2 feet above

existing grade level to determine cross section area in square inches. Assessment for damage will be \$27.00 per square inch.

Shrubs and Grass Areas: An initial fine of \$1,000 shall be imposed for any unauthorized disturbance within the boundaries of the shrub and grass areas to remain within the right-of-way and outside the limits of disturbance. This disturbance includes but is not limited to: parking or intrusion of equipment or vehicles; storage of any materials, and any unauthorized damage and/or removal of vegetation. In addition to the initial fine, a base fine of \$8.00 for every square foot of area of damaged vegetation within any areas designated to remain on the plans shall be imposed. The areas covered under this section include but are not limited to: areas designated to remain or no-work areas. In determining the amount of fine, the Construction Inspector shall consider the degree and extent of harm caused by the violation, the cost of rectifying the damage, and whether the violation was committed willfully.

Materials: Tree Protection lumber dimensions shall be 4X4 and 2X4 sizes.

Protection: The Contractor shall protect existing trees, shrubs, and grass areas within construction limits from the following damage:

- (1) Compaction of root area by equipment, vehicles or material storage;
- (2) Trunk damage by moving equipment material storage, nailing or bolting;
- (3) Strangling by tying ropes or guy wires to trunks or large branches;
- (4) Poisoning by pouring solvents, gas, paint or other chemicals on or around trees and roots;
- (5) Cutting of roots by excavating or ditching;
- (6) Damage of branches by improper pruning;
- (7) Drought from failure to water or by cutting or changing normal drainage pattern past roots;
- (8) Changes of soil pH factor by disposal of lime base materials such as concrete or plaster;
- (9) Do not cut roots 1-1/2" in diameter or over. Excavation and earthwork within drip line of trees shall be done by hand.

Install barricade protection around trees and shrubs, constructed of 4X4 posts and 2X4 stringers top and bottom. Install protection prior to demolition or excavation operations. Leave protection until construction operations are essentially complete.

Maintenance:

- (1) Water trees and shrubs within construction limits as required to maintain their health during course of construction operations.
- (2) Pruning will be performed by County.

#### XXXVI. Prosecution and Progress

At the pre-construction meeting, the Contractor shall submit for acceptance a schedule of all planned work activities and sequences that is intended to be followed in order to both substantially and fully complete the Work within the allotted time periods (the "Project Schedule"). The purpose of the County requiring the Project Schedule shall be to:

- (1) Ensure adequate planning during the prosecution and progress of the work in accordance with the allowable number of working/ calendar days and all milestones;
- (2) Assure coordination of the efforts of the Contractor, County, Program Manager/GEC, Construction Inspector, utilities and others that may be involved in the Project;
- (3) Assist the Contractor, County, Program Manager/GEC and Construction Inspector in monitoring the progress of the Work and evaluating proposed changes to the Contract Documents; and
- (4) Assist the County, Program Manager/GEC and Construction Inspector in administering the time requirements set forth in the Contract Documents.

A Type B Schedule will be required on all projects. Following is the schedule requirements:

Type B Schedule:

The Contractor shall create and maintain a Critical Path Method (CPM) Project Schedule showing the manner of prosecution of work that it intends to follow in order to both substantially and fully complete the Work within the allotted time periods. The Project Schedule shall employ computerized CPM for the planning, scheduling and reporting of the work as described in this specification. The CPM Project Schedule shall be prepared using the Precedence Diagram Method (PDM). No direct compensation will be allowed for fulfilling these requirements, as such work is considered subsidiary to the various bid items of the Project.

- (1) Personnel. The Contractor shall provide an individual, referred to hereinafter as the Scheduler, to create and maintain the CPM schedule. He or she shall be proficient in CPM analysis and shall be able to perform required tasks on the specified software. The Scheduler shall be made available for discussion or meetings when requested by the County, Construction Inspector or Program Manager/GEC.
- (2) Schedule. The Project Schedule shall show the sequence and interdependence of activities required for complete performance of the work. The Contractor shall be responsible for assuring all work sequences are logical and show a coordinated plan of the Work.

Each activity on the schedule shall be described by: An activity number utilizing an alphanumeric designation system tied to the traffic control plans, and that is agreeable to the County, Program Manager/GEC, or Construction Inspector; concise description of the Work represented by the activity; and activity durations in whole working days with a maximum of twenty (20) working days. Durations greater than twenty (20) working days may be used for non-construction activities (mobilization, submittal preparation, curing, etc.), and other activities mutually agreeable between the Contractor and County, Program Manager/GEC or Construction Inspector. The Contractor shall provide a legend for all abbreviations. The activities shall be coded so that organized plots of the schedule may be produced. Typical activity coding includes: Traffic control phase, location and work type. If allowed and if the Contractor shall not use the independent activity type. This would cause the schedule to be incompatible with Primavera Project Planner.

The activity durations shall be based on the quantity for the individual work activity divided by a production rate. An estimated production rate for each activity shall also be shown.

The Contractor shall plan and incorporate major resources into the schedule. Major resources are defined as crews and equipment that constrain the Contractor from pursuing available work. The resources shall accurately represent the Contractor's planned equipment and manpower to achieve the productivity rates specified above.

Seasonal weather conditions shall be considered and included in the CPM schedule for all work influenced by temperature and/or precipitation. Seasonal weather conditions shall be determined by an assessment of average historical climatic conditions. Average historical weather data is available through the National Oceanic and Atmospheric Administration (NOAA). These effects will be simulated through the use of work calendars for each major work type (i.e., earthwork, concrete paving, structures, asphalt, drainage, etc.) Project and work calendars should be updated each month to show days actually able to work on the various work activities.

"Total float" is defined as the amount of time between the early start date and the late start date, or the early finish date and the late finish date, for each and every activity in the schedule. Float time in the schedule is a shared commodity between the County and the Contractor.

Only responsible delays in activities that affect milestone dates or the Project's completion date, as determined by CPM analysis, will be considered for a time extension.

The schedule shall show the sequence and interdependence of activities required for complete performance of the work. The schedule shall be prepared and maintained in accordance with the scheduling requirements stated in this Section and shall include two (2) organized plots with the activities logically grouped using the activity coding. The Contractor shall also provide an electronic copy of the schedule on diskette or CD-ROM.

The schedule shall encompass the time from the start of the Contract Time to the

Project's Final Completion. The longest path through the schedule shall be readily discernable on the plot of the schedule.

(3) Joint Review, Revision and Acceptance. Within twenty (20) calendar days of receipt of the Contractor's proposed schedule, the County or its authorized agents shall evaluate the schedule for compliance with this specification, and notify the Contractor of the findings. If the County or its authorized personnel request a revision or justification, the Contractor shall provide a satisfactory revision or adequate justification to the satisfaction of the Construction Inspector or County authorized personnel within seven (7) calendar days.

If the Contractor submits a CPM schedule for acceptance which is based on a sequence of work not in the Contract Documents, then the Contractor shall notify the County or its authorized entities in writing, separate from the schedule submittal.

The County's review and acceptance of the Contractor's Project Schedule is for conformance to the requirements of the Contract Documents only. Review and acceptance by the County or other authorized personnel of the Contractor's Project Schedule does not relieve the Contractor of any of its responsibility for the Project Schedule, or of the Contractor's ability to meet interim milestone dates (if specified) and the Final Completion date, nor does such review and acceptance expressly or by implication warrant, acknowledge or admit the reasonableness of the logic, durations, manpower or equipment loading of the Contractor's Project Schedule. In the event the Contractor fails to define any element of work, activity or logic and the County's review does not detect this omission or error, such omission or error, when discovered by the Contractor or County and its authorized personnel, shall be corrected by the Contractor at the next monthly schedule update and shall not affect the project completion date.

- (4) Updates. The Project Schedule shall be updated on a monthly basis and shall be required as a basis for the pay application approval. The Project Schedule update shall be submitted on the first working day of each month. The Contractor shall meet with the Construction Inspector or County authorized personnel each month at a scheduled update meeting to review actual progress made through the data date of the schedule update. The review of progress will include dates activities actually started and/or completed, and the percentage of work completed or remaining duration on each activity started and/or completed. The percentage of work complete shall be calculated by utilizing the quantity and productivity rate information. The Project Schedule update shall include one (1) copy of the following information:
  - a) Electronic copy of the updated schedule including revisions and changes on diskette or CD-ROM or other storage media.
  - b) One (1) logically organized plot of the schedule update if requested by the County or its authorized personnel.
- (5) Project Schedule Revisions. If the Contractor desires to make major changes in the

Project Schedule, the Contractor shall notify the County or Construction Inspector in writing. The written notification shall include the reason for the proposed revision, what the revision is comprised of, and how the revision was incorporated into the schedule. In addition to the written notification of the revision, the Contractor shall provide an electronic copy and one logically organized plot of the schedule including the revision if requested by the County or Construction Inspector.

Major changes are hereby defined as those that may affect compliance with the requirements of the Contract Documents or those that change the critical path. All other changes may be accomplished through the monthly updating process.

(6) Time Impact Analysis. The Contractor shall notify the County or Construction Inspector when an impact may justify an extension of Contract Time or adjustment of milestone dates. This notice shall be made in writing as soon as possible, but no later than the end of the next estimate period after the commencement of an impact or the notice for a change is given to the Contractor. Not providing notice to the County or Construction Inspector by the end of the next estimate period will indicate the Contractor's approval of the time charges as shown on that time statement. Future consideration of that statement will not be permitted and the Contractor forfeits its right to subsequently request a time extension or time suspension unless the circumstances are such that the Contractor could not reasonably have knowledge of the impact by the end of the next estimate period.

When changes are initiated or impacts are experienced, the Contractor shall submit to the County or Construction Inspector a written time impact analysis describing the influence of each change or impact.

A time impact analysis is an evaluation of the effects of changes in the construction sequence, contract, plans, or site conditions on the Contractor's plan for constructing the Project, as represented by the Project Schedule. The purpose of the time impact analysis is to determine if the overall Project has been delayed, and if necessary, to provide the Contractor and the County a basis for making adjustments to the time allotted for Substantial Completion and Final Completion.

A time impact analysis shall consist of one or all of the steps listed below.

Step 1. Establish the status of the Project before the impact using the most recent Project Schedule update prior to the impact occurrence.

Step 2. Predict the effect of the impact on the most recent Project Schedule update prior to the impact occurrence. This requires estimating the duration of the impact and inserting the impact into the schedule update. The Contractor shall demonstrate how the impact was inserted into the schedule showing the added or modified activities and the added or modified relationships. Any other changes made to the schedule including modifications to the calendars or constraints shall be noted.

Step 3. Track the effects of the impact on the schedule during its occurrence. Note any

changes in sequencing, and mitigation efforts.

Step 4. Compare the status of the Work prior to the impact (Step 1) to the prediction of the effect of the impact (Step 2), and to the status of the work during and after the effects of the impact are over (Step 3). Note that if an impact causes a lack of access to a portion of the Project, the effects of the impact may extend to include a reasonable period for remobilization.

The time impact analysis shall include an electronic copy of the complete schedule prepared in Step 2. If the Project Schedule is revised after the submittal of a time impact analysis but prior to its approval, the Contractor shall promptly indicate in writing to the County or Construction Inspector the need for any modification to its time impact analysis.

Only one (1) copy of each time impact analysis shall be submitted within fourteen (14) calendar days after the completion of an impact. The County or Construction Inspector may require Step 1 and Step 2 of the time impact analysis be submitted at the commencement of the impact, if needed to make a decision regarding the suspension of Contract Time.

Approval or rejection of each time impact analysis by the County, Construction Inspector or Program Manager/GEC shall be made within fourteen (14) calendar days after receipt unless subsequent meetings and negotiations are necessary.

The time impact analysis shall be incorporated into and attached to any relevant change order(s) and/or supplemental agreement(s).

#### XXXVII. Sanitary Provisions

Provide and maintain adequate, neat, and sanitary toilet accommodations for employees, including County employees and representatives, in compliance with the requirements and regulations of the Texas Department of Health or other authorities having jurisdiction.

#### XXXVIII. Work Near Railroads

(A) General.

If the work crosses or is in close proximity to a railroad, do not interfere with the use or operation of the railroad company's trains or other property. Assign responsible supervisory personnel to ensure that tracks and adjacent areas are clear of debris, road materials, and equipment. It is the Contractor's responsibility to contact the railroad to determine the railroad's requirements for work within the railroad right of way and to comply with the requirements. The County will not reimburse the Contractor for any cost associated with these requirements. If the work requires construction within 25 ft. horizontally of the near rail or if the tracks may be subject to obstruction due to construction operations, notify the Engineer and the Railroad Company at least 3 days before performing work. The railroad company will provide flaggers during this work. If railroad flaggers will be needed longer than 2 consecutive days, request them at least 30 days before performing

work within the railroad right of way. Flaggers provided by the railroad company will be paid for by the County. Do not store material or equipment in the Railroad's right of way within 15 ft. of the centerline of any track. Do not place any forms or temporary falsework within 8.5 ft. horizontally from the centerline or 22 ft. vertically above the top of rails of any track, unless otherwise shown in the Contract Documents.

(B) Temporary Crossings.

If a temporary crossing is needed, obtain permission from the railroad company before crossing the tracks. Execute the "Agreement for Contractor's Temporary Crossing" if required by the Railroad Company. The Contractor shall ensure that the tracks are left clear of equipment and debris that would endanger the safe operation of railroad traffic. Provide a crossing guard on each side of the crossing to direct equipment when hauling across the tracks. The Contractor shall stop construction traffic a safe distance away from the crossing upon the approach of railroad traffic. Work for temporary crossings will not be paid for directly, but shall be subsidiary to items of the Work subject of the Contract Documents. Work performed by the Railroad Company for the temporary crossing, except flaggers, will be at the Contractor's expense.

### SECTION 12 GENERAL NOTES

Item	Description	**Rate
**204	Sprinkling	
	(Dust)	30 GAL/CY
	(Item 132)	30 GAL/CY
	(Item 247)	30 GAL/CY
**210	Rolling (Flat Wheel)	
	(Item 247)	1 HR/200 TON
	(Item 316)	1 HR/6000 SY
**210	<b>Rolling (Tamping and Heavy Tamping)</b>	1 HR/200 CY
**210	<b>Rolling (Lt Pneumatic Tire)</b>	
	(Item 132)	1 HR/500 CY
	(Item 247)	1 HR/200 TON
	(Item 316 - Seal Coat)	1 HR/6000 SY
	(Item 316 - Two Course)	1 HR/3000 SY
247	Flexible Base (CMP IN PLC)	132 LB/CF
310	Prime Coat	0.20 GAL/SY
316	Underseals Asphalts (Multi Option)	0.20 GAL/SY
	Surface Treatments	
	Seal Coat	
	Grade 4	
	Asphalt	0.38 GAL/SY
	Aggregate	1 CY/120 SY
	Grade 5	
	Asphalt	0.32 GAL/SY
	Aggregate	1 CY/150 SY
	<b>Two Course Surface Treatment</b>	
	Asphalt 1st Application	0.28 GAL/SY
	Asphalt 2nd Application	0.24 GAL/SY
	Aggregate 1st Application Grade 4	1 CY/110 SY
	Aggregate 2nd Application Grade 4	1 CY/130 SY
3076	<b>Dense-Graded Hot-Mix Asphalt and Superpave</b>	110 LB/SY/IN
347/3081	Thin Overlay Mixtures (TOM)	
	SAC B	113.0 LB/SY/IN
	SAC A	116.0LB/SY/IN
3085	UnderSeal Course	0.20 GAL/SY
	Tack Coat	0.08 GAL/SY

#### GENERAL NOTES: Version: September 9, 2022

** For Informational Purposes Only

#### The following standard detail sheet or sheets have been modified:

#### **Modified Standards**

#### None
# GENERAL

Contractor questions on this project are to be addressed to the following individual(s): Hays County Purchasing <u>purchasing@co.hays.tx.us</u>

Bid information, including plans, specifications, and bidding documents, is available through the following websites:

City of San Marcos E-Procurement: https://sanmarcostx.gov/bids.aspx BidNet Direct: https://www.bidnetdirect.com/texas/hayscounty Texas Comptroller: <u>http://www.txsmartbuy.com/</u>

All contractor questions will be reviewed by the County and it's representatives. Once a response is developed, it will be posted to websites above.

References to manufacturer's trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted if they are of equal quality, comply with the specifications for this project, and are approved.

If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

The roadbed will be free of organic material prior to placing any section of the pavement structure.

Equip all construction equipment used in roadway work with highly visible omnidirectional flashing warning lights.

Intelligent Transportation Systems (ITS) Infrastructure may exist within the limits of this project and that the system must remain operational throughout construction. The exact location of ITS Infrastructure is not known. Contact the County and it's representatives for the location(s) at least 48 hours before commencing any work that might affect present ITS Infrastructure. Use caution if working in these areas to avoid damaging or interfering with existing facilities. Repair any damage to this system within 8 hours of occurrence at no cost to the Department. In the event of system damage, notify TxDOT/CTECC at (512) 974-0883 within one hour of occurrence. Failure of the Contractor to repair damage to any infrastructure that conveys any corridor information to TxDOT/CTECC will result in the Contractor being billed for the full cost of emergency repairs.

Provide a smooth, clean sawcut along the existing asphalt or concrete pavement structure, as directed. Consider subsidiary to the pertinent Items.

Construct all manholes/valves to final pavement elevations prior to the placement of final surface. If the manholes/valves are going to be exposed to traffic, place temporary asphalt around the manhole/valve to provide a 50:1 taper. The asphalt taper is subsidiary to the ACP work.

Supply litter barrels in enough numbers at locations as directed to control litter within the project. Consider subsidiary to pertinent Items.

Use a self-contained vacuum broom to sweep the roadway and keep it free of sediment as directed. The contractor will be responsible for any sweeping above and beyond the normal maintenance required to keep fugitive sediment off the roadway as directed by the County and it's representatives.

Damage to existing pipes and SET's due to Contractor operations will be repaired at Contractor's expense.

All locations used for storing construction equipment, materials, and stockpiles of any type, within the right of way, will be as directed. Use of right of way for these purposes will be restricted to those locations where driver sight distance to businesses and side street intersections is not obstructed and at other locations where an unsightly appearance will not exist. The Contractor will not have exclusive use of right of way but will cooperate in the use of the right of way with the city/county and various public utility companies as required.

During evacuation periods for Hurricane events the Contractor will cooperate with Department for the restricting of Lane Closures and arranging for Traffic Control to facilitate Coastal Evacuation Efforts.

# **ITEM 5 – CONTROL OF THE WORK**

Place construction stakes at intervals of no more than 100 ft. This work is subsidiary.

Provide a 72-hour advance email notice to <u>AUS_Locate@TxDOT.gov</u> to request illumination, traffic signal, ITS, or toll equipment utility locates. Provide <u>AUS_Locate@TxDOT.gov</u> an electronic pdf of as-builts within 21 calendar days of illumination, traffic signal, ITS, or toll equipment being placed into operation. As-built shall include GPS coordinates of manholes and junction boxes. Include final version of RFI's and revised plan sheets.

# **Precast Alternate Proposals.**

When a precast or cast-in-place concrete element is included in the plans, a precast concrete alternate may be submitted in accordance with "Standard Operating Procedure for Alternate Precast Proposal Submission" found online at <u>https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/publications/bridge.html#design</u>. Acceptance or denial of an alternate is at the sole discretion of the County and it's representatives. Impacts to the project schedule and any additional costs resulting from the use of alternates are the sole responsibility of the Contractor.

# **Electronic Shop Drawing Submittals.**

Contact will be provided in preconstruction meeting.

# Utilities.

Contractor shall notify all utility companies prior to construction determine the location of existing utilities. Prior to commencing excavation activities, the contractor will contact Texas 811.

The existence and location of underground utilities indicated on the plans are taken from available records and are not guaranteed but shall be investigated and verified by the contractor before starting work. The contractor shall be held responsible for any damage to and for the maintenance and protection of the existing utilities even if they are not shown in the plans. Location and depth of existing utilities shown here are approximate only. Actual locations and depths must be verified by the contractor prior to construction, and the contractor shall be responsible for protection of utilities during construction.

# **Cooperating with Joint Bid Utilities.**

The County and it's representatives will designate a utility inspector at the pre-construction meeting. All durations exclude utility owner holidays.

Provide a complete package of information for all resubmittals. Submit each item and individual components of that item under separate cover.

Prior to submitting an RFI, meet and discuss with the County and the utility inspector. Include a proposed solution, existing and proposed line elevations, and redline of proposed changes with the RFI. Make note of adjacent utilities in the RFI if it includes relocation of a line. Submit RFIs via email to the County and the utility inspector.

Complete pre-testing and have the utility inspector verify prior to formal testing and inspection. Submit email to the County and the utility inspector requesting a formal test and inspection 14 calendar days before the test date. Pay retest fees directly to utility owner at current rates.

Submit an email to the utility inspector identifying the lines, valves, location, and date of shut offs or limited service 21 calendar days before for all lines and 60 calendar days before for water lines 24 in. or greater. The utility owner will conduct a test shut off before actual shut off. Do not shut off power or water lines 24 in. or greater between June 1st and August 31st. Provide a verbal notification 7 calendar days and written notification 72 hours before impact to service to all customers.

Provide an electronic pdf of as-builts within 28 calendar days of a line becoming active. Include GPS coordinates of items not installed per original plans including meters, manholes, valves, bends, and fire hydrant locations in the as-builts. Include limits of encasements such as steel and flowable fill. Include final version of RFI's and revised plan sheets.

# Alignment and Profile.

Unless shown in the plans, profile and alignment data for roadways being overlaid or widened are for design verification only. Provide survey and construct the roadway in accordance with the typical section. Bid items and data may be provided to adjust cross slope and super elevations.

# **ITEM 6 - CONTROL OF MATERIALS**

Give a minimum of 1 business day notice for materials, which require inspection at the Plant.

Comply with the latest provisions of Build America, Buy America Act (BABA Act) of the Bipartisan Infrastructure Law which restricts funds being made available from Federal financial assistance programs unless all the iron products, steel products, manufactured products, and construction materials used in the project are produced in the United States. Use steel or iron products, manufactured products, or construction materials produced in the United States except when:

- a waiver exists exempting the material from Buy America compliance
- the cost of materials, including delivery, does not exceed 0.1% of the total Contract cost or \$2,500, whichever is greater,
- the Contract contains an alternate item for a foreign source product and the Contract is awarded based on the alternate item, or
- the materials are temporarily installed.

For construction materials submit a notarized original of TxDOT Construction Material Buy America Certification Form (Department Form 2806) with the proper attachments for verification of compliance.

Construction Materials are classified as an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives —that is or consists primarily of:

- Non-ferrous metals,
- plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables),
- Glass (including optic glass)
- Lumber, or
- Drywall.

Details shown on the plans provide additional clarification on Buy America requirements for this project.

For steel or Iron materials submit a notarized original of the FORM D-9-USA-1 (Department Form 1818) with the proper attachments for verification of compliance. For Steel or Iron materials the manufacturing process includes any process that modifies the chemical content, physical shape or size, or final finish of a product. The manufacturing process begins with initial melting and mixing and continues through fabrication (cutting, drilling, welding, bending, etc.) and coating (paint, galvanizing, epoxy, etc.).

# **ITEM 7 – LEGAL RELATIONS AND RESPONSIBILITIES**

The County and it's representatives will coordinate with TDLR regarding pedestrian elements and sidewalks. The contractor will procure and provide all permits, licenses, and inspections; pay all charges, fees, and taxes regarding TDLR rules governing industrialized housing and buildings.

Roadway closures during key dates and/or special events are prohibited. See notes for Item 502 for the key dates and/or special events.

Refer to the Environmental Permits, Issues and Commitments (EPIC) plan sheets for additional requirements and permits.

When any abandoned well is encountered, cease construction operations in this area and notify the County and it's representatives who will coordinate the proper plugging procedures. A water well driller licensed in the State of Texas must be used to plug a well.

Perform maintenance of vehicles or equipment at designated maintenance sites. Keep a spill kit on-site during fueling and maintenance. This work is subsidiary.

Maintain positive drainage for permanent and temporary work for the duration of the project. Be responsible for any items associated with the temporary or interim drainage and all related maintenance. This work is subsidiary.

Suspend all activities near any significant recharge features, such as sinkholes, caves, or any other subterranean openings that are discovered during construction or core sampling. Do not proceed until the designated Geologist or TCEQ representative is present to evaluate and approve remedial action.

Locate aboveground storage tanks kept on-site for construction purposes in a contained area as to not allow any exposure to soils. The containment will be sized to capture 150% of the total capacity of the storage tanks.

# PSL in Edwards Aquifer Recharge and Contributing Zone.

Obtain written approval from the County and it's representatives for all on or off right of way PSLs not specifically addressed in the plans. Provide a signed sketch of the location 30 business days prior to use of the PSL. Include a list of materials, equipment and portable facilities that will be stored at the PSL. The County and it's representatives will coordinate with the necessary agencies. Approval of the PSL is not guaranteed. Un approved PSL is not a compensable impact.

# Work within a USACE Jurisdictional Area.

Do not initiate activities within a U.S. Army Corps of Engineers (USACE) jurisdictional area that have not been previously evaluated by the USACE as part of the permit review of this project. Such activities include, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. Obtain written approval from the County and it's representatives for activities not specifically addressed in the plans. Provide a signed sketch and description of the location 60 business days prior to begin work at the location. Complete and return any forms provided by the County and it's representatives. Approval of the work is not guaranteed. Un approved work is not a compensable impact.

# Work over or near Bodies of Water (lakes, rivers, ponds, creeks, dry waterways, etc.).

Keep on site a universal spill kit adequate for the body of water and the work being performed. Debris is not allowed to fall into the ordinary high-water level (OHWL). Debris that falls into the OHWL must be removed at the end of each workday. Debris that falls into the floodway must be removed at the end of each work week or prior to a rain event. Install and maintain traffic control devices to maintain a navigable corridor for water traffic, except during bridge demo and beam placement. This work is subsidiary.

Obtain written approval from the County and it's representatives for temporary fill or crossings not specifically addressed in the plans. Provide a signed sketch of the location 60 business days prior to begin work at the location. Complete and return any forms provided by the County and it's representatives. Approval of the work is not guaranteed. Unapproved work is not a compensable impact.

# **DSHS** Asbestos and Demolition Notification.

Complete and provide the Texas Department of State Health Services (DSHS) notification form to the County and it's representatives at least 30 calendar days prior to bridge removal or renovation for each phase or step of work. Notify the County and it's representatives via email of any changes to the work start and end dates.

# **Migratory Birds and Bats.**

Migratory birds and bats may be nesting within the project limits and concentrated on roadway structures such as bridges and culverts. Remove all old and unoccupied migratory bird nests from any structures, trees, etc. between September 16 and February 28. Prevent migratory birds from re-nesting between March 1 and September 15. Prevention shall include all areas within 25 ft. of proposed work. All methods used for the removal of old nesting areas and the prevention of renesting must be submitted to the County and it's representatives 30 business days prior to begin work. This work is subsidiary.

If active nests are encountered on-site during construction, all construction activity within 25 ft. of the nest must stop. Contact the County and it's representatives to determine how to proceed.

# Tree and Brush Trimming and Removal.

Work will be conducted September 16 thru February 28. Work conducted outside this timeframe will require a bird survey. Submit a survey request to the County and it's representatives 30 business days prior to begin work.

No extension of time or compensation will be granted for a delay or suspension due to the above bird, bat and tree/brush requirements.

#### Law Enforcement Personnel.

Submit charge summary and invoices using the County forms.

Patrol vehicles must be clearly marked to correspond with the officer's agency and equipped with appropriate lights to identify them as law enforcement. For patrol vehicles not owned by a law enforcement agency, markings will be retroreflective and legible from 100 ft. from both sides and the rear of the vehicle. Lights will be high intensity and visible from all angles.

No payment will be made for law enforcement personnel needed for moving equipment or payment for drive time to/from the event site. A minimum number of hours is not guaranteed. Payment is for work performed. If the Contractor has a field office, provide an office location for a supervisory officer when event requires a supervising officer. This work is subsidiary to Item 502-6001.

A maximum combined rate of \$70 per hour for the law enforcement personnel and the patrol vehicle will be allowed. Any scheduling fee is subsidiary per Standard Specification 502.4.2.

Cancel law enforcement personnel when the event is canceled. Cancellation, minimums or "show up" fees will not be paid when cancellation is made 12 hours prior to beginning of the event. Failure to cancel within 12 hours will not be cause for payment for cancellation, minimums, or "show up" time. Payment of actual "show up" time to the event site due to cancellation will be on a case-by-case basis at a maximum of 2 hours per officer.

Alterations to the cancellation and maximum rate must be approved by the County and it's representatives or pre-determined by official policy of the officer's governing authority.

# **Select Tree Preservation.**

Provide a certified arborist to review the condition of the following trees: See Plan sheet number 128 for table of trees. An arborist shall provide a condition assessment of these trees and written direction for additional protection at least 5 business days prior to beginning work. The County and it's representatives will approve additional work. Payment for the arborist and work in addition to work shown on the plans will be paid for under the force account method in accordance with Article 9.7, "Payment for Extra Work and Force Account Method."

#### Back Up Alarm.

For hours 9 P to 5 A, utilize a non-intrusive, self-adjusting noise level reverse signal alarm. This is not applicable to hot mix or seal coat operations. This is subsidiary.

# **ITEM 8 – PROSECUTION AND PROGRESS**

Electronic versions of schedules will be saved in Microsoft Project format.

Working days will be charged in accordance with 8.3.1.4, "Standard Workweek."

Special Provision 008-HC03 has been included to amend Standard Article 8.1 to extend the begin work date due to anticipated lag time in arrival of proposed signal pole. Substantially complete the project in 142 working days.

# **ITEM 100 - PREPARING RIGHT OF WAY**

Prep ROW must not begin until accessible trees designated for preservation have been protected, items listed in the EPIC have been addressed, and SW3P controls installed in accessible areas.

Backfill material will be Type B Embankment using ordinary compaction.

Follow Item 752.4 Work Methods and Item 752 general notes when removing or working on or near trees and brush.

Unless shown otherwise in the plans or a designated non-mow area, perform trimming or removal for areas within 30 ft. of edge of pavement under construction. Trim or remove to provide minimum of 5 ft. of horizontal clearance and 7 ft. of vertical clearance for the following:

sidewalks, paths, guard fence, rails, signs, object markers, and structures. Trim to provide a minimum of 14 ft. vertical clearance under all trees. This work is subsidiary.

# ITEM 105 – REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT

Existing typical is based on information available. This typical may not account for all maintenance work such as overlays or pavement repairs. A change in material type or thickness does not warrant additional payment. Payment is full compensation for removing all material to the depth specified.

# **ITEM 110 – EXCAVATION**

The County and it's representatives will define unsuitable material.

# ITEM 132 – ALL EMBANKMENT

At no time will the retaining wall backfill material exceed the adjacent embankment operation by more than one lift. At no time will the embankment adjacent to the retaining wall backfill exceed the wall backfill by any elevation. Embankment placed over the area of MSE backfill must meet the same backfill requirements for the type specified under Item 423.

The County and it's representatives will define unsuitable material. Material which the Contractor might deem to be unsuitable due to moisture content will not be considered unsuitable material.

Prior to begin embankment of existing area, correct, or replace unstable material to a depth of 6 in. below existing grade. Embankment areas will be inspected prior to beginning work.

Rock or broken concrete produced by the project is allowed in earth embankments. The size of the rock or broken concrete will not exceed the layer thickness requirements in Section 132.3.4., "Compaction Methods." The material will not be placed vertically within 5 ft. of the finished subgrade elevation.

Embankment placed vertically within 5 ft. of the finished subgrade elevation or within the edges of the subgrade and treated with lime, cement, or other calcium-based additives must have a sulfate content less than 3000 ppm. Allow 5 business days for testing. Treatment of sulfate material 3000 ppm to 7000 ppm requires 7 days of mellowing and continuous water curing, in accordance TxDOT guidelines for Treatment of Sulfate-Rich Soils and Bases in Pavement Structures (9/2005). Material over 7000 ppm is not allowed.

# ITEM 132 – EMBANKMENT TY C

The County must approve all Type C embankment material before use on the project. Do not furnish shale clays. Furnish embankment with sulfate content less than 3000 ppm if treated with calcium-based chemicals or within 5 ft. of the finished subgrade elevation. Existing material from within the project limits that meets the Type C Substitute requirements may substituted for Type C but is not allowed to substitute for C1, C2, or density-controlled material. Offsite material may be used to blend with onsite material to achieve the Type C requirements. The Type C substitute may also be existing material in accordance with 132 for rock embankment. The Type C substitute material may only be placed vertically beyond 5 ft. below the finished subgrade elevation or 5 ft. beyond the edge of the subgrade.

Туре С				
Percent 1	Retained	LL	PI	PI
3"	#4	Max	Max	Min
0	MIN 45	55	20	6
Type C Substitute				
Percent 2	Retained		PI	
3"	#4		Max	
Max 10	10-90		25	

#### TY C1 and C2 Percent Retained

Description	Percent Ketained				LL	PI 1	PI	
Description	3"	1 3/4"	3/8''	#4	#40	Max	Max	Min
Embankment (Ordinary) (TY C1)	0	0-10	-	45-75	60-85	45	20	6
Embankment (Ordinary) (TY C2)	-	-	0	30-75	50-85	55	25	8

# **ITEM 160 - TOPSOIL**

Off-site topsoil will have a minimum PI of 25.

No Sandy Loam allowed.

Obtain approval of the actual depth of the topsoil sources for both on-site and off-site sources. Construct topsoil stockpiles of no more than five (5) feet in height.

Salvage topsoil from sites of excavation and embankment. Maximum salvage depth is 6 inches.

Windrowing of topsoil obtained from the Right of Way (ROW) is not allowed.

# **ITEM 168 – VEGETATIVE WATERING**

Water all areas of project to be seeded or sodded.

Maintain the seedbed in a condition favorable for the growth of grass. Watering can be postponed immediately after a rainfall on the site of  $\frac{1}{2}$  inch or greater but will be resumed before the soil dries out. Continue watering until final acceptance.

Vegetative watering rates and quantities are based on ¹/₄ inch of watering per week over a 3-month watering cycle. The actual rates used and paid for will be as directed and will be based on prevailing weather conditions to maintain the seedbed.

Obtain water at a source that is metered (furnish a current certification of the meter being used) or furnish the manufacturer's specifications showing the tank capacity for each truck used. Notify the County and it's representatives, each day that watering takes place, before watering, so that meter readings or truck counts can be verified.

# **ITEM 204 – SPRINKLING**

Apply water for dust control as directed. When dust control is not being maintained, cease operations until dust control is maintained. Consider subsidiary to the pertinent Items.

**County:** Hays Highway: RM 12

# **ITEM 216 - PROOF ROLLING**

Correct and perform "Proof Rolling" retest at the Contractor's expense, to the satisfaction of the County and it's representatives, when initial "Proof Rolling" yields a failing result.

#### **ITEM 247 - FLEXIBLE BASE**

The layer thickness will be 4 in. to 6 in. unless shown on the plans. Placing in a single layer is allowed when total thickness of base is 8 in. or less. When placed in multiple layers, compact the bottom and middle layers to at least 95% and 98% of the maximum dry density, respectively. When placed in a single layer or the final layer, compact to at least 100%.

Correction of subgrade soft spots is subsidiary.

Complete per plans the subgrade, ditches, slopes, and drainage structures prior to the placement of base.

Do not use a vibratory roller to compact base placed directly on top of a drainage structure.

# **ITEMS 260 THRU 276 – SUBGRADE TREATMENTS AND BASE**

Use ordinary compaction for subgrade treatment.

Three weeks prior to treatment, provide a sample of soil or flexible base to be treated.

#### **ITEM 300s – SURFACE COURSES AND PAVEMENTS**

If an under seal is not provided, furnish a tack coat. Apply tack coat at 0.08 GAL/SY (residual). Apply non-tracking tack coat using manufacturer recommend rates.

# **ITEM 302 – AGGREGATES FOR SURFACE TREATMENTS**

Previously tested aggregates delivered to the project, which are found to contain excessive quantities of dust (more than 0.5 percent passing the no. 40 sieve) during pre-coating, stockpiling, or hauling operations, will be rejected. Use test method Tex-200-F, Part II, for testing.

Table 3 Los Angeles Abrasion, % Max, is lowered from 35 to 30 and is applicable to all aggregates.

When TY E is allowed, furnish coarse fractionated recycled asphalt pavement (CF-RAP). CF-RAP aggregate stockpiles must be approved on a stockpile-by-stockpile basis, unless approved by the County and it's representatives. Do not exceed stockpiles greater than 2000 tons. CF-RAP will meet the below gradation requirement (after ignition burn off of asphalt) or finer than Grade 4. CF-RAP will meet deleterious material and decantation requirements in accordance with Table 3.

<b>CF-RAP Requirements</b>				
	Perc	ent Reta	ained	
5/8"	1/2''	3/8''	#4	<b>#8</b>
0	10-25	60-80	85-100	90-100

# **ITEM 310 – PRIME COAT**

Apply blotter material to all driveways and intersections. This work is subsidiary.

When Multi Option is allowed, provide MC 30, EC 30, or AE-P. MC 30 is not allowed in Travis County.

Rolling to ensure penetration is required.

# ITEM 316 – SEAL COAT

Ensure that all underseals are covered by HMACP before exposing to traffic for roadways listed in Table 1 of Item 502 or ADT greater than 5,000.

Aggregates (Multi Option) for seal coats not exposed to traffic and underseals shall be Type E, PA, PB, A or B. The Grade shall range between 4 and 5.

Use a medium pneumatic roller in accordance with Item 210.

Surface all transitions, tapers, climbing lanes and intersections to the limits as directed.

Remove and dispose of off the ROW the audible/profile markings, reflectorized markings, and raised markers. Blade pavement edges to remove vegetation. Any areas with excessive asphalt or aggregate will be removed. Continue sweeping excess aggregate off the roadway, riprap, and shoulder up to two weeks after completing the work. This work is subsidiary.

# **ITEM 320 - EQUIPMENT FOR ASPHALT CONCRETE PAVEMENT**

Use of motor grader is allowed for placement of mixtures greater than 10 inches from the riding surface, when hot mix is used in lieu of flexible base, or as allowed.

# ITEMS 341THRU 348/3082 - HOT-MIX ASPHALT PAVEMENT

Core holes may be filled with an Asphaltic patching material meeting the requirements of DMS-9203 or with SCM meeting requirements of DMS-9202.

Install transverse butt joints with 50 ft. H: 1 in. V transition from the new ACP to the existing surface. Install a butt joint with 24 in. H: 1 in. V transition from the new ACP to a driveway, pullout, or intersection. Saw cut the existing pavement at the butt joints. This work is subsidiary.

Use a device to create a maximum 3H:1V notched wedge joint on all longitudinal joints of 2 in. or greater. This work is subsidiary.

Prior to milling, core the existing pavement to verify thickness. This work is subsidiary.

Ensure placement sequence to avoid excess distance of longitudinal joint lap back not to exceed one day's production rates.

Submit any proposed adjustments or changes to a JMF before production of the new JMF.

Tack every layer. Do not dilute tack coat. Apply it evenly through a distributor spray bar.

Provide a minimum transition of 10' for intersections, 10' for commercial driveways, and 6' for residential driveways unless otherwise shown on the plans.

Irregularities will require the replacement of a full lane width using an asphalt paver. Replace the entire sublot if the irregularities are greater than 40% of the sublot area.

Lime or an approved anti-stripping agent must be used when crushed gravel is utilized to meet a SAC "A" requirement.

When using RAP or RAS, include the management methods of processing, stockpiling, and testing the material in the QCP submitted for the project. If RAP and RAS are used in the same mix, the QCP must document that both materials have dedicated feeder bins for each recycled material. Blending of RAP and RAS in one feeder bin or in a stockpile is not permitted.

Asphalt content and binder properties of RAP and RAS stockpiles must be documented when recycled asphalt content greater than 20% is utilized.

No RAS is allowed in surface courses.

Department approved warm-mix additives is required for all surface mix application when RAP is used. Dosage rates will be approved during JMF approval.

The Hamburg Wheel Test will have a minimum rut depth of 3mm except for SMA with HPG or PG 76.

# ITEMS 341/3076 - DENSE-GRADED HOT-MIX ASPHALT

Use the SGC for design and production testing of all mixtures. Design all Type D mixtures as a surface mix, maximum 15% RAP and no RAS. Contractor may not use a substitute PG binder for 76-22. When using substitute binders, mold specimens for mix design and production at the temperature required for the substitute binder used to produce the HMA.

The Hamburg Wheel minimum number of passes for PG 64 or lower is reduced to 7,000. The County and it's representatives may accept Hamburg Wheel test results for production and placement if no more than 1 of the 5 most recent tests is below the specified number of passes and the failing test is no more than 2,000 passes below the specified number of passes.

# ITEMS 347/3081 - THIN OVERLAY MIXTURES (TOM)

For SAC A, blending SAC B aggregate with an RSSM greater than the SAC A rating or 10, whichever is greater, is prohibited.

When using a Thermal Imaging System follow the Weather Condition requirements for When Not Using a Thermal Imaging System.

Produce mixture with a Department approved WMA additive or process to facilitate compaction when the haul distance is greater than 40 miles or when the air temperature is 70°F and falling. WMA processes such as water or foaming processes are not allowed under these circumstances.

# **ITEM 354 - PLANING AND TEXTURING PAVEMENT**

Contractor retains ownership of salvaged materials.

Unless shown on the plans, mill and resurface the work area during each shift on roadways with ADT greater than 20,000 or if milling will expose the flex base or subgrade per the typical section. Unless shown on the plans, mill and resurface a work area within 5 days for roadways with ADT 20,000 or less.

Taper permanent transverse faces 50 ft. per 1 in. Taper temporary transverse faces 25 ft. per 1 in. Taper permanent longitudinal faces 6 ft. per 1 in. HMA may be used as temporary tapers. Provide minimum 1 in. butt joints at bridge ends and paving ends. This work is subsidiary.

Milled surfaces directly covered by a mat thickness of 1 in. or less shall produce a milled texture with a ridge to valley depth (RVD) no greater than 0.25 in. (6.5 mm).

# **ITEM 400 - EXCAVATION AND BACKFILL FOR STRUCTURES**

Unless shown on the plans, the following backfill will apply to cutting and restoring flexible pavement. Backfill with cement-stabilized backfill. The cement-stabilized backfill is subsidiary. Cap the backfill with Type B hot mix to a depth equal to the adjacent hot mix. At locations where the backfill surface is final, place 1-1/2 in. Type D for the surface. The minimum hot mix depth will be 4 in.

Unless shown on the plans, flowable fill option 1 item will be used for pavement widening.

Saw-cut the pavement at the edge of the excavation. This work is subsidiary.

# **ITEM 416 - DRILLED SHAFT FOUNDATIONS**

Stake all Foundations, for approval, before beginning drilling operations.

Calculate the vertical signal head clearance before placing any signal pole foundation. For mast-arm signal and strain pole anchor bolts, set two in tension and two in compression.

Obtain approval of placement prior to placing concrete.

Remove spoils from a flood plain at the end of each workday.

# **ITEM 420 – CONCRETE SUBSTRUCTURES**

Do not use PMDF in areas where a "Free Joint" is indicated in the plans.

Check the sign plans for locations of clearance signs and brackets on structures, which will require inserts in the pre-stressed beams.

Where Retaining Walls are integral parts of the abutment header, do not place the abutment cap prior to backfilling the wall and the abutment area up to the elevation of the bottom of the abutment cap.

Mass placements are defined as placements with a least dimension greater than or equal to 5 ft. or designated elsewhere on the plans.

Perform work during good weather unless otherwise directed. If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by the weather, the Contractor is responsible for all costs associated with repairs/replacement.

Upon completion of the structure, stencil the National Bridge Inventory (NBI) number (structure number) using black paint and 4 in. tall numbers at 4 locations designated by TxDOT. This work is subsidiary.

Bonding agents are required at construction joints. Do not use membrane curing for structural concrete as defined in Item 421, Table 8.

Remove all loose Formwork and other Materials from the floodplain or drainage areas daily.

# ITEM 421 - HYDRAULIC CEMENT CONCRETE

Minimum 28-day design strengths for the following classes are:

Class A: _____3000_____(psi.)

# ITEM 432 - RIPRAP

Mow strip riprap will be 4 in. and all other riprap will be 5 in. unless otherwise shown on the plans. Mow strip for cable barrier may be placed monolithically with the barrier foundations if using concrete in accordance with Item 543. Fiber reinforcement is not allowed except in mow strip for cable barrier if foundation and mow strip are placed monolithically. GFRP is allowed reinforcement for all applications.

Saw-cut existing riprap then epoxy 12 in. long No. 3 or No. 4 bars 6 in. deep at a maximum spacing of 18 in. in each direction to tie new riprap to existing riprap. This work is subsidiary. Provide Type A Grade 3 or 5 flexible base for cement stabilized riprap. Compressive strengths for flexible base are waived.

SGT approach taper, paid for using mow strip item, will be installed using concrete, flexible base coated with SS-1 at a rate of 0.12 GAL/SY, or HMA Type B/C/D. Placement will be ordinary compaction and does not require placement using an asphalt paver.

# **ITEM 460 - CORRUGATED METAL PIPE**

Field adjust pipe end to maintain the necessary slope. Field cutting of pipe end is allowed. Coat all field cuts with asphalt paint. Cut ditches to grade before laying pipe.

# ITEM 466 - HEADWALLS AND WINGWALLS

Remove all loose formwork and materials from the waterway at the end of each work week or prior to a rain event. Debris that falls into the waterway must be removed at the end of each workday. Upon completion of the structure, stencil the National Bridge Inventory (NBI) number (structure number) using black paint and 4 in. tall numbers at 4 locations designated by TxDOT. This work is subsidiary.

# **ITEM 467 - SAFETY END TREATMENT**

Field adjust pipe end to maintain the necessary slope. Field cutting of pipe end is allowed. Coat all metal field cuts or exposed reinforcement with asphalt paint.

# **ITEM 474 - LINEAR DRAINS**

Provide reformed circumferential corrugation ends if helical corrugated pipe is furnished.

Provide continuous draw openings in slotted drain pipes.

# **ITEM 479 – ADJUSTING MANHOLES AND INLETS**

Use style SL, per standard PSL, for capping inlets and manholes unless otherwise shown on the plans. The cap may be cast in place. The cap must be level and overhang 6 in. beyond the outside edge of the structure. Dowel or attachment of the cap to the existing structure is not required.

# **ITEM 496 - REMOVING STRUCTURES**

Submit a demolition plan to the County and it's representatives. Have the plan signed and sealed by a licensed professional engineer when the structure will continue to accommodate traffic after removal has begun and the removal impacts any part of the structure below the deck or riding surface. If applicable, the plan must detail requirements for meeting the U.S. Army Corps of Engineers' Section 404 Permit. The demolition plan must detail handling of roadway and waterway traffic. Waterway traffic must be maintained at all times unless a closure is approved by the County and it's representatives.

No debris is allowed to fall into a body of water. Debris that falls into the water must be removed at the end of each workday. Debris that falls into the floodway must be removed at the end of each work week or prior to a rain event.

# ITEM 502 - BARRICADES, SIGNS, AND TRAFFIC HANDLING

	Table 1	
Roadway	Limits	Allowable Closure Time
All	Within 200' of a signalized intersection	9 P to 5 A
All	All (Full Closure, see allowable work bel	ow) 11 P to 4 A
	Table 2	
Roadway	Limits	Allowable Closure Time
RM 3237	RM 12 to 170' North of RM 12 5 P	Tues. (8/8/23) to 5 A Thurs. (8/17/23)
For roadway	vs without defined allowable closure times,	nighttime lane closures will be allowed
from 8 P to 6	5 A. Unless stated, daytime or Friday night	lane closures will not be allowed and one
lane in each	direction will remain open at all times for a	ll roadways.

Full closures only allowed Friday night thru Monday morning for bridge beam installation, bridge demolition, or OSB truss removal/installation. Full closures only allowed for roadways with frontage roads or if a designated detour route is provided in the plans.

No closures will be allowed on the weekends, working day prior, and working day after the National Holidays defined in the Standard Specifications, Good Friday, and Easter weekend. No closures will be allowed on weekends when the Wimberley Market Days are held which are on the first Saturday of each month from the beginning of March until the end of December. Closures the Sunday of the Super Bowl will not be allowed from 1 P to 11 P. No closures will be allowed on Friday and the weekends for projects within 20 miles of Formula 1 at COTA, ACL Fest, SXSW, ROT Rally, UT home football games (includes games not on a Friday or weekend), sales tax holiday, Dell Match Play (includes Thursday), Rodeo Austin, or other special events that could be impacted by the construction. All lanes will be open by noon of the day before these special events. Additional key dates or special events include the following:

To account for directional traffic volumes, begin and end times of closures may be shifted equally by the County and it's representatives . The closure duration will remain. Added compensation is not allowed.

Submit an emailed request for a lane closure (LCN) to the County. The email will be submitted in the format provided. Receive concurrence prior to implementation. Submit a cancellation of lane closures a minimum of 18 hours prior to implementation. Blanket requests for extended periods are not allowed. Max duration of a request is 2 weeks prior to requiring resubmittal.

Provide 2-hour notice prior to implementation and immediately upon removal of the closure.

For roadways listed in Table 1: Submit the request 96 hours prior to implementation.

For roadways not listed in Table 1: Submit the request a minimum of 48 hours prior to the closure and by the following deadline immediately prior to the closure: 11A on Tuesday or 11A on Friday. For all roadways: Submit request for traffic detours and full roadway closures 168 hours prior to implementation. Submit request for nighttime work 96 hours to implementation date.

Cancellations of accepted closures (not applicable to full closures or detours) due to weather will not require resubmission in accordance with the above restrictions if the work is completed during the next allowable closure time.

Closures that conflict with adjacent contractor will be prioritized according to critical path work per latest schedule. Conflicting critical path or non-critical work will be approved for first LCN submitted. Denial of a closure due to prioritization or other reasons will not be reason for time suspension, delay, overhead, etc.

Cover, relocate or remove existing signs that conflict with traffic control. Install all permanent signs, delineation, and object markers required for the operation of the roadway before opening to traffic. Use of temporary mounts is allowed or may be required until the permanent mounts are installed or not impacted by construction. Maintain the temporary mounts. This work is subsidiary.

Meet with the County and it's representatives prior to lane closures to ensure that sufficient equipment, materials, devices, and workers will be used. Take immediate action to modify traffic control, if at any time the queue becomes greater than 20 minutes. Have a contingency plan of how modification will occur. Consider inclement weather prior to implementing the lane closures. Do not set up traffic control when the pavement is wet.

Place a 28-inch cone, meeting requirements of BC (10), on top of foundations that have protruding studs. This work is subsidiary.

Edge condition treatment types must be in accordance with the TxDOT standard. Installation and removal of a safety slope is subsidiary.

To determine a speed limit or an advisory speed limit, submit a request to the County and it's representatives 60 business days prior to manufacture of the sign.

# ITEM 506 - TEMPORARY EROSION, SEDIMENTATION, AND ENV CONTROLS

If SW3P plan sheets are not provided, place the control measures as directed.

Install, maintain, remove control measures in areas of the right of way utilized by the Contractor that are outside the limits of disturbance required for construction. Permanently stabilize the area. This work is subsidiary.

Erosion control measures must be initiated immediately in areas where construction activities have ceased and will not resume for a period exceeding 14 calendar days. Vertical track all exposed soil, stockpiles, and slopes. Re-track after each rain event or every 14 days, whichever occurs first. Sheep foot roller is allowed for vertical tracking. This work is subsidiary.

Unless a specific pay item is provided in the plans, the installation of the 6:1 or flatter for RFD side slopes in the safety zone will be subsidiary to pertinent bid items.

# **ITEM 508 – CONSTRUCTING DETOURS**

Detour typical section must match the adjacent roadway section, unless shown on the plans.

Flexible base will be Type A Grade 5 placed using ordinary compaction. Base compressive strengths are waived for roadways not listed in Item 502, Table 1.

# ITEMS 528, 531, & 536 – MISCELLANEOUS CONSTRUCTION

Reinforcement will be in accordance with Section 432.3.1 unless shown on the plans. Fiber reinforcement is not allowed. GFRP is allowed reinforcement for all applications. Class A and B Concrete are allowed to use Coarse Aggregate Grades 1-8.

Unless shown on the plans, all concrete will be 5 in. thick and have 2 in. sand, base, or RAP bedding. Furnish base meeting the requirement for any type or grade in accordance with Item 247. Compressive strengths for flexible base are waived. RAP must be 100% passing a 1 in. sieve. Bedding and flexible base must be placed using ordinary compaction.

If roots are encountered verify with the County and it's representatives before accommodating or removing 2 in. diameter or larger roots. Root removal must be in accordance with Section 752.4.2. Roots may remain in the bedding or base. For improvements within 6 in. of a root, the concrete thickness may be reduced by 1 in. and the bedding increased by 1 in. to minimize impacts to the roots. Adjust bedding and surface profile to provide a 1 in. bedding cushion around the roots. The surface profile may be adjusted to the extent allowed by ADA. This work is subsidiary.

# ITEM 530 – INTERSECTIONS, DRIVEWAYS, AND TURNOUTS

Notify property owners at least 48 hr. before beginning work on their driveway. Provide a list of each notification and contact before each closure. Only close driveways for reconstruction if duration and alternate access are approved. Install and maintain material across a work zone as temporary access. This work is subsidiary.

For ACP or SURF TREAT, the pavement structure will match the adjacent roadway unless detailed on the plans. HMA, including surface, may use a maximum allowable quantity of 40% RAP and 5% RAS for private driveways, public driveways for 2-lane roadways or smaller, and turnouts. Blending of 2 or more sources is allowed.

For CONC, the pavement structure will be 6 in. thick and have 3 in. flexible base bedding unless detailed on the plans.

#### **ITEM 585 - RIDE QUALITY FOR PAVEMENT SURFACES**

Use Surface Test Type B Pay Schedule 3 to evaluate ride quality of travel lanes, including service roads.

# ITEMS 600s & 6000s - ITS, LIGHTING, SIGNING, MARKINGS, AND SIGNALS

Meet the requirements of the NEC, Texas MUTCD, TxDOT standards, and TxDOT Standard Specifications. Notify the County and it's representatives if existing elements to remain do not meet code or specification.

Contractor shall provide all service, equipment and material required to provide a functional item and interface with existing equipment and software.

For signal shop contact Charles Vaughn Jr (<u>Charles.Vaughn@txdot.gov</u>) and Douglas Turner (<u>Douglas.L.Turner@txdot.gov</u>).

Use the County and it's representatives provided form to submit an electrical, illumination, and signal checklist prior to request for signal activation or a punch list.

Provide a 7-day advance email notice to the County and it's representatives to request illumination or traffic signal punch list inspection.

Provide a 14-day advance email notice to the County and it's representatives with signal technician contact information and signal locations prior to working or assuming operations of illumination or traffic signal.

Provide a 60-day advance email notice to the County and it's representatives to request signal timing if timing is not provided in the plans.

Provide a 180-day advance email notice to the County and it's representatives for equipment to be provided by the County and it's representatives.

Provide equipment that requires TxDOT programming, etc. to the County and it's representatives 180 day in advance.

Prior to relief of maintenance, a Test Period is required for signals and ITS equipment in accordance with Item 680.3.1.8. Response time to reported trouble calls shall be less than 2 hours. Complete repairs within 24 hours. Notify the County and it's representatives and maintain a logbook in the controller cabinet of each trouble call. Do not clear the error log in the conflict monitor without approval.

Definitions of abbreviations used to designate ITS equipment, material, etc. can be provided by the County and it's representatives.

Stakes or other physical method shall be installed to hold down conduit prior to placement of concrete/flow fill encasement.

Minimum distance between HDPE joints will be 200 ft.

# **ITEM 618 - CONDUIT**

Shift the locations of conduit and ground boxes to accommodate field conditions. Install conduit not exceeding 2 feet in any direction from a straight line. Install conduit at a minimum depth of 2 ft. below finished grade. Installation of the conduit by jacking or boring method will be at a depth of at least 1 ft. below subgrade.

Install a high tension, non-metallic pull rope in all empty conduit runs. This work is subsidiary. Use a coring device, not a hammer drill, when drilling holes through concrete structures.

Structurally mounted junction boxes will be as shown on the plans. When used for traffic signal installations, these boxes will be 12" x 12" x 8". This work is subsidiary.

For underground conduit, smooth wall schedule 40 HDPE can be substituted for schedule 40 PVC. Schedule 80 bore can be replaced with a schedule 40 HDPE carrier pipe of adequate size to carry the proposed conduits. HDPE must transition to RMC/PVC per ED (11)-14.

When using existing conduit, ensure that all conduits have bushings and cleaned of dirt, mud, grease, and other debris. Re-strap existing or relocated conduit per the specification. This work is subsidiary.

Abandoned underground conduit must have all conductors removed.

# **ITEM 620 - ELECTRICAL CONDUCTORS**

Provide 10-amp time delay fuses.

For Flashing Beacons (Item 685) and Pedestal Poles (Item 687), provide single-pole breakaway disconnects.

Install a minimum size 8 AWG equipment grounding conductor (EGC) in all conduits including loop detectors and traffic signal cables. Payment and the size of the EGC will be in accordance with standard ED (3)-14 note 12.

Permanently mark "illumination" on the luminaire conductors installed inside a traffic signal pole. Make the marks easily visible from the hand hole.

# ITEM 624 – GROUND BOXES

Aggregate for fill under the box will be crushed, have a maximum size of 2 in., minimum size of 1/2 in., and requirements per Item 302 are waived.

# **ITEM 628 – ELECTRICAL SERVICES**

Contact the utility company upon execution of contract and prior to the pre-construction meeting to make arrangements for all work and materials provided by the utility company. Contact <u>AUS Business Services@txdot.gov</u> for account approval and information. Accounts shall be placed in the name of TxDOT.

# ITEM 644 – SMALL ROADSIDE SIGN ASSEMBLIES

Triangular slip base that use set screws to secure the post will require 1 of the set screws to penetrate the post by drilling a hole in the post at the location of the screw. All set screws shall be treated with anti-seize compound.

# ITEM 658 – DELINEATOR AND OBJECT MARKER ASSEMBLIES

Installation and maintenance of portable CTB reflectors will be subsidiary to the barrier.

Flexible posts YFLX and WFLX must be tubular in shape. The "flat" flexible posts are not allowed.

# **ITEM 662 - WORK ZONE PAVEMENT MARKINGS**

Notify the County and it's representatives at least 24 hours in advance of work for this item.

Maintain removable and short-term markings daily. Remove within 48 hours after permanent striping has been completed.

Item 668 is not allowed for use as Item 662.

Roadways with existing profile pavement markings or rumble strips must supplement work zone solid lines with traffic buttons spaced at 12 in. Traffic buttons used to supplement the work zone markings will be paid by the each in addition to the work zone item.

# ITEM 666 - RETROREFLECTORIZED PAVEMENT MARKINGS

Notify the County and it's representatives at least 24 hr. before beginning work.

Place longitudinal markings nightly for IH 35 main lanes or roadways with AADT greater than 100,000. Use of temporary flexible reflective roadway marker tabs is subsidiary and at the Contractor's option. Replace missing or damaged tabs nightly. If using tabs, place longitudinal markings weekly by 5 AM Friday for all weekday work and by 5 AM Monday for all weekend work. Failure to maintain tabs or place longitudinal markings by deadline will require nightly placement of longitudinal markings.

Place longitudinal markings no later than 7 calendar days after placement of the surface for roadways with AADT greater than 20,000.

When the raised portion of a profile marking is placed as a separate operation from the pavement marking, the raised portion must be placed first then covered with TY I.

When using black shadow to cover existing stripe apply a non-retroreflective angular abrasive bead drop. The marking color shall be adjusted to resemble the pavement color. If Item 677 is not used prior to placement of black shadow, scrape the top of the marking with a blade or large piece of equipment unless surface is a seal coat. The scraping of the marking is subsidiary.

# **ITEM 677 - ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS**

Dispose of removed materials and debris at locations off the right of way.

Elimination using a pavement marking will not be allowed in lieu of methods listed in specification.

Remove pavement markings on concrete surfaces by a blasting method. Flail milling will be allowed when total quantity of removal on concrete surfaces is less than 1000 ft.

Strip seal is only method allowed on seal coat surface unless project includes placement of a new surface. If total quantity of removal on a seal coat surface is less than 2000 ft., elimination using a pavement marking is allowed if a test section is approved by the County and it's representatives. Test section shall demonstrate the thermo marking color matches the existing pavement color.

Remove pavement markings outside the limits of the new surface by a blasting method.

Use a TRAIL or a non-retroreflective paint to cover stripe remnants that remain after elimination. The test requirements for these materials are waived. The paint color shall be adjusted to resemble the existing pavement color. Installation and maintenance is subsidiary.

# ITEM 680 - HIGHWAY TRAFFIC SIGNALS

Luminaire arms shall be aligned with the signal head support. If multiple signal head supports, the luminaire arm shall be aligned with the support over the higher volume roadway.

Install 250W EQ LED illumination fixtures as shown in the plans. Test in accordance with Item 616. This work is subsidiary.

Furnish all materials and install signs mounted on the traffic signal wire, traffic signal poles, mast arms, and pedestal pole assemblies. Remove all conflicting signs and sign foundations when signal is placed into operation. This work is subsidiary.

Use a Vulcan swinger sign mounting bracket or equivalent for all signs mounted on span wires.

Place the traffic signal into operation after the traffic signal and stripe have been completed. The signal shop will be present to program the controller and assist with detection setup. Have a qualified technician and a representative from the controller supplier on the project site to place the traffic signals in operation.

If shown on the plans, install the Emergency Response Detection equipment supplied by the City.

Upon removal, contact signal shop to stockpile a maximum of 4 signal poles and mast arms that meet the current TxDOT standards at the Austin District Headquarters located at 7901 North IH 35, 78753. If signal shop declines receipt of material, Contractor will be responsible for disposal.

For city operated signals, the city may assist in determining how the detector loop lead-in cables are to be connected, and will also program the controller for operation, the video detection, hook up the conflict monitor, detector units and other equipment, and turn on the controller.

#### ITEM 682 – VEHICLE AND PEDESTRIAN SIGNAL HEADS

Install signal head attachments so the wiring to each passes from the signal pole through the attachment hardware to the signal head. Use UV rated tie wraps.

Traffic signal heads will be aluminum unless otherwise shown on the plans. Back plates will be black aluminum.

Provide louvers, which have five vanes with a black finish on inside surfaces when required. Fasten a hardware cloth screen, securely, with  $\frac{5}{8}$ " or smaller mesh size to the front face of each louver to prevent bird nesting.

Use the four-point mounting system (TY A) for signal heads, except in cases of skewed or vertical heads when (TY B) will be used.

# **ITEM 684 – TRAFFIC SIGNAL CABLES**

For Type A cables, cables meeting the requirements of IMSA 19-1 can be substituted for IMSA 20-1. For all types of cables, an increase of one size larger wire diameter and thickness can be substituted for plan size. For example, 12 AWG can be substituted for 14 AWG.

For each cable run, coil an extra 2 ft. of cable in each steel pole and 5 ft. in the controller cabinet. Provide a separate multi-conductor signal cable (14 AWG) inside pedestal poles and mast-arm signal poles from the terminal strip to each signal head as shown on the plans.

ITEM 686 - TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL)

Provide and install damping plates on all mast arms 40 ft. or greater. For mast arms less than 40 ft., refer to SMA and DMA vibration notes for guidance. This work is subsidiary.

When luminaires are installed on mast arm poles, install a separate terminal strip in the signal pole access compartment. Provide a 10-amp time-delay fuse for traffic signal poles with luminaires.

# **ITEM 687 – PEDESTAL POLE ASSEMBLIES**

Verify the required pole height prior to ordering material.

# **ITEM 688 - PEDESTRIAN DETECTORS AND VEHICLE LOOP DETECTORS**

Test all loops in accordance with the FHWA loop detector handbook. Install vehicle loops prior to placement of roadway surface.

For replacement of existing loops, replacement of damaged or missing conduit from the vehicle loop detector to the ground box will be measured and paid by overrun of loop detector bid item.

Removal of damaged ground boxes at end of lead in cable is subsidiary to the new ground box. Test period for the pedestrian detectors shall be in accordance with item 680.3.1.8.

Pedestrian push buttons will be mounted at 42 in. above the walking surface and have permanent type signs within the detector unit (9 in. x 12 in. sign and push button station on signal poles and 5 in. x 7 in. sign and push button station on pedestrian poles), which explains their purpose and indicates which crosswalk signal is actuated. Provide speech walk message as shown in the plans or per the County and it's representatives.

# ITEM 752 – TREE AND BRUSH REMOVAL

Follow Item 752.4 Work Methods and Item 752 general notes when removing or working on or near trees and brush even if Item 752 is not included as a pay item.

Flailing equipment is not allowed. Burning brush is not allowed in urban areas or on ROW. Use hand methods or other means of removal if doing work by mechanical methods is impractical.

Prior to begin tree pruning, send email confirmation to the County and it's representatives that training and demonstration of work methods has been provided to the employees. This work is subsidiary.

Shredded vegetation may be blended, at a rate not to exceed 15 percent by volume, with Item 160 if the maximum dimension is not greater than 2 in.

# ITEM 3084 – BONDING COURSE

The minimum application rates are listed in Table BC. Miscellaneous Tack is allowed for use with dense-graded Type B HMA. If a tack bid item is not provided, use bonding course item.

The target shear bond strengths are listed in Table BCS. The informational test cores shall be taken once a shift for first 5 lots of placement or a change to placement method of bonding course,

bonding material, or hot mix material. The remaining informational test cores shall be taken once every 3 lots for surface mix. Informational tests are not required for non-surface mix beyond the first 5 lots unless there is a change to placement method of bonding course, bonding material, or hot mix material. Results from these informational tests will not be used for specification compliance.

<u>Table BC</u>	
Material	Minimum Application Rate
	(gal. per square yard)
TRAIL – Emulsified Asphalt	0.06
TRAIL – Hot Asphalt	0.12
Spray Applied Underseal Membrane	0.10

Target Shear Bond Strength
(Tex-249-F psi)
60.0
N/A
40.0

Table BCS	For Informational	Tests)
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# **ITEM 3085 – UNDERSEAL COURSE**

No emulsified asphalt material allowed under PFC or SMA, except for use with Item 316, on roadways with ADT greater than 100,000.

The minimum application rates are listed in Table UC. The target shear bond strengths are listed in Table UCS. The informational test cores shall be taken once a shift for first 5 lots of placement or a change to placement method of bonding course, bonding material, or hot mix material. The remaining informational test cores shall be taken once every 3 lots for surface mix. Informational tests are not required for non-surface mix beyond the first 5 lots unless there is a change to placement method of bonding course, bonding material, or hot mix material. Results from these informational tests will not be used for specification compliance.

	Table UC	
Material	Minimum Application Rate	Minimum Application Rate
	(mat > 1" gal. per square yard)	(mat <= 1" gal. per square yard)
TRAIL – Hot Asphalt	0.15	0.10
Spray Applied Underseal	0.15	0.15
Membrane		
Seal Coat – Tier II emulsion	0.25	0.25
Seal Coat – Tier II asphalt	0.23	0.23

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Table I	UCS
Material	Minimum Shear Strength
	(psi)
SMA – Stone-Matrix Asphalt	60.0
PFC – Permeable Friction Course	40.0
All Other Materials	40.0

# ITEM 6001 – PORTABLE CHANGEABLE MESSAGE SIGN

Provide <u>3</u> PCMS. Provide a replacement within 12 hours. PCMS will be available for traffic control, event notices, roadway conditions, service announcements, etc.

Place PCMS 10 calendar days prior to begin work stating "Road Work Begin Soon, Contact 832-7000 For Info".

Place PCMS at time of LCN request. Place the PCMS at the expected end of queue caused by the closure. When the closure is active, revise the message to reflect the actual condition during the closure, such as "RIGHT LN CLOSED XXX FT".

# ITEM 6016 – MULTI-DUCT CONDUIT SYSTEM

Concrete or flowable fill encasement is not required unless stated in bid item code.

In addition to PVC multi duct acceptable per the specification, HDPE from the pre-qualified Item 618 material list may be used by installing a 4 in. duct and field pull in 4-1 in. smooth wall innerducts. Blue Diamond 4 in. SIDR 11.5 casing with 4-1 in. SDR 13.5 innerducts is an acceptable substitute for PVC multi duct.

Minimum distance between HDPE joints will be 200 ft.

# ITEM 6185 – TRUCK MOUNTED ATTENUATOR AND TRAILER ATTENUATOR

The TMA/TA used for installation/removal of traffic control for a work area will be subsidiary to the TMA/TA used to perform the work.

The contractor will be responsible for determining if one or more operations will be ongoing at the same time to determine the total number of TMA/TA required for the work. TMA/TAs paid by the day is full compensation for all worksite locations during an entire day.

TMA/TAs used to protect damaged attenuators will be paid by the day using the force account item for the repair.

# SECTION 13 TECHNICAL SPECIFICATIONS

#### HAYS COUNTY / TEXAS DEPARTMENT OF TRANSPORTATION

#### **GOVERNING SPECIFICATIONS**

#### (STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS)

WHERE DISCREPANCIES OCCUR BETWEEN THE TECHNICAL SPECIFICATIONS, THE FOLLOWING DESCENDING ORDER OF PRIORITY SHALL GOVERN: (1) SPECIAL CONDITIONS, (2) SPECIAL PROVISIONS TO SPECIAL SPECIFICATIONS, (3) SPECIAL SPECIFICATIONS, (4) SPECIAL PROVISIONS, AND (5) STANDARD SPECIFICATIONS.

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION NOVEMBER 1, 2014. STANDARD SPECIFICATIONS ARE INCORPORATED INTO THE CONTRACT BY <u>REFERENCE</u>.

ITEMS 1L - 9L GENERAL REQUIRMENTS AND COVENANTS

ITEM 100	PREPARING RIGHT OF WAY (103)
ITEM 104	REMOVING CONCRETE
ITEM 105	REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT
ITEM 110	EXCAVATION (132)
ITEM 132	EMBANKMENT (100)(160)(204)(210)(216)(260)(400)
ITEM 134	BACKFILLING PAVEMENT EDGES (162)(166)(168)(300)(314)(3096)
ITEM 160	TOPSOIL (168)
ITEM 162	SODDING FOR EROSION CONTROL (166)(168)
ITEM 166	FERTILIZER (520)
ITEM 168	VEGETATIVE WATERING
<b>ITEM 210</b>	ROLLING
<b>ITEM 247</b>	FLEXIBLE BASE (105)(204)(210)(216)(520)
<b>ITEM 302</b>	AGGREGATES FOR SURFACE TREATMENTS (300)(301)(3096)
<b>ITEM 310</b>	PRIME COAT (300)(316)(3096)
ITEM 316	SURFACE TREATMENTS (210)(300)(302)(3096)
ITEM 354	PLANING AND TEXTURING PAVEMENT
<b>ITEM 400</b>	EXCAVATION AND BACKFILL FOR STRUCTURES (110) (132) (401) (402) (403)
	(416) (420) (421) (423)
ITEM 401	FLOWABLE BACKFILL (421)
<b>ITEM 402</b>	TRENCH EXCAVATION PROTECTION
ITEM 416	DRILLED SHART FOUNDATIONS (405)(420)(421)(423)(440)(448)
<b>ITEM 420</b>	CONCRETE SUBSTRUCTURES (400)(404)(421)(422)(426)(427)(440)(441)(448)
<b>ITEM 421</b>	HYDRAULIC CEMENT CONCRETE (360)(361)(416)
<b>ITEM 432</b>	RIPRAP (247)(420)(421)(431)(440)
ITEM 440	REINFORCEMENT FOR CONCRETE (448)
ITEM 441	STEEL STRUCTURES (420)(442)(445)(446)(447)(448)
ITEM 442	METAL FOR STRUCTURES (441)(445)(446)(447)(448)
ITEM 445	GALVANIZING (441)
ITEM 449	ANCHOR BOLTS (445)
ITEM 450	RAILING (420)(421)(422)(424)(440)(441)(442)(445)(446)(448)(540)
ITEM 460	CORRUGATED METAL PIPE (400)(402)(403)(445)(467)(476)
ITEM 461	STRUCTURAL PLATE STRUCTURES (400) (402) (403) (420) (421) (440) (442) (445)
	(447) (467)
ITEM 464	REINFORCED CONCRETE PIPE (400)(402)(403)(467)(476)
ITEM 466	HEADWALLS AND WINGWALLS (400)(420)(421)(432)(440)(464)

ITEM 467	SAFETY END TREATMENT (400)(420)(421)(432)(440)(442)(445)(460)(464)		
ITEM 474	LINEAR DRAINS (400)(420)(421)(440)(445)(460)(471)		
ITEM 476	JACKING, BORING, OR TUNNELING PIPE OR BOX (402)(403)(460)(462)(464)		
ITEM 479	ADJUSTING MANHOLES AND INLETS (400)(421)(465)(471)		
ITEM 480	CLEANING EXISTING CULVERTS		
ITEM 496	REMOVING STRUCTURES		
<b>ITEM 500</b>	MOBILIZATION		
ITEM 502	BARRICADES, SIGNS AND TRAFFIC HANDLING		
ITEM 506	TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL		
	CONTROLS (161) (432) (556)		
ITEM 508	CONSTRUCTING DETOURS		
ITEM 512	PORTABLE CONCRETE TRAFFIC BARRIER (420)(421)(424)(440)(442)		
ITEM 530	INTERSECTIONS, DRIVEWAYS, AND TURNOUTS (247) (260) (263) (275) (276)		
	(292) (316) (330)(334)(340)(341)(360)(421)(440)(3076)		
ITEM 531	SIDEWALKS (104)(360)(420)(421)(440)(530)		
ITEM 533	MILLED RUMBLE STRIPS		
ITEM 560	MAILBOX ASSEMBLIES		
ITEM 585	RIDE OUALITY FOR PAVEMENT SURFACES		
ITEM 610	ROADWAY ILLUMINATION ASSEMBLIES (416)(421)(432)(441)(442)(445)(449)		
11201010	(614)(616)(618)(620)(622)(624)(628)		
ITEM 618	CONDUIT (400)(476)		
ITEM 620	ELECTRICAL CONDUCTORS (610)(628)		
ITEM 624	GROUND BOXES (420)(421)(432)(440)(618)(620)		
ITEM 628	ELECTRICAL SERVICES $(441)(445)(449)(618)(620)(627)(656)$		
ITEM 636	SIGNS (643)		
ITEM 644	SMALL DOADSIDE SIGN ASSEMBLIES (491)(440)(441)(449)(445)(626)(649)(656)		
ITEM 656	FOUNDATIONS FOR TRAFFIC CONTROL DEVICES $(400)$ $(416)$ $(420)$ $(421)$ $(432)$		
11201020	(441)(441)(442)(445)(447)(449)(618)		
ITEM 658	DELINEATOR AND OBJECT MARKER ASSEMBLIES (445)		
ITEM 662	WORK ZONE PAVEMENT MARKINGS (666)(668)(672)(677)		
ITEM 666	REFLECTORIZED PAVEMENT MARKINGS (316)(318)(502)(662)(677)(678)		
ITEM 668	PREFABRICATED PAVEMENT MARKINGS (678)		
ITEM 672	RAISED PAVEMENT MARKERS (677)(678)		
ITEM 677	ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS (300)(302)		
	(316)(3096)		
ITEM 678	PAVEMENT SUFACE PREPARATION FOR MARKINGS (677)		
ITEM 680	HIGHWAY TRAFFIC SIGNALS (416)(610)(618)(624)(625)(627)(628)(636)(656)(682)		
	(684)(686)(688)		
ITEM 682	VEHICLE AND PEDESTRIAN SIGNAL HEADS		
ITEM 684	TRAFFIC SIGNAL CABLES		
ITEM 686	TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (416)(421)(441)(442)(445)(449)		
ITEM 687	PEDESTAL POLE A SSEMBLIES (31 EEE) (410)(421)(441)(442)(443)(443) (443)		
ITEM 688	I EDESTAL I OLE ASSEMIDLIES ( $449$ )(000)(002) DEDESTRIAN DETECTORS AND VEHICLE I OOD DETECTORS ( $619$ )( $624$ )( $620$ )		
	(684)		
ITEM 690	MAINTENANCE OF TRAFFIC SIGNALS (416) (421) (476) (610) (618) (620) (622)		
112111 070	(624)(625)(627)(628)(636)(656)(680)(682)(684)(685)(686)(687)(688))		
ITEM 700	POTHOLE REPAIR (300)(330)(334)(520)(3076)(3096)		
ITEM 752	TREE AND BRUSH REMOVAL		
1112111/32			

SPECIAL SPECIFICATIONS:

ITEM 1004	TREE PROTECTION (300) (301) (316) (320) (340) (341) (342) (347) (348) (520) (585) (3079) (3081) (3082) (3096)
ITEM 3076	DENSE-GRADED HOT-MIX ASPHALT (300) (301) (316) (320) (340) (341) (342) (347) (348) (520) (585) (3079) (3081) (3082) (3096)
ITEM 3079	PERMEABLE FRICTION COURSE (PFC) (300)(301)(320)(342)(520)(585)(3096)
ITEM 3081	THIN OVERLAY MIXTURES (TOM) (300)(301)(320)(520)(585)(3076)(3096)
ITEM 3082	THIN BONDED FRICTION COURSES (210) (300) (301) (320) (342) (520) (585) (3079)
	(3082) (3096)
ITEM 3084	BONDING COURSE (300) (3002) (3096)
ITEM 3085	UNDERSEAL COURSE (300)(302)(316)(3002)(3096)
ITEM 6001	PORTABLE CHANGEABLE MESSAGE SIGN
ITEM 6024	HIGH PERFORMANCE PAVEMENT MARKINGS WITH RETROREFLECTIVE
	REQUIREMENTS
ITEM 6054	SPREAD SPECTRUM RADIOS FOR TRAFFIC SIGNALS
ITEM 6185	TRUCK MOUNTED ATTENUATOR (TMA) AND TRAILERATTENUATOR (TA)
ITEM 6292	RADAR VEHICLE DETECTION SYSTEM FOR SIGNALIZED INTERSECTION
	CONTROL
ITEM 6384	TELECOMMUNICATION SYSTEM
ITEM 6385	HIGHWAY TRAFFIC SIGNALS
ITEM 6386	INSTALLATION OF CELLULAR MODEM
ITEM 6387	PEDESTRIAN ILLUMINATION
ITEM 7232	SANITARY SEWER
ITEM 7251	SUBSURFACE UTILITY LOCATE

SPECIAL PROVISIONS:

FHWA-1273 REQUIRED CONTRACT PROVISIONS (See Section 4)

WAGE RATES (See Section 8)

SPECIAL PROVISION TO ITEM 000	(000001L)	SCHEDULE OF LIQUIDATED DAMAGES
SPECIAL PROVISION TO ITEM 000	(000002L)	NONDISCRIMINATION
SPECIAL PROVISION TO ITEM 000	(000003L)	CERTIFICATION OF NONDISCRIMINATION
		IN EMPLOYMENT
SPECIAL PROVISION TO ITEM 000	(000004L)	NOTICE OF REQUIREMENT FOR
		AFFIRMATIVE ACTION TO ENSURE EQUAL
		EMPLOYMENT OPPORTUNITY
SPECIAL PROVISION TO ITEM 000	(000005L)	STANDARD FEDERAL EQUAL
		EMPLOYMENT OPPORTUNITY
		CONSTRUCTION CONTRACT
SPECIAL PROVISION TO ITEM 000	(000006)	ON-THE_JOB TRAINING PROGRAM
SPECIAL PROVISION TO ITEM 000	(000241L)	CARGO PREFERENCE ACT REQUIREMENTS
		IN FEDERAL AID CONTRACTS
SPECIAL PROVISION TO ITEM 000	(000394L)	DISADVANTAGED BUSINESS ENTERPRISE
		IN FEDERAL AID CONTRACTS
SPECIAL PROVISION TO ITEM 000	(000659)	NOTICE OF CONTRACTOR PERFORMANCE
		EVALUATIONS
SPECIAL PROVISION TO ITEM 000	(0001019)	CERTIFICATE OF INTERESTED PARTIES
SPECIAL PROVISION TO ITEM 000	(000HC03)	UTILITY IMPORTANT NOTICE TO
		CONTRACTORS
SPECIAL PROVISION TO ITEM 000	(000HC04)	UTILITY IMPORTANT NOTICE TO
		CONTRACTORS
SPECIAL PROVISION TO ITEM 000	(000HC07)	DISADVANTAGED BUSINESS ENTERPRISE
		(DBE) GOAL
SPECIAL PROVISION TO ITEM 000	(0001243)	IMPORTANT NOTICE TO CONTRACTORS
SPECIAL PROVISION TO ITEM 001	(001HC01)	ABBREVIATIONS AND DEFINITIONS
SPECIAL PROVISION TO ITEM 002	(002HC01)	INSTRUCTIONS TO BIDDERS

SPECIAL PROVISION TO ITEM 002	(002009L)	INSTRUCTIONS TO BIDDERS
SPECIAL PROVISION TO ITEM 003	(003HC01)	AWARD AND EXECUTION OF CONTRACT
SPECIAL PROVISION TO ITEM 003	(003011)	AWARD AND EXECUTION OF CONTRACT
SPECIAL PROVISION TO ITEM 004	(004HC01)	SCOPE OF WORK
SPECIAL PROVISION TO ITEM 005	(005HC01)	CONTROL OF THE WORK
SPECIAL PROVISION TO ITEM 005	(005002)	CONTROL OF THE WORK
SPECIAL PROVISION TO ITEM 005	(005003)	CONTROL OF THE WORK
SPECIAL PROVISION TO ITEM 006	(006012)	CONTROL OF MATERIALS
SPECIAL PROVISION TO ITEM 006	(006030)	CONTROL OF MATERIALS
SPECIAL PROVISION TO ITEM 007	(007HC01)	LEGAL RELATIONS AND
	(007 11001)	RESPONSIBILITIES
SPECIAL PROVISION TO ITEM 007	(007HC02)	LEGAL RELATIONS AND
	(007 11002)	RESPONSIBILITIES
SPECIAL PROVISION TO ITEM 007	(007 004)	LEGAL RELATIONS AND RESPONSIBILITIES
SPECIAL PROVISION TO ITEM 007	(0070111)	LEGAL RELATIONS AND RESPONSIBILITIES
SPECIAL PROVISION TO ITEM 007	(008  HC01)	PROSECUTION AND PROGRESS
SDECIAL DROVISION TO ITEM 008	(00811C01)	DEOSECUTION AND DEOCRESS
SPECIAL PROVISION TO ITEM 008	(008 - 030)	DECETION AND PROCRESS
SPECIAL PROVISION TO ITEM 008	(008030)	PROSECTION AND PROCRESS
SPECIAL PROVISION TO ITEM 000	(000033)	FROSECTION AND FROUKESS
SPECIAL PROVISION TO ITEM 000	(009 - HC01)	MEASUREMENT AND PAYMENT
SPECIAL PROVISION TO ITEM 009	(009010)	MEASUREMENT AND PAYMENT
SPECIAL PROVISION TO ITEM 109	(009011)	MEASUREMENT AND PAYMENT
SPECIAL PROVISION TO ITEM 132	(132002)	
SPECIAL PROVISION TO ITEM 24/	(24/003)	FLEXIBLE BASE
SPECIAL PROVISION TO ITEM 300	(300020)	ASPHALTS, OILS, AND EMULSIONS
SPECIAL PROVISION TO ITEM 302	(302003)	AGGREGATES FOR SURFACE
		TREATMENTS
SPECIAL PROVISION TO ITEM 314	(314001)	EMULSIFIED ASPHALT TREATMENT
SPECIAL PROVISION TO ITEM 316	(316002)	SEAL COAT
SPECIAL PROVISION TO ITEM 334	(334003)	HOT-MIX COLD-LAID ASPHALT CONCRETE
SDECIAL DROVISION TO ITEM 342	(342 005)	DEDMEADIE EDICTION COUDSE
SPECIAL PROVISION TO ITEM 342	(342003)	THIN OVEDLAY MIVTUDE
SPECIAL PROVISION TO ITEM 247	(347 003)	THIN OVEREAT MIATORE
SPECIAL PROVISION TO ITEM 421	(348004)	CONCRETE SUBSTRUCTURE
SPECIAL PROVISION TO ITEM 421	(420 001)	
SPECIAL PROVISION TO ITEM 421	(421010)	HYDRAULIC CEMENT CONCRETE
SPECIAL PROVISION TO ITEM 426	(426005)	PUSI-TENSIONING
SPECIAL PROVISION TO ITEM 42/	(42/003)	SURFACE FINISHES FOR CONCRETE
SPECIAL PROVISION TO ITEM 440	(440004)	REINFORCEMENT FOR CONCRETE
SPECIAL PROVISION TO ITEM 441	(441004)	STEEL STRUCTURES
SPECIAL PROVISION TO ITEM 442	(442001)	METAL FOR STRUCTURES
SPECIAL PROVISION TO ITEM 446	(446005)	FIELD CLEANING AND PAINTING STEEL
SPECIAL PROVISION TO ITEM 447	(447001)	STRUCTURAL BOLTING
SPECIAL PROVISION TO ITEM 449	(449002)	ANCHOR BOLTS
SPECIAL PROVISION TO ITEM 449	(450001)	RAILING
SPECIAL PROVISION TO ITEM 462	(462002)	CONCRETE BOX CULVERTS AND DRAINS
SPECIAL PROVISION TO ITEM 464	(464001)	REINFORCED CONCRETE PIPE
SPECIAL PROVISION TO ITEM 502	(502008)	BARRICADES, SIGNS AND TRAFFIC
SPECIAL PROVISION TO ITEM 506	(506005)	TEMPORARY EROSION, SEDIMENTATION AND ENVIRONMENTAL CONTROLS
SPECIAL PROVISION TO ITEM 520	(520002)	WEIGHING AND MEASURING EOUIPMENT
SPECIAL PROVISION TO ITEM 540	(540001)	METAL BEAM GUARD FENCE
SPECIAL PROVISION TO ITEM 636	(636001)	SIGNS
SPECIAL PROVISION TO ITEM 643	(643001)	SIGN IDENTIFICATION DECALS
SPECIAL PROVISION TO ITEM 656	(656001)	FOUNDATIONS FOR TRAFFIC CONTROL

		DEVICES
SPECIAL PROVISION TO ITEM 666	(666007)	RETROREFLECTORIZED PAVEMENT
		MARKINGS
SPECIAL PROVISION TO ITEM 680	(680006)	HIGHWAY TRAFFIC SIGNALS
SPECIAL PROVISION TO ITEM 6185	(6185002)	TRUCK MOUNTED ATENUATOR (TMA)
		AND TRAILER ATTENUATOR (TA)
SPECIAL PROVISION TO ITEM 6384	(6384001)	TELECOMMUNICATION SYSTEM

GENERAL: THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-LISTED SPECIFICATION ITEMS AND INCLUDING THE SPECIAL PROVISIONS AND SPECIAL SPECIFICATIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFICATIONS FOR THIS PROJECT.

# Item 1L Abbreviations and Definitions



# 1. APPLICABILITY

Wherever the following terms are used in these specifications or other Contract documents, the intent and meaning will be interpreted as shown below.

# 2. ABBREVIATIONS

AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standard Committee, Inc.
AMRL	AASHTO Materials Reference Laboratory
ANLA	American Nursery and Landscape Association
ANSI	American National Standards Institute
APA	The Engineered Wood Association
API	American Petroleum Institute
APWA	American Public Works Association
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASBI	American Segmental Bridge Institute
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASTM	American Society for Testing and Materials
AWC	American Wood Council
AWG	American Wire Gage
AWPA	American Wood Protection Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BMP	Best Management Practices
CFR	Code of Federal Regulations
CMP	Corrugated Metal Pipe
COE	U.S. Army Corps of Engineers
CRSI	Concrete Reinforcing Steel Institute
DBE	Disadvantaged Business Enterprise
DMS	Departmental Material Specification
EIA	Electronic Industries Alliance
EPA	United States Environmental Protection Agency
FHWA	Federal Highway Administration, U.S. Department of Transportation
FSS	Federal Specifications and Standards (General Services Administration)
GSA	United States General Services Administration
HUB	Historically Underutilized Business
ICEA	Insulated Cable Engineers Association

IEEE	Institute of Electrical and Electronics Engineers
IESNA	Illuminating Engineering Society of North America
IMSA	International Municipal Signal Association
ISO	International Organization for Standardization
ITS	Intelligent Transportation System
ITF	Institute of Transportation Engineers
IG	Local Government
l RFD	Load and Resistance Factor Design
MASH	Manual for Assessing Safety Hardware
MPI	Material Producer List (TxDOT document)
NCHRP	National Cooperative Highway Research Program
NCR	Nonconformance Report (TxDOT form)
NEC	National Electrical Code (Published by NEPA)
NEMA	National Electrical Manufacturers Association
NEPA	National Environmental Policy Act
NESC	National Electrical Safety Code
NEDO	National Fire Protection Association
MIST	National Institute of Standards and Technology
NRM	Nonhazardous Recyclable Material
	National Ready Mixed Concrete Association
NSRA	National Steel Bridge Alliance
NTPEP	National Transportation Product Evaluation Program
	Occupational Safety & Health Administration 11 S. Department of Labor
	Portland Cement Association
	Precast/Prestressed Concrete Institute
DE	Professional Engineer
DDI	Plastics Pine Institute
DS&F	Plans Specifications and Estimates
	Project-Specific Location
PTI	Post-Tension Institute
$\cap \Delta$	Quality Assurance
	Quality Control
RCP	Dainforced Concrete Pine
	Pogistored Dublic Land Surveyor
DDC	Pailroad Commission of Toyas
SBE	Small Rusiness Enternrise
SEDA	Southorn Forost Droducts Association
SEL	International System of Units
	Southorn Ding Inspection Purcou
SPID	The Society for Distoctive Costings
	Toyas Administrative Code
	Texas Authinisi alive Coue Toxas Commission on Environmental Quality
	Texas Commission on Environmental Quality
TOC	Texas Department of Licensing and Regulation
	Toxas Manual on Uniform Traffic Control Dovicos
	Texas Department of Transportation
	Inderwriters Laberatory Inc.
	Unider Writers Laburatury, IIIC.
	Wire Deinforcement Institute
	Western Wood Droducts Accordiation
VVVPA	Western wood Products Association

# 3. DEFINITIONS

3.1. Abrasive Blasting. Spraying blasts of pressurized air combined with abrasive media.

- 3.2. Actual Cost. Contractor's actual cost to provide labor, material, equipment, and project overhead necessary for the work.
- 3.3. Addendum. Change in bid documents developed between advertising and bid submittal deadline.
- 3.4. Additive Alternate. A bid item contained in the bid documents that is not a regular item or a replacement alternate bid item. The additive alternate items include work that may be added to the base bid work.
- 3.5. **Deductive Alternate.** A bid item contained in the bid documents that is not a regular item or a replacement alternate bid item. The deductive alternate items include work that may be deducted from the base bid work.
- 3.6. Advertisement. The public announcement required by law inviting bids for work to be performed or materials to be furnished.
- 3.7. Affiliates. Two or more firms are affiliated if they share common officers, directors, or stockholders; a family member of an officer, director, or stockholder of one firm serves in a similar capacity in another of the firms; an individual who has an interest in, or controls a part of, one firm either directly or indirectly also has an interest in, or controls a part of, another of the firms; the firms are so closely connected or associated that one of the firms, either directly or indirectly or a part of, another of the firms; the firms are so closely connected or associated that one of the firms, either directly or indirectly, controls or has the power to control another firm; one firm controls or has the power to control another of the firms; or the firms are closely allied through an established course of dealings, including, but not limited to, the lending of financial assistance.
- 3.8. Air Blasting. Spraying blasts of pressurized air free of oil and moisture.
- 3.9. Air Temperature. The temperature measured in degrees Fahrenheit (°F) in the shade, not in the direct rays of the sun, and away from artificial heat.
- 3.10. Anticipated Profit. Profit for work not performed.
- 3.11. **Apparent Low Bidder**. The Bidder determined to have the numerically lowest total bid as a result of the tabulation of bids by the Owner.
- 3.12. Architect of Record. A person registered as an architect or licensed as a landscape architect, in accordance with State law, exercising overall responsibility for the design or a significant portion of the design and performs certain Contract administration responsibilities as described in the Contract; or a firm employed by the Owner to provide professional architectural services.
- 3.13. Arterial Highway. A highway used primarily for through traffic and usually on a continuous route.
- 3.14. **Notice of Award**. The Owner's acceptance of a Contractor's bid for a proposed Contract that authorizes the Owner to enter into a Contract.
- 3.15. Base Bid. The total bid amount without additive alternates.
- 3.16. **Bid**. The offer from the Bidder for performing the work described in the bid documents, submitted on the prescribed bid form, considering addenda issued and giving unit bid prices for performing the work described in the bid documents.
- 3.17. **Bid Bond**. The security executed by the Contractor and the Surety furnished to the Owner to guarantee payment of liquidated damages if the Contractor fails to enter into an awarded Contract.
- 3.18. **Bid Documents.** The complete set of documents necessary for a Bidder to submit a bid. The documents may include plans, specifications, special specifications, special provisions, addenda, and the prescribed form a Bidder is to submit as the Bid. Other terms used may include general conditions, proposal, instructions to bidders, and construction specifications.

- 3.19. Bid Error. A mathematical mistake made by a Bidder in the unit price entered into the bid documents.
- 3.20. **Bid Form.** The portion of the bid documents that a prospective Bidder must submit to the Owner for their bid to be considered.
- 3.21. **Bidder**. An individual, partnership, limited liability company, corporation, or joint venture submitting a bid for a proposed Contract.
- 3.22. Blast Cleaning. Using one of the blasting methods, including, but not limited to, water blasting, low-pressure water blasting, abrasive blasting, water-abrasive blasting, shot blasting, slurry blasting, water injected abrasive blasting, and brush blasting.
- 3.23. **Bridge**. A structure, including supports, erected over a depression or an obstruction (e.g., water, a highway, or a railway) having a roadway or track for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 ft. between faces of abutments, spring lines of arches, or extreme ends of the openings for multiple box culverts.
- 3.24. Brush Blasting. Sweeping lightly with an abrasive blast to remove loose material.
- 3.25. **Building Contract**. A Contract entered under State law for the construction or maintenance of an Owner building or appurtenance facilities. Building Contracts are considered to be construction Contracts.
- 3.26. Certificate of Insurance. A form approved by the Owner covering insurance requirements stated in the Contract.
- 3.27. Change Order. Written order to the Contractor detailing changes to the specified work, item quantities or any other modification to the Contract.
- 3.28. **Concrete Construction Joint**. A joint formed by placing plastic concrete in direct contact with concrete that has attained its initial set.
- 3.29. Concrete Repair Manual. TxDOT manual specifying methods and procedures for concrete repair as an extension of the standard specifications.
- 3.30. **ConcreteWorks**[©]. TxDOT-owned software for concrete heat analysis. Software is available on the TxDOT's website.
- 3.31. **Construction Contract**. A Contract entered under State law for the construction, reconstruction, or maintenance of a segment of the transportation system.
- 3.32. **Consultant**. The licensed professional engineer or engineering firm, or the architect or architectural firm, registered in the State of Texas and under Contract to the Owner to perform professional services. The consultant may be the Engineer or architect of record or may provide services through and be subcontracted to the Engineer or architect of record.
- 3.33. **Contract**. The agreement between the Owner and the Contractor establishing the obligations of the parties for furnishing of materials and performance of the work prescribed in the Contract documents.
- 3.34. **Contract Documents**. Elements of the Contract, including, but not limited to, the plans, specifications incorporated by reference, special provisions, special specifications, Contract bonds, change orders, addendums, and supplemental agreements.
- 3.35. **Contract Time**. The number of days specified for completion of the work, including authorized additional working days.

- 3.36. **Contractor**. The individual, partnership, limited liability company, corporation, or joint venture and all principals and representatives with which the Contract is made by the Owner.
- 3.37. **Controlled Access Highway**. Any highway to or from which access is denied or controlled, in whole or in part, from or to abutting land or intersecting streets, roads, highways, alleys, or other public or private ways.
- 3.38. **Control of Access**. The condition in which the right to access of owners or occupants of abutting land or other persons in connection with a highway is fully or partially controlled by public authority.
- 3.39. **Control Point**. An established point shown on the plans to provide vertical and horizontal references for geometric control for construction.
- 3.40. **Cross-Sections**. Graphic representations of the original ground and the proposed facility, at right angles to the centerline or base line.
- 3.41. **Culvert**. Any buried structure providing an opening under a roadway for drainage or other purposes. Culverts may also be classified as bridges. (See Section 1.3.23., "Bridge.")
- 3.42. Cycle. The activity necessary for performing the specified work within the right of way project limits once.
- 3.43. **Daily Road-User Cost**. Damages based on the estimated daily cost of inconvenience to the traveling public resulting from the work.
- 3.44. **Date of Written Authorization**. Date of the written Notice to Proceed authorizing the Contractor to begin work.
- 3.45. **Debar (Debarment)**. Action taken by the Owner, State, or federal government pursuant to regulation that prohibits a person or company from entering into a Contract, or from participating as a subcontractor, or supplier of materials or equipment used in a highway improvement Contract as defined in local, state, or federal law.
- 3.46. **Detour**. A temporary traffic route around a closed portion of a road.
- 3.47. **Department**. When used in the context of the party with whom the Contractor has a Construction Contract, Department refers to Owner. When used in other contexts such as technical specifications, refers to the Texas Department of Transportation.
- 3.48. **Departmental Material Specifications**. Reference specifications for various materials published by TxDOT's Construction Division with a DMS-XXXXX numbering system.
- 3.49. **Direct Traffic Culvert**. Concrete box culvert whose top slab is used as the final riding surface or is to have an overlay or other riding surface treatment.
- 3.50. **Disadvantaged Business Enterprise**. A small business certified through the Texas Unified Certification Program in accordance with 49 CFR Part 26, that is at least 51% owned by one or more socially and economically disadvantaged individuals, or in the case of a publicly owned business, in which is at least 51% of the stock is owned by one or more socially and economically disadvantaged individuals, and whose management and daily business operations are controlled by one or more of the individuals who own it.
- 3.51. **Divided Highway**. A highway with separate roadways intended to move traffic in opposite directions.
- 3.52. **Easement**. A real property right acquired by one party to use land belonging to another party for a specified purpose.
- 3.53. Engineer. The Professional Engineer licensed in Texas who represents the interests of the Owner.
- 3.54. Entity. Political subdivision for which the project is designed and constructed. Either a Municipality (City) or a County or other entity organized under the authority of State of Texas statutes. May also be referred to as an **Owner**.
- 3.55. **Expressway**. A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at intersections.
- 3.56. Family Member. A family member of an individual is the individual's parent, parent's spouse, step-parent, step-parent's spouse, sibling, sibling's spouse, spouse, child, child's spouse, spouse's child, spouse's child's spouse, grandchild, grandparent, uncle, uncle's spouse, aunt, aunt's spouse, first cousin, or first cousin's spouse.
- 3.57. **Force Account**. Payment for directed work based on the actual cost of labor, equipment, and materials furnished with markups for project overhead and profit.
- 3.58. **Freeway**. An expressway with full control of access.
- 3.59. Frontage Road. A local street or road auxiliary to and located along an arterial highway for service to abutting property and adjacent areas and for control of access (sometimes known as a service road, access road, or insulator road).
- 3.60. Hazardous Materials or Waste. Hazardous materials or waste include, but are not limited to, explosives, compressed gas, flammable liquids, flammable solids, combustible liquids, oxidizers, poisons, radioactive materials, corrosives, etiologic agents, and other material classified as hazardous by 40 CFR 261, or applicable state and federal regulations.
- 3.61. High-Pressure Water Blasting. Water blasting with pressures between 5,000 and 10,000 psi.
- 3.62. **Highway, Street, or Road**. General terms denoting a public way for purposes of vehicular travel, including the entire area within the right of way. Recommended usage in urban areas is highway or street; in rural areas, highway or road.
- 3.63. Historically Underutilized Business. A corporation, sole proprietorship, partnership, or joint venture formed for the purpose of making a profit certified by the Texas Comptroller of Public Accounts, and 51% owned by one or more persons who are economically disadvantaged because of their identification as members of certain groups, including African Americans, Hispanic Americans, Asian-Pacific Americans, Native Americans, or women, and have a proportionate interest and demonstrate active participation in the control, operation, and management of the business' affairs. Individuals meeting the HUB definition are required to be residents of the State of Texas. Businesses that do not have their primary headquarters in the State of Texas are not eligible for HUB certification.
- 3.64. Incentive/Disincentive Provisions. An adjustment to the Contract price of a predetermined amount for each day the work is completed ahead of or behind the specified milestone, phase, or Contract completion dates. The amount of the incentive/disincentive is determined based on estimated costs for engineering, traffic control, delays to the motorists, and other items involved in the Contract.
- 3.65. **Independent Assurance Tests**. Tests used to evaluate the sampling and testing techniques and equipment used in the acceptance program. The tests are performed by the Owner or the Owner's representative and are not used for acceptance purposes.
- 3.66. **Inspector**. The person assigned by the Owner to inspect any or all parts of the work and the materials used for compliance with the Contract.
- 3.67. **Intelligent Transportation System**. An integrated system that uses video and other electronic detection devices to monitor traffic flows.

- 3.68. **Intersection**. The general area where 2 or more highways, streets, or roads join or cross, including the roadway and roadside facilities for traffic movements within it.
- 3.69. **Island**. An area within a roadway from which vehicular traffic is intended to be excluded, together with any area at the approach occupied by protective deflecting or warning devices.
- 3.70. **Joint Venture**. Any combination of individuals, partnerships, limited liability companies, or corporations submitting a single bid form.
- 3.71. Lane Rental. A method to assess the Contractor daily or hourly rental fees for each lane, shoulder, or combination of lanes and shoulders taken out of service.
- 3.72. Letting. The receipt, opening, tabulation, and determination of the apparent low Bidder.
- 3.73. Letting Official. The Owner representative empowered by the Owner to officially receive bids and close the receipt of bids at a letting.
- 3.74. Licensed Professional Engineer. A person who has been duly licensed by the Texas Board of Professional Engineers to engage in the practice of engineering in the State of Texas; also referred to as a Professional Engineer.
- 3.75. **Limits of Construction**. An area with established boundaries, identified within the highway right of way and easements, where the Contractor is permitted to perform the work.
- 3.76. **Local Street or Road**. A street or road primarily for access to residence, business, or other abutting property.
- 3.77. Low-Pressure Water Blasting. Water blasting with pressures between 3,000 and 5,000 psi.
- 3.78. **Major Item**. An item of work included in the Contract that has a total cost equal to or greater than 5% of the original Contract or \$100,000 whichever is less. A major item at the time of bid will remain a major item. An item not originally a major item does not become one through the course of the Contract.
- 3.79. Material Producer List. TxDOT-maintained list of approved products. Referenced as "Department's MPL".
- 3.80. **Materially Unbalanced Bid**. A bid that generates a reasonable doubt that award to the Bidder submitting a mathematically unbalanced bid will result in the lowest ultimate cost to the Owner.
- 3.81. **Mathematically Unbalanced Bid.** A bid containing bid prices that do not reflect reasonable actual costs plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs.
- 3.82. **Median**. The portion of a divided highway separating the traffic lanes in opposite directions.
- 3.83. **Milestone Date**. The date that a specific portion of the work is to be completed, before the completion date for all work under the Contract.
- 3.84. **Monolithic Concrete Placement**. The placement of plastic concrete in such manner and sequence to prevent a construction joint.
- 3.85. **National Holidays**. January 1, the last Monday in May, July 4, the first Monday in September, the fourth Thursday in November, and December 24 or December 25.
- 3.86. Nonhazardous Recyclable Material. A material recovered or diverted from the nonhazardous waste stream for the purposes of reuse or recycling in the manufacture of products that may otherwise be produced using raw or virgin materials.

3.87. Nonresident Bidder. A Bidder whose principal place of business is not in Texas. This includes a Bidder whose ultimate parent company or majority owner does not have its principal place of business in Texas. 3.88. **Nonresponsive Bid.** A bid that does not meet the criteria for acceptance contained in the bid documents. 3.89. Non-Site-Specific Contracts. Contracts in which a geographic region is specified for the work and for which work orders, with or without plans, further detail the limits and work to be performed. 3.90. Notice to Proceed, Written notification to the Contractor authorizing work to begin. 3.91. Notification. Either written or oral instruction to the Contractor concerning the work. Voice mail is oral notification. 3.92 **Owner**, Political subdivision for whom the project is designed and constructed. Either a Municipality (City), a County or other entity organized under the authority of State of Texas statutes. May also be referred to as an Entity. 3.93. Pavement. That part of the roadway having a constructed surface for the use of vehicular traffic. 3.94. Pavement Structure. Combination of surface course and base course placed on a subgrade to support the traffic load and distribute it to the roadbed. 3.94.1. Surface Course. Pavement structure layers designed to accommodate the traffic load. The top layer resists skidding, traffic abrasion, and the disintegrating effects of climate and is sometimes called the wearing course. 3.94.2. Base Course. One or more layers of specified material thickness placed on a subgrade to support a surface course. 3.94.3. Subgrade. The top surface of a roadbed upon which the pavement structure, shoulders, and curbs are constructed. 3.94.4. Subgrade Treatment. Modifying or stabilizing material in the subgrade. 3.95. Payment Bond. The security executed by the Contractor and the Surety, furnished to the Owner to guarantee payment of all legal debts of the Contractor pertaining to the Contract. 3.96. Performance Bond. The security executed by the Contractor and the Surety, furnished to the Owner to guarantee the completion of the work in accordance with the terms of the Contract. 3.97 Plans. The approved drawings, including true reproductions of the drawings that show the location, character, dimensions, and details of the work and are a part of the Contract. 3.98. Power of Attorney for Surety Bonds. An instrument under corporate seal appointing an attorney-in-fact to act on behalf of a Surety in signing bonds. 3.99. Qualification. The process for determining a Contractor's eligibility to be awarded a construction contract 3.100. **Prequalification**. The process for determining a Contractor's eligibility to bid work. 3.101. Prequalification Statement. The forms on which required information is furnished concerning the Contractor's ability to perform and finance the work. 3.102. **Pregualified Contractor**. A contractor that is approved to bid on TxDOT contracts by satisfying their Pregualification Process.

- 3.103. **Post Qualification**. The owner will determine if contractors are qualified to bid on the project after bids are open. The bid documents will identify the minimum requirements that contractor must meet to be qualified for the project. Unqualified contractors' bids will be considered non-responsive and not accepted.
- 3.104. **Project-Specific Location**. A material source, plant, waste site, parking area, storage area, field office, staging area, haul road, or other similar location either outside the project limits or within the project limits but not specifically addressed in the Contract.
- 3.105. **Proposal Guaranty**. The security furnished by the Bidder as a guarantee that the Bidder will enter into a Contract if awarded the work.
- 3.106. **Quality Assurance**. Sampling, testing, inspection, and other activities conducted by the Engineer to determine payment and make acceptance decisions.
- 3.107. **Quality Control**. Sampling, testing, and other process control activities conducted by the Contractor to monitor production and placement operations.
- 3.108. **Ramp**. A section of highway for the primary purpose of making connections with other highways.
- 3.109. **Referee Tests**. Tests requested to resolve differences between Contractor and Owner test results. The referee laboratory is the Owners.
- 3.110. **Regular Item**. A bid item contained in the bid documents and not designated as an additive alternate or replacement alternate bid item.
- 3.111. Rental Rate Blue Book for Construction Equipment. Publication containing equipment rental rates.
- 3.112. **Replacement Alternate**. A bid item identified on the bid documents that a Bidder may substitute for a specific regular item of work.
- 3.113. **Responsive Bid**. A bid that meets all requirements of the advertisement and the bid documents for acceptance.
- 3.114. Right of Way. A general term denoting land or property devoted to transportation purposes.
- 3.115. **Roadbed**. The graded portion of a highway prepared as foundation for the pavement structure and shoulders. On divided highways, the depressed median type and the raised median type highways are considered to have 2 roadbeds. Highways with a flush median are considered to have 1 roadbed. Frontage roads are considered separate roadbeds.
- 3.116. **Road Master**. A railroad maintenance official in charge of a division of railway.
- 3.117. **Roadside**. The areas between the outside edges of the shoulders and the right of way boundaries. Unpaved median areas between inside shoulders of divided highways and areas within interchanges are included.
- 3.118. **Roadway**. The portion of the highway (including shoulders) used by the traveling public.
- 3.119. Sandblasting, Dry. Spraying blasts of pressurized air combined with sand.
- 3.120. Sandblasting, Wet. Spraying blasts of pressurized water combined with sand.
- 3.121. **Shoulder**. That portion of the roadway contiguous with the traffic lanes for accommodation of stopped vehicles for emergency use or for lateral support of base and surface courses.
- 3.122. Shot Blasting. Spraying blasts of pressurized air combined with metal shot.

- 3.123. Sidewalk. Portion of the right of way constructed exclusively for pedestrian use.
- 3.124. Slurry Blasting. Spraying blasts of pressurized air combined with a mixture of water and abrasive media.
- 3.125. Special Provisions. Additions or revisions to these standard specifications or special specifications.
- 3.126. **Special Specifications**. Supplemental specifications applicable to the Contract not covered by these standard specifications.
- 3.127. **Specifications**. Directives or requirements issued or made pertaining to the method and manner of performing the work or to quantities and qualities of materials to be furnished under the Contract. References to DMSs, ASTM or AASHTO specifications, or TxDOT bulletins and manuals, imply the latest standard or tentative standard in effect on the date of the bid. The Owner will consider incorporation of subsequent changes to these documents in accordance with Item 4L, "Scope of Work."
- 3.128. **Small Business Enterprise**. A firm (including affiliates) whose annual gross receipts do not exceed the U.S. Small Business Administration's size standards for 4 consecutive years.
- 3.129. **State**. The State of Texas.
- 3.130. **State Holiday**. A holiday authorized by the State Legislature excluding optional state holidays and not listed in Section 1.3.85., "National Holidays." A list of state holidays can be found on the TxDOT's website.
- 3.131. Station. A unit of measurement consisting of 100 horizontal feet.
- 3.132. **Subcontract**. The agreement between the Contractor and subcontractor establishing the obligations of the parties for furnishing of materials and performance of the work prescribed in the Contract documents.
- 3.133. **Subcontractor**. An individual, partnership, limited liability company, corporation, or any combination thereof that the Contractor sublets, or proposes to sublet, any portion of a Contract, excluding a material supplier, a hauling firm hauling only from a commercial source to the project, truck owner-operator, wholly-owned subsidiary, or specialty-type businesses such as security companies and rental companies.
- 3.134. **Subsidiary**. Materials, labor, or other elements that because of their nature or quantity have not been identified as a separate item and are included within the items on which they necessarily depend.
- 3.135. **Substructure**. The part of the structure below the bridge seats, but not including bearings, drilled shafts, or piling. Parapets, back walls, wing walls of the abutments, and drainage structures are considered parts of the substructure.
- 3.136. **Superintendent**. The representative of the Contractor who is available at all times and able to receive instructions from the Owner or authorized Owner representatives and to act for the Contractor.
- 3.137. **Superstructure**. The part of the structure above the bridge seats or above the springing lines of arches and including the bearings. Flatwork construction may be considered superstructure.
- 3.138. **Supplemental Agreement**. Written agreement entered into between the Contractor and the Owner and approved by the Surety, covering alterations and changes in the Contract. A supplemental agreement is used by the Owner whenever the modifications include assignment of the Contract from one party to another or other cases as desired by the Owner.
- 3.139. **Surety**. The corporate body or bodies authorized to do business in Texas bound with and for the Contractor for the faithful performance of the work covered by the Contract and for the payment for all labor and material supplied in the prosecution of the work.
- 3.140. Surplus Materials. Any debris or material related to the Contract but not incorporated into the work.

- 3.141. **Suspension**. Action taken by the Owner, State, or federal government pursuant to regulation that prohibits a person or company from entering into a Contract, or from participating as a subcontractor, or supplier of materials or equipment used in a contract
- 3.142. Tex –XXX-X. TxDOT material test methods found on TxDOT's Construction Division Web Site.
- 3.143. **Traffic Lane**. The strip of roadway intended to accommodate the forward movement of a single line of vehicles.
- 3.144. **Traveled Way**. The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.
- 3.145. Truck Owner-Operator. An individual who owns and operates 1 truck for hire.
- 3.146. **UT-Bridge**. TxDOT-owned software for steel girder erection. Software is available on TxDOT's website.
- 3.147. UT-Lift. TxDOT-owned software for steel girder erection. Software is available on TxDOT's website.
- 3.148. Utility. Privately, publicly, or cooperatively owned lines, facilities, and systems for producing, transmitting, or distributing communications, power, heat, gas, oil, water, waste, or storm water that are not connected with the highway drainage, signal systems, or other products that directly or indirectly serve the public; the utility company.
- 3.149. Verification Tests. Tests used to verify accuracy of QC and QA and mixture design testing.
- 3.150. Water-Abrasive Blasting. Spraying blasts of pressurized water combined with abrasive media.
- 3.151. Water Blasting. Spraying blasts of pressurized water of at least 3,000 psi.
- 3.152. Water-Injected Abrasive Blasting. Abrasive blasting with water injected into the abrasive/air stream at the nozzle.
- 3.153. Wholly-Owned Subsidiary. A legal entity owned entirely by the Contractor or subcontractor.
- 3.154. **Work**. The furnishing of all labor, materials, equipment, and other incidentals necessary for the successful completion of the Contract.
- 3.155. Written Notice. Written notice is considered to have been duly given if delivered in person to the individual or member to whom it is intended or if sent by regular, registered, or certified mail and delivered to the last known business address; sent by facsimile to the last known phone number; or sent by e-mail to the last known address. The date of the letter will serve as the beginning day of notice. Unclaimed mail or failure to provide current mailing address will not be considered a failure to provide written notice.

### Item 2L Instructions to Bidders



### 1. INTRODUCTION

Instructions to the Contractor in these specifications are generally written in active voice, imperative mood. The subject of imperative sentences is understood to be "the Contractor." The Owner's responsibilities are generally written in passive voice, indicative mood. Phrases such as "as approved," "unless otherwise approved," "upon approval," "as directed," "as verified," "as ordered," and "as determined" refer to actions of the Engineer unless otherwise stated, and it is understood that the directions, orders, or instructions to which they relate are within the limitations of and authorized by the Contract.

#### 2. ELIGIBILITY OF BIDDERS

Bidders on this project must be prequalified though TxDOT. Refer to TxDOT's web site for prequalification requirements. Assure prequalification documents are submitted to TxDOT at least 14 days before bid opening. Comply with all technical prequalification requirements in the bid documents.

#### 3. ISSUING BID DOCUMENTS

Bid Documents may be obtained at from the websites:

www.bidnetdirect.com/hayscounty, http://www.txsmartbuy.com/sp, https://www.sanmarcostx.gov/Bids.aspx

At the time Bid Documents are obtained, Bidder must provide a working e-mail address, so as to receive any addenda or clarification issued by the Owner.

The Owner will not issue bid documents if one or more of the following apply:

- the Bidder is prohibited from rebidding a specific project due to a bid error on the original bid documents,
- the Bidder failed to enter into a Contract on the original award,
- the Bidder was defaulted or terminated on the original Contract, unless the Owner terminated for convenience, or
- the Bidder or a subsidiary or affiliate of the Bidder has received compensation from the Owner to participate in the preparation of the plans or specifications on which the bid or Contract is based.

#### 4. INTERPRETING ESTIMATED QUANTITIES

The quantities listed in the bid documents are approximate and will be used for the comparison of bids. Payments will be made for actual quantities of work performed in accordance with the Contract.

#### 5. EXAMINING DOCUMENTS AND WORK LOCATIONS

Examine the bid documents and specified work locations before submitting a bid for the work. Submitting a bid will be considered evidence that the Bidder has performed this examination. Borings, soil profiles, water elevations, and underground utilities shown on the plans were obtained for the use of the Owner in the preparation of plans. This information is provided for the Bidder's information only and the Owner makes no representation as to the accuracy of the data. Be aware of the difficulty of accurately classifying all material

encountered in making foundation investigations, the possible erosion of stream channels and banks after survey data have been obtained, and the unreliability of water elevations other than for the date recorded.

Oral explanations, instructions, or consideration for Contractor-proposed changes in the bid documents given during the bidding process are not binding. Only requirements included in the bid documents and Owner-issued addenda are binding. Request explanations of documents at least five(5) days prior to the bid opening.

Immediately notify the Owner of any error, omission, or ambiguity discovered in any part of the bid documents. The Owner will issue addenda when appropriate.

#### 6. PREPARING THE BID

Prepare the bid form furnished by the Owner. Informational bid forms printed from the Owner's website will not be accepted.

Specify a unit price in dollars and cents for each regular item, additive alternate item, deductive alternate item or replacement alternate item for which an estimated quantity is given.

When "Working Days" is an item, submit the number of working days to be used to complete the Contract or phases of the Contract.

The Owner will not accept an incomplete bid. A bid that has one or more of the deficiencies listed below is considered incomplete:

- the bid form was not signed,
- all certifications were not acknowledged,
- a regular item, additive alternate item or deductive alternate item is left blank,
- a regular item and the corresponding replacement alternate item are left blank,
- the bid form submitted had the incorrect number of items, or
- 5% Bid Bond,
- Vendor Reference Form.

#### NONRESPONSIVE BID

7.

The Owner will not accept a nonresponsive bid. A bid that has one or more of the deficiencies listed below is considered nonresponsive:

- The bid was not in the hands of the Letting Official at the time and location specified in the advertisement.
- A bid was submitted for the same project by a Bidder or Bidders and one or more of its partners or affiliates.
- The bid form was signed by a person who was not authorized to bind the Bidder or Bidders.
- The bid guaranty did not comply with the requirements contained in this Item.
- The bid was in a form other than the official bid form issued by the Owner.
- The Bidder modified the bid in a manner that altered the conditions or requirements for work as stated in the bid documents.
- The Bidder bid more than the maximum or less than the minimum number of allowable working days when working days was an item.
- The Bidder did not meet the requirements of the technical qualification.
- The bidder is not prequalified by TxDOT
- The bidder does not meet the Owner's qualification requirements.
- 5% Bid Bond.
- Vendor Reference Form.

#### 8. SUBMITTAL OF BIDS

- 8.1. Electronic Bids. When electronic bidding is available, the Bidder is responsible for taking the appropriate measures to submit a bid. These measures include, but are not limited to, acquiring hardware, software, and Internet connectivity needed for submitting a bid via the Owner's bidding system.
- 8.1.1. **Bid Form**. Use the electronic bid form in the Owner's bidding system. When regular bid items have corresponding replacement alternate items, select the bid item or group of items to be used for the bid tabulation. Acknowledge all addenda listed in the Owner's bidding system.

The electronic bid form may not contain the special provisions, special specifications, general notes, and other Contract documents. These documents are included by reference.

8.1.2. **Bid Guaranty**. Provide a bid guaranty in the amount indicated on the bid form. Use an electronic bid bond. Guaranty checks or printed bid bonds will not be accepted.

Use the most current version of the electronic bond accepted by the Owner. For a joint venture, the bond must be in the name of all joint venture participants. Enter the bond authorization code into the Owner's bidding system.

It is the Bidder's responsibility to ensure the electronic bid bond is issued in the name or names of the Bidder or Bidders.

- 8.1.3. Submittal of Bid. Submit the bid using the Owner's bidding system.
- 8.1.4. **Revising the Bid Form**. Make desired changes as allowed by the Owner's bidding system up until the time and date set for the opening of bids. The last bid submitted will be used for tabulation purposes.
- 8.1.5. Withdrawing a Bid. Submit an electronic or written request to withdraw a bid before the time and date set for the opening. The Owner will not accept oral requests. An electronic request must be made using the Owner's bidding system.

A written request must be signed and submitted to the Letting Official with proof of identification. The request must be made by a person authorized to bind the Bidder or Bidders. In the case of joint venture, the Owner will accept a request from any person authorized to bind a party to the joint venture. The Owner may require written delegation of authority to withdraw a bid when the individual sent to withdraw the bid is not authorized to bind the Bidder or Bidders.

- 8.2. Printed Bid.
- 8.2.1. **Bid Form**. Mark all entries in ink. As an alternative to hand writing the unit prices in the bid form, submit an electronic bid form.

When regular bid items have corresponding replacement alternate items, select the bid item or group of items to be used for the bid tabulation. Acknowledge all addenda by checking the appropriate box on the addendum acknowledgement page. Provide the complete and correct name of the Bidder submitting the bid. A person authorized to bind the Bidder must sign the bid form. In the case of a joint venture, provide the complete and correct name of all Bidders submitting the bid. In the case of a joint venture, the person signing the bid form must be authorized to bind all joint venture participants.

If a bid form contains both regular items for domestic steel or iron materials and replacement alternate items for foreign steel or iron materials, the Bidder must either:

- submit unit bid prices for domestic items only, or
- submit unit bid prices for both the domestic and foreign items.
- 8.2.2. **Bid Guaranty**. Provide a bid guaranty in the amount indicated on the bid documents. Use a printed bid bond. An electronic bid bond may be used as the guaranty. Ensure the electronic bid bond meets the requirements of Section 2.8.1.2., "Bid Guaranty," and submit the electronic bid bond with the printed bid.
- 8.2.3. **Bid Bond**. Use the bid bond form provided by the Owner. Submit the bid bond with the powers of attorney attached and in the amount specified. The bond must be dated on or before the date of the bid opening, bear the impressed seal of the Surety, and be signed by the Bidder or Bidders and an authorized individual of the Surety. As an alternative for joint venture Bidders, each of the Bidders may submit a separate bid bond completed as outlined in this section. Bid bonds will only be accepted from Sureties authorized to execute a bond under and in accordance with State law.
- 8.2.4. **Submittal of Bid**. Place the completed bid form and the bid guaranty in a sealed envelope marked to indicate the contents.

When submitting by mail or delivery service, place the envelope in another sealed envelope and address as indicated in the official advertisement or in the bid documents. It is the Bidder's responsibility to ensure that the sealed bid arrives at the location described on or before the time and date set for the bid opening. To be accepted, the bid must be in the hands of the Letting Official by that time of opening regardless of the method chosen for delivery.

- 8.2.5. **Revising the Bid Form**. Make desired changes to the bid form in ink and submit the bid to the Letting Official. The Owner will not make revisions to a bid on behalf of a Bidder.
- 8.2.6. Withdrawing a Bid. Submit a written request to withdraw a bid before the time and date set for the opening. The Owner will not accept oral requests. A written request must be signed and submitted to the Letting Official with proof of identification. The request must be made by a person authorized to bind the Bidder or Bidders. In the case of joint venture, the Owner will accept a request from any person authorized to bind a party to the joint venture. The Owner may require written delegation of authority to withdraw a bid when the individual sent to withdraw the bid is not authorized to bind the Bidder or Bidders.

#### 9. OPENING AND READING OF BIDS

At the time, date, and location specified in the official advertisement, the Owner will publicly open and read bids.

#### 10. TABULATING BIDS

- 10.1. **Official Total Bid Amount**. The Owner will sum the products of the quantities and the unit prices bid in the bid form to determine the official total bid amount, except as provided in Section 2.11., "Consideration of Unit Prices." The official total bid amount is the basis for determining the apparent low Bidder. The total bid amounts will be compared and the results made public.
- 10.2. **Rounding of Unit Prices**. The Owner will round off all unit bids involving fractional parts of a cent to the nearest one-tenth cent (\$0.001) in determining the amount of the bid as well as computing the amount due for payment of each item under the Contract. For rounding purposes, entries of five-hundredths of a cent (\$0.0005) or more will be rounded up to the next highest tenth of a cent, while entries less than five-hundredths of a cent will be rounded down to the next lowest tenth of a cent.

10.3. Interpretation of Unit Prices. The Owner will make a documented determination of the unit bid price if a unit bid price is illegible or conflicting in the case of replacement alternate items. The Owner's determination will be final.

#### 10.4. Consideration of Unit Prices.

10.4.1. **A** + **B Bidding**. The official total bid amount will be determined by the summation of the Contract amount and the time element. The Owner will use the following formula to make the calculation:

 $\mathsf{A} + \mathsf{B1} + \mathsf{B2} + \mathsf{BX} + \ldots + \mathsf{BT}$ 

The Contract amount, equal to A in the formula, is determined by the summation of the products of the approximate quantities shown in the bid and the unit bid prices bid. The time element, equal to B1, B2, BX (when phases are included as bid components), and BT (substantial completion of the project when included as a bid component), of the bid is determined by multiplying the number of working days bid to substantially complete the project, or phases, by the daily road-user cost (RUC) provided on the bid documents. When partial days are bid they will be rounded up to the nearest whole day.

The formula above determines the low Bidder and establishes the Contract time.

10.4.2. **"Buy America**." Comply with Buy America in accordance with Section 6.1.1.. For a Bidder who proposes to use foreign steel or iron materials to be considered the apparent low Bidder, their total bid must be at least 25% lower than the next lowest bid if that bid proposes to use domestic steel or iron materials.

This requirement does not apply to minimal use of steel or iron materials provided that the total cost of all foreign source items used in the project, as delivered to the project site, is less than \$2,500 or one-tenth-of-one-percent (1/10 of 1%) of the Contract amount, whichever is greater

#### 11. CONSIDERATION OF BID ERRORS.

The Owner will consider a claim of a bid error by the apparent low Bidder if the following requirements have been met:

- Submit written notification to the Owner within 5 business days after the date the bid is opened.
- Identify the items of work involved and include bidding documentation. The Owner may request clarification of submitted documentation.

The Owner will evaluate the claim of an error by the apparent low Bidder by considering the following:

- The bid error relates to a material item of work.
- The bid error amount is a significant portion of the total bid.
- The bid error occurred despite the exercise of ordinary care.
- The delay of the proposed work will not impact cost and safety to the public.

Acceptance of the bid error claim by the Owner will result in the rejection of the bid of the apparent low bidder .and the Owner may consider the second responsive bid. The erring Contractor will not be allowed to bid the project if it is relet. Rejection of bids due to the Contractor's bid error may result in the application of sanctions by the Owner.

#### TIE BIDS

12.

If the official total bid amount for 2 or more Bidders is equal and those bids are the lowest submitted, each tie Bidder will be given an opportunity to withdraw their bid. If 2 or more tie Bidders do not withdraw their bids, the low Bidder will be determined by a coin toss. If all tie Bidders request to withdraw their bids, no withdrawals will be allowed and the low Bidder will be determined by a coin toss. The Letting Official will preside over the proceedings for the coin toss.

### Item 3L Award and Execution of Contract



### 1. AWARD OF CONTRACT

The Owner will award, reject, or defer the Contract within 90 days after the opening of the bid. The Owner reserves the right to reject any or all bids and to waive technicalities in the best interest of the Owner.

- 1.1. Award. The Owner will award the Contract to the low Bidder as determined by Article 2.11., "Tabulating Bids." The Owner may award a Contract to the second lowest Bidder when the following requirements have been met:
  - The low Bidder withdraws its bid.
  - The low Bidder fails to enter into a contract with the Owner after Award
  - The second low Bidder's unit bid prices are reasonable.

#### 1.2. **Rejection**. The Owner will reject the Contract if:

- Collusion may have existed among the Bidders. Collusion participants will not be allowed to bid future bids for the same Contract.
- The low bid is mathematically and materially unbalanced. The Bidder will not be allowed to bid future bids for the same Contract.
- The lowest bid is higher than the Owner's estimate and re-advertising for bids may result in a lower bid.
- Rejection of the Contract is in the best interest of the Owner.
- 1.3. **Deferral**. The Owner may defer the award or rejection of the Contract when deferral is in the best interest of the Owner.

#### 2. RESCINDING OF AWARD

The Owner reserves the right to cancel the award of any Contract before Contract execution with no compensation due when the cancellation is in the best interest of the Owner. The Owner will return the bid guaranty to the Contractor.

#### 3. DISADVANTAGED BUSINESS ENTERPRISE (DBE)/HISTORICALLY UNDERUTILIZED BUSINESS/SMALL BUSINESS ENTERPRISE (SBE)

Submit all DBE/HUB/SBE information in the time frame specified when required by the bid documents.

#### 4. EXECUTION OF CONTRACT

Provide the following within 10 days after written notification of award of the Contract:

- 4.1. Contract. Executed by Contractor and Surety.
- 4.2. **Bonds**. Executed performance bond and payment bond in the full amount of the Contract price with powers of attorney. Provide bonds in accordance with Table 1. Furnish the payment and performance bonds as a guaranty for the protection of the claimants and the Owner for labor and materials and the faithful performance of the work.

Т	able	e 1	
Bonding	Req	uiren	nents

Contract Amount	Required Bonds		
Less than \$25,000	None		
\$25,000 to \$100,000	Payment		
More than \$100,000	Performance and Payment		

4.3. **Insurance**. Submit a Certificate of Insurance showing coverages in accordance with Contract requirements.

Insurances must cover the contracted work for the duration of the Contract and must remain in effect until final acceptance. Failure to obtain and maintain insurance for the contracted work may result in suspension of work or default of the Contract. If the insurance expires and coverage lapses for any reason, stop all work until the Owner receives an acceptable Certificate of Insurance.

Provide the Owner with a Certificate of Insurance verifying the types and amounts of coverage shown in Section 11 Special Conditions. The Certificate of Insurance must be in a form approved by the Owner. Any Certificate of Insurance provided must be available for public inspection.

By signing the Contract, the Contractor certifies compliance with all applicable laws, rules, and regulations pertaining to workers' compensation insurance. This certification includes all subcontractors. Pay all deductibles stated in the policy. Subcontractors must meet the requirements of Section 11 Special Conditions either through their own coverage or through the Contractor's coverage.

The Workers' Compensation policy must include a waiver of subrogation endorsement in favor of the Owner.

For building-facilities Contracts, provide All Risk Builder's Risk Insurance to protect the Owner against loss by storm, fire or extended coverage perils on work and materials intended for use on the project including the adjacent structure. Name the Owner under the Lost Payable Clause.

For Contracts with railroad requirements, see project-specific details for additional insurance requirements.

Provide a substitute Surety on the Contract bonds in the original full Contract amount within 15 days of notification if the Surety is declared bankrupt or insolvent, the Surety's underwriting limitation drops below the Contract amount or the Surety's right to do business is terminated by the Owner. The substitute Surety must be authorized by the laws of the State and acceptable to the Owner. Work will be suspended until a substitute Surety is provided. Working day charges will be suspended for 15 days or until an acceptable Surety is provided, whichever is sooner.

The work performed under this section will not be measured or paid for directly but will be subsidiary to pertinent items.

4.4. **Railroad Documents**. Provide all required documents for satisfaction of railroad requirements for projects that have work which involves railroad right of way.

#### 5. FAILURE TO ENTER CONTRACT

If the Contractor fails to comply with all of the requirements in Article 3.4., "Execution of Contract," the bid guaranty will become the property of the Owner, not as a penalty, but as liquidated damages. The Contractor forfeiting the bid guaranty will not be considered in future bids for the same work unless there has been a substantial change in design of the work.

#### 6. APPROVAL AND EXECUTION OF CONTRACT

The Contract will be approved and signed under authority of the Owner.

#### 7. RETURN OF BID GUARANTY

Bid bonds will not be returned.

#### 8. BEGINNING OF WORK

Do not begin work until authorized in writing by the Owner.

When callout work is required, provide a method of contact available from 8 A.M. until 5 P.M. every work day and 24 hr. a day, 7 days a week for projects with emergency mobilization, unless otherwise shown on the plans. The time of notice will be the transmission time of the notice sent, provided orally, or provided in person by the Owner's representative.

Verify all quantities of materials shown on the plans before ordering.

For projects with alternate bid items, the work order will identify the base bid work and additive or deductive alternate work to be performed. The Owner makes no guarantee that the additive or deductive alternate work will be required.

#### 9. ASSIGNMENT OF CONTRACT

Do not assign, sell, transfer, or otherwise dispose of the Contract or any portion rights, title, or interest (including claims) without the approval of the Owner or designated representative. The Owner must deem any proposed assignment justified and legally acceptable before the assignment can take place.

#### 10. EXCLUDED PARTIES

The Contractor certifies by signing the Contract that the Contractor will not enter into any subcontract with a subcontractor that is debarred or suspended by the Owner or by any state or federal agency.



#### 1. CONTRACT INTENT

The intent of the Contract is to describe the completed work to be performed. Furnish materials, supplies, tools, equipment, labor, and other incidentals necessary for the proper prosecution and completion of the work in accordance with Contract documents.

#### 2. PRECONSTRUCTION CONFERENCE

Before starting work, schedule and attend a preconstruction conference with the Owner. Failure to schedule and attend a preconstruction conference is not grounds for delaying the beginning of working day charges.

Work with the Owner to resolve all issues during the course of the Contract. Refer to Article 4.7., "Dispute or Claims Procedure," for all unresolved issues.

#### 3. CHANGES IN THE WORK

The Engineer reserves the right to make changes in the work including addition, reduction, or elimination of quantities and alterations needed to complete the Contract. Perform the work as altered. These changes will not invalidate the Contract nor release the Surety. The Contractor is responsible for notifying the sureties of any changes to the Contract.

If the changes in quantities or the alterations do not significantly change the character of the work under the Contract, the altered work will be paid for at the Contract unit price. If the changes in quantities or the alterations significantly change the character of the work, the Contract will be amended by a change order. If no unit prices exist, this will be considered extra work and the Contract will be amended by a change order. Provide cost justification as requested, in an acceptable format. Payment will not be made for anticipated profits on work that is eliminated.

Agree on the scope of work and the basis of payment for the change order before beginning the work. If there is no agreement, the Engineer may order the work to proceed under Article 9.7., "Payment for Extra Work and Force Account Method," or by making an interim adjustment to the Contract. In the case of an adjustment, the Engineer will consider modifying the compensation after the work is performed.

A significant change in the character of the work occurs when:

- the character of the work for any item as altered differs materially in kind or nature from that in the Contract or
- a major item of work varies by more or less than 25% from the original Contract quantity.

When the quantity of work to be done under any major item of the Contract is more than 125% of the original quantity stated in the Contract, then either party to the Contract may request an adjustment to the unit price on the portion of the work that is above 125%.

When the quantity of work to be done under any major item of the Contract is less than 75% of the original quantity stated in the Contract, then either party to the Contract may request an adjustment to the unit price. When mutually agreed, the unit price may be adjusted by multiplying the Contract unit price by the factor in Table 1. If an adjusted unit price cannot be agreed upon, the Engineer may determine the unit price by multiplying the Contract unit price by the factor in Table 1.

Quantity-Based Price Adjustment Factors			
% of Original Quantity	Factor		
≥ 50 and < 75	1.05		
≥ 25 and < 50	1.15		
< 25	1.25		

Table 1
Quantity-Based Price Adjustment Factors

If the changes require additional working days to complete the Contract, Contract working days will be adjusted in accordance with Item 8, "Prosecution and Progress."

#### DIFFERING SITE CONDITIONS

During the progress of the work, differing subsurface or latent physical conditions may be encountered at the site. The 2 types of differing site conditions are defined as:

- those that differ materially from those indicated in the Contract and
- unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the Contract.

Notify the Engineer in writing when differing site conditions are encountered. The Engineer will notify the Contractor when the Owner discovers differing site conditions. Unless directed otherwise, do not work on the affected items and leave the site undisturbed. The Engineer will investigate the conditions and determine whether differing site conditions exist. If the differing site conditions cause an increase or decrease in the cost or number of working days specified for the performance of the Contract, the Engineer will make adjustments, excluding the loss of anticipated profits, in accordance with the Contract. Additional compensation will be made only if the required written notice has been provided.

#### 5. REQUESTS FOR ADDITIONAL COMPENSATION

Notify the Engineer in writing of any intent to request additional compensation once there is knowledge of the basis for the request. An assessment of damages is not required to be part of this notice but is desirable. The intent of the written notice requirement is to provide the Owner an opportunity to evaluate the request and to keep an accurate account of the actual costs that may arise. Minimize impacts and costs.

If written notice is not given, the Contractor waives the right to additional compensation unless the circumstances could have reasonably prevented the Contractor from knowing the cost impact before performing the work. Notice of the request and the documentation of the costs will not be construed as proof or substantiation of the validity of the request. Submit the request in enough detail to enable the Owner to determine the basis for entitlement, adjustment in the number of working days specified in the Contract, and compensation.

The Owner will not consider fees and interest on requests for additional compensation. Fees include, but are not limited to: preparation, attorney, printing, shipping, and various other fees.

Damages occur when impacts that are the responsibility of the Owner result in additional costs to the Contractor that could not have been reasonably anticipated at the time of letting. Costs of performing additional work are not considered damages. For Contractor damages, the intent is to reimburse the Contractor for actual expenses arising out of a compensable impact. No profit or markups, other than labor burden, will be allowed. For damages, labor burden will be reimbursed at 35% unless the Contractor can justify higher actual cost. Justification for a higher percentage must be in accordance with the methodology provided by the Owner , submitted separately for project overhead labor and direct labor, and determined and submitted by a Certified Public Accountant (CPA). Submit CPA-prepared labor burden rates directly to the Owner.

4.

If the Contractor requests compensation for delay damages and the delay is determined to be compensable, then standby equipment costs and project overhead compensation will be based on the duration of the compensable delay and will be limited as follows:

- 5.1. **Standby Equipment Costs**. Payment will be made in accordance with Section 9.7.1.4.3., "Standby Equipment Costs."
- 5.2. **Project Overhead**. Project overhead is defined as the administrative and supervisory expenses incurred at the work locations. When delay to project completion occurs, reimbursement for project overhead for the Contractor will be made using the following options:
  - reimbursed at 6% (computed as daily cost by dividing 6% of the original Contract amount by the number of original Contract work days), or
  - actual documented costs for the impacted period.

Project overhead for delays impacting subcontractors will be determined from actual documented costs submitted by the Contractor.

Time extensions and suspensions alone will not be justification for reimbursement for project overhead.

5.3. Home Office Overhead. The Owner will not compensate the Contractor for home office overhead.

#### 6. DISPUTE OR CLAIMS PROCEDURE

The dispute resolution policy promotes a cooperative attitude between the Engineer and Contractor. Emphasis is placed on resolving issues while they are still current, at the project office, and in an informal manner. Open sharing of information is encouraged by all parties involved so the information provided completely and accurately reflects the issues and facts. If information is not shared, decisions may be limited to relying on the documentation that is available for review.

The Owners's goal is to have a dispute settled by the Engineer before elevating it as a claim.

If a dispute cannot be resolved, initiate the Contract claim procedure by filing a Contract claim after the completion of the Contract or when required for orderly performance of the Contract. Submit the claim to the Owner in accordance with state law.

For a claim resulting from enforcement of a warranty period, file the claim no later than one year after expiration of the warranty period. For all other claims, file the claim no later than the date the Owner issues notice to the Contractor that they are in default, the date the Owner terminates the Contract, or one year after the date of final acceptance of the Contract. It is the Contractor's responsibility to submit requests in a timely manner.

### Item 5L Control of the Work



#### 1. AUTHORITY OF ENGINEER

The Engineer has the authority to observe, test, inspect, approve, and accept the work on behalf of the Owner. The Engineer decides all questions about the quality and acceptability of materials, work performed, work progress, Contract interpretations, and acceptable Contract fulfillment. The Engineer has the authority to enforce and make effective these decisions.

The Engineer acts as a referee in all questions arising under the terms of the Contract. The Engineer's decisions will be final and binding.

#### 2. PLANS AND WORKING DRAWINGS

When required, provide working drawings to supplement the plans with all necessary details not included on the Contract plans. Prepare and furnish working drawings in a timely manner and obtain approval, if required, before the beginning of the associated work. For all working drawing submittal requirements, the Engineer may allow electronic and other alternative submission procedures. Have a licensed professional engineer sign, seal, and date the working drawings as indicated in Table 1.

Prepare working drawings using United States standard measures in the English language. The routing of submittals for review and approval will be established at the preconstruction conference. The Contractor is responsible for the accuracy, coordination, and conformity of the various components and details of the working drawings. Owner approval of the Contractor's working drawings will not relieve the Contractor of any responsibility under the Contract. The work performed under this article will not be measured or paid for directly but will be subsidiary to pertinent items.

Signature and Approval Requirements for working Drawings			
Working Drawings For		Requires Licensed Professional Engineer's Signature, Seal, and Date	Requires Owner Approval
1. Alternate or opt submitted by Cont	ional designs tractor	Yes	Yes
2. Supplementary drawings for struc	shop and fabrication tural Items	No unless required on the plans	See applicable Item
3. Contractor-prop facilities that affec included on the pl	posed temporary t the public safety, not ans	Yes	Yes
4. Form and falsework details	Bridges, retaining walls, and other major structures	Yes unless otherwise shown on the plans	No ¹
	Minor structures	No unless otherwise shown on the plans	No
5. Erection drawings		Yes	No ^{1,2}
6. Contractor-proposed major modifications to traffic control plan		Yes	Yes

#### Table 1 Signature and Approval Requirements for Working Drawings

1. The Engineer may require that the Contractor have a licensed professional engineer certify that the temporary works are constructed according to the sealed drawings.

2. Approval is required for items spanning over live traffic or where safety of the traveling public is affected, in the opinion of the Engineer.

#### CONFORMITY WITH PLANS, SPECIFICATIONS, AND SPECIAL PROVISIONS

Furnish materials and perform work in reasonably close conformity with the lines, grades, cross-sections, dimensions, details, gradations, physical and chemical characteristics of materials, and other requirements shown in the Contract (including additional plans for non-site-specific work). Reasonably close conformity limits will be as defined in the respective items of the Contract or, if not defined, as determined by the Engineer. Obtain approval before deviating from the plans and approved working drawings. Do not perform work beyond the lines and grades shown on the plans or any extra work without the Engineer's approval. Work performed beyond the lines and grades shown on the plans or any extra work performed without approval is considered unauthorized and excluded from pay consideration. The Owner will not pay for material rejected due to improper fabrication, excess quantity, or any other reasons within the Contractor's control.

- 3.1. Acceptance of Defective or Unauthorized Work. When work fails to meet Contract requirements, but is adequate to serve the design purpose, the Engineer will decide the extent to which the work will be accepted and remain in place. The Engineer will document the basis of acceptance by a letter and may adjust the Contract price.
- 3.2. **Correction of Defective or Unauthorized Work**. When work fails to meet Contract requirements and is inadequate to serve the design purpose it will be considered defective. Correct, or remove and replace, the work at the Contractor's expense, as directed.

The Engineer has the authority to correct or to remove and replace defective or unauthorized work. The cost may be deducted from any money due or to become due to the Contractor.

#### 4. COORDINATION OF PLANS, SPECIFICATIONS, AND SPECIAL PROVISIONS

The specifications, accompanying plans (including additional plans for non-site-specific work), special provisions, change orders, and supplemental agreements are intended to work together and be interpreted as a whole.

Numerical dimensions govern over scaled dimensions. Special provisions govern over plans (including general notes), which govern over standard specifications and special specifications. Job-specific plan sheets govern over standard plan sheets.

However, in the case of conflict between plans (including general notes) and specifications regarding responsibilities for hazardous materials and traffic control in Items 1L through 9L and Item 502, "Barricades, Signs, and Traffic Handling," special provisions govern over standard specifications and special specifications, which govern over the plans.

Notify the Engineer promptly of any omissions, errors, or discrepancies discovered so that necessary corrections and interpretations can be made. Failure to promptly notify the Engineer will constitute a waiver of all claims for misunderstandings or ambiguities that result from the errors, omissions, or discrepancies discovered.

#### 5. COOPERATION OF CONTRACTOR

3.

Cooperate with the Engineer. Respond promptly to instructions from the Engineer. Provide all information necessary to administer the Contract.

Designate in writing a competent, English-speaking Superintendent employed by the Contractor. The Superintendent must be experienced with the work being performed and capable of reading and understanding the Contract. Ensure the Superintendent is available at all times and able to receive instructions from the Engineer or authorized Owner representatives and to act for the Contractor. The

Engineer may suspend work without suspending working day charges if a Superintendent is not available or does not meet the above criteria.

At the written request of the Engineer, immediately remove from the project any employee or representative of the Contractor or a subcontractor who, in the opinion of the Engineer, does not perform work in a proper and skillful manner or who is disrespectful, intemperate, disorderly, uncooperative, or otherwise objectionable. Do not reinstate these individuals without the written consent of the Engineer.

Furnish suitable machinery, equipment, and construction forces for the proper prosecution of the work. Provide adequate lighting to address quality requirements and inspection of nighttime work.

The Engineer may suspend the work without suspending working day charges until the Contractor complies with this requirement. All work associated with fulfilling this requirement is subsidiary to the various items of the Contract and no direct compensation will be made.

#### 6. COOPERATING WITH UTILITIES

Use established safety practices when working near utilities. Consult with the appropriate utilities before beginning work. Notify the Engineer immediately of utility conflicts. The Engineer will decide whether to adjust utilities or adjust the work to eliminate or lessen the conflict. Unless otherwise shown on the plans, the Engineer will make necessary arrangements with the utility owner when utility adjustments are required.

Use work procedures that protect utilities or appurtenances that remain in place during construction. Cooperate with utilities to remove and rearrange utilities to avoid service interruption or duplicate work by the utilities. Allow utilities access to the right of way.

Immediately notify the appropriate utility of service interruptions resulting from damage due to construction activities. Cooperate with utilities until service is restored. Maintain access to active fire hydrants at all times unless approved by the Engineer.

#### 7. COOPERATION BETWEEN CONTRACTORS

Cooperate and coordinate with other Contractors working within the limits or adjacent to the limits.

#### 8. COOPERATION WITH RAILROADS

Plan and prosecute portions of the work involving a railway to avoid interference with or hindrance to the railroad company.

If the work is on railroad right of way, do not interfere with the operation of the railroad company's trains or other property.

- 8.1. **Project-Specific Information**. Refer to project-specific plan sheets in the Contract for specific information concerning the work to be completed by both the Contractor and the railroad within railroad right of way; railroad right of way locations impacted by construction; percentage of Contract work at each location; train movements at each location; and requirements for railroad insurance, flagging, and Right of Entry (ROE) Agreements.
- 8.2. **Right of Entry Agreement (if required)**. The process for obtaining a fully executed ROE Agreement will be as follows:
  - The Owner will send the unexecuted ROE Agreement to the Contractor with the unexecuted construction Contract.
  - Partially execute the ROE Agreement and return it to the Department with the required insurance attached.

- The Owner will coordinate with the railroad company regarding the further execution of the ROE Agreement and associated fees. The Owner will pay any ROE Agreement fees directly to the railroad company.
- Once the Owner has received the fully-executed ROE Agreement from the railroad company, the Owner will forward the fully-executed ROE Agreement to the Contractor.

#### 9. CONSTRUCTION SURVEYING

Use Method A unless otherwise specified in the Contract. Upon request, the Engineer will allow the Contractor to copy available earthwork cross-sections, computer printouts or data files, and other information necessary to establish and control work. Maintain the integrity of control points. Preserve all control points, stakes, marks, and right of way markers. Assume cost and responsibility of replacing disturbed control points, stakes, marks, and right of way markers damaged by the Contractor's or its subcontractor operations. If the Owner repairs disturbed control points, stakes, marks, or right of way markers, the cost of repair may be deducted from money due or to become due to the Contractor. Replace right of way markers under the direction of a RPLS. This work will be subsidiary to pertinent items.

The Engineer reserves the right to make measurements and surveys to determine the accuracy of the work and determine pay quantities. The Engineer's measurements and surveys do not relieve the Contractor's responsibility for accuracy of work. Allow the Engineer adequate time to verify the surveying.

9.1. **Method A**. The Engineer will set control points for establishing lines, slopes, grades, and centerlines and for providing both vertical and horizontal control. At a minimum, provide a controlling pair of monument points at both the beginning and end of construction project for projects less than 2 miles in length. For projects greater than 2 miles in length, monuments will be set in pairs of 2 at a minimum of 2 miles based on the overall length of the project. Use these control points as reference to perform the work.

Furnish materials, equipment, and qualified workforce necessary for the construction survey work. Place construction points, stakes, and marks at intervals sufficient to control work to established tolerances. Place construction stakes at intervals of no more than 100 ft., or as directed. Place stakes and marks so as not to interfere with normal maintenance operations.

- 9.2. **Method B**. The Engineer will set adequate control points, stakes, and marks to establish lines, slopes, grades, and centerlines. Furnish additional work, stakes, materials, and templates necessary for marking and maintaining points and lines.
- 9.3. Method C. Set adequate control points, stakes, and marks to establish lines, slopes, grades, and centerlines.

#### 10. INSPECTION

Inspectors are authorized representatives of the Engineer. Inspectors are authorized to examine all work performed and materials furnished, including preparation, fabrication, and material manufacture. Inspectors inform the Contractor of failures to meet Contract requirements. Inspectors may reject work or materials and may suspend work until any issues can be referred to and decided by the Engineer. Inspectors cannot alter, add, or waive Contract provisions, issue instructions contrary to the Contract, act as foremen for the Contractor, or interfere with the management of the work. Inspection, or lack of inspection, will not relieve the Contractor from obligation to provide materials or perform the work in accordance with the Contract.

Provide safe access to all parts of the work and provide information and assistance to the Engineer to allow a complete and detailed inspection. Give the Engineer sufficient notice to inspect the work. Work performed without suitable inspection, as determined by the Engineer, may be ordered removed and replaced at Contractor's expense. Remove or uncover portions of finished work as directed. Once inspected, restore work to Contract requirements. If the uncovered work is acceptable, the costs to uncover, remove, and replace or make good the parts removed will be paid for in accordance with Article 4.4., "Changes in the

Work." If the work is unacceptable, assume all costs associated with repair or replacement, including the costs to uncover, remove, and replace or make good the parts removed.

When a government entity, utility, railroad company, or other entity accepts or pays a portion of the Contract, that organization's representatives may inspect the work but cannot direct the Contractor. The right of inspection does not make that entity a party to the Contract and does not interfere with the rights of the parties to the Contract.

#### 11. FINAL CLEANUP

Upon completion of the work, remove litter, debris, objectionable material, temporary structures, excess materials, and equipment from the work locations. Clean and restore property damaged by the Contractor's operations during the prosecution of the work. Leave the work locations in a neat and presentable condition. This work will not be paid for directly but will be considered subsidiary to items of the Contract.

Remove from the right of way cofferdams, construction buildings, material and fabrication plants, temporary structures, excess materials, and debris resulting from construction. Where work is in a stream, remove debris to the ground line of the bed of the stream. Leave stream channels and rights of way in a neat and presentable condition. Clean structures to the flow line or the elevation of the outfall channel, whichever is higher. Dispose of all excess material in accordance with federal, state, and local regulations.

#### 12. FINAL ACCEPTANCE

- 12.1. Final acceptance is made when all work is complete and the Engineer, in writing, accepts all work for the work locations in the Contract. Final acceptance relieves the Contractor from further Contract responsibilities.
- 12.1.1. **Work Completed**. Work completed must include work for vegetative establishment and maintenance, test, and performance periods and work to meet the requirements of Article 5.11., "Final Cleanup."
- 12.1.2. **Final Inspection**. After all work is complete, the Contractor will request a final inspection by the Engineer authorized to accept the work.

The final inspection will be made as soon as possible, and not later than 10 calendar days after the request. No working day charges will be made between the date of request and final inspection.

After the final inspection, if the work is satisfactory, the Engineer will notify the Contractor in writing of the final acceptance of the work. If the final inspection finds any work to be unsatisfactory, the Engineer will identify in writing all deficiencies in the work requiring correction. Correct the deficiencies identified. Working day charges will resume if these deficiencies are not corrected within 7 calendar days, unless otherwise approved. Upon correction, the Engineer will make an inspection to verify that all deficiencies were corrected satisfactorily. The Engineer will provide written notice of the final acceptance.

- 12.1.3. **Final Measurement**. Final measurements and pay quantity adjustments may be made after final acceptance.
- 12.1.4. **Removal of Traffic Control Devices**. Remove construction traffic control devices and advance warning signs upon final acceptance or as directed.

## Item 6L Control of Materials



#### 1. SOURCE CONTROL

Use only materials that meet Contract requirements. Unless otherwise specified or approved, use new materials for the work. Secure the Engineer's approval of the proposed source of materials to be used before their delivery. Materials can be approved at a supply source or staging area but may be reinspected in accordance with Article 6.4., "Sampling, Testing, and Inspection."

### 1.1. **Buy America**. Comply with the latest provisions of Buy America as listed at 23 CFR 635.410. Use steel or iron materials manufactured in the United States except when:

- the cost of materials, including delivery, does not exceed 0.1% of the total Contract cost or \$2,500, whichever is greater;
- the Contract contains a replacement alternate item for a foreign source steel or iron product and the Contract is awarded based on the replacement alternate item; or
- the materials are temporarily installed.

Provide a notarized original of the TxDOT FORM D-9-USA-1 (or equivalent) with the proper attachments for verification of compliance.

Manufacturing is any process that modifies the chemical content, physical shape or size, or final finish of a product. Manufacturing begins with initial melting and mixing and continues through fabrication (cutting, drilling, welding, bending, etc.) and coating (paint, galvanizing, epoxy, etc.).

- 1.2. **Convict Produced Materials.** Materials produced by convict labor may only be incorporated in the work if such materials have been:
  - produced by convicts who are on parole, supervised release, or probation from prison; or
  - produced in a qualified prison facility.

A "qualified prison facility" means any prison facility in which convicts, during the 12-month period ending July 1, 1987, produced materials for use in federal-aid highway construction projects.

#### 2. MATERIAL QUALITY

Correct or remove materials that fail to meet Contract requirements or that do not produce satisfactory results. Reimburse the Owner for cost incurred if additional sampling and testing is required by a change of source.

Materials not meeting Contract requirements will be rejected, unless the Engineer approves corrective actions. Upon rejection, immediately remove and replace rejected materials.

If the Contractor does not comply with this article, the Owner may have defective material removed and replaced. The cost of testing, removal, and replacement will be deducted from the estimate.

#### 3. MANUFACTURER WARRANTIES

Transfer to the Owner warranties and guarantees required by the Contract or received as part of normal trade practice.

#### SAMPLING, TESTING, AND INSPECTION

Incorporate into the work only material that has been inspected, tested, and accepted by the Engineer. Remove, at the Contractor's expense, materials from the work locations that are used without prior testing and approval or written permission.

Unless otherwise mutually agreed, the material requirements and standard test methods in effect at the time the proposed Contract is advertised govern. Unless otherwise noted, the Engineer will perform testing at Owner's expense. In addition to facilities and equipment required by the Contract, furnish facilities and calibrated equipment required for tests to control the manufacture of construction items. If requested, provide a complete written statement of the origin, composition, and manufacture of materials.

All materials used are subject to inspection or testing at any time during preparation or use. Material which has been tested and approved at a supply source or staging area may be reinspected or tested before or during incorporation into the work, and rejected if it does not meet Contract requirements. Copies of test results are to be made available upon request. Do not use material that, after approval, becomes unfit for use.

Unless otherwise noted in the Contract, all testing must be performed within the United States and witnessed by the Engineer. If materials or processes require testing outside the contiguous 48 United States, reimburse the Owner for inspection expenses.

#### 5. PLANT INSPECTION AND TESTING

The Engineer may, but is not obligated to, inspect materials at the acquisition or manufacturing source. Material samples will be obtained and tested for compliance with quality requirements.

If inspection is at the plant, meet the following conditions unless otherwise specified:

- Cooperate fully and assist the Engineer during the inspection.
- Ensure the Engineer has full access to all parts of the plant used to manufacture or produce materials.
- In accordance with pertinent items and the Contract, provide a facility at the plant for use by the Engineer as an office or laboratory.
- Provide and maintain adequate safety measures and restroom facilities.
- Furnish and calibrate scales, measuring devices, and other necessary equipment.

The Engineer may provide inspection for periods other than daylight hours if:

- continuous production of materials for Owner use is necessary due to the production volume being handled at the plant, and
- the lighting is adequate to allow satisfactory inspection.

#### STORAGE OF MATERIALS

Store and handle materials to preserve their quality and fitness for the work. Store materials so that they can be easily inspected and retested. Place materials under cover, on wooden platforms, or on other hard, clean surfaces as necessary or when directed.

Obtain approval to store materials on the right of way. Storage space off the right of way is at the Contractor's expense.

6.

4.

#### 7. OWNER-FURNISHED MATERIAL

The Owner will supply materials as shown in the Contract documents. The cost of handling and placing materials supplied by the Owner will not be paid for directly but is subsidiary to the item in which they are used. Assume responsibility for materials upon receipt.

#### 8. USE OF MATERIALS FOUND ON THE RIGHT OF WAY

Material found in the excavation areas and meeting the Owner's specifications may be used in the work. This material will be paid for at the Contract bid price for excavation and under the item for which the material is used.

Do not excavate or remove any material from within the right of way that is not within the limits of the excavation without written permission. If excavation is allowed within a right of way project-specific location (PSL), replace the removed material with suitable material at no cost to the Owner as directed.

#### 9. RECYCLED MATERIALS

The Owner will not allow hazardous wastes, as defined in 30 TAC 335, proposed for recycling to be used on the project. Use nonhazardous recyclable materials (NRMs) only if the specification for the item does not disallow or restrict use. Determine if NRMs are regulated under 30 TAC 312, 330, 332, 334, or 335, and comply with all general prohibitions and requirements. Use NRMs in accordance with DMS-11000, "Evaluating and Using Nonhazardous Recyclable Materials Guidelines," and furnish all documentation required by that specification.

#### 10. HAZARDOUS MATERIALS

Use materials that are free of hazardous materials as defined in Item 1L, "Abbreviations and Definitions."

Notify the Engineer immediately when a visual observation or odor indicates that materials in required material sources or on sites owned or controlled by the owner may contain hazardous materials. Except when the contract includes bid items for the contractor to remove hazardous materials, the Engineer is responsible for testing and removing or disposing of hazardous materials not introduced by the Contractor on sites owned or controlled by the Owner as indicated below.

The plans will indicate locations where paint on steel is suspected to contain hazardous materials and where regulated asbestos containing materials have been found. The Engineer may suspend work wholly or in part during the testing, removal, or disposition of hazardous materials on sites owned or controlled by the Owner, except in the case of when the contract includes removing and disposing of hazardous materials.

When a visual observation or odor indicates that materials delivered to the work locations by the Contractor may contain hazardous materials, have an approved commercial laboratory test the materials for contamination. Remove, remediate, and dispose of any of these materials found to be contaminated. Testing, removal, and disposition of hazardous materials introduced onto the work locations by the Contractor will be at the Contractor's expense. Working day charges will not be suspended and extensions of working days will not be granted for activities related to handling hazardous material delivered by the Contractor.

- 10.1. Painted Steel Requirements. Paint containing hazardous materials will be removed as shown on the plans.
- 10.1.1. **Paint Removed by Third Party**. The Owner may provide a third party to remove paint containing hazardous materials where paint must be removed to perform work or to allow dismantling of the steel.
- 10.1.2. **Paint Removed by the Contractor**. This work may only be performed by a firm or company with one of the following certifications:

- SSPC-QP2 certification for lead painting operations, or
- Certified Lead Firm by the Texas Department of State Health Services.

Maintain certification for the duration of the work. Provide copies of audits or certification if requested.

Comply with worker and public safety regulations, including, but not limited to, OSHA 29 CFR Parts 1910.1025, 1926.62, and 1926.63. Monitor permissible exposure limits in accordance with OSHA requirements.

Remove paint containing hazardous materials from designated areas shown on the plans or as directed. Comply with access limitations shown on the plans.

Provide power hand tools, equipped with high-efficiency particulate air filter vacuums to mechanically remove paint.

Contain, collect, store, transport, and dispose of all waste generated by cleaning operation in accordance with local, state, and federal requirements including 40 CFR 302. Properly characterize and dispose of all wastes. Manage any hazardous wastes in accordance with regulatory requirements and dispose in a facility authorized to accept such wastes. Provide copies of disposal manifests.

The work performed, materials furnished, equipment, labor, tools, and incidentals will be paid for in accordance with Item 446, "Field Cleaning and Painting Steel."

10.2. **Removal and Disposal of Painted Steel**. Painted steel will be disposed of at a steel recycling or smelting facility unless otherwise shown on the plans. If the paint contains hazardous materials, maintain and make available to the Engineer invoices and other records obtained from the facility showing the received weight of the steel and the facility name.

For steel that is dismantled by unbolting, no paint stripping will be required. Use care to not damage existing paint. When dismantling is performed using flame or saw-cutting methods to remove steel elements coated with paint containing hazardous materials, the plans will show stripping locations.

The work provided, materials furnished, equipment, labor, tools, and incidentals will be paid for in accordance with Item 496, "Removing Structures," and Item 497, "Sale of Salvagable Material."

- 10.3. Asbestos Requirements. The plans will indicate locations or elements where asbestos containing materials (ACM) have been found. At locations where previously unknown ACM has been found, the Owner will arrange for abatement by a third party. For work at these locations, notify the Engineer of proposed dates of demolition or removal of structural elements with ACM at least 60 days before work is to begin to allow the Owner enough time to abate the asbestos.
- 10.4. **Work Performed by a Third Party**. When the work for removal of paint or asbestos abatement is to be provided by a third party, coordinate and cooperate with the third party and the Owner. Continue other work detailed on the plans not directly involved in the paint removal or asbestos abatement work. Provide notice to the Owner regarding the progress of the work to allow the Owner enough time to schedule the third party work.

#### 11. SURPLUS MATERIALS

Take ownership of surplus materials unless otherwise shown on the plans or as directed by the Engineer. Remove and dispose of materials in accordance with federal, state, and local regulations. If requested, provide an appropriate level of documentation to verify proper disposal. When materials are disposed of on private property, provide written authorization from the property owner for the use of the property for this purpose upon request.

### Item 7L Legal Relations and Responsibilities



#### 1. SAFETY

1.1. **Point of Contact**. Designate a Contractor Safety Point of Contact (CSPOC). The Owner will assign an Owner employee for their point of contact designated as Owner's Safety Point of Contact OSPOC. The CSPOC will ensure that the Contractor's and Subcontractor's employees' use the appropriate personal protection equipment (hard hats, safety vests, protective toe footwear, etc.).

The CSPOC will ensure that crew leaders and foremen (including subcontractors) have attended the required training.

- 1.2. **Safety Preconstruction Meeting**. In cooperation with the Engineer, schedule and attend a safety preconstruction meeting (may be a part of the preconstruction conference in Article 4.2., "Preconstruction Conference." Attendees for this safety preconstruction meeting will be:
  - the Contractor,
  - subcontractors,
  - Owner,
  - local law enforcement, and
  - other personnel that play an active role on the project.
- 1.3. **Public Safety and Convenience**. Ensure the safety and convenience of the public and property as provided in the Contract and as directed by the Engineer. Keep existing roadways open to traffic or construct and maintain detours and temporary structures for safe public travel. Manage construction to minimize disruption to traffic. Maintain the roadway in a good and passable condition, including proper drainage and provide for ingress and egress to adjacent property.

Store all equipment not in use in a manner and at locations that will not interfere with the safe passage of traffic.

Provide qualified flaggers in accordance with Item 502.2.2., "Flaggers," for the safety and convenience of the traveling public and workers, as directed.

If the Engineer determines that any of the requirements of this article have not been met, the Engineer may take any necessary corrective action. This will not change the legal responsibilities set forth in the Contract. The cost to the Owner for this work will be deducted from any money due or to become due to the Contractor.

- 1.4. Use of Blue Warning Lights. Texas Transportation Code 547.105 authorizes the use of warning lights to promote safety and provides an effective means of gaining the travelling public's attention as they drive in areas where construction crews are present. In order to influence the public to move over when high risk construction activities are taking place, minimize the utilization of blue warning lights. These lights must be used only while performing work on or near the travel lanes or shoulder where the travelling public encounters construction crews that are not protected by a standard work zone set up such as a lane closure, shoulder closure, or one-way traffic control. Refrain from leaving the warning lights engaged while travelling from one work location to another or while parked on the right of way away from the pavement or a work zone.
- 1.5. **Barricades, Warning and Detour Signs, and Traffic Handling**. Provide, install, move, replace, maintain, clean, and remove all traffic control devices in accordance with the traffic control devices specifications and as shown on the plans and as directed. If details are not shown on the plans, provide devices and work in

accordance with the TMUTCD and as directed by the Engineer. When authorized or directed by the Engineer, provide additional signs or traffic control devices not required by the plans.

If an unexpected situation arises that causes the Contractor to believe that the traffic control should be changed, make all reasonable efforts to promptly contact the Engineer. Take prudent actions until the Engineer can be contacted.

The Engineer may authorize or direct in writing the removal or relocation of project limit advance warning signs. When project limit advance warning signs are removed before final acceptance, traffic control in accordance with the TMUTCD may be used for minor operations as approved. Removal or relocation of project limit advance warning signs does not imply final acceptance.

#### 2. LAWS TO BE OBSERVED

Comply with all federal, state, and local laws, ordinances, and regulations that affect the performance of the work. Indemnify and save harmless the Owner and its representatives against any claim arising from violation by the Contractor of any law, ordinance, or regulation.

This Contract is between the Owner and the Contractor only. No person or entity may claim third-party beneficiary status under this Contract or any of its provisions, nor may any non-party sue for personal injuries or property damage under this Contract.

#### 3. PERMITS, LICENSES, AND TAXES

Procure all permits and licenses; pay all charges, fees, and taxes; and give all notices necessary and incidental to the due and lawful prosecution of work, except for permits provided by the Owner and as specified in Article 7.6., "Preservation of Cultural and Natural Resources and the Environment."

#### 4. PATENTED DEVICES, MATERIAL, AND PROCESSES

Indemnify and save harmless the Owner from any claims for infringement from the Contractor's use of any patented design, device, material, process, trademark, or copyright selected by the Contractor and used in connection with the work. Indemnify and save harmless the Owner against any costs, expenses, or damages that it may be obliged to pay, by reason of this infringement, at any time during the prosecution or after the completion of the work.

#### 5. PERSONAL LIABILITY OF PUBLIC OFFICIALS

Owner employees are agents and representatives of the Owner and will incur no liability, personal or otherwise, in carrying out the provisions of the Contract or in exercising any power or authority granted under the Contract.

# 6. PRESERVATION OF CULTURAL AND NATURAL RESOURCES AND THE ENVIRONMENT

If the Contractor initiates changes to the Contract and the Owner approves the changes, the Contractor is responsible for obtaining clearances and coordinating with the appropriate regulatory agencies.

- 6.1. **Cultural Resources**. Cease all work immediately if a site, building, or location of historical, archeological, educational, or scientific interest is discovered within the right of way. The site, building, or location will be investigated and evaluated by the Owner.
- 6.2. Texas Pollutant Discharge Elimination System (TPDES) Permits and Storm Water Pollution Prevention Plans (SWP3). The Owner will file the Notice of Intent (NOI) and the Notice of Termination (NOT) for work shown on the plans in the right of way. Adhere to all requirements of the SWP3.

- 6.3. Work in Waters of the United States. For work in the right of way, the Owner will obtain any required Section 404 permits from the U.S. Army Corps of Engineers before work begins. Adhere to all agreements, mitigation plans, and standard best management practices required by the permit. When Contractor-initiated changes in the construction method changes the impacts to waters of the U.S., obtain new or revised Section 404 permits.
- 6.4. Work in Navigable Waters of the United States. For work in the right of way, the Owner will obtain any required Section 9 permits from the U.S. Coast Guard before work begins. Adhere to the stipulations of the permits and associated best management practices. When Contractor-initiated changes in the construction method changes the impacts to navigable waters of the U.S., obtain new or revised Section 9 permits.
- 6.5. Work Over the Recharge or Contributing Zone of Protected Aquifers. Make every reasonable effort to minimize the degradation of water quality resulting from impacts relating to work over the recharge or contributing zones of protected aquifers, as defined and delineated by the TCEQ. Use best management practices and perform work in accordance with Contract requirements.
- 6.6. **Project-Specific Locations**. For all project-specific locations (PSLs) on or off the right of way (material sources, waste sites, parking areas, storage areas, field offices, staging areas, haul roads, etc.), signing the Contract certifies compliance with all applicable laws, rules, and regulations pertaining to the preservation of cultural resources, natural resources, and the environment as issued by the following or other agencies:
  - Occupational Safety and Health Administration,
  - Texas Commission on Environmental Quality,
  - Texas Department of Transportation,
  - Texas Historical Commission,
  - Texas Parks and Wildlife Department,
  - Texas Railroad Commission,
  - U.S. Army Corps of Engineers,
  - U.S. Department of Energy,
  - U.S. Department of Transportation,
  - U.S. Environmental Protection Agency,
  - U.S. Federal Emergency Management Agency, and
  - U.S. Fish and Wildlife Service.

All subcontractors must also comply with applicable environmental laws, rules, regulations, and requirements in the Contract. Maintain documentation of certification activities including environmental consultant reports, Contractor documentation on certification decisions and contacts, and correspondence with the resource agencies. Provide documentation upon request.

Obtain written approval from the Engineer for all PSLs in the right of way not specifically addressed on the plans. Prepare an SWP3 for all Contractor facilities, such as asphalt or concrete plants located within public right of way. Comply with all TCEQ permit requirements for portable facilities, such as concrete batch plants, rock crushers, asphalt plants, etc. Address all environmental issues, such as Section 404 permits, wetland delineation, endangered species consultation requirements, or archeological and historic site impacts. Obtain all permits and clearances in advance.

#### 7. AGRICULTURAL IRRIGATION

Regulate the sequence of work and make provisions as necessary to provide for agricultural irrigation or drainage during the work. Meet with the Irrigation District or land owner to determine the proper time and sequence when irrigation demands will permit shutting-off water flows to perform work.

Unless otherwise provided on the plans, the work performed under this article will not be measured or paid for directly but will be subsidiary to pertinent items.

#### 8. SANITARY PROVISIONS

Provide and maintain adequate, neat, and sanitary toilet accommodations for employees, including Owner employees, in compliance with the requirements and regulations of the Texas Department of Health or other authorities with jurisdiction.

#### 9. ABATEMENT AND MITIGATION OF EXCESSIVE OR UNNECESSARY NOISE

Minimize noise throughout all phases of the Contract. Exercise particular and special efforts to avoid the creation of unnecessary noise impact on adjacent noise sensitive receptors in the placement of non-mobile equipment such as air compressors, generators, pumps, etc. Place mobile and stationary equipment to cause the least disruption of normal adjacent activities.

All equipment associated with the work must be equipped with components to suppress excessive noise and these components must be maintained in their original operating condition considering normal depreciation. Noise-attenuation devices installed by the manufacturer such as mufflers, engine covers, insulation, etc. must not be removed nor rendered ineffectual nor be permitted to remain off the equipment while the equipment is in use.

#### 10. USING EXPLOSIVES

Do not endanger life or property. The contractor is required to submit a written Blasting Plan if required by the plans or requested by the Engineer. The Owner retains the right to reject the blasting plan. Store all explosives securely and clearly mark all storage places with "DANGER – EXPLOSIVES." Store, handle, and use explosives and highly flammable material in compliance with federal, state, and local laws, ordinances, and regulations. Assume liability for property damage, injury, or death resulting from the use of explosives.

Give at least a 48-hr. advance notice to the appropriate Road Master before doing any blasting work involving the use of electric blasting caps within 200 ft. of any railroad track.

#### 11. RESPONSIBILITY FOR HAZARDOUS MATERIALS

Indemnify and save harmless the Owner and its agents and employees from all suits, actions, or claims and from all liability and damages for any injury or damage to any person or property arising from the generation or disposition of hazardous materials introduced by the Contractor on any work done by the Contractor on Owner-owned or controlled sites. Indemnify and save harmless the Owner and its representatives from any liability or responsibility arising out of the Contractor's generation or disposition of any hazardous materials obtained, processed, stored, shipped, etc., on sites not owned or controlled by the Owner. Reimburse the Owner for all payments, fees, or restitution the Owner is required to make as a result of the Contractor's actions.

#### 12. ASBESTOS CONTAINING MATERIAL

In Texas, the Department of State Health Services (DSHS), Asbestos Programs Branch, is responsible for administering the requirements of the National Emissions Standards for Hazardous Air Pollutants, 40 CFR, Subpart M (NESHAP) and the Texas Asbestos Health Protection Rules (TAHPR). Based on EPA guidance and regulatory background information, bridges are considered to be a regulated "facility" under NESHAP. Therefore, federal standards for demolition and renovation apply.

Provide notice to the Owner of demolition or renovation to the structures listed on the plans at least 30 calendar days before initiating demolition or renovation of each structure or load bearing member. Provide the scheduled start and completion date of structure demolition, renovation, or removal.

When demolition, renovation, or removal of load-bearing members is planned for several phases, provide the start and completion dates identified by separate phases.

DSHS requires that notifications be postmarked at least 10 working days before initiating demolition or renovation. If the date of actual demolition, renovation, or removal is changed, the Owner will be required to notify DSHS at least 10 days in advance of the work. This notification is also required when a previously scheduled (notification sent to DSHS) demolition, renovation, or removal is delayed. Therefore, if the date of actual demolition, or removal is changed, provide the Engineer, in writing, the revised dates in enough time to allow for the Owner's notification to DSHS to be postmarked at least 10 days in advance of the actual work.

Failure to provide the above information may require the temporary suspension of work under Article 8.4., "Temporary Suspension of Work or Working Day Charges," due to reasons under the control of the Contractor. The Owner retains the right to determine the actual advance notice needed for the change in date to address post office business days and staff availability.

#### 13. RESTORING SURFACES OPENED BY PERMISSION

Do not authorize anyone to make an opening in the highway for utilities, drainage, or any other reason without written permission by the Engineer. Repair all openings as directed by the Engineer. Payment for repair of surfaces opened by permission will be made in accordance with pertinent items or Article 4.4., "Changes in the Work." Costs associated with openings made with Contractor authorization but without Owner approval will not be paid.

#### 14. PROTECTING ADJACENT PROPERTY

Protect adjacent property from damage. If any damage results from an act or omission on the part of or on behalf of the Contractor, take corrective action to restore the damaged property to a condition similar or equal to that existing before the damage was done.

#### 15. RESPONSIBILITY FOR DAMAGE CLAIMS

Indemnify and save harmless the Owner and its agents and employees from all suits, actions, or claims and from all liability and damages for any injury or damage to any person or property due to the Contractor's negligence in the performance of the work and from any claims arising or amounts recovered under any laws, including workers' compensation and the Texas Tort Claims Act. Indemnify and save harmless the Owner and assume responsibility for all damages and injury to property of any character occurring during the prosecution of the work resulting from any act, omission, neglect, or misconduct on the Contractor's part in the manner or method of executing the work; from failure to properly execute the work; or from defective work or material.

Pipelines and other underground installations that may or may not be shown on the plans may be located within the right of way. Indemnify and save harmless the Owner from any suits or claims resulting from damage by the Contractor's operations to any pipeline or underground installation. Make available the scheduled sequence of work to the respective utility owners so that they may coordinate and schedule adjustments of their utilities that conflict with the proposed work.

#### 16. HAULING AND LOADS ON ROADWAYS AND STRUCTURES

Comply with federal and state laws concerning legal gross and axle weights. Except for the designated Interstate system, vehicles with a valid yearly overweight tolerance permit may haul materials to the work locations at the permitted load. Provide copies of the yearly overweight tolerance permits to the Engineer upon request. Construction equipment is not exempt from oversize or overweight permitting requirements on roadways open to the traveling public.

Protect existing bridges and other structures that will remain in use by the traveling public during and after the completion of the Contract. Construction traffic on roadways, bridges, and culverts within the limits of the work, including any structures under construction that will remain in service during and after completion of the Contract is subject to legal size and weight limitations.

Additional temporary fill may be required by the Engineer for hauling purposes for the protection of certain structures. This additional fill will not be paid directly but will be subsidiary.

Replace or restore to original condition any structure damaged by the Contractor's operations.

The Engineer may allow equipment with oversize or non-divisible overweight loads to operate without a permit within the work locations on pavement structures not open to the traveling public. Submit Contractorproposed changes to traffic control plans for approval, in accordance with Item 502, "Barricades, Signs, and Traffic Handling." The following sections further address overweight allowances. The Owner will make available to the Contractor any available plans and material reports for existing structures.

16.1. **Overweight Construction Traffic Crossing Structures.** The Engineer may allow crossing of a structure not open to the public within the work locations, when divisible or non-divisible loads exceed legal weight limitations, including limits for load-posted bridges. Obtain written permission to make these crossings. Submit for approval a structural analysis by a licensed professional engineer indicating that the excessive loads should be allowed. Provide a manufacturer's certificate of equipment weight that includes the weight distribution on the various axles and any additional parts such as counterweights, the configuration of the axles, or other information necessary for the analysis. Submit the structural analysis and supporting documentation sufficiently in advance of the move to allow for review. Permission may be granted if the Engineer finds that no damage or overstresses in excess of those normally allowed for occasional overweight loads will result to structures that will remain in use after Contract completion. Provide temporary matting or other protective measures as directed.

Schedule loads so that only one vehicle is on any span or continuous unit at any time. Use barricades, fences, or other positive methods to prevent other vehicular access to structures at any time the overweight load is on any span or continuous unit.

16.2. Construction Equipment Operating on Structures. Cranes and other construction equipment used to perform construction operations that exceed legal weight limits may be allowed on structures. Before any operation that may require placement of equipment on a structure, submit for approval a detailed structural analysis prepared by a licensed professional engineer.

Submit the structural analysis and supporting documentation sufficiently in advance of the use to allow for review and approval. Include all axle loads and configurations, spacing of tracks or wheels, tire loads, outrigger placements, center of gravity, equipment weight, and predicted loads on tires and outriggers for all planned movements, swings, or boom reaches. The analysis must demonstrate that no overstresses will occur in excess of those normally allowed for occasional overweight loads.

- 16.3. Loads on Structures. Do not store or stockpile material on bridge structures without written permission. If required, submit a structural analysis and supporting documentation by a licensed professional engineer for review. Permission may be granted if the Engineer finds that no damage or overstresses in excess of those normally allowed for occasional overweight loads will result to structures that will remain in use after Contract completion. Provide temporary matting or other protective measures as directed.
- 16.4. Hauling Divisible Overweight Loads on Pavement Within the Work Locations. The Engineer may allow divisible overweight loads on pavement structures within the work locations not open to the traveling public. Obtain written approval before hauling the overweight loads. Include calculations to demonstrate that there will be no damage or overstress to the pavement structure.

#### 17. CONTRACTOR'S RESPONSIBILITY FOR WORK

Until final acceptance of the Contract, take every precaution against injury or damage to any part of the work by the action of the elements or by any other cause, whether arising from the execution or from the nonexecution of the work. Protect all materials to be used in the work at all times, including periods of suspension. When any roadway or portion of the roadway is in suitable condition for travel, it may be opened to traffic as directed. Opening of the roadway to traffic does not constitute final acceptance.

Repair damage to all work until final acceptance. Repair damage to existing facilities in accordance with the Contract or as directed. Repair damage to existing facilities or work caused by Contractor operations at the Contractor's expense. Repair work for damage that was not due to the Contractor's operations will not be paid for except as provided below.

- 17.1. **Reimbursable Repair**. Except for damage to appurtenances listed in Section 7.17.2.1., "Unreimbursed Repair," the Contractor will be reimbursed for repair of damage caused by:
  - motor vehicle, watercraft, aircraft, or railroad-train incident;
  - vandalism; or
  - Acts of God, such as earthquake, tidal wave, tornado, hurricane, or other cataclysmic phenomena of nature.

#### 17.2. Appurtenances.

- 17.2.1. **Unreimbursed Repair**. Except for destruction (not reusable) due to hurricanes, reimbursement will not be made for repair of damage to the following temporary appurtenances, regardless of cause:
  - signs,
  - barricades,
  - changeable message signs, and
  - other work zone traffic control devices.

Crash cushion attenuators and guardrail end treatments are the exception to the above listing and are to be reimbursed in accordance with Section 7.17.2.2., "Reimbursed Repair."

For the devices listed in this section, reimbursement may be made for damage due to hurricanes. Where the Contractor retains replaced appurtenances after completion of the project, the Owner will limit the reimbursement to the cost that is above the salvage value at the end of the project.

- 17.2.2. **Reimbursed Repair**. Reimbursement will be made for repair of damage due to the causes listed in Section 7.17.1., "Reimbursable Repair," to appurtenances (including temporary and permanent crash cushion attenuators and guardrail end treatments).
- 17.3. **Roadways and Structures**. Until final acceptance, the Contractor is responsible for all work constructed under the Contract. The Owner will not reimburse the Contractor for repair work to new construction, unless the failure or damage is due to one of the causes listed in Section 7.17.1, "Reimbursable Repair."

The Owner will be responsible for the cost for repair of damage to existing roadways and structures not caused by the Contractor's operations.

- 17.4. **Detours**. The Contractor will be responsible for the cost of maintenance of detours constructed under the Contract, unless the failure or damage is due to one of the causes listed in Section 7.17.1., "Reimbursable Repair." The Engineer may consider failures beyond the Contractor's control when determining reimbursement for repairs to detours constructed. The Owner will be responsible for the cost of maintenance of existing streets and roadways used for detours or handling traffic.
- 17.5. **Relief from Maintenance**. The Engineer may relieve the Contractor from responsibility of maintenance as outlined in this section. This relief does not release the Contractor from responsibility for defective materials or work or constitute final acceptance.
- 17.5.1. **Isolated Work Locations**. For isolated work locations, when all work is completed, including work for Article 5.11., "Final Cleanup," the Engineer may relieve the Contractor from responsibility for maintenance.

- 17.5.2. Work Except for Vegetative Establishment and Test Periods. When all work for all or isolated work locations has been completed, including work for Article 5.11., "Final Cleanup," with the exception of vegetative establishment and maintenance periods and test and performance periods, the Engineer may relieve the Contractor from responsibility for maintenance of completed portions of work.
- 17.5.3. **Work Suspension**. When all work is suspended for an extended period of time, the Engineer may relieve the Contractor from responsibility for maintenance of completed portions of work during the period of suspension.
- 17.5.4. When Directed by the Engineer. The Engineer may relieve the Contractor from the responsibility for maintenance when directed.
- 17.6. **Basis of Payment**. When reimbursement for repair work is allowed and performed, payment will be made in accordance with pertinent items or Article 4.4., "Changes in the Work."

#### 18. ELECTRICAL REQUIREMENTS

18.1. Definitions.

#### 18.1.1. Electrical Work. Electrical work is work performed for:

- Item 610, "Roadway Illumination Assemblies,"
- Item 614, "High Mast Illumination Assemblies,"
- Item 616, "Performance Testing of Lighting Systems,"
- Item 617, "Temporary Roadway Illumination,"
- Item 618, "Conduit,"
- Item 620, "Electrical Conductors,"
- Item 621, "Tray Cable,"
- Item 622, "Duct Cable,"
- Item 628, "Electrical Services,"
- Item 680, "Highway Traffic Signals,"
- Item 681, "Temporary Traffic Signals,"
- Item 684, "Traffic Signal Cables,"
- Item 685, "Roadside Flashing Beacon Assemblies,"
- other items that involve either the distribution of electrical power greater than 50 volts or the installation of conduit and duct banks,
- the installation of conduit and wiring associated with Item 624, "Ground Boxes," and Item 656, "Foundations for Traffic Control Devices," and
- the installation of the conduit system for communication and fiber optic cable.

Electrical work does not include the installation of communications or fiber optic cable, or the connections for low voltage and inherently power limited circuits such as electronic or communications equipment. Assembly and placement of poles, structures, cabinets, enclosures, manholes, or other hardware will not be considered electrical work as long as no wiring, wiring connections, or conduit work is done at the time of assembly and placement.

- 18.1.2. **Specialized Electrical Work**. Specialized electrical work is work that includes the electrical service and feeders, sub-feeders, branch circuits, controls, raceways, and enclosures for the following:
  - pump stations,
  - moveable bridges,
  - ferry slips,
  - motor control centers,
  - facilities required under Item 504, "Field Office and Laboratory,"
  - rest area or other public buildings,

- weigh-in-motion stations,
- electrical services larger than 200 amps,
- electrical services with main or branch circuit breaker sizes not shown in the Contract, and
- any 3-phase electrical power.
- 18.1.3. Certified Person. A certified person is a person who has passed the test from the TxDOT course TRF450, "TxDOT Roadway Illumination and Electrical Installations," or other courses as approved by the Owner. Submit a current and valid certification upon request.
- 18.1.4. Licensed Electrician. A licensed electrician is a person with a current and valid unrestricted master electrical license, or unrestricted journeyman electrical license that is supervised or directed by an unrestricted master electrician. An unrestricted master electrician need not be on the work locations at all times electrical work is being done, but the unrestricted master electrician must approve work performed by the unrestricted journeyman. Licensed electrician requirements by city ordinances do not apply to on state system work.

The unrestricted journeyman and unrestricted master electrical licenses must be issued by the Texas Department of Licensing and Regulation or by a city in Texas with a population of 50,000 or greater that issues licenses based on passing a written test and demonstrating experience.

The Engineer may accept other states' electrical licenses. Submit documentation of the requirements for obtaining that license. Acceptance of the license will be based on sufficient evidence that the license was issued based on:

- passing a test based on the NEC similar to that used by Texas licensing officials, and
- sufficient electrical experience commensurate with general standards for an unrestricted master and unrestricted journeyman electrician in the State of Texas.
- 18.2. Work Requirements. The qualifications required to perform electrical work and specialized electrical work are listed in Table 2.

Work Requirements			
Type of Work	Qualifications to Perform Work		
Electrical work with plans	Licensed electrician, certified person, or workers directly supervised by a licensed electrician or certified person		
Electrical work without plans	Licensed electrician or workers directly supervised by a licensed electrician		
Specialized electrical work	Licensed electrician or workers directly supervised by a licensed electrician		
Replace lamps, starting aids, and changing fixtures	Licensed electrician, certified person, or workers directly supervised by a licensed electrician or certified person		
Conduit in precast section with approved working drawings	Inspection by licensed electrician or certified person		
Conduit in cast-in-place section	Inspection by licensed electrician or certified person		
All other electrical work (troubleshooting,	Licensed electrician or workers directly		
repairs, component replacement, etc.)	supervised by a licensed electrician		

Table 2

A licensed electrician must be physically present during all electrical work when Table 2 states that workers are to be directly supervised by a licensed electrician or certified person.

A non-certified person may install conduit in cast-in-place concrete sections if the work is verified by a certified person before concrete placement.

When the plans specify IMSA certification, the requirements of Table 2 will still apply to the installation of the conduit, ground boxes, electrical services, pole grounding, and electrical conductors installed under Item 620, "Electrical Conductors."
# Item 8L Prosecution and Progress



# 1. PROSECUTION OF WORK

Unless otherwise shown in the Contract, begin work within 10 calendar days after the authorization date to begin work as shown on the Notice to Proceed. Prosecute the work continuously to completion within the working days specified. Unless otherwise shown in the Contract documents, work may be prosecuted in concurrent phases if no changes are required in the traffic control plan or if a revised traffic control plan is approved. Notify the Engineer at least 24 hr. before beginning work or before beginning any new operation. Do not start new operations to the detriment of work already begun. Minimize interference to traffic.

# 2. SUBCONTRACTING

Do not sublet any portion of a construction Contract without the Engineer's written approval. A subcontract does not relieve any responsibility under the Contract and bonds. Ensure that all subcontracted work complies with all governing labor provisions.

The Contractor certifies by signing the Contract that the Contractor will not enter into any subcontract with a subcontractor that is debarred or suspended by the Owner, or any state or federal agency.

For federally funded Contracts, ensure the required federal documents are physically attached to each subcontract agreement including all tiered subcontract agreements.

For all DBE/HUB/SBE subcontracts including all tiered DBE/HUB/SBE subcontracts, submit a copy of the executed subcontract agreement.

Submit a copy of the executed non-DBE subcontracts including all tiered non-DBE subcontracts when requested.

2.1. **Construction Contracts**. Perform work with own organization on at least 30% of the total original Contract cost (25% if the Contractor is an SBE on a wholly State or local funded Contract) excluding any items determined to be specialty items. Specialty items are those that require highly specialized knowledge, abilities, or equipment not usually available in the contracting firm expected to bid on the proposed Contract as a whole.

Specialty items will be shown on the plans or as directed by the Engineer. Bid cost of specialty items performed by subcontractors will be deducted from the total original Contract cost before computing the required amount of work to be performed by the Contractor's own organization.

The term "perform work with own organization" includes only:

- workers employed and paid directly by the Contractor or wholly owned subsidiary;
- equipment owned by the Contractor or wholly owned subsidiary;
- rented or leased equipment operated by the Contractor's employees or wholly owned subsidiary's employees;
- materials incorporated into the work if the majority of the value of the work involved in incorporating the material is performed by the Contractor's own organization, including a wholly owned subsidiary's organization; and

Iabor provided by staff leasing firms licensed under Chapter 91 of the Texas Labor Code for nonsupervisory personnel if the Contractor or wholly owned subsidiary maintains direct control over the activities of the leased employees and includes them in the weekly payrolls.

When staff leasing firms provide materials or equipment, they are considered subcontractors. In these instances, submit staff leasing firms for approval as a subcontractor.

Copies of cancelled checks and certified statements may be required to verify compliance with the requirements of this section.

- 2.2. **Payments to Subcontractors**. Report payments for DBE/HUB/SBE subcontracts including tiered DBE/HUB/SBE subcontracts in the manner as prescribed by the Owner.
- 2.3. **Payment Records**. Make payment records, including copies of cancelled checks, available for inspection by the Owner. Submit payment records upon request. Retain payment records for a period of 3 yr. following completion of the Contract work or as specified by the Owner.

Failure to submit this information to the Engineer by the 20th day of each month will result in the Owner taking actions, including, but not limited to, withholding estimates and suspending the work. This work will not be measured or paid for directly but will be subsidiary to pertinent items.

# 3. COMPUTATION OF CONTRACT TIME FOR COMPLETION

Upon request, the Engineer will provide the conceptual time determination schedule to the Contractor for informational purposes only. The schedules assume generic resources, production rates, sequences of construction and average weather conditions based on historic data. The Owner will not adjust the number of working days and milestones, if any, due to differences in opinion regarding any assumptions made in the preparation of the schedule or for errors, omissions, or discrepancies found in the Owner's conceptual time schedule.

The number of working days is established by the Contract. Working day charges will begin 10 calendar days after the date of the written authorization to begin work. Working day charges will continue in accordance with the Contract. The Engineer may consider increasing the number of working days under extraordinary circumstances.

- 3.1. **Working Day Charges**. Working days will be charged in accordance with Section 8.3.1.4., "Standard Workweek," unless otherwise shown in the Contract documents. Working days will be computed and charged in accordance with one of the following:
- 3.1.1. **Five-Day Workweek**. Working days will be charged Monday through Friday, excluding national holidays, regardless of weather conditions or material availability. The Contractor has the option of working on Saturdays. Provide sufficient advance notice when scheduling work on Saturdays. Work on Sundays and national holidays will not be permitted without written permission. If work requiring an Inspector to be present is performed on a Saturday, Sunday, or national holiday, and weather and other conditions permit the performance of work for 7 hr. between 7 A.M. and 6 P.M., a working day will be charged.
- 3.1.2. Six-Day Workweek. Working days will be charged Monday through Saturday, excluding national holidays, regardless of weather conditions or material availability. Work on Sundays and national holidays will not be permitted without written permission. If work requiring an Inspector to be present is performed on a Sunday or a national holiday, and weather or other conditions permit the performance of work for 7 hr. between 7 A.M. and 6 P.M., a working day will be charged.
- 3.1.3. Seven-Day Workweek. Working days will be charged Monday through Sunday, excluding national holidays, regardless of weather conditions or material availability. Work on national holidays will not be permitted without written permission. If work is performed on any of these holidays requiring an Inspector to be present,

and weather or other conditions permit the performance of work for 7 hr. between 7 A.M. and 6 P.M., a working day will be charged.

- 3.1.4. **Standard Workweek**. Working days will be charged Monday through Friday, excluding national or state holidays, if weather or other conditions permit the performance of the principal unit of work underway, as determined by the Engineer, for a continuous period of at least 7 hr. between 7 A.M. and 6 P.M., unless otherwise shown in the Contract. The Contractor has the option of working on Saturdays or state holidays. Provide sufficient advance notice to the Engineer when scheduling work on Saturdays. Work on Sundays and national holidays will not be permitted without written permission. If work requiring an Inspector to be present is performed on a Saturday, Sunday, or holiday, and weather or other conditions permit the performance of work for 7 hr. between 7 A.M. and 6 P.M., a working day will be charged.
- 3.1.5. **Calendar Day**. Working days will be charged Sunday through Saturday, including all holidays, regardless of weather conditions, material availability, or other conditions not under the control of the Contractor.
- 3.1.6. **Other**. Days will be charged as shown in the Contract documents.
- 3.2. **Restricted Work Hours**. Restrictions on Contractor work hours and the related definition for working day charges are as prescribed in this article unless otherwise shown in the Contract documents.
- 3.3. **Nighttime Work**. Nighttime work is allowed only when shown in the Contract documents or as directed. Nighttime work is defined as work performed from 30 min. after sunset to 30 min. before sunrise.
- 3.3.1. Five-, Six-, and Seven-Day Workweeks. Nighttime work that extends past midnight will be assigned to the following day for the purposes of approval for allowing work on Sundays or national holidays.

#### 3.3.2. Standard Workweek.

- 3.3.2.1. **Nighttime Work Only**. When nighttime work is allowed or required and daytime work is not allowed, working day charges will be made when weather and other conditions permit the performance of the principal unit of work underway, as determined by the Engineer, for a continuous period of at least 7 hr. for the nighttime period, as defined in Section 8.3.3., "Nighttime Work," unless otherwise shown in the Contract documents.
- 3.3.2.2. Nighttime Work and Daytime Work Requiring Inspector. When nighttime work is performed or required and daytime work is allowed, working day charges will be made when weather and other conditions permit the performance of the principal unit of work underway, as determined by the Engineer, for a continuous period of at least 7 hr. for the nighttime period, as defined in Section 8.3.3., "Nighttime Work," or for a continuous period of at least 7 hr. for the alternative daytime period unless otherwise shown in the Contract documents. Only one day will be charged for each 24-hr. time period. When the Engineer agrees to restrict work hours to the nighttime period only, working day charges will be in accordance with Section 8.3.3.2.1., "Nighttime Work Only."
- 3.4. **Time Statements**. The Engineer will furnish the Contractor a monthly time statement. Review the monthly time statement for correctness. Report protests in writing, no later than 30 calendar days after receipt of the time statement, providing a detailed explanation for each day protested. Not filing a protest within 30 calendar days will indicate acceptance of the working day charges and future consideration of that statement will not be permitted.

### 4. TEMPORARY SUSPENSION OF WORK OR WORKING DAY CHARGES

The Engineer may suspend the work, wholly or in part, and will provide notice and reasons for the suspension in writing. Suspend and resume work only as directed in writing.

When part of the work is suspended, the Engineer may suspend working day charges only when conditions not under the control of the Contractor prohibit the performance of critical activities. When all of the work is

suspended for reasons not under the control of the Contractor, the Engineer will suspend working day charges.

# 5. PROJECT SCHEDULES

Prepare, maintain, and submit project schedules. Project schedules are used to convey the Contractor's intended work plan to the Owner. Prepare project schedules with a level of effort sufficient for the work being performed. Project schedules will not be used as a basis to establish the amount of work performed or for the preparation of the progress payments.

- 5.1. **Project Scheduler**. Designate an individual who will develop and maintain the progress schedule. The Project Scheduler will be prepared to discuss, in detail, the proposed sequence of work and methods of operation, and how that information will be communicated through the Progress Schedule at the Preconstruction Meeting. This individual will also attend the project meetings and make site visits to prepare, develop, and maintain the progress schedules.
- 5.2. **Construction Details**. Before starting work, prepare and submit a progress schedule based on the sequence of work and traffic control plan shown in the Contract documents. At a minimum, prepare the progress schedule as a Bar Chart or Critical Path Method (CPM), as shown on the plans. Include all planned work activities and sequences and show Contract completion within the number of working days specified. Incorporate major material procurements, known utility relocations, and other activities that may affect the completion of the Contract in the progress schedule. Show a beginning date, ending date, and duration in whole working days for each activity. Do not use activities exceeding 20 working days, except for agreed upon activities. Show an estimated production rate per working day for each work activity.

### 5.3. Schedule Format. Format all project schedules according to the following:

- Begin the project schedule on the date of the start of Contract time or start of activities affecting work on the project;
- Show the sequence and interdependence of activities required for complete performance of the work. If using a CPM schedule, show a predecessor and a successor for each activity; and
- Ensure all work sequences are logical and show a coordinated plan of the work.

CPM schedules must also include:

- Clearly and accurately identify the critical path as the longest continuous path;
- Provide a legend for all abbreviations, run date, data date, project start date, and project completion date in the title block of each schedule submittal; and
- Through the use of calendars, incorporate seasonal weather conditions into the schedule for work (e.g., earthwork, concrete paving, structures, asphalt, drainage, etc.) that may be influenced by temperature or precipitation. Also, incorporate non-work periods such as holidays, weekends, or other non-work days as identified in the Contract.
- 5.4. Activity Format. For each activity on the project schedule provide:
  - A concise description of the work represented by the activity;
  - An activity duration in whole working days;
  - Code activities so that organized plots of the schedule may be produced.

CPM schedules must also include the quantity of work and estimated production rate for major items of work. Provide enough information for review of the work being performed.

### 5.5. Schedule Types.

5.5.1. **Bar Chart**. Seven calendar days before the preconstruction meeting, prepare and submit a hard copy of the schedule using the bar chart method.

- 5.5.1.1. **Progress Schedule Reviews**. Update the project schedule and submit a hard copy when changes to the schedule occur or when requested.
- 5.5.2. Critical Path Method. Prepare and submit the schedule using the CPM.
- 5.5.2.1. **Preliminary Schedule**. Seven calendar days before the preconstruction meeting, submit both the plotted and electronic copies of the project schedule showing work to be performed within the first 90 calendar days of the project.
- 5.5.2.2. **Baseline Schedule**. The baseline schedule will be considered the Contractor's plan to successfully construct the project within the time frame and construction sequencing indicated in the Contract. Submit both plotted and electronic copies of the baseline schedule. Submit 2 plots of the schedule: one organized with the activities logically grouped using the activity coding; and the other plot showing only the critical path determined by the longest path, not based on critical float.

Develop and submit the baseline schedule for review within the first 45 calendar days of the project unless the time for submission is extended.

5.5.2.2.1. **Review**. Within 15 calendar days of receipt of the schedule, the Engineer will evaluate, and inform the Contractor if the schedule has been accepted. If the schedule is not accepted, the Engineer will provide comments to the Contractor for incorporation. Provide a revised schedule based on the Engineer's comments, or reasons for not doing so within 10 calendar days. The Engineer's review and acceptance of the project schedule is for conformance to the requirements of the Contract documents only and does not relieve the Contractor of any responsibility for meeting the interim milestone dates (if specified) or the Contract completion date. Review and acceptance does not expressly or by implication warrant, acknowledge, or admit the reasonableness of the logic or durations of the project schedule. If the Contractor fails to define any element of work, activity, or logic and the Engineer's review does not detect this omission or error, the Contractor is responsible for correcting the error or omission.

Submit an acceptable baseline schedule before the 90th calendar day of the project unless the time for submission is extended.

5.5.2.3. **Progress Schedule**. Maintain the project schedule for use by both the Contractor and the Engineer. Submit both the plotted and electronic copy as it will become an as-built record of the daily progress achieved on the project. If continuous progress of an activity is interrupted for any reason except non-work periods (such as holidays, weekend, or interference from temperature or precipitation), then the activity will show the actual finish date as that date of the start of the interruption and the activity will be broken into a subsequent activity (or activities, based on the number of interruptions) similarly numbered with successive alpha character as necessary. The original duration of the subsequent activity will be that of the remaining duration of the original activity. Relationships of the subsequent activity will match those of the original activity so that the integrity of the project schedule logic is maintained. Once established, the original durations and actual dates of all activities must remain unchanged. Revisions to the schedule may be made as necessary.

The project schedule must be revised when changes in construction phasing and sequencing occur or other changes that cause deviation from the original project schedule occur. Any revisions to the schedule must be listed in the monthly update narrative with the purpose of the revision and description of the impact on the project schedule's critical path and project completion date. Create the schedule revision using the latest update before the start of the revision.

Monthly updating of the project schedule will include updating of:

- The actual start dates for activities started;
- The actual finish dates for activities completed;
- The percentage of work completed and remaining duration for each activity started but not yet completed; and
- The calendars to show days actual work was performed on the various work activities.

The cut-off day for recording monthly progress will be the last day of each month. Submit the updated project schedule no later than the 20th calendar day of the following month. The Engineer will evaluate the updated schedule within 5 calendar days of receipt and inform the Contractor if it has or has not been accepted. If the schedule is not accepted, the Engineer will provide comments to the Contractor for incorporation. Provide a revised schedule based on the Engineer's comments, or reasons for not doing so within 5 calendar days.

Provide a brief narrative in a bulleted statement format for major items that have impacted the schedule. Notify the Engineer if resource-leveling is being used.

- 5.5.2.3.1. **Project Schedule Summary Report (PSSR)**. When shown on the plans, provide the PSSR instead of the narrative required in Section 8.5.5.2.3., "Progress Schedule." The PSSR includes a listing of major items that have impacted the schedule as well as a summary of progress in days ahead or behind schedule. Include an explanation of the project progress for the period represented on the form provided by the Owner.
- 5.5.3. **Notice of Potential Time Impact**. Submit a "Notice of Potential Time Impact" when a Contract time extension or adjustment of milestone dates may be justified or when directed.

Failure to provide this notice in the time frames outlined above will compromise the Owner's ability to mitigate the impacts and the Contractor forfeits the right to request a time extension or adjustment of milestone dates unless the circumstances are such that the Contractor could not reasonably have had knowledge of the impact at the time.

# 5.5.4. **Time Impact Analysis**. When directed, provide a time impact analysis. A time impact analysis is an evaluation of the effects of impacts on the project. A time impact analysis consists of the following steps:

- **Step 1**. Establish the status of the project immediately before the impact.
- **Step 2**. Predict the effect of the impact on the schedule update used in Step 1.
- **Step 3**. Track the effects of the impact on the schedule during its occurrence.
- Step 4. Establish the status of the project after the impact's effect has ended and provide details identifying any mitigating actions or circumstances used to keep the project ongoing during the impact period.

Determine the time impact by comparing the status of the work before the impact (Step 1) to the prediction of the effect of the impact (Step 2), if requested, and to actual effects of the impact once it is complete (Step 4). Unless otherwise approved, Steps 1, 3, and 4, must be completed before consideration of a Contract time extension or adjustment of a milestone date will be provided. Time extensions will only be considered when delays that affect milestone dates or the Contract completion date are beyond the Contractor's control. Submit Step 4 no later than 15 calendar days after the impact's effects have ended or when all the information on the effect has been realized.

Submit one electronic backup copy of the complete time impact analysis and a copy of the full project schedule incorporating the time impact analysis. If the project schedule is revised after the submittal of a time impact analysis, but before its approval, indicate in writing the need for any modification to the time impact analysis.

The Engineer will review the time impact analysis upon completion of step 4. If this review detects revisions or changes to the schedule that had not been performed and identified in a narrative, the Engineer may reject the time impact analysis. If the Engineer is in agreement with the time impact analysis, a change order may be issued to grant additional working days, or to adjust interim milestones. Once a change order has been executed, incorporate the time impact analysis into the project schedule. The time impact analysis may also be used to support the settlement of disputes and claims. Compensation related to the time impact analysis may be provided at the completion of the analysis or the completion of the project to determine the true role the impact played on the final completion.

The work performed under this article will not be measured or paid for directly but will be subsidiary to pertinent items.

### 6. FAILURE TO COMPLETE WORK ON TIME

The time established for the completion of the work is an essential element of the Contract. If the Contractor fails to complete the work within the number of working days specified, working days will continue to be charged. Failure to complete the Contract, a separate work order, or callout work within the number of working days specified, including any approved additional working days, will result in liquidated damages for each working day charged over the number of working days specified in the Contract. The dollar amount specified in the Contract will be deducted from any money due or to become due the Contractor for each working day the Contract remains incomplete. This amount will be assessed not as a penalty but as liquidated damages.

# 7. DEFAULT OF THE CONTRACT

7.1. **Declaration of Default.** The Engineer may declare the Contractor to be in default of the Contract if the Contractor:

- fails to begin the work within the number of days specified,
- fails to prosecute the work to assure completion within the number of days specified,
- is uncooperative, disruptive or threatening,
- fails to perform the work in accordance with the Contract requirements,
- neglects or refuses to remove and replace rejected materials or unacceptable work,
- discontinues the prosecution of the work without the Engineer's approval,
- makes an unauthorized assignment,
- fails to resume work that has been discontinued within a reasonable number of days after notice to do so,
- fails to conduct the work in an acceptable manner, or
- commits fraud or other unfixable conduct as determined by the Owner.

If any of these conditions occur, the Engineer will give notice in writing to the Contractor and the Surety of the intent to declare the Contractor in default. If the Contractor does not proceed as directed within 10 days after the notice, the Owner will provide written notice to the Contractor and the Surety to declare the Contractor to be in default of the Contract. The Owner will also provide written notice of default to the Surety. If the Contractor provides the Owner written notice of voluntary default of the Contract, the Owner may waive the 10 day notice of intent to declare the Contractor in default and immediately provide written notice of default to the Surety. Working day charges will continue until completion of the Contract. The Owner may suspend work in accordance with Section 8.4., "Temporary Suspension of Work or Working Day Charges," to investigate apparent fraud or other unfixable conduct before defaulting the Contractor. The Contractor may be subject to sanctions under the state and/or federal laws and regulations.

The Owner will determine the method used for the completion of the remaining work as follows:

- Contracts without Performance Bonds. The Owner will determine the most expeditious and efficient way to complete the work, and recover damages from the Contractor.
- Contracts with Performance Bonds. The Owner will, without violating the Contract, demand that the Contractor's Surety complete the remaining work in accordance with the terms of the original Contract. A completing Contractor will be considered a subcontractor of the Surety. The Owner reserves the right to approve or reject proposed subcontractors. Work may resume after the Owner receives and approves Certificates of Insurance as required in Section 3.4.3., "Insurance." Certificates of Insurance may be issued in the name of the completing Contractor. The Surety is responsible for making every effort to expedite the resumption of work and completion of the Contract. The Owner may complete the work using any or all materials at the work locations that it deems suitable and acceptable. Any costs incurred by the Owner for the completion of the work under the Contract will be the responsibility of the Surety.

From the time of notification of the default until work resumes (either by the Surety or the Owner), the Owner will maintain traffic control devices and will do any other work it deems necessary, unless otherwise agreed upon by the Owner and the Surety. All costs associated with this work will be deducted from money due to the Surety.

The Owner will hold all money earned but not disbursed by the date of default. Upon resumption of the work after the default, all payments will be made to the Surety. All costs and charges incurred by the Owner as a result of the default, including the cost of completing the work under the Contract, costs of maintaining traffic control devices, costs for other work deemed necessary, and any applicable liquidated damages or disincentives will be deducted from money due the Contractor for completed work. If these costs exceed the sum that would have been payable under the Contract, the Surety will be liable and pay the Owner the balance of these costs in excess of the Contract price. In case the costs incurred by the Owner are less than the amount that would have been payable under the Contract if the work had been completed by the Contractor, the Owner will be entitled to retain the difference.

Comply with Article 8.2., "Subcontracting," and abide by the DBE/HUB/SBE commitments previously approved by the Owner .

No markups as defined in Article 9.7., "Payment for Extra Work and Force Account Method," will be allowed for the Surety.

Wrongful Default. Submit a written request to the Owner within 14 calendar days of receipt of the notice of default for consideration of wrongful default.

The Owner will determine if the Contractor has been wrongfully defaulted, and will proceed with the following:

- If the Owner determines the default is proper, the default will remain. If the Contractor is in disagreement, the Contractor may file a claim in accordance with Article 4.7., "Dispute or Claims Procedure."
- If the Owner determines it was a wrongful default, the Owner will terminate the Contract for convenience, in accordance with Article 8.8., "Termination of the Contract."

### TERMINATION OF THE CONTRACT

7.2.

8.

The Owner may terminate the Contract in whole or in part whenever:

- the Contractor is prevented from proceeding with the work as a direct result of an executive order of the President of the United States or the Governor of the State;
- the Contractor is prevented from proceeding with the work due to a national emergency, or when the work to be performed under the Contract is stopped, directly or indirectly, because of the freezing or diversion of materials, equipment or labor as the result of an order or a proclamation of the President of the United States;
- the Contractor is prevented from proceeding with the work due to an order of any federal authority;
- the Contractor is prevented from proceeding with the work by reason of a preliminary, special, or permanent restraining court order where the issuance of the restraining order is primarily caused by acts or omissions of persons or agencies other than the Contractor; or
- the Owner determines that termination of the Contract is in the best interest of the Owner or the public. This includes, but is not limited to, the discovery of significant hazardous material problems, right of way acquisition problems, or utility conflicts that would cause substantial delays or expense to the Contract.
- 8.1. **Procedures and Submittals**. The Engineer will provide written notice to the Contractor of termination specifying the extent of the termination and the effective date. Upon notice, immediately proceed in accordance with the following:
  - stop work as specified in the notice;

- place no further subcontracts or orders for materials, services, or facilities, except as necessary to complete a critical portion of the Contract, as approved;
- terminate all subcontracts to the extent they relate to the work terminated;
- complete performance of the work not terminated;
- settle all outstanding liabilities and termination settlement proposals resulting from the termination for public convenience of the Contract;
- create an inventory report, including all acceptable materials and products obtained for the Contract that have not been incorporated in the work that was terminated (include in the inventory report a description, quantity, location, source, cost, and payment status for each of the acceptable materials and products); and
- take any action necessary, or that the Engineer may direct, for the protection and preservation of the materials and products related to the Contract that are in the possession of the Contractor and in which the Owner has or may acquire an interest.
- 8.2. Settlement Provisions. Within 60 calendar days of the date of the notice of termination, submit a final termination settlement proposal, unless otherwise approved. The Engineer will prepare a change order that reduces the affected quantities of work and adds acceptable costs for termination. No claim for loss of anticipated profits will be considered. The Owner will pay reasonable and verifiable termination costs including:
  - all work completed at the unit bid price and partial payment for incomplete work;
  - the percentage of Item 500, "Mobilization," equivalent to the percentage of work complete or actual cost that can be supported by cost records, whichever is greater;
  - expenses necessary for the preparation of termination settlement proposals and support data;
  - the termination and settlement of subcontracts;
  - storage, transportation, restocking, and other costs incurred necessary for the preservation, protection, or disposition of the termination inventory; and
  - other expenses acceptable to the Owner.

# Item 9L Measurement and Payment



# 1. MEASUREMENT OF QUANTITIES

The Engineer will measure all completed work using United States standard measures, unless otherwise specified.

- 1.1. Linear Measurement. Unless otherwise specified, all longitudinal measurements for surface areas will be made along the actual surface of the roadway and not horizontally. No deduction will be made for structures in the roadway with an area of 9 sq. ft. or less. For all transverse measurements for areas of base courses, surface courses, and pavements, the dimensions to be used in calculating the pay areas will be the neat dimensions and will not exceed those shown on the plans, unless otherwise directed.
- 1.2. Volume Measurement. Transport materials measured for payment by volume in approved hauling vehicles. Display a unique identification mark on each vehicle. Furnish information necessary to calculate the volume capacity of each vehicle. The Engineer may require verification of volume through weight measurement. Use body shapes that allow the capacity to be verified. Load and level the load to the equipment's approved capacity. Loads not hauled in approved vehicles may be rejected.
- 1.3. Weight Measurement. Transport materials measured for payment by weight or truck measure in approved hauling vehicles. Furnish certified measurements, tare weights, and legal gross weight calculations for all haul units. Affix a permanent, legible number on the truck and on the trailer to correspond with the certified information. Furnish certified weights of loaded haul units transporting material if requested.

The material will be measured at the point of delivery. The cost of supplying these volume and weight capacities is subsidiary to the pertinent item. For measurement by the ton, in the field, provide measurements in accordance with Item 520, "Weighing and Measuring Equipment," except for items where ton measurements are measured by standard tables.

The Engineer may reject loads and suspend hauling operations for overloading.

- 1.3.1. Hauling on Routes Accessible to the Traveling Public. For payment purposes on haul routes accessible to the traveling public, the net weight of the load will be calculated as follows:
  - If the gross vehicle weight is less than the maximum allowed by state law, including applicable yearly weight tolerance permit, the net weight of the load will be determined by deducting the tare weight of the vehicle from the gross weight.
  - If the gross vehicle weight is more than the maximum allowed by state law, including applicable yearly weight tolerance permit, the net weight of the load will be determined by deducting the tare weight of the vehicle from the maximum gross weight allowed.
- 1.3.2. Hauling on Routes Not Accessible to the Traveling Public. For payment purposes on haul routes that are not accessible to the traveling public where advance permission is obtained in writing from the Engineer:
  - If the gross vehicle weight is less than the maximum allowed, including applicable yearly weight tolerance permit, the net weight of the load will be determined by deducting the tare weight of the vehicle from the gross weight.
  - If the gross vehicle weight is more than the maximum allowed, the net weight of the load will be determined by deducting the tare weight of the vehicle from the maximum gross weight allowed.

### PLANS QUANTITY MEASUREMENT

2.

Plans quantities may or may not represent the exact quantity of work performed or material moved, handled, or placed during the execution of the Contract. The estimated bid quantities are designated as final payment quantities, unless revised by the governing specifications or this article.

If the quantity measured as outlined under "Measurement" varies by more than 5% (or as stipulated under "Measurement" for specific Items) from the total estimated quantity for an individual item originally shown in the Contract, an adjustment may be made to the quantity of authorized work done for payment purposes.

When quantities are revised by a change in design approved by the Owner, by change order, or to correct an error on the plans, the plans quantity will be increased or decreased by the amount involved in the change, and the 5% variance will apply to the new plans quantity.

If the total Contract quantity multiplied by the unit bid price for an individual item is less than \$250 and the item is not originally a plans quantity item, then the item may be paid as a plans quantity item if the Engineer and Contractor agree in writing to fix the final quantity as a plans quantity.

For Contracts with callout work and work orders, plans quantity measurement requirements are not applicable.

### 3. ADJUSTMENT OF QUANTITIES

The party to the Contract requesting the adjustment will provide field measurements and calculations showing the revised quantity. When approved, this revised quantity will constitute the final quantity for which payment will be made. Payment for revised quantity will be made at the unit price bid for that item, except as provided for in Article 4.4., "Changes in the Work."

### 4. SCOPE OF PAYMENT

Payment of the Contract unit price is full compensation for all materials, equipment, labor, tools, and supplies necessary to complete the item of work under the Contract. Until final acceptance in accordance with Article 5.12., "Final Acceptance," assume liability for completing the work according to the Contract documents and any loss or damage arising from the performance of the work or from the action of the elements, infringement of patent, trademark, or copyright, except as provided elsewhere in the Contract.

The Owner will only pay for material incorporated into the work in accordance with the Contract. Payment of progress estimates will in no way affect the Contractor's obligation under the Contract to repair or replace any defective parts in the construction or to replace any defective materials used in the construction and to be responsible for all damages due to defects if the defects and damages are discovered on or before final inspection and acceptance of the work.

### 5. PROGRESS PAYMENTS

The Engineer will prepare a monthly estimate of the amount of work performed, including materials in place. Incomplete items of work may be paid at an agreed upon percentage as approved. Payment of the monthly estimate is determined at the Contract item prices less any withholdings or deductions in accordance with the Contract. Progress payments may be withheld for failure to comply with the Contract.

### 6. PAYMENT FOR MATERIAL ON HAND (MOH)

If payment for MOH is desired, request compensation for the invoice cost of acceptable nonperishable materials that have not been used in the work before the request, and that have been delivered to the work location or are in acceptable storage places. Nonperishable materials are those that do not have a shelf life or whose characteristics do not materially change when exposed to the elements. Include only materials that

have been sampled, tested, approved, or certified, and are ready for incorporation into the work. Only materials which are completely constructed or fabricated on the Contractor's order for a specific Contract and are so marked and on which an approved test report has been issued are eligible. Payment for MOH may include the following types of items: concrete traffic barrier, precast concrete box culverts, concrete piling, reinforced concrete pipe, and illumination poles. Any repairs required after fabricated materials have been approved for storage will require approval of the Engineer before being made and will be made at the Contractor's expense. Include only those materials that have an invoice cost of at least \$1,000 in the request for MOH payment.

If the request is acceptable, the Engineer will include payment for MOH in a progress payment. Payment for MOH does not constitute acceptance of the materials. Payment will not exceed the actual cost of the material as established by invoice, or the total cost for the associated item less reasonable placement costs, whichever is less. Materials for which the Contractor does not have a paid invoice within 60 days will not be eligible for payment and will be removed from the estimate. Payment may be limited to a portion of the invoice cost or unit price if shown elsewhere in the Contract. Payment for precast products fabricated or constructed by the Contractor for which invoices or freight bills are not available may be made based on statements of actual cost.

Submit the request on forms provided by the Owner. These forms may be electronically reproduced, provided they are in the same format and contain all the required information and certifications. Continue to submit monthly MOH forms until the total value of MOH is \$0.

By submitting a request for MOH payment, the Contractor expressly authorizes the Owner to audit MOH records, and to perform process reviews of the record-keeping system. If the Owner determines noncompliance with any of the requirements of this provision, the Owner may exclude payment for any or all MOH for the duration of the Contract.

Maintain all records relating to MOH payment until final acceptance. Provide these records to the Engineer upon request.

### 7. PAYMENT FOR EXTRA WORK AND FORCE ACCOUNT METHOD

Payment for extra work directed, performed, and accepted will be made in accordance with Article 4.4., "Changes in the Work." Payment for extra work may be established by agreed unit prices or by Force Account Method.

Agreed unit prices are unit prices that include markups and are comparable to recent bid prices for the same character of work. These unit prices may be established without additional breakdown justification.

When using Force Account Method, determine an estimated cost for the proposed work and establish labor and equipment rates and material costs. Maintain daily records of extra work and provide copies of these records daily, signed by the Contractor's representative, for verification by the Engineer. Request payment for the extra work no later than the 10th day of the month following the month in which the work was performed. Include copies of all applicable invoices. If the extra work to be performed has an estimated cost of less than \$10,000, submit for approval and payment an invoice of actual cost for materials, equipment, labor, tools, and incidentals necessary to complete the extra work.

- 7.1. **Markups**. Payment for extra work may include markups as compensation for the use of small tools, overhead expense, and profit.
- 7.1.1. **Labor**. Compensation will be made for payroll rates for each hour that the labor, foremen, or other approved workers are actually engaged in the work. In no case will the rate of wages be less than the minimum shown in the Contract for a particular category. An additional 25% of this sum will be paid as compensation for overhead, superintendence, profit, and small tools.
- 7.1.2. **Insurance and Taxes**. An additional 55% of the labor cost, excluding the 25% compensation provided in Section 9.7.1.1., "Labor," will be paid as compensation for labor insurance and labor taxes including the cost

of premiums on non-project-specific liability (excluding vehicular) insurance, workers compensation insurance, Social Security, unemployment insurance taxes, and fringe benefits.

- 7.1.3. **Materials**. Compensation will be made for materials associated with the work based on actual delivered invoice costs, less any discount. An additional 25% of this sum will be paid as compensation for overhead and profit.
- 7.1.4. **Equipment**. Payment will be made for the established equipment hourly rates for each hour that the equipment is involved in the work. An additional 15% of this sum will be paid as compensation for overhead and profit not included in the rates.

Transportation cost for mobilizing equipment will be included if the equipment is mobilized from an off-site location.

7.1.4.1. **Contractor-Owned Equipment**. For Contractor-owned machinery, trucks, power tools, or other equipment, use the FHWA rental rates found in the *Rental Rate Blue Book* multiplied by the regional adjustment factor and the rate adjustment factor to establish hourly rates. Use the rates in effect for each section of the *Rental Rate Blue Book* at the time of use.

If a rate has not been established for a particular piece of equipment in the *Rental Rate Blue Book*, the Engineer will allow a reasonable hourly rate. This price will include operating costs.

Payment for equipment will be made for the actual hours used in the work. The Owner reserves the right to withhold payment for low production or lack of progress. Payment will not be made for time lost for equipment breakdowns, time spent to repair equipment, or time after equipment is no longer needed.

If equipment is used intermittently while dedicated solely to the work, payment will be made for the duration the equipment is assigned to the work but no more than 8 hours will be paid during a 24-hour day, nor more than 40 hours per week, nor more than 176 hours per month, except when time is computed using a six-day or seven-day workweek. When using a six-day workweek, no more than 8 hours will be paid during a 24-hour day, nor more than 48 hours per week, nor more than 211 hours per month. When using a seven-day workweek, no more than 8 hours will be paid during a 24-hour day, nor more than 8 hours per week, nor more than 211 hours per month.

7.1.4.2. Equipment Not Owned by the Contractor. For equipment rented from a third party not owned by the Contractor, payment will be made at the invoice daily rental rate for each day the equipment is needed for the work. The Owner reserves the right to limit the daily rate to comparable *Rental Rate Blue Book* rates. When the invoice specifies that the rental rate does not include fuel, lubricants, repairs, and servicing, the *Rental Rate Blue Book* hourly operating cost for each hour the equipment is operated will be added.

When the invoice specifies equipment operators as a component of the equipment rental, payment will be made at the invoice rate for each operator for each day the equipment is needed for the work.

- 7.1.4.3. **Standby Equipment Costs**. Payment for standby equipment will be made in accordance with Section 9.7.1.4., "Equipment," except that:
- 7.1.4.3.1. Contractor-Owned Equipment. For Contractor-owned machinery, trucks, power tools, or other equipment:
  - Standby will be paid at 50% (to remove operating cost) of the FHWA rental rates found in the *Rental Rate Blue Book* multiplied by the regional adjustment factor and the rate adjustment factor.
  - Standby costs will not be allowed during periods when the equipment would have otherwise been idle.
- 7.1.4.3.2. **Equipment Not Owned by the Contractor**. For equipment rented from a third party not owned by the Contractor:
  - Standby will be paid at the invoice daily rental rate, excluding operating cost, which includes fuel, lubricants, repairs, and servicing. The Owner reserves the right to limit the daily standby rate to

comparable FHWA rental rates found in the *Rental Rate Blue Book* multiplied by the regional adjustment factor and the rate adjustment factor.

- Standby will be paid for equipment operators when included on the invoice and equipment operators are actually on standby.
- Standby costs will not be allowed during periods when the equipment would have otherwise been idle.
- 7.1.5. **Subcontracting**. An additional 5% of the actual invoice cost will be paid to the Contractor as compensation for administrative cost, superintendence, and profit.
- 7.1.6. **Law Enforcement**. An additional 5% of the actual invoice cost will be paid as compensation for administrative costs, superintendence, and profit.
- 7.1.7. **Railroad Flaggers**. An additional 5% of the actual invoice cost will be paid as compensation for administrative cost, superintendence, and profit.
- 7.1.8. **Bond Cost**. An additional 1% of the total compensation provided in Article 9.7., "Payment for Extra Work and Force Account Method," will be paid for the increase in bond.

### 8. RETAINAGE

The Owner will withhold 5% retainage on the Contractor. The Contractor may withhold retainage on subcontractors in accordance with state and federal regulations.

### 9. PAYMENT PROVISIONS FOR SUBCONTRACTORS

For the purposes of this article only, the term subcontractor includes suppliers and the term work includes materials provided by suppliers at a location approved by the Engineer.

These requirements apply to all tiers of subcontractors. Incorporate the provisions of this article into all subcontract or material purchase agreements.

Pay subcontractors for work performed within 10 days after receiving payment for the work performed by the subcontractor. Also, pay any retainage on a subcontractor's work within 10 days after satisfactory completion of all of the subcontractor's work. Completed subcontractor work includes vegetative establishment, test, maintenance, performance, and other similar periods that are the responsibility of the subcontractor.

For the purpose of this section, satisfactory completion is accomplished when:

- the subcontractor has fulfilled the Contract requirements of both the Owner and the subcontract for the subcontracted work, including the submittal of all information required by the specifications and the Owner; and
- the work done by the subcontractor has been inspected, approved, and paid by the Owner.

Provide a certification of prompt payment in accordance with the Owner's prompt payment procedure to certify that all subcontractors and suppliers were paid from the previous months payments and retainage was released for those whose work is complete. Submit the completed form each month and the month following the month when final acceptance occurred at the end of the project.

The inspection and approval of a subcontractor's work does not eliminate the Contractor's responsibilities for all the work as defined in Article 7.17., "Contractor's Responsibility for Work."

The Owner may pursue actions against the Contractor, including withholding of estimates and suspending the work, for noncompliance with the subcontract requirements of this section upon receipt of written notice with sufficient details showing the subcontractor has complied with contractual obligations.

# FINAL PAYMENT

10.

When the Contract has been completed, all work has been approved, final acceptance has been made in accordance with Article 5.12., "Final Acceptance," and Contractor submittals have been received, the Engineer will prepare a final estimate for payment showing the total quantity of work completed and the money owed the Contractor. The final payment will reflect the entire sum due, less any sums previously paid.

# **Special Specification 1004**

# Texas Department of Transportation

# **Tree Protection**

# 1. DESCRIPTION

Install tree protection as shown on the plans or as directed.

# 2. MATERIALS

Furnish materials in accordance with the plans.

# 3. CONSTRUCTION

Use construction methods in accordance with the plans.

# 4. MEASUREMENT

This Item will be measured by the acres of trees protected or by each tree protected.

# 5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Tree Protection." This price is full compensation for furnishing all materials, equipment, labor, and incidentals.

# Special Specification 3076 Dense-Graded Hot-Mix Asphalt



# 1. DESCRIPTION

Construct a hot-mix asphalt (HMA) pavement layer composed of a compacted, dense-graded mixture of aggregate and asphalt binder mixed hot in a mixing plant. Payment adjustments will apply to HMA placed under this specification unless the HMA is deemed exempt in accordance with Section 3076.4.9.4., "Exempt Production."

# 2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications.

Notify the Engineer of all material sources and before changing any material source or formulation. The Engineer will verify that the specification requirements are met when the Contractor makes a source or formulation change, and may require a new laboratory mixture design, trial batch, or both. The Engineer may sample and test project materials at any time during the project to verify specification compliance in accordance with Item 6, "Control of Materials."

- 2.1. Aggregate. Furnish aggregates from sources that conform to the requirements shown in Table 1 and as specified in this Section. Aggregate requirements in this Section, including those shown in Table 1, may be modified or eliminated when shown on the plans. Additional aggregate requirements may be specified when shown on the plans. Provide aggregate stockpiles that meet the definitions in this Section for coarse, intermediate, or fine aggregate. Aggregate from reclaimed asphalt pavement (RAP) is not required to meet Table 1 requirements unless otherwise shown on the plans. Supply aggregates that meet the definitions in Tex-100-E for crushed gravel or crushed stone. The Engineer will designate the plant or the quarry as the sampling location. Provide samples from materials produced for the project. The Engineer will establish the Surface Aggregate Classification (SAC) and perform Los Angeles abrasion, magnesium sulfate soundness, and Micro-Deval tests. Perform all other aggregate quality tests listed in Table 1. Document all test results on the mixture design report. The Engineer may perform tests on independent or split samples to verify Contractor test results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis given in Tex-200-F, Part II.
- 2.1.1. **Coarse Aggregate**. Coarse aggregate stockpiles must have no more than 20% material passing the No. 8 sieve. Aggregates from sources listed in the Department's *Bituminous Rated Source Quality Catalog* (BRSQC) are preapproved for use. Use only the rated values for hot-mix listed in the BRSQC. Rated values for surface treatment (ST) do not apply to coarse aggregate sources used in hot-mix asphalt.

For sources not listed on the Department's BRSQC:

- build an individual stockpile for each material;
- request the Department test the stockpile for specification compliance; and
- once approved, do not add material to the stockpile unless otherwise approved.

Provide aggregate from non-listed sources only when tested by the Engineer and approved before use. Allow 30 calendar days for the Engineer to sample, test, and report results for non-listed sources.

Provide coarse aggregate with at least the minimum SAC shown on the plans. SAC requirements only apply to aggregates used on the surface of travel lanes. SAC requirements apply to aggregates used on surfaces other than travel lanes when shown on the plans. The SAC for sources on the Department's *Aggregate Quality Monitoring Program* (AQMP) (Tex-499-A) is listed in the BRSQC.

2.1.1.1. Blending Class A and Class B Aggregates. Class B aggregate meeting all other requirements in Table 1 may be blended with a Class A aggregate to meet requirements for Class A materials, unless otherwise shown on the plans. Ensure that at least 50% by weight, or volume if required, of the material retained on the No. 4 sieve comes from the Class A aggregate source when blending Class A and B aggregates to meet a Class A requirement unless otherwise shown on the plans. Blend by volume if the bulk specific gravities of the Class A and B aggregates differ by more than 0.300. Coarse aggregate from RAP and Recycled Asphalt Shingles (RAS) will be considered as Class B aggregate for blending purposes.

The Engineer may perform tests at any time during production, when the Contractor blends Class A and B aggregates to meet a Class A requirement, to ensure that at least 50% by weight, or volume if required, of the material retained on the No. 4 sieve comes from the Class A aggregate source. The Engineer will use the Department's mix design template, when electing to verify conformance, to calculate the percent of Class A aggregate retained on the No. 4 sieve by inputting the bin percentages shown from readouts in the control room at the time of production and stockpile gradations measured at the time of production. The Engineer may determine the gradations based on either washed or dry sieve analysis from samples obtained from individual aggregate cold feed bins or aggregate stockpiles. The Engineer may perform spot checks using the gradations supplied by the Contractor on the mixture design report as an input for the template; however, a failing spot check will require confirmation with a stockpile gradation determined by the Engineer.

2.1.1.2. **Micro-Deval Abrasion**. The Engineer will perform a minimum of one Micro-Deval abrasion test in accordance with <u>Tex-461-A</u> for each coarse aggregate source used in the mixture design that has a Rated Source Soundness Magnesium (RSSM) loss value greater than 15 as listed in the BRSQC. The Engineer will perform testing before the start of production and may perform additional testing at any time during production. The Engineer may obtain the coarse aggregate samples from each coarse aggregate source or may require the Contractor to obtain the samples. The Engineer may waive all Micro-Deval testing based on a satisfactory test history of the same aggregate source.

The Engineer will estimate the magnesium sulfate soundness loss for each coarse aggregate source, when tested, using the following formula:

Mg_{est.} = (RSSM)(MD_{act.}/RSMD)

where: *Mg_{est.}* = magnesium sulfate soundness loss *MD_{act.}* = actual Micro-Deval percent loss *RSMD* = Rated Source Micro-Deval

When the estimated magnesium sulfate soundness loss is greater than the maximum magnesium sulfate soundness loss specified, the coarse aggregate source will not be allowed for use unless otherwise approved. The Engineer will consult the Soils and Aggregates Section of the Materials and Tests Division, and additional testing may be required before granting approval.

2.1.2. Intermediate Aggregate. Aggregates not meeting the definition of coarse or fine aggregate will be defined as intermediate aggregate. Supply intermediate aggregates, when used that are free from organic impurities. The Engineer may test the intermediate aggregate in accordance with <u>Tex-408-A</u> to verify the material is free from organic impurities. Supply intermediate aggregate from coarse aggregate sources, when used that meet the requirements shown in Table 1 unless otherwise approved.

Test the stockpile if 10% or more of the stockpile is retained on the No. 4 sieve, and verify that it meets the requirements in Table 1 for crushed face count ( $\underline{\text{Tex-}460-\text{A}}$ ) and flat and elongated particles ( $\underline{\text{Tex-}280-\text{F}}$ ).

2.1.3. Fine Aggregate. Fine aggregates consist of manufactured sands, screenings, and field sands. Fine aggregate stockpiles must meet the gradation requirements in Table 2. Supply fine aggregates that are free from organic impurities. The Engineer may test the fine aggregate in accordance with <u>Tex-408-A</u> to verify the material is free from organic impurities. Unless otherwise shown on the plans, up to 10% of the total aggregate may be field sand or other uncrushed fine aggregate. Use fine aggregate, with the exception of field sand, from coarse aggregate sources that meet the requirements shown in Table 1 unless otherwise approved.

Test the stockpile if 10% or more of the stockpile is retained on the No. 4 sieve and verify that it meets the requirements in Table 1 for crushed face count (<u>Tex-460-A</u>) and flat and elongated particles (<u>Tex-280-F</u>).

Property	Test Method	Requirement			
Coarse	Coarse Aggregate				
SAC	Tex-499-A (AQMP)	As shown on the plans			
Deleterious material, %, Max	<u>Tex-217-F</u> , Part I	1.5			
Decantation, %, Max	Tex-217-F, Part II	1.5			
Micro-Deval abrasion, %	<u>Tex-461-A</u>	Note 1			
Los Angeles abrasion, %, Max	<u>Tex-410-A</u>	40			
Magnesium sulfate soundness, 5 cycles, %, Max	<u>Tex-411-A</u>	30			
Crushed face count, ² %, Min	Tex-460-A, Part I	85			
Flat and elongated particles @ 5:1, %, Max	<u>Tex-280-F</u>	10			
Fine Aggregate					
Linear shrinkage, %, Max	<u>Tex-107-E</u>	3			
Sand equivalent, %, Min	<u>Tex-203-F</u>	45			

	Table	1
Anaroasto	Quality	Requirements

 Used to estimate the magnesium sulfate soundness loss in accordance with Section 3076.2.1.1.2., "Micro-Deval Abrasion."

2. Only applies to crushed gravel.

#### Table 2 Gradation Requirements for Fine Aggregate

Oradation Requirements for The Aggregate			
Sieve Size	% Passing by Weight or Volume		
3/8"	100		
#8	70–100		
#200	0–30		

2.2.

**Mineral Filler**. Mineral filler consists of finely divided mineral matter such as agricultural lime, crusher fines, hydrated lime, or fly ash. Mineral filler is allowed unless otherwise shown on the plans. Use no more than 2% hydrated lime or fly ash unless otherwise shown on the plans. Use no more than 1% hydrated lime if a substitute binder is used unless otherwise shown on the plans or allowed. Test all mineral fillers except hydrated lime and fly ash in accordance with <u>Tex-107-E</u> to ensure specification compliance. The plans may require or disallow specific mineral fillers. Provide mineral filler, when used, that:

- is sufficiently dry, free-flowing, and free from clumps and foreign matter as determined by the Engineer;
- does not exceed 3% linear shrinkage when tested in accordance with <u>Tex-107-E</u>; and
- meets the gradation requirements in Table 3, unless otherwise shown on the plans.

Table 3		
Gradation Requirements for Mineral Filler		
Sieve Size	% Passing by Weight or Volume	
#8	100	
#200	55–100	

- 2.3. **Baghouse Fines**. Fines collected by the baghouse or other dust-collecting equipment may be reintroduced into the mixing drum.
- 2.4. **Asphalt Binder**. Furnish the type and grade of performance-graded (PG) asphalt specified on the plans.

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- 2.5. **Tack Coat.** Furnish CSS-1H, SS-1H, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder in accordance with Item 300, "Asphalts, Oils, and Emulsions." Specialized tack coat materials listed on the Department's MPL are allowed or required when shown on the plans. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 2.6. **Additives.** Use the type and rate of additive specified when shown on the plans. Additives that facilitate mixing, compaction, or improve the quality of the mixture are allowed when approved. Provide the Engineer with documentation such as the bill of lading showing the quantity of additives used in the project unless otherwise directed.
- 2.6.1. **Lime and Liquid Antistripping Agent**. When lime or a liquid antistripping agent is used, add in accordance with Item 301, "Asphalt Antistripping Agents." Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream unless the plant has a baghouse or dust collection system that reintroduces the lime into the drum.
- 2.6.2. Warm Mix Asphalt (WMA). Warm Mix Asphalt (WMA) is defined as HMA that is produced within a target temperature discharge range of 215°F and 275°F using approved WMA additives or processes from the Department's MPL.

WMA is allowed for use on all projects and is required when shown on the plans. When WMA is required, the maximum placement or target discharge temperature for WMA will be set at a value below 275°F.

Department-approved WMA additives or processes may be used to facilitate mixing and compaction of HMA produced at target discharge temperatures above 275°F; however, such mixtures will not be defined as WMA.

2.6.3. **Compaction Aid.** Compaction Aid is defined as a chemical warm mix additive that is used to produce an asphalt mixture at a discharge temperature greater than 275°F.

Compaction Aid is allowed for use on all projects and is required when shown on the plans.

2.7. Recycled Materials. Use of RAP and RAS is permitted unless otherwise shown on the plans. Use of RAS is restricted to only intermediate and base mixes unless otherwise shown on the plans. Do not exceed the maximum allowable percentages of RAP and RAS shown in Table 4. The allowable percentages shown in Table 4 may be decreased or increased when shown on the plans. Determine the asphalt binder content and gradation of the RAP and RAS stockpiles for mixture design purposes in accordance with <u>Tex-236-F</u>, Part I. The Engineer may verify the asphalt binder content of the stockpiles at any time during production. Perform other tests on RAP and RAS when shown on the plans. Asphalt binder from RAP and RAS is designated as recycled asphalt binder. Calculate and ensure that the ratio of the recycled asphalt binder to total binder does not exceed the percentages shown in Table 5 during mixture design and HMA production when RAP or RAS is used. Use a separate cold feed bin for each stockpile of RAP and RAS during HMA production.

Surface, intermediate, and base mixes referenced in Tables 4 and 5 are defined as follows:

- Surface. The final HMA lift placed at the top of the pavement structure or placed directly below mixtures produced in accordance with Items 316, 342, 347, or 348;
- Intermediate. Mixtures placed below an HMA surface mix and less than or equal to 8.0 in. from the riding surface; and
- Base. Mixtures placed greater than 8.0 in. from the riding surface. Unless otherwise shown on the plans, mixtures used for bond breaker are defined as base mixtures.
- 2.7.1. **RAP**. RAP is salvaged, milled, pulverized, broken, or crushed asphalt pavement. Fractionated RAP is defined as a stockpile that contains RAP material with a minimum of 95.0% passing the 3/8-in. or 1/2-in. sieve, before burning in the ignition oven, unless otherwise approved. The Engineer may allow the Contractor to use an alternate to the 3/8-in. or 1/2-in. screen to fractionate the RAP.

Use of Contractor-owned RAP including HMA plant waste is permitted unless otherwise shown on the plans. Department-owned RAP stockpiles are available for the Contractor's use when the stockpile locations are shown on the plans. If Department-owned RAP is available for the Contractor's use, the Contractor may use Contractor-owned fractionated RAP and replace it with an equal quantity of Department-owned RAP. Department-owned RAP generated through required work on the Contractor is available for the Contractor's use when shown on the plans. Perform any necessary tests to ensure Contractor- or Department-owned RAP is appropriate for use. The Department will not perform any tests or assume any liability for the quality of the Department-owned RAP unless otherwise shown on the plans. The Contractor will retain ownership of RAP generated on the project when shown on the plans.

Do not use Department- or Contractor-owned RAP contaminated with dirt or other objectionable materials. Do not use Department- or Contractor-owned RAP if the decantation value exceeds 5% and the plasticity index is greater than 8. Test the stockpiled RAP for decantation in accordance with <u>Tex-406-A</u>, Part I. Determine the plasticity index in accordance with <u>Tex-106-E</u> if the decantation value exceeds 5%. The decantation and plasticity index requirements do not apply to RAP samples with asphalt removed by extraction or ignition.

Do not intermingle Contractor-owned RAP stockpiles with Department-owned RAP stockpiles. Remove unused Contractor-owned RAP material from the project site upon completion of the project. Return unused Department-owned RAP to the designated stockpile location.

Table 4				
	Maximum Allowable Amounts of RAP ¹			
	Ма	aximum Allowab	le	
	Fractionated RAP (%)			
	Surface Intermediate Base			
15.0 25.0 30.0				
1. Must also meet the recycled binder to total				

binder ratio shown in Table 5.

2.7.2. **RAS**. Use of post-manufactured RAS or post-consumer RAS (tear-offs) is not permitted in surface mixtures unless otherwise shown on the plans. RAS may be used in intermediate and base mixtures unless otherwise shown on the plans. Up to 3% RAS may be used separately or as a replacement for fractionated RAP in accordance with Table 4 and Table 5. RAS is defined as processed asphalt shingle material from manufacturing of asphalt roofing shingles or from re-roofing residential structures. Post-manufactured RAS is processed manufacturer's shingle scrap by-product. Post-consumer RAS is processed shingle scrap removed from residential structures. Comply with all regulatory requirements stipulated for RAS by the TCEQ. RAS may be used separately or in conjunction with RAP.

Process the RAS by ambient grinding or granulating such that 100% of the particles pass the 3/8 in. sieve when tested in accordance with <u>Tex-200-F</u>, Part I. Perform a sieve analysis on processed RAS material before extraction (or ignition) of the asphalt binder.

Add sand meeting the requirements of Table 1 and Table 2 or fine RAP to RAS stockpiles if needed to keep the processed material workable. Any stockpile that contains RAS will be considered a RAS stockpile and be limited to no more than 3.0% of the HMA mixture in accordance with Table 4.

Certify compliance of the RAS with <u>DMS-11000</u>, "Evaluating and Using Nonhazardous Recyclable Materials Guidelines." Treat RAS as an established nonhazardous recyclable material if it has not come into contact with any hazardous materials. Use RAS from shingle sources on the Department's MPL. Remove substantially all materials before use that are not part of the shingle, such as wood, paper, metal, plastic, and felt paper. Determine the deleterious content of RAS material for mixture design purposes in accordance with <u>Tex-217-F</u>, Part III. Do not use RAS if deleterious materials are more than 0.5% of the stockpiled RAS unless otherwise approved. Submit a sample for approval before submitting the mixture design. The Department will perform the testing for deleterious material of RAS to determine specification compliance.

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2.8.

**Substitute Binders**. Unless otherwise shown on the plans, the Contractor may use a substitute PG binder listed in Table 5 instead of the PG binder originally specified, if using recycled materials, and if the substitute PG binder and mixture made with the substitute PG binder meet the following:

- the substitute binder meets the specification requirements for the substitute binder grade in accordance with Section 300.2.10., "Performance-Graded Binders;" and
- the mixture has less than 10.0 mm of rutting on the Hamburg Wheel test (<u>Tex-242-F</u>) after the number of passes required for the originally specified binder. Use of substitute PG binders may only be allowed at the discretion of the Engineer if the Hamburg Wheel test results are between 10.0 mm and 12.5 mm.

Table 5

Allowable Substitute PG Binders and Maximum Recycled Binder Ratios					
Originally	Originally Allowable Substitute	Allowable Substitute PG Binder for	Maximum Ratio of Recycled Binder ¹ to Total Binder (%)		
PG Binder	Surface Mixes	Intermediate and Base Mixes	Surface	Intermediate	Base
76-22 ^{4,5}	70-22	70-22	10.0	20.0	25.0
70-22 ^{2,5}	N/A	64-22	10.0	20.0	25.0
64-22 ^{2,3}	N/A	N/A	10.0	20.0	25.0
76-28 ^{4,5}	70-28	70-28	10.0	20.0	25.0
70-28 ^{2,5}	N/A	64-28	10.0	20.0	25.0
64-28 ^{2,3}	N/A	N/A	10.0	20.0	25.0

 Combined recycled binder from RAP and RAS. RAS is not permitted in surface mixtures unless otherwise shown on the plans.

2. Binder substitution is not allowed for surface mixtures.

3. Binder substitution is not allowed for intermediate and base mixtures.

- 4. Use no more than 10.0% recycled binder in surface mixtures when using this originally specified PG binder.
- Use no more than 20.0% recycled binder when using this originally specified PG binder for intermediate mixtures. Use no more than 25.0% recycled binder when using this originally specified PG binder for base mixtures.

### 3. EQUIPMENT

Provide required or necessary equipment in accordance with Item 320, "Equipment for Asphalt Concrete Pavement."

# 4. CONSTRUCTION

Produce, haul, place, and compact the specified paving mixture. In addition to tests required by the specification, Contractors may perform other QC tests as deemed necessary. At any time during the project, the Engineer may perform production and placement tests as deemed necessary in accordance with Item 5, "Control of the Work." Schedule and participate in a mandatory pre-paving meeting with the Engineer on or before the first day of paving unless otherwise shown on the plans.

4.1. **Certification**. Personnel certified by the Department-approved hot-mix asphalt certification program must conduct all mixture designs, sampling, and testing in accordance with Table 6. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning production and when personnel changes are made. Provide a mixture design developed and signed by a Level 2 certified specialist. Provide Level 1A certified specialists at the plant during production operations. Provide Level 1B certified specialists to conduct placement tests. Provide AGG101 certified specialists for aggregate testing.

l est Methods,	Test Responsibility, and	d Minimum Certifica	ation Levels	1
Test Description	Test Method	Contractor	Engineer	Level ¹
	1. Aggregate and Recycle	d Material Testing		
Sampling	<u>Tex-221-F</u>	✓	✓	1A/AGG101
Dry sieve	<u>Tex-200-F</u> , Part I	✓	√	1A/AGG101
Washed sieve	Tex-200-F, Part II	✓	✓	1A/AGG101
Deleterious material	Tex-217-F, Parts I & III	✓	✓	AGG101
Decantation	<u>Tex-217-F</u> , Part II	✓	✓	AGG101
Los Angeles abrasion	<u>Tex-410-A</u>		✓	TxDOT
Magnesium sulfate soundness	<u>Tex-411-A</u>		✓	TxDOT
Micro-Deval abrasion	<u>Tex-461-A</u>		✓	AGG101
Crushed face count	<u>Tex-460-A</u>	✓	✓	AGG101
Flat and elongated particles	<u>Tex-280-F</u>	<ul> <li>✓</li> </ul>	✓	AGG101
Linear shrinkage	<u>Tex-107-E</u>	✓	✓	AGG101
Sand equivalent	<u>Tex-203-F</u>	<ul> <li>✓</li> </ul>	✓	AGG101
Organic impurities	<u>Tex-408-A</u>	$\checkmark$	$\checkmark$	AGG101
	2. Asphalt Binder & Tacl	k Coat Sampling		1
Asphalt binder sampling	<u>Tex-500-C</u> , Part II	✓	$\checkmark$	1A/1B
Tack coat sampling	Tex-500-C, Part III	✓	✓	1A/1B
	3. Mix Design & V	erification		
Design and JMF changes	<u>Tex-204-F</u>	✓	✓	2
Mixing	<u>Tex-205-F</u>	✓	✓	2
Molding (TGC)	<u>Tex-206-F</u>	✓	✓	1A
Molding (SGC)	<u>Tex-241-F</u>	✓	✓	1A
Laboratory-molded density	Tex-207-F, Parts I & VI	✓	✓	1A
Rice gravity	Tex-227-F, Part II	✓	✓	1A
Ignition oven correction factors ²	Tex-236-F, Part II	✓	✓	2
Indirect tensile strength	<u>Tex-226-F</u>	✓	✓	1A
Hamburg Wheel test	<u>Tex-242-F</u>	✓	✓	1A
Boil test	<u>Tex-530-C</u>	$\checkmark$	$\checkmark$	1A
	4. Production 1	Testing		
Selecting production random numbers	<u>Tex-225-F</u> , Part I		$\checkmark$	1A
Mixture sampling	<u>Tex-222-F</u>	$\checkmark$	$\checkmark$	1A/1B
Molding (TGC)	<u>Tex-206-F</u>	$\checkmark$	$\checkmark$	1A
Molding (SGC)	<u>Tex-241-F</u>	$\checkmark$	$\checkmark$	1A
Laboratory-molded density	Tex-207-F, Parts I & VI	$\checkmark$	$\checkmark$	1A
Rice gravity	Tex-227-F, Part II	$\checkmark$	$\checkmark$	1A
Gradation & asphalt binder content ²	<u>Tex-236-F</u> , Part I	✓	$\checkmark$	1A
Control charts	<u>Tex-233-F</u>	$\checkmark$	$\checkmark$	1A
Moisture content	Tex-212-F, Part II	$\checkmark$	$\checkmark$	1A/AGG101
Hamburg Wheel test	<u>Tex-242-F</u>	✓	✓	1A
Micro-Deval abrasion	<u>Tex-461-A</u>		✓	AGG101
Boil test	<u>Tex-530-C</u>	✓	✓	1A
Abson recovery	<u>Tex-211-F</u>		$\checkmark$	TxDOT
	5. Placement 1	"esting		
Selecting placement random numbers	Tex-225-F, Part II		$\checkmark$	1B
Trimming roadway cores	Tex-251-F, Parts I & II	✓	$\checkmark$	1A/1B
In-place air voids	Tex-207-F, Parts I & VI	✓	$\checkmark$	1A
In-place density (nuclear method)	Tex-207-F, Part III	$\checkmark$		1B
Establish rolling pattern	Tex-207-F, Part IV	$\checkmark$		1B
Control charts	<u>Tex-233-F</u>	$\checkmark$	$\checkmark$	1A
Ride quality measurement	Tex-1001-S	✓	✓	Note 3
Segregation (density profile)	Tex-207-F, Part V	✓	✓	1B
Longitudinal joint density	Tex-207-F, Part VII	✓	✓	1B
Thermal profile	<u>Tex-244-F</u>	$\checkmark$	$\checkmark$	1B
Shear Bond Strength Test	Tex-249-F		✓	TxDOT
1 Level 1A 1B AGG101 and 2 are ce	rtification levels provided by	the Hot Mix Asphalt Ce	nter certification pr	maram

Table 6 et Mothada, Tast D vol

Refer to Section 3076.4.9.2.3., "Production Testing," for exceptions to using an ignition oven. Profiler and operator are required to be certified at the Texas A&M Transportation Institute facility when Surface Test Type B is specified. 2. 3.

**Reporting and Responsibilities**. Use Department-provided templates to record and calculate all test data, including mixture design, production and placement QC/QA, control charts, thermal profiles, segregation density profiles, and longitudinal joint density. Obtain the current version of the templates at http://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html or from the Engineer. The Engineer and the Contractor will provide any available test results to the other party when requested. The maximum allowable time for the Contractor and Engineer to exchange test data is as given in Table 7 unless otherwise approved. The Engineer and the Contractor or placement, a payment adjustment less than 1.000, or that fails to meet the specification requirements. Record and electronically submit all test results and pertinent information on Department-provided templates.

Subsequent sublots placed after test results are available to the Contractor, which require suspension of operations, may be considered unauthorized work. Unauthorized work will be accepted or rejected at the discretion of the Engineer in accordance with Article 5.3., "Conformity with Plans, Specifications, and Special Provisions."

Table 7

Reporting Schedule				
Description	Reported By	Reported To	To Be Reported Within	
	Production	Quality Control		
Gradation ¹				
Asphalt binder content ¹		Engineer	1 working day of completion of	
Laboratory-molded density ²	Contractor		the sublet	
Moisture content ³				
Boil test ³				
	Production Q	uality Assurance		
Gradation ³				
Asphalt binder content ³				
Laboratory-molded density ¹	Engineer	Contractor	1 working day of completion of the sublot	
Hamburg Wheel test ⁴	Ligiteel			
Boil test ³				
Binder tests ⁴				
Placement Quality Control				
In-place air voids ²		Engineer	1 working day of completion of the lot	
Segregation ¹	Contractor			
Longitudinal joint density ¹	Contractor			
Thermal profile ¹				
	Placement Qu	uality Assurance		
In-place air voids ¹			1 working day after receiving the trimmed cores ⁵	
Segregation ³	Engineer	Contractor		
Longitudinal joint density ³	Engineer	Contractor	1 working day of completion of	
Thermal profile ³			the lot	
Aging ratio ⁴				
Payment adjustment summary	Engineer	Contractor	2 working days of performing all required tests and receiving Contractor test data	
·				

1. These tests are required on every sublot.

4.2.

2. Optional test. When performed on split samples, report the results as soon as they become available.

3. To be performed at the frequency specified in Table 16 or as shown on the plans.

4. To be reported as soon as the results become available.

5. 2 days are allowed if cores cannot be dried to constant weight within 1 day.

The Engineer will use the Department-provided template to calculate all payment adjustment factors for the lot. Sublot samples may be discarded after the Engineer and Contractor sign off on the payment adjustment summary documentation for the lot.

Use the procedures described in <u>Tex-233-F</u> to plot the results of all quality control (QC) and quality assurance (QA) testing. Update the control charts as soon as test results for each sublot become available. Make the control charts readily accessible at the field laboratory. The Engineer may suspend production for failure to update control charts.

4.3. Quality Control Plan (QCP). Develop and follow the QCP in detail. Obtain approval for changes to the QCP made during the project. The Engineer may suspend operations if the Contractor fails to comply with the QCP.

Submit a written QCP before the mandatory pre-paving meeting. Receive approval of the QCP before beginning production. Include the following items in the QCP:

### 4.3.1. **Project Personnel**. For project personnel, include:

- a list of individuals responsible for QC with authority to take corrective action;
- current contact information for each individual listed; and
- current copies of certification documents for individuals performing specified QC functions.

4.3.2. **Material Delivery and Storage**. For material delivery and storage, include:

- the sequence of material processing, delivery, and minimum quantities to assure continuous plant operations;
- aggregate stockpiling procedures to avoid contamination and segregation;
- frequency, type, and timing of aggregate stockpile testing to assure conformance of material requirements before mixture production; and
- procedure for monitoring the quality and variability of asphalt binder.

### 4.3.3. **Production**. For production, include:

- loader operation procedures to avoid contamination in cold bins;
- procedures for calibrating and controlling cold feeds;
- procedures to eliminate debris or oversized material;
- procedures for adding and verifying rates of each applicable mixture component (e.g., aggregate, asphalt binder, RAP, RAS, lime, liquid antistrip, WMA);
- procedures for reporting job control test results; and
- procedures to avoid segregation and drain-down in the silo.
- 4.3.4. **Loading and Transporting**. For loading and transporting, include:
  - type and application method for release agents; and
  - truck loading procedures to avoid segregation.

#### 4.3.5. Placement and Compaction. For placement and compaction, include:

- proposed agenda for mandatory pre-paving meeting, including date and location;
- proposed paving plan (e.g., paving widths, joint offsets, and lift thicknesses);
- type and application method for release agents in the paver and on rollers, shovels, lutes, and other utensils;
- procedures for the transfer of mixture into the paver, while avoiding segregation and preventing material spillage;
- process to balance production, delivery, paving, and compaction to achieve continuous placement operations and good ride quality;
- paver operations (e.g., operation of wings, height of mixture in auger chamber) to avoid physical and thermal segregation and other surface irregularities; and
- procedures to construct quality longitudinal and transverse joints.

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### 4.4. Mixture Design.

- 4.4.1. **Design Requirements**. The Contractor will design the mixture using a Superpave Gyratory Compactor (SGC). A Texas Gyratory Compactor (TGC) may be used when shown on the plans. Use the dense-graded design procedure provided in <u>Tex-204-F</u>. Design the mixture to meet the requirements listed in Tables 1, 2, 3, 4, 5, 8, 9, and 10.
- 4.4.1.1. **Design Number of Gyrations (Ndesign) When The SGC Is Used**. Design the mixture at 50 gyrations (Ndesign). Use a target laboratory-molded density of 96.0% to design the mixture; however, adjustments can be made to the Ndesign value as noted in Table 9. The Ndesign level may be reduced to at least 35 gyrations at the Contractor's discretion.

Use an approved laboratory from the Department's MPL to perform the Hamburg Wheel test, and provide results with the mixture design, or provide the laboratory mixture and request that the Department perform the Hamburg Wheel test. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel test results on the laboratory mixture design.

The Engineer will provide the mixture design when shown on the plans. The Contractor may submit a new mixture design at any time during the project. The Engineer will verify and approve all mixture designs (JMF1) before the Contractor can begin production.

Provide the Engineer with a mixture design report using the Department-provided template. Include the following items in the report:

- the combined aggregate gradation, source, specific gravity, and percent of each material used;
- asphalt binder content and aggregate gradation of RAP and RAS stockpiles;
- the target laboratory-molded density (or Ndesign level when using the SGC);
- results of all applicable tests;
- the mixing and molding temperatures;
- the signature of the Level 2 person or persons that performed the design;
- the date the mixture design was performed; and
- a unique identification number for the mixture design.

Sieve	В	C	D	F
Sieve	Fine	Coarse	Fine	Fine
Size	Base	Surface	Surface	Mixture
2"	-	-	-	-
1-1/2"	100.0 ¹	-	-	-
1"	98.0-100.0	100.0 ¹	_	-
3/4"	84.0-98.0	95.0-100.0	100.0 ¹	-
1/2"	-	-	98.0-100.0	100.0 ¹
3/8"	60.0-80.0	70.0-85.0	85.0-100.0	98.0-100.0
#4	40.0-60.0	43.0-63.0	50.0-70.0	70.0-90.0
#8	29.0-43.0	32.0-44.0	35.0-46.0	38.0-48.0
#30	13.0-28.0	14.0-28.0	15.0–29.0	12.0-27.0
#50	6.0-20.0	7.0–21.0	7.0–20.0	6.0–19.0
#200	2.0-7.0	2.0-7.0	2.0-7.0	2.0-7.0
Design VMA, % Minimum				
-	13.0	14.0	15.0	16.0
Production (Plant-Produced) VMA, % Minimum				
-	12.5	13.5	14.5	15.5

Table 8
Master Gradation Limits (% Passing by Weight or Volume) and VMA Requirements

1. Defined as maximum sieve size. No tolerance allowed.

Laboratory Mixture Design Properties			
Mixture Property	Test Method	Requirement	
Target laboratory-molded density, % (SGC)	<u>Tex-207-F</u>	96.0	
Design gyrations (Ndesign for SGC)	<u>Tex-241-F</u>	501	
Indirect tensile strength (dry), psi	<u>Tex-226-F</u>	85–200 ²	
Boil test ³	<u>Tex-530-C</u>	-	

Table 9 aboratory Mixture Design Properties

1. Adjust within a range of 35–100 gyrations when shown on the plans or specification or when mutually agreed between the Engineer and Contractor.

- 2. The Engineer may allow the IDT strength to exceed 200 psi if the corresponding Hamburg Wheel rut depth is greater than 3.0 mm and less than 12.5 mm.
- 3. Used to establish baseline for comparison to production results. May be waived when approved.

Table 10
Hamburg Wheel Test Requirements

numburg wheel rectinequirements			
High-Temperature Binder Grade	Test Method	Minimum # of Passes @ 12.5 mm ¹ Rut Depth, Tested @ 50°C	
PG 64 or lower		10,000 ²	
PG 70	Tex-242-F	15,000 ³	
PG 76 or higher		20,000	

 When the rut depth at the required minimum number of passes is less than 3 mm, the Engineer may require the Contractor to increase the target laboratory-molded density (TGC) by 0.5% to no more than 97.5% or lower the Ndesign level (SGC) to at least 35 gyrations.

2. May be decreased to at least 5,000 passes when shown on the plans.

3. May be decreased to at least 10,000 passes when shown on the plans.

- 4.4.1.2. **Target Laboratory-Molded Density When The TGC Is Used**. Design the mixture at a 96.5% target laboratory-molded density. Increase the target laboratory-molded density to 97.0% or 97.5% at the Contractor's discretion or when shown on the plans or specification.
- 4.4.2. **Job-Mix Formula Approval**. The job-mix formula (JMF) is the combined aggregate gradation, target laboratory-molded density (or Ndesign level), and target asphalt percentage used to establish target values for hot-mix production. JMF1 is the original laboratory mixture design used to produce the trial batch. When WMA is used, JMF1 may be designed and submitted to the Engineer without including the WMA additive. When WMA is used, document the additive or process used and recommended rate on the JMF1 submittal. The Engineer and the Contractor will verify JMF1 based on plant-produced mixture from the trial batch unless otherwise approved. The Engineer may accept an existing mixture design previously used on a Department project and may waive the trial batch to verify JMF1. The Department may require the Contractor to reimburse the Department for verification tests if more than 2 trial batches per design are required.

### 4.4.2.1. Contractor's Responsibilities.

- 4.4.2.1.1. **Providing Gyratory Compactor**. Use a SGC calibrated in accordance with <u>Tex-241-F</u> to design the mixture in accordance with <u>Tex-204-F</u>, Part IV, for molding production samples. Locate the SGC, if used, at the Engineer's field laboratory and make the SGC available to the Engineer for use in molding production samples. Furnish a TGC calibrated in accordance with <u>Tex-914-K</u> when shown on the plans to design the mixture in accordance with <u>Tex-204-F</u>, Part I, for molding production samples.
- 4.4.2.1.2. **Gyratory Compactor Correlation Factors**. Use <u>Tex-206-F</u>, Part II, to perform a gyratory compactor correlation when the Engineer uses a different gyratory compactor. Apply the correlation factor to all subsequent production test results.
- 4.4.2.1.3. **Submitting JMF1**. Furnish a mix design report (JMF1) with representative samples of all component materials and request approval to produce the trial batch. Provide approximately 10,000 g of the design mixture if opting to have the Department perform the Hamburg Wheel test on the laboratory mixture, and request that the Department perform the test.

- 4.4.2.1.4. **Supplying Aggregates**. Provide approximately 40 lb. of each aggregate stockpile unless otherwise directed.
- 4.4.2.1.5. **Supplying Asphalt**. Provide at least 1 gal. of the asphalt material and enough quantities of any additives proposed for use.
- 4.4.2.1.6. **Ignition Oven Correction Factors**. Determine the aggregate and asphalt correction factors from the ignition oven in accordance with <u>Tex-236-F</u>, Part II. Provide correction factors that are not more than 12 months old. Provide the Engineer with split samples of the mixtures before the trial batch production, including all additives (except water), and blank samples used to determine the correction factors for the ignition oven used for QA testing during production. Correction factors established from a previously approved mixture design may be used for the current mixture design if the mixture design and ignition oven are the same as previously used, unless otherwise directed.
- 4.4.2.1.7. **Boil Test**. Perform the test and retain the tested sample from <u>Tex-530-C</u> until completion of the project or as directed. Use this sample for comparison purposes during production. The Engineer may waive the requirement for the boil test.
- 4.4.2.1.8. **Trial Batch Production**. Provide a plant-produced trial batch upon receiving conditional approval of JMF1 and authorization to produce a trial batch, including the WMA additive or process if applicable, for verification testing of JMF1 and development of JMF2. Produce a trial batch mixture that meets the requirements in Table 4, Table 5, and Table 11. The Engineer may accept test results from recent production of the same mixture instead of a new trial batch.
- 4.4.2.1.9. **Trial Batch Production Equipment**. Use only equipment and materials proposed for use on the project to produce the trial batch.
- 4.4.2.1.10. **Trial Batch Quantity**. Produce enough quantity of the trial batch to ensure that the mixture meets the specification requirements.
- 4.4.2.1.11. **Number of Trial Batches**. Produce trial batches as necessary to obtain a mixture that meets the specification requirements.
- 4.4.2.1.12. **Trial Batch Sampling**. Obtain a representative sample of the trial batch and split it into 3 equal portions in accordance with <u>Tex-222-F</u>. Label these portions as "Contractor," "Engineer," and "Referee." Deliver samples to the appropriate laboratory as directed.
- 4.4.2.1.13. **Trial Batch Testing**. Test the trial batch to ensure the mixture produced using the proposed JMF1 meets the mixture requirements in Table 11. Ensure the trial batch mixture is also in compliance with the Hamburg Wheel requirement in Table 10. Use a Department-approved laboratory to perform the Hamburg Wheel test on the trial batch mixture or request that the Department perform the Hamburg Wheel test. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel test results on the trial batch. Provide the Engineer with a copy of the trial batch test results.
- 4.4.2.1.14. Development of JMF2. Evaluate the trial batch test results after the Engineer grants full approval of JMF1 based on results from the trial batch, determine the optimum mixture proportions, and submit as JMF2. Adjust the asphalt binder content or gradation to achieve the specified target laboratory-molded density. The asphalt binder content established for JMF2 is not required to be within any tolerance of the optimum asphalt binder content established for JMF1; however, mixture produced using JMF2 must meet the voids in mineral aggregates (VMA) requirements for production shown in Table 8. If the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1, the Engineer may perform or require the Contractor to perform Tex-226-F on Lot 1 production to confirm the indirect tensile strength does not exceed 200 psi. Verify that JMF2 meets the mixture requirements in Table 5.
- 4.4.2.1.15. **Mixture Production**. Use JMF2 to produce Lot 1 as described in Section 3076.4.9.3.1.1., "Lot 1 Placement," after receiving approval for JMF2 and a passing result from the Department's or a Department-approved

laboratory's Hamburg Wheel test on the trial batch. If desired, proceed to Lot 1 production, once JMF2 is approved, at the Contractor's risk without receiving the results from the Department's Hamburg Wheel test on the trial batch.

Notify the Engineer if electing to proceed without Hamburg Wheel test results from the trial batch. Note that the Engineer may require up to the entire sublot of any mixture failing the Hamburg Wheel test to be removed and replaced at the Contractor's expense.

- 4.4.2.1.16. **Development of JMF3**. Evaluate the test results from Lot 1, determine the optimum mixture proportions, and submit as JMF3 for use in Lot 2.
- 4.4.2.1.17. **JMF Adjustments**. If JMF adjustments are necessary to achieve the specified requirements, make the adjustments before beginning a new lot. The adjusted JMF must:
  - be provided to the Engineer in writing before the start of a new lot;
  - be numbered in sequence to the previous JMF;
  - meet the mixture requirements in Table 4 and Table 5;
  - meet the master gradation limits shown in Table 8; and
  - be within the operational tolerances of JMF2 listed in Table 11.
- 4.4.2.1.18. **Requesting Referee Testing**. Use referee testing, if needed, in accordance with Section 3076.4.9.1., "Referee Testing," to resolve testing differences with the Engineer.

Table 11 Operational Tolerances				
				Description
Individual % retained for #8 sieve and larger	<u>Tex-200-F</u> or <u>Tex-236-F</u>	Must be Within Master Grading Limits in Table 8	±5.0 ^{2,3}	±5.0
Individual % retained for sieves smaller than #8 and larger than #200			±3.0 ^{2,3}	±3.0
% passing the #200 sieve			±2.0 ^{2,3}	±1.6
Asphalt binder content, %	Tex-236-F	±0.5	±0.3 ³	±0.3
Laboratory-molded density, %	<u>Tex-207-F</u>	±1.0	±1.0	±1.0
In-place air voids, %		N/A	N/A	±1.0
Laboratory-molded bulk specific gravity		N/A	N/A	±0.020
VMA, %, min	Tex-204-F	Note ⁴	Note ⁴	N/A
Theoretical maximum specific (Rice) gravity	Tex-227-F	N/A	N/A	±0.020

1. Contractor may request referee testing only when values exceed these tolerances.

2. When within these tolerances, mixture production gradations may fall outside the master grading limits; however, the % passing the #200 will be considered out of tolerance when outside the master grading limits.

3. Only applies to mixture produced for Lot 1 and higher.

4. Test and verify that Table 8 requirements are met.

#### 4.4.2.2. Engineer's Responsibilities.

4.4.2.2.1. **Gyratory Compactor**. For SGC mixtures designed in accordance with <u>Tex-204-F</u>, Part IV, the Engineer will use a Department SGC, calibrated in accordance with <u>Tex-241-F</u>, to mold samples for laboratory mixture design verification. For molding trial batch and production specimens, the Engineer will use the Contractor-provided SGC at the field laboratory or provide and use a Department SGC at an alternate location. The Engineer will make the Contractor-provided SGC in the Department field laboratory available to the Contractor for molding verification samples.

For TGC mixtures designed in accordance with <u>Tex-204-F</u>, Part I, the Engineer will use a Department TGC, calibrated in accordance with <u>Tex-914-K</u>, to mold samples for trial batch and production testing. The Engineer will make the Department TGC and the Department field laboratory available to the Contractor for molding verification samples, if requested by the Contractor.

# 4.4.2.2.2. Conditional Approval of JMF1 and Authorizing Trial Batch. The Engineer will review and verify conformance of the following information within 2 working days of receipt:

- the Contractor's mix design report (JMF1);
- the Contractor-provided Hamburg Wheel test results;
- all required materials including aggregates, asphalt, additives, and recycled materials; and
- the mixture specifications.

The Engineer will grant the Contractor conditional approval of JMF1 if the information provided on the paper copy of JMF1 indicates that the Contractor's mixture design meets the specifications. When the Contractor does not provide Hamburg Wheel test results with laboratory mixture design, 10 working days are allowed for conditional approval of JMF1. The Engineer will base full approval of JMF1 on the test results on mixture from the trial batch.

Unless waived, the Engineer will determine the Micro-Deval abrasion loss in accordance with Section 3076.2.1.1.2., "Micro-Deval Abrasion." If the Engineer's test results are pending after two working days, conditional approval of JMF1 will still be granted within two working days of receiving JMF1. When the Engineer's test results become available, they will be used for specification compliance.

After conditionally approving JMF1, including either Contractor- or Department-supplied Hamburg Wheel test results, the Contractor is authorized to produce a trial batch.

- 4.4.2.2.3. **Hamburg Wheel Testing of JMF1**. If the Contractor requests the option to have the Department perform the Hamburg Wheel test on the laboratory mixture, the Engineer will mold samples in accordance with <u>Tex-242-F</u> to verify compliance with the Hamburg Wheel test requirement in Table 10.
- 4.4.2.2.4. **Ignition Oven Correction Factors**. The Engineer will use the split samples provided by the Contractor to determine the aggregate and asphalt correction factors for the ignition oven used for QA testing during production in accordance with <u>Tex-236-F</u>, Part II. Provide correction factors that are not more than 12 months old.
- 4.4.2.2.5. **Testing the Trial Batch**. Within 1 full working day, the Engineer will sample and test the trial batch to ensure that the mixture meets the requirements in Table 11. If the Contractor requests the option to have the Department perform the Hamburg Wheel test on the trial batch mixture, the Engineer will mold samples in accordance with <u>Tex-242-F</u> to verify compliance with the Hamburg Wheel test requirement in Table 10.

The Engineer will have the option to perform the following tests on the trial batch:

- Tex-226-F, to verify that the indirect tensile strength meets the requirement shown in Table 9; and
- <u>Tex-530-C</u>, to retain and use for comparison purposes during production.
- 4.4.2.2.6. **Full Approval of JMF1**. The Engineer will grant full approval of JMF1 and authorize the Contractor to proceed with developing JMF2 if the Engineer's results for the trial batch meet the requirements in Table 11. The Engineer will notify the Contractor that an additional trial batch is required if the trial batch does not meet these requirements.
- 4.4.2.2.7. **Approval of JMF2**. The Engineer will approve JMF2 within one working day if the mixture meets the requirements in Table 5 and the gradation meets the master grading limits shown in Table 8. The asphalt binder content established for JMF2 is not required to be within any tolerance of the optimum asphalt binder content established for JMF1; however, mixture produced using JMF2 must meet the VMA requirements shown in Table 8. If the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1, the Engineer may perform or require the Contractor to perform <u>Tex-226-F</u> on Lot 1 production to confirm the indirect tensile strength does not exceed 200 psi.

4.4.2.2.8. Approval of Lot 1 Production. The Engineer will authorize the Contractor to proceed with Lot 1 production (using JMF2) as soon as a passing result is achieved from the Department's or a Department-approved laboratory's Hamburg Wheel test on the trial batch. The Contractor may proceed at its own risk with Lot 1 production without the results from the Hamburg Wheel test on the trial batch.

> If the Department's or Department-approved laboratory's sample from the trial batch fails the Hamburg Wheel test, the Engineer will suspend production until further Hamburg Wheel tests meet the specified values. The Engineer may require up to the entire sublot of any mixture failing the Hamburg Wheel test be removed and replaced at the Contractor's expense.

- 4.4.2.2.9. Approval of JMF3 and Subsequent JMF Changes. JMF3 and subsequent JMF changes are approved if they meet the mixture requirements shown in Table 4, Table 5, and the master grading limits shown in Table 8, and are within the operational tolerances of JMF2 shown in Table 11.
- 4.5. **Production Operations.** Perform a new trial batch when the plant or plant location is changed. Take corrective action and receive approval to proceed after any production suspension for noncompliance to the specification. Submit a new mix design and perform a new trial batch when the asphalt binder content of:
  - any RAP stockpile used in the mix is more than 0.5% higher than the value shown on the mixture design report: or
  - RAS stockpile used in the mix is more than 2.0% higher than the value shown on the mixture design report.
- Storage and Heating of Materials. Do not heat the asphalt binder above the temperatures specified in 4.5.1. Item 300, "Asphalts, Oils, and Emulsions," or outside the manufacturer's recommended values. Provide the Engineer with daily records of asphalt binder and hot-mix asphalt discharge temperatures (in legible and discernible increments) in accordance with Item 320, "Equipment for Asphalt Concrete Pavement," unless otherwise directed. Do not store mixture for a period long enough to affect the quality of the mixture, nor in any case longer than 12 hr. unless otherwise approved.
- 4.5.2. Mixing and Discharge of Materials. Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck before shipping to ensure that it does not exceed the maximum production temperatures listed in Table 12 (or 275°F for WMA). The Department will not pay for or allow placement of any mixture produced above the maximum production temperatures listed in Table 12.

Table 12

Maximum Production Temperature		
High-Temperature Binder Grade ¹	Maximum Production Temperature	
PG 64	325°F	
PG 70	335°F	
PG 76	345°F	

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.

Produce WMA within the target discharge temperature range of 215°F and 275°F when WMA is required. Take corrective action any time the discharge temperature of the WMA exceeds the target discharge range. The Engineer may suspend production operations if the Contractor's corrective action is not successful at controlling the production temperature within the target discharge range. Note that when WMA is produced, it may be necessary to adjust burners to ensure complete combustion such that no burner fuel residue remains in the mixture.

Control the mixing time and temperature so that substantially all moisture is removed from the mixture before discharging from the plant. Determine the moisture content, if requested, by oven-drying in accordance with

<u>Tex-212-F</u>, Part II, and verify that the mixture contains no more than 0.2% of moisture by weight. Obtain the sample immediately after discharging the mixture into the truck, and perform the test promptly.

4.6. **Hauling Operations**. Clean all truck beds before use to ensure that mixture is not contaminated. Use a release agent shown on the Department's MPL to coat the inside bed of the truck when necessary.

Use equipment for hauling as defined in Section 3076.4.7.3.3., "Hauling Equipment." Use other hauling equipment only when allowed.

4.7. Placement Operations. Collect haul tickets from each load of mixture delivered to the project and provide the Department's copy to the Engineer approximately every hour, or as directed. Use a hand-held thermal camera or infrared thermometer, when a thermal imaging system is not used, to measure and record the internal temperature of the mixture as discharged from the truck or Material Transfer Device (MTD) before or as the mix enters the paver and an approximate station number or GPS coordinates on each ticket. Calculate the daily yield and cumulative yield for the specified lift and provide to the Engineer at the end of paving operations for each day unless otherwise directed. The Engineer may suspend production if the Contractor fails to produce and provide haul tickets and yield calculations by the end of paving operations for each day.

Prepare the surface by removing raised pavement markers and objectionable material such as moisture, dirt, sand, leaves, and other loose impediments from the surface before placing mixture. Remove vegetation from pavement edges. Place the mixture to meet the typical section requirements and produce a smooth, finished surface with a uniform appearance and texture. Offset longitudinal joints of successive courses of hot-mix by at least 6 in. Place mixture so that longitudinal joints on the surface course coincide with lane lines and are not placed in the wheel path, or as directed. Ensure that all finished surfaces will drain properly. Place the mixture at the rate or thickness shown on the plans. The Engineer will use the guidelines in Table 13 to determine the compacted lift thickness of each layer when multiple lifts are required. The thickness determined is based on the rate of 110 lb./sq. yd. for each inch of pavement unless otherwise shown on the plans.

Compacted Lift Thickness and Required Core Height				
Mixture	Compacted Lift Thickness Guidelines		Minimum Untrimmed Core	
Туре	Minimum (in.)	Maximum (in.)	Height (in.) Eligible for Testing	
В	2.50	5.00	1.75	
С	2.00	4.00	1.50	
D	1.50	3.00	1.25	
F	1.25	2.50	1.25	

Table 13 Compacted Lift Thickness and Required Core Height

### 4.7.1. Weather Conditions.

4.7.1.1. When Using a Thermal Imaging System. Place mixture when the roadway surface is dry and the roadway surface temperature is at or above the temperatures listed in Table 14A. The Engineer may restrict the Contractor from paving surface mixtures if the ambient temperature is likely to drop below 32°F within 12 hr. of paving. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. Provide output data from the thermal imaging system to demonstrate to the Engineer that no recurring severe thermal segregation exists in accordance with Section 3076.4.7.3.1.2., "Thermal Imaging System."

Illinh Town contume	Minimum Pavement Surface Temperatures (°F)		
Binder Grade ¹	Subsurface Layers or Night Paving Operations	Surface Layers Placed in Daylight Operations	
PG 64	35	40	
PG 70	45 ²	50 ²	
PG 76	45 ²	50 ²	

Table 14A Minimum Pavement Surface Temperatures

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.

4.7.1.2. When Not Using a Thermal Imaging System. When using a thermal camera instead of the thermal imaging system, place mixture when the roadway surface temperature is at or above the temperatures listed in Table 14B unless otherwise approved or as shown on the plans. Measure the roadway surface temperature with a hand-held thermal camera or infrared thermometer. The Engineer may allow mixture placement to begin before the roadway surface reaches the required temperature if conditions are such that the roadway surface will reach the required temperature within 2 hr. of beginning placement operations. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. The Engineer may restrict the Contractor from paving if the ambient temperature is likely to drop below 32°F within 12 hr. of paving.

Uigh Tomporatura	Minimum Pavement Surface Temperatures (°F)		
Binder Grade ¹	Subsurface Layers or Night Paving Operations	Surface Layers Placed in Daylight Operations	
PG 64	45	50	
PG 70	55 ²	60 ²	
PG 76	60 ²	60 ²	

Table 14B Minimum Pavement Surface Temperatures

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.

2. Contractors may pave at temperatures 10°F lower than these values when a chemical WMA additive is used as a compaction aid in the mixture, when using WMA, or utilizing a paving process with equipment that eliminates thermal segregation. In such cases, for each sublot and in the presence of the Engineer, use a hand-held thermal camera operated in accordance with <u>Tex-244-F</u> to demonstrate to the satisfaction of the Engineer that the uncompacted mat has no more than 10°F of thermal segregation.

### 4.7.2. Tack Coat.

- 4.7.2.1. **Application.** Clean the surface before placing the tack coat. The Engineer will set the rate between 0.04 and 0.10 gal. of residual asphalt per square yard of surface area. Apply a uniform tack coat at the specified rate unless otherwise directed. Apply the tack coat in a uniform manner to avoid streaks and other irregular patterns. Apply the tack coat to all surfaces that will come in contact with the subsequent HMA placement, unless otherwise directed. Allow adequate time for emulsion to break completely before placing any material. Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 4.7.2.2. **Sampling.** The Engineer will obtain at least one sample of the tack coat binder per project in accordance with <u>Tex-500-C</u>, Part III, and test it to verify compliance with Item 300, "Asphalts, Oils, and Emulsions." The Engineer will notify the Contractor when the sampling will occur and will witness the collection of the sample from the asphalt distributor immediately before use.

For emulsions, the Engineer may test as often as necessary to ensure the residual of the emulsion is greater than or equal to the specification requirement in Item 300, "Asphalts, Oils, and Emulsions."

Contractors may pave at temperatures 10°F lower than these values when a chemical WMA additive is used as a compaction aid in the mixture or when using WMA.

4.7.3. **Lay-Down Operations**. Use the placement temperatures in Table 15 to establish the minimum placement temperature of the mixture delivered to the paver.

Table 15

Minimum Mixture Placement Temperature		
High-Temperature	Minimum Placement Temperature	
PG 64	260°F	
PG 70	270°F	
PG 76	280°F	

- 1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
- Minimum placement temperatures may be reduced 10°F if using a chemical WMA additive as a compaction aid.
- 3. When using WMA, the minimum placement temperature is 215°F.
- 4.7.3.1. **Thermal Profile**. Use a hand-held thermal camera or a thermal imaging system to obtain a continuous thermal profile in accordance with <u>Tex-244-F</u>. Thermal profiles are not applicable in areas described in Section 3076.4.9.3.1.4., "Miscellaneous Areas."
- 4.7.3.1.1. Thermal Segregation.
- 4.7.3.1.1.1. **Moderate**. Any areas that have a temperature differential greater than 25°F, but not exceeding 50°F, are deemed as moderate thermal segregation.
- 4.7.3.1.1.2. **Severe**. Any areas that have a temperature differential greater than 50°F are deemed as severe thermal segregation.
- 4.7.3.1.2. **Thermal Imaging System**. Review the output results when a thermal imaging system is used, and provide the automated report described in <u>Tex-244-F</u> to the Engineer daily unless otherwise directed. Modify the paving process as necessary to eliminate any recurring (moderate or severe) thermal segregation identified by the thermal imaging system. The Engineer may suspend paving operations if the Contractor cannot successfully modify the paving process to eliminate recurring severe thermal segregation. Density profiles are not required and not applicable when using a thermal imaging system. Provide the Engineer with electronic copies of all daily data files that can be used with the thermal imaging system software to generate temperature profile plots daily or upon completion of the project or as requested by the Engineer.
- 4.7.3.1.3. Thermal Camera. When using a thermal camera instead of the thermal imaging system, take immediate corrective action to eliminate recurring moderate thermal segregation when a hand-held thermal camera is used. Evaluate areas with moderate thermal segregation by performing density profiles in accordance with Section 3076.4.9.3.3.2.. "Segregation (Density Profile)." Provide the Engineer with the thermal profile of every sublot within one working day of the completion of each lot. When requested by the Engineer, provide the thermal images generated using the thermal camera. Report the results of each thermal profile in accordance with Section 3076.4.2., "Reporting and Responsibilities." The Engineer will use a hand-held thermal camera to obtain a thermal profile at least once per project. No production or placement payment adjustments greater than 1.000 will be paid for any sublot that contains severe thermal segregation. Suspend operations and take immediate corrective action to eliminate severe thermal segregation unless otherwise directed. Resume operations when the Engineer determines that subsequent production will meet the requirements of this Section. Evaluate areas with severe thermal segregation by performing density profiles in accordance with Section 3076.4.9.3.3.2., "Segregation (Density Profile)." Remove and replace the material in any areas that have both severe thermal segregation and a failing result for Segregation (Density Profile) unless otherwise directed. The sublot in question may receive a production and placement payment adjustment greater than 1.000, if applicable, when the defective material is successfully removed and replaced.
- 4.7.3.2. **Windrow Operations**. Operate windrow pickup equipment so that when hot-mix is placed in windrows, substantially all the mixture deposited on the roadbed is picked up and loaded into the paver.

- 4.7.3.3. **Hauling Equipment**. Use belly dumps, live bottom, or end dump trucks to haul and transfer mixture; however, with exception of paving miscellaneous areas, end dump trucks are only allowed when used in conjunction with an MTD with remixing capability or when a thermal imaging system is used unless otherwise allowed.
- 4.7.3.4. **Screed Heaters**. Turn off screed heaters to prevent overheating of the mat if the paver stops for more than 5 min. The Engineer may evaluate the suspect area in accordance with Section 3076.4.9.3.3.4., "Recovered Asphalt Dynamic Shear Rheometer (DSR)," if the screed heater remains on for more than 5 min. while the paver is stopped.
- 4.8. **Compaction**. Compact the pavement uniformly to contain between 3.8% and 8.5% in-place air voids. Take immediate corrective action to bring the operation within 3.8% and 8.5% when the in-place air voids exceed the range of these tolerances. The Engineer will allow paving to resume when the proposed corrective action is likely to yield between 3.8% and 8.5% in-place air voids.

Obtain cores in areas placed under Exempt Production, as directed, at locations determined by the Engineer. The Engineer may test these cores and suspend operations or require removal and replacement if the inplace air voids are less than 2.7% or more than 9.9%. Areas defined in Section 3076.4.9.3.1.4., "Miscellaneous Areas," are not subject to in-place air void determination.

Furnish the type, size, and number of rollers required for compaction as approved. Use additional rollers as required to remove any roller marks. Use only water or an approved release agent on rollers, tamps, and other compaction equipment unless otherwise directed.

Use the control strip method shown in <u>Tex-207-F</u>, Part IV, on the first day of production to establish the rolling pattern that will produce the desired in-place air voids unless otherwise directed.

Use tamps to thoroughly compact the edges of the pavement along curbs, headers, and similar structures and in locations that will not allow thorough compaction with rollers. The Engineer may require rolling with a trench roller on widened areas, in trenches, and in other limited areas.

Complete all compaction operations before the pavement temperature drops below 160°F unless otherwise allowed. The Engineer may allow compaction with a light finish roller operated in static mode for pavement temperatures below 160°F.

Allow the compacted pavement to cool to 160°F or lower before opening to traffic unless otherwise directed. Sprinkle the finished mat with water or limewater, when directed, to expedite opening the roadway to traffic.

4.9. Acceptance Plan. Payment adjustments for the material will be in accordance with Article 3076.6., "Payment."

Sample and test the hot-mix on a lot and sublot basis. Suspend production until test results or other information indicates to the satisfaction of the Engineer that the next material produced or placed will result in payment factors of at least 1.000, if the production payment factor given in Section 3076.6.1., "Production Payment Adjustment Factors," for two consecutive lots or the placement pay factor given in Section 3076.6.2., "Placement Payment Adjustment Factors," for two consecutive lots is below 1.000.

4.9.1. **Referee Testing**. The Materials and Tests Division is the referee laboratory. The Contractor may request referee testing if a "remove and replace" condition is determined based on the Engineer's test results, or if the differences between Contractor and Engineer test results exceed the maximum allowable difference shown in Table 11 and the differences cannot be resolved. The Contractor may also request referee testing if the Engineer's test results require suspension of production and the Contractor's test results are within specification limits. Make the request within five working days after receiving test results and cores from the Engineer. Referee tests will be performed only on the sublot in question and only for the particular tests in question. Allow 10 working days from the time the referee laboratory receives the samples for test results to

The Materials and Tests Division will determine the laboratory-molded density based on the molded specific gravity and the maximum theoretical specific gravity of the referee sample. The in-place air voids will be determined based on the bulk specific gravity of the cores, as determined by the referee laboratory and the Engineer's average maximum theoretical specific gravity for the lot. With the exception of "remove and replace" conditions, referee test results are final and will establish payment adjustment factors for the sublot in question. The Contractor may decline referee testing and accept the Engineer's test results when the placement payment adjustment factor for any sublot results in a "remove and replace" condition. Placement sublots subject to be removed and replaced will be further evaluated in accordance with Section 3076.6.2.2., "Placement Sublots Subject to Removal and Replacement."

### 4.9.2. **Production Acceptance**.

4.9.2.1. **Production Lot.** A production lot consists of four equal sublots. The default quantity for Lot 1 is 1,000 tons; however, when requested by the Contractor, the Engineer may increase the quantity for Lot 1 to no more than 4,000 tons. The Engineer will select subsequent lot sizes based on the anticipated daily production such that approximately three to four sublots are produced each day. The lot size will be between 1,000 tons and 4,000 tons. The Engineer may change the lot size before the Contractor begins any lot.

If the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1, the Engineer may perform or require the Contractor to perform <u>Tex-226-F</u> on Lot 1 to confirm the indirect tensile strength does not exceed 200 psi. Take corrective action to bring the mixture within specification compliance if the indirect tensile strength exceeds 200 psi unless otherwise directed.

4.9.2.1.1. **Incomplete Production Lots.** If a lot is begun but cannot be completed, such as on the last day of production or in other circumstances deemed appropriate, the Engineer may close the lot. Adjust the payment for the incomplete lot in accordance with Section 3076.6.1., "Production Payment Adjustment Factors." Close all lots within five working days unless otherwise allowed.

### 4.9.2.2. Production Sampling.

- 4.9.2.2.1. **Mixture Sampling**. Obtain hot-mix samples from trucks at the plant in accordance with <u>Tex-222-F</u>. The sampler will split each sample into three equal portions in accordance with <u>Tex-200-F</u> and label these portions as "Contractor," "Engineer," and "Referee." The Engineer will perform or witness the sample splitting and take immediate possession of the samples labeled "Engineer" and "Referee." The Engineer will maintain the custody of the samples labeled "Engineer" and "Referee" until the Department's testing is completed.
- 4.9.2.2.1.1. **Random Sample**. At the beginning of the project, the Engineer will select random numbers for all production sublots. Determine sample locations in accordance with <u>Tex-225-F</u>. Take one sample for each sublot at the randomly selected location. The Engineer will perform or witness the sampling of production sublots.
- 4.9.2.2.1.2. **Blind Sample**. For one sublot per lot, the Engineer will obtain and test a "blind" sample instead of the random sample collected by the Contractor. Test either the "blind" or the random sample; however, referee testing (if applicable) will be based on a comparison of results from the "blind" sample. The location of the Engineer's "blind" sample will not be disclosed to the Contractor. The Engineer's "blind" sample may be randomly selected in accordance with <u>Tex-225-F</u> for any sublot or selected at the discretion of the Engineer. The Engineer will use the Contractor's split sample for sublots not sampled by the Engineer.
- 4.9.2.2.2. Informational Shear Bond Strength Testing. Select one random sublot from Lot 2 or higher for shear bond strength testing. Obtain full depth cores in accordance with <u>Tex-249-F</u>. Label the cores with the Control Section Job (CSJ), producer of the tack coat, mix type, shot rate, lot, and sublot number and provide to the

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Engineer. The Engineer will ship the cores to the Materials and Tests Division or district laboratory for shear bond strength testing. Results from these tests will not be used for specification compliance.

4.9.2.2.3. Asphalt Binder Sampling. Obtain a 1-qt. sample of the asphalt binder witnessed by the Engineer for each lot of mixture produced. The Contractor will notify the Engineer when the sampling will occur. Obtain the sample at approximately the same time the mixture random sample is obtained. Sample from a port located immediately upstream from the mixing drum or pug mill and upstream from the introduction of any additives in accordance with <u>Tex-500-C</u>, Part II. Label the can with the corresponding lot and sublot numbers, producer, producer facility location, grade, district, date sampled, and project information including highway and CSJ. The Engineer will retain these samples for one year. The Engineer may also obtain independent samples. If obtaining an independent asphalt binder sample and upon request of the Contractor, the Engineer will split a sample of the asphalt binder with the Contractor.

At least once per project, the Engineer will collect split samples of each binder grade and source used. The Engineer will submit one split sample to MTD to verify compliance with Item 300, "Asphalts, Oils, and Emulsions" and will retain the other split sample for one year.

4.9.2.3. **Production Testing**. The Contractor and Engineer must perform production tests in accordance with Table 16. The Contractor has the option to verify the Engineer's test results on split samples provided by the Engineer. Determine compliance with operational tolerances listed in Table 11 for all sublots.

Take immediate corrective action if the Engineer's laboratory-molded density on any sublot is less than 95.0% or greater than 97.0% to bring the mixture within these tolerances. The Engineer may suspend operations if the Contractor's corrective actions do not produce acceptable results. The Engineer will allow production to resume when the proposed corrective action is likely to yield acceptable results.

The Engineer may allow alternate methods for determining the asphalt binder content and aggregate gradation if the aggregate mineralogy is such that <u>Tex-236-F</u>, Part I does not yield reliable results. Provide evidence that results from <u>Tex-236-F</u>, Part I are not reliable before requesting permission to use an alternate method unless otherwise directed. Use the applicable test procedure as directed if an alternate test method is allowed.

	Table 16	
Production	and Placement Testing	Frequen

Production and Placement Testing Frequency						
Description	Test Method	Minimum Contractor Testing Frequency	Minimum Engineer Testing Frequency			
Individual % retained for #8 sieve and larger Individual % retained for sieves smaller than #8 and larger than #200	<u>Tex-200-F</u> or	1 per sublot	1 per 12 sublots ¹			
% passing the #200 sieve	<u>Tex-236-F</u>					
Laboratory-molded density Laboratory-molded bulk specific gravity In-place air voids	<u>Tex-207-F</u>	N/A	1 per sublot ¹			
VMA	Tex-204-F					
Segregation (density profile) ² Longitudinal joint density	Tex-207-F, Part V Tex-207-F. Part VII	1 per sublot	1 per project			
Moisture content	Tex-212-F, Part II	When directed	,			
Theoretical maximum specific (Rice) gravity	<u>Tex-227-F</u>	N/A	1 per sublot ¹			
Asphalt binder content	<u>Tex-236-F</u>	1 per sublot	1 per lot ¹			
Hamburg Wheel test	<u>Tex-242-F</u>	N/A				
Recycled Asphalt Shingles (RAS) ³	<u>Tex-217-F</u> , Part III	N/A				
Thermal profile ²	<u>Tex-244-F</u>	1 per sublot				
Asphalt binder sampling and testing	<u>Tex-500-C</u> , Part II	1 per lot (sample only)⁴	1 per project			
Tack coat sampling and testing	Tex-500-C, Part III	N/A				
Boil test ⁵	<u>Tex-530-C</u>	1 per lot				
Shear Bond Strength Test ⁶	<u>Tex-249-F</u>	1 per project (sample only)				

1. For production defined in Section 3076.4.9.4., "Exempt Production," the Engineer will test one per day if 100 tons or more are produced. For Exempt Production, no testing is required when less than 100 tons are produced.

2. Not required when a thermal imaging system is used.

3. Testing performed by the Materials and Tests Division or designated laboratory.

4. Obtain witnessed by the Engineer. The Engineer will retain these samples for one year.

5. The Engineer may reduce or waive the sampling and testing requirements based on a satisfactory test history.

6. Testing performed by the Materials and Tests Division or District for informational purposes only.

- 4.9.2.4. **Operational Tolerances**. Control the production process within the operational tolerances listed in Table 11. When production is suspended, the Engineer will allow production to resume when test results or other information indicates the next mixture produced will be within the operational tolerances.
- 4.9.2.4.1. **Gradation**. Suspend operation and take corrective action if any aggregate is retained on the maximum sieve size shown in Table 8. A sublot is defined as out of tolerance if either the Engineer's or the Contractor's test results are out of operational tolerance. Suspend production when test results for gradation exceed the operational tolerances in Table 11 for three consecutive sublots on the same sieve or four consecutive sublots on any sieve unless otherwise directed. The consecutive sublots may be from more than one lot.
- 4.9.2.4.2. **Asphalt Binder Content.** A sublot is defined as out of operational tolerance if either the Engineer's or the Contractor's test results exceed the values listed in Table 11. No production or placement payment adjustments greater than 1.000 will be paid for any sublot that is out of operational tolerance for asphalt binder content. Suspend production and shipment of the mixture if the Engineer's or the Contractor's asphalt binder content deviates from the current JMF by more than 0.5% for any sublot.
- 4.9.2.4.3. Voids in Mineral Aggregates (VMA). The Engineer will determine the VMA for every sublot. For sublots when the Engineer does not determine asphalt binder content, the Engineer will use the asphalt binder content results from QC testing performed by the Contractor to determine VMA.

Take immediate corrective action if the VMA value for any sublot is less than the minimum VMA requirement for production listed in Table 8. Suspend production and shipment of the mixture if the Engineer's VMA results on two consecutive sublots are below the minimum VMA requirement for production listed in Table 8. No production or placement payment adjustments greater than 1.000 will be paid for any sublot that does not

meet the minimum VMA requirement for production listed in Table 8 based on the Engineer's VMA determination.

Suspend production and shipment of the mixture if the Engineer's VMA result is more than 0.5% below the minimum VMA requirement for production listed in Table 8. In addition to suspending production, the Engineer may require removal and replacement or may allow the sublot to be left in place without payment.

4.9.2.4.4. **Hamburg Wheel Test**. The Engineer may perform a Hamburg Wheel test at any time during production, including when the boil test indicates a change in quality from the materials submitted for JMF1. In addition to testing production samples, the Engineer may obtain cores and perform Hamburg Wheel tests on any areas of the roadway where rutting is observed. Suspend production until further Hamburg Wheel tests meet the specified values when the production or core samples fail the Hamburg Wheel test criteria in Table 10. Core samples, if taken, will be obtained from the center of the finished mat or other areas excluding the vehicle wheel paths. The Engineer may require up to the entire sublot of any mixture failing the Hamburg Wheel test to be removed and replaced at the Contractor's expense.

If the Department's or Department approved laboratory's Hamburg Wheel test results in a "remove and replace" condition, the Contractor may request that the Department confirm the results by re-testing the failing material. The Materials and Tests Division will perform the Hamburg Wheel tests and determine the final disposition of the material in question based on the Department's test results.

4.9.2.5. Individual Loads of Hot-Mix. The Engineer can reject individual truckloads of hot-mix. When a load of hotmix is rejected for reasons other than temperature, contamination, or excessive uncoated particles, the Contractor may request that the rejected load be tested. Make this request within 4 hr. of rejection. The Engineer will sample and test the mixture. If test results are within the operational tolerances shown in Table 11, payment will be made for the load. If test results are not within operational tolerances, no payment will be made for the load.

#### 4.9.3. Placement Acceptance.

- 4.9.3.1. **Placement Lot**. A placement lot consists of four placement sublots. A placement sublot consists of the area placed during a production sublot.
- 4.9.3.1.1. **Lot 1 Placement**. Placement payment adjustments greater than 1.000 for Lot 1 will be in accordance with Section 3076.6.2., "Placement Payment Adjustment Factors"; however, no placement adjustment less than 1.000 will be assessed for any sublot placed in Lot 1 when the in-place air voids are greater than or equal to 2.7% and less than or equal to 9.9%. Remove and replace any sublot with in-place air voids less than 2.7% or greater than 9.9%.
- 4.9.3.1.2. Incomplete Placement Lots. An incomplete placement lot consists of the area placed as described in Section 3076.4.9.2.1.1., "Incomplete Production Lots," excluding areas defined in Section 3076.4.9.3.1.4., "Miscellaneous Areas." Placement sampling is required if the random sample plan for production resulted in a sample being obtained from an incomplete production sublot.
- 4.9.3.1.3. **Shoulders, Ramps, Etc.** Shoulders, ramps, intersections, acceleration lanes, deceleration lanes, and turn lanes are subject to in-place air void determination and payment adjustments unless designated on the plans as not eligible for in-place air void determination. Intersections may be considered miscellaneous areas when determined by the Engineer.
- 4.9.3.1.4. **Miscellaneous Areas**. Miscellaneous areas include areas that typically involve significant handwork or discontinuous paving operations, such as temporary detours, driveways, mailbox turnouts, crossovers, gores, spot level-up areas, and other similar areas. Temporary detours are subject to in-place air void determination when shown on the plans. Miscellaneous areas also include level-ups and thin overlays when the layer thickness specified on the plans is less than the minimum untrimmed core height eligible for testing shown in Table 13. The specified layer thickness is based on the rate of 110 lb./sq. yd. for each inch of

pavement unless another rate is shown on the plans. When "level up" is listed as part of the item bid description code, a payment adjustment factor of 1.000 will be assigned for all placement sublots as described in Article 3076.6, "Payment." Miscellaneous areas are not eligible for random placement sampling locations. Compact miscellaneous areas in accordance with Section 3076.4.8., "Compaction." Miscellaneous areas are not subject to in-place air void determination, thermal profiles testing, segregation (density profiles), or longitudinal joint density evaluations.

4.9.3.2. **Placement Sampling**. The Engineer will select random numbers for all placement sublots at the beginning of the project. The Engineer will provide the Contractor with the placement random numbers immediately after the sublot is completed. Mark the roadway location at the completion of each sublot and record the station number. Determine one random sample location for each placement sublot in accordance with <u>Tex-225-F</u>. Adjust the random sample location by no more than necessary to achieve a 2-ft. clearance if the location is within 2 ft. of a joint or pavement edge.

Shoulders, ramps, intersections, acceleration lanes, deceleration lanes, and turn lanes are always eligible for selection as a random sample location; however, if a random sample location falls on one of these areas and the area is designated on the plans as not subject to in-place air void determination, cores will not be taken for the sublot and a 1.000 pay factor will be assigned to that sublot.

Provide the equipment and means to obtain and trim roadway cores on site. On-site is defined as in close proximity to where the cores are taken. Obtain the cores within one working day of the time the placement sublot is completed unless otherwise approved. Obtain two 6-in. diameter cores side-by-side from within 1 ft. of the random location provided for the placement sublot. For Type D and Type F mixtures, 4-in. diameter cores are allowed. Mark the cores for identification, measure and record the untrimmed core height, and provide the information to the Engineer. The Engineer will witness the coring operation and measurement of the core thickness. Visually inspect each core and verify that the current paving layer is bonded to the underlying layer. Take corrective action if an adequate bond does not exist between the current and underlying layer to ensure that an adequate bond will be achieved during subsequent placement operations.

Trim the cores immediately after obtaining the cores from the roadway in accordance with <u>Tex-251-F</u> if the core heights meet the minimum untrimmed value listed in Table 13. Trim the cores on site in the presence of the Engineer. Use a permanent marker or paint pen to record the lot and sublot numbers on each core as well as the designation as Core A or B. The Engineer may require additional information to be marked on the core and may choose to sign or initial the core. The Engineer will take custody of the cores immediately after witnessing the trimming of the cores and will retain custody of the cores until the Department's testing is completed. Before turning the trimmed cores over to the Engineer, the Contractor may wrap the trimmed cores or secure them in a manner that will reduce the risk of possible damage occurring during transport by the Engineer. After testing, the Engineer will return the cores to the Contractor.

The Engineer may have the cores transported back to the Department's laboratory at the HMA plant via the Contractor's haul truck or other designated vehicle. In such cases where the cores will be out of the Engineer's possession during transport, the Engineer will use Department-provided security bags and the Roadway Core Custody protocol located at http://www.txdot.gov/business/specifications.htm to provide a secure means and process that protects the integrity of the cores during transport.

Decide whether to include the pair of cores in the air void determination for that sublot if the core height before trimming is less than the minimum untrimmed value shown in Table 13. Trim the cores as described above before delivering to the Engineer if electing to have the cores included in the air void determination. Deliver untrimmed cores to the Engineer and inform the Engineer of the decision to not have the cores included in air void determination if electing to not have the cores included in air void determination. The placement pay factor for the sublot will be 1.000 if cores will not be included in air void determination.

Instead of the Contractor trimming the cores on site immediately after coring, the Engineer and the Contractor may mutually agree to have the trimming operations performed at an alternate location such as a field laboratory or other similar location. In such cases, the Engineer will take possession of the cores

immediately after they are obtained from the roadway and will retain custody of the cores until testing is completed. Either the Department or Contractor representative may perform trimming of the cores. The Engineer will witness all trimming operations in cases where the Contractor representative performs the trimming operation.

Dry the core holes and tack the sides and bottom immediately after obtaining the cores. Fill the hole with the same type of mixture and properly compact the mixture. Repair core holes with other methods when approved.

- 4.9.3.3. **Placement Testing**. Perform placement tests in accordance with Table 16. After the Engineer returns the cores, the Contractor may test the cores to verify the Engineer's test results for in-place air voids. The allowable differences between the Contractor's and Engineer's test results are listed in Table 11.
- 4.9.3.3.1. In-Place Air Voids. The Engineer will measure in-place air voids in accordance with <u>Tex-207-F</u> and <u>Tex-227-F</u>. Before drying to a constant weight, cores may be pre-dried using a CoreDry or similar vacuum device to remove excess moisture. The Engineer will average the values obtained for all sublots in the production lot to determine the theoretical maximum specific gravity. The Engineer will use the average air void content for in-place air voids.

The Engineer will use the vacuum method to seal the core if required by <u>Tex-207-F</u>. The Engineer will use the test results from the unsealed core to determine the placement payment adjustment factor if the sealed core yields a higher specific gravity than the unsealed core. After determining the in-place air void content, the Engineer will return the cores and provide test results to the Contractor.

4.9.3.3.2. Segregation (Density Profile). Test for segregation using density profiles in accordance with <u>Tex-207-F</u>, Part V when using a thermal camera insead of the thermal imaging system. Density profiles are not required and are not applicable when using a thermal imaging system. Density profiles are not applicable in areas described in Section 3076.4.9.3.1.4., "Miscellaneous Areas."

Perform a minimum of one density profile per sublot. Perform additional density profiles when any of the following conditions occur, unless otherwise approved:

- the paver stops due to lack of material being delivered to the paving operations and the temperature of the uncompacted mat before the initial break down rolling is less than the temperatures shown in Table 17;
- areas that are identified by either the Contractor or the Engineer with thermal segregation;,
- any visibly segregated areas that exist.

	minimum oncompacted mat remperature requiring a begregation in				
	High-Temperature	Minimum Temperature of the Uncompacted Mat			
	Binder Grade	Allowed Before Initial Break Down Rolling ^{2,3,4}			
	PG 64	<250°F			
ſ	PG 70	<260°F			
	PG 76	<270°F			

Table 17 Mimimum Uncompacted Mat Temperature Requiring a Segregation Profile

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.

- 2. Segregation profiles are required in areas with moderate and severe thermal segregation as described in Section 3076.4.7.3.1.3.
- 3. Minimum uncompacted mat temperature requiring a segregation profile may be reduced 10°F if using a chemical WMA additive as a compaction aid.

Provide the Engineer with the density profile of every sublot in the lot within one working day of the completion of each lot. Report the results of each density profile in accordance with Section 3076.4.2., "Reporting and Responsibilities."

The density profile is considered failing if it exceeds the tolerances in Table 18. No production or placement payment adjustments greater than 1.000 will be paid for any sublot that contains a failing density profile. When a hand-held thermal camera is used instead of a thermal imaging system, the Engineer will measure the density profile at least once per project. The Engineer's density profile results will be used when available. The Engineer may require the Contractor to remove and replace the area in question if the area fails the density profile and has surface irregularities as defined in Section 3076.4.9.3.3.5., "Irregularities." The sublot in question may receive a production and placement payment adjustment greater than 1.000, if applicable, when the defective material is successfully removed and replaced.

Investigate density profile failures and take corrective actions during production and placement to eliminate the segregation. Suspend production if 2 consecutive density profiles fail unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

Segregation (Density Profile) Acceptance Criteria					
Maximum Allowable Maximum Allowable Mixture Type Density Range Density Range (Highest to Lowest) (Average to Lowest)					
Туре В	8.0 pcf	5.0 pcf			
Type C, Type D & Type F	6.0 pcf	3.0 pcf			

Table 18

#### 4.9.3.3.3. Longitudinal Joint Density.

- 4.9.3.3.3.1. Informational Tests. Perform joint density evaluations while establishing the rolling pattern and verify that the joint density is no more than 3.0 pcf below the density taken at or near the center of the mat. Adjust the rolling pattern, if needed, to achieve the desired joint density. Perform additional joint density evaluations, at least once per sublot, unless otherwise directed.
- 4.9.3.3.3.2. **Record Tests.** Perform a joint density evaluation for each sublot at each pavement edge that is or will become a longitudinal joint. Joint density evaluations are not applicable in areas described in Section 3076.4.9.3.1.4., "Miscellaneous Areas." Determine the joint density in accordance with Tex-207-F, Part VII. Record the joint density information and submit results on Department forms to the Engineer. The evaluation is considered failing if the joint density is more than 3.0 pcf below the density taken at the core random sample location and the correlated joint density is less than 90.0%. The Engineer will make independent joint density verification at least once per project and may make independent joint density verifications at the random sample locations. The Engineer's joint density test results will be used when available.

^{4.} When using WMA, the minimum uncompacted mat temperature requiring a segregation profile is 215°F.

Investigate joint density failures and take corrective actions during production and placement to improve the joint density. Suspend production if the evaluations on two consecutive sublots fail unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

- 4.9.3.3.4. **Recovered Asphalt Dynamic Shear Rheometer (DSR)**. The Engineer may take production samples or cores from suspect areas of the project to determine recovered asphalt properties. Asphalt binders with an aging ratio greater than 3.5 do not meet the requirements for recovered asphalt properties and may be deemed defective when tested and evaluated by the Materials and Tests Division. The aging ratio is the DSR value of the extracted binder divided by the DSR value of the original unaged binder. Obtain DSR values in accordance with AASHTO T 315 at the specified high temperature performance grade of the asphalt. The Engineer may require removal and replacement of the defective material at the Contractor's expense. The asphalt binder will be recovered for testing from production samples or cores in accordance with <u>Tex-211-F</u>.
- 4.9.3.3.5. Irregularities. Identify and correct irregularities including segregation, rutting, raveling, flushing, fat spots, mat slippage, irregular color, irregular texture, roller marks, tears, gouges, streaks, uncoated aggregate particles, or broken aggregate particles. The Engineer may also identify irregularities, and in such cases, the Engineer will promptly notify the Contractor. If the Engineer determines that the irregularity will adversely affect pavement performance, the Engineer may require the Contractor to remove and replace (at the Contractor's expense) areas of the pavement that contain irregularities. The Engineer may also require the Contractor to remove and replace (at the Contractor to remove and replace (at the Contractor's expense) areas where the mixture does not bond to the existing pavement.

If irregularities are detected, the Engineer may require the Contractor to immediately suspend operations or may allow the Contractor to continue operations for no more than one day while the Contractor is taking appropriate corrective action.

#### 4.9.4. **Exempt Production**. The Engineer may deem the mixture as exempt production for the following conditions:

- anticipated daily production is less than 500 tons;
- total production for the project is less than 5,000 tons;
- when mutually agreed between the Engineer and the Contractor; or
- when shown on the plans.

For exempt production, the Contractor is relieved of all production and placement sampling and testing requirements, except for coring operations when required by the Engineer. The production and placement pay factors are 1.000 if the specification requirements listed below are met, all other specification requirements are met, and the Engineer performs acceptance tests for production and placement listed in Table 16 when 100 tons or more per day are produced.

- produce, haul, place, and compact the mixture in compliance with the specification and as directed;
- control mixture production to yield a laboratory-molded density that is within ±1.0% of the target laboratory-molded density as tested by the Engineer;
- compact the mixture in accordance with Section 3076.4.8., "Compaction;" and
- when a thermal imaging system is not used, the Engineer may perform segregation (density profiles) and thermal profiles in accordance with the specification.
- 4.9.5. **Ride Quality**. Measure ride quality in accordance with Item 585, "Ride Quality for Pavement Surfaces," unless otherwise shown on the plans.

### 5. MEASUREMENT

- 5.1. **Dense Graded Hot-Mix Asphalt.** Hot mix will be measured by the ton of composite hot-mix, which includes asphalt, aggregate, and additives. Measure the weight on scales in accordance with Item 520, "Weighing and Measuring Equipment."
- 5.2. **Tack Coat.** Tack coat will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume in gallons from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All tack, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine asphalt volume used and application rate if the device is accurate within 1.5% of the strapped volume.

## 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under Section 3076.5.1, "Measurement," will be paid for at the unit bid price for "Dense Graded Hot-Mix Asphalt" of the mixture type, SAC, and binder specified. These prices are full compensation for surface preparation, materials, placement, equipment, labor, tools, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under Article 3076.5.2, "Measurement," will be paid for at the unit bid price for "Tack Coat" of the tack coat provided. These prices are full compensation for materials, placement, equipment, labor, tools, and incidentals. Payment adjustments will be applied as determined in this Item; however, a payment adjustment factor of 1.000 will be assigned for all placement sublots for "level ups" only when "level up" is listed as part of the item bid description code. A payment adjustment factor of 1.000 will be assigned to all production and placement sublots when "exempt" is listed as part of the item bid description code, and all testing requirements are met.

Payment for each sublot, including applicable payment adjustments greater than 1.000, will only be paid for sublots when the Contractor supplies the Engineer with the required documentation for production and placement QC/QA, thermal profiles, segregation density profiles, and longitudinal joint densities in accordance with Section 3076.4.2., "Reporting and Responsibilities." When a thermal imaging system is used, documentation is not required for thermal profiles or segregation density profiles on individual sublots; however, the thermal imaging system automated reports described in <u>Tex-244-F</u> are required.

Trial batches will not be paid for unless they are included in pavement work approved by the Department.

Payment adjustment for ride quality will be determined in accordance with Item 585, "Ride Quality for Pavement Surfaces."

6.1. **Production Payment Adjustment Factors**. The production payment adjustment factor is based on the laboratory-molded density using the Engineer's test results. The bulk specific gravities of the samples from each sublot will be divided by the Engineer's maximum theoretical specific gravity for the sublot. The individual sample densities for the sublot will be averaged to determine the production payment adjustment factor in accordance with Table 19 for each sublot, using the deviation from the target laboratory-molded density defined in Table 9. The production payment adjustment factor for completed lots will be the average of the payment adjustment factors for the four sublots sampled within that lot.

Production Payment Adjustment Factors for Laboratory-Molded Density			
Absolute Deviation from	Production Payment Adjustment Factor		
Target Laboratory-Molded Density	(Target Laboratory-Molded Density)		
0.0	1.050		
0.1	1.050		
0.2	1.050		
0.3	1.044		
0.4	1.038		
0.5	1.031		
0.6	1.025		
0.7	1.019		
0.8	1.013		
0.9	1.006		
1.0	1.000		
1.1	0.965		
1.2	0.930		
1.3	0.895		
1.4	0.860		
1.5	0.825		
1.6	0.790		
1.7	0.755		
1.8	0.720		
> 1.8	Remove and replace		

Table 19
Production Payment Adjustment Factors for Laboratory-Molded Density1
Absolute Density1

 If the Engineer's laboratory-molded density on any sublot is less than 95.0% or greater than 98.0%, take immediate corrective action to bring the mixture within these tolerances. The Engineer may suspend operations if the Contractor's corrective actions do not produce acceptable results. The Engineer will allow production to resume when the proposed corrective action is likely to yield acceptable results.

6.1.1. **Payment for Incomplete Production Lots**. Production payment adjustments for incomplete lots, described under Section 3076.4.9.2.1.1., "Incomplete Production Lots," will be calculated using the average production payment factors from all sublots sampled.

A production payment factor of 1.000 will be assigned to any lot when the random sampling plan did not result in collection of any samples within the first sublot.

- 6.1.2. **Production Sublots Subject to Removal and Replacement**. If after referee testing, the laboratory-molded density for any sublot results in a "remove and replace" condition as listed in Table 19, the Engineer may require removal and replacement or may allow the sublot to be left in place without payment. The Engineer may also accept the sublot in accordance with Section 3076.5.3.1., "Acceptance of Defective or Unauthorized Work." Replacement material meeting the requirements of this Item will be paid for in accordance with this Section.
- 6.2. Placement Payment Adjustment Factors. The placement payment adjustment factor is based on in-place air voids using the Engineer's test results. The bulk specific gravities of the cores from each sublot will be divided by the Engineer's average maximum theoretical specific gravity for the lot. The individual core densities for the sublot will be averaged to determine the placement payment adjustment factor in accordance with Table 20 for each sublot that requires in-place air void measurement. A placement payment adjustment factor of 1.000 will be assigned to the entire sublot when the random sample location falls in an area designated on the plans as not subject to in-place air void determination. A placement payment adjustment factor of 1.000 will be assigned to quantities placed in areas described in Section 3076.4.9.3.1.4., "Miscellaneous Areas." The placement payment adjustment factor for completed lots will be the average of the placement payment adjustment factors for up to four sublots within that lot.

In-Place	Placement Pay	In-Place	Placement Pay
Air Voids	Adjustment Factor	Air Voids	Adjustment Factor
< 2.7	Remove and Replace	6.4	1.042
2.7	0.710	6.5	1.040
2.8	0.740	6.6	1.038
2.9	0.770	6.7	1.036
3.0	0.800	6.8	1.034
3.1	0.830	6.9	1.032
3.2	0.860	7.0	1.030
3.3	0.890	7.1	1.028
3.4	0.920	7.2	1.026
3.5	0.950	7.3	1.024
3.6	0.980	7.4	1.022
3.7	0.998	7.5	1.020
3.8	1.002	7.6	1.018
3.9	1.006	7.7	1.016
4.0	1.010	7.8	1.014
4.1	1.014	7.9	1.012
4.2	1.018	8.0	1.010
4.3	1.022	8.1	1.008
4.4	1.026	8.2	1.006
4.5	1.030	8.3	1.004
4.6	1.034	8.4	1.002
4.7	1.038	8.5	1.000
4.8	1.042	8.6	0.998
4.9	1.046	8.7	0.996
5.0	1.050	8.8	0.994
5.1	1.050	8.9	0.992
5.2	1.050	9.0	0.990
5.3	1.050	9.1	0.960
5.4	1.050	9.2	0.930
5.5	1.050	9.3	0.900
5.6	1.050	9.4	0.870
5.7	1.050	9.5	0.840
5.8	1.050	9.6	0.810
5.9	1.050	9.7	0.780
6.0	1.050	9.8	0.750
6.1	1.048	9.9	0.720
6.2	1.046	> 9.9	Remove and Replace
6.3	1.044		

Table 20 Placement Payment Adjustment Factors for In-Place Air Voids

6.2.1. **Payment for Incomplete Placement Lots**. Payment adjustments for incomplete placement lots described under Section 3076.4.9.3.1.2., "Incomplete Placement Lots," will be calculated using the average of the placement payment factors from all sublots sampled and sublots where the random location falls in an area designated on the plans as not eligible for in-place air void determination.

If the random sampling plan results in production samples, but not in placement samples, the random core location and placement adjustment factor for the sublot will be determined by applying the placement random number to the length of the sublot placed.

If the random sampling plan results in placement samples, but not in production samples, no placement adjustment factor will apply for that sublot placed.

A placement payment adjustment factor of 1.000 will be assigned to any lot when the random sampling plan did not result in collection of any production samples.

The bulk specific gravity of the cores from each sublot will be divided by the Engineer's average maximum theoretical specific gravity for the lot. The individual core densities for the sublot will be averaged to determine the new payment adjustment factor of the sublot in question. If the new payment adjustment factor is 0.700 or greater, the new payment adjustment factor will apply to that sublot. If the new payment adjustment factor adjustment factor will apply to that sublot. If the new payment adjustment factor is 0.700, no payment will be made for the sublot. Remove and replace the failing sublot, or the Engineer may allow the sublot to be left in place without payment. The Engineer may also accept the sublot in accordance with Section 3076.5.3.1., "Acceptance of Defective or Unauthorized Work." Replacement material meeting the requirements of this Item will be paid for in accordance with this Section.

6.3. **Total Adjusted Pay Calculation**. Total adjusted pay (TAP) will be based on the applicable payment adjustment factors for production and placement for each lot.

TAP = (A+B)/2

where:

A = Bid price × production lot quantity × average payment adjustment factor for the production lot
 B = Bid price × placement lot quantity × average payment adjustment factor for the placement lot + (bid price × quantity placed in miscellaneous areas × 1.000)

Production lot quantity = Quantity actually placed - quantity left in place without payment

*Placement lot quantity* = Quantity actually placed - quantity left in place without payment - quantity placed in miscellaneous areas

# Special Specification 3079 Permeable Friction Course



## 1. DESCRIPTION

Construct a hot-mix asphalt (HMA) surface course composed of a compacted permeable mixture of aggregate, asphalt binder, and additives mixed hot in a mixing plant.

## 2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications.

Notify the Engineer of all material sources and before changing any material source or formulation. The Engineer will verify that the specification requirements are met when the Contractor makes a source or formulation change, and may require a new laboratory mixture design, trial batch, or both. The Engineer may sample and test project materials at any time during the project to verify specification compliance in accordance with Item 6, "Control of Materials."

- 2.1. Aggregate. Furnish aggregates from sources that conform to the requirements in accordance with Table 1 and as specified in this Section. Aggregate requirements in this Section, including those shown in Table 1, may be modified or eliminated when shown on the plans. Additional aggregate requirements may be specified when shown on the plans. Provide aggregate stockpiles that meet the definitions in this Section for coarse aggregate. Do not use intermediate or fine aggregate in permeable friction course (PFC) mixtures. Supply aggregates that meet the definitions in <u>Tex-100-E</u> for crushed gravel or crushed stone. The Engineer will designate the plant or the quarry as the sampling location. Provide samples from materials produced for the project. The Engineer will establish the Surface Aggregate Classification (SAC) and perform Los Angeles abrasion, magnesium sulfate soundness, and Micro-Deval tests. Perform all other aggregate quality tests in accordance with Table 1. Document all test results on the mixture design report. The Engineer may perform tests on independent or split samples to verify Contractor test results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis given in <u>Tex-200-F</u>, Part II.
- 2.1.1. Coarse Aggregate. Coarse aggregate stockpiles must have no more than 20% material passing the No. 8 sieve. Aggregates from sources listed in the Department's *Bituminous Rated Source Quality Catalog* (BRSQC) are preapproved for use. Use only the rated values for hot-mix listed in the BRSQC. Rated values for surface treatment (ST) do not apply to coarse aggregate sources used in hot-mix asphalt.

For sources not listed on the Department's BRSQC:

- build an individual stockpile for each material;
- request the Department test the stockpile for specification compliance;
- approved only when tested by the Engineer;
- once approved, do not add material to the stockpile unless otherwise approved; and
- allow 30 calendar days for the Engineer to sample, test, and report results.

Provide coarse aggregate with at least the minimum SAC shown on the plans. SAC requirements only apply to aggregates used on the surface of travel lanes, unless otherwise shown on the plans. SAC requirements apply to aggregates used on surfaces other than travel lanes when shown on the plans. The SAC for sources on the Department's *Aggregate Quality Monitoring Program* (AQMP) (Tex-499-A) is listed in the BRSQC.

2.1.1.1. Blending Class A and Class B Aggregates. To prevent crushing of the Class B aggregate when blending, Class B aggregate may be blended with a Class A aggregate to meet requirements for Class A materials if the Department's BRSQC rated source soundness magnesium (RSSM) rating for the Class B aggregate is less than the Class A aggregate or if the RSSM rating for the Class B aggregate is less than or equal to 10%. Use the rated values for hot mix asphaltic concrete (HMAC) published in the BRSQC. When blending Class A and B aggregates to meet a Class A requirement, ensure that at least 50% by weight, or volume if required, of all the aggregates used in the mixture design retained on the No. 4 sieve comes from the Class A aggregate source, unless otherwise shown on the plans. Blend by volume if the bulk specific gravities of the Class A and B aggregates differ by more than 0.300. Class B aggregate may be disallowed when shown on the plans.

> The Engineer may perform tests at any time during production, when the Contractor blends Class A and B aggregates to meet a Class A requirement, to ensure that at least 50% by weight, or volume if required, of the material retained on the No. 4 sieve comes from the Class A aggregate source. The Engineer will use the Department's mix design template, when electing to verify conformance, to calculate the percent of Class A aggregate retained on the No. 4 sieve by inputting the bin percentages shown from readouts in the control room at the time of production and stockpile gradations measured at the time of production. The Engineer may determine the gradations based on either washed or dry sieve analysis from samples obtained from individual aggregate cold feed bins or aggregate stockpiles. The Engineer may perform spot checks using the gradations supplied by the Contractor on the mixture design report as an input for the template; however, a failing spot check will require confirmation with a stockpile gradation determined by the Engineer.

2.1.1.2. Micro-Deval Abrasion. The Engineer will perform a minimum of one Micro-Deval abrasion test in accordance with Tex-461-A for each coarse aggregate source used in the mixture design that has a Rated Source Soundness Magnesium (RSSM) loss value greater than 10 as listed in the BRSQC, unless otherwise directed. The Engineer will perform testing before the start of production and may perform additional testing at any time during production. The Engineer may obtain the coarse aggregate samples from each coarse aggregate source or may require the Contractor to obtain the samples. The Engineer may waive all Micro-Deval testing based on a satisfactory test history of the same aggregate source.

> The Engineer will estimate the magnesium sulfate soundness loss for each coarse aggregate source, when tested, using the following formula:

 $Mq_{est.} = (RSSM)(MD_{act.}/RSMD)$ 

where:

*Mg_{est}* = magnesium sulfate soundness loss RSSM = Rated Source Soundness Magnesium *MD_{act}* = actual Micro-Deval percent loss RSMD = Rated Source Micro-Deval

When the estimated magnesium sulfate soundness loss is greater than the maximum magnesium sulfate soundness loss specified, the coarse aggregate source will not be allowed for use unless otherwise approved. The Engineer will consult the Soils and Aggregates Section of the Materials and Tests Division, and additional testing may be required before granting approval.

Coarse Aggregate Quality Requirements						
Property Test Method Requirement						
SAC	Tex-499-A (AQMP)	As shown on the plans				
Deleterious material, %, Max	<u>Tex-217-F</u> , Part I	1.0				
Decantation, %, Max	<u>Tex-217-F</u> , Part II	1.5				
Micro-Deval abrasion, %	<u>Tex-461-A</u>	Note 1				
Los Angeles abrasion, %, Max	<u>Tex-410-A</u>	30				
Magnesium sulfate soundness, 5 cycles, %, Max	<u>Tex-411-A</u>	20				
Crushed face count, ² %, Min	<u>Tex-460-A</u> , Part I	95				
Flat and elongated particles @ 5:1, %, Max	<u>Tex-280-F</u>	10				

Table 1

1. Used to estimate the magnesium sulfate soundness loss in accordance with Section 3079.2.1.1.2., "Micro-Deval Abrasion."

2 – 19

Only applies to crushed gravel.

- 2.2. **Baghouse Fines.** Fines collected by the baghouse or other dust-collecting equipment may be reintroduced into the mixing drum.
- 2.3. **Asphalt Binder.** Furnish the type and grade of binder specified on the plans that meets the requirements of Item 300, "Asphalts, Oils, and Emulsions."
- 2.3.1. **Performance-Graded (PG) Binder**. Provide an asphalt binder with a high-temperature grade of PG 76 and low-temperature grade as shown on the plans in accordance with Section 300.2.10., "Performance-Graded Binders," when PG binder is specified.
- 2.3.2. Asphalt-Rubber (A-R) Binder. Provide A-R binder that meets the Type I or Type II requirements of Section 300.2.9., "Asphalt-Rubber Binders," when A-R is specified unless otherwise shown on the plans. Use at least 15.0% by weight of Crumb Rubber Modifier (CRM) that meets the Grade B or Grade C requirements of Section 300.2.7., "Crumb Rubber Modifier," unless otherwise shown on the plans. Provide the Engineer the A-R binder blend design with the mix design (JMF1) submittal. Provide the Engineer with documentation such as the bill of lading showing the quantity of CRM used in the project unless otherwise directed.
- 2.4. **Tack Coat.** Furnish CSS-1H, SS-1H, EBL, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder in accordance with Item 300, "Asphalts, Oils, and Emulsions." Specialized tack coat materials listed on the Department's Tracking Resistant Asphalt Interlayer (TRAIL) MPL may be allowed or required when shown on the plans. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 2.5. Additives. Provide the Engineer with documentation such as the bill of lading showing the quantity of additives used in the project unless otherwise directed.
- 2.5.1. Fibers. Provide cellulose or mineral fibers when PG binder is specified. Do not use fibers when A-R binder is specified. Submit written certification to the Engineer that the fibers proposed for use meet the requirements of DMS-9204, "Fiber Additives for Bituminous Mixtures." Fibers may be pre-blended into the binder at the asphalt supply terminal unless otherwise shown on the plans.
- 2.5.2. Lime Mineral Filler. Add lime as mineral filler at a rate of 1.0% by weight of the total dry aggregate in accordance with Item 301, "Asphalt Antistripping Agents," unless otherwise shown on the plans or waived by the Engineer based on Hamburg Wheel test results. Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream unless the plant has a baghouse or dust collection system that reintroduces the lime into the drum.
- 2.5.3. Lime and Liquid Antistripping Agent. When lime or a liquid antistripping agent is used, add in accordance with Item 301, "Asphalt Antistripping Agents." Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream unless the plant has a baghouse or dust collection system that reintroduces the lime into the drum. When the plans require lime to be added as an antistripping agent, lime added as mineral filler will count towards the total quantity of lime specified.
- 2.5.4. **Compaction Aid.** Compaction aid is defined as a Department-approved chemical warm mix additive denoted as "chemical additive" on the Department's materials producer list (MPL) that is used to facilitate mixing and compaction of HMA.

Compaction aid is allowed for use on all projects. Compaction aid is required when shown on the plans or as required in Section 3079.4.7.1., "Weather Conditions."

Warm mix foaming processes, denoted as "foaming process" on the Department-approved MPL, may be used to facilitate mixing and compaction of HMA; however warm mix foaming processes are not defined as a Compaction aid.

2.6. Recycled Materials. Recycled materials are not allowed for use.

## 3. EQUIPMENT

Provide required or necessary equipment in accordance with Item 320, "Equipment for Asphalt Concrete Pavement." When A-R binder is specified, equip the hot-mix plant with an in-line viscosity-measuring device located between the blending unit and the mixing drum. Provide a means to calibrate the asphalt mass flow meter on-site when a meter is used.

## 4. CONSTRUCTION

Produce, haul, place, and compact the specified paving mixture. In addition to tests required by the specification, Contractors may perform other QC tests as deemed necessary. At any time during the project, the Engineer may perform production and placement tests as deemed necessary in accordance with Item 5, "Control of the Work." Schedule and participate in a mandatory pre-paving meeting with the Engineer on or before the first day of paving unless otherwise shown on the plans.

4.1. Certification. Personnel certified by the Department-approved hot-mix asphalt certification program must conduct all mixture designs, sampling, and testing in accordance with Table 2. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning production and when personnel changes are made. Provide a mixture design developed and signed by a Level 2 certified specialist. Provide Level 1A certified specialists at the plant during production operations. Provide Level 1B certified specialists to conduct placement tests. Provide Level AGG101 certified specialists for aggregate testing.

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Table 2
Test Methods, Test Responsibility, and Minimum Certification Level

Test Description	Test Method	Contractor	Engineer	Level ¹			
1 Annrenate Testina							
Sampling	Tex-221-F	√ v	$\checkmark$	1A/AGG101			
Dry sieve	Tex-200-F. Part I	✓	✓	1A/AGG101			
Washed sieve	Tex-200-F. Part II	✓	✓	1A/AGG101			
Deleterious material	Tex-217-F. Parts I & III	✓	✓	AGG101			
Decantation	Tex-217-F. Part II	✓	✓	AGG101			
Los Angeles abrasion	Tex-410-A		✓	Department			
Magnesium sulfate soundness	Tex-411-A		✓	Department			
Micro-Deval abrasion	Tex-461-A		✓	AGG101			
Crushed face count	Tex-460-A	✓	✓	AGG101			
Flat and elongated particles	Tex-280-F	✓	✓	AGG101			
	2. Asphalt Binder & Tacl	k Coat Sampli	ina				
Asphalt binder sampling	Tex-500-C, Part II	<ul> <li>✓</li> </ul>	✓ ✓	1A/1B			
Tack coat sampling	Tex-500-C, Part III	$\checkmark$	$\checkmark$	1A/1B			
	3. Mix Design & V	erification					
Design and JMF changes	Tex-204-F	✓	✓	2			
Mixing	Tex-205-F	$\checkmark$	$\checkmark$	2			
Molding (SGC)	Tex-241-F	✓	$\checkmark$	1A			
Laboratory-molded density	Tex-207-F, Parts I, VI, & VIII	✓	✓	1A			
Rice gravity	Tex-227-F, Part II	✓	$\checkmark$	1A			
Ignition oven correction factors ²	Tex-236-F, Part II	✓	$\checkmark$	2			
Drain-down	Tex-235-F	✓	✓	1A			
Hamburg Wheel test	Tex-242-F	✓	✓	1A			
Boil test ⁴	Tex-530-C	✓	✓	1A			
Cantabro loss	Tex-245-F	✓	✓	1A			
	4. Production	esting					
Control charts	Tex-233-F	✓	$\checkmark$	1A			
Mixture sampling	Tex-222-F	✓	✓	1A/1B			
Gradation & asphalt binder content ²	<u>Tex-236-F</u> , Part I	~	$\checkmark$	1A			
Moisture content	Tex-212-F. Part II	✓	✓	1A/AGG101			
Micro-Deval abrasion	Tex-461-A		✓	AGG101			
Drain-down	Tex-235-F	✓	✓	1A			
Boil test ⁴	Tex-530-C	✓	✓	1A			
Abson recovery	Tex-211-F		✓	Department			
5. Placement Testing							
Control charts	Tex-233-F	√	$\checkmark$	1A			
Ride quality measurement	Tex-1001-S	✓	✓	Note 3			
Thermal profile	Tex-244-F	✓	$\checkmark$	1B			
Water flow test	Tex-246-F	✓	$\checkmark$	1B			
Shear bond strength test	Tex-249-F		✓	Department			

 Level 1A, 1B, AGG101, and 2 are certification levels provided by the Hot Mix Asphalt Center certification program.
 Refer to Section 3079.4.9.2.3., "Production Testing," for exceptions to using an ignition oven.
 Profiler and operator are required to be certified at the Texas A&M Transportation Institute facility when Surface Test Type B is specified.

4. When shown on the plans.

**Reporting and Responsibilities**. Use Department-provided templates to record and calculate all test data, including mixture design, production and placement tests, control charts, and thermal profiles. Obtain the current version of the templates at <a href="https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html">https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html</a> or from the Engineer. The Engineer and the Contractor will provide any available test results to the other party when requested. The maximum allowable time for the Contractor and Engineer to exchange test data is given in Table 3. The Engineer and the Contractor will immediately report to the other party any test result that requires suspension of production or placement or that fails to meet the specification requirements. Record and electronically submit all test results and pertinent information on Department-provided templates.

Subsequent sublots placed after test results are available to the Contractor, which require suspension of operations, may be considered unauthorized work. Unauthorized work will be accepted or rejected at the discretion of the Engineer in accordance with Article 5.3., "Conformity with Plans, Specifications, and Special Provisions."

Table 3

Reporting Schedule							
Description	Reported By	Reported To	To Be Reported Within				
	Production Quality Control						
Gradation ¹							
Asphalt binder content ¹							
Laboratory-molded density ¹			1 working day of completion of				
Moisture content ²	Contractor	Engineer	the sublot				
Drain-down ¹							
Boil test ⁴							
	Production Qualit	ty Assurance					
Gradation ²							
Asphalt binder content ²			1 working day of completion of				
Laboratory-molded density ²							
Hamburg Wheel test ³	Engineer	Contractor	the cublet				
Boil test ⁴			the subiot				
Drain-down ²							
Binder tests ³							
	Placement Qua	lity Control					
Thermal profile ¹	Contractor	Engineer	1 working day of completion of				
Water flow ¹	CUIIIIACIUI	LIIGIIIEEI	the lot				
Placement Quality Assurance							
Thermal profile ²			1 working day of completion of				
Aging ratio ³	Engineer	Contractor	the lot				
Water flow ²							

1. These tests are required on every sublot.

2. To be performed at the frequency in accordance with Table 9 or as shown on the plans.

3. To be reported as soon as the results become available.

4. When shown on the plans

Use the procedures described in <u>Tex-233-F</u> to plot the results of all production and placement testing, when directed. Update the control charts as soon as test results for each sublot become available. Make the control charts readily accessible at the field laboratory. The Engineer may suspend production for failure to update control charts.

4.3. Quality Control Plan (QCP). Develop and follow the QCP in detail. Obtain approval for changes to the QCP made during the project. The Engineer may suspend operations if the Contractor fails to comply with the QCP.

Submit a written QCP before the mandatory pre-paving meeting when directed. Receive approval of the QCP before pre-paving meeting. Include the following items in the QCP:

#### 4.3.1. **Project Personnel.** For project personnel, include:

a list of individuals responsible for QC with authority to take corrective action;

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current contact information for each individual listed; and

current copies of certification documents for individuals performing specified QC functions.

### 4.3.2. Material Delivery and Storage. For material delivery and storage, include:

- the sequence of material processing, delivery, and minimum quantities to assure continuous plant operations;
- aggregate stockpiling procedures to avoid contamination and segregation;
- frequency, type, and timing of aggregate stockpile testing to assure conformance of material requirements before mixture production; and
- procedure for monitoring the quality and variability of asphalt binder.

#### 4.3.3. **Production**. For production, include:

- loader operation procedures to avoid contamination in cold bins;
- procedures for calibrating and controlling cold feeds;
- procedures to eliminate debris or oversized material;
- procedures for adding and verifying rates of each applicable mixture component (e.g., aggregate, asphalt binder, lime, liquid antistrip, compaction aid, foaming process, fibers);
- procedures for reporting job control test results; and
- procedures to avoid segregation and drain-down in the silo.

#### 4.3.4. Loading and Transporting. For loading and transporting, include:

- type and application method for release agents; and
- truck loading procedures to avoid segregation.

#### 4.3.5. Placement and Compaction. For placement and compaction, include:

- proposed agenda for mandatory pre-paving meeting, including date and location;
- proposed paving plan (e.g., production rate, paving widths, joint offsets, and lift thicknesses);
- type and application method for release agents in the paver and on rollers, shovels, lutes, and other utensils;
- procedures for the transfer of mixture into the paver, while avoiding physical and thermal segregation and preventing material spillage;
- process to balance production, delivery, paving, and compaction to achieve continuous placement operations and good ride quality;
- paver operations (e.g., speed, operation of wings, height of mixture in auger chamber) to avoid physical and thermal segregation and other surface irregularities; and
- procedures to construct quality longitudinal and transverse joints.

#### 4.4. Mixture Design.

4.4.1. **Design Requirements.** Use the PFC design procedure provided in <u>Tex-204-F</u>, unless otherwise shown on the plans. Design the mixture to meet the requirements in accordance with Tables 1, 4, 5, and 6. Use a Superpave Gyratory Compactor (SGC) at 50 gyrations as the design number of gyrations (Ndesign).

The Engineer will provide the mixture design when shown on the plans. The Contractor may submit a new mixture design at any time during the project. The Engineer will verify and approve all mixture designs (JMF1) before the Contractor can begin production.

Provide the Engineer with a mixture design report using the Department-provided template. Include the following items in the report:

- the combined aggregate gradation, source, specific gravity, and percent of each material used;
- results of all applicable tests;
- the mixing and molding temperatures;
- the signature of the Level 2 person or persons that performed the design;

- the date the mixture design was performed; and
- a unique identification number for the mixture design.

Master Gradation Limits (% Passing by Weight or Volume)						
	PG 76 Mixtures		A-R M			
Sieve Size	Fine (PFC-F)	Coarse (PFC-C)	Fine (PFCR-F)	Coarse (PFCR-C)	Test Procedure	
3/4"	_	100.0 ¹	100.0 ¹	100.0 ¹		
1/2"	100.0 ¹	80.0-100.0	95.0-100.0	80.0-100.0		
3/8"	95.0-100.0	35.0-60.0	50.0-80.0	35.0-60.0	Tox 200 E	
#4	20.0-55.0	1.0-20.0	0.0-8.0	0.0-20.0	<u>16X-200-1</u>	
#8	1.0-10.0	1.0-10.0	0.0-4.0	0.0-10.0		
#200	1.0-4.0	1.0-4.0	0.0-4.0	0.0-4.0		

Table 4 er Gradation Limits (% Passing by Weight or V

1. Defined as maximum sieve size. No tolerance allowed.

mixture Design Properties					
	PG 76 N	lixtures	A-R Mi		
Mix Property	Fine (PFC-F) Requirements	Coarse (PFC-C) Requirements	Fine (PFCR-F) Requirements	Coarse (PFCR-C) Requirements	Test Procedure
Design gyrations (Ndesign)	50	50	50	50	<u>Tex-241-F</u>
Lab-molded density, %	78.0 Max	82.0 Max	82.0 Max	82.0 Max	<u>Tex-207-F</u>
Asphalt Binder Content, %	6.0-7.0	6.0-7.0	8.0–10.0	7.0–9.0	
Hamburg Wheel test, ¹ passes at 12.5 mm rut depth	10,000 Min ²	Note 3	Note 3	Note 3	<u>Tex-242-F</u>
Drain-down, %	0.10 Max	0.10 Max	0.10 Max	0.10 Max	<u>Tex-235-F</u>
Fiber content, % by wt. of total PG 76 mixture	0.20-0.50	0.20-0.50	_	_	Calculated
Lime content, % by wt. of total aggregate	1.04	1.04	-	-	Calculated
CRM content, % by wt. of A-R binder	-	-	15.0 Min	15.0 Min	Calculated
Boil test ⁵	-	-	-	-	<u>Tex-530-C</u>
Cantabro loss, %	20.0 Max	20.0 Max	20.0 Max	20.0 Max	<u>Tex-245-F</u>

Table 5	
Mixture Design Prop	ertie

1. Mold test specimens to Ndesign at the optimum asphalt binder content.

2. May be decreased when shown on the plans.

3. No specification value is required unless otherwise shown on the plans.

4. Unless otherwise shown on the plans or waived by the Engineer based on Hamburg Wheel results.

- 5. When shown on the plans. Used to establish baseline for comparison to production results.
- 4.4.2. Job-Mix Formula Approval. The job-mix formula (JMF) is the combined aggregate gradation, Ndesign level, and target asphalt percentage used to establish target values for hot-mix production. JMF1 is the original laboratory mixture design used to produce the trial batch. When a compaction aid or foaming process is used, JMF1 may be designed and submitted to the Engineer without including the compaction aid or foaming process. When a compaction aid or foaming process is used, document the compaction aid or foaming process used and recommended rate on the JMF1 submittal. The Engineer and the Contractor will verify JMF1 based on plant-produced mixture from the trial batch unless otherwise approved. The Engineer may accept an existing mixture design previously used on a Department project and may waive the trial batch to verify JMF1. The Department may require the Contractor to reimburse the Department for verification tests if more than two trial batches per design are required.

#### 4.4.2.1. Contractor's Responsibilities.

- 4.4.2.1.1. **Providing Gyratory Compactor**. Furnish an SGC calibrated in accordance with <u>Tex-241-F</u> for molding production samples. Locate the SGC at the Engineer's field laboratory or make the SGC available to the Engineer for use in molding production samples.
- 4.4.2.1.2. **Gyratory Compactor Correlation Factors.** Use <u>Tex-206-F</u>, Part II, to perform a gyratory compactor correlation when the Engineer uses a different SGC. Apply the correlation factor to all subsequent production test results.
- 4.4.2.1.3. **Submitting JMF1.** Furnish a mix design report (JMF1) with representative samples of all component materials and request approval to produce the trial batch. Provide an additional 25 lb. of the design mixture if opting to have the Department perform the Hamburg Wheel test on the laboratory mixture when required in accordance with Table 5, and request that the Department perform the test.
- 4.4.2.1.4. Supplying Aggregates. Provide approximately 40 lb. of each aggregate stockpile unless otherwise directed.
- 4.4.2.1.5. **Supplying Asphalt.** Provide at least 1 gal. of the asphalt material and enough quantities of any additives proposed for use.
- 4.4.2.1.6. **Ignition Oven Correction Factors.** Determine the aggregate and asphalt correction factors from the ignition oven in accordance with <u>Tex-236-F</u>, Part II. Provide correction factors that are not more than 12 mo. old. Note that the asphalt content correction factor takes into account the percent fibers in the mixture so that the fibers are excluded from the binder content determination. Provide the Engineer with split samples of the mixtures before the trial batch production, including all additives (except water), and blank samples used to determine the correction factors for the ignition oven used for quality assurance (QA) testing during production. Correction factors established from a previously approved mixture design may be used for the current mixture design if the mixture design and ignition oven are the same as previously used and the correction factors are not more than 12 mo. old, unless otherwise directed.
- 4.4.2.1.7. **Boil Test.** When shown on the plans, perform the test and retain the tested sample from <u>Tex-530-C</u> until completion of the project or as directed. Use this sample for comparison purposes during production. Add lime or liquid antistripping agent, as directed, if signs of stripping exist.
- 4.4.2.1.8. **Trial Batch Production**. Provide a plant-produced trial batch upon receiving conditional approval of JMF1 and authorization to produce a trial batch including the compaction aid or foaming process, if applicable, for verification testing of JMF1 and development of JMF2. Produce a trial batch mixture that meets the requirements in accordance with Table 6. The Engineer may accept test results from recent production of the same mixture instead of a new trial batch.
- 4.4.2.1.9. **Trial Batch Production Equipment.** Use only equipment and materials proposed for use on the project to produce the trial batch. Provide documentation to verify the calibration or accuracy of the asphalt mass flow meter to measure the binder content. Verify that asphalt mass flow meter meets the requirements of 0.4% accuracy, when required, in accordance with Item 520, "Weighing and Measuring Equipment." The Engineer may require that the accuracy of the mass flow meter be verified based on quantities used.
- 4.4.2.1.10. **Trial Batch Quantity.** Produce enough quantity of the trial batch to ensure that the mixture meets the specification requirements.
- 4.4.2.1.11. **Number of Trial Batches.** Produce trial batches as necessary to obtain a mixture that meets the specification requirements.
- 4.4.2.1.12. **Trial Batch Sampling.** Obtain a representative sample of the trial batch and split it into three equal portions in accordance with <u>Tex-222-F</u>. Label these portions as "Contractor," "Engineer," and "Referee." Deliver samples to the appropriate laboratory as directed.
- 4.4.2.1.13. **Trial Batch Testing**. Test the trial batch to ensure the mixture produced using the proposed JMF1 meets the mixture requirements in accordance with Table 6. Ensure the trial batch mixture is also in compliance with the requirements in accordance with Table 5. Use a Department-approved laboratory listed on the MPL to perform

the Hamburg Wheel test on the trial batch mixture or request that the Department perform the Hamburg Wheel test. Provide an additional 25 lb. of the trial batch mixture if opting to have the Department perform the Hamburg Wheel test, if applicable, and request that the Department perform the test. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel test results on the trial batch. Provide the Engineer with a copy of the trial batch test results.

- 4.4.2.1.14. **Development of JMF2.** Evaluate the trial batch test results, determine the target mixture proportions, and submit as JMF2 after the Engineer grants full approval of JMF1 based on results from the trial batch. The mixture produced using JMF2 must meet the requirements in accordance with Tables 4 and 5. Verify that JMF2 meets the operational tolerances in accordance with Table 6.
- 4.4.2.1.15. Mixture Production. Use JMF2 to produce Lot 1 after receiving approval for JMF2.
- 4.4.2.1.16. **Development of JMF3.** Evaluate the test results from Lot 1, determine the optimum mixture proportions, and submit as JMF3 for use in Lot 2.
- 4.4.2.1.17. **JMF Adjustments.** If JMF adjustments are necessary to achieve the specified requirements, make the adjustments before beginning a new lot. The adjusted JMF must:
  - be provided to the Engineer in writing before the start of a new lot;
  - be numbered in sequence to the previous JMF;
  - meet the master gradation limits in accordance with Table 4; and
  - be within the operational tolerances of JMF2 in accordance with Table 6.
- 4.4.2.1.18. **Requesting Referee Testing.** Use referee testing, if needed, in accordance with Section 3079.4.9.1., "Referee Testing," to resolve testing differences with the Engineer.

Test Description	Test Method	Allowable Difference between JMF2 and JMF1 Target ¹	Allowable Difference from Current JMF and JMF2 ²	Allowable Difference between Contractor and Engineer ³
Individual % retained for sieve sized larger than #200	Tex-200-F	Must be Within Master Grading Limits in	+3.04	$\pm 5.0^{4}$
% passing the #200 sieve	10/ 2001	accordance with Table 4	2010	$\pm 2.0^{4}$
Laboratory-molded density, %	<u>Tex-207-F</u> , Part VIII	±1.0	±1.0	±1.0
Asphalt binder content, %	<u>Tex-236-F</u> , Part I⁵	±0.36,7	$\pm 0.3^{4,6,7}$	±0.36,7
Drain-down, %	<u>Tex-235-F</u>	Note 8	Note 8	N/A
Boil test	<u>Tex-530-C</u>	Note 9	Note 9	N/A

Table 6

1. JMF1 is the approved laboratory mixture design used for producing the trial batch. JMF2 is the approved mixture design developed from the trial batch used to produce Lot 1.

2. Current JMF is JMF3 or higher. JMF3 is the approved mixture design used to produce Lot 2.

3. Contractor may request referee testing only when values exceed these tolerances.

4. Only applies to mixture produced for Lot 1 and higher. Aggregate gradation is not allowed to be outside the limits shown in Table 4.

5. Ensure the binder content determination excludes fibers.

6. May be obtained from asphalt mass flow meter readouts as determined by the Engineer.

7. Binder content is not allowed to be outside the limits in accordance with Table 5.

8. Verify that Table 5 requirements are met.

9. When shown on the plans.

#### 4.4.2.2. Engineer's Responsibilities.

4.4.2.2.1. Superpave Gyratory Compactor. The Engineer will use a Department SGC calibrated in accordance with <u>Tex-241-F</u> to mold samples for laboratory mixture design verification. For molding trial batch and production specimens, the Engineer will use the Contractor-provided SGC at the

field laboratory or provide and use a Department SGC at an alternate location.

## 4.4.2.2.2. Conditional Approval of JMF1 and Authorizing Trial Batch. The Engineer will review and verify conformance of the following information within two working days of receipt:

- the Contractor's mix design report (JMF1);
- the Contractor-provided Hamburg Wheel test results;
- all required materials including aggregates, asphalt, and additives; and
- the mixture specifications.

The Engineer will grant the Contractor conditional approval of JMF1 if the information provided on the paper copy of JMF1 indicates that the Contractor's mixture design meets the specifications. When the Contractor does not provide Hamburg Wheel test with laboratory mixture design, 10 working days are allowed for conditional approval of JMF1. The Engineer will base full approval of JMF1 on the test results on mixture from the trial batch.

Unless waived, the Engineer will determine the Micro-Deval abrasion loss in accordance with Section 3079.2.1.1.2., "Micro-Deval Abrasion." If the Engineer's test results are pending after two working days, conditional approval of JMF1 will still be granted within two working days of receiving JMF1. When the Engineer's test results become available, they will be used for specification compliance.

The Contractor is authorized to produce a trial batch after the Engineer grants conditional approval of JMF1.

- 4.4.2.2.3. Hamburg Wheel Testing. At the Contractor's request, the Department will perform the Hamburg Wheel test on the laboratory mixture in accordance with <u>Tex-242-F</u> to verify compliance with the Hamburg Wheel test requirement in accordance with Table 5. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel test results on the laboratory mixture design.
- 4.4.2.2.4. **Ignition Oven Correction Factors.** The Engineer will use the split samples provided by the Contractor to determine the aggregate and asphalt correction factors for the ignition oven used for QA testing during production in accordance with <u>Tex-236-F</u>, Part II. Provide correction factors that are not more than 12 mo. old. The Engineer will verify that the asphalt content correction factor takes into account the percent fibers in the mixture so that the fibers are excluded from the binder content determination.
- 4.4.2.2.5. **Testing the Trial Batch.** Within one full working day, the Engineer will sample and test the trial batch to ensure that the mixture meets the requirements in accordance with Table 6. If the Contractor requests the option to have the Department perform the Hamburg Wheel test on the trial batch mixture, the Engineer will mold samples in accordance with <u>Tex-242-F</u> to verify compliance with the Hamburg Wheel test requirement in accordance with Table 5.

The Engineer will have the option to perform <u>Tex-530-C</u> on the trial batch when shown on the plans. These results may be retained and used for comparison purposes during production.

4.4.2.2.6. **Full Approval of JMF1.** The Engineer will grant full approval of JMF1 and authorize the Contractor to proceed with developing JMF2 if the Engineer's results for the trial batch meet the requirements in accordance with Table 5.

The Engineer will notify the Contractor that an additional trial batch is required if the trial batch does not meet these requirements.

4.4.2.2.7. **Approval of JMF2.** The Engineer will approve JMF2 within one working day if the mixture meets the requirements in accordance with Tables 4, 5, and 6.

- 4.4.2.2.8. Approval of Lot 1 Production. The Engineer will authorize the Contractor to proceed with Lot 1 production (using JMF2).
- 4.4.2.2.9. **Approval of JMF3 and Subsequent JMF Changes**. JMF3 and subsequent JMF changes are approved if they meet the master grading limits in accordance with Table 4, the asphalt binder content in accordance with Table 5, and are within the operational tolerances of JMF2 in accordance with Table 6.
- 4.4.2.2.10. Binder Content Adjustments. For JMF2 and above, the Engineer may require the Contractor to adjust the target binder content by no more than 0.3% from the current JMF.
- 4.5. **Production Operations.** Perform a new trial batch when the plant or plant location is changed. Take corrective action and receive approval to proceed after any production suspension for noncompliance to the specification.
- 4.5.1. **Storage and Heating of Materials.** Do not heat the asphalt binder above the temperatures specified in Item 300, "Asphalts, Oils, and Emulsions," or outside the manufacturer's recommended values. Provide the Engineer with daily records of asphalt binder and hot-mix asphalt discharge temperatures (in legible and discernible increments) in accordance with Item 320, "Equipment for Asphalt Concrete Pavement," unless otherwise directed. Do not store mixture for a period long enough to affect the quality of the mixture, nor in any case longer than 12 hr. unless otherwise approved.
- 4.5.2. **Mixing and Discharge of Materials.** Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck before shipping to ensure that it does not exceed the maximum production temperatures in accordance with Table 7. The Department will not pay for or allow placement of any mixture produced above the maximum production temperatures in accordance with Table 7.

High-Temperature Binder Grade ¹	Maximum Production Temperature		
PG 76	345°F		
A-R Binder	345°F		

Table 7 Maximum Production Temperature

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.

Control the mixing time and temperature so that substantially all moisture is removed from the mixture before discharging from the plant. Determine the moisture content, if requested, by oven-drying in accordance with <u>Tex-212-F</u>, Part II, and verify that the mixture contains no more than 0.2% of moisture by weight. Obtain the sample immediately after discharging the mixture into the truck and perform the test promptly.

4.6. Hauling Operations. Clean all truck beds before use to ensure that mixture is not contaminated. Use a release agent, when necessary, shown on the Department's MPL to coat the inside bed of the truck. Do not use diesel or any release agent not shown on the Department's MPL.

Use equipment for hauling as defined in Section 3079.4.7.3.3., "Hauling Equipment." Use other hauling equipment only when allowed.

4.7. Placement Operations. Collect haul tickets from each load of mixture delivered to the project and provide the Department's copy to the Engineer approximately every hour or as directed. Use a hand-held thermal camera or infrared thermometer, when a thermal imaging system is not used, to measure and record the internal temperature of the mixture as discharged from the truck or Material Transfer Device (MTD) before or as the mix enters the paver and an approximate station number or GPS coordinates on each ticket. Calculate the daily yield and cumulative yield for the specified lift and provide to the Engineer at the end of paving operations for each day unless otherwise directed. The Engineer may suspend production if the Contractor fails to produce and provide haul tickets and yield calculations by the end of paving operations for each day.

Prepare the surface by removing raised pavement markers and objectionable material such as moisture, dirt, sand, leaves, and other loose impediments from the surface before placing mixture. Remove vegetation from

pavement edges. Place the mixture to meet the typical section requirements and produce a smooth, finished surface with a uniform appearance and texture. Offset longitudinal joints of successive courses of hot-mix by at least 6 in. Place mixture so that longitudinal joints on the surface course coincide within 6-in. of lane lines and are not placed in the wheel path, or as directed. Ensure that all finished surfaces will drain properly.

#### 4.7.1. Weather Conditions.

4.7.1.1. When Using a Thermal Imaging System. The Contractor may pave any time the roadway is dry and the roadway surface temperature is at least 60°F unless otherwise approved or as shown on the plans; however, the Engineer may restrict the Contractor from paving if the ambient temperature is likely to drop below 32°F within 12 hr. of paving. Place mixtures when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. Provide output data from the thermal imaging system to demonstrate to the Engineer that no recurring severe thermal segregation exists in accordance with Section 3079.4.7.3.1.2., "Thermal Imaging System."

Produce mixture with a target discharge temperature higher than 300°F and with a compaction aid to facilitate compaction when the air temperature is 70°F and falling.

4.7.1.1.1 When Not Using a Thermal Imaging System. When using a thermal camera instead of the thermal imaging system, place mixture when the roadway surface temperature is at or above 70°F unless otherwise approved or as shown on the plans. Measure the roadway surface temperature with a hand-held thermal camera or infrared thermometer. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. The Engineer may restrict the Contractor from paving if the air temperature is 60°F and falling.

Produce mixture with a target discharge temperature higher than  $300^{\circ}F$  and with a compaction aid to facilitate compaction when the air temperature is  $70^{\circ}F$  and falling.

- 4.7.2. Tack Coat.
- 4.7.2.1. **Application**. Clean the surface before placing the tack coat. The Engineer will set the rate between 0.04 and 0.10 gal. of residual asphalt per square yard of surface area. Apply a uniform tack coat at the specified rate unless otherwise directed. Apply the tack coat in a uniform manner to avoid streaks and other irregular patterns. Apply adequate overlap of the tack coat in the longitudinal direction during the placement of the mat to ensure bond of adjacent PFC mats, unless otherwise directed. Unless otherwise directed, avoid tacking the vertical faces of adjacent PFC mats in the longitudinal direction to avoid restricting lateral drainage. Apply tack coat to all transverse joints. Allow adequate time for emulsion to break completely before placing any material. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 4.7.2.2. Sampling. The Engineer will obtain at least one sample of the tack coat binder per project in accordance with <u>Tex-500-C</u>, Part III, and test it to verify compliance with Item 300, "Asphalts, Oils, and Emulsions." The Engineer will notify the Contractor when the sampling will occur and will witness the collection of the sample from the asphalt distributor immediately before use. Label the can with the corresponding lot and sublot numbers, producer, producer facility, grade, district, date sampled, and project information including highway and CSJ. For emulsions, the Engineer may test as often as necessary to ensure the residual of the emulsion is greater than or equal to the specification requirement in Item 300, "Asphalts, Oils, and Emulsions."
- 4.7.3. Lay-Down Operations. Use the placement temperature in accordance with Table 8 to establish the minimum placement temperature of the mixture delivered to the paving operation.

 Table 8

 Minimum Mixture Placement Temperature

High-Temperature Binder Grade ¹	Minimum Placement Temperature (Before Entering Paving Operation) ^{2,3}		
PG 76	280°F		
A-R Binder	280°F		

- 1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
- 2. The mixture temperature must be measured using a hand-held thermal camera or infrared thermometer nearest to the point of entry of the paving operation.
- 3. Minimum placement temperatures may be reduced 10°F if using a compaction aid.
- 4.7.3.1. **Thermal Profile**. Use a hand-held thermal camera or a thermal imaging system to obtain a continuous thermal profile in accordance with <u>Tex-244-F</u>. Thermal profiles are not applicable in areas described in Section 3079.4.9.3.2., "Miscellaneous Areas."
- 4.7.3.1.1. Thermal Segregation.
- 4.7.3.1.1.1. Moderate. Any areas that have a temperature differential greater than 25°F, but not exceeding 50°F.
- 4.7.3.1.1.2. Severe. Any areas that have a temperature differential greater than 50°F.
- 4.7.3.1.2. **Thermal Imaging System.** Review the output results when a thermal imaging system is used, and provide the report described in <u>Tex-244-F</u> to the Engineer daily. Modify the paving process as necessary to eliminate any recurring (moderate or severe) thermal segregation identified by the thermal imaging system.-

The Engineer may suspend subsequent paving operations if the Contractor cannot successfully modify the paving process to eliminate recurring severe or moderate thermal segregation.

Provide the Engineer with electronic copies of all daily data files that can be used with the thermal imaging system software to generate temperature profile plots daily or as requested by the Engineer.

- 4.7.3.1.2.1. Thermal Camera. When using a thermal camera instead of the thermal imaging system, take immediate corrective action to eliminate recurring moderate thermal segregation when a hand-held thermal camera is used. Provide the Engineer with the thermal profile of every sublot within one working day of the completion of each lot. When requested by the Engineer, provide the electronic files generated using the thermal camera. Report the results of each thermal profile in accordance with Section 3079.4.2., "Reporting and Responsibilities." The Engineer will use a hand-held thermal camera to obtain a thermal profile at least once per project. Suspend operations and take immediate corrective action to eliminate severe thermal segregation unless otherwise directed. Resume operations when the Engineer determines that subsequent production will meet the requirements of this Section.
- 4.7.3.2. Windrow Operations. Operate windrow pickup equipment so that when hot-mix is placed in windrows, substantially all the mixture deposited on the roadbed is picked up and loaded into the paver.
- 4.7.3.3. Hauling Equipment. Use belly dumps, live bottom, or end dump trucks to haul and transfer mixture; however, with exception of paving miscellaneous areas, end dump trucks are only allowed when used in conjunction with an MTD with remixing capability or when a thermal imaging system is used unless otherwise allowed.
- 4.7.3.4. **Screed Heaters.** Turn off screed heaters to prevent overheating of the mat if the paver stops for more than 5 min. The Engineer may evaluate the suspect area in accordance with Section 3079.4.9.3.3., "Recovered Asphalt Dynamic Shear Rheometer (DSR)," if the screed heater remains on for more than 5 min. while the paver is stopped.
- 4.8. **Compaction.** Roll the freshly placed PFC with as many steel-wheeled rollers as necessary, operated in static mode, to seat the mixture without excessive breakage of the aggregate and to provide a smooth surface and uniform texture. Do not use pneumatic rollers. Moisten the roller drums thoroughly with a soap and water solution to prevent adhesion. Use only water or an approved release agent on rollers, tamps, and

other compaction equipment unless otherwise directed.

Use <u>Tex-246-F</u> to test and verify that the compacted mixture has adequate permeability. Measure the water flow once per sublot at locations directed by the Engineer. The water flow rate must be less than 20 sec. Investigate the cause of the water flow rate test failures and take corrective actions during production and placement to ensure the water flow rate is less than 20 sec. Suspend production if two consecutive water flow rate tests fail unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

Complete all compaction operations before the pavement temperature drops below 180°F unless otherwise allowed. The Engineer may allow compaction with a light finish roller operated in static mode for pavement temperatures below 180°F.

Allow the compacted pavement to cool to 160°F or lower before opening to traffic unless otherwise directed. Sprinkle the finished mat with water or limewater, when directed, to expedite opening the roadway to traffic.

- 4.9. Acceptance Plan. Sample and test the hot-mix on a lot and sublot basis.
- 4.9.3. **Referee Testing.** The Materials and Tests Division is the referee laboratory. The Contractor may request referee testing if the differences between Contractor and Engineer test results exceed the operational tolerances in accordance with Table 6 and the differences cannot be resolved. The Contractor may also request referee testing if the Engineer's test results require suspension of production and the Contractor's test results are within specification limits. Make the request within five working days after receiving test results and cores from the Engineer. Referee tests will be performed only on the sublot in question and only for the particular tests in question. Allow 10 working days from the time the referee laboratory receives the samples for test results to be reported. The Department may require the Contractor to reimburse the Department for referee tests if more than three referee tests per project are required and the Engineer's test results are closer to the referee test results than the Contractor's test results.

#### 4.9.4. Production Acceptance.

- 4.9.4.1. **Production Lot.** A production lot consists of four equal sublots. The default quantity for Lot 1 is 1,000 ton; however, when requested by the Contractor, the Engineer may increase the quantity for Lot 1 to no more than 2,000 ton. The Engineer will select subsequent lot sizes based on the anticipated daily production such that approximately three to four sublots are produced each day. The lot size will be between 1,000 ton and 4,000 ton. The Engineer may change the lot size before the Contractor begins any lot.
- 4.9.4.1.1. **Incomplete Production Lots.** If a lot is begun but cannot be completed, such as on the last day of production or in other circumstances deemed appropriate, the Engineer may close the lot. Close all lots within five working days unless otherwise allowed.

#### 4.9.4.2. Production Sampling.

- 4.9.4.2.1. **Mixture Sampling.** Obtain hot-mix samples from trucks at the plant in accordance with <u>Tex-222-F</u>. The sampler will split each sample into three equal portions in accordance with <u>Tex-200-F</u> and label these portions as "Contractor," "Engineer," and "Referee." The Engineer will perform or witness the sample splitting and take immediate possession of the samples labeled "Engineer" and "Referee." The Engineer will maintain the custody of the samples labeled "Engineer" and "Referee" until the Department's testing is completed.
- 4.9.4.2.1.1. Random Sample. At the beginning of the project, the Engineer will select random numbers for all production sublots. Determine sample locations in accordance with <u>Tex-225-F</u>. Take one sample for each sublot at the randomly selected location. The Engineer will perform or witness the sampling of production sublots.
- 4.9.4.2.1.2. Blind Sample. For one sublot per lot, the Engineer will obtain and test a "blind" sample instead of the random sample collected by the Contractor. Test either the "blind" or the random sample; however, referee testing (if applicable) will be based on a comparison of results from the "blind" sample. The location of the Engineer's "blind" sample will not be disclosed to the Contractor. The Engineer's "blind" sample may be randomly selected in accordance with <u>Tex-225-F</u> for any sublot or selected at the discretion of the Engineer. The

Engineer will use the Contractor's split sample for sublots not sampled by the Engineer.

- 4.9.4.2.2. Informational Shear Bond Strength Testing. Select one random sublot from Lot 2 or higher for shear bond strength testing. Obtain full depth cores in accordance with <u>Tex-249-F</u>. Label the cores with the Control Section Job (CSJ), producer of the tack coat, mix type, shot rate, lot, and sublot number and provide to the Engineer. The Engineer will ship the cores to the Materials and Tests Division or district laboratory for shear bond strength testing. Results from these tests will not be used for specification compliance.
- 4.9.4.2.3. Informational Hamburg and Overlay Testing. Select one random sublot from Lot 2 or higher for Hamburg and Overlay testing during the first week of production. Obtain and provide the Engineer with approximately 90 lb. of mixture, sampled in accordance with <u>Tex-222-F</u>, in sealed containers, boxes, or bags labeled with the Control-Section-Job (CSJ), mixture type, lot, and sublot number. The Engineer will ship the mixture to the Materials and Tests Division for Hamburg and Overlay testing. Results from these tests will not be used for specification compliance.
- 4.9.4.2.4. Asphalt Binder Sampling. Obtain a 1 qt. (1 gal. for A-R binder) sample of the asphalt binder witness by the Engineer for each lot of mixture produced. The Contractor will notify the Engineer when the sampling will occur. Obtain the sample at approximately the same time the mixture random sample is obtained. Sample from a port located immediately upstream from the mixing drum or pug mill and upstream from the introduction of any additives in accordance with <u>Tex-500-C</u>, Part II. Label the can with the corresponding lot and sublot numbers, producer, producer facility, grade, district, date sampled, and project information including highway and CSJ. The Engineer will retain these samples for one year. The Engineer may also obtain independent samples. If obtaining an independent asphalt binder sample and upon request of the Contractor, the Engineer will split a sample of the asphalt binder with the Contractor

At least once per project, the Engineer will collect split samples of each binder grade and source used. The Engineer will submit one split sample to the Materials and Tests Division to verify compliance with Item 300, "Asphalts, Oils, and Emulsions" and will retain the other split sample for one year.

4.9.4.3. **Production Testing.** The Contractor and Engineer must perform production tests in accordance with Table 9. The Contractor has the option to verify the Engineer's test results on split samples provided by the Engineer. Determine compliance with operational tolerances in accordance with Table 6 for all sublots.

At any time during production, the Engineer may require the Contractor to verify the following based on quantities used:

- lime content (within ±0.1% of JMF), when PG binder is specified;
- fiber content (within ±0.03% of JMF), when PG binder is specified; and
- CRM content (within ±1.5% of JMF), when A-R binder is specified.

Maintain the in-line measuring device when A-R binder is specified to verify the A-R binder viscosity between 2,500 and 4,000 centipoise at 350°F unless otherwise approved. Record A-R binder viscosity at least once per hour and provide the Engineer with a daily summary unless otherwise directed.

If the aggregate mineralogy is such that <u>Tex-236-F</u>, Part I does not yield reliable results, the Engineer may allow alternate methods for determining the asphalt content and aggregate gradation. The Engineer will require the Contractor to provide evidence that results from <u>Tex-236-F</u>, Part I are not reliable before permitting an alternate method unless otherwise allowed. Use the applicable test procedure as directed if an alternate test method is allowed.

Table 9

Production and Pracement resting Frequency					
Description	Test Method	Minimum Contractor Testing Frequency	Minimum Engineer Testing Frequency		
Individual % retained for sieve sized larger than #200 % passing the #200 sieve	<u>Tex-200-F</u>	1 per sublot	1 per 12 sublots		
Laboratory-molded density, %	Tex-207-F, Part VIII	1 per sublot	1 per lot		
Asphalt binder content ¹ , %	<u>Tex-236-F</u> , Part I ²	1 per sublot	1 per lot		
Drain-down, %	<u>Tex-235-F</u>	1 per sublot	1 per 12 sublots		
Boil test ³	<u>Tex-530-C</u>	1 per project	1 per project		
Moisture content	<u>Tex-212-F</u> , Part II	When directed	1 per project		
Cantabro loss, %	<u>Tex-245-F</u>	1 per project (sample only)	1 per project		
Overlay test	<u>Tex-248-F</u>	1 per project (sample only)	1 per project ^{4,9}		
Hamburg Wheel test	<u>Tex-242-F</u>	1 per project (sample only)	1 per project ^{4,9}		
Water flow test	<u>Tex-246-F</u>	1 per sublot	1 per project		
Asphalt binder sampling	Tex-500-C, Part II	1 per lot (sample only)⁵	1 per project		
Tack coat sampling and testing	<u>Tex-500-C</u> , Part III	N/A	1 per project		
Thermal profile	<u>Tex-244-F</u>	1 per sublot, ^{6,7,8}	1 per project ⁷		

1. May be obtained from t mass flow meter readouts as determined by the Engineer.

2. Ensure the binder content determination excludes fibers.

3. When shown on the plans.

4. Testing performed by the Materials and Tests Division on sample obtained from Lot 2 or higher.

5. Obtain samples witness by the Engineer. The Engineer will retain these samples for one year.

- 6. To be performed in the presence of the Engineer when using the thermal camera, unless otherwise approved.
- 7. Not required when a thermal imaging system is used.
- 8. When using the thermal imaging system, the test report must include the temperature measurements taken in accordance with Tex-244-F.
- 9. Testing performed by the Materials and Tests Division for informational purposes only.
- 4.9.4.4. **Operational Tolerances**. Control the production process within the operational tolerances in accordance with Table 6. Suspend production and placement operations when production or placement test results exceed the tolerances in accordance with Table 6 unless otherwise allowed. When production is suspended, the Engineer will allow production to resume when test results or other information indicates the next mixture produced will be within the operational tolerances.
- 4.9.4.5. Individual Loads of Hot-Mix. The Engineer can reject individual truckloads of hot-mix. When a load of hot-mix is rejected for reasons other than temperature, contamination, or excessive uncoated particles, the Contractor may request that the rejected load be tested. Make this request within 4 hr. of rejection. The Engineer will sample and test the mixture. If test results are within the operational tolerances in accordance with Table 6, payment will be made for the load. If test results are not within operational tolerances, no payment will be made for the load.
- 4.9.5. Placement Acceptance.
- 4.9.5.1. Placement Lot. A placement lot consists of four placement sublots. A placement sublot consists of the area placed during a production sublot.
- 4.9.5.2. Miscellaneous Areas. Miscellaneous areas include areas that typically involve significant handwork or discontinuous paving operations such as driveways, mailbox turnouts, crossovers, gores, spot level-up 17 19

areas, and other similar areas. The specified layer thickness is based on the rate of 90 lb. per square yard for each inch of pavement unless another rate is shown on the plans. Miscellaneous areas are not subject to thermal profiles testing.

- 4.9.5.3. **Recovered Asphalt Dynamic Shear Rheometer (DSR).** The Engineer may take production samples or cores from suspect areas of the project to determine recovered asphalt properties. Asphalt binders with an aging ratio greater than 3.5 do not meet the requirements for recovered asphalt properties and may be deemed defective when tested and evaluated by the Materials and Tests Division. The aging ratio is the DSR value of the extracted binder divided by the DSR value of the original unaged binder. Obtain DSR values in accordance with AASHTO T 315 at the specified high temperature performance grade of the asphalt. The Engineer may require removal and replacement of the defective material at the Contractor's expense. The asphalt binder will be recovered for testing from production samples or cores in accordance with <u>Tex-211-F</u>.
- 4.9.5.4. Irregularities. Identify and correct irregularities, including segregation, rutting, raveling, flushing, fat spots, mat slippage, irregular color, irregular texture, roller marks, tears, gouges, streaks, uncoated aggregate particles, or broken aggregate particles. The Engineer may also identify irregularities, and in such cases, the Engineer will promptly notify the Contractor. If the Engineer determines that the irregularity will adversely affect pavement performance, the Engineer may require the Contractor to remove and replace (at the Contractor's expense) areas of the pavement that contain irregularities. The Engineer may also require the Contractor to remove and replace (at the Contractor to remove and replace (at the Contractor to remove and replace (at the Contractor's expense) areas where the mixture does not bond to the existing pavement.

If irregularities are detected, the Engineer may require the Contractor to immediately suspend operations or may allow the Contractor to continue operations for no more than one day while the Contractor is taking appropriate corrective action.

- 4.9.6. **Exempt Production**. When the anticipated daily production is less than 100 ton, all QC and QA sampling and testing are waived. The Engineer may deem the mixture as exempt production for the following conditions:
  - anticipated daily production is more than 100 ton but less than 250 ton;
  - total production for the project is less than 2,500 ton;
  - when mutually agreed between the Engineer and the Contractor; or
  - when shown on the plans.

For exempt production, the Contractor is relieved of all production and placement sampling and testing requirements. All other specification requirements apply, and the Engineer will perform acceptance tests for production and placement in accordance with Table 9.

For exempt production:

- produce, haul, place, and compact the mixture as directed by the Engineer; and
- control mixture production to yield a laboratory-molded density that is within ±1.0% of the target density as tested by the Engineer.
- 4.9.7. **Ride Quality.** Measure ride quality in accordance with Item 585, "Ride Quality for Pavement Surfaces," unless otherwise shown on the plans.

#### 5. MEASUREMENT

- 5.1. **PFC Hot-Mix Asphalt.** Permeable friction course (PFC) hot-mix will be measured by the ton of composite mixture which includes asphalt, aggregate, and additives. Measure the weight on scales in accordance with Item 520, "Weighing and Measuring Equipment.
- 5.2. **Tack Coat.** Tack coat will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume in gallons from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All tack, including emulsions, will be measured by the gallon applied.

### 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under Section 3079.5.1., "PFC Hot-Mix Asphalt," will be paid for at the unit bid price for "Permeable friction course Hot Mix Asphalt" of the mixture type, SAC, and binder specified. These prices are full compensation for surface preparation, materials, placement, equipment, labor, tools, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under Section 3079.5.2., "Tack Coat," will be paid for at the unit bid price for "Tack Coat" of the tack coat provided. These prices are full compensation for materials, placement, equipment, labor, tools, and incidentals.

Trial batches will not be paid for unless they are included in pavement work approved by the Department.

Payment adjustment for ride quality will be determined in accordance with Item 585, "Ride Quality for Pavement Surfaces."

## Special Specification 3081 Thin Overlay Mixtures



## 1. DESCRIPTION

Construct a thin surface course composed of a compacted mixture of aggregate and asphalt binder mixed hot in a mixing plant. Produce a thin overlay mixture (TOM) with a minimum lift thickness of 1/2 in. for a Type F mixture and 3/4 in. for a Type C mixture.

## 2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications.

Notify the Engineer of all material sources and before changing any material source or formulation. The Engineer will verify that the specification requirements are met when the Contractor makes a source or formulation change, and may require a new laboratory mixture design, trial batch, or both. The Engineer may sample and test project materials at any time during the project to verify specification compliance in accordance with Item 6, "Control of Materials."

- 2.1. Aggregate. Furnish aggregates from sources that conform to the requirements in accordance with Table 1 and as specified in this Section. Aggregate requirements in this Section, including those shown in Table 1, may be modified or eliminated when shown on the plans. Additional aggregate requirements may be specified when shown on the plans. Provide aggregate stockpiles that meet the definitions in this Section for coarse, intermediate, or fine aggregate. Do not use reclaimed asphalt pavement (RAP) or recycled asphalt shingles (RAS). Supply aggregates that meet the definitions in accordance with <u>Tex-100-E</u> for crushed gravel or crushed stone. The Engineer will designate the plant or the quarry as the sampling location. Provide samples from materials produced for the project. The Engineer will establish the Surface Aggregate Classification (SAC) and perform Los Angeles abrasion, magnesium sulfate soundness, and Micro-Deval tests. Perform all other aggregate quality tests in accordance with Table 1. Document all test results on the mixture design report. The Engineer may perform tests on independent or split samples to verify Contractor test results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis in accordance with <u>Tex-200-F</u>, Part II.
- 2.1.1. **Coarse Aggregate.** Coarse aggregate stockpiles must have no more than 20% material passing the No. 8 sieve. Aggregates from sources listed in the Department's *Bituminous Rated Source Quality Catalog* (BRSQC) are preapproved for use. Use only the rated values for hot-mix listed in the BRSQC. Rated values for surface treatment (ST) do not apply to coarse aggregate sources used in hot-mix asphalt.

For sources not listed on the Department's BRSQC:

- build an individual stockpile for each material;
- request the Department test the stockpile for specification compliance;
- approved only when tested by the Engineer;
- once approved, do not add material to the stockpile unless otherwise approved; and
- allow 30 calendar days for the Engineer to sample, test, and report results.
- 2.1.1.1. Blending Class A and Class B Aggregates. Class B aggregate meeting all other requirements in blending Class A and B aggregates to meet a Class A requirement, ensure that at least 50% by weight, or volume if required, of all aggregates used in the mixture design retained on the No. 8 sieve comes from the Class A

aggregate source, unless otherwise shown on the plans. Blend by volume if the bulk specific gravities of the Class A and B aggregates differ by more than 0.300. Class B aggregate may be disallowed when shown on the plans.

The Engineer may perform tests at any time during production, when the Contractor blends Class A and B aggregates to meet a Class A requirement, to ensure that at least 50% by weight, or volume if required, of the material retained on the No. 8 sieve comes from the Class A aggregate source. The Engineer will use the Department's mix design template, when electing to verify conformance, to calculate the percent of Class A aggregate retained on the No. 8 sieve by inputting the bin percentages shown from readouts in the control room at the time of production and stockpile gradations measured at the time of production. The Engineer may determine the gradations based on either washed or dry sieve analysis from samples obtained from individual aggregate cold feed bins or aggregate stockpiles. The Engineer may perform spot checks using the gradations supplied by the Contractor on the mixture design report as an input for the template; however, a failing spot check will require confirmation with a stockpile gradation determined by the Engineer.

2.1.1.2. **Micro-Deval Abrasion.** The Engineer will perform a minimum of one Micro-Deval abrasion test in accordance with <u>Tex-461-A</u> for each coarse aggregate source used in the mixture design that has a Rated Source Soundness Magnesium (RSSM) loss value greater than 15 as listed in the BRSQC, unless otherwise directed. The Engineer will perform testing before the start of production and may perform additional testing at any time during production. The Engineer may obtain the coarse aggregate samples from each coarse aggregate source or may require the Contractor to obtain the samples. The Engineer may waive all Micro-Deval testing based on a satisfactory test history of the same aggregate source.

The Engineer will estimate the magnesium sulfate soundness loss for each coarse aggregate source, when tested, using the following formula:

Mg_{est.} = (RSSM)(MD_{act}/RSMD)

where:

 $Mg_{est}$  = magnesium sulfate soundness loss RSSM = Rated Source Soundness Magnesium  $MD_{act}$  = actual Micro-Deval percent loss RSMD = Rated Source Micro-Deval

When the estimated magnesium sulfate soundness loss is greater than the maximum magnesium sulfate soundness loss specified, the coarse aggregate source will not be allowed for use unless otherwise approved. The Engineer will consult the Soils and Aggregates Section of the Materials and Tests Division, and additional testing may be required before granting approval.

2.1.2. Intermediate Aggregate. Aggregates not meeting the definition of coarse or fine aggregate will be defined as intermediate aggregate. Supply intermediate aggregates, when used that are free from organic impurities. The Engineer may test the intermediate aggregate in accordance with <u>Tex-408-A</u> to verify the material is free from organic impurities. Supply intermediate aggregate from coarse aggregate sources, when used that meet the requirements in accordance with Table 1 unless otherwise approved.

If 10% or more of the stockpile is retained on the No. 4 sieve, verify that it meets the requirements in accordance with Table 1 for crushed face count (Tex-460-A) and flat and elongated particles (Tex-280-F).

2.1.3. Fine Aggregate. Fine aggregates consist of manufactured sands and screenings. Natural sands are not allowed in any mixture. Fine aggregate stockpiles must meet the fine aggregate properties in accordance with Table 1 and the gradation requirements in accordance with Table 2. Supply fine aggregates that are free from organic impurities. The Engineer may test the fine aggregate in accordance with <u>Tex-408-A</u> to verify the material is free from organic impurities. Use fine aggregate from coarse aggregate sources that meet the requirements in accordance with Table 1 unless otherwise approved.

Aggregate Quality Requirements					
Property Test Method Requirement					
Coarse Aggre	egate				
SAC	Tex-499-A	A1			
Deleterious material, %, Max	Tex-217-F, Part I	1.5			
Decantation, %, Max	Tex-217-F, Part II	1.5			
Micro-Deval abrasion, %	<u>Tex-461-A</u>	Note ^r			
Los Angeles abrasion, %, Max	<u>Tex-410-A</u>	30			
Magnesium sulfate soundness, 5 cycles, %, Max	Tex-411-A	20			
Crushed face count, ³ %, Min	Tex-460-A, Part I	95			
Flat and elongated particles @ 5:1, %, Max	<u>Tex-280-F</u>	10			
Fine Aggregate					
Linear shrinkage, %, Max	<u>Tex-107-E</u>	3			
Sand equivalent, %, Min	Tex-203-F	45			
1 Surface Aggregate Classification of "A" is required un	aloce otherwise show	a on the plane			

Table 1

Surface Aggregate Classification of "A" is required unless otherwise shown on the plans.

- 2. Used to estimate the magnesium sulfate soundness loss in accordance with
- Section 3081.2.1.1.2., "Micro-Deval Abrasion."
- 3. Only applies to crushed gravel.

Gradation Requirements for Fine Aggregate			
Sieve Size % Passing by Weight or Volume			
3/8"	100		
#8	70–100		
#200	0–30		

Table 2

2.2.

Mineral Filler. Mineral filler consists of finely divided mineral matter such as agricultural lime, crusher fines, or hydrated lime. Mineral filler is allowed unless otherwise shown on the plans. Fly ash is not permitted unless otherwise shown on the plans. Use no more than 2% hydrated lime unless otherwise shown on the plans. Test all mineral fillers except hydrated lime and fly ash in accordance with Tex-107-E to ensure specification compliance. The plans may require or disallow specific mineral fillers. Provide mineral filler, when used, that:

- is sufficiently dry, free-flowing, and free from clumps and foreign matter as determined by the Engineer;
- does not exceed 3% linear shrinkage when tested in accordance with Tex-107-E; and
- meets the gradation requirements in Table 3, unless otherwise shown on the plans.

lab	le :	3	

Gradation Requirements for Mineral Filler			
Sieve Size	% Passing by Weight or Volume		
#8	100		
#200	55–100		

- 2.3. Baghouse Fines. Fines collected by the baghouse or other dust-collecting equipment may be reintroduced into the mixing drum.
- 2.4. Asphalt Binder. Furnish performance-graded (PG) asphalt binder with a high temperature grade of PG 76 unless otherwise shown in the plans and a low temperature grade as shown on the plans, in accordance with Section 300.2.10., "Performance-Graded Binders."
- 2.5. Tack Coat. Furnish CSS-1H, SS-1H, EBL, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder in accordance with Item 300, "Asphalts, Oils, and Emulsions." Specialized tack coat materials listed on the Department's Tracking Resistant Asphalt Interlayer (TRAIL) MPL may be allowed or required when shown on the plans. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

- 2.6. **Additives.** Provide the Engineer with documentation such as the bill of lading showing the quantity of additives used in the project unless otherwise directed.
- 2.6.1. Lime and Liquid Antistripping Agent. When lime or a liquid antistripping agent is used, add in accordance with Item 301, "Asphalt Antistripping Agents." Use no more than 1% hydrated lime when using crushed gravel. Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream unless the plant has a baghouse or dust collection system that reintroduces the lime into the drum.
- 2.6.2. Compaction Aid. Compaction Aid is defined as a department-approved chemical warm mix additive denoted as "chemical additive" on the Department's materials producer list (MPL) that is used to facilitate mixing and compaction of HMA.

Compaction Aid is allowed for use on all projects. Compaction aid is required when shown on the plans or as required in Section 3081.4.7.1., "Weather Conditions."

Warm mix foaming processes, denoted as "foaming process" on the Department-approved MPL, may be used to facilitate mixing and compaction of HMA; however warm mix foaming processes are not defined as a Compaction Aid.

2.7. Recycled Materials. Recycled materials are not allowed for use.

## 3. EQUIPMENT

Provide required or necessary equipment in accordance with Item 320, "Equipment for Asphalt Concrete Pavement."

### 4. CONSTRUCTION

Produce, haul, place, and compact the specified paving mixture. In addition to tests required by the specification, Contractors may perform other QC tests as deemed necessary. At any time during the project, the Engineer may perform production and placement tests as deemed necessary in accordance with Item 5, "Control of the Work." Schedule and participate in a mandatory pre-paving meeting with the Engineer on or before the first day of paving unless otherwise shown on the plans.

4.1. Certification. Personnel certified by the Department-approved hot-mix asphalt certification program must conduct all mixture designs, sampling, and testing in accordance with Table 4. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning production and when personnel changes are made. Provide a mixture design developed and signed by a Level 2 certified specialist. Provide Level 1A certified specialists at the plant during production operations. Provide Level 1B certified specialists to conduct placement tests. Provide AGG101 certified specialists for aggregate testing.

Test Met	hods, Test Responsibilit	y, and Minimum (	Certification Leve	els	
Test Description	Test Method	Contractor	Engineer	Level ¹	
	1. Aggregate T	esting			
Sampling	<u>Tex-221-F</u>	✓	$\checkmark$	1A/AGG101	
Dry sieve	Tex-200-F, Part I	✓	$\checkmark$	1A/AGG101	
Washed sieve	Tex-200-F, Part II	✓	✓	1A/AGG101	
Deleterious material	Tex-217-F, Part I	✓	✓	AGG101	
Decantation	Tex-217-F, Part II	✓	✓	AGG101	
Los Angeles abrasion	Tex-410-A		✓	Department	
Magnesium sulfate soundness	Tex-411-A		✓	Department	
Micro-Deval abrasion	Tex-461-A		✓	AGG101	
Crushed face count	Tex-460-A	✓	$\checkmark$	AGG101	
Flat and elongated particles	Tex-280-F	√	$\checkmark$	AGG101	
Sand equivalent	Tex-203-F	✓	$\checkmark$	AGG101	
Organic impurities	Tex-408-A	✓	$\checkmark$	AGG101	
Methylene blue test	Tex-252-F		$\checkmark$	Department	
	2. Asphalt Binder & Taci	k Coat Sampling			
Asphalt binder sampling	Tex-500-C. Part II	$\checkmark$	✓	1A/1B	
Tack coat sampling	Tex-500-C. Part III	✓	✓	1A/1B	
	3. Mix Desian & V	erification			
Design and JME changes	Tex-204-F	✓	✓	2	
Mixing	Tex-205-F	✓	✓	2	
Molding (TGC)	Tex-206-F	✓	✓	1A	
Molding (SGC)	Tex-241-F	✓	$\checkmark$	1A	
Laboratory-molded density	Tex-207-E Parts I & VI	$\checkmark$	$\checkmark$	1A	
Rice gravity	Tex-227-E Part II	✓	✓	14	
Drain-down	Toy-235-E	✓	✓	14	
Ignition oven correction factors ²	Tex-236-E Part II	✓	✓	2	
Indirect tensile strength	Tex-226-E	✓	✓	1Δ	
Overlay test	Tex-220-1		✓	Denartment	
Hamburg Wheel test	Tex 240-1	1	<u>,</u>	11	
Boil tost4	Tex 530 C	·		14	
Doll (est.	A Production	, Tostina	•	IA	
Selecting production random numbers	Toy 225 F. Dart I	csung	✓	1	
Mixture compling	Tox 222 E	1		1A/1D	
Molding (TCC)	Tox 206 E	· •		14/10	
Molding (FGC)	<u>Tex-200-1</u>		•	14	
Laboratory molded density	Tox 207 E. Darte L& V/I	v ./	v ./	14	
Disc growity	Tox 227 E. Dort II	•	•	14	
Cradation & apphalt hindor contont?	Tex 226 E. Dart I	•	· ·	14	
	Tex-230-F, Pall I	•	•	14	
Dialii-dowii	<u>Tex-235-F</u>	•	•	14	
Control Charles	Tex-233-F	•	•	1A/ACC101	
Moisture content	<u>Tex-212-F</u> , Palt II	•	•	14/AGG101	
Hamburg wheel lest	<u>Tex-242-F</u>	•	•	IA Demonstrational	
Overlay lest	Tex 461 A	v	•		
Micro-Deval abrasion	<u>Tex-461-A</u>		v	AGGIUI	
	Tex-030-C	v	<b>v</b>	IA Denertra ant	
ADSOIT RECOVERY	<u>1ex-211-F</u>	a a time e	v	Department	
5. Placement Testing					
Establish rolling pattern	<u>1ex-207-F</u> , Part IV	×		IB	
In-place density (nuclear method)	<u>1ex-207-F</u> , Part III	<b>√</b>	,	IB	
Control charts	<u>1ex-233-F</u>	×	✓	IA	
Ride quality measurement	<u>1ex-1001-S</u>	✓	✓	Note 3	
I nermal profile	1ex-244-F	✓	✓	18	
Water flow test	<u>1ex-246-F</u>	$\checkmark$	$\checkmark$	1B	

Table 4

1. Level 1A, 1B, AGG101, and 2 are certification levels provided by the Hot Mix Asphalt Center certification program.

2. Refer to Section 3081.4.9.2.3., "Production Testing," for exceptions to using an ignition oven.

3. Profiler and operator are required to be certified at the Texas A&M Transportation Institute facility when Surface Test Type B is specified.

4. When shown on the plans.

4.2. Reporting and Responsibilities. Use Department-provided templates to record and calculate all test data, including mixture design, production and placement QC/QA, control charts, and thermal profiles. Obtain the current version of the templates at https://www.txdot.gov/inside-txdot/forms-publications/consultantscontractors/forms/site-manager.html or from the Engineer. The Engineer and the Contractor will provide any available test results to the other party when requested. The maximum allowable time for the Contractor and Engineer to exchange test data is as given in Table 5 unless otherwise approved. The Engineer and the Contractor will immediately report to the other party any test result that requires suspension of production or placement or that fails to meet the specification requirements. Record and electronically submit all test results and pertinent information on Department-provided templates.

> Subsequent sublots placed after test results are available to the Contractor, which require suspension of operations, may be considered unauthorized work. Unauthorized work will be accepted or rejected at the discretion of the Engineer in accordance with Section 5.3., "Conformity with Plans, Specifications, and Special Provisions."

> > Table 5

Reporting Schedule					
Description	Reported By	Reported To	To Be Reported Within		
	Production Qua	lity Control			
Gradation ¹					
Asphalt binder content ¹					
Laboratory-molded density ²		Engineer	1 working day of completion of		
Moisture content ³	Contractor	Ŭ	the sublot		
Boil test ⁵					
	Production Quality	ty Assurance			
Gradation ³		[			
Asphalt binder content ³		Contractor	1 working day of completion of		
Laboratory-molded density ¹					
Hamburg Wheel test ⁴	Engineer				
Overlay test ⁴			the subiot		
Boil test ⁵					
Binder tests ⁴					
	Placement Qua	lity Control			
Thermal profile ¹	Contractor	Engineer	1 working day of completion of		
Water flow ¹	CONTRACTOR		the lot		
Placement Quality Assurance					
Thermal profile ³			1 working day of completion of		
Aging ratio ⁴	Engineer	Contractor	t working day of completion of		
Water flow			lne iol		

1. These tests are required on every sublot.

Optional test. When performed on split samples, report the results as soon as they become available. 2.

3. To be performed at the frequency specified and in accordance with Table 13 or as shown on the plans.

To be reported as soon as the results become available. 4.

5. When shown on the plans.

Use the procedures described in Tex-233-F to plot the results of all quality control (QC) and quality assurance (QA) testing. Update the control charts as soon as test results for each sublot become available. Make the control charts readily accessible at the field laboratory. The Engineer may suspend production for failure to update control charts.

4.3. Quality Control Plan (QCP). Develop and follow the QCP in detail. Obtain approval for changes to the QCP made during the project. The Engineer may suspend operations if the Contractor fails to comply with the QCP.

> Submit a written QCP before the mandatory pre-paving meeting. Receive approval of the QCP before prepaving meeting. Include the following items in the QCP:
|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3081   |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 4.3.1.   | Project Personnel. For project personnel, include:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |
|          | <ul> <li>a list of individuals responsible for QC with authority to take corrective action;</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |
|          | <ul> <li>current contact information for each individual listed; and</li> <li>current contact information decuments for individuals performing specified OC functions.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |
|          | ■ current copies of certification documents for individuals performing specified QC functions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |
| 4.3.2.   | Material Delivery and Storage. For material delivery and storage, include:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |
|          | the sequence of material processing, delivery, and minimum quantities to assure continuous plant operations:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |
|          | <ul> <li>aggregate stockpiling procedures to avoid contamination and segregation;</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |
|          | <ul> <li>frequency, type, and timing of aggregate stockpile testing to assure conformance of material</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |
|          | requirements before mixture production; and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |
|          | procedure for monitoring the quality and variability of asphalt binder.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |        |
| 4.3.3.   | Production. For production, include:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        |
|          | <ul> <li>loader operation procedures to avoid contamination in cold bins;</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        |
|          | <ul> <li>procedures for calibrating and controlling cold feeds;</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |
|          | <ul> <li>procedures to eliminate debris or oversized material;</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |        |
|          | procedures for adding and verifying rates of each applicable mixture component (e.g., aggregate,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |
|          | asphalt binder, lime, liquid antistrip, compaction aid, foaming process);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |        |
|          | procedures for reporting job control test results; and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |
|          | procedures to avoid segregation and drain-down in the silo.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |
| 4.3.4.   | Loading and Transporting. For loading and transporting, include:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |
|          | <ul> <li>type and application method for release agents; and</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |        |
|          | truck loading procedures to avoid segregation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |
| 4.3.5.   | Placement and Compaction. For placement and compaction, include:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |
|          | <ul> <li>proposed agenda for mandatory pre-paving meeting, including date and location;</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |
|          | proposed paving plan (e.g., production rate, paving widths, joint offsets, and lift thicknesses);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |
|          | type and application method for release agents in the paver and on rollers, shovels, lutes, and other is a second seco | er     |
|          | utensils;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |        |
|          | procedures for the transfer of mixture into the paver, while avoiding physical and thermal segregation<br>and preventing material, spillage:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | on     |
|          | <ul> <li>process to balance production, delivery, paying, and compaction to achieve continuous placement</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ť      |
|          | operations and good ride quality;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |
|          | paver operations (e.g., speed, operation of wings, height of mixture in auger chamber) to avoid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |
|          | physical and thermal segregation and other surface irregularities; and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |
|          | procedures to construct quality longitudinal and transverse joints.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |        |
| 4.4.     | Mixture Design.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |
| 4.4.1.   | Design Requirements. The Contractor may design the mixture using a Texas Gyratory Compactor (TC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | GC) or |
|          | a Superpave Gyratory Compactor (SGC) unless otherwise shown on the plans. Use the typical weight of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | lesign |
|          | example given in <u>Tex-204-F</u> , Part I, when using a TGC. Use the Superpave mixture design procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |
|          | accordance with Tables 1, 2, 3, 6, and 7.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |        |
|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |
| 4.4.1.1. | Target Laboratory-Molded Density When the TGC Is Used. Design the mixture at a 97.5% target<br>laboratory-molded density or in accordance with Table 7.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |        |

4.4.1.2. **Design Number of Gyrations (Ndesign) When the SGC Is Used.** Design the mixture at 50 gyrations (Ndesign). Use a target laboratory-molded density of 96.0% to design the mixture; however, adjustments can be made to the Ndesign value as noted in Table 7. The Ndesign level may be reduced to no less than 35 gyrations at the Contractor's discretion.

Use an approved laboratory from the Department's MPL to perform the Hamburg Wheel test, and the Department will perform the Overlay test and provide results with the mixture design, or provide the laboratory mixture and request that the Department perform the Hamburg Wheel test and Overlay test. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel test and Overlay test results on the laboratory mixture design.

The Engineer will provide the mixture design when shown on the plans. The Contractor may submit a new mixture design at any time during the project. The Engineer will verify and approve all mixture designs (JMF1) before the Contractor can begin production.

Provide the Engineer with a mixture design report using the Department-provided template. Include the following items in the report:

- the combined aggregate gradation, source, specific gravity, and percent of each material used;
- the target laboratory-molded density (or Ndesign level when using the SGC);
- results of all applicable tests;
- the mixing and molding temperatures;
- the signature of the Level 2 person or persons that performed the design;
- the date the mixture design was performed; and
- a unique identification number for the mixture design.

Master Gradation Limits (% Passing by Weight or Volume) and Volumetric Requirements				
Sieve Size	Coarse (TOM-C)	Fine (TOM-F)		
1/2"	100.0 ¹	100.0 ¹		
3/8"	95.0-100.0	98.0-100.0		
#4	40.0-60.0	70.0–95.0		
#8	17.0–27.0	40.0-65.0		
#16	5.0-27.0	20.0-45.0		
#30	5.0-27.0	10.0–35.0		
#50	5.0-27.0	10.0–20.0		
#200	5.0-9.0	2.0–12.0		
Asphalt Binder Content, ² % Min				
-	6.0	6.5		
Design VMA, ³ % Min				
-	16.0	16.5		
Production (Plant-Produced) VMA, ³ % Min				
-	15.5	16.0		

1. Defined as maximum sieve size. No tolerance allowed.

2. Unless otherwise shown on the plans or approved by the Engineer.

3. Voids in Mineral Aggregates (VMA).

Mixture Design Properties			
Mixture Property	Test Method	Requirement	
Target laboratory-molded density, % (TGC)	Tex-207- F	97.5 ¹	
Design gyrations (Ndesign for SGC)	<u>Tex-241-F</u>	50 ²	
Hamburg Wheel test, passes at 12.5 mm rut depth for PG 76 mixtures	<u>Tex-242-F</u>	20,000 Min	
Overlay test, Critical Fracture Energy, lbin/sq. in	<u>Tex-248-F</u>	1.5 Min	
Overlay test, Crack Progression Rate	<u>Tex-248-F</u>	0.40 Max	
Drain-down, %	Tex-235-F	0.20 Max	

Table 7

1. Unless otherwise shown on the plans or approved by the Engineer. Laboratory-molded density requirement using the TGC may be waived when approved by the Engineer.

- 2. May be adjusted within the range of 35–100 gyrations when shown on the plans or specification or when mutually agreed between the Engineer and Contractor. Laboratory-molded density requirement using the SGC may be waived when approved by the Engineer.
- 4.4.1 Job-Mix Formula Approval. The job-mix formula (JMF) is the combined aggregate gradation, target laboratory-molded density (or Ndesign level), and target asphalt percentage used to establish target values for hot-mix production. JMF1 is the original laboratory mixture design used to produce the trial batch. When a compaction aid or foaming process is used, JMF1 may be designed and submitted to the Engineer without including the compaction aid or foaming process. When a compaction aid or foaming process used and recommended rate on the JMF1 submittal. The Engineer and the Contractor will verify JMF1 based on plant-produced mixture from the trial batch unless otherwise approved. The Engineer may accept an existing mixture design previously used on a Department project and may waive the trial batch to verify JMF1. The Department may require the Contractor to reimburse the Department for verification tests if more than two trial batches per design are required.

#### 4.4.2.1. Contractor's Responsibilities.

- 4.4.2.1.1. **Providing Gyratory Compactor**. Use a TGC calibrated in accordance with <u>Tex-914-K</u> when electing or required to design the mixture in accordance with <u>Tex-204-F</u>, Part I, for molding production samples. Furnish an SGC calibrated in accordance with <u>Tex-241-F</u> when electing or required to design the mixture in accordance with <u>Tex-204-F</u>, Part IV, for molding production samples. Locate the SGC if used, at the Engineer's field laboratory or make the SGC available to the Engineer for use in molding production samples.
- 4.4.2.1.2. **Gyratory Compactor Correlation Factors.** Use <u>Tex-206-F</u>, Part II, to perform a gyratory compactor correlation when the Engineer uses a different gyratory compactor. Apply the correlation factor to all subsequent production test results.
- 4.4.2.1.3. **Submitting JMF1.** Furnish a mix design report (JMF1) with representative samples of all component materials and request approval to produce the trial batch. Provide approximately 25 lb. of the design mixture if opting to have the Department perform the Hamburg Wheel test on the laboratory mixture, and request that the Department perform the test. Provide approximately 60 lb. of the design mixture to perform the Overlay test.
- 4.4.2.1.4. **Supplying Aggregates.** Provide approximately 40 lb. of each aggregate stockpile unless otherwise directed.
- 4.4.2.1.5. **Supplying Asphalt.** Provide at least 1 gal. of the asphalt material and enough quantities of any additives proposed for use.
- 4.4.2.1.6. **Ignition Oven Correction Factors.** Determine the aggregate and asphalt correction factors from the ignition oven in accordance with <u>Tex-236-F</u>, Part II. Provide correction factors that are not more than 12 mo. old. Provide the Engineer with split samples of the mixtures before the trial batch production, including all additives (except water), and blank samples used to determine the correction factors for the ignition oven used for QA testing during production. Correction factors established from a previously approved mixture design may be used for the current mixture design if the mixture design and ignition oven are the same as previously used and the correction factors are not more than 12 mo. old, unless otherwise directed.
- 4.4.2.1.7. **Boil Test.** When shown on the plans, perform the test and retain the tested sample from <u>Tex-530-C</u> until completion of the project or as directed. Use this sample for comparison purposes during production.
- 4.4.2.1.8. **Trial Batch Production**. Provide a plant-produced trial batch upon receiving conditional approval of JMF1 and authorization to produce a trial batch, including the compaction aid or foaming process, if applicable, for verification testing of JMF1 and development of JMF2. Produce a trial batch mixture that meets the requirements in accordance with Table 8. The Engineer may accept test results from recent production of the same mixture instead of a new trial batch.

- 4.4.2.1.9. **Trial Batch Production Equipment.** Use only equipment and materials proposed for use on the project to produce the trial batch.
- 4.4.2.1.10. **Trial Batch Quantity.** Produce enough quantity of the trial batch to ensure that the mixture meets the specification requirements.
- 4.4.2.1.11. **Number of Trial Batches.** Produce trial batches as necessary to obtain a mixture that meets the specification requirements.
- 4.4.2.1.12. **Trial Batch Sampling.** Obtain a representative sample of the trial batch and split it into three equal portions in accordance with <u>Tex-222-F</u>. Label these portions as "Contractor," "Engineer," and "Referee." Deliver samples to the appropriate laboratory as directed.
- 4.4.2.1.13. **Trial Batch Testing.** Test the trial batch to ensure the mixture produced using the proposed JMF1 meets the mixture requirements in accordance with Table 8. Ensure the trial batch mixture is also in compliance with the requirements in accordance with Tables 6 and 7. Use a Department-approved laboratory listed on the MPL to perform the Hamburg Wheel test on the trial batch mixture or request that the Department perform the Hamburg Wheel test, and request that the Department perform the test. Obtain and provide approximately 60 lb. of trial batch mixture in sealed containers, boxes, or bags labeled with the CSJ, mixture type, lot, and sublot number in accordance with <u>Tex-222-F</u> for the Overlay test. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel test and Overlay test results on the trial batch. Provide the Engineer with a copy of the trial batch test results.
- 4.4.2.1.14. **Development of JMF2.** Evaluate the trial batch test results after the Engineer grants full approval of JMF1 based on results from the trial batch, determine the optimum mixture proportions, and submit as JMF2. Adjust the asphalt binder content or gradation to achieve the specified target laboratory-molded density. The mixture produced using JMF2 must meet the requirements in accordance with Tables 6 and 7. Verify that JMF2 meets the operation tolerances of JMF1 in accordance with Table 8.
- 4.4.2.1.15. **Mixture Production.** Use JMF2 to produce Lot 1 after receiving approval for JMF2 and a passing result from the Department's or a Department-approved laboratory's Hamburg Wheel test and the Department's Overlay test on the trial batch. If desired, proceed to Lot 1 production, once JMF2 is approved, at the Contractor's risk without receiving the results from either the Department's Hamburg Wheel test or Overlay test on the trial batch.

Notify the Engineer if electing to proceed without Hamburg Wheel test and Overlay test results from the trial batch. Note that the Engineer may require up to the entire sublot of any mixture failing the Hamburg Wheel test or Overlay test to be removed and replaced at the Contractor's expense.

- 4.4.2.1.16. **Development of JMF3.** Evaluate the test results from Lot 1, determine the optimum mixture proportions, and submit as JMF3 for use in Lot 2.
- 4.4.2.1.17. **JMF Adjustments.** If JMF adjustments are necessary to achieve the specified requirements, make the adjustments before beginning a new lot. The adjusted JMF must:
  - **b**e provided to the Engineer in writing before the start of a new lot;
  - be numbered in sequence to the previous JMF;
  - meet the master gradation limits in accordance with Table 6; and
  - be within the operational tolerances of JMF2 in accordance with Table 8.
- 4.4.2.1.18. **Requesting Referee Testing.** Use referee testing, if needed, in accordance with Section 3081.4.9.1., "Referee Testing," to resolve testing differences with the Engineer.

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Description	Test Method	Allowable Difference between JMF2 and JMF1 Target ¹	Allowable Difference from Current JMF and JMF2 ²	Allowable Difference between Contractor and Engineer ³
Individual % retained for #8 sieve and larger		Must be Within	±3.0 ^{4,5}	±5.0
Individual % retained for sieves smaller than #8 and larger than #200	<u>Tex-200-F</u>	Master Grading	$\pm 3.0^{4,5}$	±3.0
% passing the #200 sieve	or <u>Tex-236-F</u>	or Linits in Fex-236-F accordance with Table 6	±2.0 ^{4,5}	±1.6
Asphalt binder content, %6	<u>Tex-236-F</u>	±0.3	±0.3 ⁵	±0.3
Laboratory-molded density, %		±1.0	±1.0	±1.0
Laboratory-molded bulk specific gravity	<u>Tex-207-F</u>	N/A	N/A	±0.020
VMA, % Min	<u>Tex-204-F</u>	Note 7	Note 7	N/A
Theoretical Max specific (Rice) gravity	<u>Tex-227-F</u>	N/A	N/A	±0.020
Drain-down, %	<u>Tex-235-F</u>	Note 8	Note 8	N/A
1. JMF1 is the approved laboratory mixture design used for producing the trial batch. JMF2 is the approved mixture				

Table 8 Operational Tolerances

JMF1 is the approved laboratory mixture design used for producing the trial batch. JMF2 is the approved mixture design developed from the trial batch used to produce Lot 1.

- 2. Current JMF is JMF3 or higher. JMF3 is the approved mix design used to produce Lot 2.
- 3. Contractor may request referee testing only when values exceed these tolerances.

4. When within these tolerances, mixture production gradations may fall outside the master grading limits; however, the % passing the #200 will be considered out of tolerance when outside the master grading limits.

- 5. Only applies to mixture produced for Lot 1 and higher.
- 6. Binder content is not allowed to be outside the limits in accordance with Table 6. May be obtained from asphalt meter readouts as determined by the Engineer.
- 7. Verify that Table 6 requirements are met.
- 8. Verify that Table 7 requirements are met.

#### 4.4.2.2. Engineer's Responsibilities.

4.4.2.2.1. **Gyratory Compactor.** For mixtures designed in accordance with <u>Tex-204-F</u>, Part I, the Engineer will use a Department TGC, calibrated in accordance with <u>Tex-914-K</u>, to mold samples for trial batch and production testing.

For mixtures designed in accordance with <u>Tex-204-F</u>, Part IV, the Engineer will use a Department SGC, calibrated in accordance with <u>Tex-241-F</u>, to mold samples for laboratory mixture design verification. For molding trial batch and production specimens, the Engineer will use the Contractor-provided SGC at the field laboratory or provide and use a Department SGC at an alternate location.

### 4.4.2.2.2. Conditional Approval of JMF1 and Authorizing Trial Batch. The Engineer will review and verify conformance of the following information within two working days of receipt:

- the Contractor's mix design report (JMF1);
- the Department-provided Overlay test results;
- the Contractor-provided Hamburg Wheel test results;
- all required materials including aggregates, asphalt, and additives; and
- the mixture specifications.

The Engineer will grant the Contractor conditional approval of JMF1 if the information provided on the paper copy of JMF1 indicates that the Contractor's mixture design meets the specifications. When the Contractor does not provide Hamburg Wheel test and department provided Overlay test results with laboratory mixture design, 10 working days are allowed for conditional approval of JMF1. The Engineer will base full approval of JMF1 on test results on mixture from the trial batch.

Unless waived, the Engineer will determine the Micro-Deval abrasion loss in accordance with

Section 3081.2.1.1., "Micro-Deval Abrasion." If the Engineer's test results are pending after two working days, conditional approval of JMF1 will still be granted within two working days of receiving JMF1. When the Engineer's test results become available, they will be used for specification compliance.

The Contractor is authorized to produce a trial batch after the Engineer grants conditional approval of JMF1.

- 4.4.2.2.3. Hamburg Wheel and Overlay Testing of JMF1. If the Contractor requests the option to have the Department perform the Hamburg Wheel test on the laboratory mixture, the Engineer will mold samples in accordance with <u>Tex-242-F</u> to verify compliance with the Hamburg Wheel test requirement in Table 7. The Engineer will perform the Overlay test and mold samples in accordance with <u>Tex-248-F</u> to verify compliance with the Overlay test requirements in Table 7. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel and Overlay test results on the laboratory mixture design.
- 4.4.2.2.4. **Ignition Oven Correction Factors.** The Engineer will use the split samples provided by the Contractor to determine the aggregate and asphalt correction factors for the ignition oven used for QA testing during production in accordance with <u>Tex-236-F</u>, Part II. Provide correction factors that are not more than 12 mo. old.
- 4.4.2.2.5. **Testing the Trial Batch**. Within one full working day, the Engineer will sample and test the trial batch to ensure that the mixture meets the requirements in accordance with Table 8. The Engineer will mold samples in accordance with <u>Tex-242-F</u> if the Contractor requests the option to have the Department perform the Hamburg Wheel test on the trial batch mixture to verify compliance with Hamburg Wheel test requirements in Table 7. The Engineer will mold samples for the Overlay test in accordance with <u>Tex-248-F</u> to verify compliance with the Overlay test requirement in Table 7.

The Engineer will have the option to perform <u>Tex-530-C</u> on the trial batch when shown on the plans. These results may be retained and used for comparison purposes during production.

- 4.4.2.2.6. **Full Approval of JMF1.** The Engineer will grant full approval of JMF1 and authorize the Contractor to proceed with developing JMF2 if the Engineer's results for the trial batch meet the requirements in accordance with Tables 6 and 7. The Engineer will notify the Contractor that an additional trial batch is required if the trial batch does not meet these requirements.
- 4.4.2.2.7. **Approval of JMF2.** The Engineer will approve JMF2 within one working day if the mixture meets the requirements in accordance with Table 6, 7, and 8.
- 4.4.2.2.8. **Approval of Lot 1 Production**. The Engineer will authorize the Contractor to proceed with Lot 1 production (using JMF2) as soon as a passing result is achieved from the Department's or a Department-approved laboratory's Hamburg Wheel test and the Department's Overlay test on the trial batch. The Contractor may proceed at its own risk with Lot 1 production without the results from the Hamburg Wheel test or Overlay test on the trial batch.

If the Department's or Department-approved laboratory's sample from the trial batch fails the Hamburg Wheel test or Overlay test, the Engineer will suspend production until further Hamburg Wheel tests or Overlay tests meet the specified values. The Engineer may require up to the entire sublot of any mixture failing the Hamburg Wheel test or Overlay test to be removed and replaced at the Contractor's expense.

- 4.4.2.2.9. Approval of JMF3 and Subsequent JMF Changes. JMF3 and subsequent JMF changes are approved if they meet the master grading limits and asphalt binder content shown in Table 6 and are within the operational tolerances of JMF2 shown in accordance with Table 8.
- 4.5. **Production Operations.** Perform a new trial batch when the plant or plant location is changed. Take corrective action and receive approval to proceed after any production suspension for noncompliance to the specification.

- 4.5.1. **Storage and Heating of Materials.** Do not heat the asphalt binder above the temperatures specified in Item 300, "Asphalts, Oils, and Emulsions," or outside the manufacturer's recommended values. Provide the Engineer with daily records of asphalt binder and hot-mix asphalt discharge temperatures (in legible and discernible increments) in accordance with Item 320, "Equipment for Asphalt Concrete Pavement," unless otherwise directed. Do not store mixture for a period long enough to affect the quality of the mixture, nor in any case longer than 12 hr. unless otherwise approved.
- 4.5.2. **Mixing and Discharge of Materials.** Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck before shipping to ensure that it does not exceed the maximum production temperatures in accordance with Table 9. The Department will not pay for or allow placement of any mixture produced above the maximum production temperatures listed in Table 9.

	Table 9		
	Maximum Production Temperature		
	High-Temperature Binder Grade ¹	Max Production Temperature	
	PG 76	345°F	
1	The high temperature hinder grade refer	rs to the high temperature grade of the virgin	

 The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.

Control the mixing time and temperature so that substantially all moisture is removed from the mixture before discharging from the plant. Determine the moisture content, if requested, by oven-drying in accordance with <u>Tex-212-F</u>, Part II, and verify that the mixture contains no more than 0.2% of moisture by weight. Obtain the sample immediately after discharging the mixture into the truck and perform the test promptly.

4.6. Hauling Operations. Clean all truck beds before use to ensure that mixture is not contaminated. Use a release agent shown on the Department's MPL to coat the inside bed of the truck when necessary. Do not use diesel or any release agent not shown on the Department's MPL.

Use equipment for hauling as defined in Section 3081.4.7.3.3., "Hauling Equipment." Use other hauling equipment only when allowed.

4.7. Placement Operations. Collect haul tickets from each load of mixture delivered to the project and provide the Department's copy to the Engineer approximately every hour, or as directed. Use a hand-held thermal camera or infrared thermometer, when a thermal imaging system is not used, to measure and record the internal temperature of the mixture as discharged from the truck or Material Transfer Device (MTD) before or as the mix enters the paver and an approximate station number or GPS coordinates on each ticket. Calculate the daily yield and cumulative yield for the specified lift and provide to the Engineer at the end of paving operations for each day unless otherwise directed. The Engineer may suspend production if the Contractor fails to produce and provide haul tickets and yield calculations by the end of paving operations for each day.

Prepare the surface by removing raised pavement markers and objectionable material such as moisture, dirt, sand, leaves, and other loose impediments from the surface before placing mixture. Remove vegetation from pavement edges. Place the mixture to meet the typical section requirements and produce a smooth, finished surface with a uniform appearance and texture. Place mixture so that longitudinal joints on the surface course coincide within 6-in. of lane lines and are not placed in the wheel path, or as directed, and offset longitudinal joints of successive courses of hot-mix by at least 6-in. Ensure that all finished surfaces will drain properly. Place the mixture at the rate or thickness shown on the plans. The Engineer will use the guidelines in Table 10 to determine the compacted lift thickness. The thickness determined is based on the rate of 110–115 lb. per square inch. for each inch of pavement unless otherwise shown on the plans.

Tab	ole 10			
Compacted L	.ift Thickr	ies	S	
	0			•

Mixture Tupe	Compacted Lift Thickness ¹		
Mixture Type	Min (in.)	Max (in.)	
TOM-C	0.75	1.25	
TOM-F	0.5	1.00	
4 0 1 1 1 1 10 110 11 1			

. Compacted target lift thickness will be specified on the plans.

#### 4.7.1. Weather Conditions.

4.7.1.1. When Using a Thermal Imaging System. The Contractor may pave any time the roadway is dry and the roadway surface temperature is at least 60°F unless otherwise approved or as shown on the plans; however, the Engineer may restrict the Contractor from paving surface mixtures if the ambient temperature is likely to drop below 32°F within 12 hr. of paving. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. Provide output data from the thermal imaging system to demonstrate to the Engineer that no recurring severe thermal segregation exists in accordance with Section 3081.4.7.3.1.2., "Thermal Imaging System."

Produce mixture with a target discharge temperature higher than 300°F and with a compaction aid to facilitate compaction when the air temperature is 70°F and falling

4.7.1.2. When Not Using a Thermal Imaging System. When using a thermal camera instead the thermal imaging system, place mixture when the roadway surface temperature is at or above 70°F unless otherwise approved or as shown on the plans. Measure the roadway surface temperature with a hand-held thermal camera or infrared thermometer. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. The Engineer may restrict the Contractor from paving if the air temperature is 70°F and falling.

Produce mixture with a target discharge temperature higher than 300°F and with a compaction aid to facilitate compaction when the air temperature is 70°F and falling.

- 4.7.2. Tack Coat.
- 4.7.2.1. **Application.** Clean the surface before placing the tack coat. The Engineer will set the rate between 0.04 and 0.10 gal. of residual asphalt per square yard of surface area, unless otherwise specified on the plans. Apply a uniform tack coat at the specified rate unless otherwise directed. Apply the tack coat in a uniform manner to avoid streaks and other irregular patterns. Apply the tack coat to all surfaces that will come in contact with the subsequent HMA placement unless otherwise directed. Apply adequate overlap of the tack coat in the longitudinal direction during placement of the mat to ensure bond of adjacent mats, unless otherwise directed. Allow adequate time for emulsion to break completely before placing any material. Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. The Engineer may suspend paving operations until there is adequate coverage. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 4.7.2.2. Sampling. The Engineer will obtain at least one sample of the tack coat binder per project in accordance with <u>Tex-500-C</u>, Part III, and test it to verify compliance with Item 300, "Asphalts, Oils, and Emulsions." The Engineer will notify the Contractor when the sampling will occur and will witness the collection of the sample from the asphalt distributor immediately before use. Label the can with the corresponding lot and sublot numbers, producer, producer facility, grade, district, date sampled, and project information including highway and CSJ. For emulsions, the Engineer may test as often as necessary to ensure the residual of the emulsion is greater than or equal to the specification requirement in Item 300, "Asphalts, Oils, and Emulsions."
- 4.7.3. Lay-Down Operations. Use the placement temperatures in accordance with Table 11 to establish the minimum placement temperature of mixture delivered to the paving operation.

Table 11 Minimum Mixture Placement Temperature

High-Temperature Binder Grade ¹	Min Placement Temperature (Before Entering Paving Operation)2,3
PG 76	280°F

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.

- 3. Minimum placement temperatures may be reduced 10°F if using a compaction aid.
- 4.7.3.1. **Thermal Profile**. Use a hand-held thermal camera or a thermal imaging system to obtain a continuous thermal profile in accordance with <u>Tex-244-F</u>.
- 4.7.3.1.1. Thermal Segregation.
- 4.7.3.1.1.1. Moderate. Any areas that have a temperature differential greater than 25°F, but not exceeding 50°F.
- 4.7.3.1.1.2. Severe. Any areas that have a temperature differential greater than 50°F.
- 4.7.3.1.2. **Thermal Imaging System**. Review the output results when a thermal imaging system is used, and provide the report described in accordance with <u>Tex-244-F</u> to the Engineer daily. Modify the paving process as necessary to eliminate any recurring (moderate or severe) thermal segregation identified by the thermal imaging system.

The Engineer may suspend subsequent paving operations if the Contractor cannot successfully modify the paving process to eliminate recurring severe or moderate thermal segregation.

Provide the Engineer with electronic copies of all daily data files that can be used with the thermal imaging system software to generate temperature profile plots daily or as requested by the Engineer.

- 4.7.3.1.3. Thermal Camera. When using a thermal camera instead of the thermal imaging system, take immediate corrective action to eliminate recurring moderate thermal segregation when a hand-held thermal camera is used. Evaluate areas with moderate thermal segregation by performing water flow testing in accordance with <u>Tex-246-F</u> and verify the water flow is greater than 120 sec. Provide the Engineer with the thermal profile of every sublot within one working day of the completion of each lot. When requested by the Engineer, provide the electronic files generated using the thermal camera. Report the results of each thermal profile in accordance with Section 3081.4.2., "Reporting and Responsibilities." The Engineer will use a hand-held thermal camera to obtain a thermal profile at least once per project, unless the thermal imaging system is used. Suspend operations and take immediate corrective action to eliminate severe thermal segregation will meet the requirements of this Section. Evaluate areas with severe thermal segregation by performing water flow testing in accordance with <u>Tex-246-F</u> and verify the water flow is greater than 120 sec. Remove and replace the material in any areas that have both severe thermal segregation and a failing result for water flow test unless otherwise directed.
- 4.7.3.2. Windrow Operations. Operate windrow pickup equipment so that when hot-mix is placed in windrows, substantially all the mixture deposited on the roadbed is picked up and loaded into the paver.
- 4.7.3.3. Hauling Equipment. Use belly dumps, live bottom, or end dump trucks to haul and transfer mixture. End dump trucks are only allowed when used in conjunction with an MTD with remixing capability unless otherwise allowed.
- 4.7.3.4. **Screed Heaters.** Turn off screed heaters to prevent overheating of the mat if the paver stops for more than 5 min. The Engineer may evaluate the suspect area in accordance with Section 3081.4.9.3.1.1., "Recovered Asphalt Dynamic Shear Rheometer (DSR)," if the screed heater remains on for more than 5 min. while the paver is stopped.

^{2.} The mixture temperature must be measured using a hand-held thermal camera or infrared thermometer nearest to the point of entry of the paving operation.

**Compaction**. Roll the freshly placed mixture with as many steel-wheeled rollers as necessary to ensure adequate compaction without excessive breakage of the aggregate and to provide a smooth surface and uniform texture. Operate each roller in static mode for TOM-F mixtures only. Do not use pneumatic-tire rollers. Use the control strip method given in accordance with <u>Tex-207-F</u>, Part IV, to establish the rolling pattern. Thoroughly moisten the roller drums with a soap and water solution to prevent adhesion. Use only water or an approved release agent on rollers, tamps, and other compaction equipment unless otherwise directed.

4.8.

Use tamps to thoroughly compact the edges of the pavement along curbs, headers, and similar structures and in locations that will not allow thorough compaction with rollers. The Engineer may require rolling with a trench roller on widened areas, in trenches, and in other limited areas.

Use <u>Tex-246-F</u> to measure water flow to verify the mixture is adequately compacted. Measure the water flow once per sublot at locations directed by the Engineer. Take additional water flow measurements when the minimum temperature of the uncompacted mat is below the temperature requirements in accordance with Table 12.

Table 12			
Minimum Uncompacted Mat Temperature Requiring Additional Water Flow Measurements			
High-Temperature Binder Grade ¹	Min Temperature of the Uncompacted Mat Allowed Before Initial Break Down Rolling ^{2, 3}		
PG 76	<270°F		

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.

2. The surface of the uncompacted mat must be measured using a hand-held thermometer or infrared thermometer.

3. Minimum uncompacted mat temperature requiring a water flow measurement may be reduced 10°F if using a compaction aid.

Use <u>Tex-246-F</u> to measure water flow to verify the mixture is adequately compacted at confined longitudinal joints as directed by the Engineer.

The water flow rate should be greater than 120 sec. Investigate the cause of the water flow rate test failures and take corrective actions during production and placement to ensure the water flow rate is greater than 120 sec. Suspend production if two consecutive water flow rate tests fail unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

Complete all compaction operations before the pavement temperature drops below 180°F unless otherwise allowed. The Engineer may allow compaction with a light finish roller operated in static mode for pavement temperatures below 180°F when approved.

Allow the compacted pavement to cool to 160°F or lower before opening to traffic unless otherwise directed. Sprinkle the finished mat with water or limewater, when directed, to expedite opening the roadway to traffic.

- 4.9. Acceptance Plan. Sample and test the hot-mix asphalt on a lot and sublot basis.
- 4.9.1. Referee Testing. The Materials and Tests Division is the referee laboratory. The Contractor may request referee testing if the differences between Contractor and Engineer test results exceed the maximum allowable difference in accordance with Table 8 and the differences cannot be resolved. The Contractor may also request referee testing if the Engineer's test results require suspension of production and the Contractor's test results are within specification limits. Make the request within five working days after receiving test results from the Engineer. Referee tests will be performed only on the sublot in question and only for the particular tests in question. Allow 10 working days from the time the referee laboratory receives the samples for test results to be reported. The Department may require the Contractor to reimburse the Department for referee tests if more than three referee tests per project are required and the Engineer's test results are closer to the referee test results than the Contractor's test results.

The Materials and Tests Division will determine the laboratory-molded density based on the molded specific gravity and the maximum theoretical specific gravity of the referee sample.

#### 4.9.2. Production Acceptance.

- 4.9.2.1. **Production Lot.** A production lot consists of four equal sublots. The default quantity for Lot 1 is 500 ton; however, when requested by the Contractor, the Engineer may increase the quantity for Lot 1 to no more than 2,000 ton. The Engineer will select subsequent lot sizes based on the anticipated daily production such that approximately three to four sublots are produced each day. The lot size will be between 500 ton and 2,000 ton. The Engineer may change the lot size before the Contractor begins any lot.
- 4.9.2.1.1. **Incomplete Production Lots.** If a lot is begun but cannot be completed, such as on the last day of production or in other circumstances deemed appropriate, the Engineer may close the lot. Close all lots within five working days unless otherwise allowed.

#### 4.9.2.2. Production Sampling.

- 4.9.2.2.1. **Mixture Sampling.** Obtain hot-mix samples from trucks at the plant in accordance with <u>Tex-222-F</u>. The sampler will split each sample into three equal portions in accordance with <u>Tex-200-F</u> and label these portions as "Contractor," "Engineer," and "Referee." The Engineer will perform or witness the sample splitting and take immediate possession of the samples labeled "Engineer" and "Referee." The Engineer will the Department's testing is completed.
- 4.9.2.2.1.1. **Random Sample**. At the beginning of the project, the Engineer will select random numbers for all production sublots. Determine sample locations in accordance with <u>Tex-225-F</u>. Take one sample for each sublot at the randomly selected location. The Engineer will perform or witness the sampling of production sublots.
- 4.9.2.2.1.2. Blind Sample. For one sublot per lot, the Engineer will obtain and test a "blind" sample instead of the random sample collected by the Contractor. Test either the "blind" or the random sample; however, referee testing (if applicable) will be based on a comparison of results from the "blind" sample. The location of the Engineer's "blind" sample will not be disclosed to the Contractor. The Engineer's "blind" sample may be randomly selected in accordance with <u>Tex-225-F</u> for any sublot or selected at the discretion of the Engineer. The Engineer will use the Contractor's split sample for sublots not sampled by the Engineer.
- 4.9.2.2.2. Informational Methylene Blue Testing. During the project and at random, obtain and provide the Engineer with approximately 50 lb. of each fine aggregate and approximately 20 lb. of all mineral fillers used to produce the mixture. Label the samples with the Control Section Job (CSJ), mixture type, and approximate lot and sublot number corresponding to when the sample was taken. The Engineer will ship the samples to the Materials and Tests Division for Methylene Blue testing in accordance with <u>Tex-252-F</u>. Results from these tests will not be used for specification compliance.
- 4.9.2.2.3. Asphalt Binder Sampling. Obtain a 1-qt. sample of the asphalt binder witnessed by the Engineer for each lot of mixture produced. The Contractor will notify the Engineer when the sampling will occur. Obtain the sample at approximately the same time the mixture random sample is obtained. Sample from a port located immediately upstream from the mixing drum or pug mill and upstream from the introduction of any additives in accordance with <u>Tex-500-C</u>, Part II. Label the can with the corresponding lot and sublot numbers, producer, producer facility location, grade, district, date sampled, and project information including highway and CSJ. The Engineer will retain these samples for one year. The Engineer may also obtain independent samples. If obtaining an independent asphalt binder sample and upon request of the Contractor, the Engineer will split a sample of the asphalt binder with the Contractor.

At least once per project, the Engineer will collect split samples of each binder grade and source used. The Engineer will submit one split sample to the Materials and Tests Division to verify compliance with Item 300, "Asphalts, Oils, and Emulsions," and will retain the other split sample for 1 yr.

4.9.2.3. **Production Testing.** The Contractor and Engineer must perform production tests in accordance withTable 13. The Contractor has the option to verify the Engineer's test results on split samples provided by the Engineer. Determine compliance with operational tolerances listed in accordance with Table 8 for all sublots. Take immediate corrective action if the Engineer's laboratory-molded density on any sublot is less than 95.0% or greater than 98.0% when using the SGC or less than 96.5% or greater than 98.5% when using the TGC, to bring

the mixture within these tolerances. The Engineer may suspend operations if the Contractor's corrective actions do not produce acceptable results. The Engineer will allow production to resume when the proposed corrective action is likely to yield acceptable results.

The Engineer may allow alternate methods for determining the asphalt binder content and aggregate gradation if the aggregate mineralogy is such that <u>Tex-236-F</u>, Part I does not yield reliable results. Provide evidence that results from <u>Tex-236-F</u>, Part I are not reliable before requesting permission to use an alternate method unless otherwise directed. Use the applicable test procedure as directed if an alternate test method is allowed.

Description	Test Method	Min Contractor Testing	Min Engineer Testing
Individual % retained for #8 sieve and larger Individual % retained for sieves smaller than #8 and larger than #200 % passing the #200 sieve	<u>Tex-200-F</u> or <u>Tex-236-F</u>	1 per sublot	1 per 12 sublots ¹
Laboratory-molded density Laboratory-molded bulk specific gravity VMA	<u>Tex-207-F</u> <u>Tex-204-F</u>	N/A	1 per sublot ¹
Moisture content	<u>Tex-212-F</u> , Part II	When directed	
Theoretical maximum specific (Rice) gravity	<u>Tex-227-F</u> , Part II	N/A	1 per sublot ¹
Asphalt binder content ²	<u>Tex-236-F</u> , Part I	1 per sublot	1 per lot ¹
Overlay test ³	<u>Tex-248-F</u>	N/A	1 per project
Hamburg Wheel test	Tex-242-F	N/A	1 per project
Thermal profile	Tex-244-F	1 per sublot ^{4,5,6}	1 per project ⁵
Asphalt binder sampling and testing	Tex-500-C, Part II	1 per lot (sample only) ⁷	1 per project
Tack coat sampling and testing	Tex-500-C, Part III	N/A	1 per project
Boil test ⁸	Tex-530-C	1 por cublet ⁹	
Water flow	Tex-246-F	i per subiot?	
Methylene blue test ¹⁰	<u>Tex-252-F</u>	1 per project (sample only)	1 per project

Table 13	
Production and Placement	Testing Frequency

1. For production defined in Section 3081.4.9.4., "Exempt Production," the Engineer will test one per day if 100 ton or more are produced. For Exempt Production, no testing is required with less than 100 ton are produced.

2. May be obtained from asphalt flow meter readout as determined by the Engineer.

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3. Testing performed by the Materials and Tests Division on sample obtained from Lot 2 or higher.

4. To be performed in the presence of the Engineer when a thermal camera is used, unless otherwise approved.

5. Not required when a thermal imaging system is used.

- 6. When using the thermal imaging system, the test report must include the temperature measurements taken in accordance with <u>Tex-244-F</u>.
- 7. Obtain samples witnessed by the Engineer. The Engineer will retain these samples for 1 yr.

8. When shown on the plans.

- 9. To be performed in the presence of the Engineer, unless otherwise directed.
- 10. Testing performed by the Materials and Tests Division for informational purposes only.
- 4.9.2.4. **Operational Tolerances.** Control the production process within the operational tolerances in accordance with Table 8. When production is suspended, the Engineer will allow production to resume when test results or other information indicates the next mixture produced will be within the operational tolerances.
- 4.9.2.4.1. **Gradation**. Suspend operation and take corrective action if any aggregate is retained on the maximum sieve size in accordance with Table 6. A sublot is defined as out of tolerance if either the Engineer's or the Contractor's test results are out of operational tolerance. Suspend production when test results for gradation exceed the operational tolerances in accordance with Table 8 for three consecutive sublots on the same sieve or four consecutive sublots on any sieve unless otherwise directed. The consecutive sublots may be from more than one lot.
- 4.9.2.4.2. Asphalt Binder Content. A sublot is defined as out of operational tolerance if either the Engineer's or the Contractor's test results exceed the values in accordance with Table 8. Suspend production when two or

more sublots within a lot are out of operational tolerance or below the minimum asphalt binder content specified in accordance with Table 6 unless otherwise directed. Suspend production and shipment of mixture if the Engineer's or Contractor's asphalt binder content deviates from the current JMF by more than 0.5% for any sublot or is less than the minimum asphalt content allowed in accordance with Table 6.

4.9.2.4.3. Voids in Mineral Aggregates (VMA). The Engineer will determine the VMA for every sublot. For sublots when the Engineer does not determine asphalt binder content, the Engineer will use the asphalt binder content results from QC testing performed by the Contractor to determine VMA.

Take immediate corrective action if the VMA value for any sublot is less than the minimum VMA requirement for production in accordance with Table 6. Suspend production and shipment of the mixture if the Engineer's VMA results on two consecutive sublots are below the minimum VMA requirement for production in accordance with Table 6.

Suspend production and shipment of the mixture if the Engineer's VMA result is more than 0.5% below the minimum VMA requirement for production in accordance with Table 6. In addition to suspending production, the Engineer may require removal and replacement or may allow the sublot to be left in place without payment.

4.9.2.4.4. Hamburg Wheel. The Engineer may perform a Hamburg Wheel on plant produced mixture at any time during production. In addition to testing production samples, the Engineer may obtain cores and perform the Hamburg Wheel test on any area of the roadway where rutting is observed. Suspend production until further Hamburg Wheel meet the specified values when the production or core samples fail to meet the Hamburg Wheel criteria in accordance with Table 7. Core samples, if taken, will be obtained from the center of the finished mat or other areas excluding the vehicle wheel paths. The Engineer may require up to the entire sublot of any mixture failing the Hamburg Wheel to be removed and replaced at the Contractor's expense.

If the Department's or Department-approved laboratory's Hamburg Wheel test results in a "remove and replace" condition, the Contractor may request that the Department confirm the results by re-testing the failing material. The Materials and Tests Division will perform the Hamburg Wheel and determine the final disposition of the material in question based on the Department's test results.

- 4.9.2.5. Individual Loads of Hot-Mix. The Engineer can reject individual truckloads of hot-mix. When a load of hotmix is rejected for reasons other than temperature, contamination, or excessive uncoated particles, the Contractor may request that the rejected load be tested. Make this request within 4 hr. of rejection. The Engineer will sample and test the mixture. If test results are within the operational tolerances in accordance with Table 8, payment will be made for the load. If test results are not within operational tolerances, no payment will be made for the load.
- 4.9.3. Placement Acceptance.
- 4.9.3.1. **Placement Lot.** A placement lot consists of four placement sublots. A placement sublot consists of the area placed during a production sublot.
- 4.9.3.1.1. **Recovered Asphalt Dynamic Shear Rheometer (DSR).** The Engineer may take production samples or cores from suspect areas of the project to determine recovered asphalt properties. Asphalt binders with an aging ratio greater than 3.5 do not meet the requirements for recovered asphalt properties and may be deemed defective when tested and evaluated by the Materials and Tests Division. The aging ratio is the DSR value of the extracted binder divided by the DSR value of the original unaged binder. Obtain DSR values in accordance with AASHTO T 315 at the specified high temperature performance grade of the asphalt. The Engineer may require removal and replacement of the defective material at the Contractor's expense. The asphalt binder will be recovered for testing from production samples or cores in accordance with <u>Tex-211-F</u>.
- 4.9.3.1.2. Irregularities. Identify and correct irregularities including segregation, rutting, raveling, flushing, fat spots, mat slippage, irregular color, irregular texture, roller marks, tears, gouges, streaks, uncoated aggregate particles, or broken aggregate particles. The Engineer may also identify irregularities, and in such cases, the Engineer will promptly notify the Contractor. The Engineer may require the Contractor to remove and replace (at the

Contractor's expense) areas of the pavement that contain irregularities if the Engineer determines that the irregularity will adversely affect pavement performance. The Engineer may also require the Contractor to remove and replace (at the Contractor's expense) areas where the mixture does not bond to the existing pavement.

The Engineer may require the Contractor to immediately suspend operations if irregularities are detected or may allow the Contractor to continue operations for no more than one day while the Contractor is taking appropriate corrective action.

- 4.9.4. **Exempt Production.** When the anticipated daily production is less than 100 ton, all QC and QA sampling and testing are waived. The Engineer may deem the mixture as exempt production for the following conditions:
  - anticipated daily production is more than 100 ton but less than 250 ton;
  - total production for the project is less than 2,500 ton;
  - when mutually agreed between the Engineer and the Contractor; or
  - when shown on the plans.

For exempt production, the Contractor is relieved of all production and placement sampling and testing requirements. All other specification requirements apply, and the Engineer will perform acceptance tests for production and placement in accordance with Table 13. For exempt production:

- produce, haul, place, and compact the mixture as directed by the Engineer; and
- control mixture production to yield a laboratory-molded density that is within ±1.0% of the target density as tested by the Engineer.
- 4.9.5. Ride Quality. Measure ride quality in accordance with Item 585, "Ride Quality for Pavement Surfaces," unless otherwise shown on the plans.

#### 5. MEASUREMENT

- 5.1. **TOM Hot-Mix Asphalt.** TOM hot-mix will be measured by the ton of composite mixture, which includes asphalt, aggregate, and additives. Measure the weight on scales in accordance with Item 520, "Weighing and Measuring Equipment."
- 5.2. **Tack Coat.** Tack coat will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume in gallons from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All tack, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine asphalt volume used and application rate if the device is accurate within 1.5% of the strapped volume.

#### 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under Section 3081.5.1., "TOM Hot-Mix Asphalt," will be paid for at the unit bid price for "Thin Overlay Mixture" of the mixture type, SAC, and binder specified. These prices are full compensation for surface preparation, removing pavement marking and markers, materials, placement, equipment, labor, tools, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under Section 3081.5.2., "Tack Coat," will be paid for at the unit bid price for "Tack Coat" of the tack coat provided. These prices are full compensation for materials, placement, equipment, labor, tools, and incidentals.

Trial batches will not be paid for unless they are included in pavement work approved by the Department.

3081

# Special Specification 3082 Thin Bonded Friction Courses



#### 1. DESCRIPTION

Construct a hot-mix asphalt (HMA) surface course composed of a warm spray-applied polymer modified emulsion membrane followed immediately with a compacted permeable mixture of aggregate, asphalt binder, and additives mixed hot in a mixing plant.

#### 2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications.

Notify the Engineer of all material sources and before changing any material source or formulation. The Engineer will verify that the specification requirements are met when the Contractor makes a source or formulation change, and may require a new laboratory mixture design, trial batch, or both. The Engineer may sample and test project materials at any time during the project to verify specification compliance in accordance with Item 6, "Control of Materials."

- 2.1. Aggregate. Furnish aggregates from sources that conform to the requirements shown in Table 1 and as specified in this Section. Aggregate requirements in this Section, including those shown in Table 1, may be modified or eliminated when shown on the plans. Additional aggregate requirements may be specified when shown on the plans. Provide aggregate stockpiles that meet the definitions in this Section for coarse or fine aggregate. Do not use intermediate or fine aggregate in PFC mixtures. Supply aggregates that meet the definitions in Tex-100-E for crushed gravel or crushed stone. The Engineer will designate the plant or the quarry as the sampling location. Provide samples from materials produced for the project. The Engineer will establish the Surface Aggregate Classification (SAC) and perform Los Angeles abrasion, magnesium sulfate soundness, and Micro-Deval tests. Perform all other aggregate quality tests listed in accordance with Table 1. Document all test results on the mixture design report. The Engineer may perform tests on independent or split samples to verify Contractor test results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis given in Tex-200-F, Part II.
- 2.1.1. Coarse Aggregate. Coarse aggregate stockpiles must have no more than 20% material passing the No. 8 sieve. Aggregates from sources listed in the Department's *Bituminous Rated Source Quality Catalog* (BRSQC) are preapproved for use. Use only the rated values for hot-mix listed in the BRSQC. Rated values for surface treatment (ST) do not apply to coarse aggregate sources used in hot-mix asphalt.

For sources not listed on the Department's BRSQC:

- build an individual stockpile for each material;
- request the Department test the stockpile for specification compliance;
- approved only when tested by the Engineer;
- once approved, do not add material to the stockpile unless otherwise approved; and
- allow 30 calendar days for the Engineer to sample, test, and report results.

Provide coarse aggregate with at least the minimum SAC shown on the plans. SAC requirements only apply to aggregates used on the surface of travel lanes, unless otherwise shown on the plans. SAC requirements apply to aggregates used on surfaces other than travel lanes when shown on the plans. The SAC for sources on the Department's *Aggregate Quality Monitoring Program* (AQMP) (Tex-499-A) is listed in the BRSQC.

2.1.1.1. Blending Class A and Class B Aggregates. To prevent crushing of the Class B aggregate when blending, Class B aggregate may be blended with a Class A aggregate to meet requirements for Class A materials if the Department's BRSQC rated source soundness magnesium (RSSM) rating for the Class B aggregate is less than the Class A aggregate or if the RSSM rating for the Class B aggregate is less than or equal to 10%. Use the rated values for hot mix asphaltic concrete (HMAC) published in the BRSQC. When blending Class A and B aggregates to meet a Class A requirement, ensure that at least 50% by weight, or volume if required, of all the aggregates used in the mixture design retained on the No. 4 sieve comes from the Class A aggregate source, unless otherwise shown on the plans. Blend by volume if the bulk specific gravities of the Class A and B aggregates differ by more than 0.300. Class B aggregate may be disallowed when shown on the plans.

The Engineer may perform tests at any time during production, when the Contractor blends Class A and B aggregates to meet a Class A requirement, to ensure that at least 50% by weight, or volume if required, of the material retained on the No. 4 sieve comes from the Class A aggregate source. The Engineer will use the Department's mix design template, when electing to verify conformance, to calculate the percent of Class A aggregate retained on the No. 4 sieve by inputting the bin percentages shown from readouts in the control room at the time of production and stockpile gradations measured at the time of production. The Engineer may determine the gradations based on either washed or dry sieve analysis from samples obtained from individual aggregate cold feed bins or aggregate stockpiles. The Engineer may perform spot checks using the gradations supplied by the Contractor on the mixture design report as an input for the template; however, a failing spot check will require confirmation with a stockpile gradation determined by the Engineer.

2.1.1.2. **Micro-Deval Abrasion.** The Engineer will perform a minimum of one Micro-Deval abrasion test in accordance with <u>Tex-461-A</u> for each coarse aggregate source used in the mixture design that has a Rated Source Soundness Magnesium (RSSM) loss value greater than 15 as listed in the BRSQC, unless otherwise directed. The Engineer will perform testing before the start of production and may perform additional testing at any time during production. The Engineer may obtain the coarse aggregate samples from each coarse aggregate source or may require the Contractor to obtain the samples. The Engineer may waive all Micro-Deval testing based on a satisfactory test history of the same aggregate source.

The Engineer will estimate the magnesium sulfate soundness loss for each coarse aggregate source, when tested, using the following formula:

Mgest = (RSSM)(MDact./RSMD)

where:

 $Mg_{est.}$  = magnesium sulfate soundness loss RSSM = Rated Source Soundness Magnesium  $MD_{act.}$  = actual Micro-Deval percent loss RSMD = Rated Source Micro-Deval

When the estimated magnesium sulfate soundness loss is greater than the maximum magnesium sulfate soundness loss specified, the coarse aggregate source will not be allowed for use unless otherwise approved. The Engineer will consult the Soils and Aggregates Section of the Materials and Tests Division, and additional testing may be required before granting approval.

2.1.2. Fine Aggregate. Fine aggregates consist of manufactured sands and screenings. Fine aggregate stockpiles must meet the fine aggregate properties in accordance with Table 1 and the gradation requirements in accordance with Table 2. Supply fine aggregates that are free from organic impurities. The Engineer may test the fine aggregate in accordance with <u>Tex-408-A</u> to verify the material is free from organic impurities. Do not use field sand or other uncrushed fine aggregate. Use fine aggregate from coarse aggregate sources that meet the requirements shown in accordance with Table 1 unless otherwise approved.

Property	Test Method	Requirement		
SAC	<u>Tex-499-A</u> (AQMP)	As shown on the plans		
Deleterious material, %, Max	<u>Tex-217-F</u> , Part I	1.0		
Decantation, %, Max	Tex-217-F, Part II	1.5		
Micro-Deval abrasion, %	<u>Tex-461-A</u>	Note 1		
Los Angeles abrasion, %, Max	Tex-410-A	30		
Magnesium sulfate soundness, 5 cycles, %, Max	Tex-411-A	20		
Crushed face count ² , %, Min	<u>Tex-460-A</u> , Part I	95		
Flat and elongated particles @ 5:1, %, Max	<u>Tex-280-F</u>	10		
Fine Aggregate Properties				
Sand Equivalent, %, Min	Tex-203-F	45		
Methylene Blue, mg/g, Max	<u>Tex-252-F</u>	10.0		

 Table 1

 Coarse Aggregate Quality Requirements

1. Used to estimate the magnesium sulfate soundness loss in accordance with section 3082.2.1.1.2., "Micro-Deval Abrasion."

2. Only applies to crushed gravel.

2.2.

#### Table 2 Gradation Requirements for Fine Aggregate

Sieve Size	% Passing by Weight or Volume			
3/8"	100			
#8	70–100			
#200	0–30			

Mineral Filler. Mineral filler consists of finely divided mineral matter such as agricultural lime, crusher fines, or hydrated lime. Fly ash is not allowed unless otherwise shown on the plans. Mineral filler is allowed unless otherwise shown on the plans. Use no more than 2% hydrated lime, unless otherwise shown on the plans. Test all mineral fillers except hydrated lime and fly ash in accordance with <u>Tex-252-F</u> to ensure specification compliance. The plans may require or disallow specific mineral fillers. Provide mineral filler, when used, that:

- is sufficiently dry, free-flowing, and free from clumps and foreign matter as determined by the Engineer;
- does not exceed 3% linear shrinkage when tested in accordance with <u>Tex-107-E</u>; and
- meets the gradation requirements in accordance with Table 3, unless otherwise shown on the plans.

# Table 3 Gradation Requirements for Mineral Filler Sieve Size % Passing by Weight or Volume #8 100 #200 55–100

- 2.3. **Baghouse Fines.** Fines collected by the baghouse or other dust-collecting equipment may be reintroduced into the mixing drum.
- 2.4. **Asphalt Binder.** Furnish the type and grade of binder specified on the plans that meets the requirements of Item 300, "Asphalts, Oils, and Emulsions."
- 2.4.1. **Performance-Graded (PG) Binder.** Provide an asphalt binder with a high-temperature grade of PG 76 and low-temperature grade as shown on the plans in accordance with Section 300.2.10., "Performance-Graded Binders," when PG binder is specified.
- 2.4.2. Asphalt-Rubber (A-R) Binder. Provide A-R binder that meets the Type I or Type II requirements of Section 300.2.9., "Asphalt-Rubber Binders," when A-R is specified unless otherwise shown on the plans. Use at least 15.0% by weight of Crumb Rubber Modifier (CRM) that meets the Grade B or Grade C requirements of Section 300.2.7., "Crumb Rubber Modifier," unless otherwise shown on the plans. Provide the Engineer the A-R binder blend design with the mix design (JMF1) submittal. Provide the Engineer with documentation such as the bill of lading showing the quantity of CRM used in the project unless otherwise directed.
- 2.5. **Membrane.** Provide a smooth and homogeneous polymer modified emulsion meeting the requirements in accordance with Table 4.

Polymer Modified Emulsion Requirements					
Test on Emulsion	Test Method	Min	Max		
Viscosity @ 77°F, SSF	T 72	20	100		
Storage Stability,1 %	T 59		1		
Demulsibility (for anionic emulsions), 35 mL of 0.02 N CaCl2, %	T 59	55			
Demulsibility (for cationic emulsions), 35 mL 0.8% Sodium dioctyl sulfosuccinate, %	T 59	55			
Sieve Test, ² %	T 59		0.05		
Distillation Test: ³ Residue by distillation, % by wt. Oil portion of distillate, % by vol.	T 59	63	0.5		
Test on Residue from Distillation	Test Method	Min	Max		
Elastic Recovery @ 50°F, 50 mm/min., %	<u>Tex-539-C</u>	60			
Penetration @ 77°F, 100 g, 5 sec, 0.1 mm	T 49	100	150		

Table 4
Polymer Modified Emulsion Requirement

 Penetration @ 77°F, 100 g, 5 sec, 0.1 mm
 T 49
 100
 1

 After standing undisturbed for 24 hr., the surface must be smooth, must not exhibit a

white or milky colored substance, and must be a homogeneous color throughout.

2. May be required by the Engineer only when the emulsion cannot be easily applied in the field.

3. The temperature on the lower thermometer should be brought slowly to 350°F  $\pm$ 10°F and maintained at this temperature for 20 min. The total distillation should be complete in 60  $\pm$ 5 min. from the first application of heat.

2.6. Additives. Provide the Engineer with documentation such as the bill of lading showing the quantity of additives used in the project unless otherwise directed.

- 2.6.1. **Fibers**. Provide cellulose or mineral fibers when PG binder is specified. Do not use fibers when A-R binder is specified. Submit written certification to the Engineer that the fibers proposed for use meet the requirements of DMS-9204, "Fiber Additives for Bituminous Mixtures." Fibers may be pre-blended into the binder at the asphalt supply terminal unless otherwise shown on the plans.
- 2.6.2. Lime Mineral Filler. Add lime as mineral filler at a rate of 1.0% by weight of the total dry aggregate in accordance with Item 301, "Asphalt Antistripping Agents," unless otherwise shown on the plans or waived by the Engineer based on Hamburg Wheel test results. Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream unless the plant has a baghouse or dust collection system that reintroduces the lime into the drum.
- 2.6.3. Lime and Liquid Antistripping Agent. When lime or a liquid antistripping agent is used, add in accordance with Item 301, "Asphalt Antistripping Agents." Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream unless the plant has a baghouse or dust collection system that reintroduces the lime into the drum. Lime added as mineral filler will count towards the total quantity of lime specified when the plans require lime to be added as an antistripping agent.
- 2.6.4. **Compaction Aid.** Compaction Aid is defined as a Department-approved chemical warm mix additive denoted as "chemical additive" on the Department's material producer list (MPL) that is used to facilitate mixing and compaction of HMA.

Compaction aid is allowed for use on all projects. Compaction aid is required when shown on the plans or as required in Section 3082.4.7.1., "Weather Conditions."

Warm mix foaming processes, denoted as "foaming process" on the Department-approved MPL, may be used to facilitate mixing and compaction of HMA; however warm mix processes are not defined as a Compaction Aid.

2.7. Recycled Materials. Recycled materials are not allowed for use.

Statewide

Provide required or necessary equipment in accordance with Item 320, "Equipment for Asphalt Concrete Pavement." When A-R binder is specified, equip the hot-mix plant with an in-line viscosity-measuring device located between the blending unit and the mixing drum. Provide a means to calibrate the asphalt mass flow meter on-site when a meter is used.

- 3.1. Placement Equipment. Provide a paver that meets all the requirements listed below.
- 3.1.1. **Paver.** Furnish a paver that will spray the membrane, apply the PFC mixture, and level the surface of the mat in a single pass. Configure the paver so that the mixture is placed no more than 5 sec. after the membrane is applied. Ensure the paver does not support the weight of any portion of hauling equipment other than the connection. Provide loading equipment that does not transmit vibrations or other motions to the paver that adversely affects the finished pavement quality. Equip the paver with an automatic dual longitudinal-grade control system and an automatic transverse-grade control system.
- 3.1.1.1. **Tractor Unit**. Supply a tractor unit that can push or propel vehicles, dumping directly into the finishing machine to obtain the desired lines and grades to eliminate any hand finishing. Equip the unit with a hitch to maintain contact between the hauling equipment's rear wheels and the finishing machine's pusher rollers while mixture is unloaded.
- 3.1.1.2. **Membrane Storage Tank and Distribution System.** Equip the paver with an insulated storage tank with a minimum capacity of 900 gal. Provide a metered mechanical pressure sprayer on the paver to apply a uniform membrane at the specified rate. Locate the spray bar on the paver so that the membrane is applied immediately in front of the screed unit. Provide a read-out device on the paver to monitor the membrane application rate.

Furnish a volumetric calibration and strap stick for the tank in accordance with <u>Tex-922-K</u>, Part I, unless otherwise directed. Calibrate the tank within the previous 5 yr. of the date first used on the project. The Engineer may verify calibration accuracy in accordance with <u>Tex-922-K</u>, Part II.

- 3.1.1.3. Screed. Provide a variable width vibratory screed that meets Item 320, "Equipment for Asphalt Concrete Pavement."
- 3.1.2. **Material Transfer Device (MTD).** Provide the specified type of MTD when shown on the plans. Ensure MTDs provide a continuous, uniform mixture flow to the asphalt paver.
- 3.1.3. **Rollers.** Provide steel-wheel rollers meeting the requirements of Item 210, "Rolling," except provide rollers weighing a minimum of 10 ton for each roller required. Operate rollers in static (non-vibrating) mode unless otherwise allowed.

#### 4. CONSTRUCTION

Produce, haul, place, and compact the specified paving mixture. In addition to tests required by the specification, Contractors may perform other QC tests as deemed necessary. At any time during the project, the Engineer may perform production and placement tests as deemed necessary in accordance with Item 5, "Control of the Work." Schedule and participate in a mandatory pre-paving meeting with the Engineer on or before the first day of paving unless otherwise shown on the plans.

4.1. Certification. Personnel certified by the Department-approved hot-mix asphalt certification program must conduct all mixture designs, sampling, and testing in accordance with Table 5. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning production and when personnel changes are made. Provide a mixture design developed and signed by a Level 2 certified specialist. Provide Level 1A certified specialists at the plant during production operations. Provide Level 1B certified specialists to conduct placement tests. Provide AGG101 certified specialists for aggregate testing.

Test Methods, Test Responsibility, and Minimum Certification Levels					
Test Description	Test Method	Contractor	Engineer	Level ¹	
1. Aggregate Testing					
Sampling	<u>Tex-221-F</u>	~	~	1A/AGG101	
Dry sieve	Tex-200-F, Part I	~	~	1A/AGG101	
Washed sieve	<u>Tex-200-F</u> , Part II	~	~	1A/AGG101	
Deleterious material	Tex-217-F, Parts I & III	✓	~	AGG101	
Decantation	<u>Tex-217-F</u> , Part II	~	~	AGG101	
Los Angeles abrasion	<u>Tex-410-A</u>		✓	Department	
Magnesium sulfate soundness	<u>Tex-411-A</u>		✓	Department	
Micro-Deval abrasion	<u>Tex-461-A</u>		✓	AGG101	
Crushed face count	<u>Tex-460-A</u>	✓	✓	AGG101	
Flat and elongated particles	<u>Tex-280-F</u>	✓	✓	AGG101	
Methylene blue test	<u>Tex-252-F</u>		✓	Department	
	2. Asphalt Binder & Tack Co	at Sampling	ι		
Asphalt binder sampling	Tex-500-C, Part II	✓	✓	1A/1B	
Membrane sampling	Tex-500-C, Part III	✓	✓	1A/1B	
	3. Mix Design & Verific	cation			
Design and JMF changes	<u>Tex-204-F</u>	✓	✓	2	
Mixing	<u>Tex-205-F</u>	✓	~	2	
Molding (SGC)	<u>Tex-241-F</u>	✓	~	1A	
Laboratory-molded density	Tex-207-F, Parts I, VI, & VIII	✓	~	1A	
Rice gravity	Tex-227-F, Part II	✓	~	1A	
Ignition oven correction factors ²	Tex-236-F, Part II	✓	~	2	
Drain-down	<u>Tex-235-F</u>	✓	~	1A	
Hamburg Wheel test	<u>Tex-242-F</u>	~	~	1A	
Boil test ⁴	<u>Tex-530-C</u>	✓	✓	1A	
Cantabro loss	<u>Tex-245-F</u>	✓	✓	1A	
	4. Production Testi	ing	ι		
Control charts	<u>Tex-233-F</u>	✓	✓	1A	
Mixture sampling	<u>Tex-222-F</u>	~	~	1A/1B	
Gradation & asphalt binder content ²	Tex-236-F, Part I	✓	✓	1A	
Moisture content	Tex-212-F, Part II	✓	~	1A/AGG101	
Micro-Deval abrasion	<u>Tex-461-A</u>		✓	AGG101	
Drain-down	<u>Tex-235-F</u>	✓	✓	1A	
Boil test ⁴	<u>Tex-530-C</u>	✓	✓	1A	
Abson recovery	<u>Tex-211-F</u>		✓	Department	
	5. Placement Testi	ng	·		
Control charts	<u>Tex-233-F</u>	✓	✓	1A	
Ride quality measurement	<u>Tex-1001-S</u>	✓	✓	Note 3	
Thermal profile	Tex-244-F	✓	✓	1B	
Water flow test	Tex-246-F	✓	✓	1B	
1 Lovel 1A 1P ACC101 and 2 are contification lovels provided by the Het Mix Apphalt Center contification program					

Table 5

Level 1A, 1B, AGG101, and 2 are certification levels provided by the Hot Mix Asphalt Center certification program.

2. Refer to Section 3082.4.5., "Production Operations," for exceptions to using an ignition oven.

3. Profiler and operator are required to be certified at the Texas A&M Transportation Institute facility when Surface Test Type B is specified.

4. When shown on the plans.

4.2.

**Reporting and Responsibilities.** Use Department-provided templates to record and calculate all test data, including mixture design, production and placement tests, control charts, and thermal profiles. Obtain the current version of the templates at <a href="https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html">https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html</a> or from the Engineer. The Engineer and the Contractor will provide any available test results to the other party when requested. The Contractor and Engineer must exchange test data within the maximum allowable time in accordance with Table 6 unless otherwise approved. The Engineer and the

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Contractor will immediately report to the other party any test result that requires suspension of production or placement or that fails to meet the specification requirements. Record and electronically submit all test results and pertinent information on Department-provided templates.

Subsequent sublots placed after test results are available to the Contractor, which require suspension of operations, may be considered unauthorized work. Unauthorized work will be accepted or rejected at the discretion of the Engineer in accordance with Section 5.3., "Conformity with Plans, Specifications, and Special Provisions."

Description	Reported By Production Qua	Reported To lity Control	To Be Reported Within			
Gradation ¹	Production Qua	lity Control				
Gradation ¹						
oradation						
Asphalt binder content ¹						
Laboratory-molded density ¹			1 working day of completion of			
Moisture content ²	Contractor	Engineer	the sublot			
Drain-down ¹						
Boil test ⁴						
	Production Qualit	ty Assurance				
Gradation ²						
Asphalt binder content ²						
Laboratory-molded density ²		Contractor	1 working day of completion of			
Hamburg Wheel test ³	Engineer		the sublet			
Boil test ⁴						
Drain-down ²						
Binder tests ³						
	Placement Qual	lity Control				
Thermal profile ¹			1 working day of completion of			
Water flow ¹	Contractor	Engineer	the lot			
Membrane application rate ²	g					
	Placement Quality Assurance					
Thermal profile ²						
Aging ratio ³	Engineer	Contractor	1 working day of completion of			
Water flow ²	Ligincei	Contractor	the lot			
Membrane application rate ²						

1. These tests are required on every sublot.

2. To be performed at the frequency in accordance with Table 14 or as shown on the plans.

3. To be reported as soon as the results become available.

4. When shown on the plans

Use the procedures described in <u>Tex-233-F</u>, when directed, to plot the results of all production and placement testing. Update the control charts as soon as test results for each sublot become available. Make the control charts readily accessible at the field laboratory. The Engineer may suspend production for failure to update control charts.

# 4.3. Quality Control Plan (QCP). Develop and follow the QCP in detail. Obtain approval for changes to the QCP made during the project. The Engineer may suspend operations if the Contractor fails to comply with the QCP.

Submit a written QCP before the mandatory pre-paving meeting, when directed. Receive approval of the QCP before pre-paving meeting. Include the following items in the QCP:

- 4.3.1. **Project Personnel**. For project personnel, include:
  - a list of individuals responsible for QC with authority to take corrective action;
  - current contact information for each individual listed; and
  - current copies of certification documents for individuals performing specified QC functions.

#### 4.3.2. Material Delivery and Storage. For material delivery and storage, include:

the sequence of material processing, delivery, and minimum quantities to assure continuous plant

operations;

- aggregate stockpiling procedures to avoid contamination and segregation;
- frequency, type, and timing of aggregate stockpile testing to assure conformance of material requirements before mixture production; and
- procedure for monitoring the quality and variability of asphalt binder.

#### 4.3.3. **Production**. For production, include:

- loader operation procedures to avoid contamination in cold bins;
- procedures for calibrating and controlling cold feeds;
- procedures to eliminate debris or oversized material;
- procedures for adding and verifying rates of each applicable mixture component (e.g., aggregate, asphalt binder, lime, liquid antistrip, compaction aid, foaming process, fibers);
- procedures for reporting job control test results; and
- procedures to avoid segregation and drain-down in the silo.

#### 4.3.4. **Loading and Transporting**. For loading and transporting, include:

- type and application method for release agents; and
- truck loading procedures to avoid segregation.

#### 4.3.5. Placement and Compaction. For placement and compaction, include:

- proposed agenda for mandatory pre-paving meeting, including date and location;
- proposed paving plan (e.g., production rate, paving widths, joint offsets, and lift thicknesses);
- type and application method for release agents in the paver and on rollers, shovels, lutes, and other utensils;
- procedures for the transfer of mixture into the paver while avoiding physical and thermal segregation and preventing material spillage;
- process to balance production, delivery, paving, and compaction to achieve continuous placement operations and good ride quality;
- paver operations (e.g., speed, operation of wings, height of mixture in auger chamber) to avoid physical and thermal segregation and other surface irregularities; and
- procedures to construct quality longitudinal and transverse joints.

#### 4.4. Mixture Design.

4.4.1. **Design Requirements.** Use the design procedure provided in <u>Tex-204-F</u>, unless otherwise shown on the plans. Design the mixture to meet the requirements in accordance with Tables 1, 2, 3, 7, 8, and 9. Use a Superpave Gyratory Compactor (SGC) at 50 gyrations as the design number of gyrations (Ndesign).

The Engineer will provide the mixture design when shown on the plans. The Contractor may submit a new mixture design at any time during the project. The Engineer will verify and approve all mixture designs (JMF1) before the Contractor can begin production.

Provide the Engineer with a mixture design report using the Department-provided template. Include the following items in the report:

- the combined aggregate gradation, source, specific gravity, and percent of each material used;
- the membrane application rate based on design volumetrics;
- results of all applicable tests;
- the mixing and molding temperatures;
- the signature of the Level 2 person or persons that performed the design;
- the date the mixture design was performed; and
- a unique identification number for the mixture design.

	Permeable Friction Course		Thin Bo	onded Friction C	ourse
Sieve Size	Fine (PFC-F)	Coarse (PFC-C and PFCR-C)	Туре А	Туре В	Туре С
3/4"	-	100.0 ¹	-	-	100 ¹
1/2"	100.0 ¹	80.0-100.0	-	100 ¹	75–100
3/8"	95.0-100.0	35.0-60.0	100 ¹	75–100	55–80
#4	20.0-55.0	1.0–20.0	35–55	22–36	22–36
#8	1.0-10.0	1.0–10.0	19–30	19–30	19–30
#16	-	-	14–25	14–24	14–24
#50	-	-	7–14	7–14	7–14
#200	1.0-4.0	1.0-4.0	4–6	4–6	4–6

Table 8

Table 7 Master Gradation Limits (% Passing by Weight or Volume) and Laboratory Mixture Design Properties

1. Defined as maximum sieve size. No tolerance allowed.

Mixture Design Properties							
Mixturo Droportu	Test	PG 76 Mi	PG 76 Mixtures		Thin Bonded Friction Course		
Mixture Property	Method	Fine (PFC-F)	Coarse (PFC-C)	Coarse (PFCR-C)	Туре А	Туре В	Туре С
Asphalt binder content, %	-	6.0-7.0	6.0-7.0	7.0-9.0	5.0-5.8	4.8-5.6	4.8-5.6
Film thickness, microns	-	-	-	-	9.0 Min	9.0 Min	9.0 Min
Design gyrations (Ndesign)	Tex-241-F	50	50	50	50	50	50
Laboratory-molded density, %	Tex-207-F	78.0 Max	82.0 Max	82.0 Max	92.0 Max	92.0 Max	92.0 Max
Hamburg Wheel test, ¹ passes at 12.5 mm rut depth	<u>Tex-242-F</u>	10,000 Min	Note 2	Note 2	Note 2	Note 2	Note 2
Drain-down, %	Tex-235-F	0.10 Max	0.10 Max	0.10 Max	0.10 Max	0.10 Max	0.10 Max
Fiber content, % by wt. of total PG 76 mixture	Calculated	0.20-0.50	0.20-0.50	-	-	-	_
Lime content, % by wt. of total aggregate	Calculated	1.0 ³	1.0 ³	-	Note 4	Note 4	Note 4
CRM content, % by wt. of A-R binder	Calculated	-	_	15.0 Min	-	_	-
Boil test ⁵	Tex-530-C	-	-	-	-	-	-
Cantabro loss, %	Tex-245-F	20.0 Max	20.0 Max	20.0 Max	20.0 Max	20.0 Max	20.0 Max

1. Mold test specimens to Ndesign at the optimum asphalt binder content.

2. No specification value is required unless otherwise shown on the plans.

3. Unless otherwise shown on the plans or waived by the Engineer based on Hamburg Wheel results.

4. Lime may be required when shown on the plans.

5. When shown on the plans. Used to establish baseline for comparison to production results.

- 4.4.2. Job-Mix Formula Approval. The job-mix formula (JMF) is the combined aggregate gradation, Ndesign level, and target asphalt percentage used to establish target values for hot-mix production. JMF1 is the original laboratory mixture design used to produce the trial batch. When a compaction aid or foaming process is used, JMF1 may be designed and submitted to the Engineer without including the compaction aid or foaming process. When a compaction aid or foaming process is used, document the compaction aid or foaming process used and recommended rate on the JMF1 submittal. The Engineer and the Contractor will verify JMF1 based on plantproduced mixture from the trial batch unless otherwise approved. The Engineer may accept an existing mixture design previously used on a Department project and may waive the trial batch to verify JMF1. The Department may require the Contractor to reimburse the Department for verification tests if more than two trial batches per design are required.
- 4.4.2.1. Contractor's Responsibilities.
- 4.4.2.1.1. **Providing Superpave Gyratory Compactor.** Furnish an SGC calibrated in accordance with <u>Tex-241-F</u> for molding production samples. Locate the SGC at the Engineer's field laboratory or make the SGC available to the Engineer for use in molding production samples.
- 4.4.2.1.2. Gyratory Compactor Correlation Factors. Use <u>Tex-206-F</u>, Part II, to perform a gyratory compactor

correlation when the Engineer uses a different SGC. Apply the correlation factor to all subsequent production test results.

- 4.4.2.1.3. **Submitting JMF1.** Furnish a mix design report (JMF1) with representative samples of all component materials and request approval to produce the trial batch. Provide an additional 25 lb. of the design mixture if opting to have the Department perform the Hamburg Wheel test on the laboratory mixture when required in accordance with Table 8, and request that the Department perform the test.
- 4.4.2.1.4. **Supplying Aggregates.** Provide approximately 40 lb. of each aggregate stockpile unless otherwise directed.
- 4.4.2.1.5. **Supplying Asphalt.** Provide at least 1 gal. of the asphalt material and enough quantities of any additives proposed for use.
- 4.4.2.1.6. **Ignition Oven Correction Factors.** Determine the aggregate and asphalt correction factors from the ignition oven in accordance with <u>Tex-236-F</u>, Part II. Provide correction factors that are not more than 12 mo. old. Note that the asphalt content correction factor takes into account the percent fibers in the mixture so that the fibers are excluded from the binder content determination. Provide the Engineer with split samples of the mixtures before the trial batch production, including all additives (except water), and blank samples used to determine the correction factors for the ignition oven used for quality assurance testing during production. Correction factors established from a previously approved mixture design may be used for the current mixture design if the mixture design and ignition oven are the same as previously used and the correction factors are not more than 12 mo. old, unless otherwise directed.
- 4.4.2.1.7. **Boil Test.** When shown on the plans, perform the test and retain the tested sample from <u>Tex-530-C</u> until completion of the project or as directed. Use this sample for comparison purposes during production. Add lime or liquid antistripping agent as directed if signs of stripping exist.
- 4.4.2.1.8. **Trial Batch Production**. Provide a plant-produced trial batch upon receiving conditional approval of JMF1 and authorization to produce a trial batch, including the compaction aid or foaming process, if applicable, for verification testing of JMF1 and development of JMF2. Produce a trial batch mixture that meets the requirements in accordance with Table 9. The Engineer may accept test results from recent production of the same mixture instead of a new trial batch.
- 4.4.2.1.9. **Trial Batch Production Equipment.** Use only equipment and materials proposed for use on the project to produce the trial batch. Provide documentation to verify the calibration or accuracy of the asphalt mass flow meter to measure the binder content. Verify that asphalt mass flow meter meets the requirements of 0.4 % accuracy, when required, in accordance with Item 520, "Weighing and Measuring Equipment." The Engineer may require that the accuracy of the mass flow meter be verified based on quantities used.
- 4.4.2.1.10. **Trial Batch Quantity.** Produce enough quantity of the trial batch to ensure that the mixture meets the specification requirements.
- 4.4.2.1.11. **Number of Trial Batches.** Produce trial batches as necessary to obtain a mixture that meets the specification requirements.
- 4.4.2.1.12. **Trial Batch Sampling.** Obtain a representative sample of the trial batch and split it into three equal portions in accordance with <u>Tex-222-F</u>. Label these portions as "Contractor," "Engineer," and "Referee." Deliver samples to the appropriate laboratory as directed.
- 4.4.2.1.13. **Trial Batch Testing.** Test the trial batch to ensure the mixture produced using the proposed JMF1 meets the mixture requirements in accordance with Table 9. Ensure the trial batch mixture is also in compliance with the requirements in accordance with Tables 7 and 8. Use a Department-approved laboratory listed on the MPL to perform the Hamburg Wheel test on the trial batch mixture or request that the Department perform the Hamburg Wheel test. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel test results on the trial batch. Provide the Engineer with a copy of the trial batch test results.
- 4.4.2.1.14. **Development of JMF2.** Evaluate the trial batch test results, determine the target mixture proportions, and

submit as JMF2 after the Engineer grants full approval of JMF1 based on results from the trial batch. Verify that JMF2 meets the mixture requirements in accordance with Table 9.

- 4.4.2.1.15. Mixture Production. After receiving approval for JMF2, use JMF2 to produce Lot 1.
- 4.4.2.1.16. **Development of JMF3.** Evaluate the test results from Lot 1, determine the optimum mixture proportions, and submit as JMF3 for use in Lot 2.
- 4.4.2.1.17. **JMF Adjustments.** If JMF adjustments are necessary to achieve the specified requirements, make the adjustments before beginning a new lot. The adjusted JMF must:
  - be provided to the Engineer in writing before the start of a new lot;
  - be numbered in sequence to the previous JMF;
  - meet the master gradation limits in accordance with Table 7
  - meet the binder content limits in accordance with Table 8; and
  - be within the operational tolerances of JMF2 in accordance with Table 9.
- 4.4.2.1.18. **Requesting Referee Testing.** Use referee testing, if needed, in accordance with Section 3082.4.9.1., "Referee Testing," to resolve testing differences with the Engineer.

Table 9 Operational Tolerances					
Test Description	Test Method	Allowable Difference between JMF2 and JMF1 Target ¹	Allowable Difference from Current JMF and JMF2 ²	Allowable Difference between Contractor and Engineer ³	
Individual % retained for sieve sized larger than #200	Tox 200 E	Must be Within Master Grading Limits in	$\pm 3.0^{4}$	$\pm 5.0^{4}$	
% passing the #200 sieve	<u>18x-200-1</u>	accordance with Table 7	$\pm 2.0^{4}$	$\pm 3.0^{4}$	
Laboratory-molded density, %	<u>Tex-207-F</u> , Part VIII	±1.0	±1.0	±1.0	
Asphalt binder content, %	<u>Tex-236-F</u> , Part I⁵	±0.36,7	$\pm 0.3^{4,6,7}$	±0.36,7	
Drain-down, %	<u>Tex-235-F</u>	Note 8	Note 8	N/A	
Boil test	<u>Tex-530-C</u>	Note 9	Note 9	N/A	
Membrane application rate	<u>Tex-247-F</u>	±0.02	±0.02	N/A	

1. JMF1 is the approved laboratory mixture design used for producing the trial batch. JMF2 is the approved mixture design developed from the trial batch used to produce Lot 1.

- 2. Current JMF is JMF3 or higher. JMF3 is the approved mixture design used to produce Lot 2.
- 3. Contractor may request referee testing only when values exceed these tolerances.
- 4. Only applies to mixture produced for Lot 1 and higher. Aggregate gradation is not allowed to be outside the limits in accordance with Table 7.
- 5. Ensure the binder content determination excludes fibers.
- 6. May be obtained from asphalt mass flow meter readouts as determined by the Engineer.
- 7. Binder content is not allowed to be outside the limits shown in Table 8.
- 8. Verify that Table 8 requirements are met.
- 9. When shown on the plans.

#### 4.4.2.2. Engineer's Responsibilities.

- 4.4.2.2.1. **Superpave Gyratory Compactor.** The Engineer will use a Department SGC calibrated in accordance with <u>Tex-241-F</u> to mold samples for laboratory mixture design verification. For molding trial batch and production specimens, the Engineer will use the Contractor-provided SGC at the field laboratory or provide and use a Department SGC at an alternate location.
- 4.4.2.2.2. Conditional Approval of JMF1 and Authorizing Trial Batch. The Engineer will review and verify conformance of the following information within two working days of receipt:

- the Contractor's mix design report (JMF1);
- the Contractor-provided Hamburg Wheel test results, if applicable;
- all required materials including aggregates, asphalt, and additives; and
- the mixture specifications.

The Engineer will grant the Contractor conditional approval of JMF1 if the information provided on the paper copy of JMF1 indicates that the Contractor's mixture design meets the specifications. When the Contractor does not provide Hamburg Wheel test with laboratory mixture design, 10 working days are allowed for conditional approval of JMF1. The Engineer will base full approval of JMF1 on the test results on mixture from the trial batch.

Unless waived, the Engineer will determine the Micro-Deval abrasion loss in accordance with

Section 3082.2.1.1.2., "Micro-Deval Abrasion." If the Engineer's test results are pending after two working days, conditional approval of JMF1 will still be granted within two working days of receiving JMF1. When the Engineer's test results become available, they will be used for specification compliance.

The Contractor is authorized to produce a trial batch after the Engineer grants conditional approval of JMF1.

- 4.4.2.2.3. Hamburg Wheel Testing. At the Contractor's request, the Department will perform the Hamburg Wheel test on the laboratory mixture in accordance with <u>Tex-242-F</u> to verify compliance with the Hamburg Wheel test requirement in accordance with Table 8. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel results on the laboratory mixture design.
- 4.4.2.2.4. **Ignition Oven Correction Factors.** The Engineer will use the split samples provided by the Contractor to determine the aggregate and asphalt correction factors for the ignition oven used for quality assurance testing during production in accordance with <u>Tex-236-F</u>, Part II. Provide correction factors that are not more than 12 mo. old. The Engineer will verify that the asphalt content correction factor takes into account the percent fibers in the mixture so that the fibers are excluded from the binder content determination.
- 4.4.2.2.5. **Testing the Trial Batch.** The Engineer will sample and test the trial batch within one full working day to ensure that the mixture meets the requirements in accordance with Table 9. If the Contractor requests the option to have the Department perform the Hamburg Wheel test on the trial batch mixture, the Engineer will mold samples in accordance with <u>Tex-242-F</u> to verify compliance with the Hamburg Wheel test requirement in accordance with Table 8.

The Engineer will have the option to perform <u>Tex-530-C</u> on the trial batch when shown on the plans. These results may be retained and used for comparison purposes during production.

4.4.2.2.6. **Full Approval of JMF1.** The Engineer will grant full approval of JMF1 and authorize the Contractor to proceed with developing JMF2 if the Engineer's results for the trial batch meet the requirements in accordance with Tables 7 and 8.

The Engineer will notify the Contractor that an additional trial batch is required if the trial batch does not meet these requirements.

- 4.4.2.2.7. **Approval of JMF2.** The Engineer will approve JMF2 within one working day if the mixture meets the requirements in accordance with Tables 7, 8, and 9.
- 4.4.2.2.8. **Approval of Lot 1 Production.** The Engineer will authorize the Contractor to proceed with Lot 1 production (using JMF2).
- 4.4.2.2.9. Approval of JMF3 and Subsequent JMF Changes. JMF3 and subsequent JMF changes are approved if they meet the master grading and asphalt binder content shown in accordance with Tables 7 and 8 and are within the operational tolerances of JMF2 in accordance with Table 9.

- 4.4.2.2.10. **Binder Content Adjustments.** For JMF2 and above, the Engineer may require the Contractor to adjust the target binder content by no more than 0.3% from the current JMF.
- 4.5. **Production Operations.** Perform a new trial batch when the plant or plant location is changed. Take corrective action and receive approval to proceed after any production suspension for noncompliance to the specification.
- 4.5.1. **Storage and Heating of Materials.** Do not heat the asphalt binder above the temperatures specified in Item 300, "Asphalts, Oils, and Emulsions," or outside the manufacturer's recommended values. Provide the Engineer with daily records of asphalt binder and hot-mix asphalt discharge temperatures (in legible and discernible increments) in accordance with Item 320, "Equipment for Asphalt Concrete Pavement," unless otherwise directed. Do not store mixture for a period long enough to affect the quality of the mixture, nor in any case longer than 12 hr. unless otherwise approved.
- 4.5.2. **Mixing and Discharge of Materials.** Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck before shipping to ensure that it does not exceed the maximum production temperatures in accordance with Table 10. The Department will not pay for or allow placement of any mixture produced above the maximum production temperatures in accordance with Table 10.

Table 10
Maximum Production Temperature

High-Temperature Binder Grade ¹	Max Production Temperature
PG 76	345°F
A-R Binder	345°F

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.

Control the mixing time and temperature so that substantially all moisture is removed from the mixture before discharging from the plant. Determine the moisture content, if requested, by oven-drying in accordance with <u>Tex-212-F</u>, Part II, and verify that the mixture contains no more than 0.2% of moisture by weight. Obtain the sample immediately after discharging the mixture into the truck and perform the test promptly.

4.6. Hauling Operations. Clean all truck beds before use to ensure that mixture is not contaminated. Use a release agent shown on the Department's MPL to coat the inside bed of the truck when necessary. Do not use diesel or any release agent not shown on the Department's MPL.

Use equipment for hauling as defined in Section 3082.4.7.3.2., "Hauling Equipment." Use other hauling equipment only when allowed.

4.7. Placement Operations. Collect haul tickets from each load of mixture delivered to the project and provide the Department's copy to the Engineer approximately every hour, or as directed. Use a hand-held thermal camera or infrared thermometer, when a thermal imaging system is not used, to measure and record the internal temperature of the mixture as discharged from the truck or Material Transfer Device (MTD) before or as the mix enters the paver and an approximate station number or GPS coordinates on each ticket. Calculate the daily yield and cumulative yield for the specified lift and provide to the Engineer at the end of paving operations for each day unless otherwise directed. The Engineer may suspend production if the Contractor fails to produce and provide haul tickets and yield calculations by the end of paving operations for each day.

Prepare the surface by removing raised pavement markers and objectionable material such as moisture, dirt, sand, leaves, and other loose impediments from the surface before placing mixture. Remove vegetation from pavement edges. Do not allow any loose mixture onto the prepared surface before application of the membrane. Place the mixture to meet the typical section requirements and produce a smooth, finished surface with a uniform appearance and texture. Offset longitudinal joints of successive courses of hot-mix by at least 6 in. Place mixture so that longitudinal joints on the surface course coincide within 6-in. of lane lines and are not placed in the wheel path, or as directed, and offset longitudinal joints of successive courses of hot-mix by at least 6-in. Ensure that all finished surfaces will drain properly.

#### 4.7.1. Weather Conditions.

4.7.1.1. When Using a Thermal Imaging System. The Contractor may pave any time the roadway is dry and the roadway surface temperature is at least 60°F unless otherwise approved or as shown on the plans; however, the Engineer may restrict the Contractor from paving if the ambient temperature is likely to drop below 32°F within 12 hr. of paving. Place mixtures when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. Provide output data from the thermal imaging system to demonstrate to the Engineer that no recurring severe thermal segregation exists in accordance with Section 3082.4.7.3.1.2., "Thermal Imaging System."

Produce mixture with a target discharge temperature higher than 300°F and with a compaction aid to facilitate compaction when the air temperature is 70°F and falling.

4.7.1.2. When Not Using a Thermal Imaging System. When using a thermal camera instead of the thermal imaging system, place mixture when the roadway surface temperature is at or above 70°F unless otherwise approved or as shown on the plans. Measure the roadway surface temperature with a hand-held thermal camera or infrared thermometer. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. The Engineer may restrict the Contractor from paving if the air temperature is 60°F and falling.

Produce mixture with a target discharge temperature higher than 300°F and with a compaction aid to facilitate compaction when the air temperature is 70°F and falling.

4.7.2. **Application of Membrane.** Apply the membrane at the rates in accordance with Table 11 unless otherwise directed. Spray the membrane using a metered mechanical pressure spray bar at a temperature of 140°F to 180°F. Monitor the membrane application rate and make adjustments to the rate when directed. Verify that the spray bar is capable of applying the membrane at a uniform rate across the entire paving width. Apply adequate overlap of the tack coat in the longitudinal direction during placement of the mat to ensure bond of adjacent mats, unless otherwise directed. Unless otherwise directed, avoid tacking the vertical faces of adjacent PFC mats in the longitudinal direction to avoid restricting lateral drainage. Apply tack coat to all transverse joints. Do not let the wheels or other parts of the paving machine contact the freshly applied membrane. Do not dilute the membrane at the terminal, in the field, or at any other location before use. Do not allow any loose mixture onto the prepared surface before application of the membrane.

Mix Type	Lift Thickness	Membrane Rate
	1-1/2 in.	0.30-0.33
Dermachia Fristian Course	1-1/4 in.	0.27-0.30
Permeable Friction Course	1 in.	0.25-0.28
	3/4 in.	0.22-0.25
	3/4 in.	0.17-0.27
Thin Bonded Friction Course	5/8 in.	0.16-0.24
	1/2 in.	0.14-0.20

Table 11 Membrane Application Rate Limits (Gal. per square vard)

- 4.7.2.1. **Non-uniform Application of Membrane**. Stop application if it is not uniform due to streaking, ridging, pooling, or flowing off the roadway surface. Verify equipment condition including plugged nozzles on the spray bar, operating procedures, application temperature, and material properties. Determine and correct the cause of non-uniform application.
- 4.7.2.2. **Test Strips.** The Engineer may perform independent tests to confirm Contractor compliance and may require testing differences or failing results to be resolved before resuming production.

The Engineer may cease operations and require construction of test strips at the Contractor's expense if any of the following occurs:

- non-uniformity of application continues after corrective action;
- in three consecutive shots, application rate differs by more than 0.03 gal. per square yard from the rate

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directed; or

■ any shot differs by more than 0.05 gal. per square yard from the rate directed.

The Engineer will approve the test strip location. The Engineer may require additional test strips until the membrane application meets specification requirements.

4.7.3. **Lay-Down Operations.** Use the placement temperature in accordance with Table 12 to establish the minimum placement temperature of the mixture delivered to the paving operation.

Min Mixture Placement Temperature			
High-Temperature Binder Grade ¹	Min Placement Temperature		
	(Before Entering Paving Operation) ^{2,3}		
PG 76	280°F		
A-R Binder	280°F		

Table 12Min Mixture Placement Temperature

- 1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
- 2. The mixture temperature must be measured using a hand-held thermal camera or infrared thermometer nearest to the point of entry of the paving operation.
- 3. Minimum placement temperatures may be reduced 10°F if using a compaction aid.
- 4.7.3.1. **Thermal Profile.** Use a hand-held thermal camera or a thermal imaging system to obtain a continuous thermal profile in accordance with <u>Tex-244-F</u>. Thermal profiles are not applicable in areas described in Section 3082.4.9.8., "Miscellaneous Areas."
- 4.7.3.1.1. Thermal Segregation.
- 4.7.3.1.1.1. Moderate. Any areas that have a temperature differential greater than 25°F, but not exceeding 50°F.
- 4.7.3.1.1.2. Severe. Any areas that have a temperature differential greater than 50°F.
- 4.7.3.1.2. **Thermal Imaging System.** Review the output results when a thermal imaging system is used, and provide the report described in <u>Tex-244-F</u> to the Engineer daily unless otherwise directed. Modify the paving process as necessary to eliminate any recurring (moderate or severe) thermal segregation identified by the thermal imaging system.

The Engineer may suspend subsequent paving operations if the Contractor cannot successfully modify the paving process to eliminate recurring severe or moderate thermal segregation.

Provide the Engineer with electronic copies of all daily data files that can be used with the thermal imaging system software to generate temperature profile plots daily or as requested by the Engineer.

- 4.7.3.1.3. Thermal Camera. When using the thermal camera instead of the thermal imaging system, take immediate corrective action to eliminate recurring moderate thermal segregation when a hand-held thermal camera is used. Provide the Engineer with the thermal profile of every sublot within one working day of the completion of each lot. When requested by the Engineer, provide the electronic files generated using the thermal camera. Report the results of each thermal profile in accordance with Section 3082.4.2., "Reporting and Responsibilities." The Engineer will use a hand-held thermal camera to obtain a thermal profile at least once per project unless the thermal imaging system is used. Suspend operations and take immediate corrective action to eliminate severe thermal segregation unless otherwise directed. Resume operations when the Engineer determines that subsequent production will meet the requirements of this Section.
- 4.7.3.2. Hauling Equipment. Use live bottom or end dump trucks to haul and transfer mixture; however, with exception of paving miscellaneous areas, end dump trucks are only allowed when used in conjunction with an MTD with remixing capability or when a thermal imaging system is used unless otherwise allowed.
- 4.7.3.3. **Screed Heaters.** Turn off screed heaters to prevent overheating of the mat if the paver stops for more than 5 min. The Engineer may evaluate the suspect area in accordance with Section 3082.4.9.9., "Recovered

Asphalt Dynamic Shear Rheometer (DSR)," if the screed heater remains on for more than 5 min. while the paver is stopped.

4.8. **Compaction.** Roll the freshly placed mixture with as many steel-wheeled rollers as necessary, operated in static mode, to seat the mixture without excessive breakage of the aggregate and to provide a smooth surface and uniform texture. Do not use pneumatic rollers. Use the control strip method given in <u>Tex-207-F</u>, Part IV, to establish the rolling pattern. Moisten the roller drums thoroughly with a soap and water solution to prevent adhesion. Use only water or an approved release agent on rollers, tamps, and other compaction equipment unless otherwise directed.

For PFC mixtures, use <u>Tex-246-F</u> to test and verify that the compacted mixture has adequate permeability. Measure the water flow once per sublot at locations directed by the Engineer. The water flow rate should be less than 20 sec. Investigate the cause of the water flow rate test failures and take corrective actions during production and placement to ensure the water flow rate is less than 20 sec. Suspend production if two consecutive water flow rate tests fail unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

Complete all compaction operations before the pavement temperature drops below 180°F unless otherwise allowed. The Engineer may allow compaction with a light finish roller operated in static mode for pavement temperatures below 180°F.

Allow the compacted pavement to cool to 160°F or lower before opening to traffic unless otherwise directed. Sprinkle the finished mat with water or limewater, when directed, to expedite opening the roadway to traffic.

- 4.9. Acceptance Plan. Sample and test the hot-mix on a lot and sublot basis.
- 4.9.1. **Referee Testing.** The Materials and Tests Division is the referee laboratory. The Contractor may request referee testing if the differences between Contractor and Engineer test results exceed the operational tolerances in accordance with Table 9 and the differences cannot be resolved. The Contractor may also request referee testing if the Engineer's test results require suspension of production and the Contractor's test results are within specification limits. Make the request within five working days after receiving test results and cores from the Engineer. Referee tests will be performed only on the sublot in question and only for the particular tests in question. Allow 10 working days from the time the referee laboratory receives the samples for test results to be reported. The Department may require the Contractor to reimburse the Department for referee tests if more than three referee tests per project are required and the Engineer's test results are closer to the referee test results than the Contractor's test results.

#### 4.9.2. Production Acceptance.

- 4.9.2.1. **Production Lot.** A production lot consists of four equal sublots. The default quantity for Lot 1 is 1,000 ton; however, when requested by the Contractor, the Engineer may increase the quantity for Lot 1 to no more than 2,000 ton. The Engineer will select subsequent lot sizes based on the anticipated daily production such that approximately three to four sublots are produced each day. The lot size will be between 1,000 ton and 4,000 ton. The Engineer may change the lot size before the Contractor begins any lot.
- 4.9.2.1.1. **Incomplete Production Lots.** If a lot is begun but cannot be completed, such as on the last day of production or in other circumstances deemed appropriate, the Engineer may close the lot. Close all lots within five working days unless otherwise allowed.

#### 4.9.2.2. Production Sampling.

4.9.2.2.1. **Mixture Sampling.** Obtain hot-mix samples from trucks at the plant in accordance with <u>Tex-222-F</u>. The sampler will split each sample into three equal portions in accordance with <u>Tex-200-F</u> and label these portions as "Contractor," "Engineer," and "Referee." The Engineer will perform or witness the sample splitting and take immediate possession of the samples labeled "Engineer" and "Referee." The Engineer will maintain the custody of the samples labeled "Engineer" and "Referee" until the Department's testing is completed.

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- 4.9.2.2.1.1. **Random Sample.** At the beginning of the project, the Engineer will select random numbers for all production sublots. Determine sample locations in accordance with <u>Tex-225-F</u>. Take one sample for each sublot at the randomly selected location. The Engineer will perform or witness the sampling of production sublots.
- 4.9.2.2.1.2. Blind Sample. For one sublot per lot, the Engineer will obtain and test a "blind" sample instead of the random sample collected by the Contractor. Test either the "blind" or the random sample; however, referee testing (if applicable) will be based on a comparison of results from the "blind" sample. The location of the Engineer's "blind" sample will not be disclosed to the Contractor. The Engineer's "blind" sample may be randomly selected in accordance with <u>Tex-225-F</u> for any sublot or selected at the discretion of the Engineer. The Engineer will use the Contractor's split sample for sublots not sampled by the Engineer.
- 4.9.2.2.2. Informational Hamburg and Overlay Testing. Select one random sublot from Lot 2 or higher for Hamburg and Overlay testing during the first week of production. Obtain and provide the Engineer with approximately 90 lb. of mixture, sampled in accordance with <u>Tex-222-F</u>, in sealed containers, boxes, or bags labeled with the Control-Section-Job (CSJ), mixture type, lot, and sublot number. The Engineer will ship the mixture to the Materials and Tests Division for Hamburg and Overlay testing. Results from these tests will not be used for specification compliance.
- 4.9.2.2.3. Asphalt Binder Sampling. Obtain a 1-qt. (1 gal. for A-R binder) sample of the asphalt binder witness by the Engineer for each lot of mixture produced. The Contractor will notify the Engineer when the sampling will occur. Obtain the sample at approximately the same time the mixture random sample is obtained. Sample from a port located immediately upstream from the mixing drum or pug mill and upstream from the introduction of any additives in accordance with <u>Tex-500-C</u>, Part II. Label the can with the corresponding lot and sublot numbers, producer, producer facility, grade, district, date sampled, and project information including highway and CSJ. The Engineer will retain these samples for one year. The Engineer may also obtain independent samples. If obtaining an independent asphalt binder sample and upon request of the Contractor, the Engineer will split a sample of the asphalt binder with the Contractor.

At least once per project, the Engineer will collect split samples of each binder grade and source used. The Engineer will submit one split sample to the Materials and Tests Division to verify compliance with Item 300, "Asphalts, Oils, and Emulsions" and will retain the other split sample for 1 yr.

4.9.2.3. Membrane Sampling. The Engineer will obtain a 1-qt. sample of the polymer modified emulsion for each lot of mixture produced in accordance with <u>Tex-500-C</u>, Part III. The Engineer will notify the Contractor when the sampling will occur and will witness the collection of the sample. Obtain the sample at approximately the same time the mixture random sample is obtained. Label the can with the corresponding lot and sublot numbers, producer, producer facility, grade, district, date sampled, and project information including highway and CSJ. The Engineer will retain theses samples for two months.

At least once per project, the Engineer will collect split samples of the polymer modified emulsion. The Engineer will submit one split sample to the Materials and Tests Division to verify compliance with Item 300, "Asphalts, Oils, and Emulsions" and will retain the other split sample for two months. The Engineer may test as often as necessary to ensure the residual of the emulsion is greater than or equal to the specification requirement in Item 300, "Asphalts, Oils, and Emulsions."

4.9.2. **Production Testing**. The Contractor and Engineer must perform production tests in accordance with Table 13. The Contractor has the option to verify the Engineer's test results on split samples provided by the Engineer. Determine compliance with operational tolerances in accordance with Table 9 for all sublots.

At any time during production, the Engineer may require the Contractor to verify the following based on quantities used:

- lime content (within ±0.1% of JMF), when PG binder is specified;
- fiber content (within ±0.03% of JMF), when PG binder is specified; and
- CRM content (within ±1.5% of JMF), when A-R binder is specified.

Maintain the in-line measuring device when A-R binder is specified to verify the A-R binder viscosity between

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2,500 and 4,000 centipoise at 350°F unless otherwise approved. Record A-R binder viscosity at least once per hour and provide the Engineer with a daily summary unless otherwise directed.

If the aggregate mineralogy is such that <u>Tex-236-F</u> Part I does not yield reliable results, the Engineer may allow alternate methods for determining the asphalt content and aggregate gradation. The Engineer will require the Contractor to provide evidence that results from <u>Tex-236-F</u>, Part I are not reliable before permitting an alternate method unless otherwise allowed. Use the applicable test procedure as directed if an alternate test method is allowed.

Description	Test Method	Min Contractor Testing Frequency	Min Engineer Testing Frequency
Individual % retained for sieve sized larger than #200	<u>Tex-200-F</u>	1 per sublot	1 per 12 sublots
% passing the #200 sieve			
Laboratory-molded density, %	Tex-207-F, Part VIII	1 per sublot	1 per lot
Asphalt binder content ¹ , %	Tex-236-F, Part I ²	1 per sublot	1 per lot
Drain-down, %	<u>Tex-235-F</u>	1 per sublot	1 per 12 sublots
Boil test ³	<u>Tex-530-C</u>	1 per project	1 per project
Membrane application rate	<u>Tex-247-F</u>	1 per lot	1 per 12 sublots
Moisture content	<u>Tex-212-F</u> , Part II	When directed	1 per project
Cantabro loss, %	<u>Tex-245-F</u>	1 per project (sample only)	1 per project
Overlay test	<u>Tex-248-F</u>	1 per project (sample only) ¹⁰	1 per project ⁴
Hamburg Wheel test	<u>Tex-242-F</u>	1 per project (sample only) ¹⁰	1 per project ⁴
Water flow test ⁵	<u>Tex-246-F</u>	1 per sublot	1 per project
Asphalt binder sampling	<u>Tex-500-C</u> , Part II	1 per lot (sample only) ⁶	1 per project
Membrane sampling and testing	Tex-500-C, Part III	N/A	1 per project
Thermal profile	<u>Tex-244-F</u>	1 per sublot ^{7,8,9}	1 per project ⁸

 Table 13

 Production and Placement Testing Frequency

1. May be obtained from asphalt mass flow meter readouts as determined by the Engineer.

2. Ensure the binder content determination excludes fibers.

3. When shown on the plans.

4. When required according to mixture type and requirements in accordance with Table 8.

5. Only required for PFC mixtures.

6. Obtain samples witness by the Engineer. The Engineer will retain these samples for 1 yr.

7. To be performed in the presence of the Engineer when using the thermal camera, unless otherwise approved.

- 8. Not required when a thermal imaging system is used.
- 9. When using the thermal imaging system, the test report must include the temperature measurements taken in accordance with <u>Tex-244-F</u>.

10. Testing performed by the Materials and Tests Division for informational purposes only.

4.9.3. **Operational Tolerances.** Control the production process within the operational tolerances in accordance with Table 9. Suspend production and placement operations when production or placement test results exceed the tolerances in accordance with Table 9 unless otherwise allowed. The Engineer will allow suspended production to resume when test results or other information indicates the next mixture produced will be within the operational tolerances.

4.9.4. Individual Loads of Hot-Mix. The Engineer can reject individual truckloads of hot-mix. When a load of hotmix is rejected for reasons other than temperature, contamination, or excessive uncoated particles, the Contractor may request that the rejected load be tested. Make this request within 4 hr. of rejection. The Engineer will sample and test the mixture. If test results are within the operational tolerances in accordance with Table 9, payment will be made for the load. If test results are not within operational tolerances, no payment will be made for the load.

#### 4.9.5. Placement Acceptance.

- 4.9.6. **Placement Lot.** A placement lot consists of four placement sublots. A placement sublot consists of the area placed during a production sublot.
- 4.9.7. **Miscellaneous Areas.** Miscellaneous areas include areas that typically involve significant handwork or discontinuous paving operations such as driveways, mailbox turnouts, crossovers, gores, spot level-up areas, and other similar areas. The specified layer thickness is based on the rate of 90 lb. per square yard for each inch of pavement unless another rate is shown on the plans. Miscellaneous areas are not subject to thermal profiles testing.
- 4.9.8. Recovered Asphalt Dynamic Shear Rheometer (DSR). The Engineer may take production samples or cores from suspect areas of the project to determine recovered asphalt properties. Asphalt binders with an aging ratio greater than 3.5 do not meet the requirements for recovered asphalt properties and may be deemed defective when tested and evaluated by the Materials and Tests Division. The aging ratio is the DSR value of the extracted binder divided by the DSR value of the original unaged binder. Obtain DSR values in accordance with AASHTO T 315 at the specified high temperature performance grade of the asphalt. The Engineer may require removal and replacement of the defective material at the Contractor's expense. The asphalt binder will be recovered for testing from production samples or cores in accordance with <u>Tex-211-F</u>.
- 4.9.9. Irregularities. Identify and correct irregularities including segregation, rutting, raveling, flushing, fat spots, mat slippage, irregular color, irregular texture, roller marks, tears, gouges, streaks, uncoated aggregate particles, or broken aggregate particles. The Engineer may also identify irregularities, and in such cases, the Engineer will promptly notify the Contractor. If the Engineer determines that the irregularity will adversely affect pavement performance, the Engineer may require the Contractor to remove and replace (at the Contractor to remove and replace (at the Contractor to remove and replace (at the Contractor's expense) areas of the pavement that contain irregularities. The Engineer may also require the contractor to remove and replace (at the Contractor's expense) areas where the mixture does not bond to the existing pavement.

If irregularities are detected, the Engineer may require the Contractor to immediately suspend operations or may allow the Contractor to continue operations for no more than one day while the Contractor is taking appropriate corrective action.

- 4.9.10. **Exempt Production.** When the anticipated daily production is less than 100 ton, all QC and QA sampling and testing are waived. The Engineer may deem the mixture as exempt production for the following conditions:
  - anticipated daily production is more than 100 ton but less than 250 ton;
  - total production for the project is less than 2,500 ton;
  - when mutually agreed between the Engineer and the Contractor; or
  - when shown on the plans.

For exempt production, the Contractor is relieved of all production and placement sampling and testing requirements. All other specification requirements apply, and the Engineer will perform acceptance tests for production and placement in accordance with Table 13. For exempt production:

- produce, haul, place, and compact the mixture as directed by the Engineer; and
- control mixture production to yield a laboratory-molded density that is within ±1.0% of the target density as tested by the Engineer.

4.9.11. Ride Quality. Measure ride quality in accordance with Item 585, "Ride Quality for Pavement Surfaces," unless otherwise shown on the plans.

#### 5. MEASUREMENT

- 5.1. **PFC Hot-Mix Asphalt.** Permeable friction course (PFC) hot-mix will be measured by the ton of composite mixture, which includes asphalt, aggregate, and additives. Measure the weight on scales in accordance with Item 520, "Weighing and Measuring Equipment."
- 5.2. **TBFC Hot-Mix Asphalt**. Thin bonded friction course (TBFC) hot-mix will be measured by the ton of composite mixture, which includes asphalt, aggregate, and additives. Measure the weight on scales in accordance with Item 520, "Weighing and Measuring Equipment."
- 5.3. **Membrane.** Membrane material will be measured by volume. Membrane material will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume in gallons from the distributor's calibrated strap stick. The Engineer will witness all operations for volume determination. All membrane will be measured by the gallon applied, in the accepted membrane.

#### 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under Section 3082.5.1., "PFC Hot-Mix Asphalt," will be paid for at the unit bid price for "Permeable friction course" of the mixture type, SAC, and binder specified. These prices are full compensation for surface preparation, removing pavement marking and markers, materials, placement, equipment, labor, tools, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under Section 3082.5.2., "TBFC Hot-Mix Asphalt," will be paid for at the unit bid price for "Thin bonded friction course" of the mixture type, SAC, and binder specified. These prices are full compensation for surface preparation, removing pavement marking and markers, materials, placement, equipment, labor, tools, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under Section 3082.5.3., "Membrane," will be paid for at the unit bid price for "Membrane" of the membrane material provided. These prices are full compensation for materials, placement, equipment, labor, tools, and incidentals.

Trial batches will not be paid for unless they are included in pavement work approved by the Department.

Payment adjustment for ride quality will be determined in accordance with Item 585, "Ride Quality for Pavement Surfaces."

# **Special Specification 3084**

## Bonding Course

#### 1. DESCRIPTION

Construct a bonding course where improved bonding is needed using a Tracking-Resistant Asphalt Interlayer (TRAIL) or a Spray Applied Underseal Membrane, applied before the placement of a new hot-mix asphalt concrete pavement.

#### 2. MATERIALS

- 2.1. Furnish the materials for one of the following two options:
- 2.1.1. **TRAIL.** Furnish asphalt material described as "tack" for typical use in the TRAIL Material Producer List. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 2.1.2. **Spray Applied Underseal Membrane.** Furnish asphalt material meeting the requirements of Special Specification 3002, "Spray Applied Underseal Membrane." Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 2.2. Furnish the material for applying tack coat to all miscellaneous contact surfaces when approved by the Engineer:
- 2.2.1. **Miscellaneous Tack.** FurnishTRAIL asphalt, CSS-1H, SS-1H, or a PG binder with a minimum hightemperature of PG 58 for tack coat binder in accordance with Item 300, "Asphalts, Oils, and Emulsions." Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 2.3. **Sampling**. The Engineer will witness the collection of at least one sample of each asphalt binder per project in accordance with Tex-500-C, Part III, and test it to verify compliance with Item 300, "Asphalts, Oils, and Emulsions" or Special Specification 3002, "Spray Applied Underseal Membrane."

#### 3. EQUIPMENT

- 3.1. TRAIL. Provide the equipment recommended by the producer.
- 3.2. Spray Applied Underseal Membrane. Provide in accordance with Special Specification 3002, "Spray Applied Underseal Membrane."

#### 4. CONSTRUCTION

- 4.1. **Preparation.** Remove existing raised pavement markers. Repair any damage incurred by removal as directed. Remove dirt, dust, or other harmful material before sealing. When shown on the plans, remove vegetation and blade pavement edges. When approved by the Engineer, apply a thin, uniform coating of Miscellaneous Tack to all miscellaneous contact surfaces such as curbs, structures, and manholes. Prevent splattering of the tack coat when placed adjacent to curb, gutter, and structures.
- 4.2. **Test Strips.** When required by the Engineer, perform a test strip of TRAIL at a location on or near the project as directed. Allow the strip to cure for a maximum of 30 min. Drive over the test strip with equipment used during laid-down construction to simulate the effect of paving equipment. There should be no evidence of tracking or picking up of the TRAIL material on the wheels of the equipment.
- 4.3. **TRAIL**. Perform the following construction methods when applying a TRAIL for a bonding course:
- 4.3.1. **Placement.** Uniformly apply the TRAIL material to all areas where mix will be placed, including joints, at the rate shown on the plans or as directed, within 15°F of the approved temperature, and not above the maximum allowable temperature. Unless otherwise directed, uniformly apply the TRAIL material at a minimum rate specified on the plans. The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions.
- 4.4. **Spray Applied Underseal Membrane.** Place in accordance with Special Specification 3002, "Spray Applied Underseal Membrane."
- 4.4.1. **Placement.** Do not allow any loose mixture onto the prepared surface before application of the membrane. Unless otherwise directed, uniformly apply the membrane to all areas where mix will be placed, including joints, at the rate shown on the plans. Unless otherwise directed, uniformly apply the membrane at the minimum rate specified on the plans. The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions.
- 4.5. Informational Shear Test. Obtain one set of full depth core specimens per project in accordance with Tex-249-F within one working day of the time the lot placement is completed. The Engineer will select the core locations. Provide the cores to the Engineer in a container labeled with the Control-Section-Job (CSJ) and lot number. The district will determine the shear bond strength between the two bonded pavement layers in accordance with Tex-249-F. Results from these tests will not be used for specification compliance.
- 4.6. **Quality Control.** Stop application if it is not uniform due to streaking, ridging, pooling, or flowing off the roadway surface. Verify equipment condition, operating procedures, application temperature, and material properties. Determine and correct the cause of non-uniform application.

The Engineer may perform independent tests to confirm contractor compliance and may require testing differences or failing results to be resolved before resuming production.

The Engineer may stop the application and require construction of test strips at the Contractor's expense if any of the following occurs:

- Non-uniformity of application continues after corrective action;
- Evidence of tracking or picking up of the TRAIL;
- In 3 consecutive shots, application rate differs by more than 0.02 gal. per square yard from the rate directed; or
- Any shot differs by more than 0.04 gal. per square yard from the rate directed.

The Engineer will approve the test strip location. The Engineer may require additional test strips until surface treatment application meets specification requirements.

### 5. MEASUREMENT

5.1. **Volume**. The asphalt material, including all components, will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All asphalt material, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine the asphalt volume used and application rate if the device is accurate to within 1.5% of the strapped volume.

### 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit bid price for "Bonding Course." These prices are full compensation

for all materials, Miscellaneous Tack used for miscellaneous contact surfaces, equipment, labor, tools, and incidentals necessary to complete the work.

# Special Specification 3085 Underseal Course

### 1. DESCRIPTION

Construct an underseal course where sealing of the underlying surface is needed using a Tracking-Resistant Asphalt Interlayer (TRAIL), a Spray Applied Underseal Membrane, or a single layer of Seal Coat, applied before the placement of a new hot-mix asphalt concrete pavement.

### 2. MATERIALS

- 2.1. Furnish the materials for one of the following three options:
- 2.1.1. TRAIL. Furnish asphalt material described as "seal" for typical use in the TRAIL Material Producer List.
- 2.1.2. **Spray Applied Underseal Membrane.** Furnish asphalt material meeting the requirements of Special Specification 3002, "Spray Applied Underseal Membrane." Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 2.1.3. **Seal Coat.** Furnish asphalt and aggregate materials meeting the requirements of Item 316, "Seal Coat." Use a polymer modified asphalt or emulsion and aggregate as shown on the plans. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 2.2. Furnish the material for applying tack coat to all miscellaneous contact surfaces when approved by the Engineer:
- 2.2.1. **Miscellaneous Tack.** Furnish TRAIL asphalt, CSS-1H, SS-1H, or a PG binder with a minimum hightemperature of PG 58 for tack coat binder in accordance with Item 300, "Asphalts, Oils, and Emulsions." Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 2.3. **Sampling.** The Engineer will witness the collection of at least one sample of each asphalt binder per project in accordance with Tex-500-C, Part III, and test it to verify compliance with Item 300, "Asphalts, Oils, and Emulsions" or Special Specification 3002, "Spray Applied Underseal Membrane."

The Engineer will sample and test the type and grade of the aggregate as shown on the plans at the frequency listed in the Department's *Guide Schedule of Sampling and Testing* in accordance with Item 302, "Aggregates for Surface Treatments."

### 3. EQUIPMENT

- 3.1. **TRAIL.** Provide the equipment recommend by the producer.
- 3.2. **Spray Applied Underseal Membrane.** Provide in accordance with Special Specification 3002, "Spray Applied Underseal Membrane."
- 3.3. Seal Coat. Provide in accordance with Item 316, "Seal Coat."

### 4. CONSTRUCTION

4.1. **Preparation.** Remove existing raised pavement markers. Repair any damage incurred by removal as directed. Remove dirt, dust, or other harmful material before sealing. When shown on the plans, remove

vegetation and blade pavement edges. When approved by the Engineer, apply a thin, uniform coating of Miscellaneous Tack to all miscellaneous contact surfaces such as curbs, structures, and manholes. Prevent splattering of the tack coat when placed adjacent to curb, gutter, and structures.

- 4.2. TRAIL. Perform the following construction methods when applying a TRAIL for an underseal course:
- 4.2.1. **Placement.** Uniformly apply the TRAIL material to all areas where mix will be placed, including joints, at the rate shown on the plans or as directed, within 15°F of the approved temperature, and not above the maximum allowable temperature. Unless otherwise directed, uniformly apply the TRAIL material at the minimum rate specified on the plans. The Engineer may adjust the application rate taking into consideration the existing pavement surface conditions.
- 4.3. **Spray Applied Underseal Membrane.** Place in accordance with Special Specification 3002, "Spray Applied Underseal Membrane."
- 4.3.1. **Placement.** Do not allow any loose mixture onto the prepared surface before application of the membrane. Unless otherwise directed, uniformly apply the membrane to all areas where mix will be placed, including joints, at the rate shown on the plans. Unless otherwise directed, uniformly apply the membrane at the minimum rate specified on the plans. The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions.
- 4.4. Seal Coat. Place in accordance with Item 316, "Seal Coat."
- 4.4.1. **Placement.** Unless otherwise directed, apply the asphalt material and aggregate at the minimum rate shown on the plans. The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions.
- 4.5. Informational Shear Test. Obtain one set of full depth core specimens per project in accordance with Tex-249-F within one working day of the time the lot placement is completed. The Engineer will select the core locations. Provide the cores to the Engineer in a container labeled with the Control-Section-Job (CSJ) and lot number. The district will determine the shear bond strength between the two bonded pavement layers in accordance with Tex-249-F. Results from these tests will not be used for specification compliance.
- 4.6. **Nonuniform Application.** Stop application if it is not uniform due to streaking, ridging, pooling, or flowing off the roadway surface. Verify equipment condition, operating procedures, application temperature, and material properties. Determine and correct the cause of non-uniform application.
- 4.7. **Test Strips.** The Engineer may perform independent tests to confirm contractor compliance and may require testing differences or failing results to be resolved before resuming production.

The Engineer may stop the application and require construction of test strips at the Contractor's expense if any of the following occurs:

- Non-uniformity of application continues after corrective action;
- Evidence of tracking or picking up of the TRAIL;
- In 3 consecutive shots, application rate differs by more than 0.03 gal. per square yard from the rate directed; or
- Any shot differs by more than 0.05 gal. per square yard from the rate directed.

The Engineer will approve the test strip location. The Engineer may require additional test strips until surface treatment application meets specification requirements.

### 5. MEASUREMENT

5.1. Asphalt Material.

5.1.1. **Volume**. The asphalt material, including all components, will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All asphalt material, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine the asphalt volume used and application rate if the device is accurate to within 1.5% of the strapped volume.

- 5.2. **Aggregate.** The work performed, materials furnished, equipment, labor, tools, and incidentals will not be paid for directly but will be subsidiary.
- 5.3. **Quantity Adjustments.** Quantity based price adjustment factors are not applicable to compensate for over and under runs resulting from the method chosen.

### 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Underseal Course." These prices are full compensation for surface preparation; furnishing, preparing, hauling, Miscellaneous Tack used for all miscellaneous contact surfaces, and placing materials; removing existing pavement markers and excess aggregate; rolling; cleaning up stockpiles; and equipment, labor, tools, and incidentals.

## Special Specification 6001 Portable Changeable Message Sign



### 1. DESCRIPTION

Furnish, operate, and maintain portable trailer mounted changeable message sign (PCMS) units.

### 2. MATERIALS

Furnish new or used material in accordance with the requirements of this Item and the details shown on the plans. Provide a self-contained PCMS unit with the following:

- Sign controller
- Changeable Message Sign
- Trailer
- Power source

Paint the exterior surfaces of the power supply housing, supports, trailer, and sign with Federal Orange No. 22246 or Federal Yellow No. 13538 of Federal Standard 595C, except paint the sign face assembly flat black.

- 2.1. **Sign Controller**. Provide a controller with permanent storage of a minimum of 75 pre-programmed messages. Provide an external input device for random programming and storage of a minimum of 75 additional messages. Provide a controller capable of displaying up to 3 messages sequentially. Provide a controller with adjustable display rates. Enclose sign controller equipment in a lockable enclosure.
- 2.2. **Changeable Message Sign**. Provide a sign capable of being elevated to at least 7 ft. above the roadway surface from the bottom of the sign. Provide a sign capable of being rotated 360° and secured against movement in any position.

Provide a sign with 3 separate lines of text and 8 characters per line minimum. Provide a minimum 18 in. character height. Provide a 5 × 7 character pixel matrix. Provide a message legibility distance of 600 ft. for nighttime conditions and 800 ft. for normal daylight conditions. Provide for manual and automatic dimming light sources.

The following are descriptions for 3 screen types of PCMS:

- Character Modular Matrix. This screen type comprises of character blocks.
- **Continuous Line Matrix**. This screen type uses proportionally spaced fonts for each line of text.
- Full Matrix. This screen type uses proportionally spaced fonts, varies the height of characters, and displays simple graphics on the entire sign.
- 2.3. **Trailer**. Provide a 2 wheel trailer with square top fenders, 4 leveling jacks, and trailer lights. Do not exceed an overall trailer width of 96 in. Shock mount the electronics and sign assembly.
- 2.4. **Power Source**. Provide a diesel generator, solar powered power source, or both. Provide a backup power source as necessary.
- 2.5. **Cellular Telephone**. When shown on the plans, provide a cellular telephone connection to communicate with the PCMS unit remotely.

### 3. CONSTRUCTION

Place or relocate PCMS units as shown on the plans or as directed. The plans will show the number of PCMS units needed, for how many days, and for which construction phases.

Maintain the PCMS units in good working condition. Repair damaged or malfunctioning PCMS units as soon as possible. PCMS units will remain the property of the Contractor.

### 4. MEASUREMENT

This Item will be measured by each PCMS or by the day used. All PCMS units must be set up on a work area and operational before a calendar day can be considered measurable. When measurement by the day is specified, a day will be measured for each PCMS set up and operational on the worksite.

### 5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Portable Changeable Message Sign." This price is full compensation for PCMS units; set up; relocating; removing; replacement parts; batteries (when required); fuel, oil, and oil filters (when required); cellular telephone charges (when required); software; and equipment, materials, tools, labor, and incidentals.

## **Special Specification 6024**

## High Performance Pavement Markings with Retroreflective Requirements



### 1. DESCRIPTION

Furnish and place reflectorized pavement markings of the types, colors, sizes, widths, and thickness shown on the plans.

### 2. MATERIALS

- 2.1. **Type I Marking Materials**. Furnish in accordance with Departmental Material Specification DMS-8220, "Hot Applied Thermoplastic."
- 2.2. **Type II Marking Materials**. Furnish in accordance with Departmental Material Specification DMS-8200, "Traffic Paint."
- 2.3. Glass Traffic Beads. Furnish drop-on glass beads to meet the desired performance requirements.
- 2.4. **Labeling**. Use clearly marked containers that indicate color, mass, material type, manufacturer, and batch number.

### 3. EQUIPMENT

3.2.

- 3.1. **General Requirements**. Use pavement marking application equipment that:
  - is maintained in satisfactory condition;
  - meets or exceeds the requirements of the National Board of Fire Underwriters and Texas Railroad Commission for this application;
  - uses an automatic bead dispenser attached to the pavement marking equipment;
  - can provide continuous mixing and agitation of the pavement marking material; and
  - includes a hand-held thermometer capable of measuring the temperature of the marking material when applying Type I material.

Use a mobile retroreflectometer approved by the Construction Division and certified by the Texas Transportation Institute Mobile Retroreflectometer Certification Program.

Use a portable retroreflectometer that:

- uses 30-meter geometry and meets the requirements described in ASTM E1710;
- has either an internal global positioning system (GPS) or the ability to be linked with an external GPS with a minimum accuracy rating of 16.4 ft. in accordance with the circular error probability (CEP) method (CEP is the radius of the circle with its origin at a known position that encompasses 50% of the readings returned from the GPS instrument);
- can record and print the GPS location and retroreflectivity reading for each location where readings are taken.

Material Placement Requirements. Use equipment that can place:

 a minimum of 40,000 ft. of 4-in. solid or broken markings per day at the specified thickness over five consecutive days;

- linear markings up to 8 in. wide in a single pass;
- markings other than solid or broken lines at an approved rate;
- a center-line and no-passing barrier-line configuration consisting of one broken line with two solid lines at the same time to the alignment, spacing, and thickness shown on the plans;
- white lines from both sides;
- lines with clean edges, uniform cross-section and thickness, and reasonably square ends;
- skip lines between 10 and 10 1/2 ft., an approximate stripe-to-gap ratio of one to three, and a stripe-gap cycle between 39 1/2 ft. and 40 1/2 ft.;
- beads uniformly and almost instantly upon the marking as the marking is being applied;
- beads uniformly during the application of two adjacent lines. Each line must have an equivalent bead yield rate and embedment; and
- different bead types with each bead type dispensed from separate bead applicators, when applying a double-drop of beads.

### 4. CONSTRUCTION

Place markings before opening to traffic unless short-term or work zone markings are allowed.

4.1. General. Obtain approval for the sequence of work and estimated daily production.

Place markings on roadways already open to traffic with minimum interference to the operations of that roadway. Use traffic control as shown on the plans or as approved. Protect all markings placed under open-traffic conditions from traffic damage and disfigurement.

Establish guides to mark the lateral location of pavement markings as shown on the plans or as directed and have guide locations verified. Use material for guides that will not leave a permanent mark on the roadway.

Provide markings with uniform and distinctive characteristics when observed in accordance with Tex-828-B. When minimum retroreflectivity requirements are specified, these values will be used to measure retroreflectivity performance.

Apply markings on pavement that is completely dry and passes the following tests:

Place a sample of Type I marking material on a piece of tarpaper placed on the pavement. Allow the material to cool to ambient temperature and then observe the underside of the tarpaper in contact with the pavement. Pavement is dry if there is no condensation on the tarpaper.

Apply markings:

- using dimensions, colors and at locations shown in the plans;
- in proper alignment with the guides without deviating from the alignment more than 1 in. per 200 ft. of roadway or more than 2 in. maximum;
- free of blisters and with no more than 5%, by area, holes or voids;
- with uniform cross section and thickness;
- with clean and reasonably square ends; and
- using personnel skilled and experienced with installation of pavement markings.

Remove all applied markings that are not in alignment or sequence as stated in the plans or as stated in the specifications at your own expense in accordance with Item 677.

4.2. **Surface Preparation**. Unless otherwise shown on the plans, prepare surfaces in accordance with this section.

- 4.2.1. Cleaning for New Asphalt Surfaces and Retracing of All Surfaces. For new asphalt surfaces (less than 3 years old) and retracing of all surfaces, air-blast or broom the pavement surface to remove loose material, unless otherwise shown on the plans. A sealer for Type I markings is not required unless otherwise shown on the plans.
- 4.2.2. **Cleaning for Old Asphalt and Concrete Surfaces (Excludes Retracing)**. For old asphalt surfaces (more than 3 years old) and all concrete surfaces, clean in accordance with Item 678, "Pavement Surface Preparation for Markings," to remove curing membrane, dirt, grease, loose and flaking existing construction markings, and other forms of contamination.
- 4.2.3. Sealer for Type I Markings. For asphalt surfaces more than 3 years old or for concrete, apply a pavement sealer before placing Type I markings on locations that do not have existing markings, unless otherwise approved. The pavement sealer may be either a Type II marking or an acrylic or epoxy sealer unless otherwise shown on the plans. Follow the manufacturer's directions for application of acrylic or epoxy sealers. When the sealer becomes dirty after placement, clean by washing or in accordance with Section 4.B.1, "Cleaning for New Asphalt Surfaces and Retracing of All Surfaces." Place the sealer in the same configuration and color (unless clear) as the Type I markings unless otherwise shown on the plans.
- 4.3. **Application**. Apply markings on surfaces with a minimum surface temperature of 50°F, when measured in accordance with Tex-829-B.

Apply markings during good weather unless otherwise directed. If markings are placed at Contractor option when inclement weather is impending and the markings are damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the markings if required.

Apply within the temperature limits recommended by the material manufacturer. Note: if during a spray application, operations cease for 5 min. or longer, flush the spray head by spraying marking material into a pan or similar container until the material being applied is at the proper temperature for application.

Apply on clean, dry pavements (meeting moisture test described above).

Apply Type I markings with a minimum thickness of:

- 0.100 in. (100 mils) for new surface treatments involving Item 316 or Item 318;
- 0.060 in. (60 mils) for retraced pavement markings; or
- 0.090 in. (90 mils) for all other Type I markings.

The maximum thickness for Type I markings is 0.180 in. (180 mils). Measure the thickness of markings in accordance with Tex-854-B, Part I.

- 4.4. **Retroreflective Requirements**. Meet the following minimum retroreflectivity values for edge line markings, center-line/no passing barrier-line, and lane lines when measured any time after 30 days but not later than 40 days after application:
  - White markings: 400 millicandelas per square meter per lux (mcd/m2lx)
  - Yellow markings: 250 mcd/m2lx
- 4.5. Retroreflectivity Measurements. Use a mobile retroreflectometer unless otherwise shown on the plans.
- 4.5.1. **Mobile Reflectometer Measurements**. Provide mobile measurements averages for every 0.1 miles unless otherwise specified or approved by the Engineer. Take measurements on each section of roadway for each series of markings (i.e. edge-line, center skip line, each line of a double line, etc.) and for each direction of traffic flow. For centerlines on two-way roadways measure each line in both directions (i.e. measure both double solid lines in both directions and measure all centerskip lines in both directions). Furnish measurements in compliance with Special Specification, "Mobile Retroreflectivity Data Collection for Pavement Markings," unless otherwise approved by the Engineer. The Engineer may require an occasional field comparison check with a portable retroreflectometer meeting the requirements listed above to ensure

accuracy. Use all equipment in accordance with the manufacturer's recommendations and directions. Inform the Engineer at least 24 hours in advance of taking any measurements.

A marking meets the retroreflectivity requirements if;

- the combined average retroreflectivity for a one-mile segment meets the minimum values specified in 8999.4.D Retroreflective Requirements, and
- •no more than 30 percent of the values are below the minimum level within the one mile segment.

The Engineer may accept one-mile segments whose average falls below the minimum specified but no more than 20 percent of the values within that mile segment are below the minimum level such that if the less-than-minimum values were discarded the segment average would subsequently pass the specified minimum values.

The one mile segment will start from the beginning of the data collection and end after a mile worth of measurements have been taken; each subsequent mile of measurements will be a new segment. Centerlines with two stripes (either solid or broken) will result in 2 miles of data for each mile segment. Each centerline stripe shall be tested for compliance as a stand-alone stripe.

If the marking fails these retroreflectivity requirements, restripe at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking. Take measurements every 0.1 miles after a minimum of 10 days after this second application within that mile segment for that series of markings.

If the markings do not meet minimum retroreflectivity after 10 days after this second application, the Engineer may require removal of all existing markings, a new application as initially specified, and a repeat of the application process until minimum retroreflectivity requirements are met.

4.5.2. **Portable Reflectometer Measurements**. When using a portable reflectometer, take a minimum of 20 measurements for each 1 mile section of roadway for each series of markings (i.e. edge-line, center skip line, each line of a double line, etc.) and for each direction of traffic flow. For centerlines on two-way roadways measure each line in both directions (i.e. measure both double solid lines in both directions and measure all centerskip lines in both directions). The spacing between each measurement must be at least 100 ft. The Engineer may decrease the mileage frequency for measurements if the previous measurements provide satisfactory results. The Engineer may require the original number of measurements if concerns arise.

If the average of these measurements fails, restripe once at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material. Take a minimum of 10 more measurements after 10 days of this second application within that mile segment for that series of markings. If the average of these measurements fall below the minimum retroreflectivity requirements, restripe again at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material. If the markings do not meet minimum retroreflectivity after this third application, the Engineer may require removal of all existing markings, a new application as initially specified, and a repeat of the application process until minimum retroreflectivity requirements are met.

- 4.5.3. **Traffic Control**. Provide traffic control, as required, when taking retroreflectivity measurements after marking application. On low volume roadways (as defined on the plans), refer to the figure, "Temporary Road Closure" in Part VI of the Texas Manual on Uniform Traffic Control Devices for the minimum traffic control requirements. For all other roadways, the minimum traffic control requirements will be as shown on the standard plans TCP (3-1) and TCP (3-2). The lead vehicle will not be required on divided highways. The traffic control plan and traffic control devices must meet the requirements listed in Item 502. Time restrictions that apply during striping application will also apply during the retroreflectivity inspections except when using the mobile retroreflectometer unless otherwise shown on the plans or approved.
- 4.6. **Performance Period**. All markings must meet the requirements of this Specification for a minimum of 30 calendar days after installation. Remove all pavement markings that fail to meet the requirements of this Specification and replace at the Contractor's expense unless otherwise directed. Replace all failing markings

within 30 days of notification. All replacement markings must also meet all requirements of this Specification for a minimum of 30 calendar days after installation.

### 5. MEASUREMENT

This Item will be measured by the linear foot. Double stripes will be measured separately.

This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal unless modified by Article 9.2, "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

Acrylic sealer, epoxy sealer, or Type II markings, when used as a sealer for Type I markings, will be measured as Pavement Sealer.

### 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "High Performance Pavement Markings with Retroreflective Requirements" of the types, colors, sizes, widths, and thickness specified or "Pavement Sealer" of the size specified. This price will be full compensation for furnishing all materials; application of pavement markings; retroreflective readings; traffic control; and other equipment, labor, tools, and incidentals.

Surface Preparation, when shown on the plans, will be paid for under Item 678.

Final work-zone pavement markings (Type II), which can be used as a sealer for Type I markings, will be paid for under this Item.

## Special Specification 6054 Spread Spectrum Radios for Traffic Signals



### 1. DESCRIPTION

Furnish and install spread spectrum radios.

### 2. MATERIALS

Supply complete manufacturer specifications for radio, antennas, cables, connectors, power supply, mounting hardware, and lightning surge protector, including the exact gain of the antenna.

### 3. SPREAD SPECTRUM RADIO

Furnish spread spectrum radios with the following operating minimum characteristics:

Radio Characteristics		
Radio Parameters	Radio Requirements	
FREQUENCY	902 - 928 MHz	
RANGE	15 Miles line of sight	
REPEAT CAPABILITIES	Store and Forward Repeater Capabilities	
POWER	1.0 Watt Transmitting Power	
ENVIRONMENT	Temperature -22°F to 140°F	
FCC APPROVAL	No License Requirements	
	Type acceptance under FCC Part 15.247	
DATA CHARACTERISTICS	Half or Full Duplex Operation	
	RS232C interface	
	Selectable1,200 thru 19,200 bps	
REGULATED POWER SUPPLY	Voltage 12 DC	
	Amperage 3 Amp	
	Operating Temp -22°F to 140°F	

Table1 Radio Characteristics

Install radios as shown on the plans or as directed.

Supply radios with diagnostic software capable of testing the link between the master radio and the remote radios. Provide software capable of detecting channels which are not adequate for the transmission of data and allow for the exclusion of these frequencies in the selection of frequencies to be scanned.

### RADIO ANTENNA

4.

Furnish radio antennas with the following minimum characteristics:

Antenna Characteristics		
Antenna Parameters	Antenna Requirements	
REMOTE SITE	Unidirectional (Yagi), Minimum 9 dB gain	
	(dB reference to half wave dipole)	
MASTER SITE	Omni-directional, Minimum 6 dB gain	
	(dB reference to half wave dipole)	
RANGE	15 Miles	
IMPEDANCE	50 Ohm	
WIND RATING	125 miles per hour	
CONNECTORS	Type "N" Female	
CONNECTORS	i ype "N" Female	

Table2

Mount the antenna on a traffic signal pole, an illumination pole, or a separate steel pole as directed. Ground the antenna to the metal support. Do not use a wood pole or support.

#### CABLE

5.

Furnish low loss coaxial cable with the following minimum characteristics:

Coaxial Cable Characteristics		
Cable Parameters	Cable Requirements	
NOMINAL IMPEDANCE	50 Ohm	
MAX ATTENUATION	4.2 dB/100 ft. at 900 MHz	

Table3

Furnish heliax type cable for runs over 100 ft. in length. Furnish cable connectors with a type "N" male connector. Install cable connectors in accordance with manufacturer's recommendations. Install cable as shown on the plans or as directed.

Furnish a coaxial protector (PolyPhaser IS-50NX-C2, Andrew APG-BNFNF- 090, Huber Suhner 3400-41-0048, or equivalent). Mount coaxial protector adjacent to and bonded to the cabinet ground bus.

### 6. TESTING, TRAINING, AND WARRANTY

Provide a factory certified representative for installation and testing of the equipment. Conduct a test site survey prior to the installation of the equipment. The Department reserves the right to conduct their own site survey as needed.

When required, provide up to 2 days of training to Department personnel in the operation, setup, and maintenance of the spread spectrum radio system. Provide instruction and materials for a maximum of 20 persons and at a location selected by the Department. Provide instruction personnel certified by the manufacturer. The User's Guide is not an adequate substitute for practical classroom training and formal certification.

Provide equipment with no less than 95% of the manufacturer's standard warranty remaining when equipment invoices are submitted for payment. Any equipment with less than 95% of its warranty remaining will not be accepted.

Provide updates of the spread spectrum radio software free of charge during the warranty period, including the update to NTCIP compliancy.

### 7. MEASUREMENT

This Item will be measured by each spread spectrum radio, antenna and by the linear foot of cable furnished and installed.

### PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Spread Spectrum Radio," "Antenna" of the type specified, "Coaxial Cable," and "Heliax Cable." The price is full compensation for furnishing, assembling, and installing the spread spectrum radios, antennas, and cable; for mounting attachments; and for testing, labor, tools, equipment, and incidentals.

## **Special Specification 6185**

# Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)



### 1. DESCRIPTION

Furnish, operate, maintain and remove upon completion of work, Truck Mounted Attenuator (TMA) or Trailer Attenuator (TA).

### 2. MATERIALS

Furnish, operate and maintain new or used TMAs or TAs. Assure used attenuators are in good working condition and are approved for use. A list of approved TMA/TA units can be found in the Department's Compliant Work Zone Traffic Control Devices List. The host vehicle for the TMA and TA must weigh a minimum of 19,000 lbs. Host vehicles may be ballasted to achieve the required weight. Any weight added to the host vehicle must be properly attached or contained within it so that it does not present a hazard and that proper energy dissipation occurs if the attenuator is impacted from behind by a large truck. The weight of a TA will not be considered in the weight of the host vehicle but the weight of a TMA may be included in the weight of the host vehicle. Upon request, provide either a manufacturer's curb weight or a certified scales weight ticket to the Engineer.

### 3. CONSTRUCTION

Place or relocate TMA/TAs as shown on the plans or as directed. The plans will show the number of TMA/TAs needed, for how many days or hours, and for which construction phases.

Maintain the TMA/TAs in good working condition. Replace damaged TMA/TAs as soon as possible.

### 4. MEASUREMENT

- 4.1. **Truck Mounted Attenuator/Trailer Attenuator (Stationary).** This Item will be measured by the each or by the day. TMA/TAs must be set up in a work area and operational before a calendar day can be considered measurable. When measurement by the day is specified, a day will be measured for each TMA/TA set up and operational on the worksite.
- 4.2. **Truck Mounted Attenuator/Trailer Attenuator (Mobile Operation).** This Item will be measured by the hour. The time begins once the TMA/TA is ready for operation at the predetermined site and stops when notified by the Engineer. A minimum of 4 hr. will be paid each day for each operating TMA/TA used in a mobile operation.

### 5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Truck Mounted Attenuators/Trailer Attenuators (Stationary)," or "Truck Mounted Attenuators/Trailer Attenuators (Mobile Operation)." This price is full compensation for furnishing TMA/TA: set up; relocating; removing; operating; fuel; and equipment, materials, tools, labor, and incidentals.

## Special Specification 6292

# Radar Vehicle Detection System for Signalized Intersection Control



### 1. DESCRIPTION

Furnish, install, relocate, or remove radar vehicle detection systems (RVDS) of the specified devices at signalized intersections to provide the required zones of detection as shown on the plans, or as directed.

### 2. MATERIALS

2.1. **General**. Except as allowed for relocation of RVDS equipment, ensure all equipment and component parts are new in accordance with Section 1.0 through Section 6.0 of Division Specification <u>TO-8000</u>, "Radar Vehicle Detection System." and in an operable condition at time of delivery and installation.

The Traffic Management Section of the Traffic Operations Division (TRF-TM) maintains the Prequalified Products Master List (QPL) of all RVDS conforming to the requirements of this Specification. New materials appearing on the <u>QPL for TO-8000</u> require no further sampling and testing before use unless deemed necessary by the Project Engineer or TRF-TM. Provide prequalified RVDSs from the Division's QPL.

Ensure all RVDS serving the same detection purpose within the project are from the same manufacturer. RVDS devices are classified by their functional requirements. The functional requirements are for radar presence detection devices (RPDD) and radar advance detection devices (RADD). The RVDS system classifications are RVDS (RPDD Only), RVDS (RADD Only)" and "RVDS (RPDD and RADD).

Provide each RVDS sensor with a mounting bracket designed to mount directly to a pole, mast-arm, or other structure. Ensure bracket is designed such that the sensor can be tilted both vertically and horizontally for alignment and then locked into place after proper alignment is achieved. All hardware must be designed to support the load of the RVDS sensor and mounting bracket.

2.2. Configuration. Ensure the RVDS will provide vehicle detection as required on the plans, or as directed.

Ensure the RVDS does not require tuning or recalibration to maintain performance once initial calibration and configuration is complete. RVDS must not require cleaning or adjustment to maintain performance.

RVDS must self-recover from power failure once power is restored.

- 2.3. **Cabling**. Provide appropriate length of all cables necessary to complete the work (of making the RVDS fully operational) at each installation site.
- 2.4. **Software**. Ensure the RVDS manufacturer includes all software required to configure and monitor operation of RVDS field equipment locally and remotely. RVDS software must be a stable production release.

Software must allow the user to configure, operate, exercise, diagnose, and read current status of all RVDS features and functions using a laptop computer.

Software must include the ability to save a local copy of RVDS field device configurations, and load saved configurations to RVDS field devices.

Ensure all licenses required for operation and use of software are included at no additional cost.

Software updates must be provided at no additional cost during the warranty period.

2.5. Electrical. All conductors supplying the equipment must meet National Electrical Code® (NEC) requirements.

Ensure equipment is designed to protect personnel from exposure to high voltage during installation, operation, and maintenance.

2.6. **Mechanical**. Ensure that all parts are fabricated from corrosion resistant materials, such as plastic, stainless steel, aluminum, or brass.

Ensure that all screws, nuts, and locking washers are corrosion resistant. Do not use self-tapping screws.

Ensure equipment is clearly and permanently marked with manufacturer name or trademark, part number, date of manufacture, and serial number.

Ensure RVDS is modular in design for ease of field replacement and maintenance. Provide a sensor that will minimize weight and wind loading when mounted on a traffic signal pole or mast arm.

All printed circuit boards (PCB) must have conformal coating.

2.7. **Environmental.** RVDS sensor must be able to withstand the maximum wind load based on the Department's basic wind velocity zone map standard without any damage or loosening from structure.

The RVDS enclosure must conform to criteria set forth in the NEMA 250 Standard for Type 4X enclosures.

The RVDS must meet all NEMA TS2 environmental requirements for temperature, humidity, transients, vibration, and shock.

2.8. Connectors and Harnesses. Ensure all conductors are properly color coded and identified.

Ensure cable connector design prohibits improper connections. Cable connector pins are plated to improve conductivity and resist corrosion.

Connections for both data and power must be made to the RVDS sensor using waterproof, quick disconnect connectors. Pigtails from the sensor to a waterproof junction box (NEMA 4) or an approved waterproof connector must be allowed for splicing. The pigtails must not be shorter than 3 ft. unless otherwise shown on the plans.

### 3. CONSTRUCTION

3.1. **System Installation**. Install RVDS system devices according to the manufacturer's recommendations to provide properly functioning detection as required. This will include the installation of sensors on signal poles or mast-arms, controller interface modules, power and surge protection panels, cabling and all associated equipment, software, serial and Ethernet communication ports, connectors and hardware required to setup and operate. Ensure that the supplier of the RVDS provides competent on-site support representative during installation to supervise installation and testing of the RVDS. Ensure the radar sensor locations are optimal for system operation and operate as required. Maintain safe construction practices during equipment installation.

Ensure installation and configuration of software on Department computers is included with the RVDS.

Use care to prevent damage to any support structures. Any equipment or structure damaged or lost must be replaced by the Contractor (with items approved by the Engineer) at no cost to the Department.

- 3.2. **Mechanical Components.** Ensure that all fasteners, including bolts, nuts, and washers with a diameter less than 5/8 in. are Type 316 or 304 stainless steel and meet the requirements of ASTM F593 and ASTM F594 for corrosion resistance. Ensure that all bolts and nuts 5/8 in. and over in diameter are galvanized and meet the requirements of ASTM A307. Separate dissimilar metals with an inert dielectric material.
- 3.3. **Wiring.** Install all wiring and electrical work supplying power to the equipment in a neat workmanlike manner. Supply and install all wiring necessary to interconnect RVDS sensors to the traffic signal cabinet and incidentals necessary to complete the work. Furnish and install any additional required wiring at no additional cost to the Department.

Wiring must be cut to proper length prior to installation. Provide cable slack for ease of removal and replacement. All cable slack must be neatly laced with lacing or straps in the bottom of the cabinet. Ensure cables are secured with clamps.

- 3.4. **Grounding.** Ensure all RVDS components, cabinets, and supports are grounded in accordance with the NEC and manufacturer recommendations.
- 3.5. **Relocation of RVDS Field Equipment.** Perform the relocation in strict conformance with the requirements herein and as shown on the plans. Completion of the work will present a neat, workmanlike, and finished appearance. Maintain safe construction practices during relocation.

Inspect the existing RVDS field equipment with a representative from the Department and document any evidence of damage prior to removal. Conduct a pre-removal test in accordance with the testing requirements contained in this Item to document operational functionality. Remove and deliver equipment that fails inspection to the Department.

Prior to removal of existing RVDS field equipment, disconnect and isolate the power cables from the electric power supply and disconnect all communication cabling from the equipment located inside the cabinet. Coil and store power and communication cabling inside the cabinet until relocation. Remove existing RVDS field equipment as shown on the plans only when authorized by the Engineer.

Use care to prevent damage to any support structures. Any equipment or structure damaged or lost must be replaced by the Contractor (with items approved by the Engineer) at no cost to the Department.

Make all arrangements for connection to the power supply and communication source including any permits required for the work to be done under the Contract. Provide wire for the power connection at least the minimum size indicated on the plans and insulated for 600 V. Meet the requirements of the NEC, latest edition.

3.6. **Removal of RVDS Field Equipment.** Perform the removal in strict conformance with the requirements herein and as shown on the plans. Completion of the work will present a neat, workmanlike, and finished appearance. Maintain safe construction practices during removal.

Disconnect and isolate any existing electrical supply prior to removal of existing field equipment.

Use care to prevent damage to any support structures. Any equipment or structure damaged or lost must be replaced by the Contractor (with items approved by the Engineer) at no cost to the Department.

All materials not designated for reuse or retention by the Department will become the property of the Contractor and be removed from the project site at the Contractor's expense. Deliver items to be retained by the Department to a location shown on the plans or general notes. The Contractor is fully responsible for any removed equipment until released by the Engineer.

- 3.7. **Documentation**. Provide electronic copy operation and maintenance manuals, along with a copy of all product documentation on electronic media. Include the following documentation:
  - Complete and accurate schematic diagrams,

- Complete installation procedures,
- Manufacturer's specifications (functional, electrical, mechanical, and environmental),
- Complete maintenance and trouble-shooting procedures, and
- Explanation of product operation.
- Warranty as specified in Section 3.8.

The RVDS must pass testing to ensure functionality and reliability prior to delivery. These include functional tests for internal subassemblies, a 24 hr. minimum unit level burn-in test, and a unit functionality test. Provide test results and supporting documentation, including serial number tested, must be submitted for each RVDS. If requested, manufacturing data per serial number must be provided for each RVDS.

Unless deemed unnecessary by the Project Engineer or TRF-TM, Provide certification from an independent laboratory demonstrating compliance with NEMA TS2 environmental requirements for temperature, humidity, transients, vibration, and shock.

Unless deemed unnecessary by the Project Engineer or TRF-TM, Provide third party enclosure test results demonstrating the sensor enclosure meets Type 4X criteria.

Unless deemed unnecessary by the Project Engineer or TRF-TM, Provide evidence of RVDS manufacturer's quality assurance program, including proof that the manufacturer of the RVDS is either ISO 9001 certified or other quality management system programs for manufacturing RVDS.

- 3.8. **Warranty**. Ensure that the detection system has a manufacturer's warranty covering defects for a minimum of 5 years from the date of final acceptance. In addition to the terms required by Article 8 of TO-8000, Ensure the warranty includes providing replacements, within 10 calendar days of notification, for defective parts and equipment during the warranty period at no cost to the Department.
- 3.9. **Training and Support**. Provide manufacturer approved end user training to the Department and their representatives. Training must include instruction on system configuration, operation, and maintenance. Provide training for a minimum of 10 Department-designated representatives up to 8 hs., including both class and field training.

Ensure that the detection system manufacturer will provide product support for a minimum of 5 years from the date of final acceptance.

### 4. TESTING

Perform the following tests on equipment and systems unless otherwise shown on the plans. The Department may witness all the tests.

- 4.1. **Stand-Alone Test.** Conduct a Stand-Alone Test for each unit after installation. The test must exercise all stand-alone (non-network) functional operations and verify that RVDS is placing detector contact closure to assigned detector channels in the traffic signal controller assembly. Notify the Engineer 5 working days before conducting this test.
- 4.2. **Consequences of Test Failure.** If a unit fails a test, provide a new unit and then repeat the test until successfully completed.
- 4.3. Final Acceptance Test. Conduct a Final Acceptance Test on the complete functional system. Demonstrate all control, monitoring, and communication requirements and operate the system for 30 days. The Engineer will furnish a Letter of Approval stating the first day of the Final Acceptance Test.
- 4.4. **Consequences of Final Acceptance Test Failure.** If a defect within the system is detected during the Final Acceptance Test, document and correct the source of failure. Once corrective measures are taken, monitor the point of failure until a consecutive 30 day period free of defects is achieved.

#### 4.5. Relocation

4.5.1. **Pre-Test.** Provide 5 copies of the test procedures to include tests of the basic functionality of the unit and blank data forms to the Engineer for review and comment as part of material documentation requirements. Functionality tests may include, but are not limited to, physical inspection of the unit and cable assemblies. Include the sequence of the tests in the procedures along with acceptance thresholds. The Engineer will comment, approve, or reject test procedures within 30 days after Contractor submittal of test procedures. Rejected test procedures must be resubmitted within 10 days. Review time is calendar days. Conduct all tests in accordance with the approved test procedures.

Conduct basic functionality testing prior to removal of RVDS field equipment. Test all functional operations of the equipment in the presence of representatives of the Contractor and the Department. Ensure that both representatives sign the test report indicating that the equipment has passed or failed each function. Once removed, the equipment becomes the responsibility of the Contractor until accepted by the Department. Compare test data prior to removal and after installation. The performance test results after relocation must be equal to or better than the test results prior to removal. Repair or replace those components within the system that failed after relocation but passed prior to removal.

4.5.2. **Post-Test.** Testing of the RVDS field equipment is to relieve the Contractor of system maintenance. The Contractor will be relieved of the responsibility for system maintenance in accordance with Item 7, "Legal Relations and Responsibilities" after a successful test period. The Contractor will not be required to pay for electrical energy consumed by the system.

After all existing RVDS field equipment has been installed, conduct approved continuity, stand alone, and performance tests. Furnish test data forms containing the sequence of tests including all the data taken as well as quantitative results for all tests. Submit the test data forms to the Engineer at least 30 days prior to the day the tests are to begin. Obtain Engineer's approval of test procedures prior to submission of equipment for tests. Send at least 1 copy of the data forms to the Engineer.

Conduct an approved stand-alone test of the equipment installation at the field sites. At a minimum, exercise all stand-alone (non-network) functional operations of the field equipment with all the equipment installed per the plans as directed by the Engineer. Complete the approved data forms with test results and turn over to the Engineer for review and either acceptance or rejection of equipment. Give at least 30 working days' notice prior to all tests to permit the Engineer or his representative to observe each test.

The Department will conduct approved RVDS field equipment system tests on the field equipment with the central equipment. The tests will, as a minimum, exercise all remote control functions and display the return status codes from the controller.

If any unit fails to pass a test, prepare and deliver a report to the Engineer. Describe the nature of the failure and the corrective action needed. If the failure is the result of improper installation or damage during reinstallation, reinstall or replace the unit and repeat the test until the unit passes successfully, at no additional cost to the Department or extension of the Contract period.

### MEASUREMENT

5.

New RVDS furnished and installed by the Contractor will be measured by each approach to the signalized intersection.

RVDS furnished by the Department for the Contractor to install only will be measured by each approach to the signalized intersection.

Existing RVDS to be relocated or removed will be measured by each sensor relocated or removed.

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6.1. **Furnish and Install.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit bid price for "RVDS (Presence Detection Only)", "RVDS (Advance Detection Only)" and "RVDS (Presence and Advance Detection)."

This price is full compensation for furnishing, installing, configuring, integrating, and testing the completed installation including RVDS equipment, voltage converters or injectors, cables, connectors, associated equipment, and mounting hardware; and for all labor, tools, equipment, any required equipment modifications for electrical service, documentation, testing, training, software, warranty and incidentals necessary to complete the work.

6.2. **Install Only.** The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "RVDS (Presence Detection Only) (Install Only)", "RVDS (Advance Detection Only) (Install Only)" and "RVDS (Presence and Advance Detection) (Install Only)."

This price is full compensation for making fully operational a radar vehicle detection system furnished by the Department; installing, configuring, integrating, and testing the completed installation including RVDS equipment, voltage converters or injectors, cables, connectors, associated equipment, and mounting hardware; and for all labor, tools, equipment, any required equipment modifications for electrical service, documentation, testing, training, software, and incidentals necessary to complete the work.

- 6.3. **Relocate.** The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "Relocate RVDS." This price is full compensation for relocating and making fully operational existing RVDS field equipment; furnishing and installing additional cables or connectors; for testing, delivery and storage of components designated for salvage or reuse; and all testing, training, software, equipment, any required equipment modifications for electrical service, labor, materials, tools, and incidentals necessary to complete the work.
- 6.4. **Remove.** The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "Remove RVDS." This price is full compensation for removing existing RVDS equipment; removal of cables and connectors; for testing, delivery and storage of components designated for salvage; and all testing training, software, equipment, labor, materials, tools, and incidentals necessary to complete the work.
- 6.5. **Communication Cable.** All communication cables necessary to make the RVDS fully operational will be subsidiary to this Item.

# Special Specification 6384 Telecommunication System



### 1. DESCRIPTION

Furnish and install telecommunication systems including directional bores that will house Utility Owner's ducts as detailed on the plans. Contractors working on the Utility Owner's portion of work must comply with the Utility Owner guidelines and manuals.

### 1.1. Definitions.

- 1.1.1. Conduit. Pipe used to encase telecommunication facilities such as fiber, cable, and inner duct.
- 1.1.2. **Casing.** Pipe used to protect conduit by fully encasing conduit piping; casing can be also described as the pipe that is used to protect conduit in trenchless construction methods. This refers to the outer pipe. Pipe used to house inner duct is not to be considered as casing.
- 1.1.3. Conduit Structure (Duct Bank). Groups of conduit arranged in tiers and encased as specified on the plans.
- 1.1.4. **Contractor.** A contractor that is a telecommunications expert per industry standards and is on the Utility Owner's approved list.
- 1.1.5. Utility Owner. Utility companies as stated on the plans.
- 1.1.6. **Department.** Texas Department of Transportation (TxDOT).

### 2. MATERIALS

- 2.1. **Telecommunication System.** Supply permanent telecommunication system structure materials such as pipe, innerducts, handholes, manholes, fittings, mule tape, duct terminators and plugs, electronic markers, etc. Obtain approval for any deviations from the following.
- 2.1.1. **Steel Casing.** Provide Grade B steel pipe manufactured in accordance with ASTM A53. When shown on the plans, supply a 16 in. steel casing with a minimum wall thickness of 0.25 in. When shown on the plans, supply an 18 in. steel casing with a minimum wall thickness of 0.25 in. When shown on the plans, supply a 36 in. steel casing with a minimum wall thickness of 0.47 in. Provide steel casing that complies with "Buy America" standards.
- 2.1.2. Conduit.
- 2.1.2.1. **Bore-Gard.** Provide conduit for the joint directional bore wherever specified on the plans, that is Schedule 40 Bore-Gard, 4.5 in. O.D., with a minimum wall thickness of 0.50 in.
- 2.1.2.2. C-PVC. Provide 4.5 in. O.D. Chlorinated Polyvinyl Chloride (CPVC) Schedule 40 IPS pressure pipe manufactured in accordance with ASTM F441 for installations requiring the use of 4 in. C-PVC. Split C-PVC should be used around existing cables and purchased with pre-manufactured grooves from an authorized Utility Owner Supplier.
- 2.1.3. Handholes and Manholes. When the use of handholes and manholes are specified on the plans, provide handholes and manholes that comply with the requirements shown on the plans.

- 2.1.3.1. **Pre-cast Handholes and Manholes.** Pre-cast handholes and manholes will be obtained by contractor from an approved Utility Owner supplier as well as all associated items including but not limited to racks, ladders, frame, and cover.
- 2.1.3.2. **Cast-In-Place Handholes and Manholes.** Materials used for cast-in-place handholes and manholes will conform to Bellcore Practices Section 622-505-210. Use Hydraulic cement with a nominal compressive strength of 4000 psi in conformance with ASTM C150. Provide rebar that are deformed steel bars with a 60,000 psi yield strength conforming to ASTM A615. Contractor to obtain all associated items including but not limited to racks, ladders, frame, and cover. These items are included. Contractor will not pour concrete until steel is inspected by the Utility Owner. Contact the Utility Owner Representatives as shown on the plans.
- 2.1.4. **Miscellaneous Materials, Tools, and Equipment.** Furnish non-telecommunication system materials, backfill, cement stabilized sand, mortar, tools, supplies, equipment, etc. required to properly complete the work that meets TxDOT and Utility Owner's minimum requirements.
- 2.2. **Procurement of Fiber Optic Cables.** The Utility Owner will provide the Fiber Optic Cable within the project limits. Contact the Utility Owner Representatives as shown on the plans, 60 days before the required delivery date.
- 2.3. Backfill. Furnish backfill in accordance with Item 400, "Excavation and Backfill for Structures."
- 2.3.1. **Bedding.** Provide cement stabilized sand for bedding beginning 2 in. below the bottom of the duct bank and extending to 12 in. above top of the duct bank as shown on the plans.
- 2.3.2. Original Material Backfill (Type A). Provide material that is equivalent to original material or better, free of debris, and compacted to 90%-95% standard proctor density in 8 in. lifts.
- 2.3.3. Cement Stabilized Backfill. Provide cement-stabilized backfill in accordance with Item 400, "Excavation and Backfill for Structures."
- 2.4. **Concrete Encasement.** Provide concrete encasement material in accordance with Item 421, "Hydraulic Cement Concrete," Class A. Where conduit bends are less than 80-ft. radii, encase in concrete.
- 2.5. **Miscellaneous Other Material.** Assume responsibility for providing other customary material not listed on the plans or within this specification to properly complete the project including, but not limited to, the following:
  - Iong radius bends;
  - handhole ground tree;
  - fencing, permanent or temporary;
  - resin, fusing materials, and equipment;
  - sand bags and silt fencing;
  - drilling fluids;
  - water to conduct bore procedure;
  - contractor's temporary buildings and latrines;
  - timbers or other materials; and
  - mandrel.
- 2.6. **Defective or Damaged Material.** Inspect materials for defects before lowering them into the trench. Repair or replace as directed any defective, damaged, or unsound material. Should damaged materials be placed, furnish at no expense to the Department, labor and materials required for removing and replacing the

defective material. Should the Contractor damage the materials after installation, the Engineer may permit the damaged section to be cut from the length, unless it is the opinion of the Engineer that the entire length was damaged. The cost and replacement of broken materials is at the expense of the Contractor.

### 3. CONSTRUCTION

- 3.1. **Contractor**. Construction including, but not limited to, excavations, installations, mandrelling, proving, and boring operations must be performed by a Department approved Contractor. The Utility Owner Subcontractor that installs the underground telecommunication system must be an approved Utility Owner Contractor in good standing with the Utility Owner.
- 3.2. **As-Built Documentation**. Redline drawings in both plan and profile should be submitted to the Department for approval in advance of any field changes or variations from the plans, as provided. If approved, any field changes should be documented, and an as-built drawing should be provided to the Utility Owner. Requests for field changes, for contractor convenience, typically will not be approved.
- 3.3. **Trench Excavation.** Perform trench excavation in accordance with Item 400, "Excavation and Backfill for Structures," as outlined herein, as shown on the plans, and as directed.

### 3.3.1. Trenches for Conduit and Conduit Structures.

- 3.3.1.1. Width of Trenches. Construct trenches that are adequate to accommodate working room needed to place conduit. When placing conduit, allow a minimum of 2 in. on each side of the duct structure for encasement as shown on the plans and notes. Backfill in accordance with Item 400, Article 3.3. When shoring or sheeting is used, measure the trench width from the inside surfaces of the uprights or sheeting.
- 3.3.1.2. **Depth of Trench.** Minimum trench depth is the height of the duct structure plus 24 in. This height includes any top protection when the trench is in an area under live load or traffic. The depth of excavation will be determined by the lines and grades as established on the plans, and notes, or as directed.
- 3.3.2. Handhole and Manhole Excavations. The width and depth of excavation for handholes and manholes will be determined by the lines and grades as established on the plans, and notes, dimensions of the handholes and manholes, and as directed.
- 3.3.3. **Excavation Below Grade.** Correct any part of the bottom of the trench excavated below the limits specified in Section 3.3.1.2., "Depth of Trench" with approved material and compacted in a manner as described in Article 400.3 of Item 400, "Excavation and Backfill for Structures," and as directed.
- 3.3.4. **Working at Driveways.** Except where otherwise noted, maintain access to driveways at all times. A flotation ditch must be installed across a driveway wherever noted on the plans, as directed, and when necessary to facilitate the movement of traffic. Open cut and restore driveways in half segments to maintain flow of traffic where possible. If a driveway must be closed, ensure there is an alternate access point to the property or construct a temporary driveway. The Contractor will be responsible for the means, methods, and equipment used to construct the flotation ditch or temporary driveway.
- 3.4. **Backfill**. Provide backfill and perform backfill operations in accordance with Item 400, "Excavation and Backfill for Structures," as described herein and as directed.
- 3.5. **Pavement.** Remove pavement and surfaces as part of the trench excavation in accordance with Item 400, "Excavation and Backfill for Structures." The removal and restoration of pavement and surfaces will be based upon the minimum trench width as described in Section 3.3.1.2., plus 2 in. on each side of the trench.
- 3.6. **Boring.** Install casing pipe or conduit, by bore, in conformance with Item 476, "Jacking, Boring, or Tunneling Pipe or Box." Install bore spacer in accordance with the manufacturer's guidelines.

- 3.6.1. **Directional Boring.** Install casing pipe or conduit by horizontal directional drill in conformance with the North American Society of Trenchless Technology (NASTT), "Mini-Horizontal Directional Drilling Manual" (1995), or ASTM F 1962 "Standard Guide for Use of Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit under Obstacles including River Crossings."
- 3.7. Handholes and Manholes. Handholes and manholes will be of the size and type as shown on the plans. Set manholes to the lines and grades as shown on the plans. Manholes will have a minimum 60 in. cover from finished grade to the top of the manhole box unless specified otherwise on the plans or as directed by the Utility Owner. Place handholes in line with final grade except where noted otherwise on the plans or as directed by the Utility Owner.
- 3.7.1. **Pre-cast Handholes and Manholes.** Install pre-cast handholes and manholes according to Bellcore Practices, Section 622-506-200, "Precast Concrete Manholes, 38Y Types, Installation."
- 3.7.2. Cast-In-Place Handholes and Manholes. Construct cast-in-place materials in accordance with Bellcore Practices Section 622-505-210, "Concrete Manholes, Cast-In-Place Construction." Contractor will not pour concrete until steel is inspected by the Utility Owner Inspector. Contact the Utility Owner Representatives as shown on the plans.
- 3.8. **Manholes.** Install manholes in accordance with the plans. Notify the appropriate contact person a minimum of 10 days before placing manholes, to ensure compliance with this requirement.
- 3.9. Handholes. Install ground tree with handhole placement.
- 3.10. **Removing Existing Facilities**. Remove abandoned telephone facilities, including manholes and conduit in accordance with Item 496, "Removing Structures." Before removing telephone facilities, contact the Utility Owner Representatives as shown on the plans. A Utility Owner approved contractor is not required to perform Utility Owner removals once the existing facility is confirmed abandoned in place.
- 3.11. **Proofing and Mandrelling**. After the duct has been installed, pass a mandrel through the duct in the presence of the Engineer and after observing the 10-day notification to Utility Owners. If the mandrel fails to pass through the duct being tested, either the duct is obstructed, misaligned, or the curve has too small a radius. Correct defective ducts. After the ducts are repaired, repeat the mandrel test in that section of duct. Mandrels are constructed in various sizes, depending upon the use and nature of the section being tested (e.g., duct size.) The OD of a test mandrel is normally 80% of the ID of nominal size of the duct. The length of the mandrel will vary depending upon the manufacturer and mandrel type (testing conduit or removing debris.)
- 3.12. **Protective Concrete Cap.** Construct concrete caps above conduit structures, as detailed on the plans, in conformance with Item 421, "Hydraulic Cement Concrete."

### 4. MEASUREMENT

- 4.1. **Directional Bore**. This item will be measured by the foot of the type and size shown on the plans for "Directional Bore (Comm)." This is a plans quantity measurement item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.
- 4.2. **Conventional Bore**. This item will be measured by foot of the type and size shown on the plans for "Conventional Bore (Comm)." Steel casings will not be measured directly but are subsidiary to the conventional bore installation. This is a plans quantity measurement item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.
- 4.3. **Proofing and Mandrelling.** This item will not be measured directly for payment but is subsidiary to the item being proofed.

- 4.4. **Trench Excavation and Backfill.** This item is measured by the cubic yard for "Trench (Comm)." Bends and appurtenances for conduit will not be measured for payment but are subsidiary to the duct bank measurement. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.
- 4.5. **Pavement.** Cutting and restoring pavement will be not measured directly but is subsidiary to the structure installed in the trench.
- 4.6. Handholes. Handholes will be measured by each handhole installed, complete in place for "Handhole (Comm)." Necks and covers will not be measured for payment but are incidental to the item installed. Handholes installed over existing telecommunication facilities will be measured for payment as described herewith. Any adjustment or removal of the existing structures necessary for the placement of the proposed handholes will not be measured directly but is incidental to the item installed.
- 4.7. **Manholes.** Manholes will be measured by each manhole installed, complete in place for "Manhole (Comm)." Necks and covers will not be measured for payment, are incidental to the item installed. Manholes installed over existing telecommunication facilities will be measured for payment as described herewith. Any adjustment or removal of the existing structures necessary for the placement of the proposed manholes will not be measured directly but is incidental to the item installed.
- 4.8. **Conduit**. Conduit will be measured by the foot, as shown on the plans, of the type and size specified within the trench or bore for "Conduit (Comm)." This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.
- 4.9. Innerduct. This item will be measured by the foot for "Innerduct (Comm)" of the type and size specified on the plans within the trench or bore. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.
- 4.10.
  Casing. Casing will be measured by the foot for "Casing (Comm)" of the type and size specified on the plans. This is a plans quantity measurement Item limited to casing used in directional bore. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required. Casing used for conventional bores will not be measured directly but is subsidiary to the bore.
- 4.11. **Protective Concrete Cap.** This item will not be measured for payment but is subsidiary to the structure installed.
- 4.12. **Concrete Removal and Restoration.** This item will not be measured for payment but is subsidiary to the structures installed.
- 4.13. Remove Existing Facilities.
- 4.13.1. **Conduit**. Removal of existing conduit, as indicated on the plans, will be measured by the foot for "Remove (Comm)." This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.
- 4.13.2. Handhole and Manholes. Handholes or manholes removed will be measured by each removed item as shown on the plans for "Remove Structure (Comm)." This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

4.13.3. **Poles.** Existing poles removed will be measured by each item specified for removal on the plans for "Remove Structure (Comm)." This is a plans quantity measurement item. The quantity shown in the proposal, unless modified by Article 9.2, "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantity are required.

### 5. PAYMENT

- 5.1. **Directional Bore.** The work performed and materials furnished, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Directional Bore (Comm)" of the length specified on the plans. This price is full compensation for installing outer casing, conduit and innerduct, mobilization, pilot hole, fusing materials, drilling fluid, sand bags, silt fencing; and, for labor, tools, equipment, and incidentals.
- 5.2. **Conventional Bore**. The work performed and materials furnished in accordance with this Item and measured, as provided under "Measurement," will be paid at the unit price of "Conventional Bore (Comm)" of the length specified on the plans. This price is full compensation for installing outer casing, conduit and innerduct, mobilization, pilot hole, fusing materials, drilling fluid, sand bags, silt fencing; and, for labor, tools, equipment, and incidentals.
- 5.3. **Proofing and Mandrelling.** This item will not be paid for directly but will be subsidiary to the pipe installed.
- 5.4. **Trench Excavation and Backfill.** The work performed and materials furnished, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Trench (Comm)." This price is full compensation for installing conduit and inner duct; excavating, furnishing and placing backfill, replacing pavement structure, sod, riprap, curbs, or other surface; for furnishing and installing fittings, bends, adaptors, lubrication access fittings, expansion joints, concrete, and underground mylar conduit marking tape; and for labor, tools, equipment, and incidentals.
- 5.5. **Pavement.** Pavement will not be paid for directly but will be subsidiary to the pipe installed.
- 5.6. **Handholes.** The work performed and materials furnished, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Handhole (Comm)" of the size specified on the plans complete in place. This price is full compensation for bonding, rings, frames, covers, ground tree, and joint sealing compound as detailed on the plans.
- 5.7. **Manholes.** The work performed and materials furnished, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Manhole (Comm)" of the size specified on the plans complete in place. This price is full compensation for bonding, rings, frames, covers, racks, ladders, terminators, plugs, etc., and joint sealing compound as detailed on the plans.
- 5.8. **Conduit.** The work performed, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Conduit (Comm)" of the size and type specified on the plans. This price is full compensation for only the material cost; construction costs associated with the installation of this item are considered incidental to the trench or bore in which they are installed.
- 5.9. Innerduct. The work performed, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Innerduct (Comm)" of the size and type specified on the plans. This price is full compensation for only the material cost; construction costs associated with the installation of this item are considered incidental to the trench or bore in which they are installed.
- 5.10. **Casing.** The work performed, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Casing (Comm)" of the size and type specified on the plans. This price is full compensation for only the material cost; construction costs associated with the installation of this item are considered incidental to the trench or directly but will be considered incidental to the conventional bore installed.

- 5.11. **Protective Concrete Cap.** This item will not be paid for directly but will be subsidiary to the structures installed.
- 5.12. **Concrete Removal and Restoration**. This item will not be paid for directly but will be subsidiary to the pipe installed.
- 5.13. Remove Existing Facilities.
- 5.13.1. **Conduit.** The work performed and materials furnished, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Remove (Comm)." This price is full compensation for removal and disposal of existing facilities as shown on the plans.
- 5.13.2. Handhole and Manholes. The work performed and materials furnished, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Remove Structure (Comm)." This price is full compensation for removal and disposal of existing facilities as shown on the plans.
- 5.13.3. **Poles.** The work performed and materials furnished, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Remove Structure (Comm)." This price is full compensation for removal and disposal of existing facilities as shown on the plans. Other above ground appurtenances will be subsidiary to the conduit removal.

## Special Specification 6385 Highway Traffic Signals



1. DESCRIPTION

Installation. Install highway traffic signals.

### 2. MATERIALS

Ensure electrical materials and construction methods conform to the current NEC and additional local utility requirements.

Furnish new materials. Ensure all materials and construction methods conform to the details shown on the plans, the requirements of this Item, and the pertinent requirements of the following Items:

- Controller Cabinet Attachment A City of Fort Worth Advance Transportation Controller Cabinet (ATCC) Specifications (as shown on plans or provided by Engineer),
- Controller as approved by the City of Fort Worth,
- Traffic Signal Controller Cabinet Foundations as shown on the plans,
- Item 610, "Roadway Illumination Assemblies,"
- Item 625, "Zinc-Coated Steel Wire Strand," and
- Item 636, "Signs."

Provide controller assemblies that are approved by the City of Fort Worth and the details shown on the plans.

Provide flasher assemblies that are approved by the City of Fort Worth and the details shown on the plans.

Sampling and testing of traffic signal controller assemblies will be done as shown on the plan or as directed.

### 3. CONSTRUCTION

- 3.1. Installation. Install traffic signal controller foundations as shown on the plans or as directed.
- 3.1.1. Electrical Requirements.
- 3.1.1.1. Electrical Services. Make arrangements for electrical services, install, and supply materials, not provided by the utility company, as shown on the plans. Install 120-volt, single-phase, 60-Hz AC electrical service unless otherwise shown on the plans.
- 3.1.1.2. **Conduit**. Install conduit and fittings of the sizes and types shown on the plans. Conduit of larger diameter size than that shown on the plans may be used with no additional compensation, providing the same diameter size is used for the entire length of the conduit run. Extend conduit in concrete foundations 2 to 3 in. above the concrete. Seal the ends of each conduit with silicone caulking, or other approved sealant, after all cables and conductors are installed.
- 3.1.1.3. Wiring. Furnish stranded No. 12 AWG XHHW conductors. Install above-ground cables and conductors in rigid metal conduit, except for span wire suspended cables and conductors, drip loops, and electrical wiring inside signal poles unless otherwise shown on the plans. Make power entrances to ground-mounted controllers through underground conduit. Wire each signal installation to operate as shown on the plans.

Attach ends of wires to properly sized self-insulated solderless terminals. Attach terminals to the wires with a ratchet-type compression crimping tool properly sized to the wire. Place pre-numbered identification tags of plastic or tape around each wire adjacent to wire ends in the controller and signal pole terminal blocks.

Splices will not be permitted except as shown on the plans, unless each individual splice is approved in writing. Make all allowed splices watertight.

3.1.1.4. **Grounding and Bonding**. Ground and bond conductors as shown on the plans or as directed. Ensure the resistance from the grounded point of any equipment to the nearest ground rod is less than 1 ohm.

Install a continuous bare or green insulated copper wire (equipment ground) throughout the electrical system that is the same size as the neutral conductor, but a minimum No. 8 AWG. Connect the equipment ground to all metal conduit, signal poles, controller housing, electrical service ground, ground rods, and all other metal enclosures and raceways.

Provide copper wire bonding jumpers that are a minimum No. 8 AWG.

3.1.2. **Controller Assemblies**. Construct controller foundations as shown on the plans or as directed. Immediately before mounting the controller assembly on the foundation, apply a bead of silicone caulk to seal the cabinet base. Seal any space between conduit entering the controller and the foundation with silicone caulk.

Deliver the keys for the controller cabinets to the Engineer when the Contract is complete.

Place the instruction manual and wiring diagrams for all equipment in the controller cabinet, inside the controller cabinet.

- 3.1.3. **Preservation of Sod, Shrubbery, and Trees**. Replace sod, shrubbery, and trees damaged during the Contract.
- 3.1.4. **Removal and Replacement of Curbs and Walks**. Obtain approval before cutting into or removing walks or curbs not shown on the plans to be removed or replaced. Restore any curbs or walks removed equivalent to original condition after work is completed, to the satisfaction of the Engineer.
- 3.1.5. Intersection Illumination. Install luminaires on signal poles as shown on the plans.
- 3.1.6. Signal Timing Plan. The traffic signal timing plan will be provided by the Department or local entity.
- 3.1.7. **Test Period**. Operate completed traffic signal installations continuously for at least 30 days in a satisfactory manner. If any Contractor-furnished equipment fails during the 30-day test period, repair or replace that equipment. This repair or replacement, except lamp replacement, will start a new 30-day test period.

Replace materials that are damaged or have failed before acceptance. Replace failed or damaged existing signal system components when caused by the Contractor. Both the Department and the City will relieve the Contractor of maintenance responsibilities upon passing a 30-day performance test of the signal system and acceptance of the Contract.

### 4. MEASUREMENT

This Item will be measured as each traffic signal installed. A traffic signal is a signalized intersection controlled by a single traffic signal controller.

### PAYMENT

5.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Installation of Highway Traffic Signals."

**Installation**. This price is full compensation for furnishing, installing, and testing the completed installation, controller and associated equipment, controller foundations, luminaires, signs mounted on signal equipment, damping plates, mounting hardware and steel wire strand; preservation and replacement of damaged sod, shrubbery, and trees; removal and replacement of curbs and walks; and materials, equipment, labor, tools, and incidentals. The City of Fort Worth will pay for electrical energy consumed by the traffic signal.

New drilled shaft foundations for traffic signal poles will be paid for under Item 416, "Drilled Shaft Foundations." New conduit will be paid for under Item 618, "Conduit." New electrical conductors will be paid for under Item 620, "Electrical Conductors." New ground boxes will be paid for under Item 624, "Ground Boxes." New electrical services will be paid for under Item 628, "Electrical Services." New vehicle and pedestrian signal heads will be paid for under Item 682, "Vehicle and Pedestrian Signal Heads." New traffic signal cables will be paid for under Item 684, "Traffic Signal Cables." New traffic signal pole assemblies will be paid for under Item 686, "Traffic Signal Pole Assemblies (Steel)." New traffic signal detectors will be paid for under Item 688, "Pedestrian Detectors and Vehicle Loop Detectors."

## Special Specification 6386 Installation of Cellular Modem



### 1. DESCRIPTION

Transport, install, and test Department furnished Cellular Modems as shown on the plans, as detailed in the special specification, and as directed.

### 2. MATERIALS

The Department will furnish: Cellular Modems w/Power Supply.

Provide all materials not supplied by the Department necessary for the Cellular Modem installation. All materials provided by the Contractor must be new.

Unless otherwise shown on the plans, equipment for the Cellular Modems for this project will be stored by the Department for pick up at TxDOT El Paso District Office, 13301 Gateway West Blvd, El Paso TX 79928.

Ensure that all materials and construction methods necessary to complete the installation conform to the requirements of this Item, the plans, and the pertinent requirements of Item 620, "Electrical Conductors."

### 3. POWER REQUIREMENTS

Provide equipment appurtenances, as required, to ensure that operations are not affected by the transient voltages, surges, and sags normally experienced on commercial power lines.

- 3.1. Wiring. Provide wiring that meets the requirements of the National Electric Code. Provide wires that are cut to proper length before assembly. Provide cable slacks to facilitate removal and replacement of assemblies, panels, and modules. Do not double-back wire to take up slack. Lace wires neatly into cable with nylon lacing or plastic straps. Secure cables with non-adhesive clamps and anchors. Provide service loops at connections.
- 3.2. Power Service Protection. Provide equipment that contains readily accessible, manually re-settable, or replaceable circuit protection devices (such as circuit breakers or fuses) for equipment and power source protection. Provide and size circuit breakers or fuses such that no wire, component, connector, PC board, or assembly must be subjected to sustained current in excess of their respective design limits upon failure of any single element or wiring.

### 4. MECHANICAL REQUIREMENTS

4.1. **Connectors and Harnesses**. Provide external connections made by means of connectors. Provide connectors that are keyed to preclude improper hookups. Color code wires and appropriately mark origin and destination of each cable.

Provide connecting harnesses of appropriate length and terminated with matching connectors for interconnection with the communications system equipment.

Provide pins and mating connectors that are plated to improve conductivity and resist corrosion. Cover connectors utilizing solder type connections by a piece of heat shrink tubing securely shrunk to ensure that it protects the connection.

4.2. Mechanical Components. Provide external screws, nuts, and locking washers that are stainless steel. Provide parts made of corrosion resistant material, such as plastic, stainless steel, anodized aluminum, or brass. Protect materials from fungus growth and moisture deterioration. Separate dissimilar metals by an inert dielectric material.

### 5. INSTALLATION OF CELLULAR MODEMS

Install all materials, equipment, power, video, and control cabling. Ensure an operating and functional system.

Prevent damage to all Cellular Modem components supplied by the Department. Replace any component that is damaged or lost during transportation or installation at the Contractor's expense.

**Testing**. Verify operation of the Cellular Modems, together with operation of its links, demonstrate that data can be transmitted at a satisfactory rate from the field location to the central location. Demonstrate that the Cellular Modems data packets are being received at the central site via a networked computer.

**Experience Requirements**. The Contractor or designated subcontractors involved in the installation and testing of the Cellular Modems shall, as a minimum, meet the following:

Two-year experience in the installation of Cellular Modems.

Must have a minimum record of having installed two Cellular Modems where they have been in continuously satisfactory operation for at least 1 year. The Contractor shall submit as proof, photographs or other supporting documents, and the names, addresses, and telephone numbers of the operating personnel who can be contacted regarding the system.

Provide necessary documentation of subcontractor qualifications pursuant to contract award.

### 6. MEASUREMENT

This Item will be measured as each Cellular Modems made fully operational and tested.

### PAYMENT

7.

The work performed and material furnished in accordance with this Item; and, measured as provided under "Measurement," will be paid for at the unit price bid for "Installation of Cellular Modems." This price is full compensation for transportation and installation of all equipment described under this Item; furnishing and installing all cables, connectors, and mounting assemblies; all documentation and testing; and all labor, manipulations, materials, tools, equipment, and incidentals.

## Special Specification 6387 Pedestrian Illumination



### 1. DESCRIPTION

Furnish and install pedestrian illumination assemblies.

### 2. MATERIALS

Provide new materials that comply with the details shown on the plans, the requirements of this item, and the pertinent requirements of the following items:

- Item 441, "Steel Structures,"
- Item 442, "Metal for Structures,"
- Item 446, "Cleaning and Painting Steel,"
- Item 449, "Anchor Bolts," and
- Item 616, "Performance Testing of Lighting Systems."

Provide six sets of submittals showing the pole and fixtures, to the Engineer for approval at the project address. Obtain the Engineer's approval on the submittals before purchasing materials and beginning work. Furnish two copies of the completed material identification form to the Engineer before beginning fabrication.

Furnish light poles, mast arms, light fixtures, and bases in accordance with the drawings as shown on the plans.

Provide shop drawings of the complete assembly in accordance with the plans.

Ensure materials are UL-listed; meet NEMA, NEC, and AASHTO requirements; and are in accordance with the Electrical Detail standard sheet.

### CONSTRUCTION

3.

Perform work in accordance with the details shown on the plans and the requirements of this item.

Use established industry and utility safety practices when installing poles and luminaires located overhead. Consult with the Engineer before beginning work.

Prevent scarring or marring of the luminaires and poles. Replace damaged components. Repair damaged painted areas in accordance with Item 446, "Cleaning and Painting Steel."

Fabricate and install pedestrian illumination standard components in accordance with the details, dimensions, and requirements shown on the plans. Test installed pedestrian illumination standards in accordance with Item 616, "Performance Testing of Lighting Systems."

### 4. MEASUREMENT

This Item will be measured as each pedestrian illumination assembly installed and successfully tested.

5.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Pole Mounted Pedestrian Illumination Assembly" of the type specified. This price is full compensation for furnishing, installing, and testing luminaires; poles, arms, drivers, anchor bolts, anchor plates, internal conductors and connections; system performance testing; and for furnishing equipment, labor, tools, and incidentals.

Drilled Shafts will be paid for under Item 416, "Drilled Shaft Foundations." New conduit will be paid for under Item 618, "Conduit." New conductors, except the conductors internal to the pole, will be paid for under Item 620, "Electrical Conductors."
# Special Specification 7232 Sanitary Sewer



### 1. DESCRIPTION

This Item will govern for all materials and work necessary for the installation of all sanitary sewer mains, fittings, connections, service lines, and other appurtenances necessary for a complete and operating system to be constructed within the existing right of way under this contract. Placement of sanitary sewer mains and appurtenances, both as to horizontal and vertical location, will be subject to minor adjustments in the field. Final location will be determined by the Engineer to conform to field conditions.

- 1.1. **References.** When referring to the standards listed below, use the latest standard or tentative standard in effect on the date of proposal.
  - ASTM A48—Gray Iron Castings
  - ASTM C923—Resilient Connector between Manhole Structures and Pipes
  - ASTM C1244—Standard Test Method for Sewer Manholes by Negative Air Pressure (Vacuum) Test
  - ASTM D-2412—Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel Plate Loading
  - ASTM D-695—Test Methods for Compressive Properties of Rigid Plastics
  - ASTM D-2584—Test Method for Ignition Loss of Cured Reinforced Resins
  - ASTM D-790—Test Method for Flexural Properties of Unreinforced and Reinforced Plastics and electrical Insulating Materials
  - ASTM D-2583—Test Method for Indentation Hardness of Rigid Plastics by means of a Barcol Impressor
  - AASHTO H-20—Axial Loading
  - ANSI/AWWA C104/A21.4—Cement Mortar Lining for Ductile Iron and Gray Iron pipe and fittings for water.
  - ANSI/AWWA C153/A21.53—Ductile Iron Compact fittings for 3 in. through 16 in. for water and other liquids.
  - ASTM D1784—Polyvinyl Chloride (PVC) Plastic pipe, compounds and Chlorinated Polyvinyl chloride (CPVC) Compounds.
  - ASTM D2241—Polyvinyl chloride (PVC) pressure rated pipe (SDR series).
  - ASTM D2321—Practice for Underground Installation of Flexible Thermoplastic Pipe.
  - ASTM D2412—External Loading Properties of Plastic Pipe by Parallel Plate Loading.
  - ASTM D3034—Type PSM Polyvinyl chloride (PVC) Plastic Sewer Pipe and fittings (SDR35).
  - ASTM D3139—Joints for Plastic Pressure Pipe Using Flexible Elastomeric Seals.
  - ASTM D3212—Joints for Drain and Sewer Plastic Pipes using Flexible Elastomeric Seals.
  - ASTM F477—Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
  - ASTM F789—Polyvinyl chloride (PVC) Plastic Gravity Sewer Pipe and fittings (type PS46).
  - 30 TAC 217 (C)—Texas Administrative Code, Volume 30, Chapter 217, Design Criteria for Domestic Wastewater Systems, Subchapter C: Conventional Collection Systems.
  - ASTM C478—Precast Reinforced Concrete Manhole Sections
  - 30 TAC 217.55—Texas Administrative Code, Volume 30, Chapter 217, Design Criteria for Domestic Wastewater Systems. 217.55—Manholes and Related Structures.
  - 30 TAC 217.58—Texas Administrative Code, Volume 30, Chapter 217, Design Criteria for Domestic Wastewater Systems. 217.58—Testing Requirements for Manholes.
  - ASTM C33—Coarse Aggregates.
  - ASTM D698—Moisture-Density Relations of Soil (Standard).

- ASTM D1557—Test for Moisture-Density Relations of Soil (Modified).
- ASTM D2321—Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications.
- ASTM D2487—Classification of Soils for Engineering Purposes.
- ASTM D4254—Minimum Index Density and Unit Weight of Soils and Calculations of Relative Density.
- ASTM D4318—Test for Liquid Limit, Plastic Limit and Plasticity Index of Soils.
- OSHA—Occupational Safety and Health Administration and Related Regulations.

### 1.2. Submittals.

### 1.2.1. Sanitary Sewer System. Required Submittals:

- Product Data. Manufacturer's product data sheets on all materials incorporated into Work.
- Certificates. Manufacturers certificates attesting compliance with applicable Specifications for grades, types, classes, and other listed properties.
- Project Record Documents. Submit documentation in accordance with applicable specifications. Accurate record drawings showing installed locations of manholes, cleanouts, valves, piping, service connections, and other accessories.

1.2.2. Precast Concrete Sanitary Sewer Manholes and Covers. Required Submittals:

- **Submittals:** Refer to applicable specifications for material submittals.
- Product Data: Provide manhole covers, component construction, features, configuration, dimensions and manufacturer name and address.

### 1.2.3. Excavation, Backfilling and Compacting for Utilities. Required Submittals:

- One (1) set to materials testing lab for classification.
- One (1) set to Engineer for approval.

### 1.3. Definitions. Definitions are as follows:

- Sanitary Sewer Main. Sanitary Sewer Main is defined as that portion of the sanitary sewer system which collects the effluent from the service laterals, including stub outs from the nearest manhole, to the point of final destination.
- Service Lateral. Service Lateral is defined as that portion of the sanitary sewer system beginning at a customer property line or other establishment property line which is the point of origin of the effluent being carried by the system to the sanitary sewer main, including the connection into the sanitary sewer main system.
- Television Inspection. Television Inspection is defined as furnishing all labor, materials, equipment, tools, logging and incidentals necessary to provide the televising and videotaping of sewer lines utilizing a color closed circuit television inspection unit to determine the condition of the lines. All new sewer mains will not carry flow until the Engineer approves and accepts the mains for service.
- By-Pass Pumping. By-Pass Pumping is defined as furnishing all labor, materials, equipment, tools, appliances and incidentals necessary to perform all operations in connection with by-pass pumping of sewage flow for the purpose of preventing interference with the construction of the sanitary sewer manholes and mains as well as providing reliable sewer service to the areas being served. The Contractor will be required to provide adequate pumping equipment and force mains to maintain reliable sanitary sewer service in all sanitary sewer lines involved. In case of equipment failure, the Contractor will have on the job site backup pumps and force mains. Under no circumstances will the flow be interrupted or stopped such that damage is done to either private or public property or sewage flows or overflows into a storm sewer or natural waterway.

The Contractor will provide by-pass pumping of sewage around each segment of pipe that is to be televised or replaced and will be responsible for all required bulkheads, pumps, equipment, piping, and

other related appurtenances to accomplish the sequence of pumping. A qualified person will man the pumps, on-site, at all times during the by-pass procedure.

All piping, joints and accessories will be designed to withstand the maximum by-pass system pressure, or a minimum of 50 psi, whichever is greater. During by-pass pumping, no sewage will be leaked, dumped, or spilled in or onto any area outside of the existing sanitary sewer system. When by-pass pumping operations are complete, all piping will be drained into the sanitary sewer before disassembly.

- Bedding. Includes the area from the trench bottom to the bottom of the pipe where material is placed to bring the trench bottom up to grade. A compacted depth of approximately 4 to 6 in. is generally sufficient bedding thickness.
- Haunching. Includes the area from the bottom of the pipe to the spring line of the pipe. Material in this area must be placed and consolidated to provide adequate side support while avoiding both vertical and lateral displacement of the pipe. The type and density of the material in this area are the most important factors affecting the performance and deflection of the pipe.
- Initial Backfill. Includes the area from the spring line of the pipe to a point at least 6 in. over the top of the pipe.
- Final Backfill. Includes the area above the initial backfill, up to final grade or the bottom of the flexible base material in the pavement section.
- Pipe Zone. Includes areas of bedding, haunching, and initial backfill as defined above.
- DR-Dimension Ratio as defined by the above references.
- **SDR**-Standard Dimension Ratio.
- **PVC**-Polyvinyl Chloride as in pipe.

### 2. MATERIALS

All materials furnished for this project will be new. A manufacturer's certificate of compliance will be acceptable for quality control.

- 2.1. Sanitary Sewer System.
- 2.1.1. **Pipe.** PVC sewer pipe will be integral bell and spigot-type joints

SDR 35 (ASTM D3034). Pipe will be manufactured from Cell Class 12454 (ASTM D1784).

Tracer Wire. Tracer wire will be considered subsidiary and installed with all sanitary sewer pipe and service lines.

2.1.2. Joints. Joints will be flexible gasketed, elastomeric-type joints.

Gaskets will be compression-type, confined in a machined groove in the spigot or bell and meet ASTM F477.

Joints will conform to ASTM D3212.

- 2.1.3. Adapters. When joining dissimilar pipe materials or repairing pipe, suitable adapters will be used. The adapters will be insert or bond-coupling type and will meet the strength and chemical requirements of ASTM C594.
- 2.1.4. Fittings. SDR 35. Fittings will be push-on type, ASTM D3034 type PSM.

PS 46. Fittings will be push-on type meeting ASTM F789 and will be furnished by the pipe manufacturer.

**Ribbed Gravity Sewer.** Fittings will be push-on type meeting ASTM D794 and will be furnished by the pipe manufacturer.

**Corrugated Gravity Sewer**. Fittings will be push-on type meeting ASTM F949 and will be furnished by the pipe manufacturer.

- 2.1.5. **Manholes.** Furnish and install 48 in. diameter precast concrete manholes in accordance with applicable portions of this specification.
- 2.1.6. Cleanouts. Cleanouts. Line-type with lacquered cast iron body and round epoxy-coated gasketed cover. Use Trinity Valley Model No. 1884, Dallas Foundry Casting No. C-339, or Engineer approved equivalent substitution.
- 2.2. Precast Concrete Sanitary Sewer Manholes and Covers.
- 2.2.1. Ring and Cover Manufacturers. Western Industrial Model 380-24TF Manhole.

Tyler Model #8070.

Bass and Hayes 300-24.

Engineer approved equivalent.

Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

- 2.2.2. Concrete Manhole Sections. Reinforced precast concrete in accordance with ASTM C478 with gaskets in accordance with ASTM C923.
- 2.2.3. Seals. Bituminous or non-shrink grout-forming water tight seal as approved.
- 2.2.4. **Resilient Connectors**. A-Lock or Engineer approved equal.
- 2.2.5. Antimicrobial Additive. Will be used to render the concrete uninhabitable for bacteria growth and will have the following requirements:
  - Manufacturers:
    - Conmic Shield®
    - Or Engineer approved equivalent.
  - The liquid antibacterial additive will be an EPA registered material and the registration number will be submitted for approval before use in the project.
  - The amount to be used will be as recommended by the manufacturer of the antibacterial additive. This amount will be included in the total water content of the concrete mix design.
  - The antibacterial additive will have successfully demonstrated prevention of microbiologically induced corrosion in sanitary sewers for ten or more years.
  - Acceptance will be a letter of certification from the concrete provider to the project owner stating that the correct amount and correct mixing procedure were followed for all antimicrobial concrete.
  - Field repairs to the precast concrete will be made using an antimicrobial additive grout that is pre-portioned and factory packaged that requires the addition of no other components. The repair grout may be used for filling joints, lift holes, damaged areas, benches and similar.

### 2.2.6. Components. Components will have the following Requirements:

- Lid and Ring ASTM A48, Class 30B cast iron construction, machined flat bearing surface, removable lid, ring and lid will weigh at least 350 lb.; live load rating of 20,000 lb. wheel load; sealing gasket; lid molded with manufacturer's name; and the words "Sanitary Sewer".
  - A manhole cover must be constructed of impervious material.

- A manhole cover that is located in a roadway must meet or exceed the AASHTO standard M-306 for load bearing.
- Precast concrete base pads will meet the requirements of ASTM C478.

2.3. Excavation, Backfilling, and Compacting for Utilities.

2.3.1. **Pipe Zone**. Materials for use within the pipe zone and within 24 in. of fiberglass structures will be in accordance with following Table 2.1:

	Туре	Soil Group Symbol	Description ASTM D2487	% Passing Sieve Sizes			Atterberg Limits		Coefficients	
Class				1½ in (40 mm)	#4 (4.75 mm)	#200 (0.075 mm)	LL⁵	Ρlc	Uniformity Cu	Curvature C _c
Ι	Manufactured, Processed Aggregate; dense-graded, clean	None	Angular, granular, crushed stone or rock, crushed gravel, and stone/sand mixtures with gradations selected to minimize migration of adjacent soils; contain little or no fines	100%	≤50%0	<5%	No	n Plastic		
=	Coarse- Grained Soils, clean	GW	Well-graded gravels and gravel-sand mixtures; little or no fines	100%	<50% of Coarse Fraction	<5%	Non-Plastic		>4	1 to 3
		GP	Poorly-graded gravels and gravel-sand mixtures; little or no fines						<4	<1 or >3
		SW	Well-graded sands and gravelly sands; little or no fines		>50% of Coarse Fraction				>6	1 to 3
		SP	Poorly-graded sands and gravelly sands; little or no fines						<6	<1 or >3
	Coarse- Grained Soils, borderline clean to w/fines	e.g. GW-GC, SP-SM.	Sands and gravels which are borderline between clean and with fines	100%	Varies	5% to 12%			Same as for C and	GW, GP, SW SP
III	Coarse- Grained Soils with Fines	GM	Silty gravels, gravel- sand-silt mixtures	100%	<50% of Coarse	>12% to <50%		<4 or <"A" Line		
		GC	Clayey gravels, gravel- sand-clay mixtures		Fraction			<7 and >"A" Line		
		SM	Silty sands, sand-silt mixtures		>50% of Coarse			>4 or <"A" Line		
	SC		Clayey sands, sand- clay mixtures		Fraction			>7 and >"A" Line		

TABLE 2.1 DESCRIPTION OF MATERIAL CLASSIFICATION (as defined in ASTM D2321)

Includes Test Method ASTM D2487 borderline classifications and dual symbols depending on plasticity and liquid limits.

LL = Liquid Limit. PI = Plasticity Index.

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In addition to the materials included in Table 2.1, the following materials are approved for the pipe zone or within 24 in. of fiberglass structures where shown: Lean Concrete: Free-flowing grout, mixed one (1) sack of cement per cubic yard of sand.

2.3.2.

Structural Concrete. Concrete for encasement will be 3,000 psi compressive strength as specified.

2.3.3. **Earth Backfill.** Earth backfill may be excavated and reused from trench or obtained from an approved borrow area. Material will be processed to ensure that only select material is used for backfilling operations. Material will be free of lumps, clods, large rocks, debris, trash, organic, spongy or otherwise objectionable material. The presence of such material in the backfill may preclude uniform compaction and result in excessive localized point loads on or deflections in the piping system or fiberglass structure.

All materials included in Table 2.1 above are approved for final backfill.

### 3. CONSTRUCTION

### 3.1. Sanitary Sewer System.

3.1.1. **Preparation.** Stake locations of manholes, cleanouts, fittings, valves (where applicable) and other accessories before installation for Engineer to review.

Before installation, remove foreign matter from within pipes, manholes, cleanouts, fittings, and valves. Verify material is in satisfactory condition and the valves and other mechanical devices function properly.

Do not lay pipe in water, or when trench or weather are unsuitable for work. Keep water out of trench until jointing is complete and bedding is placed to the top of pipe. When work is not in progress, close end of pipe and fittings securely so that no trench water, earth or other substances will enter pipes or fittings.

Keep inside of pipe free from foreign matter during operations by plugging or other approved method.

Place pipe so that full length of each section rests solidly upon pipe bedding, with recesses excavated to accommodate bells and joints. Take up and re-lay pipe when grade or joint is disturbed after laying.

Handle pipe and accessories so that pipe placed in trench is sound and undamaged. Take particular care not to injure pipe coating when applicable.

Cut pipe neatly, using approved type mechanical cutter without damaging pipe. Use cutters when practicable.

Pipe will be installed incompliance with Manufacturer's Specifications, and ASTM Standard D-2321-72 for "Underground Installation of Flexible Thermoplastic Sewer Pipe".

By-Pass pumping will be subsidiary to the line item for sewer installation.

3.1.2. Bedding and Backfill. Backfill compaction will be in accordance with plan details and specifications.

Do not exceed 75% of pipe manufacturer's recommendations for deflections from straight line or grade as required by vertical curves, horizontal curves, or offsets. If alignment requires deflections in excess of these limitations, use fittings.

Intersecting lines will be joined by an appropriate fitting.

Any adjustment to obtain correct line will be made by tamping or removing soil and in no case by wedging or blocking pipe.

- 3.1.3. Placing and Laying. Set and bury lines accurately to grades as shown.
- 3.1.4. Joints. Install mechanical and flanged joints in accordance with manufacturer's recommendations.

Make push-on joints in accordance with manufacturer's recommendations. Lay spigot ends downstream and push-on to full depth.

- 3.1.5. Water Line Crossing. No sanitary sewer line will be installed within 9-ft. (in all directions) of potable water line. Where the 9-ft. separation distance is not possible, contractor will refer to TCEQ §217.53 and coordinate with Engineer.
- 3.1.6. Service Connections. Service connections will be installed at each house, building, or other locations as shown and per the details.

The actual location of each service connection will be verified by the Contractor. The Contractor will confirm the location of the service connections with Engineer.

When the service line is to be terminated at the property line, the Engineer will determine the point of termination. Some of the service lines will extend on to private property to the building as shown on the plans.

A service connection will consist of a 4-in. outlet wye. The outlet will be installed in the main with the branch tilted up at an angle of 30 or 45°.

Connection: Unless otherwise noted, the service will be 4-in. diameter, SDR-35 (PS 46) PVC Pipe. Tracer wire will be installed subsidiary to each service connection. This service line will extend to the property line where it will terminate or be connected to an existing service line. The service will be installed on a minimum grade of 0.75%. If the service line is terminated, the Contractor will close the line with a PVC Stopper tightly set with solvent. The Contractor will mark all terminated service lines with a 2 x 4 wooden stake or other approved suitable marker. The stake (marker) will extend from the end of the service line to 18-in. above grade.

No connections will be made to an existing service line until the affected main and all new mains downstream of the connections have been properly tested, accepted, and approved or use by the Engineer.

- 3.1.7. **Testing.** The following described testing will be required for all new gravity sewer lines. Upon completion of the required testing, Contractor will provide a signed and notarized affidavit certifying that the system has been tested and meet the applicable requirements.
- 3.1.8. Low-pressure Air Tests. A low-pressure air test will be performed after completing a section of sewer line.

The exfiltration test will conform to 30 TAC 217.57(a)(1) using procedures described in ASTM F1417 (Polyvinyl Chloride PVC) except for testing times. Testing times will be calculated based on 30 TAC 217.57(a)(1)(B)(ii).

The tests will be performed under the observation of the Owner and Engineer.

If the exfiltration exceeds the maximum allowable amount, the Contractor will replace the section of the sewer line necessary to meet the specified limits.

3.1.9. **Gravity Systems (Infiltration or Exfiltration).** The pipe will be laid so that infiltration/exfiltration does not exceed 50 gal. per inch of diameter per mile of line for a 24-hr. period.

The Contractor will furnish a pump of sufficient capacity to remove the infiltration. The infiltration will be measured by pumping a known volume in a known amount of time.

Hydrostatic Tests for gravity systems will be performed in accordance with 30 TAC 217.57(a)(2) and as directed.

If the infiltration/exfiltration exceeds the maximum allowable amount, the Contractor will replace or repair the section of the sewer line necessary to meet the specified limits.

3.1.10. **Deflection Tests.** A deflection test will be performed on all flexible pipes (PVC).

The deflection test will conform to the requirements of 30 TAC 217.57(b) including testing after the final backfill has been in place for at least 30 days.

If the deflection exceeds the maximum allowable amount, the Contractor will replace or repair the section of the sewer line necessary to meet the specified limits.

If the deflection exceeds the maximum allowable amount, the Contractor will replace or repair the section of the sewer line necessary to meet the specified limits.

3.1.11. **System Flushing.** Upon completion of each sewer line, the Contractor will flush the sewer line with a sufficient quantity of clean water. The flushing will be performed until the water runs clear and clean.

The quantity of water will be sufficient to properly flush the line and will not be less than 200 gal. per minute.

3.1.12. **Pre/Post Construction Television Inspection**. Before construction, the Contractor will provide video inspection of the existing sewer system. Upon completion of each sewer line, the Contractor will provide video inspection service of the sewer system. All defects found will be repaired by the Contractor at his own expense.

Payment for this service will be subsidiary to the line item for sewer installation.

The video inspection will be provided to the City for their record.

3.1.13. **Final Inspection.** Before final inspection, the Contractor will complete all work on the portion of the line to be tested. The ditches will be dressed and debris removed.

The final inspection will include the entire length of the line and include cleanup.

All defects noted will be repaired by the Contractor at his own expense before final payment.

### 3.2. Precast Concrete Sanitary Sewer Manholes and Covers.

3.2.1. **Configuration.** Shaft Construction will be concentric with concentric cone top section; lipped male/female dry joints; sleeved to receive pipe. Shape will be cylindrical with minimal inside clear diameter dimensions of 48-in. Design depth will be as indicated. Clear lid opening will be 30-in. minimum or as indicated. Provide pipe entry openings as required.

Pipe Connections:

- A manhole-pipe connection must use watertight, size-on-size resilient connectors hat allow for differential settlement and must conform to American Society for Testing and Materials C-923.
- Resilient connectors will be cast into the wall of precast bases

Manhole Inverts:

- Inverts must meet the requirements of 30 TAC 217.55 (I)(2).
- The bottom of a manhole must contain a U-shaped channel that is a smooth continuation of the inlet and outlet pipes.
- A manhole connected to a pipe less than 15-in. in diameter must have a channel depth equal to at least half the largest pipe's diameter.

- A manhole connected to a pipe at least 15-in. in diameter but not more than 24-in. in diameter must have a channel depth equal to at least 3/4 of the largest pipe's diameter.
- A manhole with pipes of different sizes must have the tops of the pipes at the same elevation and flow channels in the invert sloped on an even slope from pipe to pipe.
- A bench provided above a channel must slope at a minimum of 0.5-in. per foot.
- An invert must be filleted to prevent solids from being deposited if a wastewater collection system pipe enters a manhole higher than 24-in. above a manhole invert.
- A wastewater collection system pipe entering a manhole more than 24-in. above an invert must have a drop pipe.
- 3.2.2. Examination. Verify items provided by other sections of work are properly sized and located.

Verify that built-in-items are in proper location, and ready for roughing into work.

Verify that excavation for manholes is correct.

Precast concrete sections will be inspected when delivered and all cracked or otherwise visible defective units will be rejected. Remove rejected materials from the project.

- 3.2.3. **Preparation.** Coordinate placement of inlet and outlet pipes required by other sections.
- 3.2.4. Placing Manhole Sections. Subgrade materials will be excavated to a uniform depth needed to permit the installation of Class II material, as specified and shown, to attain proper line and grade.

The elevation of the Class II material will be adjusted as required to attain proper grade and alignment of the base section.

Grout manhole inverts to achieve slope to exit piping. Grout will be installed monolithically.

The connecting pipe for installation with resilient connectors will be plain end, square cut spigots, which will not protrude more than 1-in. inside the manhole wall.

Stubs for further connections will be provided at the locations shown and be between three (3) and four (4) ft. in length and terminated in a bell and plug.

Set rings and covers level to correct elevations.

Coordinate with other sections of work to provide correct size, shape and location.

Manhole height will be adjusted by using variable height riser set as the bottom section.

The finished elevation will be attained by constructing a neck or chimney using precast concrete rings.

3.2.5. **Testing**. Manholes will be tested for leakage separately and independently of the wastewater lines by hydrostatic exfiltration testing, vacuum testing, or other approved methods.

The maximum leakage for hydrostatic testing will be 0.025 gal.-per-ft. diameter-per-ft. of manhole depth per hr. Alternate test methods must ensure compliance with the above allowable leakage.

If a manhole fails a leakage test, the manhole must be made water-tight and retested at the Contractor's expense.

Testing must meet the requirements of 30 TAC 217.58.

3.3. Excavation, Backfilling, and Compacting for Utilities.

3.3.1. **Protection and/or Removal of Existing Utilities.** The Contractor will anticipate all underground obstructions, such as but not limited to, water mains, gas lines, storm and sanitary sewers, telephone or electric light or power ducts, concrete and debris. Any such lines or obstructions indicated on the Drawings show only the approximate locations and will be verified in the field by the Contractor. The Owner and Engineer will endeavor to familiarize the Contractor with all known utilities and obstructions, but this will not relieve the Contractor from full responsibility in anticipating all underground obstructions whether or not shown on the Drawings.

The Contractor will, at his own expense, maintain in proper working order and without interruption of service all existing utilities and services which may be encountered in the work. With the consent of the Engineer and utility owner such service connections may be temporarily interrupted to permit the Contractor to remove designated lines or to make temporary changes in the locations of services. The cost of making any temporary changes will be at the Contractor's expense.

Notify all utility companies involved to have their utilities located and marked in the field. All underground utilities in a particular segment of the project will then be uncovered to verify location and elevation before construction begins in that segment of the project.

The Contractor will obtain necessary permits, except County right-of-way permits, required for completion of the project.

3.3.2. **Examination and Preparation.** Examine utility routes and coordinate excavation work to eliminate installation conflict.

Allow room for stockpiling excavated material and utility construction material during utility construction.

### 3.3.3. Trench Excavation. Procedure:

- Trenches will be excavated to indicated or specified depths by open cut method.
- During excavation, stockpile material suitable for backfilling in an orderly manner far enough from the bank of the trench to avoid overloading, slides, or cave-ins.
- Grade as necessary to prevent surface water from flowing into trenches or other excavations.
- Cut walls of trench as close to vertical as the stability of the material and trench safety will allow. Remove stones as necessary to avoid point-bearing. Over-excavate wet or unstable soil from the trench bottom to permit construction of a more stable bed for pipe. Over excavation will be filled and tamped with clean dry sand, pea gravel, or other approved material to the required grade.
- Excavate the trench the proper width as shown, or as required by the Contractor's Trench Safety Program. If the trench width below the top of pipe is wider than specified in this section or shown, install additional backfill. No additional payment will be made for additional material or work required for installation.
- Accurately grade the trench bottom to provide proper bedding as required for pipe installation.
- If any excavation is carried beyond the lines and grades required or authorized, the Contractor will, at his own expense, fill such space with suitable material and properly compact the material as directed. No additional payment will be made.
- 3.3.4. Sheeting and Bracing. If trench safety methods do not include sloping of trench walls, install sheeting and bracing; or use appropriate trench box necessary to support the sides of trenches and other excavations with vertical sides, as required by current OSHA regulations.
- 3.3.5. Water in Excavation. Keep work free from ground or surface water at all times. Provide pumps of adequate capacity or other approved method to remove water from the excavation in such a manner that it will not interfere with the progress of the work or the proper placing of other work.
- 3.3.6. **Trenching Progress.** Trenching operations for any individual utility work crew will not be in excess of 100-ft. ahead of pipe laying operations in city streets or 2,000-ft. in open country. Not more than two (2) consecutive

cross-streets may be closed to traffic by any individual utility work crew at any given time. Ensure no trenches are left open when work is not in progress. Temporarily backfill any open trenches with uncompacted material and install proper barricades at the end of each work day.

- 3.3.7. **Existing Lawns and Shrubbery.** The Contractor will take particular care to preserve existing lawns and shrubbery. Make minor pipe alignment as may be necessary.
- 3.3.8. **Existing Pavement.** Existing pavement over trenches will be removed to a width of 6-in. outside of the trench on each side. Remove to a neat line by sawing method. Take appropriate measures to prevent damage to existing pavement adjacent to the trench by wheels, tracks and/or stabilizers of excavating equipment. Remove brick pavement by hand, deliver and stack as directed by the Owner.
- 3.3.9. **Temporary Pavement.** Place a temporary pavement over an open-cut trench pavement section within the confines of an existing roadway pavement section including, but not limited to, asphalt (cold mix) and unimproved streets and roadways.

Place and compact 6-in. of flexible base course under temporary pavement sections within roadways as shown on the drawings. Apply 2-in. Type D Cold Mix on top of flexible base course.

Pavement replacement will be paid for by the linear foot, which will be total payment for tamping the backfill, placing, and compacting the base material, finishing and replacing the pavement as per the section.

### 3.4. Pipe Bedding.

### 3.4.1. Within the Pipe Zone and/or Adjacent to Fiberglass Structures. Adhere to the following:

- Accurately grade the bottom of the trench 4-in. below the bottom of the pipe and to the limits of the clear space on either side of the pipe.
- Install materials which comply with Table 2.1 above and in accordance with "Pipe Bedding Detail" shown on the Drawing.
- The initial layer of embedment material placed to receive the pipe will be brought up to a grade slightly higher than that required for the bottom of the pipe and the pipe will be placed thereon and brought to grade by tamping, or by removal of the slight excess amount of embedment under the pipe.
- Adjustment to grade line will be made by scraping away or filling with embedment materials. Wedging or blocking up of pipe will not be permitted.
- Each pipe section will have a uniform bearing on the embedment for the full length of the pipe, except immediately at the joint.
- After each pipe has been graded, aligned, placed in final position on the bedding material and joint made, sufficient embedment material will be deposited and compacted under and around each side of the pipe and back of the bell or end thereof to hold the pipe in proper position and alignment during subsequent pipe jointing and embedment operations.
- Sheeting and shoring will not be allowed in the pipe zone during or after installation of the pipe or embedment material, unless special provisions are made to ensure the specified compaction of bedding and pipe alignment is maintained after removal of sheeting and shoring.
- Minimum compaction effort within the pipe zone and adjacent to fiberglass structures will be in accordance with the following Table 3.4 based on the class of bedding material used:

Minindan Required Compaction				
Classification of Bedding Material	Standard Proctor Density ^a (Relative Density ^b shown in parentheses)			
Class I	Dumped			
Class II	≥85% standard (≥40% relative)			
Class III	≥90% standard (≥55% relative)			
Class IV	Not approved for bedding material			
Class V	Not approved for bedding material			

Table 3.4 Minimum Required Compaction

^a Standard Proctor Density per ASTM D698, moisture content will be ± 2% of optimum.

Relative Density per ASTM D4254.

3.4.2.

Utility Installation. Water Lines and Sanitary Sewers. Limit clear on either side of the pipe to 12-in. above the pipe, cut as wide as necessary to sheet and brace and properly perform the work. Provide class of bedding as shown. Install piping and appurtenances as specified.

Excavation for Appurtenances. Excavate sufficiently for valves, fittings, manholes, valve vaults, utility pull boxes and similar structures to leave at least 18-in. clear between the outer surfaces and the embankment or shoring that may be used to hold and protect the embankment wall. Install valves, fittings, manholes or valve vault structure, piping and appurtenances as specified. Any other-depth excavation will be refilled with lean concrete or other suitable compacted material approved by the Engineer, at no additional cost to the Owner.

3.4.3. Final Backfill. Backfill trenches to ground surface with material as specified. Reopen trenches improperly backfilled to depth required for proper compaction. Refill and compact as specified, or otherwise correct the condition in an approved manner.

Take care to avoid contacting pipe or structure to be backfilled with compaction equipment. Do not use compaction equipment directly over the pipe until sufficient initial backfill has been placed to assure such equipment will not be damage or disturb the pipe.

All forms, lumber, trash, and debris will be removed from trenches, manholes, and other utility structures before backfilling.

Dispose of unacceptable backfill material and provide suitable material for backfill at no additional cost to the Owner.

3.4.4. **Open Areas.** Above the pipe zone, deposit earth backfill from excavated material, compact to minimum of 85% of maximum density per ASTM D698, while maintaining moisture within ± 2% of optimum. Excavated material placed will be free of rock greater than 2-in. in any direction.

Backfill for valves, fittings, manholes, utility pull boxes and other utility structures will be placed in accordance with applicable Specification Sections.

3.4.5. **Pavement Section.** Above the pipe zone to below the flexible base material, deposit earth backfill from excavated material, compact to minimum of 95% of maximum density per ASTM D698, while maintaining moisture within ± 2% of optimum; or deposit ASTM D2487 Class II material in 6-in. lifts, compact to 40% relative density according to ASTM D4254.

For valves, fittings, manholes, valve vaults or boxes in pavement sections, backfill with Class II material to bottom of proposed pavement. Backfill material will be deposited in 6-in. lifts. Class II material must be compacted to 40% relative density according to ASTM D4254.

- 3.4.6. **Disposal of Excess Material.** Remove waste and excess excavated material from the construction site before final inspection. Legally dispose of material:
  - At a licensed and approved site.
  - On adjacent private property with written and notarized permission from the property owner.

- On Owner property with written and notarized permission from the Owner.
- All costs associated with waste material removal and disposal will be paid for by the Contractor.

### MEASUREMENT

Measurements and Payment will include the following terms:

- Remove Structural Manhole Each,
- 48" Precast Concrete Manhole (0'-4') Each,
- 48" Precast Concrete Manhole (4'-8') Each,
- 48" Precast Concrete Manhole (8'-12') Each,
- 48" Precast Concrete Manhole (12'-16') Each,
- Reconnect Existing Sewer Mains Each,
- Tie-In to Existing Manhole Each,
- 4" SDR-35 PVC Gravity Sewer Line Linear Foot,
- 6" SDR-35 PVC Gravity Sewer Line Linear Foot,
- 8" SDR-35 PVC Gravity Sewer Line Linear Foot,
- Encasement for 4" Sewer Line (Bore or Open-Cut) Linear Foot,
- Encasement for 6" Sewer Line (Bore or Open-Cut) Linear Foot,
- Encasement for 8" Sewer Line (Bore or Open-Cut) Linear Foot,
- Remove or Abandon/ Pressure Grout Exist. Sewer Line (2"-12") Linear Foot,
- Trench Safety (Depths Greater than 5 ft.) Linear Foot,
- Pavement Replacement Linear Foot,
- Pre/Post Television Inspection Linear Foot,
- Flowable Backfill Cubic Yards,
- Sewage Service Line Each, and
- Plug Wastewater Line Each.

### PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit prices bid for the various items of the work. The price is full compensation for removal of existing sewer components (line, manholes, and appurtenances), furnishing, hauling, placing, and installing the materials; for inspecting, disinfection, and testing; and for other materials, labor, equipment, tools, and incidentals. All fittings, connections, tracer wire, etc. are considered subsidiary to the individual line items for sewer line installation.

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4.

# Special Specification 7251 SUBSURFACE UTILITY LOCATE



# 1. DESCRIPTION

Perform Quality Level A to locate a subsurface utility facility as shown on the plans or as directed. Locate means to obtain precise horizontal and vertical position, material type, condition, size, and other data that may be obtainable about the utility facility and its surrounding environment through exposure by non-destructive excavation techniques that ensures the integrity of the utility facility. Subsurface Utility Locate Quality Level A are inclusive of Quality Levels B, C, and D.

Quality Levels are defined by ASCE Standard 38-02 titled *Standard Guideline for the Collection and Depiction of Existing Utility Data.* 

### 2. MATERIALS

Use materials that meet the requirements of the following Items.

- Item 132 "Embankment"
- Item 334 "Hot-Mix Cold-Laid Asphalt Concrete Pavement"
- Item 340 "Dense-Graded Hot-Mix Asphalt (Small Quantity)"
- Item 400 "Excavation and Backfill for Structures"
- Item 421 "Hydraulic Cement Concrete"
- Item 700 "Pothole Repair."

### 3. CONSTRUCTION

- 3.1. **Surface Locate**. Contact utility owner to verify location of the utility facility before beginning subsurface location.
- 3.2. **Subsurface Locate**. Provide the locate method and equipment to the Engineer before work begins. Excavate using a method that is nondestructive to the utility facility. Expose and verify, by survey, the precise location of the utility facility.
- 3.3. **Surface Marking**. For locates within an existing roadbed carrying traffic, furnish and install an aboveground marker directly above centerline of the utility facility. For locates outside an existing roadbed, furnish and install a 4-in. pipe directly above centerline of the utility facility. The pipe should be capped and extend from the top of the utility facility to 4-in. above the surface.
- 3.4. **Removing Pavement or Concrete.** Remove material as necessary to locate the utility facility. Ensure all loose materials are removed and only sound material is left in place. Increase the cut and restore area to remove loose materials.
- 3.5. Backfill.
- 3.5.1. **Outside Roadbed.** Backfill minor excavations outside the edges of a proposed roadbed with Type B Embankment in accordance with Item 132, "Embankment." Place 4 in. of topsoil.
- 3.5.2. Within Roadbed. Backfill excavations within a proposed or existing roadbed with Cement-Stabilized Backfill in accordance with Item 400, "Excavation and Backfill for Structures." Replace pavement in accordance with Section 3.6, "Cutting and Restoring Within Roadbed."

- 3.6. Cutting and Restoring Within Roadbed. Saw cut all edges for areas larger than 3 sq. ft.
- 3.6.1. Flexible Pavement. Perform work in accordance with Item 700, "Pothole Repair." Hot-Mix Asphalt (HMA) must be placed at a depth equal to the existing depth of Pavement Structure. Place Hot-Mix Cold-Laid Asphalt Type C for areas equal to or less than 3 sq. ft. Use HMA for areas greater than 3 sq. ft. HMA will be Type B with 2 in. Type D surface.
- 3.6.2. Concrete Pavement. Concrete must be placed at a depth equal to the existing depth of concrete pavement. Repair in accordance with Item 361, "Repair of Concrete Pavement." Repair using half-depth for areas equal to or less than 10 sq. ft. Repair using full-depth for areas greater than 10 sq. ft.
- 3.6.3. **Concrete**. Concrete must be placed at a depth equal to the existing depth of concrete. Place class of concrete in accordance with Item 421, "Hydraulic Cement Concrete." Areas larger than 3 sq. ft. will require reinforcing bars equal to the adjacent concrete reinforcement with reinforcement doweled 12 in. into existing concrete.
- 3.7. **Locate Report**. Provide a report of the locate data to the Engineer. Provide survey data to the Engineer in Microsoft Excel or approved alternative. The data should include utility owner name, utility service type, conduit size, conduit type, number of conduits, station, offset, and elevation. The data should be provided for each utility conduit if multiple conduits for the same utility owner are at the locate site. All conduits for the same utility owner at the locate site should be located with data provided in the same report.
- 3.8. Utility Damage. If any damage results from an act or omission on the part of or on behalf of the Contractor, take corrective action to restore the damaged property to a condition similar or equal to that existing before the damage was done. Be responsible for any damage to the utility facility during the locating process. If damage occurs, the Engineer will stop work and notify the appropriate utility facility owner, the State, and appropriate regulatory agencies. The regulatory agencies include but are not limited to the Railroad Commission of Texas and the Texas Commission on Environmental Quality. The Engineer will not resume work until the utility facility owner has determined the corrective action to be taken. The Engineer will be liable for all costs involved in the repair or replacement of the utility facility.

### 4. MEASUREMENT

This item will be measured by each utility facility locate for each utility owner. Each conduit for the same utility owner at the locate site will not be paid individually. Different utility owners in the same location should be paid separately.

# 5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for the various designations of "Subsurface Utility Locate."

This price is full compensation for utility coordination, surface location, excavation, embankment, removal of concrete and pavement, backfill material, topsoil, disposal of material, saw cutting, cutting and restoring pavement and concrete, survey, traffic control, barricades, equipment, labor, tools, and incidentals.

# Special Provision to Item 000 Schedule of Liquidated Damages

The dollar amount of daily contract administration Liquidated Damages per Working Day is \$832.00.

# Special Provision to Item 000 Nondiscrimination



# 1. DESCRIPTION

All recipients of federal financial assistance are required to comply with various nondiscrimination laws including Title VI of the Civil Rights Act of 1964, as amended, (Title VI). Title VI forbids discrimination against anyone in the United States on the grounds of race, color, or national origin by any agency receiving federal funds.

Owner, as a recipient of Federal financial assistance, and under Title VI and related statutes, ensures that no person shall on the grounds of race, religion (where the primary objective of the financial assistance is to provide employment per 42 U.S.C. § 2000d-3), color, national origin, sex, age or disability be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any of Owner's programs or activities.

## 2. DEFINITION OF TERMS

Where the term "contractor" appears in the following six nondiscrimination clauses, the term "contractor" is understood to include all parties to contracts or agreements with the Owner.

# 3. NONDISCRIMINATION PROVISIONS

During the performance of this contract, the contractor agrees as follows:

- 3.1. **Compliance with Regulations**. The Contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- 3.2. **Nondiscrimination**. The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- 3.3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- 3.4. Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Owner or the Texas Department of Transportation to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the Owner or the Texas Department of Transportation as appropriate, and shall set forth what efforts it has made to obtain the information.

- 3.5. Sanctions for Noncompliance. In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Owner shall impose such contract sanctions as it, the Owner may determine to be appropriate, including, but not limited to:
  - withholding of payments to the contractor under the contract until the contractor complies, and/or
  - cancellation, termination or suspension of the contract, in whole or in part.
- 3.6. Incorporation of Provisions. The contractor shall include the provisions of paragraphs (3.1) through (3.6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Owner may direct as a means of enforcing such provisions including sanctions for non-compliance: provided, however that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Owner to enter into such litigation to protect the interests of the Owner, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

# Special Provision to Item 000 Certification of Nondiscrimination in Employment



## 1. GENERAL

By signing this proposal, the Bidder certifies that Bidder has participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, or if Bidder has not participated in a previous contract of this type, or if Bidder has had previous contract or subcontracts and has not filed, Bidder will file with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

**Note**—The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by Bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

# Special Provision to Item 000

**GENERAL** 

# Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)



## In addition to the affirmative action requirements of the Special Provision titled "Standard Federal Equal Employment Opportunity Construction Contract Specifications" as set forth elsewhere in this proposal, the Bidder's attention is directed to the specific requirements for utilization of minorities and females as set forth below.

## 2. GOALS

1.

### 2.1. Goals for minority and female participation are hereby established in accordance with 41 CFR 60-4.

# 2.2. The goals for minority and female participation expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area are as follows:

Goals for minority participation in each trade, %	Goals for female participation in each trade, %		
See Table 1	6.9		

- 2.3. These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it will apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction. The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 will be based on its implementation of the Standard Federal Equal Employment Opportunity Construction Contract Specifications Special Provision and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and the Contractor must make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority and female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals will be a violation of the Contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.
- 2.4. A Contractor or subcontractor will be considered in compliance with these provisions by participation in the Texas Highway-Heavy Branch, AGC, Statewide Training and Affirmative Action Plan. Provided that each Contractor or subcontractor participating in this plan must individually comply with the equal opportunity clause set forth in 41 CFR 60-1.4 and must make a good faith effort to achieve the goals set forth for each participating trade in the plan in which it has employees. The overall good performance of other Contractors and subcontractors toward a goal in an approved plan does not excuse any covered Contractor's or subcontractors participating in the plan must be able to demonstrate their participation and document their compliance with the provisions of this Plan.

### 3. SUBCONTRACTING

The Contractor must provide written notification to the Owner within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation pending concurrence of the Owner in the award. The notification will list the names,

address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.

### 4. COVERED AREA

As used in this special provision, and in the Contract resulting from this solicitation, the geographical area covered by these goals for female participation is the State of Texas. The geographical area covered by these goals for other minorities are the counties in the State of Texas as indicated in Table 1.

### REPORTS

5.

The Contractor is hereby notified that he may be subject to the Office of Federal Contract Compliance Programs (OFCCP) reporting and record keeping requirements as provided for under Executive Order 11246 as amended. OFCCP will provide direct notice to the Contractor as to the specific reporting requirements that he will be expected to fulfill.

County	Participation, %	County	Participation, %
Anderson	22.5	Chambers	27.4
Andrews	18.9	Cherokee	22.5
Angelina	22.5	Childress	11.0
Aransas	44.2	Clay	12.4
Archer	11.0	Cochran	19.5
Armstrong	11.0	Coke	20.0
Atascosa	49.4	Coleman	10.9
Austin	27.4	Collin	18.2
Bailey	19.5	Collingsworth	11.0
Bandera	49.4	Colorado	27.4
Bastrop	24.2	Comal	47.8
Baylor	11.0	Comanche	10.9
Bee	44.2	Concho	20.0
Bell	16.4	Cooke	17.2
Bexar	47.8	Coryell	16.4
Blanco	24.2	Cottle	11.0
Borden	19.5	Crane	18.9
Bosque	18.6	Crockett	20.0
Bowie	19.7	Crosby	19.5
Brazoria	27.3	Culberson	49.0
Brazos	23.7	Dallam	11.0
Brewster	49.0	Dallas	18.2
Briscoe	11.0	Dawson	19.5
Brooks	44.2	Deaf Smith	11.0
Brown	10.9	Delta	17.2
Burleson	27.4	Denton	18.2
Burnet	24.2	DeWitt	27.4
Caldwell	24.2	Dickens	19.5
Calhoun	27.4	Dimmit	49.4
Callahan	11.6	Donley	11.0
Cameron	71.0	Duval	44.2
Camp	20.2	Eastland	10.9
Carson	11.0	Ector	15.1
Cass	20.2	Edwards	49.4
Castro	11.0	Ellis	18.2

#### Table 1 Goals for Minority Participation

County	Participation, %	County	Participation, %
El Paso	57.8	Kenedy	44.2
Erath	17.2	Kent	10.9
Falls	18.6	Kerr	49.4
Fannin	17.2	Kimble	20.0
Favette	27.4	King	19.5
Fisher	10.9	Kinney	49.4
Floyd	19.5	Kleberg	44.2
Foard	11.0	Knox	10.9
Fort Bend	27.3	Lamar	20.2
Franklin	17.0	Lamh	10 5
Freestone	17.2	Lampasas	17.5
Frio	10.0	Lampasas	10.0
Caipac	47.4		47.4
Gallies	19.0		27.4
Galvesion	28.9	Lee	24.2
Garza	19.5	Leon	27.4
Gillespie	49.4	Liberty	27.3
Glasscock	18.9	Limestone	18.6
Goliad	27.4	Lipscomb	11.0
Gonzales	49.4	Live Oak	44.2
Gray	11.0	Llano	24.2
Grayson	9.4	Loving	18.9
Gregg	22.8	Lubbock	19.6
Grimes	27.4	Lynn	19.5
Guadalupe	47.8	Madison	27.4
Hale	19.5	Marion	22.5
Hall	11.0	Martin	18.9
Hamilton	18.6	Mason	20.0
Hansford	11.0	Matagorda	27.4
Hardeman	11.0	Maverick	49.4
Hardin	22.6	McCulloch	20.0
Harris	27.3	McLennan	20.7
Harrison	27.3	McMullon	10 /
Hartlov	11 0	Modina	47.4
Hackoll	10.0	Monard	20.0
Have	24.1	Midland	20.0
∏dyS Homphill	24.1	Milam	19.1
Hemphili	11.0	IVIIIdIII Millo	10.0
Henderson	22.5	IVIIIIS	18.0
Hidaigo	12.8	Mitchell	10.9
HIII	18.6	Montague	17.2
Hockley	19.5	Montgomery	27.3
Hood	18.2	Moore	11.0
Hopkins	17.2	Morris	20.2
Houston	22.5	Motley	19.5
Howard	18.9	Nacogdoches	22.5
Hudspeth	49.0	Navarro	17.2
Hunt	17.2	Newton	22.6
Hutchinson	11.0	Nolan	10.9
Irion	20.0	Nueces	41.7
Jack	17.2	Ochiltree	11.0
Jackson	27.4	Oldham	11.0
Jasper	22.6	Orange	22.6
Jeff Davis	49.0	Palo Pinto	17.2
lefferson	22.6	Panola	22.5
lim Hoga	<u> </u>	Parker	18.2
lim Wells	<u> </u>	Parmer	11.0
Inhnson	12 1	Peros	10.0
	10.2	Dolk	10.7 77 A
JUIIES Karpos	11.0	r UIN Dottor	21.4 0.2
Kaufman	47.4	r Ullei Drosidio	Y.3 40.0
Kandall	18.2	Piesiulo Dandall	49.0
Kendali	49.4	Kanuali	9.3

County	Participation, %	County	Participation, %
Rains	17.2	Reagan	20.0
Real	49.4	Throckmorton	10.9
Red River	20.2	Titus	20.2
Reeves	18.9	Tom Green	19.2
Refugio	44.2	Travis	24.1
Roberts	11.0	Trinity	27.4
Robertson	27.4	Tyler	22.6
Rockwall	18.2	Upshur	22.5
Runnels	20.0	Upton	18.9
Rusk	22.5	Uvalde	49.4
Sabine	22.6	Val Verde	49.4
San Augustine	22.5	Van Zandt	17.2
San Jacinto	27.4	Victoria	27.4
San Patricio	41.7	Walker	27.4
San Saba	20.0	Waller	27.3
Schleicher	20.0	Ward	18.9
Scurry	10.9	Washington	27.4
Shackelford	10.9	Webb	87.3
Shelby	22.5	Wharton	27.4
Sherman	11.0	Wheeler	11.0
Smith	23.5	Wichita	12.4
Somervell	17.2	Wilbarger	11.0
Starr	72.9	Willacy	72.9
Stephens	10.9	Williamson	24.1
Sterling	20.0	Wilson	49.4
Stonewall	10.9	Winkler	18.9
Sutton	20.0	Wise	18.2
Swisher	11.0	Wood	22.5
Tarrant	18.2	Yoakum	19.5
Taylor	11.6	Young	11.0
Terrell	20.0	Zapata	49.4
Terry	19.5	Zavala	49.4

# Special Provision to Item 000 Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)



1.	GENERAL
1.1.	<ul> <li>As used in these specifications:</li> <li>"Covered area" means the geographical area described in the solicitation from which this Contract resulted;</li> <li>"Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;</li> <li>"Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.</li> <li>"Minority" includes:</li> </ul>
	<ul> <li>Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);</li> <li>Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);</li> <li>Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and</li> <li>American Indian or Alaskan Native (all persons having origins in any of the original peoples of North American and maintaining identifiable tribal affiliations through membership and participation or community identification).</li> </ul>
1.2.	Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it will physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this Contract resulted.
1.3.	If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) will be in accordance with that plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the equal employment opportunity (EEO) clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractor's four a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
1.4.	The Contractor will implement the specific affirmative action standards provided in Section 1.7.1. through Section 1.7.16. of these specifications. The goals set forth in the solicitation from which this Contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction Contractors performing Contracts in geographical areas where they do not have a Eederal or federally assisted construction Contract will apply the minority and female goals

Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

- 1.5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women will excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
- 1.6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
- 1.7. The Contractor will take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications will be based upon its effort to achieve maximum results from its actions. The Contractor will document these efforts fully, and will implement affirmative action steps at least as extensive as the following:
- 1.7.1. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor will specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
- 1.7.2. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- 1.7.3. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-thestreet applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this will be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
- 1.7.4. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral Process has impeded the Contractor's efforts to meet its obligations.
- 1.7.5. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the U.S. Department of Labor. The Contractor will provide notice of these programs to the sources compiled under 7b above.
- 1.7.6. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and Collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- 1.7.7. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other

employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., before the initiation of construction work at any job site. A written record must be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

- 1.7.8. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- 1.7.9. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month before the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor will send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- 1.7.10. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
- 1.7.11. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- 1.7.12. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- 1.7.13. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- 1.7.14. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities will be provided to assure privacy between the sexes.
- 1.7.15. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
- 1.7.16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- 1.8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (Section 7.1. through Section 7.16.). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under Section 7.1. through Section 7.16. of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation will not be a defense for the Contractor's noncompliance.
- 1.9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor

may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

- 1.10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- 1.11. The Contractor will not enter into any Subcontract with any person or firm debarred from Government Contracts pursuant to Executive Order 11246.
- 1.12. The Contractor will carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties will be in violation of these specifications and Executive Order 11246, as amended.
- 1.13. The Contractor, in fulfilling its obligations under these specifications, will implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director will proceed in accordance with 41 CFR 60-4.8.
- 1.14. The Contractor will designate a responsible official to monitor all employment-related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records must at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records must be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.
- 1.15. Nothing herein provided will be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).
- 1.16. In addition to the reporting requirements set forth elsewhere in this Contract, the Contractor and the subcontractors holding subcontracts, not including material suppliers, of \$10,000 or more, will submit for every month of July during which work is performed, employment data as contained under Form PR 1391 (Appendix C to 23 CFR, Part 230), and in accordance with the included instructions.

# Special Provision to Item 000 On-the-Job Training Program



# 1. DESCRIPTION

The primary objective of this Special Provision is the training and advancement of minorities, women and economically disadvantaged persons toward journeyworker status. Accordingly, make every effort to enroll minority, women and economically disadvantaged persons to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and will not be used to discriminate against any applicant for training, whether or not he/she is a member of a minority group.

## 2. TRAINEE ASSIGNMENT

Training assignments are based on the past volume of state-let highway construction contracts awarded with the Department. Contractors meeting the selection criteria will be notified of their training assignment at the beginning of the reporting year by the Department's Office of Civil Rights.

### 3. PROGRAM REQUIREMENTS

Fulfill all of the requirements of the On-the-Job Training Program including the maintenance of records and submittal of periodic reports documenting program performance. Trainees will be paid at least 60% of the appropriate minimum journeyworker's rate specified in the Contract for the first half of the training period, 75% for the third quarter, and 90% for the last quarter, respectively.

### 4. REIMBURSEMENT

If requested, Contractors may be reimbursed \$0.80 per training hour at no additional cost to the Department. Training may occur on this project, all other Department contracts, or local-administered federal-aid projects with concurrence of the local government entity. However, reimbursement for training is not available on projects to the extent that such projects that do not contain federal funds.

### 5. COMPLIANCE

The Contractor will have fulfilled the contractual responsibilities by having provided acceptable training to the number of trainees specified in their goal assignment. Noncompliance may be cause for corrective and appropriate measures pursuant to Article 8.7., "Abandonment of Work or Default of Contract," which may be used to comply with the sanctions for noncompliance pursuant to 23 CFR Part 230.

# Special Provision 000 Cargo Preference Act Requirements in Federal Aid Contracts



## 1. DESCRIPTION

All recipients of federal financial assistance are required to comply with the U.S. Department of Transportation's (DOT) Cargo Preference Act Requirements, 46 CFR Part 381, Use of United States-Flag Vessels.

This requirement applies to material or equipment that is acquired specifically for a Federal-aid highway project. It is not applicable to goods or materials that come into inventories independent of a Federal Highway Administration (FHWA) funded contract.

When oceanic shipments are necessary for materials or equipment acquired for a specific Federal-aid construction project, the contractor agrees to:

- Utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- Furnish a legible copy of a rated, on-board commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of 46 CFR Part 381 Section 7, "Federal Grant, Guaranty, Loan and Advance of Funds Agreements," within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, to both the Engineer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
- Insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

# Special Provision to Item 000 Disadvantaged Business Enterprise in Federal-Aid Contracts



# 1. DESCRIPTION

The purpose of this Special Provision is to carry out the U.S. Department of Transportation's (DOT) policy of ensuring nondiscrimination in the award and administration of DOT-assisted Contracts and creating a level playing field on which firms owned and controlled by individuals who are determined to be socially and economically disadvantaged can compete fairly for DOT-assisted Contracts.

## 2. DISADVANTAGED BUSINESS ENTERPRISE IN FEDERAL-AID CONTRACTS

2.1. **Policy**. It is the policy of the DOT and the Texas Department of Transportation (Department) that DBEs, as defined in 49 CFR Part 26, Subpart A, and the Department's DBE Program, will have the opportunity to participate in the performance of Contracts financed in whole or in part with federal funds. The DBE requirements of 49 CFR Part 26, and the Department's DBE Program, apply to this Contract as follows.

The Contractor will solicit DBEs through reasonable and available means, as defined in 49 CFR Part 26, Appendix A, and the Department's DBE Program, or show a good faith effort to meet the DBE goal for this Contract.

The Contractor, subrecipient, or subcontractor will not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. Carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted Contracts. Failure to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the recipient deems appropriate.

The requirements of this Special Provision must be physically included in any subcontract.

By signing the Contract proposal, the Bidder is certifying that the DBE goal as stated in the proposal will be met by obtaining commitments from eligible DBEs or that the Bidder will provide acceptable evidence of good faith effort to meet the commitment.

- 2.2. Definitions.
- 2.2.1. Administrative Reconsideration. A process by which the low bidder may request reconsideration when the Department determines the good faith effort (GFE) requirements have not been met.
- 2.2.2. Commercially Useful Function (CUF). A CUF occurs when a DBE has the responsibility for the execution of the work and carrying out such responsibilities by actually performing, managing, and supervising the work.
- 2.2.3. **Disadvantaged Business Enterprise (DBE).** A for-profit small business certified through the Texas Unified Certification Program in accordance with 49 CFR Part 26, that is at least 51% owned by one or more socially and economically disadvantaged individuals, or in the case of a publicly owned business, in which is at least 51% of the stock is owned by one or more socially and economically disadvantaged individuals, and whose management and daily business operations are controlled by one or more of the individuals who own it.
- 2.2.4. **DBE Joint Venture.** An association of a DBE firm and one or more other firms to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills, and knowledge, and

in which the DBE is responsible for a distinct, clearly defined portion of the work of the Contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

- 2.2.5. **DOT.** The U.S. Department of Transportation, including the Office of the Secretary, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the Federal Aviation Administration (FAA).
- 2.2.6. Federal-Aid Contract. Any Contract between the Owner and a Contractor that is paid for in whole or in part with DOT financial assistance.
- 2.2.7. **Good Faith Effort.** All necessary and reasonable steps to achieve the contract goal which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if not fully successful. Good faith efforts are evaluated prior to award and throughout performance of the Contract. For guidance on good faith efforts, see 49 CFR Part 26, Appendix A.
- 2.2.8. North American Industry Classification System (NAICS). A designation that best describes the primary business of a firm. The NAICS is described in the North American Industry Classification Manual—United States, which is available on the Internet at the U.S. Census Bureau website: http://www.census.gov/eos/www/naics/.
- 2.2.9. Race-Conscious. A measure or program that is focused specifically on assisting only DBEs, including women-owned businesses.
- 2.2.10. **Race-Neutral DBE Participation.** Any participation by a DBE through customary competitive procurement procedures.
- 2.2.11. **Texas Unified Certification Program (TUCP) Directory.** An online directory listing all DBEs currently certified by the TUCP. The Directory identifies DBE firms whose participation on a Contract may be counted toward achievement of the assigned DBE Contract goal.
- 2.3. Contractor's Responsibilities.
- 2.3.1. **DBE Liaison Officer**. Designate a DBE liaison officer who will administer the Contractor's DBE program and who will be responsible for maintenance of records of efforts and contacts made to subcontract with DBEs.
- 2.3.2. Compliance Tracking System (CTS). This Contract is subject to Contract compliance tracking. Contractors and DBEs are required to provide any noted and requested Contract compliance-related data to the Owner. This includes, but is not limited to, commitments, payments, substitutions, and good faith efforts. Contractors and DBEs are responsible for responding by any noted response date or due date to any instructions or request for information by the Owner.
- 2.3.3. **Apparent Low Bidder**. The apparent low bidder must submit DBE commitments to satisfy the DBE goal or submit good faith effort Form 2603 and supporting documentation demonstrating why the goal could not be achieved, in whole or part, no later than 5 calendar days after bid opening. The means of transmittal and the risk of timely receipt of the information will be the bidder's responsibility and no extension of the 5-calendar-day timeframe will be allowed for any reason.
- 2.3.4. **DBE Contractor.** A DBE Contractor may receive credit toward the DBE goal for work performed by its own forces and work subcontracted to DBEs. In the event a DBE subcontracts to a non-DBE, that information must be reported monthly.
- 2.3.5. DBE Committal. Only those DBEs certified by the TUCP are eligible to be used for goal attainment. The Directory can be accessed at the following Internet address: https://txdot.txdotcms.com/FrontEnd/VendorSearchPublic.asp?TN=txdot&XID=2340.

A DBE must be certified on the day the commitment is considered and at time of subcontract execution. It is the Contractor's responsibility to ensure firms identified for participation are approved certified DBE firms.

The Bidder is responsible to ensure that all submittals are checked for accuracy. Any and all omissions, deletions, and/or errors that may affect the end result of the commitment package are the sole liabilities of the bidder.

Commitments in excess of the goal are considered race-neutral commitments.

- 2.3.6. **Good Faith Effort Requirements.** A Contractor who cannot meet the Contract goal, in whole or in part, must make adequate good faith efforts to obtain DBE participation as so stated and defined in 49 CFR Part 26, Appendix A.
- 2.3.6.1. Administrative Reconsideration. If the Owner determines that the apparent low bidder has failed to satisfy the good faith efforts requirement, the Owner will notify the Bidder of the failure and will give the Bidder an opportunity for administrative reconsideration.

The Bidder must request an administrative reconsideration of that determination within 3 days of the date of receipt of the notice. The request must be submitted directly to the Owner.

If a reconsideration request is timely received, the reconsideration decision will be made by the Owner's DBE liaison officer or, if the DBE liaison officer took part in the original determination that the Bidder failed to satisfy the good faith effort requirements, an Owner employee who holds a senior leadership position and reports directly to the executive officer, and who did not take part in the original determination will act as an administrative hearing officer. The Bidder may provide written documentation or argument concerning whether the assigned DBE contract goal was met or whether adequate good faith efforts were made to meet the Contract goal.

The DBE liaison or other Owner employee making the reconsideration determination may request a meeting with the Bidder to discuss whether the goal commitments were met or whether adequate good faith efforts were made to obtain the commitments to meet the Contract goal.

The meeting must be held within 7 days of the date of the request submitted under this section. If the Bidder is unavailable to meet during the 7-day period, the reconsideration decision will be made on the written information provided by the Bidder.

The Owner will provide to the Bidder a written decision that explains the basis for finding that the Bidder did not meet the Contract goal or did not make adequate good faith efforts to meet the Contract goal, within 7 days of the date of the notice issued in this section.

The reconsideration decision is final and not subject to administrative appeal.

2.3.7. **Determination of DBE Participation**. The work performed by the DBE must be reasonably construed to be included in the work area and NAICS work code identified by the Contractor in the approved commitment.

Participation by a DBE on a Contract will not be counted toward DBE goals until the amount of the participation has been paid to the DBE.

Payments made to a DBE that was not on the original commitment may be counted toward the Contract goal if that DBE was certified as a DBE before the execution of the subcontract and has performed a Commercially Useful Function.

The total amount paid to the DBE for work performed with its own forces is counted toward the DBE goal. When a DBE subcontracts part of the work of its Contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the subcontractor is itself a DBE.

DBE Goal credit for the DBE subcontractors leasing of equipment or purchasing of supplies from the Contractor or its affiliates is not allowed. Project materials or supplies acquired from an affiliate of the Contractor cannot directly or indirectly (second or lower tier subcontractor) be used for DBE goal credit.

If a DBE firm is declared ineligible due to DBE decertification after the execution of the DBE's subcontract, the DBE firm may complete the work and the DBE firm's participation will be counted toward the Contract goal. If the DBE firm is decertified before the DBE firm has signed a subcontract, the Contractor is obligated to replace the ineligible DBE firm or demonstrate that it has made good faith efforts to do so.

The Contractor may count 100% of its expenditure to a DBE manufacturer. According to 49 CFR 26.55(e)(1)(i), a DBE manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the Contract and of the general character described by the specifications.

The Contractor may count only 60% of its expenditure to a DBE regular dealer. According to 49 CFR 26.55(e)(2)(i), a DBE regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles, or equipment of the general character described by the specifications and required under the Contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. A firm may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business if the firm both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment must be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis. A long-term lease with a third-party transportation company is not eligible for 60% goal credit.

With respect to materials or supplies purchased from a DBE that is neither a manufacturer nor a regular dealer, the Contractor may count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site.

A Contractor may count toward its DBE goal a portion of the total value of the Contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the Contract performed by the DBE.

2.3.8. **Commercially Useful Function**. It is the Contractor's obligation to ensure that each DBE used on federal-assisted contracts performs a commercially useful function on the Contract.

The Owner will monitor performance during the Contract to ensure each DBE is performing a CUF.

Under the terms established in 49 CFR 26.55, a DBE performs a CUF when it is responsible for execution of the work of the Contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved.

With respect to material and supplies used on the Contract, a DBE must be responsible for negotiating price, determining quality and quantity, ordering the material, installing the material, if applicable, and paying for the material itself.

With respect to trucking, the DBE trucking firm must own and operate at least one fully licensed, insured, and operational truck used on the Contract. The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Contract. The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE that leases trucks equipped with drivers from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE leased trucks equipped with drivers not to exceed the value of transportation services on the Contract provided by DBE-owned trucks or leased trucks with DBE employee drivers. Additional participation by non-DBE owned trucks equipped with drivers receives credit only for the fee or commission it receives as a result of the lease arrangement.

A DBE does not perform a CUF when its role is limited to that of an extra participant in a transaction, Contract, or project through which funds are passed in order to obtain the appearance of DBE participation. The Owner will evaluate similar transactions involving non-DBEs in order to determine whether a DBE is an extra participant.

If a DBE does not perform or exercise responsibility for at least 30% of the total cost of its Contract with its own work force, or the DBE subcontracts a greater portion of the work than would be expected on the basis of normal industry practice for the type of work involved, the Owner will presume that the DBE is not performing a CUF.

If the Owner determines that a DBE is not performing a CUF, no work performed by such DBE will count as eligible participation. The denial period of time may occur before or after a determination has been made by the Owner.

In case of the denial of credit for non-performance, the Contractor will be required to provide a substitute DBE to meet the Contract goal or provide an adequate good faith effort when applicable.

2.3.8.1. **Rebuttal of a Finding of No Commercially Useful Function**. Consistent with the provisions of 49 CFR 26.55(c)(4)&(5), before the Owner makes a final finding that no CUF has been performed by a DBE, the Owner will notify the DBE and provide the DBE the opportunity to provide rebuttal information.

CUF determinations are not subject to administrative appeal.

2.3.9. Joint Check. The use of joint checks between a Contractor and a DBE is allowed with Owner approval. To obtain approval, the Contractor must submit a completed Form 2178, "DBE Joint Check Approval," to the Owner.

The Owner will closely monitor the use of joint checks to ensure that such a practice does not erode the independence of the DBE nor inhibit the DBE's ability to perform a CUF. When joint checks are utilized, DBE credit toward the Contract goal will be allowed only when the subcontractor is performing a CUF in accordance with 49 CFR 26.55(c)(1).

Long-term or open-ended joint checking arrangements may be a basis for further scrutiny and may result in the lack of participation towards the Contract goal requirement if DBE independence cannot be established.

Joint checks will not be allowed simply for the convenience of the Contractor.

If the proper procedures are not followed or the Owner determines that the arrangements result in a lack of independence for the DBE involved, no credit for the DBE's participation as it relates to the material cost will be used toward the Contract goal requirement, and the Contractor will need to make up the difference elsewhere on the project.

2.3.10. **DBE Termination and Substitution.** No DBE named in the commitment submitted under Section 2.3.5. will be terminated for convenience, in whole or part, without the Owner's approval. This includes, but is not limited to, instances in which a Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

Unless consent is provided, the Contractor will not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

The Contractor, prior to submitting its request to terminate, must first give written notice to the DBE of its intent to terminate and the reason for the termination. The Contractor will copy the Owner on the Notice of Intent to terminate.

The DBE has 5 calendar days to respond to the Contractor's notice and will advise the Contractor and the Owner of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Owner should not approve the prime Contractor's request for termination.

The Owner may provide a shorter response time if required in a particular case as a matter of public necessity.

The Owner will consider both the Contractor's request and DBE's stated position prior to approving the request. The Owner may provide a written approval only if it agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate the DBE. If the Owner does not approve the request, the Contractor must continue to use the committed DBE firm in accordance with the Contract. For guidance on what good cause includes, see 49 CFR 26.53.

Good cause does not exist if the Contractor seeks to terminate, reduce, or substitute a DBE it relied upon to obtain the Contract so that the Contractor can self-perform the work for which the DBE firm was engaged.

When a DBE subcontractor is terminated, make good faith efforts to find, as a substitute for the original DBE, another DBE to perform, at least to the extent needed to meet the established Contract goal, the work that the original DBE was to have performed under the Contract.

Submit the completed Form 2228, "DBE Termination Substitution Request," within seven (7) days, which may be extended for an additional 7 days if necessary at the request of the Contractor. The Owner will provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

2.3.11. **Reports and Records.** By the 15th of each month and after work begins, report payments to meet the DBE goal and for DBE race-neutral participation on projects with or without goals. These payment reports will be required until all DBE subcontracting or material supply activity is completed. Negative payment reports are required when no activity has occurred in a monthly period.

Notify the Owner if payment to any DBE subcontractor is withheld or reduced.

Before receiving final payment from the Owner, the Contractor must indicate a final payment on the compliance tracking system. The final payment is a summary of all payments made to the DBEs on the project.

All records must be retained for a period of 3 years following completion of the Contract work, and must be available at reasonable times and places for inspection by authorized representatives of the Owner, Texas Department of Transportation or the DOT. Provide copies of subcontracts or agreements and other documentation upon request.

2.3.12. **Failure to Comply.** If the Owner determines the Contractor has failed to demonstrate good faith efforts to meet the assigned goal, the Contractor will be given an opportunity for reconsideration by the Owner.

A Contractor's failure to comply with the requirements of this Special Provision will constitute a material breach of this Contract. In such a case, the Owner reserves the right to terminate the Contract; to deduct the amount of DBE goal not accomplished by DBEs from the money due or to become due the Contractor; or to secure a refund, not as a penalty but as liquidated damages, to the Owner or such other remedy or remedies as the Owner deems appropriate.

2.3.13. Investigations. The Owner may conduct reviews or investigations of participants as necessary. All participants, including, but not limited to, DBEs and complainants using DBE Subcontractors to meet the Contract goal, are required to cooperate fully and promptly with compliance reviews, investigations, and other requests for information.

- 2.3.14. Falsification and Misrepresentation. If the Owner determines that a Contractor or subcontractor was a knowing and willing participant in any intended or actual subcontracting arrangement contrived to artificially inflate DBE participation or any other business arrangement determined by the Owner to be unallowable, or if the Contractor engages in repeated violations, falsification, or misrepresentation, the Owner may:
  - refuse to count any fraudulent or misrepresented DBE participation;
  - withhold progress payments to the Contractor commensurate with the violation;
  - refer the matter to the Office of Inspector General of the US Department of Transportation for investigation; and/or
  - seek any other available contractual remedy.
# Special Provision 000 Notice of Contractor Performance Evaluations



### 1. GENERAL

In accordance with Texas Transportation Code §223.012, the Engineer will evaluate Contractor performance based on quality, safety, and timeliness of the project.

### 2. DEFINITIONS

2.1. **Project Recovery Plan (PRP)**—a formal, enforceable plan developed by the Contractor, in consultation with the District, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct project-specific performance deficiencies.

In accordance with Title 43, Texas Administrative Code (TAC), §9.23, the District will request a PRP if the Contractor's performance on a project is below the Department's acceptable standards and will monitor the Contractor's compliance with the established plan.

2.2. Corrective Action Plan (CAP)—a formal, enforceable plan developed by the Contractor, and proposed for adoption by the Construction or Maintenance Division, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct statewide performance deficiencies.

In accordance with 43 TAC §9.23, the Division will request a CAP if the average of the Contractor's statewide final evaluation scores falls below the Department's acceptable standards for the review period and will monitor the Contractor's compliance with the established plan.

### 3. CONTRACTOR EVALUATIONS

In accordance with Title 43, Texas Administrative Code (TAC) §9.23, the Engineer will schedule evaluations at the following intervals, at minimum:

- Interim evaluations—at or within 30 days after the anniversary of the notice to proceed, for Contracts extending beyond 1 yr., and
- Final evaluation—upon project closeout.

In case of a takeover agreement, neither the Surety nor its performing Contractor will be evaluated.

In addition to regularly scheduled evaluations, the Engineer may schedule an interim evaluation at any time to formally communicate issues with quality, safety, or timeliness. Upon request, work with the Engineer to develop a PRP to document expectations for correcting deficiencies.

Comply with the PRP as directed. Failure to comply with the PRP may result in additional remedial actions available to the Engineer under Item 5, "Control of the Work." Failure to meet a PRP to the Engineer's satisfaction may result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Engineer will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a PRP, including consideration of sufficient time.

Follow the escalation ladder if there is a disagreement regarding an evaluation or disposition of a PRP. The Contractor may submit additional documentation pertaining to the dispute. The District Engineer's decision

on a Contractor's evaluation score and recommendation of action required in a PRP or follow up for noncompliance is final.

### 4. DIVISION OVERSIGHT

Upon request of the Construction or Maintenance Division, develop and submit for Division approval a proposed CAP to document expectations for correcting deficiencies in the performance of projects statewide.

Comply with the CAP as directed. The CAP may be modified at any time up to completion or resolution after written approval of the premise of change from the Division. Failure to meet an adopted or revised adopted CAP to the Division's satisfaction within 120 days will result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Division will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a CAP, including consideration of sufficient time and associated costs as appropriate.

### 5. PERFORMANCE REVIEW COMMITTEE

The Performance Review Committee, in accordance with 43 TAC §9.24, will review at minimum all final evaluations, history of compliance with PRPs, any adopted CAPs including agreed modifications, any information about events outside a Contractor's control contributing to the Contractor's performance, and any documentation submitted by the Contractor and may recommend one or more of the following actions:

- take no action,
- reduce the Contractor's bidding capacity,
- prohibit the Contractor from bidding on one or more projects,
- immediately suspend the Contractor from bidding for a specified period of time, by reducing the Contractor's bidding capacity to zero, or
- prohibit the Contractor from being awarded a Contract on which they are the apparent low bidder.

The Deputy Executive Director will determine any further action against the Contractor.

### 6. APPEALS PROCESS

In accordance with 43 TAC §9.25, the Contractor may appeal remedial actions determined by the Deputy Executive Director.

## Special Provision 000 Certificate of Interested Parties (Form 1295)



Submit a notarized Form 1295, "Certificate of Interested Parties," in the following instances:

- at Contract execution for Contracts awarded by the Commission;
- at Contract execution for Contracts awarded by the District Engineer or Chief Engineer with an award amount of \$1,000,000 or more; at any time an existing Contract awarded by the District Engineer or Chief Engineer increases in value to \$1,000,000 or more due to changes in the Contract; at any time there is an increase of \$1,000,000 or more to an existing Contract (change orders, extensions, and renewals); or
- at any time there is a change to the information in Form 1295, when the form was filed for an existing Contract.

Form 1295 and instructions on completing and filing the form are available on the Texas Ethics Commission website.

# Special Provision to Item 000 Utility Important Notice to Contractors



The Contractor's attention is directed to the fact that there may be some outstanding utility adjustments as of December 2022 required for the construction of this project. The County anticipates that these utility adjustments will be completed as shown.

The Contractor is invited to review the outstanding utility adjustments with the Engineer assigned to this project and listed in the "Notice to Contractors." An extension of work time may be granted, as necessary, for delays caused by utility interference with this work. It is specifically understood, however, that if the contractor is delayed by virtue of the adjustment of any utilities, that this delay will not be considered as a basis for a claim by the contractor. Any work done by the contractor before utility relocations are complete must not interfere with utility relocation work.

The following utilities are to be adjusted by their owners and are to be completed as shown. The approximate location is based on the project centerline/baseline stationing.

OWNER	APPROX. LOCATION	ESTIMATED DATE OF RELOCATION
Zayo/ Frontier	Sta. 22+00, 25' LT to Sta. 27+50, 46' LT	Installation of Shared Duct Bank is Joint Bid with the project. PS&E is in the advertised plan set.
Wimberley Water Supply Corporation	Sta. 17+20, 22' LT to Sta. 26+65, 65' LT	Relocation of the 6-inch water line is ongoing. Estimated date of completion is January 29, 2023.
City of Wimberley	<ul> <li>Sewer Manholes to be Adjusted:</li> <li>RM 12, Sta. 18+24, 15' LT</li> <li>RM 12, Sta. 20+90, 16' LT</li> <li>RM 12, Sta. 20+90, 20' RT</li> <li>RM 12, Sta. 22+82, 21' RT</li> <li>RM 3237, Sta. 14+41, 23' LT</li> <li>Steel Casing to be Installed:</li> <li>RM 3237, Sta. 11+58.15, 27' LT to Sta. 12+02.58, 27' LT</li> </ul>	Adjustment of sanitary sewer manholes and installation of steel casing on the existing sanitary sewer main is Joint Bid with the project. PS&E is in the advertised plan set as part of the roadway plans on pages 121, 122 and 123.

## Special Provision to Item 000 Utility Important Notice to Contractors



The Contractor's attention is directed to the fact that one of the joint bid utilities on the project will require the placement of fiber in the shared duct bank that is part of this project. The utility owners of the fiber, Zayo and Frontier, have 45 days to locate, pull through and splice their respective fiber utilities to the shared duct bank within fourty-five (45) days after the County has provided notice that the installation of the shared duct bank is complete. If the splicing has not been completed within (45) days after the County has provided notice that the installation of the shared duct bank is complete, delay charges will be charged at \$1,250.00 per day which will be passed directly to Zayo and Frontier, respectively until the Contractor and the County have been notified that the splicing to the shared duct bank has been completed.

The Contractor is invited to review the outstanding utility adjustments with the Engineer assigned to this project and listed in the "Notice to Contractors." An extension of work time may be granted, as necessary, for delays caused by utility interference with this work. It is specifically understood, however, that if the contractor is delayed by virtue of the adjustment of these utilities, that this delay will not be considered as a basis for a claim by the contractor. Any work done by the contractor before utility relocations are complete must not interfere with utility relocation work.

# Special Provision to Item 000 Disadvantaged Business Enterprise (DBE) Goal



The DBE Goal required for this project is 5%.

# Special Provision to Item 000 Schedule of Liquidated Damages



The dollar amount of daily contract administration Liquidated Damages per Working Day is \$832.00.

In addition to the amount shown above, the Liquidated Damages will be increased by the amount shown in Item 8 of the General Notes for Road User Cost (RUC), when applicable.

## Special Provision to Item 1 Abbreviations and Definitions



Item 1, Abbreviations and Definitions of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 2, Abbreviations is being supplemented with the follow abbreviations:

CEI	Construction Engineering Inspector
COUNTY	Hays County, Texas
GEC	General Engineering Consultant

Article 3, Definitions is being amended by the following definitions:

**3.47. Department is supplemented** by the following: Wherever, in the Standard Specifications, reference is made to the Department and its representatives and such reference relates to the rights, actions and contract administration, such reference shall be taken to mean Hays County and its representatives as the project Developer, who shall coordinate with the Texas Department of Transportation on all matters relative to real property ownership and to any other matter related to the Project.

**3.54. Engineer.** The definition is voided and replaced by the following: The County Engineer or the authorized representative of the County Engineer.

**3.66. Inspector.** The definition is voided and replaced by the following: The contracted consultant who performs construction engineering and inspection services for the Project.

**3.153.** Work is supplemented by the following: Incidentals shall include but not be limited to tools, superintendence, labor, services, insurance and all water, light, power, fuel, transportation and other facilities necessary for the execution and completion of the Work covered by the Contract Documents. Materials or work described in words which, when so applied, have a well- known technical or trade meaning shall be held to refer to such recognized standards.

Article 3, Definitions is being supplemented by the following definitions:

**3.156.** County. Hays County, Texas is the organization referred to in the Contract and hereinafter referred to as the "County." Nothing in the Contract Document shall create any contractual or agency relationship between any parties other than the County and the Contractor. For purposes of the Contract Documents and any other documents relating to the Project, the County shall be deemed to be the "Developer" of the Project.

**3.157 General Engineering Consultant (GEC).** The consulting engineering firm representing and assisting the County in the design, review, and coordination of the design and construction phases of the Project. The GEC shall be responsible for the oversight of construction engineering and inspection services performed on the Project.

**3.158** Extra Work. The term "Extra Work" as used in the Contract Documents shall mean and include all work that may be required by the Engineer or the County to be done by the Contractor to accomplish any change, alteration or addition to the Work shown upon the plans, or reasonably implied by the specifications, and not covered by the Contractor's proposal, except as provided under Article 4.4 Changes in the work.

**3.159 Substantially Completed**. The term "Substantially Completed" or "Substantial Completion" shall be understood to mean that all Project Work (or the work for a specified phase of the Project) requiring lane or shoulder closures or obstructions is completed, and traffic is following the lane arrangement as shown on the plans for the finished roadway (or the specified phase of work). Additionally, all pavement construction, resurfacing, traffic control devices, and pavement markings shall be in their final position (or as called for on the plans for the specified phase of work) at such time; provided, however, the Engineer may make an exception as to the permanent pavement markings being in their final position provided that, in the Engineer's sole

discretion, the lack of markings does not cause a disruption to traffic flow or an unsafe condition for the traveling public, and work zone pavement markings are in place.

**3.160 Notice of Substantial Completion**. Notice issued to the Contractor by the Inspector or County's Representative acknowledging Substantial Completion of the Project, signifying the end of time charges.

**3.161 Certificate of Completion**. Certificate issued to the Contractor by the Inspector acknowledging "Final Completion" of the Project, as determined by completion of the Punch List. The issuance of the Certificate of Completion shall serve as evidence of "Final Completion" and such certificate shall relieve the Contractor of ownership responsibilities for the Project, except for repair of damage caused by the Contractor or by the Contractor's operations to existing facilities or completed and substantially accepted work. All warranties for the Project shall be transferred to the Department at the issuance of the Certificate of Completion.

**3.162 Certificate of Acceptance.** The certificate issued to the Contractor by the County acknowledging final acceptance and purchase of the Project.

3.163 Standard Specifications. Shall mean and include Items 1-9 of the General Requirements and Covenants.

## Special Provision to Item 2 Instructions to Bidders



Item 2, Instructions to Bidders of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 2.2 Eligibility of Bidders is deleted and replaced by the following: Bidders must be (1) prequalified by Confidential Questionnaire to bid on this project; and (2) be registered with the State of Texas; and (3) be able to provide suitable evidence of prior experience for similar work and written documentation of successfully completed similar contracts upon request to bid on this project.

Article 2.3 Issuing Proposal Forms is deleted and replaced by the following: Hays County will issue a proposal form to all interested parties through the following procurement websites:

City of San Marcos E-Procurement: https://sanmarcostx.gov/bids.aspx;

BidNet Direct: www.bidnetdirect.com/hayscounty;

Texas Comptroller: http://www.txsmartbuy.com/sp.

Article 2.6 Preparing the Bid is supplemented by the following: Bids MUST be legible and of a quality that can be reproduced.

Article 2.7 Nonresponsive Bid is supplemented by the following: Bids will be considered nonresponsive if any of the following forms are not submitted with the bid: Bid Form, Schedule of Rates and Prices, 5% Bid Bond and Vendor Reference Form and DBE commitment as specified in Article 2L.13., "Disadvantaged Business Enterprise (DBE)."

Article 2.8.3 Submittal of Bid is deleted and replaced by the following: Electronic bids may be submitted through the following procurement website:

BidNet Direct: www.bidnetdirect.com/hayscounty..

Article 2.9.2 Bid Bond is supplemented by: A bid bond in the amount of not less than five percent (5%) of the total bid price that the bidder is submitting, from a reliable surety company, as a guarantee that the bidder will enter into a contract and execute performance and payment bonds, as stipulated above, within ten (10) days after notice of award of contract to the bidder. Bid guarantees must be submitted in the same sealed envelope with the bid. Bids submitted without bid bonds will not be considered.

Article 2.9.3 Submittal of Bid is supplemented by: SEALED BIDS MARKED WITH SOLICITATION NUMBER AND RESPONDENT NAME ON THE OUTERMOST ENVELOPE: ONE (1) ORIGINAL AND ONE (1) DIGITAL COPY ON A THUMB DRIVE

OR

ELECTRONIC BID PACKETS CAN BE SUBMITTED THROUGH BIDNET DIRECT AND ONE (1) HARD COPY IS REQUIRED TO BE RECEIVED.

FACSIMILE AND ELECTRONIC MAIL TRANSMITTALS SHALL NOT BE ACCEPTED.

Article 2 is further supplemented by:

Article 2.14 Per Unit basis. This price must be good from the date of Bid opening through the completion of the Project. Bids which do not state a fixed price will not be considered.

Article 2.15 Sales Tax: Hays County is by statute, exempt from the State Sales Tax and Federal Excise Tax.

Article 2.17 References: Hays County REQUIRES bidder to supply with this Bid, a list of at least three (3) references where like services have been supplied by their firm. Include name of firm, address, telephone number and name of representative.

Article 2.18 Silence of Specifications: The apparent silence of these specifications as to any detail or to the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

Article 2.19 Bid Forms. Bid forms that are included in the Bid package shall be used. CHANGES to Bid forms made by bidders shall DISQUALIFY THE BID.

## Special Provision to Item 2L Instructions to Bidders



Item 2L, "Instructions to Bidders," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

#### Article 2L.3., "Issuing Bid Documents," second paragraph, is supplemented by the following.

The Owner will not issue a proposal form if one or more of the following apply:

the Bidder or affiliate of the Bidder that was originally determined as the apparent low Bidder on a project but was deemed nonresponsive for failure to submit a DBE commitment as specified in Article 2L.13., "Disadvantaged Business Enterprise (DBE)," is prohibited from rebidding that specific project.

#### Article 2L.7., "Nonresponsive Bid," is supplemented by the following:

The Owner will not accept a nonresponsive bid. A bid that has one or more of the deficiencies listed below is considered nonresponsive:

■ the Bidder failed to submit a DBE commitment as specified in Article 2L.13., "Disadvantaged Business Enterprise (DBE)."

#### Article 2L.13., "Disadvantaged Business Enterprise (DBE)," is added.

The apparent low bidder must submit DBE commitment information on federally funded projects with DBE goals within 5 calendar days (as defined in 49 CFR Part 26, Subpart A) of bid opening. For a submission that meets the 5-day requirement, administrative corrections will be allowed.

If the apparent low Bidder fails to submit their DBE information within the specified timeframe, the apparent low bidder will be deemed nonresponsive and the proposal guaranty will become the property of the Owner, not as a penalty, but as liquidated damages. The Bidder forfeiting the proposal guaranty will not be considered in future proposals for the same work unless there has been a substantial change in the design of the work. The Owner may recommend:

- reject all bids, or
- award the Contract to the new apparent low Bidder, if the new apparent low Bidder submits DBE information within one calendar day of notification by the Owner.

If the new apparent low Bidder is unable to submit the required DBE information within one calendar day:

- the new apparent low Bidder will not be deemed nonresponsive,
- the Bidder's guaranty will not be forfeited,
- the Owner will reject all bids, and
- the Bidder will remain eligible to receive future proposals for the same project.

### Special Provision to Item 3 Award and Execution of Contract



Item 3, Award and Execution of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 3.4.2 Bonds is supplemented by the following: Unless otherwise specified, the cost of the premium for the performance and payment bonds shall be included in the price bid by the Contractor for the Work subject of the Contract Documents, and no extra payment for such bonds will be made by the County.

Chapter 262.032 and Chapter 2253.021 of the Texas Government Code governs the requirements for performance bonds and payment bonds for government entities making public work contracts. A performance bond is required if the contract is in excess of \$50,000 and is to be made for the full amount of the contract. The bonds are to be executed within ten (10) days after receipt of written notification of award of contract prior to beginning work on the project and must be executed by a corporate surety or sureties in accordance with the Texas Insurance Code. In the event the bond exceeds \$100,000.00, the surety must also (1) hold a certificate of authority from the United States secretary of the treasury to qualify as a surety on obligations permitted or required and admitted as are insurer in this state and is the holder of a certificate of authority from the United States secretary of the treasury to qualify as a surety or the treasury of the treasury to qualify as a surety or reinsurer that is authorized and admitted as are insurer in this state and is the holder of a certificate of authority from the United States secretary of the treasury to qualify as a surety or reinsurer on obligations permitted or required under federal law.

In determining whether the surety or reinsurer holds a valid certificate of authority the County may rely on the list of companies holding certificates of authority as published in the Federal Register covering the date on which the bond is to be executed. If the public works contract is less than \$50,000 the performance bond will not be required as long as the contract provides that payment is not due until the work is completed and accepted by the county. The purpose of a performance bond is for the protection of the government entity and is conditioned on the faithful performance of the work being done in accordance with the plans, specifications and Contract Documents. The payment bond is for the protection of persons supplying labor and materials to the contractor to ensure payment.

Article 3.4.5 List of Quoting Suppliers and Subcontractors is supplemented by: The Inspector shall promptly notify the Contractor, in writing, if the County, after due investigation, has objection to any Subcontractor on such list and does not accept such Subcontractor.

The Contractor shall not contract with any Subcontractor or any person or organization (including those who are to furnish materials or equipment fabricated to a special design) proposed for portions of the Work designated in the Contract Documents or in the Instructions to Bidders or, if none is so designated, with any Subcontractor proposed for the principal portions of the Work who has been rejected by the County. The Contractor will not be required to contract with any Subcontractor or person or organization against whom the Contractor has a reasonable objection.

If the County refuses to accept any Subcontractor or person or organization on a list submitted by the Contractor in response to the requirements of the Contract Documents or the Instructions to Bidders, the Contractor shall submit an acceptable substitute and the Contract Price shall be increased or decreased by the difference in cost occasioned by such substitution and an appropriate change order shall be issued; however, no increase in the Contract Price shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting for acceptance any list or lists of names as required by the Contract Documents or the Instructions to Bidders.

If the County requires a change of any proposed Subcontractor or person or organization previously accepted by them, the Contract Price shall be increased or decreased by the difference in cost occasioned by such change and an appropriate change order shall be issued.

The Contractor shall not make any substitution for any Subcontractor or person or organization that has been accepted by the County, unless the substitution is acceptable to the County.

#### Item 3 is further supplemented by the following:

Article 3.11 Indemnification. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE COUNTY, THE INSPECTOR, THE GEC AND THE ENGINEER OF RECORD AND THEIR RESPECTIVE OFFICERS, AGENTS AND EMPLOYEES, FROM AND AGAINST ALL DAMAGES, CLAIMS, LOSSES, DEMANDS, SUITS, JUDGMENTS AND COSTS, INCLUDING REASONABLE ATTORNEYS' FEES AND EXPENSES, ARISING OUT OF OR RESULTING FROM THE PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH DAMAGE, CLAIM, LOSS, DEMAND, SUIT, JUDGMENT, COST OR EXPENSE:

- IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH OF ANY PERSON INCLUDING CONTRACTOR'S EMPLOYEES AND ANY SUBCONTRACTOR'S EMPLOYEES AND ANY SUBCONTRACTOR'S EMPLOYEES, OR TO INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY INCLUDING CONTRACTOR'S PROPERTY (OTHER THAN THE WORK ITSELF) AND THE PROPERTY OF ANY SUBCONTRACTOR OF SUB-SUBCONTRACTOR INCLUDING THE LOSS OF USE RESULTING THEREFROM; AND,
- IS CAUSED IN WHOLE OR IN PART BY ANY INTENTIONAL OR NEGLIGENT ACT OR OMISSION OF THE CONTRACTOR, ANY SUBCONTRACTOR, ANY SUB-SUBCONTRACTOR OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY ONE OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE.

THE OBLIGATION OF THE CONTRACTOR UNDER THIS PARAGRAPH SHALL NOT EXTEND TO THE LIABILITY OF THE INSPECTOR, THE ENGINEER, THE GEC, THE ENGINEER OF RECORD THEIR AGENTS OR EMPLOYEES ARISING OUT OF THE PREPARATION OF MAPS, PLANS, REPORTS, SURVEYS, CHANGE ORDERS, DESIGNS OR SPECIFICATIONS, OR THE APPROVAL OF MAPS, PLANS, REPORTS, SURVEYS, CHANGE ORDERS, DESIGNS OR SPECIFICATIONS OR THE ISSUANCE OF OR THE FAILURE TO GIVE DIRECTIONS OR INSTRUCTIONS BY THE INSPECTOR, ITS AGENTS OR EMPLOYEES, PROVIDED SUCH IS THE SOLE CAUSE OF THE INJURY OR DAMAGE.

IN ANY AND ALL CLAIMS AGAINST THE COUNTY, THE INSPECTOR THE GEC OR THE ENGINEER OF RECORD OR ANY OF THEIR AGENTS OR EMPLOYEES BY ANY EMPLOYEE OF THE CONTRACTOR, ANY SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM, OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, THE INDEMNIFICATION OBLIGATIONS UNDER THE CONTRACT DOCUMENTS SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS PAYABLE BY OR FOR THE CONTRACTOR OR ANY SUBCONTRACTOR OR SUB-SUBCONTRACTOR UNDER WORKERS' COMPENSATION ACTS, DISABILITY BENEFIT ACTS OR OTHER EMPLOYEE BENEFIT ACTS.

Article 3.12 Ownership of Documents. All drawings, specifications and copies thereof furnished by the Engineer of Record shall not be reused on other work, and, with the exception of the signed contract sets, are to be returned to the Engineer of Record on request, at the completion of the work. All models, drawings, specifications and copies thereof are the property of the County.

Article 3.13 Adequacy of Design. It is understood that the County believes it has employed competent engineers and designers. It is therefore agreed that the County and Engineer shall be responsible for the adequacy of the design, sufficiency of the Contract Documents, the safety of the structure and the practicability of the operations of the completed project provided that the Contractor has complied with the requirements of the said Contract Documents, all approved modifications thereof, and additions and alterations thereto approved in writing by the County. The burden of proof of such compliance shall be upon the Contractor to show that it has complied with the said requirements of the Contract Documents, approved modifications thereof, and all approved additions and alterations thereto.

The paper copies of the Contract Documents are considered to be the official contract documents. Any request by the Contractor and use thereof of electronic or digital information, including engineering design and survey files, shall be at the sole risk and legal responsibility of the Contractor. Neither the County nor the Engineer of Record makes any warranty or representation as to the compatibility of the files provided with other software programs, nor shall they be held responsible for subsequent uses of the data by the Contractor or anyone who may obtain the data from the Contractor. THE CONTRACTOR SHALL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD THE COUNTY ITS AGENTS, EMPLOYEES, OR REPRESENTATIVES AND THE ENGINEER OF RECORD HARMLESS FROM ANY AND ALL CLAIMS, SUITS, LIABILITY, DEMANDS OR COSTS ARISING OUT OF OR RESULTING FROM SUCH USE. Because data stored on electronic media can deteriorate undetected or be modified undetected, neither the County nor the Engineer of Record can be held liable for the completeness or correctness of the electronic data once in possession of the Contractor.

Article 3.14 Inspection and Audit. Contractor's records shall be subject to audit and such records shall include, but not be limited to accounting records, written policies and procedures; subcontract files (including proposals of successful and unsuccessful bidders, bid recaps, etc.); original estimates; estimating work sheets; correspondence; change order files (including documentation covering negotiated settlements); back charge logs and supporting documentation; general ledger entries detailing cash and trade discounts earned, insurance rebates and dividends; and any other Contractor records which may have a bearing on matters of interest to the County in connection with the contractor's work for the County. All of the foregoing, hereinafter referred to as "records," shall be open to inspection and subject to audit and/or reproduction by County or its authorized representative to the extent necessary to adequately permit evaluation and verification of:

- Contractor compliance with the Contract Documents,
- compliance with County's business ethics policies,
- compliance by other contractors or subcontractors with contracts with County or Contractor, and
- compliance with provisions for pricing change orders, invoices or claims submitted by the Contractor or any of its payees.

Other specific records subject to audit include all information, materials and data of every kind and character such as documents, subscriptions, recordings, computerized information, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, daily diaries, superintendent reports, drawings, receipts, vouchers and memoranda, and any and all other agreements, sources of information that may, in County's judgment, have any bearing on or pertain to any matters, rights, duties or obligations under or covered by the Contract Documents. Such records subject to audit shall also include those records necessary to evaluate and verify direct and indirect costs, (including overhead allocations) as they may apply to costs associated with this Project. In those situations where Contractor's records have been generated from computerized data (whether mainframe, mini-computer, or PC based computer systems), Contractor agrees to provide County's representatives with extracts of data files in computer readable format on data disks or suitable alternative computer data exchange formats.

The County or its designee shall be entitled to audit all of the Contractor's records for a period of three (3) years after final payment or a longer period if required by law.

Contractor shall require all payees (including those entering into lump sum subcontracts and lump sum major material purchase orders), to comply with the provisions of this article by insertion of the requirements hereof in a written contract agreement between Contractor and payee. Requirements to include flow-down audit provisions in contracts with payees will apply to Subcontractors, Sub-Subcontractors, material suppliers, etc. when working under any type of contract including lump sum agreement, unit price agreements, time and material agreements, cost plus agreements, or other agreements. Contractor will cooperate fully and will cause all payees to cooperate fully in furnishing or in making available to County from time to time whenever requested in an expeditious manner any and all such information, materials and data required by this article.

County's agent or its authorized representative shall have access to the Contractor's facilities, shall be allowed to interview all current or former employees to discuss matters pertinent to the performance of the Work, shall have access to all necessary records, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this article.

Article 4.3., "Insurance" is replaced by Section VI. "Insurance" under the Special Conditions of this contract.

## Special Provision to Item 3 Award and Execution Contract



Item 3, Award and Execution of Contract," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 4.3, "Insurance." The first sentence is voided and replaced by the following:

For construction and building Contracts, submit a certificate of insurance showing coverages in accordance with Contract requirements. For routine maintenance Contracts, refer to Article 8, "Beginning of Work."

Article 8, "Beginning of Work." The first sentence is supplemented by the following:

For a routine maintenance Contract, do not begin work until a certificate of insurance showing coverages in accordance with the Contract requirements is provided and accepted.

# Special Provision to Item 4 Scope of Work



Item 4, Scope of Work of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

#### Article 4.7 Dispute and Claims Procedure is deleted and replaced, in its entirety, by the following:

The dispute resolution policy promotes a cooperative attitude between the Engineer and Contractor. Emphasis is placed on resolving issues while they are still current, at the area office or the district office, and in an informal manner. Open sharing of information is encouraged by all parties involved so the information provided completely and accurately reflects the issues and facts. If information is not shared, decisions may be limited to relying on the documentation that is available for review.

The Inspector initially shall determine all claims, disputes and other matters in question between the Contractor and the County relating to execution or progress of the Work or interpretation of the Contract Documents. The Inspector's decision shall be rendered in writing to the GEC for review within a reasonable time, which shall not be construed to be less than ten (10) days.

In the event the issue cannot be resolved in the timeframe established by the County or renders any decision which, in the opinion of either party hereto, is not in accordance with the meaning and intent of the Contract Documents, either party may file with the Inspector its written objection to the decision within thirty (30) days of such decision by the Inspector, and by such action may reserve the right to submit the question so raised to litigation as hereinafter provided.

The Contractor shall continue performance of the Work during all disputes or disagreements with the County. The production or delivery of goods, the furnishing of services and the construction of projects or facilities shall not be delayed, prejudiced or postponed pending resolution of any disputes or disagreements, except as the County may otherwise agree in writing.

File a claim after completion of the Contract or when required for orderly performance of the Contract. For a claim resulting from enforcement of a warranty period, file the claim no later than one year after expiration of the warranty period. For all other claims, file the claim no later than the date the County issues notice to the Contractor that they are in default, the date the County terminates the Contract, or one year after the date of final acceptance of the Contract. It is the Contractor's responsibility to submit requests in a timely manner.

## Special Provision to Item 5 Control of the Work



Item 5, Control of the Work of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

#### Article 5.2 Plans and Working Drawings is supplemented by the following:

The Contractor shall submit to the Inspector, with such promptness as to cause no delay in its own work or in that of any other contractor, a minimum of six (6) stamped/reviewed copies, unless otherwise specified, of all shop and/or setting drawings and schedules required for the work of the various trades, and the Engineer of Record shall pass upon them with reasonable promptness, making desired corrections. Note: A single copy of the reviewed drawings shall be retained by the reviewer, the County, the County's Representative and Inspector for their records. The Contractor may not submit more than four different shop drawing plans for review in any one week. The Engineer of Record shall return the shop drawings to the Contractor, via the GEC, within three (3) weeks of its having received them, with appropriate comments. The Contractor shall make any corrections required by the Engineer of Record, file with it two (2) corrected copies and furnish such other copies as may be needed. The Engineer of Record 's approval of such drawings or schedules shall not relieve the Contractor from responsibility for deviations from drawings or specifications, unless the Contractor has in writing called the Engineer of Record 's attention to such deviations at the time of submission, nor shall it relieve Contractor from responsibility for errors of any sort in shop drawings or schedules. It shall be the Contractor's responsibility to fully and completely review all shop drawings to ascertain their effect on its ability to perform the required work in accordance with the Contract Documents and within the time for completion thereof. Any shop drawings which are required for temporary supports must be signed and sealed by an Engineer registered in the State of Texas.

Such review by the Engineer of Record shall be for the sole purpose of determining the sufficiency of said shop drawings or schedules to result in finished improvements in conformity with the plans and specifications, and shall not relieve the Contractor of its duties and obligations, as an independent contractor, set forth in the Contract Documents. It is hereby expressly understood and agreed that the Engineer of Record does not assume any duty to pass upon the propriety or adequacy of such drawings or schedules, or any means or methods reflected thereby, in relation to the safety of either person or property during the Contractor's performance hereunder.

Article 5.4 Coordination of Plans, Specifications, and Special Provisions. The second paragraph of this article shall be replaced, in its entirety, by the following paragraph:

Numerical dimensions govern over scaled dimensions. In the event of any conflict between the terms set forth in the Contract, Standard Specifications, Special Provisions and Special Conditions, the following shall serve as a guide in determining which of said documents shall control over the other (listed in descending order of most controlling to least controlling): Special Conditions, Special Provisions, Standard Specifications/General Requirements and Covenants and the Contract. Job-specific plan sheets govern over standard plan sheets.

#### Article 5.10 Inspection is supplemented by the following:

**5.10.1 County-Inspector Relationship**. The Inspector will be the County's contracted consultant during construction. The duties, responsibilities and limitations of authority of the Inspector as the County's representative during construction are as set forth in the Contract Documents and/or the Agreement for Construction Engineering and Inspection Services and shall not be extended or limited without written consent of the County or the Inspector. The Inspector will advise and consult with the County and the GEC, and all of the County's instructions to the Contractor shall be issued through the Inspector.

The Contractor is and at all times shall remain an independent contractor, solely responsible for the manner and method of completing its work under the Contract Documents, with full power and authority to select the means, method and manner of performing such work, so long as such methods do not adversely affect the completed improvements, the County and the Inspector being interested only in the result obtained and conformity of such completed improvements with the Contract Documents.

Likewise, the Contractor shall be solely responsible for the safety of itself, its employees and other persons, as well as for the protection and safety of the improvements being erected and its property or any other person's property, as a result of its operations under the Contract Documents. Engineering construction drawings and specifications, as well as any additional information concerning the Work to be performed passing from or through the Inspector, shall not be interpreted as requiring or allowing the Contract documents, the plans and specifications; the intent of such drawings, specifications and any other such information being to define with specificity the agreement of the parties as to the Work the Contractor is to perform.

**5.10.2.** Professional Inspection by the Construction Inspector. The Inspector shall be on the jobsite when work is being performed to provide construction engineering inspections of the Work performed by the Contractor. In addition to performing material testing on behalf of the County, the Inspector shall review the progress of the executed Work and to determine if such Work meets the essential performance and design features and the technical and functional engineering requirements of the Contractor's construction means, methods, techniques, sequences, quality, procedures, programs, safety precautions or lack of same incident thereto or in connection therewith. Notwithstanding any other provision of the Contract Documents, the Engineer and the Inspector shall not be responsible or liable for any acts, errors, omissions or negligence of the Contractor, any Subcontractor's or Subcontractor's agents, servants or employees or any other person, firm or corporation performing or attempting to perform any of the Work.

Article 5.11 Final Cleanup. This article is supplemented by the following: In the event the Contractor fails or refuses to clean and remove surplus materials and debris as provided above, the County or the Inspector may do so, or cause same to be done, at the Contractor's expense, and the reasonable cost thereof shall be deducted from any amounts that are owing to the Contractor.

#### 5.12.2.2. Final Inspection. Replace this section with the following:

**5.8.12.2.a Punch List**. The Contractor shall notify the Inspector in writing when, in the Contractor's opinion, the Work has been "Substantially Completed" and when so notifying the Inspector, the Contractor shall furnish to the Inspector, in writing, a detailed list of unfinished work, also known as the Punch List. The Inspector, in cooperation with TxDOT, will review the Punch List and will add any items that the Contractor failed to include on said list. The fact that a structure or facility has been "Substantially Completed" shall not excuse the Contractor from performing all of the Work undertaken, whether such work is of a minor or major nature. Furthermore, the Contractor shall remain obligated to fully complete the Work and perform its obligations under the Contract Documents after the Work has been Substantially Completed.

**5.12.2.2.b Final Completion and Acceptance**. The Contractor shall have a specified time period for completion of the Punch List items, as set forth in Section XI of the Special Conditions, "Completion of Work on Time." Within ten (10) days after the Contractor has given the Inspector written notice that the Punch List has been completed, the Inspector shall inspect the Work and within said time, if the Work is found to be completed in accordance with the Contact Documents, the Inspector, with the concurrence of TxDOT, shall issue to the Contractor its Certificate of Completion. In the event the Punch List has not been completed, the Inspector shall advise the Contractor, in writing, of the Inspector's basis for deeming the Punch List incomplete. Following the Contractor's receipt of the Inspector's notice that the Punch List is incomplete, the Contractor shall complete the remaining items prior to the expiration of the above referenced specified time period for completion of the Punch List items. Upon satisfactory completion of the Punch List and the issuance of the Certificate of Completion, it shall be the Contractor's responsibility to submit the contract close-out documents, which shall include the record drawings, Form FHWA-47 and Affidavit of All Bills Paid, and thereupon it shall be the duty of the County to issue a Certificate of Acceptance (Final Acceptance) to the Contractor.

# Special Provision to Item 5 Control of the Work



Item 5, "Control of the Work," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

#### Article 5.1, "Authority of Engineer," is voided and replaced by the following.

The Engineer has the authority to observe, test, inspect, approve, and accept the work. The Engineer decides all questions about the quality and acceptability of materials, work performed, work progress, Contract interpretations, and acceptable Contract fulfillment. The Engineer has the authority to enforce and make effective these decisions.

The Engineer acts as a referee in all questions arising under the terms of the Contract. The Engineer's decisions will be final and binding.

The Engineer will pursue and document actions against the Contractor as warranted to address Contract performance issues. Contract remedies include, but are not limited to, the following:

- conducting interim performance evaluations requiring a Project Recovery Plan, in accordance with Title 43, Texas Administrative Code (TAC) §9.23,
- requiring the Contractor to remove and replace defective work, or reducing payment for defective work,
- removing an individual from the project,
- suspending the work without suspending working day charges,
- assessing standard liquidated damages to recover the Department's administrative costs, including additional projectspecific liquidated damages when specified in the Contract in accordance with 43 TAC §9.22,
- withholding estimates,
- declaring the Contractor to be in default of the Contract, and
- in case of a Contractor's failure to meet a Project Recovery Plan, referring the issue directly to the Performance Review Committee for consideration of further action against the Contractor in accordance with 43 TAC §9.24.

The Engineer will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards, including consideration of sufficient time.

Follow the issue escalation ladder if there is disagreement regarding the application of Contract remedies.

# Special Provision to Item 5 Control of the Work



Item 5, "Control of the Work" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 5.4, "Coordination of Plans, Specifications, and Special Provisions," the last sentence of the last paragraph is replaced by the following:

Failure to promptly notify the Engineer will constitute a waiver of all contract claims against the Department for misunderstandings or ambiguities that result from the errors, omissions, or discrepancies.

# Special Provision to Item 6 Control of Materials



Item 6, "Control of Materials" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 6.10., "Hazardous Materials," is voided and replaced by the following:

Comply with the requirements of Article 7.12., "Responsibility for Hazardous Materials."

Notify the Engineer immediately when a visual observation or odor indicates that materials on sites owned or controlled by the Department may contain hazardous materials. Except as noted herein, the Department is responsible for testing, removing, and disposing of hazardous materials not introduced by the Contractor. The Engineer may suspend work wholly or in part during the testing, removing, or disposing of hazardous materials, except in the case where hazardous materials are introduced by the Contractor.

Use materials that are free of hazardous materials. Notify the Engineer immediately if materials are suspected to contain hazardous materials. If materials delivered to the project by the Contractor are suspected to contain hazardous materials, have an approved commercial laboratory test the materials for the presence of hazardous materials as approved. Remove, remediate, and dispose of any of these materials found to contain hazardous materials. The work required to comply with this section will be at the Contractor's expense if materials are found to contain hazardous materials. Working day charges will not be suspended and extensions of working days will not be granted for activities related to handling hazardous material introduced by the Contractor. If suspected materials are not found to contain hazardous materials, the Department will reimburse the Contractor for hazardous materials testing and will adjust working day charges if the Contractor can show that this work impacted the critical path.

**10.1. Painted Steel Requirements**. Coatings on existing steel contain hazardous materials unless otherwise shown on the plans. Remove paint and dispose of steel coated with paint containing hazardous materials is in accordance with the following:

**10.1.1. Removing Paint From Steel** For contracts that are specifically for painting steel, Item 446, "Field Cleaning and Painting Steel" will be included as a pay item. Perform work in accordance with that item.

For projects where paint must be removed to allow for the dismantling of steel or to perform other work, the Department will provide for a separate contractor (third party) to remove paint containing hazardous materials prior to or during the Contract. Remove paint covering existing steel shown not to contain hazardous materials in accordance with Item 446, "Field Cleaning and Painting Steel."

**10.1.2. Removal and Disposal of Painted Steel.** For steel able to be dismantled by unbolting, paint removal will not be performed by the Department. The Department will remove paint, at locations shown on the plans or as agreed, for the Contractor's cutting and dismantling purposes. Utilize Department cleaned locations for dismantling when provided or provide own means of dismantling at other locations.

Painted steel to be retained by the Department will be shown on the plans. For painted steel that contains hazardous materials, dispose of the painted steel at a steel recycling or smelting facility unless otherwise shown on the plans. Maintain and make available to the Engineer invoices and other records obtained from the facility showing the received weight of the steel and the facility name. Dispose of steel that does not contain hazardous material coatings in accordance with federal, state and local regulations.

**10.2.** Asbestos Requirements. The plans will indicate locations or elements where asbestos containing materials (ACM) are known to be present. Where ACM is known to exist or where previously unknown ACM has been found, the Department will arrange for abatement by a separate contractor prior to or during the Contract. Notify the Engineer of proposed dates of demolition or removal of structural elements with ACM at least 60 days before beginning work to allow the Department sufficient time for abatement.

The Department of State Health Services (DSHS), Asbestos Programs Branch, is responsible for administering the requirements of the National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 61, Subpart M and the Texas Asbestos Health Protection Rules (TAHPR). Based on EPA guidance and regulatory background information, bridges are considered to be a regulated "facility" under NESHAP. Therefore, federal standards for demolition and renovation apply.

The Department is required to notify the DSHS at least 10 working days (by postmarked date) before initiating demolition or renovation of each structure or load bearing member shown on the plans. If the actual demolition or renovation date is changed or delayed, notify the Engineer in writing of the revised dates in sufficient time to allow for the Department's notification to DSHS to be postmarked at least 10 days in advance of the actual work.

Failure to provide the above information may require the temporary suspension of work under Article 8.4., "Temporary Suspension of Work or Working Day Charges," due to reasons under the control of the Contractor. The Department retains the right to determine the actual advance notice needed for the change in date to address post office business days and staff availability.

**10.3. Lead Abatement.** Provide traffic control as shown on the plans, and coordinate and cooperate with the third party and the Department for managing or removing hazardous materials. Work for the traffic control shown on the plans and coordination work will not be paid for directly but will be subsidiary to pertinent Items.

## Special Provision to Item 006 Control of Materials



Item 6, "Control of Materials" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 1.1, "Buy America," The section is removed and replaced by the following:

Comply with the latest provisions of Build America, Buy America Act (BABA Act) of the Bipartisan Infrastructure Law which restricts funds being made available from Federal financial assistance programs unless all the iron products, steel products, manufactured products, and construction materials used in the project are produced in the United States. Use steel or iron products, manufactured products, or construction materials produced in the United States except when:

- a waiver exists exempting the material from Buy America compliance
- the cost of materials, including delivery, does not exceed 0.1% of the total Contract cost or \$2,500, whichever is greater,
- the Contract contains an alternate item for a foreign source product and the Contract is awarded based on the alternate item, or
- the materials are temporarily installed.

For construction materials submit a notarized original of TxDOT Construction Material Buy America Certification Form (Department Form 2806) with the proper attachments for verification of compliance.

Construction Materials are classified as an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives —that is or consists primarily of:

- Non-ferrous metals,
- plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables),
- Glass (including optic glass)
- Lumber, or
- Drywall.

Details shown on the plans provide additional clarification on Buy America requirements for this project.

For steel or Iron materials submit a notarized original of the FORM D-9-USA-1 (Department Form 1818) with the proper attachments for verification of compliance. For Steel or Iron materials the manufacturing process includes any process that modifies the chemical content, physical shape or size, or final finish of a product. The manufacturing process begins with initial melting and mixing and continues through fabrication (cutting, drilling, welding, bending, etc.) and coating (paint, galvanizing, epoxy, etc.).

Article 4., "Sampling, Testing, and Inspection," is supplemented by the following:

Meet with the Engineer and choose either the Department or a Department-selected Commercial Lab (CL) for conducting the subset of project-level sampling and testing shown in Table 1, "Select Guide Schedule Sampling and Testing." Selection may be made on a test by test basis. CLs will meet the testing turnaround times shown (includes test time and time for travel and sampling and reporting) and in all cases issue test reports as soon as possible.

If the Contractor chooses a Department-selected CL for any Table 1 sampling and testing:

- notify the Engineer, District Lab, and the CL of project scheduling that may require CL testing;
- provide the Engineer, District Lab, and CL at least 24 hours' notice by phone or e-mail;
- reimburse the Department for CL Table 1 testing using the contract fee schedule for the CL (including mileage, travel, and stand ime) at the minimum guide schedule testing frequencies;
- reimburse the Department for CL Table 1 testing above the minimum guide schedule frequencies for retesting when minimum frequency testing results in failures to meet specification limits;
- agree with the Engineer and CL upon a policy regarding notification for testing services;
- give any cancellation notice to the Engineer, District Lab, and CL by phone or e-mail;
- reimburse the Department a \$150 cancellation fee to cover technician time and mileage charges for previously scheduled work cancelled without adequate notice, which resulted in mobilization of technician and/or equipment by the CL; and
- all CL charges will be reimbursed to the Department by a deduction from the Contractor's monthly pay estimate.

If the CL does not meet the Table 1 turnaround times, testing charge to the Contractor will be reduced by 50% for the first late day and an additional 5% for each succeeding late day.

Approved CL project testing above the minimum testing frequencies in the Guide Schedule of Sampling and Testing, and not as the result of failing tests, will be paid by the Department.

Other project-level Guide Schedule sampling and testing not shown on Table 1 will be the responsibility of the Department.

TxDOT Test	Test Description	Turn- Around Time (Calendar days)
	SOILS/BASE	
<u>Tex-101-E</u>	Preparation of Soil and Flexible Base Materials for Testing (included in other tests)	
<u>Tex-104-E</u>	Liquid Limit of Soils (included in 106-E)	
<u>Tex-105-E</u>	Plastic Limit of Soils (included in 106-E)	
<u>Tex-106-E</u>	Calculating the Plasticity Index of Soils	7
<u>Tex-110-E</u>	Particle Size Analysis of Soils	6
<u>Tex-113-E</u>	Moisture-Density Relationship of Base Materials	7
<u>Tex-114-E</u>	Moisture-Density Relationship of Subgrade and Embankment Soil	7
<u>Tex-115-E</u>	Field Method for In-Place Density of Soils and Base Materials	2
<u>Tex-116-E</u>	Ball Mill Method for the Disintegration of Flexible Base Material	5
Tex-117-E, Part II	Triaxial Compression Tests For Disturbed Soils and Base Materials (Part II)	6
<u>Tex-113-E</u> w/ Tex-117-E	Moisture-Density Relationship of Base Materials with Triaxial Compression Tests For Disturbed Soils and Base Materials (Part II)	10
Tex-140-E	Measuring Thickness of Pavement Layer	2
Tex-145-E	Determining Sulfate Content in Soils - Colorimetric Method	4
HOT MIX ASPHALT		
<u>Tex-200-F</u>	Sieve Analysis of Fine and Coarse Aggregate (dry, from ignition oven with known correction factors)	1 (Note 2)
<u>Tex-203-F</u>	Sand Equivalent Test	3
<u>Tex-206-F</u> , w/ <u>Tex-207-F</u> , Part I, w/ <u>Tex-227-F</u>	(Lab-Molded Density of Production Mixture – Texas Gyratory) Method of Compacting Test Specimens of Bituminous Mixtures with Density of Compacted Bituminous Mixtures, Part I - Bulk Specific Gravity of Compacted Bituminous Mixtures, with Theoretical Maximum Specific Gravity of Bituminous Mixtures	1 (Note 2)
Tex-207-F, Part I &/or Part VI	(In-Place Air Voids of Roadway Cores) Density of Compacted Bituminous Mixtures, Part I- Bulk Specific Gravity of Compacted Bituminous Mixtures &/or Part VI - Bulk Specific Gravity of Compacted Bituminous Mixtures Using the Vacuum Method	1 (Note 2)

 Table 1

 Select Guide Schedule Sampling and Testing (Note 1)

Tex-207-F, Part V	Density of Compacted Bituminous Mixtures, Part V- Determining Mat Segregation using a Density-Testing	3	
	Gauge Density of Compacted Bituminous Mixtures, Part, VII - Determining Longitudinal Joint Density using a		
<u>Tex-207-F</u> , Part VII	Density-Testing Gauge	4	
<u>Tex-212-F</u>	Moisture Content of Bituminous Mixtures	3	
<u>Tex-217-F</u>	Deleterious Material and Decantation Test for Coarse Aggregate	4	
<u>Tex-221-F</u>	Sampling Aggregate for Bituminous Mixtures, Surface Treatments, and LRA (included in other tests)		
Tex-222-F	Sampling Bituminous Mixtures (included in other tests)		
Tex-224-F	Determination of Flakiness Index	3	
<u>Tex-226-F</u>	Indirect Tensile Strength Test (production mix)	4	
<u>Tex-235-F</u>	Determining Draindown Characteristics in Bituminous Materials	3	
Tex-236-F (Correction Factors)	Asphalt Content from Asphalt Paving Mixtures by the Ignition Method (Determining Correction Factors)	4	
<u>Tex-236-F</u>	Asphalt Content from Asphalt Paving Mixtures by the Ignition Method (Production Mixture)	1 (Note 2)	
Toy 241 E	(Lab-Molded Density of Production Mixture – Superpave Gyratory)		
w/ Tex-207-F Part I	Superpave Gyratory Compacting of Specimens of Bituminous Mixtures (production mixture) with Density	1	
w/ Tex-227-F	of Compacted Bituminous Mixtures, Part I - Part I - Bulk Specific Gravity of Compacted Bituminous	(Note 2)	
T 242 F	Mixtures, with Theoretical Maximum Specific Gravity of Bituminous Mixtures	2	
<u>1ex-242-F</u>	Hamburg wheel-Tracking Test (production mix, molded samples)	3	
<u>1ex-244-F</u>	I nermal Profile of Hot Mix Asphalt		
<u>1ex-246-F</u>	Permeability of water Flow of Hot Mix Aspnalt	3	
<u>1ex-280-F</u>		3	
<u>1ex-530-C</u>	Effect of water on Bituminous Paving Mixtures (production mix)	4	
Τοχ 400 Δ	AUGREGATES	2	
Tox 410 A	Abrasian of Coarso Aggregate Using the Los Angelos Machine	5	
Tex 411 A	Abidsion of Coarse Aggregate by Lee of Sedium Sulfete or Megnesium Sulfete	10	
<u>Tex-411-A</u>	Soundriess of Aggregate by Use of Soundriff Suifate of Magnesium Suifate	1Z	
<u>1ex-461-A</u>	Degradation of Coarse Aggregate by Micro-Deval Abrasion	5	
Toy 612 1	CHEWICAL	Λ	
<u>1ex-012-J</u>	Acid Insoluble Residue for Fille Aggregate	4	
HMA Production Speci	alist [TxAPA – Level 1-A] (\$/hr)		
HMA Roadway Special	list [TxAPA – Level 1-B] (\$/hr)		
Technician Travel/Standby Time (\$/hr)			
Per Diem (\$/day – meals and lodging)			
Mileage Rate (\$/mile fr	om closest CL location)		
Note 1– Turn-Around	Note 1– Turn-Around Time includes test time and time for travel/sampling and reporting.		

Note 2 – These tests require turn-around times meeting the governing specifications. Provide test results within the stated turn-around time. CL is allowed one additional day to provide the signed and sealed report.

# Special Provision to Item 7 Legal Relations and Responsibilities



Item 7, Legal Relations and Responsibilities of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 7.2.4 Public Safety and Convenience is supplemented by the following: The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to:

- all employees on the Work and all other persons who may be affected thereby:
- all the Work and all materials and equipment to be incorporated therein, whether in storage or off the site, under the care, custody or control of the Contractor or any of its Subcontractors or Sub-subcontractors; and
- other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, fences, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.

The Contractor shall at all times exercise reasonable precautions for the safety of employees and others on or near the Work and shall comply with all applicable provisions of federal, state, and municipal safety laws and building and construction codes. All machinery and equipment and other physical hazards shall, except where incompatible with federal, state, or municipal laws or regulations, be guarded in accordance with the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America. The Contractor shall provide such machinery guards, safe walkways, ladders, bridges, gangplanks, and other safety devices. The safety precautions actually taken and their adequacy shall be the sole responsibility of the Contractor, acting at its discretion as an independent contractor.

Within 24 hours after Contractor becomes aware of the occurrence of any accident or other event which results in, or might result in, injury to the person or property of anyone, whether or not it results from or involves any action or failure to act by the Contractor or any employee or agent of the Contractor and which arises in any manner from the performance of the Work, the Contractor shall send a written report of such accident or other event to the County and the Inspector, setting forth a full and concise statement of the facts pertaining thereto. Such statement shall include a written recordation of the location of the event and the circumstances surrounding the event through photographs, interviewing witnesses, obtaining of medical reports and other documentation that defines the event. The Contractor shall also provide to the County a copy of any and all accident reports received from safety officials or agencies. Copies of such documentation shall be provided to the County and the Inspector for their records. The Contractor shall also immediately send the County and the Inspector a copy of any summons, subpoena, notice, or other documents served upon the Contractor, its agents, employees, or representatives, or received by it or them, in connection with any matter before any court arising in any manner from the Contractor's performance of the Work.

Article 7.3 Laws to be Observed. The first sentence of the second paragraph is voided and replaced by the following: This Contract is between Hays County and the Contractor only.

Article 7.15 Protecting Adjacent Property. is supplemented by the following:

The Contractor shall take proper means to protect the adjacent or adjoining property or properties, in any way encountered, which might be injured or seriously affected by any process of construction to be undertaken pursuant to the Contract Documents, from

any damage or injury by reason of said process of construction; and the Contractor shall be liable for any and all claims for such damage on account of its failure to fully protect all adjoining property. THE CONTRACTOR AGREES TO INDEMNIFY, SAVE AND HOLD HARMLESS THE COUNTY, THE INSPECTOR THE GEC AND THE ENGINEER OF RECORD, AS WELL AS ANY OF THEIR AGENTS, REPRESENTATIVES, OFFICERS OR EMPLOYEES AGAINST ANY CLAIM OR CLAIMS FOR DAMAGES DUE TO ANY INJURY TO ANY ADJACENT OR ADJOINING PROPERTY, ARISING OR GROWING OUT OF THE PERFORMANCE OF THE WORK, BUT ANY SUCH INDEMNITY SHALL NOT APPLY TO ANY CLAIM OF ANY KIND ARISING SOLELY OUT OF THE EXISTENCE OR CHARACTER OF THE WORK.

#### Article 7.16 Responsibility for Damage Claims is supplemented by the following:

Notwithstanding any other provision of the Contract Documents, the Contractor shall be solely responsible for the location and protection of any and all public utility lines and utility customer service lines in the Project area. The Contractor shall exercise due care to locate and to mark, uncover or otherwise protect all such lines in the construction zone and any of the Contractor's work or storage areas. Upon request, the County shall provide such information as it has about the location and grade of water, sewer, gas, and telephone and electric lines and other utilities in the Work area but such information shall not relieve or be deemed to be in satisfaction of the Contractor's obligation hereunder, which shall be primary and nondelegable.

Any such lines damaged by the Contractor's operations shall be immediately repaired by the Contractor or it shall cause such damage to be repaired at its expense.

#### Item 7 is further supplemented by:

Article 7.21 Texas Hazardous Communication Act. THE TEXAS HAZARD COMMUNICATION ACT, Chapter 502 of the Health and Safety Code, Sec. 502.006, states that a chemical manufacturer or distributor shall provide appropriate Material Safety Data Sheets (MSDS) to employers who acquire hazardous chemicals in this state with each initial shipment and with the first shipment after a MSDS is updated. The MSDS must conform to the most current requirements of the OSHA standard in 29 CFR 1910.1200. By submitting your bid to the County you are acknowledging that this regulation is a part of this bid and that you will provide appropriate MSDS with each initial shipment and with the first shipment after a MSDS is updated.

# Special Provision to Item 7 Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 2.6.5., "Training", is supplemented by the following:

Coordinate enrollment, pay associated fees, and successfully complete approved Training or Contractor Delivered Training. Training is valid for the period prescribed by the provider but no less than 3 yrs. from the date of completion. The Owner may require training at a frequency less than the period prescribed or 3 yrs. based on Owner's needs. Training and associated fees will not be measured or paid for directly but are considered subsidiary to pertinent Items.

#### 2.6.5.1. Approved Training. Approved training is listed below:

#### 2.6.5.1.1 Contractor Responsible Person and Alternate.

Provider	Course Title
American Traffic Safety Services Association	Traffic Control Supervisor
National Highway Institute	Maintenance of Traffic Control for Supervisors

#### 2.6.5.1.2. Flagger Instructor Training.

Provider	Course Title
American Traffic Safety Services Association	Flagging Instructor Training Course
Texas Engineering Extension Services	Train-the-Trainer Flaggers
National Safety Council	Flagger (Instructor)
University of Texas at Arlington,	Certified Flagger Instructor
Division for Enterprise Development	

### Flagger Training.

Provider	Course Title
Texas Engineering Extension Services	Flaggers in Work Zones
National Safety Council	Flagger (Novice)
University of Texas at Arlington,	Flaggers in Work Zones (TxDOT Training)
Continuing Education Department	
University of Texas at Arlington,	WZ Traffic Control/Qualified Flagger
Continuing Education Department	
Associated Builders and Contractors,	Flagger Training
Austin Chapter	
LDI Safety Training	Flagger Training
Tipton Compliance and Safety	Flagger Training

### 2.6.5.1.3. Law Enforcement Personnel.

Provider	Course Title
National Highway Institute	Safe and Effective Use of Law Enforcement
	Personnel in Work Zones

### 2.6.5.1.4. Other Work Zone Personnel.

Provider	Course Title
American Traffic Safety Services Association	Traffic Control Technician Training
Texas Engineering Extension Services	Work Zone Traffic Control
National Highway Institute	Maintenance of Traffic Control for Technicians
National Highway Institute	Maintenance Training Series: Basics of Work Zone Traffic Control

2.6.5.2. Contractor Delivered Training. Develop Contractor Delivered Training curriculum and submit the curriculum to the Owner for approval. Do not implement the training curriculum before receiving written approval from the Owner. The work performed and materials furnished to develop the curriculum and provide training will not be measured or paid for directly but will be considered subsidiary to pertinent Items.

A contractor's certified flagging instructor is permitted to train other flaggers.

# Special Provision to Item 7 Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 7.7.2., "Texas Pollutant Discharge Elimination System (TPDES) Permits and Storm Water Pollution Prevention Plans (SWP3)," is voided and replaced by the following:

- 7.2. Texas Pollution Discharge Elimination System (TPDES) Permits and Storm Water Pollution Prevention Plans (SWP3).
- 7.2.1. Projects with less than one acre of soil disturbance including required associated project specific locations (PSL's) per TPDES GP TXR 150000.

No posting or filing will be required for soil disturbances within the right of way. Adhere to the requirements of the SWP3.

7.2.2. Projects with one acre but less than five acres of soil disturbance including required associated PSL's per TPDES GP TXR 150000.

The Department will be considered a primary operator for <u>Operational Control Over Plans and Specifications</u> as defined in TPDES GP TXR 150000 for construction activity in the right of way. The Department will post a small site notice along with other requirements as defined in TPDES GP TXR 150000 as the entity of having operational control over plans and specifications for work shown on the plans in the right of way.

The Contractor will be considered a Primary Operator for <u>Day-to-Day Operational Control</u> as defined in TPDES GP TXR 150000 for construction activity in the right of way. In addition to the Department's actions, the Contractor will post a small site notice along with other requirements as defined in TPDES GP TXR 150000 as the entity of having day-to-day operational control of the work shown on the plans in the right of way. This is in addition to the Contractor being responsible for TPDES GP TXR 150000 requirements for on- right of way and off- right of way PSL's. Adhere to all requirements of the SWP3 as shown on the plans. The Contractor will be responsible for Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed.

# 7.2.3. Projects with 5 acres or more of soil disturbance including required associated PSL's per TPDES GP TXR 150000.

The Department will be considered a primary operator for <u>Operational Control Over Plans and Specifications</u> as defined in TPDES GP TXR 150000 for construction activities in the right of way. The Department will post a large site notice, file a notice of intent (NOI), notice of change (NOC), if applicable, and a notice of termination (NOT) along with other requirements per TPDES GP TXR 150000 as the entity having operational control over plans and specifications for work shown on the plans in the right of way.

The Contractor will be considered a primary operator for <u>Day-to-Day Operational Control</u> as defined in TPDES GP TXR 150000 for construction activities in the right of way. In addition to the Department's actions, the Contractor shall file a NOI, NOC, if applicable, and NOT and post a large site notice along with other requirements as the entity of having day-to-day operational control of the work shown on the plans in the right of way. This is in addition to the Contractor

being responsible for TPDES GP TXR 150000 requirements for on- right of way and off- right of way PSL's. Adhere to all requirements of the SWP3 as shown on the plans.

### Special Provision to Item 7L Legal Relations and Responsibilities



Item 7L, "Legal Relations and Responsibilities," of the Standard Specifications is amended with respect to the clauses cited below.

Section 1.5.2., "Flaggers," the first paragraph is voided and replaced by the following:

1.5.2 Flaggers. Designate in writing, a flagger instructor who will serve as a flagging supervisor and is responsible for training and assuring that all flaggers are qualified to perform flagging duties. Certify to the Engineer that all flaggers will be trained and make available upon request a list of flaggers trained to perform flagging duties.

Section 1.5.5., "Training," is voided and replaced by the following:

1.5.5 **Training.** Train workers involved with the traffic control using Department-approved training as shown on the "Traffic Control Training" Material Producer List.

Coordinate enrollment, pay associated fees, and successfully complete Department-approved training or Contractor-developed training. Training is valid for the period prescribed by the provider. Except for law enforcement personnel training, refresher training is required every 4 yr. from the date of completion unless otherwise specified by the course provider. The Engineer may require training at a frequency instead of the period prescribed based on the Department's needs. Training and associated fees will not be measured or paid for directly but are considered subsidiary to pertinent Items.

Certify to the Engineer that workers involved in traffic control and other work zone personnel have been trained and make available upon request a copy of the certification of completion to the Engineer. Ensure the following is included in the certification of completion:

- name of provider and course title,
- name of participant,
- date of completion, and
- date of expiration.

Where Contractor-developed training or a Department-approved training course does not produce a certification, maintain a log of attendees. Make the log available upon request. Ensure the log is legible and includes the following:

- printed name and signature of participant,
- name and title of trainer, and
- date of training.
- 1.5.5.1. **Contractor-developed Training**. Develop and deliver Contractor-developed training meeting the minimum requirements established by the Department. The outline for this training must be submitted to the Engineer for approval at the preconstruction meeting. The CRP or designated alternate may deliver the training instead of the Department-approved training. The work performed and materials furnished to develop and deliver the training will not be measured or paid for directly but will be considered subsidiary to pertinent Items.
- 1.5.5.1.1. Flagger Training Minimum Requirements. A Contractor's certified flagging instructor is permitted to train other flaggers.

1.5.5.1.2. **Optional Contractor-developed Training for Other Work Zone Personnel**. For other work zone personnel, the Contractor may provide training meeting the curriculum shown below instead of Department-approved training.

Minimum curriculum for Contractor-provided training is as follows:

Contractor-developed training must provide information on the use of personnel protection equipment, occupational hazards and health risks, and other pertinent topics related to traffic management. The type and amount of training will depend on the job duties and responsibilities. Develop training applicable to the work being performed. Develop training to include the following topics.

- The Life You Save May Be Your Own (or other similar company safety motto).
- Purpose of the training.
  - It's the Law.
  - To make work zones safer for workers and motorist.
  - To understand what is needed for traffic control.
  - To save lives including your own.
- Personal and Co-Worker Safety.
  - High Visibility Safety Apparel. Discuss compliant requirements; inspect regularly for fading and reduced reflective properties; if night operations are required, discuss the additional and appropriate required apparel in addition to special night work risks; if moving operations are underway, discuss appropriate safety measures specific to the situation and traffic control plan.
  - Blind Areas. A blind area is the area around a vehicle or piece of construction equipment not
    visible to the operators, either by line of sight or indirectly by mirrors. Discuss the "Circle of Safety"
    around equipment and vehicles; use of spotters; maintain eye contact with equipment operators;
    and use of hand signals.
  - Runovers and Backovers. Remain alert at all times; keep a safe distance from traffic; avoid turning your back to traffic and if you must then use a spotter; and stay behind protective barriers, whenever possible. Note: It is not safe to sit on or lean against a concrete barrier, these barriers can deflect four plus feet when struck by a vehicle.
  - Look out for each other, warn co-workers.
  - Be courteous to motorists.
  - Do not run across active roadways.
  - Workers must obey traffic laws and drive courteously while operating vehicles in the work zones.
  - Workers must be made aware of company distracted driving policies.
- Night Time Operations. Focus should be placed on projects with a nighttime element.
- Traffic Control Training. Basics of Traffic Control.
  - Identify work zone traffic control supervisor and other appropriate persons to report issues to when they arise.
  - Emphasize that work zone traffic control devices must be in clean and in undamaged condition. If devices have been hit but not damaged, put back in their correct place and report to traffic control supervisor. If devices have been damaged, replace with new one and report to traffic control supervisor. If devices are dirty, faded or have missing or damaged reflective tape clean or replace and report to traffic control supervisor. Show examples of non-acceptable device conditions. Discuss various types of traffic control devices to be used and where spacing requirements can be found.
  - Channelizing Devices and Barricades with Slanted Stripes. Stripes are to slant in the direction you want traffic to stay or move to; demonstrate this with a device.
  - Traffic Queuing. Workers must be made aware of traffic queuing and the dangers created by it. Workers must be instructed to immediately notify the traffic control supervisor and other supervisory personnel if traffic is queuing beyond advance warning sign and devices or construction limits.

 Signs. Signs must be straight and not leaning. Report problems to the traffic control supervisor or other as designated for immediate repair. Covered signs must be fully covered. If covers are damaged or out of place, report to traffic control supervisor or other as designated.

# Special Provision to Item 8 Prosecution and Progress



Item 8, Prosecution and Progress of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

#### Article 8.1 Prosecution of Work. The first sentence of the first paragraph is voided and replaced by the following:

Begin work 90 calendar days after the authorization date to begin work. Do not begin work before or after this period unless authorized in writing by the Engineer.

Article 8.2 Subcontracting is supplemented by the following. Do not sublet any portion of a construction Contract without the Engineer's written approval. A subcontract does not relieve any responsibility under the Contract and bonds. Ensure that all subcontracted work complies with all governing labor provisions. All work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate written agreement between the Contractor and the Subcontractor (and where appropriate between Subcontractors) which shall contain provisions that:

- preserve and protect the rights of the County, the Inspector, the GEC and the Engineer of Record under the contract with
  respect to the Work to be performed under the subcontract so that the subcontracting thereof will not prejudice such rights;
- require that such work be performed in accordance with the requirements of the Contract Documents;
- require submission to the Contractor of the applications for payment under each subcontract to which the Contractor is a party, in reasonable time to enable the Contractor to apply for payment in accordance with the Contract Documents;
- require that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to subcontracted
  portions of the Work shall be submitted to the Contractor (via any Subcontractor or Sub-subcontractor where appropriate) in
  sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like claims by the
  Contractor upon the County;
- obligate each subcontractor specifically to consent to the provisions of this article.

A copy of all such signed subcontract agreements shall be filed by the Contractor with the Inspector before the Subcontractor shall be allowed to commence work.

#### Article 8.3.1.4 Standard Workweek is supplemented by:

Should the Contractor be delayed in the completion of the Work by any act or neglect of the County, the Inspector or the Engineer of Record, or of any employee of either, or by other contractors employed by the County, or by changes ordered in the Work, or by strikes, lockouts, fires, and unusual delays by common carriers, or unavoidable cause or causes beyond the Contractor's control, or by any cause which the Inspector shall decide justifies the delay, then an extension of time shall be allowed for completing the Work, sufficient to compensate for the delay, the amount of the extension to be determined by the Inspector; provided, however, before the Inspector may decide whether or not to allow such an extension of time, the Contractor must tender a prompt written request for an extension of time wherein the Contractor shall give the Inspector a written description of the cause of such delay.

No claims shall be made by the Contractor for damages resulting from hindrances or delays from any cause (except where the Work is stopped by order of and for the convenience of the County) during the progress of any portion of the Work embraced in the Contract Documents. In case said work shall be stopped by the act of the County, then such expense, as in the sole judgment of the Inspector is caused by such stoppage of said work, shall be paid by the County to the Contractor.
Article 8.7 Default of Contract. The paragraph entitled "Contracts with Performance Bonds" is supplemented by the following:

In case the surety should fail to commence compliance within ten (10) days after service of the herein above provided notice of abandonment and notice for completion, then the County may provide for completion of the Work in either of the following elective manners:

- The County may thereupon employ such force of men and use such machinery, equipment, tools, materials and supplies as the County may deem necessary to complete the Work and charge the expense of such labor, machinery, equipment, tools, materials and supplies to the Contractor, and expense so charged shall be deducted and paid by the County out of such monies as may be due, or that may thereafter at any time become due to the Contractor under and by virtue of the Contract Documents. In case such expense is less than the sum which would have been payable under the Contract Documents if the same had been completed by the Contractor, the County will be entitled to retain the difference. In case such expense is greater than the sum which would have been payable under the Contract Documents if the same had been completed by the Contractor, then the Contract or and/or its surety shall pay the amount of such excess to the County, or
- The County, under sealed bids, after twenty-one (21) days notice published one or more times in a newspaper having general circulation in the area of the location of the Project, may let a contract for the completion of the Work under substantially the same terms and conditions which are provided in the Contract Documents. In case there is any increase in cost to the County under the new contract as compared to what would have been the cost under the Contract Documents, such increase shall be charged to the Contractor and the surety shall be and remain bound therefor. However, should the cost to complete any such contract prove to be less than what would have been the cost to complete under the Contract Documents, the County shall be entitled to retain the difference.

When the Work shall have reached Final Completion, the Contractor and its surety shall be so notified and Certificates of Completion and Acceptance, as provided in Section 5.12.2.2.b. herein above, shall be issued. A complete itemized statement of the contract accounts, certified by the Inspector as being correct, shall then be prepared and delivered to the Contractor and its surety, whereupon the Contractor and/or its surety, or the County as the case may be, shall pay the balance due as reflected by said statement within fifteen (15) days after the date of such Certificate of Completion.

In the event the statement of accounts shows that the cost to complete the Work is less than that which would have been the cost to the County had the Work been completed by the Contractor under the terms of the Contract Documents, or when the Contractor and/or its surety shall pay the balance shown to be due by them to the County, then all machinery, equipment, tools, materials or supplies left on the site of the Project shall be turned over to the Contractor and/or its surety.

Should the cost to complete the Work exceed the amount the County would have been obligated to pay the Contractor had the Work been completed by the Contractor under the terms of the Contract Documents, and should the Contractor and/or its surety fail to pay the amount due the County within the time designated hereinabove, and should there remain any machinery, equipment, tools, materials or supplies on the site of the Project, notice thereof, together with an itemized list of such equipment and materials, shall be mailed to the Contractor and its surety at the respective addresses designated in the Contract Documents. After properly tendering such notice, such property shall be held at the risk of the Contractor and its surety subject only to the duty of the County to exercise ordinary care to protect such property. After fifteen (15) days from the date of said notice, the County may sell such machinery, equipment, tools, materials or supplies and apply the net sum derived from such sale to the credit of the Contractor and its surety. Such sale may be made at either public or private sale, with or without notice, as the County may elect. The County shall release, to their proper owners, any machinery, equipment, tools, materials, or supplies, which remain on the Project and which belong to persons other than the Contractor or its surety. The books on all operations provided herein shall be opened to the Contractor and its surety.

Article 8.8 Termination of Contract. The following section shall be added to Article 8.8:

**8.8.3.** Termination for Convenience. In connection with the Work outlined in the Contract Documents, it is agreed and fully understood by Contractor, that the County may cancel or indefinitely suspend further work hereunder or terminate the Contract for the convenience of the County, upon fifteen (15) days written notice to Contractor. In the event the County terminates the Contract for convenience, it is hereby understood and acknowledged by the Contractor that immediately upon receipt of the County's notice of termination, all work and labor being performed under the Contract Documents shall cease. Contractor shall invoice the County for all work satisfactorily completed and shall be compensated in accordance with the terms of the Contractor Documents for work accomplished prior to the receipt of said notice. No amount shall be due for lost or anticipated profits. However, no cost incurred

after the effective date of the notice of termination shall be treated as reimbursable costs unless it relates to carrying out the unterminated portion or taking closeout measures.

### Item 8 is further supplemented by the following:

Article 8.9 Workers and Equipment. Furnish suitable machinery, equipment, and construction forces for the proper prosecution of the work. Provide adequate lighting to address quality requirements and inspection of nighttime work. At the written request of the Engineer, immediately remove from the work locations any employee or representative of the Contractor or a subcontractor who, in the opinion of the Engineer, does not perform work in a proper and skillful manner or who is disrespectful, intemperate, disorderly, uncooperative, or otherwise objectionable. Do not reinstate these individuals without the written consent of the Engineer. The Engineer may suspend the work without suspending working day charges until the Contractor complies with these requests. No illegal alien may be employed by any Contractor for work on this Project, and a penalty of \$500.00 per day will be assessed for each day and for each illegal alien who works for the Contractor at this Project.

# Special Provision to Item 8 Prosecution and Progress



Item 8, "Prosecution and Progress" of the Standard Specification is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 8.2., "Subcontracting," is supplemented by the following paragraph, which is added as paragraph six to this article:

The Contractor certifies by signing the Contract that the Contractor will not enter into any subcontract with a subcontractor that is not registered in the Department of Homeland Security's (DHS) E-Verify system. Require that all subcontractors working on the project register and require that all subcontractors remain active in the DHS E-Verify system until their work is complete on the project.

## Special Provision to Item 8 Prosecution and Progress



Item 8, "Prosecution and Progress" of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Article 8.7.2., "Wrongful Default," is revised and replaced by the following:

If it is determined after the Contractor is declared in default, that the Contractor was not in default, the rights and obligations of all parties will be the same as if termination had been issued for the convenience of the public as provided in Article 8.8 "Termination of Contract."

## Special Provision to Item 9 Measurement and Payment



Item 9, Measurement and Payment of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 9.5 Progress Payments. The first sentence is replaced by: On or before the first Wednesday of each month, the Contractor shall submit to the Inspector a statement showing the total value of the Work performed up to and including the last day of the preceding month. The statement shall also include the value of all sound materials delivered on the job site and to be included in the Work and all partially completed work whether bid as a lump sum or a unit item which, in the opinion of the Inspector, is acceptable. The Inspector shall either examine and approve by signature or modify and approve such modified statement.

The Inspector shall review the Contractor's applications for payment and supporting data, determine the amount owed to the Contractor and recommend, in writing to the GEC for review, payment to the Contractor in such amounts; such recommendation of payment to the Contractor constitutes a representation to the County of the Inspector's professional judgment that the Work has progressed to the point indicated to the best of its knowledge, information and belief, but such recommendation of an application for payment to the Contractor shall not be deemed as a representation by the Inspector that the Inspector has made any examination to determine how or for what purpose the Contractor has used the monies paid on account of the Contract Price.

The County shall then pay the Contractor, within 30 days of the statement submittal, the total amount of the approved statement, and further less all previous payments and all further sums that may by retained by the County under the terms of the Contract Documents and/or under state or federal law. It is understood, however, that in case the whole work be near completion and some unexpected and unusual delay occurs due to no fault or neglect on the part of the Contractor, then the County may, upon written recommendation of the Inspector, pay a reasonable and equitable portion of the retained percentage to the Contractor, if any; or the Contractor, at the County's option, may be relieved of the obligation to fully complete the Work and, thereupon, the Contractor shall receive payment of the balance due Contractor under the contract subject to the conditions stated under Article 9.8.

As a minimum, invoices shall be on the form provided by the County and include: (1) Name, address, and telephone number of Contractor and similar information in the event the payment is to be made to a different address, (2) County contract number, (3) Identification of items or service as outlined in the Contract Documents, (4) Quantity or quantities, applicable unit prices, total prices, and total amount and (5) Any additional payment information which may be called for by the Contract Documents.

Payment inquiries should be directed to the GEC.

Article 9.9 Payment Provisions for Subcontractors is further supplemented as follows: THE CONTRACTOR AGREES THAT IT WILL INDEMNIFY, DEFEND AND SAVE HARMLESS THE COUNTY, THE INSPECTOR, THE GEC AND THE ENGINEER OF RECORD, AS WELL AS ANY OF THEIR AGENTS, REPRESENTATIVES, OFFICERS OR EMPLOYEES FROM ALL CLAIMS GROWING OUT THE LAWFUL DEMANDS OF SUBCONTRACTORS, LABORERS, WORKERS, MECHANICS, MATERIALMEN AND FURNISHERS OF MACHINERY, MACHINERY PARTS, EQUIPMENT, POWER TOOLS, AND ALL SUPPLIES, INCLUDING COMMISSARY, INCURRED IN THE FURTHERANCE OF THE PERFORMANCE OF THE WORK SUBJECT OF THE CONTRACT DOCUMENTS. When so desired by the County, the Contractor shall furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged or waived. If the Contractor fails to furnish such evidence to County's complete satisfaction, then the County may either pay directly any unpaid bills of which the County has written notice of, or may withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to liquidate any and all such lawful claims. When satisfactory evidence is furnished that all liabilities have been fully discharged, payments to the Contractor shall be resumed in full in accordance with the terms of the Contract Documents, but in no event shall the provisions of this sentence be construed to impose any obligation upon the County by either the Contractor or its surety.

Article 9.10. Final Payment is supplemented by: At the County's sole discretion, this payment may include payment for work remaining to be performed in association with the removal of temporary erosion controls or the establishment of permanent stabilization measures. On or after the 30th day, and before the 35th day after the date of the Certificate of Acceptance, the

balance due the Contractor under the terms of the Contract Documents shall be paid. Neither the Certificate of Acceptance nor the Final Payment, nor any provision in the Contract Documents, shall relieve the Contractor of the obligation for fulfillment of any warranty which may be required.

The County may, on account of subsequently discovered evidence, withhold or nullify the whole or part of any certificate to such extent as may be necessary to protect itself from loss on account of:

- Defective work not remedied or other obligations hereunder not completed.
- Claims filed or reasonable evidence indicating the probable or potential filing of claims.
- Failure of the Contractor to make payments properly to Subcontractors or for material or labor.
- Damage to the County or another contractor's work, material or equipment.
- Reasonable doubt that the Work can be completed for the unpaid balance of the contract amount or Contract Price.
- Reasonable indication that the Work will not be completed within the contract time.
- Other causes affecting the performance of the Work subject of the Contract Documents.

When the above grounds are removed or the Contractor provides a surety bond satisfactory to the County, which will protect the County in the amount withheld, payment shall be made for amounts withheld because of them.

Should the County fail to make payment to the Contractor of the sum named in any partial or final statement, when such payment is due, then the County shall pay to the Contractor, in addition to the sum shown as due by such statement, interest thereon in accordance with Texas Government Code Section 2251.025. More specifically, the rate of interest that shall accrue on a late payment is the rate in effect on September 1 of County's fiscal year in which the payment becomes due. The said rate in effect on September 1 shall be equal to the sum of one percent (1%); and (2) the prime rate published in the Wall Street Journal on the first day of July of the preceding fiscal year that does not fall on a Saturday or Sunday. County's payment of the amount due plus said interest shall fully liquidate any injury to the Contractor growing out of such delay in payment. It is expressly agreed that delay by the County in making payment to the Contractor of the sum named in any partial or final statement shall not constitute, on the part of the County, a breach under the Contract Documents, nor shall it serve as an abandonment by the County. Furthermore, any delay by the County in making payment to the Contractor of the sum named in any partial or final statement shall not, to any extent or for any time, relieve the Contractor of its obligations to fully and completely perform pursuant to the terms of the Contract Documents.

## Special Provision to Item 009 Measurement and Payment



Item 009 "Measurement and Payment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

### Article 9.5., "PROGRESS PAYMENTS" is supplemented with the following:

It is the Department's desire to pay a Contractor for work through the last working day of the month; however, the use of early cut-off dates for monthly estimates and MOH is a project management practice to manage workload at the Area Office level. Approval for using early cut-off dates is at the District's discretion. The earliest cut-off date for estimates is the 25th of the month.

### Article 9.6., "PAYMENT FOR MATERIAL ON HAND (MOH)" first paragraph is amended as follows:

If payment for MOH is desired, request compensation for the invoice cost of acceptable nonperishable materials that have not been used in the work before the request, and that have been delivered to the work location or are in acceptable storage places. Nonperishable materials are those that do not have a shelf life or whose characteristics do not materially change when exposed to the elements. Include only materials that have been sampled, tested, approved, or certified, and are ready for incorporation into the work. Only materials which are completely constructed or fabricated on the Contractor's order for a specific Contract and are so marked and on which an approved test report has been issued are eligible. Payment for MOH may include the following types of items: concrete traffic barrier, precast concrete box culverts, concrete piling, reinforced concrete pipe, and illumination poles. Any repairs required after fabricated materials have been approved for storage will require approval of the Engineer before being made and will be made at the Contractor's expense. Include only those materials and products, when cumulated under an individual item or similar bid items, that have an invoice cost of at least \$1,000 in the request for MOH payment (e.g. For MOH eligibility, various sizes of conductor are considered similar bid items and may be cumulated to meet the threshold; for small roadside signs, the sign supports, mounting bolts, and the sign face is considered one bid item or similar bid items for more than one pay item for sign supports.) Requests for MOH are to be submitted at least two days before but not later than the estimate cutoff date unless otherwise agreed. If there is a need to request MOH after the established cut-off date, the district can make accommodation as the need arises. This needed accommodation is to be the exception, though, and not the rule.

## Special Provision to Item 9 Measurement and Payment



Item 9, "Measurement and Payment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 9.7.1.4.3., "Standby Equipment Costs," is voided and replaced by the following:

7.1.4.3. **Standby Equipment Costs.** Payment for standby equipment will be made in accordance with Section 9.7.1.4., "Equipment," except that the 15% markup will not be allowed and that:

Section 7.1.4.3.1., "Contractor-Owned Equipment," is voided and replaced by the following:

- 7.1.4.3.1. Contractor-Owned Equipment. For Contractor-owned equipment:
  - Standby will be paid at 50% of the monthly Equipment Watch rate after the regional and age adjustment factors have been applied. Operating costs will not be allowed. Calculate the standby rate as follows.

Standby rate = (FHWA hourly rate - operating costs) × 50%

- If an hourly rate is needed, divide the monthly *Equipment Watch* rate by 176.
- No more than 8 hr. of standby will be paid during a 24-hr. day period, nor more than 40 hr. per week.
- Standby costs will not be allowed during periods when the equipment would have otherwise been idle.

### Special Provision to Item 132 Embankment



Item 132, "Embankment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 132.3.4., "Compaction Methods." The last sentence is replaced by the following.

Compact embankments in accordance with Section 132.3.4.1., "Ordinary Compaction," or Section 132.3.4.2., "Density Control," as shown on the plans. The Contractor may use Section 132.3.4.3., "Density Control by Computer-Generated (CG) Curve," as an option for density control.

Article 132.3.4., "Compaction Methods," is supplemented by the following.

**3.4.3. Density Control by Computer-Generated (CG) Curve.** At the Contractor's discretion, CG curves may be used for density control.

Compact each layer to the required density using equipment complying with Item 210, "Rolling." Determine the maximum lift thickness based on the ability of the compacting operation and equipment to meet the required density. Do not exceed layer thickness of 12 in. loose or 10 in. compacted material, unless otherwise approved. Maintain a level layer with consistent thickness to ensure uniform compaction.

When using this method for each source and type of material, or when directed, sample and conduct testing according to the input parameters specified in Table 3 and provide CG field moisture-density curves based on each soil-compactor-lift thickness combination and CG Tex-114-E moisture-density curves based on each lift of soil. The CG field dry density ( $D_{fcg}$ ) must be greater than or equal to the CG Tex-114-E maximum dry density ( $D_{acg}$ ). The Engineer may obtain independent soil samples for supplemental Tex-114-E lab tests to check a supplemental maximum dry density ( $D_a$ ) and optimum moisture content ( $W_{opt}$ ) for reference when new CG curves are submitted. Provide access to the computer program used to generate the curve, when directed.

mputer-Generated Lab and Field Compaction Curve Input C						
Input Variables	Test Method					
Liquid Limit, %	Tex-104-E					
Plasticity Index (PI), %	Tex-106-E					
Soil gradation	Tex-110-E					
Soli gradation	Tex-111-E					
Soil classification	Tex-112-E					
Compaction roller brand, type, and model	N/A					
Loose lift thickness, in.	N/A					
	Use 2.65 for soil type SC.					
Soil specific gravity	Use 2.68 for soil type CL.					
	Use 2.69 for soil type CH.					

 Table 3

 Computer-Generated Lab and Field Compaction Curve Input Criteria

Provide a compaction control report showing all input and output parameters and CG compaction curves, including:

- CG Tex-114-E laboratory maximum dry density (D_{acg}),
- CG Tex-114-E laboratory optimum moisture content (W_{optcg}),
- CG field maximum dry density (D_{fcg}),

- CG field optimum moisture content (Wf_{optcg}),
- graph of CG laboratory and field compaction curves and the "Zero Air Voids Line," and
- minimum number of roller passes to achieve the required density and moisture content.

Meet the requirements for field maximum dry density (D_{fcg}) and field optimum moisture content (Wf_{optcg}) specified in Table 4, unless otherwise shown on the plans. Use only the specific roller and soil properties utilized in lift construction as input parameters to generate the CG field curve used to meet moisture-density requirements in construction.

Description	Density	Moisture Content		
Description	Tex-115-E			
PI ≤ 15	$\geq 98\%~D_{fcg}$	$\geq$ Wf _{optcg}		
15 < PI ≤ 35	$\geq 98\%~D_{fcg}$ and $\leq 102\%~D_{fcg}$	$\geq Wf_{optcg}$		
PI > 35	$\geq 95\%~D_{acg}$ and $\leq 100\%~D_{acg}$	$\geq$ Wf _{optcg}		

Table 4 Computer-Generated Lab and Field Compaction Curve Input Criteria

Each layer is subject to testing by the Engineer for density and moisture content. During compaction, the moisture content of the soil should be above CG optimum moisture content but should not exceed the value shown on the moisture-density curve, above optimum, required to achieve 98% dry density.

When the CG field maximum dry density (Dfcg) is not achieved, perform the following steps in order.

- Verify that construction controls including lift soil properties, minimum number and uniformity of compactor passes, lift thickness, and moisture content are correct.
- If needed, rework the lift with the corrected controls using the original CG curve.
- Generate a new CG field compaction curve based on actual in-place soil properties and rework the lift.
- Generate a non-CG Tex-114-E moisture-density reference standard and rework the material using this reference standard.

When required, remove small areas of the layer to allow for density tests. Replace the removed material and recompact at no additional expense to the Department. Proof-roll in accordance with Item 216, "Proof Rolling," when shown on the plans or as directed. Correct soft spots as directed.

Article 132.3.5., "Maintenance of Moisture and Reworking." The first sentence is replaced by the following.

Maintain the density and moisture content once all requirements in Table 2 or 4 are met.

### Special Provision to Item 247 Flexible Base



Item 247, "Flexible Base" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 2.4., "Certification." This section is added.

Personnel certified by the Department-approved soils and base certification program must conduct all sampling, field testing, and laboratory testing required by the following:

- Section 2.1, "Aggregate,"
- Section 2.1.3.2, "Recycled Material (Including Crushed Concrete) Requirements,"
- Section 4.3, "Compaction," for measuring flexible base depth, and
- Section 4.3.2, "Density Control," for determining the roadway density and moisture content.

Supply the Engineer with a list of certified personnel and copies of their current certificates before laboratory and field testing is performed and when personnel changes are made. At any time during the project, the Engineer may perform production tests as deemed necessary in accordance with Item 5, "Control of the Work."

### Section 2.5., "Reporting and Responsibilities." This section is added.

Use Department-provided templates to record and calculate all test data. Obtain the current version of the templates at http://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html or from the Engineer. The Engineer and the Contractor will provide any available test results to the other party when requested. Record and electronically submit all test results and pertinent information on Department-provided templates.

### Section 2.6., "Sampling." This section is added.

The Engineer will sample flexible base from stockpiles located at the production site or at the project location in accordance with <u>Tex-400-A</u>, Section 5.3. The Engineer will label the sample containers as "Engineer," "Contractor" or "Supplier," and "CST/M&P." Witness the sampling and take immediate possession of the sample containers labeled "Contractor" or "Supplier." The Engineer will maintain custody of the samples labeled "CST/M&P" until testing and reporting is completed.

### Section 2.7., "Referee Testing." This section is added.

CST/M&P is the referee laboratory. The Contractor may request referee testing when the Engineer's test results fail to meet any of the material requirements listed in Table 1. Make the request via email within 5 working days after receiving test results from the Engineer. Submit test reports signed and sealed by a licensed professional engineer from a commercial laboratory listed on the Department's Material Producer List (MPL) of laboratories approved to perform compaction and triaxial compression testing located at http://ftp.dot.state.tx.us/pub/txdot-info/cmd/mpl/complabs.pdf. Submit completed test reports electronically on Department-provided templates in their original format. The referee laboratory will report test results to the Engineer within the allowable number of working days listed in Table 2 from the time the referee laboratory receives the samples. It is at the discretion of the Engineer or the referee laboratory to deny a referee request upon review of the test reports provided by the Contractor.

Material Property	Test Method	Working Days					
Gradation	Tex-110-E, Part I	5					
Liquid Limit (Multi-Point Method)	Tex-104-E, Part I	5					
Plasticity Index	Tex-106-E	5					
Wet Ball Mill Value	Tex-116-E,	F					
Wet Ball Mill, % Increase passing #40 sieve	Parts I and II	5					
Compressive Strength ¹	Tex-117-E, Part II	6					
Compressive Strength ²	Tex-117-E	12					

 Table 2

 Number of Allowable Working Days to Report Referee Test Results

1. Moisture-Density curve provided by the District

2. Moisture-Density curve determined by the referee laboratory

Section 4.6., "Ride Quality." This section is voided and replaced by the following.

Measurement of ride quality only applies to the final travel lanes that receive a 1- or 2-course surface treatment for the final riding surface, unless otherwise shown on the plans. Measure the ride quality of the base course either before or after the application of the prime coat, as directed, and before placement of the surface treatment. Use a certified profiler operator from the Department's MPL. When requested, furnish the Engineer documentation for the person certified to operate the profiler.

Provide all profile data to the Engineer in electronic data files within 3 days of measuring the ride quality using the format specified in <u>Tex-1001-S</u>. The Engineer will use Department software to evaluate longitudinal profiles to determine areas requiring corrective action. Correct 0.1-mi.sections for each wheel path having an average international roughness index (IRI) value greater than 100 in. per mile to an IRI value of 100 in. per mile or less, unless otherwise shown on the plans.

Re-profile and correct sections that fail to maintain ride quality, as directed. Correct re-profiled sections until specification requirements are met, as approved. Perform this work at no additional expense to the Department.

# Special Provision to Item 300 Asphalt, Oils, and Emulsions



Item 300, "Asphalt, Oils, and Emulsions" of the Standard Specifications is replaced by Special Specification <u>3096</u>, "Asphalts, Oils, and Emulsions." All Item 300 Special Provisions are no longer available, beginning with the April 2022 letting.

## Special Provision to Item 302 Aggregates for Surface Treatments



Item 302, "Aggregates for Seal Coats," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 2.1., "Aggregate." Tables 2 and 3 are voided and replaced by the follow	ng.
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	Grade									
Sieve	1	2	3S ²		3	4S ²	4	5S ²	5	
Sieve				Non- Lightweight	Lightweight					
1"	-	-	-	-	-	-	-	-	-	
7/8"	0–2	0	-	-	-	-	-	-	-	
3/4"	20-35	0–2	0	0	0	-	-	-	-	
5/8"	85–100	20-40	0–5	0–5	0–2	0	0	-	-	
1/2"	-	80–100	55–85	20-40	10–25	0–5	0–5	0	0	
3/8"	95–100	95–100	95–100	80–100	60–80	60–85	20-40	0–5	0–5	
1/4"	-	-	-	95–100	95–100	-	-	65–85	-	
#4	-	-	-	-	-	95–100	95–100	95–100	50-80	
#8	99–100	99–100	99–100	98–100	98–100	98–100	98–100	98–100	98–100	

1. Round test results to the nearest whole number.

2. Single-size gradation.

Dronorty	Toot Mathed	Requirement ¹		
Property	l est method	Minimum	Maximum	
SAC	AQMP	As shown on the plans		
Deleterious Material ² , %	<u>Tex-217-F</u> , Part I	-	2.0	
Decantation, %	<u>Tex-406-A</u>	-	1.5	
Flakiness Index, %	<u>Tex-224-F</u>	-	17	
Gradation	<u>Tex-200-F</u> , Part I	Table 2 R	equirements	
Los Angeles Abrasion, %	<u>Tex-410-A</u>	-	35	
Magnesium Sulfate Soundness, 5 Cycle, %	<u>Tex-411-A</u>	-	25	
Micro-Deval Abrasion, %	<u>Tex-461-A</u>	Note 3		
Coarse Aggregate Angularity ⁴ , 2 Crushed Faces, %	<u>Tex-460-A</u> , Part I	85 -		
Additio	nal Requirements for	Lightweight Aggregate		
Dry Loose Unit Wt., lb./cu. ft.	<u>Tex-404-A</u>	35	60	
Pressure Slaking, %	<u>Tex-431-A</u>	-	6.0	
Freeze-Thaw Loss, %	<u>Tex-432-A</u>	-	10.0	
Water Absorption, 24hr., %	<u>Tex-433-A</u>	-	12.0	

### Table 3 Aggregate Quality Requirements

1. Material requirements are listed below, unless otherwise shown on the plans.

2. Not required for lightweight aggregate.

3. Used to estimate the magnesium sulfate soundness loss in accordance with Section 2.1.1.

4. Only required for crushed gravel.

Section 2.1.1., "Micro-Deval Abrasion," is added.

The Engineer will perform a minimum of one Micro-Deval abrasion test in accordance with <u>Tex-461-A</u> for each coarse aggregate source per project that has a Rated Source Soundness Magnesium (RSSM) loss value greater than 15 as listed in the BRSQC. The Engineer may waive all Micro-Deval testing based on a satisfactory test history of the same aggregate source.

The Engineer will estimate the magnesium sulfate soundness loss for each coarse aggregate source, when tested, using the following formula.

Mg_{est.} = (RSSM)(MD_{act.}/RSMD)

where:  $Mg_{est}$  = magnesium sulfate soundness loss  $MD_{act}$  = actual Micro-Deval percent loss RSMD = Rated Source Micro-Deval

When the estimated magnesium sulfate soundness loss is greater than the maximum magnesium sulfate soundness loss specified, the coarse aggregate source will not be allowed for use unless otherwise approved by the Engineer. The Engineer may require additional testing before granting approval.

Section 2.2., "Precoating." The third paragraph is voided and replaced by the following.

The Engineer retains the right to remove precoat material from aggregate samples in accordance with <u>Tex-210-F</u>, or as recommended by the Construction Division, and test the aggregate to verify compliance with Table 2 and Table 3 requirements. Gradation testing may be performed with precoat intact.

Section 2.3., "Sampling," is added.

Personnel who conduct sampling and witnessing of sampling must be certified by the Department-approved certification program. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning construction and when personnel changes are made. At any time during the project, the Engineer may perform production tests as deemed necessary in accordance with Item 5, "Control of the Work."

The Engineer will sample aggregate from stockpiles located at the production site, intermediate distribution site, or project location in accordance with  $\underline{\text{Tex-221-F}}$ , Section 3.2.3. The Engineer will split each sample into 2 equal portions in accordance with  $\underline{\text{Tex-220-F}}$ , Section 3.3, and label these portions "Engineer" and "Contractor" or "Supplier." Witness the sampling and splitting, and take immediate possession of the samples labeled "Contractor" or "Supplier".

Section 2.4., "Reporting and Responsibilities," is added.

The Engineer will provide test results to the Contractor and Supplier within 10 working days from the date the stockpile was sampled for sources listed on the Department's Bituminous Rated Source Quality Catalog (BRSQC), unless otherwise directed. The Engineer will provide test results for the LA Abrasion (Tex-410-A) and Magnesium Sulfate Soundness (Tex-411-A) tests within 30 calendar days for sources not listed on the BRSQC, or for sources not meeting the requirements of Section 2.1.1., "Micro-Deval Abrasion." The Engineer will report to the other party within 24 hours when any test result does not meet the requirements listed in Table 2 or Table 3.

## Special Provision to Item 314 Emulsified Asphalt Treatment



Item 314, "Emulsified Asphalt Treatment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Articles 1 through 6 are voided and replaced by the following:

### 1. DESCRIPTION

Apply a mixture of water and asphalt emulsion as a base or subgrade treatment; for erosion control, including dust prevention; or as a prime coat.

### 2. MATERIALS

Furnish materials of the type and grade shown on the plans in accordance with the following:

- 2.1. Emulsion. Furnish emulsified asphalt meeting the requirements of Item 300, "Asphalt, Oils, and Emulsions."
- 2.2. Emulsion and Water Mixture. Dilute the emulsion by adding water to create a mixture containing a proportion of emulsion, expressed as a percentage of total volume, in accordance with the percentage shown on the plans or as directed.

### 3. EQUIPMENT

Provide a self-propelled sprinkler in accordance with Article 204.3., "Equipment." Provide current calibration documentation for the tank used for distribution.

### 4. CONSTRUCTION

Agitate the emulsion and water mixture to produce a uniform blend. Evenly distribute at the rate selected by the Engineer to locations shown on the plans or as directed.

4.1. Base or Subgrade Treatment. Treat the base or subgrade to the depth and width shown on the plans or as directed.

Regulate the percentage of emulsion in the mixture and distribute successive applications to achieve the specified rate. Maintain the proper moisture content of the treated material. Mix the treated material, then shape and compact as required by the specification for the course. Finish the course to the line, grade, and typical section shown on the plans. Maintain the surface with light applications of the mixture while curing the course, as directed.

- 4.2. **Erosion Control**. Apply the mixture as shown on the plans or as directed.
- 4.3. **Prime Coat**. Regulate the percentage of emulsion in the mixture and distribute successive applications to achieve the specified rate.

### 5. MEASUREMENT

The treatment will be measured by the gallon of emulsion used in the emulsion and water mixture.

### 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Emulsified Asphalt (Base or Subgrade Treatment)," "Emulsified Asphalt (Erosion Control)," or "Emulsified Asphalt (Prime Coat)," of the type and grade specified. This price is full compensation for materials, including emulsion and water, and for equipment, labor, tools, and incidentals.

## Special Provision to Item 316 Seal Coat



Item 316, "Seal Coat" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 4.8, "Asphalt Placement" is supplemented by the following:

4.8.5. Collect all samples in accordance with Tex-500-C, "Sampling Bituminous Materials, Pre-Molded Joint Fillers, and Joint Sealers" from the distributor and with witness by the Engineer.

At least once per project, collect split samples of each binder grade and source used. The Engineer will submit one split sample to MTD for testing and retain the other split sample.

In addition, collect one sample of each binder grade and source used on the project for each production day. The Engineer will retain these samples.

The Engineer will keep all retained samples for one yr., for hot-applied binders and cutback asphalts; or for two mo., for emulsified asphalts. The Engineer may submit retained samples to MTD for testing as necessary or as requested by MTD.

## Special Provision to Item 334 Hot-Mix Cold-Laid Asphalt Concrete Pavement



Item 334, "Hot-Mix Cold-Laid Asphalt Concrete Pavement," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed hereby.

Section 334.4.1.2., "Job-Mix Formula Approval," Table 5, is voided and replaced by the following:

Laboratory Mixture Design Properties							
Property	Test Method	Requirement					
Target laboratory-molded density, % ¹	Tex-207-F	94.0 ± 1.5					
Hveem stability, Min	Tex-208-F	35					
Hydrocarbon-volatile content, %, Max	<u>Tex-213-F</u>	0.6					
Moisture content, %, Max ²	<u>Tex-212-F</u>	1.0					
Boil test, %, Max ³	Tex-530-C	10					

Table 5

1. Unless otherwise shown on the plans.

2. Unless otherwise approved.

3. Limit may be increased or eliminated when approved.

## Special Provision to Item 342 Permeable Friction Course (PFC)



Item 342, "Permeable Friction Course (PFC)" of the Standard Specifications is replaced by Special Specification <u>3079</u>, "Permeable Friction Course." All Item 342 Special Provisions and bid codes are no longer available, beginning with the April 2022 letting.

# Special Provision to Item 347 Thin Overlay Mixture (TOM)



Item 347, "Thin Overlay Mixture (TOM)" of the Standard Specifications is replaced by Special Specification <u>3081</u>, "Thin Overlay Mixture (TOM). All Item 347 Special Provisions and bid codes are no longer available, beginning with the April 2022 letting.

## Special Provision to Item 348 Thin Bonded Friction Courses



Item 348, "Thin Bonded Friction Courses" of the Standard Specifications is replaced by Special Specification <u>3082</u>, "Thin Bonded Friction Courses." All Item 348 Special Provisions and bid codes are no longer available, beginning with the April 2022 letting.

## Special Provision to Item 420 Concrete Substructure



Item 420, "Concrete Substructures" of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Article 420.6., "Payment." The first paragraph is replaced by the following:

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for the class of concrete and element identified and by the special designation when appropriate. This price is full compensation for furnishing, hauling, and mixing concrete materials; furnishing, bending, fabricating, splicing, welding and placing the required reinforcement; clips, blocks, metal spacers, ties, wire, or other materials used for fastening reinforcement in place; placing, finishing, and curing concrete; mass placement controls; applying ordinary surface finish; furnishing and placing drains, metal flashing strips, and expansion-joint material; excavation, subgrade preparation; and forms and falsework, equipment, labor, tools, and incidentals.

## Special Provision to Item 421 Hydraulic Cement Concrete



Item 421, "Hydraulic Cement Concrete" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 421.2., "Materials," the second sentence of the first paragraph is voided and replaced by the following.

Provide aggregates from sources listed in the Department's Concrete Rated Source Quality Catalog (CRSQC).

Article 421.2.2., Supplementary Cementing Materials (SCM), is voided and replaced with the following.

Supplementary Cementing Materials (SCM).

- Fly Ash. Furnish fly ash, Modified fly ash (MFA), and Ground Bottom Ash (GBA) conforming to DMS-4610, "Fly Ash."
- Slag Cement. Furnish Slag Cement conforming to <u>DMS-4620</u>, "Slag Cement."
- Silica Fume. Furnish silica fume conforming to <u>DMS-4630</u>, "Silica Fume."
- Metakaolin. Furnish metakaolin conforming to DMS-4635, "Metakaolin."

Article 421.3.1.3., "Agitators and Truck and Stationary Mixers," the first paragraph is voided and replaced by the following.

Provide stationary and truck mixers capable of combining the ingredients of the concrete into a thoroughly mixed and uniform mass and capable of discharging the concrete so that the requirements of <u>Tex-472-A</u> are met.

### Article 421.3.1.3., "Agitators and Truck and Stationary Mixers," is supplemented with the following.

Truck mixers with automated water and chemical admixture measurement and slump and slump flow monitoring equipment meeting the requirement of ASTM C 94 will be allowed. Provide data every 6 mo. substantiating the accuracy of slump, slump flow, temperature, water, and chemical admixture measurements. The slump measured by the automated system must be within 1 in. of the slump measured in accordance with <u>Tex-415-A</u>. The concrete temperature measured by the automated system must be within 1°F of concrete temperature measured in accordance with <u>Tex-422-A</u>. The Engineer will not use the automated measurements for acceptance.

### Article 421.4.2, "Mix Design Proportioning," Table 8 is voided and replaced by the following.

				Сс	Table 8 Increte Class	ies	
Class of Concrete	Design Strength,¹ Min f'c (psi)	Max w/cm Ratio	Coarse Aggregate Grades ^{2,3,4}	Cement Types	Mix Design Options	Exceptions to Mix Design Options	General Usage ⁵
A	3,000	0.60	1–4, 8	I, II, I/II, IL,	1, 2, 4, & 7	When the cementitious material content does not exceed 520 lb./cu. yd., any fly ash listed in the MPL may be used at a coment replacement of 20% to	Curb, gutter, curb & gutter, conc. retards, sidewalks, driveways, back-up walls, anchors, non- reinforced drilled shafts
В	2,000	0.60	2–7	ip, is, it, v		50%.	Riprap, traffic signal controller foundations, small roadside signs, and anchors
C6	3,600	0.45	1–6	I, II, I/II, IP, IL, IS, IT, V	1–8		Drilled shafts, bridge substructure, traffic rail, culverts except top slab of direct traffic culverts, headwalls, wing walls, inlets, manholes, traffic barrier
E	3,000	0.50	2–5	I, II, I/II, IL, IP, IS, IT, V	1–8	When the cementitious material content does not exceed 520 lb./cu. yd., any fly ash listed in the MPL may be used at a cement replacement of 20% to 50%.	Seal concrete
F6	Note ⁷	0.45	2–5	I, II, I/II, IP, IL, IS, IT, V	Ť		Railroad structures; occasionally for bridge piers, columns, bents, post-tension members
He	Note ⁷	0.45	3-6	I, II, I/II, III, IP, IL, IS, IT, V	1–4, 8	Mix design options 1-8 allowed for cast-in-place concrete and the following precast elements unless otherwise stated in the plans: Bridge Deck Panels, Retaining Wall Systems, Coping, Sound Walls, Wall Columns, Traffic Rail, Traffic Barrier, Long/Arch Span Culverts, and precast concrete products included in Items 462, 464, and 465. Do not use Type III cement in mass placement concrete. Up to 20% of blended cement may be replaced with listed SCMs when Option 4 is used for precast concrete. Options 6, & 7 allowed for cast- in-place Class H concrete.	Precast concrete, post-tension members
S6	4,000	0.45	2–5	I, II, I/II, IP, IL, IS, IT, V	1–8		Bridge slabs, top slabs of direct traffic culverts, approach slabs
Ρ	See Item 360, "Concrete Pavement."	0.50	2–3	I, II, I/II, IL, IP, IS, IT, V	1–8	When the cementitious material content does not exceed 520 lb./cu. yd., any fly ash listed in the MPL may be used at a cement replacement of 20% to 50%.	Concrete pavement

Class of Concrete	Design Strength,1 Min f'c (psi)	Max w/cm Ratio	Coarse Aggregate Grades ^{2,3,4}	Cement Types	Mix Design Options	Exceptions to Mix Design Options	General Usage ^s
CO6	4,600	0.40	6		1.0		Bridge deck concrete overlay
LMC ⁶	4,000	0.40	6–8		1–8		Latex-modified concrete overlay
SS6	3,600	0.45	4–6	I, II, I/II, IP, IL, IS, IT, V	1-8	Use a minimum cementitious material content of 658 lb./cu. yd. of concrete. Limit the alkali loading to 4.0 lbs./cu. yd. or less when using option 7.	Slurry displacement shafts, underwater drilled shafts
K₀	Note ⁷	0.40	Note ⁷	I, II, I/II, III IP, IL, IS, IT, V	1-8		Note ⁷
HES	Note ⁷	0.45	Note ⁷	I, IL, II, I/II, III		Mix design options do not apply. 700 lb. of cementitious material per cubic yard limit does not apply.	Concrete pavement, concrete pavement repair
"X" (HPC) 6,8,9	Note ¹⁰	0.45	Note ¹⁰	I, II, I/II, III IP, IL, IS, IT, V	1–4, & 8	Maximum fly ash replacement for Option 3 may be increased to 50%. Up to 20% of a blended cement may be replaced with listed SCMs for Option 4. Do not use Option 8 for precast concrete.	
"X" (SRC) 6.8. 9	Note ¹⁰	0.45	Note ¹⁰	I/II, II, IP, IL, IS, IT, V	1–4, & 7	When using fly ash, only use fly ashes allowed for SRC as listed in the Fly Ash MPL. Type III-MS may be used where allowed. Type I and Type III cements may be use when fly ashes allowed for SRC as listed in the Fly Ash MPL are used, and with a maximum w/cm of 0.40. Up to 20% of blended cement may be replaced with listed SCMs when Option 4 is used for precast concrete. Use Option 7 for precast concrete where allowed.	

1. Design strength must be attained within 56 days.

2. Do not use Grade 1 coarse aggregate except in massive foundations with 4 in. minimum clear spacing between reinforcing steel bars, unless otherwise permitted. Do not use Grade 1 aggregate in drilled shafts.

3. Use Grade 8 aggregate in extruded curbs unless otherwise approved.

4. Other grades of coarse aggregate maybe used in non-structural concrete classes when allowed by the Engineer.

5. For information only.

6. Structural concrete classes.

7. As shown on the plans or specified.

8. "X" denotes class of concrete shown on the plans or specified.

9. (HPC): High Performance Concrete, (SRC): Sulfate Resistant Concrete.

10. Same as class of concrete shown on the plans.

Article 421.4.2.2., "Aggregates," is supplemented by the following.

Use the following equation to determine if the aggregate combination meets the sand equivalency requirement when blending fine aggregate or using an intermediate aggregate:

$$\frac{\left(SE_1 \times P_1\right) + \left(SE_2 \times P_2\right) + \left(SE_{ia} \times P_{ia}\right)}{100} \ge 80\%$$

where:

 $SE_1$  = sand equivalency (%) of fine aggregate 1

 $SE_2$  = sand equivalency (%) of fine aggregate 2

 $SE_{ia}$  = sand equivalency (%) of intermediate aggregate passing the 3/8 in. sieve

 $P_1$  = percent by weight of fine aggregate 1 of the fine aggregate blend

 $P_2$  = percent by weight of fine aggregate 2 of the fine aggregate blend

 $P_{ia}$  = percent by weight of intermediate aggregate passing the 3/8 in. sieve

Article 421.4.2.3., Chemical Admixtures," the second paragraph is voided and replaced with the following.

Use a 30% calcium nitrite solution when a corrosion-inhibiting admixture is required. Dose the admixture at the rate of gallons of admixture per cubic yard of concrete shown on the plans. Use set retarding admixtures, as needed, to control setting time to ensure concrete containing corrosion inhibiting admixtures remain workable for the entire duration of the concrete placement. Perform setting time testing and slump loss testing during trial batch testing.

Article 421.4.2.5., "Slump," the second paragraph is voided and not replaced. Table 9 is voided and replaced with below:

#### Placement Slump Requirements Placement Slump General Usage Range,1,2 in. Walls (over 9 in. thick), caps, columns, piers 3 to 7 Bridge slabs, top slabs of direct traffic culverts, approach slabs, concrete overlays, latex-3 to 6 modified concrete for bridge deck overlays Inlets, manholes, walls (less than 9 in. thick), bridge railing, culverts, concrete traffic barrier, 4 to 6 concrete pavement (formed) Precast concrete 4 to 9 Underwater concrete placements 6 to 8-1/2 See Item 416. Drilled shafts, slurry displaced and underwater drilled shafts "Drilled Shaft Foundations." Curb, gutter, curb and gutter, concrete retards, sidewalk, driveways, seal concrete, anchors, As approved riprap, small roadside sign foundations, concrete pavement repair, concrete repair

Table 9
Placement Slump Requirements

 Maximum slump values may be increase above these values shown using chemical admixtures, provided the admixture treated concrete has the same or lower water-to-cementitious ratio and does not exhibit segregation or excessive bleeding. Request approval to increase slump limits in advance for proper evaluation by the Engineer.

2. For fiber reinforced concrete, perform slump before addition of fibers.

Article 421.4.2.6., "Mix Design Options", is voided and replaced with the following.

**Option 1.** Replace cement with at least the minimum dosage listed in the Fly Ash MPL for the fly ash used in the mixture. Do not replace more than 50% of the cement with fly ash.

Option 2. Replace 35% to 50% of the cement with slag cement.

**Option 3.** Replace 35% to 50% of the cement with a combination of fly ash, slag cement, MFA, metakaolin, or at least 3% silica fume; however, no more than 35% may be fly ash, and no more than 10% may be silica fume.

**Option 4**. Use Type IP, Type IS, or Type IT cement as allowed in Table 8 for each class of concrete. Up to 10% of a Type IP, Type IS, or Type IT cement may be replaced with fly ash, slag cement, or silica fume. Use no more than 10% silica fume in the final cementitious material mixture if the Type IT cement contains silica fume, and silica fume is used to replace the cement.

**Option 5.** Option 5 is left intentionally blank.

**Option 6.** Use a lithium nitrate admixture at a minimum dosage determined by testing conducted in accordance with Tex-471-A. Before use of the mix, provide an annual certified test report signed and sealed by a licensed professional engineer, from a laboratory on the Department's MPL, certified by the Construction Division as being capable of testing according to Tex-471-A.

**Option 7.** Ensure the total alkali contribution from the cement in the concrete does not exceed 3.5 lb. per cubic yard of concrete when using hydraulic cement not containing SCMs calculated as follows:

lb. alkali per cu. yd. = 
$$\frac{(lb. cement per cu. yd.) \times (\% Na_2 O equivalent in cement)}{100}$$

In the above calculation, use the maximum cement alkali content reported on the cement mill certificate.

**Option 8.** Use Table 10 when deviating from Options 1–3 or when required by the Fly Ash MPL. Perform required testing annually and submit results to the Engineer. Laboratories performing ASTM C1260, ASTM C1567, and ASTM C1293 testing must be listed on the Department's MPL. Before use of the mix, provide a certified test report signed and sealed by a licensed professional engineer demonstrating the proposed mixture conforms to the requirements of Table 10.

Provide a certified test report signed and sealed by a licensed professional engineer, when HPC is required, and less than 20% of the cement is replaced with SCMs, demonstrating ASTM C1202 test results indicate the permeability of the concrete is less than 1,500 coulombs tested immediately after either of the following curing schedules:

- Moisture cure specimens 56 days at 73°F.
- Moisture cure specimens 7 days at 73°F followed by 21 days at 100°F.

		option o	resting and mix besign requirements	
nario	ASTM C	1260 Result	Testing Requirements for Mix Design Materials	
Cer	Mix Desian Mix Desian		or Prescriptive Mix Design Options	
Š	Fine Aggregate	Coarse Anarenate		
	Tille Aggregate	Coarse Aygregate		
A	> 0.10%	> 0.10%	each aggregate ¹ to 0.10% when tested individually in accordance with ASTM C1567.	
в	≤ 0.10%	≤ 0.10%	Use the minimum replacement listed in the Fly Ash MPL, or When Option 8 is listed on the MPL, use a minimum of 40% fly ash with a maximum CaO ² content of 25%, or Use any ternary combination which replaces 35% to 50% of cement.	
	< 0.100/	ASTM C1293 1 yr.	Use a minimum of 20% of any fly ash; or	
	≤ 0.10%	Expansion $\leq 0.04\%$	Use any ternary combination which replaces 20% to 50% of cement.	
С	≤ 0.10%	> 0.10%	Determine the dosage of SCMs needed to limit the 14-day expansion of coarse and intermediate ¹ aggregate to 0.10% when tested individually in accordance with ASTM C1567.	
D	> 0.10%	≤ 0.10%	Use the minimum replacement listed in the Fly Ash MPL, or When Option 8 is listed on the MPL, use a minimum of 40% fly ash with a maximum CaO ² content of 25%, or Use any ternary combination which replaces 35% to 50% of cement.	
	> 0.10%	ASTM C1293 1 yr. Expansion $\leq$ 0.04%	Determine the dosage of SCMs needed to limit the 14-day expansion of each fine aggregate to 0.10% when individually tested in accordance with ASTM C1567.	

Table 10 Option 8 Testing and Mix Design Requirements

1. Intermediate size aggregates will fall under the requirements of mix design coarse aggregate.

2. Average the CaO content from the previous ten values as listed on the test certificate.

Article 421.4.2.7., "Optimized Aggregate Gradation (OAG) Concrete," the first sentence of the first paragraph is voided and replaced by the following.

The gradations requirements in Table 4 and Table 6 do not apply when OAG concrete is specified or used by the Contractor unless otherwise shown on the plans.

The fineness modulus for fine aggregate listed in Table 5, does not apply when OAG Concrete is used,

Article 421.4.6.2., Delivering Concrete," the third paragraph is supplemented by the following.

When truck mixers are equipped with automated water or chemical admixture measurement and slump or slump flow monitoring equipment, the addition of water or chemical admixtures during transit is allowed. Reports generated by this equipment must be submitted to the Engineer daily.

Article 421.4.6.2., "Delivering Concrete," the fifth paragraph is voided and replaced with the following. Begin the discharge of concrete delivered in truck mixers within the times listed in Table 14. Concrete delivered after these times, and concrete that has not begun to discharge within these times will be rejected

Article 421.4.8.3., "Testing of Fresh Concrete," is voided and replaced with the following.

**Testing Concrete.** The Engineer, unless specified in other Items or shown on the plans, will test the fresh and hardened concrete in accordance with the following methods:

- Slump. <u>Tex-415-A</u>;
- Air Content. <u>Tex-414-A</u> or <u>Tex-416-A</u>;
- Temperature. Tex-422-A;
- Making and Curing Strength Specimens. <u>Tex-447-A</u>;
- Compressive Strength. <u>Tex-418-A</u>;
- Flexural Strength. Tex-448-A; and
- Maturity. <u>Tex-426-A</u>.

Flexural strength and maturity specimens will not be made unless specified in other items or shown on the plans.

Concrete with slump less than minimum required after all addition of water withheld will be rejected, unless otherwise allowed by the Engineer. Concrete with slump exceeding maximum allowed may be used at the contractor's option. If used, Engineer will make, test, and evaluate strength specimens as specified in Article 421.5., "Acceptance of Concrete." Acceptance of concrete not meeting air content or temperature requirements will be determined by Engineer. Fresh concrete exhibiting segregation and excessive bleeding will be rejected.

Article 421.4.8.3.1. "Job-Control Testing," is voided and not replaced.

## Special Provision to Item 426 Post-Tensioning



Item 426, "Post-Tensioning" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 2.1., "Prestressing Steel." The first bullet is voided and replaced with the following.

Seven-wire steel strand meeting <u>DMS-4500</u>, "Steel Strand, Uncoated Seven-Wire Low Relaxation for Prestressed Concrete," or

Section 2.2., "Post-Tensioning System." The second bulleted item is voided and replaced with the following:

Provide pre-packaged grouts in accordance with <u>DMS-4670</u>, "Grouts for Post-Tensioning." Do not use grouts that exceed the manufacturers' recommended shelf life or 6 mo. after date of manufacture, whichever is less.

Section 4.2., "Required Submittals." The section is voided and replaced with the following.

- 4.2. **Required Submittals.** Submit information required in this Section for post-tensioned elements, in addition to forming and falsework plans required by Item 420, "Concrete Substructures," and Item 424, "Precast Concrete Structural Members (Fabrication)." Include all necessary construction information in these submittals for cast-in-place and precast construction including, but not limited to the information required in this Section.
- 4.2.1. **Design Calculations**. Provide design procedures, coefficients, allowable stresses, tendon spacing, and clearances in accordance with the AASHTO LRFD *Bridge Design Specifications* and PTI/ASBI M50 unless otherwise shown on the plans. Submit enough calculations to support the proposed system and method of post-tensioning including friction loss diagrams. When the required jacking force for a particular type of tendon, duct, and configuration is furnished on the plans, design calculations are not required except to adjust for conditions different from those shown on the plans.
- 4.2.2. **Post-Tensioning Details**. Provide drawings with details that meet the requirements of PTI/ASBI M50 and this Specification.
- 4.2.3. **Grouting Plan**. Submit for approval written grouting procedures at least four weeks before the start of the element's construction. Include items required by PTI M55.

Include the names of people responsible for PT installation and grouting operations, with the foreman of each grouting crew certified as a PTI Level 2 Bonded PT Field Specialist and ASBI Certified Grouting Technician.

4.2.4. **Stressing Safety Plan**. Provide a plan to protect the public, workers, and Department personnel on and around the vicinity where post-tensioning operations are occurring.

Submit for approval, a detailed safety plan which identifies potential risk associated with post-tensioning operations, including but not limited to:

- tendon alignment,
- temporary shoring,
- ram operations, and
- stand anchorage.

Section 4.3., "Design Calculations." The section is voided and replaced with the following.

4.3. Packaging, Storing, and Handling of Post-Tensioning Components. Package, store, and handle posttensioning steel, grout, duct, and other accessories in accordance with PTI/ASBI M50 and PTI M55 unless otherwise indicated. Acceptance and rejection criteria for strand will follow PTI/ASBI M50 and PTI M55.

The following exceptions apply:

- grout storage onsite will be limited to 30 days unless approval by the Engineer is given in advance of material delivery,
- install grout caps and ensure vents are closed at all times so that water and other contaminants cannot enter the duct before strand installation, and
- do not flush ducts at any time.

Section 4.4., "Packaging, Storing, and Handling of Post-Tensioning Components." The section is voided and replaced with the following.

4.4. **Duct and Prestressing Steel Installation for Post-Tensioning**. Follow PTI/ASBI M50 for duct and prestressing steel installation procedures and requirements unless otherwise specified. Verify that concrete strength requirements on the plans are met for stressing and staged loading of post-tensioned structural elements.

Stress the tendons within seven days of installing the strand in the ducts unless otherwise approved in advance. Follow the tensioning procedure noted in the approved post-tensioning details.

Section 4.5., "Duct and Prestressing Steel Installation for Post-Tensioning." The section is voided and replaced with the following.

4.5. **Grouting**. Grout in accordance with PTI M55.

Grout within 14 days of tendon stressing unless otherwise specified or approved. Obtain approval to extend the grouting time before stressing tendons.

Do not allow the grout temperature to exceed 85°F during mixing and pumping. Do not grout when the ambient temperature is below 35°F. Field-test the grout in accordance with Table 1 during grout installation. Perform field-testing by trained personnel at the Contractor's expense while witnessed by the Engineer. Pump at the lowest pressure possible that will maintain a continuous flow of grout.

Test	Frequency	Requirement							
Schupak Pressure Bleed Test (ASTM C1741)	1 per day	Per <u>DMS-4670</u>							
Fluidity test (Tex-437-A, Method 2)	2 every 2 hr.	per <u>DMS-4670</u>							
	2 min. per day								
Compressive Strength test (3" × 6" cylinders)	1 per day	per <u>DMS-4670</u>							
Mud Balance test (Tex-130-E, Part II) ^{1, 2}	2 per day	per PTI M55							

Table1 Requirements for Field-Testing of Grout

1. Take one sample from the mixer and one sample from the farthest duct outlet.

2. Verify wet density is within the range established by the department.

Section 4.6., "Grouting." The section is voided and not replaced.

Article 5., "MEASUREMENT AND PAYMENT." The section is voided and replaced with the following.

### 5. MEASUREMENT

This Item will be measured by the each PT element or member. An element or member is defined by one of the following individual components.

PT Cap

- PT Column
- PT Bent
- Other elements shown in the plans.

The PT may extend into other elements which is subsidiary to the main element being post-tensioned.

### PAYMENT

6.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "PT" for the member type shown on the plans. This price is full compensation for submittals, mock-ups, prestressing steel, post-tensioning, ducts, grout fittings, grout, end anchorages, bearing plates, equipment, labor, materials, tools, and incidentals. Materials furnished for testing will not be paid for directly.

Post-tensioning of precast members, tensioned at a fabrication plant, will not be paid for directly but will be subsidiary to pertinent Items.

### Special Provision to Item 427 Surface Finishes for Concrete



Item 427, "Surface Finishes for Concrete" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 427.2.1 "Coatings," is supplemented with the following:

**Epoxy Waterproofing.** Provide Type X Epoxy per <u>DMS-6100</u> "Epoxies and Adhesives." Match color of coating with Federal Standard 595C color 35630, concrete gray, unless otherwise shown on the plans.

Article 427.4.2.2 "Application," is supplemented with the following:

**Epoxy Waterproofing.** Mix epoxy per manufacturer's instructions. Apply the coating on a dry surface at a maximum application rate of 100 sq. ft per gallon. Apply a thin uniform film of mixed epoxy to the substrate by the use of a short nap roller or brush. The epoxy may be sprayed following the thinning requirements of the manufacturer. No more than 15% reduction is permitted.

Match the color of the applied coating with the color standard shown on the plans. Apply when ambient temperature is between 50°F and 100°F.

Article 427.6 "Payment," the second paragraph is voided and replaced in its entirety with:

When a surface finish for concrete is specified as a pay item, the work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Adhesive Grout Finish," "Concrete Paint Finish," "Opaque Sealer Finish," "Silicone Resin Paint Finish," "Epoxy Waterproof Finish," or "Blast Finish." This price is full compensation for materials; cleaning and preparing surfaces; application of materials; and equipment, labor, tools, and incidentals.

## Special Provision to Item 440 Reinforcement for Concrete



Item 440, "Standard Specification Title" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 440.2., "Materials" is supplemented with the following:

- 2.14. Provide zinc-coated, hot-dip galvanized Class I or II steel reinforcement conforming to ASTM A767, Grades 60 or 75 when shown on the plans and as allowed.
- 2.15. Provide continuously hot-dip galvanized reinforcement (CGR) conforming to ASTM A1094 steel reinforcement, Grades 60 or 75 when shown on the plans and as allowed.

Article 440.2.5., "Weldable Reinforcing Steel" is supplemented with the following:

All welding operations must be performed prior to hot-dip galvanizing.

Article 440.2.8., "Mechanical Couplers" is supplemented with the following:

Provide hot-dipped or mechanically galvanized couplers when splicing galvanized reinforcing or continuously galvanized reinforcing.

Article 440.2.11., "Low-Carbon, Chromium Reinforcing Steel." The first sentence is voided and replaced by the following:

Provide deformed steel bars conforming to ASTM A1035, Grade 100, Type CS when low-carbon, chromium reinforcing steel is required on the plans. Type CM will only be permitted if specified on the plans.

Article 440.3.1., "Bending" is supplemented with the following:

Do not bend hot-dip galvanized reinforcement. Only minor positioning adjustments are permitted.

Bending of continuously galvanized reinforcement is permitted after galvanizing.

Article 440.3.5, "Placing" the following will be added to paragraph four.

Use Class 1 or 1A supports with continuously galvanized reinforcing. Provide epoxy or plastic-coated tie wires and clips for use with epoxy coated reinforcing steel.

Article 440.3.6.3., "Repairing Coating" is supplemented with the following:

Repair damaged galvanized surfaces in accordance with Article 445.3.5.2. "Repair Processes."

## Special Provision to Item 441 Steel Structures



Item 441, "Steel Structures" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

### Section 441.2.2., Approved Electrodes and Flux-Electrode Combinations," is voided and replaced with the following:

Use only electrodes and flux-electrode combinations conforming to AWS A5 specifications, and pertinent classifications for the applicable welding processes. When requested, submit a current Certificate of Conformance (COC) containing all test results as required by the applicable AWS A5 specification and welding code. Provide proof of Buy America compliance for welding consumables when requested. For bridge main member fabrication, submit the COC annually.

Section 441.2.3., "High-Strength Bolts," is revised and replaced by the following:

Use fasteners that meet Item 447, "Structural Bolting." Use galvanized fasteners on field connections of bridge members when ASTM F3125-Grade A325 bolts are specified, and steel is painted.

Section 441.3.1.5.1., "Plants," The second and third paragraphs are voided and replaced with the following:

Fabrication plants that produce the following non-bridge steel members must be approved in accordance with DMS-7380, "Steel Non-Bridge Member Fabrication Plant Qualification."

- Item 610, "Roadway Illumination Poles"
- Item 613, "High Mast Illumination Poles"
- Item 614, "High Mast Rings and Support Assemblies"
- Item 650, "Overhead Sign Support Structures"
- Item 654, "Sign Walkways"
- Item 686, "Traffic Signal Poles"
- Special Specification 6064, "Intelligent Transportation System (ITS) Poles."

The Materials and Tests Division (MTD) maintains a list of approved non-bridge fabrication plants on the Department MPL that produce these members.

Section 441.3.1.6.1., "Erection Drawings," the third paragraph is voided and replaced with the following:

Perform erection engineering evaluation of the structural adequacy and stability of constructing the bridge system for each step of the steel erection.

Section 441.3.1.5.3., "Nondestructive Testing (NDT)," is voided and replaced with the following:

Personnel performing NDT must be qualified in accordance with the applicable AWS code and the employer's Written Practice. Level III personnel who qualifies Level I and Level II technicians must be certified by ASNT for which the NDT Level III is qualified. In addition, NDT technicians must pass hands-on tests that MTD administers. This will remain current provided they continue to perform testing on Department materials as evidenced by test reports requiring their signature. A technician who fails any of the hands-on tests must wait 3 mo. or as approved otherwise before retesting. Qualification to perform NDT will be revoked when the technician's employment is terminated or when the technician goes 6 mo. without performing a test on a Department project. The technician must pass a new hands-on test to be re-certified. Testing of similar weld joints for non-Department projects may be considered by the Engineer instead of re-testing provided enough documentation is submitted with the signature of the project's Engineer. These requirements also apply to testing agencies, and individual third-party contractors.

### Section 441.3.1.5.4., "Welding Procedure Specification Qualification Testing," is voided and replaced by the following:

For Fabricators qualified in accordance with DMS-7370, DMS-7380, or DMS-7395, laboratories performing procedure qualification testing for welding procedure specifications (WPSs) must be accredited by a nationally recognized agency that performs testing in accordance with ISO/International Electrotechnical Commission (IEC) 17025 in the mechanical field of testing.

Section 441.3.1.9., "Material Identification," is amended to include the following paragraph:

Low-stress stencil marks must have a radius instead of a sharp point. Acceptable stencils include dot, vibration, and rounded-V stencils. Label these stencils so that they are easily distinguishable from other stencils that are not low-stress.

Section 441.3.2.4.1., "Flange Tilt," the last sentence is voided and replaced with the following:

Minor jacking that does not deform the material will be permitted.

Section 441.3.2.5.3., "Magnetic Particle Testing," is voided and replaced with the following:

Use alternating current (AC) when using the yoke method unless otherwise approved. Welds may be further evaluated with halfwave rectified DC for subsurface indications. Centerline cracking may be detected with aluminum prod method when approved.

Section 441.3.5.8., "Hammering," is added to state the following:

Do not perform hammering on any portion of the member that causes the material to permanently deform. Avoid damage to the material by measures such as use of brass or aluminum hammers or by padding the area to be hammered.

Section 441.3.8.1., "Shop Painting," is amended to include with the following paragraph:

Measure the anchor profile after blast cleaning at random locations along the thermal cut surfaces. If specified anchor profile is not achieved over the entire flame cut surface, grind the edges and re-blast to achieve the required anchor pattern.

Section 441.3.9., "Handling and Storage of Materials," The second sentence of the second paragraph is replaced by the following:

Keep materials clean and avoid damaging of the applied coating.
### Special Provision to Item 441 Steel Structures



Item 441, "Steel Structures" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

#### Section 441.2.2., Approved Electrodes and Flux-Electrode Combinations," is voided and replaced with the following:

Use only electrodes and flux-electrode combinations conforming to AWS A5 specifications, and pertinent classifications for the applicable welding processes. When requested, submit a current Certificate of Conformance (COC) containing all test results as required by the applicable AWS A5 specification and welding code. Provide proof of Buy America compliance for welding consumables when requested. For bridge main member fabrication, submit the COC annually.

Section 441.2.3., "High-Strength Bolts," is revised and replaced by the following:

Use fasteners that meet Item 447, "Structural Bolting." Use galvanized fasteners on field connections of bridge members when ASTM F3125-Grade A325 bolts are specified, and steel is painted.

Section 441.3.1.5.1., "Plants," The second and third paragraphs are voided and replaced with the following:

Fabrication plants that produce the following non-bridge steel members must be approved in accordance with DMS-7380, "Steel Non-Bridge Member Fabrication Plant Qualification."

- Item 610, "Roadway Illumination Poles"
- Item 613, "High Mast Illumination Poles"
- Item 614, "High Mast Rings and Support Assemblies"
- Item 650, "Overhead Sign Support Structures"
- Item 654, "Sign Walkways"
- Item 686, "Traffic Signal Poles"
- Special Specification 6064, "Intelligent Transportation System (ITS) Poles."

The Materials and Tests Division (MTD) maintains a list of approved non-bridge fabrication plants on the Department MPL that produce these members.

Section 441.3.1.6.1., "Erection Drawings," the third paragraph is voided and replaced with the following:

Perform erection engineering evaluation of the structural adequacy and stability of constructing the bridge system for each step of the steel erection.

Section 441.3.1.5.3., "Nondestructive Testing (NDT)," is voided and replaced with the following:

Personnel performing NDT must be qualified in accordance with the applicable AWS code and the employer's Written Practice. Level III personnel who qualifies Level I and Level II technicians must be certified by ASNT for which the NDT Level III is qualified. In addition, NDT technicians must pass hands-on tests that MTD administers. This will remain current provided they continue to perform testing on Department materials as evidenced by test reports requiring their signature. A technician who fails any of the hands-on tests must wait 3 mo. or as approved otherwise before retesting. Qualification to perform NDT will be revoked when the technician's employment is terminated or when the technician goes 6 mo. without performing a test on a Department project. The technician must pass a new hands-on test to be re-certified. Testing of similar weld joints for non-Department projects may be considered by the Engineer instead of re-testing provided enough documentation is submitted with the signature of the project's Engineer. These requirements also apply to testing agencies, and individual third-party contractors.

#### Section 441.3.1.5.4., "Welding Procedure Specification Qualification Testing," is voided and replaced by the following:

For Fabricators qualified in accordance with DMS-7370, DMS-7380, or DMS-7395, laboratories performing procedure qualification testing for welding procedure specifications (WPSs) must be accredited by a nationally recognized agency that performs testing in accordance with ISO/International Electrotechnical Commission (IEC) 17025 in the mechanical field of testing.

Section 441.3.1.9., "Material Identification," is amended to include the following paragraph:

Low-stress stencil marks must have a radius instead of a sharp point. Acceptable stencils include dot, vibration, and rounded-V stencils. Label these stencils so that they are easily distinguishable from other stencils that are not low-stress.

Section 441.3.2.4.1., "Flange Tilt," the last sentence is voided and replaced with the following:

Minor jacking that does not deform the material will be permitted.

Section 441.3.2.5.3., "Magnetic Particle Testing," is voided and replaced with the following:

Use alternating current (AC) when using the yoke method unless otherwise approved. Welds may be further evaluated with halfwave rectified DC for subsurface indications. Centerline cracking may be detected with aluminum prod method when approved.

Section 441.3.5.8., "Hammering," is added to state the following:

Do not perform hammering on any portion of the member that causes the material to permanently deform. Avoid damage to the material by measures such as use of brass or aluminum hammers or by padding the area to be hammered.

Section 441.3.8.1., "Shop Painting," is amended to include with the following paragraph:

Measure the anchor profile after blast cleaning at random locations along the thermal cut surfaces. If specified anchor profile is not achieved over the entire flame cut surface, grind the edges and re-blast to achieve the required anchor pattern.

Section 441.3.9., "Handling and Storage of Materials," The second sentence of the second paragraph is replaced by the following:

Keep materials clean and avoid damaging of the applied coating.

### Special Provision to Item 442 Metal for Structures



Item 442, "Metal for Structures" of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Section 442.2.1.3.3., "Fasteners." The first sentence of the first paragraph is replaced by the following:

Fasteners. Provide high-strength bolts that meet ASTM F3125-Grade A325 unless otherwise shown on the plans.

Section 442.2.1.3.3., "Fasteners." The third paragraph is deleted and not replaced.

### Special Provision to Item 446 Field Cleaning and Painting Steel



For this project, Item 446, "Field Cleaning and Painting Steel," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 446.4.1., "Qualification," the first and second paragraphs are voided and replaced by the following:

Submit to the Engineer documentation verifying SSPC QP 1 or NACE NIICAP AS-1 certification for work requiring the removal or application of coatings. Additionally, submit to the Engineer documentation verifying SSPC QP 2 Cat A or NACE NIICAP AS-2 certification when work requires removal of coatings containing hazardous materials. Maintain certifications throughout the project. No work may be performed without current and active certifications unless otherwise shown on the plans. The Engineer may waive certification requirements for minor, touch-up repair work and coating steel members repaired in accordance with Item 784, "Steel Member Repair."

The Engineer may waive certification requirements, when stated on the plans, for the purpose of qualification in either contractor certification program if the project has been accepted as a qualification project as part of the process for obtaining SSPC QP1 Cat A or NACE NIICAP AS-1 certification. Submit certification applications and proof of acceptance before beginning work or provide SSPC QP 7 certification when required on the plans.

Section 446.4.7.3.2., "Classes of Cleaning," is amended with the following:

Prepare all surfaces of painted steel members subsequently exposed from structural operations, such as deck removal or steel repair, in accordance with this Item. Prevent loose or damaged paint from entering the environment.

# Special Provision to Item 447 Structural Bolting



Item 447, "Structural Bolting" of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Article 447.2.2., "Bolt Assemblies." The first paragraph is replaced by the following:

**Bolt Assemblies.** Provide ASTM F3125 bolts and nuts and washers meeting the type, grade, and finish requirements in Table 1, unless otherwise shown in the plans.

Article 447.2.2., "Bolt Assemblies." The second paragraph is replaced by the following:

Use Grade A325 or Grade A490 Type 3 plain (uncoated) bolts for weathering steel as indicated and Grade A325 Type 1 galvanized bolts for coated steel, unless otherwise shown on the plans.

Article 447.2.2., "Bolt Assemblies." Table 1 is replaced by the following:

ASTM Type, Finish, and Grade for Structural Bolts, Nuts, and Washers								
	Bolt ¹ Grade	Bolt Type	Bolt Finish	ASTM A563 Nut Grade and Finish	ASTM F436 Washer Type and Finish			
Heavy-	A325	1	Galvanized	DH, ² galvanized and lubricated	1; galvanized			
Hex Polts1	A325	3	Plain	C3 and DH3; plain	3; plain			
DUILS	A490	3	Plain	DH3; plain	3; plain			
Tension-	F1852	1	Galvanized	DH, ² galvanized and lubricated	1; galvanized			
CUIIII0I Polte1	F1852	3	Plain	C3 and DH3; plain	3; plain			
DUILS	F2280	3	Plain	DH3; plain	3; plain			

Table 1

1. ASTM F3125 High Strength Structural Bolts

2. ASTM A194 Heavy Hex Grade 2H nuts may be substituted.

Article 447.2.6., "Fitup Bolts and Erection Pins." The first paragraph is replaced by the following:

**Fitup Bolts and Erection Pins.** Provide heavy-hex fitup bolts of the same diameter as the connection bolts. Do not use washer-type indicating devices for fitups. Do not reuse galvanized bolts or Grade A490 bolts that have been used as fitup bolts. Provide a sufficient number of erection or drift pins, 1/32 in. larger than the bolt diameter.

Article 447.4.3., "General." The second sentence of the third paragraph is replaced by the following:

Install hardened washers under both the nut and bolt head of Grade A490 bolts when the outer plies being fastened have a yield strength less than 40 ksi.

	Table 2					
	Bolt Tension					
Nominal Balt Siza in	Minimum Tension (kips)					
Nominal Boit Size, In.	Grade A325 Bolts	Grade A490 Bolts				
V ₂	12	15				
5/8	19	24				
3/4	28	35				
7/8	39	49				
1	51	64				
1-1/8	56	80				
1-1/4	71	102				
1-3/8	85	121				
1-1/2	103	148				

#### Article 447.4.3., "General." Table 2 is replaced by the following:

Article 447.4.5.2., "Install Bolts." The second paragraph is replaced by the following:

Fully tighten a minimum number of bolts as directed until the plies are in full contact if snugging does not bring the plies of the joint into full contact. Mark these bolts as fitup bolts. Use a non-galvanized Grade A325 bolt of the same diameter as a fitup bolt in connections requiring the use of galvanized Grade A325 bolts. Re-snug all remaining bolts.

Article 447.4.5.3., "Tension Bolts." The first paragraph is replaced by the following:

**Tension Bolts**. Loosen all fitup bolts after tensioning all the other bolts in the connection. Ungalvanized Grade A325 bolts used as fitup bolts may be reused in a connection using this type of bolt. Replace all galvanized bolts and Grade A490 bolts used as fitup bolts. Tension these remaining untensioned bolts in accordance with this paragraph. Ensure the element not turned by the wrench (bolt head or nut) does not rotate.

Article 447.4.5.4., "Bolt Reuse." The first paragraph is replaced by the following:

**Bolt Reuse**. Do not reuse Grade A490 or galvanized Grade A325 bolts. Ungalvanized Grade A325 bolts may be reused one time if the threads have not been damaged. Re-tensioning previously tensioned bolts loosened by the tensioning of adjacent bolts is not considered to be reuse.

### Special Provision to Item 449 Anchor Bolts



Item 449, "Anchor Bolts" of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Table 1						
Bolt and Nut Standards						
Specified Anchor Bolt Category	Bolt Standards	Nut Standards				
Mild steel	ASTM A307 Gr. A, F1554 Gr.	ASTM A563				
Wild Steel	36, or A36					
Modium strongth	ASTM F1554 Gr. 55 with	ASTM A194 Gr. 2 or				
mild stool	supplementary requirement	A563 Gr. D or better				
mild Steel	S1					
High strongth stool	ASTM F3125-Grade A325	ASTM A194 or				
nigh-strength steel	or ASTM A449 ¹	A563, heavy hex				
Alley steel	ASTM A193 Gr. B7 or F1554	ASTM A194 Gr. 2H or				
Alloy Steel	Gr. 105	A563 Gr. DH, heavy hex				
4 101 1 11 11						

#### Section 449.2.1., "Bolts and Nuts." Table 1 is replaced by the following:

1. If headed bolts are specified, ASTM A449 bolts must be heavy hex head.

Section 449.3.3.1,"Anchor Bolt Thread Lubricant Coating," The first sentence of the first paragraph is voided and replaced by the following.

Coat anchor bolt threads before installing nuts with an electrically conducting lubricant compound described in Section 449.3.3.2.1., "Definitions," for traffic signal poles, roadway illumination poles, high mast illumination poles, intelligent transportation system poles, overhead sign support structures, and steel electrical service supports.

Section 449.3.3.2,"Anchor Bolt Tightening Procedure," The first sentence of the first paragraph is voided and replaced by the following.

Tighten anchor bolts for traffic signal poles, shoe base and concrete traffic barrier base roadway illumination poles, high mast illumination poles, intelligent transportation system poles, and overhead sign support structures in accordance with this Section.

## Special Provision to Item 450 Railing



Item 450, "Railing" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 450.3.1.2., "Fabrication," is supplemented with the following.

Fabrication plants that produce metal railing (steel and aluminum) must be approved in accordance with DMS-7395, "Metal Railing Fabrication Plant Qualification." This required approval does not include fabricators of chain link fence. The Materials and Tests Division maintains a MPL of approved fabrication plants of metal railing.

Permanently mark each metal railing post base plate, at a visible location when erected, with the fabrication plant's insignia or trademark. For fabricated rail panels, provide this permanent mark on one post base plate, per panel.

### Special Provision to Item 462 Concrete Box Culverts and Drains



Item 462, "Concrete Box Culverts and Drains," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 2.1., "General." The last paragraph is voided and replaced with the following:

Furnish material for precast formed and machine-made box culverts in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

Sections 2.2.2., "Formed Precast," and 2.2.3., "Machine-Made Precast," are voided and replaced by the following.

2.2.2 **Precast**. Precast formed and machine –made box culvert fabrication plants must be approved in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures." The Construction Division maintains a list of approved precast box culvert fabrication plants on the Department's MPL. Fabricate precast boxes in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

Sections 2.3.2., "Formed Precast," and 2.3.3., "Machine-Made Precast," are voided and replaced by the following.

- 2.3.2 **Precast.** Make, cure, and test compressive test specimens for precast formed and machine –made box culverts in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures.
- Section 2.5., "Marking," the first paragraph is voided and replaced with the following.

Marking. Clearly mark each precast unit with the following:

- Name or trademark of fabricator and plant location;
- ASTM designation and product designation (when applicable);
- Date of manufacture,
- Box size,
- Minimum and maximum fill heights,
- Designation "TX" for precast units fabricated per DMS-7305,
- Fabricator's designated approval stamp for each approved unit,
- Designation "SR" for boxes meeting sulfate-resistant concrete plan requirements (when applicable), and
- Precast drainage structures used for jacking and boring (when applicable).

Section 2.6., "Tolerances." The section is voided and replaced with the following.

Ensure precast sections meet the permissible variations listed in ASTM C1577.

Ensure that the sides of a section at each end do not vary from being perpendicular to the top and bottom by more than 1/2 in. when measured diagonally between opposite interior corners. Deviations from this tolerance will be acceptable if the sections can be fitted at the plant and the joint opening at any point does not exceed 1 in. Use match-marks for proper installation on sections that have been accepted in this manner.

Ensure wall and slab thicknesses are not less than shown on the plans except for occasional deficiencies not greater than 3/16 in. or 5%, whichever is greater. If proper jointing is not affected, thicknesses in excess of plan requirements are acceptable.

#### Section 2.7., "Defects and Repair." The section is voided and replaced with the following:

Fine cracks on the surface of members that do not extend to the plane of the nearest reinforcement are acceptable unless the cracks are numerous and extensive. Repair cracks that extend into the plane of the reinforcing steel in accordance with the Department's Concrete Repair Manual. The Engineer may accept boxes with repairs that are sound, properly finished, and cured in conformance with pertinent specifications. Discontinue further production of precast sections until corrections are made and proper curing is provided when fine cracks on the surface indicate poor curing practices.

Repair precast boxes in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

Section 2.8., "Storage and Shipment." This section is voided and replaced with the following:

2.8 **Storage and Shipment**. Store precast sections on a level surface. Do not place any load on the sections until design strength is reached and curing is complete. Store and ship precast boxes in accordance with DMS-7305, "Fabrication and Qualification Production for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures.

### Special Provision to Item 464 Reinforced Concrete Pipe



Item 464, "Reinforced Concrete Pipe," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 2.1., "Fabrication." The section is voided and replaced with the following.

Fabrication plants must be approved by the Materials and Tests Division in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures," before furnishing precast reinforced concrete pipe for Departmental projects. The Department's MPL has a list of approved reinforced concrete pipe plants.

Furnish material and fabricate reinforced concrete pipe in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

Section 2.3., "Marking." The first paragraph is voided and replaced with the following.

Furnish each section of reinforced concrete pipe marked with the following information specified in DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

- Class or D-Load of pipe,
- ASTM designation,
- Date of manufacture,
- Pipe size,
- Name or trademark of fabricator and plant location,
- Designation "TX" for precast units fabricated per DMS-7305;
- Designated fabricator's approval stamp for each approved unit,
- Pipe to be used for jacking and boring (when applicable), and
- Designation "SR" for pipe meeting sulfate-resistant concrete plan requirements (when applicable).

Section 2.5., "Causes for Rejection." The section is voided and replaced with the following.

Individual sections of pipe may be rejected for any of the conditions stated in the Annex of DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

Section 2.6., "Repairs." The section is voided and replaced with the following:

Make repairs, if necessary, as stated in the Annex of DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

### Special Provision to Item 502 Barricades, Signs and Traffic Handling



Item 502, "Barricades, Signs and Traffic Handling" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 502.1., "Description," is supplemented by the following:

Temporary work-zone (TWZ) traffic control devices manufactured after December 31, 2019, must have been successfully tested to the crashworthiness requirements of the 2016 edition of the Manual for Assessing Safety Hardware (MASH). Such devices manufactured on or before this date and successfully tested to NCHRP Report 350 or the 2009 edition of MASH may continue to be used throughout their normal service lives. An exception to the manufacture date applies when, based on the project's date of letting, a category of MASH-2016 compliant TWZ traffic control devices are not approved, or are not self-certified after the December 31, 2019, date. In such case, devices that meet NCHRP-350 or MASH-2009 may be used regardless of the manufacture date.

Such TWZ traffic control devices include: portable sign supports, barricades, portable traffic barriers designated exclusively for use in temporary work zones, crash cushions designated exclusively for use in temporary work zones, longitudinal channelizers, truck and trailer mounted attenuators. Category I Devices (i.e., lightweight devices) such as cones, tubular markers and drums without lights or signs attached however, may be self-certified by the vendor or provider, with documentation provided to Department or as are shown on Department's Compliant Work Zone Traffic Control Device List.

#### Article 502.4., "Payment," is supplemented by the following:

Truck mounted attenuators and trailer attenuators will be paid for under Special Specification, "Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)." Portable Changeable Message Signs will be paid for under Special Specification, "Portable Changeable Message Signs will be paid for under Special Specification, "Portable Traffic Signals will be paid for under Special Specification, "Portable Traffic Signals."

### Special Provision to Item 506 Temporary Erosion, Sedimentation, and Environmental Controls



Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 506.1., "Description." The second paragraph is voided and replaced by the following.

Contractor is considered primary operator to have day-to-day operational control as defined in TPDES GP TXR150000.

- 1.1. For projects with soil disturbance of less than 1 acre, no submittal to TCEQ will be required but Contractor will follow SWP3. For projects with soil disturbance of 1 acre to less than 5 acres a small site notice will be posted at the site. For projects with soil disturbance of 5 acres or more a Notice of Intent (NOI) is required and a large site notice posted at site. Postings will be in accordance with TPDES GP TXR150000. Postings not associated with project specific locations will be in same location as Department's postings.
- 1.2. Notice of Intent (NOI). Submit a NOI, if applicable, with the TCEQ under the TPDES GP TXR150000 at least 7 days prior to commencement of construction activities at the project site. Provide a signed copy to the Engineer and any other MS4 operators at the time of submittal. The Department will submit their NOI prior to contractor submission and will provide a copy for Contractor's use in completing the Contractor's NOI form.
- **1.3.** Notice of Change (NOC). Upon concurrence of the Engineer, submit a NOC, if applicable, to the TCEQ within 14 days of discovery of a change or revision to the NOI as required by the TPDES GP TXR150000. Provide a signed copy of the NOC to the Engineer and any other MS4 operators at the time of submittal.
- 1.4. Notice of Termination (NOT). Upon concurrence of the Engineer, submit a NOT, if applicable, to the TCEQ within 30 days of the Engineer's approval that 70% native background vegetative cover is met or equivalent permanent stabilization have been employed in accordance with the TPDES GP TXR 150000. Provide a signed copy of the NOT to the Engineer and any other MS4 operators at the time of submittal.

Section 506.3.1, "Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities," is supplemented by the following:

3.1. Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities. Provide and designate in writing at the preconstruction conference a CRPE and alternate CRPE who have overall responsibility for the storm water management program. The CRPE will implement stormwater and erosion control practices; will oversee and observe stormwater control measure monitoring and management; will monitor the project site daily and produce daily monitoring reports as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. Daily monitor reports shall be maintained and made available upon request. During time suspensions when work is not occurring or on contract non-work days, daily inspections are not required unless a rain event has occurred. The CRPE will provide recommendations on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project. Ensure training is completed as identified in Section 506.3.3., "Training," by all applicable personnel before employees work on the project. Document and maintain and make available upon request, a list, signed by the CRPE, of all applicable Contractor and subcontractor employees who have completed the training. Include the employee's name, the training course name, and date the employee completed the training.

Section 506.3.3., "Training," is supplemented by the following:

Training is provided by the Department at no cost to the Contractor and is valid for 3 yr. from the date of completion. The Engineer may require the following training at a frequency less than 3 yr. based on environmental needs:

- "Environmental Management System: Awareness Training for the Contractor" (English and Spanish) (Approximate running time 20 min.), and
- "Storm Water: Environmental Requirements During Construction" (English and Spanish) (Approximate running time 20 min.).

The Contractor responsible person environmental (CRPE), alternate CRPE designated for emergencies, Contractor's superintendent, Contractor, and subcontractor lead personnel involved in soil disturbing or SWP3 activities must enroll in and complete the training listed below and maintain and make available upon request the certificate of completion. Training is provided by a third party and is valid for 3 yr. from the date shown on the Certificate of Completion. Coordinate enrollment as prescribed by the Department and pay associated fees for the following training:

- "Revegetation During Construction,"
- "Construction General Permit Compliance," and
- "Construction Stage Gate Checklist (CSGC)."

Training and associated fee will not be measured or paid for directly but are subsidiary to this Item.

### Special Provision to Item 520 Weighing and Measuring Equipment



Item 520, "Weighing and Measuring Equipment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 520.2., "Equipment." The third paragraph is voided and replaced by the following.

Calibrate truck scales using weights certified by the Texas Department of Agriculture (TDA) or an equivalent agency as approved. Provide a written calibration report from a scale mechanic for truck scale calibrations. Cease plant operations during the checking operation. Do not use inaccurate or inadequate scales. Bring performance errors as close to zero as practicable when adjusting equipment.

Article 520.2., "Equipment." The fourth paragraph is amended to include the following:

At the Contractors option, an electronic ticket delivery system (e-ticketing) may be used instead of printed tickets. The use of eticketing will require written approval of the Engineer. At a minimum, the approved system will:

- Provide electronic, real-time e-tickets meeting the requirements of the applicable bid items;
- Automatically generate e-tickets using software and hardware fully integrated with the automated scale system used to weigh the material, and be designed in such a way that data input cannot be altered by the Contractor or the Engineer;
- Provide the Engineer access to the e-ticketing data in real-time with a web-based or app-based system compatible with iOS;
- Provide offline capabilities to prevent data loss if power or connectivity is lost;
- Require both the Contractor and the Engineer to accept or reject the e-ticket and provide the ability to record the information required by the applicable bid items, as well as any comments. Record the time of the approval/rejection and include it in the summary spreadsheet described below. Provide each party the capability to edit their respective actions and any entered information;

The Contractor may discontinue use of the e-ticket system and provide printed tickets as needed to meet the requirements of the applicable bid items.

### Special Provision to Item 540 Metal Beam Guard Fence



Item 540, "Metal Beam Guard Fence" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 540.4.7, "Measurement," is voided and replaced with the following:

Long Span System. Measurement will be by each long span system, complete in place. Each long span system will be from the first CRT to the last CRT in the system.

# Special Provision to Item 636 Signs



Item 636, "Signs" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 636.3.1, "Fabrication." is deleted.

Section 636.3.1.2, "Sheeting Application." The last sentence of the fourth paragraph is voided and replaced by the following.

Do not splice sheeting or overlay films for signs fabricated with ink or with colored transparent films.

# Special Provision to Item 643 Sign Identification Decals



Item 643, "Sign Identification Decals," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 2. "Materials." The sign identification decal design shown in Figure 1 and the description for each row in Table 1 are supplemented by the following.

Texas Department of Transportation												
С	Fabrication Date T											
J	F	М	А	М	J	J	А	S	0	Ν	D	
	20	)1	20	)2	20	203		204		205		
	0	1	2	3	4	5	6	7	8	9		
Sheeting MFR - Substrate												
А	В	С	D	E	F	G	Н	J	Κ	L	М	ļ
Film MFR												
А	В	С	D	Ε	F	G	Н	J	Κ	L	М	
			S	heeti	ng M	FR - L	egen	d				
А	В	С	D	Е	F	G	Н	J	Κ	L	М	
		-		Ins	tallat	ion D	ate	-	-	-		
				0	1	2	3					8
	0	1	2	3	4	5	6	7	8	9		
J	F	М	А	М	J	J	А	S	0	Ν	D	1
	201 202		)2	203		204		205			1	
	0	1	2	3	4	5	6	7	8	9		1
Name of Sign Fabricator Physical Address City, State, Zip Code									1			

Figure 1 Decal Design (Row numbers explained in Table 1)

#### Table 1 Decal Description

Row Explanation
1 – Sign fabricator
2 – Month fabricated
3 – First 3 digits of year fabricated
4 – Last digit of year fabricated
5 – Manufacturer of the sheeting applied to the substrate
6 – Film (colored transparent or non-reflective black) manufacturer
7 – Manufacturer of the sheeting for the legend
8 – Tens digit of date installed
9 - Ones digit of date installed
10 – Month installed
11 – First 3 digits of year installed
12 – Last digit of year installed
13 – Name of sign fabricator and physical location of sign shop

### Special Provision to Item 656 Foundations for Traffic Control Devices



Item 656, "Foundations for Traffic Control Devices" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 3. "Construction.," the first paragraph is supplemented by the following:

Ensure the top of the foundation and anchor bolts meet specified requirements in relation to the final grade.

### Special Provision to Item 666 Retroreflectorized Pavement Markings



Item 666, "Retroreflectorized Pavement Markings," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 2.3., "Glass Traffic Beads." The first paragraph is voided and replaced by the following:

Furnish drop-on glass beads in accordance with DMS-8290, "Glass Traffic Beads," or as approved. Furnish a double-drop of Type II and Type III drop-on glass beads for longitudinal pavement markings where each type bead is applied separately in equal portions (by weight), unless otherwise approved. Apply the Type III beads before applying the Type II beads. Furnish Type II beads for work zone pavement markings and transverse markings or symbols.

Section 4.3.1., "Type I Markings.," is supplemented by the following:

**4.3.1.3. Spot Striping.** Perform spot striping on a callout basis with a minimum callout quantity as shown on the plans.

Section 4.3.2., "Type II Markings.," is supplemented by the following:

**4.3.2.1. Spot Striping**. Perform spot striping on a callout basis with a minimum callout quantity as shown on the plans.

Section 4.4., "Retroreflectivity Requirements.," is voided and replaced by the following.

Type I markings for Contracts totaling more than 20,000 ft. of pavement markings must meet the following minimum retroreflectivity values for all longitudinal edgeline, centerline or no passing barrier-line, and lane line markings when measured any time after 3 days, but not later than 10 days after application.

- White markings: 250 millicandelas per square meter per lux (mcd/m²/lx)
- Yellow markings: 175 mcd/m²/lx

Retroreflectivity requirements for Type I markings are not required for Contracts with less than 20,000 ft. of pavement markings or Contracts with callout work, unless otherwise shown on the plans.

Section 4.5., "Retroreflectivity Measurements.," is voided and replaced by the following:

Use a mobile retroreflectometer to measure retroreflectivity for Contracts totaling more than 50,000 ft. of pavement markings, unless otherwise shown on the plans. For Contracts with less than 50,000 ft. of pavement markings, mobile or portable retroreflectometers may be used at the Contractor's discretion. Coordinate with and obtain authorization from the Engineer before starting any retroreflectivity data collection.

Section 4.5.1., "Mobile Retroreflectometer Measurements." The last paragraph is voided and replaced by the following.

Restripe again at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material if the average of these measurements falls below the minimum retroreflectivity requirements. Take measurements every 0.1 miles a minimum of 10 days after this third application within that mile segment for that series of markings. If the markings do not meet minimum retroreflectivity after this third application, the Engineer may require removal of all existing markings, a new application as initially specified, and a repeat of the application process until minimum retroreflectivity requirements are met.

Section 4.5.2., "Portable Retroreflectometer Measurements." The first and second paragraphs are voided and replaced by the following.

Provide portable measurement averages for every 1.0 mile unless otherwise specified or approved. Take a minimum of 20 measurements for each 1-mi. section of roadway for each series of markings (e.g., edgeline, center skip line, each line of a double line) and direction of traffic flow when using a portable reflectometer. Measure each line in both directions for centerlines on two-way roadways (i.e., measure both double solid lines in both directions and measure all center skip lines in both directions). The spacing between each measurement must be at least 100 ft. The Engineer may decrease the mileage frequency for measurements if the previous measurements provide satisfactory results. The Engineer may require the original number of measurements if concerns arise.

Restripe at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material if the averages of these measurements fail. Take a minimum of 10 more measurements after 10 days of this second application within that mile segment for that series of markings. Restripe again at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material if the average of these measurements falls below the minimum retroreflectivity requirements. If the markings do not meet minimum retroreflectivity after this third application, the Engineer may require removal of all existing markings, a new application as initially specified, and a repeat of the application process until minimum retroreflectivity requirements are met.

Section 4.6. "Performance Period." The first sentence is voided and replaced by the following:

All longitudinal markings must meet the minimum retroreflectivity requirements within the time frame specified. All markings must meet all other performance requirements of this specification for at least 30 calendar days after installation.

Article 6. "Payment." The first two paragraphs are voided and replaced by the following.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Pavement Sealer" of the size specified; "Retroreflectorized Pavement Markings" of the type and color specified and the shape, width, size, and thickness (Type I markings only) specified, as applicable; "Retroreflectorized Pavement Markings with Retroreflective Requirements" of the types, colors, sizes, widths, and thicknesses specified; "Retroreflectorized Profile Pavement Markings" of the various types, colors, shapes, sizes, and widths specified; or "Reflectorized Pavement Marking (Call Out)" of the shape, width, size, and thickness (Type I markings only) specified, as applicable; or "Pavement Sealer (Call Out)" of the size specified.

This price is full compensation for materials, application of pavement markings, equipment, labor, tools, and incidentals.

## Special Provision to Item 680 Highway Traffic Signals



Item 680, "Highway Traffic Signals" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 680.3.1.1.2,"Conduit," The fourth sentence of the first paragraph is voided and replaced by the following.

Seal the ends of each conduit with approved sealant, after all cables and conductors are installed.

### Special Provision to Special Specification 6185 Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)



Item 6185, "Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 4. "Measurement", is voided and replaced by the following:

- 4.1. **Truck Mounted Attenuator/Trailer Attenuator (Stationary).** This Item will be measured by the day. TMA/TAs must be set up in a work area and operational before a calendar day can be considered measureable. A day will be measured for each TMA/TA set up and operational on the worksite.
- 4.2. **Truck Mounted Attenuator/Trailer Attenuator (Mobile Operation).** This Item will be measured by the hour or by the day. The time begins once the TMA/TA is ready for operation at the predetermined site and stops when notified by the Engineer. When measurement by the hour is specified, a minimum of 4 hr. will be paid each day for each operating TMA/TA used in a mobile operation. When measurement by the day is specified, a day will be measured for each TMA/TA set up and operational on the worksite.

# Special Provision to Special Specification 6384 Telecommunication System



Special Specification 6384, "Telecommunication System" is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 6384.5.9., "Innerduct." The first paragraph is voided and replaced by the following:

**Innerduct.** The work performed, in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price for "Innerduct (Comm)" of the size and type specified on the plans. This price will be full compensation for rodding and pulling, installing risers, pedestals, marker posts; for furnishing and installing all fittings, air hose and pipe cabinets, sweeps, bends, repair couplings, adaptors, ground box termination kits, manhole termination kits, pre-assembled split repair kits, aerial risers, U-Guards, installation of down guy wire and anchor with guard, standoff brackets, lubrication access fittings, expansion joints, concrete, and underground mylar conduit marking tape; and for all labor, tools, equipment and incidentals necessary to complete the work.

#### APPENDIX A QUALITY ASSURANCE PROGRAM FOR CONSTRUCTION PROJECTS



# Quality Assurance Program for Design-Bid-Build Projects

# January 2022

**TxDOT Materials and Tests Division** 

### Summary of Program Changes: January 2022 Update

#### Purpose

The Quality Assurance Program for Design-Bid-Build Projects has been revised to address updated business practices, provide clarification for new and existing practices, and update internal and external document references.

#### Contents

#### Chapter 1, "Introduction"

- Section 1.2, "Support"
  - Updated MTD Administration contact phone number.

#### Chapter 2, "Acceptance Program"

- Section 2.2, "Sampling and Testing Frequency and Location"
  - Added that material tested for acceptance must be representative of the material used on the project.
  - Added that laboratory testing used in the acceptance decision must be performed at a laboratory location qualified under Section 8.
  - Added that the location of sampling and testing must be documented in SiteManager.
- Section 2.3, "Documentation"
  - Added subsections 2.3.1, "Material Test Reports," and 2.3.2, "Authorization of Material Tests," to distinguish between test report requirements and material authorization requirements.
  - In Section 2.3.1, "Material Test Reports," clarified that any acceptance testing will be documented on TxDOT-approved templates and identified key fields which are required to be completed within the test report.
  - In Section 2.3.2, "Authorization of Material Tests," added:
    - requirements concerning the timing and documentation of material authorizations in SiteManager and changes to SiteManager sampling and testing requirements;
    - o description of material exception and reference to material certification letter requirements; and
    - how samples or tests which are not used for project acceptance should be addressed in SiteManager.

#### Chapter 3, "Independent Assurance Program"

- Moved and reordered previous Sections 3.3-3.6, as follows:
  - Section 3.3 was consolidated into Sections 7 and 8.
  - Section 3.4 was consolidated into Section 6.

- Section 3.5 became Section 3.3, "Comparing Test Results."
- Section 3.6 became Section 3.4, "Annual Report of IA Program Results."
- Section 3.4, "Annual Report of IA Program Results"
  - Updated metrics which are required to be identified in the IA annual report.

#### Chapter 4, "Materials Certification"

- Section 4.1, "Overview"
  - Revised to clarify the intent of the material certification.
- Section 4.2, "Submission of Material Certification Letter"
  - Added section to establish requirements for completing and submitting material certification letters.
- Section 4.3, "Material Exceptions"
  - Added section to establish the definition of a material exception, and the requirements for documenting material exceptions on the material certification letter.
- Section 4.4, "Materials and Tests Division Oversight"
  - Added section to establish a quarterly review process for MTD to verify completeness and accuracy of material certification letters.

#### Chapter 6, "Technician Qualification Program"

- Section 6.3, "Who Must Be Qualified?"
  - Added that any individual who performs material sampling must be qualified in the relevant sampling test procedure.
- Section 6.4, "Who Can Qualify Sampling and Testing Personnel?"
  - Clarified which District laboratory personnel may qualify sampling and testing personnel.
  - Clarified that the laboratory personnel must have a current ACI certification.
- Section 6.5, "Required Certifications for Non-TxDOT Personnel"
  - Renamed to encompass all non-TxDOT personnel.
- Section 6.6, "Qualification Procedure"
  - Clarified the minimum passing requirements of written exams for concrete test methods.
  - Clarified that written exams and performance evaluations must be completed within a 30-day period.
- Section 6.8, "Responsibility and Documentation"
  - Added Form 2687 as a required supporting document for technician qualifications.
  - Clarified that supporting documentation must be retained for a minimum of 10 years.

#### Chapter 7, "Requirements and Frequencies for Laboratory Equipment"

- Moved and reordered previous Sections 7.1-7.7, as follows:
  - Sections 7.1-7.3 and 7.5-7.7 were consolidated into Chapter 8.
  - Section 7.4 became Section 7.2, "Calibration, Standardizations, Checks, and Verification."
- Renamed chapter to emphasize the focus on equipment requirements.
- Section 7.1, "Overview"
  - Added section to summarize overall requirements of laboratory equipment for TxDOT and non-TxDOT laboratories.
- Section 7.2, "Calibration, Standardizations, Checks, and Verification"
  - Revised to incorporate reference to all types of laboratory equipment requirements.
- Section 7.3, "Contractor Shared Equipment"
  - Added section to establish requirements for sharing laboratory equipment between the Contractor and TxDOT or TxDOT's representative.
- Section 7.4, "Documentation"
  - Added section to establish documentation requirements for laboratory equipment, including responsibility and records retention.

#### Chapter 8, "Laboratory Qualification Program"

- Moved and reordered previous Sections 7.1-7.3 and 7.5-7.7 to align with the tiered approach of the laboratory qualification process, as follows:
  - Section 7.1 became Section 8.1, "Purpose."
  - Section 7.3 became Section 8.2, "Qualification."
  - Section 7.2 became Section 8.3, "Laboratory Responsibility."
  - Section 7.6 became Section 8.4, "Documentation."
  - Sections 7.5 and 7.7 were consolidated into Section 8.5, "Non-Compliance."
- Section 8.2, "Qualification"
  - Clarified that field and are included in the MTD central laboratory qualification; area office and project laboratories are included in the District laboratory qualification; and CEI firms performing material testing require qualification.
  - Added that laboratory qualifications issued through the Design-Build QAP will be valid under the Design-Bid-Build program.
  - Renamed and revised Section 8.2.1, "District Accreditation," to emphasize the application of the qualification to the entire District and to further detail the District accreditation process, including:

- Added that the accreditation inspection process involves review of the District's quality management system, technician certifications, equipment records, and oversight of CEI projects;
- Added that the report rating will be issued with the District Accreditation Report, and that report ratings of 3 will results in a re-inspection;
- Added the process for reviewing and issuing the District Accreditation Report;
- Clarified the corrective action response timeline, and added a communication plan for addressing corrective action responses;
- Added the process for closing out the accreditation inspection;
- Added the process for District accreditation re-inspections when a report rating of 3 is issued; and
- Added requirements for submission of peer review documentation.
- Revised Section 8.2.2, "Commercial Laboratory and CEI Qualification Process," to address the following:
  - Added that the firm's location, contact person, and project role must be identified on Form 2682;
  - Clarified that the Visual Inspection Equipment Checklist must be used to document laboratory equipment;
  - Added requirements for completing and submitting qualification documentation; and
  - Clarified annual audit requirements and the tools and resources which should be used to conduct and document the reviews.
- Section 8.3, "Laboratory Responsibility"
  - Revised to establish requirements for the documentation and submission of District quality assurance standard operating procedures on an annual basis, and to further define the responsibilities of CEI firms, area office personnel, and the District material quality champion.
- Section 8.4, "Documentation"
  - Clarified that laboratory qualification documentation must be retained by the qualifying authority and the qualified laboratory for 10 years.

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**1**. Introduction

#### **1.1** Overview

The Texas Department of Transportation (TxDOT) established the Quality Assurance Program (QAP) for Design-Bid-Build (DBB) Projects to ensure that materials and workmanship incorporated into highway construction projects are in reasonable conformity with the requirements of the approved plans and specifications, including any approved changes. This program was developed in accordance with the criteria in 23 CFR 637 B, where the Materials and Tests Division (MTD) central laboratory will be accredited under the AASHTO Accreditation Program (AAP) which oversees the statewide qualification program.

The QAP consists of an "Acceptance Program" and "Independent Assurance (IA) Program" based on test results obtained by qualified persons and equipment.

The QAP allows for the use of validated Contractor-performed quality control (QC) test results as part of an acceptance decision. It also allows for the use of test results obtained by commercial laboratories in acceptance decisions. The acceptance of all materials and workmanship is the responsibility of the Engineer.

### **1.2** Support

For more information regarding the information and procedures in the program, contact MTD Administration at 512/975-9755.

2. Acceptance Program
### 2.1 Overview

The QAP assures materials incorporated into any highway construction project, are subject to verification sampling and testing, as well as QC sampling and testing when required by the specifications.

The District Engineer will delegate an individual at the District-level for the accountability of certification verification in SiteManager (SM) and at the laboratory for various project delivery options applicable to the DBB program, in accordance with <u>Section 8.3.3</u>.

The delegation of authority should encompass a mechanism that provides oversight authority and an audit function to ensure compliance. Additional information can be found in <u>Section 8.3</u>.

# 2.2 Sampling and Testing Frequency and Location

Verification sampling and testing will be performed at the location and frequency established in the TxDOT <u>Guide Schedule of Sampling and Testing for Design Bid Build (DBB) Projects</u> (DBB Guide Schedule) or specifications specific to each project. Material that is tested for acceptance must be representative of the material used on the project.

Laboratory testing used in the acceptance decision must be performed at a laboratory location qualified under <u>Section 8</u>. The location of sampling and testing must be documented in SM in accordance with <u>Section 2.3</u>.

# 2.3 Documentation

#### 2.3.1 Material Test Reports

Any acceptance testing will be documented within SM on the TxDOT-approved Excel templates. All key fields within the test report must be completed, including but not limited to, sampler name, sample location, tester name, test date, and all relevant test results. When the tester does not enter test results directly into SM, the hardcopy will need to be scanned and attached to the SM sample documenting the tester's name.

The laboratory location where testing is performed must be documented in SM using the appropriate Lab ID. In instances where a non-TxDOT technician performs material testing in a TxDOT laboratory, the laboratory location where testing was performed must be documented as a comment in the test report.

#### 2.3.2 Authorization of Material Tests

Material samples must be tested, reviewed, and authorized by a minimum of two separate individuals, and they must be authorized within 30 days of sample collection. When authorization within the 30 day period is not possible, a justification for the delay must be documented in SM, including an estimated timeframe for resolution.

An engineering justification must be documented in SM to explain the reason for acceptance of material when:

- the material has failing test results;
- the material was not sampled and tested in accordance with DBB Guide Schedule requirements; or
- adjustments were made to SM sampling and testing requirements (e.g., adjusting conversion factors or zeroing testing frequencies).

Adjustments to SM sampling and testing requirements should be made only when corrections are needed to accurately represent project needs. Changes must be made only by designated District personnel, and the individual who approved the change must be documented within the required justification.

Acceptance of material which deviates from the specifications or DBB Guide Schedule requirements constitutes a material exception, as defined in <u>Section 4</u>, and must be documented on the material certification letter upon project close-out.

Samples which are created in SM but are not used for a project should be authorized as "Void" to invalidate the Sample ID. The omit indicator can be used to exclude specific tests within one Sample ID. The omit indicator will prevent the tests from meeting project sampling and testing requirements.

### 2.4 Quality Control Sampling and Testing

Contractor-performed QC sampling and testing may be used as part of an acceptance decision when required or allowed by specification.

QC sampling and testing personnel, laboratories, and equipment will be qualified in accordance with <u>Section 6</u> and <u>Section 8</u> and will be evaluated under <u>Section 3</u>.

QC test results will be validated by verification test results obtained from independently taken samples. Qualified TxDOT personnel or their designated agents will perform verification sampling and testing.

### 2.5 **Dispute Resolution**

When QC test results are used in the acceptance decision, the MTD central laboratory or an accredited independent laboratory approved by MTD will perform the referee testing. The referee laboratory decision will be final.

3. Independent Assurance Program

### 3.1 Overview

The IA program evaluates all sampling and testing procedures, personnel, and equipment used as part of an acceptance decision.

The IA program evaluates the qualified sampling and testing personnel and testing equipment and is established using the system approach. The system approach bases frequency of IA activities on time — regardless of the number of tests, quantities of materials, or numbers of projects tested by the individual being evaluated.

# **3.2 Required Frequencies and Activities**

Table 1 gives the frequencies and activities required for evaluating sampling and testing personnel and equipment under the system approach to IA.

Time	Activity
Before performing acceptance sampling and testing.	Qualification required under <u>Section 6</u> and <u>Section 8</u> of this QAP.
Within 12 mo. after Observation and Qualification, not to exceed 15 mo.	Each qualified technician is required to participate in the first available proficiency or split sample for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 24 mo. after Observation and Qualification, not to exceed 27 mo.	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 36 mo. of Qualification. (Only required for certifications issued by TxDOT or HMAC with a 3 yr. cycle.)	Qualification is again required under <u>Section 6</u> and <u>Section 8</u> of this QAP.
Within 36 mo. after Observation and Qualification, not to exceed 39 mo. (Only required for ACI, which has a 5 yr. certification cycle.)	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.

#### Table 1: Frequencies and Activities Required Under IA System Approach

Within 48 mo. after Observation and	Each qualified technician is required to
Qualification, not to exceed 51 mo. (Only	participate in one proficiency or split sample test
required for ACI, which has a 5 yr. certification	for each test method requiring IA. Results must
cycle.)	compare to the IA test results to within the
	established tolerance.
Within 60 mo. of qualification (Only required for	Qualification is again required under Section 6
certifications issued by ACI with a 5 yr. cycle).	and <u>Section 8</u> of this QAP.

Maintaining technician qualification under the IA system approach requires continuation of the above cycle of qualification and successful split or proficiency sample testing.

### 3.3 Comparing Test Results

Comparison of the split sample test results can be used if equipment or procedures issues are suspected. <u>Appendix B</u> gives the acceptable tolerance limits for comparing test results from split and proficiency samples.

If the comparisons of the test results do not comply with the tolerances, an engineering review of the test procedures and equipment will be performed immediately to determine the source of the discrepancy.

### 3.4 Annual Report of IA Program Results

MTD will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of TxDOT's systems approach IA program. See <u>Appendix C</u> for the annual report form.

This report identifies:

- number of sampling and testing personnel evaluated by the systems approach IA testing,
- number of personnel removed for non-participation,
- number of IA evaluations completed,
- number of IA evaluations found to meet tolerances in <u>Appendix B</u>,
- number of IA evaluations found to not meet tolerances in <u>Appendix B</u>, and
- summary of any significant system-wide corrective actions taken.

4. Materials Certification

#### 4.1 Overview

A material certification must be submitted for each construction project subject to TxDOT or FHWA oversight activities. The intent of the material certification is to ensure that the quality of all materials incorporated into the project is in conformance with the plans and specifications.

### 4.2 Submission of Material Certification Letters

Upon final acceptance of a construction project, a material certification letter must be submitted to MTD via email at <u>MTD_Materials_Cert@txdot.gov</u>. The letter will conform in substance to the examples shown in <u>Appendix D</u> or <u>Appendix E</u> for projects with federal or state oversight, respectively. MTD is responsible for making the material certification letters available to the FHWA, as applicable.

Material certification letters must be authorized by the TxDOT office designated to oversee the project. The letter may be signed by the Area Engineer or Director of Construction. Material certification letters authorized by Construction Engineering and Inspection (CEI) firms or other non-TxDOT personnel will not be accepted for submission.

### 4.3 Material Exceptions

A material exception is defined as any material represented by an acceptance test that does not meet the criteria contained on the plans and specifications. Exceptions should be investigated to determine if the material is in reasonably close conformity with the plans and specifications.

An exception exists when:

- any material is tested and does not meet minimum specifications if the material is left in place, either with or without pay; and
- any material is not sampled and tested in accordance with minimum testing requirements if the material is left in place, either with or without pay.

When material exceptions exist for a project, the exceptions must be indicated on the material exception letter. Documentation of the material exceptions and the corresponding justifications should be attached to the material certification letter when submitted.

### 4.4 Materials and Tests Division Oversight

MTD will perform a quarterly review of completed material certification letters on a sample basis to verify the completeness and accuracy of the material certification letters, including material exceptions identified and corresponding justifications. Inconsistencies identified during the review will be communicated to appropriate District personnel, and Districts will correct and re-submit material certification letters when necessary.

**5.** Conflict of Interest

### 5.1 Overview

To avoid an appearance of a conflict of interest, any qualified non-TxDOT laboratory will perform only one of the following functions on the same project:

- verification sampling and testing,
- QC sampling and testing,
- IA testing, or
- referee testing.

# 6. Technician Qualification Program

#### 6.1 Purpose

This program provides uniform statewide procedures for technician qualification to ensure that sampling and testing required by the specifications are performed according to the prescribed sampling and testing methods.

### 6.2 Technician Qualification

Sampling and testing personnel will be qualified to perform sampling and testing for the acceptance of materials in the areas of soils, bituminous, aggregate, and concrete materials.

The test methods for which individuals can be qualified are included in the following series of the <u>TxDOT Test</u> <u>Procedures</u>:

- <u>100-E Series (Soils),</u>
- <u>200-F Series (Bituminous),</u>
- 400-A Series (Aggregates and Concrete), and
- 500-C Series (Asphalt Tex-500-C and Tex-530-C).

#### 6.3 Who Must Be Qualified?

Any individual who performs sampling and testing on the materials listed in <u>Section 6.2</u>, for acceptance, must be qualified in each test procedure they perform. Any individual who performs material sampling must be qualified in the relevant sampling test procedure (e.g., Tex-100-E, Tex-221-F, Tex-222-F, Tex-400-A, Tex-500-C, etc.).

Reciprocity may be granted to individuals who have been successfully qualified under another state's program. These situations will be considered on a case-by-case basis and must meet the approval of the MTD Director.

# 6.4 Who Can Qualify Sampling and Testing Personnel?

The following personnel may qualify an individual to perform the required sampling and testing of materials:

- MTD personnel;
- District laboratory personnel who have been qualified directly by MTD;
- TxDOT-approved entities such as the Hot-Mix Asphalt Center (HMAC) and the American Concrete Institute (ACI);
- District laboratory personnel who have been qualified by the HMAC can issue provisional certifications or sampling certifications; and
- District laboratory personnel who have been qualified by ACI can issue concrete certifications.

Certifications received from HMAC and ACI may be used to satisfy the written exam and observation part of the Technician Qualification Program.

Each District laboratory will maintain a minimum of one individual qualified by MTD or its designated agent, for each test procedure performed within the District. To qualify District personnel for TxDOT concrete test methods, the District laboratory personnel must have a current corresponding ACI Field or Strength certification.

### 6.5 Required Certifications for Non-TxDOT Personnel

Non-TxDOT laboratory personnel performing sampling and testing for TxDOT, or as required by specification, must obtain and keep current the following certifications pertinent to their scope of testing:

- ACI Concrete Field Testing Technician Grade 1,
- ACI Concrete Strength Testing Technician,
- <u>HMAC Level 1A Plant Mix Specialist</u>,
- <u>HMAC Level 1B Roadway Specialist</u>,
- <u>HMAC Level 2 Mix Design Specialist</u>,
- <u>HMAC SB 101 Materials Properties Specialist</u>,
- HMAC SB 102 Field Specialist,
- HMAC SB 103 Materials Analyst Specialist,
- HMAC SB 201 Strength Specialist,
- <u>HMAC SB 202 Compressive Strength Specialist</u>, and
- HMAC AGG 101 Aggregate Specialist.

For testing procedures not covered by the above certifications, the following personnel may qualify an individual to perform the required sampling and testing of materials:

- MTD personnel, and
- District laboratory personnel who have been certified by MTD to perform technician qualifications.

### 6.6 **Qualification Procedure**

To qualify, an authorized evaluator must witness an individual successfully perform the specific test and the necessary calculations required to determine specification compliance. Successful performance is defined as demonstrating the ability to properly perform the key elements for each test method. If the individual fails to demonstrate the ability to perform a test, the individual will be allowed one retest per test method at the evaluator's convenience. The maximum number of attempts cannot exceed three trials in a 90 day period.

In addition to successful performance of a test method, the individual must pass a written examination (minimum score of 80%¹) administered by an authorized evaluator or their designee. The maximum amount of time allocated per test will be 1 hr. If an individual cannot complete the written test in 1 hr., it will result in failure. An individual failing the written examination may request a retest. The retest must be scheduled and administered within 30 days of notification of failure; however, the maximum number of attempts cannot exceed three trials in a 90 day period.

¹ For TxDOT concrete test methods where written examinations are grouped together to be completed, the minimum score for any individual test method must be 70%, and the overall minimum score for all test methods combined must be 80%.

Under unique circumstances, the qualification authority may grant a verbal examination upon request. The reasons for requesting a verbal examination must be presented and documented before the individual is allowed to take the examination. Should the technician fail the retest examination, the technician will not be allowed to test again unless a written notification is received from the technician's employer or supervisor stating that the technician has received additional training. MTD or its representative will determine the adequacy of the additional training. Failure to pass the third written examination will be considered as failing the entire qualification.

Successful qualification is defined as passing both the written and performance examinations, which must be completed within a 30 day period.

In addition, the individual must participate in split or proficiency samples administered by the qualifying authority to validate the qualification as defined in <u>Appendix B</u>. MTD determines the qualifying authority for the split or proficiency sample.

Unless otherwise stated, qualification of an individual is valid for not more than 3 yr., after which the individual must be re-qualified. Under the IA system approach, annual split or proficiency evaluations will be required as specified in <u>Section 3.2</u>. Failure to satisfactorily complete annual split or proficiency testing will result in certification revocation.

#### 6.7 **Provisional Certifications**

If the required certifications for TxDOT, CEI, commercial laboratories, and Contractor personnel cannot be readily obtained due to course availability, schedule conflicts, or other extenuating circumstances, provisional certifications administered by MTD or TxDOT District laboratory will be allowed, per the following stipulations:

- provisional certifications must be approved by MTD or TxDOT District laboratory;
- provisional certifications will be valid for one month after the HMAC or ACI examination dates; and
- the candidate must show evidence of being enrolled in the required HMAC or ACI course.

### 6.8 **Responsibility and Documentation**

MTD and the District materials Engineer, laboratory supervisor, or designee are responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. The CEI firm must identify a coordinator with the responsibility to communicate with the area office (AO), who will then coordinate with the District-level responsible person to satisfy the requirements for qualified testers. SM will be used to send email notifications on certification status to the owner (i.e., technician) as well as the District-level responsible person. SM will be the official system of record for qualified or certified TxDOT and commercial laboratory personnel.

Issuance of qualification certificates by the TxDOT qualifying authority is not required. A qualification summary listing all tests for which an individual is qualified is available in SM and may be printed or signed at the District's discretion. Documentation must be maintained through the Object Linking and Embedding (OLE) attachment window. This function allows all qualified personnel supporting documentation to be viewed in SM which includes:

- copies of certificates issued by HMAC and ACI; or
- copies of certificates issued by MTD or TxDOT District laboratory, if issued;
- written examination report with clear identification of technician's name, score, and date taken;
- original performance examinations saved as a PDF file for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date; and
- copies of Form 2687, "Examinee's Certification Acknowledgment."

Supporting documentation for technician qualification must be retained for a minimum of 10 yr. Results of annual proficiency testing administered by MTD or HMAC will be stored in their respective central repositories through SharePoint. Annual split sample evaluations will be stored in SM.

# 6.9 **Disqualification**

Accusations of misconduct by testing technicians are made to the responsible TxDOT District representative and reported to MTD. Table 2 defines the three levels of misconduct: neglect, abuse, and breach of trust.

Term	Definition
Neglect	Unintentional deviations from testing procedures or specifications.
Abuse	Careless or deliberate deviation from testing procedures or specifications.
Breach of Trust	Violation of the trust placed in the certified technician including, but not limited to, acts such as:
	<ul> <li>falsification of records;</li> <li>being aware of improprieties in sampling, testing, or production by others and not reporting them to</li> </ul>
	appropriate supervisors involved in the project;
	<ul> <li>re-sampling or retesting without awareness and consent of appropriate supervisors involved in the project; and</li> </ul>
	<ul> <li>manipulating compensation or production.</li> </ul>

#### Table 2: Levels of Misconduct

The applicable certification steering committee will investigate accusations of misconduct with the assistance of the responsible District. Depending on the severity of the misconduct, MTD may impose penalties ranging from a written reprimand, a temporary suspension, or a permanent revocation of the certification, contingent upon the findings of the investigation. A technician with a revoked certification will be removed from the project and will not be allowed to be employed on any TxDOT project statewide.

# 7. Requirements and Frequencies for Laboratory Equipment

### 7.1 Overview

All laboratory equipment used in acceptance testing must be calibrated, standardized, checked, or verified in accordance with applicable procedures, including both TxDOT laboratories and non-TxDOT commercial laboratories.

### 7.2 Calibration, Standardizations, Checks, and Verification

Calibration, standardization, checks, and verification of TxDOT equipment may be performed by MTD of the TxDOT District laboratory. TxDOT may also hire a qualified third-party entity to perform equipment requirements in accordance with corresponding test procedures.

The procedures for laboratory equipment requirements and intervals are shown in:

- <u>Tex-198-E</u>, "Minimum Standards for Acceptance of a Laboratory for Soils and Flexible Base Testing,"
- <u>Tex-237-F</u>, "Minimum Standards for Acceptance of a Laboratory for Hot Mix Testing,"
- <u>Tex-498-A</u>, "Minimum Standards for Acceptance of a Laboratory for Concrete and Aggregate Testing," and
- <u>Tex-900-K series</u>, procedures for calibrating, standardizing, checking, verifying, and certifying equipment.

When applicable, equipment that is moved may require calibration, standardization, checks, or verification.

### 7.3 Contractor Shared Equipment

Unless otherwise stated on the plans and specifications, testing equipment cannot be provided by the Contractor to use for acceptance testing performed by TxDOT or its representative. When allowed by specifications, Contractor-provided testing equipment must be in a location where TxDOT has oversight of the equipment.

Calibration records for shared equipment are required to be retained by TxDOT in accordance with Section 7.4.

# 7.4 Documentation

TxDOT District laboratories are responsible for maintaining documentation of equipment calibration, standardization, checks, and verification for any testing equipment used for acceptance testing. Records must be retained in a PDF file in a central repository location, as defined by MTD, for a minimum of 10 yr.

# 8. Laboratory Qualification Program

#### 8.1 Purpose

This program provides uniform statewide procedures to ensure that laboratory facilities, including equipment and personnel, are qualified for the performance of required sampling and testing methods.

### 8.2 Qualification

All laboratories performing sampling and testing for TxDOT require qualification. Laboratories which require qualification include, but are not limited to, the following:

- MTD central laboratory, which includes MTD's field laboratories;
- District laboratories, which includes area office and project laboratories (e.g., field laboratories at hotmix plans); and
- CEI and commercial laboratories.

TxDOT laboratory qualifications issued in accordance with the <u>Quality Assurance Program for CDA/Design-Build</u> <u>Projects – Section 4.4</u> will be recognized as valid under the DBB program.

#### 8.2.1 District Accreditation

MTD is responsible for accrediting TxDOT Districts on a 3 yr. cycle. The accreditation inspection consists of an evaluation of laboratory procedures and equipment necessary for the performance of TxDOT test methods in the material areas of concrete, hot-mix asphalt, and soils and aggregates. The assessment also includes a review of the District's quality management system, including records of technician certification, equipment calibration, and oversight of CEI projects. The District accreditation issued by MTD encompasses all TxDOT laboratories managed by the District, including the District laboratory, area offices, and TxDOT laboratories at plant locations.

#### 8.2.1.1 Report Rating

MTD will document the accreditation review on a District Accreditation Report, which will be issued to the District upon completion of the review. The report will include an assigned rating level to assess the District's overall performance based on the associated risks to TxDOT. Report rating levels are described in Table 3 below. Districts which receive a rating of 3 on the District Accreditation Report will be subject to the re-inspection process described in <u>Section 8.2.1.6</u>.

Rating	Rating Description
1	Excellent review with minor or no deficiencies notated.
2	Several deficiencies or repetitive observations were notated.
3	A level of negligence was found programmatically violating compliance requirements.

Table 3:	Rating	Legend
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#### 8.2.1.2 Report Review and Distribution

Upon completion of the accreditation inspection, MTD will hold a report review meeting with the District to discuss the draft District Accreditation Report, including the report rating and details of the findings. The District Director of Construction and Laboratory Supervisor or Lead Worker (as applicable) are required to attend the meeting. The draft report will be modified as needed based on the discussion during this meeting and before the report is finalized by MTD.

The final District Accreditation Report will be distributed to the MTD Director and Deputy Director, as well as the District Director of Construction and Laboratory Supervisor (when applicable) for the TxDOT District laboratory. The MTD Director will then issue a memo to the District Engineer, conforming in substance to the example shown in <u>Appendix F</u>, as well as a copy of the report. The memo will include the District's current and prior report rating level, and any additional feedback deemed necessary. When the District Accreditation Report rating is a 3, the memo will also be distributed to the TxDOT Director of District Operations and Director of Engineering & Safety Operations.

#### 8.2.1.3 Resolution of Findings

The District Accreditation Report summarizes the accreditation inspection, where a finding is classified as either a deficiency or an observation, defined as follows.

- **Deficiency:** A finding that indicates policy or practice contrary to the requirements of the applicable test methods or documented quality procedures.
- Observation: Observations are intended as comments for improvements relating to specific technical information to offer recommendations for best practice. Specifically, observations are noted for any technically related deficiencies where judgment and experience indicate it is not likely to affect the laboratory's ability to produce valid and accurate test results.

A corrective action report (CAR) and supporting documentation are collectively submitted to MTD by the District to address the findings notated in the report. The CAR will document actions that have been taken to prevent recurrence and to show a formal resolution to the findings.

- Deficiencies: Deficiencies require a formal written response describing the corrective actions taken or planned and enough documentation, (i.e., copies of records, new or revised procedures, equipment invoices, photographs, etc.) to substantiate actions taken. Corrective actions should be permanently implemented to prevent recurrence of the problem.
- Observations: No written response is required for findings identified as observations. However, the laboratory should take necessary corrective action to address the observation to prevent possible recurrence. Repeat observations may result in deficiencies.

#### 8.2.1.4 Corrective Action Response Timeline

The resolution of all findings should be completed within 21 days from the issuance of the final District Accreditation Report, including submission of the CAR and supporting documentation to MTD. If the District

cannot satisfy the findings in the report within the stated timeframe, an extension may be requested for additional time, typically 7 days, to resolve any outstanding or pending findings. Additional time extensions may be granted on a case-by-case basis; however, extensions may not exceed 90 days cumulatively. The MTD Director may notify the TxDOT Director of District Operations and Director of Engineering & Safety Operations of any outstanding issues that remain unresolved after 60 days to ensure that the findings are resolved within the 90 day period.

To maintain transparency and ensure that appropriate individuals stay informed throughout the corrective action process, all correspondence between MTD and the Districts will include the individuals listed in Table 4 below.

Days Since Final Report Issuance	District Contacts	MTD Contacts
0-45 days	<ul><li>Director of Construction</li><li>District Laboratory Staff</li></ul>	<ul><li>Deputy Division Director</li><li>Quality Assurance Staff</li></ul>
45+ days	<ul> <li>District Engineer</li> <li>Deputy District Engineer</li> <li>Director of Construction</li> <li>District Laboratory Staff</li> </ul>	<ul><li>Division Director</li><li>Deputy Division Director</li><li>Quality Assurance Staff</li></ul>
60+ days	MTD Director may escalate outstanding issu and Director of Engineering and Safety Oper	ies to TxDOT Director of District Operations rations.

#### Table 4: Corrective Action Response Communication Plan

#### 8.2.1.5 Accreditation Close-Out

Upon satisfactory completion of the District accreditation process, MTD will provide the District with official notification that the accreditation process has been closed out. MTD will update the District's accreditation scope on the MTD Directory of Active Accredited Labs.

#### 8.2.1.6 District Accreditation Re-Inspection

TxDOT Districts which receive a rating of 3 on the District Accreditation Report will be subject to a re-inspection by MTD approximately 12-18 mo. following the accreditation close-out. MTD will continue to re-inspect the District annually until a minimum rating of 2 is achieved.

Each re-inspection will focus on the portions of the District Accreditation Report or prior re-inspection which resulted in the rating of 3. Upon completion of the re-inspection, MTD will issue a memo with the re-inspection results, conforming in substance to the example shown in <u>Appendix G</u>.

Following each re-inspection, MTD will work with the District to resolve deficiencies identified during the reinspection. The District will be given 90 days to resolve deficiencies in accordance with <u>Section 8.2.1.4</u>. All correspondence between MTD and Districts regarding re-inspections will include, at a minimum, the individuals identified under "45+ days" in Table 4 above. The MTD Director may notify the TxDOT Director of District Operations and Director of Engineering & Safety Operations of any outstanding issues that remain unresolved after 60 days to ensure that the findings are resolved within the 90-day period.

The re-inspection memo will include an updated rating as described in Section <u>8.2.1.1</u>. Districts that receive a re-inspection rating of 2 will return to the standard cyclical accreditation schedule. Districts that receive a re-inspection rating of 3 will be referred to the TxDOT Director of District Operations and Director of Engineering & Safety Operations, and the District will continue to be re-inspected by MTD annually.

#### 8.2.1.7 District Laboratory Peer Review Program

Districts are required to host a District Laboratory Peer Review within 12-24 mo. after the QAP District accreditation. Districts will also participate as "peers" by conducting a review of other Districts, as assigned by MTD. The peer review will include a minimum of one District-managed project and two projects managed by CEI firms to ensure program compliance. When complete, documentation of the peer review must be submitted to MTD via email at <u>MTD_Peer_Review@txdot.gov</u>.

#### 8.2.2 Commercial Laboratory and CEI Qualification Process

#### 8.2.2.1 Quality System Inspection

At the District level, the District laboratory will be the qualifying authority for CEI firms and commercial laboratories, only in the areas for which the District laboratory is accredited. The laboratory qualifying authority will use <u>Form 2682</u>, <u>"Quality System Inspection – Commercial Laboratory,"</u> to document the following:

- identify the firm's location, contact person, and project role;
- identify the scope of testing to be performed;
- verify that test methods used to perform tests are available and current;
- document that the laboratory has the required equipment to perform the tests using the <u>Visual</u> <u>Inspection Equipment Checklist;</u>
- check the calibration/verification records for each piece of equipment, to include:
  - description of equipment,
  - identification of any traceable standard used,
  - frequency of calibration,
  - date of calibration,
  - date of last calibration,
  - date of next calibration,
  - calibrating technician,
  - procedure used to calibrate/verify equipment, and

- detailed results of calibration; and
- verify that the laboratory has qualified/certified technicians to perform required testing.

In addition, all equipment may be subject to calibration, verification, or other inspection by the qualifying authority, in accordance with <u>Section 7</u>.

#### 8.2.2.2 Material Producer List

Laboratories performing acceptance sampling and testing should use results from <u>TxDOT's Material Producer</u> List (MPL) and perform materials sampling and testing in accordance with TxDOT's DBB Guide Schedule. Materials that are not monitored or not pre-approved by TxDOT are subject to sampling and testing as part of the acceptance program, except as noted in the DBB Guide Schedule remarks.

Project/field laboratories performing Tex-113-E, Tex-117-E, and Tex-242-F tests must be an approved laboratory from TxDOT's MPL.

#### 8.2.2.3 Qualification Certificate

After qualifying a CEI or commercial laboratory, the District must notify MTD within 14 days by submitting a copy of the completed Form 2682, "Quality System Inspection – Commercial Laboratory," and laboratory qualification certificate to <u>MTD_QAP@txdot.gov</u>. MTD will post the certificate to the Directory of Active Accredited Laboratories available through the MTD Crossroads intranet site and will update the laboratory's qualification effective dates within SM.

Commercial laboratory qualifications are valid for 3 yr., and the effective period of the qualification must be listed on the certificate. Laboratories will be removed from the Directory of Active Accredited Laboratories as of the expiration date listed on the certificate unless the laboratory has been re-qualified before that date. SM will be used to notify MTD and laboratory contacts of upcoming laboratory qualification expiration dates.

#### 8.2.2.4 Annual Audit

An annual audit will be conducted by the designated District staff for each CEI or commercial laboratory to ensure continual compliance with technician records and equipment intervals. The following tools and resources should be used to conduct and document the review for program compliance:

- Form 2682, "Quality System Inspection Commercial Laboratory," to document the review;
- SM "Material Test History Report Area Engineer Inspected Materials" query that shows material testing completed for a project;
- SM "Testers and Users by District" query that allows filtering to determine expiring certifications; and
- equipment calibration or verification records retain in the MTD-designated location.

### 8.3 Laboratory Responsibility

The responsibilities are spread among varying roles and are defined below to achieve a level of quality and to maintain program compliance. Communication between the District laboratory, area offices, and CEI firms is key to ensuring that all sampling and testing laboratories, equipment, and personnel employed on TxDOT projects are appropriately qualified.

District Engineers are responsible for ensuring this communication takes place and documenting the communication channels in a District quality assurance standard operating procedure (SOP) that conforms in substance to the outline shown in <u>Appendix H</u>. The SOP must be reviewed, updated as needed, and approved by the District Engineer annually by April 1st, with a copy provided to MTD via email at <u>MTD_QAP@txdot.gov</u>.

#### 8.3.1 CEI Firm

The CEI firm must:

- provide certified personnel that are knowledgeable of all material testing procedures;
- provide copies of current certifications for all personnel performing project acceptance testing;
- provide a completed Form 2682, "Design-Bid-Build Quality System Inspection Commercial Laboratory," documenting pre-accreditation of the testing laboratory, including equipment calibrations and verifications and technician certifications, to the area office (AO) within 10 days after execution of the Contract;
- submit commercial laboratory accreditation request to the AO, with enough notice to ensure that laboratories are accredited within 30 days of Contract execution;
- perform all material tests at the facility shown on the Contract, except tests performed at the plant or on the roadway;
- use only material testing laboratories that are accredited by the Laboratory Qualification Program outlined in <u>Section 8.2;</u>
- perform an annual audit to validate ongoing laboratory accreditation, equipment calibrations and verifications, and technician certifications for the duration of the Contract;
- develop a Quality Control Plan (QCP) that:
  - is project-specific,
  - demonstrates how quality is to be achieved through acceptance testing per project,
  - addresses how the CEI firm will track and ensure that only certified technicians perform acceptance on equipment that is calibrated and in good working order, and
  - meets the requirements established in the CEI Contract scope of work, as outlined in Appendix I; and
- provide the QCP to the AO within 10 days after the execution of the Contract.

#### 8.3.2 District Area Office Personnel

Each Area Engineer will designate an AO coordinator. The AO coordinator is required to:

- provide District laboratory personnel with monthly status of the CEI projects;
- provide the District laboratory contacts for CEI firms and their subcontracted commercial laboratories;
- invite District laboratory personnel to the kick-off and associated pre-construction meetings;
- review the CEI project-specific testing, certification, and equipment needs to validate that required documentation has been received;
- forward all CEI technician certifications, equipment calibrations and verifications, and laboratory requests to the District laboratory;
- submit the CEI's QCP to the District laboratory;
- approve or reject the QCP based on recommendations from the District laboratory; and
- ensure that an issue-based evaluation of the CEI firm is completed when there are issues of noncompliance with requirements of <u>Section 8.3.1</u>, including missing deliverables or use of unqualified laboratories or technicians throughout the duration of the project.

#### 8.3.3 District Material Quality Champion

The District Engineer will designate a District Material Quality Champion to serve as primary point of contact for the District regarding material quality. The Material Quality Champion is responsible for ensuring that the District meets the following requirements:

- Review and make recommendations to the AO coordinator for approval or rejection of the CEI's QCP;
- coordinate the inspection of the commercial laboratory facility and equipment once the QCP has been approved;
- communicate the status of the inspection with the CEI firm;
- use SM to auto-notify the owner (i.e., technician) and the District laboratory designee before certification expiration; and
- conduct and document, at a minimum annually, an internal audit of the District for continual quality program compliance using the following tools and resources:
  - SM "Testers and Users by District" query that allows filtering to determine expiring certifications;
  - SM "Equipment Calibrations" query to show equipment status and upcoming expiration dates;
  - Equipment calibration or verification records retained in the MTD-designated location; and
  - MTD's Material Samples dashboards to show completeness, accuracy, and timely authorization of SM material samples.

### 8.4 Documentation

The qualifying authority is responsible for verifying that laboratories are qualified to perform sampling and testing. Upon satisfactory completion of the laboratory qualification process, the qualifying authority will issue a certificate covering the scope of testing in which the laboratory has been qualified. Laboratory qualification documentation must be retained by the qualifying authority and the qualified laboratory for a minimum of 10 yr.

Laboratory qualification documentation to be maintained by the qualifying authority includes:

- availability and calibration or verification records for each piece of equipment,
- personnel qualified or certified to perform required testing, and
- copy of laboratory qualification certificate issued.

### 8.5 Non-Compliance

A laboratory that does not meet all the above requirements is subject to disqualification or suspension.

Any equipment in a qualified laboratory failing to meet specified equipment requirements for a specific test method will not be used for that test method. MTD or the TxDOT District laboratory responsible for the certification or audit will immediately notify all applicable area offices of non-conformance for those test methods.

The next higher qualification authority will resolve disputes concerning calibration and verification of equipment. For disputes that cannot be resolved at the District level, MTD will be the final authority.

# 9. Appendices

# Appendix A Acronyms and Definitions

The following terms and definitions are referenced in this document and have the meanings set forth below.

AAP	AASHTO Accreditation Program (AASHTO re:source and CCRL)
AASHTO	American Association of State Highway Transportation Officials
ACI	American Concrete Institute
AO	Area Office
AQMP	Aggregate Quality Monitoring Program
CAR	Corrective Action Report
CCRL	Concrete and Cement Reference Laboratory
CEI	Construction Engineering and Inspection
CFR	Code of Federal Regulations
DBB	Design-Bid-Build
MTD	Materials and Tests Division
CMEC	Construction Materials Engineering Council
FHWA	Federal Highway Administration
НМА	Hot-Mix Asphalt
НМАС	Hot-Mix Asphalt Center
IA	Independent Assurance
L-A-B	Laboratory Accreditation Bureau
MPL	Material Producer List
OLE	Object Linking and Embedding attachment window
QAP	Quality Assurance Program
QAT	Quality Assurance Test
QC	Quality Control
QCP	Quality Control Plan
SM	SiteManager
SOP	Standard Operating Procedure
ТХАРА	Texas Asphalt Pavement Association
TxDOT	Texas Department of Transportation

Abuse-Careless or deliberate deviation from testing procedures or specifications.

Acceptance Program—All factors that comprise TxDOT's program to determine the quality of the product as specified in the Contract requirements. These factors include verification sampling, testing, and inspection and may include results of QC sampling and testing.

**Accredited Laboratories**—Laboratories that are recognized by a formal accrediting body as meeting quality system requirements including demonstrated competence to perform standard test procedures.

**Breach of Trust**—Violation of the trust placed in the certified technician including, but not limited to, acts such as, falsification of records; being aware of improprieties in sampling, testing, or production by others and not reporting them to appropriate supervisors involved in the project; re-sampling or retesting without awareness and consent of appropriate supervisors involved in the project; and manipulating compensation or production.

Certified Technician-A technician certified by some agency as proficient in performing certain duties.

**Independent Assurance (IA) Program**—Activities that are an unbiased and independent evaluation of all the sampling and testing procedures, equipment, and personnel qualifications used in the acceptance program.

**Material Producer List (MPL)**—TxDOT-approved products and materials from various manufacturers and producers are located at: <u>https://www.txdot.gov/business/resources/producer-list.html</u>

Neglect–Unintentional deviations from testing procedures or specifications.

**Proficiency Samples**—Homogenous samples that are distributed and tested by two or more laboratories or personnel. The test results are compared to assure that the laboratories or personnel are obtaining the same results.

**Qualified Laboratories**—Laboratories that are capable as defined by appropriate programs established by TxDOT. As a minimum, the qualification program must include provisions for checking testing equipment, and the laboratory must keep records of calibration checks.

**Qualified Sampling and Testing Personnel**—Personnel who are capable as defined by appropriate programs established by TxDOT.

Quality Assurance (QA)—All planned and systematic actions necessary to provide confidence that a product or service will satisfy given requirements for quality.

**Quality Control (QC)**—All Contractor operational techniques and activities performed or conducted to fulfill the Contract requirements.

**TxDOT Standard Specifications**—the Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges adopted by the Texas Department of Transportation, including all revisions thereto applicable on the effective date of the Contract documents.

Verification Sampling and Testing-Sampling and testing performed to verify the quality of the product.

# Appendix B Test Methods for Split/Proficiency Evaluation

After observation and qualification, each qualified technician is required to participate annually in one proficiency or split sample test for each test method requiring independent assurance. Split sample test results must compare to the independent assurance test results below. Proficiency sample test results must be within  $\pm 2$  standard deviations of the proficiency sample mean.

Test Procedure	Description	Tolerance
Tex-104-E	Liquid Limit of Soils	15% of mean ¹
Tex-105-E	Plastic Limit of Soils	15% of mean ¹
Tex-106-E	Plasticity Index of Soils	20% of mean ¹
Tex-107-E	Bar Linear Shrinkage of Soils	± 2%
Тач 140 Г	Deuticle Cite Anchorie of Caile, Daut I	> No. 4 sieve: ± 5% points
Tex-110-E	Particle Size Analysis of Solis, Part I	$\leq$ No. 4 sieve: ± 3% points
Тач 112 Г	Moisture-Density Relationship of Base	Density ± 2.0 PCF
Tex-113-E	Materials	Moisture Content ± 0.5%
Tax 447 F	Triaxial Compression for Disturbed Soils	Strength ± 15 psi
Tex-117-E	and Base Materials, Part II	Moisture Content ± 0.5%
		>5/8" sieve: ± 5.0% points
		(individual % retained)
Tex-200-F	Asphaltic Concrete Combined Aggregate	≤5/8" sieve-No. 200: ± 3.0%
		(individual % retained)
		Passing No. 200: ± 1.6% points
	Compacting Test Specimens of	± 1.0% laboratory-molded
Tex-206-F	Rituminous Mixturos	density in accordance with
		Tex-207-F
		Laboratory-Molded Density:
	Determining Density of Comparted	± 1.0%
Tex-207-F	Determining Density of Compacted	Laboratory-Molded Bulk Specific
	Bituminous Mixtures	Gravity: ± 0.020
		In-place air voids (cores): ± 1.0%
Тоу 007 Г	Theoretical Maximum Specific Gravity of	1.0.020
1ex-221-F	Bituminous Mixtures	I 0.020
Toy 226 F	Asphalt Content of Asphalt Paving	
16x-230-F	Mixtures by the Ignition Method	± 0.3%

#### Laboratory Testing Procedures and Tolerance Limits

Test Procedure	Description	Tolerance
	Compacting Bituminous Specimens	± 1.0% laboratory-molded
Tex-241-F	Using the Superpave Gyratory	density in accordance with
	Compactor (SGC)	Tex-207-F
		17% of mean ¹ (4 × 8" specimen)
Tex-418-A	Compressive Strength of Cylindrical	14% of mean ¹ (6 × 12"
	Concrete Specimens	specimen)

¹ The difference between compared test results must not exceed the indicated percentage of the mean of the compared test results, where the mean is the average of the two test results.

EXAMPLE: Plasticity Index

Tolerance = 20% of the mean

Technician test value	18
IA technician test value	22
Mean	20
20% difference	4

Both values are within 20% of the mean.

# Appendix C IA Annual Report

{Date}

Independent Assurance Program Manager Materials and Tests Division (MTD) Texas Department of Transportation 125 East 11th Street Austin, TX 78701

RE: Annual Report of Independent Assurance (IA) Program Results - {Project Name}

Dear Sir:

In accordance with the requirements set forth in the TxDOT Quality Assurance Program for Design-Bid-Build Projects, the information below summarizes the results of system approach independent assurance (IA) testing conducted by our firm on the {Project Name} project for calendar year {XXXX}.

TxDOT Independent Assurance Program Results			
IA Activities	TxDOT	Non-TxDOT	Total
Number of personnel evaluated under system approach			
Number of personnel removed from the IA program			
Number of IA evaluations completed			
Number of IA evaluations meeting tolerance			
Number of IA evaluations not meeting tolerance			

CC: Materials and Tests Division Director TxDOT - MTD

# Appendix D Material Certification Letter Example – Federal Oversight

A form-fillable version of the Material Certification Letter can be found here.

	ADDRESS, ONY_TEMAS, JEP   TELEPHONE   WWW.TXDOT.GOV
Date	
Division Ad Federal Hij 300 East & Austin, TX	Iministrator ghway Administration, Texas Division Ith Street 78701
RE:	Final Materials Certification Letter
Project:	Federal Aid Project No.: Federal Project No. CSJ: CSJ Number County: County
Dear FHW	Texas Division Administrator,
This letter	is to certify:
The results	of the tests used in the acceptance program indicate that the materials incorporated in
the constru- conformity test that d exception.	vection work, and in the construction operations controlled by sampling and testing, were in with the approved plans and specifications. Any material represented by an acceptance bes not meet the criteria contained in the plans and specifications is considered an
the construction conformity test that do exception. D E st	with the approved plans and specifications. Any material represented by an acceptance bes not meet the criteria contained in the plans and specifications is considered an ceptions to the plans and specifications are explained on the back hereof (or on attached leet).
conformity test that de exception.	Action work, and in the construction operations controlled by sampling and testing, were in with the approved plans and specifications. Any material represented by an acceptance bes not meet the criteria contained in the plans and specifications is considered an ceptions to the plans and specifications are explained on the back hereof (or on attached leet). ere are no exceptions to the plans and specifications on this project.
conformity test that d exception.	Action work, and in the construction operations controlled by sampling and testing, were in with the approved plans and specifications. Any material represented by an acceptance bes not meet the criteria contained in the plans and specifications is considered an ceptions to the plans and specifications are explained on the back hereof (or on attached leet). Here are no exceptions to the plans and specifications on this project.
Ine constru- conformity test that de exception.	DOT District Area Engineer or Orrector of Construction, P.E.

# Appendix E Material Certification Letter Example – Non-Federal Oversight

A form-fillable version of the Material Certification Letter can be found here.

	ADDRESS, CITY, TENAS, ZIP   TELEPHOWE   WWW.DOOT.GOV
Date	
70007	District Engineer
Title	Stronger en Bluenen.
RE:	Final Materials Certification Letter
Project	Cit Contact No. (Cit Contact No.
	CSJ: CSJ Number
	Loundy: Dounty
Dear D	strict Engineer,
This let	ter is to certify:
The res the con conform test the exception	ults of the tests used in the acceptance program indicate that the materials incorporated in struction work, and in the construction operations controlled by sampling and testing, were in hity with the approved plans and specifications. Any material represented by an acceptance t does not meet the criteria contained in the plans and specifications is considered an on.
	Exceptions to the plans and specifications are explained on the back hereof (or on attached sheet).
	There are no exceptions to the plans and specifications on this project.
Gen.	by,
Sincere	
Sincere Name t Title	r TXDOT District Area Engineer in Directol of Construction, P.E.
Name t Tale	or TxDOT District Area Engineer an Director of Construction, P.E. Director, Materials & Tests Division, TxDOT

	MEM			
To:	(Da (TxDOT District Engineer)			
From:	(MTD Director)			
Subject:	District QAP Accreditation			
The In ac	Materials and Tests Division (MTD) has completed an accreditation inspection of the (District), ccordance with the TxDOT Quality Assurance Program for Construction.			
The exce obse requ [1/2	The District Accreditation Report has been issued with an overall rating of $(1/2/3)$ , indicating (an excellent review with minor or no deficiencies were noted/several deficiencies or repetitive observations were noted/a level of negligence was found programmatically violating compliance requirements). This represents (an improvement/no change/a decline) from the previous rating of $(1/2/3)$ issued in the [Month, Year] District Accreditation Report.			
MTD desc docu to re defic Defi Dist	) has requested that the District Director of Construction provide a formal written response cribing the corrective actions taken to address the deficiencies, as well as sufficient umentation to substantiate the corrective actions by <u>(Date)</u> . MTD will work with the district staff esolve all deficiencies within 90 days (i.e., by [Date]). To assist in meeting this deadline, any ciencies which remain outstanding after 45 days will be communicated to the District Engineer. ciencies that are outstanding after 60 days may be communicated to the TxDOT Director of rict Operations and Director of Engineering & Safety Operations.			
ngof3 Accr	ddition, the district will be subject to a re-inspection by MTD approximately 12-18 months wing the accreditation close-out. The re-inspection will focus on the portions of the District reditation Report which resulted in the rating of 3. MTD will continue to re-inspect the district ually until a minimum rating of 2 is achieved.			
Plea	ise contact (Quality Assurance Staff) at MTD with any questions.			
CC:	(Director of District Operations) (Director of Engineering & Safety Operations)			

# Appendix F District Accreditation Results Memo Example

# Appendix G District Accreditation Re-Inspection Results Memo Example

		MEMO		
		(Date)		
To:	[TxDOT District Engineer]	(Ease)		
From	(MTD Director)			
Subje	District QAP Accreditation Re-Inspection			
	The Materials and Tests Division (MTD) has completed accordance with the TxDOT Quality Assurance Program for inspection was to evaluate the continuity of correctiv deficiencies noted in the (Month, Year) District Accreditati level of 3.	a re-inspection of the (District), in Construction. The purpose of the re- e actions implemented to address on Report, which resulted in a rating		
ating of 2	The re-inspection found that corrective actions implement equipment/quality management system/CE&I project] def ensure continued compliance with the TxDOT Quality Assu- records reviewed were substantially complete and accurate	ted to address previous (technician/ ficiencies are operating effectively to grance Program for Construction. The		
	As a result, the district has been issued a <u>re-inspection rating of 2</u> , indicating significant improvement from the previous inspection. This concludes the laboratory re-inspection process, and the district will return to the standard cyclical accreditation schedule.			
	The re-inspection found that corrective actions implement equipment/quality management system/CE&I project} defi- sustained to ensure continued compliance with the TxI Construction. As a result, the district has been issued a p continued level of negligence was found programmaticall Deficiencies identified during the re-inspection are listed in	ted to address previous (technician/ ciencies were insufficient or were not DOT Quality Assurance Program for re-inspection rating of 3, indicating a y violating compliance requirements, the attached document.		
ating of 3 -	The district must provide MTD with a formal written response describing the corrective actions taken to address the deficiencies, as well as sufficient documentation to substantiate the corrective actions by <b>Date</b> .			
	The district will also be subject to a re-inspection annually u 2 is achieved.	intil a minimum re-inspection rating of		
	Please contact [Quality Assurance Staff] at MTD with any qu	lestions.		
## Appendix H District Quality Assurance SOP Requirements



		0	Who is responsible for performing the reviews
			How the district will conduct and document the reviews, and
		0	How the district will conduct and document the reviews, and How the district will ansure that undated technician certification and equinment records are
		.0	complete and stored within the required location
			complete and stored within the required location.
1.5	District	Oversigh	t and Monitoring- Define a process to monitor for continual quality program compliance. Identify the
		Procedu	res to adjust sampling and testing requirements in the CCMS including:
			Who is responsible for making changes in the system
		0	Who has authority to approve the changes and
		0	How the district will ensure that the reason for the change is documented:
		Procedu	rise to ensure the completeness and accuracy of sample information and material test results
		ontorod	in the CCMS, including items completed by CEI firms or commercial laboratories:
		Procedu	in the como, including items completed by SET inno of commercial laboratories,
		authoriz	ation is documented.
	1.1	Procedu	auon is ubcumented, iras to complete Material Cartification Latters at project close out including:
		Floceuu	Who is responsible for completing and signing the letter
		0	How the district will identify material excentions to be included in the latter, and
		0	How the district will document and compile justifications for material excentions identified; and
		Procedu	rise to conduct an internal audit of the district including:
	-	Tiocedu	The frequency of the reviews (at a minimum annually)
		0	Who is responsible for performing the reviews
		0	How the district will monitor for expiring technician certifications and equinment intervals
		0	How the district will ensure that required equinment records are complete, accurate, and stored
		0	within the required location
		~	How the district will monitor the material samples dashboards for completeness, accuracy, and
		.0.	timely authorization of material samples
		0	How the district will document the reviews and
			The process for addressing the items identified during the reviews
		0	The process for boardsbing the items recreated winning the reviews.

# Appendix I CEI Quality Control Plan Requirements

	Quality Control Plan	
1.1	Quality Control Plan (QCP). Develop a QCP that is project specific and developed in accordance with the DBB QAP. Submit the written QCP within 10 days after execution of the CE&I contract and before the mandatory kick-off meeting. Receive written approval from the AO on the QCP before beginning inspection, sampling and testing and for any addendums. Include the following procedures and items in the QCP:	
1.1.1	Project and Personnel- For the CE&I project and personnel include:	
	<ul> <li>CSJ#, District, County, AE, Highway;</li> <li>a dedicated person responsible for quality with their current contact information (cell phone and email address) that will ensure that all CE&amp;I and Contractor technician certifications and equipment calibrations are current, including updates to test methods, and proficiencies performed in time and independently;</li> <li>a list of the subcontractor firms and a defined scope of responsibility maintained by the principal firm to comply with the DBB QAP; names of individuals and their sampling and testing responsibilities;</li> <li>current electronic copies of certification documents for individuals performing specified sampling and testing functions;</li> <li>procedure for ensuring technicians participate and perform proficiency samples independently and how technicians will not share results; and</li> </ul>	
	<ul> <li>handling accusations of misconduct covering: neglect, abuse, or breach of trust.</li> </ul>	
1.1.2	<ul> <li>Laboratory- For CE&amp;I laboratory equipment and calibration, include:</li> <li>current electronic copies of most recent equipment calibration checks where applicable and in accordance with: <ul> <li>Tex-198-E, "Minimum Standards for Acceptance of a Laboratory for Soils and Flexible Base Testing,"</li> <li>Tex-237-F, "Minimum Standards for Acceptance of a Laboratory for Concrete and Aggregate Testing,"</li> <li>Tex-498-A, "Minimum Standards for Acceptance of a Laboratory for Concrete and Aggregate Testing," and</li> <li>Tex-900-K Series, procedures for calibrating, verifying, and certifying equipment and devices.</li> </ul> </li> <li>include only equipment required for testing on this project and the support equipment such as calipers and weights;</li> <li>annual equipment calibration schedule with date(s) due;</li> <li>maintenance and repair plan for laboratory equipment;</li> <li>electronic copies of all standards used for calibrating or verifications; and</li> <li>procedures for ensuring quality is attained through laboratory testing equipment beyond the normal calibration cycle.</li> </ul>	
1.1.3	<ul> <li>Quality- For the CE&amp;I firm to achieve quality through inspection, sampling, and testing, include: <ul> <li>a designated person responsible for the CE&amp;I firm's adherence to the QCP;</li> <li>how QCP information will be communicated to all members of the CE&amp;I team;</li> <li>how the firm will ensure that employees receive a copy and understand the construction Contractor's quality control plan/paving plan for each material;</li> <li>all reference document resources available to technicians;</li> <li>in-house equipment available to technicians for equipment calibration and repair;</li> <li>instructions for how laboratory equipment shall be cared for;</li> <li>procedures for establishing which equipment can be shared between the CE&amp;I firm and the construction Contractor and the corresponding approval process;</li> <li>procedures and time limits for reporting test results to the Engineer and Contractor;</li> <li>timely review of QA test results for reasonableness and comparison of QC and QA data; and</li> <li>how the firm will protect the integrity of quality assurance data, to include:</li> <li>do not provide the construction Contractor with the random numbers for material sampling in advance;</li> <li>separation of review and authorization functions in SiteManager;</li> <li>how test results will be documented in SiteManager when the tester does not directly enter the results; and</li> <li>how the firm will ensure the correct QC and QA data is saved in SiteManager.</li> </ul> </li> </ul>	

### APPENDIX B GUIDE SCHEDULE OF SAMPLING AND TESTING

# GUIDE SCHEDULE OF SAMPLING & TESTING FOR DESIGN BID-BUILD (DBB) PROJECTS -(DBB Guide Schedule)

JUNE 28, 2019



### Using the Guide Schedule

Research of sampling and testing rates, listed for project tests in the following Guide Schedule, show that the Department's and the Contractor's risk of either rejecting "good" material or accepting "bad" material range from 20% to 40%.

To reduce this risk, we recommend that the sampling rate be increased during initial production. A four-fold increase in testing frequency will generally reduce risk to approximately 5%. The intent of increasing testing, at the start of production, is to insure the Contractor's processes are in control and to establish acceptability requirements early.

There is a need to increase the frequency of testing for high-variability materials and when testing results do not meet specifications. The Engineer may require the Contractor to reimburse the Department for costs resulting from failing test results, in accordance with the specifications.

Materials incorporated in TxDOT projects are subjected to various quality assurance procedures such as testing (as outlined in this document), certification, quality monitoring, approved lists, etc. The Engineer and testing staff should familiarize themselves with materials to be used before work begins by reviewing the specifications and this document. Discuss material testing requirements with the Contractor.

Other testing required by the specifications, but not shown in the DBB Guide Schedule, should be performed at a frequency necessary to provide adequate confidence that materials meet specifications.

NOTE—The TxDOT District Area Engineer or Director of Construction must submit a "Materials Certification Letter" at final acceptance of the project. The intent of this letter is to ensure that the quality of all materials incorporated into the project is in conformance with the plans and specifications, thus ensuring a service life equivalent to the design life. Any material represented by an acceptance test, that does not meet the criteria contained in the plans and specifications, is considered an exception. Exceptions must be listed in the materials certification letter. For projects with federal oversight, submit the materials certification letter (See Appendix D of DBB QAP) to the FHWA division administrator, with a copy to the Materials and Tests Division (MTD). For non-federal oversight projects, submit the material certification letter (Appendix E of DBB QAP) to the TxDOT District Engineer, with a copy to MTD. Refer to section 4.1 of the "Quality Assurance Program for Design-Bid-Build Projects" (DBB QAP).

Assuring the quality of the product and proper incorporation of materials into the project begins with proper sampling practices. Sampling, testing, and construction inspection must be performed collaboratively to assure the specific attributes of the finished product reflect quality workmanship. Sampling guidance for hot-mix asphalt is contained in Tex-225-F, "Random Selection of Bituminous Mixture Samples," and the respective specification for that material. All remaining materials are covered by method and materials specifications, to which the following applies.

For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:

- <u>Soils/flexible base</u>: Vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed.
- <u>Aggregates</u>: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
- <u>Concrete (structural and miscellaneous)</u>: Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled. Tests for slump, air, and temperature should be done often to ensure the consistent control of the concrete production (not applicable to miscellaneous concrete).

#### This Guide Schedule is applicable to all contracts associated with the 2014 Standard Specifications.

	TABLE I – E	MBANKMENTS, S	SUBGRADES, BACKFII	L, AND BASE CO	URSES
			PROJECT	TESTS	
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
	Liquid Limit <b>(A)</b>	Tex-104-E		Materials with $PI \le 15: 10,000 \text{ CY}$	For Type A embankment or when required by the plans. This test may be waived for embankment cuts as directed by the Engineer. Determine a new liquid
	Plasticity Index (A)	Tex-106-E	During stockpiling	Materials with PI > 15: 5,000 CY	notable change in material. Sample in accordance with Tex-100-E.
	Gradation	Tex-110-E	operations, from completed stockpile, or project site	Each 10,000 CY	When shown on plans. This test may be waived for embankment cuts, as directed by the Engineer.
EMBANKMENT	Moisture/Density	Tex-114-E	(B)	As directed by the Engineer	Sample in accordance with Tex-100-E. Not required for ordinary compaction. Determine a new optimum moisture and maximum density for each different material or notable change in material.
	In-place Density ( <b>A</b> )	Tex-115-E	<mark>As directed by the</mark> Engineer	Fill: each 5,000 CY min. 1 per lift.	Sample in accordance with Tex-100-E. Not required for ordinary compaction. Determine a new optimum moisture and maximum density according to Tex-114-E for each different material or notable change in material.
				Cut: each 6,000 LF	Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Materials such as RAP, gypsum, lime, cement, and iron ore tend to bias the counts for nuclear density gauges.
RETAINING WALL (NON-SELECT BACKFILL)	As shown above for Embankment (Cuts and Fills)		As shown above for Embankment (Cuts and Fills)	As shown above for Embankment (Cuts and Fills)	Sample in accordance with Tex-100-E.
	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	Required only for Type CS backfill. Test the fraction of material finer than the No. 200 sieve. Sample in accordance with Tex-400-E.
RETAINING WALL	Overdetion	Tex-110-E	During stockpiling operations, from	Fach E 000 CV	Required only for Drainage Aggregate. Sample in accordance with Tex-400-A.
(SELECT BACKFILL)	Gradation	Tex-401-A	completed stockpile, or project site <b>(B)</b>	Each 5,000 CY	Required only for Select Backfill. Sample in accordance with Tex-400-A.
	Resistivity (A)	Tex-129-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	For material with resistivity between 1,500 and 3,000 ohm-cm, determine chloride and sulfate content, as specified in Item 423. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

	TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES					
			PROJECT 1	TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS	
	рН <b>(А)</b>	Tex-128-E	During stockpiling operations, from completed stockpile, or project site ( <b>B</b> )	Each 5,000 CY	Sample in accordance with Tex-400-A.	
	Magnesium Soundness	Tex-411-A	During stockpiling operations, or from completed stockpile	1 per source, per project	Test when backfill sources appear to contain particles such as shale, caliche, or other soft, poor- durability particles. Sample in accordance with Tex-400-A.	
RETAINING WALL (SELECT BACKFILL) (continued)	Micro-Deval	Tex-461-A	During stockpiling operations, or from completed stockpile	1 per source, per project	May be used as an alternate to the magnesium soundness only when the % loss from the micro- deval is not greater than 20%. When the % loss from the micro-deval is greater than 20%, the magnesium soundness governs aggregate verification. Sample in accordance with Tex-400-A.	
	In-place Density <b>(A)</b>	Tex-115-E	<mark>As directed by the</mark> Engineer.	1 per backfill lift, per wall	Not required for rock backfill. For walls greater than 500 ft. in length, perform one test per lift for every 500 ft. in length. <b>(F)</b> Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E for each different material or notable change in material and adjust the density accordingly.	
	Liquid Limit <b>(A)</b>	Tex-104-E	During stockpiling operations, from completed stockpile, or windrow ( <b>B</b> )	Each 5,000 CY	Sample in accordance with Tex-400-A.	
UNTREATED BASE	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or windrow ( <b>B</b> )	Each 5,000 CY		
	Gradation (A)	Tex-110-E	During stockpiling operations, from completed stockpile, or windrow ( <b>B</b> )	Each 5,000 CY	Sample in accordance with Tex-400-A.	
	Moisture/Density	Tex-113-E	From completed stockpile at the source (E)	Each 20,000 CY	Not required for ordinary compaction. Sample in accordance with Tex-400-A.	

		TABLE I – E	MBANKMENTS, S	UBGRADES, BACKFIL	L, AND BASE CO	URSES
				PROJECT	TESTS	
MATERIAL OR	PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
		Wet Ball Mill <b>(A)</b>	Tex-116-E	From completed stockpile at the source <b>(E)</b>	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. Sample in accordance with Tex-400-A.
		Strength		From completed		Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. When base material is from a source where the District has a record of satisfactory triaxial results, the frequency of testing may be reduced to one per 30,000 CY.
		(A)	Tex-117-E	(E)		If any one test falls below the minimum value required, the frequency of testing will return to the original frequency of 20,000 CY. Sample in accordance with Tex-400-A.
UNTREATED BASE COURSES (Continued)		In-place Density <b>(A)</b>	Tex-115-E	As directed by the Engineer	Each 3,000 CY, min. 1 per lift	Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Materials such as RAP, gypsum, lime, cement, and iron ore tend to bias the counts for nuclear density gauges.
		Thickness (A)	Tex-140-E	As directed by the Engineer	Each 3,000 CY	Not required where survey grade control documents are compliant.
		Ride Quality <b>(A)</b>	Tex-1001-S Surface Test, Type B	Final riding surface of travel lanes		This applies to the final travel lanes that receive a 1- or 2-course surface treatment for the final surface, unless otherwise shown on the plans.
	SUBGRADE	Organic Content	Tex-148-E	As directed by the Engineer	1 per <mark>project, per</mark> source or as directed by the Engineer	Required for existing subgrade material and material imported from a borrow source. Soil survey and geologic maps may be used to determine sampling locations. Sample in accordance with Tex-100-E.
TREATED SUBGRADE AND BASE COURSES	BEFORE TREATMENT	Sulfate Content	Tex-145-E	As directed by the Engineer	1 per 500 feet or 5,000 CY	Required for existing subgrade material and material imported from a borrow source. Soil survey and geologic maps may be used to determine sampling locations. Sample in accordance with Tex-100-E.
	NEW BASE MATERIAL	Liquid Limit <b>(A)</b>	Tex-104-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	When central mix site or plant is used, windrow sampling may be waived. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES							
				PROJECT T	ESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS	
		Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or windrow ( <b>B</b> )	Each 5,000 CY		
	NEW BASE MATERIAL	Gradation <b>(A)</b>	Tex-110-E	During stockpiling operations, from completed stockpile, or windrow ( <b>B</b> )	Each 5,000 CY	Sample in accordance with Tex-400-A.	
	(Continued)	Wet Ball Mill <b>(A)</b>	Tex-116-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. Sample in accordance with Tex-400-A.	
TREATED		Strength (A)	Tex-117-E	From completed stockpile at the source <b>(E)</b>	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. When base material is from a source where the District has a record of satisfactory triaxial results, the frequency of testing may be reduced to one per 30,000 CY. If any one test falls below the minimum value required, the frequency of testing will return to the original frequency of 20,000 CY.	
SUBGRADE AND BASE COURSES (Continued)	LIME	Compliance with DMS-6350	Tex-600-J	During delivery to project	Commercial Lime Slurry: each 200 tons of lime Carbide Lime Slurry: each 100 tons of lime	Sample in accordance with Tex-600-J. Verify the source is listed on the current Material Producer List for Lime. Only materials appearing on the Material Producer List will be accepted. Sample frequency for Carbide Lime Slurry may be increased as directed by the Engineer. For Hydrated Lime and Quick Lime, project testing is not required but it is encouraged to sample and test the material at a rate of 1 per project as a best practice.	
	CEMENT	Compliance with DMS-4600		Railroad car, truck, or cement bins		Verify the source is listed on the current Material Producer List for Cement. If not, sample and test in accordance with DMS-4600. <b>(C)</b>	
	FLY ASH MATERIAL	Compliance with DMS-4615		Project samples at location <mark>directed by the</mark> Engineer		Verify the source is listed on the current Material Producer List for Fly Ash. Only materials from MTD approved sources appearing on the Material Producer List for Fly Ash will be accepted. Project testing is not required but it is encouraged to sample and test the material at a rate of 1 per project as a best practice. (C)	

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES							
				PROJECT 1	TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS	
		Pulverization Gradation	Tex-101-E, Part III	Roadway, after pulverization and mixing	As necessary for control	At the beginning of the project, one test must be made for each 4,500 CY or 6,000 tons until the Engineer is satisfied that acceptable pulverization results are being obtained. Sample in accordance with Tex-100-E.	
	COMPLETE MIXTURE	Moisture/Density Curve and Strength	Tex-120-E, Part II, or Tex-121-E, Part II	From roadway windrow after treatment <b>(E)</b>	Each 20,000 CY	Not required for ordinary compaction. Determine a new moisture/density curve for each different or notable change in material. Perform Tex-120-E, Part II, for Cement Treated Material, and Tex-121-E, Part II, for Lime, Lime-Fly Ash, or Fly Ash Treated Material. If Tex-120-E, Part I, Tex-121-E, Part I, or Tex-127-E is performed before the project, this test may be waived. Sample in accordance with Tex-100-E.	
TREATED SUBGRADE AND BASE COURSES (Continued)		Moisture/Density Curve and Strength	Tex-120-E, Part I, Tex-121-E, Part I, or Tex-127-E	From roadway before treatment	As necessary for control	Perform Tex-120-E, Part I, on cement treated material, and Tex-121-E, Part I, for lime-fly ash or fly ash treated material. Verifies the field strength by comparing results from the mix design. Performed at the direction of the Engineer and when notable change in material, as described above for Part II of the test procedures. Sample in accordance with Tex-100-E.	
		In-place Density <b>(A)</b>	Tex-115-E	<mark>As directed by the</mark> Engineer	Each 3,000 CY, min 1 per lift	Determine the appropriate moisture/density curve for each different material or notable change in material. Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Stabilizers and materials such as RAP, gypsum, and iron ore tend to bias the counts for nuclear density gauges.	
		Thickness (A)	Tex-140-E	As directed by the Engineer	Each 3,000 CY	Not required where survey grade control documents are used for compliance.	

	TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES						
			PROJECT T	ESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS		
	Sulfate Content	Tex-145-E	During stockpiling operations, from completed stockpile, or	Each 5,000 CY	Required only for contractor furnished recycled material, including crushed concrete. Not required for RAP. Sample in accordance with Tex-400-A.		
PAVEMENT (RAP), CRUSHED CONCRETE, and RECYCLED MATERIALS	Deleterious Material	Tex-413-A	windrow	Each 5,000 CY	Required only for contractor furnished recycled material, including crushed concrete. Sample in accordance with Tex-400-A.		
	Decantation	Tex-406-A	During stockpiling operations, from completed stockpile, or windrow	Each 5,000 CY	Required only for contractor furnished RAP. Sample in accordance with Tex-400-A.		

	TABLE I – FOOTNOTES
Α	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager (SM), in the remarks field, and on the end of the Project Materials Certification Letter.
В	Engineer will select any of these locations or any combinations thereof with the provision that the initial sample will be obtained from the completed stockpile at the source and at least one out of ten consecutive samples will be taken at the project site (from the windrow for treated and untreated bases and embankments when possible).
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:
D	<ul> <li>Soils/Flexible Base: For gradation, liquid limit, and plastic limit, vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed.</li> </ul>
	<ul> <li>Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.</li> </ul>
Е	The Engineer will sample from the completed stockpile at the source and test before placement.
F	Each test performed that is based on a quantity of material is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

	TABLE IA – ASPHALT TREATED BASE (Plant Mix)						
			PROJECT 1	TESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS		
	Liquid Limit <b>(A)</b>	Tex-104-E	During stockpiling operations, from completed stockpile, or <mark>before</mark> mixing	Each 5,000 CY	Sample in accordance with Tex-400-A.		
AGGREGATE	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or <mark>before</mark> mixing	Each 5,000 CY			
	Wet Ball Mill (A)	Tex-116-E	During stockpiling operations, from completed stockpile, or <mark>before</mark> mixing	1 per project, per source	Sample in accordance with Tex-400-A. <b>(B)</b>		
LIME	Compliance with DMS-6350		During delivery to the project	Hydrated Lime: 1 per project Commercial Lime Slurry: each 200 tons of lime <b>(D)</b> Carbide Lime Slurry: each 100 tons of lime <b>(D)</b> Quick Lime: 1 per project	On projects requiring less than 50 tons, material from MTD approved sources may be accepted on the basis of Producer's Certification without sampling.		
RECLAIMED ASPHALT PAVEMENT (RAP), and RECYCLED AGGREGATE	Decantation	<mark>Tex</mark> -406-A, Part I	During stockpiling operations, from completed stockpile, or <mark>before</mark> mixing	Each 10,000 CY	Sample in accordance with Tex-400-A.		
RECYCLED ASPHALT SHINGLES (RAS)	Decantation	Tex-217-F,Part III	During stockpiling operations, from completed stockpile, or <mark>before</mark> mixing	Each 10,000 CY	Sample in accordance with Tex-400-A.		
ASPHALT BINDER	Compliance with Item 300		Sampling port nearest the storage tank	<mark>1 per project, per</mark> grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500- C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SiteManager (SM) Assistant. The Engineer must associate one QM sample per project in SM.		

		TABLE IA – ASP	HALT TREATED BASE	(Plant Mix)	
			PROJECT T	ESTS	
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
TACK COAT	Compliance with Item 300		Distributor	<mark>1 per project, per</mark> grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex- 500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample per project in SM.
	Gradation (A)	Tex-200-F, Part I	Plant Mix (C)	20,000 CY (25,000 tons)	Sample in accordance with Tex-222-F. Determine the gradation of the aggregate from the complete mixture tested in accordance with Tex- 236-F.
	Laboratory Density <b>(A)</b>	Tex-126-E	Plant Mix <b>(C)</b>	20,000 CY (25,000 tons)	Sample in accordance with Tex-222-F.
COMPLETE MIXTURE	Percent Asphalt (A)	Tex-236-F	Plant Mix <b>(C)</b>	Each 1,500 CY (2,000 tons) or days production	Determine <mark>an asphalt content correction factor</mark> for ignition oven at a minimum of one per project. Sample in accordance with Tex-222-F.
	Indirect Tensile Strength – Dry	Tex-226-F	Plant Mix	1 per project, per design	Sample in accordance with Tex-222-F.
	Moisture Susceptibility	Tex-530-C	As directed by the Engineer	1 per project, per design	This test may be waived, when shown on the plans. Sample in accordance with Tex-222-F.
ROADWAY	In-Place Air Voids (A)	Tex-207-F	Roadway cores, as directed by the Engineer <b>(C, D)</b>	Each 3,000 CY, min 1 per lift	Not required for ordinary compaction or when air void requirements are waived. Sample in accordance with Tex-222-F.
	Ride Quality	Tex-1001-S Surface Test, Type A	On Finished Surface		Unless otherwise shown on the plans.

	TABLE IA – FOOTNOTES
Α	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager (SM), in the remarks field, and on the end of the Project Materials Certification Letter.
В	Engineer will select any of these locations or any combinations thereof with the provision that at least one out of ten consecutive samples will be taken at the project site (from the windrow for treated and untreated bases and embankments when possible).
С	<ul> <li>For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: <ul> <li>Soils/Flexible Base: Vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed.</li> <li>Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.</li> </ul> </li> </ul>
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE II – SEAL COAT							
			PROJECT T	ESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS		
	Gradation (A)	Tex-200-F, Part I	Stockpile (At source or at point of delivery)	<mark>E</mark> ach 1,000 CY	Rate may be reduced to each 2,000 CY if the Engineer approves a contractor quality control plan. Sample in accordance with Tex-221-F.		
	L. A. Abrasion (A)	Tex-410-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use.		
	Magnesium Soundness <b>(A)</b>	Tex-411-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use.		
	Surface Aggregate Classification (A)	Tex-612-J, Tex-411-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)		
AGGREGATE	Pressure Slake ( <b>A</b> )	Tex-431-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.		
	Freeze Thaw ( <b>A</b> )	Tex-432-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.		
	Unit Weight	Tex-404-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.		
	24 hr. Water Absorption ( <b>A</b> )	Tex-433-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.		
	Crushed Face Count	Tex-460-A, Part I	Stockpile	1 per 20,000 CY	Only required for crushed gravel. Sample in accordance with Tex-221-F.		
	Deleterious Material (A)	Tex-217-F, Part I	Stockpile	1 per 10,000 CY	Not required for lightweight aggregate. Sample in accordance with Tex-221-F.		
	Decantation (A)	Tex-406-A	Stockpile	1 per 10,000 CY	Sample in accordance with Tex-221-F.		
	Flakiness Index	Tex-224-F	Stockpile	Frequency <mark>as</mark> directed by the Engineer	Sample in accordance with Tex-221-F.		

TABLE II – SEAL COAT						
			PROJECT	TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS	
	Micro Deval	Tex-461-A	Stockpile	1 per project or as necessary for control	Compare result to published value listed on the current Material Producer List for BRSQC. Submit sample to MTD for Soundness and L.A. Abrasion testing when results differ by more than 3% points, unless otherwise directed by the Engineer.	
(Continued)	White Rock Count	Tex-220-F	Stockpile		Required only for Limestone Rock Asphalt. Not required when MTD provides inspection at the plant. Sample in accordance with Tex-221-F.	
	Naturally Impregnated Bitumen Content	Tex-236-F	Stockpile		Required only for Limestone Rock Asphalt. Not required when MTD provides inspection at the plant. Sample in accordance with Tex-221-F.	
PRECOATED AGGREGATE	Asphalt Content	Tex-210-F	Stockpile	Frequency <mark>as</mark> directed by the Engineer when a target value is specified	Sample in accordance with Tex-221-F.	
ASPHALT BINDER	Compliance with Item 300		<mark>Distributor</mark>	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample asphalt binder in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample per project in SM.	

	TABLE II – FOOTNOTES							
Α	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.							
В	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.							
С	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:							
	<ul> <li>Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.</li> </ul>							
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.							

	TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)						
				PROJECT 1	TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS	
		Decantation <b>(B)</b>	Tex-406-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.	
		Sieve Analysis (A) (B)	Tex-401-A		Each 1,000 CY of concrete (each source)	Test combined aggregate when used. Sample in accordance with Tex-400-A.	
	COARSE	Deleterious Materials <b>(B)</b>	Tex-413-A	From stockpile at	1 per project or as necessary for control	Sample in accordance with Tex-400-A.	
	AGGREGATE	Los Angeles Abrasion (A) (B)	Tex-410-A	concrete plant	One, each source	Verify the value of the source, as listed on the current Material Producer list for CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A.	
						Sample in accordance with Tex-400-A. (C)	
		Magnesium Soundness (A) (B)	Tex-411-A		One, each source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. <b>(C)</b>	
MINERAL AGGREGATE		Sand Equivalent ( <b>B</b> )	Tex-203-F		1 per project or as necessary for control	Test combined aggregate when used. Sample in accordance with Tex-400-A.	
		Organic Impurities <b>(B)</b>	Tex-408-A		1 per project, per source	Sample in accordance with Tex-400-A.	
	FINE	Sieve Analysis (A) (B)	Tex-401-A	From stocknile at	Each 1,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.	
	AGGREGATE	Fineness Modulus <b>(B)</b>	Tex-402-A	concrete plant	1 per project or as necessary for control	Test combined aggregate when used. Test to confirm material variability when strength values are in question. Sample in accordance with Tex-400-A.	
		Deleterious Material <b>(B)</b>	Tex-413-A		1 per project or as necessary for control	Test to confirm material variability when strength values are in question. Sample in accordance with Tex-400-A.	

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

	TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)							
				PROJECT 1	TESTS			
MATERIAL	DR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS		
MINERAL AGGREGATE (Continued)	FINE AGGREGATE (Continued)	Acid Insoluble Residue (A) (B)	Tex-612-J		Two, each source	Only for concrete subject to direct traffic. Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. <b>(C)</b>		
SILICA FUME		Compliance with DMS-4630 (A)		Railroad car, truck, bags or silos	1 per project, per class of concrete (For each type and brand)	Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume. Sample in accordance with Tex-300-D.		
META	KAOLIN	Compliance with DMS-4635 <b>(A)</b>		Railroad car, truck or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D.		
MIX DESIGN		Compliance with Standard Specification Item 421.4.A		At source (if not approved)	Min. 1 design per class, per source	Verify if cement, fly ash, slag cement, and chemical admixture sources are listed on the Material Producer Lists. If not, sample and submit to MTD for testing. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT). Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash.		
JOINT MATERIAL		Compliance with DMS-6300				Verify the source is listed on the Material Producer List for Joint Sealers. If not, sample and test before use in accordance with DMS-6310. (C) Sample in accordance with Tex-500-C.		
CURING COMPOUND		Compliance with DMS-4650		Sampled at jobsite; tested by <mark>MTD</mark> . See remarks.	When requested by MTD	Only products listed on the Material Producer List for Concrete Curing Compounds will be allowed. When sample is requested by MTD, sample in accordance with Tex-718-I. Ensure container has been agitated and mixed before sampling. (C)		
EVAPORATION RETARDANTS		Compliance with DMS-4650				Only products listed on the Material Producer list for Evaporation Retardants will be allowed. <b>(C)</b>		
REINFORG	CING STEEL	Compliance with the Std. Specifications & Spec. Provisions	As Specified			Only materials from MTD approved sources listed on the Material Producer Lists for Reinforcing Steel Mills and Seven Wire Steel Strand will be allowed. (C)		

TAE	TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)						
			PROJECT 1	TESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS		
MECHANICAL COUPLERS	Compliance with DMS-4510	Tex-743-I	Sampled at jobsite; Tested by <mark>MTD</mark>	3 couplers per lot (500 couplers) for each type, model, bar size, and grade	Only materials from MTD approved sources listed on the Material Producer List for Mechanical Couplers will be allowed. <b>(C)</b>		
LATEX	Compliance with DMS-4640 for concrete chemical admixtures				Verify the Latex is listed on the Material Producer List for Chemical Admixtures.		
EPOXY	Compliance with DMS-6100, unless otherwise specified		Sampled at jobsite if not pre-approved by MTD.	1 per batch or shipment	Verify the source is listed on the Material Producer List for Epoxies and Adhesives. If not, sample and test before use in accordance with DMS-6100. Sample in accordance with Tex-734-I. <b>(C)</b>		
CONCRETE	Compressive Strength (A)	Tex-418-A	At point of concrete placement	4 cylinders for each 60 CY per class, per day (For bridge railing and traffic railing, testing may be reduced to 4 cylinders per 180 CY per class regardless of days)	Sampling must be in accordance with Tex-407-A. Making additional cylinders for 56 day testing should be considered when slow strength gain mixtures are being used, or when the approved mix design has a history of failing to meet design strength at 28 days. Test two cylinders at 7 days, and if the average value is below the design strength, as defined in Item 421, Table 8, test the remaining 2 cylinders at 28 days, or 56 days if additional cylinder were not made. If the average value of the 2 cylinders tested at 7 days meets the minimum design strength, listed in Item 421, Table 8, the remaining cylinders are not required to be tested. If the average value of the 7 and 28 day cylinders are below the design strengths, and 56 days.		
	Slump	Tex-415-A		1 test, per 4	Sample in accordance with Tex-407-A. Perform slump and temperature tests on the same load from which strength test specimens are made. Perform entrained air test only when entrained air concrete is specified on the plans.		
	Entrained Air (A)	Tex-416-A or Tex-414-A	4	strength specimens	Check temperature of every load for bridge slabs and mass concrete placements.		
	Temperature of Concrete (A)	Tex-422-A			with specification requirements for the appropriate specification Item #.		

TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)						
			PROJECT TESTS			
MATERIAL OR PRODUCT TEST FOR TEST NUMBER		TEST NUMBER	LOCATION OR TIME OF FREQUENCY OF SAMPLING (D) SAMPLING (E)		REMARKS	
CONCRETE (Continued)	Bridge Deck or Culvert Top Slab Thickness and Depth of Reinforcement	Tex-423-A, Part II	During dry run and during concrete placement (Bridge decks and direct traffic culverts)	1 per span	Min 6–Max 18 locations per span.	

	TABLE III – FOOTNOTES							
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.							
В	These Project Tests may be used for one or more projects being furnished concrete from the same plant during the same period.							
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.							
	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:							
D	<ul> <li>Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.</li> </ul>							
	• Concrete (structural): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled. Test often for slump, air, and temperature to ensure the consistent control of the concrete production.							
Е	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.							

TABLE IV – HYDRAULIC CEMENT CONCRETE – NON-STRUCTURAL CONCRETE (Classes: A, B, or E)							
	PROJECT TESTS						
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	R LOCATION OR TIME OF FREQUENCY OF SAMPLING (B) SAMPLING (C)		REMARKS		
CONCRETE	Compressive Strength (A)	Tex-418-A	At point of concrete placement	2 cylinders per 180 CY, per class	Sampling must be in accordance with Tex-407-A. Strength will be determined by 7-day specimens.		
MIX DESIGN	Compliance with the Standard Specification		At source if not approved	Min. 1 design per class, per source	Verify if cement, fly ash, slag cement, and chemical admixture sources are listed on the Material Producer Lists. If not, sample and submit to MTD for testing. Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT).		
SILICA FUME	Compliance with DMS-4630		Railroad car, truck, bags, or silos	1 test per project, per class (for each type and brand)	Sample in accordance with Tex-300-D. Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume.		
METAKAOLIN	Compliance with DMS-4635		Railroad car, truck, or silos	1 test per project, per class (for each type and brand)	Sample in accordance with Tex-300-D.		

	TABLE IV – FOOTNOTES							
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.							
в	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:							
	• Concrete (miscellaneous): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled.							
С	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.							

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)							
				PROJEC	CT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS	
		Decantation	Tex-406-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.	
		Sieve Analysis (A)	Tex-401-A		As necessary for control	Sample in accordance with Tex-400-A. Test combined aggregate when used.	
	COARSE AGGREGATE	Deleterious Materials	Tex-413-A	From stockpile at concrete plant	Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.	
		L.A. Abrasion (A)	Tex-410-A		One seek source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTP for testing before use in accordance	
		Magnesium Soundness <b>(A)</b>	Tex-411-A		one, each source	with Tex-499-A. Sample in accordance with Tex-400-A. <b>(C)</b>	
		Sand Equivalent	Tex-203-F		Each 3,000 CY of concrete (Each source or combination of sources)	Sample in accordance with Tex-400-A. Test combined aggregate when used. <mark>At least</mark> one per week's production.	
AGGREGATE	FINE AGGREGATE	Organic Impurities	Tex-408-A	From stockpile at concrete plant	1 per project, per source	Sample in accordance with Tex-400-A.	
		Sieve Analysis (A)	Tex-401-A		As necessary for control	Sample in accordance with Tex-400-A.	
		Fineness Modulus (B)	Tex-402-A			Test combined aggregate when used.	
		Deleterious Material <b>(B)</b>	Tex-413-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.	
		Acid Insoluble (A)	Tex-612-J		1 per project, per source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A.	
MIX DESIGN		Compliance with the Standard Specifications Item 421.4.A		At source, if not approved	Min. 1 design, per class, per source	Verify if cement, fly ash, ground granulated blast furnace slag, and admixture sources are listed on the Material Producer List. If not, sample and submit to MTD for testing. Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT).	
SILICA FUME		Compliance with DMS-4630		Railroad car, truck, bags, or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D. Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume.	

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)							
			PROJEC	CT TESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS		
METAKAOLIN	Compliance with DMS-4635		Railroad car, truck, or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D.		
JOINT MATERIAL	Compliance with DMS-6310		Sampled at jobsite if not sampled at source by MTD; tested by MTD. See remarks.	1 per batch or shipment	Sample in accordance with Tex-500-C. Sampling may be waived when the source is listed on the Material Producer List for Joint Sealers. (C)		
CURING COMPOUND	Compliance with DMS-4650		Sampled at jobsite; tested by <mark>MTD</mark> . See remarks.	When requested by <mark>MTD</mark>	Only products listed on the Material Producer List for Concrete Curing Compounds will be allowed. When sample is requested by MTD, sample in accordance with Tex-718- I. Ensure container has been agitated and mixed before sampling. (C)		
EVAPORATION RETARDANTS	Compliance with DMS-4650				Only products listed on the Material Producer List for Evaporation Retardants will be allowed. (C)		
REINFORCING STEEL	Compliance with the Std. Specifications & Spec. Provisions	As Specified			Only materials from MTD approved sources listed on the Material Producer List for Reinforcing Steel Mills and Seven Wire Steel Strand will be accepted. (C)		
MULTIPLE PIECE TIE BARS	Compliance with DMS-4515	Tex-712-I	Sampled at jobsite if not sampled at source by MTD; tested by MTD. See remarks.	Refer to Tex-711-I for sampling rates	Only materials from MTD approved sources listed on the Material Producer List for Multiple Piece Tie-bars for Concrete Pavements will be allowed. Sample in accordance with Tex-711-I.		
EPOXY	Compliance with DMS-6100		Sampled at jobsite if not pre-approved by MTD. See remarks.	1 batch per shipment	Verify the source is listed on the Material Producer List for Epoxies and Adhesives. If not, sample and test before use in accordance with DMS-6100. Sample in accordance with Tex-734-I. (C)		
CONCRETE	Strength (A) (B)	Tex-448-A or Tex-418-A	At point of concrete placement	2 cylinders for every 10 contractor job control tests	Sample in accordance with Tex-407-A. When the contract requires the project testing to be by the Engineer, the frequency and job control testing will be in accordance with the item of work. Split sample verification testing used when contractor performs job control testing. When job control testing by the contractor is waived by the plans, the frequency of sampling will be one test (2 specimens) for each 3,000 SY of concrete or fraction thereof or per day and split sample verification testing will be waived. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.		

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

	TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)						
			PROJEC	T TESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS		
	Slump	Tex-415-A			Sample in accordance with Tex-407-A. Slump is not required for slip-formed pavement.		
	Entrained Air <b>(A)</b>	Tex-416-A or Tex-414-A	At time and location strength specimens are made	1 test for every 10 contractor job control tests.	Perform slump and temperature tests on the same load from which the strength specimens are made. Perform entrained air test only when entrained air concrete is specified on the plans.		
CONCRETE	Temperature	Tex-422-A			specification requirements for the appropriate specification Item #.		
(Continued)	Pavement Texture	Tex-436-A	Final Riding Surface of travel lanes	1 per day, per driving lane	Perform when carpet drag is the only surface texture required on the plans.		
	Thickness	Tex-423-A, Part I	Center of paving machine	Every 500 feet	Methods other than Tex-423-A may be shown on the plans.		
	Ride Quality <b>(A)</b>	Tex-1001-S Surface Test, Type B	Final riding surface of travel lanes		Engineer may verify contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.		

	TABLE V – FOOTNOTES
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
В	When a project test does not meet the specified strength requirements and a reduced pay factor is assigned, document the analysis on the Letter of Certification of Materials Used.
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348) (All testing as noted in Table VI may be waived for exempt production as defined by specification.)					
			PROJEC	CT TESTS	
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS
	L. A. Abrasion (A)	Tex-410-A		1 per project, per	Verify the published value of the source, as listed on the
	Magnesium Soundness <b>(A)</b>	Tex-411-A		source	current Material Producer list for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in
COARSE AGGREGATE	Surface Aggregate Classification (A)	Tex-499-A	9-A (B)	1 per project, per source	accordance with Tex-499-A. (C)
	Micro Deval	Tex-461-A		1 per project, per aggregate source	Not required when the Rated Source Soundness Magnesium loss is 15 or less as listed on the current published BRSQC. If testing is required, sample in accordance with Tex-221-F.
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per source, per design	Does not apply to Item 342. Sample in accordance with Tex-221-F. The timing of when the test is performed is at the discretion of the Engineer.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample binder at hot- mix plant in accordance with Tex- 500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A)		Distributor	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.

TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348) (All testing as noted in Table VI may be waived for exempt production as defined by specification.)						
			PROJEC	CT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS	
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min 1 design, per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted on individual materials, as necessary, for control.	
					Sample in accordance with Tex-222-F.	
	Asphalt Content		Engineer Truck Sample		236-F at a minimum of one per project.	
	(A)	Tex-236-F	(D)	Minimum 1 per Lot	When Tex-236-F does not yield reliable results, use alternative methods for determining asphalt content, such as, Tex-210-F (ASTM D2172/AASHTO T164) and Tex-228- F (ASTM D4125/AASHTO T287).	
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced ( <b>D</b> )	1 per Sublot	Sample in accordance with Tex-222-F.	
					Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #. Does not apply to Items 342 and 348.	
	Gradation <b>(A)</b>	Tex-200-F	Engineer Truck Sample <b>(D)</b>	Minimum 1, per 12 Sublots <b>(E</b> )	Sample in accordance with Tex-222-F. Determine correction factors for ignition oven using Tex- 236-F at a minimum of one per project.	
COMPLETE MIXTURE	Moisture Susceptibility	Tex-530-C	Truck Sample		Sample in accordance with Tex-222-F, unless waived by the Engineer.	
	Indirect Tensile Strength – Dry	Tex-226-F		1 per project	Sample in accordance with Tex-222-F, unless waived by the Engineer. Does not apply to Items 342, 346, 347, and 348.	
	Moisture Content	Tex-212-F, Part II	Engineer Truck Sample		Sample in accordance with Tex-222-F.	
	Lab Molded				Sample in accordance with Tex-222-F.	
	Density (A)	Tex-207-F, Part I, VI, VIII	k-207-F, Part I, Truck Sample VI, VIII (D)	1 per Sublot 1 per Lot for Item 347	Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.	
	Drain Down Test (A)	Tex-235-F	Engineer Truck Sample	1 per 12 Sublots	Sample in accordance with Tex-222-F. Not required for Items 341, 344, and 347.	
	Hamburg Wheel Test <b>(A)</b>	Tex-242-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Sample during production. Does not apply to Item 348 PFC-C, PFCR-C, and Thin Bonded Wearing Course –All Types.	

TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348)         (All testing as noted in Table VI may be waived for exempt production as defined by specification.)					
			PROJEC	T TESTS	
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS
	Cantabro Loss (A)	Tex-245-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Sample during production.
COMPLETE MIXTURE (Continued)	Overlay Test (A)	Tex-248-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Does not apply to Items 341, 344, and 348 PFC-C, PFCR-C, and Thin Bonded Wearing Course –All Types.
	In-Place Air Voids <b>(A)</b>	Tex-207-F, Part I, VI, VIII	Roadway <b>(D)</b>	2 cores per Sublot	Two cores taken per Sublot and averaged. Sample in accordance with Tex-222-F. Does not apply to Items 342, 347, and 348.
	Segregation Profile (A)	Tex-207-F, Part V	Roadway	1 per project	Not required when Contractor uses thermal imaging system. Does not apply to Items 342, 347, and 348.
ROADWAY	Joint Density ( <b>A</b> )	Tex-207-F, Part VII	Roadway	1 per project	
	Thermal Profile	Tex-244-F	Immediately behind paver	1 per project	Not required when Contractor uses thermal imaging system.
	Ride Quality Test Type B <b>(A)</b>	Tex-1001-S	Final riding surface of travel lanes	1 per project	Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results for surface test Type A are not required to be reported.
	Permeability	Tex-246-F	Roadway	1 per project	Permeability is encouraged to use with items 342 and 348. Only applies to Item 347.
FABRIC UNDERSEAL	Compliance with DMS-6220		Sampled, tested, and approved by MTD		Sampling must be in accordance with Tex-735-I. Verify the source is listed on the current Material Producer List for Silt Fence, Filter Fabric, and Fabric Underseals. If not, sample and test before use in accordance with DMS- 6220.

	TABLE VI – FOOTNOTES						
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.						
В	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.						
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.						
D	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."						
Е	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.						
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TABLE VII – HOT-MIX ASPHALT PAVEMENT (Items 334) (Refer to DMS-9210, "Limestone Rock Asphalt (LRA)," for testing requirements for Item 330.)						
			PROJEC	CT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY (Per Design) (F)	REMARKS	
	L. A. Abrasion (A)	Tex-410-A	-		Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the	
	Magnesium Soundness (A)	Tex-411-A	Stockpile <b>(B)</b>	1 per project, per source	project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (D)	
COARSE AGGREGATE	Micro Deval	Tex-461-A			Sample in accordance with Tex-221-F. Testing frequency may be reduced or eliminated based on a satisfactory test history.	
	Surface Aggregate Classification (A)	Tex-499-A	Stockpile <b>(B)</b>	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. SiteManager Quality Monitoring test documentation is accomplished by attaching an approved mix design.	
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per source	Sample in accordance with Tex-221-F. The timing of when the test is performed is at the discretion of the Engineer.	
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.	
TACK COAT	Compliance with Item 300 (A) (C)		Distributor	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.	

TABLE VII – HOT-MIX ASPHALT PAVEMENT (Items 334) (Refer to DMS-9210, "Limestone Rock Asphalt (LRA)," for testing requirements for Item 330.)						
			PROJEC	T TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY (Per Design) (F)	REMARKS	
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min 1 design per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted in individual materials as necessary for control.	
	Asphalt Content (A)	Tex-236-F	Engineer Truck Sample <b>(E)</b>	Minimum of 1 per 5,000 tons	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.	
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced <b>(E)</b>	1 per 5,000 tons	Sample in accordance with Tex-222-F.	
	Gradation (A)	Tex-236-F	Truck Sample	Minimum 1 per 5,000 tons	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.	
COMPLETE MIXTURE	Boil Test	Tex-530-C		1 per project	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.	
	Moisture Content	Tex-212-F, Part II		1 per 5,000 tons	Sample in accordance with Tex-222-F. Performed by MTD at the point of production for payment calculations.	
	Hydrocarbon- Volatile Content	Tex-213-F		1 per 5,000 tons	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.	
	Lab Molded Density ( <b>A</b> )	Tex-207-F	Truck Sample	1 per 5,000 tons	Sample in accordance with Tex-222-F.	
	Hveem Stability <b>(A)</b>	Tex-208-F		1 per 5,000 tons	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.	
ROADWAY	Ride Quality Test Type B <b>(A)</b>	Tex-1001-S	Final riding surface of travel lanes		Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.	

	TABLE VII – FOOTNOTES
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
В	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project.
С	Or as called for in the Specifications.
D	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
Е	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."
F	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

		TABLE VIII -	HOT-MIX ASPHALT F	AVEMENT (Item 340	))
			PROJEC	T TESTS	
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY	REMARKS
	L. A. Abrasion (A)	Tex-410-A	Stockpile	1 per project,	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not sample in accordance with
	Magnesium Soundness (A)	Tex-411-A	(B)	per source	Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
COARSE AGGREGATE	Micro Deval	Tex-461-A	Stockpile <b>(B)</b>	1 per project, per source	Sample in accordance with Tex-221-F. Testing frequency may be reduced or eliminated based on a satisfactory test history.
	Surface Aggregate Classification (A)	Tex-499-A	Stockpile <b>(B)</b>	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per design	Sample in accordance with Tex-221-F.
					Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	<mark>1 per project, per grade,</mark> per source	Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant.
					The Engineer must associate one QM sample, per project in SM.
					Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III.
TACK COAT	Compliance with Item 300 (A)		Distributor	<mark>1 per project, per grade,</mark> per source	Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant.
					The Engineer must associate one QM sample, per project in SM.
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min. 1 design per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted in individual materials as necessary for control.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

	TABLE VIII – HOT-MIX ASPHALT PAVEMENT (Item 340)						
			PROJEC	CT TESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY	REMARKS		
	Asphalt Content	Tex-236-F	Truck Sample ( <b>D</b> )	Minimum of 1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.		
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced <b>(D)</b>	1 per day	Sample in accordance with Tex-222-F.		
	Gradation <b>(A)</b>	Tex-236-F	Truck Sample	Minimum 1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.		
COMPLETE MIXTURE	Boil Test	Tex-530-C		1 per project	Sample in accordance with Tex-222-F, unless waived by the Engineer.		
	Indirect Tensile Strength – Dry	Tex-226-F		1 per project, per design	Sample in accordance with Tex-222-F, unless waived by the Engineer.		
	Lab Molded Density <b>(A)</b>	Tex-207-F	Truck Sample	1 per day	Sample in accordance with Tex-222-F.		
	Hamburg Wheel Tracker <b>(A)</b>	Tex-242-F		1 per project	Sample in accordance with Tex-222-F. Sample during production.		
	Air Voids ( <b>A</b> )	Tex-207-F	Selected by the Engineer (D)	1 per day (2 Cores)	Sample in accordance with Tex-222-F.		
ROADWAY	Ride Quality Test Type B <b>(A)</b>	Tex-1001-S	Final riding surface of travel lanes		Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.		
FABRIC UNDERSEAL	Compliance with DMS-6220		Sampled, tested, and approved by <mark>MTD</mark>		Sample in accordance with Tex-735-I. Verify the source is listed on the current Material Producer List for Silt Fence, Filter Fabric, and Fabric Underseals. If not, sample and submit to MTD for testing before use in accordance with DMS-6220.		

	TABLE VIII – FOOTNOTES
Α	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
В	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IX – MICROSURFACING (Item 350)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OF SAMPLING	FREQUENCY (Per Design)	REMARKS
AGGREGATE	Magnesium Soundness (A)	Tex-411-A	Stockpile ( <b>B</b> )	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing at 1 per project, per source. (C)
	Gradation	Tex-200-F, Part II		1 per project, per source	Sample in accordance with Tex-221-F.
	Crushed Face Count	Tex-460-A		1 per project, per source	Sample in accordance with Tex-221-F.
	Acid Insoluble (A)	Tex-612-J		1 per project, per source	Verify the value of the source, as listed on the current BRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-221-F. (C)
	Surface Aggregate Classification	Tex-499-A	Stockpile, or BRSQC <b>(B)</b>	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing at 1 per project, per source. (C)
COMBINED BLEND	Sand Equivalent	Tex-203-F	Stockpile <b>(B)</b>	1 per project, per source	Sample in accordance with Tex-221-F.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A)		Distributor	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IX – MICROSURFACING (Item 350)						
			PROJEC	CT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OF SAMPLING	FREQUENCY (Per Design)	REMARKS	
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min. 1 design per project	Submit to <mark>MTD</mark> for approval.	
CEMENT	Compliance with DMS-4600				Verify the source is listed on the current Material Producer List for Cement. If not, sample and submit to MTD for testing before use in accordance with DMS-4600.	
	Asphalt Content	Tex-236-F		1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.	
	Gradation	Tex-200-F, Part II Tex-236-F		T hei gaà	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven use at a minimum of one per project.	

	TABLE IX – FOOTNOTES						
Α	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.						
в	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.						
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.						
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.						

APPENDIX C AASHTO ACCREDITED LABORATORIES

# **AASHTO Accredited CMT Laboratories in Texas**

* Directory of accredited laboratories and scope of testing is maintained on the AASHTO Materials Reference Laboratory website at: <u>http://www.amrl.net</u>. Laboratory must be accredited for each specific test performed.



#### Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

Jerry Borcherding Commissioner Smith

#### Agenda Item

Approve specifications for IFB 2023-B11 Darden Hill @ Sawyer Ranch Roundabout and authorize Purchasing to solicit for bids and advertise. SMITH/BORCHERDING

#### Summary

Hays County issues this Invitation for Bid (IFB) to solicit bids to secure a contractor to perform all work laid out in the technical specification of IFB 2023-B11 project manual and supporting documentation for Darden Hill at Sawyer Ranch Roundabout.

Attachments IFB 2023-B11 Darden Hill @ Sawyer Ranch Roundabout Project Manual



# HAYS COUNTY PROJECT CONSTRUCTION MANUAL

# FOR DARDEN HILL AT SAWYER RANCH ROUNDABOUT

Bid No. IFB 2023-B11

Bid Date: JANUARY 26, 2023 Bid Time: 1:00 PM (CST)

Hays County, Texas Purchasing Department 712 South Stagecoach Trail, Suite 1071 San Marcos, TX 78666



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# Appendices

Appendix A – Quality Assurance Program for Construction Projects

Appendix B – Guide Schedule of Sampling and Testing

Appendix C – AASHTO Accredited Laboratories

### SECTION 1 IFB SUBMITTAL CHECKLIST

### **IFB Submittal Checklist**

This checklist is provided for convenience and identifies documents that must be submitted with the bid/proposal in order to be considered responsive. Any bids/proposals received without these requisite documents may be deemed nonresponsive and may not be considered for contract award.

### The following forms MUST be returned for the bid/proposal to be considered responsive:

- _____1. Completed Bid Form
- _____2. Completed Schedule of Rates and Prices
- _____ 3. Vendor References Completed
- _____4. Bid Bond for 5% of total bid amount

### **Required Forms by Hays County:**

- 1. Conflict of Interest Questionnaire Completed and Signed
- _____2. Certificate of Interested Parties Form 1295 filed online with the Texas Ethics Commission and Signed
- _____ 3. Code of Ethics for Hays County Signed
- _____4. Hays County Practices Related to Historically Underutilized Businesses Signed
- _____ 5. Hays County House Bill 89 Verification Signed and Notarized
- _____6. Hays County Purchasing Department Senate Bill 252 Certification Signed
- _____7. Vendor/Bidder's Affirmation Completed and Signed
- 8. Related Party Disclosure Form Completed and Signed
- 9. Debarment & Licensing Certification Signed and Notarized
- _____ 10. System for Award Management (<u>www.SAM.gov</u>) Entity Registration Page
- _____11. Any addenda applicable to this solicitation

### Hays County will accept bids, by the stated due date by one of the following methods:

- 1. Electronic Submission of Bid Packet through BidNet Direct, as well as, one (1) hard copy delivered to the Hays County Purchasing Office, OR
- 2. One (1) original proposal and one (1) digital copy on a thumb drive are in a sealed envelope with the Solicitation Number and Respondent's Name on the outermost envelope, addressed to:

Hays County Purchasing, 712 S Stagecoach Trail, Suite 1071, San Marcos, TX 78666

### SECTION 2 INVITATION FOR BIDS

# PUBLIC NOTICE HAYS COUNTY INVITATION FOR BIDS

Hays County will be accepting sealed Bids for:

#### DARDEN HILL AT SAWYER RANCH ROUNDABOUT, Bid No IFB 2023-B11.

Sealed Bids will be received by Hays County, through either hardcopy at the Purchasing Office, Hays County Government Center, 712 South Stagecoach Trail, Suite 1071, San Marcos, TX 78666 or electronically through www.bidnetdirect.com/hayscounty (the BidNet Direct website) until 1:00 PM local time on THURSDAY, JANUARY 26, 2023, at which time and place the bids will be publicly opened and read. Bids received after the time and date set for submission will be returned unopened.

Issuing Office:	Hays County Auditor
	Purchasing Office
	712 S. Stagecoach Trial, Suite 1071
	San Marcos, TX 78666
	Plans, Specifications, and Bidding documents for pre-qualified
	bidders and interested non-bidders may be secured from the
	websites:
	www.bidnetdirect.com/hayscounty,
	http://www.txsmartbuy.com/sp,
	https://www.sanmarcostx.gov/Bids.aspx
Responses to Solicitation:	Sealed bids marked with Solicitation Number and Respondent Name
	on the outermost envelope: One (1) original and one (1) digital copy on a thumb drive
	OR
	Electronic bid packets can be submitted through BidNet Direct and one (1) hard copy is required to be received
	one (1) hard copy is required to be received.
Deadline for Responses:	In issuing office or submitted to BidNet Direct no later than: THURSDAY, JANUARY 26, 2023; 1:00 PM, Central Time (CT)
	Any bid may be withdrawn prior to the above scheduled time for the
	opening of the bids or authorized postponement thereof. Any bid
	received after the time and date specified shall not be accepted.
Pre-Bid Meeting:	A non-mandatory Virtual Pre-Bid Conference will be held on WEDNESDAY, JANUARY 11, 2023 at 1:00 PM through Microsoft Teams. See link: Join Microsoft Teams Meeting or contact purchasing@co.hays.tx.us for a calendar appointment.
Bonding Requirements:	Bid Bond in the amount not less than five percent (5%) of the total amount of the bid, issued by an acceptable surety company, must accompany each bid as a guarantee that the successful bidder will enter into a proper contract and execute bonds and guaranties within ten (10) days after the date contract documents are received by the awarded contractor. Performance and Payment Bonds (100% of Contract Price) will be required as stated in the bidding documents.

#### **DETAIL SUMMARY**

Other Requirements:	To submit Proposals for this Contract, prospective bidder shall, on THURSDAY, JANUARY 26, 2023, meet the following requirements:						
	(1) provide suitable evidence of prior experience for similar work and be able to provide written documentation of successfully completed similar contracts.						
	(2) SYSTEM FOR AWARD MANAGEMENT (SAM): Respondent and its Principals may not be debarred or suspended nor otherwise on the Excluded Parties List System (EPLS) in SAM. Include verification that the company as well as the company's principals are not listed (are not debarred) through the System for Award Management ( <u>www.SAM.gov</u> ). Enclose a printout of the Entity Registration page that shows your company is in active status and is not expired.						
	(3) Attachment D: DBE Commitment Agreement Form must be filled out and submitted with bid.						
	<ul> <li>(4) Bidders on this project must be prequalified though TxDOT.</li> <li>Refer to TxDOT's web site for prequalification requirements.</li> <li>Assure prequalification documents are submitted to TxDOT at least 14 days before bid opening. Comply with all technical prequalification requirements in the bid documents.</li> </ul>						
Initial Contract Term:	182 calendar days						
<b>Optional Contract Terms:</b>	None.						
Designated Contact:	Hays County Purchasing Department Email: <u>purchasing@co.hays.tx.us</u>						
Questions & Answers:	Questions regarding this solicitation must be made in writing and submitted to the designated contact above no later than <b>WEDNESDAY, JANUARY 18, 2023, at 5:00 PM</b> , CT.						
	Telephone inquiries will not be accepted. Questions will be accepted in writing to <u>purchasing@co.hays.tx.us</u> .						
	Answers to questions will be provided in the form of an addendum after the question deadline has passed. All addenda will be posted on the BidNet Direct, Civic Plus and ESBD websites.						
Addenda	Any interpretations, corrections or changes to this IFB and specifications will be made by addenda. Sole issuing authority of addenda shall be vested in the Hays County Purchasing Office. It is the Respondent's responsibility to acknowledge receipt of all addenda with bid submission.						
Contact with County Staff:	Upon issuance of this solicitation, employees and representatives of Hays County, other than the Purchasing Office staff identified as the Designated Contact above, will not discuss the contents of this solicitation with any Respondent or its representatives. Failure of a Respondent or any of its representatives to observe this restriction may result in disqualification of any related offer. This restriction does not preclude discussions between affected parties for the purpose of conducting business unrelated to this procurement.						

# **Anticipated Schedule of Events**

January 05, 2022	Issuance of IFB
January 11, 2023	Pre-Bid Meeting Online (1:00 PM, CT)
January 18, 2023	Deadline for Submission of Questions (5:00 PM, CT)
January 26, 2023	Deadline for Submission of Bids (1:00 PM, CT)
	Late bids will not be accepted
February, 2023	Anticipated Contract Award Date

# SECTION 3 BID INSTRUCTIONS / REQUIREMENTS

# **BID INSTRUCTIONS / REQUIREMENTS**

THE CONTRACT BID INSTRUCTION SHALL BE AS SET FORTH IN SECTION 13 TECHNICAL SPECIFICATIONS.

SECTION 4 BID FORM / SCHEDULE OF RATES AND PRICES / CONFLICT OF INTEREST QUESTIONNAIRE / CERTIFICATE OF INTEREST PARTIES / CODE OF ETHICS FOR HAYS COUNTY / HAYS COUNTY PRACTICES RELATED TO HISTORICALLY UNDERUTILIZED BUSINESSES / HAYS COUNTY HOUSE BILL 89 VERIFICATION / HAYS COUNTY PURCHASING DEPARTMENT SENATE BILL 252 CERTIFICATION / VENDOR REFERENCES / VENDOR/BIDDER'S AFFIRMATION / RELATED PARTY DISCLOSURE FORM / DEBARMENT AND LICENSING CERTIFICATION

### **BID FORM**

#### **PROJECT IDENTIFICATION**

Project No. IFB 2023-B11 Darden Hill at Sawyer Ranch Roundabout

#### THIS BID IS SUBMITTED TO:

Electronically: Bid Packets can be submitted through BidNet Direct: www.bidnetdirect.com/hayscounty,

#### Manually:

Hays County Purchasing Department Attn: Stephanie Hunt 712 South Stagecoach Trail, Suite 1071 San Marcos, Texas 78666

The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with COUNTY in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

BIDDER accepts all of the terms and conditions of the Invitation for Bids and Bid Instructions/Requirements, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the day of Bid opening. BIDDER will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within 10 working days after the date of COUNTY's Notice of Award.

This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm, or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over COUNTY.

BIDDER will complete the work in accordance with the Contract Documents and the accompanying Schedule of Rates and Prices and will pay not less than the Prevailing Wage Rates for Hays County, Texas. The work will be completed within 182 calendar days from the date for commencing work as set forth in the "Notice to Proceed" to be issued by the COUNTY.

Bid Form Communications concerning this Bid shall be addressed to the address of BIDDER indicated below:

SUBMITTED ON		, 20	
State Contractor Licens	e Number		
IF BIDDER is:			
<u>An Individual</u>			
Ву	(Individual's Name)		(SEAL)
	(Signature)		
doing business as Business address:			
Phone Number: Email:	Fa	x Number:	
A Partnership			
Зу	(Firm Name)		(SEAL)
	(General Partner)		
	(Signature)		
Business address:			
Phone Number:	Fa	x Number:	

# A Corporation

By		(SEAL)
5	(Corporate Name)	
	(State of Incorporation)	
Ву	(Name of Person Authorized to Sign)	(SEAL)
	(Signature)	
(Corporate Seal)		
<b>A</b>		
Attest:	(Secretary)	
Business Address		
Phone Number:	Fax Number:	
Email:		
Date of Qualification to	Do Business is	

### A Joint Venture

By		(SEAL)	
J	(Name)	、 , ,	
	(Address)		
	(Signature)		
Bv			
	(Name)		
	(Address)		
	(Signature)		

Phone & Fax Numbers, Email & mailing addresses for receipt of official communications:

(Each joint venturer must sign. The manner for signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner above.)

#### PROJECT:

#### IFB 2023-B11 DARDEN HILL AT SAWYER RANCH CONTRACTOR:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUN	IT BID
1	100 6002	PREPARING ROW	23	STA		\$	-
2	105 6028	REMOVE STAB BASE & ASPH PAV (27")	14398	SY		\$	-
3	105 6077	REMOVING STAB BASE & ASPH PAV (8")	2545	SY		\$	-
4	110 6001	EXCAVATION (ROADWAY)	9873	CY		\$	_
5	132 6003	EMBANKMENT (FINAL)(ORD COMP)(TY B)	2595	CY		\$	_
6	152 6001	ROAD GRADER WORK (ORD COMP)	23	STA		\$	-
7	160 6003	FURNISHING AND PLACING TOPSOIL (4")	17182	SY		\$	_
8	162 6002	BLOCK SODDING	3703	SY		\$	_
9	164 6027	CELL FBR MLCH SEED(PERM)(URBAN)(CLAY)	17182	SY		\$	-
10	164 6055	BONDED FBR MTRX SEED (TEMP)(WARM)	17182	SY		\$	_
11	164 6056	BONDED FBR MTRX SEED (TEMP)(COOL)	17182	SY		\$	-
12	169 6001	SOIL RETENTION BLANKETS (CL 1) (TY A)	17182	SY		\$	-

#### PROJECT:

#### IFB 2023-B11 DARDEN HILL AT SAWYER RANCH CONTRACTOR:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUNT	BID
13	216 6001	PROOF ROLLING	6	HR		\$	-
14	260 6002	LIME (HYDRATED LIME (SLURRY))	116	TON		\$	-
15	260 6073	LIME TRT (SUBGRADE)(8")	14398	SY		\$	-
16	292 6002	ASPHALT STAB BASE (GR 2)(PG 64)	2733	TON		\$	-
17	310 6027	PRIME COAT(MC-30 OR AE-P)	2468	GAL		\$	-
18	340 6106	D-GR HMA(SQ) TY-D PG64-22	4680	TON		\$	-
19	462 6003	CONC BOX CULV (4 FT X 2 FT)	121	LF		\$	-
20	464 6005	RC PIPE (CL III)(24 IN)	64	LF		\$	-
21	467 6132	SET (TY I)(S= 4 FT)(HW= 2 FT)(4:1) (C)	2	EA		\$	-
22	467 6395	SET (TY II) (24 IN) (RCP) (6: 1) (P)	4	EA		\$	-
23	496 6004	REMOV STR (SET)	4	EA		\$	-
24	496 6006	REMOV STR (HEADWALL)	2	EA		\$	_

#### PROJECT:

#### IFB 2023-B11 DARDEN HILL AT SAWYER RANCH CONTRACTOR:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUNT	BID
25	496 6007	REMOV STR (PIPE)	267	LF		\$	Ι
26	500 6001	MOBILIZATION	1	LS		\$	-
27	502 6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	6	МО		\$	-
28	506 6003	ROCK FILTER DAMS (INSTALL) (TY 3)	150	LF		\$	-
29	506 6011	ROCK FILTER DAMS (REMOVE)	150	LF		\$	-
30	506 6038	TEMP SEDMT CONT FENCE (INSTALL)	3611	LF		\$	-
31	506 6039	TEMP SEDMT CONT FENCE (REMOVE)	3611	LF		\$	-
32	506 6040	BIODEG EROSN CONT LOGS (INSTL) (8")	86	LF		\$	-
33	506 6043	BIODEG EROSN CONT LOGS (REMOVE)	86	LF		\$	-
34	508 6001	CONSTRUCTING DETOURS	2545	SY		\$	-
35	528 6002	COLORED TEXTURED CONC (6")	584	SY		\$	-
36	529 6008	CONC CURB & GUTTER (TY II)	2215	LF		\$	_

#### PROJECT:

#### IFB 2023–B11 DARDEN HILL AT SAWYER RANCH CONTRACTOR:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUNT	BID
37	530 6005	DRIVEWAYS (ACP)	229	SY		\$	-
38	530 6008	TURNOUTS (ACP)	68	SY		\$	_
39	531 6016	CURB RAMPS (TY 21)	8	EA		\$	-
40	552-6001	WIRE FENCE (TY A)	470	LF		\$	-
41	644 6001	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	29	EA		\$	-
42	644 6004	IN SM RD SN SUP&AM TY10BWG(1)SA(T)	4	EA		\$	-
43	644 6068	RELOCATE SM RD SN SUP&AM TY 10BWG	2	EA		\$	-
44	644 6076	REMOVE SM RD SN SUP&AM	6	EA		\$	-
45	644 6078	REMOVE SM RD SN SUP&AM (SIGN ONLY)	1	EA		\$	Ι
46	662 6063	WK ZN PAV MRK REMOV (W)4"(SLD)	1169	LF		\$	-
47	662 6075	WK ZN PAV MRK REMOV (W)24"(SLD)	46	LF		\$	Ι
48	662 6095	WK ZN PAV MRK REMOV (Y)4"(SLD)	7226	LF		\$	_

#### PROJECT:

#### IFB 2023–B11 DARDEN HILL AT SAWYER RANCH CONTRACTOR:

BID ITEM	TECH SPEC	DESCRIPTION	BID QUANTITY	UNIT MEASURE	UNIT COST	AMOUN	t bid
49	666 6002	REFL PAV MRK TY I (W)4"(BRK)(090MIL)	67	LF		\$	-
50	666 6005	REFL PAV MRK TY I (W)4"(DOT)(090MIL)	50	LF		\$	-
51	666 6011	REFL PAV MRK TY I (W)4"(SLD)(090MIL)	3300	LF		\$	_
52	666 6029	REFL PAV MRK TY I (W)8"(DOT)(090MIL)	42	LF		\$	-
53	666 6035	REFL PAV MRK TY I (W)8"(SLD)(090MIL)	833	LF		\$	_
54	666 6047	REFL PAV MRK TY I (W)24"(SLD)(090MIL)	342	LF		\$	-
55	666 6053	REFL PAV MRK TY I (W)(ARROW)(090MIL)	14	EA		\$	-
56	666 6077	REFL PAV MRK TY I (W)(WORD)(090MIL)	7	EA		\$	-
57	666 6098	REF PAV MRK TY I(W)18"(YLD TRI)(090MIL)	55	EA		\$	-
58	666 6125	REFL PAV MRK TY I (Y)4"(SLD)(090MIL)	3794	LF		\$	_
59	677 6001	ELIM EXT PAV MRK & MRKS (4")	1079	LF		\$	-
60	1004 6001	TREE PROTECTION	1	EA		\$	_

#### PROJECT:

#### IFB 2023–B11 DARDEN HILL AT SAWYER RANCH CONTRACTOR:

BID	TECH	DESCRIPTION	BID	UNIT	UNIT COST	AMOUNT BI	D
ITEM	SPEC		QUANTITY	MEASURE			
61	509S-1	TRENCH EXCAVATION SAFETY PROTECTIVE SYSTEMS (ALL DEPTHS)	1584	LF		\$	-
62	10-AW 16" D	PIPE, 16" DIA. DUCTILE IRON (ALL DEPTHS), INCLUDING EXCAVATION AND BACKFILL	642	LF		\$	-
63	510-AW 8" Dia	PIPE, 8" DIA. DUCTILE IRON (ALL DEPTHS), INCLUDING EXCAVATION AND BACKFILL	942	LF		\$	_
64	510-KW	16" CUT-IN TEE	1	EA		\$	_
65	510-KW	6" CUT-IN TEE	3	EA		\$	_
66	511S-A	GATE, DUCTILE IRON, 16" DIAMETER	5	EA		\$	_
67	511S-A	GATE, DUCTILE IRON, 8" DIAMETER	6	EA		\$	_
68	511S-A	GATE, DUCTILE IRON, 6" DIAMETER	6	EA		\$	_
69	511S-B	FIRE HYDRANTS (SEE STANDARD NO. 5115–17)	1	EA		\$	_
70	511S-F	6" & 2" PRV & VAULT ASSEMBLY	1	EA		\$	_

#### **PROJECT:** IFB 2023–B11 DARDEN HILL AT SAWYER RANCH **CONTRACTOR**:

Full compensation for compliance with each and every provision of the Request for Bids, the Bid, the Specifications, and the Contract will be considered as included in the unit prices for the work set forth below, and no separate payment will be made for compliance with each and every provision of the Request for Bids, the Bid, the Specifications, and the Contract, unless separate payment is expressly provided for therein.

BID	TECH	DESCRIPTION	BID	UNIT		
ITEM	SPEC		QUANTITY	MEASURE	UNIT COST	
71	604S-E	NATIVE SEEDING FOR EROSION CONTROL, BROADCAST SEEDING	4730	SY		\$ –
72	642S	SILT FENCE FOR EROSION CONTROL	335	LF		\$ -

TOTAL AMOUNT OF BID

Dollars and Cents	\$ –
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#### NOTE: THE COURT MAY EITHER REJECT ALL BIDS OR AWARD A CONTRACT TO THE LOWEST AND/OR BEST BID.

Acknowledgment of Addenda

Addendum No. 1: Addendum No. 2: Addendum No. 3: Addendum No. 4:

CONFLICT OF INTEREST QUESTIONNAIRE For vendor doing business with local governmental entity	FORM CIQ
This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.	OFFICE USE ONLY
This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).	Date Received
By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. <i>See</i> Section 176.006(a-1), Local Government Code.	
A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.	
1 Name of vendor who has a business relationship with local governmental entity.	
<ul> <li>Check this box if you are filing an update to a previously filed questionnaire. (The law recompleted questionnaire with the appropriate filing authority not later than the 7th busines you became aware that the originally filed questionnaire was incomplete or inaccurate.)</li> </ul>	equires that you file an updated as day after the date on which
Name of local government officer about whom the information is being disclosed.	
Name of Officer	
<ul> <li>Describe each employment or other business relationship with the local government officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with Complete subparts A and B for each employment or business relationship described. Attact CIQ as necessary.</li> <li>A. Is the local government officer or a family member of the officer receiving or I other than investment income, from the vendor?</li> <li>Yes</li> <li>No</li> <li>B. Is the vendor receiving or likely to receive taxable income, other than investment</li> </ul>	t income, from or at the direction
of the local government officer or a family member of the officer AND the taxable local governmental entity?	income is not received from the
5 Describe each employment or business relationship that the vendor named in Section 1 m other business entity with respect to which the local government officer serves as an o ownership interest of one percent or more.	naintains with a corporation or officer or director, or holds an
6 Check this box if the vendor has given the local government officer or a family member as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.0	of the officer one or more gifts 003(a-1).
Signature of vendor doing business with the governmental entity	Date

# CONFLICT OF INTEREST QUESTIONNAIRE For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/ Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

#### Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

#### Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

### **Certificate of Interested Parties**

In 2015, the Texas Legislature adopted <u>House Bill 1295</u>, which added 2252.908 to the Texas Government Code and applies to all contracts entered into on or after January 1, 2016. Section 2252.908 (b)(1)(2) applies only to a contract of a governmental entity or state agency that requires an action or vote by the governing body of the entity or agency before the contract may be signed or that has a value of at least \$1 million. In addition, pursuant to Section 2252.908 (d), a governmental entity or state agency may not enter into a contract described by Subsection (b) with a business entity unless the business entity, in accordance with this section and rules adopted under this section, submits a disclosure of interested parties to the governmental entity or state agency.

With regard to Hays County purchases, a vendor that is awarded a contract or purchase approved by Hays County Commissioner's Court is required to electronically complete a Form 1295 through the Texas Ethics Commission website

(https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm) and submit a signed and notarized copy of the form to the County. A contract, including County issued purchase order (if applicable), will not be enforceable or legally binding until the County receives and acknowledges receipt of the properly completed Form 1295 from the awarded vendor.

CERTIFICATE OF INTE	RESTED PARTIES		I	FORM 1295
Complete Nos. 1 - 4 and 6 if the Complete Nos. 1, 2, 3, 5, and 6	ere are interested parties. if there are no interested parties.		OFFIC	CE USE ONLY
Name of business entity filing form, entity's place of business.		File		
2 Name of governmental entity or stat which the form is being filed.	e agency that is a party to the contract	t for	×+	
3 Provide the identification number us and provide a description of the serv	sed by the governmental entity or state vices, goods, or other property to be pr	e agency to tr rovided upd	ack of ider the contr	ntify the contract, act.
4 Name of Interested Party	City, State, Country (place of business)		of Interest	(check applicable)
	, O'			
	and.			
	Nn			
	Å.			
	2			
Check only if there is the linteres	ted Party.			
6 UNSWORN DECLARATION My name is	, and my da	te of birth is		
My address (street) L declare under penalty of perjury that the for	egoing is true and correct.	,(state	, ) (zip cod	, e) (country)
Executed in County,	State of , on the day	y of(mon	, 20 th) (y	 year)
	Signature of authorize	ed agent of con (Declarant)	tracting busi	ness entity
ADI	DADDITIONAL PAGES AS NEC	ESSARY		

Γ

# CODE OF ETHICS FOR HAYS COUNTY

Public employment is a public trust. It is the policy of Hays County to promote and balance the objective of protecting government integrity and the objective of facilitating the recruitment and retention of personnel needed by Hays County. Such a policy implemented by prescribing essential standards of ethical conduct without creating unnecessary obstacles to entering public services.

Public servants must discharge their duties impartially so as to assure fair competitive access to governmental procurement by responsible contractors. Moreover, they should conduct themselves in such a manner as to foster public confidence in the integrity of the Hays County procurement organization.

To achieve the purpose of this article, it is essential that those doing business with Hays County also observe the ethical standards prescribed here.

It shall be a breach of ethics to attempt to influence any public employee, elected official or department head to breach the standards of ethical conduct set forth in this code.

It shall be a breach of ethics for any employee of Hays County or a vendor doing business with the county to participate directly or indirectly in a procurement when the employee or vendor knows that:

The employee or any member of the employee's immediate family, or household has a substantial financial interest pertaining to the procurement. This means ownership of 10% or more of the company involved and/or ownership of stock or other interest or such valued at \$2500.00 or more.

A business or organization in which the employee, or any member of the employee's immediate family, has a financial interest pertaining to the procurement.

Gratuities: It shall be a breach of ethics to offer, give or agree to give any employee of Hays County or for any employee to solicit, demand, accept or agree to accept from a vendor, a gratuity of consequence or any offer of employment in connection with any decision approval, disapproval, recommendation, preparation or any part of a program requirement or purchase request influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or controversy, any particular matter pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefore pending before this government.

Kickbacks: It shall be a breach of ethics for any payment, gratuity or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor for any contract for Hays County as an inducement for the award of a contract or order.

Contract Clause: The prohibition against gratuities and kickbacks prescribed above shall be conspicuously set forth in every contract and solicitation therefore.

Any effort to influence any employee, elected official, or department head to violate the standards of the code is grounds to void the contract. Please certify, by your signature below, that you understand the ethics policy of Hays County and in no way will attempt to violate the code.

SIGNATURE:	 	 
PRINT NAME & TITLE:		

COMPANY NAME: _____

# Hays County Practices Related to Historically Underutilized Businesses

### 1. STATEMENT OF PRACTICES

Hays County will strive to ensure that all businesses, regardless of size, economic, social or ethnic status have an equal opportunity to participate in the County's procurement processes. The County is committed to promote full and equal business opportunity for all businesses to supply the goods and services needed to support the mission and operations of county government, and seeks to encourage the use of certified historically underutilized businesses (HUB's) through the use of race, ethnic and gender neutral means. It is the practice of Hays County to involve certified HUBs to the greatest extent feasible in the County's procurement of goods, equipment, services and construction projects while maintaining competition and quality of work standards. The County affirms the good faith efforts who recognize and practice similar business standards.

#### 2. DEFINITIONS

<u>Historically underutilized businesses (HUBs)</u>, also known as a disadvantaged business enterprise (DBE), are generally business enterprises at least 51% of which is owned and the management and daily business operations are controlled by one or more persons who is/are socially and economically disadvantaged because of his/her identification as a member of certain groups, including women, Black Americans, Mexican Americans, and other Americans if Hispanic origin, Asian Americans and American Indians.

<u>Businesses</u> include firms, corporations, sole proprietorships, vendors, suppliers, contractors, subcontractors, professionals and other similar references when referring to a business that provides goods and/or services regardless of the commodity category.

<u>Certified HUB's</u> include business enterprises that meet the definition of a HUB and who meet the certification requirements of certification agencies recognized by Hays County, as expressed below.

<u>Statutory bid limit</u> refers to the Texas Local Government Code provision that requires competitive bidding for many items valued at greater than \$50,000.

### 3. GUIDELINES

- a. Hays County, its contractors, their subcontractors and suppliers, as well as all vendors of goods, equipment and services, shall not discriminate on the basis of race, color, creed, gender, age, religion, national origin, citizenship, mental or physical disability, veteran's status or political affiliation in the award and/or performance of contracts. All entities doing business or anticipating doing business with the County shall support, encourage and implement affirmative steps toward a common goal of establishing equal opportunity for all citizens and businesses of the County.
- b. Vendors and/or contractors desiring to participate in the HUB program must successfully complete the certification process with the State of Texas or Texas Unified Certification Program. The vendor or contractor is also required to hold a current valid certification (title) from either of these entities.
- c. Vendors and/or contractors must be registered with the State Comptroller's web-based HUB directory and with the Comptroller's Centralized Master Bidder's List (CMBL). Hays

County will solicit bids from certified HUB's for state purchasing and public works contracts.

- 4. Hays County will actively seek and encourage HUBs to participate in all facets of the procurement process by:
  - a. Continuing to increase and monitor a database of certified HUB vendors, professionals and contractors. The database will be expanded to include products, areas of expertise and capabilities of each HUB firm.
  - b. Continuing to seek new communication links with HUB vendors, professionals and contractors to involve them in the procurement process.
  - c. Continuing to advertise bids on the County's website and in the newspapers including newspapers that target socially and economically disadvantaged communities.
- 5. As prescribed by law, the purchase of one or more items costing in excess of the statutory bid limit must comply with the competitive bid process. Where possible, those bids will be structured to include and encourage the participation of HUB firms in the procurement process by:
  - a. Division of proposed requisitions into reasonable lots in keeping with industry standards and competitive bid requirements.
  - b. Where feasible, assessment of bond and insurance requirements and the designing of such requirements to reasonably permit more than one business to perform the work.
  - c. Specifications of reasonable, realistic delivery schedules consistent with the County's actual requirements.
  - d. Specifications, terms and conditions reflecting the County's actual requirements are clearly stated, and do not impose unreasonable or unnecessary contract requirements.
- 6. A HUB practice statement shall be included in all specifications. The County will consider the bidder's responsiveness to the HUB Practices in the evaluation of bids and proposals. Failure to demonstrate a good faith effort to comply with the County's HUB practices may result in a bid or proposal being considered non-responsive to specifications.
- 7. Nothing in this practice statement shall be construed to require the County to award a contract other than to the lowest responsive bidder as required by law. This practice is narrowly tailored in accordance with applicable law.

Please sign for acknowledgement of the Hays County HUB Practices:

### Hays County House Bill 89 Verification

I, _______ (Person name), the undersigned representative of _______ (Company or Business name, hereafter referred to as Company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

- 1. Does not boycott Israel currently; and
- 2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.001, Texas Government Code:

- 1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and
- 2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.

 Signature of Company Representative
 Date

 On this _____ day of ______, 20____, personally appeared

 ______, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

 NOTARY SEAL

Notary Public in and for the State of Texas

(if other than Texas, Write state in here _____)

Date

# Hays County Purchasing Department Senate Bill 252 Certification

Pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that the company named below is not listed on the website of the Comptroller of the State of Texas concerning the listing of companies that are identified under Section 806.051, Section 807.051 or Section 2253.153. I further certify that should the above-named company enter into a contract that is on said listing of companies on the website of the Comptroller of the State of Texas which do business with Iran, Sudan or any Foreign Terrorist Organization, I will immediately notify the Hays County Purchasing Department.

**Company Name** 

Print Name of Company Representative

Signature of Company Representative

Date

# CERTIFICATION CHECK PERFORMED BY HAYS COUNTY PURCHASING:

On this day, the Purchasing Representative for Hays County in San Marcos, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051 or Section 2253.253 and I have ascertained that the above-named company is not contained on said listing of companies which do business with Iran, Sudan or any Foreign Terrorist Organization.

Print Name of Hays County Purchasing Representative

Signature of Hays County Purchasing Representative

Date

Solicitation Number
# **VENDOR REFERENCES**

Please list three (3) references of current customers who can verify the quality of service your company provides. The County prefers customers of similar size and scope of work to this proposal/bid. **This form must be returned with your bid/proposal.** 

Company Name:
Address:
Contact Person and Title:
Phone Number:
Email:
Scope & Duration of Contract:
REFERENCE TWO
Company Name:
Address:
Contact Person and Title:
Phone Number:
Email:
Scope & Duration of Contract:
REFERENCE THREE
Company Name:
Address:
Contact Person and Title:

Phone Number: _____

Email: _____

Scope & Duration of Contract: _____

# Vendor/Bidder's Affirmation

- Vendor/Bidder affirms that they are duly authorized to execute this Contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to price, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other person engages in this type of business prior to the official opening of this bid.
- 2. Vendor/Bidder hereby assigns to Purchaser any and all claims for overcharges associated with this Contract which arise under the antitrust laws of the United States, 15 USCA Section 1 et seq., and which arise under the antitrust laws of the State of Texas, Tex. Bus. & Com. Code, Section 15.01, et seq.
- 3. Pursuant to 262.0276 (a) of the Texas Local Government Code, Vendor/Bidder, hereby affirms that Vendor/Bidder:

_____ Does not own taxable property in Hays County, or;

_____ Does not owe any ad valorem taxes to Hays County or is not otherwise indebted to

Hays County

Name of Contracting Company

If taxable property is owned in Hays County, list property ID numbers:

Signature of Company Official Authorizing Bid/Offer

Printed Name

Email Address

Title

Phone

# **Related Party Disclosure Form**



Hays County strives to provide financial transparency to its taxpayers. Completion of this form will allow for added transparency into the procurement process by disclosing Vendor relationships with current or former Hays County employees. The existence of a relationship may not present a legal or ethical conflict for a Vendor. However, disclosure will allow for consideration of potential conflicts and/or ways to eliminate conflicts.

A Vendor who Employs any of the following is required to disclose the relationship on this form:

- Current Hays County employee (including elected or appointed official)(Complete Section A)
- Former Hays County employee who has been separated from Hays County for no less than four (4) years (including elected or appointed official) (Complete Section B)
- Person related within the 2nd degree of consanguinity or affinity to either of the above⁽¹⁾ (Complete Section C)

If no known relationships exist, complete Section D.

<u>This form is required to be completed in full and submitted with the proposal package.</u> A submitted proposal package that does not include this completed form will be considered non-responsive and will not be eligible for an award.

Section A: Current Hays County Empl	<u>oyee</u>			
Employee Name	Title			
Section B: Former Hays County Emplo	oyee			
Employee Name	Title	Da	ate of Separation from County	
Section C: Person Related to Current	or Former Hays Co	unty Employee		
Employee or Former Employee Name	e Tit	le		
Name of Related Person	Tit	le	Relationship	
Section D: No Known Relationships If no relationships in accordance with the above exist or are known to exist, provide a written explanation below:				

Attach additional pages if necessary.

I, the undersigned, hereby certify that the information provided is true and complete to the best of my knowledge.

Name of Vendor

Signature of Certifying Official

Title of Certifying Official

Printed Name of Certifying Official

Date

⁽¹⁾A degree of relationship is determined under Texas Government Code Chapter 573. (as outlined below)

Relationship of Consanguinity				
	1st Degree	2nd Degree	<b>3rd</b> Degree*	4th Degree*
Person	child or parent	grandchild, sister, brother or grand- parent	great-grandchild, niece, nephew, aunt,* uncle* or great-grandparent	great-great- grandchild, grandniece, grandnephew, first cousin, great aunt,* great uncle* or great- great-grandparent
* An aunt, uncle, great aunt or great uncle is related to a person by consanguinity only if he or she is the sibling of the person's parent or grandparent.				

Relationship of Affinity				
	1st Degree	2nd Degree		
Person	spouse, mother-in-law, father-in-law, son-in- law, daughter-in-law, stepson, stepdaughter, stepmother or stepfather	brother-in-law, sister-in-law, spouse's grandparent, spouse's grandchild, grandchild's spouse or spouse of grandparent		

"Vendor" shall mean any individuals or entity that seeks to enter into a contract with Hays County.

"Employs" shall mean any relationship wherein Vendor has made arrangements to compensate an individual, directly or by way of a business organization in which the individual has a sharehold or ownership interest, even if that arrangement is contractual and/or on an hourly-charge basis.

# DEBARMENT AND LICENSING CERTIFICATION

#### § STATE OF TEXAS § §

### **COUNTY OF HAYS**

I, the undersigned, being duly sworn or under penalty of perjury under the laws of the United States and the State of Texas, certifies that Firm named herein below and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a federal, state or local governmental entity with commission of any of the offenses enumerated in paragraph (1)(b) of this certification;
- d. Have not within a three-year period preceding this application/proposal had one or more public (federal, state or local) transactions terminated for cause or default;
- e. Are registered and licensed in the State of Texas to perform the professional services which are necessary for the project; and
- f. Have not been disciplined or issued a formal reprimand by any State agency for professional accreditation within the past three years.

Name of Firm

Signature of Certifying Official

Title of Certifying Official

Printed Name of Certifying Official

Date

Where the Firm is unable to certify to any of the statements in this certification, such Firm shall attach an explanation to this certification.

SUBSCRIBED and sworn to before me the undersigned authority by on this the day of _____, 20___, on behalf of said Firm.

> Notary Public in and for the State of Texas (if other than Texas, Write state in here _____ )

My commission expires:

# SECTION 5 STANDARD FORM OF CONTRACT

# STANDARD FORM OF CONTRACT

# STATE OF TEXAS

# HAYS COUNTY

**THIS STANDARD FORM OF CONTRACT** (the "Contract") is by and between HAYS COUNTY, TEXAS, a political subdivision of the State of Texas (hereinafter called "County") and ______ (hereinafter called "Contractor").

The County and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

### Article 1. Work

Contractor shall complete all Work as specified or indicated in the Contract Documents. The "Project" is generally described as follows:

Project No. IFB 2023-B11 - DARDEN HILL AT SAWYER RANCH ROUNDABOUT

# Article 2. Engineer of Record

The Project has been designed by <u>DOUCET AND ASSOCIATES</u>, who is hereinafter called the "Engineer of Record" and who is to act as the County's design professional.

# Article 3. Contract Time

The Work shall be Substantially Completed in 182 calendar days (the "Contract Time"). Following Substantial Completion, the Contractor shall proceed expeditiously with adequate forces and shall achieve Final Completion within the time specified in the Special Conditions.

# Article 4. Contract Price

County shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraph 4.1 below (the "Contract Price"):

4.1 For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in the Bid Form Schedule of Rates and Prices, and as totaled below:

TOTAL OF ALL UNIT PRICES_		\$ (dollars)
	(incent words)	

(insert words)

As provided in the Standard Specifications, estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by the Engineer of Record.

# Article 5. Contractor's Representations

In order to induce County to enter into this Contract, Contractor makes the following representations:

- 5.1 Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents including the "technical data".
- 5.2 Contractor has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.
- 5.3 Contractor is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.
- 5.4 Contractor has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site which have been identified. Contractor acknowledges that such reports and drawings are not Contract Documents and may not be complete for Contractor's purposes. Contractor acknowledges that the County and Engineer of Record do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site.
- 5.5 Contractor has correlated the information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- 5.6 Contractor has given Engineer of Record written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Engineer of Record is acceptable to Contractor, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

- 5.7 Contractor represents and agrees that there are no obligations, commitments, or impediments of any kind that will limit or prevent performance of its obligations under the Contract Documents.
- 5.8 Contractor warrants, represents, and agrees that if (i) it is a corporation or limited liability company, then it is a corporation duly organized, validly existing and in good standing under the laws of the State of Texas, or a foreign corporation or limited liability company duly authorized and in good standing to conduct business in the State of Texas, that it has all necessary corporate power and has received all necessary corporate approvals to execute and deliver this Contract, and the individual executing the Contract on behalf of Contractor has been duly authorized to act for and bind Contractor; or (ii) if it is a partnership, limited partnership, or limited liability partnership, then it has all necessary partnership power and has secured all necessary approvals to execute and deliver this Contract and perform all its obligations under the Contract Documents; and the individual executing this Contractor has been duly authorized to act for and bind Contractor has been duly authorized and endeliver this Contract and perform all its obligations under the Contract Documents; and the individual executing this Contractor.
- 5.9 Neither the execution and delivery of this Contract by Contractor nor the performance of its obligations under the Contract Documents will result in the violation of any provision, if a corporation, of its articles of incorporation or by-laws, if a limited liability company, of its articles of organization or regulations, or if a partnership, by any partnership agreement by which Contractor is bound, or any agreement by which Contractor is bound or to the best of the Contractor's knowledge and belief, will conflict with any order or decree of any court or governmental instrumentality relating to Contractor.
- 5.10 Except for the obligation of the County to pay Contractor the Contract Price pursuant to the terms of the Contract Documents, and to perform certain other obligations pursuant to the terms and conditions explicitly set forth in the Contract Documents, County shall have no liability to Contractor or to anyone claiming through or under Contractor by reason of the execution or performance of this Contract. Notwithstanding any obligation or liability of County to Contractor, no present or future partner or affiliate of County or any agent, officer, director, or employee of County, or of the various departments comprising Hays County, or anyone claiming under Contractor by reason of the execution or performance or to anyone claiming under County has or shall have any personal liability to Contractor or to anyone claiming through or under Contractor by reason of the execution or performance of the execution or performance of this Contractor.

# Article 6. Contract Documents

The "Contract Documents," which comprise the entire agreement between the County and Contractor concerning the Work, consist of the following:

6.1	This Standard Form of Contract
6.2	Performance Bond
6.3	Payment Bond
6.4	Maintenance Bond
6.5	Certificate of Insurance
6.6	Wage Rates
6.7	Standard Specifications
6.8	Special Provisions
6.9	Special Conditions
6.10	Technical Specifications
6.11	Plan Drawings
6.12	Addenda numbers to, inclusive
6.13	Contractor's Bid Form
6.14	Documentation submitted by Contractor prior to Notice of Award.
6.15	The following which may be delivered or issued after the Effect Contract and are not attached hereto: All Written Amendm

6.15 The following which may be delivered or issued after the Effective Date of the Contract and are not attached hereto: All Written Amendments and other documents amending, modifying or supplementing the Contract Documents pursuant to applicable sections in the Standard Specifications.

The documents listed in paragraphs 6.2 et seq. above are attached to this Contract (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Article 6. The Contract Documents may only be amended, modified or supplemented as provided in the Standard Specifications.

### Article 7. Miscellaneous

- 7.1 Terms used in this Contract which are defined in the Standard Specifications will have the meanings indicated in the Standard Specifications.
- 7.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 7.3 The County and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.
- 7.4 Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the County and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken position.
- 7.5 Each party to this Contract hereby agrees and acknowledges that venue and jurisdiction of any suit, right, or cause of action arising out of or in connection with this Contract shall lie exclusively in Hays County, Texas. Furthermore, this Contract shall be governed by and construed in accordance with the laws of the State of Texas, excluding, however, its choice of law rules.
- 7.6 The parties to this Contract agree that during the performance of the services under this Contract they will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The parties to this Contract will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship.
- 7.7 This Contract is for the sole and exclusive benefit of the parties hereto, and nothing in this Contract, express or implied, is intended to confer or shall be construed as conferring upon any other person any rights, remedies or any other type or types of benefits.

- 7.8 Each party to this Contract acknowledges that it and its counsel have reviewed this Contract and that the normal rules of construction are not applicable and there will be no presumption that any ambiguities will be resolved against the drafting party in the interpretation of this Contract.
- 7.9 Each party to this Contract, in the performance of this Contract, shall act in an individual capacity and not as agents, employees, partners, joint ventures or associates of one another. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purposes whatsoever.
- 7.10 Nothing in this Contract shall be deemed to waive, modify or amend any legal defense available at law or in equity to County, its past or present officers, employees, or agents or employees, nor to create any legal rights or claim on behalf of any third party. County does not waive, modify, or alter to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.
- 7.11 To the extent, if any, that any provision in this Contract is in conflict with Tex. Gov't Code 552.001 et seq., as amended (the "Public Information Act"), the same shall be of no force or effect. Furthermore, it is expressly understood and agreed that County, its officers and employees may request advice, decisions and opinions of the Attorney General of the State of Texas in regard to the application of the Public Information Act to any items or data furnished to County as to whether or not the same are available to the public. It is further understood that County's officers and employees shall have the right to rely on the advice, decisions and opinions of the Attorney General, and that County, its officers and employees shall have no liability or obligation to any party hereto for the disclosure to the public, or to any person or persons, of any items or data furnished to County by a party hereto, in reliance of any advice, decision or opinion of the Attorney General of the State of Texas.
- 7.12 County and Contractor have signed this Contract in triplicate. One counterpart each has been delivered to the County, Contractor and Engineer of Record. All portions of the Contract Documents have been signed, initialed or identified by County and Contractor or identified by Engineer of Record on their behalf.
- 7.13 This Contract and the Contract Documents represent the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either oral or written. This Contract may be amended only by written instrument signed by each party to this Contract. NO OFFICIAL, EMPLOYEE, AGENT, OR REPRESENTATIVE OF THE COUNTY HAS ANY AUTHORITY, EITHER EXPRESS OR IMPLIED, TO AMEND THIS CONTRACT, EXCEPT PURSUANT TO SUCH EXPRESS AUTHORITY AS MAY BE GRANTED BY THE HAYS COUNTY COMMISSIONERS COURT.

This Contract will be effective on "Effective Date" of the Contract).	, 20 (which is the
COUNTY	CONTRACTOR
By: Ruben Becerra, Hays County Judge	By: Title:
	[CORPORATE SEAL]
Attest	Attest

# SECTION 6 WAGE RATES

"General Decision Number: TX20220007 01/07/2022

Superseded General Decision Number: TX20210007

State: Texas

Construction Types: Heavy and Highway

Counties: Atascosa, Bandera, Bastrop, Bell, Bexar, Brazos, Burleson, Caldwell, Comal, Coryell, Guadalupe, Hays, Kendall, Lampasas, McLennan, Medina, Robertson, Travis, Williamson and Wilson Counties in Texas.

HEAVY (excluding tunnels and dams, not to be used for work on Sewage or Water Treatment Plants or Lift / Pump Stations in Bell, Coryell, McClennon and Williamson Counties) and HIGHWAY Construction Projects

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date 01/07/2022 0 * SUTX2011-006 08/03/2011 Rates Fringes CEMENT MASON/CONCRETE FINISHER (Paving and Structures).....\$ 12.56 ELECTRICIAN.....\$ 26.35 FORM BUILDER/FORM SETTER Paving & Curb.....\$ 12.94 Structures.....\$ 12.87 LABORER Asphalt Raker.....\$ 12.12 Flagger.....\$ 9.45 Laborer, Common.....\$ 10.50 Laborer, Utility.....\$ 12.27 Pipelayer....\$ 12.79 Work Zone Barricade Servicer....\$ 11.85 PAINTER (Structures).....\$ 18.34 POWER EQUIPMENT OPERATOR: Agricultural Tractor.....\$ 12.69 Asphalt Distributor.....\$ 15.55 Asphalt Paving Machine.....\$ 14.36 Boom Truck.....\$ 18.36 Broom or Sweeper.....\$ 11.04 Concrete Pavement Finishing Machine.....\$ 15.48 Crane, Hydraulic 80 tons or less.....\$ 18.36 Crane, Lattice Boom 80 tons or less.....\$ 15.87 Crane, Lattice Boom over

80 tons.....\$ 19.38 Crawler Tractor.....\$ 15.67 Directional Drilling Locator.....\$ 11.67 Directional Drilling Operator....\$ 17.24 Excavator 50,000 lbs or Less.....\$ 12.88 Excavator over 50,000 lbs...\$ 17.71 Foundation Drill, Truck Mounted.....\$ 16.93 Front End Loader, 3 CY or Less.....\$ 13.04 Front End Loader, Over 3 CY.\$ 13.21 Loader/Backhoe....\$ 14.12 Mechanic.....\$ 17.10 Milling Machine.....\$ 14.18 Motor Grader, Fine Grade....\$ 18.51 Motor Grader, Rough.....\$ 14.63 Pavement Marking Machine....\$ 19.17 Reclaimer/Pulverizer.....\$ 12.88 Roller, Asphalt.....\$ 12.78 Roller, Other.....\$ 10.50 Scraper....\$ 12.27 Spreader Box.....\$ 14.04 Trenching Machine, Heavy....\$ 18.48 Servicer....\$ 14.51 Steel Worker Reinforcing.....\$ 14.00 Structural.....\$ 19.29 TRAFFIC SIGNAL INSTALLER Traffic Signal/Light Pole Worker....\$ 16.00 TRUCK DRIVER Lowboy-Float.....\$ 15.66 Off Road Hauler.....\$ 11.88 Single Axle.....\$ 11.79 Single or Tandem Axle Dump Truck.....\$ 11.68 Tandem Axle Tractor w/Semi Trailer....\$ 12.81 WELDER.....\$ 15.97 _____ _____

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

______

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

#### _____

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union, which prevailed in the survey for this classification, which in this example would be Plumbers 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1,

#### 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

_____

#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination

* a Wage and Hour Division letter setting forth a position on a wage determination matter

* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Division National Office Branch of Wage Surveys. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations Wage and Hour Division U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

_____

END OF GENERAL DECISION"

# SECTION 7 PERFORMANCE BOND

# **PERFORMANCE BOND**

#### STATE OF TEXAS COUNTY OF _____

KNOW ALL MEN BY THESE PRESENTS: That _____

County of ______, and State of ______, as principal, and

authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto Hays County (County), in the penal sum of

Dollars

(\$_____) for the payment whereof, the said Principal and Surety bind themselves, their heirs, administrators, executors, successors, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written Agreement with the County, dated the ______day of ______, 20_____(the "Agreement"), to which the said Agreement, along with the Contract Documents referenced therein are hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform said Agreement and shall in all respects duly and faithfully observe and perform all and singular the covenants, conditions and agreements in and by the Agreement agreed and covenanted by the Principal to be observed and performed, and according to the true intent and meaning of said Agreement and the Contract Documents hereto annexed, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein.

SURETY, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or to the work performed thereunder, or to the Contract Documents referenced therein, shall in anyway affect the obligations on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms on the Agreement, or to the work to be performed thereunder.

IN WITNESS WHEREOF, the	e said Principal and Surety have signed and sealed this instrument
this day of	, 20
PRINCIPAL	SURETY
SIGNATURE	SIGNATURE
NAME & TITLE	NAME & TITLE
ADDRESS	ADDRESS
()	<u>    (     )</u>
PHONE NUMBER	PHONE NUMBER
The name and address of the Resident A	Agency of Surety is:
( <u>)</u>	
PHONE NUMBER	SIGNATURE OF LICENSED LOCAL RECORDING AGENT appointed to countersign
	on behalf of Surety (Required by Art. 21.09 of the
	Insurance Code)
**********	************************
T	
I,SIGNATURE	, having executed Bonds
SIGNATORE	
for	do hereby affirm I have
NAME OF SURETY	

verified that said Surety is now certified with Authority from either: (a) the Secretary of the Treasury of the United States if the project funding includes Federal monies; or (b) the State of Texas if none of the project funding is from Federal sources; and further, said Surety is in no way limited or restricted from furnishing Bond in the State of Texas for the amount and under conditions stated herein.

# SECTION 8 PAYMENT BOND

# **PAYMENT BOND**

#### STATE OF TEXAS COUNTY OF _____

	KNOW ALL MEN BY THESE PRESENTS: That
	of the City of
County (herein	of, and State of, as Principal fter referred to as the "Principal"), and
authori to as th in the p	ed under the laws of the State of Texas to act as Surety on bonds for principals (hereinafter referred "Surety"), are held and firmly bound unto Hays County, (hereinafter referred to as the "County"), nal sum of
	Dollars
(\$ heirs, a	) for the payment whereof, the said Principal and Surety bind themselves, their ministrators, executors, successors and assigns, jointly and severally, by these presents:
the	WHEREAS, the Principal has entered into a certain written agreement with the County, dated day of, 20, to, to, to, to, to
"Agree to and p	(hereinafter referred to as the ment"), which said Agreement and the Contract Documents incorporated therein are hereby referred hade a part hereof as fully and to the same extent as if copied at length herein.
	NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the Work provided for in said Agreement, then, this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein.

SURETY, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or to the Work performed thereunder, or to the other Contract Documents accompanying the same, shall in anyway affect its obligation on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms of the Agreement, or to the work to be performed thereunder or to the other Contract Documents accompanying the same.

SURETY
SIGNATURE
NAME & TITLE
ADDRESS
( ) PHONE NUMBER

( ) PHONE NUMBER

SIGNATURE OF LICENSED LOCAL RECORDING AGENT appointed to countersign on behalf of Surety (Required by Art. 21.09 of the Insurance Code)

# SECTION 9 CERTIFICATE OF INSURANCE

#### - -. . .

CERTIFICATE OF INSURANCE					
TO:	I	DATE:			
		Project No.:			
(COUNTY)		Гуре of			
		Project:			
(ADDRESS)					
THIS IS TO CERTIFY THAT					
is, at the date of this certificate, operations hereinafter described for provisions of the standard policies Exceptions to the standard policy no	insured by this or the types o used by this Co ted on reverse s	s Company f Insurance mpany, and side hereof.	with respect and in accor further herein	to the business rdance with the after described.	
	TYPE OF INSU	RANCE			
POLICY NO.	EFFECTIVE	EXPIRES	LIMIT	S OF LIABILITY	
Workmen's Compensation					
			1 Person	\$	
Public Liability			1 Accident	<u> </u>	
Liability			1 Accident	₽ <u></u> \$	
Property Damage			1 / tooldollt	Ψ	
Builder's Risk					
Automobile					
Other					
The foregoing Policies (do) (do not)	) cover all sub-c	contractors.			
Locations Covered:					
Descriptions of Operations Covered:					

The above policies either in the body thereof or by appropriate endorsement provide that they may not be changed or canceled by the insurer in less than five days after the insured has received written notice of such change or cancellation.

Where applicable local laws or regulations require more than five days actual notice of change or cancellation to the assured, the above policies contain such special requirements, either in the body thereof or by appropriate endorsement thereto attached.

(Name of Insurer)

Ву:_____

Phone No. ( )

Title:

# SECTION 10 GENERAL CONDITIONS

# **General Conditions**

THE CONTRACT GENERAL CONDITIONS SHALL BE AS SET FORTH IN THE STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES, ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION NOVEMBER 1, 2014, INCLUSIVE OF ITEMS 1L – 9L GENERAL REQUIRMENTS AND COVENANTS, AND APPLICABLE SPECIAL PROVISIONS (SEE SECTION 13 TECHNICAL SPECIFICATIONS).

# SECTION 11 SPECIAL CONDITIONS

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XXXIV.	Confined Space Entry Program
XXXV.	Tree and Plant Protection
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XXXXXXXXXXX	

XXXVIII. Work Near Railroads

# SPECIAL CONDITIONS

### I. County

Hays County, a political subdivision of the State of Texas, acting through its County Judge, or his designee, agents or employees, whom Contractor has entered into the Agreement and for whom the Work is to be performed, is referred to as "County". The County shall be contacted through its Purchasing Department for contract related subjects and through the County Engineer's office for design and construction related subjects:

Purchasing Department	County Engineer
Hays County	Hays County
712 South Stagecoach Trl, Ste 1071	2171 Yarrington Road
San Marcos, TX 78666	Kyle, TX 78640

### II. Program Manager

**<u>HNTB Corporation</u>** is the County's Program Manager for the Project. The Program Manager represents the County and oversees the planning, design, review, and coordination of the design and construction phases of the Project.

### III. General Engineering Consultant (GEC)

**<u>HNTB Corporation</u>** is the consulting engineering firm representing and assisting the County in the design, review, and coordination of the design and construction phases of the project, including oversight of the construction engineering and inspection services performed on the Project.

### **IV.** The Construction Inspector

**<u>B2Z</u> Engineering, LLC** is the "Construction Inspector" referred to herein and in the Contract Documents. The Construction Inspector will be responsible for performing construction engineering and inspection services on the Project.

### V. Engineer of Record

**Doucet and Associates** is the County's design professional, who shall provide professional engineering services as defined in the Texas Government Code Chapter 2254, Subchapter A, and referred to as the "Engineer of Record" in Article 2 of the "Standard Form of Contract" contained in the Contract Documents. Nothing contained in the Contract Documents shall create any contractual or agency relationship between the Engineer of Record and the Contractor.

### VI. Insurance

The Contractor will carry Workmen's Compensation Insurance, Public Liability and Property Damage Insurance, and Automobile Insurance sufficient to provide adequate protection against damage claims which may arise from operations under the Contract Documents, in compliance with the following:

Contractors Insurance: Without limiting any of the other obligations or liabilities of the Contractor, during the term of the Agreement and prior to Final Completion, the Contractor

and each subcontractor, at their own expense, shall purchase and maintain the herein stipulated minimum insurance with companies duly approved to do business in the State of Texas and satisfactory to the County. Certificates of each policy shall be delivered to the County before any work is started, along with a written statement from the issuing company stating that said policy shall not be canceled, non-renewed or materially changed without 30 days advance written notice being given to the County. Prior to the effective date of cancellation, Contractor must deliver to the County a replacement certificate of insurance or proof of reinstatement. A model Certificate of Insurance is illustrated herein. Coverage shall be of the following types and not less than the specified amounts:

- (a) workers' compensation as required by Texas law, with the policy endorsed to provide a waiver of subrogation as to the County; employer's liability insurance of not less than \$500,000 for each accident, \$500,000 disease--each employee, \$500,000 disease-policy limit.
- (b) commercial general liability insurance, including independent contractor's liability, completed operations and contractual liability covering, but not limited to, the liability assumed under the indemnification provisions of the Contract Documents, fully insuring Contractor's (or subcontractor's) liability for injury to or death of County's employees and third parties, extended to include personal injury liability coverage with damage to property of third parties, with minimum limits as set forth below:

General Aggregate	\$1,000,000
Operations Aggregate	\$1,000,000
Personal and Advertising Injury	\$600,000
Each Occurrence	\$600,000
Fire Damage (any one fire)	\$50,000
Medical Expense (any one person)	\$5,000

The policy shall include coverage extended to apply to completed operations, asbestos hazards (if this project involves work with asbestos) and XCU (explosion, collapse and underground) hazards. The completed operations coverage must be maintained for a minimum of one year after Final Completion and acceptance of the Work, with evidence of same filed with County.

(c) comprehensive automobile and truck liability insurance, covering owned, hired and non-owned vehicles, with a combined bodily injury and property damage minimum limit of \$600,000 per occurrence; or separate limits of \$250,000 for bodily injury (per person), \$500,000 bodily injury (per accident) and \$100,000 for property damage. Such insurance shall include coverage for loading and unloading hazards.

"Umbrella" Liability Insurance: The Contractor shall obtain, pay for and maintain umbrella liability insurance during the contract term, insuring Contractor for an amount of not less than \$1,000,000 per occurrence combined limit for bodily injury and property damage that follows form and applies in excess of the primary liability coverages required herein above. The policy shall provide "drop down" coverage where underlying primary insurance

coverage limits are insufficient or exhausted. County and Project Engineer shall be named as additional insured.

Policy Endorsements and Special Conditions

- (a) Each insurance policy to be furnished by Contractor shall include the following conditions by endorsement to the policy:
  - (1) name the County, the Program Manager/GEC, the County's Representatives, the Construction Inspector and the Engineer of Record as an additional insured to all applicable coverage;
  - (2) each policy shall require that 30 days prior to the cancellation, non-renewal or any material change in coverage, a notice thereof shall be given to County by certified mail.
- (3) the term "County" shall include all authorities, boards, bureaus, commissions, divisions, departments and offices of the County and individual members, employees and agents thereof in their official capacities, and/or while acting on behalf of the County;
- (4) the "Program Manager" represents and assists the County in the planning, design, review, and coordination of the design and construction phases of the project.
- (5) the policy phrase "other insurance" shall not apply to the County where the County is an additional insured on the policy; and
- (6) all provisions of the Contract Documents concerning liability, duty and standard of care together with the indemnification provision, shall be underwritten by contractual liability coverage sufficient to include such obligations within applicable policies.
- (b) Insurance furnished by the Contractor shall also be in accordance with the following requirements:
  - (1) any policy submitted shall not be subject to limitations, conditions or restrictions deemed inconsistent with the intent of the insurance requirements to be fulfilled by Contractor. The County's decision thereon shall be final;
  - (2) all policies are to be written through companies duly licensed to transact that class of insurance in the State of Texas; and
  - (3) all liability policies required herein shall be written with an "occurrence" basis coverage trigger.
- (c) Contractor agrees to the following:
  - (1) Contractor hereby waives subrogation rights for loss or damage to the extent same are covered by insurance. Insurers shall have no right of recovery or subrogation against the County, it being the intention that the insurance policies shall protect all parties to the Agreement and be primary coverage for all losses covered by the policies;
  - (2) companies issuing the insurance policies and Contractor shall have no recourse against the County for payment of any premiums or assessments for any deductibles, as all such premiums and deductibles are the sole responsibility and risk of the Contractor;

- (3) approval, disapproval or failure to act by the County regarding any insurance supplied by the Contractor (or any subcontractors) shall not relieve the Contractor of full responsibility or liability for damages and accidents as set forth in the contract documents. Neither shall the bankruptcy, insolvency or denial of liability by the insurance company exonerate the Contractor from liability; and
- (4) no special payments shall be made for any insurance that the Contractor and subcontractors are required to carry; all are included in the contract price and the contract unit prices.

Any of such insurance policies required under the Contract Documents may be written in combination with any of the others, where legally permitted, but none of the specified limits may be lowered thereby.

The Contractor shall furnish the County with satisfactory proof that it has provided adequate insurance coverage in amounts and by approved carriers as required by the Contract Documents.

# VII. Record ("As-Built") Drawings

The Contractor shall mark all changes and revisions on all of its copies of the working drawings during the course of the Project as they occur. Upon completion of the Project and prior to Final Acceptance and Payment, the Contractor shall submit to the Construction Inspector one set of its working drawings, dated and signed by the Contractor and its project superintendent and labeled as "As-Built", that shows all changes and revisions outlined above and that shows field locations of all above ground appurtenances including, but not limited to valves, fire hydrants and manholes. These as-built drawings shall be forwarded to the GEC and then to the County and become the property of the County. Each appurtenance shall be located by at least two (2) horizontal distances measured from existing, easily identifiable, immovable appurtenances such as fire hydrants or valves. Property pins can be used for as-builts tie-ins provided no existing utilities as previously described are available. Costs for delivering as-built drawings shall be subsidiary to other bid items.

# VIII. Limit of Financial Resources

The County has a limited amount of financial resources committed to this Project; therefore, it shall be understood by Contractor that the County may be required to change and/or delete any items which it may feel is necessary to accomplish all or part of the scope of work within its limit of financial resources. Contractor shall be entitled to no claim for damages or anticipated profits on any portion of work that may be omitted. At any time during the duration of the Project, the County reserves the right to omit any work from the Contract Documents. Unit prices for all items previously approved in the Contract Documents shall be used to delete or add work per change order.

# IX. Limits of Work and Payment

It shall be the obligation of the Contractor to complete all work included in the Contract Documents, so authorized by the County, as described in the Contract Documents and
Technical Specifications. Any question arising as to the limits of work shall be left up to the interpretation of the Engineer and/or Inspector.

#### X. State Sales Tax

On a contract awarded by a governmental entity for the construction of a publicly-owned improvement in a street right-of-way or other easement which has been dedicated to the public and to the Organization which qualifies for exemption pursuant to the provisions of Article 20.04 (F) of the Texas Limited Sales, Excise and Use Tax Act, the Contractor can probably be exempted in the following manner:

The Contractor may buy tax-free any materials incorporated into the project by issuing a resale certificate in lieu of paying the sales tax at the time of purchase. The Contractor may then accept an exemption certificate from the City for the materials.

Even with a separated contract, the rental of equipment and the purchase of items which do not ultimately become part of the physical structure will still be subject to state and local sales taxes.

#### XI. Completion of Work on Time

The Contractor agrees that time is of the essence and that the definite value of damages which would result from delay would be incapable of ascertainment and uncertain, so that for each day of delay beyond the number of days herein agreed upon for the Substantial Completion of the Work specified in the Contract Documents and contracted for, after due allowance for such extension of time as is provided for under the provisions of the Contract, the County may withhold permanently from the Contractor's total compensation, not as penalty but as liquidated damages, the sum as specified in Special Provision 000-1243 per calendar day.

Furthermore, it is agreed by the Contractor that the time period between Substantial Completion and Final Completion shall be no longer than <u>30</u> calendar days. This separate time period shall be for completion of the Punch List, as set forth in Item 5L Control of Work of the Contract, Final Completion and Acceptance. In the event that Contractor fails to attain Final Completion on or before the expiration of the above said time period, the Contractor shall be subject to the remedies set forth in the Contract Documents. More specifically, the Contractor shall be subject to the terms set forth in Special Provision 008-HC01 under Article 8.7, Default of Contract. In addition to exercising its rights and remedies under the Contract Documents, the County may also exercise any remedy that may be available to it under the law or in equity.

#### XII. Layout and Construction Stakes

All construction staking shall be performed by the Contractor at the Contractor's expense.

The Contractor shall coordinate with design engineer to identify all necessary elements for station development as well as identify the trees, shrubs, and grass areas designated to remain within the construction limits to prevent damage to these items.

# XIII. Safety

The Contractor must use methods of construction that meet or exceed Occupational Safety and Health Administration Standards and any other local, state or federal regulations for safety that are in effect. The Contractor will have a trench safety plan prepared and sealed by Contractor's registered professional engineer.

# XIV. Maintenance Bond Term & Amount - OMITTED

No Maintenance Bond is required.

# XV. Safety Restrictions - Work Near High Voltage Lines

The following procedures shall be followed for work near high voltage lines on the Project.

- (a) A warning sign not less than five (5) inches by seven (7) inches, painted yellow with black letters that are legible at twelve (12) feet shall be placed inside and outside vehicles such as cranes, derricks, power shovels, drilling rigs, pile drivers, hoisting equipment or similar apparatus. The warning sign shall read as follows: "Warning-Unlawful to Operate This Equipment Within Six Feet of High Voltage Lines".
- (b) Equipment that may be operated with ten (10) feet of high voltage lines shall have an insulating cage guard around the boom or arm (except backhoes or dippers), and insulator links on the lift hook connections.
- (c) When necessary to work within six (6) feet of high voltage electrical lines, notify the power company. The electric company will erect temporary mechanical barriers, de-energize the line, or raise or lower the line. All such work done by the power company shall be at the expense of the contractor. The contractor shall maintain an accurate log of all such calls to the electric company.
- (d) No person shall work within six (6) feet of high voltage lines without protection measures having been taken as outlined in Paragraph C.

# XVI. Erosion Control

Contractor shall comply with all laws prohibiting the pollution of any lake, stream, river, or wetland by the dumping of any refuse, rubbish, dredge material, or debris therein.

The Contractor will file the Notice of Intent (NOI) and the Notice of Termination (NOT) as the Project's operator. All required Permits and Notices shall be posted by the Contractor at the Project site.

Contractor shall apply temporary and/or permanent erosion and sedimentation controls, as specified in the plans or directed to disturbed roadside areas, fifteen feet and beyond from road pavement, prior to initiating road base operations. Following asphalt paving of road pavement, apply temporary and/or permanent erosion and sedimentation controls to remaining disturbed areas, as specified in the plans or as directed.

Contractor shall be responsible for the maintenance of all temporary and permanent water quality and erosion control measures proposed under the Storm Water Pollution Prevention Plan (SWPPP) or the Water Pollution Abatement Plan (WPAP) for the duration of the Project construction. Upon completion of construction and before the Construction Inspector issues the Certificate of Completion, Contractor shall be responsible for the removal of all temporary measures and the cleaning and resetting of all permanent measures. All costs associated with this work shall be considered subsidiary to other bid items and no additional compensation shall be allowed.

Contractor shall take special precautions during all periods of heavy rainfall and at all locations where storm water, groundwater and/or mud and debris may enter the sewer systems. All mud, stones, and debris that enter the sewer systems due to Contractor's operations, or Contractor's neglect, shall be cleaned from the system by Contractor. It shall be Contractor's responsibility to see that such storm water, groundwater and debris do not enter the sewer system. All costs for such work shall be merged in the unit prices bid and no additional compensation shall be allowed.

If it is necessary in the prosecution of the Work to interrupt existing surface drainage, sewers, or under drainage, temporary drainage shall be provided until permanent drainage work is completed. The construction of all temporary drainage installations shall be considered as incidental to the construction of the Work. Drainage ways shall be kept clear or other satisfactory provisions made for drainage.

Contractor shall be responsible for and shall take all reasonable and necessary precautions to preserve and protect all existing tile drains, sewers, and other subsurface drains, or parts thereof, which may be continued in service without change. Contractor shall repair, at its own expense, any and all damage to such facilities resulting from negligence or carelessness on the part of its operations.

The Construction Inspector shall be responsible for the monitoring and inspection of the erosion control measures by completion of the Construction Pollution Prevention Plan Inspection and Maintenance Report, as required for coverage under the Texas Pollutant Discharge Elimination System (TPDES) General Construction Permit (TXR150000).

#### XVII. Discovery of Hazardous Materials

If, during the course of the Work, the existence of hazardous material, including asbestos containing material, is observed in the work area, the Contractor shall immediately notify the County in writing. The Contractor shall not perform any work pertinent to the hazardous material prior to receipt of special instructions from the County. Asbestos containing material includes transit pipe.

#### **XVIII.** Submittals – Certificate of Compliance

The Contractor shall submit to the Construction Inspector a Certificate of Compliance from the manufacturer and/or supplier of each and every specified material or manufactured equipment item. The said certificate shall state that the material or the item of equipment to be furnished has been manufactured with materials in accordance with the applicable sections of all required codes, specifications, and standards as required by the specifications.

#### XIX. Unavailability of Materials

If the Contractor is unable to furnish or use any of the materials or equipment specified because of any order by a governmental agency limiting the manufacture or use, or because of the supply situation in the general market for such material or equipment, the Contractor shall offer substitutes therefor. The substitutes shall be suitable for the purpose, considering the factors of quality, serviceability, appearance, and maintenance. No substitute shall be used until the Engineer has approved it.

No consideration will be given to the use of substitutes on account of market conditions unless the Contractor demonstrates that, for the item in question, the Contractor placed its order without delay, that it has shown due diligence in attempting to locate the item as specified, and that the unavailability is due to market conditions in general throughout the particular industry.

If substitutes are used in the Work, the compensation to be paid to the Contractor shall be subject to review and adjustment. As a general principle, if the Engineer shall determine that the substitute will be less satisfactory, the Contractor shall allow a credit to the County; only under unusual circumstances shall there be an increase in compensation to the Contractor on account of substitution. The basis upon which the amount of price and adjustments will be founded shall be the cost of the appropriate items at the time the bids for the Project were opened.

#### XX. Traffic Control

Access shall be provided for residents and emergency vehicles at all times. When it becomes necessary to restrict access, the Contractor shall notify all applicable agencies (i.e. Fire Department, E.M.S., Public Works, etc.) a minimum of five (5) working days in advance of the proposed restrictions. At the end of each day, two lanes of traffic shall be opened to the public, unless otherwise stated in the Contract Documents.

The Contractor shall coordinate with other contractors working in the area.

#### XXI. Temporary Traffic Handling Devices

The Contractor shall furnish, erect and maintain all necessary barricades, lights, warning signs and temporary pavement markings as shown on the Plans and/or in accordance with the Texas Manual on Uniform Traffic Control Devices and with the Specifications in the Contract Documents. In addition, the Contractor shall provide flag-persons and take necessary precautionary measures for the protection of persons, property and the Work, when deemed necessary by the Country or the Construction Inspector.

The Construction Inspector shall be responsible for the monitoring and inspection of the traffic control measures by completion of the Traffic Control Devices Inspection Report (TCDIR), and the Contractor shall be responsible for compliance with the terms of the TCDIR procedures.

#### XXII. Roadway Signs

All permanent and temporary roadway signage designated in the Contract Documents shall be in accordance with the Texas Manual on Uniform Traffic Control Devices.

# XXIII. Project Signs

The Contractor shall erect at the site of construction, and maintain during construction, signs satisfactory to the County identifying the Project and indicating that the government is participating in the development of the Project. Two project signs will be required for the Project. The two said signs shall be 8' X 4' and made out of white 10 mm corrugated plastic with pressure sensitive vinyl lettering to include: Hays County / TxDOT Partnership Program with the Hays County Seal, the Project's name, and a brief description relating to the estimated date of completion, contact phone number, website address and the appropriate Hays County Commissioner's name and precinct number. Furnishing, installing and maintaining these signs shall be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling". Proofs of sign shall be submitted to the Inspector for approval prior to fabrication.

# XXIV. Permits

The Contractor shall be responsible for obtaining any and all required construction permits. Contractor agrees to comply with all conditions of the permits and to maintain copies of the permits at the site at all times while the Work is in progress. The County shall be responsible for obtaining Section 404 permits from the U.S. Army Corps of Engineers as part of the Project design. When Contractor-initiated changes in the construction method changes the impacts to waters of the U.S., Contractor shall be responsible for obtaining new or revised Section 404 permits.

#### XXV. Landscape Restoration

If not designated as a specific pay item in bid package, the Contractor shall take the means necessary to protect all trees, shrubbery and sod. Protection, removal and replacement of existing landscaping will be in accordance with the Contract Documents.

#### XXVI. Existing Fencing

All fences encountered during construction within the right-of-way (ROW) shall be removed by the Contractor under "Preparing Right-of-Way." Permanent fencing, designating the ROW, will be provided by others, unless otherwise shown in the Contract Documents. The Contractor will be required to coordinate preparing ROW operations and fence removal and installations with the landowners as needed.

#### XXVII. Easements

Any easements, both temporary and permanent, required for the Project will be provided by the County as shown in the Contract Documents. Other easements required or desirable by the Contractor shall be arranged by the Contractor at its sole expense. The easements shall be cleaned after use and restored to their original conditions, or better by the Contractor. In the event additional work is required by the Contractor, it shall be the Contractor's responsibility to obtain written permission from the property owners involved for the use of additional property required. No additional payment will be allowed for this item.

#### XXVIII. Limits of Contractor's Operation

The Contractor shall limit construction operations to within the ROW or the easement unless otherwise directed by the County or its authorized representative.

#### XXIX. Maintenance of Pedestrian Walkways

The Contractor will be required to maintain clear walkways for pedestrians during construction in a manner to provide access in the most convenient and safest manner consistent with essential construction operations. Specifically, the following will be enforced.

Pedestrian traffic may be blocked at a location where work is actually in progress. Signs, barricades, and warning devices must be placed at nearest crosswalks approaching the construction site from every direction advising pedestrians of the blockage and advising them to use alternate routes.

Access to doorways and pedestrian entrances must be maintained at all times during hours that access is needed by business. Paving by sections or providing temporary access may be required.

No more than one corner of any intersection may be under construction at any one time. Work must be completed and opened for use by pedestrians before starting work on any other corner of an intersection.

The Contractor will be expected to diligently pursue construction from start to completion at every location to avoid prolonged and unnecessary disruptions to pedestrian traffic.

This work shall be considered incidental and not a separate pay item, unless provided otherwise in the Contract Documents.

#### XXX. Spoil

All excavated material unfit for backfill, waste material accumulated on the job, and any material surplus to that needed in the prosecution of the Work shall be removed from the site by the Contractor and properly and legally disposed of at its expense, unless otherwise directed by the Inspector. THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE COUNTY, ALL OF ITS OFFICERS, AGENTS, AND EMPLOYEES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY CHARACTER RESULTING FROM ITS ARRANGEMENTS FOR THE DISPOSAL OF SPOIL. This shall be incidental and not a separate pay item.

#### XXXI. Materials Testing

Quality Control testing of all materials, construction items or products incorporated in the work shall be performed by the Contractor at the Contractor's expense.

Quality Assurance sampling and testing for acceptance will be performed by the Inspector in accordance with the Quality Control (QC) / Quality Assurance (QA) program outlined in Appendix A. The cost of such tests will be incurred by the County and coordinated by the Construction Inspector through funds made available to the Construction Inspector

under his/her agreement with the County for the professional services related to construction engineering and inspection on the Project.

The Inspector shall furnish for review by the GEC, not later than 10 days after receipt of notice to proceed, a Quality Control Plan consisting of plans, procedures, and organization necessary to produce an end product which complies with the contract documents. The Inspector will be allowed the latitude to develop standards of control subject to approval by the County. As a minimum, the plan shall include description of the type and frequency of inspection staffing, materials handling and construction procedures, calibration and maintenance of equipment, production process control, and testing deemed necessary to assure quality as specified by the Contract Documents.

# XXXII. Pre-Construction Conference

Before the Project work order is issued, a pre-construction conference shall be held with representatives of the County and the Contractor. The Contractor shall plan to submit a schedule of operations at the pre-construction conference, unless otherwise notified. See Section XXXVI-Prosecution and Progress for additional construction schedule requirements.

# XXXIII. Weight Tickets

The Contractor will be responsible for providing asphalt and aggregate tickets for quantity verifications on all asphaltic concrete used for the Project.

#### XXXIV. Confined Space Entry Program

It shall be the responsibility of the Contractor to implement and maintain a variable "Confined Space Entry Program" which must meet OSHA requirements for all its employees and subcontractors at all times during construction. OSHA defines all active sewer manholes, regardless of depth, as "permit required confined spaces". Contractors shall submit an acceptable "Confined Space Entry Program" for all applicable manholes and maintain an active file for these manholes. The cost of complying with this program shall be subsidiary to the pay items involving work in confined spaces.

#### XXXV. Tree and Plant Protection

Scope: Provide complete protection and maintenance of existing trees, shrubs, and grass areas designated to remain within construction limits and/or right-of-way.

Coordination: Coordinate protection of existing trees, shrubs and grass areas with other trades so as to prevent damage to these items.

Payment for Damages: If existing trees, shrubs or grass areas are destroyed, killed or badly damaged as a result of construction observations, Contract sum will be reduced by the amount of assessed damages. Damages will be evaluated by the Construction Inspector, using the following:

Trees: International Shade Tree Conference Standards and following formula – measurement of a cross section of tree trunk will be made at a point 2 feet above

existing grade level to determine cross section area in square inches. Assessment for damage will be \$27.00 per square inch.

Shrubs and Grass Areas: An initial fine of \$1,000 shall be imposed for any unauthorized disturbance within the boundaries of the shrub and grass areas to remain within the right-of-way and outside the limits of disturbance. This disturbance includes but is not limited to: parking or intrusion of equipment or vehicles; storage of any materials, and any unauthorized damage and/or removal of vegetation. In addition to the initial fine, a base fine of \$8.00 for every square foot of area of damaged vegetation within any areas designated to remain on the plans shall be imposed. The areas covered under this section include but are not limited to: areas designated to remain or no-work areas. In determining the amount of fine, the Construction Inspector shall consider the degree and extent of harm caused by the violation, the cost of rectifying the damage, and whether the violation was committed willfully.

Materials: Tree Protection lumber dimensions shall be 4X4 and 2X4 sizes.

Protection: The Contractor shall protect existing trees, shrubs, and grass areas within construction limits from the following damage:

- (1) Compaction of root area by equipment, vehicles or material storage;
- (2) Trunk damage by moving equipment material storage, nailing or bolting;
- (3) Strangling by tying ropes or guy wires to trunks or large branches;
- (4) Poisoning by pouring solvents, gas, paint or other chemicals on or around trees and roots;
- (5) Cutting of roots by excavating or ditching;
- (6) Damage of branches by improper pruning;
- (7) Drought from failure to water or by cutting or changing normal drainage pattern past roots;
- (8) Changes of soil pH factor by disposal of lime base materials such as concrete or plaster;
- (9) Do not cut roots 1-1/2" in diameter or over. Excavation and earthwork within drip line of trees shall be done by hand.

Install barricade protection around trees and shrubs, constructed of 4X4 posts and 2X4 stringers top and bottom. Install protection prior to demolition or excavation operations. Leave protection until construction operations are essentially complete.

Maintenance:

- (1) Water trees and shrubs within construction limits as required to maintain their health during course of construction operations.
- (2) Pruning will be performed by County.

## XXXVI. Prosecution and Progress

At the pre-construction meeting, the Contractor shall submit for acceptance a schedule of all planned work activities and sequences that is intended to be followed in order to both substantially and fully complete the Work within the allotted time periods (the "Project Schedule"). The purpose of the County requiring the Project Schedule shall be to:

- (1) Ensure adequate planning during the prosecution and progress of the work in accordance with the allowable number of working/ calendar days and all milestones;
- (2) Assure coordination of the efforts of the Contractor, County, Program Manager/GEC, Construction Inspector, utilities and others that may be involved in the Project;
- (3) Assist the Contractor, County, Program Manager/GEC and Construction Inspector in monitoring the progress of the Work and evaluating proposed changes to the Contract Documents; and
- (4) Assist the County, Program Manager/GEC and Construction Inspector in administering the time requirements set forth in the Contract Documents.

A Type B Schedule will be required on all projects. Following is the schedule requirements:

Type B Schedule:

The Contractor shall create and maintain a Critical Path Method (CPM) Project Schedule showing the manner of prosecution of work that it intends to follow in order to both substantially and fully complete the Work within the allotted time periods. The Project Schedule shall employ computerized CPM for the planning, scheduling and reporting of the work as described in this specification. The CPM Project Schedule shall be prepared using the Precedence Diagram Method (PDM). No direct compensation will be allowed for fulfilling these requirements, as such work is considered subsidiary to the various bid items of the Project.

- (1) Personnel. The Contractor shall provide an individual, referred to hereinafter as the Scheduler, to create and maintain the CPM schedule. He or she shall be proficient in CPM analysis and shall be able to perform required tasks on the specified software. The Scheduler shall be made available for discussion or meetings when requested by the County, Construction Inspector or Program Manager/GEC.
- (2) Schedule. The Project Schedule shall show the sequence and interdependence of activities required for complete performance of the work. The Contractor shall be responsible for assuring all work sequences are logical and show a coordinated plan of the Work.

Each activity on the schedule shall be described by: An activity number utilizing an alphanumeric designation system tied to the traffic control plans, and that is agreeable to the County, Program Manager/GEC, or Construction Inspector; concise description of the Work represented by the activity; and activity durations in whole working days with a maximum of twenty (20) working days. Durations greater than twenty (20) working days may be used for non-construction activities (mobilization, submittal preparation, curing, etc.), and other activities mutually agreeable between the Contractor and County, Program Manager/GEC or Construction Inspector. The Contractor shall provide a legend for all abbreviations. The activities shall be coded so that organized plots of the schedule may be produced. Typical activity coding includes: Traffic control phase, location and work type. If allowed and if the Contractor shall not use the independent activity type. This would cause the schedule to be incompatible with Primavera Project Planner.

The activity durations shall be based on the quantity for the individual work activity divided by a production rate. An estimated production rate for each activity shall also be shown.

The Contractor shall plan and incorporate major resources into the schedule. Major resources are defined as crews and equipment that constrain the Contractor from pursuing available work. The resources shall accurately represent the Contractor's planned equipment and manpower to achieve the productivity rates specified above.

Seasonal weather conditions shall be considered and included in the CPM schedule for all work influenced by temperature and/or precipitation. Seasonal weather conditions shall be determined by an assessment of average historical climatic conditions. Average historical weather data is available through the National Oceanic and Atmospheric Administration (NOAA). These effects will be simulated through the use of work calendars for each major work type (i.e., earthwork, concrete paving, structures, asphalt, drainage, etc.) Project and work calendars should be updated each month to show days actually able to work on the various work activities.

"Total float" is defined as the amount of time between the early start date and the late start date, or the early finish date and the late finish date, for each and every activity in the schedule. Float time in the schedule is a shared commodity between the County and the Contractor.

Only responsible delays in activities that affect milestone dates or the Project's completion date, as determined by CPM analysis, will be considered for a time extension.

The schedule shall show the sequence and interdependence of activities required for complete performance of the work. The schedule shall be prepared and maintained in accordance with the scheduling requirements stated in this Section and shall include two (2) organized plots with the activities logically grouped using the activity coding. The Contractor shall also provide an electronic copy of the schedule on diskette or CD-ROM.

The schedule shall encompass the time from the start of the Contract Time to the

Project's Final Completion. The longest path through the schedule shall be readily discernable on the plot of the schedule.

(3) Joint Review, Revision and Acceptance. Within twenty (20) calendar days of receipt of the Contractor's proposed schedule, the County or its authorized agents shall evaluate the schedule for compliance with this specification, and notify the Contractor of the findings. If the County or its authorized personnel request a revision or justification, the Contractor shall provide a satisfactory revision or adequate justification to the satisfaction of the Construction Inspector or County authorized personnel within seven (7) calendar days.

If the Contractor submits a CPM schedule for acceptance which is based on a sequence of work not in the Contract Documents, then the Contractor shall notify the County or its authorized entities in writing, separate from the schedule submittal.

The County's review and acceptance of the Contractor's Project Schedule is for conformance to the requirements of the Contract Documents only. Review and acceptance by the County or other authorized personnel of the Contractor's Project Schedule does not relieve the Contractor of any of its responsibility for the Project Schedule, or of the Contractor's ability to meet interim milestone dates (if specified) and the Final Completion date, nor does such review and acceptance expressly or by implication warrant, acknowledge or admit the reasonableness of the logic, durations, manpower or equipment loading of the Contractor's Project Schedule. In the event the Contractor fails to define any element of work, activity or logic and the County's review does not detect this omission or error, such omission or error, when discovered by the Contractor or County and its authorized personnel, shall be corrected by the Contractor at the next monthly schedule update and shall not affect the project completion date.

- (4) Updates. The Project Schedule shall be updated on a monthly basis and shall be required as a basis for the pay application approval. The Project Schedule update shall be submitted on the first working day of each month. The Contractor shall meet with the Construction Inspector or County authorized personnel each month at a scheduled update meeting to review actual progress made through the data date of the schedule update. The review of progress will include dates activities actually started and/or completed, and the percentage of work completed or remaining duration on each activity started and/or completed. The percentage of work complete shall be calculated by utilizing the quantity and productivity rate information. The Project Schedule update shall include one (1) copy of the following information:
  - a) Electronic copy of the updated schedule including revisions and changes on diskette or CD-ROM or other storage media.
  - b) One (1) logically organized plot of the schedule update if requested by the County or its authorized personnel.
- (5) Project Schedule Revisions. If the Contractor desires to make major changes in the

Project Schedule, the Contractor shall notify the County or Construction Inspector in writing. The written notification shall include the reason for the proposed revision, what the revision is comprised of, and how the revision was incorporated into the schedule. In addition to the written notification of the revision, the Contractor shall provide an electronic copy and one logically organized plot of the schedule including the revision if requested by the County or Construction Inspector.

Major changes are hereby defined as those that may affect compliance with the requirements of the Contract Documents or those that change the critical path. All other changes may be accomplished through the monthly updating process.

(6) Time Impact Analysis. The Contractor shall notify the County or Construction Inspector when an impact may justify an extension of Contract Time or adjustment of milestone dates. This notice shall be made in writing as soon as possible, but no later than the end of the next estimate period after the commencement of an impact or the notice for a change is given to the Contractor. Not providing notice to the County or Construction Inspector by the end of the next estimate period will indicate the Contractor's approval of the time charges as shown on that time statement. Future consideration of that statement will not be permitted and the Contractor forfeits its right to subsequently request a time extension or time suspension unless the circumstances are such that the Contractor could not reasonably have knowledge of the impact by the end of the next estimate period.

When changes are initiated or impacts are experienced, the Contractor shall submit to the County or Construction Inspector a written time impact analysis describing the influence of each change or impact.

A time impact analysis is an evaluation of the effects of changes in the construction sequence, contract, plans, or site conditions on the Contractor's plan for constructing the Project, as represented by the Project Schedule. The purpose of the time impact analysis is to determine if the overall Project has been delayed, and if necessary, to provide the Contractor and the County a basis for making adjustments to the time allotted for Substantial Completion and Final Completion.

A time impact analysis shall consist of one or all of the steps listed below.

Step 1. Establish the status of the Project before the impact using the most recent Project Schedule update prior to the impact occurrence.

Step 2. Predict the effect of the impact on the most recent Project Schedule update prior to the impact occurrence. This requires estimating the duration of the impact and inserting the impact into the schedule update. The Contractor shall demonstrate how the impact was inserted into the schedule showing the added or modified activities and the added or modified relationships. Any other changes made to the schedule including modifications to the calendars or constraints shall be noted.

Step 3. Track the effects of the impact on the schedule during its occurrence. Note any

changes in sequencing, and mitigation efforts.

Step 4. Compare the status of the Work prior to the impact (Step 1) to the prediction of the effect of the impact (Step 2), and to the status of the work during and after the effects of the impact are over (Step 3). Note that if an impact causes a lack of access to a portion of the Project, the effects of the impact may extend to include a reasonable period for remobilization.

The time impact analysis shall include an electronic copy of the complete schedule prepared in Step 2. If the Project Schedule is revised after the submittal of a time impact analysis but prior to its approval, the Contractor shall promptly indicate in writing to the County or Construction Inspector the need for any modification to its time impact analysis.

Only one (1) copy of each time impact analysis shall be submitted within fourteen (14) calendar days after the completion of an impact. The County or Construction Inspector may require Step 1 and Step 2 of the time impact analysis be submitted at the commencement of the impact, if needed to make a decision regarding the suspension of Contract Time.

Approval or rejection of each time impact analysis by the County, Construction Inspector or Program Manager/GEC shall be made within fourteen (14) calendar days after receipt unless subsequent meetings and negotiations are necessary.

The time impact analysis shall be incorporated into and attached to any relevant change order(s) and/or supplemental agreement(s).

#### XXXVII. Sanitary Provisions

Provide and maintain adequate, neat, and sanitary toilet accommodations for employees, including County employees and representatives, in compliance with the requirements and regulations of the Texas Department of Health or other authorities having jurisdiction.

#### XXXVIII. Work Near Railroads

(A) General.

If the work crosses or is in close proximity to a railroad, do not interfere with the use or operation of the railroad company's trains or other property. Assign responsible supervisory personnel to ensure that tracks and adjacent areas are clear of debris, road materials, and equipment. It is the Contractor's responsibility to contact the railroad to determine the railroad's requirements for work within the railroad right of way and to comply with the requirements. The County will not reimburse the Contractor for any cost associated with these requirements. If the work requires construction within 25 ft. horizontally of the near rail or if the tracks may be subject to obstruction due to construction operations, notify the Engineer and the Railroad Company at least 3 days before performing work. The railroad company will provide flaggers during this work. If railroad flaggers will be needed longer than 2 consecutive days, request them at least 30 days before performing

work within the railroad right of way. Flaggers provided by the railroad company will be paid for by the County. Do not store material or equipment in the Railroad's right of way within 15 ft. of the centerline of any track. Do not place any forms or temporary falsework within 8.5 ft. horizontally from the centerline or 22 ft. vertically above the top of rails of any track, unless otherwise shown in the Contract Documents.

(B) Temporary Crossings.

If a temporary crossing is needed, obtain permission from the railroad company before crossing the tracks. Execute the "Agreement for Contractor's Temporary Crossing" if required by the Railroad Company. The Contractor shall ensure that the tracks are left clear of equipment and debris that would endanger the safe operation of railroad traffic. Provide a crossing guard on each side of the crossing to direct equipment when hauling across the tracks. The Contractor shall stop construction traffic a safe distance away from the crossing upon the approach of railroad traffic. Work for temporary crossings will not be paid for directly, but shall be subsidiary to items of the Work subject of the Contract Documents. Work performed by the Railroad Company for the temporary crossing, except flaggers, will be at the Contractor's expense.

# SECTION 12 GENERAL NOTES

Item	Description	**Rate
**204	Sprinkling	
	(Dust)	30 GAL/CY
	(Item 132)	30 GAL/CY
	(Item 247)	30 GAL/CY
**210	Rolling (Flat Wheel)	
	(Item 247)	1 HR/200 TON
	(Item 316)	1 HR/6000 SY
**210	Rolling (Tamping and Heavy Tamping)	1 HR/200 CY
**210	<b>Rolling (Lt Pneumatic Tire)</b>	
	(Item 132)	1 HR/500 CY
	(Item 247)	1 HR/200 TON
	(Item 316 - Seal Coat)	1 HR/6000 SY
	(Item 316 - Two Course)	1 HR/3000 SY
247	Flexible Base (CMP IN PLC)	132 LB/CF
310	Prime Coat	0.20 GAL/SY
314	Emulsified Asphalt Treatment (SS-1 or MS-2)	0.30 GAL/SY
316	Underseals Asphalts (Multi Option)	0.20 GAL/SY
	Surface Treatments	
	Seal Coat	
	Grade 4	
	Asphalt	0.38 GAL/SY
	Aggregate	1 CY/120 SY
	Grade 5	
	Asphalt	0.32 GAL/SY
	Aggregate	1 CY/150 SY
	Two Course Surface Treatment	
	Asphalt 1st Application	0.28 GAL/SY
	Asphalt 2nd Application	0.24 GAL/SY
	Aggregate 1st Application Grade 4	1 CY/110 SY
	Aggregate 2nd Application Grade 4	1 CY/130 SY
340/3078,341/3076,	Dense-Graded Hot-Mix Asphalt and Superpave	110 LB/SY/IN
344/3077		
342/3079	Permeable Friction Course (PFC)	
	Aggregate	84.6 LB/SY/IN
	Asphalt	5.4 LB/SY/IN
346/3080	Stone-Matrix Asphalt	113 LB/SY/IN
347/3081	Thin Overlay Mixtures (TOM) - Surface	
	Asphalt	7.0 LB/SY/IN
	Aggregate (SAC B)	106.0 LB/SY/IN
250	Aggregate (SAC A)	109.0LB/SY/IN
350	Nilcrosurfacing	25 LB/SY
3084	Bonding Course	0.09 GAL/SY
3085	UnderSeal Course	0.20 GAL/SY
	L'Iack Coat	1 0.08 GAL/SY

# GENERAL NOTES: Version: June 28, 2021

** For Informational Purposes Only

# The following standard detail sheet or sheets have been modified:

## **Modified Standards**

# GENERAL

"Contractor questions on this project are to be addressed to the following individual(s): Hays County Purchasing <u>purchasing@co.hays.tx.us</u>

Bid information, including plans, specifications and bidding documents, is available through the following websites:

City of San Marcos E-Procurement: <u>https://sanmarcostx.gov/bids.aspx</u>

BidNet Direct: <a href="https://www.bidnetdirect.com/texas/hayscounty">https://www.bidnetdirect.com/texas/hayscounty</a>

Texas Comptroller: http://www.txsmartbuy.com/

All contractor questions will be reviewed by the Engineer. Once a response is developed, it will be posted to websites above.

References to manufacturer's trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted if they are of equal quality, comply with the specifications for this project, and are approved.

If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

The roadbed will be free of organic material prior to placing any section of the pavement structure.

Equip all construction equipment used in roadway work with highly visible omnidirectional flashing warning lights.

Provide a smooth, clean sawcut along the existing asphalt or concrete pavement structure, as directed. Consider subsidiary to the pertinent Items.

Construct all manholes/valves to final pavement elevations prior to the placement of final surface. If the manholes/valves are going to be exposed to traffic, place temporary asphalt around the manhole/valve to provide a 50:1 taper. The asphalt taper is subsidiary to the ACP work.

Use a self-contained vacuum broom to sweep the roadway and keep it free of sediment as directed. The contractor will be responsible for any sweeping above and beyond the normal maintenance required to keep fugitive sediment off the roadway as directed by the Engineer.

Damage to existing pipes and SET's due to Contractor operations will be repaired at Contractor's expense.

All locations used for storing construction equipment, materials, and stockpiles of any type, within the right of way, will be as directed. Use of right of way for these purposes will be restricted to those locations where driver sight distance to businesses and side street intersections is not obstructed and at other locations where an unsightly appearance will not exist. The Contractor will not have exclusive use of right of way but will cooperate in the use of the right of way with the city/county and various public utility companies as required.

# **ITEM 2 – INSTRUCTIONS TO BIDDERS**

# **ITEM 5 – CONTROL OF THE WORK**

Place construction stakes at intervals of no more than 100 ft. This work is subsidiary.

# **Precast Alternate Proposals.**

When a precast or cast-in-place concrete element is included in the plans, a precast concrete alternate may be submitted in accordance with "Standard Operating Procedure for Alternate Precast Proposal Submission" found online at <a href="https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/publications/bridge.html#design">https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/publications/bridge.html#design</a>. Acceptance or denial of an alternate is at the sole discretion of the Engineer. Impacts to the project schedule and any additional costs resulting from the use of alternates are the sole responsibility of the Contractor.

# **Electronic Shop Drawing Submittals.**

Contact will be provided in preconstruction meeting.

# Utilities.

Contractor shall notify all utility companies prior to construction determine the location of existing utilities. Prior to commencing excavation activities, the contractor will contact Texas 811.

The existence and location of underground utilities indicated on the plans are taken from available records and are not guaranteed but shall be investigated and verified by the contractor before starting work. The contractor shall be held responsible for any damage to and for the maintenance and protection of the existing utilities even if they are not shown in the plans. Location and depth of existing utilities shown here are approximate only. Actual locations and depths must be verified by the contractor prior to construction, and the contractor shall be responsible for protection of utilities during construction.

# **Cooperating with Joint Bid Utilities.**

The Engineer will designate a utility inspector at the pre-construction meeting. All durations exclude utility owner holidays.

Provide a complete package of information for all resubmittals. Submit each item and individual components of that item under separate cover.

Prior to submitting a RFI, meet and discuss with County and the utility inspector. Include a proposed solution, existing and proposed line elevations, and redline of proposed changes with the RFI. Make note of adjacent utilities in the RFI if it includes relocation of a line. Submit RFIs via email to TxDOT and the utility inspector.

Complete pre-testing and have the utility inspector verify prior to formal testing and inspection. Submit email to County and the utility inspector requesting a formal test and inspection 14 calendar days before the test date. Pay retest fees directly to utility owner at current rates.

Submit an email to the utility inspector identifying the lines, valves, location, and date of shut offs or limited service 21 calendar days before for all lines and 60 calendar days before for water lines 24 in. or greater. The utility owner will conduct a test shut off before actual shut off. Do not shut off power or water lines 24 in. or greater between June 1st and August 31st. Provide a verbal notification 7 calendar days and written notification 72 hours before impact to service to all customers.

Provide an electronic pdf of as-builts within 28 calendar days of a line becoming active. Include GPS coordinates of items not installed per original plans including meters, manholes, valves, bends, and fire hydrant locations in the as-builts. Include limits of encasements such as steel and flowable fill. Include final version of RFI's and revised plan sheets.

# Alignment and Profile.

Unless shown in the plans, profile and alignment data for roadways being overlaid or widened are for design verification only. Provide survey and construct the roadway in accordance with the typical section. Bid items and data may be provided to adjust cross slope and super elevations.

# **ITEM 6 - CONTROL OF MATERIALS**

Give a minimum of 1 business day notice for materials, which require inspection at the Plant.

For structures with paint containing hazardous materials, provide locations of paint removal 60 days prior to begin removal.

For removal, tie, or tap of asbestos concrete (AC) pipe, contact TxDOT and the local utility company 60 days prior to performing the work. Expose the AC pipe to provide a minimum of 1 ft. of clearance around the top and sides. A minimal amount of soil may remain around the AC

pipe to avoid disturbance. The local utility company will be responsible for the demo notice to DSHS and removal of the AC pipe. Tie or tap into existing AC pipe may require removing an entire section of pipe from collar to collar and replacement of pipe with new pipe using existing bid items.

#### **ITEM 7 – LEGAL RELATIONS AND RESPONSIBILITIES**

The County via TxDOT will coordinate with TDLR regarding pedestrian elements and sidewalks. The contractor will procure and provide all permits, licenses, and inspections; pay all charges, fees, and taxes regarding TDLR rules governing industrialized housing and buildings.

No significant traffic generator events identified.

Refer to the Environmental Permits, Issues and Commitments (EPIC) plan sheets for additional requirements and permits.

Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding 14 calendar days. Track all exposed soil, stockpiles, and slopes. Tracking consists of operating a tracked vehicle or equipment up and down the slope, leaving track marks perpendicular to the direction of the slope. Re-track slopes and stockpiles after each rain event or every 14 days, whichever occurs first. This work is subsidiary.

Perform maintenance of vehicles or equipment at designated maintenance sites. Keep a spill kit on-site during fueling and maintenance. This work is subsidiary.

Maintain positive drainage for permanent and temporary work for the duration of the project. Be responsible for any items associated with the temporary or interim drainage and all related maintenance. This work is subsidiary.

Suspend all activities near any significant recharge features, such as sinkholes, caves, or any other subterranean openings that are discovered during construction or core sampling. Do not proceed until the designated Geologist or TCEQ representative is present to evaluate and approve remedial action.

Locate aboveground storage tanks kept on-site for construction purposes in a contained area as to not allow any exposure to soils. The containment will be sized to capture 150% of the total capacity of the storage tanks.

#### PSL in Edwards Aquifer Recharge and Contributing Zone.

Obtain written approval from the Engineer for all on or off right of way PSLs not specifically addressed in the plans. Provide a signed sketch of the location 30 business days prior to use of the PSL. Include a list of materials, equipment and portable facilities that will be stored at the PSL. TxDOT will coordinate with the necessary agencies. Approval of the PSL is not guaranteed. Un approved PSL is not a compensable impact.

# Work within a USACE Jurisdictional Area.

Do not initiate activities within a U.S. Army Corps of Engineers (USACE) jurisdictional area that have not been previously evaluated by the USACE as part of the permit review of this project. Such activities include, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. Obtain written approval from the Engineer for activities not specifically addressed in the plans. Provide a signed sketch and description of the location 60 business days prior to begin work at the location. Complete and return any forms provided by the County. Approval of the work is not guaranteed. Un approved work is not a compensable impact.

#### Work over or near Bodies of Water (lakes, rivers, ponds, creeks, dry waterways, etc.).

Keep on site a universal spill kit adequate for the body of water and the work being performed. Debris is not allowed to fall into the ordinary high-water level (OHWL). Debris that falls into the OHWL must be removed at the end of each work day. Debris that falls into the floodway must be removed at the end of each work week or prior to a rain event. Install and maintain traffic control devices to maintain a navigable corridor for water traffic, except during bridge demo and beam placement. This work is subsidiary.

Obtain written approval from the Engineer for temporary fill or crossings not specifically addressed in the plans. Provide a signed sketch of the location 60 business days prior to begin work at the location. Complete and return any forms provided by TxDOT. Approval of the work is not guaranteed. Unapproved work is not a compensable impact.

# **DSHS** Asbestos and Demolition Notification.

Complete and provide the Texas Department of State Health Services (DSHS) notification form to the County and its representatives at least 30 calendar days prior to bridge removal or renovation for each phase or step of work. Notify the County and its representatives via email of any changes to the work start and end dates.

#### **Migratory Birds and Bats.**

Migratory birds and bats may be nesting within the project limits and concentrated on roadway structures such as bridges and culverts. Remove all old and unoccupied migratory bird nests from any structures, trees, etc. between September 16 and February 28. Prevent migratory birds from re-nesting between March 1 and September 15. Prevention shall include all areas within 25 ft. of proposed work. All methods used for the removal of old nesting areas and the prevention of renesting must be submitted to the County 30 business days prior to begin work. This work is subsidiary.

If active nests are encountered on-site during construction, all construction activity within 25 ft. of the nest must stop. Contact the Engineer to determine how to proceed.

# Tree and Brush Trimming and Removal.

Work will be conducted September 16 thru February 28. Work conducted outside this timeframe will require a bird survey. Submit a survey request to TxDOT 30 business days prior to begin work.

No extension of time or compensation will be granted for a delay or suspension due to the above bird, bat and tree/brush requirements.

#### Law Enforcement Personnel.

Submit charge summary and invoices using the Department forms.

Patrol vehicles must be clearly marked to correspond with the officer's agency and equipped with appropriate lights to identify them as law enforcement. For patrol vehicles not owned by a law enforcement agency, markings will be retroreflective and legible from 100 ft. from both sides and the rear of the vehicle. Lights will be high intensity and visible from all angles.

No payment will be made for law enforcement personnel needed for moving equipment or payment for drive time to/from the event site. A minimum number of hours is not guaranteed. Payment is for work performed. If the Contractor has a field office, provide an office location for a supervisory officer when event requires a supervising officer. This work is subsidiary.

A maximum combined rate of \$70 per hour for the law enforcement personnel and the patrol vehicle will be allowed. Any scheduling fee is subsidiary per Standard Specification 502.4.2.

Cancel law enforcement personnel when the event is canceled. Cancellation, minimums or "show up" fees will not be paid when cancellation is made 12 hours prior to beginning of the event. Failure to cancel within 12 hours will not be cause for payment for cancellation, minimums, or "show up" time. Payment of actual "show up" time to the event site due to cancellation will be on a case by case basis at a maximum of 2 hours per officer.

Alterations to the cancellation and maximum rate must be approved by the Engineer or predetermined by official policy of the officers governing authority.

#### Back Up Alarm.

For hours 9 P to 5 A, utilize a non-intrusive, self-adjusting noise level reverse signal alarm. This is not applicable to hotmix or seal coat operations. This is subsidiary.

#### **ITEM 8 – PROSECUTION AND PROGRESS**

Electronic versions of schedules will be saved in MicroSoft Project format.

Working days will be charged in accordance with 8.3.1.4 "Standard Workweek."

#### **ITEM 100 - PREPARING RIGHT OF WAY**

Prep ROW must not begin until accessible trees designated for preservation have been protected, items listed in the EPIC have been addressed, and SW3P controls installed in accessible areas.

Backfill material will be Type B Embankment using ordinary compaction.

Follow Item 752.4 Work Methods and Item 752 general notes when removing or working on or near trees and brush.

Unless shown otherwise in the plans or a designated non-mow area, perform trimming or removal for areas within 30 ft. of edge of pavement under construction. Trim or remove to provide minimum of 5 ft. of horizontal clearance and 7 ft. of vertical clearance for the following: sidewalks, paths, guard fence, rails, signs, object markers, and structures. Trim to provide a minimum of 14 ft. vertical clearance under all trees. This work is subsidiary.

# ITEM 105 – REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT

Break, remove, and store or dispose of existing asphalt pavement, including surface treatments, and treated or untreated base materials.

Break material retained by the Department into pieces not larger than 24 in. unless otherwise shown on the plans. Remove existing asphalt pavement before disturbing stabilized base. Avoid contamination of the asphalt materials and damage to adjacent areas. Repair material damaged by operations outside the designated locations. Stockpile materials designated salvageable at designated sites when shown on the plans or as directed. Prepare stockpile site by removing vegetation and trash and by providing for proper drainage. Material not designated to be salvaged will become the property of the Contractor. When this material is disposed of, do so in accordance with federal, state, and local regulations

# **ITEM 110 – EXCAVATION**

The County and its representatives will define unsuitable material.

# ITEM 132 – ALL EMBANKMENT

The County and its representatives will define unsuitable material. Material which the Contractor might deem to be unsuitable due to moisture content will not be considered unsuitable material.

Prior to begin embankment of existing area, correct or replace unstable material to a depth of 6 in. below existing grade. Embankment areas will be inspected prior to beginning work.

Rock or broken concrete produced by the project is allowed in earth embankments. The size of the rock or broken concrete will not exceed the layer thickness requirements in Section 132.3.4., "Compaction Methods." The material will not be placed vertically within 5 ft. of the finished subgrade elevation.

Embankment placed vertically within 5 ft. of the finished subgrade elevation or within the edges of the subgrade and treated with lime, cement, or other calcium based additives must have a sulfate content less than 3000 ppm. Allow 5 business days for testing. Treatment of sulfate material 3000 ppm to 7000 ppm requires 7 days of mellowing and continuous water curing, in accordance TxDOT guidelines for Treatment of Sulfate-Rich Soils and Bases in Pavement Structures (9/2005). Material over 7000 ppm is not allowed.

# ITEM 152 – ROAD GRADER WORK

Construct subgrade and adjacent slopes. Construct portions of the roadway according to the typical sections as shown on the plans where finished grade is uncontrolled. Move earthwork of minor volumes and for short distances only. Move earthwork within the limits as shown on the plans and in at least 500-ft. sections, except on bridge projects.

Remove or rework unsuitable or unstable materials in accordance with Article 110.2., "Construction," or as directed. Grade the roadway and shape to the typical sections shown on the plans. Finish to a profile uniform and consistent with the topography. Scarify existing natural ground or roadbed and compact in accordance with the method shown on the plans and as outlined in Article 132.3., "Construction." Supplement "Road Grader Work" with Item 154, "Scraper Work," Item 156, "Bulldozer Work," or both when shown on the plans. Perform work in accordance with the requirements of the governing Item

#### **ITEM 160 - TOPSOIL**

Off-site topsoil will have a minimum PI of 25.

No Sandy Loam allowed.

Obtain approval of the actual depth of the topsoil sources for both on-site and off-site sources. Construct topsoil stockpiles of no more than five (5) feet in height.

It is permissible to use topsoil dikes for erosion control berms within the right of way, as directed.

Seed or track slopes within 14 days of placement.

Salvage topsoil from sites of excavation and embankment. Maximum salvage depth is 6 inches.

Windrowing of topsoil obtained from the Right of Way (ROW) is not allowed.

#### **ITEM 162 – SODDING FOR EROSION CONTROL**

Provide common Bermuda. Provide St. Augustine if the adjacent grass is St. Augustine.

#### **ITEM 164 – SEEDING FOR EROSION CONTROL**

Provide and install temporary or permanent seeding for erosion control as shown on the plans or as directed.

Cultivate the area to a depth of 4 in. before placing the seed unless otherwise directed. Use approved equipment to vertically track the seedbed as shown on the plans or as directed. Cultivate the seedbed to a depth of 4 in. or mow the area before placement of the permanent seed when performing permanent seeding after an established temporary seeding. Plant the seed specified and mulch, if required, after the area has been completed to lines and grades as shown on the plans

Cellulose Fiber Mulch Seeding. Plant seed in accordance with Section 164.3.1., "Broadcast Seeding." Apply cellulose fiber mulch uniformly over the seeded area immediately after planting the seed or seed mixture at the following rates.

- Sandy soils with slopes of 3:1 or less—2,500 lb. per acre.
- Sandy soils with slopes greater than 3:1—3,000 lb. per acre.
- Clay soils with slopes of 3:1 or less—2,000 lb. per acre.
- Clay soils with slopes greater than 3:1—2,300 lb. per acre.

Cellulose fiber mulch rates are based on dry weight of mulch per acre. Mix cellulose fiber mulch and water to make a slurry and apply uniformly over the seeded area using suitable equipment

# **ITEM 169 – SOIL RETENTION BLANKETS**

Type A blankets containing straw fibers are not allowed. Type B and D blankets shall be a spray type blanket.

# **ITEM 216 - PROOF ROLLING**

Correct and perform "Proof Rolling" retest at the Contractor's expense, to the satisfaction of the Engineer, when initial "Proof Rolling" yields a failing result.

#### ITEM 260 thru 276 – SUBGRADE TREATMENTS AND BASE

Use ordinary compaction for subgrade treatment.

Three weeks prior to treatment, provide a sample of soil or flexible base to be treated.

#### ITEM 260 - LIME TREATMENT (ROAD-MIXED)

Apply 33 pounds per square yard.

For sulfate content greater than 3000 ppm, mix in an additional 4.0% points above optimum moisture after initial mixing and prior to mellow.

If the sulfate content is greater than 7000 ppm, do not treat. Undercut the unsuitable material to the depth per bid item for lime treatment and replace unsuitable material in accordance with Item 110. Payment will be made in accordance with Item 110.

# ITEM 292 – ASPHALT TREATMENT (PLANT-MIXED)

Construct a base or foundation course composed of a compacted mixture of aggregate and asphalt binder mixed hot in a mixing plant.

Asphalt Material. Furnish PG64-22 asphalt binder that meets requirements of Item 300, "Asphalts, Oils and Emulsions." When more than 30% RAP is allowed and used, ensure that the new binder and recovered binder from the RAP, when blended proportionally, meet the PG64-22 requirements.

#### ITEM 300s – SURFACE COURSES AND PAVEMENTS

Asphalt season is May 1 thru September 15. Emulsified Asphalt season is April 1 thru October 15. The latest work start date for asphalt season is August 1.

If an under seal is not provided, furnish a tack coat. Apply tack coat at 0.08 GAL/SY (residual). Apply non-tracking tack coat using manufacturer recommend rates.

## ITEM 310 – PRIME COAT

Apply blotter material to all driveways and intersections. This work is subsidiary.

When Multi Option is allowed, provide MC 30, EC 30 or AE-P. MC 30 is not allowed in Travis County.

Rolling to ensure penetration is required.

#### ITEM 340/3078 THRU 348/3082 - HOT-MIX ASPHALT PAVEMENT

Core holes may be filled with an Asphaltic patching material meeting the requirements of DMS-9203 or with SCM meeting requirements of DMS-9202.

Install transverse butt joints with 50 ft. H: 1 in. V transition from the new ACP to the existing surface. Install a butt joint with 24 in. H: 1 in. V transition from the new ACP to a driveway, pullout or intersection. Saw cut the existing pavement at the butt joints. This work is subsidiary.

Use a device to create a maximum 3H:1V notched wedge joint on all longitudinal joints of 2 in. or greater. This work is subsidiary.

Prior to milling, core the existing pavement to verify thickness. This work is subsidiary.

Ensure placement sequence to avoid excess distance of longitudinal joint lap back not to exceed one day's production rates.

Submit any proposed adjustments or changes to a JMF before production of the new JMF.

Tack every layer. Do not dilute tack coat. Apply it evenly through a distributor spray bar.

Provide a minimum transition of 10' for intersections, 10' for commercial driveways, and 6' for residential driveways unless otherwise shown on the plans.

Irregularities will require the replacement of a full lane width using an asphalt paver. Replace the entire sublot if the irregularities are greater than 40% of the sublot area.

Lime or an approved anti-stripping agent must be used when crushed gravel is utilized to meet a SAC "A" requirement.

When using RAP or RAS, include the management methods of processing, stockpiling, and testing the material in the QCP submitted for the project. If RAP and RAS are used in the same mix, the QCP must document that both of these materials have dedicated feeder bins for each recycled material. Blending of RAP and RAS in one feeder bin or in a stockpile is not permitted.

Asphalt content and binder properties of RAP and RAS stockpiles must be documented when recycled asphalt content greater than 20% is utilized.

No RAS is allowed in surface courses.

Department approved warm-mix additives is required for all surface mix application when RAP is used. Dosage rates will be approved during JMF approval.

The Hamburg Wheel Test will have a minimum rut depth of 3mm.

# ITEM 340/3078 & 341/3076 - DENSE-GRADED HOT-MIX ASPHALT

Use the SGC for design and production testing of all mixtures. Design all Dense-Graded Type D mixtures as a surface mix, maximum 15% RAP and no RAS.

When using substitute binders, mold specimens for mix design and production at the temperature required for the substitute binder used to produce the HMA.

The Hamburg Wheel minimum number of passes for PG 64 or lower is reduced to 7,000. The Engineer may accept Hamburg Wheel test results for production and placement if no more than 1 of the 5 most recent tests is below the specified number of passes and the failing test is no more than 2,000 passes below the specified number of passes.

#### ITEM 432 - RIPRAP

Mow strip riprap will be 4 in. and all other riprap will be 5 in. unless otherwise shown on the plans or in the pay items. Mow strip for cable barrier may be placed monolithically with the barrier foundations if using concrete in accordance with Item 543. Fiber reinforcement is not allowed except in mow strip for cable barrier if foundation and mow strip are placed monolithically.

Saw-cut existing riprap then epoxy 12 in. long No. 3 or No. 4 bars 6 in. deep at a maximum spacing of 18 in. in each direction to tie new riprap to existing riprap. This work is subsidiary.

For cement-stabilized riprap, provide Type A Grade 5 flexible base. Compressive strengths for Item 247 are waived.

SGT approach taper, paid using mow strip item, shall be installed using concrete, flexible base coated with SS-1 at a rate of 0.12 GAL/SY, or HMA Type B/C/D. Placement shall be ordinary compaction and does not require placement using an asphalt paver.

# ITEM 462 - CONCRETE BOX CULVERTS AND DRAINS

Install as directed in plans and maintain positive drainage at all times.

# ITEM 464 – REFINFORCED CONCRETE PIPE

Furnish and install reinforced concrete pipe, materials for precast concrete pipe culverts, or precast concrete storm drain mains, laterals, stubs, and inlet leads. Install as directed in plans and maintain positive drainage at all times.

# ITEM 467 - SAFETY END TREATMENT

Field adjust pipe end to maintain the necessary slope. Field cutting of pipe end is allowed. Coat all metal field cuts or exposed reinforcement with asphalt paint.

#### **ITEM 496 - REMOVING STRUCTURES**

Submit a demolition plan to the Engineer. Have the plan signed and sealed by a licensed professional engineer when the structure will continue to accommodate traffic after removal has begun and the removal impacts any part of the structure below the deck or riding surface. If applicable, the plan must detail requirements for meeting the U.S. Army Corps of Engineers' Section 404 Permit. The demolition plan must detail handling of roadway and waterway traffic. Waterway traffic must be maintained at all times unless a closure is approved by the Engineer.

No debris is allowed to fall into a body of water. Debris that falls into the water must be removed at the end of each workday. Debris that falls into the floodway must be removed at the end of each work week or prior to a rain event.

#### **ITEM 500 - MOBILZATION**

Establish and remove offices, plants, and facilities. Move personnel, equipment, and supplies to and from the project or the vicinity of the project site to begin work or complete work on Contract Items. Bonds and insurance are required for performing mobilization. For Contracts with emergency mobilization, provide a person and method of contact available 24 hrs. a day, 7 days a week unless otherwise shown on the plans. The time of notice will be the transmission time of the written notice or notice provided orally by the Department's representative

#### ITEM 502 - BARRICADES, SIGNS, AND TRAFFIC HANDLING

		Table 1	
Roadway	Limits		Allowable Closure Time
Darden Hill	At Sawyer Ranch Road		8 P to 5 A

Darden Hill closure times, nighttime lane closures will be allowed from 8 P to 5 A. Unless stated, daytime or Friday night lane closures will not be allowed and one lane in each direction will remain open at all times for all roadways.

Two lanes closed on IH 35 allowed to begin at 9 P for main lane (shoulder work not included) hot mix overlay or pavement repair operations (does not include bridge joint work).

No closures will be allowed on the weekends, working day prior, and working day after the National Holidays defined in the Standard Specifications, Good Friday, and Easter weekend. Closures the Sunday of the Super Bowl will not be allowed from 1 P to 11 P. All lanes will be open by noon of the day before these special events.

To account for directional traffic volumes, begin and end times of closures may be shifted equally by the Engineer. The closure duration will remain. Added compensation is not allowed.

Submit an emailed request for a lane closure (LCN) to County. The email will be submitted in the format provided. Receive concurrence prior to implementation. Submit a cancellation of lane closures a minimum of 18 hours prior to implementation. Blanket requests for extended periods are not allowed. Max duration of a request is 2 weeks prior to requiring resubmittal.

Provide 2 hour notice prior to implementation and immediately upon removal of the closure.

For roadways listed in Table 1: Submit the request 96 hours prior to implementation.

For roadways not listed in Table 1: Submit the request a minimum of 48 hours prior to the closure and by the following deadline immediately prior to the closure: 11A on Tuesday or 11A on Friday. For all roadways: Submit request for traffic detours and full roadway closures 168 hours prior to implementation. Submit request for nighttime work 96 hours to implementation date.

Cancellations of accepted closures (not applicable to full closures or detours) due to weather will not require resubmission in accordance with the above restrictions if the work is completed during the next allowable closure time.

Closures that conflict with adjacent contractor will be prioritized according to critical path work per latest schedule. Conflicting critical path or non-critical work will be approved for first LCN submitted. Denial of a closure due to prioritization or other reasons will not be reason for time suspension, delay, overhead, etc.

Cover, relocate or remove existing signs that conflict with traffic control. Install all permanent signs, delineation, and object markers required for the operation of the roadway before opening to traffic. Use of temporary mounts is allowed or may be required until the permanent mounts are installed or not impacted by construction. Maintain the temporary mounts. This work is subsidiary.

Meet with the Engineer prior to lane closures to ensure that sufficient equipment, materials, devices, and workers will be used. Take immediate action to modify traffic control, if at any time the queue becomes greater than 20 minutes. Have a contingency plan of how modification will occur. Consider inclement weather prior to implementing the lane closures. Do not set up traffic control when the pavement is wet.

Place a 28-inch cone, meeting requirements of BC (10), on top of foundations that have protruding studs. This work is subsidiary.

Edge condition treatment types must be in accordance with the TxDOT standard. Installation and removal of a safety slope is subsidiary.

To determine a speed limit or an advisory speed limit, submit a request to TxDOT 60 business days prior to manufacture of the sign.

For non-site specific signal projects, 2 months of barricades will be paid per work order location.

The Contractor Force Account "Safety Contingency" that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor's Responsible Person based on weekly or more frequent traffic management reviews on the project. The Engineer may choose to use existing bid items if it does not slow the implementation of enhancement.

# **ITEM 506 - TEMPORARY EROSION, SEDIMENTATION, AND ENV CONTROLS**

Install, maintain, remove erosion, sedimentation and environmental control measures in areas of the right of way utilized by the contractor that are outside the limits of disturbance required for construction. Permanently stabilize the area. This work is subsidiary.

#### **ITEM 508 – CONSTRUCTING DETOURS**

Detour typical section must match the adjacent roadway section, unless shown on the plans.

Flexible base will be Type A Grade 5 placed using ordinary compaction. Base compressive strengths are waived for roadways not listed in Item 502, Table 1.

#### ITEM 528, 531, & 536 – MISCELLANEOUS CONSTRUCTION

Reinforcement will be in accordance with Item 432.3.1 unless shown on the plans. Fiber reinforcement is not allowed. Class A and B Concrete are allowed to use Coarse Aggregate Grades 1-8. Expansion joints will be placed every 40 ft. Expansion joints must be 1" wide asphalt board and flush with the surface. The bottom of the joint shall be at half the depth of the concrete. Sidewalk cross slope must not exceed 1.5%.

Unless shown on the plans or in the pay items, all concrete will be 5 in. thick and have 2 in. sand, base, or RAP bedding. Furnish base meeting the requirement for any type or grade in accordance with Item 247. Base compressive strengths are waived. RAP must be 100% passing a 1 in. sieve. Bedding must be placed using ordinary compaction.

If roots are encountered verify with the Engineer prior to accommodating or removing 2 in. diameter or larger roots. Root removal must be in accordance with Item 752.4.2. Roots may remain in the bedding or base. For improvements within 6 in. of a root, the concrete thickness may be reduced by 1 in. and the bedding increased by 1 in. to minimize impacts to the roots. Adjust bedding and surface profile to provide a 1 in. bedding cushion around the roots. The surface profile may be adjusted to the extent allowed by ADA. This work is subsidiary.

# ITEM 528 - COLORED TEXTURED CONCRETE AND LANDSCAPE PAVERS

Unless shown on the plans, concrete and pavers shall use a 90-degree herringbone pattern with 8 in. x 4 in. Pavestone Holland series or equivalent with adjacent sidewalks banded with a soldier course. Concrete or paver shall be terra cotta finish. Concrete shall have an antique finish attained by application of Scofield Lithochrome color hardener A-29 and A-57 as the release agent or equivalent. Concrete shall be sealed with a clear sealer provided by the color manufacturer. Paver

joint-filling sand shall be tan colored polymeric sand. Expansion joint material shall not be used between pavers and adjacent concrete.

#### ITEM 530 – INTERSECTIONS, DRIVEWAYS, AND TURNOUTS

Notify property owners a minimum of 48 hr. in advance of beginning work on their driveway. Provide a list of each notification and contact prior to each closure. Only close driveways for reconstruction if duration and alternate access are approved. Install and maintain material across a work zone as temporary access. Temporary access must not have grade breaks that exceed 8%. This work is subsidiary.

Grade breaks must not exceed 8%. Sidewalk crossing slope will be 1.5% and 5 ft. wide with width reduction in approved locations.

For ACP or SURF TREAT, the pavement structure will match the adjacent roadway unless detailed on the plans. HMA, including surface, may use a maximum allowable amount of 40% RAP and 5% RAS for private driveways, public driveways for 2-lane roadways or smaller, and turnouts. Blending of 2 or more sources is allowed. Furnish base meeting the requirement for any type or grade in accordance with Item 247. Compressive strengths for flexible base are waived. Base must be placed using ordinary compaction.

For CONC, the pavement structure will be 6 in. thick and have 3 in. base bedding unless detailed on the plans. Furnish base meeting ACP or SURF TREAT requirements. Class A concrete is required and may use Coarse Aggregate Grades 1-8. Expansion joints will be placed every 20 ft.

Expansion joints will be constructed as detailed in the latest TxDOT Concrete Curb and Curb and Gutter Standard. Reinforcement will be in accordance with concrete riprap for Item 432.3.1., unless specified on the plans.

#### **ITEM 531 SIDEWALKS**

Construct hydraulic cement concrete sidewalks

Shape and compact subgrade, foundation, or pavement surface to the line, grade, and cross-section shown on the plans. Lightly sprinkle subgrade or foundation material immediately before concrete placement. Hand-tamp and sprinkle foundation when placement is directly on subgrade or foundation materials. Remove and dispose of existing concrete in accordance with Item 104, "Removing Concrete." Provide a clean surface for concrete placement directly on the surface material or pavement. Mix and place concrete in accordance with the pertinent Items. Hand-finishing is allowed for any method of construction. Finish exposed surfaces to a uniform transverse broom finish surface. Curb ramps must include a detectable warning surface and conform to details shown on the plans. Install joints as shown on the plans. Ensure that abrupt changes in sidewalk elevation do not exceed 1/4 in., sidewalk cross slope does not exceed 2%, curb ramp grade does not exceed 8.3%, and flares adjacent to the ramp do not exceed 10% slope. Ensure that the sidewalk depth and reinforcement are not less than the driveway cross-sectional details shown on the plans where a sidewalk crosses a concrete driveway.

#### ITEM 600s & 6000s - ITS, LIGHTING, SIGNING, MARKINGS, AND SIGNALS

Meet the requirements of the NEC, Texas MUTCD, TxDOT standards, and TxDOT Standard Specifications. Notify the Engineer if existing elements to remain do not meet code or specification.

Contractor shall provide all service, equipment and material required to provide a functional item and interface with existing equipment and software.

#### ITEM 644 – SMALL ROADSIDE SIGN ASSEMBLIES

Triangular slip base that use set screws to secure the post will require 1 of the set screws to penetrate the post by drilling a hole in the post at the location of the screw. All set screws shall be treated with anti-seize compound.

#### **ITEM 662 - WORK ZONE PAVEMENT MARKINGS**

Notify the Engineer at least 24 hours in advance of work for this item.

Maintain removable and short-term markings daily. Remove within 48 hours after permanent striping has been completed.

Item 668 is not allowed for use as Item 662.

#### **ITEM 666 - RETROREFLECTORIZED PAVEMENT MARKINGS**

Notify the Engineer at least 24 hr. before beginning work.

Place longitudinal markings nightly for IH 35 main lanes or roadways with AADT greater than 100,000. Use of temporary flexible reflective roadway marker tabs is subsidiary and at the Contractor's option. Replace missing or damaged tabs nightly. If using tabs, place longitudinal markings weekly by 5 AM Friday for all weekday work and by 5 AM Monday for all weekend work. Failure to maintain tabs or place longitudinal markings by deadline will require nightly placement of longitudinal markings.

Place longitudinal markings no later than 7 calendar days after placement of the surface for roadways with AADT greater than 20,000.

When the raised portion of a profile marking is placed as a separate operation from the pavement marking, the raised portion must be placed first then covered with TY I.

When using black shadow to cover existing stripe apply a non-retroreflective angular abrasive bead drop. The marking color shall be adjusted to resemble the pavement color. If Item 677 is not used prior to placement of black shadow, scrape the top of the marking with a blade or large piece of equipment unless surface is a seal coat. The scraping of the marking is subsidiary.

#### **ITEM 677 - ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS**

Dispose of removed materials and debris at locations off the right of way.

Elimination using a pavement marking will not be allowed in lieu of methods listed in specification.

Remove pavement markings on concrete surfaces by a blasting method. Flail milling will be allowed when total quantity of removal on concrete surfaces is less than 1000 ft.

Strip seal is only method allowed on seal coat surface unless project includes placement of a new surface. If total quantity of removal on a seal coat surface is less than 2000 ft., elimination using a pavement marking is allowed if a test section is approved by the Engineer. Test section shall demonstrate the thermo marking color matches the existing pavement color.

Remove pavement markings outside the limits of the new surface by a blasting method.

Use a TRAIL or a non-retroreflective paint to cover stripe remnants that remain after elimination. The test requirements for these materials are waived. The paint color shall be adjusted to resemble the existing pavement color. Installation and maintenance is subsidiary.

#### **ITEM 1004 – TREE PROTECTION**

Install tree protection as shown on the plans or as directed. Use construction methods in accordance with the plans.

# SECTION 13 TECHNICAL SPECIFICATIONS

#### HAYS COUNTY GOVERNING SPECIFICATIONS

#### (STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS)

WHERE DISCREPANCIES OCCUR BETWEEN THE TECHNICAL SPECIFICATIONS, THE FOLLOWING DESCENDING ORDER OF PRIORITY SHALL GOVERN: (1) SPECIAL CONDITIONS, (2) SPECIAL PROVISIONS TO SPECIAL SPECIFICATIONS, (3) SPECIAL SPECIFICATIONS, (4) SPECIAL PROVISIONS, AND (5) STANDARD SPECIFICATIONS.

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION NOVEMBER 1, 2014. STANDARD SPECIFICATIONS ARE INCORPORATED INTO THE CONTRACT BY REFERENCE.

#### ITEMS 1L – 9L GENERAL REQUIRMENTS AND COVENANTS

- ITEM 100 PREPARING RIGHT OF WAY (103)
- ITEM 105 REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT
- ITEM 110 EXCAVATION (132)
- ITEM 132 EMBANKMENT (100)(160)(204)(210)(216)(260)(400)
- ITEM 152 ROAD GRADER WORK (110)(132)(150)(154)(156)
- ITEM 160 TOPSOIL (168)
- ITEM 162 SODDING FOR EROSION CONTROL (166)(168)
- ITEM 164 SEEDING FOR EROSION CONTROL (162)(166)(168)
- ITEM 169 SOIL RETENTION BLANKETS
- ITEM 216 PROOF ROLLING (210)
- ITEM 260 LIME TREATMENT (ROAD-MIXED) (105)(132)(204)(210)(216)(247)(300)(310)(520)
- ITEM 292 ASPHALT TREATMENT (PLANT-MIXED) (300)(301)(320)(520)(585)
- ITEM 310 PRIME COAT (300)(316)
- ITEM 340DENSE-GRADED HOT-MIX ASPHALT (SMALL QUANTITY) (300)(301)(320) (520)(585)ITEM 462CONCRETE BOX CULVERTS AND DRAINS (400)(402)(403)(420)(421)(422)(424)
- ITEM 462 CONCRETE BOX CULVERTS AND DRAINS (400)(402)(403)(420)(421)(422)(424) (440)(464)(476)
- ITEM 464 REINFORCED CONCRETE PIPE (400)(402)(403)(467)(476)
- ITEM 467 SAFETY END TREATMENT (400)(420)(421)(432)(440)(442)(445)(460)(464)
- ITEM 496 REMOVING STRUCTURES
- ITEM 500 MOBILIZATION
- ITEM 502 BARRICADES, SIGNS AND TRAFFIC HANDLING (009)
- ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS (161)(432)(556)
- ITEM 508 CONSTRUCTING DETOURS (007)
- ITEM 528 COLORED TEXTURED CONCRETE AND LANDSCAPE PAVERS (132)(247)(275)(401) (420)(421)(440)
- ITEM 529 CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER (360)(420) (421)(440)
- ITEM 530 INTERSECTIONS, DRIVEWAYS, AND TURNOUTS (247)(260)(263)(275)(276)(292)(316) (330)(334)(340)(360)(421)(440)
- ITEM 531 SIDEWALKS (104)(360)(420)(421)(440)(530)
- ITEM 552 WIRE FENCE (445)(492)
- ITEM 644 SMALL ROADSIDE SIGN ASSEMBLIES (421)(440)(441)(442)(445)(636)(643)(656)
- ITEM 662 WORK ZONE PAVEMENT MARKINGS (666)(668)(672)(677)
- ITEM 666 REFLECTORIZED PAVEMENT MARKINGS (009)(316)(318)(502)(662)(677)(678)
- ITEM 677 ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS (300)(302) (316)

STANDARD SPECIFICATIONS MANUAL CITY OF AUSTIN, TEXAS CODIFIED THROUGH RULE NO. R161-21.12, ENACTED JUNE 17, 2021 (SUPP. NO. 7-2021)

WHEREVER, IN THE CITY OF AUSTIN STANDARD SPECIFICATIONS, REFERENCE IS MADE TO THE CITY OF AUSTIN AND ITS REPRESENTATIVES, SUCH REFERENCE SHALL BE TAKEN TO MEAN HAYS COUNTY AND ITS REPRESENTATIVES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL TESTING REQUIRED BY THE STANDARD SPECIFICATIONS, INCLUDING THAT WHICH IS ATTRIBUTED TO THE CITY FO AUSTIN AND ITS REPRESENTATIVES.

ITEM NO. 509SEXCAVATION SAFETY SYSTEMS 9-26-12ITEM NO. 510PIPE 12-8-18ITEM NO. 511SWATER VALVES 9-26-12ITEM NO. 604SSEEDING FOR EROSION CONTROL 6-17-21ITEM NO. 642SSILT FENCE 9-1-11

TEXAS DEPARTMENT OF TRANSPORTATION SPECIAL PROVISIONS: THE CONTENT OF THE SPECIAL PROVISIONS ARE INCLUDED ON THE FOLLOWING PAGES.

SPECIAL PROVISION TO ITEM 000	(000HC01)
SPECIAL PROVISION TO ITEM 000	(000HC03)
SPECIAL PROVISION TO ITEM 000	(0001243)
SPECIAL PROVISION TO ITEM 008	(008HC01)
SPECIAL PROVISION TO ITEM 008	(008HC03)
SPECIAL PROVISION TO ITEM 009	(009HC01)
SPECIAL PROVISION TO ITEM 132	(132002)
SPECIAL PROVISION TO ITEM 340	(340004)
SPECIAL PROVISION TO ITEM 462	(462002)
SPECIAL PROVISION TO ITEM 464	(464001)
SPECIAL PROVISION TO ITEM 502	(502008)
SPECIAL PROVISION TO ITEM 506	(506002)
SPECIAL PROVISION TO ITEM 506	(506005)
SPECIAL PROVISION TO ITEM 552	(552001)
SPECIAL PROVISION TO ITEM 666	(666007)

TEXAS DEPARTMENT OF TRANSPORTATION SPECIAL SPECIFICATIONS: THE CONTENT OF THE SPECIAL SPECIFICATIONS ARE INCLUDED ON THE FOLLOWING PAGES.

SPECIAL SPECIFICATION ITEM 1004 TREE PROTECTION

GENERAL: THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-LISTED SPECIFICATION ITEMS AND INCLUDING THE SPECIAL PROVISIONS AND SPECIAL SPECIFICATIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFICATIONS FOR THIS PROJECT.
# Item 1L Abbreviations and Definitions



## 1. APPLICABILITY

Wherever the following terms are used in these specifications or other Contract documents, the intent and meaning will be interpreted as shown below.

## 2. ABBREVIATIONS

AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standard Committee, Inc.
AMRL	AASHTO Materials Reference Laboratory
ANLA	American Nursery and Landscape Association
ANSI	American National Standards Institute
APA	The Engineered Wood Association
API	American Petroleum Institute
APWA	American Public Works Association
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASBI	American Segmental Bridge Institute
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASTM	American Society for Testing and Materials
AWC	American Wood Council
AWG	American Wire Gage
AWPA	American Wood Protection Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BMP	Best Management Practices
CFR	Code of Federal Regulations
CMP	Corrugated Metal Pipe
COE	U.S. Army Corps of Engineers
CRSI	Concrete Reinforcing Steel Institute
DBE	Disadvantaged Business Enterprise
DMS	Departmental Material Specification
EIA	Electronic Industries Alliance
EPA	United States Environmental Protection Agency
FHWA	Federal Highway Administration, U.S. Department of Transportation
FSS	Federal Specifications and Standards (General Services Administration)
GSA	United States General Services Administration
HUB	Historically Underutilized Business
ICEA	Insulated Cable Engineers Association

IEEE	Institute of Electrical and Electronics Engineers				
IESNA	Illuminating Engineering Society of North America				
IMSA	International Municipal Signal Association				
ISO	International Organization for Standardization				
ITS	Intelligent Transportation System				
ITF	Institute of Transportation Engineers				
IG	Local Government				
l RFD	Load and Resistance Factor Design				
MASH	Manual for Assessing Safety Hardware				
MPI	Material Producer List (TxDOT document)				
NCHRP	National Cooperative Highway Research Program				
NCR	Nonconformance Report (TxDOT form)				
NEC	National Electrical Code (Published by NEPA)				
NEMA	National Electrical Manufacturers Association				
NEPA	National Environmental Policy Act				
NESC	National Electrical Safety Code				
NEDO	National Fire Protection Association				
MIST	National Institute of Standards and Technology				
NRM	Nonhazardous Recyclable Material				
	National Ready Mixed Concrete Association				
NSRA	National Steel Bridge Alliance				
NTPEP	National Transportation Product Evaluation Program				
	Occupational Safety & Health Administration 11 S. Department of Labor				
	Portland Cement Association				
	Precast/Prestressed Concrete Institute				
DE	Professional Engineer				
DDI	Plastics Pine Institute				
DS&F	Plans Specifications and Estimates				
	Project-Specific Location				
PTI	Post-Tension Institute				
$\cap \Delta$	Quality Assurance				
	Quality Control				
RCP	Dainforced Concrete Pine				
	Pogistored Dublic Land Surveyor				
DDC	Pailroad Commission of Toyas				
SBE	Small Rusiness Enternrise				
SEDA	Southorn Forost Droducts Association				
SEL	International System of Units				
	Southorn Ding Inspection Purcou				
SPID	The Society for Distoctive Costings				
	Toyas Administrative Code				
	Texas Authinisi alive Coue Toxas Commission on Environmental Quality				
	Texas Commission on Environmental Quality				
TOC	Texas Department of Licensing and Regulation				
	Toxas Manual on Uniform Traffic Control Dovicos				
	Texas Department of Transportation				
	Inderwriters Laberatory Inc.				
	Unider Writers Laburatury, IIIC.				
	Wire Deinforcement Institute				
	Western Wood Droducts Accordiation				
VVVPA	Western wood Products Association				

## 3. DEFINITIONS

3.1. Abrasive Blasting. Spraying blasts of pressurized air combined with abrasive media.

- 3.2. Actual Cost. Contractor's actual cost to provide labor, material, equipment, and project overhead necessary for the work.
- 3.3. Addendum. Change in bid documents developed between advertising and bid submittal deadline.
- 3.4. Additive Alternate. A bid item contained in the bid documents that is not a regular item or a replacement alternate bid item. The additive alternate items include work that may be added to the base bid work.
- 3.5. **Deductive Alternate.** A bid item contained in the bid documents that is not a regular item or a replacement alternate bid item. The deductive alternate items include work that may be deducted from the base bid work.
- 3.6. Advertisement. The public announcement required by law inviting bids for work to be performed or materials to be furnished.
- 3.7. Affiliates. Two or more firms are affiliated if they share common officers, directors, or stockholders; a family member of an officer, director, or stockholder of one firm serves in a similar capacity in another of the firms; an individual who has an interest in, or controls a part of, one firm either directly or indirectly also has an interest in, or controls a part of, another of the firms; the firms are so closely connected or associated that one of the firms, either directly or indirectly or a part of, another of the firms; the firms are so closely connected or associated that one of the firms, either directly or indirectly, controls or has the power to control another firm; one firm controls or has the power to control another of the firms; or the firms are closely allied through an established course of dealings, including, but not limited to, the lending of financial assistance.
- 3.8. Air Blasting. Spraying blasts of pressurized air free of oil and moisture.
- 3.9. Air Temperature. The temperature measured in degrees Fahrenheit (°F) in the shade, not in the direct rays of the sun, and away from artificial heat.
- 3.10. Anticipated Profit. Profit for work not performed.
- 3.11. **Apparent Low Bidder**. The Bidder determined to have the numerically lowest total bid as a result of the tabulation of bids by the Owner.
- 3.12. Architect of Record. A person registered as an architect or licensed as a landscape architect, in accordance with State law, exercising overall responsibility for the design or a significant portion of the design and performs certain Contract administration responsibilities as described in the Contract; or a firm employed by the Owner to provide professional architectural services.
- 3.13. Arterial Highway. A highway used primarily for through traffic and usually on a continuous route.
- 3.14. **Notice of Award**. The Owner's acceptance of a Contractor's bid for a proposed Contract that authorizes the Owner to enter into a Contract.
- 3.15. Base Bid. The total bid amount without additive alternates.
- 3.16. **Bid**. The offer from the Bidder for performing the work described in the bid documents, submitted on the prescribed bid form, considering addenda issued and giving unit bid prices for performing the work described in the bid documents.
- 3.17. **Bid Bond**. The security executed by the Contractor and the Surety furnished to the Owner to guarantee payment of liquidated damages if the Contractor fails to enter into an awarded Contract.
- 3.18. **Bid Documents.** The complete set of documents necessary for a Bidder to submit a bid. The documents may include plans, specifications, special specifications, special provisions, addenda, and the prescribed form a Bidder is to submit as the Bid. Other terms used may include general conditions, proposal, instructions to bidders, and construction specifications.

- 3.19. Bid Error. A mathematical mistake made by a Bidder in the unit price entered into the bid documents.
- 3.20. **Bid Form.** The portion of the bid documents that a prospective Bidder must submit to the Owner for their bid to be considered.
- 3.21. **Bidder**. An individual, partnership, limited liability company, corporation, or joint venture submitting a bid for a proposed Contract.
- 3.22. Blast Cleaning. Using one of the blasting methods, including, but not limited to, water blasting, low-pressure water blasting, abrasive blasting, water-abrasive blasting, shot blasting, slurry blasting, water injected abrasive blasting, and brush blasting.
- 3.23. **Bridge**. A structure, including supports, erected over a depression or an obstruction (e.g., water, a highway, or a railway) having a roadway or track for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 ft. between faces of abutments, spring lines of arches, or extreme ends of the openings for multiple box culverts.
- 3.24. Brush Blasting. Sweeping lightly with an abrasive blast to remove loose material.
- 3.25. **Building Contract**. A Contract entered under State law for the construction or maintenance of an Owner building or appurtenance facilities. Building Contracts are considered to be construction Contracts.
- 3.26. Certificate of Insurance. A form approved by the Owner covering insurance requirements stated in the Contract.
- 3.27. Change Order. Written order to the Contractor detailing changes to the specified work, item quantities or any other modification to the Contract.
- 3.28. **Concrete Construction Joint**. A joint formed by placing plastic concrete in direct contact with concrete that has attained its initial set.
- 3.29. Concrete Repair Manual. TxDOT manual specifying methods and procedures for concrete repair as an extension of the standard specifications.
- 3.30. **ConcreteWorks**[©]. TxDOT-owned software for concrete heat analysis. Software is available on the TxDOT's website.
- 3.31. **Construction Contract**. A Contract entered under State law for the construction, reconstruction, or maintenance of a segment of the transportation system.
- 3.32. **Consultant**. The licensed professional engineer or engineering firm, or the architect or architectural firm, registered in the State of Texas and under Contract to the Owner to perform professional services. The consultant may be the Engineer or architect of record or may provide services through and be subcontracted to the Engineer or architect of record.
- 3.33. **Contract**. The agreement between the Owner and the Contractor establishing the obligations of the parties for furnishing of materials and performance of the work prescribed in the Contract documents.
- 3.34. **Contract Documents**. Elements of the Contract, including, but not limited to, the plans, specifications incorporated by reference, special provisions, special specifications, Contract bonds, change orders, addendums, and supplemental agreements.
- 3.35. **Contract Time**. The number of days specified for completion of the work, including authorized additional working days.

- 3.36. **Contractor**. The individual, partnership, limited liability company, corporation, or joint venture and all principals and representatives with which the Contract is made by the Owner.
- 3.37. **Controlled Access Highway**. Any highway to or from which access is denied or controlled, in whole or in part, from or to abutting land or intersecting streets, roads, highways, alleys, or other public or private ways.
- 3.38. **Control of Access**. The condition in which the right to access of owners or occupants of abutting land or other persons in connection with a highway is fully or partially controlled by public authority.
- 3.39. **Control Point**. An established point shown on the plans to provide vertical and horizontal references for geometric control for construction.
- 3.40. **Cross-Sections**. Graphic representations of the original ground and the proposed facility, at right angles to the centerline or base line.
- 3.41. **Culvert**. Any buried structure providing an opening under a roadway for drainage or other purposes. Culverts may also be classified as bridges. (See Section 1.3.23., "Bridge.")
- 3.42. Cycle. The activity necessary for performing the specified work within the right of way project limits once.
- 3.43. **Daily Road-User Cost**. Damages based on the estimated daily cost of inconvenience to the traveling public resulting from the work.
- 3.44. **Date of Written Authorization**. Date of the written Notice to Proceed authorizing the Contractor to begin work.
- 3.45. **Debar (Debarment)**. Action taken by the Owner, State, or federal government pursuant to regulation that prohibits a person or company from entering into a Contract, or from participating as a subcontractor, or supplier of materials or equipment used in a highway improvement Contract as defined in local, state, or federal law.
- 3.46. **Detour**. A temporary traffic route around a closed portion of a road.
- 3.47. **Department**. When used in the context of the party with whom the Contractor has a Construction Contract, Department refers to Owner. When used in other contexts such as technical specifications, refers to the Texas Department of Transportation.
- 3.48. **Departmental Material Specifications**. Reference specifications for various materials published by TxDOT's Construction Division with a DMS-XXXXX numbering system.
- 3.49. **Direct Traffic Culvert**. Concrete box culvert whose top slab is used as the final riding surface or is to have an overlay or other riding surface treatment.
- 3.50. **Disadvantaged Business Enterprise**. A small business certified through the Texas Unified Certification Program in accordance with 49 CFR Part 26, that is at least 51% owned by one or more socially and economically disadvantaged individuals, or in the case of a publicly owned business, in which is at least 51% of the stock is owned by one or more socially and economically disadvantaged individuals, and whose management and daily business operations are controlled by one or more of the individuals who own it.
- 3.51. **Divided Highway**. A highway with separate roadways intended to move traffic in opposite directions.
- 3.52. **Easement**. A real property right acquired by one party to use land belonging to another party for a specified purpose.
- 3.53. Engineer. The Professional Engineer licensed in Texas who represents the interests of the Owner.

- 3.54. Entity. Political subdivision for which the project is designed and constructed. Either a Municipality (City) or a County or other entity organized under the authority of State of Texas statutes. May also be referred to as an **Owner**.
- 3.55. **Expressway**. A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at intersections.
- 3.56. Family Member. A family member of an individual is the individual's parent, parent's spouse, step-parent, step-parent's spouse, sibling, sibling's spouse, spouse, child, child's spouse, spouse's child, spouse's child's spouse, grandchild, grandparent, uncle, uncle's spouse, aunt, aunt's spouse, first cousin, or first cousin's spouse.
- 3.57. **Force Account**. Payment for directed work based on the actual cost of labor, equipment, and materials furnished with markups for project overhead and profit.
- 3.58. **Freeway**. An expressway with full control of access.
- 3.59. Frontage Road. A local street or road auxiliary to and located along an arterial highway for service to abutting property and adjacent areas and for control of access (sometimes known as a service road, access road, or insulator road).
- 3.60. Hazardous Materials or Waste. Hazardous materials or waste include, but are not limited to, explosives, compressed gas, flammable liquids, flammable solids, combustible liquids, oxidizers, poisons, radioactive materials, corrosives, etiologic agents, and other material classified as hazardous by 40 CFR 261, or applicable state and federal regulations.
- 3.61. High-Pressure Water Blasting. Water blasting with pressures between 5,000 and 10,000 psi.
- 3.62. **Highway, Street, or Road**. General terms denoting a public way for purposes of vehicular travel, including the entire area within the right of way. Recommended usage in urban areas is highway or street; in rural areas, highway or road.
- 3.63. Historically Underutilized Business. A corporation, sole proprietorship, partnership, or joint venture formed for the purpose of making a profit certified by the Texas Comptroller of Public Accounts, and 51% owned by one or more persons who are economically disadvantaged because of their identification as members of certain groups, including African Americans, Hispanic Americans, Asian-Pacific Americans, Native Americans, or women, and have a proportionate interest and demonstrate active participation in the control, operation, and management of the business' affairs. Individuals meeting the HUB definition are required to be residents of the State of Texas. Businesses that do not have their primary headquarters in the State of Texas are not eligible for HUB certification.
- 3.64. Incentive/Disincentive Provisions. An adjustment to the Contract price of a predetermined amount for each day the work is completed ahead of or behind the specified milestone, phase, or Contract completion dates. The amount of the incentive/disincentive is determined based on estimated costs for engineering, traffic control, delays to the motorists, and other items involved in the Contract.
- 3.65. **Independent Assurance Tests**. Tests used to evaluate the sampling and testing techniques and equipment used in the acceptance program. The tests are performed by the Owner or the Owner's representative and are not used for acceptance purposes.
- 3.66. **Inspector**. The person assigned by the Owner to inspect any or all parts of the work and the materials used for compliance with the Contract.
- 3.67. **Intelligent Transportation System**. An integrated system that uses video and other electronic detection devices to monitor traffic flows.

- 3.68. **Intersection**. The general area where 2 or more highways, streets, or roads join or cross, including the roadway and roadside facilities for traffic movements within it.
- 3.69. **Island**. An area within a roadway from which vehicular traffic is intended to be excluded, together with any area at the approach occupied by protective deflecting or warning devices.
- 3.70. **Joint Venture**. Any combination of individuals, partnerships, limited liability companies, or corporations submitting a single bid form.
- 3.71. Lane Rental. A method to assess the Contractor daily or hourly rental fees for each lane, shoulder, or combination of lanes and shoulders taken out of service.
- 3.72. Letting. The receipt, opening, tabulation, and determination of the apparent low Bidder.
- 3.73. Letting Official. The Owner representative empowered by the Owner to officially receive bids and close the receipt of bids at a letting.
- 3.74. Licensed Professional Engineer. A person who has been duly licensed by the Texas Board of Professional Engineers to engage in the practice of engineering in the State of Texas; also referred to as a Professional Engineer.
- 3.75. **Limits of Construction**. An area with established boundaries, identified within the highway right of way and easements, where the Contractor is permitted to perform the work.
- 3.76. **Local Street or Road**. A street or road primarily for access to residence, business, or other abutting property.
- 3.77. Low-Pressure Water Blasting. Water blasting with pressures between 3,000 and 5,000 psi.
- 3.78. **Major Item**. An item of work included in the Contract that has a total cost equal to or greater than 5% of the original Contract or \$100,000 whichever is less. A major item at the time of bid will remain a major item. An item not originally a major item does not become one through the course of the Contract.
- 3.79. Material Producer List. TxDOT-maintained list of approved products. Referenced as "Department's MPL".
- 3.80. **Materially Unbalanced Bid**. A bid that generates a reasonable doubt that award to the Bidder submitting a mathematically unbalanced bid will result in the lowest ultimate cost to the Owner.
- 3.81. **Mathematically Unbalanced Bid.** A bid containing bid prices that do not reflect reasonable actual costs plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs.
- 3.82. **Median**. The portion of a divided highway separating the traffic lanes in opposite directions.
- 3.83. **Milestone Date**. The date that a specific portion of the work is to be completed, before the completion date for all work under the Contract.
- 3.84. **Monolithic Concrete Placement**. The placement of plastic concrete in such manner and sequence to prevent a construction joint.
- 3.85. **National Holidays**. January 1, the last Monday in May, July 4, the first Monday in September, the fourth Thursday in November, and December 24 or December 25.
- 3.86. Nonhazardous Recyclable Material. A material recovered or diverted from the nonhazardous waste stream for the purposes of reuse or recycling in the manufacture of products that may otherwise be produced using raw or virgin materials.

3.87. Nonresident Bidder. A Bidder whose principal place of business is not in Texas. This includes a Bidder whose ultimate parent company or majority owner does not have its principal place of business in Texas. 3.88. **Nonresponsive Bid.** A bid that does not meet the criteria for acceptance contained in the bid documents. 3.89. Non-Site-Specific Contracts. Contracts in which a geographic region is specified for the work and for which work orders, with or without plans, further detail the limits and work to be performed. 3.90. Notice to Proceed, Written notification to the Contractor authorizing work to begin. 3.91. Notification. Either written or oral instruction to the Contractor concerning the work. Voice mail is oral notification. 3.92 **Owner**, Political subdivision for whom the project is designed and constructed. Either a Municipality (City), a County or other entity organized under the authority of State of Texas statutes. May also be referred to as an Entity. 3.93. Pavement. That part of the roadway having a constructed surface for the use of vehicular traffic. 3.94. Pavement Structure. Combination of surface course and base course placed on a subgrade to support the traffic load and distribute it to the roadbed. 3.94.1. Surface Course. Pavement structure layers designed to accommodate the traffic load. The top layer resists skidding, traffic abrasion, and the disintegrating effects of climate and is sometimes called the wearing course. 3.94.2. Base Course. One or more layers of specified material thickness placed on a subgrade to support a surface course. 3.94.3. Subgrade. The top surface of a roadbed upon which the pavement structure, shoulders, and curbs are constructed. 3.94.4. Subgrade Treatment. Modifying or stabilizing material in the subgrade. 3.95. Payment Bond. The security executed by the Contractor and the Surety, furnished to the Owner to guarantee payment of all legal debts of the Contractor pertaining to the Contract. 3.96. Performance Bond. The security executed by the Contractor and the Surety, furnished to the Owner to guarantee the completion of the work in accordance with the terms of the Contract. 3.97 Plans. The approved drawings, including true reproductions of the drawings that show the location, character, dimensions, and details of the work and are a part of the Contract. 3.98. Power of Attorney for Surety Bonds. An instrument under corporate seal appointing an attorney-in-fact to act on behalf of a Surety in signing bonds. 3.99. Qualification. The process for determining a Contractor's eligibility to be awarded a construction contract 3.100. **Prequalification**. The process for determining a Contractor's eligibility to bid work. 3.101. Prequalification Statement. The forms on which required information is furnished concerning the Contractor's ability to perform and finance the work. 3.102. **Pregualified Contractor.** A contractor that is approved to bid on TxDOT contracts by satisfying their Pregualification Process.

- 3.103. **Post Qualification**. The owner will determine if contractors are qualified to bid on the project after bids are open. The bid documents will identify the minimum requirements that contractor must meet to be qualified for the project. Unqualified contractors' bids will be considered non-responsive and not accepted.
- 3.104. **Project-Specific Location**. A material source, plant, waste site, parking area, storage area, field office, staging area, haul road, or other similar location either outside the project limits or within the project limits but not specifically addressed in the Contract.
- 3.105. **Proposal Guaranty**. The security furnished by the Bidder as a guarantee that the Bidder will enter into a Contract if awarded the work.
- 3.106. **Quality Assurance**. Sampling, testing, inspection, and other activities conducted by the Engineer to determine payment and make acceptance decisions.
- 3.107. **Quality Control**. Sampling, testing, and other process control activities conducted by the Contractor to monitor production and placement operations.
- 3.108. **Ramp**. A section of highway for the primary purpose of making connections with other highways.
- 3.109. **Referee Tests**. Tests requested to resolve differences between Contractor and Owner test results. The referee laboratory is the Owners.
- 3.110. **Regular Item**. A bid item contained in the bid documents and not designated as an additive alternate or replacement alternate bid item.
- 3.111. Rental Rate Blue Book for Construction Equipment. Publication containing equipment rental rates.
- 3.112. **Replacement Alternate**. A bid item identified on the bid documents that a Bidder may substitute for a specific regular item of work.
- 3.113. **Responsive Bid**. A bid that meets all requirements of the advertisement and the bid documents for acceptance.
- 3.114. Right of Way. A general term denoting land or property devoted to transportation purposes.
- 3.115. **Roadbed**. The graded portion of a highway prepared as foundation for the pavement structure and shoulders. On divided highways, the depressed median type and the raised median type highways are considered to have 2 roadbeds. Highways with a flush median are considered to have 1 roadbed. Frontage roads are considered separate roadbeds.
- 3.116. **Road Master**. A railroad maintenance official in charge of a division of railway.
- 3.117. **Roadside**. The areas between the outside edges of the shoulders and the right of way boundaries. Unpaved median areas between inside shoulders of divided highways and areas within interchanges are included.
- 3.118. **Roadway**. The portion of the highway (including shoulders) used by the traveling public.
- 3.119. Sandblasting, Dry. Spraying blasts of pressurized air combined with sand.
- 3.120. Sandblasting, Wet. Spraying blasts of pressurized water combined with sand.
- 3.121. **Shoulder**. That portion of the roadway contiguous with the traffic lanes for accommodation of stopped vehicles for emergency use or for lateral support of base and surface courses.
- 3.122. Shot Blasting. Spraying blasts of pressurized air combined with metal shot.

- 3.123. Sidewalk. Portion of the right of way constructed exclusively for pedestrian use.
- 3.124. Slurry Blasting. Spraying blasts of pressurized air combined with a mixture of water and abrasive media.
- 3.125. Special Provisions. Additions or revisions to these standard specifications or special specifications.
- 3.126. **Special Specifications**. Supplemental specifications applicable to the Contract not covered by these standard specifications.
- 3.127. **Specifications**. Directives or requirements issued or made pertaining to the method and manner of performing the work or to quantities and qualities of materials to be furnished under the Contract. References to DMSs, ASTM or AASHTO specifications, or TxDOT bulletins and manuals, imply the latest standard or tentative standard in effect on the date of the bid. The Owner will consider incorporation of subsequent changes to these documents in accordance with Item 4L, "Scope of Work."
- 3.128. **Small Business Enterprise**. A firm (including affiliates) whose annual gross receipts do not exceed the U.S. Small Business Administration's size standards for 4 consecutive years.
- 3.129. **State**. The State of Texas.
- 3.130. **State Holiday**. A holiday authorized by the State Legislature excluding optional state holidays and not listed in Section 1.3.85., "National Holidays." A list of state holidays can be found on the TxDOT's website.
- 3.131. Station. A unit of measurement consisting of 100 horizontal feet.
- 3.132. **Subcontract**. The agreement between the Contractor and subcontractor establishing the obligations of the parties for furnishing of materials and performance of the work prescribed in the Contract documents.
- 3.133. **Subcontractor**. An individual, partnership, limited liability company, corporation, or any combination thereof that the Contractor sublets, or proposes to sublet, any portion of a Contract, excluding a material supplier, a hauling firm hauling only from a commercial source to the project, truck owner-operator, wholly-owned subsidiary, or specialty-type businesses such as security companies and rental companies.
- 3.134. **Subsidiary**. Materials, labor, or other elements that because of their nature or quantity have not been identified as a separate item and are included within the items on which they necessarily depend.
- 3.135. **Substructure**. The part of the structure below the bridge seats, but not including bearings, drilled shafts, or piling. Parapets, back walls, wing walls of the abutments, and drainage structures are considered parts of the substructure.
- 3.136. **Superintendent**. The representative of the Contractor who is available at all times and able to receive instructions from the Owner or authorized Owner representatives and to act for the Contractor.
- 3.137. **Superstructure**. The part of the structure above the bridge seats or above the springing lines of arches and including the bearings. Flatwork construction may be considered superstructure.
- 3.138. **Supplemental Agreement**. Written agreement entered into between the Contractor and the Owner and approved by the Surety, covering alterations and changes in the Contract. A supplemental agreement is used by the Owner whenever the modifications include assignment of the Contract from one party to another or other cases as desired by the Owner.
- 3.139. **Surety**. The corporate body or bodies authorized to do business in Texas bound with and for the Contractor for the faithful performance of the work covered by the Contract and for the payment for all labor and material supplied in the prosecution of the work.
- 3.140. Surplus Materials. Any debris or material related to the Contract but not incorporated into the work.

- 3.141. **Suspension**. Action taken by the Owner, State, or federal government pursuant to regulation that prohibits a person or company from entering into a Contract, or from participating as a subcontractor, or supplier of materials or equipment used in a contract
- 3.142. Tex –XXX-X. TxDOT material test methods found on TxDOT's Construction Division Web Site.
- 3.143. **Traffic Lane**. The strip of roadway intended to accommodate the forward movement of a single line of vehicles.
- 3.144. **Traveled Way**. The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.
- 3.145. Truck Owner-Operator. An individual who owns and operates 1 truck for hire.
- 3.146. **UT-Bridge**. TxDOT-owned software for steel girder erection. Software is available on TxDOT's website.
- 3.147. UT-Lift. TxDOT-owned software for steel girder erection. Software is available on TxDOT's website.
- 3.148. Utility. Privately, publicly, or cooperatively owned lines, facilities, and systems for producing, transmitting, or distributing communications, power, heat, gas, oil, water, waste, or storm water that are not connected with the highway drainage, signal systems, or other products that directly or indirectly serve the public; the utility company.
- 3.149. Verification Tests. Tests used to verify accuracy of QC and QA and mixture design testing.
- 3.150. Water-Abrasive Blasting. Spraying blasts of pressurized water combined with abrasive media.
- 3.151. Water Blasting. Spraying blasts of pressurized water of at least 3,000 psi.
- 3.152. Water-Injected Abrasive Blasting. Abrasive blasting with water injected into the abrasive/air stream at the nozzle.
- 3.153. Wholly-Owned Subsidiary. A legal entity owned entirely by the Contractor or subcontractor.
- 3.154. **Work**. The furnishing of all labor, materials, equipment, and other incidentals necessary for the successful completion of the Contract.
- 3.155. Written Notice. Written notice is considered to have been duly given if delivered in person to the individual or member to whom it is intended or if sent by regular, registered, or certified mail and delivered to the last known business address; sent by facsimile to the last known phone number; or sent by e-mail to the last known address. The date of the letter will serve as the beginning day of notice. Unclaimed mail or failure to provide current mailing address will not be considered a failure to provide written notice.

## Item 2L Instructions to Bidders



## 1. INTRODUCTION

Instructions to the Contractor in these specifications are generally written in active voice, imperative mood. The subject of imperative sentences is understood to be "the Contractor." The Owner's responsibilities are generally written in passive voice, indicative mood. Phrases such as "as approved," "unless otherwise approved," "upon approval," "as directed," "as verified," "as ordered," and "as determined" refer to actions of the Engineer unless otherwise stated, and it is understood that the directions, orders, or instructions to which they relate are within the limitations of and authorized by the Contract.

## 2. ELIGIBILITY OF BIDDERS

Bidders on this project must be prequalified though TxDOT. Refer to TxDOT's web site for prequalification requirements. Assure prequalification documents are submitted to TxDOT at least 14 days before bid opening. Comply with all technical prequalification requirements in the bid documents.

## 3. ISSUING BID DOCUMENTS

Bid Documents may be obtained at from the websites:

www.bidnetdirect.com/hayscounty, http://www.txsmartbuy.com/sp, https://www.sanmarcostx.gov/Bids.aspx

At the time Bid Documents are obtained, Bidder must provide a working e-mail address, so as to receive any addenda or clarification issued by the Owner.

The Owner will not issue bid documents if one or more of the following apply:

- the Bidder is prohibited from rebidding a specific project due to a bid error on the original bid documents,
- the Bidder failed to enter into a Contract on the original award,
- the Bidder was defaulted or terminated on the original Contract, unless the Owner terminated for convenience, or
- the Bidder or a subsidiary or affiliate of the Bidder has received compensation from the Owner to participate in the preparation of the plans or specifications on which the bid or Contract is based.

## 4. INTERPRETING ESTIMATED QUANTITIES

The quantities listed in the bid documents are approximate and will be used for the comparison of bids. Payments will be made for actual quantities of work performed in accordance with the Contract.

## 5. EXAMINING DOCUMENTS AND WORK LOCATIONS

Examine the bid documents and specified work locations before submitting a bid for the work. Submitting a bid will be considered evidence that the Bidder has performed this examination. Borings, soil profiles, water elevations, and underground utilities shown on the plans were obtained for the use of the Owner in the preparation of plans. This information is provided for the Bidder's information only and the Owner makes no representation as to the accuracy of the data. Be aware of the difficulty of accurately classifying all material

encountered in making foundation investigations, the possible erosion of stream channels and banks after survey data have been obtained, and the unreliability of water elevations other than for the date recorded.

Oral explanations, instructions, or consideration for Contractor-proposed changes in the bid documents given during the bidding process are not binding. Only requirements included in the bid documents and Owner-issued addenda are binding. Request explanations of documents at least five(5) days prior to the bid opening.

Immediately notify the Owner of any error, omission, or ambiguity discovered in any part of the bid documents. The Owner will issue addenda when appropriate.

#### 6. PREPARING THE BID

Prepare the bid form furnished by the Owner. Informational bid forms printed from the Owner's website will not be accepted.

Specify a unit price in dollars and cents for each regular item, additive alternate item, deductive alternate item or replacement alternate item for which an estimated quantity is given.

When "Working Days" is an item, submit the number of working days to be used to complete the Contract or phases of the Contract.

The Owner will not accept an incomplete bid. A bid that has one or more of the deficiencies listed below is considered incomplete:

- the bid form was not signed,
- all certifications were not acknowledged,
- a regular item, additive alternate item or deductive alternate item is left blank,
- a regular item and the corresponding replacement alternate item are left blank,
- the bid form submitted had the incorrect number of items, or
- 5% Bid Bond,
- Vendor Reference Form.

## NONRESPONSIVE BID

7.

The Owner will not accept a nonresponsive bid. A bid that has one or more of the deficiencies listed below is considered nonresponsive:

- The bid was not in the hands of the Letting Official at the time and location specified in the advertisement.
- A bid was submitted for the same project by a Bidder or Bidders and one or more of its partners or affiliates.
- The bid form was signed by a person who was not authorized to bind the Bidder or Bidders.
- The bid guaranty did not comply with the requirements contained in this Item.
- The bid was in a form other than the official bid form issued by the Owner.
- The Bidder modified the bid in a manner that altered the conditions or requirements for work as stated in the bid documents.
- The Bidder bid more than the maximum or less than the minimum number of allowable working days when working days was an item.
- The Bidder did not meet the requirements of the technical qualification.
- The bidder is not prequalified by TxDOT
- The bidder does not meet the Owner's qualification requirements.
- 5% Bid Bond
- Vendor Reference Form

## 8. SUBMITTAL OF BIDS

- 8.1. Electronic Bids. When electronic bidding is available, the Bidder is responsible for taking the appropriate measures to submit a bid. These measures include, but are not limited to, acquiring hardware, software, and Internet connectivity needed for submitting a bid via the Owner's bidding system.
- 8.1.1. **Bid Form**. Use the electronic bid form in the Owner's bidding system. When regular bid items have corresponding replacement alternate items, select the bid item or group of items to be used for the bid tabulation. Acknowledge all addenda listed in the Owner's bidding system.

The electronic bid form may not contain the special provisions, special specifications, general notes, and other Contract documents. These documents are included by reference.

8.1.2. **Bid Guaranty**. Provide a bid guaranty in the amount indicated on the bid form. Use an electronic bid bond. Guaranty checks or printed bid bonds will not be accepted.

Use the most current version of the electronic bond accepted by the Owner. For a joint venture, the bond must be in the name of all joint venture participants. Enter the bond authorization code into the Owner's bidding system.

It is the Bidder's responsibility to ensure the electronic bid bond is issued in the name or names of the Bidder or Bidders.

- 8.1.3. Submittal of Bid. Submit the bid using the Owner's bidding system.
- 8.1.4. **Revising the Bid Form**. Make desired changes as allowed by the Owner's bidding system up until the time and date set for the opening of bids. The last bid submitted will be used for tabulation purposes.
- 8.1.5. Withdrawing a Bid. Submit an electronic or written request to withdraw a bid before the time and date set for the opening. The Owner will not accept oral requests. An electronic request must be made using the Owner's bidding system.

A written request must be signed and submitted to the Letting Official with proof of identification. The request must be made by a person authorized to bind the Bidder or Bidders. In the case of joint venture, the Owner will accept a request from any person authorized to bind a party to the joint venture. The Owner may require written delegation of authority to withdraw a bid when the individual sent to withdraw the bid is not authorized to bind the Bidder or Bidders.

- 8.2. Printed Bid.
- 8.2.1. **Bid Form**. Mark all entries in ink. As an alternative to hand writing the unit prices in the bid form, submit an electronic bid form.

When regular bid items have corresponding replacement alternate items, select the bid item or group of items to be used for the bid tabulation. Acknowledge all addenda by checking the appropriate box on the addendum acknowledgement page. Provide the complete and correct name of the Bidder submitting the bid. A person authorized to bind the Bidder must sign the bid form. In the case of a joint venture, provide the complete and correct name of all Bidders submitting the bid. In the case of a joint venture, the person signing the bid form must be authorized to bind all joint venture participants.

If a bid form contains both regular items for domestic steel or iron materials and replacement alternate items for foreign steel or iron materials, the Bidder must either:

- submit unit bid prices for domestic items only, or
- submit unit bid prices for both the domestic and foreign items.
- 8.2.2. **Bid Guaranty**. Provide a bid guaranty in the amount indicated on the bid documents. Use a printed bid bond. An electronic bid bond may be used as the guaranty. Ensure the electronic bid bond meets the requirements of Section 2.8.1.2., "Bid Guaranty," and submit the electronic bid bond with the printed bid.
- 8.2.3. **Bid Bond**. Use the bid bond form provided by the Owner. Submit the bid bond with the powers of attorney attached and in the amount specified. The bond must be dated on or before the date of the bid opening, bear the impressed seal of the Surety, and be signed by the Bidder or Bidders and an authorized individual of the Surety. As an alternative for joint venture Bidders, each of the Bidders may submit a separate bid bond completed as outlined in this section. Bid bonds will only be accepted from Sureties authorized to execute a bond under and in accordance with State law.
- 8.2.4. **Submittal of Bid**. Place the completed bid form and the bid guaranty in a sealed envelope marked to indicate the contents.

When submitting by mail or delivery service, place the envelope in another sealed envelope and address as indicated in the official advertisement or in the bid documents. It is the Bidder's responsibility to ensure that the sealed bid arrives at the location described on or before the time and date set for the bid opening. To be accepted, the bid must be in the hands of the Letting Official by that time of opening regardless of the method chosen for delivery.

- 8.2.5. **Revising the Bid Form**. Make desired changes to the bid form in ink and submit the bid to the Letting Official. The Owner will not make revisions to a bid on behalf of a Bidder.
- 8.2.6. Withdrawing a Bid. Submit a written request to withdraw a bid before the time and date set for the opening. The Owner will not accept oral requests. A written request must be signed and submitted to the Letting Official with proof of identification. The request must be made by a person authorized to bind the Bidder or Bidders. In the case of joint venture, the Owner will accept a request from any person authorized to bind a party to the joint venture. The Owner may require written delegation of authority to withdraw a bid when the individual sent to withdraw the bid is not authorized to bind the Bidder or Bidders.

## 9. OPENING AND READING OF BIDS

At the time, date, and location specified in the official advertisement, the Owner will publicly open and read bids.

## 10. TABULATING BIDS

- 10.1. **Official Total Bid Amount**. The Owner will sum the products of the quantities and the unit prices bid in the bid form to determine the official total bid amount, except as provided in Section 2.11., "Consideration of Unit Prices." The official total bid amount is the basis for determining the apparent low Bidder. The total bid amounts will be compared and the results made public.
- 10.2. **Rounding of Unit Prices**. The Owner will round off all unit bids involving fractional parts of a cent to the nearest one-tenth cent (\$0.001) in determining the amount of the bid as well as computing the amount due for payment of each item under the Contract. For rounding purposes, entries of five-hundredths of a cent (\$0.0005) or more will be rounded up to the next highest tenth of a cent, while entries less than five-hundredths of a cent will be rounded down to the next lowest tenth of a cent.

10.3. Interpretation of Unit Prices. The Owner will make a documented determination of the unit bid price if a unit bid price is illegible or conflicting in the case of replacement alternate items. The Owner's determination will be final.

#### 10.4. Consideration of Unit Prices.

10.4.1. **A** + **B Bidding**. The official total bid amount will be determined by the summation of the Contract amount and the time element. The Owner will use the following formula to make the calculation:

 $\mathsf{A} + \mathsf{B1} + \mathsf{B2} + \mathsf{BX} + \ldots + \mathsf{BT}$ 

The Contract amount, equal to A in the formula, is determined by the summation of the products of the approximate quantities shown in the bid and the unit bid prices bid. The time element, equal to B1, B2, BX (when phases are included as bid components), and BT (substantial completion of the project when included as a bid component), of the bid is determined by multiplying the number of working days bid to substantially complete the project, or phases, by the daily road-user cost (RUC) provided on the bid documents. When partial days are bid they will be rounded up to the nearest whole day.

The formula above determines the low Bidder and establishes the Contract time.

10.4.2. **"Buy America**." Comply with Buy America in accordance with Section 6.1.1.. For a Bidder who proposes to use foreign steel or iron materials to be considered the apparent low Bidder, their total bid must be at least 25% lower than the next lowest bid if that bid proposes to use domestic steel or iron materials.

This requirement does not apply to minimal use of steel or iron materials provided that the total cost of all foreign source items used in the project, as delivered to the project site, is less than \$2,500 or one-tenth-of-one-percent (1/10 of 1%) of the Contract amount, whichever is greater

#### 11. CONSIDERATION OF BID ERRORS.

The Owner will consider a claim of a bid error by the apparent low Bidder if the following requirements have been met:

- Submit written notification to the Owner within 5 business days after the date the bid is opened.
- Identify the items of work involved and include bidding documentation. The Owner may request clarification of submitted documentation.

The Owner will evaluate the claim of an error by the apparent low Bidder by considering the following:

- The bid error relates to a material item of work.
- The bid error amount is a significant portion of the total bid.
- The bid error occurred despite the exercise of ordinary care.
- The delay of the proposed work will not impact cost and safety to the public.

Acceptance of the bid error claim by the Owner will result in the rejection of the bid of the apparent low bidder .and the Owner may consider the second responsive bid. The erring Contractor will not be allowed to bid the project if it is relet. Rejection of bids due to the Contractor's bid error may result in the application of sanctions by the Owner.

## TIE BIDS

12.

If the official total bid amount for 2 or more Bidders is equal and those bids are the lowest submitted, each tie Bidder will be given an opportunity to withdraw their bid. If 2 or more tie Bidders do not withdraw their bids, the low Bidder will be determined by a coin toss. If all tie Bidders request to withdraw their bids, no withdrawals will be allowed and the low Bidder will be determined by a coin toss. The Letting Official will preside over the proceedings for the coin toss.

## Item 3L Award and Execution of Contract



## 1. AWARD OF CONTRACT

The Owner will award, reject, or defer the Contract within 90 days after the opening of the bid. The Owner reserves the right to reject any or all bids and to waive technicalities in the best interest of the Owner.

- 1.1. Award. The Owner will award the Contract to the low Bidder as determined by Article 2.11., "Tabulating Bids." The Owner may award a Contract to the second lowest Bidder when the following requirements have been met:
  - The low Bidder withdraws its bid.
  - The low Bidder fails to enter into a contract with the Owner after Award
  - The second low Bidder's unit bid prices are reasonable.

#### 1.2. **Rejection**. The Owner will reject the Contract if:

- Collusion may have existed among the Bidders. Collusion participants will not be allowed to bid future bids for the same Contract.
- The low bid is mathematically and materially unbalanced. The Bidder will not be allowed to bid future bids for the same Contract.
- The lowest bid is higher than the Owner's estimate and re-advertising for bids may result in a lower bid.
- Rejection of the Contract is in the best interest of the Owner.
- 1.3. **Deferral**. The Owner may defer the award or rejection of the Contract when deferral is in the best interest of the Owner.

## 2. RESCINDING OF AWARD

The Owner reserves the right to cancel the award of any Contract before Contract execution with no compensation due when the cancellation is in the best interest of the Owner. The Owner will return the bid guaranty to the Contractor.

## 3. DISADVANTAGED BUSINESS ENTERPRISE (DBE)/HISTORICALLY UNDERUTILIZED BUSINESS/SMALL BUSINESS ENTERPRISE (SBE)

Submit all DBE/HUB/SBE information in the time frame specified when required by the bid documents.

## 4. EXECUTION OF CONTRACT

Provide the following within 10 days after written notification of award of the Contract:

- 4.1. Contract. Executed by Contractor and Surety.
- 4.2. **Bonds**. Executed performance bond and payment bond in the full amount of the Contract price with powers of attorney. Provide bonds in accordance with Table 1. Furnish the payment and performance bonds as a guaranty for the protection of the claimants and the Owner for labor and materials and the faithful performance of the work.

Table 1	
Bonding Requirements	

Contract Amount	Required Bonds			
Less than \$25,000	None			
\$25,000 to \$100,000	Payment			
More than \$100,000	Performance and Payment			

4.3. **Insurance**. Submit a Certificate of Insurance showing coverages in accordance with Contract requirements.

Insurances must cover the contracted work for the duration of the Contract and must remain in effect until final acceptance. Failure to obtain and maintain insurance for the contracted work may result in suspension of work or default of the Contract. If the insurance expires and coverage lapses for any reason, stop all work until the Owner receives an acceptable Certificate of Insurance.

Provide the Owner with a Certificate of Insurance verifying the types and amounts of coverage shown in Section 11 Special Conditions. The Certificate of Insurance must be in a form approved by the Owner. Any Certificate of Insurance provided must be available for public inspection.

By signing the Contract, the Contractor certifies compliance with all applicable laws, rules, and regulations pertaining to workers' compensation insurance. This certification includes all subcontractors. Pay all deductibles stated in the policy. Subcontractors must meet the requirements of Section 11 Special Conditions either through their own coverage or through the Contractor's coverage.

The Workers' Compensation policy must include a waiver of subrogation endorsement in favor of the Owner.

For building-facilities Contracts, provide All Risk Builder's Risk Insurance to protect the Owner against loss by storm, fire or extended coverage perils on work and materials intended for use on the project including the adjacent structure. Name the Owner under the Lost Payable Clause.

For Contracts with railroad requirements, see project-specific details for additional insurance requirements.

Provide a substitute Surety on the Contract bonds in the original full Contract amount within 15 days of notification if the Surety is declared bankrupt or insolvent, the Surety's underwriting limitation drops below the Contract amount or the Surety's right to do business is terminated by the Owner. The substitute Surety must be authorized by the laws of the State and acceptable to the Owner. Work will be suspended until a substitute Surety is provided. Working day charges will be suspended for 15 days or until an acceptable Surety is provided, whichever is sooner.

The work performed under this section will not be measured or paid for directly but will be subsidiary to pertinent items.

4.4. **Railroad Documents**. Provide all required documents for satisfaction of railroad requirements for projects that have work which involves railroad right of way.

## 5. FAILURE TO ENTER CONTRACT

If the Contractor fails to comply with all of the requirements in Article 3.4., "Execution of Contract," the bid guaranty will become the property of the Owner, not as a penalty, but as liquidated damages. The Contractor forfeiting the bid guaranty will not be considered in future bids for the same work unless there has been a substantial change in design of the work.

## 6. APPROVAL AND EXECUTION OF CONTRACT

The Contract will be approved and signed under authority of the Owner.

## 7. RETURN OF BID GUARANTY

Bid bonds will not be returned.

## 8. BEGINNING OF WORK

Do not begin work until authorized in writing by the Owner.

When callout work is required, provide a method of contact available from 8 A.M. until 5 P.M. every work day and 24 hr. a day, 7 days a week for projects with emergency mobilization, unless otherwise shown on the plans. The time of notice will be the transmission time of the notice sent, provided orally, or provided in person by the Owner's representative.

Verify all quantities of materials shown on the plans before ordering.

For projects with alternate bid items, the work order will identify the base bid work and additive or deductive alternate work to be performed. The Owner makes no guarantee that the additive or deductive alternate work will be required.

#### 9. ASSIGNMENT OF CONTRACT

Do not assign, sell, transfer, or otherwise dispose of the Contract or any portion rights, title, or interest (including claims) without the approval of the Owner or designated representative. The Owner must deem any proposed assignment justified and legally acceptable before the assignment can take place.

## 10. EXCLUDED PARTIES

The Contractor certifies by signing the Contract that the Contractor will not enter into any subcontract with a subcontractor that is debarred or suspended by the Owner or by any state or federal agency.



## 1. CONTRACT INTENT

The intent of the Contract is to describe the completed work to be performed. Furnish materials, supplies, tools, equipment, labor, and other incidentals necessary for the proper prosecution and completion of the work in accordance with Contract documents.

## 2. PRECONSTRUCTION CONFERENCE

Before starting work, schedule and attend a preconstruction conference with the Owner. Failure to schedule and attend a preconstruction conference is not grounds for delaying the beginning of working day charges.

Work with the Owner to resolve all issues during the course of the Contract. Refer to Article 4.7., "Dispute or Claims Procedure," for all unresolved issues.

## 3. CHANGES IN THE WORK

The Engineer reserves the right to make changes in the work including addition, reduction, or elimination of quantities and alterations needed to complete the Contract. Perform the work as altered. These changes will not invalidate the Contract nor release the Surety. The Contractor is responsible for notifying the sureties of any changes to the Contract.

If the changes in quantities or the alterations do not significantly change the character of the work under the Contract, the altered work will be paid for at the Contract unit price. If the changes in quantities or the alterations significantly change the character of the work, the Contract will be amended by a change order. If no unit prices exist, this will be considered extra work and the Contract will be amended by a change order. Provide cost justification as requested, in an acceptable format. Payment will not be made for anticipated profits on work that is eliminated.

Agree on the scope of work and the basis of payment for the change order before beginning the work. If there is no agreement, the Engineer may order the work to proceed under Article 9.7., "Payment for Extra Work and Force Account Method," or by making an interim adjustment to the Contract. In the case of an adjustment, the Engineer will consider modifying the compensation after the work is performed.

A significant change in the character of the work occurs when:

- the character of the work for any item as altered differs materially in kind or nature from that in the Contract or
- a major item of work varies by more or less than 25% from the original Contract quantity.

When the quantity of work to be done under any major item of the Contract is more than 125% of the original quantity stated in the Contract, then either party to the Contract may request an adjustment to the unit price on the portion of the work that is above 125%.

When the quantity of work to be done under any major item of the Contract is less than 75% of the original quantity stated in the Contract, then either party to the Contract may request an adjustment to the unit price. When mutually agreed, the unit price may be adjusted by multiplying the Contract unit price by the factor in Table 1. If an adjusted unit price cannot be agreed upon, the Engineer may determine the unit price by multiplying the Contract unit price by the factor in Table 1.

Quantity-Based Price Adjustment Factors				
% of Original Quantity	Factor			
≥ 50 and < 75	1.05			
≥ 25 and < 50	1.15			
< 25	1.25			

Table 1
Quantity-Based Price Adjustment Factors

If the changes require additional working days to complete the Contract, Contract working days will be adjusted in accordance with Item 8, "Prosecution and Progress."

## DIFFERING SITE CONDITIONS

During the progress of the work, differing subsurface or latent physical conditions may be encountered at the site. The 2 types of differing site conditions are defined as:

- those that differ materially from those indicated in the Contract and
- unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the Contract.

Notify the Engineer in writing when differing site conditions are encountered. The Engineer will notify the Contractor when the Owner discovers differing site conditions. Unless directed otherwise, do not work on the affected items and leave the site undisturbed. The Engineer will investigate the conditions and determine whether differing site conditions exist. If the differing site conditions cause an increase or decrease in the cost or number of working days specified for the performance of the Contract, the Engineer will make adjustments, excluding the loss of anticipated profits, in accordance with the Contract. Additional compensation will be made only if the required written notice has been provided.

## 5. REQUESTS FOR ADDITIONAL COMPENSATION

Notify the Engineer in writing of any intent to request additional compensation once there is knowledge of the basis for the request. An assessment of damages is not required to be part of this notice but is desirable. The intent of the written notice requirement is to provide the Owner an opportunity to evaluate the request and to keep an accurate account of the actual costs that may arise. Minimize impacts and costs.

If written notice is not given, the Contractor waives the right to additional compensation unless the circumstances could have reasonably prevented the Contractor from knowing the cost impact before performing the work. Notice of the request and the documentation of the costs will not be construed as proof or substantiation of the validity of the request. Submit the request in enough detail to enable the Owner to determine the basis for entitlement, adjustment in the number of working days specified in the Contract, and compensation.

The Owner will not consider fees and interest on requests for additional compensation. Fees include, but are not limited to: preparation, attorney, printing, shipping, and various other fees.

Damages occur when impacts that are the responsibility of the Owner result in additional costs to the Contractor that could not have been reasonably anticipated at the time of letting. Costs of performing additional work are not considered damages. For Contractor damages, the intent is to reimburse the Contractor for actual expenses arising out of a compensable impact. No profit or markups, other than labor burden, will be allowed. For damages, labor burden will be reimbursed at 35% unless the Contractor can justify higher actual cost. Justification for a higher percentage must be in accordance with the methodology provided by the Owner , submitted separately for project overhead labor and direct labor, and determined and submitted by a Certified Public Accountant (CPA). Submit CPA-prepared labor burden rates directly to the Owner.

4.

If the Contractor requests compensation for delay damages and the delay is determined to be compensable, then standby equipment costs and project overhead compensation will be based on the duration of the compensable delay and will be limited as follows:

- 5.1. **Standby Equipment Costs**. Payment will be made in accordance with Section 9.7.1.4.3., "Standby Equipment Costs."
- 5.2. **Project Overhead**. Project overhead is defined as the administrative and supervisory expenses incurred at the work locations. When delay to project completion occurs, reimbursement for project overhead for the Contractor will be made using the following options:
  - reimbursed at 6% (computed as daily cost by dividing 6% of the original Contract amount by the number of original Contract work days), or
  - actual documented costs for the impacted period.

Project overhead for delays impacting subcontractors will be determined from actual documented costs submitted by the Contractor.

Time extensions and suspensions alone will not be justification for reimbursement for project overhead.

5.3. Home Office Overhead. The Owner will not compensate the Contractor for home office overhead.

## 6. DISPUTE OR CLAIMS PROCEDURE

The dispute resolution policy promotes a cooperative attitude between the Engineer and Contractor. Emphasis is placed on resolving issues while they are still current, at the project office, and in an informal manner. Open sharing of information is encouraged by all parties involved so the information provided completely and accurately reflects the issues and facts. If information is not shared, decisions may be limited to relying on the documentation that is available for review.

The Owners's goal is to have a dispute settled by the Engineer before elevating it as a claim.

If a dispute cannot be resolved, initiate the Contract claim procedure by filing a Contract claim after the completion of the Contract or when required for orderly performance of the Contract. Submit the claim to the Owner in accordance with state law.

For a claim resulting from enforcement of a warranty period, file the claim no later than one year after expiration of the warranty period. For all other claims, file the claim no later than the date the Owner issues notice to the Contractor that they are in default, the date the Owner terminates the Contract, or one year after the date of final acceptance of the Contract. It is the Contractor's responsibility to submit requests in a timely manner.

## Item 5L Control of the Work



## 1. AUTHORITY OF ENGINEER

The Engineer has the authority to observe, test, inspect, approve, and accept the work on behalf of the Owner. The Engineer decides all questions about the quality and acceptability of materials, work performed, work progress, Contract interpretations, and acceptable Contract fulfillment. The Engineer has the authority to enforce and make effective these decisions.

The Engineer acts as a referee in all questions arising under the terms of the Contract. The Engineer's decisions will be final and binding.

## 2. PLANS AND WORKING DRAWINGS

When required, provide working drawings to supplement the plans with all necessary details not included on the Contract plans. Prepare and furnish working drawings in a timely manner and obtain approval, if required, before the beginning of the associated work. For all working drawing submittal requirements, the Engineer may allow electronic and other alternative submission procedures. Have a licensed professional engineer sign, seal, and date the working drawings as indicated in Table 1.

Prepare working drawings using United States standard measures in the English language. The routing of submittals for review and approval will be established at the preconstruction conference. The Contractor is responsible for the accuracy, coordination, and conformity of the various components and details of the working drawings. Owner approval of the Contractor's working drawings will not relieve the Contractor of any responsibility under the Contract. The work performed under this article will not be measured or paid for directly but will be subsidiary to pertinent items.

Signature and Approval Requirements for working Drawings					
Working Drawings For		Requires Licensed Professional Engineer's Signature, Seal, and Date	Requires Owner Approval		
1. Alternate or optional designs submitted by Contractor		Yes	Yes		
2. Supplementary shop and fabrication drawings for structural Items		No unless required on the plans	See applicable Item		
<ol> <li>Contractor-proposed temporary facilities that affect the public safety, not included on the plans</li> </ol>		Yes	Yes		
4. Form and falsework details	Bridges, retaining walls, and other major structures	Yes unless otherwise shown on the plans	No ¹		
	Minor structures	No unless otherwise shown on the plans	No		
5. Erection drawings		Yes	No ^{1,2}		
6. Contractor-proposed major modifications to traffic control plan		Yes	Yes		

#### Table 1 Signature and Approval Requirements for Working Drawings

1. The Engineer may require that the Contractor have a licensed professional engineer certify that the temporary works are constructed according to the sealed drawings.

2. Approval is required for items spanning over live traffic or where safety of the traveling public is affected, in the opinion of the Engineer.

## CONFORMITY WITH PLANS, SPECIFICATIONS, AND SPECIAL PROVISIONS

Furnish materials and perform work in reasonably close conformity with the lines, grades, cross-sections, dimensions, details, gradations, physical and chemical characteristics of materials, and other requirements shown in the Contract (including additional plans for non-site-specific work). Reasonably close conformity limits will be as defined in the respective items of the Contract or, if not defined, as determined by the Engineer. Obtain approval before deviating from the plans and approved working drawings. Do not perform work beyond the lines and grades shown on the plans or any extra work without the Engineer's approval. Work performed beyond the lines and grades shown on the plans or any extra work performed without approval is considered unauthorized and excluded from pay consideration. The Owner will not pay for material rejected due to improper fabrication, excess quantity, or any other reasons within the Contractor's control.

- 3.1. Acceptance of Defective or Unauthorized Work. When work fails to meet Contract requirements, but is adequate to serve the design purpose, the Engineer will decide the extent to which the work will be accepted and remain in place. The Engineer will document the basis of acceptance by a letter and may adjust the Contract price.
- 3.2. **Correction of Defective or Unauthorized Work**. When work fails to meet Contract requirements and is inadequate to serve the design purpose it will be considered defective. Correct, or remove and replace, the work at the Contractor's expense, as directed.

The Engineer has the authority to correct or to remove and replace defective or unauthorized work. The cost may be deducted from any money due or to become due to the Contractor.

#### 4. COORDINATION OF PLANS, SPECIFICATIONS, AND SPECIAL PROVISIONS

The specifications, accompanying plans (including additional plans for non-site-specific work), special provisions, change orders, and supplemental agreements are intended to work together and be interpreted as a whole.

Numerical dimensions govern over scaled dimensions. Special provisions govern over plans (including general notes), which govern over standard specifications and special specifications. Job-specific plan sheets govern over standard plan sheets.

However, in the case of conflict between plans (including general notes) and specifications regarding responsibilities for hazardous materials and traffic control in Items 1L through 9L and Item 502, "Barricades, Signs, and Traffic Handling," special provisions govern over standard specifications and special specifications, which govern over the plans.

Notify the Engineer promptly of any omissions, errors, or discrepancies discovered so that necessary corrections and interpretations can be made. Failure to promptly notify the Engineer will constitute a waiver of all claims for misunderstandings or ambiguities that result from the errors, omissions, or discrepancies discovered.

## 5. COOPERATION OF CONTRACTOR

3.

Cooperate with the Engineer. Respond promptly to instructions from the Engineer. Provide all information necessary to administer the Contract.

Designate in writing a competent, English-speaking Superintendent employed by the Contractor. The Superintendent must be experienced with the work being performed and capable of reading and understanding the Contract. Ensure the Superintendent is available at all times and able to receive instructions from the Engineer or authorized Owner representatives and to act for the Contractor. The

Engineer may suspend work without suspending working day charges if a Superintendent is not available or does not meet the above criteria.

At the written request of the Engineer, immediately remove from the project any employee or representative of the Contractor or a subcontractor who, in the opinion of the Engineer, does not perform work in a proper and skillful manner or who is disrespectful, intemperate, disorderly, uncooperative, or otherwise objectionable. Do not reinstate these individuals without the written consent of the Engineer.

Furnish suitable machinery, equipment, and construction forces for the proper prosecution of the work. Provide adequate lighting to address quality requirements and inspection of nighttime work.

The Engineer may suspend the work without suspending working day charges until the Contractor complies with this requirement. All work associated with fulfilling this requirement is subsidiary to the various items of the Contract and no direct compensation will be made.

## 6. COOPERATING WITH UTILITIES

Use established safety practices when working near utilities. Consult with the appropriate utilities before beginning work. Notify the Engineer immediately of utility conflicts. The Engineer will decide whether to adjust utilities or adjust the work to eliminate or lessen the conflict. Unless otherwise shown on the plans, the Engineer will make necessary arrangements with the utility owner when utility adjustments are required.

Use work procedures that protect utilities or appurtenances that remain in place during construction. Cooperate with utilities to remove and rearrange utilities to avoid service interruption or duplicate work by the utilities. Allow utilities access to the right of way.

Immediately notify the appropriate utility of service interruptions resulting from damage due to construction activities. Cooperate with utilities until service is restored. Maintain access to active fire hydrants at all times unless approved by the Engineer.

## 7. COOPERATION BETWEEN CONTRACTORS

Cooperate and coordinate with other Contractors working within the limits or adjacent to the limits.

#### 8. COOPERATION WITH RAILROADS

Plan and prosecute portions of the work involving a railway to avoid interference with or hindrance to the railroad company.

If the work is on railroad right of way, do not interfere with the operation of the railroad company's trains or other property.

- 8.1. **Project-Specific Information**. Refer to project-specific plan sheets in the Contract for specific information concerning the work to be completed by both the Contractor and the railroad within railroad right of way; railroad right of way locations impacted by construction; percentage of Contract work at each location; train movements at each location; and requirements for railroad insurance, flagging, and Right of Entry (ROE) Agreements.
- 8.2. **Right of Entry Agreement (if required)**. The process for obtaining a fully executed ROE Agreement will be as follows:
  - The Owner will send the unexecuted ROE Agreement to the Contractor with the unexecuted construction Contract.
  - Partially execute the ROE Agreement and return it to the Department with the required insurance attached.

- The Owner will coordinate with the railroad company regarding the further execution of the ROE Agreement and associated fees. The Owner will pay any ROE Agreement fees directly to the railroad company.
- Once the Owner has received the fully-executed ROE Agreement from the railroad company, the Owner will forward the fully-executed ROE Agreement to the Contractor.

#### 9. CONSTRUCTION SURVEYING

Use Method A unless otherwise specified in the Contract. Upon request, the Engineer will allow the Contractor to copy available earthwork cross-sections, computer printouts or data files, and other information necessary to establish and control work. Maintain the integrity of control points. Preserve all control points, stakes, marks, and right of way markers. Assume cost and responsibility of replacing disturbed control points, stakes, marks, and right of way markers damaged by the Contractor's or its subcontractor operations. If the Owner repairs disturbed control points, stakes, marks, or right of way markers, the cost of repair may be deducted from money due or to become due to the Contractor. Replace right of way markers under the direction of a RPLS. This work will be subsidiary to pertinent items.

The Engineer reserves the right to make measurements and surveys to determine the accuracy of the work and determine pay quantities. The Engineer's measurements and surveys do not relieve the Contractor's responsibility for accuracy of work. Allow the Engineer adequate time to verify the surveying.

9.1. **Method A**. The Engineer will set control points for establishing lines, slopes, grades, and centerlines and for providing both vertical and horizontal control. At a minimum, provide a controlling pair of monument points at both the beginning and end of construction project for projects less than 2 miles in length. For projects greater than 2 miles in length, monuments will be set in pairs of 2 at a minimum of 2 miles based on the overall length of the project. Use these control points as reference to perform the work.

Furnish materials, equipment, and qualified workforce necessary for the construction survey work. Place construction points, stakes, and marks at intervals sufficient to control work to established tolerances. Place construction stakes at intervals of no more than 100 ft., or as directed. Place stakes and marks so as not to interfere with normal maintenance operations.

- 9.2. **Method B**. The Engineer will set adequate control points, stakes, and marks to establish lines, slopes, grades, and centerlines. Furnish additional work, stakes, materials, and templates necessary for marking and maintaining points and lines.
- 9.3. Method C. Set adequate control points, stakes, and marks to establish lines, slopes, grades, and centerlines.

## 10. INSPECTION

Inspectors are authorized representatives of the Engineer. Inspectors are authorized to examine all work performed and materials furnished, including preparation, fabrication, and material manufacture. Inspectors inform the Contractor of failures to meet Contract requirements. Inspectors may reject work or materials and may suspend work until any issues can be referred to and decided by the Engineer. Inspectors cannot alter, add, or waive Contract provisions, issue instructions contrary to the Contract, act as foremen for the Contractor, or interfere with the management of the work. Inspection, or lack of inspection, will not relieve the Contractor from obligation to provide materials or perform the work in accordance with the Contract.

Provide safe access to all parts of the work and provide information and assistance to the Engineer to allow a complete and detailed inspection. Give the Engineer sufficient notice to inspect the work. Work performed without suitable inspection, as determined by the Engineer, may be ordered removed and replaced at Contractor's expense. Remove or uncover portions of finished work as directed. Once inspected, restore work to Contract requirements. If the uncovered work is acceptable, the costs to uncover, remove, and replace or make good the parts removed will be paid for in accordance with Article 4.4., "Changes in the

Work." If the work is unacceptable, assume all costs associated with repair or replacement, including the costs to uncover, remove, and replace or make good the parts removed.

When a government entity, utility, railroad company, or other entity accepts or pays a portion of the Contract, that organization's representatives may inspect the work but cannot direct the Contractor. The right of inspection does not make that entity a party to the Contract and does not interfere with the rights of the parties to the Contract.

## 11. FINAL CLEANUP

Upon completion of the work, remove litter, debris, objectionable material, temporary structures, excess materials, and equipment from the work locations. Clean and restore property damaged by the Contractor's operations during the prosecution of the work. Leave the work locations in a neat and presentable condition. This work will not be paid for directly but will be considered subsidiary to items of the Contract.

Remove from the right of way cofferdams, construction buildings, material and fabrication plants, temporary structures, excess materials, and debris resulting from construction. Where work is in a stream, remove debris to the ground line of the bed of the stream. Leave stream channels and rights of way in a neat and presentable condition. Clean structures to the flow line or the elevation of the outfall channel, whichever is higher. Dispose of all excess material in accordance with federal, state, and local regulations.

## 12. FINAL ACCEPTANCE

- 12.1. Final acceptance is made when all work is complete and the Engineer, in writing, accepts all work for the work locations in the Contract. Final acceptance relieves the Contractor from further Contract responsibilities.
- 12.1.1. **Work Completed**. Work completed must include work for vegetative establishment and maintenance, test, and performance periods and work to meet the requirements of Article 5.11., "Final Cleanup."
- 12.1.2. **Final Inspection**. After all work is complete, the Contractor will request a final inspection by the Engineer authorized to accept the work.

The final inspection will be made as soon as possible, and not later than 10 calendar days after the request. No working day charges will be made between the date of request and final inspection.

After the final inspection, if the work is satisfactory, the Engineer will notify the Contractor in writing of the final acceptance of the work. If the final inspection finds any work to be unsatisfactory, the Engineer will identify in writing all deficiencies in the work requiring correction. Correct the deficiencies identified. Working day charges will resume if these deficiencies are not corrected within 7 calendar days, unless otherwise approved. Upon correction, the Engineer will make an inspection to verify that all deficiencies were corrected satisfactorily. The Engineer will provide written notice of the final acceptance.

- 12.1.3. **Final Measurement**. Final measurements and pay quantity adjustments may be made after final acceptance.
- 12.1.4. **Removal of Traffic Control Devices**. Remove construction traffic control devices and advance warning signs upon final acceptance or as directed.

## Item 6L Control of Materials



## 1. SOURCE CONTROL

Use only materials that meet Contract requirements. Unless otherwise specified or approved, use new materials for the work. Secure the Engineer's approval of the proposed source of materials to be used before their delivery. Materials can be approved at a supply source or staging area but may be reinspected in accordance with Article 6.4., "Sampling, Testing, and Inspection."

## 1.1. **Buy America**. Comply with the latest provisions of Buy America as listed at 23 CFR 635.410. Use steel or iron materials manufactured in the United States except when:

- the cost of materials, including delivery, does not exceed 0.1% of the total Contract cost or \$2,500, whichever is greater;
- the Contract contains a replacement alternate item for a foreign source steel or iron product and the Contract is awarded based on the replacement alternate item; or
- the materials are temporarily installed.

Provide a notarized original of the TxDOT FORM D-9-USA-1 (or equivalent) with the proper attachments for verification of compliance.

Manufacturing is any process that modifies the chemical content, physical shape or size, or final finish of a product. Manufacturing begins with initial melting and mixing and continues through fabrication (cutting, drilling, welding, bending, etc.) and coating (paint, galvanizing, epoxy, etc.).

- 1.2. **Convict Produced Materials.** Materials produced by convict labor may only be incorporated in the work if such materials have been:
  - produced by convicts who are on parole, supervised release, or probation from prison; or
  - produced in a qualified prison facility.

A "qualified prison facility" means any prison facility in which convicts, during the 12-month period ending July 1, 1987, produced materials for use in federal-aid highway construction projects.

## 2. MATERIAL QUALITY

Correct or remove materials that fail to meet Contract requirements or that do not produce satisfactory results. Reimburse the Owner for cost incurred if additional sampling and testing is required by a change of source.

Materials not meeting Contract requirements will be rejected, unless the Engineer approves corrective actions. Upon rejection, immediately remove and replace rejected materials.

If the Contractor does not comply with this article, the Owner may have defective material removed and replaced. The cost of testing, removal, and replacement will be deducted from the estimate.

## 3. MANUFACTURER WARRANTIES

Transfer to the Owner warranties and guarantees required by the Contract or received as part of normal trade practice.

#### SAMPLING, TESTING, AND INSPECTION

Incorporate into the work only material that has been inspected, tested, and accepted by the Engineer. Remove, at the Contractor's expense, materials from the work locations that are used without prior testing and approval or written permission.

Unless otherwise mutually agreed, the material requirements and standard test methods in effect at the time the proposed Contract is advertised govern. Unless otherwise noted, the Engineer will perform testing at Owner's expense. In addition to facilities and equipment required by the Contract, furnish facilities and calibrated equipment required for tests to control the manufacture of construction items. If requested, provide a complete written statement of the origin, composition, and manufacture of materials.

All materials used are subject to inspection or testing at any time during preparation or use. Material which has been tested and approved at a supply source or staging area may be reinspected or tested before or during incorporation into the work, and rejected if it does not meet Contract requirements. Copies of test results are to be made available upon request. Do not use material that, after approval, becomes unfit for use.

Unless otherwise noted in the Contract, all testing must be performed within the United States and witnessed by the Engineer. If materials or processes require testing outside the contiguous 48 United States, reimburse the Owner for inspection expenses.

#### 5. PLANT INSPECTION AND TESTING

The Engineer may, but is not obligated to, inspect materials at the acquisition or manufacturing source. Material samples will be obtained and tested for compliance with quality requirements.

If inspection is at the plant, meet the following conditions unless otherwise specified:

- Cooperate fully and assist the Engineer during the inspection.
- Ensure the Engineer has full access to all parts of the plant used to manufacture or produce materials.
- In accordance with pertinent items and the Contract, provide a facility at the plant for use by the Engineer as an office or laboratory.
- Provide and maintain adequate safety measures and restroom facilities.
- Furnish and calibrate scales, measuring devices, and other necessary equipment.

The Engineer may provide inspection for periods other than daylight hours if:

- continuous production of materials for Owner use is necessary due to the production volume being handled at the plant, and
- the lighting is adequate to allow satisfactory inspection.

## STORAGE OF MATERIALS

Store and handle materials to preserve their quality and fitness for the work. Store materials so that they can be easily inspected and retested. Place materials under cover, on wooden platforms, or on other hard, clean surfaces as necessary or when directed.

Obtain approval to store materials on the right of way. Storage space off the right of way is at the Contractor's expense.

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#### 7. OWNER-FURNISHED MATERIAL

The Owner will supply materials as shown in the Contract documents. The cost of handling and placing materials supplied by the Owner will not be paid for directly but is subsidiary to the item in which they are used. Assume responsibility for materials upon receipt.

#### 8. USE OF MATERIALS FOUND ON THE RIGHT OF WAY

Material found in the excavation areas and meeting the Owner's specifications may be used in the work. This material will be paid for at the Contract bid price for excavation and under the item for which the material is used.

Do not excavate or remove any material from within the right of way that is not within the limits of the excavation without written permission. If excavation is allowed within a right of way project-specific location (PSL), replace the removed material with suitable material at no cost to the Owner as directed.

#### 9. RECYCLED MATERIALS

The Owner will not allow hazardous wastes, as defined in 30 TAC 335, proposed for recycling to be used on the project. Use nonhazardous recyclable materials (NRMs) only if the specification for the item does not disallow or restrict use. Determine if NRMs are regulated under 30 TAC 312, 330, 332, 334, or 335, and comply with all general prohibitions and requirements. Use NRMs in accordance with DMS-11000, "Evaluating and Using Nonhazardous Recyclable Materials Guidelines," and furnish all documentation required by that specification.

## 10. HAZARDOUS MATERIALS

Use materials that are free of hazardous materials as defined in Item 1L, "Abbreviations and Definitions."

Notify the Engineer immediately when a visual observation or odor indicates that materials in required material sources or on sites owned or controlled by the owner may contain hazardous materials. Except when the contract includes bid items for the contractor to remove hazardous materials, the Engineer is responsible for testing and removing or disposing of hazardous materials not introduced by the Contractor on sites owned or controlled by the Owner as indicated below.

The plans will indicate locations where paint on steel is suspected to contain hazardous materials and where regulated asbestos containing materials have been found. The Engineer may suspend work wholly or in part during the testing, removal, or disposition of hazardous materials on sites owned or controlled by the Owner, except in the case of when the contract includes removing and disposing of hazardous materials.

When a visual observation or odor indicates that materials delivered to the work locations by the Contractor may contain hazardous materials, have an approved commercial laboratory test the materials for contamination. Remove, remediate, and dispose of any of these materials found to be contaminated. Testing, removal, and disposition of hazardous materials introduced onto the work locations by the Contractor will be at the Contractor's expense. Working day charges will not be suspended and extensions of working days will not be granted for activities related to handling hazardous material delivered by the Contractor.

- 10.1. Painted Steel Requirements. Paint containing hazardous materials will be removed as shown on the plans.
- 10.1.1. **Paint Removed by Third Party**. The Owner may provide a third party to remove paint containing hazardous materials where paint must be removed to perform work or to allow dismantling of the steel.
- 10.1.2. **Paint Removed by the Contractor**. This work may only be performed by a firm or company with one of the following certifications:

- SSPC-QP2 certification for lead painting operations, or
- Certified Lead Firm by the Texas Department of State Health Services.

Maintain certification for the duration of the work. Provide copies of audits or certification if requested.

Comply with worker and public safety regulations, including, but not limited to, OSHA 29 CFR Parts 1910.1025, 1926.62, and 1926.63. Monitor permissible exposure limits in accordance with OSHA requirements.

Remove paint containing hazardous materials from designated areas shown on the plans or as directed. Comply with access limitations shown on the plans.

Provide power hand tools, equipped with high-efficiency particulate air filter vacuums to mechanically remove paint.

Contain, collect, store, transport, and dispose of all waste generated by cleaning operation in accordance with local, state, and federal requirements including 40 CFR 302. Properly characterize and dispose of all wastes. Manage any hazardous wastes in accordance with regulatory requirements and dispose in a facility authorized to accept such wastes. Provide copies of disposal manifests.

The work performed, materials furnished, equipment, labor, tools, and incidentals will be paid for in accordance with Item 446, "Field Cleaning and Painting Steel."

10.2. **Removal and Disposal of Painted Steel**. Painted steel will be disposed of at a steel recycling or smelting facility unless otherwise shown on the plans. If the paint contains hazardous materials, maintain and make available to the Engineer invoices and other records obtained from the facility showing the received weight of the steel and the facility name.

For steel that is dismantled by unbolting, no paint stripping will be required. Use care to not damage existing paint. When dismantling is performed using flame or saw-cutting methods to remove steel elements coated with paint containing hazardous materials, the plans will show stripping locations.

The work provided, materials furnished, equipment, labor, tools, and incidentals will be paid for in accordance with Item 496, "Removing Structures," and Item 497, "Sale of Salvagable Material."

- 10.3. Asbestos Requirements. The plans will indicate locations or elements where asbestos containing materials (ACM) have been found. At locations where previously unknown ACM has been found, the Owner will arrange for abatement by a third party. For work at these locations, notify the Engineer of proposed dates of demolition or removal of structural elements with ACM at least 60 days before work is to begin to allow the Owner enough time to abate the asbestos.
- 10.4. **Work Performed by a Third Party**. When the work for removal of paint or asbestos abatement is to be provided by a third party, coordinate and cooperate with the third party and the Owner. Continue other work detailed on the plans not directly involved in the paint removal or asbestos abatement work. Provide notice to the Owner regarding the progress of the work to allow the Owner enough time to schedule the third party work.

### 11. SURPLUS MATERIALS

Take ownership of surplus materials unless otherwise shown on the plans or as directed by the Engineer. Remove and dispose of materials in accordance with federal, state, and local regulations. If requested, provide an appropriate level of documentation to verify proper disposal. When materials are disposed of on private property, provide written authorization from the property owner for the use of the property for this purpose upon request.

## Item 7L Legal Relations and Responsibilities



## 1. SAFETY

1.1. **Point of Contact**. Designate a Contractor Safety Point of Contact (CSPOC). The Owner will assign an Owner employee for their point of contact designated as Owner's Safety Point of Contact OSPOC. The CSPOC will ensure that the Contractor's and Subcontractor's employees' use the appropriate personal protection equipment (hard hats, safety vests, protective toe footwear, etc.).

The CSPOC will ensure that crew leaders and foremen (including subcontractors) have attended the required training.

- 1.2. **Safety Preconstruction Meeting**. In cooperation with the Engineer, schedule and attend a safety preconstruction meeting (may be a part of the preconstruction conference in Article 4.2., "Preconstruction Conference." Attendees for this safety preconstruction meeting will be:
  - the Contractor,
  - subcontractors,
  - Owner,
  - local law enforcement, and
  - other personnel that play an active role on the project.
- 1.3. **Public Safety and Convenience**. Ensure the safety and convenience of the public and property as provided in the Contract and as directed by the Engineer. Keep existing roadways open to traffic or construct and maintain detours and temporary structures for safe public travel. Manage construction to minimize disruption to traffic. Maintain the roadway in a good and passable condition, including proper drainage and provide for ingress and egress to adjacent property.

Store all equipment not in use in a manner and at locations that will not interfere with the safe passage of traffic.

Provide qualified flaggers in accordance with Item 502.2.2., "Flaggers," for the safety and convenience of the traveling public and workers, as directed.

If the Engineer determines that any of the requirements of this article have not been met, the Engineer may take any necessary corrective action. This will not change the legal responsibilities set forth in the Contract. The cost to the Owner for this work will be deducted from any money due or to become due to the Contractor.

- 1.4. Use of Blue Warning Lights. Texas Transportation Code 547.105 authorizes the use of warning lights to promote safety and provides an effective means of gaining the travelling public's attention as they drive in areas where construction crews are present. In order to influence the public to move over when high risk construction activities are taking place, minimize the utilization of blue warning lights. These lights must be used only while performing work on or near the travel lanes or shoulder where the travelling public encounters construction crews that are not protected by a standard work zone set up such as a lane closure, shoulder closure, or one-way traffic control. Refrain from leaving the warning lights engaged while travelling from one work location to another or while parked on the right of way away from the pavement or a work zone.
- 1.5. **Barricades, Warning and Detour Signs, and Traffic Handling**. Provide, install, move, replace, maintain, clean, and remove all traffic control devices in accordance with the traffic control devices specifications and as shown on the plans and as directed. If details are not shown on the plans, provide devices and work in

accordance with the TMUTCD and as directed by the Engineer. When authorized or directed by the Engineer, provide additional signs or traffic control devices not required by the plans.

If an unexpected situation arises that causes the Contractor to believe that the traffic control should be changed, make all reasonable efforts to promptly contact the Engineer. Take prudent actions until the Engineer can be contacted.

The Engineer may authorize or direct in writing the removal or relocation of project limit advance warning signs. When project limit advance warning signs are removed before final acceptance, traffic control in accordance with the TMUTCD may be used for minor operations as approved. Removal or relocation of project limit advance warning signs does not imply final acceptance.

#### 2. LAWS TO BE OBSERVED

Comply with all federal, state, and local laws, ordinances, and regulations that affect the performance of the work. Indemnify and save harmless the Owner and its representatives against any claim arising from violation by the Contractor of any law, ordinance, or regulation.

This Contract is between the Owner and the Contractor only. No person or entity may claim third-party beneficiary status under this Contract or any of its provisions, nor may any non-party sue for personal injuries or property damage under this Contract.

## 3. PERMITS, LICENSES, AND TAXES

Procure all permits and licenses; pay all charges, fees, and taxes; and give all notices necessary and incidental to the due and lawful prosecution of work, except for permits provided by the Owner and as specified in Article 7.6., "Preservation of Cultural and Natural Resources and the Environment."

## 4. PATENTED DEVICES, MATERIAL, AND PROCESSES

Indemnify and save harmless the Owner from any claims for infringement from the Contractor's use of any patented design, device, material, process, trademark, or copyright selected by the Contractor and used in connection with the work. Indemnify and save harmless the Owner against any costs, expenses, or damages that it may be obliged to pay, by reason of this infringement, at any time during the prosecution or after the completion of the work.

## 5. PERSONAL LIABILITY OF PUBLIC OFFICIALS

Owner employees are agents and representatives of the Owner and will incur no liability, personal or otherwise, in carrying out the provisions of the Contract or in exercising any power or authority granted under the Contract.

# 6. PRESERVATION OF CULTURAL AND NATURAL RESOURCES AND THE ENVIRONMENT

If the Contractor initiates changes to the Contract and the Owner approves the changes, the Contractor is responsible for obtaining clearances and coordinating with the appropriate regulatory agencies.

- 6.1. **Cultural Resources**. Cease all work immediately if a site, building, or location of historical, archeological, educational, or scientific interest is discovered within the right of way. The site, building, or location will be investigated and evaluated by the Owner.
- 6.2. Texas Pollutant Discharge Elimination System (TPDES) Permits and Storm Water Pollution Prevention Plans (SWP3). The Owner will file the Notice of Intent (NOI) and the Notice of Termination (NOT) for work shown on the plans in the right of way. Adhere to all requirements of the SWP3.

- 6.3. Work in Waters of the United States. For work in the right of way, the Owner will obtain any required Section 404 permits from the U.S. Army Corps of Engineers before work begins. Adhere to all agreements, mitigation plans, and standard best management practices required by the permit. When Contractor-initiated changes in the construction method changes the impacts to waters of the U.S., obtain new or revised Section 404 permits.
- 6.4. Work in Navigable Waters of the United States. For work in the right of way, the Owner will obtain any required Section 9 permits from the U.S. Coast Guard before work begins. Adhere to the stipulations of the permits and associated best management practices. When Contractor-initiated changes in the construction method changes the impacts to navigable waters of the U.S., obtain new or revised Section 9 permits.
- 6.5. Work Over the Recharge or Contributing Zone of Protected Aquifers. Make every reasonable effort to minimize the degradation of water quality resulting from impacts relating to work over the recharge or contributing zones of protected aquifers, as defined and delineated by the TCEQ. Use best management practices and perform work in accordance with Contract requirements.
- 6.6. **Project-Specific Locations**. For all project-specific locations (PSLs) on or off the right of way (material sources, waste sites, parking areas, storage areas, field offices, staging areas, haul roads, etc.), signing the Contract certifies compliance with all applicable laws, rules, and regulations pertaining to the preservation of cultural resources, natural resources, and the environment as issued by the following or other agencies:
  - Occupational Safety and Health Administration,
  - Texas Commission on Environmental Quality,
  - Texas Department of Transportation,
  - Texas Historical Commission,
  - Texas Parks and Wildlife Department,
  - Texas Railroad Commission,
  - U.S. Army Corps of Engineers,
  - U.S. Department of Energy,
  - U.S. Department of Transportation,
  - U.S. Environmental Protection Agency,
  - U.S. Federal Emergency Management Agency, and
  - U.S. Fish and Wildlife Service.

All subcontractors must also comply with applicable environmental laws, rules, regulations, and requirements in the Contract. Maintain documentation of certification activities including environmental consultant reports, Contractor documentation on certification decisions and contacts, and correspondence with the resource agencies. Provide documentation upon request.

Obtain written approval from the Engineer for all PSLs in the right of way not specifically addressed on the plans. Prepare an SWP3 for all Contractor facilities, such as asphalt or concrete plants located within public right of way. Comply with all TCEQ permit requirements for portable facilities, such as concrete batch plants, rock crushers, asphalt plants, etc. Address all environmental issues, such as Section 404 permits, wetland delineation, endangered species consultation requirements, or archeological and historic site impacts. Obtain all permits and clearances in advance.

## 7. AGRICULTURAL IRRIGATION

Regulate the sequence of work and make provisions as necessary to provide for agricultural irrigation or drainage during the work. Meet with the Irrigation District or land owner to determine the proper time and sequence when irrigation demands will permit shutting-off water flows to perform work.

Unless otherwise provided on the plans, the work performed under this article will not be measured or paid for directly but will be subsidiary to pertinent items.

## 8. SANITARY PROVISIONS

Provide and maintain adequate, neat, and sanitary toilet accommodations for employees, including Owner employees, in compliance with the requirements and regulations of the Texas Department of Health or other authorities with jurisdiction.

#### 9. ABATEMENT AND MITIGATION OF EXCESSIVE OR UNNECESSARY NOISE

Minimize noise throughout all phases of the Contract. Exercise particular and special efforts to avoid the creation of unnecessary noise impact on adjacent noise sensitive receptors in the placement of non-mobile equipment such as air compressors, generators, pumps, etc. Place mobile and stationary equipment to cause the least disruption of normal adjacent activities.

All equipment associated with the work must be equipped with components to suppress excessive noise and these components must be maintained in their original operating condition considering normal depreciation. Noise-attenuation devices installed by the manufacturer such as mufflers, engine covers, insulation, etc. must not be removed nor rendered ineffectual nor be permitted to remain off the equipment while the equipment is in use.

## 10. USING EXPLOSIVES

Do not endanger life or property. The contractor is required to submit a written Blasting Plan if required by the plans or requested by the Engineer. The Owner retains the right to reject the blasting plan. Store all explosives securely and clearly mark all storage places with "DANGER – EXPLOSIVES." Store, handle, and use explosives and highly flammable material in compliance with federal, state, and local laws, ordinances, and regulations. Assume liability for property damage, injury, or death resulting from the use of explosives.

Give at least a 48-hr. advance notice to the appropriate Road Master before doing any blasting work involving the use of electric blasting caps within 200 ft. of any railroad track.

## 11. RESPONSIBILITY FOR HAZARDOUS MATERIALS

Indemnify and save harmless the Owner and its agents and employees from all suits, actions, or claims and from all liability and damages for any injury or damage to any person or property arising from the generation or disposition of hazardous materials introduced by the Contractor on any work done by the Contractor on Owner-owned or controlled sites. Indemnify and save harmless the Owner and its representatives from any liability or responsibility arising out of the Contractor's generation or disposition of any hazardous materials obtained, processed, stored, shipped, etc., on sites not owned or controlled by the Owner. Reimburse the Owner for all payments, fees, or restitution the Owner is required to make as a result of the Contractor's actions.

## 12. ASBESTOS CONTAINING MATERIAL

In Texas, the Department of State Health Services (DSHS), Asbestos Programs Branch, is responsible for administering the requirements of the National Emissions Standards for Hazardous Air Pollutants, 40 CFR, Subpart M (NESHAP) and the Texas Asbestos Health Protection Rules (TAHPR). Based on EPA guidance and regulatory background information, bridges are considered to be a regulated "facility" under NESHAP. Therefore, federal standards for demolition and renovation apply.

Provide notice to the Owner of demolition or renovation to the structures listed on the plans at least 30 calendar days before initiating demolition or renovation of each structure or load bearing member. Provide the scheduled start and completion date of structure demolition, renovation, or removal.

When demolition, renovation, or removal of load-bearing members is planned for several phases, provide the start and completion dates identified by separate phases.

DSHS requires that notifications be postmarked at least 10 working days before initiating demolition or renovation. If the date of actual demolition, renovation, or removal is changed, the Owner will be required to notify DSHS at least 10 days in advance of the work. This notification is also required when a previously scheduled (notification sent to DSHS) demolition, renovation, or removal is delayed. Therefore, if the date of actual demolition, or removal is changed, provide the Engineer, in writing, the revised dates in enough time to allow for the Owner's notification to DSHS to be postmarked at least 10 days in advance of the actual work.

Failure to provide the above information may require the temporary suspension of work under Article 8.4., "Temporary Suspension of Work or Working Day Charges," due to reasons under the control of the Contractor. The Owner retains the right to determine the actual advance notice needed for the change in date to address post office business days and staff availability.

## 13. RESTORING SURFACES OPENED BY PERMISSION

Do not authorize anyone to make an opening in the highway for utilities, drainage, or any other reason without written permission by the Engineer. Repair all openings as directed by the Engineer. Payment for repair of surfaces opened by permission will be made in accordance with pertinent items or Article 4.4., "Changes in the Work." Costs associated with openings made with Contractor authorization but without Owner approval will not be paid.

## 14. PROTECTING ADJACENT PROPERTY

Protect adjacent property from damage. If any damage results from an act or omission on the part of or on behalf of the Contractor, take corrective action to restore the damaged property to a condition similar or equal to that existing before the damage was done.

## 15. RESPONSIBILITY FOR DAMAGE CLAIMS

Indemnify and save harmless the Owner and its agents and employees from all suits, actions, or claims and from all liability and damages for any injury or damage to any person or property due to the Contractor's negligence in the performance of the work and from any claims arising or amounts recovered under any laws, including workers' compensation and the Texas Tort Claims Act. Indemnify and save harmless the Owner and assume responsibility for all damages and injury to property of any character occurring during the prosecution of the work resulting from any act, omission, neglect, or misconduct on the Contractor's part in the manner or method of executing the work; from failure to properly execute the work; or from defective work or material.

Pipelines and other underground installations that may or may not be shown on the plans may be located within the right of way. Indemnify and save harmless the Owner from any suits or claims resulting from damage by the Contractor's operations to any pipeline or underground installation. Make available the scheduled sequence of work to the respective utility owners so that they may coordinate and schedule adjustments of their utilities that conflict with the proposed work.

## 16. HAULING AND LOADS ON ROADWAYS AND STRUCTURES

Comply with federal and state laws concerning legal gross and axle weights. Except for the designated Interstate system, vehicles with a valid yearly overweight tolerance permit may haul materials to the work locations at the permitted load. Provide copies of the yearly overweight tolerance permits to the Engineer upon request. Construction equipment is not exempt from oversize or overweight permitting requirements on roadways open to the traveling public.

Protect existing bridges and other structures that will remain in use by the traveling public during and after the completion of the Contract. Construction traffic on roadways, bridges, and culverts within the limits of the work, including any structures under construction that will remain in service during and after completion of the Contract is subject to legal size and weight limitations.
Additional temporary fill may be required by the Engineer for hauling purposes for the protection of certain structures. This additional fill will not be paid directly but will be subsidiary.

Replace or restore to original condition any structure damaged by the Contractor's operations.

The Engineer may allow equipment with oversize or non-divisible overweight loads to operate without a permit within the work locations on pavement structures not open to the traveling public. Submit Contractorproposed changes to traffic control plans for approval, in accordance with Item 502, "Barricades, Signs, and Traffic Handling." The following sections further address overweight allowances. The Owner will make available to the Contractor any available plans and material reports for existing structures.

16.1. **Overweight Construction Traffic Crossing Structures.** The Engineer may allow crossing of a structure not open to the public within the work locations, when divisible or non-divisible loads exceed legal weight limitations, including limits for load-posted bridges. Obtain written permission to make these crossings. Submit for approval a structural analysis by a licensed professional engineer indicating that the excessive loads should be allowed. Provide a manufacturer's certificate of equipment weight that includes the weight distribution on the various axles and any additional parts such as counterweights, the configuration of the axles, or other information necessary for the analysis. Submit the structural analysis and supporting documentation sufficiently in advance of the move to allow for review. Permission may be granted if the Engineer finds that no damage or overstresses in excess of those normally allowed for occasional overweight loads will result to structures that will remain in use after Contract completion. Provide temporary matting or other protective measures as directed.

Schedule loads so that only one vehicle is on any span or continuous unit at any time. Use barricades, fences, or other positive methods to prevent other vehicular access to structures at any time the overweight load is on any span or continuous unit.

16.2. Construction Equipment Operating on Structures. Cranes and other construction equipment used to perform construction operations that exceed legal weight limits may be allowed on structures. Before any operation that may require placement of equipment on a structure, submit for approval a detailed structural analysis prepared by a licensed professional engineer.

Submit the structural analysis and supporting documentation sufficiently in advance of the use to allow for review and approval. Include all axle loads and configurations, spacing of tracks or wheels, tire loads, outrigger placements, center of gravity, equipment weight, and predicted loads on tires and outriggers for all planned movements, swings, or boom reaches. The analysis must demonstrate that no overstresses will occur in excess of those normally allowed for occasional overweight loads.

- 16.3. Loads on Structures. Do not store or stockpile material on bridge structures without written permission. If required, submit a structural analysis and supporting documentation by a licensed professional engineer for review. Permission may be granted if the Engineer finds that no damage or overstresses in excess of those normally allowed for occasional overweight loads will result to structures that will remain in use after Contract completion. Provide temporary matting or other protective measures as directed.
- 16.4. Hauling Divisible Overweight Loads on Pavement Within the Work Locations. The Engineer may allow divisible overweight loads on pavement structures within the work locations not open to the traveling public. Obtain written approval before hauling the overweight loads. Include calculations to demonstrate that there will be no damage or overstress to the pavement structure.

### 17. CONTRACTOR'S RESPONSIBILITY FOR WORK

Until final acceptance of the Contract, take every precaution against injury or damage to any part of the work by the action of the elements or by any other cause, whether arising from the execution or from the nonexecution of the work. Protect all materials to be used in the work at all times, including periods of suspension. When any roadway or portion of the roadway is in suitable condition for travel, it may be opened to traffic as directed. Opening of the roadway to traffic does not constitute final acceptance.

Repair damage to all work until final acceptance. Repair damage to existing facilities in accordance with the Contract or as directed. Repair damage to existing facilities or work caused by Contractor operations at the Contractor's expense. Repair work for damage that was not due to the Contractor's operations will not be paid for except as provided below.

- 17.1. **Reimbursable Repair**. Except for damage to appurtenances listed in Section 7.17.2.1., "Unreimbursed Repair," the Contractor will be reimbursed for repair of damage caused by:
  - motor vehicle, watercraft, aircraft, or railroad-train incident;
  - vandalism; or
  - Acts of God, such as earthquake, tidal wave, tornado, hurricane, or other cataclysmic phenomena of nature.

#### 17.2. Appurtenances.

- 17.2.1. **Unreimbursed Repair**. Except for destruction (not reusable) due to hurricanes, reimbursement will not be made for repair of damage to the following temporary appurtenances, regardless of cause:
  - signs,
  - barricades,
  - changeable message signs, and
  - other work zone traffic control devices.

Crash cushion attenuators and guardrail end treatments are the exception to the above listing and are to be reimbursed in accordance with Section 7.17.2.2., "Reimbursed Repair."

For the devices listed in this section, reimbursement may be made for damage due to hurricanes. Where the Contractor retains replaced appurtenances after completion of the project, the Owner will limit the reimbursement to the cost that is above the salvage value at the end of the project.

- 17.2.2. **Reimbursed Repair**. Reimbursement will be made for repair of damage due to the causes listed in Section 7.17.1., "Reimbursable Repair," to appurtenances (including temporary and permanent crash cushion attenuators and guardrail end treatments).
- 17.3. **Roadways and Structures**. Until final acceptance, the Contractor is responsible for all work constructed under the Contract. The Owner will not reimburse the Contractor for repair work to new construction, unless the failure or damage is due to one of the causes listed in Section 7.17.1, "Reimbursable Repair."

The Owner will be responsible for the cost for repair of damage to existing roadways and structures not caused by the Contractor's operations.

- 17.4. **Detours**. The Contractor will be responsible for the cost of maintenance of detours constructed under the Contract, unless the failure or damage is due to one of the causes listed in Section 7.17.1., "Reimbursable Repair." The Engineer may consider failures beyond the Contractor's control when determining reimbursement for repairs to detours constructed. The Owner will be responsible for the cost of maintenance of existing streets and roadways used for detours or handling traffic.
- 17.5. **Relief from Maintenance**. The Engineer may relieve the Contractor from responsibility of maintenance as outlined in this section. This relief does not release the Contractor from responsibility for defective materials or work or constitute final acceptance.
- 17.5.1. **Isolated Work Locations**. For isolated work locations, when all work is completed, including work for Article 5.11., "Final Cleanup," the Engineer may relieve the Contractor from responsibility for maintenance.

- 17.5.2. Work Except for Vegetative Establishment and Test Periods. When all work for all or isolated work locations has been completed, including work for Article 5.11., "Final Cleanup," with the exception of vegetative establishment and maintenance periods and test and performance periods, the Engineer may relieve the Contractor from responsibility for maintenance of completed portions of work.
- 17.5.3. **Work Suspension**. When all work is suspended for an extended period of time, the Engineer may relieve the Contractor from responsibility for maintenance of completed portions of work during the period of suspension.
- 17.5.4. When Directed by the Engineer. The Engineer may relieve the Contractor from the responsibility for maintenance when directed.
- 17.6. **Basis of Payment**. When reimbursement for repair work is allowed and performed, payment will be made in accordance with pertinent items or Article 4.4., "Changes in the Work."

### 18. ELECTRICAL REQUIREMENTS

18.1. Definitions.

#### 18.1.1. Electrical Work. Electrical work is work performed for:

- Item 610, "Roadway Illumination Assemblies,"
- Item 614, "High Mast Illumination Assemblies,"
- Item 616, "Performance Testing of Lighting Systems,"
- Item 617, "Temporary Roadway Illumination,"
- Item 618, "Conduit,"
- Item 620, "Electrical Conductors,"
- Item 621, "Tray Cable,"
- Item 622, "Duct Cable,"
- Item 628, "Electrical Services,"
- Item 680, "Highway Traffic Signals,"
- Item 681, "Temporary Traffic Signals,"
- Item 684, "Traffic Signal Cables,"
- Item 685, "Roadside Flashing Beacon Assemblies,"
- other items that involve either the distribution of electrical power greater than 50 volts or the installation of conduit and duct banks,
- the installation of conduit and wiring associated with Item 624, "Ground Boxes," and Item 656, "Foundations for Traffic Control Devices," and
- the installation of the conduit system for communication and fiber optic cable.

Electrical work does not include the installation of communications or fiber optic cable, or the connections for low voltage and inherently power limited circuits such as electronic or communications equipment. Assembly and placement of poles, structures, cabinets, enclosures, manholes, or other hardware will not be considered electrical work as long as no wiring, wiring connections, or conduit work is done at the time of assembly and placement.

- 18.1.2. **Specialized Electrical Work**. Specialized electrical work is work that includes the electrical service and feeders, sub-feeders, branch circuits, controls, raceways, and enclosures for the following:
  - pump stations,
  - moveable bridges,
  - ferry slips,
  - motor control centers,
  - facilities required under Item 504, "Field Office and Laboratory,"
  - rest area or other public buildings,

- weigh-in-motion stations,
- electrical services larger than 200 amps,
- electrical services with main or branch circuit breaker sizes not shown in the Contract, and
- any 3-phase electrical power.
- 18.1.3. Certified Person. A certified person is a person who has passed the test from the TxDOT course TRF450, "TxDOT Roadway Illumination and Electrical Installations," or other courses as approved by the Owner. Submit a current and valid certification upon request.
- 18.1.4. Licensed Electrician. A licensed electrician is a person with a current and valid unrestricted master electrical license, or unrestricted journeyman electrical license that is supervised or directed by an unrestricted master electrician. An unrestricted master electrician need not be on the work locations at all times electrical work is being done, but the unrestricted master electrician must approve work performed by the unrestricted journeyman. Licensed electrician requirements by city ordinances do not apply to on state system work.

The unrestricted journeyman and unrestricted master electrical licenses must be issued by the Texas Department of Licensing and Regulation or by a city in Texas with a population of 50,000 or greater that issues licenses based on passing a written test and demonstrating experience.

The Engineer may accept other states' electrical licenses. Submit documentation of the requirements for obtaining that license. Acceptance of the license will be based on sufficient evidence that the license was issued based on:

- passing a test based on the NEC similar to that used by Texas licensing officials, and
- sufficient electrical experience commensurate with general standards for an unrestricted master and unrestricted journeyman electrician in the State of Texas.
- 18.2. Work Requirements. The qualifications required to perform electrical work and specialized electrical work are listed in Table 2.

Work Requirements			
Type of Work	Qualifications to Perform Work		
Electrical work with plans	Licensed electrician, certified person, or workers directly supervised by a licensed electrician or certified person		
Electrical work without plans	Licensed electrician or workers directly supervised by a licensed electrician		
Specialized electrical work	Licensed electrician or workers directly supervised by a licensed electrician		
Replace lamps, starting aids, and changing fixtures	Licensed electrician, certified person, or workers directly supervised by a licensed electrician or certified person		
Conduit in precast section with approved working drawings	Inspection by licensed electrician or certified person		
Conduit in cast-in-place section	Inspection by licensed electrician or certified person		
All other electrical work (troubleshooting,	Licensed electrician or workers directly		
repairs, component replacement, etc.)	supervised by a licensed electrician		

Table 2

A licensed electrician must be physically present during all electrical work when Table 2 states that workers are to be directly supervised by a licensed electrician or certified person.

A non-certified person may install conduit in cast-in-place concrete sections if the work is verified by a certified person before concrete placement.

When the plans specify IMSA certification, the requirements of Table 2 will still apply to the installation of the conduit, ground boxes, electrical services, pole grounding, and electrical conductors installed under Item 620, "Electrical Conductors."

# Item 8L Prosecution and Progress



## 1. PROSECUTION OF WORK

Unless otherwise shown in the Contract, begin work within 10 calendar days after the authorization date to begin work as shown on the Notice to Proceed. Prosecute the work continuously to completion within the working days specified. Unless otherwise shown in the Contract documents, work may be prosecuted in concurrent phases if no changes are required in the traffic control plan or if a revised traffic control plan is approved. Notify the Engineer at least 24 hr. before beginning work or before beginning any new operation. Do not start new operations to the detriment of work already begun. Minimize interference to traffic.

## 2. SUBCONTRACTING

Do not sublet any portion of a construction Contract without the Engineer's written approval. A subcontract does not relieve any responsibility under the Contract and bonds. Ensure that all subcontracted work complies with all governing labor provisions.

The Contractor certifies by signing the Contract that the Contractor will not enter into any subcontract with a subcontractor that is debarred or suspended by the Owner, or any state or federal agency.

For federally funded Contracts, ensure the required federal documents are physically attached to each subcontract agreement including all tiered subcontract agreements.

For all DBE/HUB/SBE subcontracts including all tiered DBE/HUB/SBE subcontracts, submit a copy of the executed subcontract agreement.

Submit a copy of the executed non-DBE subcontracts including all tiered non-DBE subcontracts when requested.

2.1. **Construction Contracts**. Perform work with own organization on at least 30% of the total original Contract cost (25% if the Contractor is an SBE on a wholly State or local funded Contract) excluding any items determined to be specialty items. Specialty items are those that require highly specialized knowledge, abilities, or equipment not usually available in the contracting firm expected to bid on the proposed Contract as a whole.

Specialty items will be shown on the plans or as directed by the Engineer. Bid cost of specialty items performed by subcontractors will be deducted from the total original Contract cost before computing the required amount of work to be performed by the Contractor's own organization.

The term "perform work with own organization" includes only:

- workers employed and paid directly by the Contractor or wholly owned subsidiary;
- equipment owned by the Contractor or wholly owned subsidiary;
- rented or leased equipment operated by the Contractor's employees or wholly owned subsidiary's employees;
- materials incorporated into the work if the majority of the value of the work involved in incorporating the material is performed by the Contractor's own organization, including a wholly owned subsidiary's organization; and

Iabor provided by staff leasing firms licensed under Chapter 91 of the Texas Labor Code for nonsupervisory personnel if the Contractor or wholly owned subsidiary maintains direct control over the activities of the leased employees and includes them in the weekly payrolls.

When staff leasing firms provide materials or equipment, they are considered subcontractors. In these instances, submit staff leasing firms for approval as a subcontractor.

Copies of cancelled checks and certified statements may be required to verify compliance with the requirements of this section.

- 2.2. **Payments to Subcontractors**. Report payments for DBE/HUB/SBE subcontracts including tiered DBE/HUB/SBE subcontracts in the manner as prescribed by the Owner.
- 2.3. **Payment Records**. Make payment records, including copies of cancelled checks, available for inspection by the Owner. Submit payment records upon request. Retain payment records for a period of 3 yr. following completion of the Contract work or as specified by the Owner.

Failure to submit this information to the Engineer by the 20th day of each month will result in the Owner taking actions, including, but not limited to, withholding estimates and suspending the work. This work will not be measured or paid for directly but will be subsidiary to pertinent items.

### 3. COMPUTATION OF CONTRACT TIME FOR COMPLETION

Upon request, the Engineer will provide the conceptual time determination schedule to the Contractor for informational purposes only. The schedules assume generic resources, production rates, sequences of construction and average weather conditions based on historic data. The Owner will not adjust the number of working days and milestones, if any, due to differences in opinion regarding any assumptions made in the preparation of the schedule or for errors, omissions, or discrepancies found in the Owner's conceptual time schedule.

The number of working days is established by the Contract. Working day charges will begin 10 calendar days after the date of the written authorization to begin work. Working day charges will continue in accordance with the Contract. The Engineer may consider increasing the number of working days under extraordinary circumstances.

- 3.1. **Working Day Charges**. Working days will be charged in accordance with Section 8.3.1.4., "Standard Workweek," unless otherwise shown in the Contract documents. Working days will be computed and charged in accordance with one of the following:
- 3.1.1. **Five-Day Workweek**. Working days will be charged Monday through Friday, excluding national holidays, regardless of weather conditions or material availability. The Contractor has the option of working on Saturdays. Provide sufficient advance notice when scheduling work on Saturdays. Work on Sundays and national holidays will not be permitted without written permission. If work requiring an Inspector to be present is performed on a Saturday, Sunday, or national holiday, and weather and other conditions permit the performance of work for 7 hr. between 7 A.M. and 6 P.M., a working day will be charged.
- 3.1.2. Six-Day Workweek. Working days will be charged Monday through Saturday, excluding national holidays, regardless of weather conditions or material availability. Work on Sundays and national holidays will not be permitted without written permission. If work requiring an Inspector to be present is performed on a Sunday or a national holiday, and weather or other conditions permit the performance of work for 7 hr. between 7 A.M. and 6 P.M., a working day will be charged.
- 3.1.3. Seven-Day Workweek. Working days will be charged Monday through Sunday, excluding national holidays, regardless of weather conditions or material availability. Work on national holidays will not be permitted without written permission. If work is performed on any of these holidays requiring an Inspector to be present,

and weather or other conditions permit the performance of work for 7 hr. between 7 A.M. and 6 P.M., a working day will be charged.

- 3.1.4. **Standard Workweek**. Working days will be charged Monday through Friday, excluding national or state holidays, if weather or other conditions permit the performance of the principal unit of work underway, as determined by the Engineer, for a continuous period of at least 7 hr. between 7 A.M. and 6 P.M., unless otherwise shown in the Contract. The Contractor has the option of working on Saturdays or state holidays. Provide sufficient advance notice to the Engineer when scheduling work on Saturdays. Work on Sundays and national holidays will not be permitted without written permission. If work requiring an Inspector to be present is performed on a Saturday, Sunday, or holiday, and weather or other conditions permit the performance of work for 7 hr. between 7 A.M. and 6 P.M., a working day will be charged.
- 3.1.5. **Calendar Day**. Working days will be charged Sunday through Saturday, including all holidays, regardless of weather conditions, material availability, or other conditions not under the control of the Contractor.
- 3.1.6. **Other**. Days will be charged as shown in the Contract documents.
- 3.2. **Restricted Work Hours**. Restrictions on Contractor work hours and the related definition for working day charges are as prescribed in this article unless otherwise shown in the Contract documents.
- 3.3. **Nighttime Work**. Nighttime work is allowed only when shown in the Contract documents or as directed. Nighttime work is defined as work performed from 30 min. after sunset to 30 min. before sunrise.
- 3.3.1. Five-, Six-, and Seven-Day Workweeks. Nighttime work that extends past midnight will be assigned to the following day for the purposes of approval for allowing work on Sundays or national holidays.

#### 3.3.2. Standard Workweek.

- 3.3.2.1. **Nighttime Work Only**. When nighttime work is allowed or required and daytime work is not allowed, working day charges will be made when weather and other conditions permit the performance of the principal unit of work underway, as determined by the Engineer, for a continuous period of at least 7 hr. for the nighttime period, as defined in Section 8.3.3., "Nighttime Work," unless otherwise shown in the Contract documents.
- 3.3.2.2. Nighttime Work and Daytime Work Requiring Inspector. When nighttime work is performed or required and daytime work is allowed, working day charges will be made when weather and other conditions permit the performance of the principal unit of work underway, as determined by the Engineer, for a continuous period of at least 7 hr. for the nighttime period, as defined in Section 8.3.3., "Nighttime Work," or for a continuous period of at least 7 hr. for the alternative daytime period unless otherwise shown in the Contract documents. Only one day will be charged for each 24-hr. time period. When the Engineer agrees to restrict work hours to the nighttime period only, working day charges will be in accordance with Section 8.3.3.2.1., "Nighttime Work Only."
- 3.4. **Time Statements**. The Engineer will furnish the Contractor a monthly time statement. Review the monthly time statement for correctness. Report protests in writing, no later than 30 calendar days after receipt of the time statement, providing a detailed explanation for each day protested. Not filing a protest within 30 calendar days will indicate acceptance of the working day charges and future consideration of that statement will not be permitted.

### 4. TEMPORARY SUSPENSION OF WORK OR WORKING DAY CHARGES

The Engineer may suspend the work, wholly or in part, and will provide notice and reasons for the suspension in writing. Suspend and resume work only as directed in writing.

When part of the work is suspended, the Engineer may suspend working day charges only when conditions not under the control of the Contractor prohibit the performance of critical activities. When all of the work is

suspended for reasons not under the control of the Contractor, the Engineer will suspend working day charges.

## 5. PROJECT SCHEDULES

Prepare, maintain, and submit project schedules. Project schedules are used to convey the Contractor's intended work plan to the Owner. Prepare project schedules with a level of effort sufficient for the work being performed. Project schedules will not be used as a basis to establish the amount of work performed or for the preparation of the progress payments.

- 5.1. **Project Scheduler**. Designate an individual who will develop and maintain the progress schedule. The Project Scheduler will be prepared to discuss, in detail, the proposed sequence of work and methods of operation, and how that information will be communicated through the Progress Schedule at the Preconstruction Meeting. This individual will also attend the project meetings and make site visits to prepare, develop, and maintain the progress schedules.
- 5.2. **Construction Details**. Before starting work, prepare and submit a progress schedule based on the sequence of work and traffic control plan shown in the Contract documents. At a minimum, prepare the progress schedule as a Bar Chart or Critical Path Method (CPM), as shown on the plans. Include all planned work activities and sequences and show Contract completion within the number of working days specified. Incorporate major material procurements, known utility relocations, and other activities that may affect the completion of the Contract in the progress schedule. Show a beginning date, ending date, and duration in whole working days for each activity. Do not use activities exceeding 20 working days, except for agreed upon activities. Show an estimated production rate per working day for each work activity.

#### 5.3. Schedule Format. Format all project schedules according to the following:

- Begin the project schedule on the date of the start of Contract time or start of activities affecting work on the project;
- Show the sequence and interdependence of activities required for complete performance of the work. If using a CPM schedule, show a predecessor and a successor for each activity; and
- Ensure all work sequences are logical and show a coordinated plan of the work.

CPM schedules must also include:

- Clearly and accurately identify the critical path as the longest continuous path;
- Provide a legend for all abbreviations, run date, data date, project start date, and project completion date in the title block of each schedule submittal; and
- Through the use of calendars, incorporate seasonal weather conditions into the schedule for work (e.g., earthwork, concrete paving, structures, asphalt, drainage, etc.) that may be influenced by temperature or precipitation. Also, incorporate non-work periods such as holidays, weekends, or other non-work days as identified in the Contract.
- 5.4. Activity Format. For each activity on the project schedule provide:
  - A concise description of the work represented by the activity;
  - An activity duration in whole working days;
  - Code activities so that organized plots of the schedule may be produced.

CPM schedules must also include the quantity of work and estimated production rate for major items of work. Provide enough information for review of the work being performed.

#### 5.5. Schedule Types.

5.5.1. **Bar Chart**. Seven calendar days before the preconstruction meeting, prepare and submit a hard copy of the schedule using the bar chart method.

- 5.5.1.1. **Progress Schedule Reviews**. Update the project schedule and submit a hard copy when changes to the schedule occur or when requested.
- 5.5.2. Critical Path Method. Prepare and submit the schedule using the CPM.
- 5.5.2.1. **Preliminary Schedule**. Seven calendar days before the preconstruction meeting, submit both the plotted and electronic copies of the project schedule showing work to be performed within the first 90 calendar days of the project.
- 5.5.2.2. **Baseline Schedule**. The baseline schedule will be considered the Contractor's plan to successfully construct the project within the time frame and construction sequencing indicated in the Contract. Submit both plotted and electronic copies of the baseline schedule. Submit 2 plots of the schedule: one organized with the activities logically grouped using the activity coding; and the other plot showing only the critical path determined by the longest path, not based on critical float.

Develop and submit the baseline schedule for review within the first 45 calendar days of the project unless the time for submission is extended.

5.5.2.2.1. **Review**. Within 15 calendar days of receipt of the schedule, the Engineer will evaluate, and inform the Contractor if the schedule has been accepted. If the schedule is not accepted, the Engineer will provide comments to the Contractor for incorporation. Provide a revised schedule based on the Engineer's comments, or reasons for not doing so within 10 calendar days. The Engineer's review and acceptance of the project schedule is for conformance to the requirements of the Contract documents only and does not relieve the Contractor of any responsibility for meeting the interim milestone dates (if specified) or the Contract completion date. Review and acceptance does not expressly or by implication warrant, acknowledge, or admit the reasonableness of the logic or durations of the project schedule. If the Contractor fails to define any element of work, activity, or logic and the Engineer's review does not detect this omission or error, the Contractor is responsible for correcting the error or omission.

Submit an acceptable baseline schedule before the 90th calendar day of the project unless the time for submission is extended.

5.5.2.3. **Progress Schedule**. Maintain the project schedule for use by both the Contractor and the Engineer. Submit both the plotted and electronic copy as it will become an as-built record of the daily progress achieved on the project. If continuous progress of an activity is interrupted for any reason except non-work periods (such as holidays, weekend, or interference from temperature or precipitation), then the activity will show the actual finish date as that date of the start of the interruption and the activity will be broken into a subsequent activity (or activities, based on the number of interruptions) similarly numbered with successive alpha character as necessary. The original duration of the subsequent activity will be that of the remaining duration of the original activity. Relationships of the subsequent activity will match those of the original activity so that the integrity of the project schedule logic is maintained. Once established, the original durations and actual dates of all activities must remain unchanged. Revisions to the schedule may be made as necessary.

The project schedule must be revised when changes in construction phasing and sequencing occur or other changes that cause deviation from the original project schedule occur. Any revisions to the schedule must be listed in the monthly update narrative with the purpose of the revision and description of the impact on the project schedule's critical path and project completion date. Create the schedule revision using the latest update before the start of the revision.

Monthly updating of the project schedule will include updating of:

- The actual start dates for activities started;
- The actual finish dates for activities completed;
- The percentage of work completed and remaining duration for each activity started but not yet completed; and
- The calendars to show days actual work was performed on the various work activities.

The cut-off day for recording monthly progress will be the last day of each month. Submit the updated project schedule no later than the 20th calendar day of the following month. The Engineer will evaluate the updated schedule within 5 calendar days of receipt and inform the Contractor if it has or has not been accepted. If the schedule is not accepted, the Engineer will provide comments to the Contractor for incorporation. Provide a revised schedule based on the Engineer's comments, or reasons for not doing so within 5 calendar days.

Provide a brief narrative in a bulleted statement format for major items that have impacted the schedule. Notify the Engineer if resource-leveling is being used.

- 5.5.2.3.1. **Project Schedule Summary Report (PSSR)**. When shown on the plans, provide the PSSR instead of the narrative required in Section 8.5.5.2.3., "Progress Schedule." The PSSR includes a listing of major items that have impacted the schedule as well as a summary of progress in days ahead or behind schedule. Include an explanation of the project progress for the period represented on the form provided by the Owner.
- 5.5.3. **Notice of Potential Time Impact**. Submit a "Notice of Potential Time Impact" when a Contract time extension or adjustment of milestone dates may be justified or when directed.

Failure to provide this notice in the time frames outlined above will compromise the Owner's ability to mitigate the impacts and the Contractor forfeits the right to request a time extension or adjustment of milestone dates unless the circumstances are such that the Contractor could not reasonably have had knowledge of the impact at the time.

## 5.5.4. **Time Impact Analysis**. When directed, provide a time impact analysis. A time impact analysis is an evaluation of the effects of impacts on the project. A time impact analysis consists of the following steps:

- **Step 1**. Establish the status of the project immediately before the impact.
- **Step 2**. Predict the effect of the impact on the schedule update used in Step 1.
- **Step 3**. Track the effects of the impact on the schedule during its occurrence.
- Step 4. Establish the status of the project after the impact's effect has ended and provide details identifying any mitigating actions or circumstances used to keep the project ongoing during the impact period.

Determine the time impact by comparing the status of the work before the impact (Step 1) to the prediction of the effect of the impact (Step 2), if requested, and to actual effects of the impact once it is complete (Step 4). Unless otherwise approved, Steps 1, 3, and 4, must be completed before consideration of a Contract time extension or adjustment of a milestone date will be provided. Time extensions will only be considered when delays that affect milestone dates or the Contract completion date are beyond the Contractor's control. Submit Step 4 no later than 15 calendar days after the impact's effects have ended or when all the information on the effect has been realized.

Submit one electronic backup copy of the complete time impact analysis and a copy of the full project schedule incorporating the time impact analysis. If the project schedule is revised after the submittal of a time impact analysis, but before its approval, indicate in writing the need for any modification to the time impact analysis.

The Engineer will review the time impact analysis upon completion of step 4. If this review detects revisions or changes to the schedule that had not been performed and identified in a narrative, the Engineer may reject the time impact analysis. If the Engineer is in agreement with the time impact analysis, a change order may be issued to grant additional working days, or to adjust interim milestones. Once a change order has been executed, incorporate the time impact analysis into the project schedule. The time impact analysis may also be used to support the settlement of disputes and claims. Compensation related to the time impact analysis may be provided at the completion of the analysis or the completion of the project to determine the true role the impact played on the final completion.

The work performed under this article will not be measured or paid for directly but will be subsidiary to pertinent items.

### 6. FAILURE TO COMPLETE WORK ON TIME

The time established for the completion of the work is an essential element of the Contract. If the Contractor fails to complete the work within the number of working days specified, working days will continue to be charged. Failure to complete the Contract, a separate work order, or callout work within the number of working days specified, including any approved additional working days, will result in liquidated damages for each working day charged over the number of working days specified in the Contract. The dollar amount specified in the Contract will be deducted from any money due or to become due the Contractor for each working day the Contract remains incomplete. This amount will be assessed not as a penalty but as liquidated damages.

### 7. DEFAULT OF THE CONTRACT

7.1. **Declaration of Default.** The Engineer may declare the Contractor to be in default of the Contract if the Contractor:

- fails to begin the work within the number of days specified,
- fails to prosecute the work to assure completion within the number of days specified,
- is uncooperative, disruptive or threatening,
- fails to perform the work in accordance with the Contract requirements,
- neglects or refuses to remove and replace rejected materials or unacceptable work,
- discontinues the prosecution of the work without the Engineer's approval,
- makes an unauthorized assignment,
- fails to resume work that has been discontinued within a reasonable number of days after notice to do so,
- fails to conduct the work in an acceptable manner, or
- commits fraud or other unfixable conduct as determined by the Owner.

If any of these conditions occur, the Engineer will give notice in writing to the Contractor and the Surety of the intent to declare the Contractor in default. If the Contractor does not proceed as directed within 10 days after the notice, the Owner will provide written notice to the Contractor and the Surety to declare the Contractor to be in default of the Contract. The Owner will also provide written notice of default to the Surety. If the Contractor provides the Owner written notice of voluntary default of the Contract, the Owner may waive the 10 day notice of intent to declare the Contractor in default and immediately provide written notice of default to the Surety. Working day charges will continue until completion of the Contract. The Owner may suspend work in accordance with Section 8.4., "Temporary Suspension of Work or Working Day Charges," to investigate apparent fraud or other unfixable conduct before defaulting the Contractor. The Contractor may be subject to sanctions under the state and/or federal laws and regulations.

The Owner will determine the method used for the completion of the remaining work as follows:

- Contracts without Performance Bonds. The Owner will determine the most expeditious and efficient way to complete the work, and recover damages from the Contractor.
- Contracts with Performance Bonds. The Owner will, without violating the Contract, demand that the Contractor's Surety complete the remaining work in accordance with the terms of the original Contract. A completing Contractor will be considered a subcontractor of the Surety. The Owner reserves the right to approve or reject proposed subcontractors. Work may resume after the Owner receives and approves Certificates of Insurance as required in Section 3.4.3., "Insurance." Certificates of Insurance may be issued in the name of the completing Contractor. The Surety is responsible for making every effort to expedite the resumption of work and completion of the Contract. The Owner may complete the work using any or all materials at the work locations that it deems suitable and acceptable. Any costs incurred by the Owner for the completion of the work under the Contract will be the responsibility of the Surety.

From the time of notification of the default until work resumes (either by the Surety or the Owner), the Owner will maintain traffic control devices and will do any other work it deems necessary, unless otherwise agreed upon by the Owner and the Surety. All costs associated with this work will be deducted from money due to the Surety.

The Owner will hold all money earned but not disbursed by the date of default. Upon resumption of the work after the default, all payments will be made to the Surety. All costs and charges incurred by the Owner as a result of the default, including the cost of completing the work under the Contract, costs of maintaining traffic control devices, costs for other work deemed necessary, and any applicable liquidated damages or disincentives will be deducted from money due the Contractor for completed work. If these costs exceed the sum that would have been payable under the Contract, the Surety will be liable and pay the Owner the balance of these costs in excess of the Contract price. In case the costs incurred by the Owner are less than the amount that would have been payable under the Contract if the work had been completed by the Contractor, the Owner will be entitled to retain the difference.

Comply with Article 8.2., "Subcontracting," and abide by the DBE/HUB/SBE commitments previously approved by the Owner .

No markups as defined in Article 9.7., "Payment for Extra Work and Force Account Method," will be allowed for the Surety.

Wrongful Default. Submit a written request to the Owner within 14 calendar days of receipt of the notice of default for consideration of wrongful default.

The Owner will determine if the Contractor has been wrongfully defaulted, and will proceed with the following:

- If the Owner determines the default is proper, the default will remain. If the Contractor is in disagreement, the Contractor may file a claim in accordance with Article 4.7., "Dispute or Claims Procedure."
- If the Owner determines it was a wrongful default, the Owner will terminate the Contract for convenience, in accordance with Article 8.8., "Termination of the Contract."

#### TERMINATION OF THE CONTRACT

7.2.

8.

The Owner may terminate the Contract in whole or in part whenever:

- the Contractor is prevented from proceeding with the work as a direct result of an executive order of the President of the United States or the Governor of the State;
- the Contractor is prevented from proceeding with the work due to a national emergency, or when the work to be performed under the Contract is stopped, directly or indirectly, because of the freezing or diversion of materials, equipment or labor as the result of an order or a proclamation of the President of the United States;
- the Contractor is prevented from proceeding with the work due to an order of any federal authority;
- the Contractor is prevented from proceeding with the work by reason of a preliminary, special, or permanent restraining court order where the issuance of the restraining order is primarily caused by acts or omissions of persons or agencies other than the Contractor; or
- the Owner determines that termination of the Contract is in the best interest of the Owner or the public. This includes, but is not limited to, the discovery of significant hazardous material problems, right of way acquisition problems, or utility conflicts that would cause substantial delays or expense to the Contract.
- 8.1. **Procedures and Submittals**. The Engineer will provide written notice to the Contractor of termination specifying the extent of the termination and the effective date. Upon notice, immediately proceed in accordance with the following:
  - stop work as specified in the notice;

- place no further subcontracts or orders for materials, services, or facilities, except as necessary to complete a critical portion of the Contract, as approved;
- terminate all subcontracts to the extent they relate to the work terminated;
- complete performance of the work not terminated;
- settle all outstanding liabilities and termination settlement proposals resulting from the termination for public convenience of the Contract;
- create an inventory report, including all acceptable materials and products obtained for the Contract that have not been incorporated in the work that was terminated (include in the inventory report a description, quantity, location, source, cost, and payment status for each of the acceptable materials and products); and
- take any action necessary, or that the Engineer may direct, for the protection and preservation of the materials and products related to the Contract that are in the possession of the Contractor and in which the Owner has or may acquire an interest.
- 8.2. Settlement Provisions. Within 60 calendar days of the date of the notice of termination, submit a final termination settlement proposal, unless otherwise approved. The Engineer will prepare a change order that reduces the affected quantities of work and adds acceptable costs for termination. No claim for loss of anticipated profits will be considered. The Owner will pay reasonable and verifiable termination costs including:
  - all work completed at the unit bid price and partial payment for incomplete work;
  - the percentage of Item 500, "Mobilization," equivalent to the percentage of work complete or actual cost that can be supported by cost records, whichever is greater;
  - expenses necessary for the preparation of termination settlement proposals and support data;
  - the termination and settlement of subcontracts;
  - storage, transportation, restocking, and other costs incurred necessary for the preservation, protection, or disposition of the termination inventory; and
  - other expenses acceptable to the Owner.

# Item 9L Measurement and Payment



## 1. MEASUREMENT OF QUANTITIES

The Engineer will measure all completed work using United States standard measures, unless otherwise specified.

- 1.1. Linear Measurement. Unless otherwise specified, all longitudinal measurements for surface areas will be made along the actual surface of the roadway and not horizontally. No deduction will be made for structures in the roadway with an area of 9 sq. ft. or less. For all transverse measurements for areas of base courses, surface courses, and pavements, the dimensions to be used in calculating the pay areas will be the neat dimensions and will not exceed those shown on the plans, unless otherwise directed.
- 1.2. Volume Measurement. Transport materials measured for payment by volume in approved hauling vehicles. Display a unique identification mark on each vehicle. Furnish information necessary to calculate the volume capacity of each vehicle. The Engineer may require verification of volume through weight measurement. Use body shapes that allow the capacity to be verified. Load and level the load to the equipment's approved capacity. Loads not hauled in approved vehicles may be rejected.
- 1.3. Weight Measurement. Transport materials measured for payment by weight or truck measure in approved hauling vehicles. Furnish certified measurements, tare weights, and legal gross weight calculations for all haul units. Affix a permanent, legible number on the truck and on the trailer to correspond with the certified information. Furnish certified weights of loaded haul units transporting material if requested.

The material will be measured at the point of delivery. The cost of supplying these volume and weight capacities is subsidiary to the pertinent item. For measurement by the ton, in the field, provide measurements in accordance with Item 520, "Weighing and Measuring Equipment," except for items where ton measurements are measured by standard tables.

The Engineer may reject loads and suspend hauling operations for overloading.

- 1.3.1. Hauling on Routes Accessible to the Traveling Public. For payment purposes on haul routes accessible to the traveling public, the net weight of the load will be calculated as follows:
  - If the gross vehicle weight is less than the maximum allowed by state law, including applicable yearly weight tolerance permit, the net weight of the load will be determined by deducting the tare weight of the vehicle from the gross weight.
  - If the gross vehicle weight is more than the maximum allowed by state law, including applicable yearly weight tolerance permit, the net weight of the load will be determined by deducting the tare weight of the vehicle from the maximum gross weight allowed.
- 1.3.2. Hauling on Routes Not Accessible to the Traveling Public. For payment purposes on haul routes that are not accessible to the traveling public where advance permission is obtained in writing from the Engineer:
  - If the gross vehicle weight is less than the maximum allowed, including applicable yearly weight tolerance permit, the net weight of the load will be determined by deducting the tare weight of the vehicle from the gross weight.
  - If the gross vehicle weight is more than the maximum allowed, the net weight of the load will be determined by deducting the tare weight of the vehicle from the maximum gross weight allowed.

### PLANS QUANTITY MEASUREMENT

2.

Plans quantities may or may not represent the exact quantity of work performed or material moved, handled, or placed during the execution of the Contract. The estimated bid quantities are designated as final payment quantities, unless revised by the governing specifications or this article.

If the quantity measured as outlined under "Measurement" varies by more than 5% (or as stipulated under "Measurement" for specific Items) from the total estimated quantity for an individual item originally shown in the Contract, an adjustment may be made to the quantity of authorized work done for payment purposes.

When quantities are revised by a change in design approved by the Owner, by change order, or to correct an error on the plans, the plans quantity will be increased or decreased by the amount involved in the change, and the 5% variance will apply to the new plans quantity.

If the total Contract quantity multiplied by the unit bid price for an individual item is less than \$250 and the item is not originally a plans quantity item, then the item may be paid as a plans quantity item if the Engineer and Contractor agree in writing to fix the final quantity as a plans quantity.

For Contracts with callout work and work orders, plans quantity measurement requirements are not applicable.

### 3. ADJUSTMENT OF QUANTITIES

The party to the Contract requesting the adjustment will provide field measurements and calculations showing the revised quantity. When approved, this revised quantity will constitute the final quantity for which payment will be made. Payment for revised quantity will be made at the unit price bid for that item, except as provided for in Article 4.4., "Changes in the Work."

### 4. SCOPE OF PAYMENT

Payment of the Contract unit price is full compensation for all materials, equipment, labor, tools, and supplies necessary to complete the item of work under the Contract. Until final acceptance in accordance with Article 5.12., "Final Acceptance," assume liability for completing the work according to the Contract documents and any loss or damage arising from the performance of the work or from the action of the elements, infringement of patent, trademark, or copyright, except as provided elsewhere in the Contract.

The Owner will only pay for material incorporated into the work in accordance with the Contract. Payment of progress estimates will in no way affect the Contractor's obligation under the Contract to repair or replace any defective parts in the construction or to replace any defective materials used in the construction and to be responsible for all damages due to defects if the defects and damages are discovered on or before final inspection and acceptance of the work.

### 5. PROGRESS PAYMENTS

The Engineer will prepare a monthly estimate of the amount of work performed, including materials in place. Incomplete items of work may be paid at an agreed upon percentage as approved. Payment of the monthly estimate is determined at the Contract item prices less any withholdings or deductions in accordance with the Contract. Progress payments may be withheld for failure to comply with the Contract.

#### 6. PAYMENT FOR MATERIAL ON HAND (MOH)

If payment for MOH is desired, request compensation for the invoice cost of acceptable nonperishable materials that have not been used in the work before the request, and that have been delivered to the work location or are in acceptable storage places. Nonperishable materials are those that do not have a shelf life or whose characteristics do not materially change when exposed to the elements. Include only materials that

have been sampled, tested, approved, or certified, and are ready for incorporation into the work. Only materials which are completely constructed or fabricated on the Contractor's order for a specific Contract and are so marked and on which an approved test report has been issued are eligible. Payment for MOH may include the following types of items: concrete traffic barrier, precast concrete box culverts, concrete piling, reinforced concrete pipe, and illumination poles. Any repairs required after fabricated materials have been approved for storage will require approval of the Engineer before being made and will be made at the Contractor's expense. Include only those materials that have an invoice cost of at least \$1,000 in the request for MOH payment.

If the request is acceptable, the Engineer will include payment for MOH in a progress payment. Payment for MOH does not constitute acceptance of the materials. Payment will not exceed the actual cost of the material as established by invoice, or the total cost for the associated item less reasonable placement costs, whichever is less. Materials for which the Contractor does not have a paid invoice within 60 days will not be eligible for payment and will be removed from the estimate. Payment may be limited to a portion of the invoice cost or unit price if shown elsewhere in the Contract. Payment for precast products fabricated or constructed by the Contractor for which invoices or freight bills are not available may be made based on statements of actual cost.

Submit the request on forms provided by the Owner. These forms may be electronically reproduced, provided they are in the same format and contain all the required information and certifications. Continue to submit monthly MOH forms until the total value of MOH is \$0.

By submitting a request for MOH payment, the Contractor expressly authorizes the Owner to audit MOH records, and to perform process reviews of the record-keeping system. If the Owner determines noncompliance with any of the requirements of this provision, the Owner may exclude payment for any or all MOH for the duration of the Contract.

Maintain all records relating to MOH payment until final acceptance. Provide these records to the Engineer upon request.

### 7. PAYMENT FOR EXTRA WORK AND FORCE ACCOUNT METHOD

Payment for extra work directed, performed, and accepted will be made in accordance with Article 4.4., "Changes in the Work." Payment for extra work may be established by agreed unit prices or by Force Account Method.

Agreed unit prices are unit prices that include markups and are comparable to recent bid prices for the same character of work. These unit prices may be established without additional breakdown justification.

When using Force Account Method, determine an estimated cost for the proposed work and establish labor and equipment rates and material costs. Maintain daily records of extra work and provide copies of these records daily, signed by the Contractor's representative, for verification by the Engineer. Request payment for the extra work no later than the 10th day of the month following the month in which the work was performed. Include copies of all applicable invoices. If the extra work to be performed has an estimated cost of less than \$10,000, submit for approval and payment an invoice of actual cost for materials, equipment, labor, tools, and incidentals necessary to complete the extra work.

- 7.1. **Markups**. Payment for extra work may include markups as compensation for the use of small tools, overhead expense, and profit.
- 7.1.1. **Labor**. Compensation will be made for payroll rates for each hour that the labor, foremen, or other approved workers are actually engaged in the work. In no case will the rate of wages be less than the minimum shown in the Contract for a particular category. An additional 25% of this sum will be paid as compensation for overhead, superintendence, profit, and small tools.
- 7.1.2. **Insurance and Taxes**. An additional 55% of the labor cost, excluding the 25% compensation provided in Section 9.7.1.1., "Labor," will be paid as compensation for labor insurance and labor taxes including the cost

of premiums on non-project-specific liability (excluding vehicular) insurance, workers compensation insurance, Social Security, unemployment insurance taxes, and fringe benefits.

- 7.1.3. **Materials**. Compensation will be made for materials associated with the work based on actual delivered invoice costs, less any discount. An additional 25% of this sum will be paid as compensation for overhead and profit.
- 7.1.4. **Equipment**. Payment will be made for the established equipment hourly rates for each hour that the equipment is involved in the work. An additional 15% of this sum will be paid as compensation for overhead and profit not included in the rates.

Transportation cost for mobilizing equipment will be included if the equipment is mobilized from an off-site location.

7.1.4.1. **Contractor-Owned Equipment**. For Contractor-owned machinery, trucks, power tools, or other equipment, use the FHWA rental rates found in the *Rental Rate Blue Book* multiplied by the regional adjustment factor and the rate adjustment factor to establish hourly rates. Use the rates in effect for each section of the *Rental Rate Blue Book* at the time of use.

If a rate has not been established for a particular piece of equipment in the *Rental Rate Blue Book*, the Engineer will allow a reasonable hourly rate. This price will include operating costs.

Payment for equipment will be made for the actual hours used in the work. The Owner reserves the right to withhold payment for low production or lack of progress. Payment will not be made for time lost for equipment breakdowns, time spent to repair equipment, or time after equipment is no longer needed.

If equipment is used intermittently while dedicated solely to the work, payment will be made for the duration the equipment is assigned to the work but no more than 8 hours will be paid during a 24-hour day, nor more than 40 hours per week, nor more than 176 hours per month, except when time is computed using a six-day or seven-day workweek. When using a six-day workweek, no more than 8 hours will be paid during a 24-hour day, nor more than 48 hours per week, nor more than 211 hours per month. When using a seven-day workweek, no more than 8 hours will be paid during a 24-hour day, nor more than 24 hours per week, nor more than 211 hours per month.

7.1.4.2. Equipment Not Owned by the Contractor. For equipment rented from a third party not owned by the Contractor, payment will be made at the invoice daily rental rate for each day the equipment is needed for the work. The Owner reserves the right to limit the daily rate to comparable *Rental Rate Blue Book* rates. When the invoice specifies that the rental rate does not include fuel, lubricants, repairs, and servicing, the *Rental Rate Blue Book* hourly operating cost for each hour the equipment is operated will be added.

When the invoice specifies equipment operators as a component of the equipment rental, payment will be made at the invoice rate for each operator for each day the equipment is needed for the work.

- 7.1.4.3. **Standby Equipment Costs**. Payment for standby equipment will be made in accordance with Section 9.7.1.4., "Equipment," except that:
- 7.1.4.3.1. Contractor-Owned Equipment. For Contractor-owned machinery, trucks, power tools, or other equipment:
  - Standby will be paid at 50% (to remove operating cost) of the FHWA rental rates found in the *Rental Rate Blue Book* multiplied by the regional adjustment factor and the rate adjustment factor.
  - Standby costs will not be allowed during periods when the equipment would have otherwise been idle.
- 7.1.4.3.2. Equipment Not Owned by the Contractor. For equipment rented from a third party not owned by the Contractor:
  - Standby will be paid at the invoice daily rental rate, excluding operating cost, which includes fuel, lubricants, repairs, and servicing. The Owner reserves the right to limit the daily standby rate to

comparable FHWA rental rates found in the *Rental Rate Blue Book* multiplied by the regional adjustment factor and the rate adjustment factor.

- Standby will be paid for equipment operators when included on the invoice and equipment operators are actually on standby.
- Standby costs will not be allowed during periods when the equipment would have otherwise been idle.
- 7.1.5. **Subcontracting**. An additional 5% of the actual invoice cost will be paid to the Contractor as compensation for administrative cost, superintendence, and profit.
- 7.1.6. **Law Enforcement**. An additional 5% of the actual invoice cost will be paid as compensation for administrative costs, superintendence, and profit.
- 7.1.7. **Railroad Flaggers**. An additional 5% of the actual invoice cost will be paid as compensation for administrative cost, superintendence, and profit.
- 7.1.8. **Bond Cost**. An additional 1% of the total compensation provided in Article 9.7., "Payment for Extra Work and Force Account Method," will be paid for the increase in bond.

### 8. RETAINAGE

The owner will withhold 5% retainage of the Contractor. The Contractor may withhold retainage on subcontractors in accordance with state and federal regulations.

### 9. PAYMENT PROVISIONS FOR SUBCONTRACTORS

For the purposes of this article only, the term subcontractor includes suppliers and the term work includes materials provided by suppliers at a location approved by the Engineer.

These requirements apply to all tiers of subcontractors. Incorporate the provisions of this article into all subcontract or material purchase agreements.

Pay subcontractors for work performed within 10 days after receiving payment for the work performed by the subcontractor. Also, pay any retainage on a subcontractor's work within 10 days after satisfactory completion of all of the subcontractor's work. Completed subcontractor work includes vegetative establishment, test, maintenance, performance, and other similar periods that are the responsibility of the subcontractor.

For the purpose of this section, satisfactory completion is accomplished when:

- the subcontractor has fulfilled the Contract requirements of both the Owner and the subcontract for the subcontracted work, including the submittal of all information required by the specifications and the Owner; and
- the work done by the subcontractor has been inspected, approved, and paid by the Owner.

Provide a certification of prompt payment in accordance with the Owner's prompt payment procedure to certify that all subcontractors and suppliers were paid from the previous months payments and retainage was released for those whose work is complete. Submit the completed form each month and the month following the month when final acceptance occurred at the end of the project.

The inspection and approval of a subcontractor's work does not eliminate the Contractor's responsibilities for all the work as defined in Article 7.17., "Contractor's Responsibility for Work."

The Owner may pursue actions against the Contractor, including withholding of estimates and suspending the work, for noncompliance with the subcontract requirements of this section upon receipt of written notice with sufficient details showing the subcontractor has complied with contractual obligations.

## FINAL PAYMENT

10.

When the Contract has been completed, all work has been approved, final acceptance has been made in accordance with Article 5.12., "Final Acceptance," and Contractor submittals have been received, the Engineer will prepare a final estimate for payment showing the total quantity of work completed and the money owed the Contractor. The final payment will reflect the entire sum due, less any sums previously paid.

# Special Provision to Item 000 Right of Way Important Notice to Contractors



The Contractor's attention is directed to the fact that there may be some outstanding right of way acquisitions as of January 2023 required for the construction of this project. The County anticipates that these acquisitions will be completed as shown.

For the Contractor's information, the following is a list of all tracts of right of way required for the construction of the project. The Contractor is invited to review the outstanding acquisitions with the Engineer assigned to this project and listed in the "Notice to Contractors." An extension of work time may be granted, as necessary, for delays caused by interference with acquisitions beyond the estimated dates of clearance.

The following right of way tracts are to be acquired as shown. The approximate location is based on the project centerline/baseline stationing.

PARCEL	OWNER	RT/LT OF CL	APPROX. LOCATION	ESTIMATED DATE OF ACQUISITION
1	OC Ranch	LT.	From 3,900' West of Enchanted Oaks Drive to Station 17+73	Possession in Use Agreement Executed on 1/17/22. Estimated Closing of Acquisition on 12/31/23.
1E	OC Ranch	LT.	From 3,900' West of Enchanted Oaks Drive to Station 17+73	Possession in Use Agreement Executed on 1/17/22. Estimated Closing of Acquisition on 12/31/23.
3	Dripping Springs Independent School District	RT	From Station 19+00 to Station 47+00	Right of Entry acquired for access from 19+00 to 25+05. Estimated Closing of Acquisition on 12/31/23.

# Special Provision to Item 000 Utility Important Notice to Contractors



The Contractor's attention is directed to the fact that there may be some outstanding utility adjustments as of January 2023 required for the construction of this project. The County anticipates that these utility adjustments will be completed as shown.

The Contractor is invited to review the outstanding utility adjustments with the Engineer assigned to this project and listed in the "Notice to Contractors." An extension of work time may be granted, as necessary, for delays caused by utility interference with this work. It is specifically understood, however, that if the contractor is delayed by virtue of the adjustment of any utilities, that this delay will not be considered as a basis for a claim by the contractor. Any work done by the contractor before utility relocations are complete must not interfere with utility relocation work.

The following utilities are to be adjusted by their owners and are to be completed as shown. The approximate location is based on the project centerline/baseline stationing.

OWNER	APPROX. LOCATION	ESTIMATED DATE OF RELOCATION
Frontier	Pole at Station 14+75 LT. to	February 28, 2023
Frontier	Pole at Station 23+00 LT	February 28, 2023
Charter Spectrum	Pole at Station 14+75 LT. to	February 28, 2023
Charter Spectrum	Pole at Station 23+00 LT	February 28, 2023
West County Travis Public Utility Agency	Station 19+00, 130' LT to Station 20+10, 130' LT Crossing - Station 19+00, 130' LT to Station 19+00, 116' RT Station 19+00, 116' RT to Station 21+00, 100' RT	Joint Bid with the project. PS&E is in the advertised plan set.

# Special Provision 000 Important Notice to Contractors



For Dollar Amount of Original Contract		Dollar Amount of Daily Contract Administration Liquidated
From More Than	To and including	Damages per Working Day
0	1,000,000	618
1,000,000	3,000,000	832
3,000,000	5,000,000	940
5,000,000	15,000,000	1317
15,000,000	25,000,000	1718
25,000,000	50,000,000	2411
50,000,000	Over 50,000,000	4265

In addition to the amount shown in Table 1, the Liquidated Damages will be increased by the amount shown in Item 8 of the General Notes for Road User Cost (RUC), when applicable.

# Special Provision to Item 8 Prosecution and Progress



Item 8, Prosecution and Progress of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 8.2 Subcontracting is supplemented by the following. Do not sublet any portion of a construction Contract without the Engineer's written approval. A subcontract does not relieve any responsibility under the Contract and bonds. Ensure that all subcontracted work complies with all governing labor provisions. All work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate written agreement between the Contractor and the Subcontractor (and where appropriate between Subcontractors) which shall contain provisions that:

- preserve and protect the rights of the County, the Inspector, the GEC and the Engineer of Record under the contract with
  respect to the Work to be performed under the subcontract so that the subcontracting thereof will not prejudice such rights;
- require that such work be performed in accordance with the requirements of the Contract Documents;
- require submission to the Contractor of the applications for payment under each subcontract to which the Contractor is a party, in reasonable time to enable the Contractor to apply for payment in accordance with the Contract Documents;
- require that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to subcontracted
  portions of the Work shall be submitted to the Contractor (via any Subcontractor or Sub-subcontractor where appropriate) in
  sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like claims by the
  Contractor upon the County;
- obligate each subcontractor specifically to consent to the provisions of this article.

A copy of all such signed subcontract agreements shall be filed by the Contractor with the Inspector before the Subcontractor shall be allowed to commence work.

#### Article 8.3.1.4 Standard Workweek is supplemented by:

Should the Contractor be delayed in the completion of the Work by any act or neglect of the County, the Inspector or the Engineer of Record, or of any employee of either, or by other contractors employed by the County, or by changes ordered in the Work, or by strikes, lockouts, fires, and unusual delays by common carriers, or unavoidable cause or causes beyond the Contractor's control, or by any cause which the Inspector shall decide justifies the delay, then an extension of time shall be allowed for completing the Work, sufficient to compensate for the delay, the amount of the extension to be determined by the Inspector; provided, however, before the Inspector may decide whether or not to allow such an extension of time, the Contractor must tender a prompt written request for an extension of time wherein the Contractor shall give the Inspector a written description of the cause of such delay.

No claims shall be made by the Contractor for damages resulting from hindrances or delays from any cause (except where the Work is stopped by order of and for the convenience of the County) during the progress of any portion of the Work embraced in the Contract Documents. In case said work shall be stopped by the act of the County, then such expense, as in the sole judgment of the Inspector is caused by such stoppage of said work, shall be paid by the County to the Contractor.

Article 8.7 Default of Contract. The paragraph entitled "Contracts with Performance Bonds" is supplemented by the following:

In case the surety should fail to commence compliance within ten (10) days after service of the herein above provided notice of abandonment and notice for completion, then the County may provide for completion of the Work in either of the following elective manners:

- The County may thereupon employ such force of men and use such machinery, equipment, tools, materials and supplies as the County may deem necessary to complete the Work and charge the expense of such labor, machinery, equipment, tools, materials and supplies to the Contractor, and expense so charged shall be deducted and paid by the County out of such monies as may be due, or that may thereafter at any time become due to the Contractor under and by virtue of the Contract Documents. In case such expense is less than the sum which would have been payable under the Contract Documents if the same had been completed by the Contractor, the County will be entitled to retain the difference. In case such expense is greater than the sum which would have been payable under the Contract Documents if the same had been completed by the Contractor, the Contract Documents if the same had been completed by the Contractor, the Contract Documents if the same had been completed by the Contractor, the Contract Documents if the same had been completed by the Contractor, the Contract Documents if the same had been completed by the Contractor, the Contract Documents if the same had been completed by the Contractor, the Contract Documents if the same had been completed by the Contractor, then the Contractor and/or its surety shall pay the amount of such excess to the County, or
- The County, under sealed bids, after twenty-one (21) days notice published one or more times in a newspaper having general circulation in the area of the location of the Project, may let a contract for the completion of the Work under substantially the same terms and conditions which are provided in the Contract Documents. In case there is any increase in cost to the County under the new contract as compared to what would have been the cost under the Contract Documents, such increase shall be charged to the Contractor and the surety shall be and remain bound therefor. However, should the cost to complete any such contract prove to be less than what would have been the cost to complete under the Contract Documents, the County shall be entitled to retain the difference.

When the Work shall have reached Final Completion, the Contractor and its surety shall be so notified and Certificates of Completion and Acceptance, as provided in Section 5.12.2.2.b. herein above, shall be issued. A complete itemized statement of the contract accounts, certified by the Inspector as being correct, shall then be prepared and delivered to the Contractor and its surety, whereupon the Contractor and/or its surety, or the County as the case may be, shall pay the balance due as reflected by said statement within fifteen (15) days after the date of such Certificate of Completion.

In the event the statement of accounts shows that the cost to complete the Work is less than that which would have been the cost to the County had the Work been completed by the Contractor under the terms of the Contract Documents, or when the Contractor and/or its surety shall pay the balance shown to be due by them to the County, then all machinery, equipment, tools, materials or supplies left on the site of the Project shall be turned over to the Contractor and/or its surety.

Should the cost to complete the Work exceed the amount the County would have been obligated to pay the Contractor had the Work been completed by the Contractor under the terms of the Contract Documents, and should the Contractor and/or its surety fail to pay the amount due the County within the time designated hereinabove, and should there remain any machinery, equipment, tools, materials or supplies on the site of the Project, notice thereof, together with an itemized list of such equipment and materials, shall be mailed to the Contractor and its surety at the respective addresses designated in the Contract Documents. After properly tendering such notice, such property shall be held at the risk of the Contractor and its surety subject only to the duty of the County to exercise ordinary care to protect such property. After fifteen (15) days from the date of said notice, the County may sell such machinery, equipment, tools, materials or supplies and apply the net sum derived from such sale to the credit of the Contractor and its surety. Such sale may be made at either public or private sale, with or without notice, as the County may elect. The County shall release, to their proper owners, any machinery, equipment, tools, materials, or supplies, which remain on the Project and which belong to persons other than the Contractor or its surety. The books on all operations provided herein shall be opened to the Contractor and its surety.

Article 8.8 Termination of Contract. The following section shall be added to Article 8.8:

**8.8.3.** Termination for Convenience. In connection with the Work outlined in the Contract Documents, it is agreed and fully understood by Contractor, that the County may cancel or indefinitely suspend further work hereunder or terminate the Contract for the convenience of the County, upon fifteen (15) days written notice to Contractor. In the event the County terminates the Contract for convenience, it is hereby understood and acknowledged by the Contract that immediately upon receipt of the County's notice of termination, all work and labor being performed under the Contract Documents shall cease. Contractor shall invoice the County for all work satisfactorily completed and shall be compensated in accordance with the terms of the Contractor Documents for work accomplished prior to the receipt of said notice. No amount shall be due for lost or anticipated profits. However, no cost incurred after the effective date of the notice of termination shall be treated as reimbursable costs unless it relates to carrying out the unterminated portion or taking closeout measures.

#### Article 8 is supplemented by the following:

Article 8.9 Workers and Equipment. Furnish suitable machinery, equipment, and construction forces for the proper prosecution of the work. Provide adequate lighting to address quality requirements and inspection of nighttime work. At the written request of

the Engineer, immediately remove from the work locations any employee or representative of the Contractor or a subcontractor who, in the opinion of the Engineer, does not perform work in a proper and skillful manner or who is disrespectful, intemperate, disorderly, uncooperative, or otherwise objectionable. Do not reinstate these individuals without the written consent of the Engineer. The Engineer may suspend the work without suspending working day charges until the Contractor complies with these requests. No illegal alien may be employed by any Contractor for work on this Project, and a penalty of \$500.00 per day will be assessed for each day and for each illegal alien who works for the Contractor at this Project.

# Special Provision to Item 8 Prosecution and Progress



Item 8, Prosecution and Progress of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

#### Article 8.1 Prosecution of Work. The second sentence of the first paragraph are voided and replaced by the following:

Prosecute the work continuously to completion within the working days specified except for as follows: The County may suspend work under this contract due to utility relocations and/or adjustments for a maximum of 90 calendar days. The suspension may be used at one time or broken into no more than 4 suspensions totaling a maximum of 90 calendar days. The Engineer and the Contractor may mutually agree, in writing, to increase or decrease this maximum number of days. The Contractor shall not be entitled to additional compensation due to delays within these 90 calendar days.

# Special Provision to Item 9 Measurement and Payment



Item 9, Measurement and Payment of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 9.5 Progress Payments. The first sentence is replaced by: On or before the first Wednesday of each month, the Contractor shall submit to the Inspector a statement showing the total value of the Work performed up to and including the last day of the preceding month. The statement shall also include the value of all sound materials delivered on the job site and to be included in the Work and all partially completed work whether bid as a lump sum or a unit item which, in the opinion of the Inspector, is acceptable. The Inspector shall either examine and approve by signature or modify and approve such modified statement.

The Inspector shall review the Contractor's applications for payment and supporting data, determine the amount owed to the Contractor and recommend, in writing to the GEC for review, payment to the Contractor in such amounts; such recommendation of payment to the Contractor constitutes a representation to the County of the Inspector's professional judgment that the Work has progressed to the point indicated to the best of its knowledge, information and belief, but such recommendation of an application for payment to the Contractor shall not be deemed as a representation by the Inspector that the Inspector has made any examination to determine how or for what purpose the Contractor has used the monies paid on account of the Contract Price.

The County shall then pay the Contractor, within 30 days of the statement submittal, the total amount of the approved statement, and further less all previous payments and all further sums that may by retained by the County under the terms of the Contract Documents and/or under state or federal law. It is understood, however, that in case the whole work be near completion and some unexpected and unusual delay occurs due to no fault or neglect on the part of the Contractor, then the County may, upon written recommendation of the Inspector, pay a reasonable and equitable portion of the retained percentage to the Contractor, if any; or the Contractor, at the County's option, may be relieved of the obligation to fully complete the Work and, thereupon, the Contractor shall receive payment of the balance due Contractor under the contract subject to the conditions stated under Article 9.8.

As a minimum, invoices shall be on the form provided by the County and include: (1) Name, address, and telephone number of Contractor and similar information in the event the payment is to be made to a different address, (2) County contract number, (3) Identification of items or service as outlined in the Contract Documents, (4) Quantity or quantities, applicable unit prices, total prices, and total amount and (5) Any additional payment information which may be called for by the Contract Documents.

Payment inquiries should be directed to the GEC.

Article 9.9 Payment Provisions for Subcontractors is further supplemented as follows: THE CONTRACTOR AGREES THAT IT WILL INDEMNIFY, DEFEND AND SAVE HARMLESS THE COUNTY, THE INSPECTOR, THE GEC AND THE ENGINEER OF RECORD, AS WELL AS ANY OF THEIR AGENTS, REPRESENTATIVES, OFFICERS OR EMPLOYEES FROM ALL CLAIMS GROWING OUT THE LAWFUL DEMANDS OF SUBCONTRACTORS, LABORERS, WORKERS, MECHANICS, MATERIALMEN AND FURNISHERS OF MACHINERY, MACHINERY PARTS, EQUIPMENT, POWER TOOLS, AND ALL SUPPLIES, INCLUDING COMMISSARY, INCURRED IN THE FURTHERANCE OF THE PERFORMANCE OF THE WORK SUBJECT OF THE CONTRACT DOCUMENTS. When so desired by the County, the Contractor shall furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged or waived. If the Contractor fails to furnish such evidence to County's complete satisfaction, then the County may either pay directly any unpaid bills of which the County has written notice of, or may withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to liquidate any and all such lawful claims. When satisfactory evidence is furnished that all liabilities have been fully discharged, payments to the Contractor shall be resumed in full in accordance with the terms of the Contract Documents, but in no event shall the provisions of this sentence be construed to impose any obligation upon the County by either the Contractor or its surety.

Article 9.10. Final Payment is supplemented by: At the County's sole discretion, this payment may include payment for work remaining to be performed in association with the removal of temporary erosion controls or the establishment of permanent stabilization measures. On or after the 30th day, and before the 35th day after the date of the Certificate of Acceptance, the

balance due the Contractor under the terms of the Contract Documents shall be paid. Neither the Certificate of Acceptance nor the Final Payment, nor any provision in the Contract Documents, shall relieve the Contractor of the obligation for fulfillment of any warranty which may be required.

The County may, on account of subsequently discovered evidence, withhold or nullify the whole or part of any certificate to such extent as may be necessary to protect itself from loss on account of:

- Defective work not remedied or other obligations hereunder not completed.
- Claims filed or reasonable evidence indicating the probable or potential filing of claims.
- Failure of the Contractor to make payments properly to Subcontractors or for material or labor.
- Damage to the County or another contractor's work, material or equipment.
- Reasonable doubt that the Work can be completed for the unpaid balance of the contract amount or Contract Price.
- Reasonable indication that the Work will not be completed within the contract time.
- Other causes affecting the performance of the Work subject of the Contract Documents.

When the above grounds are removed or the Contractor provides a surety bond satisfactory to the County, which will protect the County in the amount withheld, payment shall be made for amounts withheld because of them.

Should the County fail to make payment to the Contractor of the sum named in any partial or final statement, when such payment is due, then the County shall pay to the Contractor, in addition to the sum shown as due by such statement, interest thereon in accordance with Texas Government Code Section 2251.025. More specifically, the rate of interest that shall accrue on a late payment is the rate in effect on September 1 of County's fiscal year in which the payment becomes due. The said rate in effect on September 1 shall be equal to the sum of one percent (1%); and (2) the prime rate published in the Wall Street Journal on the first day of July of the preceding fiscal year that does not fall on a Saturday or Sunday. County's payment of the amount due plus said interest shall fully liquidate any injury to the Contractor growing out of such delay in payment. It is expressly agreed that delay by the County in making payment to the Contractor of the sum named in any partial or final statement shall not constitute, on the part of the County, a breach under the Contract Documents, nor shall it serve as an abandonment by the County. Furthermore, any delay by the County in making payment to the Contractor of the sum named in any partial or final statement shall not, to any extent or for any time, relieve the Contractor of its obligations to fully and completely perform pursuant to the terms of the Contract Documents.

# Special Provision to Item 132 Embankment



Item 132, "Embankment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 132.3.4., "Compaction Methods." The last sentence is replaced by the following.

Compact embankments in accordance with Section 132.3.4.1., "Ordinary Compaction," or Section 132.3.4.2., "Density Control," as shown on the plans. The Contractor may use Section 132.3.4.3., "Density Control by Computer-Generated (CG) Curve," as an option for density control.

Article 132.3.4., "Compaction Methods," is supplemented by the following.

**3.4.3. Density Control by Computer-Generated (CG) Curve.** At the Contractor's discretion, CG curves may be used for density control.

Compact each layer to the required density using equipment complying with Item 210, "Rolling." Determine the maximum lift thickness based on the ability of the compacting operation and equipment to meet the required density. Do not exceed layer thickness of 12 in. loose or 10 in. compacted material, unless otherwise approved. Maintain a level layer with consistent thickness to ensure uniform compaction.

When using this method for each source and type of material, or when directed, sample and conduct testing according to the input parameters specified in Table 3 and provide CG field moisture-density curves based on each soil-compactor-lift thickness combination and CG Tex-114-E moisture-density curves based on each lift of soil. The CG field dry density ( $D_{fcg}$ ) must be greater than or equal to the CG Tex-114-E maximum dry density ( $D_{acg}$ ). The Engineer may obtain independent soil samples for supplemental Tex-114-E lab tests to check a supplemental maximum dry density ( $D_a$ ) and optimum moisture content ( $W_{opt}$ ) for reference when new CG curves are submitted. Provide access to the computer program used to generate the curve, when directed.

omputer-Generated Lab and Field Compaction Curve Input Crit		
	Input Variables	Test Method
	Liquid Limit, %	Tex-104-E
	Plasticity Index (PI), %	Tex-106-E
	Call gradation	Tex-110-E
	Soli gradation	Tex-111-E
	Soil classification	Tex-112-E
	Compaction roller brand, type, and model	N/A
	Loose lift thickness, in.	N/A
	Soil specific gravity	Use 2.65 for soil type SC.
		Use 2.68 for soil type CL.
		Use 2.69 for soil type CH.

Tal	ble 3
Computer-Generated Lab and Fie	eld Compaction Curve Input Criteria

Provide a compaction control report showing all input and output parameters and CG compaction curves, including:

- CG Tex-114-E laboratory maximum dry density (D_{acg}),
- CG Tex-114-E laboratory optimum moisture content (W_{optcg}),
- CG field maximum dry density (D_{fcg}),

- CG field optimum moisture content (Wf_{optcg}),
- graph of CG laboratory and field compaction curves and the "Zero Air Voids Line," and
- minimum number of roller passes to achieve the required density and moisture content.

Meet the requirements for field maximum dry density ( $D_{fcg}$ ) and field optimum moisture content ( $Wf_{optcg}$ ) specified in Table 4, unless otherwise shown on the plans. Use only the specific roller and soil properties utilized in lift construction as input parameters to generate the CG field curve used to meet moisture-density requirements in construction.

Description	Density	Moisture Content
	Tex-115-E	
PI ≤ 15	$\geq 98\% \ D_{fcg}$	$\geq Wf_{optcg}$
15 < PI ≤ 35	$\geq 98\%~D_{fcg}$ and $\leq 102\%~D_{fcg}$	$\geq Wf_{optcg}$
PI > 35	$\geq 95\%~D_{acg}$ and $\leq 100\%~D_{acg}$	$\geq Wf_{optcg}$

Table 4 Computer-Generated Lab and Field Compaction Curve Input Criteria

Each layer is subject to testing by the Engineer for density and moisture content. During compaction, the moisture content of the soil should be above CG optimum moisture content but should not exceed the value shown on the moisture-density curve, above optimum, required to achieve 98% dry density.

When the CG field maximum dry density (D_{fcg}) is not achieved, perform the following steps in order.

- Verify that construction controls including lift soil properties, minimum number and uniformity of compactor passes, lift thickness, and moisture content are correct.
- If needed, rework the lift with the corrected controls using the original CG curve.
- Generate a new CG field compaction curve based on actual in-place soil properties and rework the lift.
- Generate a non-CG Tex-114-E moisture-density reference standard and rework the material using this reference standard.

When required, remove small areas of the layer to allow for density tests. Replace the removed material and recompact at no additional expense to the Department. Proof-roll in accordance with Item 216, "Proof Rolling," when shown on the plans or as directed. Correct soft spots as directed.

Article 132.3.5., "Maintenance of Moisture and Reworking." The first sentence is replaced by the following.

Maintain the density and moisture content once all requirements in Table 2 or 4 are met.

# Special Provision to Item 340 Dense-Graded Hot-Mix (Small Quantity)



Item 340, "Dense-Graded Hot-Mix (Small Quantity)" of the Standard Specifications is replaced by Special Specification <u>3076</u>, "Dense-Graded Hot-Mix Asphalt," Section 4.9.4., "Exempt Production." All Item 340 Special Provisions and bid codes are no longer available, beginning with the February 2022 letting.

# Special Provision to Item 462 Concrete Box Culverts and Drains



Item 462, "Concrete Box Culverts and Drains," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 2.1., "General." The last paragraph is voided and replaced with the following:

Furnish material for precast formed and machine-made box culverts in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

Sections 2.2.2., "Formed Precast," and 2.2.3., "Machine-Made Precast," are voided and replaced by the following.

2.2.2 **Precast**. Precast formed and machine –made box culvert fabrication plants must be approved in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures." The Construction Division maintains a list of approved precast box culvert fabrication plants on the Department's MPL. Fabricate precast boxes in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Development's MPL. Fabricate precast boxes in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

Sections 2.3.2., "Formed Precast," and 2.3.3., "Machine-Made Precast," are voided and replaced by the following.

- 2.3.2 **Precast.** Make, cure, and test compressive test specimens for precast formed and machine –made box culverts in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures.
- Section 2.5., "Marking," the first paragraph is voided and replaced with the following.

Marking. Clearly mark each precast unit with the following:

- Name or trademark of fabricator and plant location;
- ASTM designation and product designation (when applicable);
- Date of manufacture,
- Box size,
- Minimum and maximum fill heights,
- Designation "TX" for precast units fabricated per DMS-7305,
- Fabricator's designated approval stamp for each approved unit,
- Designation "SR" for boxes meeting sulfate-resistant concrete plan requirements (when applicable), and
- Precast drainage structures used for jacking and boring (when applicable).

Section 2.6., "Tolerances." The section is voided and replaced with the following.

Ensure precast sections meet the permissible variations listed in ASTM C1577.

Ensure that the sides of a section at each end do not vary from being perpendicular to the top and bottom by more than 1/2 in. when measured diagonally between opposite interior corners. Deviations from this tolerance will be acceptable if the sections can be fitted at the plant and the joint opening at any point does not exceed 1 in. Use match-marks for proper installation on sections that have been accepted in this manner.

Ensure wall and slab thicknesses are not less than shown on the plans except for occasional deficiencies not greater than 3/16 in. or 5%, whichever is greater. If proper jointing is not affected, thicknesses in excess of plan requirements are acceptable.

#### Section 2.7., "Defects and Repair." The section is voided and replaced with the following:

Fine cracks on the surface of members that do not extend to the plane of the nearest reinforcement are acceptable unless the cracks are numerous and extensive. Repair cracks that extend into the plane of the reinforcing steel in accordance with the Department's Concrete Repair Manual. The Engineer may accept boxes with repairs that are sound, properly finished, and cured in conformance with pertinent specifications. Discontinue further production of precast sections until corrections are made and proper curing is provided when fine cracks on the surface indicate poor curing practices.

Repair precast boxes in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

Section 2.8., "Storage and Shipment." This section is voided and replaced with the following:

2.8 **Storage and Shipment**. Store precast sections on a level surface. Do not place any load on the sections until design strength is reached and curing is complete. Store and ship precast boxes in accordance with DMS-7305, "Fabrication and Qualification Production for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures.

# Special Provision to Item 464 Reinforced Concrete Pipe



Item 464, "Reinforced Concrete Pipe," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 2.1., "Fabrication." The section is voided and replaced with the following.

Fabrication plants must be approved by the Materials and Tests Division in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures," before furnishing precast reinforced concrete pipe for Departmental projects. The Department's MPL has a list of approved reinforced concrete pipe plants.

Furnish material and fabricate reinforced concrete pipe in accordance with DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

Section 2.3., "Marking." The first paragraph is voided and replaced with the following.

Furnish each section of reinforced concrete pipe marked with the following information specified in DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

- Class or D-Load of pipe,
- ASTM designation,
- Date of manufacture,
- Pipe size,
- Name or trademark of fabricator and plant location,
- Designation "TX" for precast units fabricated per DMS-7305;
- Designated fabricator's approval stamp for each approved unit,
- Pipe to be used for jacking and boring (when applicable), and
- Designation "SR" for pipe meeting sulfate-resistant concrete plan requirements (when applicable).

Section 2.5., "Causes for Rejection." The section is voided and replaced with the following.

Individual sections of pipe may be rejected for any of the conditions stated in the Annex of DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

Section 2.6., "Repairs." The section is voided and replaced with the following:

Make repairs, if necessary, as stated in the Annex of DMS-7305, "Fabrication and Qualification Procedure for Multi-Project Fabrication Plants of Precast Concrete Drainage Structures."

# Special Provision to Item 502 Barricades, Signs and Traffic Handling



Item 502, "Barricades, Signs and Traffic Handling" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 502.1., "Description," is supplemented by the following:

Temporary work-zone (TWZ) traffic control devices manufactured after December 31, 2019, must have been successfully tested to the crashworthiness requirements of the 2016 edition of the Manual for Assessing Safety Hardware (MASH). Such devices manufactured on or before this date and successfully tested to NCHRP Report 350 or the 2009 edition of MASH may continue to be used throughout their normal service lives. An exception to the manufacture date applies when, based on the project's date of letting, a category of MASH-2016 compliant TWZ traffic control devices are not approved, or are not self-certified after the December 31, 2019, date. In such case, devices that meet NCHRP-350 or MASH-2009 may be used regardless of the manufacture date.

Such TWZ traffic control devices include: portable sign supports, barricades, portable traffic barriers designated exclusively for use in temporary work zones, crash cushions designated exclusively for use in temporary work zones, longitudinal channelizers, truck and trailer mounted attenuators. Category I Devices (i.e., lightweight devices) such as cones, tubular markers and drums without lights or signs attached however, may be self-certified by the vendor or provider, with documentation provided to Department or as are shown on Department's Compliant Work Zone Traffic Control Device List.

#### Article 502.4., "Payment," is supplemented by the following:

Truck mounted attenuators and trailer attenuators will be paid for under Special Specification, "Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)." Portable Changeable Message Signs will be paid for under Special Specification, "Portable Changeable Message Sign." Portable Traffic Signals will be paid for under Special Specification, "Portable Traffic Signals."
# Special Provision to Item 506 Temporary Erosion, Sedimentation, and Environmental Controls



For this project, Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 506.1., "Description," is voided and replaced by the following:

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3) or as directed. Ensure the installation and maintenance of control measures is performed in accordance with the manufacturer's or designer's specifications. Erosion and sediment control devices must be selected from the "Erosion Control Approved Products" or "Sediment Control Approved Products" lists. Perform work in a manner to prevent degradation of receiving waters, facilitate project construction, and comply with applicable federal, state, and local regulations.

Article 506.3., "Qualifications, Training, and Employee Requirements," is voided and not replaced.

Section 506.4.1., "Contractor Responsibilities," Section 506.4.2., "Implementation," and Section 506.4.3., "General," are voided and replaced by the following:

- 4.1. **Contractor Responsibilities**. Implement the SWP3 for the project site in accordance with the plans and specifications, and as directed. Coordinate storm water management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Department's right of way in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site.
- 4.2. Implementation.
- 4.2.1. **Commencement**. Implement the SWP3 as shown and as directed. Contractor proposed recommendations for changes will be allowed as approved. Do not implement changes until approval has been received and changes have been incorporated into the plans by the Engineer. Minor adjustments to meet field conditions are allowed and will be recorded by the Engineer in the SWP3.

Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract.

Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

- 4.3. General.
- 4.3.1. **Temporary Alterations or Control Measure Removal**. Altering or removal of control measures is allowed when control measures are restored within the same working day.

- 4.3.2. **Stabilization**. Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site has temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice as approved.
- 4.3.3. Finished Work. Upon the Engineer's acceptance of vegetative cover or other stabilization practice, remove and dispose of all temporary control measures unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained as approved.
- 4.3.4. **Restricted Activities and Required Precautions**. Do not discharge onto the ground or surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment on site in a manner as to prevent actual or potential water pollution. Manage, control, and dispose of litter on site such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only in approved contained areas. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e. dewatering). Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

Section 506.4.4., "Installation, Maintenance, and Removal Work." The first paragraph is voided and replaced by the following.

Perform work in accordance with the SWP3, and according to the manufacturers' guidelines. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place or the disturbed area has been adequately stabilized as determined by the Engineer.

Section 506.4.5., "Monitoring and Documentation," is voided and not replaced.

Section 506.6.5.2., "Maintenance Earthwork for Erosion and Sediment Control for Cleaning and/or Restoring Control Measures," is voided and replaced by the following:

Earthwork needed to remove and obliterate of erosion-control features will not be paid for directly but is subsidiary to pertinent Items unless otherwise shown on the plans.

Sprinkling and rolling required by this Item will not be paid for directly but will be subsidiary to this Item.

# Special Provision to Item 506 Temporary Erosion, Sedimentation, and Environmental Controls



Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 506.1., "Description." The second paragraph is voided and replaced by the following.

Contractor is considered primary operator to have day-to-day operational control as defined in TPDES GP TXR150000.

- 1.1. For projects with soil disturbance of less than 1 acre, no submittal to TCEQ will be required but Contractor will follow SWP3. For projects with soil disturbance of 1 acre to less than 5 acres a small site notice will be posted at the site. For projects with soil disturbance of 5 acres or more a Notice of Intent (NOI) is required and a large site notice posted at site. Postings will be in accordance with TPDES GP TXR150000. Postings not associated with project specific locations will be in same location as Department's postings.
- 1.2. Notice of Intent (NOI). Submit a NOI, if applicable, with the TCEQ under the TPDES GP TXR150000 at least 7 days prior to commencement of construction activities at the project site. Provide a signed copy to the Engineer and any other MS4 operators at the time of submittal. The Department will submit their NOI prior to contractor submission and will provide a copy for Contractor's use in completing the Contractor's NOI form.
- **1.3.** Notice of Change (NOC). Upon concurrence of the Engineer, submit a NOC, if applicable, to the TCEQ within 14 days of discovery of a change or revision to the NOI as required by the TPDES GP TXR150000. Provide a signed copy of the NOC to the Engineer and any other MS4 operators at the time of submittal.
- 1.4. Notice of Termination (NOT). Upon concurrence of the Engineer, submit a NOT, if applicable, to the TCEQ within 30 days of the Engineer's approval that 70% native background vegetative cover is met or equivalent permanent stabilization have been employed in accordance with the TPDES GP TXR 150000. Provide a signed copy of the NOT to the Engineer and any other MS4 operators at the time of submittal.

Section 506.3.1, "Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities," is supplemented by the following:

3.1. Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities. Provide and designate in writing at the preconstruction conference a CRPE and alternate CRPE who have overall responsibility for the storm water management program. The CRPE will implement stormwater and erosion control practices; will oversee and observe stormwater control measure monitoring and management; will monitor the project site daily and produce daily monitoring reports as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. Daily monitor reports shall be maintained and made available upon request. During time suspensions when work is not occurring or on contract non-work days, daily inspections are not required unless a rain event has occurred. The CRPE will provide recommendations on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project. Ensure training is completed as identified in Section 506.3.3., "Training," by all applicable personnel before employees work on the project. Document and maintain and make available upon request, a list, signed by the CRPE, of all applicable Contractor and subcontractor employees who have completed the training. Include the employee's name, the training course name, and date the employee completed the training.

Section 506.3.3., "Training," is supplemented by the following:

Training is provided by the Department at no cost to the Contractor and is valid for 3 yr. from the date of completion. The Engineer may require the following training at a frequency less than 3 yr. based on environmental needs:

- "Environmental Management System: Awareness Training for the Contractor" (English and Spanish) (Approximate running time 20 min.), and
- "Storm Water: Environmental Requirements During Construction" (English and Spanish) (Approximate running time 20 min.).

The Contractor responsible person environmental (CRPE), alternate CRPE designated for emergencies, Contractor's superintendent, Contractor, and subcontractor lead personnel involved in soil disturbing or SWP3 activities must enroll in and complete the training listed below and maintain and make available upon request the certificate of completion. Training is provided by a third party and is valid for 3 yr. from the date shown on the Certificate of Completion. Coordinate enrollment as prescribed by the Department and pay associated fees for the following training:

- "Revegetation During Construction,"
- "Construction General Permit Compliance," and
- "Construction Stage Gate Checklist (CSGC)."

Training and associated fee will not be measured or paid for directly but are subsidiary to this Item.

# Special Provision to Item 552 Wire Fence



Item 552, "Wire Fence" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 2.4., "Barbed Wire," is voided and replaced by the following:

Furnish barbed wire in accordance with ASTM A121 and as shown on the plans.

Section 2.5., "Wire Mesh," is voided and replaced by the following:

Furnish wire mesh fabric in accordance with ASTM A116 and as shown on the plans.

Article 3., "Construction," is supplemented by the following:

Unless otherwise directed, T-posts, steel pipe brace posts, steel pipe gate posts, steel pipe post assemblies, and water gap posts are to remain in place.

Posts removed for the convenience of the Contractor due to brush removal or other issues will be replaced at the Contractor's expense.

Remove brush and trees from fence areas where work is performed. Chip brush and trees or remove and dispose of removed materials at locations off the right of way in accordance with local, state, and federal requirements.

Article 4., "Measurement," is voided and replaced by the following:

Fencing will be measured by the foot of wire fence, excluding gates. Gates will be measured by each gate. Posts and post assemblies, which are installed or removed and replaced, will be paid by each post. New brace posts and t-posts will be measured by each post. New hinge sets on existing posts will be paid by each hinge set.

Article 5., "Payment," is voided and replaced by the following:

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Wire Fence", "Gate", "Post", "Post Assembly", "Brace Post", "T-Post", and "Hinge Set" of the type specified. This price is full compensation for furnishing, preparing, hauling, and installing fence and gate materials; excavation, backfilling and disposal of surplus material; removing and trimming of brush and tree limbs; and equipment, labor, tools, and incidentals.

Unless otherwise shown on the plans, removal of existing fence will not be paid for directly but will be subsidiary to pertinent Items.

There will be no payment for undamaged posts removed and replaced if removal is for the Contractor's convenience.

# Special Provision to Item 666 Retroreflectorized Pavement Markings



Item 666, "Retroreflectorized Pavement Markings," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 2.3., "Glass Traffic Beads." The first paragraph is voided and replaced by the following:

Furnish drop-on glass beads in accordance with DMS-8290, "Glass Traffic Beads," or as approved. Furnish a double-drop of Type II and Type III drop-on glass beads for longitudinal pavement markings where each type bead is applied separately in equal portions (by weight), unless otherwise approved. Apply the Type III beads before applying the Type II beads. Furnish Type II beads for work zone pavement markings and transverse markings or symbols.

Section 4.3.1., "Type I Markings.," is supplemented by the following:

**4.3.1.3. Spot Striping.** Perform spot striping on a callout basis with a minimum callout quantity as shown on the plans.

Section 4.3.2., "Type II Markings.," is supplemented by the following:

4.3.2.1. Spot Striping. Perform spot striping on a callout basis with a minimum callout quantity as shown on the plans.

Section 4.4., "Retroreflectivity Requirements.," is voided and replaced by the following.

Type I markings for Contracts totaling more than 20,000 ft. of pavement markings must meet the following minimum retroreflectivity values for all longitudinal edgeline, centerline or no passing barrier-line, and lane line markings when measured any time after 3 days, but not later than 10 days after application.

- White markings: 250 millicandelas per square meter per lux (mcd/m²/lx)
- Yellow markings: 175 mcd/m²/lx

Retroreflectivity requirements for Type I markings are not required for Contracts with less than 20,000 ft. of pavement markings or Contracts with callout work, unless otherwise shown on the plans.

Section 4.5., "Retroreflectivity Measurements.," is voided and replaced by the following:

Use a mobile retroreflectometer to measure retroreflectivity for Contracts totaling more than 50,000 ft. of pavement markings, unless otherwise shown on the plans. For Contracts with less than 50,000 ft. of pavement markings, mobile or portable retroreflectometers may be used at the Contractor's discretion. Coordinate with and obtain authorization from the Engineer before starting any retroreflectivity data collection.

Section 4.5.1., "Mobile Retroreflectometer Measurements." The last paragraph is voided and replaced by the following.

Restripe again at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material if the average of these measurements falls below the minimum retroreflectivity requirements. Take measurements every 0.1 miles a minimum of 10 days after this third application within that mile segment for that series of markings. If the markings do not meet minimum retroreflectivity after this third application, the Engineer may require removal of all existing markings, a new application as initially specified, and a repeat of the application process until minimum retroreflectivity requirements are met.

Section 4.5.2., "Portable Retroreflectometer Measurements." The first and second paragraphs are voided and replaced by the following.

Provide portable measurement averages for every 1.0 mile unless otherwise specified or approved. Take a minimum of 20 measurements for each 1-mi. section of roadway for each series of markings (e.g., edgeline, center skip line, each line of a double line) and direction of traffic flow when using a portable reflectometer. Measure each line in both directions for centerlines on two-way roadways (i.e., measure both double solid lines in both directions and measure all center skip lines in both directions). The spacing between each measurement must be at least 100 ft. The Engineer may decrease the mileage frequency for measurements if the previous measurements provide satisfactory results. The Engineer may require the original number of measurements if concerns arise.

Restripe at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material if the averages of these measurements fail. Take a minimum of 10 more measurements after 10 days of this second application within that mile segment for that series of markings. Restripe again at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material if the average of these measurements falls below the minimum retroreflectivity requirements. If the markings do not meet minimum retroreflectivity after this third application, the Engineer may require removal of all existing markings, a new application as initially specified, and a repeat of the application process until minimum retroreflectivity requirements are met.

Section 4.6. "Performance Period." The first sentence is voided and replaced by the following:

All longitudinal markings must meet the minimum retroreflectivity requirements within the time frame specified. All markings must meet all other performance requirements of this specification for at least 30 calendar days after installation.

Article 6. "Payment." The first two paragraphs are voided and replaced by the following.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Pavement Sealer" of the size specified; "Retroreflectorized Pavement Markings" of the type and color specified and the shape, width, size, and thickness (Type I markings only) specified, as applicable; "Retroreflectorized Pavement Markings with Retroreflective Requirements" of the types, colors, sizes, widths, and thicknesses specified; "Retroreflectorized Profile Pavement Markings" of the various types, colors, shapes, sizes, and widths specified; or "Reflectorized Pavement Marking (Call Out)" of the shape, width, size, and thickness (Type I markings only) specified, as applicable; or "Pavement Sealer (Call Out)" of the size specified.

This price is full compensation for materials, application of pavement markings, equipment, labor, tools, and incidentals.

# **Special Specification 1004**

#### Texas Department of Transportation

# **Tree Protection**

## 1. DESCRIPTION

Install tree protection as shown on the plans or as directed.

#### 2. MATERIALS

Furnish materials in accordance with the plans.

#### 3. CONSTRUCTION

Use construction methods in accordance with the plans.

#### 4. MEASUREMENT

This Item will be measured by the acres of trees protected or by each tree protected.

#### 5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Tree Protection." This price is full compensation for furnishing all materials, equipment, labor, and incidentals.

#### APPENDIX A QUALITY ASSURANCE PROGRAM FOR CONSTRUCTION PROJECTS



# Quality Assurance Program for Design-Bid-Build Projects

# January 2022

**TxDOT Materials and Tests Division** 

## Summary of Program Changes: January 2022 Update

#### Purpose

The Quality Assurance Program for Design-Bid-Build Projects has been revised to address updated business practices, provide clarification for new and existing practices, and update internal and external document references.

#### Contents

#### Chapter 1, "Introduction"

- Section 1.2, "Support"
  - Updated MTD Administration contact phone number.

#### Chapter 2, "Acceptance Program"

- Section 2.2, "Sampling and Testing Frequency and Location"
  - Added that material tested for acceptance must be representative of the material used on the project.
  - Added that laboratory testing used in the acceptance decision must be performed at a laboratory location qualified under Section 8.
  - Added that the location of sampling and testing must be documented in SiteManager.
- Section 2.3, "Documentation"
  - Added subsections 2.3.1, "Material Test Reports," and 2.3.2, "Authorization of Material Tests," to distinguish between test report requirements and material authorization requirements.
  - In Section 2.3.1, "Material Test Reports," clarified that any acceptance testing will be documented on TxDOT-approved templates and identified key fields which are required to be completed within the test report.
  - In Section 2.3.2, "Authorization of Material Tests," added:
    - requirements concerning the timing and documentation of material authorizations in SiteManager and changes to SiteManager sampling and testing requirements;
    - o description of material exception and reference to material certification letter requirements; and
    - how samples or tests which are not used for project acceptance should be addressed in SiteManager.

#### Chapter 3, "Independent Assurance Program"

- Moved and reordered previous Sections 3.3-3.6, as follows:
  - Section 3.3 was consolidated into Sections 7 and 8.
  - Section 3.4 was consolidated into Section 6.

- Section 3.5 became Section 3.3, "Comparing Test Results."
- Section 3.6 became Section 3.4, "Annual Report of IA Program Results."
- Section 3.4, "Annual Report of IA Program Results"
  - Updated metrics which are required to be identified in the IA annual report.

#### Chapter 4, "Materials Certification"

- Section 4.1, "Overview"
  - Revised to clarify the intent of the material certification.
- Section 4.2, "Submission of Material Certification Letter"
  - Added section to establish requirements for completing and submitting material certification letters.
- Section 4.3, "Material Exceptions"
  - Added section to establish the definition of a material exception, and the requirements for documenting material exceptions on the material certification letter.
- Section 4.4, "Materials and Tests Division Oversight"
  - Added section to establish a quarterly review process for MTD to verify completeness and accuracy of material certification letters.

#### Chapter 6, "Technician Qualification Program"

- Section 6.3, "Who Must Be Qualified?"
  - Added that any individual who performs material sampling must be qualified in the relevant sampling test procedure.
- Section 6.4, "Who Can Qualify Sampling and Testing Personnel?"
  - Clarified which District laboratory personnel may qualify sampling and testing personnel.
  - Clarified that the laboratory personnel must have a current ACI certification.
- Section 6.5, "Required Certifications for Non-TxDOT Personnel"
  - Renamed to encompass all non-TxDOT personnel.
- Section 6.6, "Qualification Procedure"
  - Clarified the minimum passing requirements of written exams for concrete test methods.
  - Clarified that written exams and performance evaluations must be completed within a 30-day period.
- Section 6.8, "Responsibility and Documentation"
  - Added Form 2687 as a required supporting document for technician qualifications.
  - Clarified that supporting documentation must be retained for a minimum of 10 years.

#### Chapter 7, "Requirements and Frequencies for Laboratory Equipment"

- Moved and reordered previous Sections 7.1-7.7, as follows:
  - Sections 7.1-7.3 and 7.5-7.7 were consolidated into Chapter 8.
  - Section 7.4 became Section 7.2, "Calibration, Standardizations, Checks, and Verification."
- Renamed chapter to emphasize the focus on equipment requirements.
- Section 7.1, "Overview"
  - Added section to summarize overall requirements of laboratory equipment for TxDOT and non-TxDOT laboratories.
- Section 7.2, "Calibration, Standardizations, Checks, and Verification"
  - Revised to incorporate reference to all types of laboratory equipment requirements.
- Section 7.3, "Contractor Shared Equipment"
  - Added section to establish requirements for sharing laboratory equipment between the Contractor and TxDOT or TxDOT's representative.
- Section 7.4, "Documentation"
  - Added section to establish documentation requirements for laboratory equipment, including responsibility and records retention.

#### Chapter 8, "Laboratory Qualification Program"

- Moved and reordered previous Sections 7.1-7.3 and 7.5-7.7 to align with the tiered approach of the laboratory qualification process, as follows:
  - Section 7.1 became Section 8.1, "Purpose."
  - Section 7.3 became Section 8.2, "Qualification."
  - Section 7.2 became Section 8.3, "Laboratory Responsibility."
  - Section 7.6 became Section 8.4, "Documentation."
  - Sections 7.5 and 7.7 were consolidated into Section 8.5, "Non-Compliance."
- Section 8.2, "Qualification"
  - Clarified that field and are included in the MTD central laboratory qualification; area office and project laboratories are included in the District laboratory qualification; and CEI firms performing material testing require qualification.
  - Added that laboratory qualifications issued through the Design-Build QAP will be valid under the Design-Bid-Build program.
  - Renamed and revised Section 8.2.1, "District Accreditation," to emphasize the application of the qualification to the entire District and to further detail the District accreditation process, including:

- Added that the accreditation inspection process involves review of the District's quality management system, technician certifications, equipment records, and oversight of CEI projects;
- Added that the report rating will be issued with the District Accreditation Report, and that report ratings of 3 will results in a re-inspection;
- Added the process for reviewing and issuing the District Accreditation Report;
- Clarified the corrective action response timeline, and added a communication plan for addressing corrective action responses;
- Added the process for closing out the accreditation inspection;
- Added the process for District accreditation re-inspections when a report rating of 3 is issued; and
- Added requirements for submission of peer review documentation.
- Revised Section 8.2.2, "Commercial Laboratory and CEI Qualification Process," to address the following:
  - Added that the firm's location, contact person, and project role must be identified on Form 2682;
  - Clarified that the Visual Inspection Equipment Checklist must be used to document laboratory equipment;
  - Added requirements for completing and submitting qualification documentation; and
  - Clarified annual audit requirements and the tools and resources which should be used to conduct and document the reviews.
- Section 8.3, "Laboratory Responsibility"
  - Revised to establish requirements for the documentation and submission of District quality assurance standard operating procedures on an annual basis, and to further define the responsibilities of CEI firms, area office personnel, and the District material quality champion.
- Section 8.4, "Documentation"
  - Clarified that laboratory qualification documentation must be retained by the qualifying authority and the qualified laboratory for 10 years.

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**1**. Introduction

#### **1.1** Overview

The Texas Department of Transportation (TxDOT) established the Quality Assurance Program (QAP) for Design-Bid-Build (DBB) Projects to ensure that materials and workmanship incorporated into highway construction projects are in reasonable conformity with the requirements of the approved plans and specifications, including any approved changes. This program was developed in accordance with the criteria in 23 CFR 637 B, where the Materials and Tests Division (MTD) central laboratory will be accredited under the AASHTO Accreditation Program (AAP) which oversees the statewide qualification program.

The QAP consists of an "Acceptance Program" and "Independent Assurance (IA) Program" based on test results obtained by qualified persons and equipment.

The QAP allows for the use of validated Contractor-performed quality control (QC) test results as part of an acceptance decision. It also allows for the use of test results obtained by commercial laboratories in acceptance decisions. The acceptance of all materials and workmanship is the responsibility of the Engineer.

## **1.2** Support

For more information regarding the information and procedures in the program, contact MTD Administration at 512/975-9755.

2. Acceptance Program

## 2.1 Overview

The QAP assures materials incorporated into any highway construction project, are subject to verification sampling and testing, as well as QC sampling and testing when required by the specifications.

The District Engineer will delegate an individual at the District-level for the accountability of certification verification in SiteManager (SM) and at the laboratory for various project delivery options applicable to the DBB program, in accordance with <u>Section 8.3.3</u>.

The delegation of authority should encompass a mechanism that provides oversight authority and an audit function to ensure compliance. Additional information can be found in <u>Section 8.3</u>.

# 2.2 Sampling and Testing Frequency and Location

Verification sampling and testing will be performed at the location and frequency established in the TxDOT <u>Guide Schedule of Sampling and Testing for Design Bid Build (DBB) Projects</u> (DBB Guide Schedule) or specifications specific to each project. Material that is tested for acceptance must be representative of the material used on the project.

Laboratory testing used in the acceptance decision must be performed at a laboratory location qualified under <u>Section 8</u>. The location of sampling and testing must be documented in SM in accordance with <u>Section 2.3</u>.

# 2.3 Documentation

#### 2.3.1 Material Test Reports

Any acceptance testing will be documented within SM on the TxDOT-approved Excel templates. All key fields within the test report must be completed, including but not limited to, sampler name, sample location, tester name, test date, and all relevant test results. When the tester does not enter test results directly into SM, the hardcopy will need to be scanned and attached to the SM sample documenting the tester's name.

The laboratory location where testing is performed must be documented in SM using the appropriate Lab ID. In instances where a non-TxDOT technician performs material testing in a TxDOT laboratory, the laboratory location where testing was performed must be documented as a comment in the test report.

#### 2.3.2 Authorization of Material Tests

Material samples must be tested, reviewed, and authorized by a minimum of two separate individuals, and they must be authorized within 30 days of sample collection. When authorization within the 30 day period is not possible, a justification for the delay must be documented in SM, including an estimated timeframe for resolution.

An engineering justification must be documented in SM to explain the reason for acceptance of material when:

- the material has failing test results;
- the material was not sampled and tested in accordance with DBB Guide Schedule requirements; or
- adjustments were made to SM sampling and testing requirements (e.g., adjusting conversion factors or zeroing testing frequencies).

Adjustments to SM sampling and testing requirements should be made only when corrections are needed to accurately represent project needs. Changes must be made only by designated District personnel, and the individual who approved the change must be documented within the required justification.

Acceptance of material which deviates from the specifications or DBB Guide Schedule requirements constitutes a material exception, as defined in <u>Section 4</u>, and must be documented on the material certification letter upon project close-out.

Samples which are created in SM but are not used for a project should be authorized as "Void" to invalidate the Sample ID. The omit indicator can be used to exclude specific tests within one Sample ID. The omit indicator will prevent the tests from meeting project sampling and testing requirements.

#### 2.4 Quality Control Sampling and Testing

Contractor-performed QC sampling and testing may be used as part of an acceptance decision when required or allowed by specification.

QC sampling and testing personnel, laboratories, and equipment will be qualified in accordance with <u>Section 6</u> and <u>Section 8</u> and will be evaluated under <u>Section 3</u>.

QC test results will be validated by verification test results obtained from independently taken samples. Qualified TxDOT personnel or their designated agents will perform verification sampling and testing.

#### 2.5 **Dispute Resolution**

When QC test results are used in the acceptance decision, the MTD central laboratory or an accredited independent laboratory approved by MTD will perform the referee testing. The referee laboratory decision will be final.

3. Independent Assurance Program

#### 3.1 Overview

The IA program evaluates all sampling and testing procedures, personnel, and equipment used as part of an acceptance decision.

The IA program evaluates the qualified sampling and testing personnel and testing equipment and is established using the system approach. The system approach bases frequency of IA activities on time — regardless of the number of tests, quantities of materials, or numbers of projects tested by the individual being evaluated.

# **3.2 Required Frequencies and Activities**

Table 1 gives the frequencies and activities required for evaluating sampling and testing personnel and equipment under the system approach to IA.

Time	Activity
Before performing acceptance sampling and testing.	Qualification required under <u>Section 6</u> and <u>Section 8</u> of this QAP.
Within 12 mo. after Observation and Qualification, not to exceed 15 mo.	Each qualified technician is required to participate in the first available proficiency or split sample for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 24 mo. after Observation and Qualification, not to exceed 27 mo.	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 36 mo. of Qualification. (Only required for certifications issued by TxDOT or HMAC with a 3 yr. cycle.)	Qualification is again required under <u>Section 6</u> and <u>Section 8</u> of this QAP.
Within 36 mo. after Observation and Qualification, not to exceed 39 mo. (Only required for ACI, which has a 5 yr. certification cycle.)	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.

#### Table 1: Frequencies and Activities Required Under IA System Approach

Within 48 mo. after Observation and	Each qualified technician is required to
Qualification, not to exceed 51 mo. (Only	participate in one proficiency or split sample test
required for ACI, which has a 5 yr. certification	for each test method requiring IA. Results must
cycle.)	compare to the IA test results to within the
	established tolerance.
Within 60 mo. of qualification (Only required for	Qualification is again required under Section 6
certifications issued by ACI with a 5 yr. cycle).	and <u>Section 8</u> of this QAP.

Maintaining technician qualification under the IA system approach requires continuation of the above cycle of qualification and successful split or proficiency sample testing.

## 3.3 Comparing Test Results

Comparison of the split sample test results can be used if equipment or procedures issues are suspected. <u>Appendix B</u> gives the acceptable tolerance limits for comparing test results from split and proficiency samples.

If the comparisons of the test results do not comply with the tolerances, an engineering review of the test procedures and equipment will be performed immediately to determine the source of the discrepancy.

## 3.4 Annual Report of IA Program Results

MTD will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of TxDOT's systems approach IA program. See <u>Appendix C</u> for the annual report form.

This report identifies:

- number of sampling and testing personnel evaluated by the systems approach IA testing,
- number of personnel removed for non-participation,
- number of IA evaluations completed,
- number of IA evaluations found to meet tolerances in <u>Appendix B</u>,
- number of IA evaluations found to not meet tolerances in <u>Appendix B</u>, and
- summary of any significant system-wide corrective actions taken.

4. Materials Certification

#### 4.1 Overview

A material certification must be submitted for each construction project subject to TxDOT or FHWA oversight activities. The intent of the material certification is to ensure that the quality of all materials incorporated into the project is in conformance with the plans and specifications.

#### 4.2 Submission of Material Certification Letters

Upon final acceptance of a construction project, a material certification letter must be submitted to MTD via email at <u>MTD_Materials_Cert@txdot.gov</u>. The letter will conform in substance to the examples shown in <u>Appendix D</u> or <u>Appendix E</u> for projects with federal or state oversight, respectively. MTD is responsible for making the material certification letters available to the FHWA, as applicable.

Material certification letters must be authorized by the TxDOT office designated to oversee the project. The letter may be signed by the Area Engineer or Director of Construction. Material certification letters authorized by Construction Engineering and Inspection (CEI) firms or other non-TxDOT personnel will not be accepted for submission.

#### 4.3 Material Exceptions

A material exception is defined as any material represented by an acceptance test that does not meet the criteria contained on the plans and specifications. Exceptions should be investigated to determine if the material is in reasonably close conformity with the plans and specifications.

An exception exists when:

- any material is tested and does not meet minimum specifications if the material is left in place, either with or without pay; and
- any material is not sampled and tested in accordance with minimum testing requirements if the material is left in place, either with or without pay.

When material exceptions exist for a project, the exceptions must be indicated on the material exception letter. Documentation of the material exceptions and the corresponding justifications should be attached to the material certification letter when submitted.

#### 4.4 Materials and Tests Division Oversight

MTD will perform a quarterly review of completed material certification letters on a sample basis to verify the completeness and accuracy of the material certification letters, including material exceptions identified and corresponding justifications. Inconsistencies identified during the review will be communicated to appropriate District personnel, and Districts will correct and re-submit material certification letters when necessary.

**5.** Conflict of Interest

## 5.1 Overview

To avoid an appearance of a conflict of interest, any qualified non-TxDOT laboratory will perform only one of the following functions on the same project:

- verification sampling and testing,
- QC sampling and testing,
- IA testing, or
- referee testing.

# 6. Technician Qualification Program

#### 6.1 Purpose

This program provides uniform statewide procedures for technician qualification to ensure that sampling and testing required by the specifications are performed according to the prescribed sampling and testing methods.

#### 6.2 Technician Qualification

Sampling and testing personnel will be qualified to perform sampling and testing for the acceptance of materials in the areas of soils, bituminous, aggregate, and concrete materials.

The test methods for which individuals can be qualified are included in the following series of the <u>TxDOT Test</u> <u>Procedures</u>:

- <u>100-E Series (Soils),</u>
- <u>200-F Series (Bituminous),</u>
- 400-A Series (Aggregates and Concrete), and
- 500-C Series (Asphalt Tex-500-C and Tex-530-C).

#### 6.3 Who Must Be Qualified?

Any individual who performs sampling and testing on the materials listed in <u>Section 6.2</u>, for acceptance, must be qualified in each test procedure they perform. Any individual who performs material sampling must be qualified in the relevant sampling test procedure (e.g., Tex-100-E, Tex-221-F, Tex-222-F, Tex-400-A, Tex-500-C, etc.).

Reciprocity may be granted to individuals who have been successfully qualified under another state's program. These situations will be considered on a case-by-case basis and must meet the approval of the MTD Director.

# 6.4 Who Can Qualify Sampling and Testing Personnel?

The following personnel may qualify an individual to perform the required sampling and testing of materials:

- MTD personnel;
- District laboratory personnel who have been qualified directly by MTD;
- TxDOT-approved entities such as the Hot-Mix Asphalt Center (HMAC) and the American Concrete Institute (ACI);
- District laboratory personnel who have been qualified by the HMAC can issue provisional certifications or sampling certifications; and
- District laboratory personnel who have been qualified by ACI can issue concrete certifications.

Certifications received from HMAC and ACI may be used to satisfy the written exam and observation part of the Technician Qualification Program.

Each District laboratory will maintain a minimum of one individual qualified by MTD or its designated agent, for each test procedure performed within the District. To qualify District personnel for TxDOT concrete test methods, the District laboratory personnel must have a current corresponding ACI Field or Strength certification.

#### 6.5 Required Certifications for Non-TxDOT Personnel

Non-TxDOT laboratory personnel performing sampling and testing for TxDOT, or as required by specification, must obtain and keep current the following certifications pertinent to their scope of testing:

- ACI Concrete Field Testing Technician Grade 1,
- ACI Concrete Strength Testing Technician,
- <u>HMAC Level 1A Plant Mix Specialist</u>,
- <u>HMAC Level 1B Roadway Specialist</u>,
- <u>HMAC Level 2 Mix Design Specialist</u>,
- <u>HMAC SB 101 Materials Properties Specialist</u>,
- HMAC SB 102 Field Specialist,
- HMAC SB 103 Materials Analyst Specialist,
- HMAC SB 201 Strength Specialist,
- <u>HMAC SB 202 Compressive Strength Specialist</u>, and
- HMAC AGG 101 Aggregate Specialist.

For testing procedures not covered by the above certifications, the following personnel may qualify an individual to perform the required sampling and testing of materials:

- MTD personnel, and
- District laboratory personnel who have been certified by MTD to perform technician qualifications.

#### 6.6 **Qualification Procedure**

To qualify, an authorized evaluator must witness an individual successfully perform the specific test and the necessary calculations required to determine specification compliance. Successful performance is defined as demonstrating the ability to properly perform the key elements for each test method. If the individual fails to demonstrate the ability to perform a test, the individual will be allowed one retest per test method at the evaluator's convenience. The maximum number of attempts cannot exceed three trials in a 90 day period.

In addition to successful performance of a test method, the individual must pass a written examination (minimum score of 80%¹) administered by an authorized evaluator or their designee. The maximum amount of time allocated per test will be 1 hr. If an individual cannot complete the written test in 1 hr., it will result in failure. An individual failing the written examination may request a retest. The retest must be scheduled and administered within 30 days of notification of failure; however, the maximum number of attempts cannot exceed three trials in a 90 day period.

¹ For TxDOT concrete test methods where written examinations are grouped together to be completed, the minimum score for any individual test method must be 70%, and the overall minimum score for all test methods combined must be 80%.

Under unique circumstances, the qualification authority may grant a verbal examination upon request. The reasons for requesting a verbal examination must be presented and documented before the individual is allowed to take the examination. Should the technician fail the retest examination, the technician will not be allowed to test again unless a written notification is received from the technician's employer or supervisor stating that the technician has received additional training. MTD or its representative will determine the adequacy of the additional training. Failure to pass the third written examination will be considered as failing the entire qualification.

Successful qualification is defined as passing both the written and performance examinations, which must be completed within a 30 day period.

In addition, the individual must participate in split or proficiency samples administered by the qualifying authority to validate the qualification as defined in <u>Appendix B</u>. MTD determines the qualifying authority for the split or proficiency sample.

Unless otherwise stated, qualification of an individual is valid for not more than 3 yr., after which the individual must be re-qualified. Under the IA system approach, annual split or proficiency evaluations will be required as specified in <u>Section 3.2</u>. Failure to satisfactorily complete annual split or proficiency testing will result in certification revocation.

#### 6.7 **Provisional Certifications**

If the required certifications for TxDOT, CEI, commercial laboratories, and Contractor personnel cannot be readily obtained due to course availability, schedule conflicts, or other extenuating circumstances, provisional certifications administered by MTD or TxDOT District laboratory will be allowed, per the following stipulations:

- provisional certifications must be approved by MTD or TxDOT District laboratory;
- provisional certifications will be valid for one month after the HMAC or ACI examination dates; and
- the candidate must show evidence of being enrolled in the required HMAC or ACI course.

#### 6.8 **Responsibility and Documentation**

MTD and the District materials Engineer, laboratory supervisor, or designee are responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. The CEI firm must identify a coordinator with the responsibility to communicate with the area office (AO), who will then coordinate with the District-level responsible person to satisfy the requirements for qualified testers. SM will be used to send email notifications on certification status to the owner (i.e., technician) as well as the District-level responsible person. SM will be the official system of record for qualified or certified TxDOT and commercial laboratory personnel.

Issuance of qualification certificates by the TxDOT qualifying authority is not required. A qualification summary listing all tests for which an individual is qualified is available in SM and may be printed or signed at the District's discretion. Documentation must be maintained through the Object Linking and Embedding (OLE) attachment window. This function allows all qualified personnel supporting documentation to be viewed in SM which includes:

- copies of certificates issued by HMAC and ACI; or
- copies of certificates issued by MTD or TxDOT District laboratory, if issued;
- written examination report with clear identification of technician's name, score, and date taken;
- original performance examinations saved as a PDF file for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date; and
- copies of Form 2687, "Examinee's Certification Acknowledgment."

Supporting documentation for technician qualification must be retained for a minimum of 10 yr. Results of annual proficiency testing administered by MTD or HMAC will be stored in their respective central repositories through SharePoint. Annual split sample evaluations will be stored in SM.

# 6.9 **Disqualification**

Accusations of misconduct by testing technicians are made to the responsible TxDOT District representative and reported to MTD. Table 2 defines the three levels of misconduct: neglect, abuse, and breach of trust.

Term	Definition
Neglect	Unintentional deviations from testing procedures or specifications.
Abuse	Careless or deliberate deviation from testing procedures or specifications.
Breach of Trust	Violation of the trust placed in the certified technician including, but not limited to, acts such as:
	<ul> <li>falsification of records;</li> <li>being aware of improprieties in sampling, testing, or production by others and not reporting them to</li> </ul>
	appropriate supervisors involved in the project;
	<ul> <li>re-sampling or retesting without awareness and consent of appropriate supervisors involved in the project; and</li> </ul>
	<ul> <li>manipulating compensation or production.</li> </ul>

#### Table 2: Levels of Misconduct

The applicable certification steering committee will investigate accusations of misconduct with the assistance of the responsible District. Depending on the severity of the misconduct, MTD may impose penalties ranging from a written reprimand, a temporary suspension, or a permanent revocation of the certification, contingent upon the findings of the investigation. A technician with a revoked certification will be removed from the project and will not be allowed to be employed on any TxDOT project statewide.

# 7. Requirements and Frequencies for Laboratory Equipment

#### 7.1 Overview

All laboratory equipment used in acceptance testing must be calibrated, standardized, checked, or verified in accordance with applicable procedures, including both TxDOT laboratories and non-TxDOT commercial laboratories.

## 7.2 Calibration, Standardizations, Checks, and Verification

Calibration, standardization, checks, and verification of TxDOT equipment may be performed by MTD of the TxDOT District laboratory. TxDOT may also hire a qualified third-party entity to perform equipment requirements in accordance with corresponding test procedures.

The procedures for laboratory equipment requirements and intervals are shown in:

- <u>Tex-198-E</u>, "Minimum Standards for Acceptance of a Laboratory for Soils and Flexible Base Testing,"
- <u>Tex-237-F</u>, "Minimum Standards for Acceptance of a Laboratory for Hot Mix Testing,"
- <u>Tex-498-A</u>, "Minimum Standards for Acceptance of a Laboratory for Concrete and Aggregate Testing," and
- <u>Tex-900-K series</u>, procedures for calibrating, standardizing, checking, verifying, and certifying equipment.

When applicable, equipment that is moved may require calibration, standardization, checks, or verification.

#### 7.3 Contractor Shared Equipment

Unless otherwise stated on the plans and specifications, testing equipment cannot be provided by the Contractor to use for acceptance testing performed by TxDOT or its representative. When allowed by specifications, Contractor-provided testing equipment must be in a location where TxDOT has oversight of the equipment.

Calibration records for shared equipment are required to be retained by TxDOT in accordance with Section 7.4.

# 7.4 Documentation

TxDOT District laboratories are responsible for maintaining documentation of equipment calibration, standardization, checks, and verification for any testing equipment used for acceptance testing. Records must be retained in a PDF file in a central repository location, as defined by MTD, for a minimum of 10 yr.
# 8. Laboratory Qualification Program

# 8.1 Purpose

This program provides uniform statewide procedures to ensure that laboratory facilities, including equipment and personnel, are qualified for the performance of required sampling and testing methods.

# 8.2 Qualification

All laboratories performing sampling and testing for TxDOT require qualification. Laboratories which require qualification include, but are not limited to, the following:

- MTD central laboratory, which includes MTD's field laboratories;
- District laboratories, which includes area office and project laboratories (e.g., field laboratories at hotmix plans); and
- CEI and commercial laboratories.

TxDOT laboratory qualifications issued in accordance with the <u>Quality Assurance Program for CDA/Design-Build</u> <u>Projects – Section 4.4</u> will be recognized as valid under the DBB program.

# 8.2.1 District Accreditation

MTD is responsible for accrediting TxDOT Districts on a 3 yr. cycle. The accreditation inspection consists of an evaluation of laboratory procedures and equipment necessary for the performance of TxDOT test methods in the material areas of concrete, hot-mix asphalt, and soils and aggregates. The assessment also includes a review of the District's quality management system, including records of technician certification, equipment calibration, and oversight of CEI projects. The District accreditation issued by MTD encompasses all TxDOT laboratories managed by the District, including the District laboratory, area offices, and TxDOT laboratories at plant locations.

# 8.2.1.1 Report Rating

MTD will document the accreditation review on a District Accreditation Report, which will be issued to the District upon completion of the review. The report will include an assigned rating level to assess the District's overall performance based on the associated risks to TxDOT. Report rating levels are described in Table 3 below. Districts which receive a rating of 3 on the District Accreditation Report will be subject to the re-inspection process described in <u>Section 8.2.1.6</u>.

Rating	Rating Description	
1	Excellent review with minor or no deficiencies notated.	
2	Several deficiencies or repetitive observations were notated.	
3	A level of negligence was found programmatically violating compliance requirements.	

Table 3:	Rating	Legend
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#### 8.2.1.2 Report Review and Distribution

Upon completion of the accreditation inspection, MTD will hold a report review meeting with the District to discuss the draft District Accreditation Report, including the report rating and details of the findings. The District Director of Construction and Laboratory Supervisor or Lead Worker (as applicable) are required to attend the meeting. The draft report will be modified as needed based on the discussion during this meeting and before the report is finalized by MTD.

The final District Accreditation Report will be distributed to the MTD Director and Deputy Director, as well as the District Director of Construction and Laboratory Supervisor (when applicable) for the TxDOT District laboratory. The MTD Director will then issue a memo to the District Engineer, conforming in substance to the example shown in <u>Appendix F</u>, as well as a copy of the report. The memo will include the District's current and prior report rating level, and any additional feedback deemed necessary. When the District Accreditation Report rating is a 3, the memo will also be distributed to the TxDOT Director of District Operations and Director of Engineering & Safety Operations.

#### 8.2.1.3 Resolution of Findings

The District Accreditation Report summarizes the accreditation inspection, where a finding is classified as either a deficiency or an observation, defined as follows.

- **Deficiency:** A finding that indicates policy or practice contrary to the requirements of the applicable test methods or documented quality procedures.
- Observation: Observations are intended as comments for improvements relating to specific technical information to offer recommendations for best practice. Specifically, observations are noted for any technically related deficiencies where judgment and experience indicate it is not likely to affect the laboratory's ability to produce valid and accurate test results.

A corrective action report (CAR) and supporting documentation are collectively submitted to MTD by the District to address the findings notated in the report. The CAR will document actions that have been taken to prevent recurrence and to show a formal resolution to the findings.

- Deficiencies: Deficiencies require a formal written response describing the corrective actions taken or planned and enough documentation, (i.e., copies of records, new or revised procedures, equipment invoices, photographs, etc.) to substantiate actions taken. Corrective actions should be permanently implemented to prevent recurrence of the problem.
- Observations: No written response is required for findings identified as observations. However, the laboratory should take necessary corrective action to address the observation to prevent possible recurrence. Repeat observations may result in deficiencies.

#### 8.2.1.4 Corrective Action Response Timeline

The resolution of all findings should be completed within 21 days from the issuance of the final District Accreditation Report, including submission of the CAR and supporting documentation to MTD. If the District cannot satisfy the findings in the report within the stated timeframe, an extension may be requested for additional time, typically 7 days, to resolve any outstanding or pending findings. Additional time extensions may be granted on a case-by-case basis; however, extensions may not exceed 90 days cumulatively. The MTD Director may notify the TxDOT Director of District Operations and Director of Engineering & Safety Operations of any outstanding issues that remain unresolved after 60 days to ensure that the findings are resolved within the 90 day period.

To maintain transparency and ensure that appropriate individuals stay informed throughout the corrective action process, all correspondence between MTD and the Districts will include the individuals listed in Table 4 below.

Days Since Final Report Issuance	District Contacts	MTD Contacts
0-45 days	<ul><li>Director of Construction</li><li>District Laboratory Staff</li></ul>	<ul><li>Deputy Division Director</li><li>Quality Assurance Staff</li></ul>
45+ days	<ul> <li>District Engineer</li> <li>Deputy District Engineer</li> <li>Director of Construction</li> <li>District Laboratory Staff</li> </ul>	<ul><li>Division Director</li><li>Deputy Division Director</li><li>Quality Assurance Staff</li></ul>
60+ days	MTD Director may escalate outstanding issu and Director of Engineering and Safety Oper	ies to TxDOT Director of District Operations rations.

#### Table 4: Corrective Action Response Communication Plan

# 8.2.1.5 Accreditation Close-Out

Upon satisfactory completion of the District accreditation process, MTD will provide the District with official notification that the accreditation process has been closed out. MTD will update the District's accreditation scope on the MTD Directory of Active Accredited Labs.

# 8.2.1.6 District Accreditation Re-Inspection

TxDOT Districts which receive a rating of 3 on the District Accreditation Report will be subject to a re-inspection by MTD approximately 12-18 mo. following the accreditation close-out. MTD will continue to re-inspect the District annually until a minimum rating of 2 is achieved.

Each re-inspection will focus on the portions of the District Accreditation Report or prior re-inspection which resulted in the rating of 3. Upon completion of the re-inspection, MTD will issue a memo with the re-inspection results, conforming in substance to the example shown in <u>Appendix G</u>.

Following each re-inspection, MTD will work with the District to resolve deficiencies identified during the reinspection. The District will be given 90 days to resolve deficiencies in accordance with <u>Section 8.2.1.4</u>. All correspondence between MTD and Districts regarding re-inspections will include, at a minimum, the individuals identified under "45+ days" in Table 4 above. The MTD Director may notify the TxDOT Director of District Operations and Director of Engineering & Safety Operations of any outstanding issues that remain unresolved after 60 days to ensure that the findings are resolved within the 90-day period.

The re-inspection memo will include an updated rating as described in Section <u>8.2.1.1</u>. Districts that receive a re-inspection rating of 2 will return to the standard cyclical accreditation schedule. Districts that receive a re-inspection rating of 3 will be referred to the TxDOT Director of District Operations and Director of Engineering & Safety Operations, and the District will continue to be re-inspected by MTD annually.

#### 8.2.1.7 District Laboratory Peer Review Program

Districts are required to host a District Laboratory Peer Review within 12-24 mo. after the QAP District accreditation. Districts will also participate as "peers" by conducting a review of other Districts, as assigned by MTD. The peer review will include a minimum of one District-managed project and two projects managed by CEI firms to ensure program compliance. When complete, documentation of the peer review must be submitted to MTD via email at <u>MTD_Peer_Review@txdot.gov</u>.

## 8.2.2 Commercial Laboratory and CEI Qualification Process

#### 8.2.2.1 Quality System Inspection

At the District level, the District laboratory will be the qualifying authority for CEI firms and commercial laboratories, only in the areas for which the District laboratory is accredited. The laboratory qualifying authority will use <u>Form 2682</u>, <u>"Quality System Inspection – Commercial Laboratory,"</u> to document the following:

- identify the firm's location, contact person, and project role;
- identify the scope of testing to be performed;
- verify that test methods used to perform tests are available and current;
- document that the laboratory has the required equipment to perform the tests using the <u>Visual</u> <u>Inspection Equipment Checklist;</u>
- check the calibration/verification records for each piece of equipment, to include:
  - description of equipment,
  - identification of any traceable standard used,
  - frequency of calibration,
  - date of calibration,
  - date of last calibration,
  - date of next calibration,
  - calibrating technician,
  - procedure used to calibrate/verify equipment, and

- detailed results of calibration; and
- verify that the laboratory has qualified/certified technicians to perform required testing.

In addition, all equipment may be subject to calibration, verification, or other inspection by the qualifying authority, in accordance with <u>Section 7</u>.

## 8.2.2.2 Material Producer List

Laboratories performing acceptance sampling and testing should use results from <u>TxDOT's Material Producer</u> List (MPL) and perform materials sampling and testing in accordance with TxDOT's DBB Guide Schedule. Materials that are not monitored or not pre-approved by TxDOT are subject to sampling and testing as part of the acceptance program, except as noted in the DBB Guide Schedule remarks.

Project/field laboratories performing Tex-113-E, Tex-117-E, and Tex-242-F tests must be an approved laboratory from TxDOT's MPL.

## 8.2.2.3 Qualification Certificate

After qualifying a CEI or commercial laboratory, the District must notify MTD within 14 days by submitting a copy of the completed Form 2682, "Quality System Inspection – Commercial Laboratory," and laboratory qualification certificate to <u>MTD_QAP@txdot.gov</u>. MTD will post the certificate to the Directory of Active Accredited Laboratories available through the MTD Crossroads intranet site and will update the laboratory's qualification effective dates within SM.

Commercial laboratory qualifications are valid for 3 yr., and the effective period of the qualification must be listed on the certificate. Laboratories will be removed from the Directory of Active Accredited Laboratories as of the expiration date listed on the certificate unless the laboratory has been re-qualified before that date. SM will be used to notify MTD and laboratory contacts of upcoming laboratory qualification expiration dates.

#### 8.2.2.4 Annual Audit

An annual audit will be conducted by the designated District staff for each CEI or commercial laboratory to ensure continual compliance with technician records and equipment intervals. The following tools and resources should be used to conduct and document the review for program compliance:

- Form 2682, "Quality System Inspection Commercial Laboratory," to document the review;
- SM "Material Test History Report Area Engineer Inspected Materials" query that shows material testing completed for a project;
- SM "Testers and Users by District" query that allows filtering to determine expiring certifications; and
- equipment calibration or verification records retain in the MTD-designated location.

# 8.3 Laboratory Responsibility

The responsibilities are spread among varying roles and are defined below to achieve a level of quality and to maintain program compliance. Communication between the District laboratory, area offices, and CEI firms is key to ensuring that all sampling and testing laboratories, equipment, and personnel employed on TxDOT projects are appropriately qualified.

District Engineers are responsible for ensuring this communication takes place and documenting the communication channels in a District quality assurance standard operating procedure (SOP) that conforms in substance to the outline shown in <u>Appendix H</u>. The SOP must be reviewed, updated as needed, and approved by the District Engineer annually by April 1st, with a copy provided to MTD via email at <u>MTD_QAP@txdot.gov</u>.

# 8.3.1 CEI Firm

The CEI firm must:

- provide certified personnel that are knowledgeable of all material testing procedures;
- provide copies of current certifications for all personnel performing project acceptance testing;
- provide a completed Form 2682, "Design-Bid-Build Quality System Inspection Commercial Laboratory," documenting pre-accreditation of the testing laboratory, including equipment calibrations and verifications and technician certifications, to the area office (AO) within 10 days after execution of the Contract;
- submit commercial laboratory accreditation request to the AO, with enough notice to ensure that laboratories are accredited within 30 days of Contract execution;
- perform all material tests at the facility shown on the Contract, except tests performed at the plant or on the roadway;
- use only material testing laboratories that are accredited by the Laboratory Qualification Program outlined in <u>Section 8.2;</u>
- perform an annual audit to validate ongoing laboratory accreditation, equipment calibrations and verifications, and technician certifications for the duration of the Contract;
- develop a Quality Control Plan (QCP) that:
  - is project-specific,
  - demonstrates how quality is to be achieved through acceptance testing per project,
  - addresses how the CEI firm will track and ensure that only certified technicians perform acceptance on equipment that is calibrated and in good working order, and
  - meets the requirements established in the CEI Contract scope of work, as outlined in Appendix I; and
- provide the QCP to the AO within 10 days after the execution of the Contract.

## 8.3.2 District Area Office Personnel

Each Area Engineer will designate an AO coordinator. The AO coordinator is required to:

- provide District laboratory personnel with monthly status of the CEI projects;
- provide the District laboratory contacts for CEI firms and their subcontracted commercial laboratories;
- invite District laboratory personnel to the kick-off and associated pre-construction meetings;
- review the CEI project-specific testing, certification, and equipment needs to validate that required documentation has been received;
- forward all CEI technician certifications, equipment calibrations and verifications, and laboratory requests to the District laboratory;
- submit the CEI's QCP to the District laboratory;
- approve or reject the QCP based on recommendations from the District laboratory; and
- ensure that an issue-based evaluation of the CEI firm is completed when there are issues of noncompliance with requirements of <u>Section 8.3.1</u>, including missing deliverables or use of unqualified laboratories or technicians throughout the duration of the project.

# 8.3.3 District Material Quality Champion

The District Engineer will designate a District Material Quality Champion to serve as primary point of contact for the District regarding material quality. The Material Quality Champion is responsible for ensuring that the District meets the following requirements:

- Review and make recommendations to the AO coordinator for approval or rejection of the CEI's QCP;
- coordinate the inspection of the commercial laboratory facility and equipment once the QCP has been approved;
- communicate the status of the inspection with the CEI firm;
- use SM to auto-notify the owner (i.e., technician) and the District laboratory designee before certification expiration; and
- conduct and document, at a minimum annually, an internal audit of the District for continual quality program compliance using the following tools and resources:
  - SM "Testers and Users by District" query that allows filtering to determine expiring certifications;
  - SM "Equipment Calibrations" query to show equipment status and upcoming expiration dates;
  - Equipment calibration or verification records retained in the MTD-designated location; and
  - MTD's Material Samples dashboards to show completeness, accuracy, and timely authorization of SM material samples.

# 8.4 Documentation

The qualifying authority is responsible for verifying that laboratories are qualified to perform sampling and testing. Upon satisfactory completion of the laboratory qualification process, the qualifying authority will issue a certificate covering the scope of testing in which the laboratory has been qualified. Laboratory qualification documentation must be retained by the qualifying authority and the qualified laboratory for a minimum of 10 yr.

Laboratory qualification documentation to be maintained by the qualifying authority includes:

- availability and calibration or verification records for each piece of equipment,
- personnel qualified or certified to perform required testing, and
- copy of laboratory qualification certificate issued.

# 8.5 Non-Compliance

A laboratory that does not meet all the above requirements is subject to disqualification or suspension.

Any equipment in a qualified laboratory failing to meet specified equipment requirements for a specific test method will not be used for that test method. MTD or the TxDOT District laboratory responsible for the certification or audit will immediately notify all applicable area offices of non-conformance for those test methods.

The next higher qualification authority will resolve disputes concerning calibration and verification of equipment. For disputes that cannot be resolved at the District level, MTD will be the final authority.

# 9. Appendices

# Appendix A Acronyms and Definitions

The following terms and definitions are referenced in this document and have the meanings set forth below.

AAP	AASHTO Accreditation Program (AASHTO re:source and CCRL)
AASHTO	American Association of State Highway Transportation Officials
ACI	American Concrete Institute
AO	Area Office
AQMP	Aggregate Quality Monitoring Program
CAR	Corrective Action Report
CCRL	Concrete and Cement Reference Laboratory
CEI	Construction Engineering and Inspection
CFR	Code of Federal Regulations
DBB	Design-Bid-Build
MTD	Materials and Tests Division
CMEC	Construction Materials Engineering Council
FHWA	Federal Highway Administration
НМА	Hot-Mix Asphalt
НМАС	Hot-Mix Asphalt Center
IA	Independent Assurance
L-A-B	Laboratory Accreditation Bureau
MPL	Material Producer List
OLE	Object Linking and Embedding attachment window
QAP	Quality Assurance Program
QAT	Quality Assurance Test
QC	Quality Control
QCP	Quality Control Plan
SM	SiteManager
SOP	Standard Operating Procedure
ТХАРА	Texas Asphalt Pavement Association
TxDOT	Texas Department of Transportation

Abuse-Careless or deliberate deviation from testing procedures or specifications.

Acceptance Program—All factors that comprise TxDOT's program to determine the quality of the product as specified in the Contract requirements. These factors include verification sampling, testing, and inspection and may include results of QC sampling and testing.

**Accredited Laboratories**—Laboratories that are recognized by a formal accrediting body as meeting quality system requirements including demonstrated competence to perform standard test procedures.

**Breach of Trust**—Violation of the trust placed in the certified technician including, but not limited to, acts such as, falsification of records; being aware of improprieties in sampling, testing, or production by others and not reporting them to appropriate supervisors involved in the project; re-sampling or retesting without awareness and consent of appropriate supervisors involved in the project; and manipulating compensation or production.

Certified Technician-A technician certified by some agency as proficient in performing certain duties.

**Independent Assurance (IA) Program**—Activities that are an unbiased and independent evaluation of all the sampling and testing procedures, equipment, and personnel qualifications used in the acceptance program.

**Material Producer List (MPL)**—TxDOT-approved products and materials from various manufacturers and producers are located at: <u>https://www.txdot.gov/business/resources/producer-list.html</u>

Neglect–Unintentional deviations from testing procedures or specifications.

**Proficiency Samples**—Homogenous samples that are distributed and tested by two or more laboratories or personnel. The test results are compared to assure that the laboratories or personnel are obtaining the same results.

**Qualified Laboratories**—Laboratories that are capable as defined by appropriate programs established by TxDOT. As a minimum, the qualification program must include provisions for checking testing equipment, and the laboratory must keep records of calibration checks.

**Qualified Sampling and Testing Personnel**—Personnel who are capable as defined by appropriate programs established by TxDOT.

Quality Assurance (QA)—All planned and systematic actions necessary to provide confidence that a product or service will satisfy given requirements for quality.

**Quality Control (QC)**—All Contractor operational techniques and activities performed or conducted to fulfill the Contract requirements.

**TxDOT Standard Specifications**—the Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges adopted by the Texas Department of Transportation, including all revisions thereto applicable on the effective date of the Contract documents.

Verification Sampling and Testing-Sampling and testing performed to verify the quality of the product.

# Appendix B Test Methods for Split/Proficiency Evaluation

After observation and qualification, each qualified technician is required to participate annually in one proficiency or split sample test for each test method requiring independent assurance. Split sample test results must compare to the independent assurance test results below. Proficiency sample test results must be within  $\pm 2$  standard deviations of the proficiency sample mean.

Test Procedure	Description	Tolerance
Tex-104-E	Liquid Limit of Soils	15% of mean ¹
Tex-105-E	Plastic Limit of Soils	15% of mean ¹
Tex-106-E	Plasticity Index of Soils	20% of mean ¹
Tex-107-E	Bar Linear Shrinkage of Soils	± 2%
Тач 140 Г	Particle Size Analysis of Soils, Part I	> No. 4 sieve: ± 5% points
Tex-110-E		$\leq$ No. 4 sieve: ± 3% points
Тач 112 Г	Moisture-Density Relationship of Base	Density ± 2.0 PCF
Tex-113-E	Materials	Moisture Content ± 0.5%
Tax 447 F	Triaxial Compression for Disturbed Soils	Strength ± 15 psi
Tex-117-E	and Base Materials, Part II	Moisture Content ± 0.5%
	Asphaltic Concrete Combined Aggregate	>5/8" sieve: ± 5.0% points
		(individual % retained)
Tex-200-F		≤5/8" sieve-No. 200: ± 3.0%
		(individual % retained)
		Passing No. 200: ± 1.6% points
	Compacting Test Specimens of Bituminous Mixtures	± 1.0% laboratory-molded
Tex-206-F		density in accordance with
		Tex-207-F
	Determining Density of Compacted Bituminous Mixtures	Laboratory-Molded Density:
		± 1.0%
Tex-207-F		Laboratory-Molded Bulk Specific
		Gravity: ± 0.020
		In-place air voids (cores): ± 1.0%
Тоу 007 Г	Theoretical Maximum Specific Gravity of	1.0.020
1ex-221-F	Bituminous Mixtures	I 0.020
Toy 226 F	Asphalt Content of Asphalt Paving	
16x-230-F	Mixtures by the Ignition Method	± 0.3%

#### Laboratory Testing Procedures and Tolerance Limits

Test Procedure	Description	Tolerance
	Compacting Bituminous Specimens	± 1.0% laboratory-molded
Tex-241-F	Using the Superpave Gyratory	density in accordance with
	Compactor (SGC)	Tex-207-F
		17% of mean ¹ (4 × 8" specimen)
Tex-418-A	Compressive Strength of Cylindrical	14% of mean ¹ (6 × 12"
	Concrete Specimens	specimen)

¹ The difference between compared test results must not exceed the indicated percentage of the mean of the compared test results, where the mean is the average of the two test results.

EXAMPLE: Plasticity Index

Tolerance = 20% of the mean

Technician test value	18
IA technician test value	22
Mean	20
20% difference	4

Both values are within 20% of the mean.

# Appendix C IA Annual Report

{Date}

Independent Assurance Program Manager Materials and Tests Division (MTD) Texas Department of Transportation 125 East 11th Street Austin, TX 78701

RE: Annual Report of Independent Assurance (IA) Program Results - {Project Name}

Dear Sir:

In accordance with the requirements set forth in the TxDOT Quality Assurance Program for Design-Bid-Build Projects, the information below summarizes the results of system approach independent assurance (IA) testing conducted by our firm on the {Project Name} project for calendar year {XXXX}.

TxDOT Independent Assurance Program Results			
IA Activities	TxDOT	Non-TxDOT	Total
Number of personnel evaluated under system approach			
Number of personnel removed from the IA program			
Number of IA evaluations completed			
Number of IA evaluations meeting tolerance			
Number of IA evaluations not meeting tolerance			

CC: Materials and Tests Division Director TxDOT - MTD

# Appendix D Material Certification Letter Example – Federal Oversight

A form-fillable version of the Material Certification Letter can be found here.

	ADDRESS, ONY_TEMAS, JEP   TELEPHONE   WWW.TXDOT.GOV
Date	
Division Ad Federal Hij 300 East & Austin, TX	Iministrator ghway Administration, Texas Division Ith Street 78701
RE:	Final Materials Certification Letter
Project:	Federal Aid Project No.: Federal Project No CSJ: CSJ Number County: County
Dear FHW	Texas Division Administrator,
This letter	is to certify:
The results	of the tests used in the acceptance program indicate that the materials incorporated in
the constru- conformity test that d exception.	vection work, and in the construction operations controlled by sampling and testing, were in with the approved plans and specifications. Any material represented by an acceptance bes not meet the criteria contained in the plans and specifications is considered an
the construction conformity test that do exception. D E st	with the approved plans and specifications. Any material represented by an acceptance bes not meet the criteria contained in the plans and specifications is considered an ceptions to the plans and specifications are explained on the back hereof (or on attached eet).
conformity test that de exception.	Action work, and in the construction operations controlled by sampling and testing, were in with the approved plans and specifications. Any material represented by an acceptance bes not meet the criteria contained in the plans and specifications is considered an ceptions to the plans and specifications are explained on the back hereof (or on attached leet). ere are no exceptions to the plans and specifications on this project.
conformity test that d exception.	Action work, and in the construction operations controlled by sampling and testing, were in with the approved plans and specifications. Any material represented by an acceptance bes not meet the criteria contained in the plans and specifications is considered an ceptions to the plans and specifications are explained on the back hereof (or on attached leet). Here are no exceptions to the plans and specifications on this project.
Ine constru- conformity test that de exception.	DOT District Area Engineer or Orrector of Construction, P.E.

# Appendix E Material Certification Letter Example – Non-Federal Oversight

A form-fillable version of the Material Certification Letter can be found here.

	ADDRESS, CITY, TENAS, ZIP   TELEPHONE   WWW.DOOT.GOV
Date	
75007	District Engineer
Title	structure en Philonia.
RE:	Final Materials Certification Letter
Project	Cit Contact No. (Cit Contact No.
	CSJ: CSJ Number
	County: Dounty
Dear D	strict Engineer,
This let	ter is to certify:
The res the con conform test the exception	ults of the tests used in the acceptance program indicate that the materials incorporated in struction work, and in the construction operations controlled by sampling and testing, were i hity with the approved plans and specifications. Any material represented by an acceptance t does not meet the criteria contained in the plans and specifications is considered an on.
	Exceptions to the plans and specifications are explained on the back hereof (or on attached sheet).
	There are no exceptions to the plans and specifications on this project.
Sincere	by,
	r TXDOT District Area Engineer an Directol of Construction, P.E.
Ivainie t Trile	
Name t Trile CC:	Director, Materials & Tests Division, TxDOT

	MEM
To:	(TxDOT District Engineer) (Da
From:	(MTD Director)
Subject:	District QAP Accreditation
The In ac	Materials and Tests Division (MTD) has completed an accreditation inspection of the (District), ccordance with the TxDOT Quality Assurance Program for Construction.
The exce obse requ [1/2	District Accreditation Report has been issued with an overall rating of $(1/2/3)$ , indicating [an illent review with minor or no deficiencies were noted/several deficiencies or repetitive ervations were noted/a level of negligence was found programmatically violating compliance lirements]. This represents (an improvement/no change/a decline) from the previous rating of $2/3$ issued in the [Month, Year] District Accreditation Report.
MTD desc docu to re defic Defi Dist	) has requested that the District Director of Construction provide a formal written response cribing the corrective actions taken to address the deficiencies, as well as sufficient umentation to substantiate the corrective actions by <u>[Date]</u> . MTD will work with the district staff esolve all deficiencies within 90 days (i.e., by [Date]). To assist in meeting this deadline, any ciencies which remain outstanding after 45 days will be communicated to the District Engineer. ciencies that are outstanding after 60 days may be communicated to the TxDOT Director of rict Operations and Director of Engineering & Safety Operations.
ngof3 In a follo Accr anno	ddition, the district will be subject to a re-inspection by MTD approximately 12-18 months wing the accreditation close-out. The re-inspection will focus on the portions of the District reditation Report which resulted in the rating of 3. MTD will continue to re-inspect the district ually until a minimum rating of 2 is achieved.
Plea	se contact (Quality Assurance Staff) at MTD with any questions.
CC:	(Director of District Operations) (Director of Engineering & Safety Operations)

# Appendix F District Accreditation Results Memo Example

# Appendix G District Accreditation Re-Inspection Results Memo Example

		MEMO
		(Date)
To:	[TxDOT District Engineer]	(const
From	(MTD Director)	
Subje	ct: District QAP Accreditation Re-Inspection	
	The Materials and Tests Division (MTD) has com accordance with the TxDOT Quality Assurance Progra inspection was to evaluate the continuity of co deficiencies noted in the (Month, Year) District Accr level of 3.	pleted a re-inspection of the (District), in am for Construction. The purpose of the re- rrective actions implemented to address editation Report, which resulted in a rating
ating of 2	The re-inspection found that corrective actions imp equipment/quality management system/CE&I proje ensure continued compliance with the TxDOT Quality records reviewed were substantially complete and ac	lemented to address previous [technician/ ct] deficiencies are operating effectively to y Assurance Program for Construction. The curate.
	As a result, the district has been issued a <u>re-ins</u> improvement from the previous inspection. This com- and the district will return to the standard cyclical acc	spection rating of 2, indicating significant cludes the laboratory re-inspection process, creditation schedule.
	The re-inspection found that corrective actions imp equipment/quality management system/CE&I project sustained to ensure continued compliance with t Construction. As a result, the district has been issu continued level of negligence was found programm Deficiencies identified during the re-inspection are lis	lemented to address previous (technician/ it) deficiencies were insufficient or were not the TxDOT Quality Assurance Program for red a <u>re-inspection rating of 3</u> , indicating a natically violating compliance requirements. ited in the attached document.
ating of 3 -	The district must provide MTD with a formal written taken to address the deficiencies, as well as suf corrective actions by <b>(Date)</b> .	response describing the corrective actions ficient documentation to substantiate the
	The district will also be subject to a re-inspection ann 2 is achieved.	ually until a minimum re-inspection rating of
	Please contact [Quality Assurance Staff] at MTD with	any questions.

# Appendix H District Quality Assurance SOP Requirements



		0	Who is responsible for performing the reviews
			How the district will conduct and document the reviews, and
		0	How the district will conduct and document the reviews, and How the district will ansure that undated technician certification and equinment records are
		.0	complete and stored within the required location
			complete and stored within the required location.
1.5	District	Oversigh	t and Monitoring- Define a process to monitor for continual quality program compliance. Identify the
		Procedu	res to adjust sampling and testing requirements in the CCMS including:
			Who is responsible for making changes in the system
		0	Who has authority to approve the changes and
		0	How the district will ensure that the reason for the change is documented:
		Procedu	rise to ensure the completeness and accuracy of sample information and material test results
		ontorod	in the CCMS, including items completed by CEI firms or commercial laboratories:
		Procedu	in the como, including items completed by SET inno of commercial laboratories,
		authoriz	ation is documented.
		Procedu	auon is ubcumented, iras to complete Material Cartification Latters at project close out including:
		Floceuu	Who is responsible for completing and signing the letter
		0	How the district will identify material excentions to be included in the latter, and
		0	How the district will document and compile justifications for material excentions identified; and
		Procedu	rise to conduct an internal audit of the district including:
	-	Tiocedu	The frequency of the reviews (at a minimum annually)
		0	Who is responsible for performing the reviews
		0	How the district will monitor for expiring technician certifications and equinment intervals
		0	How the district will ensure that required equinment records are complete, accurate, and stored
		0	within the required location
		~	How the district will monitor the material samples dashboards for completeness, accuracy, and
		.0.	timely authorization of material samples
		0	How the district will document the reviews and
			The process for addressing the items identified during the reviews
		0	The process for boardsbing the items recreated winning the reviews.

# Appendix I CEI Quality Control Plan Requirements

	Quality Control Plan	
1.1	Quality Control Plan (QCP). Develop a QCP that is project specific and developed in accordance with the DBB QAP. Submit the written QCP within 10 days after execution of the CE&I contract and before the mandatory kick-off meeting. Receive written approval from the AO on the QCP before beginning inspection, sampling and testing and for any addendums. Include the following procedures and items in the QCP:	
1.1.1	Project and Personnel- For the CE&I project and personnel include:	
	<ul> <li>CSJ#, District, County, AE, Highway;</li> <li>a dedicated person responsible for quality with their current contact information (cell phone and email address) that will ensure that all CE&amp;I and Contractor technician certifications and equipment calibrations are current, including updates to test methods, and proficiencies performed in time and independently;</li> <li>a list of the subcontractor firms and a defined scope of responsibility maintained by the principal firm to comply with the DBB QAP; names of individuals and their sampling and testing responsibilities;</li> <li>current electronic copies of certification documents for individuals performing specified sampling and testing functions;</li> <li>procedure for ensuring technicians participate and perform proficiency samples independently and how technicians will not share results; and</li> </ul>	
	<ul> <li>handling accusations of misconduct covering: neglect, abuse, or breach of trust.</li> </ul>	
1.1.2	<ul> <li>Laboratory- For CE&amp;I laboratory equipment and calibration, include:</li> <li>current electronic copies of most recent equipment calibration checks where applicable and in accordance with: <ul> <li>Tex-198-E, "Minimum Standards for Acceptance of a Laboratory for Soils and Flexible Base Testing,"</li> <li>Tex-237-F, "Minimum Standards for Acceptance of a Laboratory for Concrete and Aggregate Testing,"</li> <li>Tex-498-A, "Minimum Standards for Acceptance of a Laboratory for Concrete and Aggregate Testing," and</li> <li>Tex-900-K Series, procedures for calibrating, verifying, and certifying equipment and devices.</li> </ul> </li> <li>include only equipment required for testing on this project and the support equipment such as calipers and weights;</li> <li>annual equipment calibration schedule with date(s) due;</li> <li>maintenance and repair plan for laboratory equipment;</li> <li>electronic copies of all standards used for calibrating or verifications; and</li> <li>procedures for ensuring quality is attained through laboratory testing equipment beyond the normal calibration cycle.</li> </ul>	
1.1.3	<ul> <li>Quality- For the CE&amp;I firm to achieve quality through inspection, sampling, and testing, include: <ul> <li>a designated person responsible for the CE&amp;I firm's adherence to the QCP;</li> <li>how QCP information will be communicated to all members of the CE&amp;I team;</li> <li>how the firm will ensure that employees receive a copy and understand the construction Contractor's quality control plan/paving plan for each material;</li> <li>all reference document resources available to technicians;</li> <li>in-house equipment available to technicians for equipment calibration and repair;</li> <li>instructions for how laboratory equipment shall be cared for;</li> <li>procedures for establishing which equipment can be shared between the CE&amp;I firm and the construction Contractor and the corresponding approval process;</li> <li>procedures and time limits for reporting test results to the Engineer and Contractor;</li> <li>timely review of QA test results for reasonableness and comparison of QC and QA data; and</li> <li>how the firm will protect the integrity of quality assurance data, to include:</li> <li>do not provide the construction Contractor with the random numbers for material sampling in advance;</li> <li>separation of review and authorization functions in SiteManager;</li> <li>how test results will be documented in SiteManager when the tester does not directly enter the results; and</li> <li>how the firm will ensure the correct QC and QA data is saved in SiteManager.</li> </ul> </li> </ul>	

# APPENDIX B GUIDE SCHEDULE OF SAMPLING AND TESTING

# GUIDE SCHEDULE OF SAMPLING & TESTING FOR DESIGN BID-BUILD (DBB) PROJECTS -(DBB Guide Schedule)

JUNE 28, 2019



# Using the Guide Schedule

Research of sampling and testing rates, listed for project tests in the following Guide Schedule, show that the Department's and the Contractor's risk of either rejecting "good" material or accepting "bad" material range from 20% to 40%.

To reduce this risk, we recommend that the sampling rate be increased during initial production. A four-fold increase in testing frequency will generally reduce risk to approximately 5%. The intent of increasing testing, at the start of production, is to insure the Contractor's processes are in control and to establish acceptability requirements early.

There is a need to increase the frequency of testing for high-variability materials and when testing results do not meet specifications. The Engineer may require the Contractor to reimburse the Department for costs resulting from failing test results, in accordance with the specifications.

Materials incorporated in TxDOT projects are subjected to various quality assurance procedures such as testing (as outlined in this document), certification, quality monitoring, approved lists, etc. The Engineer and testing staff should familiarize themselves with materials to be used before work begins by reviewing the specifications and this document. Discuss material testing requirements with the Contractor.

Other testing required by the specifications, but not shown in the DBB Guide Schedule, should be performed at a frequency necessary to provide adequate confidence that materials meet specifications.

NOTE—The TxDOT District Area Engineer or Director of Construction must submit a "Materials Certification Letter" at final acceptance of the project. The intent of this letter is to ensure that the quality of all materials incorporated into the project is in conformance with the plans and specifications, thus ensuring a service life equivalent to the design life. Any material represented by an acceptance test, that does not meet the criteria contained in the plans and specifications, is considered an exception. Exceptions must be listed in the materials certification letter. For projects with federal oversight, submit the materials certification letter (See Appendix D of DBB QAP) to the FHWA division administrator, with a copy to the Materials and Tests Division (MTD). For non-federal oversight projects, submit the material certification letter (Appendix E of DBB QAP) to the TxDOT District Engineer, with a copy to MTD. Refer to section 4.1 of the "Quality Assurance Program for Design-Bid-Build Projects" (DBB QAP).

Assuring the quality of the product and proper incorporation of materials into the project begins with proper sampling practices. Sampling, testing, and construction inspection must be performed collaboratively to assure the specific attributes of the finished product reflect quality workmanship. Sampling guidance for hot-mix asphalt is contained in Tex-225-F, "Random Selection of Bituminous Mixture Samples," and the respective specification for that material. All remaining materials are covered by method and materials specifications, to which the following applies.

For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:

- <u>Soils/flexible base</u>: Vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed.
- <u>Aggregates</u>: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
- <u>Concrete (structural and miscellaneous)</u>: Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled. Tests for slump, air, and temperature should be done often to ensure the consistent control of the concrete production (not applicable to miscellaneous concrete).

## This Guide Schedule is applicable to all contracts associated with the 2014 Standard Specifications.

	TABLE I – E	MBANKMENTS, S	SUBGRADES, BACKFII	L, AND BASE CO	URSES
			PROJECT	TESTS	
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
	Liquid Limit <b>(A)</b>	Tex-104-E		Materials with $PI \le 15: 10,000 \text{ CY}$	For Type A embankment or when required by the plans. This test may be waived for embankment cuts as directed by the Engineer. Determine a new liquid
	Plasticity Index (A)	Tex-106-E	During stockpiling	Materials with PI > 15: 5,000 CY	notable change in material. Sample in accordance with Tex-100-E.
	Gradation	Tex-110-E	operations, from completed stockpile, or project site	Each 10,000 CY	When shown on plans. This test may be waived for embankment cuts, as directed by the Engineer.
EMBANKMENT	Moisture/Density	Tex-114-E	(B)	As directed by the Engineer	Sample in accordance with Tex-100-E. Not required for ordinary compaction. Determine a new optimum moisture and maximum density for each different material or notable change in material.
	In-place Density ( <b>A</b> )	Tex-115-E	<mark>As directed by the</mark> Engineer	Fill: each 5,000 CY min. 1 per lift.	Sample in accordance with Tex-100-E. Not required for ordinary compaction. Determine a new optimum moisture and maximum density according to Tex-114-E for each different material or notable change in material.
				Cut: each 6,000 LF	Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Materials such as RAP, gypsum, lime, cement, and iron ore tend to bias the counts for nuclear density gauges.
RETAINING WALL (NON-SELECT BACKFILL)	As shown above for Embankment (Cuts and Fills)		As shown above for Embankment (Cuts and Fills)	As shown above for Embankment (Cuts and Fills)	Sample in accordance with Tex-100-E.
	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	Required only for Type CS backfill. Test the fraction of material finer than the No. 200 sieve. Sample in accordance with Tex-400-E.
RETAINING WALL	Overdetion	Tex-110-E	During stockpiling operations, from	Fach E 000 CV	Required only for Drainage Aggregate. Sample in accordance with Tex-400-A.
(SELECT BACKFILL)	Gradation	Tex-401-A	completed stockpile, or project site <b>(B)</b>	Each 5,000 CY	Required only for Select Backfill. Sample in accordance with Tex-400-A.
	Resistivity (A)	Tex-129-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	For material with resistivity between 1,500 and 3,000 ohm-cm, determine chloride and sulfate content, as specified in Item 423. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

	TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES					
			PROJECT 1	TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS	
	рН <b>(А)</b>	Tex-128-E	During stockpiling operations, from completed stockpile, or project site ( <b>B</b> )	Each 5,000 CY	Sample in accordance with Tex-400-A.	
	Magnesium Soundness	Tex-411-A	During stockpiling operations, or from completed stockpile	1 per source, per project	Test when backfill sources appear to contain particles such as shale, caliche, or other soft, poor- durability particles. Sample in accordance with Tex-400-A.	
RETAINING WALL (SELECT BACKFILL) (continued)	Micro-Deval	Tex-461-A	During stockpiling operations, or from completed stockpile	1 per source, per project	May be used as an alternate to the magnesium soundness only when the % loss from the micro- deval is not greater than 20%. When the % loss from the micro-deval is greater than 20%, the magnesium soundness governs aggregate verification. Sample in accordance with Tex-400-A.	
	In-place Density <b>(A)</b>	Tex-115-E	<mark>As directed by the</mark> Engineer.	1 per backfill lift, per wall	Not required for rock backfill. For walls greater than 500 ft. in length, perform one test per lift for every 500 ft. in length. <b>(F)</b> Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E for each different material or notable change in material and adjust the density accordingly.	
	Liquid Limit <b>(A)</b>	Tex-104-E	During stockpiling operations, from completed stockpile, or windrow ( <b>B</b> )	Each 5,000 CY	Sample in accordance with Tex-400-A.	
UNTREATED BASE	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or windrow ( <b>B</b> )	Each 5,000 CY		
	Gradation (A)	Tex-110-E	During stockpiling operations, from completed stockpile, or windrow ( <b>B</b> )	Each 5,000 CY	Sample in accordance with Tex-400-A.	
	Moisture/Density	Tex-113-E	From completed stockpile at the source (E)	Each 20,000 CY	Not required for ordinary compaction. Sample in accordance with Tex-400-A.	

		TABLE I – E	MBANKMENTS, S	UBGRADES, BACKFIL	L, AND BASE CO	URSES
				PROJECT	TESTS	
MATERIAL OR	PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
		Wet Ball Mill <b>(A)</b>	Tex-116-E	From completed stockpile at the source <b>(E)</b>	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. Sample in accordance with Tex-400-A.
		Strength		From completed		Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. When base material is from a source where the District has a record of satisfactory triaxial results, the frequency of testing may be reduced to one per 30,000 CY.
		(A)	Tex-117-E	(E)		If any one test falls below the minimum value required, the frequency of testing will return to the original frequency of 20,000 CY. Sample in accordance with Tex-400-A.
UNTREATED BASE COURSES (Continued)		In-place Density <b>(A)</b>	Tex-115-E	As directed by the Engineer	Each 3,000 CY, min. 1 per lift	Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Materials such as RAP, gypsum, lime, cement, and iron ore tend to bias the counts for nuclear density gauges.
		Thickness (A)	Tex-140-E	As directed by the Engineer	Each 3,000 CY	Not required where survey grade control documents are compliant.
		Ride Quality <b>(A)</b>	Tex-1001-S Surface Test, Type B	Final riding surface of travel lanes		This applies to the final travel lanes that receive a 1- or 2-course surface treatment for the final surface, unless otherwise shown on the plans.
	SUBGRADE	Organic Content	Tex-148-E	As directed by the Engineer	1 per <mark>project, per</mark> source or as directed by the Engineer	Required for existing subgrade material and material imported from a borrow source. Soil survey and geologic maps may be used to determine sampling locations. Sample in accordance with Tex-100-E.
TREATED SUBGRADE AND BASE COURSES	BEFORE TREATMENT	Sulfate Content	Tex-145-E	As directed by the Engineer	1 per 500 feet or 5,000 CY	Required for existing subgrade material and material imported from a borrow source. Soil survey and geologic maps may be used to determine sampling locations. Sample in accordance with Tex-100-E.
	NEW BASE MATERIAL	Liquid Limit <b>(A)</b>	Tex-104-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	When central mix site or plant is used, windrow sampling may be waived. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES							
				PROJECT T	ESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS	
		Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or windrow ( <b>B</b> )	Each 5,000 CY		
	NEW BASE MATERIAL	Gradation <b>(A)</b>	Tex-110-E	During stockpiling operations, from completed stockpile, or windrow ( <b>B</b> )	Each 5,000 CY	Sample in accordance with Tex-400-A.	
	(Continued)	Wet Ball Mill <b>(A)</b>	Tex-116-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. Sample in accordance with Tex-400-A.	
TREATED		Strength (A)	Tex-117-E	From completed stockpile at the source <b>(E)</b>	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. When base material is from a source where the District has a record of satisfactory triaxial results, the frequency of testing may be reduced to one per 30,000 CY. If any one test falls below the minimum value required, the frequency of testing will return to the original frequency of 20,000 CY.	
SUBGRADE AND BASE COURSES (Continued)	LIME	Compliance with DMS-6350	Tex-600-J	During delivery to project	Commercial Lime Slurry: each 200 tons of lime Carbide Lime Slurry: each 100 tons of lime	Sample in accordance with Tex-600-J. Verify the source is listed on the current Material Producer List for Lime. Only materials appearing on the Material Producer List will be accepted. Sample frequency for Carbide Lime Slurry may be increased as directed by the Engineer. For Hydrated Lime and Quick Lime, project testing is not required but it is encouraged to sample and test the material at a rate of 1 per project as a best practice.	
	CEMENT	Compliance with DMS-4600		Railroad car, truck, or cement bins		Verify the source is listed on the current Material Producer List for Cement. If not, sample and test in accordance with DMS-4600. <b>(C)</b>	
	FLY ASH MATERIAL	Compliance with DMS-4615		Project samples at location <mark>directed by the</mark> Engineer		Verify the source is listed on the current Material Producer List for Fly Ash. Only materials from MTD approved sources appearing on the Material Producer List for Fly Ash will be accepted. Project testing is not required but it is encouraged to sample and test the material at a rate of 1 per project as a best practice. (C)	

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES							
				PROJECT 1	TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS	
		Pulverization Gradation	Tex-101-E, Part III	Roadway, after pulverization and mixing	As necessary for control	At the beginning of the project, one test must be made for each 4,500 CY or 6,000 tons until the Engineer is satisfied that acceptable pulverization results are being obtained. Sample in accordance with Tex-100-E.	
	COMPLETE MIXTURE	Moisture/Density Curve and Strength	Tex-120-E, Part II, or Tex-121-E, Part II	From roadway windrow after treatment <b>(E)</b>	Each 20,000 CY	Not required for ordinary compaction. Determine a new moisture/density curve for each different or notable change in material. Perform Tex-120-E, Part II, for Cement Treated Material, and Tex-121-E, Part II, for Lime, Lime-Fly Ash, or Fly Ash Treated Material. If Tex-120-E, Part I, Tex-121-E, Part I, or Tex-127-E is performed before the project, this test may be waived. Sample in accordance with Tex-100-E.	
TREATED SUBGRADE AND BASE COURSES (Continued)		Moisture/Density Curve and Strength	Tex-120-E, Part I, Tex-121-E, Part I, or Tex-127-E	From roadway before treatment	As necessary for control	Perform Tex-120-E, Part I, on cement treated material, and Tex-121-E, Part I, for lime-fly ash or fly ash treated material. Verifies the field strength by comparing results from the mix design. Performed at the direction of the Engineer and when notable change in material, as described above for Part II of the test procedures. Sample in accordance with Tex-100-E.	
		In-place Density <b>(A)</b>	Tex-115-E	<mark>As directed by the</mark> Engineer	Each 3,000 CY, min 1 per lift	Determine the appropriate moisture/density curve for each different material or notable change in material. Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Stabilizers and materials such as RAP, gypsum, and iron ore tend to bias the counts for nuclear density gauges.	
		Thickness (A)	Tex-140-E	As directed by the Engineer	Each 3,000 CY	Not required where survey grade control documents are used for compliance.	

	TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES						
			PROJECT T	ESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS		
	Sulfate Content	Tex-145-E	During stockpiling operations, from completed stockpile, or	Each 5,000 CY	Required only for contractor furnished recycled material, including crushed concrete. Not required for RAP. Sample in accordance with Tex-400-A.		
PAVEMENT (RAP), CRUSHED CONCRETE, and RECYCLED MATERIALS	Deleterious Material	Tex-413-A	windrow	Each 5,000 CY	Required only for contractor furnished recycled material, including crushed concrete. Sample in accordance with Tex-400-A.		
	Decantation	Tex-406-A	During stockpiling operations, from completed stockpile, or windrow	Each 5,000 CY	Required only for contractor furnished RAP. Sample in accordance with Tex-400-A.		

	TABLE I – FOOTNOTES
Α	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager (SM), in the remarks field, and on the end of the Project Materials Certification Letter.
В	Engineer will select any of these locations or any combinations thereof with the provision that the initial sample will be obtained from the completed stockpile at the source and at least one out of ten consecutive samples will be taken at the project site (from the windrow for treated and untreated bases and embankments when possible).
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:
D	<ul> <li>Soils/Flexible Base: For gradation, liquid limit, and plastic limit, vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed.</li> </ul>
	<ul> <li>Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.</li> </ul>
Е	The Engineer will sample from the completed stockpile at the source and test before placement.
F	Each test performed that is based on a quantity of material is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

	TABLE IA – ASPHALT TREATED BASE (Plant Mix)						
			PROJECT 1	TESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS		
	Liquid Limit <b>(A)</b>	Tex-104-E	During stockpiling operations, from completed stockpile, or <mark>before</mark> mixing	Each 5,000 CY	Sample in accordance with Tex-400-A.		
AGGREGATE	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or <mark>before</mark> mixing	Each 5,000 CY			
	Wet Ball Mill (A)	Tex-116-E	During stockpiling operations, from completed stockpile, or <mark>before</mark> mixing	1 per project, per source	Sample in accordance with Tex-400-A. <b>(B)</b>		
LIME	Compliance with DMS-6350		During delivery to the project	Hydrated Lime: 1 per project Commercial Lime Slurry: each 200 tons of lime <b>(D)</b> Carbide Lime Slurry: each 100 tons of lime <b>(D)</b> Quick Lime: 1 per project	On projects requiring less than 50 tons, material from MTD approved sources may be accepted on the basis of Producer's Certification without sampling.		
RECLAIMED ASPHALT PAVEMENT (RAP), and RECYCLED AGGREGATE	Decantation	<mark>Tex</mark> -406-A, Part I	During stockpiling operations, from completed stockpile, or <mark>before</mark> mixing	Each 10,000 CY	Sample in accordance with Tex-400-A.		
RECYCLED ASPHALT SHINGLES (RAS)	Decantation	Tex-217-F,Part III	During stockpiling operations, from completed stockpile, or <mark>before</mark> mixing	Each 10,000 CY	Sample in accordance with Tex-400-A.		
ASPHALT BINDER	Compliance with Item 300		Sampling port nearest the storage tank	<mark>1 per project, per</mark> grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500- C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SiteManager (SM) Assistant. The Engineer must associate one QM sample per project in SM.		

		TABLE IA – ASP	HALT TREATED BASE	(Plant Mix)	
			PROJECT T	ESTS	
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
TACK COAT	Compliance with Item 300		Distributor	<mark>1 per project, per</mark> grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex- 500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample per project in SM.
	Gradation (A)	Tex-200-F, Part I	Plant Mix (C)	20,000 CY (25,000 tons)	Sample in accordance with Tex-222-F. Determine the gradation of the aggregate from the complete mixture tested in accordance with Tex- 236-F.
	Laboratory Density <b>(A)</b>	Tex-126-E	Plant Mix <b>(C)</b>	20,000 CY (25,000 tons)	Sample in accordance with Tex-222-F.
COMPLETE MIXTURE	Percent Asphalt (A)	Tex-236-F	Plant Mix <b>(C)</b>	Each 1,500 CY (2,000 tons) or days production	Determine <mark>an asphalt content correction factor</mark> for ignition oven at a minimum of one per project. Sample in accordance with Tex-222-F.
	Indirect Tensile Strength – Dry	Tex-226-F	Plant Mix	1 per project, per design	Sample in accordance with Tex-222-F.
	Moisture Susceptibility	Tex-530-C	As directed by the Engineer	1 per project, per design	This test may be waived, when shown on the plans. Sample in accordance with Tex-222-F.
ROADWAY	In-Place Air Voids (A)	Tex-207-F	Roadway cores, as directed by the Engineer <b>(C, D)</b>	Each 3,000 CY, min 1 per lift	Not required for ordinary compaction or when air void requirements are waived. Sample in accordance with Tex-222-F.
	Ride Quality	Tex-1001-S Surface Test, Type A	On Finished Surface		Unless otherwise shown on the plans.

	TABLE IA – FOOTNOTES
Α	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager (SM), in the remarks field, and on the end of the Project Materials Certification Letter.
В	Engineer will select any of these locations or any combinations thereof with the provision that at least one out of ten consecutive samples will be taken at the project site (from the windrow for treated and untreated bases and embankments when possible).
С	<ul> <li>For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: <ul> <li>Soils/Flexible Base: Vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed.</li> <li>Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.</li> </ul> </li> </ul>
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE II – SEAL COAT						
PROJECT TESTS						
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS	
AGGREGATE	Gradation (A)	Tex-200-F, Part I	Stockpile (At source or at point of delivery)	<mark>E</mark> ach 1,000 CY	Rate may be reduced to each 2,000 CY if the Engineer approves a contractor quality control plan. Sample in accordance with Tex-221-F.	
	L. A. Abrasion ( <b>A</b> )	Tex-410-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use.	
	Magnesium Soundness <b>(A)</b>	Tex-411-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use.	
	Surface Aggregate Classification (A)	Tex-612-J, Tex-411-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)	
	Pressure Slake (A)	Tex-431-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.	
	Freeze Thaw ( <b>A</b> )	Tex-432-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.	
	Unit Weight	Tex-404-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.	
	24 hr. Water Absorption ( <b>A</b> )	Tex-433-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.	
	Crushed Face Count	Tex-460-A, Part I	Stockpile	1 per 20,000 CY	Only required for crushed gravel. Sample in accordance with Tex-221-F.	
	Deleterious Material (A)	Tex-217-F, Part I	Stockpile	1 per 10,000 CY	Not required for lightweight aggregate. Sample in accordance with Tex-221-F.	
	Decantation (A)	Tex-406-A	Stockpile	1 per 10,000 CY	Sample in accordance with Tex-221-F.	
	Flakiness Index	Tex-224-F	Stockpile	Frequency <mark>as</mark> directed by the Engineer	Sample in accordance with Tex-221-F.	
TABLE II – SEAL COAT						
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			PROJECT	TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS	
	Micro Deval	Tex-461-A	Stockpile	1 per project or as necessary for control	Compare result to published value listed on the current Material Producer List for BRSQC. Submit sample to MTD for Soundness and L.A. Abrasion testing when results differ by more than 3% points, unless otherwise directed by the Engineer.	
(Continued)	White Rock Count	Tex-220-F	Stockpile		Required only for Limestone Rock Asphalt. Not required when MTD provides inspection at the plant. Sample in accordance with Tex-221-F.	
	Naturally Impregnated Bitumen Content	Tex-236-F	Stockpile		Required only for Limestone Rock Asphalt. Not required when MTD provides inspection at the plant. Sample in accordance with Tex-221-F.	
PRECOATED AGGREGATE	Asphalt Content	Tex-210-F	Stockpile	Frequency <mark>as</mark> directed by the Engineer when a target value is specified	Sample in accordance with Tex-221-F.	
ASPHALT BINDER	Compliance with Item 300		<mark>Distributor</mark>	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample asphalt binder in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample per project in SM.	

	TABLE II – FOOTNOTES							
Α	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.							
В	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.							
С	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:							
	<ul> <li>Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.</li> </ul>							
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.							

	TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)							
				PROJECT 1	TESTS			
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS		
		Decantation <b>(B)</b>	Tex-406-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.		
		Sieve Analysis (A) (B)	Tex-401-A		Each 1,000 CY of concrete (each source)	Test combined aggregate when used. Sample in accordance with Tex-400-A.		
	COARSE	Deleterious Materials <b>(B)</b>	Tex-413-A	From stockpile at	1 per project or as necessary for control	Sample in accordance with Tex-400-A.		
	AGGREGATE	Los Angeles Abrasion (A) (B)	Tex-410-A	concrete plant	One, each source	Verify the value of the source, as listed on the current Material Producer list for CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A.		
						Sample in accordance with Tex-400-A. (C)		
		Magnesium Soundness (A) (B)	Tex-411-A		One, each source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. <b>(C)</b>		
MINERAL AGGREGATE	FINE AGGREGATE	Sand Equivalent ( <b>B</b> )	Tex-203-F		1 per project or as necessary for control	Test combined aggregate when used. Sample in accordance with Tex-400-A.		
		Organic Impurities <b>(B)</b>	Tex-408-A		1 per project, per source	Sample in accordance with Tex-400-A.		
		Sieve Analysis (A) (B)	Tex-401-A	From stocknile at	Each 1,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.		
		Fineness Modulus <b>(B)</b>	Tex-402-A	concrete plant	1 per project or as necessary for control	Test combined aggregate when used. Test to confirm material variability when strength values are in question. Sample in accordance with Tex-400-A.		
		Deleterious Material <b>(B)</b>	Tex-413-A		1 per project or as necessary for control	Test to confirm material variability when strength values are in question. Sample in accordance with Tex-400-A.		

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

	TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)							
				PROJECT 1	TESTS			
MATERIAL	DR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS		
MINERAL AGGREGATE (Continued)	FINE AGGREGATE (Continued)	Acid Insoluble Residue (A) (B)	Tex-612-J		Two, each source	Only for concrete subject to direct traffic. Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. <b>(C)</b>		
SILICA FUME		Compliance with DMS-4630 (A)		Railroad car, truck, bags or silos	1 per project, per class of concrete (For each type and brand)	Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume. Sample in accordance with Tex-300-D.		
META	KAOLIN	Compliance with DMS-4635 <b>(A)</b>		Railroad car, truck or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D.		
MIX DESIGN		Compliance with Standard Specification Item 421.4.A		At source (if not approved)	Min. 1 design per class, per source	Verify if cement, fly ash, slag cement, and chemical admixture sources are listed on the Material Producer Lists. If not, sample and submit to MTD for testing. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT). Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash.		
JOINT MATERIAL		Compliance with DMS-6300				Verify the source is listed on the Material Producer List for Joint Sealers. If not, sample and test before use in accordance with DMS-6310. (C) Sample in accordance with Tex-500-C.		
CURING COMPOUND		Compliance with DMS-4650		Sampled at jobsite; tested by <mark>MTD</mark> . See remarks.	When requested by MTD	Only products listed on the Material Producer List for Concrete Curing Compounds will be allowed. When sample is requested by MTD, sample in accordance with Tex-718-I. Ensure container has been agitated and mixed before sampling. (C)		
EVAPORATION	I RETARDANTS	Compliance with DMS-4650				Only products listed on the Material Producer list for Evaporation Retardants will be allowed. <b>(C)</b>		
REINFORCING STEEL		Compliance with the Std. Specifications & Spec. Provisions	As Specified			Only materials from MTD approved sources listed on the Material Producer Lists for Reinforcing Steel Mills and Seven Wire Steel Strand will be allowed. (C)		

TAE	TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)							
			PROJECT 1	TESTS				
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS			
MECHANICAL COUPLERS	Compliance with DMS-4510	Tex-743-I	Sampled at jobsite; Tested by <mark>MTD</mark>	3 couplers per lot (500 couplers) for each type, model, bar size, and grade	Only materials from MTD approved sources listed on the Material Producer List for Mechanical Couplers will be allowed. <b>(C)</b>			
LATEX	Compliance with DMS-4640 for concrete chemical admixtures				Verify the Latex is listed on the Material Producer List for Chemical Admixtures.			
EPOXY	Compliance with DMS-6100, unless otherwise specified		Sampled at jobsite if not pre-approved by MTD.	1 per batch or shipment	Verify the source is listed on the Material Producer List for Epoxies and Adhesives. If not, sample and test before use in accordance with DMS-6100. Sample in accordance with Tex-734-I. <b>(C)</b>			
CONCRETE	Compressive Strength (A)	Tex-418-A	At point of concrete placement	4 cylinders for each 60 CY per class, per day (For bridge railing and traffic railing, testing may be reduced to 4 cylinders per 180 CY per class regardless of days)	Sampling must be in accordance with Tex-407-A. Making additional cylinders for 56 day testing should be considered when slow strength gain mixtures are being used, or when the approved mix design has a history of failing to meet design strength at 28 days. Test two cylinders at 7 days, and if the average value is below the design strength, as defined in Item 421, Table 8, test the remaining 2 cylinders at 28 days, or 56 days if additional cylinder were not made. If the average value of the 2 cylinders tested at 7 days meets the minimum design strength, listed in Item 421, Table 8, the remaining cylinders are not required to be tested. If the average value of the 7 and 28 day cylinders are below the design strengths, and 56 days.			
	Slump	Tex-415-A		1 test, per 4 strength specimens	Sample in accordance with Tex-407-A. Perform slump and temperature tests on the same load from which strength test specimens are made. Perform entrained air test only when entrained air concrete is specified on the plans.			
	Entrained Air (A)	Tex-416-A or Tex-414-A	4		Check temperature of every load for bridge slabs and mass concrete placements.			
	Temperature of Concrete (A)	Tex-422-A			with specification requirements for the appropriate specification Item #.			

TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)							
		PROJECT T	ESTS				
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS		
CONCRETE (Continued)	Bridge Deck or Culvert Top Slab Thickness and Depth of Reinforcement	Tex-423-A, Part II	During dry run and during concrete placement (Bridge decks and direct traffic culverts)	1 per span	Min 6–Max 18 locations per span.		

	TABLE III – FOOTNOTES						
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.						
В	These Project Tests may be used for one or more projects being furnished concrete from the same plant during the same period.						
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.						
	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:						
D	<ul> <li>Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.</li> </ul>						
	• Concrete (structural): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled. Test often for slump, air, and temperature to ensure the consistent control of the concrete production.						
Е	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.						

TABLE IV – HYDRAULIC CEMENT CONCRETE – NON-STRUCTURAL CONCRETE (Classes: A, B, or E)							
PROJECT TESTS							
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (B)	FREQUENCY OF SAMPLING (C)	REMARKS		
CONCRETE	Compressive Strength (A)	Tex-418-A	At point of concrete placement	2 cylinders per 180 CY, per class	Sampling must be in accordance with Tex-407-A. Strength will be determined by 7-day specimens.		
MIX DESIGN	Compliance with the Standard Specification		At source if not approved	Min. 1 design per class, per source	Verify if cement, fly ash, slag cement, and chemical admixture sources are listed on the Material Producer Lists. If not, sample and submit to MTD for testing. Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT).		
SILICA FUME	Compliance with DMS-4630		Railroad car, truck, bags, or silos	1 test per project, per class (for each type and brand)	Sample in accordance with Tex-300-D. Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume.		
METAKAOLIN	Compliance with DMS-4635		Railroad car, truck, or silos	1 test per project, per class (for each type and brand)	Sample in accordance with Tex-300-D.		

	TABLE IV – FOOTNOTES							
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.							
в	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:							
	• Concrete (miscellaneous): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled.							
С	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.							

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)							
				PROJEC	CT TESTS		
MATERIAL O	OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS	
		Decantation	Tex-406-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.	
		Sieve Analysis (A)	Tex-401-A		As necessary for control	Sample in accordance with Tex-400-A. Test combined aggregate when used.	
	COARSE AGGREGATE	Deleterious Materials	Tex-413-A	From stockpile at concrete plant	Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.	
		L.A. Abrasion (A)	Tex-410-A		One seek source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTP for testing before use in accordance	
		Magnesium Soundness <b>(A)</b>	Tex-411-A		one, each source	with Tex-499-A. Sample in accordance with Tex-400-A. <b>(C)</b>	
MINERAL		Sand Equivalent	Tex-203-F		Each 3,000 CY of concrete (Each source or combination of sources)	Sample in accordance with Tex-400-A. Test combined aggregate when used. <mark>At least</mark> one per week's production.	
AGGREGATE	FINE AGGREGATE	Organic Impurities	Tex-408-A	From stockpile at concrete plant	1 per project, per source	Sample in accordance with Tex-400-A.	
		Sieve Analysis (A)	Tex-401-A		As necessary for control	Sample in accordance with Tex-400-A.	
		Fineness Modulus (B)	Tex-402-A			Test combined aggregate when used.	
		Deleterious Material <b>(B)</b>	Tex-413-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.	
		Acid Insoluble (A)	Tex-612-J		1 per project, per source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A.	
MIX DESIGN		Compliance with the Standard Specifications Item 421.4.A		At source, if not approved	Min. 1 design, per class, per source	Verify if cement, fly ash, ground granulated blast furnace slag, and admixture sources are listed on the Material Producer List. If not, sample and submit to MTD for testing. Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT).	
SILICA FUME		Compliance with DMS-4630		Railroad car, truck, bags, or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D. Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume.	

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

	TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)							
			PROJEC	CT TESTS				
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS			
METAKAOLIN	Compliance with DMS-4635		Railroad car, truck, or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D.			
JOINT MATERIAL	Compliance with DMS-6310		Sampled at jobsite if not sampled at source by MTD; tested by MTD. See remarks.	1 per batch or shipment	Sample in accordance with Tex-500-C. Sampling may be waived when the source is listed on the Material Producer List for Joint Sealers. (C)			
CURING COMPOUND	Compliance with DMS-4650		Sampled at jobsite; tested by <mark>MTD</mark> . See remarks.	When requested by <mark>MTD</mark>	Only products listed on the Material Producer List for Concrete Curing Compounds will be allowed. When sample is requested by MTD, sample in accordance with Tex-718- I. Ensure container has been agitated and mixed before sampling. (C)			
EVAPORATION RETARDANTS	Compliance with DMS-4650				Only products listed on the Material Producer List for Evaporation Retardants will be allowed. (C)			
REINFORCING STEEL	Compliance with the Std. Specifications & Spec. Provisions	As Specified			Only materials from MTD approved sources listed on the Material Producer List for Reinforcing Steel Mills and Seven Wire Steel Strand will be accepted. (C)			
MULTIPLE PIECE TIE BARS	Compliance with DMS-4515	Tex-712-I	Sampled at jobsite if not sampled at source by MTD; tested by MTD. See remarks.	Refer to Tex-711-I for sampling rates	Only materials from MTD approved sources listed on the Material Producer List for Multiple Piece Tie-bars for Concrete Pavements will be allowed. Sample in accordance with Tex-711-I.			
EPOXY	Compliance with DMS-6100		Sampled at jobsite if not pre-approved by MTD. See remarks.	1 batch per shipment	Verify the source is listed on the Material Producer List for Epoxies and Adhesives. If not, sample and test before use in accordance with DMS-6100. Sample in accordance with Tex-734-I. (C)			
CONCRETE	Strength (A) (B)	Tex-448-A or Tex-418-A	At point of concrete placement	2 cylinders for every 10 contractor job control tests	Sample in accordance with Tex-407-A. When the contract requires the project testing to be by the Engineer, the frequency and job control testing will be in accordance with the item of work. Split sample verification testing used when contractor performs job control testing. When job control testing by the contractor is waived by the plans, the frequency of sampling will be one test (2 specimens) for each 3,000 SY of concrete or fraction thereof or per day and split sample verification testing will be waived. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.			

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)							
			PROJEC	T TESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS		
	Slump	Tex-415-A	At time and location strength specimens are made	1 test for every 10 contractor job control tests.	Sample in accordance with Tex-407-A. Slump is not required for slip-formed pavement.		
	Entrained Air <b>(A)</b>	Tex-416-A or Tex-414-A			Perform slump and temperature tests on the same load from which the strength specimens are made. Perform entrained air test only when entrained air concrete is specified on the plans.		
CONCRETE	Temperature	Tex-422-A			specification requirements for the appropriate specification Item #.		
(Continued)	Pavement Texture	Tex-436-A	Final Riding Surface of travel lanes	1 per day, per driving lane	Perform when carpet drag is the only surface texture required on the plans.		
	Thickness	Tex-423-A, Part I	Center of paving machine	Every 500 feet	Methods other than Tex-423-A may be shown on the plans.		
	Ride Quality <b>(A)</b>	Tex-1001-S Surface Test, Type B	Final riding surface of travel lanes		Engineer may verify contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.		

	TABLE V – FOOTNOTES
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
В	When a project test does not meet the specified strength requirements and a reduced pay factor is assigned, document the analysis on the Letter of Certification of Materials Used.
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348)         (All testing as noted in Table VI may be waived for exempt production as defined by specification.)						
PF			PROJEC	CT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS	
	L. A. Abrasion (A)	Tex-410-A		1 per project, per	Verify the published value of the source, as listed on the	
	Magnesium Soundness <b>(A)</b>	Tex-411-A		source	current Material Producer list for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in	
COARSE AGGREGATE	Surface Aggregate Classification (A)	Tex-499-A	Stockpile (B)	1 per project, per source	accordance with Tex-499-A. (C)	
	Micro Deval	Tex-461-A		1 per project, per aggregate source	Not required when the Rated Source Soundness Magnesium loss is 15 or less as listed on the current published BRSQC. If testing is required, sample in accordance with Tex-221-F.	
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per source, per design	Does not apply to Item 342. Sample in accordance with Tex-221-F. The timing of when the test is performed is at the discretion of the Engineer.	
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample binder at hot- mix plant in accordance with Tex- 500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.	
TACK COAT	Compliance with Item 300 (A)		Distributor	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.	

TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348)         (All testing as noted in Table VI may be waived for exempt production as defined by specification.)						
			PROJEC	CT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS	
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min 1 design, per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted on individual materials, as necessary, for control.	
					Sample in accordance with Tex-222-F.	
	Asphalt Content		Engineer Truck Sample		236-F at a minimum of one per project.	
	(A)	Tex-236-F	(D)	Minimum 1 per Lot	When Tex-236-F does not yield reliable results, use alternative methods for determining asphalt content, such as, Tex-210-F (ASTM D2172/AASHTO T164) and Tex-228- F (ASTM D4125/AASHTO T287).	
					Sample in accordance with Tex-222-F.	
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced <b>(D)</b>	1 per Sublot	Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #. Does not apply to Items 342 and 348.	
	Gradation <b>(A)</b>	Tex-200-F	Engineer Truck Sample <b>(D)</b>	Minimum 1, per 12 Sublots <b>(E</b> )	Sample in accordance with Tex-222-F. Determine correction factors for ignition oven using Tex- 236-F at a minimum of one per project.	
COMPLETE MIXTURE	Moisture Susceptibility	Tex-530-C	Truck Sample		Sample in accordance with Tex-222-F, unless waived by the Engineer.	
	Indirect Tensile Strength – Dry	Tex-226-F		1 per project	Sample in accordance with Tex-222-F, unless waived by the Engineer. Does not apply to Items 342, 346, 347, and 348.	
	Moisture Content	Tex-212-F, Part II	Engineer Truck Sample		Sample in accordance with Tex-222-F.	
	Lab Molded				Sample in accordance with Tex-222-F.	
	Density (A)	Tex-207-F, Part I, VI, VIII	Truck Sample <b>(D)</b>	1 per Sublot 1 per Lot for Item 347	Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.	
	Drain Down Test (A)	Tex-235-F	Engineer Truck Sample	1 per 12 Sublots	Sample in accordance with Tex-222-F. Not required for Items 341, 344, and 347.	
	Hamburg Wheel Test <b>(A)</b>	Tex-242-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Sample during production. Does not apply to Item 348 PFC-C, PFCR-C, and Thin Bonded Wearing Course –All Types.	

TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348)         (All testing as noted in Table VI may be waived for exempt production as defined by specification.)						
			PROJEC	T TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS	
	Cantabro Loss (A)	Tex-245-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Sample during production.	
COMPLETE MIXTURE (Continued)	Overlay Test (A)	Tex-248-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Does not apply to Items 341, 344, and 348 PFC-C, PFCR-C, and Thin Bonded Wearing Course –All Types.	
	In-Place Air Voids <b>(A)</b>	Tex-207-F, Part I, VI, VIII	Roadway <b>(D)</b>	2 cores per Sublot	Two cores taken per Sublot and averaged. Sample in accordance with Tex-222-F. Does not apply to Items 342, 347, and 348.	
	Segregation Profile (A)	Tex-207-F, Part V	Roadway	1 per project	Not required when Contractor uses thermal imaging system. Does not apply to Items 342, 347, and 348.	
ROADWAY	Joint Density ( <b>A</b> )	Tex-207-F, Part VII	Roadway	1 per project		
	Thermal Profile	Tex-244-F	Immediately behind paver	1 per project	Not required when Contractor uses thermal imaging system.	
	Ride Quality Test Type B <b>(A)</b>	Tex-1001-S	Final riding surface of travel lanes	1 per project	Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results for surface test Type A are not required to be reported.	
	Permeability	Tex-246-F	Roadway	1 per project	Permeability is encouraged to use with items 342 and 348. Only applies to Item 347.	
FABRIC UNDERSEAL	Compliance with DMS-6220		Sampled, tested, and approved by MTD		Sampling must be in accordance with Tex-735-I. Verify the source is listed on the current Material Producer List for Silt Fence, Filter Fabric, and Fabric Underseals. If not, sample and test before use in accordance with DMS- 6220.	

	TABLE VI – FOOTNOTES							
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.							
В	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.							
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.							
D	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."							
Е	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.							
	04							

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TABLE VII – HOT-MIX ASPHALT PAVEMENT (Items 334) (Refer to DMS-9210, "Limestone Rock Asphalt (LRA)," for testing requirements for Item 330.)							
				CT TESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY (Per Design) (F)	REMARKS		
	L. A. Abrasion (A)	Tex-410-A	-		Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the		
	Magnesium Soundness (A)	Tex-411-A	Stockpile <b>(B)</b>	1 per project, per source	project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (D)		
COARSE AGGREGATE	Micro Deval	Tex-461-A			Sample in accordance with Tex-221-F. Testing frequency may be reduced or eliminated based on a satisfactory test history.		
	Surface Aggregate Classification (A)	Tex-499-A	Stockpile <b>(B)</b>	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. SiteManager Quality Monitoring test documentation is accomplished by attaching an approved mix design.		
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per source	Sample in accordance with Tex-221-F. The timing of when the test is performed is at the discretion of the Engineer.		
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.		
TACK COAT	Compliance with Item 300 (A) (C)		Distributor	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.		

TABLE VII – HOT-MIX ASPHALT PAVEMENT (Items 334) (Refer to DMS-9210, "Limestone Rock Asphalt (LRA)," for testing requirements for Item 330.)						
			PROJEC	T TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY (Per Design) (F)	REMARKS	
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min 1 design per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted in individual materials as necessary for control.	
	Asphalt Content (A)	Tex-236-F	Engineer Truck Sample <b>(E)</b>	Minimum of 1 per 5,000 tons	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.	
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced <b>(E)</b>	1 per 5,000 tons	Sample in accordance with Tex-222-F.	
	Gradation (A)	Tex-236-F	Truck Sample	Minimum 1 per 5,000 tons	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.	
COMPLETE MIXTURE	Boil Test	Tex-530-C		1 per project	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.	
	Moisture Content	Tex-212-F, Part II	_	1 per 5,000 tons	Sample in accordance with Tex-222-F. Performed by MTD at the point of production for payment calculations.	
	Hydrocarbon- Volatile Content	Tex-213-F		1 per 5,000 tons	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.	
	Lab Molded Density ( <b>A</b> )	Tex-207-F	Truck Sample	1 per 5,000 tons	Sample in accordance with Tex-222-F.	
	Hveem Stability <b>(A)</b>	Tex-208-F		1 per 5,000 tons	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.	
ROADWAY	Ride Quality Test Type B <b>(A)</b>	Tex-1001-S	Final riding surface of travel lanes		Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.	

	TABLE VII – FOOTNOTES							
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.							
В	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project.							
С	Or as called for in the Specifications.							
D	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.							
Е	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."							
F	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.							

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

		TABLE VIII -	HOT-MIX ASPHALT F	AVEMENT (Item 340	))
			PROJEC	T TESTS	
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY	REMARKS
	L. A. Abrasion (A)	Tex-410-A	Stockpile	1 per project,	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not sample in accordance with
	Magnesium Soundness (A)	Tex-411-A	(B)	per source	Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
COARSE AGGREGATE	Micro Deval	Tex-461-A	Stockpile <b>(B)</b>	1 per project, per source	Sample in accordance with Tex-221-F. Testing frequency may be reduced or eliminated based on a satisfactory test history.
	Surface Aggregate Classification (A)	Tex-499-A	Stockpile <b>(B)</b>	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per design	Sample in accordance with Tex-221-F.
					Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	<mark>1 per project, per grade,</mark> per source	Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant.
					The Engineer must associate one QM sample, per project in SM.
					Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III.
TACK COAT	Compliance with Item 300 (A)		Distributor	<mark>1 per project, per grade,</mark> per source	Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant.
					The Engineer must associate one QM sample, per project in SM.
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min. 1 design per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted in individual materials as necessary for control.

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VIII – HOT-MIX ASPHALT PAVEMENT (Item 340)						
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY	REMARKS	
	Asphalt Content	Tex-236-F	Truck Sample ( <b>D</b> )	Minimum of 1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.	
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced <b>(D)</b>	1 per day	Sample in accordance with Tex-222-F.	
	Gradation ( <b>A</b> )	Tex-236-F	Truck Sample	Minimum 1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.	
COMPLETE MIXTURE	Boil Test	Tex-530-C		1 per project	Sample in accordance with Tex-222-F, unless waived by the Engineer.	
	Indirect Tensile Strength – Dry	Tex-226-F		1 per project, per design	Sample in accordance with Tex-222-F, unless waived by the Engineer.	
	Lab Molded Density <b>(A)</b>	Tex-207-F	- Truck Sample	1 per day	Sample in accordance with Tex-222-F.	
	Hamburg Wheel Tracker <b>(A)</b>	Tex-242-F		1 per project	Sample in accordance with Tex-222-F. Sample during production.	
	Air Voids ( <b>A</b> )	Tex-207-F	Selected by the Engineer (D)	1 per day (2 Cores)	Sample in accordance with Tex-222-F.	
ROADWAY	Ride Quality Test Type B <b>(A)</b>	Tex-1001-S	Final riding surface of travel lanes		Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.	
FABRIC UNDERSEAL	Compliance with DMS-6220		Sampled, tested, and approved by <mark>MTD</mark>		Sample in accordance with Tex-735-I. Verify the source is listed on the current Material Producer List for Silt Fence, Filter Fabric, and Fabric Underseals. If not, sample and submit to MTD for testing before use in accordance with DMS-6220.	

	TABLE VIII – FOOTNOTES
Α	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
В	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IX – MICROSURFACING (Item 350)						
			PROJEC	CT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OF SAMPLING	FREQUENCY (Per Design)	REMARKS	
	Magnesium Soundness (A)	Tex-411-A		1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing at 1 per project, per source. (C)	
	Gradation	Tex-200-F, Part II	Stockpile	1 per project, per source	Sample in accordance with Tex-221-F.	
	Crushed Face Count	Tex-460-A	(B)	1 per project, per source	Sample in accordance with Tex-221-F.	
AGGREGATE	Acid Insoluble (A)	Tex-612-J		1 per project, per source	Verify the value of the source, as listed on the current BRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-221-F. (C)	
	Surface Aggregate Classification	Tex-499-A	Stockpile, or BRSQC <b>(B)</b>	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing at 1 per project, per source. (C)	
COMBINED BLEND	Sand Equivalent	Tex-203-F	Stockpile <b>(B)</b>	1 per project, per source	Sample in accordance with Tex-221-F.	
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.	
TACK COAT	Compliance with Item 300 (A)		Distributor	<mark>1 per project, per grade,</mark> per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.	

This is a guide for minimum sampling and testing. Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IX – MICROSURFACING (Item 350)					
		PROJECT TESTS			
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OF SAMPLING	FREQUENCY (Per Design)	REMARKS
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min. 1 design per project	Submit to <mark>MTD</mark> for approval.
CEMENT	Compliance with DMS-4600				Verify the source is listed on the current Material Producer List for Cement. If not, sample and submit to MTD for testing before use in accordance with DMS-4600.
COMPLETE MIX	Asphalt Content	Tex-236-F	During production	1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Gradation	Tex-200-F, Part II Tex-236-F			Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven use at a minimum of one per project.

	TABLE IX – FOOTNOTES			
Α	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.			
в	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.			
С	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.			
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.			

APPENDIX C AASHTO ACCREDITED LABORATORIES

# **AASHTO Accredited CMT Laboratories in Texas**

* Directory of accredited laboratories and scope of testing is maintained on the AASHTO Materials Reference Laboratory website at: <u>http://www.amrl.net</u>. Laboratory must be accredited for each specific test performed.



# Hays County Commissioners Court

Date: 01/03/2023	
Requested By:	
Sponsor:	

Jerry Borcherding Commissioner Smith

#### Agenda Item:

Discussion and possible action to award a contract for IFB 2023-B02 RM 2770 Roadway Improvements with Hunter Industries, Ltd. in the amount of \$635,948.76. SMITH/BORCHERDING

#### Summary:

On November 1, 2022, the Commissioners Court approved the Purchasing Division to solicit bids for IFB 2023-B02 RM 2770 Roadway Improvements. The Purchasing Division received three (3) responsive bids from the following companies:

Aaron Concrete Contractors, LP \$756,435.05 Cox Commercial Construction \$797,724.85 Hunter Industries, Ltd. \$635,948.76

It is staff's recommendation to award the contract to Hunter Industries, Ltd.

Fiscal Impact: Amount Requested: \$635,948.76 Line Item Number: 020-710-00.5448_010

#### Budget Office:

Source of Funds: Road & Bridge General Fund Budget Amendment Required Y/N?: No Comments: Project was budgeted during the FY23 budget process.

#### Auditor's Office:

Purchasing Guidelines Followed Y/N?: Yes, Invitation For Bid 2023-B02 RM 2770 Roadway Improvements G/L Account Validated Y/N?: Yes,Contract Services Road Work New Revenue Y/N?: N/A Comments:

IFB 2023-B02 Bid Tabulation Contract

Attachments

#### Notice **Basic Information** Estimated Contract Value (USD) \$0.00 (Not shown to suppliers) **Reference Number** 0000303066 **Issuing Organization** Hays County **Owner Organization** Hays County, Transportation **Project Type** IFB - Invitation for Bid (Formal) **Project Number** IFB 2023-B02 Title IFB 2023-B02 RM 2770 Roadway Improvements Source ID PU.AG.USA.1605725.C11101176 **Piggyback Solicitation** No Details Location Hays County, Texas Job Location Hays County **Road Name** RM 2770 @ Flint Hills Description The proposed project will reconstruct the existing road at the FM 2770 at Flint Hills Driveway intersection. The project consists of, but is not limited to, construction of left turn lane and paved shoulders, earthwork, drainage structures, pavement markings, and erosion control facilities. Dates 11/03/2022 04:25 PM CDT Publication **Question Acceptance Deadline** 11/16/2022 05:00 PM CST Questions are submitted online No 11/28/2022 12:00 PM CST **Closing Date Prebid Conference** 11/09/2022 10:00 AM CST **Contact Information** Stephanie Hunt 512393283 purchasing@co.hays.tx.us

## Bid Result Publication Revision Publication Type Bid Results

#### Hunter Industries, Ltd.

Organization Name	Hunter Industries, Ltd.
Bid Amount	\$635,948.76
Bid Rank	1
Address	
	4501 Hunter Road
	San Marcos Texas
	78666 United States

#### **Cox Commercial Construction**

Organization Name	Cox Commercial Construction
Bid Amount	\$797,724.85
Bid Rank	3
Address	
	2009 Ranch Road 620 N. #180
	Austin Texas
	78734 United States

#### Aaron Concrete Contractors, L.P.

Organization Name	Aaron Concrete Contractors, L.P.
Bid Amount	\$756,435.05
Bid Rank	2
Address	
	4108 Nixon LN
	AUSTIN Texas

78725 United States

11/29/2022 07:12 PM CST

# STANDARD FORM OF CONTRACT Hays County, Texas

#### STATE OF TEXAS

#### HAYS COUNTY

THIS STANDARD FORM OF CONTRACT (the "Contract") is by and between <u>HAYS COUNTY, TEXAS</u>, a political subdivision of the State of Texas (hereinafter called "County") and <u>HUNTER INDUSTRIES, LTD.</u> (hereinafter called Contractor").

The County and Contractor, in consideration of the mutual covenants hereinafter set forth, agrees as follows:

#### Article 1. Work

Contractor shall complete all Work as specified or indicated in the Contract Documents. The "Project is generally described as follows:

## Project No. IFB 2023-B02 – RM 2770 ROADWAY IMPROVEMENTS (Project Name)

#### Article 2. Engineer of Record

The Project has been designed by WSB & ASSOCIATES, INC. who is hereinafter called the "Engineer of Record" and who is to act as the County's design professional.

#### Article 3. Contract Time

The Work shall be Substantially Completed in <u>57 STANDARD WORKWEEK DAYS</u> (the "Contract Time"). Following Substantial Completion, the Contractor shall proceed expeditiously with adequate forces and shall achieve Final Completion within the time specified in the Special Conditions.

#### Article 4. Contract Price

County shall pay Contractor for completions of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraph 4.1 below (the "Contract Price")

4.1 For all Unit price Work, an amount equal to the sum of the established unit price for each separately identified item of the Unit Price Work times the estimated quantity if that item as indicated in the Bid Form Schedule of Rates and Prices. And as totaled below:

# TOTAL OF ALL UNIT PRICES: <u>\$635,948.76</u> <u>Six Hundred Thirty Five Thousand Nine Hundred Forty Eight dollars and Seventy Six cents</u>

As provided in the Standard Specifications, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by the Engineer of Record.

# Article 5. Contractor's Representations

In order to induce County to enter into this Contract, Contractor makes the following representations:

- 5.1 Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents including the "technical data".
- 5.2 Contractor has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.
- 5.3 Contractor is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.
- 5.4 Contractor has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site which has been identified. Contractor acknowledges that such reports and drawings are not Contract Documents and may not be complete for Contractor's purposes. Contractor acknowledges that the County and Engineer of Record do not assume responsibility for the accuracy or completeness if information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site.
- 5.5 Contractor has correlated the information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and date with the Contract Documents.
- 5.6 Contractor has given Engineer of Record written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Engineer of Record is acceptable to Contractor, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of Work.
- 5.7 Contractor represents and agrees that there are no obligations, commitments, or impediments of any kind that will limit or prevent performance of its obligations under the Contract Documents.
- 5.8 Contractor warrants, represents, and agrees that if (i) it is a corporation or limited liability company, then it is a corporation duly organized, validly existing and in good standing to

conduct business in the State of Texas, or a foreign corporation or limited liability company duly authorized and in good standing to conduct business in the State of Texas, that it has all necessary corporate power and has received all necessary corporate approvals to execute and deliver this Contract, and the individual executing the Contract on behalf of the Contractor has been duly authorizes to act for and bind Contractor; or (ii) if it is a partnership, limited partnership, or limited liability partnership, then it has necessary partnership power and has secured all necessary approvals to execute and deliver this Contract and perform all its obligations under the Contract Documents; and the individual executing this Contract on behalf of Contractor has been duly authorized to act for and bind Contractor.

- 5.9 Neither the execution and delivery of this Contract by Contractor nor the performance of its obligations under the Contract Documents will result in the violation of any provision, if a corporation, of its articles of incorporation or bylaws, if a limited liability company, of its articles of organization or regulations, or if a partnership, by any partnership agreement by which Contractor is bound, or any agreement by which Contractor is bound or to the best of the Contractor's knowledge and belief, will conflict with any order or decree of any court of governmental instrumentality relating to Contractor.
- 5.10 Except for the obligation of the County to pay Contractor the Contract Price pursuant to the terms of the Contract Documents, and to perform certain other obligations pursuant to the terms and conditions explicitly set forth in the Contract Documents, County shall have no liability to Contractor or to anyone claiming through or under Contractor by reason of the execution or performance of the Contract. Notwithstanding any obligation or liability of County to Contractor, no present or future partner or affiliate of County or any agent, officer, director, or employee of County, or of the various departments comprising Hays County, or anyone claiming through or under Contractor by reason of the execution or performance of this Contract.

# Article 6. Contract Documents

The "Contract Documents", which comprise the entire agreement between Hays County and Contractor concerning the Work, consist of the following:

- 6.1 This Standard Form of Contract
- 6.2 Performance Bond
- 6.3 Payment Bond
- 6.4 Maintenance Bond
- 6.5 Certificate of Insurance
- 6.6 Wage Rates

6.7	Standard Specifications
6.8	Special Provisions
6.9	Special Conditions
6.10	Technical Specifications
6.11	Plan Drawings
6.12	Addendum numbers <u>1</u> to <u>1</u> , inclusive
6.13	Contractor's Bid Form
6.14	Documentation submitted by Contractor prior to Notice of Award
6.15	The following which may be delivered or issued after the Effective D

6.15 The following which may be delivered or issued after the Effective Date of the Contract and are not attached hereto: All Written Amendments and other documents amending, modifying or supplementing the Contract Documents pursuant to applicable sections in the Standard Specifications.

The documents listed in paragraphs 6.2 et seq. above are attached to this Contract (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Article 6. The Contract Documents may only be amended, modified or supplemented as provided in the Standard Specifications.

# Article 7. Miscellaneous

- 7.1 Terms used in this contract which are defined in the Standard Specifications will have the meanings included in the Standard Specifications.
- 7.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 7.3 The County and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

- 7.4 Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the County and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention if the stricken position.
- 7.5 Each Party to this Contract hereby agrees and acknowledges that venue and jurisdiction of any suit, right, or cause of action arising out of or in connections with this Contract shall lie exclusively in Hays County, Texas. Furthermore, this Contract shall be governed by and construed in accordance with the laws of the State of Texas, excluding, however its choice of law rules.
- 7.6 The parties to this Contract agree that during the performance of the services under this Contract they will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The parties to this Contract will take affirmative action to ensure that applicants are employed and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; termination; rates of pay or other forms of compensation, and selection for training including apprenticeship.
- 7.7 This Contract is for the sole and exclusive benefit of the parties hereto, and nothing in this Contract, express or implied, is intended to confer or shall be construed as conferring upon any other person any rights, remedies or any other type or types of benefits.
- 7.8 Each party to this Contract acknowledges that it and its counsel have reviewed this Contract and that the normal rules of construction ae not applicable and there will be no presumption that any ambiguities will be resolves against the drafting party in the interpretation of this Contract.
- 7.9 Each party to the Contract, in the performance of this Contract, shall act in an individual capacity and not as agents, employees, partners, joint ventures or associates of one another. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purposes whatsoever.
- 7.10 Nothing in this Contract shall be deemed to waive, modify or amend any legal defense available at law or in equity to County, its past or present officers, employees, or agents or employees, nor to create any legal rights or claim on behalf of any third party. County does not waive, modify, or alter to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.
- 7.11 To the Extent, if any, that any provision in this Contract is in conflict with Tex. Gov't Code 552.001 et seq., as amended ( the "Public Information Act"), the same shall be of no force

or effect. Furthermore, it is expressly understood and agreed that County, its officers and employees may request advice, decisions and opinions of the Attorney General of the State of Texas in regard to the application of the Public Information Act to any items or data furnished to County as to whether or not the same are available to the public. It is further understood that County's officers and employees shall have the right to rely on the advice, decisions and opinions of the Attorney General, and the County, its officers and employees shall have no liability or obligation to any party hereto for the disclosure to the public, or to any person or persons, of any items or data furnished to County by a party hereto, in reliance of any advice, decision or opinion of the Attorney General of the State of Texas.

- 7.12 County and Contractor have signed this Contract in triplicate. One counterpart each has been delivered to the County, Contractor and Engineer of Record. All portions of the Contract Documents have been signed, initialed, or identified by County and Contractor or identified by Engineer of Record on their behalf.
- 7.13 This Contract and Contract Documents represent the entire and integrates agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either oral or written. This Contract may be amended only by written instrument signed by each party to this Contract. NO OFFICIAL, EMPLOYEE, AGENT, OR REPRESENTATIVE OF THE COUNTY HAS ANY AUTHORITY, EITHER EXPRESS OR IMPLIES, TO AMEND THIS CONTRACT, EXCEPT PURSUANT TO SUCH EXPRESS AUTHORITY AS MAY BE GRANTED BY THE HAYS COUNTY COMMISSIONERS COURT.

This Contract will be effective on December 6, 2022 (which is the "Effective Date" of the Contract)

COUNTY, HAYS	CONTRACTOR, HUNTER INDUSTRIES, LTD.
Ву:	By: Clean
Printed Name: <u>Rueben Becerra,</u>	Printed Name: STEVE RIORDAN
Title: <u>Hays County Judge</u>	Title: CFO

(CORPORATE SEAL)

Attest:

Dr. Elaine H. Cardenas, County Clerk



# Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

Jerry H. Borcherding Commissioner Shell

#### Agenda Item

Discussion and possible to grant variances to Hays County road construction standards and to the adopted fire code for Moon Ridge subdivision in Precinct 3. SHELL/BORCHERDING

#### Summary

Hays County Road standards limit road grades to 11%. The adopted fire code limits grades to 10%. The developer is requesting a variance to allow a grade of 15% to facilitate access to certain lots.



# Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

Jerry Borcherding Commissioner Cohen

# Agenda Item

Discussion and possible action to accept the maintenance bond rider extension from DNT Construction, Inc. until June 30, 2023 for Shadow Creek subd., Phase 9, Section 2 (maintenance bond #1848963 in the amount of \$180,609.38). COHEN/BORCHERDING

#### Summary

The completion of construction of the roads and drainage improvements within the County ROW for Shadow Creek subd., Phase 9, Section 2 has been delayed and the contractor is requesting more time to complete. This rider extends the duration of the existing maintenance bond until June 30, 2023.

Attachments

Maintenance bond extension backup



The Hanover Insurance Company | 440 Lincoln Street, Worcester, MA 01653 Citizens Insurance Company of America | 808 North Highlander Way, Howell, MI 48843 Massachusetts Bay Insurance Company | 440 Lincoln Street, Worcester, MA 01653

Rider

Hays County, Texas 712 S. Stagecoach Trail San Marcos, TX 78666

MALNT. BOND#-1848963		
Amount.	-\$ 180,609.30	

To be attached to and form part of <b>Bond Number</b> <u>1848963</u>	
DNT Construction, LLC	
issued to	
Hays County, Texas	
in favor of	
described as Shadow Creek Subdivision Phase 9 Section 2 Drainage and Pavement Improv	/ements
Effective date of Rider6/30/2022	
The Principal and Surety hereby consent to changing the referenced bond as de	escribed below:
Address changed to Bond term changed to	
Name changed to Bond penalty changed to	
Other change	
Warranty extended to the date of June 30, 2023	
Said bond shall be subject to all its terms, conditions and limitations, except as	herein modified.
In witness whereof, The Hanover Insurance Company has caused	this instrument
to be signed by its duly authorized Attorney-in-Fact this <u>21st</u> day of <u>December</u>	<u>per</u> , <u>2022</u> .
By:Jeremy Farque, Attorney In Fact	_
Distribution copy to:	
DNT Construction, LLC	
2300 Picadilly Drive	
Round Rock, TX 78664	GOMPANN
Whorton Insurance Services	S. D. Ellin
11200 Jollyville Rd.	14 CA ME
Austin, TX 78759	, ' <u>o</u> T

#### THE HANOVER INSURANCE COMPANY MASSACHUSETTS BAY INSURANCE COMPANY CITIZENS INSURANCE COMPANY OF AMERICA

#### POWER OF ATTORNEY

THIS Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

#### KNOW ALL PERSONS BY THESE PRESENTS:

That THE HANOVER INSURANCE COMPANY and MASSACHUSETTS BAY INSURANCE COMPANY, both being corporations organized and existing under the laws of the State of New Hampshire, and CITIZENS INSURANCE COMPANY OF AMERICA, a corporation organized and existing under the laws of the State of Michigan, (hereinafter individually and collectively the "Company") does hereby constitute and appoint,

#### Tom Mulanax, David Whorton, Michael Whorton, Jim Whorton, Noe Moreno, Rachel Martinez, Pollyanna Lengel and/or Jeremy Farque

Of Whorton Insurance Services of Austin, Texas each individually, if there be more than one named, as its true and lawful attorney(s)-infact to sign, execute, seal, acknowledge and deliver for, and on its behalf, and as its act and deed any place within the United States, any and all surety bonds, recognizances, undertakings, or other surety obligations. The execution of such surety bonds, recognizances, undertakings or surety obligations, in pursuance of these presents, shall be as binding upon the Company as if they had been duly signed by the president and attested by the secretary of the Company, in their own proper persons. Provided however, that this power of attorney limits the acts of those named herein; and they have no authority to bind the Company except in the manner stated and to the extent of any limitation stated below:

Any such obligations in the United States, not to exceed Twenty Million and No/100 (\$20,000,000) in any single instance

That this power is made and executed pursuant to the authority of the following Resolutions passed by the Board of Directors of said Company, and said Resolutions remain in full force and effect:

RESOLVED: That the President or any Vice President, in conjunction with any Vice President, be and they hereby are authorized and empowered to appoint Attorneys-in-fact of the Company, in its name and as it acts, to execute and acknowledge for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, waivers of citation and all other writings obligatory in the nature thereof, with power to attach thereto the seal of the Company. Any such writings so executed by such Attorneys-in-fact shall be binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company in their own proper persons.

RESOLVED: That any and all Powers of Attorney and Certified Copies of such Powers of Attorney and certification in respect thereto, granted and executed by the President or Vice President in conjunction with any Vice President of the Company, shall be binding on the Company to the same extent as if all signatures therein were manually affixed, even though one or more of any such signatures thereon may be facsimile. (Adopted October 7, 1981 – The Hanover Insurance Company; Adopted April 14, 1982 – Massachusetts Bay Insurance Company; Adopted September 7, 2001 – Citizens Insurance Company of America)

IN WITNESS WHEREOF, THE HANOVER INSURANCE COMPANY, MASSACHUSETTS BAY INSURANCE COMPANY and CITIZENS INSURANCE COMPANY OF AMERICA have caused these presents to be sealed with their respective corporate seals, duly attested by two Vice Presidents, this 31st day of **May**, 2017.

The Hanover Insurance Company Massachusetts Bay Insurance Company Citizens Insurance Company of America Joche CI

John C. Roche, EVP and President

THE COMMONWEALTH OF MASSACHUSETTS COUNTY OF WORCESTER



) \$5.

The Hanover Insurance Company Massachusetts Bay Insurance Company Citizens Insurance Company of America

AKawall

James H. Kawiecki, Vice President

On this 31st day of May, 2017 before me came the above named Vice Presidents of The Hanover Insurance Company, Massachusetts Bay Insurance Company and Citizens Insurance Company of America, to me personally known to be the individuals and officers described herein, and acknowledged that the seals affixed to the preceding instrument are the corporate seals of The Hanover Insurance Company, Massachusetts Bay Insurance Company and Citizens Insurance Company of America, respectively, and that the said corporate seals and their signatures as officers were duly affixed and subscribed to said instrument by the authority and direction of said Corporations.



Diane J. Mayino, Notary Public My Commission Expires March 4, 2022

I, the undersigned Vice President of The Hanover Insurance Company, Massachusetts Bay Insurance Company and Citizens Insurance Company of America, hereby certify that the above and foregoing is a full, true and correct copy of the Original Power of Attorney issued by said Companies, and do hereby further certify that the said Powers of Attorney are still in force and effect.

GIVEN under my hand and the seals of said Companies, at Worcester, Massachusetts, this 21st day of December, 2022

**CERTIFIED COPY** 

Theelle Theodore G. Martinez, Vice President



# Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

Jerry Borcherding Commissioner Shell

# Agenda Item

Discussion and possible action to consider the acceptance of vegetative coverage and release of the revegetation bond #PB03016800715M in the amount of \$31,129.80 for 6 Creeks subdivision, Phase 1, Section 8A. SHELL/BORCHERDING

#### Summary

Staff recommends the release of the revegetation bond that was issued for 6 Creeks subd., Ph. 1, Sec. 8A as a result of our latest inspection verifying 70%+ vegetative coverage of all disturbed areas within the County ROW.

Revegetation bond backup

Attachments
# **MAINTENANCE - REVEGETATION BOND**

## Bond No. PB03016800715M

1

## KNOW ALL MEN BY THESE PRESENTS,

That we <u>DNT Construction, LLC</u>, as Principal, and <u>PHILADELPHIA INDEMNITY INSURANCE COMPANY</u>, a corporation organized under the laws of the State of <u>Pennsylvania</u>, and authorized to do business in the State of Texas, as Surety, are held and firmly bound unto <u>Hays County, Texas</u> as Obligee in the penal sum of <u>Thirty One Thousand One Hundred Twenty Nine and 80/100 (\$31,129.80</u>) to which payment well and truly to be made we do bind ourselves, and each of our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has completed that certain work (herein referred to as the "Work") described as: Non-Native Seeding for Erosion Control, Hydro Mulch Improvements – 6 Creeks Section 8AHays County, Revegetation Bond

**WHEREAS**, the Obligee requires that the Principal furnish a bond conditioned to guarantee the Work against defects in workmanship and materials which are the responsibility of the Principal under the contract under which the Work was constructed, and which did not appear prior to the final completion of the Work.

**NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH**, that if the Principal shall indemnify the Obligee for all loss that the obligee may sustain by reason of defective materials or workmanship which may first become apparent, and with respect to which written notice is delivered to Surety, at the expiration of the period of sixty days from the date of substantial completion, being the establishment of grass/vegetation at 70% in areas of hydro mulch, then this obligation shall be void, otherwise to remain in full force and effect for a period of up to <u>One Year</u>. However, such termination shall not discharge the Surety from any liability previously accrued pursuant to this bond.

This obligation does not cover normal wear and tear of materials, misuse or abuse by the Obligee or third parties, failure of Obligee to perform oblige-required maintenance, nor any defects known to Obligee prior to final completion of the Work nor any defects discovered or occurring after the expiration of the period set forth above.

## Signed, Sealed and Dated this September 17, 2021.

**DNT Construction, LLC** Principal By:



### PHILADELPHIA INDEMNITY INSURANCE COMPANY One Bala Plaza, Suite 100 Bala Cynwyd, PA 19004-0950

### **Power of Attorney**

KNOW ALL PERSONS BY THESE PRESENTS: That PHILADELPHIA INDEMNITY INSURANCE COMPANY (the Company), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, does hereby constitute and appoint <u>Tom Mulanax, Michael Whorton, David Whorton, Rachel</u> <u>Martinez, Rosemaric Lopez, Jeremy Farque and/or Noe Moreno of Whorton Insurance Services,</u> its true and lawful Attorney-in-fact with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an amount not to exceed <u>\$50,000,000.</u>

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PHILADELPHIA INDEMNITY INSURANCE COMPANY on the 14th of November, 2016.

**RESOLVED:** That the Board of Directors hereby authorizes the President or any Vice President of the Company: (1) Appoint Attorney(s) in Fact and authorize the Attorney(s) in Fact to execute on behalf of the Company bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and to attach the seal of the Company thereto; and (2) to remove, at any time, any such Attorney-in-Fact and revoke the authority given. And, be it

That the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

IN TESTIMONY WHEREOF, PHILADELPHIA INDEMNITY INSURANCE COMPANY HAS CAUSED THIS INSTRUMENT TO BE SIGNED AND ITS CORPORATE SEALTO BE AFFIXED BY ITS AUTHORIZED OFFICE THIS 5TH DAY OF MARCH, 2021.



FURTHER

**RESOLVED:** 

John Glomb, President & CEO Philadelphia Indemnity Insurance Company

On this 5th day of March, 2021 before me came the individual who executed the preceding instrument, to me personally known, and being by me duly sworn said that he is the therein described and authorized officer of the PHILADELPHIA INDEMNITY INSURANCE COMPANY; that the seal affixed to said instrument is the Corporate seal of said Company; that the said Corporate Seal and his signature were duly affixed.

Gommonwestih of Pennsylvania - Notary Seal Vanessa Mckenzie, Notary Publio Montgomery County My commission expires November 3, 2024 Commission number 1366394 Member, Pannsylvar: - Association of Notaries

(Seal)

Notary Public:

Vanessa mcKenzie

residing at:

My commission expires: November 3, 2024

I, Edward Sayago, Corporate Secretary of PHILADELPHIA INDEMNITY INSURANCE COMPANY, do hereby certify that the foregoing resolution of the Board of Directors and the Power of Attorney issued pursuant thereto on the 5th day March, 2021 are true and correct and are still in full force and effect. I do further certify that John Glomb, who executed the Power of Attorney as President, was on the date of execution of the attached Power of Attorney the duly elected President of PHILADELPHIA INDEMNITY INSURANCE COMPANY.

Bala Cynwyd, PA

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 17th day of September ,2021.



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Edward Sayago, Corporate Secretary PHILADELPHIA INDEMNITY INSURANCE COMPANY



# Hays County Commissioners Court

Date: 01/03/2023	
Requested By:	Marcus Pacheco, Development Services Director
Sponsor:	Commissioner Smith

## Agenda Item

PLN-2078-PC; Hold a Public Hearing followed by discussion and possible action regarding Hawk Ridge, Ph 1, Blk B, Lots, 11, 17 & 18, Replat. SMITH/PACHECO

## Summary

Hawk Ridge, Ph 1, Blk B, Lots, 11, 17 & 18, Replat. is a recorded subdivision located off of Nutty Brown Rd. on Evergreen Way in Dripping Springs and in Precinct 4.

The proposed replat will establish eight (8) lots across 9.73 acres.

Water utility will be accomplished by West Travis Public Utility Agency (WTPUA) and wastewater will be accomplished by individuals on-site sewage facilities.

Attachments

Plat Location Map Cover Letter Tech Review Comment Letter

THE STATE OF TEXAS THE COUNTY OF HAYS KNOW ALL MEN BY THESE PRESENTS: THAT, CATHARINE STEVEN VENTURES,LLC, OWNER OF LOT II.BLOCK B, HAWK RIDGE PHASE I, A SUBDIVISION IN HAYS COUNTY, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN INSTRUMENT No. 21072200 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AS CONVEYED TO IT BY VIRTUE OF GENERAL WARRANTY DEED RECORDED IN INSTRUMENT No. 21021869 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AND AND

AND THAT NALLE CUSTOM HOMES, INC. OWNER OF LOT I7 AND LOT IB, BLOCK B, HAWK RIDGE PHASE I, A SUBDIVISION IN HAYS COUNTY, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN INSTRUMENT NO. 21072200 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AS CONVEYED TO IT BY GENERAL WARRANTY DEEDS RECORDED IN INSTRUMENT Nos. 22005052 AND 22005023 OF THE OFFICIAL PUBLIC RECORDS HAYS COUNTY TEXAS TO HEREY RESUBDIVIDE SAID LOTS IN ACCORDANCE WITH THE ATTACHED MAP OR PLAT TO BE KNOWN AS

### RESUBDIVISION OF LOTS 11, 17 AND 18 BLOCK B HAWK RIDGE PHASE 1

SUBJECT TO ANY EASEMENTS AND/OR RESTRICTIONS HERETOFORE GRANTED AND NOT RELEASED

WITNESS MY HAND THIS THE _____ DAY OF _____ A.D., 20

KIRBY WALLS Authorized Agent for CATHARINE STEVEN VENTURES, LLC 801 POLO CLUB DRIVE AUSTIN, TEXAS 78737

WITNESS MY HAND THIS THE _____DAY OF _____ A.D., 20

EE NALLE Authorized Agent for VALLE CUSTOM HOMES, INC. 000 MOPAC CIRCLE UISTIM TOWARD LEE NALLE AUSTIN, TEXAS 78746

THE STATE OF TEXAS THE COUNTY OF HAYS BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED KIRBY WALLS KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND HE ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED. GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE ____ ____ A.D. 20____

NOTARY PUBLIC IN AND FOR HAYS COUNTY, TEXAS

THE STATE OF TEXAS THE COUNTY OF HAYS BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED LEE NALLE KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIED TO THE FOREGOING INSTRUMENT AND HE ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED. GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE __ DAY OF ____A.D. 20____

NOTARY PUBLIC IN AND FOR HAYS COUNTY, TEXAS

### PLAT NOTES:

I. THIS FINAL PLAT IS NOT LOCATED WITHIN THE JURISDICTION OF ANY MUNICIPALITY. 2. NO PORTION OF THIS PLAT LIES WITHIN THE BOUNDARIES OF THE EDWARDS AOUIFER RECHARGE ZONE.

3. THIS PLAT LIES WITHIN THE BOUNDARIES OF THE CONTRIBUTING ZONE OF THE EDWARDS AQUIFER.

4. THIS PLAT IS LOCATED WITHIN THE BOUNDARY OF THE DRIPPING SPRINGS INDEPENDENT SCHOOL DISTRICT.

INDEPENDENT SCHOOL DISTRICT. 5. NO PORTION OF THIS PROPERTY IS LOCATED WITHIN A DESIGNATED 100 YEAR FLOOD PLAIN AS DELINEATED ON THE FLOOD INSURANCE RATE MAP PANEL No. 48209C 0140 F.EFFECTIVE DATE OF SEPTEMBER 2, 2005, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. 6. WATER SERVICE WILL BE PROVIDED TO EACH LOT FROM WEST TRAVIS COUNTY PUA.

7. WASTEWATER SERVICE WILL BE PROVIDED TO EACH LOT BY AN ADVANCED ON-SITE SEWAGE FACILITY. 8. ELECTRIC SERVICE WILL BE PROVIDED BY THE PEDERNALES ELECTRIC COOPERATIVE. 9. DRIVEWAYS SHALL COMPLY WITH CHAPTER 721 OF HAYS COUNTY DEVELOPMENT REGULATIONS, AND BE PERMITTED THROUGH THE TRANSPORTATION DEPARTMENT OF HAYS COUNTY

UNDER CHAPTER 751. IO. THIS SUBDIVISION IS LOCATED WITHIN HAYS-TRINITY GROUNDWATER CONSERVATION DISTRICT 2. II. ALL CULVERTS, WHEN REQUIRED, SHALL COMPLY WITH THE HAYS COUNTY STANDARD. 12. MAILBOXES PLACED WITHIN THE ROW, SHALL BE OF AN APPROVED TADOT OR FHWA DESIGN.

12. MAILBOXES PLACED WITHIN THE ROW, SHALL BE OF AN APPROVED TADOT OR FHWA DESION 13. POST CONSTRUCTION STORMWATER CONTROL MEASURES SHALL HAVE A MAINTENANCE PLAN. THE MAINTENANCE PLAN MUST BE FILED IN THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY. THE OWNER/OPERATOR OF ANY NEW DEVELOPMENT OR REDEVELOPMENT SITE SHALL DEVELOP AND IMPLEMENT A MAINTENANCE FLAN ADDRESSION GAINTENANCE REDUREMENTS FOR ANY STRUCTURAL CONTROL MEASURES INSTALLED ON SITE. OPERATION AND MAINTENANCE PERFORMED SHALL BE DOCUMENTED AND RETAINED AND MADE AVAILABLE FOR REVIEW UPON REQUEST. 14. POST DEVELOPMENT CONDITION FOR 2.5, IO, IS AND IOO YEAR STORM EVENTS. PRE AND POST PEUPLOPHENT DUNCE CALLULATE SHALL DE MOLTEDE WITH THE CONSTRUCTION. DEVELOPMENT RUNOFF CALCULATIONS SHALL BE INCLUDED WITH THE CONSTRUCTION DRAWINGS FOR THIS SUBDIVISION.

15. ALL ROADWAYS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH APPLICABLE HAYS COUNTY, STANDARDS.

16. THIS SUBDIVISION LIES WITHIN THE HAYS COUNTY EMERGENCY SERVICES DISTRICT No. I AND 6



SEWAGE DISPOSAL/INDIVIDUAL WATER SUPPLY CERTIFICATION, TO-WIT:

NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO AN INDIVIDUAL WATER SUPPLY OR A STATE APPROVED COMMUNITY WATER SYSTEM. DUE TO DECLINING WATER SUPPLIES AND DIMINISHING WATER QUALITY, PROSPECTIVE PROPERTY OWNERS ARE CAUTIONED BY HAYS COUNTY TO QUESTION THE SELLER CONCERNING GROUND WATER AVAILABILITY. RAIN WATER COLLECTION IS ENCOURAGED AND IN SOME AREAS MAY OFFER THE BEST RENEWABLE WATER RESOURCE.

NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC SEWER SYSTEM OR TO AN ON-SITE WASTEWATER SYSTEM WHICH HAS BEEN APPROVED AND PERMITTED BY HAYS COUNTY DEVELOPMENT SERVICES DEPARTMENT. NO CONSTRUCTION OR OTHER DEVELOPMENT WITHIN THIS SUBDIVISION MAY BEGIN UNTIL ALL HAYS COUNTY DEVELOPMENT AUTHORIZATION REQUIREMENTS HAVE BEEN SATISFIED

MARCUS PACHECO DIRECTOR HAYS COUNTY DEVELOPMENT SERVICES DEPARTMENT SERVICES DEPARTMENT

ERIC VAN GAASBEEK R.S., C.F.M. INTERIM FLOODPLAIN ADMINISTRATOR

THE STATE OF TEXAS THE COUNTY OF HAYS I, ELAINE H. CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE ______DAY OF_______AD. 2021, AT _____O'CLOCK _____N IN THE PLAT RECORDS OF HAYS COUNTY, TEXAS, IN INSTRUMENT NO.

WITNESS MY HAND AND SEAL OF OFFICE, THIS THE _____ DAY OF _____ ...... A.D. 2021.

ELAINE H. CARDENAS COUNTY CLERK HAYS COUNTY, TEXAS.

STATE OF TEXAS COUNTY OF HAYS I, ELAINE H. GARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, DO HEREBY CERTIFY THAT ON THE______ DAY OF______.A.D. 20______.THE COMMISSIONERS COURT OF HAYS COUNTY, TEXAS, PASSED AN ORDER AUTHORIZING THE FILING FOR RECORD OF THIS PLAT, AND SAID ORDER HAS BEEN DULY ENTERED IN THE MINUTES OF THE SAID COURT IN INSTRUMENT No.

WITNESS MY HAND AND SEAL OF OFFICE, THIS THE _____ DAY OF _____ A.D. 2021.

RUBEN BECERRA COUNTY JUDGE HAYS COUNTY, TEXAS

ELAINE H. CARDENAS COUNTY CLERK HAYS COUNTY, TEXAS.

> IN ORDER TO PROMOTE SAFE USE OF ROADWAYS AND PRESERVE THE CONDITIONS OF PUBLIC ROADWAYS, NO DRIVEWAY CONSTRUCTED ON ANY LOT WITHIN THIS SUBDIVISION SHALL BE PERMITTED ACCESS ONTO A PUBLICLY DEDICATED ROADWAY UNLESS (A) A DRIVEWAY PERMIT HAS BEEN ISSUED BY THE TRANSPORTATION DEPARTMENT OF HAYS COUNTY AND (B) THE DRIVEWAY SATISF THE REQUIREMENT FOR DRIVEWAYS SET FORTH IN TABLE 721.02 OF THE HAYS COUNTY DEVELOPMENT REGULATIONS. DRIVEWAY SATISFIES

IN APPROVING THIS PLAT BY THE COMMISSIONERS COURT OF HAYS COUNTY, TEXAS, IT IS UNDERSTOOD THAT THE BUILDING OF ALL STREETS, ROADS, AND OTHER PUBLIC THOROUGHFARES DELINEATED AND SHOWN ON THIS PLAT, AND ALL BRIDGES AND CULVERTS NECESSARY TO BE CONSTRUCTED OR PLACED IN SUCH STREETS, ROADS, OR OTHER PUBLIC THOROUGHFARES, OR IN CONNECTION THEREWITH SHALL BE THE RESPONSIBILITY OF THE OWNER AND/OR THE DEVELOPER OF THE TRACT OF LAND COVERED BY THIS PLAT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY THE COMMISSIONERS COURT OF HAYS COUNTY, TEXAS, AND THE COMMISSIONERS OF HAYS COUNTY, TEXAS, ASSUME NO OBLIGATION TO BUILD THE STREETS, ROADS, OR OTHER PUBLIC THOROUGHFARES SHOWN ON THIS PLAT OR OF CONSTRUCTING ANY BRIDGES OR CULVERTS IN CONNECTION THEREWITH.

### PRIVATELY MAINTAINED PAVED STREETS:

CATHERINE STEVEN VENTURES, LLC, BY FILING THIS PLAT OF RECORD, AND ALL FUTURE OWNERS OF PROPERTY WITHIN THIS SUBDIVISION, BY PURCHASING SUCH PROPERTY, ACKNOWLEDGE AND AGREE THAT HAYS COUNTY SHALL HAVE NO OBLIGATION WHATSOEVER TO REPAIR OR ACCEPT MAINTEMANCE OF THE ROADS SHOWN ON THIS SUBDIVISION UNTIL AND UNLESS CATHERINE STEVEN VENTURES, LLC AND/OR THE HAWKINGE HOMEOWNERS ASSOCIATION HAS IMPROVED THE ROADS TO THE HAWKINGE HOMEOWNERS ASSOCIATION HAS IMPROVED THE ROADS TO THE HAWKINGE HOMEOWNERS ASSOCIATION FUR ACTION OF THE COMMISSIONERS COURT AND THE ROADWAY, WITH ALL REQUIRED RIGHT-OF-WAY HAVE BEEN ACCEPTED FOR MAINTENANCE BY FORMALL, WRITTEN ACTION OF THE COMMISSIONERS COURT AND THE ROADWAY, WITH ALL REQUIRED BIGHT-OF-WAY HAS BEEN DEDICATED BY THE OWNERS THEREOF, AND ACCEPTED BY THE COUNTY, AS A PUBLIC STREET. CATHERINE STEVEN VENTURES, LLC AND ALL FUTURE OWNERS OF PROPERTY WITHIN THIS SUBDIVISION SHALL LOOK SOLELY TO THE HAWKRIGGE HOMEOWNERS ASSOLIATION FOR FUTURE MAINTENANCE AND REPAIR OF THE ROADS AND STREETS SHOWN ON THIS SUBDIVISION.



# **RESUBDIVISION OF** LOTS 11, 17 AND 18 BLOCK B

Hawk Ridge

ORIENTATION NOTE: The orientation for this plat was based upon the State Plane Coordinate System. (4204 -- Texas South Central Zone)

Phase 1



STATE OF TEXAS COUNTY OF TRAVIS KNOW ALL MEN BY THESE PRESENTS:

THAT I, THE UNDERSIGNED, A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT COMPLIES WITH THE ENGINEERING RELATED REQUIREMENTS OF THE HAYS COUNTY SUBDIVISION REGULATIONS.

ANDREW DODSON, PE DODSON CIVIL GROUP **TX FIRM 20870** 

DATE

STATE OF TEXAS COUNTY OF TRAVIS KNOW ALL MEN BY THESE PRESENTS: THAT I, THE UNDERSIGNED, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HART, THE UNDERSTANLEY A THIS PLAT COMPLES WITH THE SURVEY RELATED REQUIREMENTS OF THE HEREBY CERTIFY THAT THIS PLAT COMPLES WITH THE SURVEY RELATED REQUIREMENTS OF THE HAYS COUNTY SUBDIVISION REGULATIONS AND FURTHER CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE AND IS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

HOLT CARSON REGISTERED PROFESSIONAL LAND SURVEYOR No. 5166 HOLT CARSON, INC. 1904 FORTVIEW ROAD AUSTIN, TEXAS 78704 FIRM 10050700

DATE

PLAT INFORMATION

TOTAL AREA: 9.73 ACRES TOTAL AREA: 9.73 ACRES TOTAL NUMBER OF LOTS: 8 AVERAGE SIZE OF LOTS: 1.22 ACRES NUMBER OF LOTS OVER 10 ACRES: 0 NUMBER OF LOTS 5-10 ACRES: 0 NUMBER OF LOTS 1-2 ACRES: 0 NUMBER OF LOTS 1-2 ACRES: 8 NUMBER OF LOTS LESS THAN 1 ACRE: 0



### Planning Map Hays County Development Services





# Hays County Commissioners Court Agenda Request

Meeting Date: January 3rd, 2022 Requested By: Colby Machacek, County Planner Prepared By: Colby Machacek, County Planner Department Director: Marcus Pacheco, Development Services Director Sponsoring Court Member: Commissioner Walt Smith, Precinct 4

# AGENDA ITEM LANGUAGE:

PLN-2078-PC; Hold a Public Hearing followed by discussion and possible action regarding Hawk Ridge, Ph 1, Blk B, Lots, 11, 17 & 18, Replat

# BACKGROUND/SUMMARY OF REQUEST:

- A.) Hawk Ridge, Ph 1, Blk B, Lots 11, 17 & 18, Replat, is a recorded subdivision located off of Nutty Brown Rd. on Evergreen Way in Dripping Springs and in Precinct 4.
- B.) The proposed replat will establish eight (8) lots across 9.73 acres. Water utility will be accomplished by West Travis County Public Utility Agency (WTCPUA) and wastewater will be accomplished by individual on-site sewage facilities.
- C.) Per Texas Local Government Code requirements, a public hearing for this proposed resubdivision of Hawk Ridge, Ph 1, Blk B, Lots 11, 17 & 18, Replat will take place on January 3rd, 2023, at 9:00 AM in our Commissioners Court. At that time, consideration for final action regarding the replat will take place.

# STAFF COMMENTS:

Staff has completed review for Hawk Ridge, Ph 1, Blk B, Lots 11, 17 & 18, Replat and has provided a comment letter pertaining to the remaining deficiencies. The items remaining are the holding of the public hearing and possible action regarding the Replat pursuant, to Texas Local Gov't Code Chapter 232 and the Hays County Development Regulations as set forth.

The application has no variances requested.

Staff recommends Approval on Condition that the deficiencies provided in the back-up be addressed/remedied prior to full approval and plat recordation.

# ATTACHMENTS/EXHIBITS:

Property Location Map

Subdivision Plat



**Hays County Development Services** 

2171 Yarrington Road, Suite 100, Kyle TX 78640 512-393-2150 / www.hayscountytx.com

Catharine Steven Ventures, LLC (Kirby Walls) 800 Polo Club Drive Austin TX 78737 kirby@kirbywalls.com Date: December 29, 2022 Project ID: PLN-2078-PC Application Status: Technical Review Application Type: Replat/Revision Application Filed: Nov. 22, 2022

RE: Hawk Ridge, Ph 1, Blk B, Lots 11, 17, & 18 Replat

To whom it may concern,

County Staff has conducted a Technical Review for the above-named subdivision. Comments from this application review follow. A written response to each comment below is required. In addition to the written response, please provide a revised copy of the plat. If you have any questions, please contact the Hays County Planning Department at 512-393-2150 Ext. 4 or at planning@co.hays.tx.us

# 9-1-1 Technical Review - Alicia Campos ((512) 393-2162)

1. 911 Technical review approved 11/28/2022

# Digital Technical Review - Kellsey Schilly ((512) 393-2179)

**1.** Lots need to be closed polygons in their own layer GPS control point monument is needed with monument identification.

# Floodplain Technical Review - Troy Orman ((512) 393-2184)

1. FLOODPLAIN TECHNICAL REVIEW COMPLETE

# OSSF Technical Review - Troy Orman ((512) 393-2184)

1. OSSF TECHNICAL REVIEW COMPLETE

# Plat / Plan Technical Review - Colby Machacek ((512) 393-7301)

- **1. Per Chapter 705 § 12.03:** Please erect the required "Notice of Application to Subdivide" sign on the property, in accordance with Hays County requirements. The County's tracking number for this project is PLN-2078-PC.
- 2. Per Chapter 705 § 8.05(B): Plats shall contain the notes and certifications required by the Hays County Plat Note and Certification Standards, as applicable.

Correct the signature block for the Hays County Floodplain Administrator as follows:

Eric Van Gaasbeek, R.S., C.F.M. Hays County Floodplain Administrator

- 3. General: Correct all year mentions to: "20__"
- 4. General: Pending receipt of the Lot County and Public Notice Fees. Invoice attached.

# Transportation Technical Review - James Parman ((512) 393-2164)

**1.** Technical review is complete.



Hays County Development Services 2171 Yarrington Road, Suite 100, Kyle TX 78640 512-393-2150 / www.hayscountytx.com

Colby Machacek **County Planner** Hays County Development Services



# Hays County Commissioners Court

Date: 01/03/2023	
Requested By:	Marcus Pacheco, Development Services Director
Sponsor:	Commissioner Shell

## Agenda Item

PLN-2122-NP; Discussion and possible action regarding the 272 AC Fitzhugh Subdivision, Final Plat. SHELL/PACHECO

## Summary

272 AC Fitzhugh, Prelim is a proposed 35 lot subdivision across 271.7 acres along West Fitzhugh Road in Dripping Springs and within Commissioner Precinct 3.

All roads being proposed within the development will be constructed and inspected to Hays County Transportation standards and privately maintained.

Water utility service is being provided by individual private wells. Wastewater treatment is being accomplished by individual on-site sewage facilities.

Attachments

Plat Location Map Technical Review Comment Letter Road Maintenance Plan

### ť,ZHUGł ABSTRACT NO. 314 AND PLEASANT D. ALEXANDER SURVEY, ABSTRACT NO. 22, HAYS COUNTY, TEXAS AND BEING ALL OF THAT CERTAIN 271.62 ACRE TRACT OF LAND RECORDED IN DOCUMENT NO. 22023007, OFFICIAL PUBLIC RECORDS, HAYS COUNTY, TEXAS NTS GENERAL NOTES LOCATION MAP 1) BASIS OF BEARING: TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD83. 2) ADJOINERS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY 3) A FIFTEEN (15) FOOT WIDE PUBLIC UTILITY EASEMENT IS HEREBY DEDICATED ADJACENT TO ALL STREET RIGHT-OF-WAYS, A FIVE (5) WIDE PUBLIC UTILITY EASEMENT IS HEREBY DEDICATED ADJACENT TO EACH SIDE LOT LINE AND A TEN (10) PUBLIC UTILITY EASEMENT IS HEREBY DEDICATED ADJACENT TO ALL REAR LOTS LINES ON ALL LOTS. 4) HAYS COUNTY REQUIRES A MINIMUM 25' FRONT BUILDING SETBACK LINE. 5) A ONE-HUNDRED AND FIFTY (150') FOOT WIDE SETBACK IS REQUIRED FROM BARTON CREEK TO ALL EFFLUENT DISPOSAL AREAS FOR OSSF SYSTEMS. 6) A PORTION OF THIS SUBDIVISION IS WITHIN THE 100-YEAR FLOODPLAIN AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) FLOOD INSURANCE RATE MAP (F.I.R.M.) SUBDIVISION PERIMETER NELS 48209C0025F DATED SEPTEMBER 2, 2005 AND 48209C0085F DATED SEPTEMBER 2, LINE TABLE 2005. LINE NO. DIRECTION LENGTH 7) TYPICAL LANDSCAPE MAINTENANCE, CUTTING AND TRIMMING, WITHIN THE SUBDIVISION, ALL EASEMENTS, AND RIGHT-OF-WAYS TO THE PAVEMENT TO BE THE RESPONSIBILITY OF THE (N89°21'32"W 71.93' R4) N89*47'31"W 71.91' L1 PROPERTY OWNERS AND/OR HOME OWNERS ASSOCIATION. 8) DRIVEWAYS SHALL COMPLY WITH CHAPTER 721 OF HAYS COUNTY DEVELOPMENT REGULATIONS AND BE PERMITTED THROUGH THE TRANSPORTATION DEPARTMENT OF HAYS COUNTY UNDER CHAPTER 751. L2 N82*54'44"W 56.61 9) ALL CULVERTS, WHEN REQUIRED SHALL COMPLY WITH THE CURRENT HAYS COUNTY STANDARD. L3 N74°23'11"W 104.88 N58'39'25"W 117.00' L4 10) MAILBOXES PLACED WITHIN THE ROW SHALL BE OF AN APPROVED TXDOT OR FHWA DESIGN. L5 N09°20'26"W 142.44' EASEMENT LINE TABLE PER HAYS COUNTY DEVELOPMENT REGULATIONS, CHAPTER 721, SUBCHAPTER 2.01. 11) NO PORTION OF THIS SUBDIVISION LIES WITHIN THE RECHARGE ZONE OF THE EDWARDS AQUIFER. THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE CONTRIBUTING ZONE OF THE UTILITIES ELECTRIC - PEDERNALES ELECTRIC COOP. LINE NO. L6 N26"18'57"W 83.83' TELEPHONE - AT&T EDWARDS AQUIFER. WATER - INDIVIDUAL PRIVATE WATER WELLS AND/OR RAINWATER COLLECTION SYSTEM L7 N46**°**59'48"W 71.64' L39 12) THIS SUBDIVISION LIES WITHIN THE DRIPPING SPRINGS INDEPENDENT SCHOOL DISTRICT. SEWER - INDIVIDUAL ON-SITE SEWAGE FACILITIES 13) THIS PROPERTY IS LOCATED WITHIN THE HAYS COUNTY E.S.D. (EMERGENCY SERVICE L8 S47'35'24"W 71.34' L40 DIŚTRICT) 1 & 6. L9 N72*58'12"W 128.77' L41 4) THIS TRACT LIES WITHIN THE HAYS TRINITY GROUNDWATER CONSERVATION DISTRICT. 15) THIS PROPERTY IS NOT LOCATED WITHIN THE EXTRA-TERRITORIAL JURISDICTION OF ANY CITY OR MUNICIPALITY. LOT SIZE CATEGORIES L10 N00*40'31"W 34.61' L42 TOTAL NUMBER OF LOTS = 35 AVERAGE LOT SIZE = 7.40 4 LOTS LARGER THAN 10.0 ACRES N42*05'16"W L43 L11 19.71' L12 N00°07'27"E 98.83' L44 30 LOT LARGER THAN 5.0 ACRES AND SMALLER THAN 10 ACRES 0 LOTS 2.00 ACRES OR LARGER UP TO 5.00 ACRES 0 LOTS LARGER THAN 1.00 ACRE AND SMALLER THAN 2.00 ACRES L45 1 LOTS SMALLER THAN 1.00 ACRE L46 L47 DRIVEWAY PERMIT STATEMENT RIGHT-OF-WAY & LOT LINE TABLE OWNER/DEVELOPER L48 IN ORDER TO PROMOTE SAFE USE OF ROADWAYS AND PRESERVE THE CONDITIONS OF PUBLIC LINE NO. DIRECTION | LENGTH | LINE NO. DIRECTION LENGTH MESA VERDE TEXAS LLC L49 ROADWAYS. NO DRIVEWAY CONSTRUCTED ON ANY LOT WITHIN THIS SUBDIVISION SHALL BE 5513 FOXFIELD LANE L13 N71°23'10"E 30.02' S10°28'03"W 139.12' L26 PERMITTED ACCESS ONTO A PUBLICLY DEDICATED ROADWAY UNLESS (A) A DRIVEWAY PERMIT AUSTIN, TEXAS 78738 L50 HAS BEEN ISSUED BY THE TRANSPORTATION DEPARTMENT OF HAYS COUNTY AND (B) THE DRIVEWAY SATISFIES THE MINIMUM SPACING REQUIREMENT FOR DRIVEWAYS SET FORTH IN L14 S16*43'18"E 30.02' L27 N10*28'03"E 139.12' L51 CHAPTER 721 OF THE HAYS COUNTY DEVELOPMENT REGULATIONS. LEGEND 65.53 L15 S45'00'00"W 73.85' L28 N28°02'14"E L52 ALL CULVERTS, WHEN REQUIRED SHALL COMPLY WITH THE CURRENT HAYS COUNTY STANDARD, PER HAYS COUNTY DEVELOPMENT REGULATIONS, CHAPTER 705, SUBCHAPTER 8.03. FOUND 1/2" IRON ROD W/ A YELLOW L16 \$90**°**00'00"W N10°09'19"E 37.76' L29 112.88 Ο L53 "WCR" PLASTIC CAP L17 L30 N16°43'18"W S00°00'00"W | 147.81 277.45' FOUND 1/2" IRON ROD (UNLESS OTHERWISE NOTED) L54 WATER/WASTEWATER NOTE L18 S45'00'00"W 43.45' L31 N31°03'57"W 285.85' FOUND 1" IRON PIPE - 14 L55 NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO AN INDIVIDUAL WATER SUPPLY OR A STATE APPROVED COMMUNITY WATER SYSTEM. DUE TO DECLINING WATER SUPPLIES AND DIMINISHING WATER QUALITY, PROSPECTIVE PROPERTY OWNERS ARE CAUTIONED BY HAYS COUNTY TO QUESTION THE SELLER CONCERNING GROUND WATER AVAILABILITY, RAIN FOUND 60D NAIL IN CEDAR TREE $\otimes$ L19 S06*40'42"W 86.96' L32 N06°40'42"E 292.11 FOUND COTTON SPINDLE ۲ L56 L20 N83*19'18"W N83"19'18"W 30.00' L33 30.00' FOUND FENCE POST (MATERIAL 0 L57 AND DIAMETER NOTED ON PLAT) WATER COLLECTION IS ENCOURAGE AND IN SOME AREAS MAY OFFER THE BEST RENEWABLE WATER RESOURCE. S06'40'42"W N06°40'42"E 86.96' L21 292.11' L34 FOUND IRON ROD W/ A PINK "RPLS L58 $\bigcirc$ 4863" PLASTIC CAP L22 S31°03'57"E 285.85' L35 N45'00'00"W 41.14 NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC SEWER L59 FOUND IRON ROD W/ A RED L23 S16*****43'18"E 277.45' L36 N00'00'00"W 147.81 SYSTEM OR TO AN ON-SITE WASTEWATER SYSTEM WHICH HAS BEEN APPROVED AND PERMITTED "CARSON & BUSH" PLASTIC CAP L60 BY HAYS COUNTY DEVELOPMENT SERVICES. FOUND IRON ROD W/ AN ORANGE L24 S10°09'19"W 131.36' L37 S90'00'00"W 37.76**'** NO CONSTRUCTION OR OTHER DEVELOPMENT WITHIN THIS SUBDIVISION MAY BEGIN UNTIL ALL HAYS COUNTY DEVELOPMENT PERMIT REQUIREMENTS HAVE BEEN MET. $(\triangle)$ L61 "ZWA" PLASTIC CAP 65.53' L38 L25 S28°02'14"W N45°00'00"W 62.80' FOUND IRON ROD W/ A YELLOW L62 "STAUDT SURVEYING" PLASTIC CAP L63 (W)WELL ERIC VAN GAASBEEK, R.S., C.F.M. HAYS COUNTY FLOODPLAIN ADMINISTRATOR DATE L64 L65 CURVE TABLE CURVE NO. ARC LENGTH RADIUS DELTA BEARING DISTANCE L66 MARCUS PACHECO. DIRECTOR OF DEVELOPMENT SERVICES DATE HAYS COUNTY DEVELOPMENT SERVICES S0518'53"W 1390.00' 002*43'39" L67 C1 66.17' 66.16' C2 428.20 842. C4 187.08 C5 950.4 C6 49.06

272 AC FITZHUGH

BEING A 271.62 ACRE TRACT OF LAND SITUATED IN THE N. MCARTHUR SURVEY NO. 3,

I, ELAINE H. CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, DO HEREBY CERTIFY THAT ON THE DAY OF , A.D. 20 THE COMMISSIONERS COURT OF HAYS COUNTY, TEXAS, PASSED AN ORDER AUTHORIZING THE FILING FOR RECORD OF THIS PLAT, AND SAID ORDER HAS BEEN DULY ENTERED IN THE MINUTES OF THE SAID COURT INSTRUMENT NUMBER
WITNESS MY HAND AND SEAL OF OFFICE THIS THE DAY OF, A.D. 20,
RUBEN BECERRAELAINE H. CARDENASCOUNTY JUDGECOUNTY CLERKHAYS COUNTY, TEXASHAYS COUNTY, TEXAS
I, ELAINE H. CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, DO HEREBY CERTIFY THAT THIS PLAT WAS FILED FOR RECORD IN MY OFFICE ON THE DAY OF, ZO, AT O'CLOCKM. IN THE PLAT RECORDS OF HAYS COUNTY, TEXAS IN INSTRUMENT NUMBER
ELAINE H. CARDENAS, COUNTY CLERK HAYS COUNTY, TEXAS
STATE OF TEXAS COUNTY OF HAYS
KNOW ALL MEN BY THESE PRESENTS, THAT, MESA VERDE TEXAS LLC, WITH AN ADDRESS OF 5513 FOXFIELD LANE, AUSTIN, TEXAS 78738, OWNER OF THE 271.62 ACRES SITUATED IN THE N. MCARTHUR SURVEY NO. 3, ABSTRACT NO. 314 AND PLEASANT D. ALEXANDER SURVEY, ABSTRACT NO. 22, HAYS COUNTY, TEXAS AS CONVEYED TO MESA VERDE TEXAS LLC BY DEED DATED APRIL 29, 2022 AND RECORDED IN DOCUMENT NO. 22023007, OFFICIAL PUBLIC RECORDS, HAYS COUNTY, TEXAS, DO HEREBY SUBDIVIDE 271.62 ACRES TO BE KNOW AS
272 AC FITZHUGH IN ACCORDANCE WITH THE PLAT SHOWN HEREON, SUBJECT TO ALL EASEMENTS AND RESTRICTIONS HERETOFORE GRANTED AND DO HEREBY DEDICATE TO THE OWNERS OF THE PROPERTY THE USE OF THE STREETS AND EASEMENTS SHOWN HEREON.
JEFF F. KENT JEFF F. KENT PO BOX 1707 DRIBDING STEVAS 78260
STATE OF TEXAS COUNTY OF HAYS
BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED JEFF F. KENT, KNOWN TO ME TO BE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN STATED.
GIVEN UNDER MY HAND AND SEAL OF OFFICE OF, THIS THE DAY OF, A.D., 20
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS
STATE OF TEXAS COUNTY OF HAYS
I, J. TRAVIS WILSON, P.E., A PROFESSIONAL ENGINEER, DO HEREBY CERTIFY THAT A PORTION OF THIS PROPERTY IS LOCATED WITHIN A DESIGNATED 100-YEAR FLOOD ZONE AREA, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) FLOOD INSURANCE RATE MAP (F.I.R.M.) COMMUNITY NO. 48209, MAP NO. 48209C0025 AND 48209C0085F, HAYS COUNTY, TEXAS, DATED SEPTEMBER 2, 2005 AND SHALL BE CONTAINED WITHIN THE RIGHT-OF-WAY AND DRAINAGE EASEMENTS SHOWN HEREON.
LICENSED PROFESSIONAL ENGINEER J. TRAVIS WILSON, P.E. NO. 97307 MILLER GRAY, LLC TBPE&LS FIRM NO. F–16302 7320 N. MOPAC EXPRESSWAY, SUITE 203 AUSTIN, TEXAS 78731 512–861–5300
STATE OF TEXAS COUNTY OF HAYS
KNOWN ALL MEN BY THESE PRESENTS THAT I, THE UNDERSIGNED, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY STATE THAT TO THE BEST OF MY SKILL AND KNOWLEDGE THIS PLAT IS TRUE AND CORRECTLY MADE AND IS PREPARED FROM AN ACTUAL

428.20'	650.00'	037 <b>*</b> 44'39"	S12"11'37"E	420.49'		L68	S82*40'29"E	22.19'
842.44'	3365.00'	014•20'39"	S23*53'38"E	840.24'		L69	S20*38'32"E	147.52
187.08'	2460.00'	004°21'26"	S14 <b>°</b> 32'35"E	187.03'		L70	S55*59'17"E	114.14
950.43 <b>'</b>	3918.12'	013*53'54"	S04°34'09"E	948.10'		L71	S48*59'20"E	110.93
49.06'	60.00'	046*50'54"	S21°02'39"E	47.70 <b>'</b>		L72	S60°15'50"E	96.54'
113.48'	69.00'	094៕3'36"	S02*38'42"W	101.11'		L73	S44*23'15"E	35.41'
41.47'	60.00'	039•36'12"	S29*57'25"W	40.65'		L74	S71°32'50"E	61.30'
127.24'	200.00'	036 <b>°</b> 27'05"	S08°04'14"E	125.10'		L75	S49 <b>°</b> 05'44"E	64.82'
351.61'	689.73'	029"12'30"	S11*41'31"E	347.82'		L76	S79"15'40"E	80.01'
54.81'	125.00'	025 <b>°</b> 07'30"	S15*28'29"W	54.38 <b>'</b>		L77	S68"12'20"E	81.95'
91.99'	300.00'	017 <b>*</b> 34'11"	S19*15'08"W	91.63'		L78	N78 <b>°</b> 39'42"E	344.58
197.27'	900.00'	012 <b>•</b> 33'30"	S16*44'48"W	196.87'		L79	N84 <b>°</b> 29'05"E	122.31
191.28'	370.68'	029*33'55"	S37 <b>•</b> 48'31"W	189.16'		L80	N12*43'43"E	43.95'
178.81'	406.00'	025*14'01"	S39 <b>*</b> 58'28"W	177.36'		L81	N74 <b>*</b> 36'35"E	99.01'
133.86'	286.00'	026*48'56"	S40 <b>*</b> 45'56"W	132.64'		L82	N45 <b>*</b> 44'19"E	280.00
407.89 <b>'</b>	1257.12'	018•35'26"	S62 <b>*</b> 58'46"W	406.11'		L83	N62 <b>°</b> 06'06"E	435.97
140.16'	1351.48'	005*56'32"	S78 <b>•</b> 35'45"W	140.10'		L84	N76 <b>*</b> 24'40"E	26.76'
693.32'	120.00'	331°02'13"	N09 <b>*</b> 44'54"W	60.02'		L85	S68"14'42"W	287.52
133.56'	1291.48'	005 <b>°</b> 55'31"	N78 <b>°</b> 39'56"E	133.50'		L86	S55 <b>*</b> 50'11"W	523.15
386.94'	1197.12'	018 <b>°</b> 31'10"	N62 <b>*</b> 55'51"E	385.26'		L87	S83"10'05"W	136.75
106.02'	226.00'	026*52'39"	N40 <b>°</b> 47'47"E	105.05'		L88	N84 <b>·</b> 38'46"W	207.44
205.23'	466.00'	025*14'01"	N39 <b>*</b> 58'28"E	203.58'		L89	S76"12'59"W	236.70
160.31'	310.68'	029 <b>*</b> 33'55"	N37 <b>*</b> 48'31"E	158.54'		L90	S85 <b>*</b> 31'13"W	187.84
184.12'	840.00'	012 <b>*</b> 33'30"	N16 <b>°</b> 44'48"E	183.75'		L91	N87 <b>°</b> 29'38"W	287.86
110.39'	360.00'	017*34'11"	N19*15'08"E	109.96'		L92	S72 <b>°</b> 25'53"W	216.49
28.50'	65.00'	025 <b>°</b> 07'30"	N15*28'29"E	28.28'		L93	S47 <b>°</b> 50'51"W	114.47
321.03'	629.73'	02912'30"	N11 <b>*</b> 41'31"W	317.56'		L94	S50°18'43"E	23.75'
165.41'	260.00'	036 <b>°</b> 27'05"	N08°04'14"W	162.64'		L95	S57 <b>°</b> 20'42"E	56.88'
53.75 <b>'</b>	60.00'	05119'38"	N15 <b>*</b> 30'30"W	51.97 <b>'</b>		L96	S78 <b>°</b> 25'20"E	157.70
106.22'	69.00'	08812'03"	N02 <b>*</b> 55'42"E	96.04'		L97	S14 <b>*</b> 44'55"E	40.68'
46.70'	60.00'	044 <b>°</b> 35'48"	N24 <b>*</b> 43'50"E	45.53 <b>'</b>		L98	S43 <b>°</b> 49'44"W	89.53'
938.94'	3858.12'	013 <b>°</b> 56'38"	N04 <b>•</b> 32'23"W	936.62'		L99	S27 <b>*</b> 59'05"E	25.50'
182.07'	2400.00'	004°20'48"	N14 <b>°</b> 32'54"W	182.03'		L100	N75°03'43"E	180.11
479.52'	3305.00'	00818'47"	N20 <b>*</b> 52'42"W	479.10'		L101	S61*41'22"E	162.19
1052.41'	887.44'	067 <b>*</b> 56'49"	N80°32'01"W	991.82'		L102	S56*41'27"E	156.92
409.46'	75.00'	312*48'12"	N45°39'30"E	60.05'		L103	S62 <b>*</b> 56'20"E	228.00
977.84 <b>'</b>	827.44'	067 <b>*</b> 42'36"	S80°34'34"E	921.92'		L104	S85*48'20"W	256.85
287.89'	3305.00'	004*59'27"	N28 <b>*</b> 34'14"W	287.79'		L105	S81*39'11"W	329.04
467.72'	710.00'	037 <b>*</b> 44'39"	N12 <b>*</b> 11'37"W	459.31'		L106	S65*44'51"W	91.88'
53.80'	1270.00'	002*25'39"	N05*27'53"E	53.80'		L107	S55*36'48"W	197.03
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0°15'50"E 96.54 4°23'15"E 35.41' 1**°**32'50"E 61.30' 9°05'44"E 64.82' 9*15'40"E 80.01' 8°12'20"E | 81.95' '8**'**39'42"E | 344.58' 4**°**29'05"E | 122.31' 2*43'43"E 43.95' 4**•**36'35"E 99.01**'** 5°44'19"E 280.00 2°06'06"E 435.97' 6*24'40"E 26.76' 814'42"W 287.52 5*50'11"W | 523.15' 3°10'05"W | 136.75' 4*****38'46"W | 207.44' 6*12'59"W 236.70' 5°31'13"W | 187.84' 7*****29'38"W 287.86' 2°25'53"W | 216.49' 7**°**50'51"W | 114.47' 0°18'43"E 23.75' 7**°**20'42"E 56.88 8°25'20"E 157.70' 4*****44'55"E 40.68' 3**°**49'44"W 89.53' 7*****59'05"E 25.50' 5°03'43"E | 180.11' 1**°**41'22"E 162.19' 6°41'27"E 156.92 2**°**56'20"E | 228.00' 5*48'20"W | 256.85' 1**°**39'11"W | 329.04' 5°44'51"W 91.88' 5°36'48"W | 197.03'

S S

299

DIRECTION LENGTH

S41"15'43"F 201.75

S81*36'00"F 206.54

52.08'

108.67'

98.42'

118.14'

104.45

100.08'

92.31'

45.86

76.05'

90.40'

89.67'

118.78'

205.64

114.35'

125.18'

4.81'

116.21'

39.98'

36.97'

188.11

86.92

116.21'

29.55'

24.49'

95.86

S58°28'26"E

S51°26'22"E

S72°30'43"E

S70**°**47'41"E

S82*48'46"E

S68°41'45"E

S63°00'23"E

S65*02'26"E

N65'02'26"W

N63°00'23"W

N68*41'45"W

N70**°**47'41"W

N81°36'00"W

N72*****30'43"W

N51°26'22"W

N58*28'26"W

S50*49'32"E

N86*25'30"E

S69**°**23'15"E

S57°14'31"E

S84**°**31'14"E

N17*****16'58"W

N66*28'30"E

S74°28'52"E

S34°25'26"E

N82*48'46"W 103.33'

N41*15'43"W 198.01'

IN APPROVING THIS PLAT BY THE COMMISSIONERS COURT OF HAYS COUNTY, TEXAS, IT IS UNDERSTOOD THAT THE BUILDING OF ALL STREETS, ROADS, AND OTHER PUBLIC THOROUGHFARES DELINEATED AND SHOWN ON THIS PLAT, AND ALL BRIDGES AND CULVERTS NECESSARY TO BE CONSTRUCTED OR PLACED IN SUCH STREETS, ROADS, OR OTHER PUBLIC THOROUGHFARES, OR IN CONNECTION THEREWITH SHALL BE THE RESPONSIBILITY OF THE OWNER AND/OR THE DEVELOPER OF THE TRACT OF LAND CONVEYED BY THIS PLAT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY THE COMMISSIONERS COURT OF HAYS COUNTY, TEXAS. HAYS COUNTY ASSUMES NO OBLIGATION TO BUILD THE STREETS, ROADS, OR OTHER PUBLIC THOROUGHFARES SHOWN ON THIS PLAT OR OF THE CONSTRUCTION OF ANY BRIDGES OR CULVERTS IN CONNECTION THEREWITH.



JOB NO.: 1243-19

DRAWN BY: CJJ

CHECKED BY: CJJ

SHEET: 1 OF 3

SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND AND THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

PRELIMINARY, NOT TO BE RECORDED FOR ANY PURPOSE

09/19/2022

REGISTERED PROFESSIONAL LAND SURVEYOR CHRISTOPHER JURICA, R.P.L.S. NO. 6344









**Hays County Development Services** 

2171 Yarrington Road, Suite 100, Kyle TX 78640 512-393-2150 / www.hayscountytx.com

Kent Sports Holdings () 5513 Foxfield Ln Austin TX 78738 Date: December 29, 2022 Project ID: PLN-2122-NP Application Status: Technical Review Application Type: New Subdivision Application Filed: Dec. 7th, 2022

RE: 272 AC Fitzhugh, Final

To whom it may concern,

County Staff has conducted a Technical Review for the above-named subdivision. Comments from this application review follow. A written response to each comment below is required. In addition to the written response, please provide a revised copy of the plat. If you have any questions, please contact the Hays County Planning Department at 512-393-2150 Ext. 4 or at planning@co.hays.tx.us

# 9-1-1 Technical Review - Kathrine Weiss ((512) 393-2165)

**1.** Technical review is Denied as of 12/13/2022. Street names on plat do not match names that were approved in the street name approval process.

# Digital Technical Review - Leanne Cantalupo ((512) 393-7779)

 Line drawn to control point is on a layer named "C-BNDY-ROW". Change layer name to something more appropriate. For example, "TIE TO MONUMENT." Add annotation for control point ID. Add additional polygon/polyline for floodplain that has a floodplain-related layer name. Add street name annotation for W. Fitzhugh Rd.

# Floodplain Technical Review - Jerry Cockerham, R.S., C.F.M. ((512) 749-1159)

- **1.** The Approximate Zone A special flood hazard areas are Hays County Best Available Flood Hazard area and should be labeled accordingly. The Variable Drainage Easement should extend to the boundaries of the Hays County Best Available Floodplain.
- **2.** Because there is a noted 150 ft. setback from the banks of Barton Creek, the banks of the creek should be designated instead of the centerline of the creek.
- 3. The Drainage Easement running through Lot 18 and Lot 28 should also be labeled as localized floodplain

# OSSF Technical Review - Jerry Cockerham, R.S., C.F.M. ((512) 749-1159)

1. OSSF Technical Review approved.



# **Hays County Development Services**

2171 Yarrington Road, Suite 100, Kyle TX 78640 512-393-2150 / www.hayscountytx.com

# Plat / Plan Technical Review - Colby Machacek ((512) 393-7301)

**1.** Per Chapter **721** § 4.03 General Requirements for Maintenance of Private Roadways

Development Authorizations that include the use of Regulated Private Roadways shall be subject to a maintenance agreement with the County. The person(s) responsible for maintenance under the agreement may be the Owner of the Subject Property, the Permittee, or another person or entity acceptable to the County. The following provisions apply to Regulated Private Roadways: (A) The following note shall be conspicuously displayed on the Record Documents filed in conjunction with the Development Authorization:

[Owner], by filing this Record Document, and all future owners of this property, by purchasing such property, acknowledge and agree that Hays County shall have no obligation whatsoever to repair or accept maintenance of the roadways shown on this approved development plan until and unless [Owner] and/or the property occupants or tenants have improved the roadways to the then current standards required by Hays County and the roadways have been accepted for maintenance by formal, written action of the County Commissioners Court and the roadways, with all required right-of-way and building setbacks, have been dedicated by the owners thereof, and accepted by the County, as public roadways. [Owner] and all future owners of property within the limits of the approved development plan shall look solely to the [Owner or Entity entering into Maintenance Agreement with the County] for future maintenance and repair of the roadways included in this development plan; and

(B) Any restrictive covenants establishing a responsibility for roadway operation and maintenance shall be placed on record concurrently with the recording of the Record Documents.

(C) Regulated Private Roadways shall be operated and maintained to allow unrestricted ingress/egress by the occupants of the property and service providers, including emergency services. The maintenance agreement with the County shall include enforcement provisions for Regulated Private Roadways that are not properly operated and maintained.

**2.** Approval may not be granted until fiscal surety for street and drainage improvements is posted in Commissioners Court or roads are built and inspected meeting Hays County standards.

# Transportation Technical Review - James Parman ((512) 393-2164)

- Per TAC <u>30, TPDES General Permit TXR040000 Part III, Section B</u>, add a note- Post-Construction Stormwater control measures shall have a maintenance plan. The maintenance plan must be filed in the real property records of Hays County. The owner operator of any new development or redevelopment site shall develop and implement a maintenance plan addressing maintenance requirements for any structural control measures installed on site. Operation and maintenance performed shall be documented and retained and made available for review upon request.
- **2.** Per Hays County Development regulations, chapter 725.3.02, add a note- Postdevelopment conditions runoff rate shall be no greater than the pre-developed condition for 2, 5, 10, 25, and 100 year storm events. Pre and post development runoff calculations shall be included with the construction drawings for this subdivision.
- **3. Per Hays County Development regulations, chapter 721.5.02**, add a note- All roadways shall be designed and constructed in accordance with applicable Hays County standards.
- **4. Per Hays County Development regulations chapter 705.5.03**, add a table of roadways that includes the name, ROW width, classification, and length.



Hays County Development Services 2171 Yarrington Road, Suite 100, Kyle TX 78640 512-393-2150 / www.hayscountytx.com

5. Per Hays County Development regulations chapter 705.5.03, add a statement indicating whether the applicant shall seek public dedication of the roadways or designation of roadways as private roadways.

Colby Machacek

**County Planner** 

Hays County Development Services

## **ROAD DESIGN REPORT**

## FOR

# 272 AC Fitzhugh

Hays County, Texas

Prepared for:

Hays County Development 2171 Yarrington Road, Ste. 100 Kyle, Texas 78640

Prepared By:



TBPE Firm Reg. No. F-16302

7320 N MoPac Exp, Suite 203, Austin, Texas 78731 www.miller-gray.com

February 2022

MG Project No. 00120-009



## **ROAD DESIGN**

The 272-acre tract is located along Fitzhugh Road / CR 101, just east of McGregor Lane and west of Bell Springs Road, in an unincorporated area of Hays County. The site is not located within the extraterritorial jurisdiction of any municipality. The concept plan dated April 2021 shows 36 single-family, large-lot subdivision. This subdivision is exempt from a daily traffic impact analysis.

The property fronts Fitzhugh Road / CR 101, which is a public roadway maintained by Hays County. The development proposes a gated subdivision with a single private road taking access from Fitzhugh Road. All roads within this subdivision will be constructed in compliance with a policy in Geometric Design of Highways and Streets (AASHTO). The roads will be designed to handle average daily traffic estimated to occur for a period of 20 years following the completion of the subdivision. Below is a list of road classifications:

Roadway	Classification	ROW	Pavement
Mesa Ranch Road	Private, Local	60′	32' (BC-BC)
Mesa Alta Lane	Private, Local	60′	32' (BC-BC)

The roadway and any associated appurtenances (i.e., drainage facilities) shall be designed in accordance with Hays County standards. A pavement section geotechnical report will be provided in design phase and will accompany the future construction plans.

After Recording, Return To: William P. McLean Leslie Keyser McLean & Howard, L.L.P. 4301 Bull Creek Road, Suite 150 Austin, Texas 78731



# MAINTENANCE PLAN FOR PRIVATE ROADS

Hays County, Texas

Declarant: Mesa Verde Texas LLC, a Texas limited liability company

Cross reference to that certain <u>Declaration of Covenants, Conditions and Restrictions for Mesa</u> <u>Verde</u>, recorded as Document No. _____, Official Public Records of Hays County, Texas.

# MESA VERDE MAINTENANCE PLAN FOR PRIVATE ROADS

This *Mesa Verde Maintenance Plan for Private Roads* (the "<u>Plan</u>") is made by **Mesa Verde Texas LLC, a Texas limited liability company** (the "<u>Declarant</u>"). Declarant has caused to be Recorded that certain <u>Declaration of Covenants, Conditions and Restrictions for Mesa Verde</u>, recorded as Document No. ______ in the Official Public Records of Hays County, Texas (the "<u>Declaration</u>") encumbering that certain property in Hays County, Texas (the "<u>Subdivision</u>") described in **Exhibit "A"** attached hereto and incorporated by reference herein.

## ARTICLE 1

# FUNDING FOR MAINTENANCE OF PRIVATE ROADS AND EASEMENTS

1.1. <u>Association</u>. The Mesa Verde Property Owners Association, Inc., a Texas nonprofit corporation (the "<u>Association</u>") has been created by Declarant to exercise the authority and assume the powers specified in *Article 4* and elsewhere in the Declaration. The Association will be the eventual owner and party responsible for maintenance of certain Common Areas (which include the private streets for the Subdivision), as defined in the Declaration, and as shown in the detail exhibits for the roadway in <u>Exhibit "B"</u> attached hereto and incorporated by reference herein.

1.2. <u>Regular Assessments</u>. The Association has the authority under the Declaration to assess Owners Regular Assessments, which are estimates of the expenses to the incurred by the Association for management, repair and maintenance of the Common Areas, including but not limited to improvements, maintenance and repaying of the private streets in the Subdivision.

1.3. <u>Working Capital Assessments</u>. Each Owner (other than Declarant) of a residential Lot will pay a one-time working capital assessment to the Association in such amount as may be determined by the Board from time to time in its sole and absolute discretion. The working capital assessment is paid by the transferee to the Association immediately upon each transfer of title to the Lot, including upon transfer of title from one Owner of such Lot to any subsequent purchaser or transferee thereof. The working capital assessments can be used to pay operating costs of the Association, including the costs for maintenance or repaving of the private streets in the Subdivision.

1.4. <u>Frequency of Assessments</u>. Assessments are paid by Owners at the beginning of the fiscal year or during the fiscal year in equal quarterly installments, or in such other manner as the Board may designate.

## ARTICLE 2 REMEDIES FOR NON-PAYMENT

2.1. <u>Remedies for Non-payment</u>. If any Assessment is not paid by an Owner by the due date applicable thereto, the Owner responsible for the payment may be required by the Board, at

the Board's election at any time and from time to time, to pay a late charge in such amount as the Board may designate, and the late charge (and any reasonable handling costs) will be levied as an Individual Assessment against the Lot owned by such Owner, collectible in the manner as provided for collection of Assessments, including foreclosure of the lien against such Lot.

2.2 <u>Right of Enforcement</u>. Declarant, its successors or assigns, or any Owner, shall have the right to enforce, by proceedings at law or in equity, the terms, provisions, covenants, restrictions, and conditions of this Declaration. Failure of Declarant or any Owner to take any action upon any breach or default shall not be deemed a waiver of their right to take action upon any subsequent breach or default.

## ARTICLE 3

# ROADWAY EASEMENTS AND UTILITIES; MAINTENANCE

3.1 <u>Easements</u>. Declarant hereby dedicates, assigns, transfers and conveys a perpetual, non-exclusive ingress and egress easement over, across and upon the private roadways in the Subdivision for the uninterrupted access to and from the Lots for the use and benefit of the Owners, their heirs, successors, assigns, and their agents, invitees, guests and permittees. Declarant reserves the right to grant utility, drainage and other easements along both sides of the entire private roadways and extending onto the Lots if necessary, without the joinder of any Lot Owner as may be required for development of the Subdivision. It is expressly agreed and understood that the title conveyed by Declarant to any of the Lots by deed shall be subject to any utility easement affecting the same and any other easement created in this Declaration or hereafter granted affecting the Lots. The Owners of the respective Lots shall not be deemed to own pipes, wires, conduits or other service lines running through their Lots which are utilized for, or serve other Lots, but each Owner shall have an easement in and to the aforesaid facilities as shall be necessary for the use, maintenance and enjoyment of their Lot.

No Maintenance by Hays County, Texas. ALL ROADWAYS IN THE MESA 3.2 VERDE SUBDIVISION IN HAYS COUNTY, TEXAS SHALL BE PRIVATELY MAINTAINED BY THE MESA VERDE PROPERTY OWNERS ASSOCIATION, INC., A TEXAS NONPROFIT CORPORATION. HAYS COUNTY, TEXAS SHALL NOT BE **RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF THE ROADWAY. THE ROADWAY WITHIN THE SUBDIVISION WILL BE MAINTAINED AND REPAIRED** BY MAINTENANCE ASSESSMENTS PAID BY OWNERS TO THE MESA VERDE PROPERTY **OWNERS** ASSOCIATION, INC., Α TEXAS **NONPROFIT** CORPORATION, IN ACCORDANCE WITH THE TERMS AND PROVISIONS IN CERTAIN DECLARATION OF THAT COVENANTS, CONDITIONS AND **RESTRICTIONS FOR MESA VERDE SUBDIVISION RECORDED AS DOCUMENT** NO. _____, OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS.

BY ACCEPTANCE OF A DEED TO A LOT WITHIN THE SUBDIVISION, EACH OWNER OF SUCH LOT COVENANTS AND AGREES TO WAIVE ANY RIGHT SUCH OWNER MAY HAVE TO DEMAND OR COMPEL THE MAINTENANCE OR REPAIR OF THE ROADWAYS OF THE SUBDIVISION BY HAYS COUNTY, TEXAS AND IS ESTOPPED FROM DOING SO. Furthermore, no entity will petition or otherwise seek Hays County, Texas to become responsible for such maintenance of the private roadways in the Subdivision. The private roadways in the Subdivision have been designed and certified by a Professional Engineer to meet or exceed Hays County, Texas specifications. A copy of the geotechnical report for the private roadways in the Subdivision is attached hereto as **Exhibit "B"**. The Hays County Transportation Department has reviewed and commented and ultimately approved of the approach set forth in this Declaration. The Hays County Transportation Department will receive a copy of this instrument once it is recorded with the Hays County Clerk for their records.

# ARTICLE 4

# GENERAL

4.1. <u>Amendment</u>. This Plan may be amended or restated by (i) the Declarant, acting alone; or (ii) by the president or secretary of the Association setting forth the amendment or restatement and certifying that such amendment or restatement has been approved by Declarant (until expiration or termination of the Development Period) or by a majority of the Board thereafter. No amendment to this Plan will be effective without the written consent of Declarant, its successors or assigns, during the Development Period.

4.2 <u>Partial Invalidity</u>. Invalidation of any of the terms, provisions, covenants, restrictions, or conditions contained in this Plan, by judgment, court order, operation of law or otherwise, shall in no way affect the validity any of the other terms, provisions, covenants, restrictions, or conditions hereof, which shall remain in full force and effect.

4.3 <u>Capitalized Terms</u>. Capitalized terms used by not defined herein shall have the meanings ascribed to such terms in the Declaration.

[SIGNATURE APPEARS ON FOLLOWING PAGE]

# [SIGNATURE PAGE TO MAINTENANCE PLAN FOR PRIVATE ROADS IN MESA VERDE]

EXECUTED to be effective on the date the Declaration is Recorded.

# DECLARANT:

Mesa Verde Texas LLC, a Texas limited liability company

By:

§ § Jeff Kent, Member

THE STATE OF TEXAS

COUNTY OF §

This instrument was acknowledged before me this _____ day of _____, 2022, by Jeff Kent, as the Member of Mesa Verde Texas LLC, a Texas limited liability company, on behalf of said company.

Notary Public – State of Texas

(SEAL)

# Exhibit "A"

# Legal Description of the Property

[See the following three (3) pages.]

Being a 271.62 acre tract of land situated in the N. McArthur Survey No. 3, Abstract No. 314 and Pleasant D. Alexander Survey, Abstract No. 22, Hays County, Texas, being all of a called 15.000 acre tract of land recorded in Instrument No 18014238, Official Public Records, Hays County, Texas and the remaining part of a called 348.7 acre tract of land recorded in Volume 1238, Page 428, Official Public Records, Hays County, Texas, said 271.62 acre tract being more particularly described by metes and bounds as follows:

BEGINNING at an iron rod found with a pink "RPLS 4863" plastic cap in the south right-of-way line of Fitzhugh Drive (County Road No. 101), the north line of the above referenced 348.7 acre tract, for the northeast corner of a called 26.922 acre tract of land recorded in Instrument No. 17028422, Official Public Records, Hays County, Texas and the northernmost northwest corner of the herein described tract;

THENCE with the south right-of-way line of Fitzhugh Road and north line of said 348.7 acre tract, North 88 degrees 52 minutes 39 seconds East, a distance of 276.47 feet to a found 3" cedar post;

THENCE continuing with the south right-of-way line of Fitzhugh Road and north line of said 348.7 acre tract, North 88 degrees 37 minutes 52 seconds East, at 414.85 feet a 1/2" iron rod found with a yellow "WCR" plastic cap for the northwest corner of the above referenced 15.000 acre tract and continuing with the south right-of-way line of Fitzhugh Road and north line of said 15.000 acre tract a total distance of 755.90 feet to a found 3" cedar post;

THENCE continuing with the south right-of-way line of Fitzhugh Road and north line of said 15.000 acre tract, North 88 degrees 43 minutes 47 seconds East, at 378.54 feet a 1/2" iron rod found with a yellow "WCR" plastic cap for the northeast corner of said 15.000 acre tract and continuing with the south right-of-way line of Fitzhugh Road and north line of said 348.7 acre tract a total distance of distance of 1242.72 feet to a found 3" cedar post;

THENCE continuing with the south right-of-way line of Fitzhugh Road and north line of said 348.7 acre tract, North 88 degrees 34 minutes 08 seconds East, a distance of 430.26 feet to a 1/2" iron rod found for the northwest corner of a called 348.7 acre tract of land recorded in Volume 527, Page 247, Deed Records, Hays County, Texas, the northeast corner of said 348.7 acre tract (Volume 1238, Page 428) and herein described tract;

THENCE with the west line of said 348.7 acre tract (Volume 527, Page 247) and the east line of said 348.7 acre tract (Volume 1238, Page 428), South 00 degrees 56 minutes 04 seconds East, a distance of 6370.94 feet to a 1/2" iron rod found in a north line of a called 650.29 acre tract of land recorded in Volume 2573, Page 474, Official Public Records, Hays County, Texas, for the southwest corner of said 348.7 acre tract (Volume 527, Page 247), the southeast corner of said 348.7 acre tract (Volume 1238, Page 428) and herein described tract;

THENCE with north lines of said 650.29 acre tract and south lines of said 348.7 acre tract (Volume 1238, Page 428) the following courses and distances:

South 89 degrees 22 minutes 59 seconds West, a distance of 260.53 feet to a 1/2" iron rod found;

South 87 degrees 52 minutes 46 seconds West, at 45.46 feet a 1/2" iron rod found and continuing a total distance of 282.08 feet to a 1/2" iron rod found;

THENCE with a north line of said 650.29 acre tract, a north line of a called 100.00 acre tract of land recorded in Volume 2778, Page 399, Official Public Records, Hays County, Texas and a south line of said 348.7 acre tract, South 88 degrees 54 minutes 59 seconds West, a distance of 255.13 feet to a 1" iron pipe found;

THENCE with northerly lines of said 100.00 acre tract and southerly lines of said 348.7 acre tract the following courses and distances:

North 87 degrees 54 minutes 11 seconds West, a distance of 377.17 feet to a 60d nail found in a 22" cedar tree;

South 89 degrees 15 minutes 47 seconds West, a distance of 489.23 feet to an iron rod found with a red "CARSON & BUSH" plastic cap;

North 89 degrees 47 minutes 31 seconds West, a distance of 71.91 feet to a 60d nail found in a 8" cedar fence post;

North 82 degrees 54 minutes 44 seconds West, a distance of 56.61 feet to a 60d nail found in a 18" cedar tree;

North 74 degrees 23 minutes 11 seconds West, a distance of 104.88 feet to a 60d nail found in a 24" cedar tree;

North 58 degrees 39 minutes 25 seconds West, a distance of 117.00 feet to an iron rod found with a red "CARSON & BUSH" plastic cap;

North 09 degrees 20 minutes 26 seconds West, a distance of 142.44 feet to an iron rod found with a red "CARSON & BUSH" plastic cap;

North 26 degrees 18 minutes 57 seconds West, a distance of 83.83 feet to an iron rod set;

North 46 degrees 59 minutes 48 seconds West, a distance of 71.64 feet to a 60d nail found in a 10" live oak tree;

South 47 degrees 35 minutes 24 seconds West, a distance of 71.34 feet to an iron rod found with a red "CARSON & BUSH" plastic cap;

North 72 degrees 58 minutes 12 seconds West, a distance of 128.77 feet to an iron rod found with a red "CARSON & BUSH" plastic cap for an interior corner of said 100.00 acre tract, the southernmost southwest corner of said 348.7 acre tract and herein described tract;

THENCE with an east line of said 100.00 acre tract and a west line of said 348.7 acre tract, North 00 degrees 40 minutes 31 seconds West, a distance of 34.61 feet to an iron rod found with a red "CARSON & BUSH" plastic cap for the southeast corner of Lot 2, Zamora Estates recorded in Instrument No. 17002204, Plat Records, Hays County, Texas and northermost northeast corner of said 100.00 acre tract;

THENCE with easterly lines of said Zamora Estates and westerly lines of said 348.7 acre tract the following courses and distances:

North 00 degrees 18 minutes 40 seconds West, a distance of 312.94 feet to an iron rod found with an orange "ZWA" plastic cap for the northeast corner of Lot 2 and southeast corner of Lot 3;

North 00 degrees 22 minutes 45 seconds West, a distance of 346.29 feet to a 1/2" iron rod found;

North 42 degrees 05 minutes 16 seconds West, a distance of 19.71 feet to a 1/2" iron rod found;

and North 00 degrees 07 minutes 27 seconds East, a distance of 98.83 feet to an iron rod found with an orange "ZWA" plastic cap for the northeast corner of Lot 3 and southeast corner of Lot 4;

and North 00 degrees 02 minutes 22 seconds West, a distance of 473.09 feet to a 1/2" iron rod found in the south line of a called 58.248 acre tract of land recorded in Document No. 16016708, Official Public Records, Hays County, Texas, for the northeast corner of Lot 4, the southernmost northwest corner of said 348.7 acre tract and herein described tract;

THENCE with a south and east line of said 58.248 acre tract and a north and a west line of said 348.7 acre tract the following courses and distances:

North 88 degrees 03 minutes 52 seconds East, a distance of 1287.24 feet to a 1/2" iron rod found for the southeast corner of said 58.248 acre tract, an interior corner of said 348.7 acre tract and herein described tract;

and North 00 degrees 57 minutes 14 seconds West, a distance of 889.46 feet to a 1/2" iron rod found for the southeast corner of a called 72.09 acre tract of land recorded in Volume 1840, Page 170, Official Public Records, Hays County, Texas, the northeast corner of said 58.248 acre tract;

THENCE with the east line of said 72.09 acre tract and a west line of said 348.7 acre tract, North 01 degrees 00 minutes 28 seconds West, a distance of 999.41 feet to a 1/2" iron rod found for the southeast corner of a called 33.28 acre tract of land recorded in Instrument No. 17039513, Official Public Records, Hays County, Texas, the northeast corner of said 72.09 acre tract;

THENCE with the east and north lines of said 33.28 acre tract, a west and south lines of said 348.7 acre tract the following courses and distances:

North 00 degrees 56 minutes 13 seconds West, a distance of 487.93 feet to a 3/4" iron rod found for the northeast corner of said 33.28 acre tract, an interior corner of said 348.7 acre tract and herein described tract;

South 88 degrees 34 minutes 51 seconds West, a distance of 1012.64 feet to a 12" cedar tree/fence post;

and South 89 degrees 19 minutes 45 seconds West, a distance of 195.15 feet to an iron rod found with a yellow "Staudt Surveying" plastic cap for the southeast corner of a called 35.04 acre tract of land recorded in Volume 4714, page 675, Official Public Records, Hays County, Texas and a southwest corner of the herein described tract;.

THENCE with the east and north line of said 35.04 acre tract the following courses and distances:

North 01 degrees 03 minutes 01 seconds West, a distance of 864.44 feet to an iron rod found with a yellow plastic cap for the northeast corner of said 35.04 acre tract and an interior corner of the herein described tract;

and South 88 degrees 48 minutes 43 seconds West, a distance of 504.73 feet to a found 3" metal fence post for the southeast corner of a called 15.00 acre tract of land recorded in Volume 4067, Page 650, Official Public Records, Hays County, Texas and the northernmost southwest corner of the herein described tract;

THENCE with the east line of said 15.00 acre tract, North 01 degrees 09 minutes 05 seconds West, a distance of 517.23 feet to an iron rod found with a plastic cap for the southeast corner of a called 26.922 acre tract of land recorded in Instrument No. 17028422, Official Public Records, Hays County, Texas and northeast corner of said 15.00 acre tract;

THENCE with the east line of said 26.922 acre tract, North 01 degrees 05 minutes 14 seconds West, a distance of 924.67 feet to the POINT OF BEGINNING containing 271.62 acres of land.

# Exhibit "B"

Geotechnical Report

[See the following thirty-four (34) pages.]



PROPOSED GEOTECHNICAL STUDY REPORT MESA VERDE RANCH DEVELOPMENT PAVEMENT Hays County, Texas

Prepared For: Langle Design and Construction Management Spicewood, Texas

> Prepared by: Atlas Technical Consultants, LLC. Dripping Springs, Texas

Atlas Project No. 220423.00 October 17, 2022



## October 17, 2022

Jude Langle Langle Design and Construction Management P.O. Box Spicewood, Texas 78669

### Atlas Geotechnical Study Report Subject: Mesa Verde Ranch Pavement Design Hays County, Texas Atlas Project No. 220423.00

Dear Mr. Langle:

This report presents the results of a study performed for the referenced project in Hays County, Texas. This study was performed in general accordance with our phone discussions and authorized with the signed master service agreement.

Our analysis and results of the field and laboratory testing are included in this report. We appreciate the opportunity to improve the quality of the infrastructure investments made to our region. Please feel free to contact us if you have any questions or if we can be of further service.

Sincerely,

Atlas Technical Consultants, LLC **TBPE Firm Registration No. 19813** 

Jimm, Baldwin, CET.

Project Manager

Copies Submitted: 1 (via email)



Sergio Flores, P.E. Geotechnical Engineer



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### Obtober 17, 2022 Atlas Project No. 220423.00

## 1 INTRODUCTION

## 1.1 PROJECT AND SITE DESCRIPTION

This report presents the results of the geotechnical pavement study for proposed roadways within the Mesa Verde Ranch development. This development is a 272-acre tract located in northwest Hays County east of McGregor Lane and south of West Fitzhugh Road. This location is outlined in the project vicinity exhibit in Figure 1. There are two proposed roadways based on the preliminary plan sheets provided. The area appears to be platted as rural large acreage subdivision with approximately 1.5 miles of proposed roadway comprised of a main entrance roadway and one cul-de-sac. Mesa Ranch Road and Mesa Alta Lane respectively.

## 1.2 PURPOSE AND SCOPE OF WORK

The purpose of this study was to review existing soil conditions and propose pavement profiles based on the materials encountered and the estimated traffic loading anticipated.

## 2 FIELD EXPLORATION

The proposed roadway materials were sampled at 12 locations, designated B-1 through B-12 in August 2022. The approximate sampling locations are presented on the Boring Location Exhibit, Figure 2. At selected depths, disturbed samples of non-cohesive and/or hard cohesive materials were collected by driving a split-spoon sampler in conjunction with the Standard Penetration Test (SPT). This technique involves driving the split-spoon sampler a distance into the soil using a free-falling hammer in general accordance with ASTM D1586. During the test, the logger records the number of blows required to drive the split-spoon sampler over three successive 6-inch increments. The first 6 inches is the "seating Drive", while the number of blows required to drive the sampler the last two 6-inch increments is the "penetration" in blows per foot. Where the resistance was high,

Page 2 of 9

the number of inches of penetration for 50 blows of the hammer is recorded. When less than 6 inches of penetration is obtained the test is terminated regardless of the drive increment. The results of the penetration test are reported on the boring log at the corresponding depth. Materials recovered from the split-spoon sampler are then placed in a plastic bag to protect the sample and reduce moisture loss. The boreholes were backfilled with soil cuttings and bentonite pellets upon completion of drilling.

Field boring logs were prepared by the drill crew as part of the drilling operations. The boring logs include visual classifications of the materials encountered during drilling and the drillers interpretation of the subsurface conditions between samples. The final boring logs included in this report represent the engineer's interpretation of the field logs and include modifications based on observations and testing of the samples in the laboratory. Soil strata boundaries shown on the boring logs are approximate. The stratification boundaries shown on the boring logs represent the approximate locations of the changes in the soil and rock types; in-situ, the transition between material types may be gradual and indistinct.

The boring locations should be considered accurate only to the degree implied by the method used in its determination. If a greater degree of accuracy is required or desired, then a licensed land surveyor should be retained to record coordinates and elevations of the borings. laboratory testing

## **3** LABORATORY TESTING

Laboratory testing was completed on select samples collected from the borings. Samples were examined at our laboratory by the project staff engineer. Classification tests performed for this study included liquid and plastic limits, collectively termed the Atterberg Limits, and sieve analysis. These tests are helpful in the evaluation of the engineering properties of the underlying soils. Results for these tests are presented in a

Page 3 of 9

summary table in Appendix B. All tests were performed in accordance with the applicable AASHTO, ASTM or TxDOT methods.

## 4 GENERAL MATERIAL OBSERVATIONS

The existing subgrade materials were observed to be generally a sandy lean clay to heavy clay with Plasticity Index (PI) values between 4 and 59. The higher plasticity indexes are generally found in the upper 18 inches of subgrade and transitioning to lean clay materials. Based on the plasticity indexes of the subgrade the resilient modulus values were estimated to be 4000 psi.

Atlas representatives observed the existing conditions to develop our recommendations. This project includes dry creek beds that appear to provide seasonal drainage for the area that will need to be addressed at the crossing locations. Drainage is assumed to meet the general requirements for subdivision development established by Hays County. There is not a developed drainage plan provided for the project and the compliance with these standards. The standards include graded ditch lines at the adjacent to paving surface within the right of way (ROW) and minimum cross slopes as outlined for Cul-de-sacs. If this assumption is in error, please advise and we will revise the report accordingly.

Soil Survey Exhibit, Figure 3, shows the general location of the various soils found within the project limits. Detailed information on these soils can be found in the soil survey data sheets and report from the United States Department of Agriculture National Resource Conservation Service. Information on the material descriptions and some of the engineering properties have been provided.

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#### Optober 17, 2022 Atlas Project No. 220423.00

#### 5 PAVEMENT RECOMMENDATIONS

#### 5.1 PAVEMENT SUBGRADES

Subgrade materials at this site are anticipated to be predominately clayey sands with some lean and fat clays in as you move through the project to the south. The soil is subject to loss of support with moisture increases that can occur beneath paving. Pavement subgrade should be graded to prevent ponding and infiltration of excessive moisture on or adjacent to the pavement subgrade surface.

Materials encountered on the project have some expansive clays and with the proximity of the creek on the south end of the project there is an anticipation of water movement to the south. These subgrade materials should be stabilized to help mitigate the effects of moisture fluctuation anticipated. Lime stabilization is recommended for the underlying soils.

#### 5.2 PAVEMENT SECTIONS

The proposed project will require standard-duty pavements, and both rigid and flexible pavement systems may be under consideration. It should be noted that a flexible pavement system will require more frequent repair and maintenance that is more than is required for a rigid during the period of design life of the pavement.

Pavement thickness calculations were performed using the parameters shown in table 5.2 that were developed based on assumed traffic data and the procedures outlined by the American Association of State Highway and Transportation Officials (AASHTO). Based on the assumed traffic data, the following types of pavements and corresponding ESAL's (Table 5.1) are considered for our pavement recommendations of the proposed development.

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#### Table 5.1 - Pavement Design Loading

Location	Unit Type	Pavement Type	¹ ESAL
² Local Street	AUTO'S	Standard Duty	45,000

Assumed Equivalent Single Axle Load
 Roadway designation in accordance with Hays County Specifications for Roadway Design.

When appropriate, the item listed in parenthesis at the end of each item refers to the source of the value.

Design Parameter	Value
Design Life	20 Years
Reliability	50% (assumed)
Standard Deviation	0.35 for Rigid, 0.45 for Flexible (AASHTO)
28-Day Compressive Strength	3,600 psi (assumed)
Concrete Elasticity Modulus	3,420,000 psi
Load Transfer Coefficient	2.9 (AASHTO)
Subgrade Resilient Modulus	4,000 psi (AASHTO)
Modulus of Subgrade Reaction	150 pci
Drainage Coefficient	1.0 (assumed, AASHTO)
Initial Serviceability	4,5 for Rigid, 4.2 for Flexible (AASHTO/Hays County)
Terminal Serviceability	1.5 (Hays County)

#### Table 5.2 - Pavement Design Parameters

Page 6 of 9

Recommended pavement thickness values for both rigid (concrete) and flexible (asphaltic) pavement systems are provided in Table 5.3. The recommended rigid and flexible sections for each pavement type are considered equivalent with respect to pavement design loading data as presented in Table 5.1.

#### Table 5.3 - Recommended Pavement Thickness

Pavement Type	Rigid Section	Flexible Section
Residential Roadway	6" TXDOT Class P JCP 8" Lime Treated Subgrade	2" HMAC Ty C or Ty D $^{(1)}8$ " TXDOT Item 247 Gr 1-2 (min. Pl $\geq$ 4) $^{(2)}8$ " Lime treated Subgrade

 Minimum Base thickness for HMAC roadways based on SPECIFICATIONS FOR ROADWAY DESIGN, PAVING AND DRAINAGE IMPROVEMENTS HAYS COUNTY, TEXAS item 300.

 Minimum Lime Treated Subgrade thickness to be used in pavement design based on SPECIFICATIONS FOR ROADWAY DESIGN, PAVING AND DRAINAGE IMPROVEMENTS HAYS COUNTY, TEXAS item 1.07.

#### 5.3 PAVEMENT MATERIAL SPECIFICATIONS

Recommended material specifications for the recommended pavement sections are provided below.

<u>Portland Cement Concrete</u> - TXDOT Item 360 (Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, 2004 Edition), with a minimum flexural strength of 500 psi at 28 days that corresponds to roughly 3,600-psi compressive strength. Concrete should be steel reinforced and include joints to control the formation of temperature and shrinkage related cracks. Concrete should include air entrainment to increase the resistance to temperature effects. As a general guide the air entrainment should vary from 4 to 6 percent.

Page 7 of 9

Hot Mix Asphaltic Concrete Surface Course - TxDOT Item 344 Ty C or Ty D

<u>Crushed Stone Base Material</u> – TxDOT Item 247, Flexible Base Material, Ty D Gr 1-2 or better with a minimum plasticity index of 4. Note that it may be necessary to reduce the lift thickness to achieve the desired compaction.

<u>Soil Stabilization</u> - TxDOT Item 260, Lime Treatment (Road Mixed), 5% lime estimated based on PI range. Soil should be tested for detrimental organics and sulfates prior to stabilization.

<u>Subgrade</u> – All subgrade under roadway shall be prepared and constructed in accordance with Specifications for Roadway Design, Paving and Drainage Improvements Hays County, Texas dated May 13, 2019 sections 1.03 and 1.04.

#### 5.4 PREVENTATIVE MAINTENANCE

Preventative maintenance in the form of drainage maintenance should be planned for all pavement sections. Drainage areas should be kept clear to not allow standing water on or near the pavement areas. Differential soil movements can occur that can cause pavement cracking. Water entering cracks can reduce the service life of the pavement. Preventative maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment.

#### **6** LIMITATIONS

In preparation of this report, we have strived to perform our services in a manner consistent with that level of care and skill ordinarily exercised by other members of our profession currently practicing in the same locality under similar conditions and at the time the services are provided. The results, conclusions, opinions, and recommendations provided in this report are directed at, and intended to be utilized within, the scope of work contained in the proposal and agreement executed by Atlas Technical Consultants, LLC and Langle Design and Construction Management. These are based on a limited number of observations and data. It is possible that conditions could vary between or

Page 8 of 9

beyond the data evaluated. Atlas Technical Consultants, LLC makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

The scope of services did not include subsurface utilities or environmental assessments regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or groundwater at this site.



# FIGURES





Atlas Technical Consultants, LLC



Atlas Technical Consultants, LLC



Atlas Technical Consultants, LLC

# Appendix A

Atlas Technical Consultants, LLC

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FA Tra	AT CLAY, (CH) , brown, stiff, highly plastic, dry with gra gments and organics	spt 1		3-4-5 (9)				90	31	59	98
2.5 SANDY FAT CLAY, (CH) - brown, tan, orange, hard, o limestone fragments at 2 feet	with SPT 2		9-21-50 (71)				50	17	33	62	
	an with limestone fragments at 3.5 feet to recovery, grab sample	SPT 3		50							
	Bottom of borehole at 5.0 feet.								-	-	-

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		15	15 10

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20	12	8	31	
	20.	39 22	39     22     17       20     12     8	

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RG						LLING	TER DRI			dwater not e	Grou	NOTE
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<u>a</u> 1					8-18-25 (43)		SPT 1	derate pl	/n.,tan, orange, hard, mo lents	LEAN CLAY dry with lime		0.0
8	27 19	-			19-22-20 (42)		SPT 2	ge, dense	2.5 CLAYEY SAND WITH GRAVEL. (SC) . tan, orange, d plasticity, dry with limestone fragments.			
					28-50		SPT 3			- very dense		
-		-					-	-	m of borehole at 5.0 feet.		CEA.	5.0
					28-50		SPT 3	-	n of borehole at 5,0 feet.	-		5.0

CLIENT PROJECT DATE ST. DRILLING DRILLING LOGGED	El Paso, Texas 79932 Telephone: (915) 760 - 6121 Langel Design and Construction T NUMBER ARTED 8/6/22 COMPLETED 8/6/22 G CONTRACTOR Austin Geo-Logic S METHOD Air Rotary BY Mike CHECKED BY SE	PROJEC PROJEC GROUNI GROUNI AT AT	T NAME T LOCAT D ELEVA D WATER TIME OF END OF		a Verde Ra Dripping S 1238 LS: LING JNG	nch prings	Hays HOLE	: Coun SIZE	ty, Te 4 inc	xas hes		
GRAPHIC	MATERIAL DESCRIPTION		SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)		PLASTIC MER		NES CONTENT
0.0	SANDY FAT CLAY, (CH), brown, tan, orange, very st plastic, dry with limestone fragments and organics	iiff, highly	SPT 1		2-7-11 (18)				75	24	51	67
2.5 LEAN CLAY WITH SAND, (CL). tan. orange, very st plasticity, dry with limestone fragments and calcium of	ff, low eposits	SPT 2		7-12-13 (25)				26	17	9	76	
	LEAN CLAY. (CL) , tan, orange, very stiff, low plasticit limestone fragments and calcium deposits.	ly, dry with	SPT 3		12-15-15 (30)				23	17	6	.91
5.0	Bottom of borehole at 5.0 feet.		SPT 3		12-15-15 (30)				23	17	6	

LIMITS
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s 18 16
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CLIEN PROJ DATE DRILI	CLIENT Langel Design and Construction Management PROJECT NUMBER 220423.00 DATE STARTED 8/6/22 COMPLETED 8/6/22 DRILLING CONTRACTOR Austin Geo-Logic DRILLING METHOD Air Rotary COCCER BY, NWA		PROJEC PROJEC GROUND GROUND	T NAME T LOCAT D ELEVA D WATER		a Verda Ra Dripping S 1278 LS:	anch prings	Hays HOLE	Coun SIZE	ty, Te 4 inc	xas hes		
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DEPTH	GRAPHIC LOG	MATERIAL DESCRIPTION		SAMPLE TY NUMBER	RECOVERY (ROD)	BLOW COUNTS (N VALUE	POCKET PE (tsf)	DRY UNIT V (pcf)	MOISTUR CONTENT (	LIQUID	PLASTIC	PLASTICITY	FINES CONT
<u></u>		CLAYEY SAND WITH GRAVEL. (SC) , brown, tan, ora dense, dry, moderate plasticity, dry with limestone frage	nge, very ments	SPT 1		9-50				37	23	14	25
2.5	SILTY, CLAYEY SAND WITH GRAVEL. (SC-SM) . tan dense, low plasticity, dry with limestone fragments - very dense at 3.5 feet	orange.	SPT 2		15-16-14 (30)				24.	19	5	40	
		- very dense at 3.5 feet - no recovery, grab sample		SPT 3		25-50							

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CLAYEY SAND, (SC) brown, tan; orange, dense, mode plasticity, dry with limestone fragments and organics	spt 1		4-12-21 (33)				53	22	31	47
- very dense with limestone fragments at 2 feet	SPT 2		16-22-30 (52)				28	18	10	45
CLAYEY SAND WITH GRAVEL - at 3.5 feet	SPT 3		27-34-30 (64)							
	CLAYEY SAND, (SC) brown tan, orange, dense, modi plasticity, dry with limestone fragments and organics - very dense with limestone fragments at 2 feet CLAYEY SAND WITH GRAVEL - at 3.5 feet Bottom of borehole at 5.0 feet.	MATERIAL DESCRIPTION CLAYEY SAND, (SC) brown, tan, orange, dense, moderate plasticity, dry with limestone fragments and organics - very dense with limestone fragments at 2 feet CLAYEY SAND WITH GRAVEL - at 3.5 feet SPT 3 Bottom of borehole at 5.0 feet.	MATERIAL DESCRIPTION  CLAYEY SAND, (SC) brown, tan. orange, dense, moderate plasticity, dry with limestone fragments and organics  - very dense with limestone fragments at 2 feet  CLAYEY SAND WITH GRAVEL - at 3.5 feet  Bottom of borehole at 5.0 feet.	MATERIAL DESCRIPTION       Lange of the second	MATERIAL DESCRIPTION     August Buyon Bu	MATERIAL DESCRIPTION     Summer       CLAYEY SAND, (SC), brown tan, orange, dense, moderate plasticity, dry with limestone fragments and organics     SPT     4-12-21       - very dense with limestone tragments at 2 feet     SPT     1       CLAYEY SAND, WITH GRAVEL - at 3.5 feet     SPT     16-22-30       SPT     27-34-30     (64)	MATERIAL DESCRIPTION     Mathematical description     Mathematical description       CLAYEY SAND, (SC), brown, tan, orange, dense, moderate plasticity, dry with limestone fragments and organics     SPT     4-12-21       - very dense with limestone tragments at 2 feet     SPT     16-22-30       CLAYEY SAND WITH GRAVEL - at 3.5 feet     SPT     27-34-30       Bottom of borehole at 5.0 feet.     SPT     27-34-30	MATERIAL DESCRIPTION       August 1 (s) (s) (s) (s) (s) (s) (s) (s) (s) (s)	MATERIAL DESCRIPTION     August 1 (900)     Monon (900)     Monon (900)     Monon (900)       CLAYEY SAND, (SC). brown tan, orange, dense, moderate plasticity, dry with limestone fragments and organics     SpT 1     4-12-21 (33)     53     22       - very dense with limestone fragments at 2 feet     SPT 2     16-22-30 (52)     53     22       CLAYEY SAND WITH GRAVEL - at 3.5 feet     SPT 3     27-34-30 (64)     1     28     18	MATERIAL DESCRIPTION       No. (1)       N

						NP LS: ING ING	DRILLI DRILLI	D ELEVAT D WATER TIME OF END OF TER DRII	GROU GROU	CLIENT       Langel Design and Construction Management         PROJECT NUMBER       220423.00         DATE STARTED       8/6/22         COMPLETED       8/6/22         DRILLING CONTRACTOR       Austin Geo-Logic         DRILLING METHOD       Air Rotary         LOGGED BY       Mike       CHECKED BY SF         NOTES       Groundwater not encountered.			
	PLASTIC WIR		MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	POCKET PEN. (tst)	BLOW COUNTS (N VALUE)	RECOVERY % (ROD)	SAMPLE TYPE NUMBER		MATERIAL DESCRIPTION	106	GRAPHIC LOG	o DEPTH
16	22	40				9-8-15 (23)		SPT 1	dry, moderate cs	AN CLAY, (CL), tan, orange, very stiff, d y with limestone fragments and organics	SANDY LE plasticity, d		-
						8-7-8 (15)		SPT 2	t 2 feet	one fragments and calcium deposits at 2	- with limes		2.5
6	14	20				12-12-11 (23)		SPT 3	, tan,orange, Igments	YEY SAND WITH GRAVEL, (SC-SM) , t nse, low plasticity, dry with limestonefrag	SILTY, CLA medium de		and a second
	14	20				12-12-11 (23)		SPT 3	, tan,orange, igments	YEY SAND WITH GRAVEL. (SC-SM) , t ise, low plasticity, dry with limestonefrag Bottom of borehole at 5.0 feet.	SILTY, CL/ medium de		5.0

## Appendix B

Atlas Technical Consultants, LLC

					)	Viesa Vi	erde Rai	nch Soil	s Boring	js					
Tes	t Na.	1	1 2	3	4	5	6	7	8	9	1 10	11	12	13	14
Lab	No:	221597	221598	221600	221601	221603	221605	221807	221609	221610	221611	221612	221614	221615	221617
Loci	ation	E	31	E	32	E	33	B4	1211-01	B5	1.11	1	36	E	17
Test	Depth	0-1.5	2-3.5	0-1.5	2-3.5	0-1.5	3.5.5	2-3.5	0-1.5	2-3.5	3.5-5	0-1.5	3.5-5	0-1.5	3.5-5
Sleve Size	Test Method	1	Cumulative % Retained												
3/8"	A second second	0.0	4.6	26	0.0	7.0	1.3	21.1	1.6	0.0	0.8	1.2	17.2	20.2	1.9
No. 4	Tex-110-E	0.2	12.1	8.5	4.3	14.9	5.9	26.5	6.1	2.2	1.3	9.2	24.4	32.6	7.6
No. 40		0.5	31.6	26.3	41.5	45,9	32.7	48.4	26.4	15.6	4.9	30,5	50.1	57.9	34.9
- #200 Wash	Tex-111-E	98.0	62.0	70.2	41.4	28.3	38.7	39.6	66.8	75.7	90.9	60.9	34.7	27 8	45.5
L	Tex-104-E	90	50	93	25	39	20	27	75	26	23	76	34	44	18
PL	Tex-105-E	31	17	38	15	22	12	19	24	17	17	36	18	25	14
PI	Tex-106-E	59	33	55	10	17	8	B	51	9	6	40	16	19	4

Tes	Test No.		16	17	18	19	20	21	22
Lab No:		221618	221619	221621	221625	221627	221628	221630	221632
Location		B8		Ba	810	B11		B12	
Test	Depth	0-1.5	2-3.5	0-1.5	2-3.5	0-1.5	2-3.5	0-1.5	3.5-5
Sleve Size	Test Method	-	-	C	umulative	% Retain	ied		
3/8"		14.9	5.2	7.5	2.6	5.0	2.1	0.0	14.5
No. 4	Tex-110-E	29.5	7.2	10.5	13.2	13.5	8.0	4.0	23.3
No. 40		58.4	31.8	35.3	49.9	42.2	36.9	26.9	52.0
- #200 Wash	Тех-111-Е	245	39.9	43.3	32.7	47:1	44.7	54.7	39,2
L	Tex-104-E	37	24	32	25	53	28	40	20
FL	Tex-105-E	23	19	18	15	22	18	22	14
PI	Tex-106-E	14	5	14	10	31	10	18	6

# Appendix C





This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. Maps from the Web Soil Survey are based on the Web Mercator distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more Date(s) aerial images were photographed: Dec 15, 2019-Dec contrasting soils that could have been shown at a more detailed Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of The orthophote or other base map on which the soll lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident. projection, which preserves direction and shape but distorts Soil map units are labeled (as space allows) for map scales Source of Map: Natural Resources Conservation Service The soil surveys that comprise your AOI were mapped at Please rely on the bar scale on each map sheet for map accurate calculations of distance or area are required. Soll Survey Area: Comel and Hays Countles, Texes Survey Area Data: Version 18, Sep 10, 2021 Coordinate System: Web Mercator (EPSG:3857) MAP INFORMATION Warning: Soil Map may not be valid at this scale. Web Soll Survey URL: 1:50,000 or larger. measurements. 20,000. 19, 2019 scale. Special Line Features Streams and Canals Interstate Highways Aerial Photography Very Story Spot Major Roads Local Roads Story Spot US Routes Spoll Area Wet Spot Other Rals fater Features 5 ckground MAP LEGEND **Panspor** π à 10 8 ۰. ł Soll Map Unit Polygons Severely Eroded Spot Area of Interest (AOI) Soll Map Unit Lines Soll Map Unit Points Miscellaneous Water Closed Depression Marsh or swamp Perennlal Water Mine or Quarry Special Point Features Rock Outcrop Gravely Spot Sandy Spot Silde or Silp Salhe Spot Lava Flow Borrow PR Sodic Spot Gravel Ptt Clay Spot Area of Interest (AOI) Sinkhole Blowout Indfill 9 -) ¢. ø ÷ ž 0 0 × ø 0 þ ñ. 魚 0 8 -0 ×. à 2 Solis

Web Soll Survey National Cooperative Soll Survey

9/21/2022 Page 2 of 3

USDA Natural Resources Conservation Service

Soil Map-Comal and Hays Counties, Texes (Mesa Verde Ranch)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BiB	Bolar clay loam, 1 to 3 percent slopes	2.3	0.5%
BtD	Brackett-Rock outcrop-Comfort complex, 1 to 8 percent slopes	109.5	22.1%
BtG	Brackett-Rock outcrop-Rasi complex, 8 to 30 percent slopes	5.6	1.1%
DeB	Denton silty clay, 1 to 3 percent slopes	72.5	14.7%
DoC	Doss silty clay, moist, 1 to 5 percent slopes	121.4	24.5%
KrB	Krum clay, 1 to 3 percent slopes	24.6	5.0%
LeB	Lewisville silty clay, 1 to 3 percent slopes	23.0	4.6%
ReD	Real-Comfort-Doss complex, 1 to 8 percent slopes	126,4	25.5%
RUD	Rumple-Comfort, rubbly association, 1 to 8 percent slopes	9.8	2.0%
Totals for Area of Interest	a concern and	495.0	100.0%

## Map Unit Legend

SD4 Natural Resources Conservation Service Web Soll Survey National Cooperative Soil Survey 9/21/2022 Page 3 of 3



Date: 01/03/2023 Requested By: Sponsor:

Miller/Dorsett Commissioner Shell

#### Agenda Item

Discussion and possible action to temporarily suspend the Hays County Salary Exception Policy pending finalization of the current market study. SHELL/MILLER/DORSETT

#### Summary

The HR Director and Budget Office are requesting a temporary suspension of the current salary exception policy that authorizes Department Heads or Elected Officials to hire positions graded 113 or higher up to the 25th percentile without court approval. This policy is being reviewed as part of the current salary study and anticipate some changes will be recommended for implementation with a new salary structure.



Sponsor:	Judge Becerra
Requested By:	Vickie Dorsett
Date: 01/03/2023	

#### Agenda Item

Discussion and possible action regarding setting the required bond amounts for certain newly elected County Officials to be sworn in to office January 2023. BECERRA

#### Summary

County Commissioner, Marie Michelle Cohen - \$3,000 payable to the Hays County Treasurer District Attorney - Kelly Higgins - \$5,000 payable to the Governor County Court at Law Judge - Jimmy Alan Hall - \$250,000 payable to the Hays County Treasurer County Court at Law Judge - Elaine Sommers Brown - \$250,000 payable to the Hays County Treasurer Justice of the Peace Pct. 5 - Sandra Bryant - \$5,000 payable to the Hays County Judge District Clerk - Avery James Anderson - \$100,000 payable to the Governor



Date: 01/03/2023	
Requested By:	Kelly Higgins
Sponsor:	Judge Becerra

#### Agenda Item:

Discussion and possible action to authorize the Criminal District Attorney's Office to hire the First Assistant District Attorney slot 0780-001 at the 25th percentile, and three Attorney V positions 0784-003, 004 & 005 at the 19.38th percentile; authorize a \$10,000.00 annual salary increase for two Court Chief Attorney V positions 0784-001 and 013; and a \$400.00 monthly salary stipend for one Attorney V position 0784-007 effective January 1, 2023. BECERRA/HIGGINS

#### Summary:

The Criminal District Attorney's Office is asking the court's consent to hire the First Assistant District Attorney at the 25th percentile. The candidate has over 30 years' experience as a prosecutor and extensive experience supervising prosecuting attorneys and organizing large offices. His tenure as Director of Operations for the Travis County DA's Office provided essential knowledge and experience for the mission of the office.

In addition, the District Attorney's Office needs to fill five felony court chief positions during the transition between administrations. This includes four of the five existing positions and one new position to serve as Court Chief Prosecutor in the newly created 483rd Judicial District Court. Most of these positions are vacant due to higher salary prospects in neighboring counties. During the recruitment efforts, we have learned that most District Attorney Offices along the I-35 corridor pay their chief level attorneys more than Hays County. This has made it very difficult to recruit qualified, experienced prosecutors from the area. To attract talent from outside the office, the DA had to offer an additional \$10k (19.38th percentile) above the minimum salary. Two attorneys have accepted that offer and are being hired and one is pending. Even at that amount, many of the attorneys we attempted to recruit turned down the offer due to salary requirements not being met.

To keep the current court chief and newly promoted prosecutors that have remained with the office in parity with the new attorneys recruited from outside the office, the DA is requesting an annual salary increase of \$10,000 for existing Court Chief Attorney position slots 0784-001 and 013; and a \$400 monthly increase for Attorney position slot 0784-007 who will be the Juvenile Section Chief as part of the restructure coming in January. These increases are necessary to maintain equity within the office and to maintain the valuable experience of our current chief level prosecutors.

Fiscal Impact:

Amount Requested: \$85,501 (annualized, includes fringe) \$64,126 (FY23) Line Item Number: 001-607-00]

#### Budget Office:

Source of Funds: General Fund Budget Amendment Required Y/N?: No Comments: Funds are available within the operating budget due to attrition. Current Employee's: \$20,000 Two \$10k Court Chief Increases \$4,800 One \$4,800 Salary Stipend \$24,800 Total Salary \$5,317 Fringe \$30,117 Total Annualized

\$22,588 FY23 Impact (eff 1/1/23-9 mos)

## New Hires:

\$15,606	First Asst. DA at 25th percentile
\$30,000	Three Attorney V slots at 19.38th percentile
\$45,606	Total Salary

\$ 9,778	Fringe				
\$55,384 Total Annualized					
\$41,538	541,538 FY23 Impact (eff 1/1/23-9 mos)				
Total Impac	Total Impact:				
\$85,501	Total Impact Annualized				
\$64,126	FY23 Impact (eff 1/1/23-9 mos)				

Auditor's Office:

Purchasing Guidelines Followed Y/N?: N/A G/L Account Validated Y/N?: Yes, Salaries and Benefits Expenses New Revenue Y/N?: N/A Comments:



Date: 01/03/2023 Requested By: Sponsor:

MONTAGUE Commissioner Shell

#### Agenda Item:

Discussion and possible action authorizing the County Judge to execute a Texas Workforce Commission Information Release Contract for the Hays County Constable, Pct. #3 Office. SHELL/MONTAGUE

#### Summary:

See attached material. This contract is \$1,500 per year, for a three year-term ending December 31, 2025.

Fiscal Impact: Amount Requested: \$4,500 (3-year period) Line Item Number: 001-637-00.5448

#### **Budget Office:**

Source of Funds: General Fund Budget Amendment Required Y/N?: No Comments: N/A

#### Auditor's Office:

Purchasing Guidelines Followed Y/N?: N/A G/L Account Validated Y/N?: Yes, Contract Services New Revenue Y/N?: N/A Comments:

TWC Constable 3 Contract

Attachments

#### TEXAS WORKFORCE COMMISSION PERFORMING AGENCY CONTRACT

## **TEXAS WORKFORCE COMMISSION**

		TWC Contract Number	er 2923PEN047		
TITLE	INFORMATIC	ON RELEASE CONTRA	СТ		
Recipient					
Name         Hays County for the benefit of Constable PCT 3					
Street Address	reet Address 200 Stillwater				
City/State/Zip	Wimberly, TX 78676	Wimberly, TX 78676			
Telephone Number	(512) 847-5532				
	Contract Pe	riod			
This Contract shall begin on January 1, 2023 ("Begin Date") and shall terminate on December 31, 2025 ("End Date").					
Funding Information					
The total amount of	this Contract will not exceed the sum	of	\$4,500.00		
	Remark	S			
This Contract is cont this Contract and any	tingent on Recipient's acceptance of y referenced attachments.	and compliance with the te	rms and conditions of		
	Summar	y			
Information to be pro	ovided by TWC will include:				
• wage records (WR	L),				
• unemployment con	mpensation claim benefit data (UI),				
• employer master f	ile (ER) inquiry.				
Type of Access:					
Type of Access: Online access only					
Number of online us	Number of online users and rate:				
1-10 for \$1,500/year	1-10 for \$1,500/year for 3 years.				
Prior contract referen 2918PEN028.	nce: This contract replaces and super	sedes all previous contracts	s, including		

TEXAS WORKFORCE COMMISSION PERFORMING AGENCY CONTRACT

## Signature Authority

Each person signing this Contract hereby warrants that he or she has been fully authorized by the respective organization to:

- Execute this Contract on behalf of the organization, and
- Validly and legally bind the organization to all the terms, performances, and provisions of this Contract.

Agency Approva	al	Recipient Approval		
Agency: Texas Workforce Com	mission	Recipient: Hays County for the benefit of Constable PCT 3		
Heather Hall	11/28/2022			
Heather Hall	Date	Ruben Becerra	Date	
Chief Information Officer		Hays County Judge		

DocuSign Envelope ID: 099D90FA-762C-4300-8443-953D441085D2

#### TEXAS WORKFORCE COMMISSION PERFORMING AGENCY CONTRACT

## **TABLE OF CONTENTS**

General Terms and	d Conditions
Section 1	Purpose and Legal Authority
Section 2	Term, Termination, and Amendment
Section 3	Consideration
Section 4	Protecting the Confidentiality of TWC Information
Section 5	Records and Audit
Section 6	Breach of Agreement, Default, and Remedies
Section 7	Miscellaneous
Attachment A	Statement of Work – Project Obligations
Attachment B	Safeguards for TWC Information
Attachment C	Texas Workforce Commission User Agreement
Attachment D	Cover Sheet for Transmitting User Agreement and Training Certificate
Attachment E	Intentionally omitted
Attachment F	Certificate of Destruction for Contractors and Vendors
Attachment G	Quarterly Self-Assessment Report
Exhibit 1 – RSP	TWC Data Exchange Request and Safeguard Plan
TEXAS WORKFORCE COMMISSION PERFORMING AGENCY CONTRACT

# **TEXAS WORKFORCE COMMISSION**

# **INFORMATION RELEASE CONTRACT**

# **GENERAL TERMS AND CONDITIONS**

## **SECTION 1 – Purpose and Legal Authority**

- 1.1 This Contract sets forth the obligations of the Texas Workforce Commission ("Agency") and the Recipient identified on the cover page (each a "Party" and together "the Parties") with respect to Agency's release of confidential data to Recipient. The obligations of the Parties are set forth in detail in **Attachment A.**
- 1.2 Subject to certain limitations, the Interlocal Cooperation Act, Texas Government Code, Chapter 791, authorizes Recipient to enter into contracts for services with governmental entities, including state agencies.

## SECTION 2 - Term, Termination, and Amendment

- 2.1 This Contract is effective from the Begin Date to the End Date specified on the cover page.
- 2.2 Either Party may suspend or terminate this Contract at any time, on written notice to the other Party specifying a termination date at least thirty (30) calendar days after the date of the notice. Suspension or termination shall not relieve Recipient of the obligation to pay for all services provided before suspension or termination at the rates specified herein. Recipient shall not be entitled to any refund of the annual subscription fee if access to Agency records is online.
- 2.3 No modification will be valid unless in writing and signed by both Parties, except for rate revisions made under Section 3.2 of these General Terms and Conditions.

# **SECTION 3 – Consideration**

- 3.1 Recipient shall pay Agency for the services described, and at the rates set forth, in Attachment A.
- 3.2 Notwithstanding Section 3.1 of these General Terms and Conditions, Agency may unilaterally revise rates upon written notice to Recipient of at least thirty (30) calendar days.

# **SECTION 4 – Protecting the Confidentiality of TWC Information**

4.1 "TWC Information" means records maintained by Agency, and records obtained by Recipient from Agency under this Contract, including (1) records and data compilations provided electronically, on paper, or via online access or e-mail, (2) records and data compilations that Recipient has converted into

TEXAS WORKFORCE COMMISSION PERFORMING AGENCY CONTRACT

another format or medium (such as handwritten or electronic notes), and (3) records and data compilations incorporated in any manner into Recipient's records, files or data compilations.

4.2 Recipient shall protect the confidentiality of TWC Information and comply with all statutory, regulatory and contract requirements. Confidentiality is required by Texas Labor Code §§ 301.081 and 301.085, the Social Security Act of 1934, and 20 Code of Federal Regulations (C.F.R.) Part 603.

# **SECTION 5 – Records and Audit**

Recipient shall keep and maintain complete and accurate records sufficient to allow Agency, the Texas State Auditor's Office, the United States government, and their authorized representatives to determine Recipient's compliance with this Contract.

# SECTION 6 – Breach of Agreement, Default, and Remedies

- 6.1 If Recipient or any official, employee, or agent of Recipient fails to comply with any provision of this Contract, including timely payment of Agency's invoices, Agency may suspend services to Recipient (including any data requests being processed) until Agency is satisfied that corrective action has been taken to assure there will be no future breach.
- 6.2 In the absence of prompt and satisfactory corrective action to cure default and assure future compliance with Contract requirements, Agency shall terminate this Contract immediately and Recipient shall surrender to Agency all TWC Information that has not previously been returned to Agency, and any other records relevant to this Contract.
- 6.3 Termination of this Contract under Section 6.2 of these General Terms and Conditions will not limit Agency from pursuing penalties under state and federal law for the unauthorized disclosure of TWC Information.
- 6.4 Agency shall undertake any other action under this Contract or under any law of this State or of the United States, to enforce this Contract and to secure satisfactory corrective action and return of TWC Information.
- 6.5 Agency shall take other remedial actions permitted under state or federal law to enforce this Contract and 20 C.F.R. Part 603 including seeking damages, penalties, and restitution for all costs incurred by Agency in enforcing this Contract and responding to Recipient's breach.

# **SECTION 7 – Miscellaneous**

7.1 Texas Labor Code § 301.085 provides that unemployment compensation records are not "public information" for purposes of the Public Information Act, Texas Government Code, Chapter 552. Recipient shall not release any TWC Information in response to a request made under the Public Information Act or any other law, regulation, or ordinance addressing public access to government records.

Information Release Contract: February 2022 TWC Contract Number: 2923PEN047 – Hays County Page 5 of 6 TEXAS WORKFORCE COMMISSION PERFORMING AGENCY CONTRACT

- 7.2 Recipient shall notify Agency within twenty-four (24) hours of the receipt of any subpoena, other judicial request, or request for appearance for testimony upon any matter concerning TWC Information. Federal regulations at 20 C.F.R. § 603.7 dictate the handling of subpoenas for TWC Information.
- 7.3 This Contract is made in and performed in the State of Texas, and shall be construed, interpreted, and applied in accordance with the laws of the State of Texas, excluding its choice of law rules. Venue of any court action brought directly or indirectly by reason of this Contract shall be in a court of competent jurisdiction in Travis County, Texas. NOTHING IN THIS SECTION SHALL BE CONSTRUED AS A WAIVER OF SOVEREIGN IMMUNITY BY AGENCY.
- 7.4 Agency's failure to enforce any provision of this Contract does not constitute a waiver of that provision or any other.
- 7.5 Recipients agrees to indemnify and hold harmless Agency, the State of Texas, and their employees and officials for any loss, damages, judgments, and costs arising or resulting from any acts or omissions or alleged acts or omissions of Recipient or its employees, agents, contractors, and subcontractors, including the inappropriate release or use of TWC Information.
- 7.6 Recipient shall be responsible and liable for any damages resulting from a breach by Recipient including damages and losses of third parties. Recipient shall reimburse Agency for any costs incurred by Agency in reimbursing third parties damaged by Recipient's breach and costs incurred in attempts by Agency to limit third party losses resulting from Recipient's breach.
- 7.7 Recipient agrees to accept liability for any damage to Agency's hardware, software, or TWC Information when such damage is caused by the actions of employees, contractors, subcontractors or agents of Recipient, whether or not the individual was an authorized User under this Contract.
- 7.8 If any provision of this Contract is held to be unenforceable by a court, this Contract will be construed as if such provision did not exist and the unenforceability of such provision will not render any other provisions of this Contract unenforceable.
- 7.9 This Contract is the entire agreement between the Parties.
- 7.10 The subject headings used in this Contract are for convenience only and are not intended to expand or limit meanings.
- 7.11 Attachments listed in the Table of Contents are incorporated in their entirety as terms and conditions of this Contract.
- 7.12 The following provisions survive the expiration or earlier termination of this Contract: Sections 4.2, 5, 6.2, 6.3, 7.1, 7.2, 7.5, 7.6, and 7.7 of these General Terms and Conditions; Sections 3.3.3, 3.3.4, and 3.3.5 of Attachment A; and Attachment B.

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Attachment A

# INFORMATION RELEASE CONTRACT BETWEEN TEXAS WORKFORCE COMMISSION AND HAYS COUNTY FOR THE BENEFIT OF CONSTABLE PCT 3

# **STATEMENT OF WORK – PROJECT OBLIGATIONS**

# **SECTION 1 – Project Abstract**

- 1.1 <u>Contract Purpose</u>. The purpose of this Contract is to provide Recipient with access to confidential Agency data, to ensure that Recipient will maintain the confidentiality of the data, and to require Recipient to reimburse Agency for costs of providing access at the rates set out in this Contract.
- 1.2 <u>Authorized Use of TWC Information</u>. Subject to the security and confidentiality provisions of this Contract, Recipient is authorized to use TWC Information, as defined in Attachment B, item 1, solely for the Limited Purpose(s) listed in the Request and Safeguard Plan and associated correspondence which is incorporated into this Contract and marked as Exhibit 1. Recipient warrants that all statements and information in Exhibit 1, Request and Safeguard Plan and associated correspondence true and correct to the best of my knowledge and understands that their organization is bound by the representations in Exhibit 1. Any other use of TWC Information by Recipient is a breach of this Contract.
- 1.3 <u>References</u>. Section references are to sections of this Attachment A unless otherwise specified.

# **SECTION 2 – Obligations of Agency**

- 2.1 <u>Description of TWC Information Disclosed and Method of Access</u>. Agency agrees to provide access to the TWC information requested and via the method as described in Exhibit 1.
- 2.2 <u>Availability</u>. Online access will routinely be available Monday through Friday, 8:00 a.m. to 5:00 p.m. Central Time, excluding State holidays, although Agency does not guarantee access during these periods. Agency may terminate or limit access without notice based on business necessity or in the event of an emergency.
- 2.3 <u>Method of transfer</u>. Agency will transfer TWC Information to Recipient only as specified in the Request and Safeguard Plan or by other methods approved in writing in advance by Agency Chief Information Security Officer or his/her designee.

# **SECTION 3 – Obligations of Recipient**

3.1 <u>Online Access</u>.

- 3.1.1 <u>Direct Oversight of Users</u>. Recipient shall ensure that all individuals with online access through user TWC system log-in accounts ("Users,") are direct Recipient employees.
- 3.1.2 <u>Annual Fee and Payment</u>. Recipient shall pay Agency the annual subscription fee applicable to the access identified in Exhibit 1, Request and Safeguard Plan. The annual subscription fee covers the twelve (12) month period that begins on the Begin Date. Payment of the annual subscription fee is due within thirty (30) calendar days of Recipient's execution of this Contract. The annual subscription fee is nonrefundable and will not be prorated in case of early termination of this Contract or suspension of services. If access identified in the Request and Safeguard Plan in Exhibit 1 is for multiple years, the Recipient shall pay Agency the annual subscription fee for each subsequent contract year within thirty (30) calendar days of the beginning of each contract year. If the contracting entity is a city or county, also known as a "local entity", Recipient shall send payment to Texas Workforce Commission, Revenue and Trust Management, P.O. Box 322, Austin, TX 78767-0322.
- 3.1.3 <u>User Documents</u>. All prospective online Users must execute a Texas Workforce Commission User Agreement ("User Agreement"), Attachment C, and complete online TWC Cybersecurity Awareness Training ("Security Training").
- 3.1.4 <u>User Document Submission and Maintenance</u>. Before Agency EAGLE Administration will invite a prospective User, Agency EAGLE Administration must receive from Recipient Contact Person (designated in Exhibit 1, Request and Safeguard Plan) a copy of the completed Texas Workforce Commission User Agreement ("User Agreement"), Attachment C and the Security Training certificate with a completed Transmittal Cover Sheet ("Cover Sheet"), Attachment D. Agency may deny access to any prospective User on security grounds. Recipient must maintain on file all original Training Certificates and User Agreements, which are subject to on-site and desk review audits.
- 3.1.5 <u>Annual User Renewal</u>. For multi-year, extended, and new contracts continuing, extending, or replacing a prior contract with online access, each year, on the first day of the month following the anniversary of the Begin Date the Recipient Contact Person shall provide new User Agreements and the Security Training certificate. The User Agreements and Security Training certificates shall be submitted with a completed Cover Sheet no earlier than 30 days before the first day following the anniversary of the Begin Date. The User Agreements and Training Certificates shall be executed and dated no more than thirty (30) calendar days before submission. Failure by Recipient Contact Person to timely provide annual User Agreements, shall result in Agency terminating User access.
- 3.1.6 <u>Notice of User Employment Change</u>. Recipient Contact Person shall notify Agency EAGLE Administration within three (3) calendar days of a User's termination, resignation, or reassignment into a position not requiring access to TWC Information, so that the User's password can be immediately revoked. Failure to provide such notice is a breach of this Contract and may result in immediate suspension of all online access, termination of this Contract, and other penalties provided by law and this Contract.
- 3.1.7 <u>Monthly Review</u>. For contracts with over twenty-five (25 users), Recipient Contact Person shall review the list of current Users monthly to ensure that the Users have not left employment or changed job duties or otherwise no longer need access. Recipient shall document their process

for comparing the current users list with the list of employees needing access. The documentation of the review process should be maintained on file for review by Agency upon request.

- 3.1.8 <u>Notice of Suspected Violations.</u> Recipient shall notify Agency of any suspected or confirmed User violation of the confidentiality and security provisions within twenty-four (24) hours of discovery and shall take appropriate corrective action.
- 3.1.9 <u>Changes to TWC Information Prohibited</u>. Users shall not change or update any TWC Information contained in Agency's computer stored files. Users shall not use any automated system or software to make multiple queries of Agency's computer stored files.
- 3.1.10 <u>Instructions</u>. Recipient shall be solely responsible for disseminating to Users any instructions provided by Agency regarding navigation of online access to TWC Information.
- 3.2 <u>Offline Access.</u> If Offline access is selected in Exhibit 1, Request and Safeguard Plan, the provisions of this section apply.
  - 3.2.1 <u>Offline Request Submission</u>. For matches of wage records to SSNs, unemployment compensation claim benefit data to SSNs, or employer tax records to EIDs or FEINs, to be performed by Agency staff, Recipient shall submit a completed *Request for Texas Workforce Commission Records*, Attachment E, with the file of SSNs, EIDs, or FEINs to be matched. Recipient shall submit the file electronically in compliance with the Information Technology Department contract listed on Exhibit 1, Request and Safeguard Plan. Agency shall not be responsible for the confidentiality of any information submitted by Recipient.
  - 3.2.2 <u>Offline Rates</u>. Rates for Offline requests are calculated on a per-request basis as specified in Exhibit 1, Request and Safeguard Plan.
  - 3.2.3 <u>Payment</u>. Recipient's payment is due within thirty (30) calendar days of receipt of invoice for information requested Offline.
  - 3.2.4. <u>Tracking of Offline Access</u>. Each quarter, the Recipient shall submit to the Agency Point of Contact a list of the data requests made and data received during the prior quarter including information necessary for identifying each transfer of data, whether a match against Recipient data, a scheduled transfer, or a transfer upon request. The quarterly filing dates are January 15, April 15, July 15, and October 15.

# 3.3 <u>Additional Requirements</u>.

- 3.3.1 <u>Security Safeguards</u>. Recipient shall establish, maintain, and comply with security safeguards and procedures to protect the confidentiality of all TWC Information. Recipient shall comply with the requirements in *Safeguards for TWC Information*, Attachment B. Failure to comply with any requirement of Attachment B is a breach of this Contract.
- 3.3.2 <u>Suspension</u>. Agency may suspend all services without notice if Agency suspects a violation of the security safeguard provisions in Attachment B. Services will remain suspended until Agency has fully investigated any suspected security violations and is satisfied that resumption of

services will not result in security breaches. In the event of an extended suspension of services, Agency will notify Recipient as soon as possible.

- 3.3.3 <u>Enduring Obligation</u>. Termination or expiration of this Contract will not end Recipient's responsibility to protect the confidentiality of TWC Information remaining in Recipient's possession, under Recipient's control, or held by a third party subject to contract or agreement with Recipient.
- 3.3.4 <u>Audit</u>. Recipient's security safeguards and procedures, as well as Recipient's access to and use of TWC Information, are subject to monitoring, evaluation, and audit by Agency.
- 3.3.5 <u>Inspections</u>. Recipient shall cooperate fully with any on-site inspections and monitoring activities of Agency. So that Agency may audit Recipient's compliance with the requirements of state and federal law and this Contract, Recipient shall permit Agency access to all sites containing TWC Information (including sites where data is maintained electronically), and to all workplaces used by personnel who have access to TWC Information.
- 3.3.6 <u>Self-Assessment Report</u>. Recipient shall submit to Agency a fully executed *Quarterly Self-Assessment Report*, Attachment G, on the next-occurring quarterly filing date after the Begin Date, and on each quarterly filing date for as long as this Contract is in effect. The quarterly filing dates are January 15, April 15, July 15, and October 15. Each report must be completed after the end of the prior calendar quarter and must have been signed within fifteen (15) days preceding submission. Failure by Recipient to submit to Agency a timely Quarterly Self-Assessment Report may result in the following consequences: the first instance of a late Quarterly Self-Assessment Report shall result in a late notice being issued by TWC. A failure by Recipient to timely respond to the first late notice by the time specified in the notice or Recipient receiving a second late notice, may result in TWC terminating the Contract for cause.
- 3.3.7 <u>Identity Theft Protection</u>. In case of unauthorized disclosure of TWC Information by Recipient, Recipient shall purchase identity theft protection service for all individuals whose information was disclosed without authorization. The protection service shall cover each individual for a two-year period and must include, at a minimum, automatic fraud alerts to the individual.
- 3.3.8 <u>Significant Change</u>. Recipient agrees to notify Agency in writing within ten (10) calendar days of any significant change affecting Recipient and Recipient's identity, including but not limited to changes in its ownership or control, name, governing board membership, authority of governing board, officeholders, or vendor identification number.
- 3.3.9 <u>Computer Resources</u>. Recipient shall provide and maintain its own computer hardware and software to accomplish the necessary computer communications linkages with Agency.
- 3.3.10 <u>Data Source</u>. Agency does not warrant or guarantee the accuracy of TWC Information. TWC Information includes data provided to Agency by third parties, including employers and employees.

# **SECTION 4 – Contact Persons**

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4.1 <u>Designation</u>. The Parties designate the primary liaisons as specified in Exhibit 1. Request and Safeguard Plan.

# **Agency Contact Person**

Contract Management Team External Data Exchange Contracts (EDE) Procurement and Contract Services Department Texas Workforce Commission 1117 Trinity Street, Room 342T Austin, TX 78701

 Phone:
 (737) 400-5435

 Fax:
 (512) 936-0219

 Email:
 DEContracts@twc.texas.gov

- 4.2 <u>Notice</u>. Any notice required under this Contract must be given to the Recipient's Contact Person specified in Exhibit 1. Request and Safeguard Plan or the Agency Contract Person.
- 4.3 <u>Notice to Alternate</u>. If Recipient designates an alternate Contact Person in Exhibit 1, Request and Safeguard Plan, written notification by Agency to one (1) of the Recipient Contact Persons will satisfy any notification requirement of this Contract.
- 4.4 <u>Change</u>. Recipient may request a change in Recipient Contact Person by submitting to Agency Contact Person a written request on organizational letterhead signed by the person who signed this Contract on behalf of Recipient, or by a successor with authority to bind Recipient contractually. The request must include the TWC Contract Number, the name of the person being replaced, and the name of the new Recipient Contact Person, with job title, work address, phone number, and email address. No change in Recipient Contact Person is effective until acknowledged in writing by Agency.
- 4.5 <u>Communications</u>. Recipient shall include the TWC Contract Number in all communications with Agency.

# SECTION 5 – Parties Option for Extension and Effect on Other Contracts

The Parties agree that this Contract supersedes and replaces all prior contracts, if any, between them for information release or data sharing as specified in Exhibit 1. Request and Safeguard Plan.

Remainder of page left blank intentionally

# SAFEGUARDS FOR TWC INFORMATION

1. "Recipient" in this Contract shall maintain sufficient safeguards over all TWC Information to prevent unauthorized access to or disclosure of TWC Information:

"TWC Information" means records maintained by Agency (TWC), and records obtained by Recipient from Agency under this Contract, including (1) records and data compilations provided electronically, on paper, or via online access or e-mail, (2) records and data compilations that Recipient has converted into another format or medium (such as handwritten or electronic notes), and (3) records and data compilations incorporated in any manner into Recipient's records, files, or data compilations.

- <u>Monitoring</u>. Recipient shall monitor its Users' access to and use of TWC Information and shall ensure that TWC Information is used only for the following "Limited Purpose" as set forth in Exhibit 1, Request and Safeguard Plan. Recipient shall also ensure that TWC Information is used only for purposes authorized by law and in compliance with all other provisions of this Contract.
- 3. <u>Storage</u>. Recipient shall store TWC Information in a place physically secure from access by unauthorized persons.
- 4. <u>Protection</u>. Recipient shall store and process TWC Information, including that maintained in electronic format, such as magnetic tapes or discs, in such a way that unauthorized persons cannot obtain TWC Information by any means.
- 5. <u>Access</u>. Recipient shall undertake precautions to ensure that only authorized personnel are given access to TWC Information stored in computer systems.
- 6. <u>Instruction</u>. Recipient shall instruct all personnel having access to TWC Information about all confidentiality requirements including the requirements of 20 C.F.R. Part 603 as well as the sanctions specified in this Contract and under state and federal law for unauthorized disclosure of TWC Information. Recipient acknowledges that all personnel who will have access to TWC Information have been instructed as required.
- 7. <u>Disposal</u>. Recipient shall dispose of TWC Information and any copies thereof after the Limited Purpose(s) is achieved, except for TWC Information possessed by any court. Disposal means return of TWC Information to Agency or destruction of TWC Information, as directed by Agency. Disposal includes deletion of personal identifiers in lieu of destruction. In any case, Recipient shall dispose of all TWC Information within thirty (30) calendar days after the termination, cancellation, or expiration of this Contract, in accordance with Attachment F, *Certificate of Destruction for Contractors and Vendors*, which is attached to this Contract and incorporated for all purposes.
- 8. <u>System</u>. Recipient shall establish and maintain a system sufficient to allow an audit of compliance with the requirements of this Attachment B and the other provisions of this Contract.
- 9. <u>No Disclosure or Release</u>. Recipient shall not disclose or release any TWC Information other than as permitted in this Contract, without prior written consent of Agency.
- <u>Unauthorized Disclosure</u>. It is a breach of this Contract to disclose TWC Information orally, electronically, in written or printed form, or in any other manner without the prior written consent of Agency:
   10.1 to any contract employee of Recipient or any individual not employed by Recipient;
  - 10.2 to another government entity, including a law enforcement entity;
  - 10.3 to Recipient employees who do not have a need to use TWC Information for the Limited Purpose.

- 11. <u>Authorized Disclosure</u>. TWC Information may only be disclosed:
  - 11.1 to employees under the direct hiring-and-firing control of Recipient who have a need to use the TWC Information for the Limited Purpose(s); and
  - 11.2 in a criminal judicial proceeding if the TWC Information is introduced in court as a sealed record with access limited to the prosecutor, defendant, judge, and jury.
- 12. <u>Security Violation</u>. Recipient shall monitor access of Users and shall notify Agency within twenty-four (24) hours if a security violation of this Contract is detected, or if Recipient suspects that the security or integrity of TWC Information has or may have been compromised in any way.
- 13. <u>Format</u>. TWC Information is subject to the requirements of this Contract even if the TWC Information is converted by Recipient into another format or medium, or incorporated in any manner into Recipient's records, files, or data compilations.
- 14. <u>Access Limited</u>. Recipient shall limit access to TWC Information to its employees who need access to achieve the Limited Purpose.
- 15. <u>Mobile Device and Removal</u>. Recipient shall not place TWC Information on mobile, remote, or portable storage devices, or remove storage media from Recipient's facility, without the prior written authorization of Agency.
- 16. <u>Public Information Act</u>. Under Texas Labor Code § 301.085, TWC Information is not "public information" for purposes of the Public Information Act, Texas Government Code, Chapter 552. Recipient shall not release any TWC Information in response to a request made under the Public Information Act or under any other law, regulation, or ordinance addressing public access to government records.
- 17. Subpoena. Recipient shall notify Agency within twenty-four (24) hours of the receipt of any subpoena, other judicial request, or request for appearance for testimony upon any matter concerning TWC Information. Federal regulations dictate the handling of subpoenas for TWC Information. Recipient shall comply with the requirements of 20 C.F.R. § 603.7 in responding to any subpoena, other judicial request, or request for appearance for testimony upon any matter concerning TWC Information.
- 18. <u>Federal Regulation</u>. Recipient shall comply with all requirements of *Safeguards for TWC Information as required by* 20 CFR Part 603 and this Contract relating to safeguarding TWC Information and ensuring its confidentiality.
- 19. <u>Unauthorized Lookup</u>. A User shall not access TWC Information listed under the User's SSN or the SSN of a coworker, family member, or friend.
- 20. <u>Screening Online Users</u>. Recipient shall screen potential Users and seek online access only for employees that Recipient has determined pose no threat to the security of TWC Information.
- 21. <u>Screening All Handlers</u>. Recipient shall permit access to TWC Information only to employees that Recipient has determined pose no threat to the security of TWC Information.
- 22. <u>Internet</u>. Recipient shall not transmit any TWC Information over the Internet unless it is encrypted using at least 256-bit AES encryption and the current FIPS 140 series encryption standards.
- 23. <u>Screen Dump</u>. Recipient's security guidelines shall ensure that any screen dump or other extraction of TWC Information will be protected from unauthorized use or disclosure.
- 24. <u>No Transfer</u>. Recipient shall not transfer the authority or ability to access or maintain TWC Information under this Contract to any other person or entity.

Information Release Contract Attachments– February 2022 TWC Contract Number: 2923PEN047 – Hays County Page 7 of 13

Attachment C

# TEXAS WORKFORCE COMMISSION USER AGREEMENT

(User's Printed Name)	(User's Social Security Number)	
(User's work phone number)	(Print User's work street address)	
(Print User's employer)	(Print User's work email)	

acknowledge that I will be assigned a personal User ID and password to gain access to the Texas Workforce Commission (TWC) computer system. Under no circumstances will I allow my User ID or password to be used by any other individual, nor will I use one belonging to anyone else. As an online User with access to confidential TWC data ("TWC Information"), I understand that I will be held personally accountable for my actions and for any activity performed under my User ID. I understand that the use of TWC Information is limited to the following "Limited Purpose(s)" only: to assist in criminal investigations; to assist in locating defendants, witnesses, and fugitives in criminal cases; to assist in locating persons with outstanding warrants; to assist in locating probation absconders. I understand that TWC maintains a record of the individuals and employers whose TWC Information I gain access to, and that I am not allowed access to TWC Information about any individual or employer except as necessary for the Limited Purpose(s). I understand that I am not allowed access to TWC Information about myself.

I will not enter any unauthorized data or make any changes to data. I will not disclose any TWC Information orally, electronically, in written or printed form, or in any other manner without prior written authorization from TWC. I will not disclose any TWC Information to other governmental entities, including law enforcement entities.

I understand that under Texas Labor Code §301.085, all TWC Information I obtain under this User Agreement is confidential and that it is a criminal offense to solicit, disclose, receive or use, or to authorize, permit, participate in, or acquiesce in another person's use of TWC Information that reveals: (1) identifying information regarding any individual or past or present employer; or (2) information that foreseeably could be combined with other publicly available information to reveal identifying information regarding any individual or past or present employer. This offense is punishable by as much as a year in jail, a fine up to \$4,000, or both.

I understand that under Texas Penal Code §33.02(a), it is a criminal offense to knowingly access a computer, computer network, or computer system without the effective consent of the owner. Depending on the circumstances, the offense is punishable by confinement in jail for up to 180 days or up to 99 years or life in prison, a fine of up to \$2,000 or up to \$10,000, or both.

I have read and had explained to me the confidentiality and security requirements of 20 C.F.R. § 603.9 and of my employer's contract with TWC. I understand and agree to abide by these requirements. I understand that if I violate any of these requirements or any provision of this User Agreement, I will jeopardize my employer's contract with TWC.

Signature of User

Date signed

**Supervisor Approval:** I have instructed the User listed above about all confidentiality requirements applicable to TWC Information obtained under the contract with TWC, including the requirements of 20 C.F.R. § 603.9 and the sanctions specified in the Contract and in state law for unauthorized disclosure of TWC Information.

Signature of Supervisor

Printed Name

Approval of Contract Signatory or Contact Person named in Contract:

Signature of Contract Signatory or Recipient Contact Person

Printed Name

Date signed

Date signed

All fields on this User Agreement are required. Employer must retain signed original and give a copy to User. Employer must send copy of executed User Agreement to TWC EAGLE Administration as specified on the required Cover Sheet, Attachment D to this Contract. An incomplete User Agreement will be rejected.

Information Release Contract Attachments– February 2022 TWC Contract Number: 2923PEN047 – Hays County Page 8 of 13

Attachment D

# TRANSMITTAL COVER SHEET FOR NEW USER AGREEMENTS AND TRAINING CERTIFICATES AND EXISTING USER TRAINING CERTIFICATES

# To: **EAGLE Administration**

via email to:	EAGLEsupport@twc.texas.gov (Document must be scanned and encrypted before sending)
via fax to:	<b>512-463-6394</b> Number of pages including cover sheet:
via mail to:	EAGLE Administration Texas Workforce Commission 101 East 15 th Street, Room 0108 Austin, TX 78778-0001
	(Recipient Contact Person)
	(Recipient Contact Person email)

# Re: User Agreement(s) and Training Certificate(s) attached

Instructions:

From:

- User Agreement and Training Certificate must be submitted together for each individual.
- Only one cover sheet is required if submitting documents for more than one User at the same time.

### For questions regarding the User Agreement, please email EAGLEsupport@twc.texas.gov Note: An incomplete User Agreement will be rejected

#### **Texas Workforce Commission** Certificate of Destruction for Contractors and Vendors

Attachment F

methods for media sanitization. In the NIST Special Publication 800-88, Cuidelines for Media Sanitization.	Hard copy and electronic media must be sanitized prior to disposal or release for reuse. The TWC tracks, documents, and verifies media sanitization and disposal actions. The media must be protected and controlled by authorized personnel during transport outside of controlled areas. Approved										
Contact Name       Title       Company Name and Address       Phone         You may attach an inventory of the media if needed for bulk media disposition or destruction.       Media Type       Media Ty	methods for media sanitiz	ation are listed	d in the NIST S 8/800-88/NISTS	pecia <mark>P800</mark>	al Publication 800	)-88, <mark>pdf</mark>	Guidelines	for Me	edia Sanitizati	on.	
You may attach an inventory of the media if needed for bulk media disposition or destruction.         Media Type       Media Title / Document Name         HARD COPY       ELECTRONIC         Media Title / Document Name       Media Title / Document Name         Paper, Microfilm, Computer Media, Tapes, etc.)       Dates of Records         Document / Record Tracking Number       TWC Item Number       Make / Model         Serial Number       CLEAR       Who Completed?         Who International Completed?       Who Verified?         Item Sanitization       PURGE       Phone         DESTROY       DATE Completed?       Who Verified?         Sanitization Method and/or Product Used >       Phone       Phone         Final Disposition of Media       Reused Internally       Destruction / Disposal         Final Disposition of Media       Reused Externally       Returned to Manufacturer         Other:       Comments:       Comments:       Physical locations(s), and any planned destruction date.         Description of TWC Data is retained, indicate the type of storage media, physical locations(s), and any planned destruction, description of TWC data cleared, purged or destruction of media destruction date?       Physical location?         Physical location?       Physical location?       Physical location?         Physical location?       Physical location? </td <td>Contact Name</td> <td></td> <td>Title</td> <td></td> <td>(</td> <td>Com</td> <td>pany Name</td> <td>and A</td> <td>Address</td> <td></td> <td>Phone</td>	Contact Name		Title		(	Com	pany Name	and A	Address		Phone
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Other:         Comments:         If any TWC Data is retained, indicate the type of storage media, physical locations(s), and any planned destruction date.         Description of TWC Data Retained and Retention Requirements:         Proposed method of destruction for TWC approval:         Type of storage media?         Physical location?         Physical location?         Planned destruction date?         Within five (5) days of destruction or purging, provide the TWC with a signed statement containing the date of clearing, purging or destruction, description of TWC data cleared, purged or destroyed and the method(s) used.         Authorized approval has been received for the destruction of media identified above and has met all TWC Records Retention Schedule requirements including state, federal and/or internal audit requirements and is not pending any open records requests.         Records Destroyed by:       Records Destruction Verified by:         Signature       Date         Be sure to enter name and contact info for who completed the data destruction and who verified data destruction in the fields above.	Final Disposition of Me	edia		R	Reused Externally Returned to Manufa			Manufacturer			
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Proposed method of destruction for TWC approval:       Type of storage media?         Physical location?       Physical location?         Planned destruction date?       Planned destruction date?         Within five (5) days of destruction or purging, provide the TWC with a signed statement containing the date of clearing, purging or destruction, description of TWC data cleared, purged or destroyed and the method(s) used.         Authorized approval has been received for the destruction of media identified above and has met all TWC Records Retention Schedule requirements including state, federal and/or internal audit requirements and is not pending any open records requests.         Records Destroyed by:       Records Destruction Verified by:         Signature       Date         Be sure to enter name and contact info for who completed the data destruction and who verified data destruction in the fields above.	Description of TWC Da	ata Retained	and Retention	ו Re	quirements:						
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Within five (5) days of destruction or purging, provide the TWC with a signed statement containing the date of clearing, purging or destruction, description of TWC data cleared, purged or destroyed and the method(s) used.         Authorized approval has been received for the destruction of media identified above and has met all TWC Records Retention Schedule requirements including state, federal and/or internal audit requirements and is not pending any open records requests.         Records Destroyed by:       Records Destruction Verified by:         Signature       Date         Be sure to enter name and contact info for who completed the data destruction and who verified data destruction in the fields above.					Planned de	estri	uction date	2?			
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Records Destroyed by:       Records Destruction Verified by:         Signature       Date         Be sure to enter name and contact info for who completed the data destruction and who verified data destruction in the fields above.	Authorized approval has been received for the destruction of media identified above and has met all TWC Records Retention Schedule requirements including state, federal and/or internal audit requirements and is not pending any open records requests.										
Signature       Date       Signature       Date         Be sure to enter name and contact info for who completed the data destruction and who verified data destruction in the fields above.       Date	R	ecords Destr	royed by:						Records De	struction Verif	ied by:
Signature         Date         Signature         Date           Be sure to enter name and contact info for who completed the data destruction and who verified data destruction in the fields above.         Date											
Be sure to enter name and contact info for who completed the data destruction and who verified data destruction in the fields above.	Signat	ure			Date				Signature		Date
	Be sure to enter nan	ne and contac	t info for who	com	pleted the data	dest	truction an	d who	verified data	destruction in	the fields above.

Send the signed Certificate of Destruction to: TWC: Information Security Office, Rm. 0330A, 101 E. 15th Street, Austin, TX 78778-0001

GP Revised: 09-02-15

#### Texas Workforce Commission Certificate of Destruction for Contractors and Vendors

#### INSTRUCTIONS FOR CERTIFICATE OF DESTRUCTION

Hard copy and electronic media must be sanitized prior to disposal or release for reuse. The TWC tracks, documents, and verifies media sanitization and disposal actions. The media must be protected and controlled by authorized personnel during transport outside of controlled areas. Approved methods for media sanitization are listed in the NIST Special Publication 800-88, Guidelines for Media Sanitization. http://csrc.nist.gov/publications/nistpubs/800-88/NISTSP800-88 with-errata.pdf

IRS Publication 1075 directs us to the FISMA requirements and NIST guidelines for sanitization and disposition of media used for <u>federal tax information</u> (FTI). These guidelines are also required for sensitive or confidential information that may include <u>personally</u> <u>identifiable information</u> (PII) or <u>protected health information</u> (PHI). <u>NIST 800-88</u>, <u>Appendix A</u> contains a matrix of media with minimum recommended sanitization techniques for clearing, purging, or destroying various media types. This appendix is to be used with the decision flow chart provided in NIST 800-88, Section 5.

There are two primary types of media in common use:

- <u>Hard Copy</u>. Hard copy media is physical representations of information. Paper printouts, printer and facsimile ribbons, drums, and platens are all examples of hard copy media.
- <u>Electronic (or soft copy)</u>. Electronic media are the bits and bytes contained in hard drives, random access memory (RAM), read-only memory (ROM), disks, memory devices, phones, mobile computing devices, networking equipment, and many other types listed in NIST SP 800-88, Appendix A.

1. For media being reused within your organization, use the **CLEAR** procedure for the appropriate type of media. Then validate the media is cleared and document the media status and disposition.

2. For media to be reused outside your organization or if leaving your organization for any reason, use the PURGE procedure for the appropriate type of media. Then validate the media is purged and document the media status and disposition. Note that some **PURGE** techniques such as degaussing will typically render the media (such as a hard drive) permanently unusable.

3. For media that will not be reused, use the **DESTRUCTION** procedure for the appropriate type of media. Then validate the media is destroyed and document the media status and disposition.

4. For media that has been damaged (i.e., crashed drive) and cannot be reused, use the **DESTRUCTION** procedure for the appropriate type of media. Then validate the media is destroyed and document the media status and disposition.

5. If immediate purging of all data storage components is not possible, data remaining in any storage component will be protected to prevent unauthorized disclosures. Within twenty (20) business days of contract expiration or termination, provide TWC with a signed statement detailing the nature of TWC data retained type of storage media, physical location, planned destruction date, and the proposed methods of destruction for TWC approval.

6. Send the signed Certificate of Destruction to:

Texas Workforce CommissionFAX to: 512-463-3062Information Security Officeor send as an email attachment to:Room 0330Aor send as an email attachment to:101 E. 15th Streetciso@twc.texas.govAustin, TX 78778-0001ciso@twc.texas.gov

Final Distribution of	Original to:	Chief Information Security Officer
Certificate	Copy to:	<ol> <li>Your Company Records Management Liaison - or - Information Security Officer</li> <li>TWC Contract Manager</li> </ol>

GP Revised: 09-02-15

# QUARTERLY SELF-ASSESSMENT REPORT

## Failure to submit this report by due date can result in termination of all access to TWC Information.

The period covered is -Year: _____ Quarter  $\Box Q1$ ,  $\Box Q2$ ,  $\Box Q3$ ,  $\Box Q4$ 

The entity receiving TWC Information under TWC Contract ("Recipient") confirms it is in compliance with the requirements of the Contract and the *Safeguards for TWC Information* (Attachment B of the Contract), during the previous period, to include the following:

1.	Recipient used the disclosed TWC Information only for purposes authorized by law and consistent with the Limited Purpose set forth in Exhibit 1. Request and Safeguard Plan of the Contract.	Yes:	No:
2.	Recipient stored the disclosed TWC Information in a place physically secure from access by unauthorized persons. This includes hard copies of the information.	Yes:	No:
3.	Recipient stored and processed disclosed TWC Information maintained in electronic format outside of the recipient computer systems in such a way that unauthorized persons cannot obtain the TWC Information by any means.	Yes:	No:
4.	Recipient took precautions to ensure that only authorized personnel were given access to disclosed TWC Information that is stored in recipient's computer systems.	Yes:	No:
5.	Recipient has instructed all personnel having access to the disclosed TWC Information about confidentiality requirements, the requirements of 20 C.F.R. § 603.9 found in <i>Safeguards for TWC Information</i> (Attachment B), and the sanctions specified in State law for unauthorized disclosure. (Each violation is a Class A Misdemeanor, punishable by a fine of \$4,000, a year in jail, or both).	Yes:	No:
6.	Recipient adhered to confidentiality requirements and procedures that are consistent with and meet the requirements of the TWC Contract.	Yes:	No:
7.	Recipient agreed to report any infraction(s) of these requirements and procedures to TWC fully and promptly.	Yes:	No:
8.	Recipient disposed of disclosed TWC Information, and any copies thereof made by Recipient, after the purpose for which the TWC Information was disclosed, is served, or as required by court order. (Disposal means return of the TWC Information to TWC or destruction of the TWC Information, as directed by TWC. Disposal includes deletion of personal identifiers in lieu of destruction.)	Yes:	No:
9.	Recipient ensured that the disclosed TWC Information is not retained with personal identifiers for longer than such period of time as TWC deems appropriate.	Yes:	No:
10	Recipient maintained a system sufficient to allow an audit of compliance with the requirements of 20 C.F.R. § 603.9 found in <i>Safeguards for TWC Information</i> (Attachment B) and the TWC Contract.	Yes:	No:

11. Attached is a description of the system referred to in Item 10. Recipient ensured that any copies of any logs sent to TWC do not contain Sensitive PII. Remember to secure originals containing PII.	Yes: No:
12. Recipient maintained as a minimum, the encryption requirements of FIPS 140-2 and encrypt the data at the minimum of 256-bit AES encryption.	Yes: No:
13. Annual Renewal of Contract User Agreement and training certifications per the Contract terms are on file and copies have been submitted to <u>EAGLEsupport@twc.texas.gov</u> .	Yes: No:
14. All users have completed the training within the previous 12 months.	Yes: No:
15. Do you re-disclose to other entities under Section 6, Redisclosure Authorization, Roles and Responsibility, of Attachment A of the contract?	Yes: No:
If yes, Receiving Agency ensures that contract personnel are held to the same standard of processing, training, and protecting information as Recipient Agency employees who have a need to use the TWC information for the Limited Purpose.	Yes: No:

# By signature hereon, the Contract signatory or the entity's internal auditor certifies that:

All statements and information submitted in response to this Quarterly Self-Assessment Report are current, accurate, and complete.

Signature

Date

Printed Name and Title

#### **Return this Report to:**

External Data Sharing Contracts Manager | Procurement and Contract Services Department | Texas Workforce Commission | 1117 Trinity Street, Room 342T | Austin, Texas 78701

Email: <u>SelfAssessmentReports@twc.texas.gov</u>

Fax: 512-936-0219

# Exhibit 1. TWC Data Exchange Request and Safeguard Plan

All statements and information on this form and associated correspondence relating to the Request and Security Plan (RSP) are incorporated by reference into the data exchange Contract with TWC as Exhibit 1.

Recipient agrees to provide written notice to TWC of any changes to the responses contained in this RSP during the Contract term immediately but no later than three (3) calendar days from the date of change. Email changes to <u>DEcontracts@twc.texas.gov</u>. After review and approval by TWC, the notice of changes shall be incorporated by reference into the Contract under Exhibit 1. Any changes to the responses requested by Recipient and accepted by TWC in this Exhibit 1 shall amend the corresponding information in the GTC and A-H.

This document is confidential under Texas Government Code regarding infrastructure security and shall be redacted from release in response to a request for information or documents. Contact TWC upon such a request.

Contact TWC upon such a request.

	CONTRACTOR INFORMATION	Please answer each question. Do not leave any unanswered.
1.	Legal name of requesting governmental	Hays County Constable Pct.3
	entity/Responsible Financial Party	200 Stillwater
		Wimberley, Texas 78676
2.	Entity Tax ID#	74-6002241
3.	Street Address – Line 1	200 Stillwater
4.	Street Address – Line 2	
5.	City, State, Zip	Wimberley, Texas 78676
6.	New request or renewal of an existing	New request
	contract?	Extension of existing agreement
		Previous/Current Contract #:
		There are other contracts between TWC, and the party not
		affected by this Contract, which are as follows:
7.	Type of entity and authority to contract	Texas Local Government Code, Chapter 791, Interlocal
		Cooperation Act (e.g., cities, counties)
		Texas Government Code, Chapter 771, Interagency
		Cooperation Act (e.g., state agency)
		Federal Agency Authority
		If state agency, please specify authority
8.	Legal Purpose(s) for requesting	☑ to assist in criminal investigations
	information	to assist in locating defendants, witnesses, and fugitives in
	(Check all that apply)	criminal cases
	(	It o assist in locating persons with outstanding warrants
		☑ to assist in locating probation absconders
		to assist in determining eligibility for public
		assistance/services
		other: please specify:
		(language will be inserted into contract)
9	Requested length of contract term	1 year 2 years 3 years 4 years 5 years

	year starting.
DATA REQUESTED	Please answer each muestion. Do not leave any unanswered.
Information requested	Wage Records (WR):
(Check the data being requested)	Wage Detail Inquiry: View wage information for an individual. Coworker Search: View wages reported by an employer.
	UI Benefits and Claimant Info (UI): <u>Personal Information</u> : View demographic information for an individual. <u>Claims</u> : View unemployment insurance claim information. <u>Payments</u> : View unemployment insurance payment info. <u>Employer Search</u> : Search employers by name or address.
	Employer Records (ER) Employer Master File: Search Employer Master File and view state unemployment tax information.
Method of receiving data	State unemployment tax miomation:            \[             Online access: Contractor access for lookup by SSN through a password-protected log-in account. Number of individuals needing access accounts:             \[                   \[
	DATA REQUESTED Information requested (Check the data being requested) Method of receiving data

Non-scheduled - Upon Request: Ad hoc request for non- scheduled matches or data files.
One-time request for large quantity of records.
<ul> <li>One-time request for one or a few records (less than 100 matches of SSNS or &lt;5 TWC Employer ID or FEIN).</li> <li>Submit request to <u>open.records@twc.texas.gov</u> or fax request to 512-463-2990 or the open records portal at <u>https://twc.govqa.us/WEBAPP/_rs/(S(rgibfuq2yv4rbj2wrzluc3se))/supporthome.aspx</u>.</li> </ul>
Specify the particular data elements for the information requested in question 11. E.g., name, address, wage benefit amount, employer name, telephone number, etc.
<ol> <li>If other specific data elements are requested, provide a data format.</li> </ol>
Offline Data Elements Requested
Data elements to be submitted to TWC for the resulting
matched data:
SSN – Social Security Number
Data available from TWC available for SSN matches
from the UI Wage Records:
Name: last, first, middle initial
NAICS
Quarter Wages were earned
Quarterly Wages
Employer Name
Employer Address
Employer Zip
Employer contract
Employer Telephone
Employer Tax Account Number
Instructions for submitting SSN-UI Wage Record Match Requests:
Filename and format will be provided by and
coordinated with the TWC developer upon receipt
of Attachment E. REQUEST FOR TEXAS
WORKFORCE COMMISSION RECORDS
File transmission shall be protected using TWC
Secure FTP and encrypted using at least 256-bit
encryption.
TWC Employer ID Number (EIN)

		Data available from TWC available for EIN matches from the Employer Tax Master File: Name: last, first, middle initial Social Security Number Quarterly Wages Employer Name Employer Address Employer Zip Employer contact Employer Telephone Employer Tax Account Number Instructions for submitting Texas EIDs or FEINs: (follow the same pattern as for SSNs): Format sample: 123456789 Send seed file via secure file transfer to Agency's secure portal, currently GoAnywhere – https://mft.twc.state.tx.us/webclient/Login.xhtml
		<ul> <li>Federal Employer ID Number (FEIN) Same as Texas Employer ID information</li> <li>Volume/quantity of offline records requested per submission and associated rates: Estimated number of individuals in which sensitive personally identifiable information requested at any one time:         <ul> <li>1-999: \$250</li> <li>1,000 - 14,999: \$300</li> <li>15,000 - 19,999: \$375</li> <li>20,000 - 24,999: \$500</li> </ul> </li> </ul>
		<ul> <li>25,000 - Above: \$1,000</li> <li>Hourly rate for programming of a new request or modification of an existing job: \$48.81.</li> <li><u>De-identification</u>: If submitting SSNs to TWC, also include a unique identifier. For enhanced security, the return file will not include SSNs but instead will include only the unique identifier where feasible.</li> </ul>
	SAFEGUARD REQUIREMENTS	Please answer each question. Do not leave any unanswered.
13.	How will data be viewed? Select one of the three options.	<ol> <li>We will <u>ONLY</u> view screen information. (Respond to #14-19, check "N/A" to #20 and #21.)</li> <li>We will use electronic copies of screen prints (PDF), or</li> </ol>

14.	Will non-employees be provided access to the data?	<ul> <li>We will transfer data into an electronic record. (Respond to #14-20, check "N/A" to #21.)</li> <li>We will use paper copies of screen prints, or</li> <li>We will transfer information into paper records format. (Respond to #14-19 and #21, check "N/A" to #20)</li> <li>Only direct employees will be provided access.</li> <li>Persons who are not employees may/will be provided</li> </ul>
	Express written contract language authorizing data exchange with non- employees is required for re- distribution of information accessed.	access. Please specify those that apply: Data Center Operators Other Governmental Contractors: Please specify:
15.	Will the data you are requesting be disclosed to any other entity? Express written contract language authorizing data exchange with non- employees is required for re- distribution of information accessed.	☐ Yes - Specify: ⊠ No
16.	What access control methods will you use for access to the TWC information?	<ul> <li>Texas State Requirements under Title 1, Part 10, TAC Sec.</li> <li>202, or comparable standards</li> <li>National Institute of Secure Technology (NIST) or comparable standards</li> <li>IRS Publication 1075 or comparable standards</li> </ul>
17.	How will your organization assess your security posture?	<ul> <li>Vulnerability testing - Frequency:</li> <li>Penetration testing - Frequency:</li> <li>Audits - Frequency: _2X per year</li> <li>Other - Please specify: Frequency:</li> </ul>
18.	Are background checks performed on employees who will access information?	<ul> <li>No, background checks are not performed</li> <li>Yes, background checks are performed.</li> <li>If yes, state when background checks are performed:</li> <li>Pre-employment</li> <li>Periodic checks during employment</li> </ul>
19.	How will you have an auditable trail?	<ul> <li>I will keep a worksheet that includes at a minimum, the person making the inquiry, the reason for the inquiry, identifying information regarding the case or claim for which the inquiry was made, and the date the inquiry was made.</li> <li>Other, If Other specify:</li> </ul>
20.	How will you encrypt the data at rest?	Please specify: N/A – We do not keep data at rest.
21.	When will data destruction occur?	<ul> <li>Consistent with Texas State Libraries and Archives Commission (state records retention laws)</li> <li>Consistent with other standards: Please specify:</li> <li>N/A - We do not retain data.</li> </ul>
	CONTACTS	
22.	Point of Contact Name (for daily matters)	Donny Torres Hays County Constable Pct.3
23.	Found of Contact Title	Seißequit

24.	Point of Contact Phone	512-847-5532
25.	Point of Contact E-mail	Donny.torres@co.hays.tx.us
26.	Point of Contact Address	200 Stillwater Wimberley, Texas 78676
27.	Alternate Point of Contact Name and	Jordan M. Powell
	Title	Hays County Office of General Counsel
		Asst. General Counsel
28.	Alternate Point of Contact Phone	512-339-2219
29.	Alternate Point of Contact E-mail	Jordan.powell@co.hays.tx.us
30.	Alternate Point of Contact Address	If different from Point of Contact: 111 East San Antonio, Suite
		202 San Marcos, Texas 78666
31.	Signatory Name	Ruben Becerra
32.	Signatory Title	Hays County Judge
33.	Signatory Phone Number	512-393-2251
34.	Signatory E-mail	Ruben.bacerra@co.hays.tx.us
35.	Signatory Address	If different from Point of Contact: 111 East San Antonio, Suite
		300 San Marcos, Texas 78666
36.	Data Technology Contact Name	Jeff McGill, Director of IT
37.	Data Technology Contact Phone	512-393-2841
38.	Data Technology Contact E-mail	jmcgill@co.hays.tx.us
39.	Invoice Recipient Name	Marisol Villarreal-Alonzo
40.	Invoice Recipient Phone Number	512-393-2251
41.	Invoice Recipient Title	Auditor
42.	Invoice Recipient E-mail	Marisol.alonzo@co.hays.tx.us
43.	Invoice Recipient Address	If different from Point of Contact: 712 S. Stagecoach Trail, Suite
		1071, San Marcos, Texas 78666

All statements and information on this form and associated correspondence relating to the Request and Safeguard Plan are incorporated by reference into the data exchange Contract with TWC as Exhibit 1. The original Exhibit 1 and contract must be signed by the Contract Signatory.

The person signing is authorized by Recipient to bind their organization to the terms of the contract.

#### **Designation For Subsequent Submissions:**

By checking here, the contract signatory approves the Recipient Point of Contact as their designee for submission of subsequent updates to the Request for Safeguard Plan and requests for renewals for purposes of extending the duration and associated amount.

Contract Signatory or designee

6-7-2022

Date

Ruben Becerra Hays County Judge **Printed Name/Title** 

For questions on how to complete this request form, contact <u>DEContracts@twc.texas.gov</u>.

# DocuSign

#### **Certificate Of Completion**

Envelope Id: 099D90FA762C43008443953D441085D2 Subject: Complete with DocuSign: Combined Contract.pdf docSeqId: docType: Source Envelope: Document Pages: 25 Certificate Pages: 2 AutoNav: Enabled EnvelopeId Stamping: Enabled Time Zone: (UTC-06:00) Central Time (US & Canada)

#### **Record Tracking**

Status: Original 11/18/2022 4:27:50 PM Security Appliance Status: Connected Storage Appliance Status: Connected

#### Signer Events

Heather Hall heather.hall@twc.texas.gov Chief Information Officer/IT Director Texas Workforce Commission Security Level: Email, Account Authentication (None)

#### Electronic Record and Signature Disclosure: Not Offered via DocuSign

Ruben Becerra Ruben.becerra@co.hays.tx.us Security Level: Email, Account Authentication (None)

#### Electronic Record and Signature Disclosure: Not Offered via DocuSign

In Person Signer Events Signature Timestamp **Editor Delivery Events** Status Timestamp **Agent Delivery Events** Status Timestamp **Intermediary Delivery Events** Status Timestamp **Certified Delivery Events** Status Timestamp **Carbon Copy Events** Status Timestamp Sgt. Donny Torres Sent: 11/28/2022 9:28:15 AM COPIED Donny.torres@co.hays.tx.us Viewed: 12/28/2022 10:23:13 AM Security Level: Email, Account Authentication (None)

Holder: Christopher Murphy

Pool: StateLocal

Account

Signature

Heather Hall

Christopher.murphy@twc.texas.gov

Pool: Texas Workforce Commission- Production

Signature Adoption: Pre-selected Style

Using IP Address: 174.246.194.130

Electronic Record and Signature Disclosure: Not Offered via DocuSign

Witness Events

Signature

Status: Sent

Envelope Originator: Christopher Murphy 101 E. 15th Street, Room 0154-B Austin, TX 78778 Christopher.murphy@twc.texas.gov IP Address: 204.65.0.21

Location: DocuSign

Location: DocuSign

Timestamp

Sent: 11/18/2022 4:32:14 PM Viewed: 11/28/2022 9:28:08 AM Signed: 11/28/2022 9:28:13 AM

Sent: 11/28/2022 9:28:16 AM

Timestamp

Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	11/18/2022 4:32:14 PM
Payment Events	Status	Timestamps



## Hays County Commissioners Court

Date: 01/03/2023	
Requested By:	Mike Jones
Sponsor:	Judge Becerra

#### Agenda Item:

Discussion and possible action to authorize a salary exception at the 50th percentile for the Full Time Deputy Fire Marshal, slot 0984-002 and increase the Part Time Deputy Fire Marshal, slot 0984-001 to 24 hours a week at \$25.00 per hour and amend the budget accordingly. **BECERRA/MIKE JONES** 

#### Summary:

The applicant has been a part-time employee of Hays County since 2019 and has gained valuable knowledge and experience with the Fire Marshal's Office. The candidate meets all four of the needed requirements for the Deputy Fire Marshal Position which are:

- 1. Basic Fire Inspection certification as issued by the Texas Commission on Fire Protection.
- 2. Plans Examiner certification as issued by the Texas Commission on Fire Protection.
- 3. Valid Class C Texas Driver's License.
- 4. Basic Fire Investigation or Arson Investigation certification as issued by the Texas Commission on Fire Protection.

The applicant also possess two of the three preferred requirements which include

- 1. Fire Instructor certification as issued by the Texas Commission on Fire Protection
- 2. Fire and Life Safety Educator I issued by the Texas Commission on Fire Protection

The candidate is a local resident of Hays County and is rooted in the community.

#### Fiscal Impact:

Amount Requested: \$23,276 (annualized) \$17,457 (FY23 fiscal impact) Line Item Number: 064-665-00]

#### **Budget Office:**

Source of Funds: Fire Marshal Code Fee Fund Budget Amendment Required Y/N?: Yes Comments: Funds are available in this Special Revenue Fund if approved. \$14,375 - Increase Staff Salaries 064-665-00.5021 \$891 - Increase FICA 064-665-00.5101_100 \$209 - Increase Medicare 064-665-00.5101_200 \$1,982 - Increase Retirement 064-665-00.5101_300 (\$17,457) - Decrease General Supplies 064-665-00.5201 Fiscal Impact: \$12,033 FTE Deputy Fire Marshal at 50th percentile \$7,134 PTE Deputy Fire Marshal 20 to 24 hrs per week at \$25 per hr \$19,167 Total Salary \$4,109 Fringe \$23,276 Total Impact (annualized)

\$17,457 FY23 Impact (eff 1/1/23-9 mos)

#### Auditor's Office:

Purchasing Guidelines Followed Y/N?: N/A G/L Account Validated Y/N?: Salaries and Fringe Benefits Expense New Revenue Y/N?: N/A Comments:



# Hays County Commissioners Court

Date: 01/03/2023	
Requested By:	Cynthia Millonzi
Sponsor:	Judge Becerra

#### Agenda Item:

Discussion and possible action to authorize a salary exception at the 50th percentile for the Bookkeeper, slot 0450-001 in the Courts Division at the Hays County Clerk's Office effective Jan 9, 2023. **BECERRA/CARDENAS** 

Summary:

Fiscal Impact:

Amount Requested: \$9,981.15 (annualized) \$7,485.87 (FY23 impact) Line Item Number: 001-617-00]

#### Budget Office:

Source of Funds: General Fund Budget Amendment Required Y/N?: No Comments: If approved, fund are available within the operating budget due to attrition.

\$41,095	50th Percentile
\$32,876	Base Salary
\$ 8,219	Difference
\$ 1,762	Fringe
\$ 9,981	Total Impact
\$ 7,486	FY23 Impact (9 mos)

Auditor's Office: Purchasing Guidelines Followed Y/N?: N/A G/L Account Validated Y/N?: Salaries and Fringe Benefits Expense New Revenue Y/N?: N/A Comments:

Salary Exception Form

Attachments



# **Request For Exception to Minimum Starting Pay**

**Applicant Data:** 

Name: Katresa Dawn Ray Hiring Department: County Clerk Position Number and Title: 0450-001 Bookkeeper Grade and Salary Range: 109, 32,886-49,314

## Salary Data:

Current Amount Budgeted For Position: Requested Starting Salary & Corresponding Percentile: 41,094.98 / 50% Additional Funding Requested: 8,219 Slot # 0450-001

Budget Information:	Annualized	FY23 (eff 1/3/23)	
Base Salary Increase Amount:	\$8,219	\$6,164	
Base Benefits Amount:	<u>\$1,762</u>	<u>\$1,322</u>	
Total Increase:	\$9,981	\$7,486	
Where will funds come from:	Funds available w	ithin operating budget, due to attri	tion.

Justification For Action Requested (*Comments about each are required*): Individual is highly qualified. Previous CFO and Bookkeeper

**Department operational need** (*How will this candidate meet the needs of the department?*) Performs the accounting duties of the Courts Division of the County Clerk's Office

**Duties and responsibilities:** (What knowledge, skills, abilities, and competencies does this candidate bring to your organization to help fulfill the duties and responsibilities of this job?) This candidate has experience in all aspects of accounting and bookkeeping procedures and practices.

Who was previously in this position? Barbara Villanueva When did they leave? 10-3-2022 Why did they leave? Transfer within the office. Where did they go? DCII position within the office

# Highlight this candidate's:

Relevant work experience and education: CFO and Bookkeeper for previous company

Knowledge, skills, abilities and competencies: Bookkeeping practices and procedures.

Relevant training, certification, license, etc.: N/A

**Internal salary alignment** (How will proposed salary compare to salaries of other employees in the department; list name, current salary and length of time in position for others in same role):

**Current salary** (How does person's current salary compare to proposed salary?)

# **Job Description Requirements** (Highlight the areas in the attached job description that this candidate possesses to help justify hiring above the minimum):

# hiring above the minimum):

The Bookkeeper is responsible for performing complex bookkeeping and financial support services of all revenue generated by the Hays County Clerk's office and passing through the office. Work includes the collection, consolidation, reconciliation, and reporting of financial data. This individual has extensive skills that meet or exceed the requirements of this position.

#### Approvals:

Hiring Supervisor: X Agree Disagree

Date (signature)

HR Approval: Agree Disagree

(signature)

C:\Users\9244\Desktop\HR\Salary Exception Request Form for Bookkeeper_Katresa Dawn Ray.docx

Date



# **Request For Exception to Minimum Starting Pay**

Budget Office

mendation of starting salary:

Funds Available: Yes No

Requires Commissioner's Court Approval (signature)

Date



# Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor: Co-Sponsor:

Commissioner Shell Commissioner Ingalsbe

#### Agenda Item:

Discussion and possible action to authorize the execution of an engagement letter with Davis Kaufman PLLC for \$65,000.04 related to the 87th legislative session of the Texas Legislature and authorize a discretionary exemption pursuant to Texas Local Government Code 262.024 (a)(4) and amend the budget accordingly. SHELL/INGALSBE

Summary: See attachment.

Fiscal Impact: Amount Requested: \$65,000.04 (annual) \$43,333.36 (FY23) Line Item Number: 001-645-00.5463

#### Budget Office:

Source of Funds: General Fund Budget Amendment Required Y/N?: Yes Comments: \$40k was budgeted for this service during the annual budget process. Recommend County-Wide Contingencies for the remaining \$3,333.36 that is needed for this fiscal year. \$3,334 - Increase Legislation Administrative Expense 001-645-00.5463 (\$3,334) - Decrease Contingencies 001-645-00.5399

#### Auditor's Office:

Purchasing Guidelines Followed Y/N?: Requires a discretionary exemption pursuant to Texas Local Government Code 262.024 (a)(4) for Professional Services G/L Account Validated Y/N?: Yes, Legislation Administrative Expense New Revenue Y/N?: N/A Comments:

**Engagement Letter** 

Attachments



December 28, 2022

Transmitted via email

Hays County Commissioners Court c/o Mark Kennedy 111 East San Antonio Street, Suite 202 San Marcos, Texas 78666

Dear Commissioners,

We appreciate the opportunity to submit this engagement letter for the representation of Hays County ("Client") on matters relating to monitoring legislative and regulatory activities and providing direct advocacy before the executive and legislative branches of Texas government during the 87th Session of the Texas Legislature.

It is our firm's practice at the beginning of an engagement to send this letter confirming the identity of the client and the nature of the work to be performed. In addition, we use this letter to summarize our billing and payment arrangements, and we ask that you acknowledge the terms of our engagement set forth in this letter by signing and returning a copy of this letter to the undersigned via electronic or first-class mail.

This engagement reflects our most recent discussion about the scope of services that your company believes would be appropriate.

# Client

In this engagement, our representation is solely of Hays County.

# **Scope of Services**

Davis Kaufman will provide the following services for representation of the client in Texas:

- Engage in monitoring legislation of interest to Hays County;
- Provide periodic reports (oral or written) to Hays County on said legislation;
- Provide legal and legislative advice to the client as requested;

- Draft proposed legislation at Client's direction and approval, including amendments to bills; and
- Engage in direct advocacy and representation before the executive and legislative branches of Texas government, as directed by the client.

# Term, Fees, and Expenses

This engagement is only for this matter. Any amendments or modifications to this agreement must be in writing and signed by all parties.

Our compensation for this representation shall be a monthly retainer of \$5,416.67 for a period of 12 months commencing with the execution of this contract on February 1, 2023 and ending on February 1, 2024. The retainer shall be due on the 1st of each calendar month, with the first monthly payment to be made upon the execution of this engagement.

Although we do not anticipate making any expenditures on your behalf, if we do, those will be subject to your review and approval.

# Conflicts

We have performed a conflicts check and believe that we are free to undertake this matter under the applicable standards governing the rules of professional conduct.

# Governing Law and Compliance

Texas law shall govern the terms of this engagement. Davis Kaufman agrees to perform the services in a lawful, ethical manner in accordance with all applicable laws and regulations relating to such activities.

# Conclusion

We appreciate the opportunity to represent Hays County and look forward to your response. Should you have any questions or need additional information, please do not hesitate to contact me at 512-797-7237.

Sincerely,

Denise Davis Partner Davis Kaufman PLLC

Agreed to and accepted on this _____ day of _____2023.

By: _____ Hays County Commissioners Court

THE STATE BAR OF TEXAS INVESTIGATES AND PROSECUTES PROFESSIONAL MISCONDUCT COMMITTED BY TEXAS ATTORNEYS. ALTHOUGH NOT EVERY COMPLAINT AGAINST OR DISPUTE WITH A LAWYER INVOLVES PROFESSIONAL MISCONDUCT, THE STATE BAR'S OFFICE OF GENERAL COUNSEL WILL PROVIDE YOU WITH INFORMATION ABOUT HOW TO FILE A COMPLAINT. PLEASE CALL 1-800-932-1900 TOLL-FREE FOR MORE INFORMATION.



# Hays County Commissioners Court

Date: 01/03/2023 Requested By: Sponsor:

CUTLER Commissioner Ingalsbe

### Agenda Item:

Discussion and possible action authorizing the County Judge to execute a Professional Services Agreement with Dr. Brandy Miller regarding psychological evaluations for the Hays County Sheriff's Office. INGALSBE/CUTLER

Summary:

Fiscal Impact: Amount Requested: \$10,000 Line Item Number: 001-618-00/03.5335

Budget Office: Source of Funds: General Fund Budget Amendment Required Y/N?: No Comments: N/A

Auditor's Office:

Purchasing Guidelines Followed Y/N?: Professional Services, not to exceed \$10,000 G/L Account Validated Y/N?: Yes, Employment Testing New Revenue Y/N?: N/A Comments:

Dr. Miller PSA

Attachments

# PROFESSIONAL SERVICES AGREEMENT HAYS COUNTY, TEXAS

**HAYS COUNTY**, a political subdivision of the State of Texas (hereinafter the "County") with administrative offices at 111 E. San Antonio, Suite 300, San Marcos, Texas 78666, and Dr. Brandy Miller (hereinafter "Contractor"), whose primary place of business is located at 2301 Bagdad Road, Suite 104, Cedar Park, Texas 78613, hereby enter into this Professional Services Agreement (hereinafter "Agreement") effective the 1st day of January, 2023 (hereinafter "Effective Date"). The County and Contractor (collectively "the parties to this Agreement" or "the parties") agree as follows:

# **1. OVERVIEW**

Contractor shall conduct Fit for Duty psychological evaluations for employees of the Hays County Sheriff's Office, including the Hays County Jail, on an as-needed basis. Contractor may also perform additional, related, evaluations on an as-needed basis.

# 2. SERVICES

Contractor agrees to perform services for the County in accordance with the County's instructions and, in particular, the instructions of Hays County Sheriff, his designee, and/or legal counsel for the Hays County Commissioners Court; and in conformance with the descriptions, definitions, terms, and conditions of this Agreement. The Scope of Services shall be limited to those services and terms attached hereto as Exhibit "A", and any subsections of Exhibit "A", if as and when they are attached hereto and signed by the parties (collectively "the Work"). If the parties to this Agreement amend the Work required under this Agreement (by adding or removing specific services and/or terms enumerated in Exhibits "A" and/or "C"), the Compensation cited in Section 5 of this Agreement may also be amended to conform with the change in Scope of Services, as agreed by the parties.

# **3. ADDITIONAL TERMS**

Additional Terms and Obligations of the parties to this Agreement, if any, are stated in Exhibit "C", attached hereto.

# 4. DURATION

The parties agree that the Work shall be performed on an as-needed basis. The initial term of the Agreement is for one (1) year from the Effective Date, and shall automatically renew, on an annual basis, unless otherwise terminated by either party with at least thirty (30) days written notice prior to the expiration of the then-current annual renewal.

# **5. COMPENSATION**

Contractor will be compensated for the Work on a per-evaluation basis, the terms of which are cited in Contractors rate schedule, which is attached hereto as Exhibit "B." Despite any reference to Contractors rate schedule, which shall be used to calculate monthly invoice amounts under this Agreement or a change in the Scope of Services (i.e. Amendment), the parties agree that the County shall pay Contractor a total fee not to exceed Ten Thousand dollars (\$10,000 USD), per year, for the Work performed under this Agreement.

# 6. PAYMENT

Contractor shall invoice the County for the Work performed under this Agreement on a monthly basis, beginning at the end of the first full month following the Effective Date. The County agrees to promptly pay all invoices in accordance with Texas Government Code Chapter 2251 and by sending payment to Contractor's address stated in Section 8, below.

# 7. NOTICE OF COMPLETION

Upon completion of the Work, Contractor shall send a Notice of Completion to the County in writing, and the County shall have the option to inspect the Work (or the product thereof) before it is considered complete under this Agreement. If the County is satisfied that the Work under this Agreement is complete, the County shall send Contractor an Acceptance of Completion in writing. If, after inspection, the County does not agree that the Work is complete or believes that the Work is of deficient quality, the County shall send Contractor a Deficiency Letter, stating the specific aspects of the Work that are incomplete and/or deficient. If, after ten (10) business days from the County's receipt of Contractor's Notice of Completion, the County does not send Contractor either an Acceptance of Completion or a Deficiency Letter, the Work under this Agreement shall be considered complete.

# **8. NOTICE (GENERAL)**

All notices issued by Contractor under or regarding this Agreement shall be provided in writing to the County at: Hays County, Attn: County Judge, 111 E. San Antonio, Suite 300, San Marcos, Texas 78666; <judge.becerra@co.hays.tx.us>.

All notices issued by the County under or regarding this Agreement shall be provided in writing to Contractor at its primary place of business.

Notices from one party to another under this Section may be made by U.S. Mail, parcel post, Facsimile, or Electronic Mail, sent to the designated contact at any of the designated addresses cited above.

# 9. INSURANCE

Contractor agrees that, during the performance of all terms and conditions of this Agreement, from the Effective Date until the County's acceptance of Contractor's Notice of Completion or until this Agreement is otherwise considered completed as a matter of law, Contractor shall, at its sole expense, provide and maintain Commercial General Liability insurance that meets or exceeds the industry standard for professional services providers in Contractor's field of employment and for the type of services that are being performed by Contractor under this Agreement. Such insurance coverage shall specifically name the COUNTY as co-insured. This insurance coverage shall cover all perils arising from the activities of Contractor, its officers, directors, employees, agents or subcontractors, relative to this Agreement. Contractor shall be responsible for any deductibles stated in the policy. A copy of the current Certificate of Liability Insurance is attached hereto as Exhibit "D". A true copy of each new Certificate of Liability Insurance shall be provided to the COUNTY within seven (7) days of the new policy date at the following address: Office of General Counsel, Hays County Courthouse, 111 East San Antonio, Suite 202, San Marcos, Texas 78666.

So long as this Agreement is in effect, Contractor shall not cause such insurance to be canceled nor permit such insurance to lapse. All insurance certificates shall include a clause to the effect that the policy shall not be canceled, reduced, restricted or otherwise limited until thirty (30) days after the COUNTY has received written notice as evidenced by a return receipt of registered or certified mail.

# **10. MUTUAL INDEMNITY**

Contractor agrees, to the fullest extent permitted by law, to indemnify and hold harmless the County, its officers, directors and employees against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by Contractor's negligent performance of the Work under this Agreement and that of its subcontractors or anyone for whom the Consultant is responsible or legally liable.

The County agrees, to the fullest extent permitted by law, to indemnify and hold harmless Contractor, its officers, directors, employees and subcontractors against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by the County's negligent acts in connection with this Agreement.

Neither the County nor Contractor shall be obligated to indemnify the other party in any manner whatsoever for the other party's negligence.

# **11. COMPLIANCE WITH LAWS**

Each party agrees to comply with all laws, regulations, rules, and ordinances applicable to this Agreement and/or applicable to the parties performing the terms and conditions of this Agreement.

# **12. SURVIVAL**

Notwithstanding any termination of this Agreement, the following Sections, and the terms and conditions contained therein, shall remain in effect: 3, 5, 8, 10, 12, 14, 15, 16, 17, 18, 20, 21 and 22.

# **13. FORCE MAJEURE**

Either of the parties to this Agreement shall be excused from any delays and/or failures in the performance of the terms and conditions of this agreement, to the extent that such delays and/or failures result from causes beyond the delaying/failing party's reasonable control, including but not limited to Acts of God, Forces of Nature, Civil Riot or Unrest, and Governmental Action that was unforeseeable by all parties at the time of the execution of this Agreement. Any delaying/failing party shall, with all reasonable diligence, attempt to remedy the cause of delay and/or failure and shall recommence all remaining duties under this Agreement within a reasonable time of such remedy.

# **14. SEVERABILITY**

If any Section or provision of this Agreement is held to be invalid or void, the other Sections and provisions of this Agreement shall remain in full force and effect to the greatest extent as is possible, and all remaining Sections or provisions of this Agreement shall be construed so that they are as consistent with the parties' intents as possible.
# **15. MULTIPLE COUNTERPARTS**

This Agreement may be executed in several counterparts, all of which taken together shall constitute one single Agreement between the parties.

# **16. SECTION HEADINGS, EXHIBITS**

The Section and Subsection headings of this Agreement, as well as Section 1, Entitled "Overview," shall not enter in the interpretation of the terms and conditions contained herein, as those portions of the Agreement are included merely for organization and ease of review. The Exhibit(s) that may be referred to herein and may be attached hereto, are incorporated herein to the same extent as if fully set forth herein.

# **17. WAIVER BY PARTY**

Unless otherwise provided in writing by the waiving party, a waiver by either of the parties to this Agreement of any covenant, term, condition, agreement, right, or duty that arises under this Agreement shall be considered a one-time waiver and shall not be construed to be a waiver of any succeeding breach thereof or any other covenant, term, condition, agreement, right, or duty that arises under this Agreement.

## **18. GOVERNING LAW AND VENUE**

THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS. Any lawsuit, claim, or action, whether in law or in equity, arising from this Agreement will be brought in Hays County, Texas.

## **19. ASSIGNMENT**

Neither party to this Agreement may assign it duties, interests, rights, benefits and/or obligations under this Agreement, in whole or in part, without the other party's prior written consent thereto.

## **20. BINDING EFFECT**

Subject to any provisions hereof restricting assignment, this Agreement shall be binding upon and shall inure to the benefit of the parties hereto, and their respective successors, permitted assigns, heirs, executors, and/or administrators.

## **21. ENTIRE AGREEMENT; AMENDMENT**

This Agreement (including any and all Exhibits attached hereto) constitutes the entire agreement between the parties hereto with respect to the subject matter hereof. Any amendments to this Agreement must be made in writing and signed by the parties to this Agreement prior to the performance of any terms or conditions contained in said amendments.

## **22. WORK PRODUCT**

Any and all product, whether in the form of calculations, letters, findings, opinions, or the like, shall be the property of Hays County during and after performance of the Work. Contractor shall have a right to retain a copy of all Work product for record-keeping purposes.

## 23. TERMINATION BY COUNTY

This Agreement may be terminated by Hays County, for any reason whatsoever, by providing thirty (30) days written notice to Contractor. Any approved services provided under this Agreement up to the date of termination may be invoiced by Contractor after the termination date, and payment of said invoice shall not be unreasonably withheld by the County.

Signatures by the parties to this Professional Services Agreement follow on the next page.

IN WITNESS WHEREOF, the undersigned have duly executed and delivered this Professional Services Agreement, and hereby declare that THEY HAVE READ AND DO UNDERSTAND AND AGREE TO EACH AND EVERY TERM, CONDITION, AND COVENANT CONTAINED IN THIS AGREEMENT AND IN ANY DOCUMENT INCORPORATED BY REFERENCE.

Hays County, Texas By: Ruben Becerra Hays County Judge Dr. Brandy Miller By: Principal

# EXHIBIT A

# Scope of Work

On an as-needed basis:

- Conduct Fit For Duty psychological evaluations for employees of the Hays County Sheriff's office, including the Hays County Jail
- Provide other evaluations as directed by the Hays County Sheriff or his designee

# EXHIBIT B

# Fee Schedule

Contractor's Evaluation Rate Schedule

Principal: \$1500.00 per evaluation (includes in-person and/or virtual evaluations)

# EXHIBIT C

if any, are as follows:
_
_
-
-
-
-

. . . . . . • • . . _ . ... .

# <u>EXHIBIT D</u>

# **Certificate of Insurance**



Date: 01/03/2023
Requested By:
Sponsor:

Judge Becerra

## Agenda Item

Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property associated with Parks and Open Space Projects being considered by Hays County. Possible discussion and/or action may follow in open court. **BECERRA** 

#### Summary

Additional information will be provided during Executive Session.



Date: 01/03/2023 Requested By: Sponsor:

Commissioner Ingalsbe

#### Agenda Item

Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property located at 2400 N IH 35, San Marcos. Possible discussion and/or action may follow in open court. **INGALSBE** 

#### Summary

Additional information will be presented in Executive Session



Date: 01/03/2023	
Requested By:	
Sponsor:	

Tammy Crumley Commissioner Ingalsbe

## Agenda Item

Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property located at 101 Thermon Drive, San Marcos. Possible discussion and/or action may follow in open court. **INGALSBE** 

#### Summary

Additional information will be presented in Executive Session.



Date: 01/03/2023
Requested By:
Sponsor:

Judge Becerra

### Agenda Item

Executive Session pursuant to Sections 551.071 and 551.087 of the Texas Government Code: consultation with counsel and deliberation regarding economic development negotiations associated with Project Midnight Blue. Possible discussion and/or action may follow in open Court. **BECERRA** 

#### Summary

Additional information will be provided in Executive Session.



Date: 01/03/2023 Requested By: Sponsor: Co-Sponsor:

Judge Becerra Commissioner Ingalsbe

#### Agenda Item

Executive Session pursuant to sections 551.071 & 551.074 of the Texas Government Code: deliberation regarding the structure, employment, and duties of all positions within Countywide Operations, Emergency Services, Human Resources, the Budget Office, and the County Judge's Office. Possible discussion and/or action may follow in open court. **BECERRA/INGALSBE** 

#### Summary

Additional information will be provided in Executive Session.



Date: 01/03/2023 Requested By: Sponsor:

**Commissioner Shell** 

## Agenda Item

Executive Session pursuant to Sections 551.071 and 551.072 of the Texas Government Code: consultation with counsel and deliberation regarding the purchase, exchange, lease and/or value of real property owned by Hays County located at 401 Veterans Drive, Kyle in Pct.3. Possible discussion and/or action may follow in open court. SHELL

#### Summary