PURCHASING DEPARTMENT
County of Hidalgo

2812 S. Bus. Hwy 2811
Edinburg, Texas 78539
Phone: (956) 318-2626
Fax: (956) 318-2629
www.co.hidalgo.tx.us/purchasing

TRANSMITTAL FORM

Today's Date: 06/28/2021 Department: 110 - County Judge

Contract No.: C-21-008-06-25 Effective Date: 06.25.2021

Description of Project: North Alamo Road Realignment

Awarded Vendor: Texas Cordia Construction

CC Approval on 06/25/2021 AI- 81290

Routing of documents:

✓ 1. Executive Office – Attn: Monica Salinas

✓ 2. District Attorney's Office – Attn: Robert Viña

3. County Judge's Office – Attn: Richard F. Cortez

4. County Clerk's Office – Attn: Arturo Guajardo, Jr.

5. Purchasing Department – Attn: Heidi Ortiz ext. 4877

ATTENTION COUNTY CLERK'S OFFICE:

Please do not attach the following to the minutes of this agenda due to the confidential nature of the information contained herein:

- ☐ Contract/Agreement
- ☐ Exhibit A – RFB Procurement Packet
- ☐ Exhibit B – Fee Schedule/Bid Page (Pgs. _____ to _____)
- ☐ Exhibit C – Certificate of Liability Insurance
- ☑ Other: Contact CS upon receipt for PDF contract

CSJ: 0921-02-311

FILED
AT 4:10 O'CLOCK P M
JUN 30 2021
ARTURO GUAJARDO, JR. COUNTY CLERK
HIDALGO COUNTY, TEXAS
BY _____ DEPUTY

THE STATE OF TEXAS §
§
COUNTY OF HIDALGO §

CONSTRUCTION CONTRACT
North Alamo Road Realignment Project (From FM 1925 Monte Cristo Rd) to 0.54 miles North of FM 1925)
C-21-008-06-25

This Agreement entered into this 25th day of June 2021, by and between the County of Hidalgo (hereinafter called the "OWNER") and Texas Cordia Construction, LLC (a corporation)
(a partnership) (an individual) of Edinburg, State of Texas, hereinafter called "CONTRACTOR". The County's procurement packet and Contractor's response are incorporated herein for all purposes.

WITNESSETH

That for and in consideration of the payments and agreement hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows:

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)

Hereinafter called the project, for the sum of $615,015.33 and all extra work in connection therewith, under the terms and stated in the General and Special Conditions of the Contract; and at his (its or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions and Special Conditions printed or written explanatory matter thereof, the specifications and contract documents therefore as prepared by County, entitled the "Owner", and as enumerated in Paragraph 1.01.A.12 of the General Conditions, all of which are made a part hereof and collectively evidence and constitute the contract.

The CONTRACTOR hereby agrees to commence work under this contract on or after a date to be specified in written "Notice to Proceed" of the OWNER and to fully complete the project within 120 working days "Standard Workweek" thereafter. The CONTRACTOR further agrees to pay, as liquidated damages, the sum of $620.00 for each consecutive calendar day thereafter.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in the General Conditions of the contract, and to make payments on account thereof as provided in Paragraphs 14.02.C and 14.07.C of the General Conditions.

WITNESS THE HANDS OF THE PARTIES effective as of the day and year first written above.

APPROVED BY COMMISSIONERS' COURT ON, June 25, 2021.

CONTRACTOR: _____
Print Name & Title: Yara M. Corbitt, PE, CEO
Name of Firm: Texas Cordia Construction, LLC
Address: 3149-A Center Pointe Drive
Edinburg, Texas 78539
Fed I.D. #/SS #: 45-2590990

STATE OF TEXAS

COUNTY OF HIDALGO

This instrument was acknowledged before me on this the 16 day of June, 2021, by Yara M. Corbitt, PE, CEO of and on behalf of Texas Cordia Construction, LLC
(Title) (A partnership)

ISABEL G. MARTINEZ
Notary Public, State of Texas
Comm. Expires 12-03-2021
Notary ID 128118614

Notary Public Signature

ATTEST:

COMMISSIONERS COURT HIDALGO COUNTY, TEXAS

Arturo Guajardo, Jr., County Clerk

COUNTY OF HIDALGO:

Richard F. Cortez, County Judge

APPROVED AS TO FORM:
Hidalgo County District Attorney's Office

By: _____
Robert Vina, III - Assistant District Attorney

APPROVED BY COMMISSIONERS COURT ON: 6/25/21

EXHIBIT “A”

REQUIREMENTS/COUNTY’S REQUEST FOR BID’S PROCUREMENT PACKET

SPECIFICATIONS AND CONTRACT DOCUMENTS
FOR

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)

BID NO. 2021-008-04-21-HGO

April 21, 2021

PREPARED FOR:
Hidalgo County Precinct No. 4

L&G CONSULTING ENGINEERS, INC.
TBPE REG # F-4105

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From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925

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Hidalgo County would like to invite you to submit a bid on the following:

BID No.:	Project Name:
2021-008-04-21-HGO	**North Alamo Rd. Realign. Project from FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925**

The project scope consists of realigning a local roadway facility consisting of Grading, Cement Treated Subgrade, Lime Treated Flexible Base, Drainage Structures, Asphaltic Concrete Pavement, Signing, Delineation, and Pavement Markings.

Estimated Project Construction Cost: $750,000 Retainage 5%

Interested contractors may obtain bid packets by calling the Hidalgo County Purchasing Department at **(956) 318-2626** or by email to heidi.ortiz@co.hidalgo.tx.us.

Please be advised that due to the current COVID-19 pandemic, physical attendance at the Pre-Bid Conference and Bid Opening meeting is subject to parameters specified in any governmental Orders applicable at the time. For your convenience, the County has made virtual attendance available via online portal, and information regarding the same will be provided to all contractors having received a bid packet from Hidalgo County prior to the respective event.

A **Non-**Mandatory Pre-Bid Conference will be held on **Monday, April 12, 2021, at 2:00 p.m.** at **Hidalgo County Precinct No 4 located at 1051 N. Doolittle Rd. Edinburg, TX 78542**.

Sealed bids shall be properly identified as follows: ***Bidders' name and address*** on the upper left-hand corner and "***Bid No. 2021-008-04-21-HGO North Alamo Road Realignment Project (from FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)"*** on the lower left-hand corner of sealed envelope or packet. Overnight mail shall also be properly labeled on the outside of the express envelope or package. **The sealed bid must contain one (1) original (pages one-sided marked ORIGINAL), one (1) copy of bid, and two (2) CD/USB in PDF format and must be identified and addressed for delivery to:**

Martha L. Salazar, CPPB, Hidalgo County Purchasing Agent
Hidalgo County Purchasing Department

US Postal Mail/Courier Address:	Physical Location:
2812 S. Business Hwy 281 **Edinburg, TX 78539**	**2802 S. Business Hwy. 281(Southeast of Canton Rd & Business Hwy 281), Edinburg, TX 78539**

Sealed bids will be accepted until **9:30 am on Wednesday, April 21, 2021.** Bids will be opened and read aloud publically at 9:31 a.m. in the **Hidalgo County Purchasing Department Conference Room located in the Hidalgo County Administration Building at 2802 S. Business Hwy 281, Edinburg, Texas**. NO FACSIMILES OR LATE ARRIVALS WILL BE ACCEPTED. ANY BID RECEIVED AFTER THAT TIME WILL NOT BE OPENED AND WILL BE RETURNED.

ELIGIBILITY OF BIDDERS: Any Contractor intending to bid on this project to be awarded by Hidalgo County must be prequalified by the Texas Department of Transportation (TxDOT) under the confidential questionnaire (CQ) level of qualification. **If the Contractor is not prequalified, the Contractor must submit a satisfactory Confidential Questionnaire Form and an audited financial statement to the TxDOT Construction Division at least fourteen (14) calendar days prior to the date that bids are to be opened.** Obtain prequalification forms from the TxDOT Construction Division.

A BIDDER'S BOND from a reliable surety company licensed to operate in the State of Texas or Certified Cashier's Check, payable without recourse to the County of Hidalgo, for the amount of not less than **5%** of the total bid shall accompany the bid as a guaranty that, if awarded the contract, the bidder will enter into a contract with the County of Hidalgo. A Payment Bond is required in the amount of one hundred percent (100%) of the Contract Amount if the contract exceeds $25,000. A Performance Bond is required in the amount of one hundred percent (100%) of the Contract Amount if the contract exceeds $100,000.

DAVIS-BACON PREVAILING WAGE RATES: Bidders must adhere to Texas State Prevailing Wage Requirements for Hidalgo County and Davis-Bacon Federal Wage Rates, including Certified Payroll. Be advised applicable wage rates may change. In addition, the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, age, disability, or national origin.

DISADVANTAGED BUSINESS ENTERPRISE POLICY: This project is financed in part by Federal Funds. A **2% DBE GOAL** has been established for this project in accordance with 49 CFR Part 26. Notice of Requirement for Affirmative Action to Ensure Equal Opportunity (Executive Order 11246, as amended). **All bidders must submit DBE commitments with their bid packet, or TxDot Form 2063.**

BIDS MAY BE HELD by the County of Hidalgo for a period not to exceed ninety (90) days from the date of the opening of bids to review the bids and investigate the qualifications of bidders, prior to awarding of the contract.

TYPEWRITTEN RFI's shall be emailed to heidi.ortiz@co.hidalgo.tx.us. **HANDWRITTEN RFI's** will **NOT** be answered. **RFI's** will not be answered by **phone**. All **RFI's** shall be submitted by **5 P.M. Tuesday, April 14, 2021. RFI's** beyond this date will not be responded to.

BY ORDER OF THE COMMISSIONERS COURT OF HIDALGO COUNTY, TEXAS on this the **27th day** of **February 2020.**

MARTHA L. SALAZAR, CPPB
HIDALGO COUNTY PURCHASING AGENT

REQUEST FOR BID (RFB)

HIDALGO COUNTY

"North Alamo Road Realignment Project from FM 1925 (Monte Cristo Road) to 0.54 miles North"

RFB No: 2021-008-04-21-HGO

Acceptance Due Date: **April 21, 2021**

Martha L. Salazar, CPPB, Purchasing Agent
Hidalgo County Purchasing Department

Contract Specialist Contact Information:

Heidi Garcia Ortiz, Contract Specialist, III
956-318-2626 Ext. 4877
Heidi.ortiz@co.hidalgo.tx.us

Please be advised that due to the current COVID-19 pandemic, physical attendance at the Pre-Bid Conference and bid-opening meeting is subject to parameters specified in any governmental Orders applicable at the time. For your convenience, the County has made virtual attendance available via online portal, and information regarding the same will be provided to all contractors having received a bid packet from Hidalgo County prior to the respective event.

1. Hidalgo County ("County") is seeking bids from qualified respondents for the North Alamo Road Realignment Project from FM 1925 (Monte Cristo Road) to 0.54 miles North in Precinct 4. Respondent (may also be referred to as contractor or vendor) may suggest substitutions of features which they feel would be in the best interest of Hidalgo County ("County"), however, a strong rationale must be presented for any deviation from the requirements. Hidalgo County reserves the right to reject the deviation and its effect on the overall bid.

2. **One (*1*) original (**pages ***one-sided*** **–**marked ***ORIGINAL*****), one (*1*) copy, and two (*2*) CD/USB** in **PDF format** are required with the respondent's name and address clearly typed/printed in the upper left-hand corner of the envelope/package and the proper notation clearly typed/printed in the lower left-hand corner of the envelope and/or package, RFB No.: 2021-008-04-21-HGO **North Alamo Road Realignment Project from FM 1925 (Monte Cristo Road) to 0.54 miles North** (Including all funding sources, programs, and entities*)* and in County's Purchasing Department, Physical Location: 2802 S. Business Hwy. 281 Postal/ Mailing: 2812 S. Business Hwy. 281 Administration Building, Edinburg, Texas, **ON OR BEFORE 9:30 A.M., Wednesday, April 21, 2021.**

NO FACSIMILES OR LATE ARRIVALS WILL BE ACCEPTED. ANY BID RECEIVED AFTER THAT TIME WILL NOT BE OPENED AND WILL BE RETURNED. OVERNIGHT MAIL MUST ALSO BE PROPERLY LABELED ON THE OUTSIDE OF EXPRESS ENVELOPE AND/OR PACKAGE IN REFERENCE TO RFB.

Hidalgo County reserves the right to refuse and reject any/all bids and to waive any/all formalities or technicalities, or to accept the bid considered the best and most advantageous to Hidalgo County.

Additionally, all forms listed below must be properly executed and included with your RFB:

1. Legal Notice Acknowledgement (See **page *11***);
2. Bid Page (Exhibit "**B**");
3. Insurance pages with Acknowledgment Forms (See **Exhibit "*C*"**);
4. Form CIQ-Conflict of Interest Questionnaire (See **Exhibit "*D*"**);
5. Vendor Bidder Application, W-9, & HUB/DBE (See **Exhibit "*E*"**);
6. Certification Regarding Debarment (See **Exhibit "*F*"**);
7. (*If applicable*) - Required Contract Clauses for Contracts Under Federal Award – 2 CFR 200, Appendix II & FEMA (See **Exhibit "*H*"**);
8. Proposer's Affidavit (See **Exhibit "*J*"**);
9. SAM.gov Registration Acknowledgement (See **Number *12*** below);

3. Hidalgo County reserves the right to separate and accept or eliminate any item(s) listed under this RFB that it deems necessary to accommodate budgetary and/or operational requirements. Hidalgo County also reserves the right to reject any or all bids submitted. Receipt of a bid shall under no circumstances obligate County to accept the Respondent's submission.

4. Respondent is responsible for obtaining any information needed in order to respond to the RFB.

5. Respondent should provide any and all relevant information necessary to establish bid

qualifications.

6. Bid submittal is to remain firm for a minimum of ninety (*90*) days after the RFB opening.

7. County reserves the right to accept or reject any or all bids.

8. Any interpretations, amendments, corrections or changes to this RFB document must be in a written addendum and signed by the County Judge or his designee. Addenda will be emailed to all who are known to have received a copy of the Request for Bid. Respondents shall acknowledge receipt of all addenda as a part of their submittal.

9. Respondent is responsible for all costs of submitting its response to the RFB.

10. Costs are to be net F.O.B., County Prepaid.

11. HIDALGO COUNTY HOLIDAYS:

2021 YEAR	
New Year's Day	**01/01/21**
Martin Luther King Day	**01/18/21**
President's Day	**02/15/21**
Good Friday	**04/02/21**
Memorial Day	**05/31/21**
Independence Day	**07/05/21**
Labor Day	**09/06/21**
Columbus Day	**10/11/21**
Veteran's Day	**11/11/21**
Thanksgiving Day	**11/25/21 – 11/26/21**
Christmas Day	**12/23/21 – 12/24/21**
New Year's Eve	**12/31/21**

12. BID, PAYMENT, OR PERFORMANCE BOND AND DEBARMENT CERTIFICATION; PAYMENT UNDER CONTRACT:

The County may, and if mandated by statute, shall require a bid bond, a performance bond, and/or a payment bond. Any such bond must be executed with a surety company authorized to do business in Texas and shall meet any other requirements established by law or by County pursuant to applicable law.

- If the contract proposed is for the construction of public works or is for a contract for goods & services exceeding $100,000, all respondents shall furnish a good and sufficient bid bond in the amount of five (5%) percent of the total contract price.
- In the event the contract exceeds Fifty Thousand Dollars ($50,000.00), the respondent shall furnish a payment bond and a performance bond to the County for the full amount of the contract within thirty (30) days after the date of signing of the contract or issuance of a Purchase Order following the acceptance of a bid, but in any event prior to the commencement of actual work.

- If the contract is for $50,000 or less, no money will be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County, and, if applicable, the receipt by County of satisfactory evidence that all subcontractors and material men

have been paid.

- If a contract is for the construction, alteration, or repair of public buildings or public works, the contractor *shall* provide a performance bond for a contract in excess of One Hundred Thousand Dollars ($100,000.00) and *shall* provide a payment bond for a contract in excess of Twenty-Five Thousand Dollars ($25,000.00) as required by Tex. Govt. Code Ch. 2253.

- For requirements contracts, bond requirements are determined by applying the proposed unit price to the estimated quantities included in the specifications.

- All participants are also required to furnish a certification or acknowledgment stating that the contractor or vendor is free from suspension or debarment pursuant to federal regulation 45 CFR Part 76. Register at SAM.gov - System for Award Management

13. TITLE VI NOTICE/ NONDISCRIMINATION:

a) By submitting a bid, the respondent certifies that it will comply with the following nondiscrimination statutes and their implementing regulations. Title VI of the Civil Rights Act of 1964, as amended (78 Stat.252, 42 U.S.C. §§2000d to 2000d-4) provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives Federal financial assistance. Title VI has been broadened by related statutes, regulations, and executive orders as found in Appendices "A" through "E" as delineated in the USDOT Standard Title VI/Non-Discrimination Assurances-Specific Assurances to prohibit discrimination on other grounds including, but not limited to, religion, sex, age, and disability. (Title VI-Appendices "A" through "E" are hereby attached as **Exhibit "*G*"**. The County's entire Title VI policy may be found at https://www.hidalgocounty.us/2071/Title-VINondiscrimination-Plan and is hereby incorporated by reference.

b) The following required statement and the applicable provisions of the Title VI Appendices "A" through "E" expanding these protections to the categories described herein are hereby incorporated by reference as applicable.

- "The County of Hidalgo, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat.252, 42 U.S.C. §§2000d to 2000d-4) and the Regulations, hereby notifies all respondents that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award".

c) The respondent will attach all applicable notices, including those referenced in Title VI – Appendices "A" through "E", to which it is obligated to provide or submit as part of the RFB.

- If applicable, Form FHWA 1273 – "*Required Contract Provisions Federal-Aid Construction Contracts*", must be physically attached to certain Federal-aid construction contracts. A contractor (or subcontractor) is required to insert Form FHWA 1273 in each subcontract and all lower-tier subcontracts. Form FHWA 1273 is attached as **Exhibit "*I*"**, and, if applicable, its provisions are incorporated in and made part of the contract entered into between the County and the successful respondent related to the present procurement.

14. ETHICAL STANDARDS:

- It shall be a breach of ethics to offer, give or agree to give any elected official, department head or employee, or former elected official, department head or employee, of the County, or for any elected official, department head or employee or former elected official, department head or employee of the County, to solicit, demand, accept or agree to accept from another person, entity or organization, a gratuity or an 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 application, request for ruling, determination, claim or controversy, or other particular matter pertaining to any program requirement or a contract or subcontract, or to any solicitation or bid, therefore, pending before any department or agency of the County.

- 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 the County, or any person associated therewith, as an inducement for the award of a subcontract or order.

- Contracts awarded hereunder shall be in compliance with Tex. Loc. Govt. Code Chapter 171: Regulation of Conflicts of Interest of Officers of Municipalities, Counties, and Certain Other Local Governments.

- **NOTICE:**

  All communications by a vendor to the county, its officials, and department heads regarding this procurement shall be done through the Hidalgo County Purchasing Department.

  No vendor, its' representative, agent, or employee shall engage in private communication with a member of the Hidalgo County Commissioners Court or county department heads regarding any procurement of goods or services by the County from the date that the RFB, RFP, RFCSP, or RFQ is released. No private communication regarding the purchase shall be permitted until the procurement process is complete and a purchase order is granted or a contract is entered into. "Private Communication" means communication with any vendor outside of a posted meeting of the governing body, a regular meeting of a standing or appointed committee, or negotiation with a vendor which has been specifically authorized by the governing body.

15. DISCLOSURE OF CONFLICT OF INTEREST:

Effective January 1, 2016, Chapter 176 of the Texas Local Government Code requires that any vendor, person, consultant, or contractor considering doing business with Hidalgo County ("the County") to disclose in the Conflict of Interest Questionnaire (the "CIQ") attached as **Exhibit "*D*",** the vendor, person, consultant or contractor's affiliation or business relationship that might cause a conflict of interest with the County. By law, the CIQ must be filed with the Hidalgo County Clerk's Office no later than the seventh business day after the date the person becomes aware of facts that require the statement to be filed. The disclosure requirement applies to a person or business that contracts or seeks to contract with Hidalgo County for the sale or purchase of property, goods, or service. Any purchase order or contract resulting from this process shall be considered null and void if the successful respondent fails to comply with the Texas Local Government Code Chapter 176. Vendors, consultants, contractors, and others who desire to conduct business with Hidalgo County are encouraged to refer to Texas Local Government Code Chapter 176 for details of this law. An offense under Texas Local Government Code Chapter 176 is a Class C Misdemeanor.

If applicable, completed Form CIQ must be submitted to the Hidalgo County Clerk's Office located at 100 N. Closner, Edinburg, Texas 78539 - Hidalgo County Courthouse.

COMPLETION AND SUBMISSION OF FORM CIQ IS THE SOLE RESPONSIBILITY OF THE PROSPECTIVE RESPONDENT. QUESTIONS REGARDING COMPLIANCE SHOULD BE DIRECTED TO YOUR LEGAL COUNSEL.

16. CERTIFICATE OF INTERESTED PARTIES (FORM HB1295):

As of January 1, 2016, to comply with Texas Government Code Section §2252.908, and the rules issued by the Texas Ethics Commission found in Title 1, Section 46.1, 46.3, and 46.5 of the Texas Administrative Code, we have updated and revised our RFB packet. In accordance with these requirements, a business must submit a completed Certificate of Interested Parties Form 1295 to the County before the County may enter into a contract with the business entity. In box 3 of Form 1295, you will provide the **RFB No. 2021-008-HGO,** as shown on the packet. Once completed and filed with the Texas Ethics Commission, Form 1295 must be printed, signed, and submitted to our office either by facsimile transmission to (956) 292-7612 or via email to **heidi.ortiz@co.hidalgo.tx.us.** Hidalgo County cannot enter into a contract until Form 1295 is submitted. Therefore, failure to timely submit signed Form 1295 may result in a delay of the award. Full instructions for completion and submittal of Form 1295 may be found on the Texas Ethics Commission website:

https://www.ethics.state.tx.us/tec/1295-Info.htm

THE AWARDED VENDOR WILL HAVE THIRTY (*30*) DAYS **FROM THE DATE THE HIDALGO COUNTY COMMISSIONERS' COURT APPROVES THIS AGREEMENT** TO SUBMIT THE SIGNED FORM 1295. *HIDALGO COUNTY CANNOT ENTER INTO A CONTRACT UNTIL FORM 1295 IS SUBMITTED.*

17. If during the life of any contract, or bid awarded, the successful respondents' net prices generally available to other customers for items awarded herein are reduced below the contracted price, it is understood and agreed that the benefits of such reduction shall be extended to County.

18. Bids submitted for professional service shall comply with any and all requirements in accordance with applicable federal, state, and local laws concerning the same. Bid to any supplemental project-specific agreement and all goods and services provided thereunder shall comply with all federal, state, and local laws concerning this type(s) of goods and/or services.

19. Minimum Standards for Responsible Prospective Respondents: A prospective respondent must affirmatively demonstrate the respondent's responsibility. A prospective respondent, by submitting an RFB, represents to County that it meets the following requirements:

- Possess or is able to obtain adequate financial resources as required to perform the comprehensive professional services contemplated by this RFB;
- Be able to comply with the required or proposed delivery schedule;
- Have a satisfactory record of performance;
- Have a satisfactory record of integrity and ethics; and
- Be otherwise qualified and eligible to receive an award.

20. Successful respondent will pay or cause to be paid, without cost or expenses to County, all FICA,

FUTA/SUTA and Federal Income Withholding Taxes of all employees, and all wages and benefits as required by Federal or State law. Successful respondents, officers, agents, and/or employees will not be entitled to any benefits of an employee or elected official of County, including, but not limited to, benefits associated with County's civil service system.

21. The contract will be in effect until (*a*) the term expires, or (*b*) participation is terminated by County with thirty (*30*) days written notice prior to cancellation with or without cause.

22. Any supplemental project-specific contract award to a successful respondent will be in effect until (*a*) the contract expires, (*b*) delivery and acceptance of products, and/or performance of services ordered, or (*c*) terminated by County with thirty (*30*) days written notice prior to cancellation with or without cause.

23. County reserves the right to enforce performance of the contract in any manner prescribed by law or deemed to be in the best interest of the County. County reserves the right to terminate the contract immediately in the event of breach or default by a successful respondent, including, but not limited to failure to maintain bid qualifications or otherwise failing to perform in accordance with the requirements of this RFB.

24. County reserves the right to enforce performance of any supplemental contract awarded hereunder in any manner prescribed by law or deemed to be in the best interest of the County. County reserves the right to terminate the contract immediately in the event of breach or default by a successful respondent, or in the event, a successful respondent fails to:

A. Meet schedules;
B. Pay any required fees or taxes; or
C. Otherwise, perform in accordance with the requirements.

25. **INDEMNIFICATION: Successful respondent shall defend, indemnify and save harmless County and all its elected officials, officers, agents, and employees from all suits, actions, or other claims of any character, name, and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful respondent, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award or which arises from any event or casualty happening on or within County premises themselves or happening upon or in any halls, elevators, entrances, stairways or approaches of or to such County facilities. Successful respondent shall pay any judgment with costs which may be obtained against county growing out of such injury or damages, and shall, upon request, provide a defense to County by counsel reasonably acceptable to County. Successful respondent's indemnity hereunder shall include but is not limited to, claims relating to patent, copyright, or trademark infringement and the like, arising out of the goods and services provided by successful respondent.**

26. The successful respondent shall warrant that all items/services shall conform to the specifications and/or all warranties provided under the Uniform Commercial Code and be free from all defects in material, workmanship, and the like. Items supplied under a contract pursuant to this Request for Bid shall be subject to County approval. Items found to be defective or not meeting specifications shall be replaced by the successful respondent within two (*2*) business days at no expense to County. Items that are not picked up within one (*1*) week after notification shall be deemed a donation to County and may be used or disposed of at County's discretion and without waiver of any other rights of County as to the items' nonconformity.

27. This document and any disputes arising hereunder shall be governed and construed according to the laws of the State of Texas and will be performable exclusively in Hidalgo County, Texas.

28. The successful respondent shall not assign, sell, transfer or convey its rights under any awarded contract, in whole or in part, without the prior written consent of County.

29. Respondents shall provide with the qualification response, a list of at least three (*3*) references where like services have been supplied by their firm. Include the name of the business or government, address, telephone number, and the name of the representative or contact person.

30. **CONTRACTS SUBJECT TO FEDERAL AWARD**:

- The procurement standards of 2 CFR, Part 200, including, but not limited to 2 CFR 200.317-200.326, and applicable Hidalgo County Purchasing Policy (found at https://www.hidalgocounty.us/805/County-Administrative-Policies) address the County's requirements, as a non-Federal entity, in regards to contracts it enters into that are subject to federal award. Pursuant to 2 CFR 200.236, the County, as a non-Federal entity, is required to include into contracts subject to federal award, the applicable provisions and contract clauses described in Appendix II to 2 CFR 200, (Contract Provisions for non-Federal Entity Contracts Under Federal Awards). As such, **if applicable**, the provisions of the Hidalgo County Purchasing Policy, the procurement standards found in 2 CFR, Part 200, and the provisions of Appendix II to 2 CFR 200, and the required contract clauses found in **Exhibit "*H*"** are incorporated by reference, whether specified explicitly or not, as part of this procurement packet and any resulting agreement.

- In addition, should the County's contracts under Federal award be subject to assistance from the Federal Emergency Management Agency (FEMA), FEMA requires the inclusion of contract terms in addition to those under Appendix II to 2 CFR 200. **If applicable**, the additional contract clauses required by FEMA are found in **Exhibit "*H*"** and incorporated by reference, whether specified explicitly or not, as part of this procurement packet and any resulting agreement. Should the contract be subject to assistance from FEMA, it is the County's intention to comply with FEMA requirements; therefore, any conflict in terms should be resolved as such.

- **If applicable**, in accordance with 2 CFR 200.319, Contractors that develop or draft specifications, requirements, statements of work, or invitations for bids or requests for bids must be excluded from competing for such procurements. (*See* 2 CFR 200.219). Additionally, Hidalgo County policy provides that for federal road projects, engineers, engineering firms, and/or a subsidiary, affiliate, or a consultant of the engineer or engineering firm who has received compensation from the County, that assist in the development of, or draft specifications, requirements, statements of work, or invitations for bids or requests for bids, will be excluded from competing for such procurements (i.e.…subsequent construction engineering/management and/or inspection/testing) for all other phases of the project. (*See* Hidalgo County Policy) "*Procedures for Selection and Contracting of Professional Service Providers for Federal Road Projects*" found at https://www.hidalgocounty.us/805/County-Administrative-Policies, which, if applicable, is incorporated by reference, whether specified explicitly or not, as part of this procurement packet and any resulting agreement for all purposes.

31. HISTORICALLY UNDERUTILIZED BUSINESSES/DISADVANTAGED BUSINESS ENTERPRISES:

The County is committed to ensuring that Historically Underutilized Businesses (HUB) and Disadvantaged Business Enterprises (DBE) such as small business enterprises (SBE), minority and

women-owned business enterprises (MWBE) receive a fair and equal opportunity for participation in the County's procurement process. The County encourages the use of these enterprises both as prime and subcontractors. (*See* **Exhibit "*E*"** for requirements).

When federal funds are expended by the County, the County will take affirmative steps set forth in 2 CFR 200.321 to assure that small, minority, women-owned businesses and labor surplus area-owned firms are used when possible. Pursuant to 2 CFR 321, the County requires that a prime contractor who uses sub-contractors take affirmative steps set forth in 2 CFR 200.321, including:

a) Placing qualified small and minority business and women's business enterprises on solicitation lists;
b) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
c) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
d) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and
e) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

Nothing in this section is to be construed to require the County to award a contract other than as required by law and Hidalgo County policies and procedures.

32. **BOYCOTT ISRAEL VERIFICATION**: In accordance with the Texas Government Code Chapter 2270, the County may not enter into a contract for goods or services with a vendor unless the contract contains a written verification from the vendor that it does not boycott Israel and will not boycott Israel during the term of the contract. *Pursuant to Sections 2270.001, 2270.002, 808.001, 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 Israeli-controlled territory, but does not include an action made for ordinary business purposes; and*
2. *"Company" has the meaning assigned by Section 808.001, except that the term does not include a sole proprietorship.*
3. *Section only applies to a contract that is between a governmental entity and a company with 10 or more full-time employees; and has a value of $100,000 or more that is to be paid wholly or partly from public funds of the governmental entity.*

By signing the acknowledgment form to this legal notice, Vendor understands that it is providing written verification and certification as indicated above. Any Vendor claiming an exception or otherwise unable to make this certification shall submit an explanation on separate sheet(s). Failure to comply or providing false information may result in rejection of Vendor's submission. **Vendor shall indemnify and hold harmless the County, its elected officials, employees, and agents for relying on this verification.**

33. **TEX. GOVT. CODE CH. 2252 - ATTESTATION-TERRORIST ORGANIZATIONS**: By submitting a response to this procurement request and/or accepting this Contract, Company attests that it is not identified on a list of companies known to have contracts with or provide supplies or services to a foreign terrorist organization as designated by the U.S. Secretary of State. County will search a database maintained by the Texas State Comptroller. A contract may not be entered

into with an entity that is identified therein. Search results shall be incorporated for all purposes as part of any resulting agreement entered into by the parties.

34. Respondents must provide all applicable documentation requested with this RFB in their response. Failure to provide this information may result in rejection of the bid as non-conforming.

REQUEST FOR BID LEGAL NOTICE
For
"North Alamo Road Realignment Project from FM 1925 (Monte Cristo Road) to 0.54 miles North"
RFB No.: 2021-008-04-21-HGO

To: Martha L. Salazar, CPPB, Purchasing Agent
Hidalgo County Purchasing Department
Physical Address: 2802 S. Business Hwy. 281 Administration Building
Mailing/Postal Address: 2812 S. Business Hwy. 281
Edinburg, Texas 78539

Respondent acknowledges that it has examined this Request for Bid and specifications and is familiar with the conditions to be met. In accordance with the Specifications, and subject to all laws and regulations of the United States and state and local laws, the undersigned respondent proposes and commits to furnish all labor, equipment, material, software, and services as set forth in the documents hereinbefore mentioned. The undersigned respondent further agrees, upon acceptance of its bid to execute supplemental contracts/documents with the County as needed.

Respondent acknowledges receipt of all of the pages of the documents referenced in the Request for Bid Checklist presented in connection with this procurement. Respondent understands that Hidalgo County reserves the right to reject any or all RFB's and further reserves the right to design the evaluation criteria to be used in selecting the lowest and best bid.

Respondent acknowledges that by signature below, it is providing the required certifications, attestations, verifications and/or acknowledgments as referenced within this Request for Bid. Respondent acknowledges that any and all specifications, provisions, and attachments of this Request for Bid are incorporated into and made a part of any resulting agreement.

Respondent agrees that this RFB shall be good and may not be withdrawn for a period of ninety (90) calendar days after the scheduled closing time for receiving bids, as contained in the specifications. An individual authorized to bind the company must sign the following section. Failure to execute this section may result in bid rejection.

Respectfully submitted,

Firm: _____

Address: _____

By: _____

Printed Name: _____

Title: _____

BIDDERS ACKNOWLEDGEMENT
Bid for
HIDALGO COUNTY
"North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 Miles North of FM 1925)"
BID NO.: 2021-008-04-21-HGO

To: Martha L. Salazar, CPPB, Purchasing Agent
Hidalgo County Purchasing Department
2812 S. Business Hwy 281 - Administration Building
Edinburg, Texas 78539

US Postal Mail/Courier Address
2812 S Business Hwy 281
Edinburg, Texas 78539

Physical Location:
2802 S Business Hwy 281(Southeast of Canton Rd & Business Hwy 281), Edinburg, Tx 78539

In accordance with the Specifications, and subject to all laws and regulations of the United States and state and local laws, the undersigned bidder proposes and commits to furnish all labor, equipment, material, software, and services as set forth in the documents hereinbefore mentioned. The undersigned bidder further agrees, upon acceptance of its bid, to execute a contract and/or Purchase Order issued by Hidalgo County for performing and completing the work described in the Specifications within the time stated and for the prices proposed in the documents attached hereto and made a part hereof.

Bidder acknowledges receipt of all of the pages of the documents referenced in the Invitation to Bid Checklist presented in connection with this procurement. Bidder understands that Hidalgo County reserves the right to reject any or all bids and further reserves the right to design the evaluation criteria to be used in selecting the lowest and best bid.

Bidder agrees that this bid shall be good and may not be withdrawn for a period of ninety (90) calendar days after the scheduled closing time for receiving bids, as contained in the Specifications.

Respectfully submitted,

Bidder: _____

Address: _____

By: _____

Printed Name: _____

Title: _____

Email Address _____

INFORMATION FOR BIDDERS

1. **Receipt and Opening of Bids**
   The Hidalgo County **Precinct #4** (herein called the "Owner"), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the Hidalgo County Purchasing department until Wednesday, **April 21, 2021,** at **9:30 a.m.** and then at said office publicly opened and read aloud. The envelopes containing the bids must be sealed, addressed to Martha L. Salazar, Hidalgo County Purchasing Agent at 2812 S Business 281, Edinburg, Texas 78539, and designated as Bid for Hidalgo County Pct # 4 **North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 Miles North of FM 1925).**

   The owner may consider informal any bid not prepared and submitted in accordance with provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 90 days after the actual date of the opening thereof.

2. **Preparation of Bid**
   Each bid must be submitted on the prescribed forms and Certification by Bidder (contractor), concerning Labor Standards and Prevailing Wage Requirements. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures, and the foregoing Certificates must be fully completed and executed when submitted.

   Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form.

3. **Subcontracts**
   The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this contract;

   a Must be acceptable to the Owner after verification of the current eligibility status; and,
   b Approval of the proposed subcontract award cannot be given by the Owner unless and until the proposed subcontractor has submitted the Certification and/or other evidence showing that it has fully complied with any reporting requirements to which it is or was subject. Although the bidder is not required to attach such Certification by proposed subcontractors to his bid, the bidder is here advised of this requirement so that appropriate action can be taken to prevent subsequent delay in subcontract awards.

4. **Telegraphic Modification**
   Any bidder may modify his bid by telegraphic communication at any time prior to the scheduled closing time for receipt of bids, provided such telegraphic communication is received by the Owner prior to the closing time and provided further, the Owner is satisfied that written confirmation of the telegraphic modification over the signature of the bidder was mailed prior to the closing time. The telegraphic communication should not reveal the bid price but should provide the additional or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened. If written confirmation is not received within two days from the closing time, no consideration will be given to the telegraphic modification.

5. **Method of Bidding**
   The Owner invites the following bid(s): **North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 Miles North of FM 1925).**

6. **Bid Security**
   Each bid must be accompanied by a certified check of the bidder, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of 5% of the bid. Such checks or bid bonds will be returned to all except the three lowest bidders within three days after the opening of bids, and the remaining checks or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract, or if no award has been made within 60 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.

7. **Liquidated Damages for Failure to enter into Contract**
   The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within 10 days after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

8. **Time of Completion and Liquidated Damages**
   Bidder must agree to commence on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within **120 Working Days "Standard Workweek"** thereafter. Bidder must agree also to pay as liquidated damages, the sum of $620.00 for each consecutive calendar day thereafter as hereinafter provided in the General Conditions.

9. **Condition of Work**
   Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible the contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

10. Addenda and Interpretations

No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally.

Every request for such interpretation should be in writing addressed to **Hidalgo County Purchasing Department, 2812 S. Business Hwy 281, Edinburg, Texas 78539, or via email to heidi.ortiz@co.hidalgo.tx.us.** To be given consideration, the request must be received at least five days prior to the date fixed for the opening of bids. Any/all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be emailed to all prospective bidders (at the respective email addresses furnished for such purposes), not later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

11. Security for Faithful Performance

Simultaneously with his delivery of the executed contract; the contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bonds shall be a duly authorized surety company satisfactory to the Owner.

12. Power of Attorney

Attorney-in-fact who sign bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

13. Notice of Special Conditions

Attention is particularly called to those parts of the contract documents and specification which deal with the following;

a Inspection and testing of materials
b Insurance requirements
c Wage rates
d States allowances

14. Laws and Regulations

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

15. Obligation of Bidder

At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents

(including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation with respect to his bid.

Supplement to Form HUD-4238-B®
INFORMATION FOR BIDDERS

16. SAFETY STANDARDS AND ACCIDENTS PREVENTION

With respect to all work performed under this contract, the contractor shall:

1 Comply with the safety standards provision of applicable laws, building and construction codes, and the "Manual of Accident Prevention in Construction" published by the Associates General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Laws 91-596), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as published in the "Federal Register", Volume 36, No 75, Saturday, April 17, 1971.

2 Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.

3 Maintain at his office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employee), who may be injured on the job site. In no case shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.

SPECIAL PROVISIONS

1. The County of Hidalgo reserves the right to partially award the contract in order to meet the budget.

2. Water, sewer, or other utility serves shall not be interrupted. Any damages to existing utilities will be Contractor's responsibility.

3. In the event of damage to underground facilities, whether shown or not shown in the drawings, the Contractor shall make the necessary repairs to place the facilities back in service at no increase in the Contractors price and all such repairs shall conform to the requirements of the company or agency servicing the facility

4. The Contractor shall exercise extra care to prevent damage to all other structures in the area including, fence, roads, pipelines, utilities, etc., whether publicly or privately owned.

5. Until acceptance by the Engineer of any part or all of the construction, as provided for in the plans and these specifications, it shall be under the charge and care of the contractor, and he shall take every necessary precaution against injury or damage to any part of the work. The Contractor shall rebuild, repair, restore, and make good, at his own expense, all injuries or damage to any portion of the work before its completion and acceptance.

6. In case the Contractor deems extra compensation is due to him for proposed work not covered in the contract, the Contractor shall notify the Engineer in writing of his claim for such extra compensation before he begins the work. Failure on the part of the Contractor to give such notification shall constitute a waiver of claim for such extra compensation. The Contractor shall not proceed until a written Change Order is approved by the Owner, Engineer, and Contractor.

7. Prospective bidders should make a careful examination of the project's sites.

8. Contractor shall review his overall method and schedule of construction with the County prior to construction for proper coordination of inspection.

9. No open trenches or excavation shall be left open overnight.

HIDALGO COUNTY PRECINCT #4

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned _____

_____ as Principal, and _____

_____ As Surety, are hereby held and firmly bound

Unto _____ as OWNER in the penal sum of _____

_____

For the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and Assigns.

Signed, this _____ day of _____, 2_____.

The condition of the above obligation is such that whereas the Principal has submitted to _____

_____ A certain BID attached hereto and

Hereby made a part hereof to enter into a contract in writing for the

_____

_____

_____

_____

NOW, THEREFORE,

(a) If said Bid shall be rejected, or

(b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and Shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then, this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation is herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by an extension of the time within which the OWNER may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)
Principal

_____
Surety

By:_____

IMPORTANT – Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

PROPOSAL TO HIDALGO COUNTY

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)

Bid No. 2021-008-04-21-HGO

The quantities in the proposal are approximate. The quantities of work and materials may be increased or decreased as considered necessary to complete the work as planned and contemplated.

This project is to be completed in **120 Working Days** and will be accepted when fully completed and finished to the satisfaction of the Engineer or designee.

Provide a proposal guaranty in the form of a Cashier's Check, Teller's Check (including an Official Check) or Bank Money Order on a State or National Bank or Savings and Loan Association, or State or Federally chartered Credit Union made payable to **Hidalgo County** in the amount of **5% of the Bidder's Total Bid.**

A bid bond may be used as the required proposal guaranty. The bond form included in this bid proposal book may be detached from the proposal for completion. The proposal book may not be disassembled to remove the bond form. The bond must be in accordance with Item 2L of the specifications.

By signing this proposal the bidder certifies:

1. The only persons or parties interested in this proposal are those named and the bidder has not directly or indirectly participated in collusion, entered into an agreement, or otherwise taken any action in restraint of free competitive bidding in connection with the above-captioned project.
2. In the event of the award of a contract, the organization represented will secure payment and performance bonds for the full amount of the contract.
3. The signatory represents and warrants that they are an authorized signatory for the organization for which the bid is submitted and that they have full and signatory authority to submit this bid on behalf of their firm.
4. That the certifications and representations contained in the proposal are true and accurate and the bidder intends the proposal to be taken as a genuine government record.
5. That the bid prices contained in the proposal have been carefully checked and are submitted as correct and final.
6. See Section ***"CERTIFICATIONS BY PROPOSAL SIGNATURE"*** for additional certifications made by signing this proposal.

Signed:**

(1) _____ **(2) _____** **(3) _____**

Print Name:

(1) _____ **(2) _____** **(3) _____**

Title:

(1) _____ **(2) _____** **(3) _____**

Company:

(1) _____ **(2) _____** **(3) _____**

Signatures shall comply with Item 2 of the specifications.

**Note: Complete (1) for single venture, through (2) for joint venture, and through (3) for triple venture.

***When the working days' field contains an asterisk (*) refer to the Special Provisions and General Notes.**

The bidder proposes and agrees to perform all work of whatever nature required, in strict accordance with the drawings and specifications, for the following sum of prices, to which:

It is understood that the work proposed to be done will be accepted when fully completed in accordance with the Contract Drawings.

It is understood that **Hidalgo County** reserves the right to reject any and all bids and to waive any minor informality received in the bids.

In the event of the award of a Contract to the Company named above, the Company will furnish a Performance Bond and a Payment Bond for the full amount of the Contract and a Certificate of Insurance, secure proper compliance with the terms and provisions of the Contract, to ensure and guarantee the work until final completion and acceptance to guarantee payment of all lawful claim for labor performed and materials furnished in the fulfillment of the Contract, and to guarantee the Bidder is covered by insurance as required by the Contract Documents.

TOTAL BID AMOUNT

In the space provided below, please enter your total bid amount for this project. Only this figure will be read publicly at the public bid opening.

It is understood and agreed by the bidder in signing this proposal that the total bid amount entered below is not binding on either the bidder or **Hidalgo County**.

The contract will be awarded by competitive bidding and on the basis of unit pricing.

It is further agreed that **the official total bid amount for this proposal will be determined by multiplying the unit bid prices WRITTEN IN WORDS for each pay item by the respective estimated quantities shown in this proposal and then totaling all of the extended amounts.**

Unit prices must be submitted in accordance with Item 2L of the Standard Specifications or Special Provision to Item 2L FOR EACH ITEM LISTED in this proposal and with the following: For each item listed in the Bid Proposal Sheets, write in a unit bid price in words and figures in the spaces provided. Also, write in the extended amount (Item Cost) in figures for each item listed in the Bid Proposal Sheets by multiplying the unit bid price by its respective estimated quantity.

NOTE
The alternative items identified on this contract are replacement alternatives and the prospective bidder should follow the replacement alternatives bidding procedures. Additive or deductive alternatives are not part of this contract. The lowest bidder will be determined by utilizing the lowest bid based on the bid price of either the base bid items or replacement alternate items not a bid on both.

$ _____

Total Base Bid Amount

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)							
Item	Code	ALT	UNIT BID PRICE ONLY, WRITTEN IN WORDS	Unit	Approx. Quantities	UNIT BID PRICE ONLY, WRITTEN IN FIGURES	ITEM COST WRITTEN IN FIGURES
100	6002		PREPARING ROW _____ DOLLARS and_____ CENTS	STA	28.61		
110	6001		EXCAVATION (ROADWAY) _____ DOLLARS and_____ CENTS	CY	1,567.00		
132	6006		EMBANKMENT (FINAL)(DENS CONT)(TY C) _____ DOLLARS and_____ CENTS	CY	3,170.00		
160	6005		FURNISHING AND PLACING TOPSOIL _____ DOLLARS and_____ CENTS	CY	50.00		
164	6034		DRILL SEEDING (PERM) (RURAL) (SANDY) _____ DOLLARS and_____ CENTS	AC	2.03		
164	6042		DRILL SEEDING (TEMP) (WARM) _____ DOLLARS and_____ CENTS	AC	2.03		
168	6001		VEGETATIVE WATERING _____ DOLLARS and_____ CENTS	MG	311.00		
204	6003		SPRINKLING (DUST CONTROL) _____ DOLLARS and_____ CENTS	MG	252.00		
247	6225		FL BS (RDWY DEL)(TY E GR 4)(FNAL POS) _____ DOLLARS and_____ CENTS	CY	2,076.00		
260	6015	1	LIME TRT (NEW BASE)(8") _____ DOLLARS and_____ CENTS	SY	9,555.00		
260	6043	1	LIME (HYD, COM OR QK)(SLURRY) _____ DOLLARS and_____ CENTS	TON	70.00		
275	6001	1	CEMENT _____ DOLLARS and_____ CENTS	TON	97.00		
275	6005		CEMENT TREAT (EXIST MATL)(12") _____ DOLLARS and_____ CENTS	SY	9,872.00		
310	6009		PRIME COAT (MC-30) _____ DOLLARS and_____ CENTS	GAL	1,763.00		
316	6277		ASPH (SPG 73-19)	GAL	2,820.00		

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)							
Item	Code	ALT	UNIT BID PRICE ONLY, WRITTEN IN WORDS	Unit	Approx. Quantities	UNIT BID PRICE ONLY, WRITTEN IN FIGURES	ITEM COST WRITTEN IN FIGURES
			_____ DOLLARS and _____ CENTS				
316	6486		AGGR (TY D GR-4P)(SAC-B) _____ DOLLARS and _____ CENTS	CY	73.00		
341	6047		D-GR HMA TY-D SAC-A PG76-22 _____ DOLLARS and _____ CENTS	TON	780.00		
354	6051		PLANE ASPH CONC PAV (0" TO 1 1/2") _____ DOLLARS and _____ CENTS	SY	311.00		
400	6010		STRUCT EXCAV (SPECIAL) _____ DOLLARS and _____ CENTS	CY	200.00		
400	6011		SAND BACKFILL _____ DOLLARS and _____ CENTS	CY	356.00		
402	6001		TRENCH EXCAVATION PROTECTION _____ DOLLARS and _____ CENTS	LF	287.00		
432	6001		RIPRAP (CONC)(4 IN) _____ DOLLARS and _____ CENTS	CY	130.00		
464	6003		RC PIPE (CL III)(18 IN) _____ DOLLARS and _____ CENTS	LF	48.00		
464	6005		RC PIPE (CL III)(24 IN) _____ DOLLARS and _____ CENTS	LF	24.00		
464	6009		RC PIPE (CL III)(42 IN) _____ DOLLARS and _____ CENTS	LF	494.00		
464	6039		RC PIPE (CL III)(24 IN)(SPL) _____ DOLLARS and _____ CENTS	LF	287.00		
465	6011		JCTBOX(COMPL)(PJB)(6FTX6FT) _____ DOLLARS and _____ CENTS	EA	3.00		
465	6129		INLET (COMPL)(PSL)(FG)(3FTX5FT-3FTX3FT) _____ DOLLARS and _____ CENTS	EA	2.00		
467	6363		SET (TY II) (18 IN) (RCP) (6: 1) (P)	EA	2.00		

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)							
Item	Code	ALT	UNIT BID PRICE ONLY, WRITTEN IN WORDS	Unit	Approx. Quantities	UNIT BID PRICE ONLY, WRITTEN IN FIGURES	ITEM COST WRITTEN IN FIGURES
			_____ DOLLARS and _____ CENTS				
500	6001		MOBILIZATION _____ DOLLARS and _____ CENTS	LS	1.00		
502	6001		BARRICADES, SIGNS AND TRAFFIC HANDLING _____ DOLLARS and _____ CENTS	MO	6.00		
506	6001		ROCK FILTER DAMS (INSTALL) (TY 1) _____ DOLLARS and _____ CENTS	LF	20.00		
506	6011		ROCK FILTER DAMS (REMOVE) _____ DOLLARS and _____ CENTS	LF	20.00		
506	6021		CONSTRUCTION EXITS (INSTALL) (TY 2) _____ DOLLARS and _____ CENTS	SY	156.00		
506	6024		CONSTRUCTION EXITS (REMOVE) _____ DOLLARS and _____ CENTS	SY	156.00		
506	6031		FRNT END LOADER WORK (ERSN & SEDM CONT) _____ DOLLARS and _____ CENTS	HR	2.00		
506	6038		TEMP SEDMT CONT FENCE (INSTALL) _____ DOLLARS and _____ CENTS	LF	100.00		
506	6039		TEMP SEDMT CONT FENCE (REMOVE) _____ DOLLARS and _____ CENTS	LF	100.00		
506	6041		BIODEG EROSN CONT LOGS (INSTL) (12") _____ DOLLARS and _____ CENTS	LF	450.00		
506	6043		BIODEG EROSN CONT LOGS (REMOVE) _____ DOLLARS and _____ CENTS	LF	450.00		
530	6005		DRIVEWAYS (ACP) _____ DOLLARS and _____ CENTS	SY	126.00		
618	6016		CONDT (PVC) (SCH 40) (1") _____ DOLLARS and _____ CENTS	LF	20.00		
618	6023		CONDT (PVC) (SCH 40) (2")	LF	285.00		

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)							
Item	Code	ALT	UNIT BID PRICE ONLY, WRITTEN IN WORDS	Unit	Approx. Quantities	UNIT BID PRICE ONLY, WRITTEN IN FIGURES	ITEM COST WRITTEN IN FIGURES
			_____ DOLLARS and _____ CENTS				
624	6002		GROUND BOX TY A (122311)W/APRON _____ DOLLARS and _____ CENTS	EA	3.00		
644	6027		IN SM RD SN SUP&AM TYS80(1)SA(P) _____ DOLLARS and _____ CENTS	EA	3.00		
644	6030		IN SM RD SN SUP&AM TYS80(1)SA(T) _____ DOLLARS and _____ CENTS	EA	1.00		
644	6050		IN SM RD SN SUP&AM TYS80(2)SA(P) _____ DOLLARS and _____ CENTS	EA	2.00		
644	6076		REMOVE SM RD SN SUP&AM _____ DOLLARS and _____ CENTS	EA	4.00		
658	6002		INSTL DEL ASSM (D-SW)SZ 1(FLX)GND(BI) _____ DOLLARS and _____ CENTS	EA	32.00		
658	6049		INSTL OM ASSM (OM-2Z)(FLX)GND(BI) _____ DOLLARS and _____ CENTS	EA	4.00		
666	6042		REFL PAV MRK TY I (W)12"(SLD)(100MIL) _____ DOLLARS and _____ CENTS	LF	100.00		
666	6048		REFL PAV MRK TY I (W)24"(SLD)(100MIL) _____ DOLLARS and _____ CENTS	LF	24.00		
666	6303		RE PM W/RET REQ TY I (W)4"(SLD)(100MIL) _____ DOLLARS and _____ CENTS	LF	5,723.00		
666	6315		RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL) _____ DOLLARS and _____ CENTS	LF	5,771.00		
672	6009		REFL PAV MRKR TY II-A-A _____ DOLLARS and _____ CENTS	EA	73.00		
680	6002		INSTALL HWY TRF SIG (ISOLATED) _____ DOLLARS and _____ CENTS	EA	1.00		
684	6027		TRF SIG CBL (TY A)(14 AWG)(1 CONDR)	LF	40.00		

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)							
Item	Code	ALT	UNIT BID PRICE ONLY, WRITTEN IN WORDS	Unit	Approx. Quantities	UNIT BID PRICE ONLY, WRITTEN IN FIGURES	ITEM COST WRITTEN IN FIGURES
			_____ DOLLARS and_____ CENTS				
684	6080		TRF SIG CBL (TY C)(14 AWG)(2 CONDR) _____ DOLLARS and_____ CENTS	LF	805.00		
688	6004		VEH LP DETECT (SAWCUT) _____ DOLLARS and_____ CENTS	LF	204.00		
			ALTERNATE 1A		-		
275	6001	1A	CEMENT _____ DOLLARS and_____ CENTS	TON	167.00		
275	6009	1A	CEMENT TREAT (NEW BASE) (8") _____ DOLLARS and_____ CENTS	SY	9,555.00		
					TOTAL BID	$	

TOTAL IN WORDS

NOTE: The alternative items identified on this contract are replacement alternatives and the prospective bidder should follow the replacement alternatives bidding procedures. Additive or deductive alternatives are not part of this contract. The lowest bidder will be determined by utilizing the lowest bid based on bid price of either the base bid items or replacement alternate items not a bid on both.

(Amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will prevail.)

The above unit prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids to waive any minor informalities in the bidding.

State of Texas Child Support Business Ownership Form

County: **HIDALGO**

Project Name: **North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925**

TxDOT CSJ: **0921-02-311**

Bid Document Number: **2021-008-04-21-HGO**

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 owns 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 **Hidalgo County** with few exceptions, you are entitled to 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 is incorrect.

_____ _____

Signature Date

_____

Printed Name

IF THIS PROJECT IS A JOINT VENTURE, ALL PARTIES TO THE JOINT VENTURE MUST PROVIDE A COMPLETED FORM.

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:	2. Status of Federal Action:	3. Report Type:
☐ a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	☐ a. bid/offer/application b. initial award c. post-award	☐ a. initial filing b. material change **For Material Change Only:** year _____ quarter _____ date of last report _____

4. Name and Address of Reporting Entity:	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:
☐ Prime ☐ Subawardee Tier _____, *if known*: **Congressional District**, *if known*:	 **Congressional District**, *if known*:
6. Federal Department/Agency:	**7. Federal Program Name/Description:** CFDA Number, *if applicable*: _____
8. Federal Action Number, *if known*:	**9. Award Amount,** *if known*: $
10. a. Name and Address of Lobbying Entity (*if individual, last name, first name, MI*):	**b. Individuals Performing Services** (*including address if different from No. 10a*) (*last name, first name, MI*):

(attach Continuation Sheet(s) SF-LLLA, if necessary)

11. Amount of Payment (*check all that apply*):	13. Type of Payment (*check all that apply*):
$ _____ ☐ actual ☐ planned	☐ a. retainer ☐ b. one-time fee ☐ c. commission ☐ d. contingent fee ☐ e. deferred ☐ f. other; specify: _____
12. Form of Payment (*check all that apply*): ☐ a. cash ☐ b. in-kind; specify: nature _____ value _____	

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:

(attach Continuation Sheet(s) SF-LLLA, if necessary)

15. Continuation Sheet(s) SF-LLLA attached: ☐ Yes ☐ No

16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less that $10,000 and not more than $100,000 for each such failure.

Signature: _____
Print Name: _____
Title: _____
Telephone No.: _____ Date: _____

Federal Use Only:

Authorized for Local Reproduction
Standard Form LLL (Rev. 7-97)

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity 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 of a Member of Congress in connection with a covered Federal action. Use the SF-LLLA Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, State and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the cover Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).

11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.

12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.

13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.

14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.

15. Check whether or not a SF-LLLA Continuation Sheet(s) is attached.

16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

Approved by OMB
0348-0046

DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET

Reporting Entity: _____ Page _____ of _____

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Standard Form - LLL-A

CERTIFICATION OF INTEREST IN OTHER BID PROPOSALS FOR THIS WORK

By signing this proposal, **the bidding firm and the signer certify that** the following information, as indicated by checking "Yes" or "No" below, is true, accurate, and complete.

A. Quotation(s) have been issued in this firm's name to other firm (s) interested in this work for consideration for performing a portion of this work.

_____ YES

_____ NO

B. If this proposal is the low bid, **the bidder agrees to** provide the following information prior to award of the contract.
   1. Identify firms that bid as prime contractors and from which the bidder received quotations for work on this project.
   2. Identify all the firms which bid as a prime contractor to which the bidder gave quotations for work on this project.

NON-COLLUSION CERTIFICATION

By signing this proposal, **the bidder certifies that** the person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. Failure to submit this certification as part of the bidding documents will make the bid nonresponsive and not eligible for award consideration.

CHILD SUPPORT

"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."

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 9L.10 "Payment Provisions for Subcontractors", all subcontract agreements exceeding $2,000 will incorporate the applicable "Wage Determination Decision", and, all subcontract agreements of $10,000 or more 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 Contract 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 purchase orders of $10,000 or more)

DISADVANTAGED BUSINESS ENTERPRISES REQUIREMENTS

The following goal for disadvantaged business enterprises is established:

DBE – 2.0%

Certification of DBE Goal Attainment

By signing the proposal, **the Bidder certifies that** the above DBE goal will be met by obtaining commitments equal to or exceeding the DBE percentage or that the Bidder will provide a good faith effort to substantiate the attempt to meet the goal.

Failure to comply with commitments to meet the stated goal or provide a satisfactory good faith effort will be considered a breach of the requirements of the proposal. As a result, the Bid Guaranty or Bid Bond of the bidder will become the property of the County and the bidder will be excluded for rebidding on the project when it is re-advertised

See Special Provision 000-394L, "Disadvantaged Business Enterprise in Federal Aid Contracts".

CERTIFICATION OF NONDISCRIMINATION IN EMPLOYMENT

See Special Provision 000---003L, "Certification of Nondiscrimination in Employment".

NOTICE TO CONTRACTORS

Hidalgo County (County) has entered into an agreement with the State of Texas (TxDOT), to construct **North Alamo Road Realignment Project From FM 1925 (Monte Cristo Rd to 0.54 miles North of FM 1925).** The County is responsible for implementation of the project including the planning, design, construction, and administration in accordance with TxDOT standards and is subject to the State's oversight.

The County has adopted the Texas Department of Transportation (TxDOT) 2014 Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, including Items 1L – 9L General Requirements and Covenants, (Standard Specs) as the governing specifications for this project *(See Section "Governing Specifications")*.

Hidalgo County has modified TxDOT's Quality Assurance Program and has received TxDOT's approval. This document is available to the contractor upon request.

Unless otherwise specified, the County will assume the responsibilities of TxDOT where "TxDOT" or "Department" is referred to in the Standard Specs.

Eligibility of Bidders: Refer to the Standard Spec Item 2L, "Instructions to Bidders", Article 2.0, "Eligibility of Bidders". Any Contractor intending to bid on this project to be awarded by Hidalgo County must be prequalified by TxDOT. If Contractor is not prequalified, the Contractor must submit a satisfactory Confidential Questionnaire Form and an audited financial statement, or a Bidder's Questionnaire Form to the TxDOT Construction Division at least fourteen (14) days prior to the date that bids are to be opened. Obtain prequalification forms from the Texas Department of Transportation Construction Division.

Buy America: Refer to Standard Spec Item 6L, "Control of Materials", Section 1.1, "Buy America". The Contractor will 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 materials are temporarily installed.

The Contractor will be required to provide a notarized original of the FORM D-9-USA-1 with the proper attachment for verification of compliance.

Equipment Rental Rates: The equipment rental rates method of payment, per Standard Spec Article 9L.8.8.2.4. is incorporated into the Contract by reference.

Time Extensions: Time charges for this project are based on a **Standard Workweek** as defined in Standard Spec Article 8L.4.4.1.4 Time extensions will be considered for reasons outside of the contractor's control which may include inclement weather, unusual market conditions, or other conditions preventing work to progress as described in the referenced section.

Liquidated Damage Rate: Liquidated damages will be assessed in accordance with Standard Spec. Item 8L "Prosecution and Progress" Article 8. The Liquidated Damage Rate for this contract is stipulated in Information For Bidders (sheet 2 of 6).

Termination of Contract: The terms under which the County may terminate the Contract in whole or in part are as indicated in Standard Spec Item 8L "Prosecution and Progress" Article 10.

Safety & Trench Protection: The contractor shall be responsible to implement a project safety program compliant with OSHA standards and in accordance with FHWA-1273 Section VII (Safety: Accident Prevention) and Health and Safety Code 756.022 and 756.023. Trench Protection, as defined by the Health and Safety Code 756.022, may be required if the following conditions occur due to the Contractor's methods:

- Trenches 5 feet deep or more require a trench protection system.
- Trenches 20 feet deep or more require that the trench protection system be designed by a registered Professional Engineer.
- OSHA standards require daily inspections of trenches and as conditions change by a competent person prior to worker entry to ensure elimination of excavation hazards.

§ 635.106 Use of publicly owned equipment.

(a) Publicly owned equipment should not normally compete with privately owned equipment on a project to be let to contract. There may be exceptional cases, however, in which the use of equipment of the State or local public agency for highway construction purposes may be warranted or justified. A proposal by any STD for the use of publicly owned equipment on such a project must be supported by a showing that it would clearly be cost effective to do so under the conditions peculiar to the individual project or locality.

(b) Where publicly owned equipment is to be made available in connection with construction work to be let to contract, Federal funds may participate in the cost of such work provided the following conditions are met:

(1) The proposed use of such equipment is clearly set forth in the Plans, Specifications and Estimate (PS&E) submitted to the Division Administrator for approval.

(2) The advertised specifications specify the items of publicly owned equipment available for use by the successful bidder, the rates to be charged, and the points of availability or delivery of the equipment; and

(3) The advertised specifications include a notification that the successful bidder has the option either of renting part or all of such equipment from the State or local public agency or otherwise providing the equipment necessary for the performance of the contract work.

(c) In the rental of publicly owned equipment to contractors, the State or local public agency shall not profit at the expense of Federal funds.

(d) Unforeseeable conditions may make it necessary to provide publicly owned equipment to the contractor at rental rates agreed to between the contractor and the State or local public agency after the work has started. Any such arrangement shall not form the basis for any increase in the cost of the project on which Federal funds are to participate.

(e) When publicly owned equipment is used on projects constructed on a force account basis, costs may be determined by agreed unit prices or on an actual cost basis. When agreed unit prices are applied the equipment need not be itemized nor rental rates shown in the estimate. However, if such work is to be performed on an actual cost basis, the STD shall submit to the Division Administrator for approval the scheduie of rates proposed to be charged, exclusive of profit, for the publicly owned equipment made available for use.

§ 635.107 Participation by disadvantaged business enterprises.

(a) The STD shall schedule contract lettings in a balanced program providing contracts of such size and character as to assure an opportunity for all sizes of contracting organizations to compete. In accordance with Title VI of the Civil Rights Act of 1964, subsequent Federal-aid Highway Acts, and 49 CFR part 26, the STD shall ensure equal opportunity for disadvantaged business enterprises (DBEs) participating in the Federal-aid highway program.

(b) In the case of a design-build project funded with title 23 funds, the requirements of 49 CFR part 26 and the State's approved DBE plan apply. If DBE goals are set, DBE commitments above the goal must not be used as a proposal evaluation factor in determining the successful offeror.

[67 FR 75925, Dec. 10, 2002]

§ 635.108 Health and safety.

Contracts for projects shall include provisions designed:

(a) To insure full compliance with all applicable Federal, State, and local laws governing safety, health and sanitation; and

(b) To require that the contractor shall provide all safeguards, safety devices, and protective equipment and shall take any other actions reasonably necessary to protect the life and health of persons working at the site of the project and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

§ 635.109 Standardized changed condition clauses.

(a) Except as provided in paragraph (b) of this section, the following

changed conditions contract clauses shall be made part of, and incorporated in, each highway construction project approved under 23 U.S.C. 106:

(1) *Differing site conditions.* (i) During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if 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, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.

(ii) Upon written notification, the engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The engineer will notify the contractor of the determination whether or not an adjustment of the contract is warranted.

(iii) No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.

(iv) No contract adjustment will be allowed under this clause for any effects caused on unchanged work. (This provision may be omitted by the STD's at their option.)

(2) *Suspensions of work ordered by the engineer.* (i) If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

(ii) Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The contractor will be notified of the engineer's determination whether or not an adjustment of the contract is warranted.

(iii) No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.

(iv) No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(3) *Significant changes in the character of work.* (i) The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.

(ii) If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.

(iii) If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

(iv) The term ''significant change'' shall be construed to apply only to the following circumstances:

(A) When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or

(B) When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

(b) The provisions of this section shall be governed by the following:

(1) Where State statute does not permit one or more of the contract clauses included in paragraph (a) of this section, the State statute shall prevail and such clause or clauses need not be made applicable to Federal-aid highway contracts.

(2) Where the State transportation department has developed and implemented one or more of the contract clauses included in paragraph (a) of this section, such clause or clauses, as developed by the State transportation department may be included in Federal-aid highway contracts in lieu of the corresponding clause or clauses in paragraph (a) of this section. The State's action must be pursuant to a specific State statute requiring differing contract conditions clauses. Such State developed clause or clauses, however, must be in conformance with 23 U.S.C., 23 CFR and other applicable Federal statutes and regulations as appropriate and shall be subject to the Division Administrator's approval as part of the PS&E.

(c) In the case of a design-build project, STDs are strongly encouraged to use ''suspensions of work ordered by the engineer'' clauses, and may consider ''differing site condition'' clauses and ''significant changes in the character of work'' clauses which are appropriate for the risk and responsibilities that are shared with the design-builder.

[56 FR 37004, Aug. 2, 1991; 57 FR 10062, Mar. 23, 1992, as amended at 67 FR 75925, Dec. 10, 2002]

§ 635.110 Licensing and qualification of contractors.

(a) The procedures and requirements a STD proposes to use for qualifying and licensing contractors, who may bid for, be awarded, or perform Federal-aid highway contracts, shall be submitted to the Division Administrator for advance approval. Only those procedures and requirements so approved shall be effective with respect to Federal-aid highway projects. Any changes in approved procedures and requirements shall likewise be subject to approval by the Division Administrator.

(b) No procedure or requirement for bonding, insurance, prequalification, qualification, or licensing of contractors shall be approved which, in the judgment of the Division Administrator, may operate to restrict competition, to prevent submission of a bid by, or to prohibit the consideration of a bid submitted by, any responsible contractor, whether resident or nonresident of the State wherein the work is to be performed.

(c) No contractor shall be required by law, regulation, or practice to obtain a license before submission of a bid or before the bid may be considered for award of a contract. This, however, is not intended to preclude requirements for the licensing of a contractor upon or subsequent to the award of the contract if such requirements are consistent with competitive bidding. Prequalification of contractors may be required as a condition for submission of a bid or award of contract only if the period between the date of issuing a call for bids and the date of opening of bids affords sufficient time to enable a bidder to obtain the required prequalification rating.

(d) Requirements for the prequalification, qualification or licensing of contractors, that operate to govern the amount of work that may be bid upon by, or may be awarded to, a contractor, shall be approved only if

THE STATE OF TEXAS §
§
COUNTY OF HIDALGO §

CONSTRUCTION CONTRACT
North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)
C-21-008-xx-xx

This Agreement entered into this XX day of Month 2021, by and between the County of Hidalgo (hereinafter called the "OWNER") and_____. (a corporation) (a partnership) (an individual) of _____, State of Texas, hereinafter called "CONTRACTOR". The County's procurement packet and Contractor's response are incorporated herein for all purposes.

WITNESSETH

That for and in consideration of the payments and agreement hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows:

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)

Hereinafter called the project, for the sum of _____and all extra work in connection therewith, under the terms and stated in the General and Special Conditions of the Contract; and at his (its or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions and Special Conditions printed or written explanatory matter thereof, the specifications and contract documents therefore as prepared by County, entitled the "Owner", and as enumerated in Paragraph 1.01.A.12 of the General Conditions, all of which are made a part hereof and collectively evidence and constitute the contract.

The CONTRACTOR hereby agrees to commence work under this contract on or after a date to be specified in written "Notice to Proceed" of the OWNER and to fully complete the project within 120 working days "Standard Workweek" thereafter. The CONTRACTOR further agrees to pay, as liquidated damages, the sum of $620.00 for each consecutive calendar day thereafter.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in the General Conditions of the contract, and to make payments on account thereof as provided in Paragraphs 14.02.C and 14.07.C of the General Conditions.

DRAFT

WITNESS THE HANDS OF THE PARTIES effective as of the day and year first written above.

APPROVED BY COMMISIONERS COURT ON, _____, 2_____.

CONTRACTOR:_____
Print Name & Title: _____
Name of Firm: _____
_____
Address: _____
_____
Fed I.D. #/SS #: _____

STATE OF TEXAS

COUNTY OF HIDALGO

This instrument was acknowledged before me on this the _____day of _____,

2_____, by _____of and on behalf of _____
(Title) (A corporation)

_____
Notary Public-Signature

ATTEST:

_____
Arturo Guajardo, Jr., County Clerk

COUNTY OF HIDALGO:

_____
Richard F. Cortez, County Judge

APPROVED AS TO FORM:
Hidalgo County District Attorney's Office

By:_____
Assistant District Attorney

DRAFT

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of ……..)

County of ……..)

_____, being first duly sworn, deposes and says that:

(1) He is _____, of

_____, the Bidder that has submitted the attached Bid;

(2) He is fully informed respecting the preparation and contents of this attached bid and all pertinent circumstances respecting such bid;

(3) Such bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representative, employees or parties in interest, including this affiant, has in any way colluded, conspired a collusive or sham Bid in connection with the Contract for which the attaché Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication of conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

_____
(Title)

Subscribed and sworn to before me on this _____

Day of _____

_____

_____

Title

PAYMENT BOND

(To be used in Texas under V.A.T.S. 5160)

THE STATE OF _____

COUNTY OF _____

KNOW ALL MEN BY THESE PRESENTS: That we (1) _____, a (2) _____, hereinafter called Principal and (3) _____ of _____, hereinafter called the Surety, are held and firmly bound unto (4) _____ of _____, hereinafter called Owner, and unto all persons, firms, and corporations who may furnish materials for, or perform labor upon the building or improvements hereinafter referred to the penal sum of _____ ($_____) Dollars in lawful money of the United States to be paid in (5) _____, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with (6) _____ _____, the Owner, dated the _____ day of _____, A.D. 20___, a copy of which is hereto attached and made a part hereof for the construction of:

HIDALGO COUNTY PRECINCT #_4_ NORTH ALAMO ROAD REALIGNMENT PROJECT (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)

These footnotes refer to numbers in body of contract above:

Date of Bond must not be prior to date of contract

(1) Correct name of Contractor
(2) A Corporation, a Partnership or an Individual, as case may be
(3) Correct name of Surety
(4) Correct name of Owner
(5) County and State
(6) Owner

NOW, THEREFORE, the condition of this obligation is such that, if the -1- Principal shall promptly make payment to all claimants as defined in Article 5160 Revised Civil Statutes of Texas, 1925, as amended by House Bill 344, Act 56th Legislature, Regular Session, 1925 effective April 27, 1959, supplying labor and materials in the prosecution of the work provided for in said Contract, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

This bond is made and entered into solely for the prosecution of all claimants supplying labor and material in the prosecution of the work provided for in said Contract, and all such claimants shall have a direct right of action under the bond as provided in Article 5160, Revised Civil Statutes 1925, as amended by House Bill 344, Acts 56th Legislature, Regular Session, 1959

PROVIDED FURTHER, that if any legal action be filed upon this bond, venue shall lie in Hidalgo County, State of Texas, and that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specification accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in six counterparts, each one of which shall be deemed an original, and this the _____ day of _____. A.D., 20_____.

ATTEST:

Principal_____

_____ By_____

(Principal) Secretary

(Seal) (Address)_____

_____ Telephone Number:_____

Witness as to Principal

_____ _____

(Address) Surety

ATTEST:

_____ By_____

(Surety) Secretary

(Seal) (Address)_____

_____ _____

Witness as to Surety NOTE: If Contractor is partnership all

Partners should execute bond

_____ Telephone Number:_____

(Address)

PAYMENT BOND FORM

_____ _____
(Individual Principal)

_____ _____
(Address) (Business Address)
Telephone Number:_____ Telephone Number:_____

_____
(Corporate Principal)

_____
(Business Address) (Affix Corporate SEAL)
Telephone Number:_____
BY_____

_____ _____
ATTEST: _____

_____
(Business Address)(Affix Corporate SEAL)

BY_____
Telephone Number:_____

CERTIFICATES AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____ Secretary of the corporation named as Principal in the within bond; that _____, who signed the said bond on behalf of the Principal was then _____ of said corporation; and I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed, and attested for and in behalf of said corporation by authority of its governing body.

_____
(TITLE)
DATE_____ _____
(AFFIX CORPORATE SEAL)

Telephone Number:_____

The rate of premium on this bond is _____ per thousand. Total amount of premium charge $_____.
(The above must be filled in by corporate surety.) (Power-of-Attorney of person signing for Surety Company must be attached.)

PERFORMANCE BOND
(To be used in Texas under V.A.T.S. 5160)

THE STATE OF _____

COUNTY OF _____

KNOW ALL MEN BY THESE PRESENTS: That we (1) _____, a (2) _____ OF _____, hereinafter called Principal and (3)_____ of _____, State of _____, hereinafter called the Surety, are held and firmly bound unto (4) _____ _____ of_____, hereinafter called Owner, in the penal sum of _____ ($_____) Dollars in lawful money of the United States to be paid in (5) _____, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with (6)_____, the Owner, dated the _____ day of _____, A.D. 2021, a copy of which is hereto attached and made a part hereof for the construction of:

HIDALGO COUNTY PRECINCT #4 North Alamo Road Realignment Project
(From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)

Hereinafter called the "Work").

These footnotes refer to the numbers in body of contract above:

Date of Bond must not be prior to date of contract
(1) Correct name of Contractor
(2) A Corporation, a Partnership or an Individual, as the case may be
(3) Correct name of Surety
(4) Correct name of Owner
(5) County and State
(6) Owner
(Texas Performance Bond) – Page 2.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform the work in accordance with the plans, specifications, and contract documents during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED FURTHER, that if any legal action is filed upon this bond, venue shall lie in Hidalgo County, State of Texas, and that the said surety, for value, received hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

IN WITNESS WHEREOF, this instrument is executed this the _____ day of _____. A.D.

ATTEST:

Principal_____

_____ By_____

(Principal) Secretary

(Seal) (Address)_____

_____ Telephone Number:_____

Witness as to Principal

_____

(Address)

ATTEST:

_____ By_____

(Surety) Secretary

(Seal) (Address)_____

_____ Telephone Number:_____

Witness as to Surety

_____

(Address)

NOTE: If Contractor is a partnership, all partners should execute bond.

PERFORMANCE-PAYMENT BOND FORM

_____ _____
(Individual Principal)

_____ _____
(Address) (Business Address)
Telephone Number:_____ Telephone Number:_____

_____
(Corporate Principal)

_____
(Business Address) (Affix Corporate SEAL)
Telephone Number:_____
BY_____

_____ _____
ATTEST: _____

_____
(Business Address)(Affix Corporate SEAL)

BY_____
Telephone Number:_____

CERTIFICATES AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____ Secretary of the corporation named as Principal in the within bond; that _____, who signed the said bond on behalf of the Principal was then _____ of said corporation; and I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed, and attested for and in behalf of said corporation by authority of its governing body.

_____
(TITLE)
DATE_____ _____
(AFFIX CORPORATE SEAL)

Telephone Number:_____

The rate of premium on this bond is _____ per thousand. Total amount of premium charge $_____.

(The above must be filled in by corporate surety.) (Power-of-Attorney of person signing for Surety Company must be attached.)

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		SHEET NO.
6			1
STATE	STATE DIST.NO.	COUNTY	
TEXAS	PHR	HIDALGO	
CONT.	SECT.	JOB	HIGHWAY NO.
0921	02	311	ALAMO

HIDALGO COUNTY
PRECINCT NO. 4

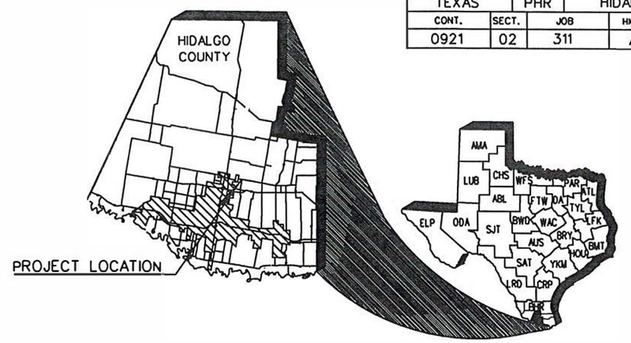
PLANS OF PROPOSED
ROADWAY IMPROVEMENT

FEDERAL AID PROJECT:
CSJ: 0921-02-311
NET LENGTH = 2,861.33 FT. = 0.54 MI.

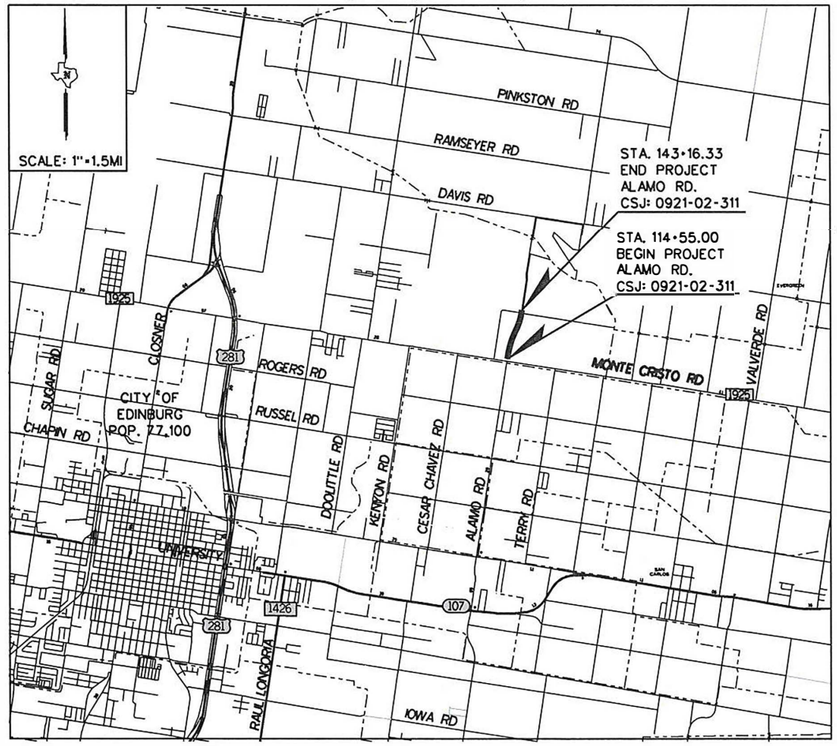
HIDALGO COUNTY

NORTH ALAMO ROAD

LIMITS:
FROM FM 1925 (MONTE CRISTO RD) TO 0.54 MI. N. OF FM 1925



REALIGNING OF A ROADWAY FACILITY CONSISTING OF GRADING, CEMENT TREATED SUBGRADE, LIME TREATED FLEXIBLE BASE, DRAINAGE STRUCTURES, ASPHALTIC CONCRETE PAVEMENT, SIGNING, DELINEATION, AND PAVEMENT MARKINGS.



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INDEX DATA
SHEET ON PAGE 2

FINAL PLAN DATA :

FINAL CONTRACT PRICE: _____
CONTRACTORS NAME: _____
CONTRACTORS ADDRESS: _____
LETTING DATE: _____
DATE WORK BEGAN: _____
DATE WORK COMPLETED: _____
DATE OF ACCEPTANCE: _____

CHANGE ORDERS AND SUPPLEMENTAL AGREEMENTS:

ALL CONSTRUCTION WORK WAS PERFORMED IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND CONTRACT. ALL PROPOSED CONSTRUCTION WAS COMPLETED UNLESS OTHERWISE NOTED.

HIDALGO COUNTY PRECINCT NO. 4 | DATE:

COUNTY HIDALGO PROJ. NO.
HWY. NO. ALAMO RD LETTING DATE
DATE ACCEPTED

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION ON JANUARY 1, 2015 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT: REQUIRED CONTRACT PROVISIONS FOR ALL FEDERAL-AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, MAY 2012).

NORTH ALAMO RD. PROJECT DATA (CSJ: 0921-02-311)

DESIGN SPEED:
ALAMO RD: 30 mph

FUNCTION CLASS:
RURAL MAJOR COLLECTOR

EXCEPTIONS:
NONE

BRIDGE
NONE

RAILROAD CROSSINGS:
NONE

ADT
FY 2016 = 400
FY 2036 = 600

EQUATIONS:
NONE

TDLR INSPECTION IS NOT REQUIRED

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
Fax : (956) 565-9018

900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

APPROVED FOR LETTING / DATE : 12/12/17

NAME, TITLE , Project Manager

APPROVED FOR LETTING / DATE : 12/12/17

NAME, TITLE Joseph Palacios

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APPROVED FOR LETTING :

RECOMMENDED FOR LETTING : 11-2-18

ADVANCE PROJECT DEVELOPMENT SUPERVISOR

SUBMITTED FOR LETTING :

APPROVED FOR LETTING :

APPROVED FOR LETTING :

NORTH ALAMO ROAD (0921-02-311)

K:\Counties\HID\FM 907 (North of FM1925)\01 GENERAL\01 Title Sheet\FM 907 Title.dgn
11/27/2017

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{D} - DENOTES DISTRICT STANDARD
{SI} - DENOTES STATE STANDARD

STANDARD SHEETS 16-32, 41-47, 59-65A, 94-100, 103-104, AND 110-112.

HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED PROFESSIONAL ENGINEER
02/14/2019

STANDARD SHEETS 71-81 AND 83-89

HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

STATE OF TEXAS
C. SIMEONIDIS
60919
REGISTERED PROFESSIONAL ENGINEER
02/14/2019

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
Fax : (956) 565-9018

900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

ALAMO ROAD
INDEX OF SHEETS

SHEET 1 OF 1

ED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						2
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311	ALAMO

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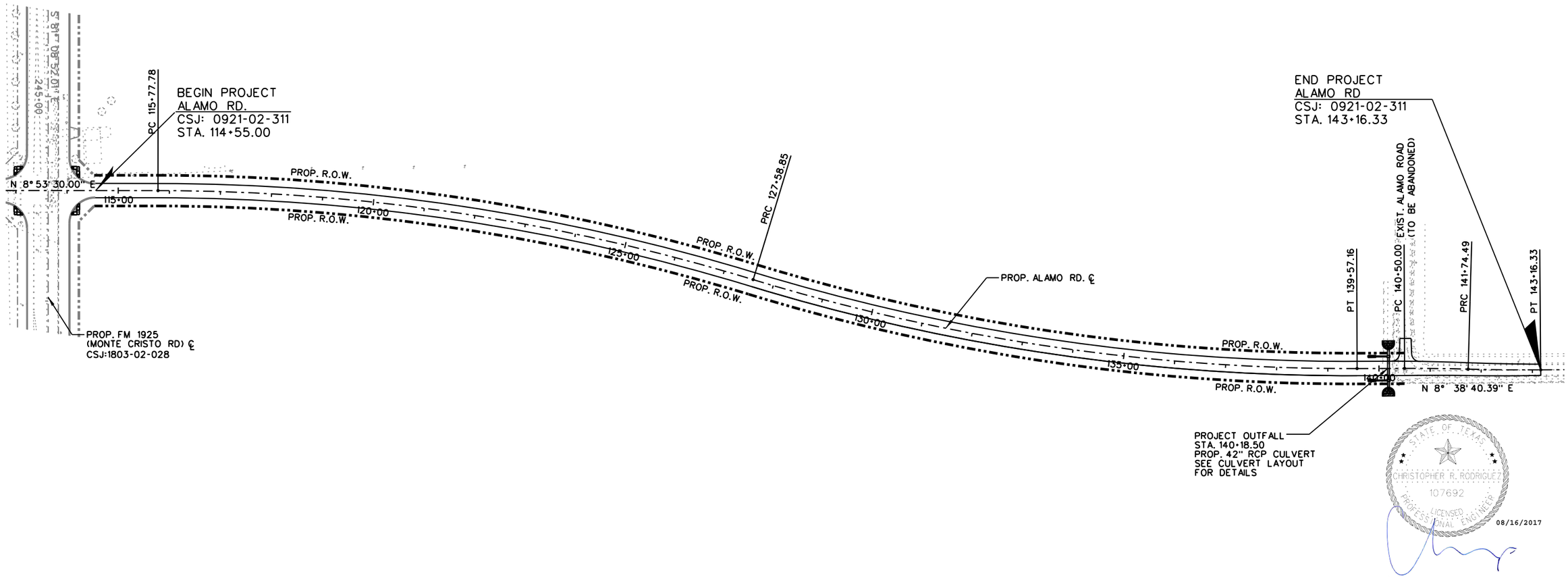
2/14/2019



STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED PROFESSIONAL ENGINEER

08/16/2017

L&G Engineering

Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
Fax : (956) 565-9018

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Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

ALAMO ROAD
PROJECT LAYOUT

SCALE 1" = 200'

SHEET 1 OF 1

ED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						3
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311	ALAMO

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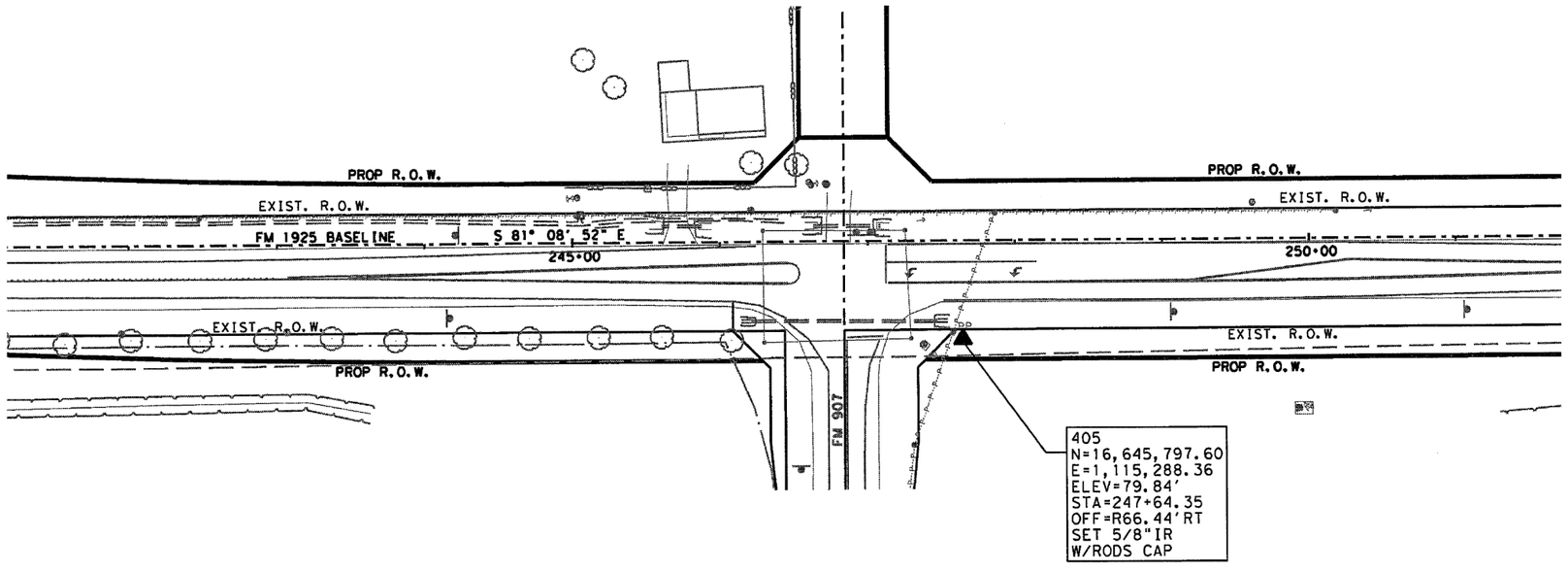

NOTE:

1. ALL BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH ZONE (4205), NORTH AMERICAN DATUM OF 1983 (1993 ADJ.)
2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1988.
3. COORDINATES AND DISTANCES ARE US SURVEY FEET, DISPLAYED IN SURFACE VALUES AND MARCH BE CONVERTED TO GRID BY DIVIDING BY THE TXDOT SURFACE ADJUSTMENT FACTOR OF 1.00004.
4. ALL HORIZONTAL CONTROL VALUES WERE ESTABLISHED BY VRS GPS OBSERVATIONS.
5. ALL VERTICAL CONTROL WAS ESTABLISHED BY DIFFERENTIAL LEVELING.

0 50 100 150

SCALE 1"=100'

THIS CONTROL SURVEY WAS PERFORMED UNDER MY SUPERVISION.

STATE OF TEXAS
REGISTERED
DARRELL BABCOCK
5466
PROFESSIONAL
LAND SURVEYOR

6-20-13

THIS SURVEY CONTROL INFORMATION HAS BEEN ACCEPTED AND INCORPORATED INTO THIS PAGE

Survey Date: FEB, 2013

RODS
Surveying, Inc.
GPS
Right-of-Way
Transportation
Land Development
6810 LEE ROAD
SPRING, TEXAS 77379
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FAX (281) 257-4021

Texas Department of Transportation

SURVEY CONTROL INDEX SHEET

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
	-		4
STATE	DISTRICT	COUNTY	
TEXAS	PHARR	HIDALGO COUNTY	
CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.

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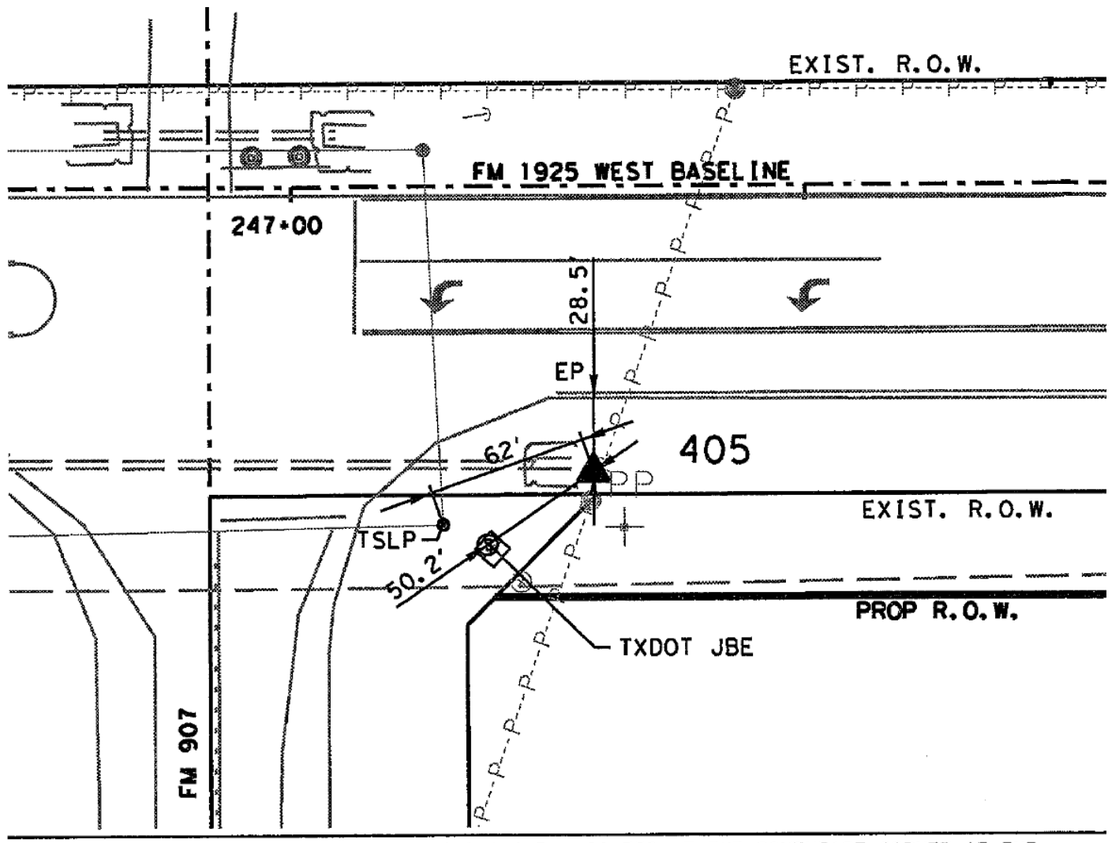

405- SET 5/8" IRON ROD W/ RODS SURVEYING CAP, LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF FM 1925 AND FM 907

NOTE:

1. ALL BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH ZONE (4205), NORTH AMERICAN DATUM OF 1983 (1993 ADJ.)
2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1988.
3. COORDINATES AND DISTANCES ARE US SURVEY FEET. DISPLAYED IN SURFACE VALUES AND MARCH BE CONVERTED TO GRID BY DIVIDING BY THE TxDOT SURFACE ADJUSTMENT FACTOR OF 1.00004.
4. ALL HORIZONTAL CONTROL VALUES WERE ESTABLISHED BY VRS GPS OBSERVATIONS.
5. ALL VERTICAL CONTROL WAS ESTABLISHED BY DIFFERENTIAL LEVELING.

0 50 100 150

SCALE 1"=100'

THIS CONTROL SURVEY WAS PERFORMED UNDER MY SUPERVISION.

STATE OF TEXAS
REGISTERED
DARRELL BABCOCK
5466
PROFESSIONAL
LAND SURVEYOR

6-20-13

THIS SURVEY CONTROL INFORMATION HAS BEEN ACCEPTED AND INCORPORATED INTO THIS PAGE

Survey Date: FEB. 2013

RODS
Surveying, Inc.
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GPS
Right-of-Way
Transportation
Land Development

Texas Department of Transportation

HORIZONTAL AND VERTICAL SURVEY CONTROL

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
	-		5
STATE	DISTRICT	COUNTY	
TEXAS	PHARR	HIDALGO COUNTY	
CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.

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GENERAL NOTES:

WHERE REQUIRED BY FIXTURES OR UNUSUAL CONDITIONS, THE GOVERNING SLOPES MAY BE VARIED WHEN SPECIFICALLY DIRECTED BY THE ENGINEER.

THE TOP 4 INCHES (MIN.) OF THE PROP. FLEXBASE SHALL BE NEW MATERIAL.

WHERE POSSIBLE AND UNLESS OTHERWISE DIRECTED BY THE ENGINEER, PERMISSIBLE CONSTR. JOINTS SHALL FALL ON STRIPING LINES AS SHOWN ON STRIPING DETAILS.

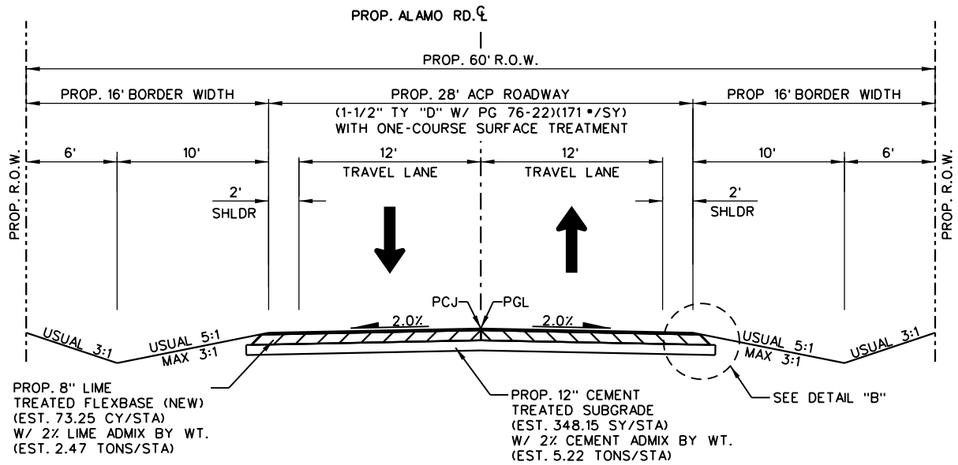
ALL GRADING SHALL BE WITHIN THE R.O.W. LIMITS.

114•/SY OF ACP IS EQUIVALENT TO 1" DEPTH OF ACP.

PGL - DENOTES PROFILE GRADE LINE

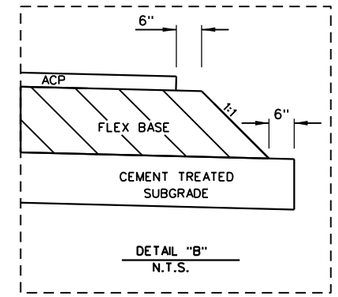
PCJ - DENOTES PERMISSIBLE CONSTRUCTION JOINT

A STATION IS EQUIVALENT TO 100 FT.



PROP. ALAMO RD. TYPICAL SECTION
STA 114•55.00 TO STA 140•50.00

PROP. 28' TO 22' RDWY TRANSITION
STA 140•50.00 TO STA 143•16.33



DETAIL "B"
N.T.S.

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED PROFESSIONAL ENGINEER
08/16/2017

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

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ALAMO ROAD PROPOSED TYPICAL SECTION

SHEET 1 OF 1

ED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						6
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311	ALAMO

8/16/2017 K:\Counties\HID\FM 907 (North of FM1925)\01 GENERAL\04 Typical Sections\FM907_TYP SECT.dgn

SUMMARY OF ROADWAY ITEMS

LOCATION	LENGTH		CUT	FILL		SUBGRADE		FLEXIBLE BASE			PRIME COAT		SEAL COAT		ASPH. CONC. PAV.		PLANING
		100	110	132	204	275	✖ 275	247	260	✖ 260	310	310	316	316	341	341	354
		6002	6001	6006	6003	6005	6001	6225	6043	6015	INFO-ONLY	6009	6277	6486	INFO-ONLY	6047	6051
		PREPARING ROW	EXCAVATION (ROADWAY)	EMBANKMENT (FINAL) (DENS CONT) (TY C)	SPRINK DUST CONTROL 8MG/STA	CEMENT TREAT (EXIST MATL) (12")	CEMENT 2.0% BY WT.	FLEX. BASE (RDWY DEL) TY"E" GR.4 (FINAL POS	LIME HYD,COM OR QK(SLRY) 2.0% BY WT.	LIME TREAT (NEW BASE) (8")	AREA ⊕	ASHP MAT'L (MC-30) 0.2 GAL/SY	ASPH (SPG 73-19) 0.32 GAL/SY	AGGR (TY D GR-4P) (SAC-B) 1 CY/120 SY	AREA ⊕	D-GR HMA (QCQA) TY-D SAC-A PG 76-2 171 #/SY	PLANE ASPH CONC PAV (0" TO 1 1/2")
	(FT)	(STA)	(CY)	(CY)	(MG)	(SY)	(TON)	(CY)	(TON)	(SY)	(SY)	(GAL)	(GAL)	(CY)	(SY)	(TON)	(SY)
		EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
ALAMO RD																	
PHASE II	2861	28.61	1504	1928	229	9477	93	1993	67	9173	8460	1692	2707	70	8460	723	
PHASE III	284		63	80	23	395	4	83	3	382	353	71	113	3	353	30	
INCIDENTAL															311	27	311
GRAND TOTAL		28.61	1567	2008	252	9872	97	2076	70	9555	8813	1763	2820	73	9124	780	311

✖ PERCENT OF LIME AND CEMENT MAY BE VARIED WHERE REQUIRED OR AS DIRECTED BY THE ENGINEER

⊕ FOR CONTRACTOR'S INFORMATION ONLY. (NON-PAY)

EST. WT. OF SUBGRADE = 2970 #/CY (COMPACTED)

EST. WT. OF FLEXIBLE BASE (NEW) = 3375 #/CY COMPACTED DRY WEIGHT

SUMMARY OF SUBBASE ALTERNATIVES (ITEM 275)

LOCATION	SUBGRADE	FLEXBASE	
	✖ 275	✖275	275
	6001	6001	6009
	CEMENT 2.0% BY WT.	CEMENT 2.0% BY WT.	CEM TRT (NEW BASE) (8")
	(TON)	(TON)	(SY)
	EST.	EST.	EST.
ALAMO RD			
ALTERNATIVE 1A	97	70	9555

✖ PERCENT OF LIME OR CEMENT MAY BE VARIED WHERE REQUIRED OR AS DIRECTED BY THE ENGINEER

SUMMARY OF TRAFFIC SIGNALS

INTERSECTION LOCATION	618	618	624	680	684	684	688
	6016	6023	6002	6002	6027	6080	6004
	CONDT (PVC) (SCHD 40) (1") (LF)	CONDT (PVC) (SCHD 40) (2") (LF)	GRND BOX TY A (122311) W/ APRON (EA)	INSTALL HWY TRF SIG (ISOLATED) (EA)	TRF SIG CBL (TY A) (14 AWG) (1 CONDR) (LF)	TRF SIG CBL (TY C) (14 AWG) (2 CONDR) (LF)	VEH LP DETECT (SAWCUT) (LF)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.
ALAMO RD @ FM 1925	20	285	3	1	40	805	204
GRAND TOTAL	20	285	3	1	40	805	204

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ALAMO ROAD
ESTIMATED QUANTITIES

ED.RD DIV.NO.	STATE AID PROJECT NO.			FILE NO.			SHEET NO.
6							7
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB		HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311		ALAMO

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11/27/2017

SUMMARY OF SEDIMENT CONTROL DEVICES (ITEM 160, 164, 166, 168, & 506)

SW3P LAYOUT SHEET	160 6005 FURNISHING AND PLACING TOPSOIL (CY)	164 6034 DRILL MLCH SEED (PERM)(RURAL) (SANDY) (ACRE)	164 6042 DRILL MLCH SEED (TEMP)(WARM) (ACRE)	166 6002 FERTILIZER ⊕ (TON)	168 6001 VEGETATIVE WATERING (MG)	506 6001 ROCK FILTE DAMS (INSTALL) (TY 1) (LF)	506 6011 ROCK FILTER DAMS (REMOVE) (LF)	506 6021 CONSTRUCTION EXIT (INSTALL) (TY 2) (SY)	506 6024 CONSTRUCTION EXIT (REMOVE) (SY)	506 6031 FRONT END LOADER WORK (ERSN & SEDM CONT) (HR)	506 6038 TEMP SEDMT CONT FENCE (INSTALL) (LF)	506 6039 TEMP SEDMT CONT FENCE (REMOVE) (LF)	506 6041 BIODEGRADABLE EROSION CNTRL LOGS (12" DIA) INSTALL (LF)	506 6043 BIODEGRADABLE EROSION CNTRL LOGS REMOVE (LF)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
ALAMO RD														
SHEET 1 OF 2		1.34	1.34	0.34	205			78	78	1			330	330
SHEET 2 OF 2		0.69	0.69	0.17	106	20	20	78	78	1			120	120
MISC	50										100	100		
GRAND TOTAL	50	2.03	2.03	0.51	311	20	20	156	156	2	100	100	450	450

⊕ FOR CONTRACTOR'S INFORMATION ONLY. (NON-PAY)

SUMMARY OF DRIVEWAYS (ITEM 530)

LOCATION	⊗530 6005 DRIVEWAYS (ACP) (SY)
	EST.
ALAMO RD	
GRAND TOTAL	126

⊗ ALL PRIVATE, COMMERCIAL, AND RESIDENTIAL DRIVEWAYS ARE TO BE CONSTRUCTED WITH ADA RECQUIRED CROSS SLOPE FOR FUTURE SIDEWALKS.

SUMMARY OF REFLECTORIZED PVMT. MARKINGS, PREFAB. PAVMT. MARKINGS, & REFLECTORIZED PVMT. MARKERS (ITEM 666 & 672)

PAVEMENT MARKING SHEET	666 6042 REFL PAV MRK TY I (W) 12" (SLD) (100MIL) (LF)	666 6048 REFL PAV MRK TY I (W) 24" (SLD) (100MIL) (LF)	666 6303 RE PM W/ RET REQ TY I (W) 4" (SLD) (100MIL) (LF)	666 6315 RE PM W/ RET REQ TY I (Y) 4" (SLD) (100MIL) (LF)	672 6009 REFL PAV MRKR TY II A-A (LF)
	EST.	EST.	EST.	EST.	EST.
ALAMO RD					
SHEET 1 OF 2	100	24	3690	3738	47
SHEET 2 OF 2			2033	2033	26
GRAND TOTAL	100	24	5723	5771	73

SUMMARY OF DELINEATORS & OBJECT MARKERS (ITEM 658)

LOCATION	658 6002 INST DEL ASSM (D-SW)SZ 1 (FLX) GND (BI) EA	658 6049 INSTL OM ASSM (OM-2Z) (FLX) GND (BI) EA
	EST.	EST.
ALAMO RD.		
STA. 114+55.00 (LT, RT)	2	
STA. 115+16.00 (LT, RT)	2	
STA. 115+78.00 (LT, RT)	2	
STA. 117+00.00 (LT, RT)		2
STA. 117+68.00 (LT, RT)	2	
STA. 119+58.00 (LT, RT)	2	
STA. 121+48.00 (LT, RT)	2	
STA. 123+38.00 (LT, RT)	2	
STA. 125+28.00 (LT, RT)	2	
STA. 127+18.00 (LT, RT)	2	
STA. 129+08.00 (LT, RT)	2	
STA. 130+98.00 (LT, RT)	2	
STA. 132+88.00 (LT, RT)	2	
STA. 134+78.00 (LT, RT)	2	
STA. 136+68.00 (LT, RT)	2	
STA. 138+58.00 (LT, RT)	2	
STA. 139+57.00 (LT, RT)	2	
STA. 139+80.00 (LT, RT)		2
GRAND TOTAL	32	4

SUMMARY OF REMOVE, RELOCATE AND INSTALL SMALL ROAD SIGNS (ITEM 636 & 644)

LOCATION	644 6027 INS SM RD SN SUP&AM TY S80 (1) SA (P) (EA)	644 6030 INS SM RD SN SUP&AM TY S80 (1) SA (T) (EA)	644 6050 INS SM RD SN SUP&AM TY S80 (2) SA (P) (EA)	644 6076 REMOVE SM RD SN SUP & AM (EA)
	EST.	EST.	EST.	EST.
ALAMO RD				
GRAND TOTAL	3	1	2	4

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ALAMO ROAD ESTIMATED QUANTITIES

SHEET 2 OF 2

FED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						8
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311	ALAMO

11/27/2017

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Station	Material Name	End Volumes (sq. ft.)	Areas Volume (cu. yd.)	Unadjusted Volumes (cu. yd.)	Adjusted Factor
114+55.00	DI RT				
	Excavation	94.0	0	0	1.00
	Fill	0.0	0	0	1.00
115+00.00	DI RT				
	Excavation	44.2	166	166	1.00
	Fill	2.0	2	2	1.00
116+00.00	DI RT				
	Excavation	34.5	146	146	1.00
	Fill	2.6	9	9	1.00
117+00.00	DI RT				
	Excavation	17.9	97	97	1.00
	Fill	11.8	27	27	1.00
118+00.00	DI RT				
	Excavation	22.0	74	74	1.00
	Fill	9.9	40	40	1.00
119+00.00	DI RT				
	Excavation	17.2	73	73	1.00
	Fill	14.4	45	45	1.00
120+00.00	DI RT				
	Excavation	16.3	62	62	1.00
	Fill	15.4	55	55	1.00
121+00.00	DI RT				
	Excavation	16.9	61	61	1.00
	Fill	12.9	52	52	1.00
122+00.00	DI RT				
	Excavation	15.8	61	61	1.00
	Fill	14.8	51	51	1.00
123+00.00	DI RT				
	Excavation	15.7	58	58	1.00
	Fill	17.7	60	60	1.00
124+00.00	DI RT				
	Excavation	13.8	55	55	1.00
	Fill	18.1	66	66	1.00
125+00.00	DI RT				
	Excavation	14.0	51	51	1.00
	Fill	15.3	62	62	1.00
126+00.00	DI RT				
	Excavation	15.0	54	54	1.00
	Fill	8.0	43	43	1.00
127+00.00	DI RT				
	Excavation	7.5	42	42	1.00
	Fill	17.7	48	48	1.00
128+00.00	DI RT				
	Excavation	1.1	16	16	1.00
	Fill	38.0	103	103	1.00
129+00.00	DI RT				
	Excavation	1.8	5	5	1.00
	Fill	28.3	123	123	1.00
130+00.00	DI RT				
	Excavation	1.9	7	7	1.00
	Fill	34.7	117	117	1.00
131+00.00	DI RT				
	Excavation	3.1	9	9	1.00
	Fill	32.0	124	124	1.00
132+00.00	DI RT				
	Excavation	5.1	15	15	1.00
	Fill	27.2	110	110	1.00
133+00.00	DI RT				
	Excavation	6.4	21	21	1.00
	Fill	30.7	107	107	1.00
134+00.00	DI RT				
	Excavation	6.6	24	24	1.00
	Fill	32.5	117	117	1.00
135+00.00	DI RT				
	Excavation	6.4	24	24	1.00
	Fill	34.7	124	124	1.00
136+00.00	DI RT				
	Excavation	9.0	29	29	1.00
	Fill	31.3	122	122	1.00
137+00.00	DI RT				
	Excavation	11.3	38	38	1.00
	Fill	29.0	112	112	1.00
138+00.00	DI RT				
	Excavation	12.1	43	43	1.00
	Fill	30.8	111	111	1.00
139+00.00	DI RT				
	Excavation	13.6	48	48	1.00
	Fill	30.4	113	113	1.00
140+00.00	DI RT				
	Excavation	30.8	82	82	1.00
	Fill	2.3	61	61	1.00
141+00.00	DI RT				
	Excavation	80.2	206	206	1.00
	Fill	0.0	4	4	1.00

G R A N D S U M M A R Y T O T A L S

Material Name	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
DI RT			
Excavation	1567	1567	1.00
Fill	2008	2008	1.00

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8/16/2017

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ALAMO RD.
EARTHWORK QUANTITIES

ED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						9
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311	ALAMO

GENERAL NOTES:

Use the Texas Department of Transportation's "Standard Specifications for Construction And Maintenance of Highways, Streets, And Bridges" (November 2014) for item specifications information and requirements. The specification book shall read "Hidalgo County Precinct No. 4" in lieu of "The Texas Department of Transportation" and/or "The Department".

****

GENERAL REQUIREMENTS AND COVENANTS TO ITEMS 1L THRU 9L

For all pits or quarries, comply with the "Texas Aggregate Quarry and Pit Safety Act."

Provide on a weekly basis a list of equipment, including idle equipment, utilized on the project that week.

Contact the 1-800 call services for locations of utilities before beginning any scarifying or excavating operations. The 1-800 call services for utility locations do not include TxDOT facilities. Contact the Pharr District Signal Section (956-702-6225) for coordination regarding TxDOT underground lines.

ITEM 5L: Control of the Work

Prior to contract letting, bidders may obtain a free computerized transfer of files (from the Engineer's office) that contains the earthwork information. If copies of the actual cross-sections in additional to, or instead of the electronic files are requested, they will be available at the Engineers office for borrowing by copying companies for the purpose of making copies for the bidder at the bidders expense.

ITEM 8L: Prosecution and Progress

Prepare progress schedules using the Critical Path Method (CPM).

Working days will be completed and charged in accordance with Article 8.3.1.4 Standard Workweek.

ITEM 100: Preparing Right of Way

Clearing & grubbing shall be executed in accordance with the District Clearing and Grubbing detail sheets.

Preparation of ROW will be done in accordance with the construction phasing shown on the Traffic Control Plans. Performance of this item will not be allowed outside of the project's current construction phase without prior approval by the Engineer.

ITEM 132: Embankment

Embankment (DENS CONT) shall be Type C with a max. PI of 40. Material used as embankment material in the top two feet below the bottom of Flexible Base shall meet the following requirements based on preliminary tests and such other tests found necessary by the Engineer.

1. The material shall be such as to produce a well-bonded embankment and shall have a minimum PI of 8 and a maximum PI of 30.

It is the Contractor's responsibility to advise the Engineer of the location of the source sufficiently in advance to avoid delay.

ITEM 160: Topsoil

Use topsoil as needed and directed by the project engineer for select problem areas. Unless otherwise approved by the project engineer, use topsoil from approved sources outside the right of way as per standard specifications. Existing topsoil is to be salvaged and retained for re-use on the project as topsoil.

ITEM 164: Seeding for Erosion Control

During drill seeding operations, application methods shall be in accordance with the method shown in the Standard Specification Book.

SS-1 Tacking Agent shall be a ratio of 2:1, two (Emulsion) to one (water) and applied at a rate of 0.05 gallons per square yard. The SS-1 Tacking Agent required for Drill Seed operations, will not be paid for directly, but will be subsidiary to Item 164 "Drill Seeding." Watering shall not be used with the Drill Seed Method.

Cool Season or Warm Season Grasses shall be included as part of Item 164 (See Table 3 and/or Table 4 in the Standard Specification Manual for dates and seed type).

Seed mixture shall be as specified under Item 164.

ITEM 166: Fertilizer

Fertilizer rate is based on a rate of 100 Lbs. of Nitrogen per acre. The Nitrogen-Phosphorous-Potassium (NPK) ratio shall include a minimum of 5 percent phosphorous and 5 percent Potassium. Fertilizer shall be homogenized.

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ALAMO ROAD
GENERAL NOTES

ED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						10A
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311	ALAMO

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ITEM 247: Flexible Base

Flexible Base Type E will be composed of caliche (argillaceous Limestone, calcareous or calcareous clay particles) and may contain stone, conglomerate, gravel, sand or granular materials when these materials are in situ with the caliche.

Flexible Base (TY E GR 4) or (TY D GR 4) crushed concrete shall conform to the following requirements:

Retained on Sq. Sieve	Percent Retained
2"	0
½"	20-60
No. 4	40-75
No. 40	70-90
Max. PI:	15
Max. Wet Ball PI:	15
Wet Ball Mill Max Amount:	50
Min. Comp. Strength PSI:	150 at 15 PSI lateral pressure
Triaxial Test	Tex-117-E

The Wet Ball Test (Tex-116-E) shall be run and the Plasticity Index of the material passing the No. 40 sieve shall be determined (Wet Ball PI).

Two (2) percent lime (by weight) will be incorporated into the Flexible Base in the field at the State's expense in accordance with the provisions of Items 260.

The percent of density as determined by Compaction Ratio (Tex-113-E) for the new Flexible Base shall be a minimum of 98%.

The Contractor's attention is called to the fact that certain existing and/or proposed structures may be within the limits of the Flexible Base. It shall be the Contractor's responsibility to perform construction operations without damage to these structures.

For water added under Item 247, the sulfate content will not exceed 3000-ppm and the chloride content will not exceed 3000-ppm.

Perform base ride quality testing for all base with only one lift of ACP or a seal coat as the final surface in accordance with the Pharr District Special Provision for flexbase ride testing. Perform base ride quality testing before placing the ACP or seal coat.

ITEM 260: Lime Treatment (Road Mixed)

The Contractor's attention is called to the fact that certain existing and/or proposed structures are within the limits of the lime-treated Subgrade. Unless otherwise directed by the Engineer, these structures shall be installed before the final rolling of this Subgrade. It shall be the Contractor's responsibility to perform the proper lime treating operation without damage to these structures.

The slurry method of applying lime will be required, except when the lime is to be added to naturally wet materials as directed by the Engineer.

For this project, the Engineer will direct a random number of lime trucks to be check weighed.

The percent of density as determined by Tex-121-E for the new and salvage Flexible Base shall be a minimum of 98% for all courses.

Proof roll all constructed lime treated subgrade and bases courses in accordance with Item 216, "Proof Rolling." Correct soft spots as directed. Correction of soft spots in the subgrade or base courses will be at the Contractor's expense.

ITEM 275: Cement Treatment (Road-Mixed)

Proof roll all constructed cement treated subgrade and bases courses in accordance with Item 216 "Proof Rolling." Correct soft spots as directed. Correction of soft spots in the subgrade or base courses will be at the Contractor's expense.

ITEM 300: Asphalts, Oils, and Emulsions

Temporary ramps/detours and driveways may use performance grade binder 64-22.

ITEM 301: Asphalt Antistripping Agents

Hydrated Lime shall be added as an Antistripping additive between the rates of 1 % minimum and 2.0% maximum by weight for item 341. If the Hamburg wheel test cannot be met within these limits, Liquid Antistripping agents as approved by the Engineer may be used in conjunction with lime for item 341.

ITEM 302: Aggregates for Surface Treatments

The aggregate for the surface treatment shall be surface dry before application unless otherwise directed by the Engineer.

ITEM 310: Prime Coat

The Contractor shall exercise diligence in the application of asphalt by the use of flagging and rolling procedures to keep from spraying or splattering the traveling public with asphaltic materia

Do not apply subsequent courses over the initial prime coat any earlier than the day after the prime coat was applied, unless otherwise authorized or directed by the Engineer.

ITEM 314: Emulsified Asphalt Treatment

The Contractor shall exercise diligence in the application of emulsified asphalt by the use of flagging to keep from spraying or splattering the traveling public with asphaltic material.

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ITEM 316: Seal Coat

In addition to cleaning by brooming of paved surfaces to be sealed as required by this Item, blading may also be necessary to clean dirt and grass from edges of the pavement and/or turnout areas. The cost of this blading will not be paid for directly, but will be considered subsidiary to the various bid Items of the project.

The type and grade of asphalt as shown on the plans and/or as directed by the Engineer, shall be used on these projects. Asphalt cement will be used during the warm season. An emulsified asphalt will be used during the cooler season if permitted in writing by the Engineer. The emulsified asphalt, if used, shall be HFRS 2P. Estimated quantities shown for the bid Item is based on an average of the estimated rates of application for asphaltic cement and emulsified asphalt. These rates should be used for estimating and comparison purposes only.

The one or two-course surface treatment shall be in place for a sufficient period of time in the opinion of the Engineer, for the surface treatment to properly dry and cure before placing the Asphaltic Concrete Pavement.

Traffic will not be permitted on the surface treatment unless authorized by the Engineer.

When emulsified asphalt is used, do not apply subsequent courses over the surface treatment any earlier than the day after the surface treatment was applied, unless otherwise authorized or directed by the Engineer.

ITEM 341: Dense-Graded Hot-Mix Asphalt

The contractor shall exercise diligence in the application of "Tack Coat" by the use of flagging and rolling procedures to keep from spraying or splattering the traveling public with asphaltic material.

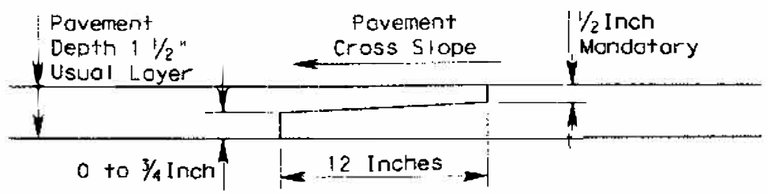
Blading (not to exceed more than 3-ft from the pavement edge) may also be necessary to clean dirt and grass from pavement edges and turnout areas as work under this bid Item. The cost of this blading will not be paid for directly, but shall be considered subsidiary to this bid Item.

This project will require the following minimum surface aggregate Classifications:

County	CSJ	Highway	Classification
Hidalgo	0921-02-311	Alamo Rd.	A

Level-up will be placed before the surface course. An asphaltic concrete spreading and finishing machine and/or motor graders; when approved by the Engineer may be used to place the ACP level-up.

All unconfined longitudinal joints shall be constructed with a joint maker providing a maximum ½-inch vertical edge and a minimum 6:1 edge taper or as approved by the Engineer.



NOTCHED WEDGE JOINT

The engineer may allow for variances to the dimensions shown.

The Hamburg wheel Test requirement for PG 64 binder will be 5,000 passes @ 0.5 inch rut depth

Target Lab Molded Density for this project shall be 97%.

Public and private driveways need to have a smooth vertical transition between the edge of pavement and the existing driveways. The contractor is to add a vertical taper if needed which will be subsidiary to Item 341.

The use of RAP and RAS will not be allowed as part of the mix design for the final riding surface

Use a release agent from the Department's MPL to clean and to coat the inside of truck beds for hauling equipment. Hauling equipment shall be cleaned prior to hauling material to job site. Submit a copy of the bill of lading to the Engineer as part of the QCP. Ensure the pavement is free from any spillage of hydraulic oil or diesel from construction equipment. The County may reject trucks that contain any foreign material and suspend production if the pavement is contaminated by any pollutants mentioned above.

The percentage of RAS used in the total mix shall not exceed 3% when allowed. The use of only pre-consumer shingles will be permitted when RAS is allowed.

SAC B aggregate must have material properties that require 5 or less on the magnesium sulfate soundness test and 15 or less on the Micro-Deval test.

ITEM 354: Planing and Texturing Pavement

Contractor is to place seal coat or ACP layer(s) as indicated on plans within 14-calendar days of planing/milling operation unless otherwise directed by the engineer.

All planing/milling operation drop offs greater than 1-inch need to have a 3:1 slope taper unless otherwise directed by the engineer. The cost of the 3:1 slope taper is subsidiary to item 354.

For full width planing/milling locations, contractor is to place seal coat or ACP layer(s) as indicated on the plans within 2-calendar days of the planing/milling operation unless otherwise directed by the engineer. Contractor will not be allowed to move onto the next planing/milling location or seal coat/ACP overlay location until the exposed area is covered as per above. Contractor cannot get paid for the planing/milling operation until exposed area is covered as per above.

ITEM 400: Excavation and Backfill for Structures

If the Contractor elects to cut pavement (existing/detour) for structural work beyond that required by the construction phasing shown in the plans and approved by the Engineer, it shall be restored at his expense and backfilled to its original condition or better in accordance with Item 400.

Unless shown otherwise in the plans, use a 1-ft depth for Item 400 Structural Excavation (Special) for gravel bedding needed below drainage structures with unstable material.

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ALAMO ROAD
GENERAL NOTES

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ITEM 432: Riprap

Provide Class "A" concrete minimum for riprap aprons placed around all box culvert and pipe safety end treatments. Provide ¼-inch thick dummy joints at least every 15-ft for riprap aprons placed around box and pipe culverts.

Do not use fiber reinforced concrete RIPRAP on side slopes equal to or steeper than 6:1 unless approved by the engineer.

ITEM 464: Reinforced Concrete Pipe

Use tongue and groove pipe where the RCP extends into the lime treated subgrade. The 4-foot depth restriction for heavy equipment passage over pipe structures is voided. The Contractor will be responsible for any construction damage to these facilities.

Do not use mortar joints.

All reinforced concrete pipe shall include rubber gaskets unless shown otherwise on the plans or directed by the engineer.

ITEM 465: Junction Boxes, Manholes & Inlets

For TY PSL with RG, FG, or SFG lid inlets, provide Class B concrete riprap with (6"x6" W3xW3 (no. 6 gauge) welded wire fabric) for any side that is touching the natural ground. The riprap will be 4-in thick and 3-ft wide with an 8-in deep by 6-in wide toe unless otherwise shown in the plans. The cost will be subsidiary to Item 465 unless otherwise shown in the plans.

ITEM 467: Safety End Treatment

All Type II SET's shall have riprap, Class "A" minimum, aprons as shown on the plans. The contractor may submit an alternate precast SET design for approval by the Engineer.

ITEM 471: Frames, Grates, Rings, and Covers

All grates will be tack welded to the frames in a manner satisfactory to the Engineer.

ITEM 502: Barricades, Signs, and Traffic Handling

Shadow vehicles equipped with Truck-Mounted Attenuators are required.

Replace/relocate all regulatory signs removed due to construction operations with the same sign on fixed support(s) immediately upon its removal. First obtain project Engineer approval before removing any regulatory roadway sign. Required flaggers are to be available to direct traffic during sign intermediate down time.

Relocate any Directional Sign Assemblies removed during construction operations immediately upon their removal.

These signs shall be relocated to a location in accordance with the Latest Version of the "Texas Manual on Uniform Traffic Control Devices". In no case will a sign be removed without a replacement sign and support(s) being readily available and a location established. Removal and relocation of these signs required for traffic control will not be paid for directly, but shall be considered subsidiary to Item 502.

From the beginning to the end of the project, all traffic control devices need to be in acceptable condition as per the Texas Quality Guidelines for Work Zone Traffic Control Devices.

ITEM 504: Field Office and Laboratory

For this project a field office will not be required at the project site.

The Contractor will furnish a Type D Structure (Asphalt Mix Laboratory) modified by the follow

Laboratory room:

The other room of this building will be used as a laboratory and will include access to a bathroom facility from the interior. The laboratory and bathroom facility will have the walls, ceiling and floor insulated such that the air temperature can be maintained at 76 degrees Fahrenheit at all times.

Furnish for the County's use in the asphalt laboratory one (1) desktop computer.

ITEM 530: Intersections, Driveways, and Turnouts

Prime coat shall meet the requirements of Item 310.

Daily testing requirements for Hot Mix Asphaltic Concrete Pavements for drives, commercial entrances and/or turnouts may be waived by the Engineer.

Public and private driveways need to have a smooth vertical transition tie-in between the proposed driveway and the existing driveway. The contractor is to add a vertical taper if needed which will be subsidiary to Item 530.

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ITEM 585: Ride Quality for Pavement Surfaces

Use Surface Test Type "A" for all pavement surfaces within the project limits.

Diamond grinding shall be used to remove localized roughness.

Pay adjustment schedules are not applicable to this project.

ITEM 618, Conduit

All conduit ends in pole bases, controllers and ground boxes shall be plugged with 4 to 6 inches of polyurethane sealant or its equivalent after cables are in place.

Conduit shall be placed in a straight line not to exceed 2.0 feet in any direction. The depth of the conduit shall be 1.5 feet except when crossing a roadway where the depth shall not be more than 3.0 feet nor less than 1.0 foot below the bottom of the base material in the roadway when placed by the jacking or boring method. Any evidence of damage to the roadway during the jacking or boring operation shall be sufficient grounds to stop the method being used.

Conduit runs under paved roadways or driveways shall be jacked or bored and then pushed across. At these locations, galvanized rigid metal may be used. All other runs shall be made by trenching. Existing pavement which will be removed, reconstructed or overlaid with new pavement may be trenched across.

Trenches for conduit runs shall be a minimum 2 feet deep and 4 inches wide. The conduit shall be placed on a 2-inch sand cushion and then backfilled with a minimum of 6 inches sand fill. The remainder of the trench shall be backfilled with flexible base, soil or two-sack concrete as required by location of conduit on the project or as directed. The top 3 inches shall match the existing surface material.

All conduit elbows and rigid extensions required to be installed on PVC conduit systems will not be paid for separately, but will be considered subsidiary to the various bid items.

Use materials from prequalified material producers list as shown on the Texas Department of Transportation (TxDOT) - Construction Division's (CST) materials producers list. Category is "Roadway Illumination and Electrical Supplies."

ITEMS 636: Aluminum Signs

Complete sign blanks and panels shall be handled and stored at the job site in such a manner that corners, edges and faces are not damaged. Finished sign blanks shall be stored in either a weather-proof warehouse or outside and off the ground in a vertical position. All paper, cardboard and chemically treated separators and packaging shall be removed prior to outside storage.

ITEM 644: Small Roadside Sign Assemblies

All signs shall be installed as shown in the plans and in accordance with the current edition of the "Texas Manual on Uniform Traffic Control Devices" and the "Sign Crew Field Book" (SCFB).

All signs shall be erected according to the locations shown on the signing layout sheets except that a sign may be shifted in order to secure a more desirable location. All sign locations will be staked as shown in the plans and as approved. It is the intent of the plans to erect all roadside traffic signs with the sign edge a minimum of 6 feet from the edge of the shoulder, or if none, 12 feet from the edge of the travel lane. In curb and gutter sections the sign edge shall be a minimum of 2 feet from the face of the curb.

For this project, aluminum type sign blanks as provided for under Item 636 will be required for all proposed signing installed under Item 644. Aluminum sign blanks less than 7.5 square feet shall be 0.08 inch thick, sign blanks 7.5 to 15 square feet shall be 0.100 inch thick and sign blanks greater than 15 square feet shall be 0.125 inch thick.

All excess excavation shall be spread uniformly inside the right of way as directed and shall be included in the price of these Items.

Sign types which design details are not shown on the plans shall conform with the latest edition of the Department's "Standard Highway Sign Design for Texas" Manual.

Signs shown to be removed shall include the complete sign installation and separate the sign post at the concrete foundation. The concrete foundation shall be disposed in accordance with this Bid Item. Except for concrete foundations, all removed sign panels, sign posts, and hardware shall remain then property of the county. All removed sign installations shall be completely disassembled. All salvageable sections of sign panels shall be recycled and remain property of the county. The removed sign material will be required to be hauled to the maintenance yard closest to the project. No signs shall be removed without prior approval.

ITEM 658, Delineator and Object Marker Assemblies

Delineator assemblies shall be installed 8 feet from the edge of the shoulder unless restricted by some obstruction, in which case, the delineator assembly shall be placed between 2 and 8 feet from the edge of the shoulder.

Bi-directional object markers shall be in accordance with the D&OM standard sheets. The contractor is directed to the standards when instructed where and how to install the object markers.

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ITEMS 662 and 666: Work Zone Pavement Markings and Retroreflectorized Pavement Markings

All permanent pavement markings and work zone pavement markings for this project under these Items shall be 0.100 inches (100 mil) thick thermoplastic.

Any permanent pavement markings or non-removal work zone pavement markings lacking reflectivity in accordance with test method Tex 828-B, or that fail to meet minimum retro reflectivity requirements for longitudinal pavement markings when required, will not be paid. The roadway will be re-striped at no additional compensation.

Pavement surface preparation for markings and markers will not be paid for directly, but shall be considered subsidiary to Item 666.

Prior to any striping operations, an on-site coordination meeting between all the parties involved will be required to review striping details and requirements to ensure quality work.

The beads used on this project shall meet the requirements of Departmental Materials Specification DMS-8290. Glass Traffic Beads Texas Type II & III. Use a 50% Type II/ 50% Type III mix utilizing a double drop system with Type III beads dropped first.

For expressway projects, provide channelizing devices at the ramp connections when temporary pavement marking tabs are placed. These channelizing devices will be subsidiary to item 502.

ITEM 677: Eliminating Existing Pavement Markings and Markers

Asphalt and aggregate types and grades shall be as approved in writing when a surface treatment is used to eliminate existing pavement markings.

ITEM 680, Installation of Highway Traffic Signals

The installation of highway traffic signals shall consist of the following principal Items:

1. Conduit
2. Pull boxes
3. Loop Detectors
4. Traffic Signal cable
5. Connections of new loop detectors to existing controller cabinet, in accordance with the phasing diagram in the plans
6. Ensure traffic signal is operating properly with new Alamo Rd approach, north of FM 1925

Any deviation of location for proposed signal work shall be as approved.

Existing utilities

The exact location of existing underground utilities shall be verified with the utility companies prior to construction to avoid conflict with or damage to these utilities.

The coordination with the utility companies will be required to make any adjustments, due to utility conflicts, as defined in the specifications or deemed necessary..

Uniformity in equipment

1. All loop detector amplifiers furnished shall be by the same manufacturer and of the same type.

Handling of traffic

Roads and streets shall be kept open to traffic at all times. The setting of loop detectors shall be arranged so as to close only one lane of a roadway at a time. The installation of signal heads, poles and conduit shall also be arranged so as to permit the continuous movement of traffic in both directions at all times.

All construction operations shall be conducted to provide the least possible interference to traffic as shown on the plans, as provided for in the specifications and/or as directed. All signing, barricading and handling of traffic shall conform to the current edition of the "Texas Manual on Uniform Traffic Control Devices".

Sequence of work

1. The existing traffic signal installations and/or flashing beacon installations shall remain in operation at all times during construction of the proposed traffic signal and/or flashing beacon installations or modifications.
2. Final inspection shall be performed in conjunction with the district signal shop.

ITEM 684: Traffic Signal Cables

All signal cable shall be #12 AWG; 2/c loop. Lead-In shall be #14 AWG shielded and loop wires in pavement.

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ITEM 688: Pedestrian Detectors and Vehicle Loop Detectors

Any deviation of location for proposed loop detector work shall be as approved.

Install loop vehicle detectors in accordance with plan Standard Sheet LD1-03 (Loop Detector Installation Details). All loop detectors shall be rectangular.

Splices for loop wire will be permitted only at ground boxes or pole base with approved weather-proof splice kits.

A minimum length of 2 feet for each cable shall be left in each ground box.

All wiring not covered by the plans and specifications shall be in accordance with the latest edition of the National Electrical Code.

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GENERAL NOTES AND SPECIFICATIONS DATA:

USE A POWER-BROOM WHEN CLEANING THE ROADWAY AS NEEDED.

REMOVE & DISPOSE ALL MATERIAL NOT DEEMED SALVAGEABLE BY THE ENGINEER, UNLESS OTHERWISE SHOWN ON THE PLANS.

ON EXISTING PAVEMENT THAT WILL REMAIN IN PLACE, SAND BLAST OR SURFACE TREAT IN ORDER TO REMOVE EXISTING STRIPING.

DO NOT BLOCK DRAINAGE WHEN HANDLING & STOCKPILING EXCAVATED MATERIAL.

MAINTAIN ACCESS TO DRIVEWAYS AND INTERSECTIONS THROUGH ALL PHASES OF CONSTRUCTION.

MAINTAIN POSITIVE DRAINAGE DURING ALL PHASES OF CONSTRUCTION.

TRAFFIC CONTROL DEVICES:

AT THE COMMENCEMENT OF THE PROJECT, ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCEPTABLE CONDITION, AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AS PER GUIDELINES FOR TEMPORARY TRAFFIC CONTROL DEVICES AND FEATURES.

NOTIFY THE PROJECT ENGINEER (PE) IN WRITING (E-MAIL IS ACCEPTABLE) ONCE THE TRAFFIC CONTROL PLAN(TCP) AND ALL TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED AS PER PLANS ON THE PROJECT SO THAT THE LOCAL GOVERNMENT RESPONSIBLE PERSON ACCOMPANIED BY THE CONTRACTOR'S RESPONSIBLE PERSON CAN CONDUCT A NIGHT INSPECTION ON THE SAID TCP AND TRAFFIC CONTROL DEVICES. COMMENCEMENT OF WORK WILL NOT BE AUTHORIZED NOR ALLOWED UNTIL THE PE NOTIFIES THE CONTRACTOR IN WRITING(E-MAIL IS ACCEPTABLE) TO PROCEED WITH THE WORK.

CONTRACTOR SHALL HAVE A SUFFICIENT AMOUNT OF TRAFFIC CONTROL DEVICES IN ACCEPTABLE CONDITION TO REPLACE ANY DAMAGED TRAFFIC CONTROL DEVICE WITHIN 24 HOURS OF NOTIFICATION.

PROVIDE ADDITIONAL SIGNS AND BARRICADES AS NECESSARY TO ADDRESS FIELD CONSTRUCTIBILITY & VISIBILITY. THESE ADDITIONAL SIGNS WILL BE CONSIDERED SUBSIDIARY TO ITEM 502.

REMOVE OR COMPLETELY COVER ALL EXISTING SIGNS WHICH ARE IN CONFLICT WITH THE TRAFFIC CONTROL PLAN.

ADJUST STOP SIGNS AS NEEDED ON INTERSECTING STREETS DURING THE VARIOUS CONSTRUCTION PHASES. DO NOT REMOVE ANY EXISTING STOP SIGNS UNTIL TEMPORARY SIGNS ARE IN PLACE.

COORDINATE THE TRAFFIC CONTROL PLAN AND THE VARIOUS SEQUENCES OF CONSTRUCTION WITH ADJACENT CONSTRUCTION PROJECTS IF APPLICABLE, TO ENSURE THE UNINTERRUPTED AND SAFE FLOW OF TRAFFIC.

NOTIFY THE ENGINEER IN WRITING WHEN MAJOR TRAFFIC CHANGES ARE TO BE MADE. NOTIFICATIONS MUST BE GIVEN A MINIMUM OF THREE WORKING DAYS PRIOR TO THE CHANGE.

ALL WORK ZONE PAVEMENT MARKINGS FOR THIS PROJECT SHALL BE 0.100 INCHES (100 MIL) THICK THERMOPLASTIC.

SAFETY:

PROTECT EXPOSED PITS THAT MUST REMAIN OPEN DURING NON-WORKING HOURS AS PER OSHA REQUIREMENTS.

PROJECT SPECIFIC NOTES:

1. TRAFFIC CONTROL PLAN STANDARDS TO GOVERN FLAGGING OPERATIONS.

TRAFFIC CONTROL PLAN NOTES

SHEET 1 OF 1 SHEETS

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED
PROFESSIONAL ENGINEER
08/16/2017

PHARR DISTRICT STANDARD

Texas Department of Transportation

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PHASE I

INSTALL PROJECT LIMIT AND ADVANCE WARNING SIGNS AND INSTALL CROSSROAD BARRICADES/SIGNS, AS SHOWN ON THE TRAFFIC CONTROL PLANS (TCP), IN ACCORDANCE WITH THE LATEST (TMUTCD) AND/OR AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE ERECTED AND PLACED PRIOR TO COMMENCING ANY PROPOSED ROADWAY CONSTRUCTION AND SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT AND UNTIL COMPLETION AND ACCEPTANCE OF THE PROJECT BY THE COUNTY.

BEGIN AND COMPLETE CONSTRUCTION OF THE CROSS CULVERT AT STATION 140+18.50, THE PROPOSED STORM DRAINAGE TRUNK LINE, AND THE STORM DRAINAGE LATERAL PRIOR TO ANY ROADWAY CONSTRUCTION. INSTALL EROSION CONTROL LOGS AND ANY OTHER REQUIRED EROSION/SEDIMENTATION CONTROL DEVICES AS SHOWN ON THE SW3P LAYOUTS AND STANDARDS AS THEY PERTAIN TO PHASE ICONSTRUCTION.

PHASE II

SWITCH, INSTALL, AND REMOVE ANY NECESSARY SIGNS, BARRICADES, CHANNELIZING DEVICES AND WORK ZONE PAVEMENT MARKINGS AS SHOWN FOR THIS PHASE OF THE TCP.

CONSTRUCT THE PROPOSED REALIGN ALAMO ROADWAY FROM STATION 114+55.00 TO STATION 140+32.00, INCLUDING THE ONE COURSE SURFACE TREATMENT AND FINAL ACP COURSE AS SHOWN ON THE TCP LAYOUTS AND AS PER THE CONSTRUCTION DESIGN PLANS AND SPECIFICATIONS.

CONSTRUCT THE EAST HALF OF THE ALAMO ROADWAY FROM STATION 140+32.00 TO STATION 143+16.33, INCLUDING THE ONE COURSE SURFACE TREATMENT AND FINAL ACP COURSE WITH THE USE OF FLAGGERS AS SHOWN ON THE TCP LAYOUTS, CONSTRUCTION DESIGN PLANS AND SPECIFICATIONS, AND WORK ZONE STANDARDS. INSTALL ALL APPROPRIATE TEMPORARY EROSION CONTROL PROTECTION.

THE CONTRACTOR SHALL REOPEN THE EXISTING ROADWAY FULLY WITH AN ALL WEATHER ROADWAY OR BETTER AND MAINTAIN BI-DIRECTIONAL TRAFFIC FLOW AFTER WORK HOURS DURING THE CONSTRUCTION OF ALAMO ROAD BETWEEN STATION 140+32.00 TO STATION 143+16.33.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE DURING CONSTRUCTION.

PHASE III

SWITCH, INSTALL, AND REMOVE ANY NECESSARY SIGNS, BARRICADES, CHANNELIZING DEVICES AND WORK ZONE PAVEMENT MARKINGS AS SHOWN FOR THIS PHASE OF THE TCP.

INSTALL FINAL PAVEMENT MARKINGS AND GUIDE MARKERS. TRANSITION TRAFFIC TO THE NEWLY CONSTRUCTED ALAMO ROADWAY AS SHOWN ON THE TCP LAYOUTS WITH THE USE OF FLAGGERS.

CONSTRUCT THE WEST HALF OF THE ALAMO ROADWAY FROM STATION 140+32.00 TO STATION 143+16.33, INCLUDING THE ONE COURSE SURFACE TREATMENT AND FINAL ACP COURSE AS PER THE CONSTRUCTION DESIGN PLANS AND SPECIFICATIONS. INSTALL ALL APPROPRIATE TEMPORARY EROSION CONTROL PROTECTION.

THE CONTRACTOR SHALL REOPEN THE EXISTING ROADWAY FULLY WITH AN ALL WEATHER ROADWAY OR BETTER AND MAINTAIN BI-DIRECTIONAL TRAFFIC FLOW AFTER WORK HOURS DURING THE CONSTRUCTION OF ALAMO ROAD BETWEEN STATION 140+32.00 TO STATION 143+16.33.

PHASE IV

INSTALL FINAL SIGNING

OPEN ROADWAYS TO FULL TRAFFIC AND REMOVE ALL TCP BARRICADES, SIGNS, CHANNELIZING DEVICES, PAVEMENT MARKINGS AND EROSION/ SEDIMENTATION CONTROL DEVICES AFTER APPROVAL AND ACCEPTANCE OF THE PROJECT BY TXDOT.

L&G Engineering

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Structural / Bridge
Environmental
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ALAMO RD.
TRAFFIC CONTROL PLAN
SEQUENCE OF CONSTRUCTION

FED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						12
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311	ALAMO

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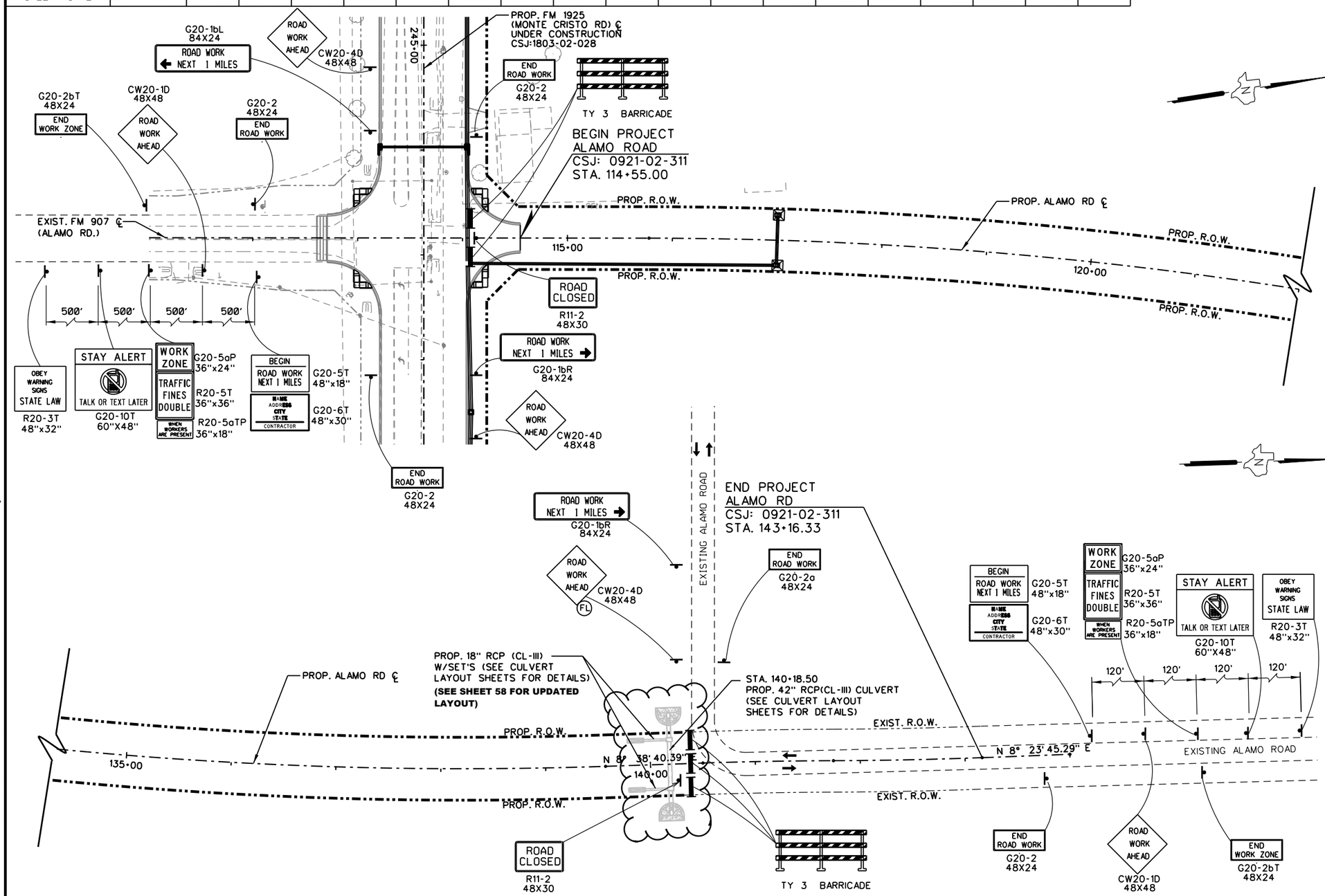
SHEET SUMMARY

	ITEM 508	PAVEMENT MARKINGS - ITEM 662												ITEM 677					
		NON-REMOVABLE				REMOVABLE				REFLECTORS		SHORT TERM (TAB)		ELIMINATING EXISTING PAVEMENT MARKINGS					
STATION LIMITS	CONSTRUCTING DETOURS (SY)	4"WHITE BROKEN (LF)	4"WHITE SOLID (LF)	4"YELLOW BROKEN (LF)	4"YELLOW SOLID (LF)	4"WHITE (DOT) (LF)	4"WHITE SOLID (LF)	4"YELLOW (DOT) (LF)	4"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	TY W (EA)	TY Y-2 (EA)	4"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
.																			
.																			
SHEET TOTAL																			

LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
A	WORK ZONE PVMT MARK (NON-REM) 4" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 4" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 4" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 4" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 4" (DOT)
E E	WORK ZONE PVMT MARK (REM) 4" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 4" YELLOW (DOT)
G	WORK ZONE PVMT MARK (NON-REM) 24" WHITE SOLID
H	WORK ZONE PVMT MARK (NON-REM) 8" WHITE SOLID
I	WORK ZONE PVMT MARK (REM) 8" WHITE (DOT)
J	WORK ZONE PVMT MARK (NON-REM) 4" WHITE BROKEN W/ TWO TY I-C PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
▬	TYPE III BARRICADE
●, ■	CHANNELIZING DEVICE
▬	CONSTRUCTION SIGN



STATE OF TEXAS
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08/16/2017

P4

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ALAMO ROAD PHASE I TRAFFIC CONTROL PLAN

SCALE: 1"= 100' SHEET 1 OF 3

ED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						13
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311	ALAMO

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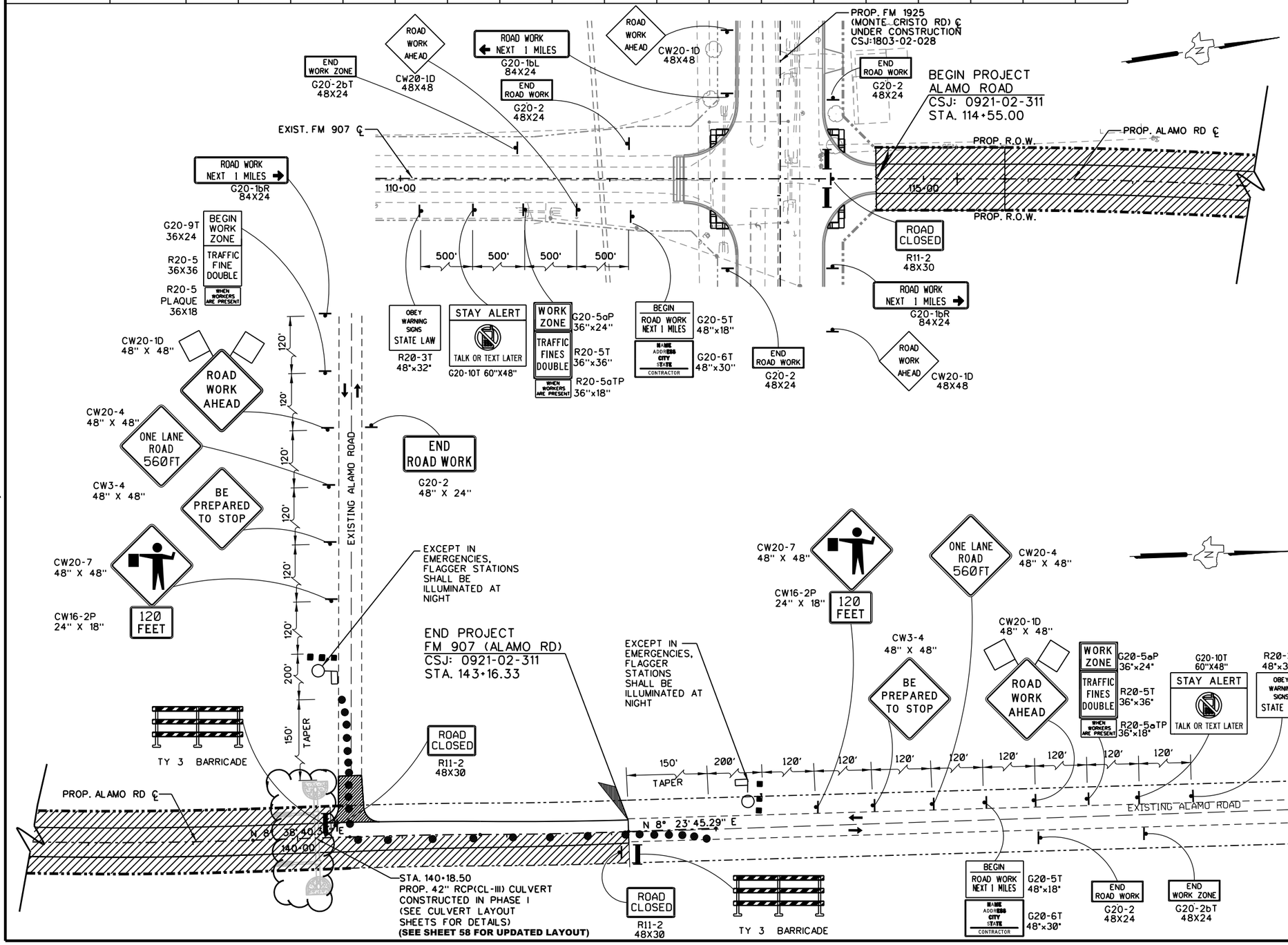
SHEET SUMMARY

	ITEM 508	PAVEMENT MARKINGS - ITEM 662												ITEM 677					
		NON-REMOVABLE				REMOVABLE				REFLECTORS		SHORT TERM (TAB)		ELIMINATING EXISTING PAVEMENT MARKINGS					
STATION LIMITS	CONSTRUCTING DETOURS (SY)	4"WHITE BROKEN (LF)	4"WHITE SOLID (LF)	4"YELLOW BROKEN (LF)	4"YELLOW SOLID (LF)	4"WHITE (DOT) (LF)	4"WHITE SOLID (LF)	4"YELLOW (DOT) (LF)	4"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	TY W (EA)	TY Y-2 (EA)	4"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
.																			
.																			
SHEET TOTAL																			

LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
A	WORK ZONE PVMT MARK (NON-REM) 4" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 4" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 4" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 4" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 4" (DOT)
E E	WORK ZONE PVMT MARK (REM) 4" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 4" YELLOW (DOT)
G	WORK ZONE PVMT MARK (NON-REM) 24" WHITE SOLID
H	WORK ZONE PVMT MARK (NON-REM) 8" WHITE SOLID
I	WORK ZONE PVMT MARK (REM) 8" WHITE (DOT)
J	WORK ZONE PVMT MARK (NON-REM) 4" WHITE BROKEN W/ TWO TY I-C PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE III BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN



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ALAMO ROAD PHASE II TRAFFIC CONTROL PLAN

SCALE: 1"= 100' SHEET 2 OF 3

ED.RD. DIV.NO.	STATE AID PROJECT NO.			FILE NO.			SHEET NO.
6							14
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB		HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311		ALAMO

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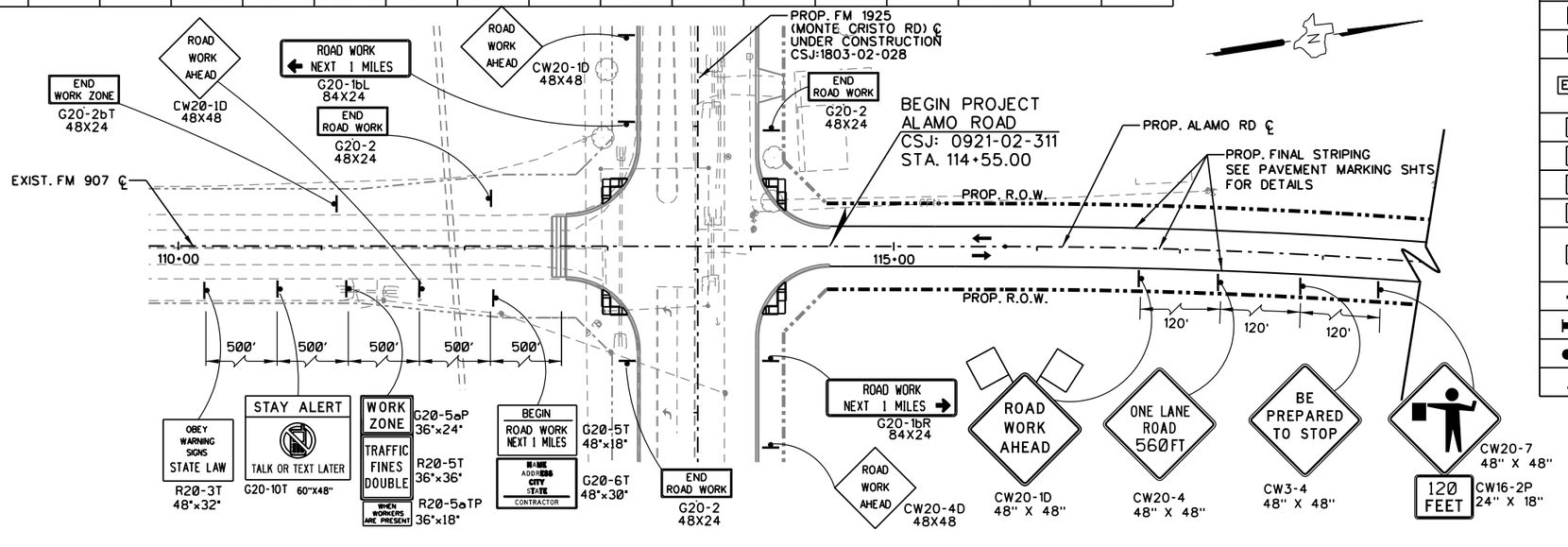
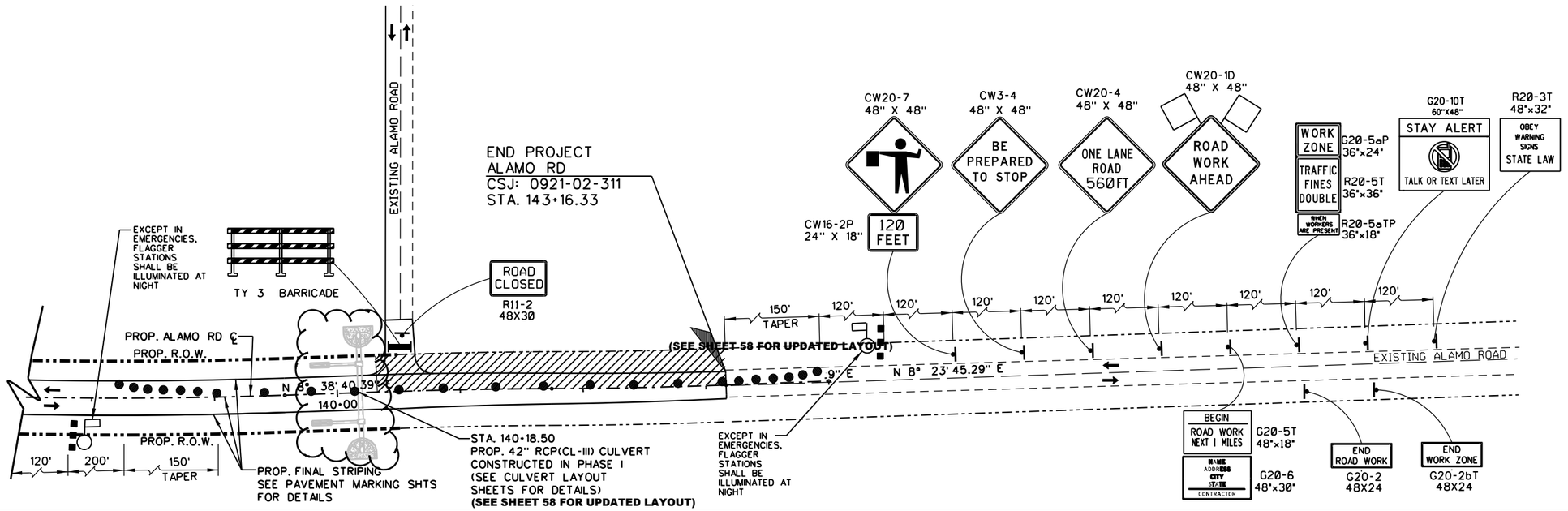
SHEET SUMMARY

	ITEM 508	PAVEMENT MARKINGS - ITEM 662												ITEM 677					
		NON-REMOVABLE				REMOVABLE				REFLECTORS		SHORT TERM (TAB)		ELIMINATING EXISTING PAVEMENT MARKINGS					
STATION LIMITS	CONSTRUCTING DETOURS (SY)	4"WHITE BROKEN (LF)	4"WHITE SOLID (LF)	4"YELLOW BROKEN (LF)	4"YELLOW SOLID (LF)	4"WHITE (DOT) (LF)	4"WHITE SOLID (LF)	4"YELLOW (DOT) (LF)	4"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	TY W (EA)	TY Y-2 (EA)	4"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
.																			
.																			
SHEET TOTAL																			

LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
A	WORK ZONE PVMT MARK (NON-REM) 4" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 4" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 4" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 4" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 4" (DOT)
E E	WORK ZONE PVMT MARK (REM) 4" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 4" YELLOW (DOT)
G	WORK ZONE PVMT MARK (NON-REM) 24" WHITE SOLID
H	WORK ZONE PVMT MARK (NON-REM) 8" WHITE SOLID
I	WORK ZONE PVMT MARK (REM) 8" WHITE (DOT)
J	WORK ZONE PVMT MARK (NON-REM) 4" WHITE BROKEN W/ TWO TY I-C PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE III BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN





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ALAMO ROAD PHASE III TRAFFIC CONTROL PLAN

SCALE: 1"= 100' SHEET 3 OF 3

ED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						15
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311	ALAMO

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BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).

2. The development and design of the Traffic Control Plan (TCP) is the responsibility of the Engineer.

3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.

4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.

5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.

6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.

7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.

8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.

9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.

10. As shown on BC(2), the OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER (see Sign Detail G20-10T) and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. However, the TRAFFIC FINES DOUBLE sign will not be required on projects consisting solely of mobile operation work, such as striping or milling edgeline rumble strips. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits.

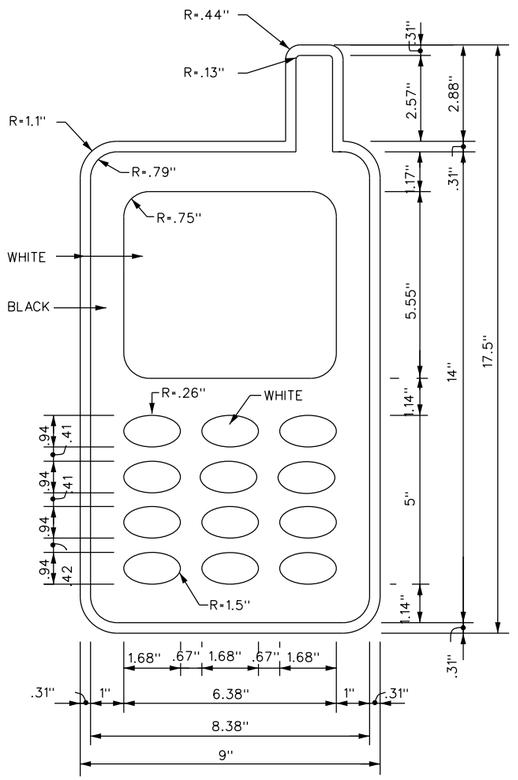
11. Except for devices required by Note 10, traffic control devices should be in place only while work is actually in progress or a definite need exists.

12. The Engineer has the final decision on the location of all traffic control devices.

13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY APPAREL NOTES:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.



SIGN DETAIL (G20-10T)

3.0" Radius, 1.25" Border, 0.75" Indent, Black on Yellow;
[STAY ALERT] Font: D
3.0" Radius, 1.25" Border, 0.75" Indent, Black on Orange;
[TALK OR TEXT LATER] Font: C specified length;

Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be found on-line at the web address given below or by contacting:

Texas Department of Transportation
Traffic Operations Division - TE
Phone (512) 416-3118

THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT http://www.txdot.gov
COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD)
DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS)
MATERIAL PRODUCER LIST (MPL)
ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)"
STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD)
TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)
TRAFFIC ENGINEERING STANDARD SHEETS

Texas Department of Transportation — Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-14

FILE: bc-14.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
4-03 5-10 8-14	DIST	COUNTY		SHEET NO.
9-07 7-13	PHR	HIDALGO		16

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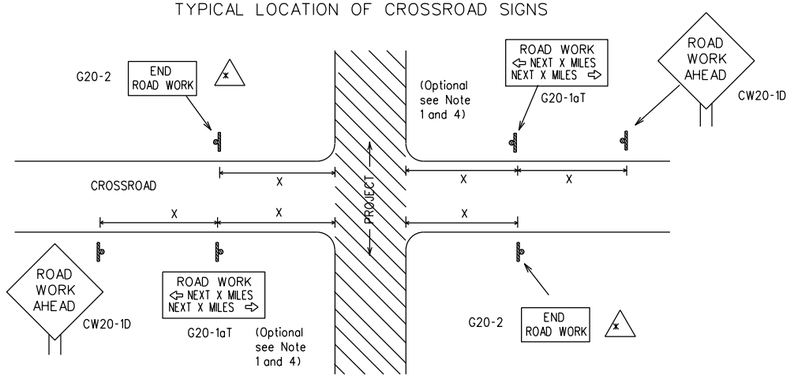
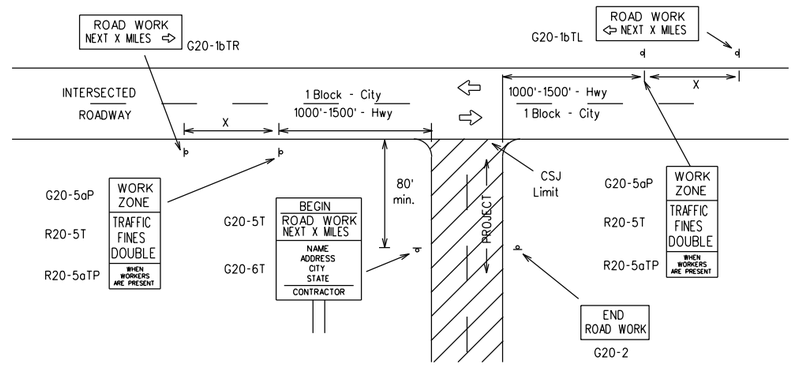
TYPICAL LOCATION OF CROSSROAD SIGNS



(x) May be mounted on back of "ROAD WORK AHEAD"(CW20-1D) sign with approval of Engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D)sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK"(G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The "ROAD WORK NEXT X MILES"(G20-1aT)sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection the Contractor shall place the "CONTRACTOR NAME"(G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow(G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR)" signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING

1,5,6

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20[4] CW21 CW22 CW23 CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

Posted Speed	Sign Spacing "X" Δ
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500 [2]
60	600 [2]
65	700 [2]
70	800 [2]
75	900 [2]
80	1000 [2]
*	* [3]

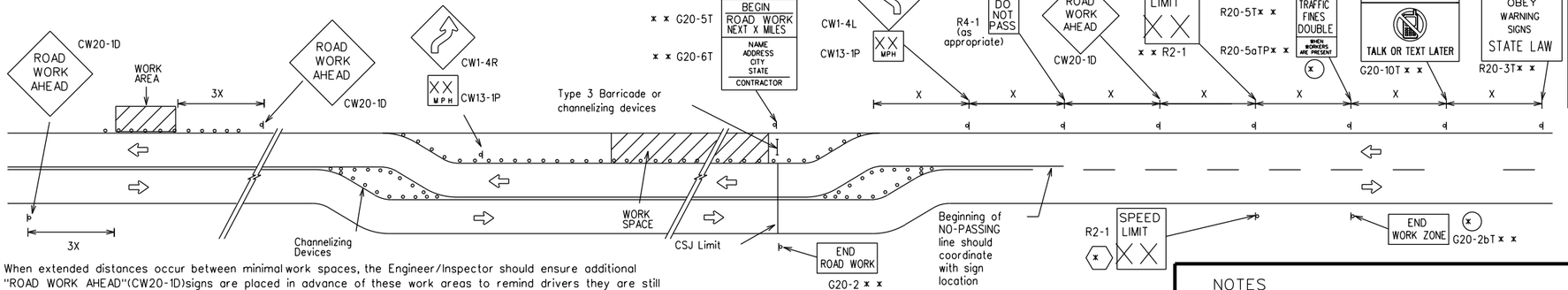
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

Δ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D)signs may be used on low volume crossroads at the discretion of the Engineer. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

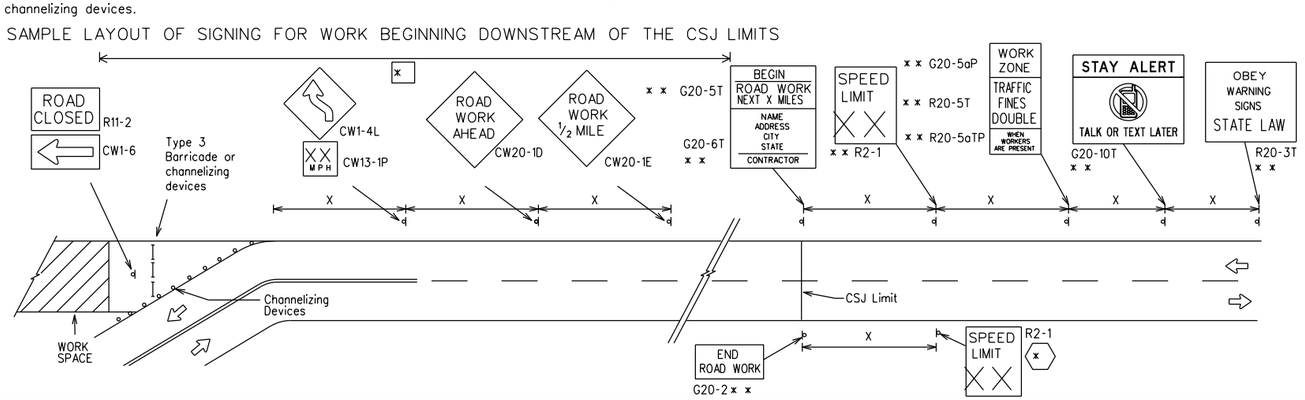
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD"(CW20-1D)signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES"(G20-5T)sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

(x) The "BEGIN WORK ZONE"(G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.

x x Required CSJ Limit signing. See Note 10 on BC(1). TRAFFIC FINES DOUBLE signs will not be required on projects consisting solely of mobile operations work.

[x] Area for placement of "ROAD WORK AHEAD" (CW20-1D)sign and other signs or devices as called for on the Traffic Control Plan.

(x) Contractor will install a regulatory speed limit sign at the end of the work zone.

LEGEND	
⊢⊣	Type 3 Barricade
O O O	Channelizing Devices
▬	Sign
X	See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.

SHEET 2 OF 12

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-14

FILE: bc-14.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13	PHR	HIDALGO		17

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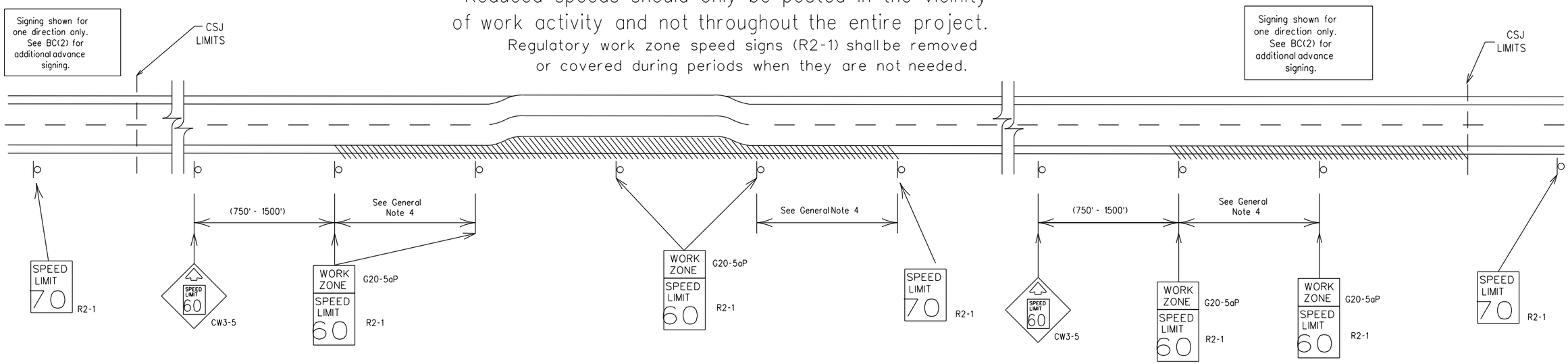
TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Zones," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project.
Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

a) rough road or damaged pavement surface
b) substantial alteration of roadway geometrics (diversions)
c) construction detours
d) grade
e) width
f) other conditions readily apparent to the driver

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 10 feet of the traveled way or actually in the travelled way.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered.
(See Removing or Covering on BC(4)).

GENERAL NOTES

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. Frequency of work zone speed limit signs should be:
   40 mph and greater 0.2 to 2 miles
   35 mph and less 0.2 to 1 mile
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. Fabrication, erection and maintenance of the "ADVANCE SPEED LIMIT" (CW3-5) sign, "WORK ZONE" (G20-5aP) plaque and the "SPEED LIMIT" (R2-1) signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
7. Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
8. Techniques that may help reduce traffic speeds include but are not limited to:
   A. Law enforcement.
   B. Flagger stationed next to sign.
   C. Portable changeable message sign (PCMS).
   D. Low-power (drone) radar transmitter.
   E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only.
   Work Zone Speed Limits should only be posted as approved for each project.
10. For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT form *1204 in the TxDOT e-form system.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

BC(3)-14

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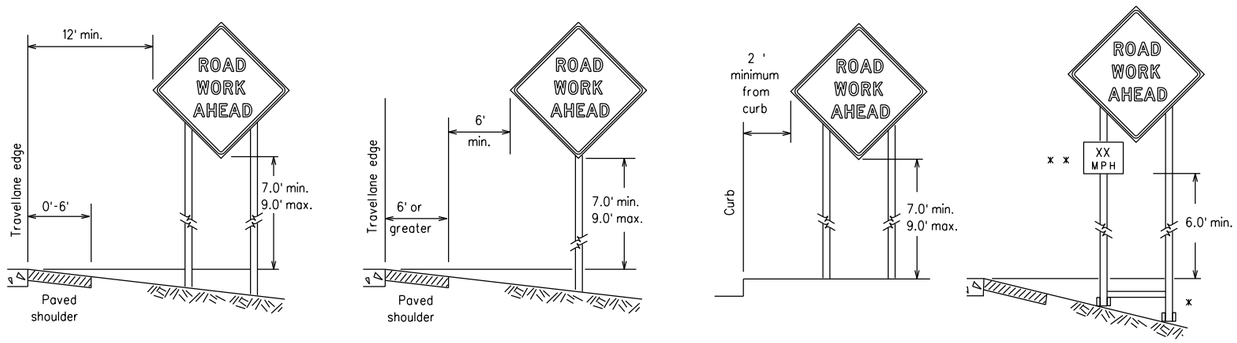
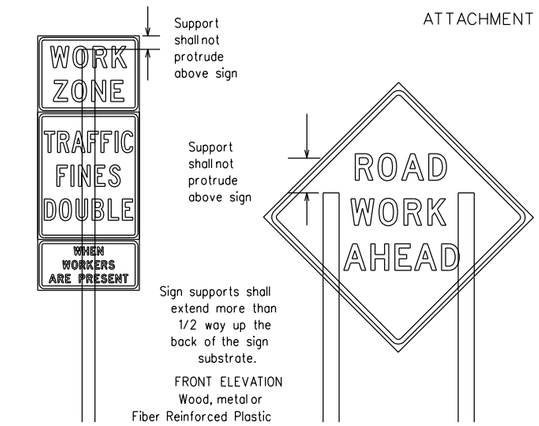
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



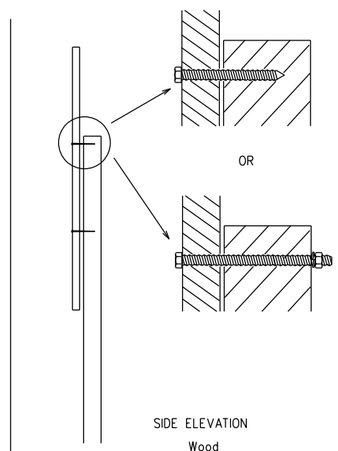
x When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

x x When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS



Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the spice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

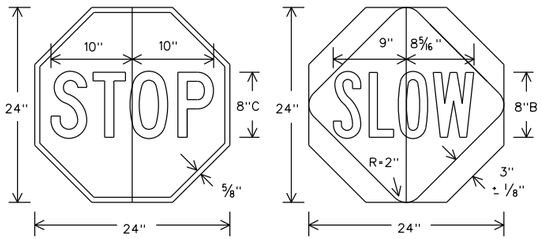


Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24" as detailed below.
2. When used at night, the STOP/SLOW paddle shall be retroreflectorized.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC sheets or the CWZTCD. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
5. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
6. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD). The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
7. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
8. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
9. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
   a. Long-term stationary - work that occupies a location more than 3 days.
   b. Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
   c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration - work that occupies a location up to 1 hour.
   e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

1. The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type B or Type C_L, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

FLAGS ON SIGNS

1. Flags may be used to draw attention to warning signs. When used the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-14

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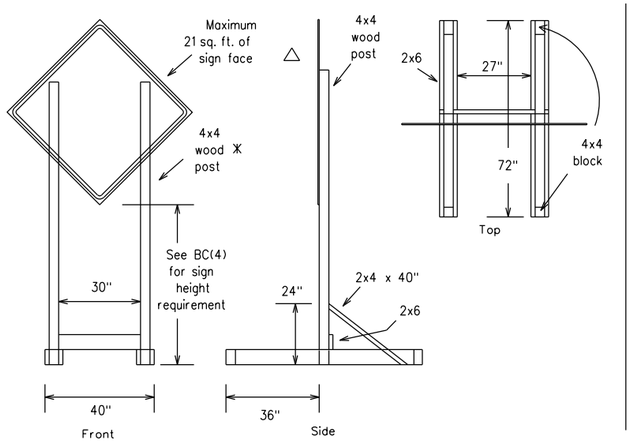
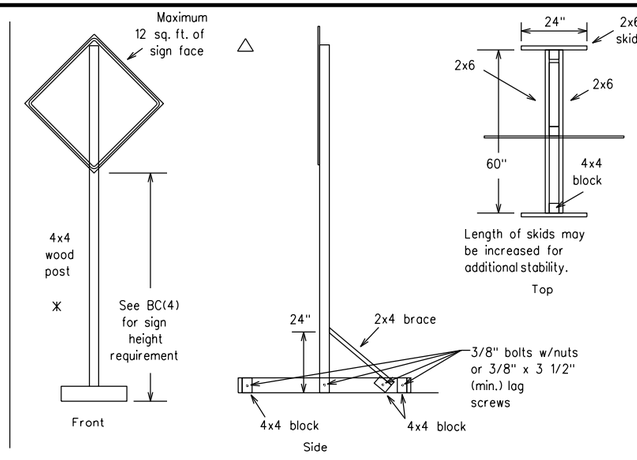
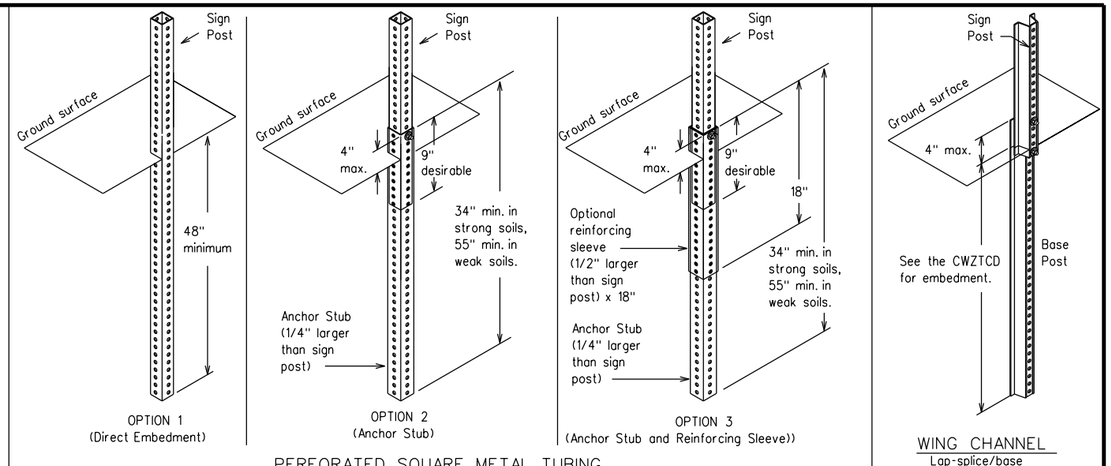




SKID MOUNTED WOOD SIGN SUPPORTS

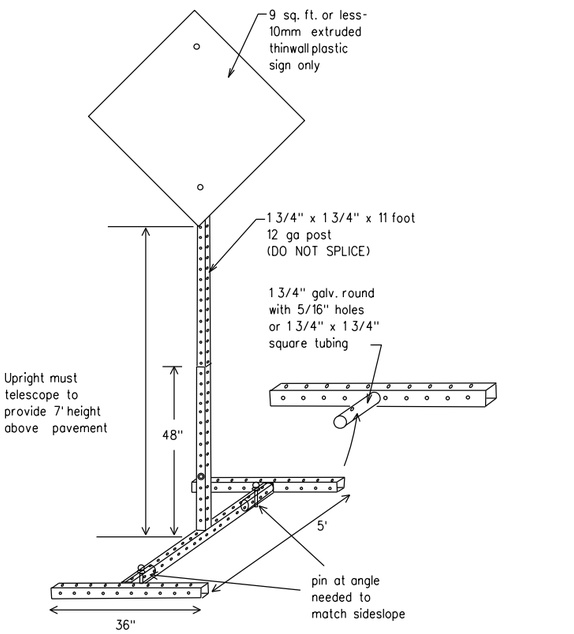
LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS □

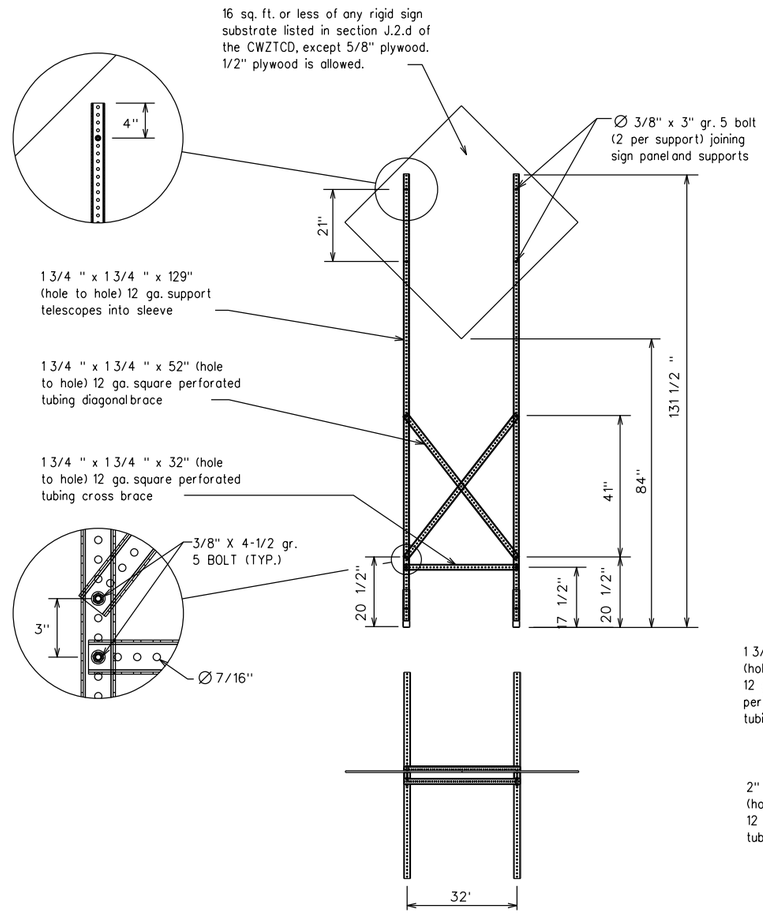


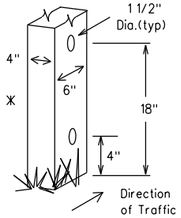
PERFORATED SQUARE METAL TUBING

GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support.
The maximum sign square footage shall adhere to the manufacturer's recommendation.
Two post installations can be used for larger signs.

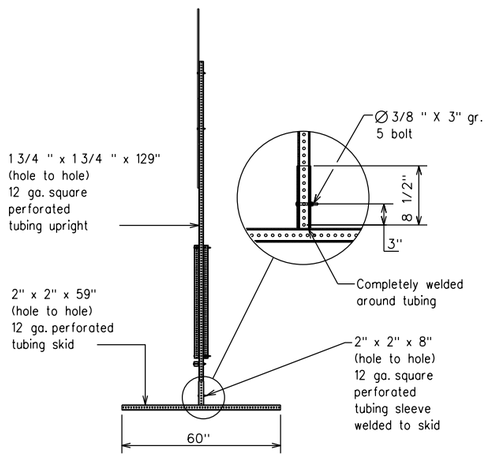






Nominal Post Size	Number of Posts	Maximum Sq. feet of Sign Face	Minimum Soil Embedment	Drilled Hole(s) Required
4 x 4	1	12	36"	NO
4 x 4	2	21	36"	NO
4 x 6	1	21	36"	YES
4 x 6	2	36	36"	YES

WOOD POST SYSTEM FOR GROUND MOUNTED SIGN SUPPORTS



WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).

OTHER DESIGNS

MORE DETAILS OF APPROVED LONG/INTERMEDIATE AND SHORT TERM SUPPORTS CAN BE FOUND ON THE CWZTCD LIST. SEE BC(1) FOR WEBSITE LOCATION.

GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
2. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
3. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

□ See BC(4) for definition of "Work Duration."

* Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.

△ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-14

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WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated, unless shown in the TMUTCD.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 600 feet at night and 800 feet in daylight. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

WORD OR PHRASE	ABBREVIATION
Access Road	ACCS RD
Alternate	ALT
Avenue	AVE
Best Route	BEST RTE
Boulevard	BLVD
Bridge	BRDG
Cannot	CANT
Center	CTR
Construction Ahead	CONST AHD
CROSSING	XING
Detour Route	DETOUR RTE
Do Not	DONT
East	E
Eastbound	(route) E
Emergency	EMER
Emergency Vehicle	EMER VEH
Entrance, Enter	ENT
Express Lane	EXP LN
Expressway	EXPWY
XXXX Feet	XXXX FT
Fog Ahead	FOG AHD
Freeway	FRWY, FWY
Freeway Blocked	FWY BLKD
Friday	FRI
Hazardous Driving	HAZ DRIVING
Hazardous Material	HAZMAT
High-Occupancy	HOV
Vehicle Highway	HWY
Hour(s)	HR, HRS
Information	INFO
It Is	ITS
Junction	JCT
Left	LFT
Left Lane	LFT LN
Lane Closed	LN CLOSED
Lower Level	LWR LEVEL
Maintenance	MAINT

WORD OR PHRASE	ABBREVIATION
Major	MAJ
Miles	MI
Miles Per Hour	MPH
Minor	MNR
Monday	MON
Normal	NORM
North	N
Northbound	(route) N
Parking	PKING
Road	RD
Right Lane	RT LN
Saturday	SAT
Service Road	SERV RD
Shoulder	SHLDR
Slippery	SLIP
South	S
Southbound	(route) S
Speed	SPD
Street	ST
Sunday	SUN
Telephone	PHONE
Temporary	TEMP
Thursday	THURS
To Downtown	TO DWNTN
Traffic	TRAF
Travelers	TRVLRS
Tuesday	TUES
Time Minutes	TIME MIN
Upper Level	UPR LEVEL
Vehicles (s)	VEH, VEHS
Warning	WARN
Wednesday	WED
Weight Limit	WT LIMIT
West	W
Westbound	(route) W
Wet Pavement	WET PVMT
Will Not	WONT

Roadway designation • IH-number, US-number, SH-number, FM-number

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

FREEWAY CLOSED X MILE	FRONTAGE ROAD CLOSED
ROAD CLOSED AT SH XXX	SHOULDER CLOSED XXX FT
ROAD CLSD AT FM XXXX	RIGHT LN CLOSED XXX FT
RIGHT X LANES CLOSED	RIGHT X LANES OPEN
CENTER LANE CLOSED	DAYTIME LANE CLOSURES
NIGHT LANE CLOSURES	I-XX SOUTH EXIT CLOSED
VARIOUS LANES CLOSED	EXIT XXX CLOSED X MILE
EXIT CLOSED	RIGHT LN TO BE CLOSED
MALL DRIVEWAY CLOSED	X LANES CLOSED TUE - FRI
XXXXXXXX BLVD CLOSED	

Other Condition List

ROADWORK XXX FT	ROAD REPAIRS XXXX FT
FLAGGER XXXX FT	LANE NARROWS XXXX FT
RIGHT LN NARROWS XXXX FT	TWO-WAY TRAFFIC XX MILE
MERGING TRAFFIC XXXX FT	CONST TRAFFIC XXX FT
LOOSE GRAVEL XXXX FT	UNEVEN LANES XXXX FT
DETOUR X MILE	ROUGH ROAD XXXX FT
ROADWORK PAST SH XXXX	ROADWORK NEXT FRI-SUN
BUMP XXXX FT	US XXX EXIT X MILES
TRAFFIC SIGNAL XXXX FT	LANES SHIFT *

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List

MERGE RIGHT	FORM X LINES RIGHT
DETOUR NEXT X EXITS	USE XXXXX RD EXIT
USE EXIT XXX	USE EXIT I-XX NORTH
STAY ON US XXX SOUTH	USE I-XX E TO I-XX N
TRUCKS USE US XXX N	WATCH FOR TRUCKS
WATCH FOR TRUCKS	EXPECT DELAYS
EXPECT DELAYS	PREPARE TO STOP
REDUCE SPEED XXX FT	END SHOULDER USE
USE OTHER ROUTES	WATCH FOR WORKERS
STAY IN LANE *	

Location List

AT FM XXXX
BEFORE RAILROAD CROSSING
NEXT X MILES
PAST US XXX EXIT
XXXXXXX TO XXXXXXX
US XXX TO FM XXXX

Warning List

SPEED LIMIT XX MPH
MAXIMUM SPEED XX MPH
MINIMUM SPEED XX MPH
ADVISORY SPEED XX MPH
RIGHT LANE EXIT
USE CAUTION
DRIVE SAFELY
DRIVE WITH CARE

** Advance Notice List

TUE-FRI XX AM- X PM
APR XX-XX X PM-X AM
BEGINS MONDAY
BEGINS MAY XX
MAY X-X XX PM - XX AM
NEXT FRI-SUN
XX AM TO XX PM
NEXT TUE AUG XX
TONIGHT XX PM- XX AM

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

** See Application Guidelines Note 6.

APPLICATION GUIDELINES

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limited to two phases, and should be understandable by themselves.
6. For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work.

WORDING ALTERNATIVES

1. The words RIGHT, LEFT and ALL can be interchanged as appropriate.
2. Roadway designations IH, US, SH, FM and LP can be interchanged as appropriate.
3. EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
4. Highway names and numbers replaced as appropriate.
5. ROAD, HIGHWAY and FREEWAY can be interchanged as needed.
6. AHEAD may be used instead of distances if necessary.
7. FT and MI, MILE and MILES interchanged as appropriate.
8. AT, BEFORE and PAST interchanged as needed.
9. Distances or AHEAD can be eliminated from the message if a location phase is used.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS, WHEN EXPOSED TO ONE DIRECTION OF TRAFFIC. WHEN EXPOSED TO TWO WAY TRAFFIC, THE FOUR DRUMS SHOULD BE PLACED WITH ONE DRUM AT EACH OF THE FOUR CORNERS OF THE UNIT.

FULL MATRIX PCMS SIGNS

1. When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
2. When symbol signs, such as the "Flagger Symbol"(CW20-7) are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
3. When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
4. A full matrix PCMS may be used to simulate a flashing arrow board provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

BC(6)-14

FILE: bc-14.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
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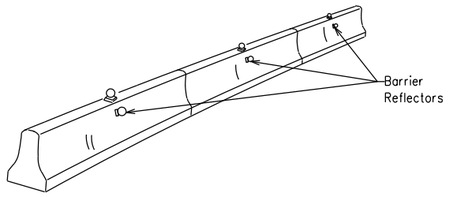
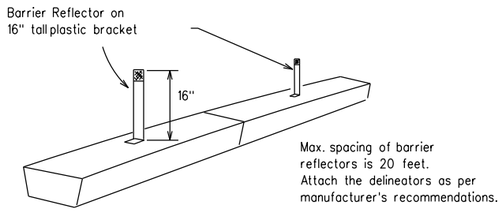
1. Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.

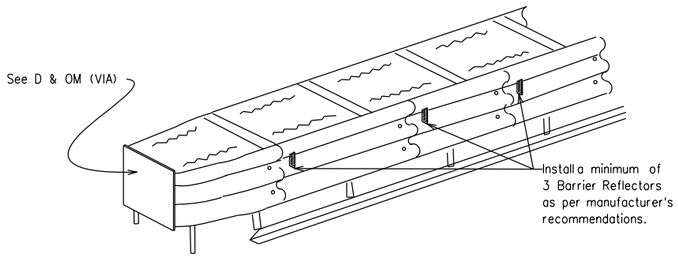


CONCRETE TRAFFIC BARRIER (CTB)

3. Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
4. Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional) while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
5. When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
6. Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
7. Maximum spacing of Barrier Reflectors is forty (40) feet.
8. Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
9. Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
10. Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
11. Single slope barriers shall be delineated as shown on the above detail.



LOW PROFILE CONCRETE BARRIER (LPCB)

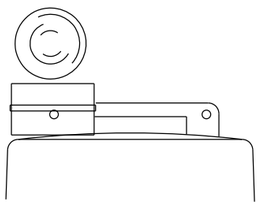


DELINEATION OF END TREATMENTS

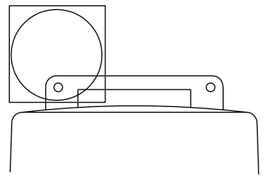
END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet crashworthy standards as defined in the National Cooperative Highway Research Report 350. Refer to the CWZTCD List for approved end treatments and manufacturers.

BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS



Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.



Warning reflector may be round or square. Must have a yellow reflective surface area of at least 30 square inches

WARNING LIGHTS

1. Warning lights shall meet the requirements of the TMUTCD.
2. Warning lights shall NOT be installed on barricades.
3. Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type B or C $_{FL}$ Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
4. Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
7. When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
8. The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

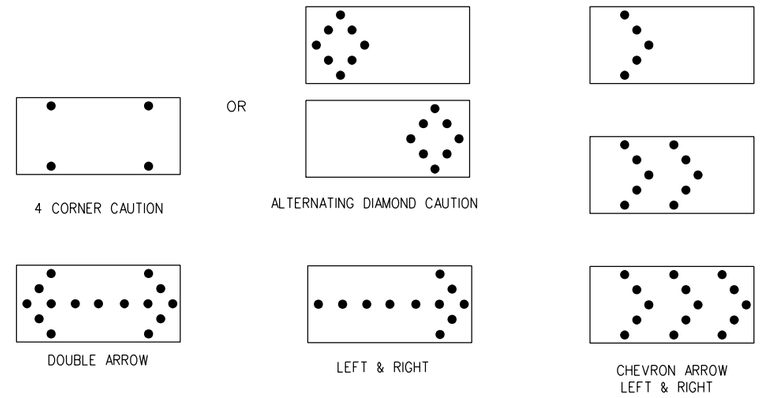
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
4. Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
5. Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
6. Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
7. The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

1. A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
2. The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
3. The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
4. Round reflectors shall be fully reflectorized, including the area where attached to the drum.
5. Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
6. The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type B or Type C.
7. When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
8. The warning reflector should be mounted on the side of the handle nearest approaching traffic.
9. The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

Arrow Boards may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

1. The Flashing Arrow Board should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
2. Flashing Arrow Boards should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
3. The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Board.
4. The Flashing Arrow Board should be able to display the following symbols:



5. The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
6. The straight line caution display is NOT ALLOWED.
7. The Flashing Arrow Board shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
8. Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
9. The sequential arrow display is NOT ALLOWED.
10. The flashing arrow display is the TxDOT standard; however, the sequential Chevron display may be used during daylight operations.
11. The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
12. A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
13. A full matrix PCMS may be used to simulate a Flashing Arrow Board provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
14. Minimum mounting height of trailer mounted Arrow Boards should be 7 feet from roadway to bottom of panel.

REQUIREMENTS			
TYPE	MINIMUM SIZE	MINIMUM NUMBER OF PANEL LAMPS	MINIMUM VISIBILITY DISTANCE
B	30 x 60	13	3/4 mile
C	48 x 96	15	1 mile

ATTENTION
Flashing Arrow Boards shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW BOARD FROM THE RIGHT-OF-WAY OR PLACE THE ARROW BOARD BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

FLASHING ARROW BOARDS

TRUCK-MOUNTED ATTENUATORS

1. Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the National Cooperative Highway Research Report No. 350 (NCHRP 350) or the Manual for Assessing Safety Hardware (MASH).
2. Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
3. Refer to the CWZTCD for a list of approved TMAs.
4. TMAs are required on freeways unless otherwise noted in the plans.
5. A TMA should be used anytime that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
6. The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR

BC(7)-14

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GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

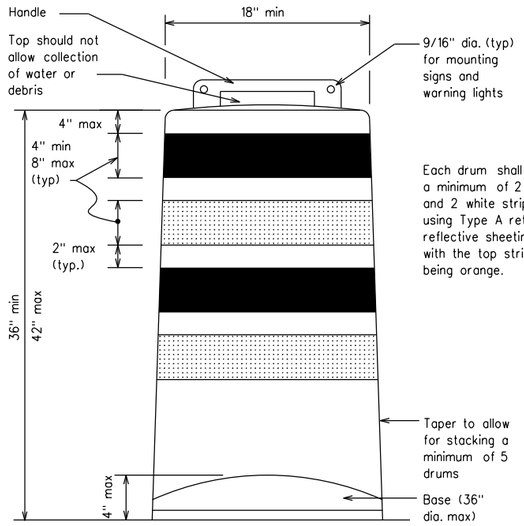
1. Plastic drums shall be a two-piece design: the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

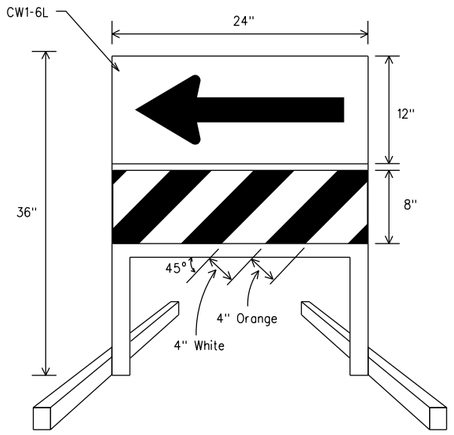
RETROREFLECTIVE SHEETING

1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

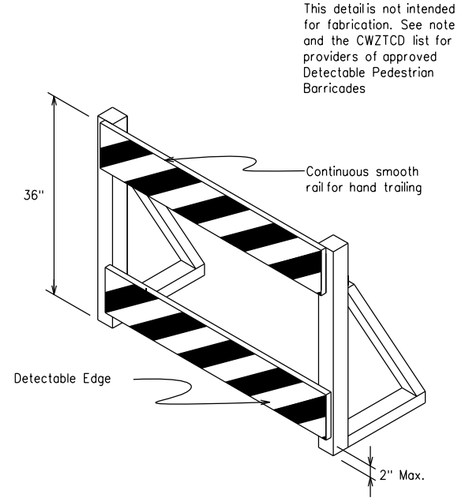
1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.





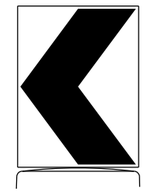
DIRECTION INDICATOR BARRICADE

1. The Direction Indicator Barricade may be used in tapers, transitions, and other areas where specific directional guidance to drivers is necessary.
2. If used, the Direction Indicator Barricade should be used in series to direct the driver through the transition and into the intended travel lane.
3. The Direction Indicator Barricade shall consist of One-Direction Large Arrow (CW1-6) sign in the size shown with a black arrow on a background of Type B or Type C Orange retroreflective sheeting above a rail with Type A retroreflective sheeting in alternating 4" white and orange stripes sloping downward at an angle of 45 degrees in the direction road users are to pass. Sheeting types shall be as per DMS 8300.
4. Double arrows on the Direction Indicator Barricade will not be allowed.
5. Approved manufacturers are shown on the CWZTCD List. Ballast shall be as approved by the manufacturers instructions.

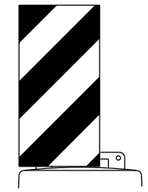


DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a device that is detectable by a person with a visual disability traveling with the aid of a long cane shall be placed across the full width of the closed sidewalk.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades may use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B or Type C Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-14

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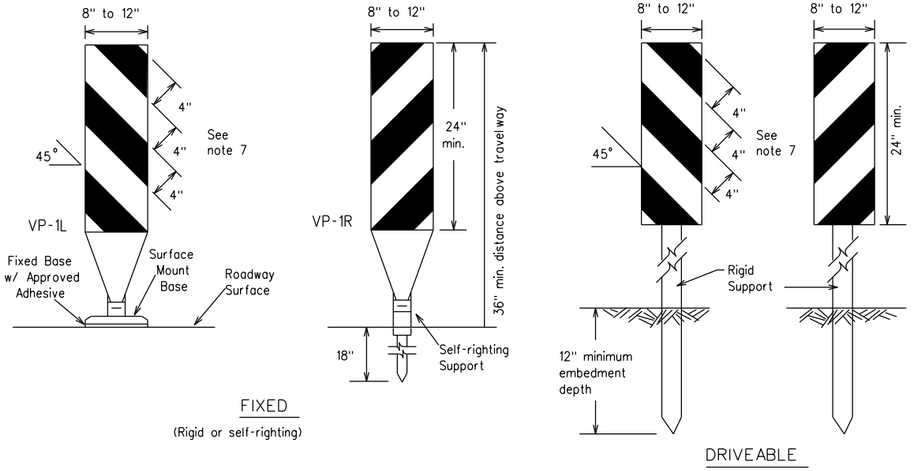
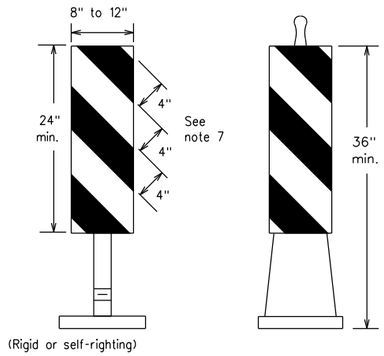


FIXED
(Rigid or self-righting)

DRIVEABLE

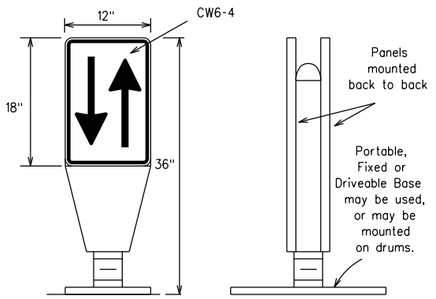


(Rigid or self-righting)

PORTABLE

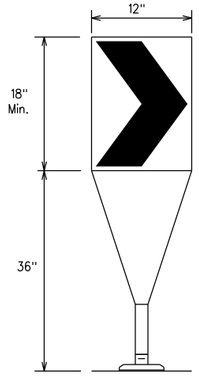
1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual Appendix B "Treatment of Pavement Drop-offs in Work Zones" for additional guidelines on the use of VP's for drop-offs.
3. VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
4. VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.

VERTICAL PANELS (VPs)



1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
2. The OTLD may be used in combination with 42" cones or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type B or Type C conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)



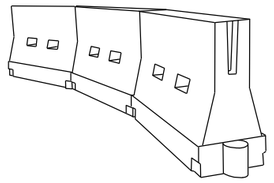
Fixed Base w/ Approved Adhesive
(Driveable Base, or Flexible Support can be used)

1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
3. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
4. To be effective, the chevron should be visible for at least 500 feet.
5. Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type B or Type C conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.
6. For Long Term Stationary use on tapers or transitions on freeways and divided highways self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

CHEVRONS

GENERAL NOTES

1. Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
3. Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
4. The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
6. Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
7. The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.



LONGITUDINAL CHANNELIZING DEVICES (LCD)

1. LCDs are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
2. LCDs may be used instead of a line of cones or drums.
3. LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
5. LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
6. LCDs used as barricades placed perpendicular to traffic should have at least one row of reflective sheeting meeting the requirements for barricade rails as shown on BC(10) placed near the top of the LCD along the full length of the device.

WATER BALLASTED SYSTEMS USED AS BARRIERS

1. Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate NCHRP 350 crashworthiness requirements based on roadway speed and barrier application.
2. Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
3. Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall not be less than 32 inches in height.

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS

Posted Speed *	Formula	Minimum Desirable Taper Lengths * * 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'
35		205'	225'	245'	35'	70'
40		265'	295'	320'	40'	80'
45	L=WS	450'	495'	540'	45'	90'
50		500'	550'	600'	50'	100'
55		550'	605'	660'	55'	110'
60		600'	660'	720'	60'	120'
65		650'	715'	780'	65'	130'
70		700'	770'	840'	70'	140'
75		750'	825'	900'	75'	150'
80		800'	880'	960'	80'	160'

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

SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS

Texas Department of Transportation
Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-14

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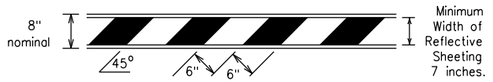
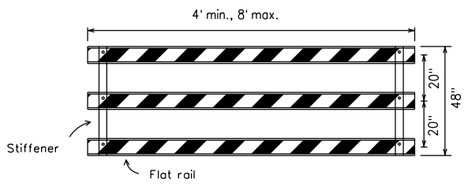
TYPE 3 BARRICADES

1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type 3 Barricades and a list of all materials used in the construction of Type 3 Barricades.
2. Type 3 Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.



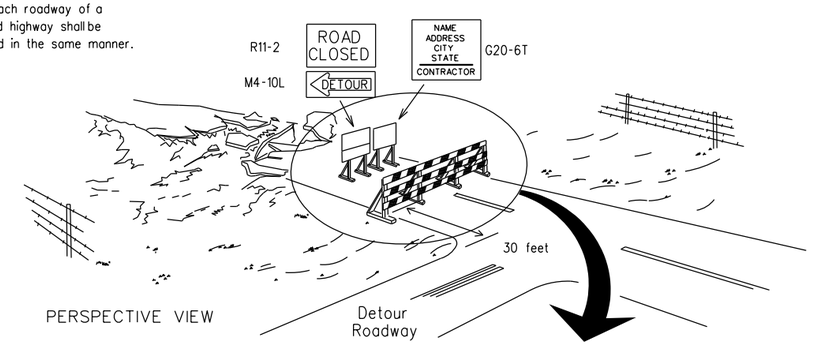
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

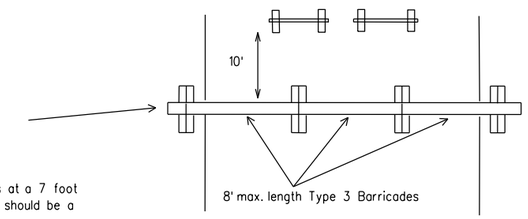
Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.

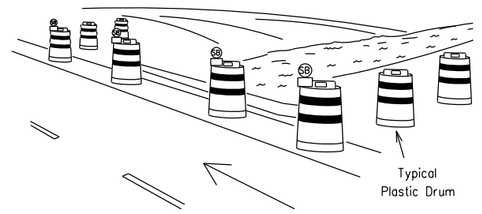
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

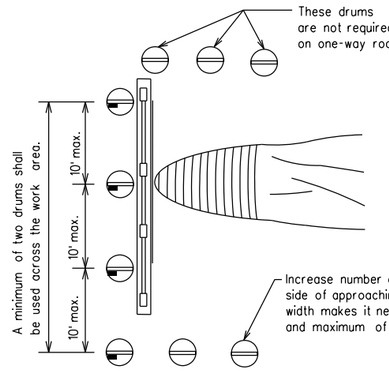
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

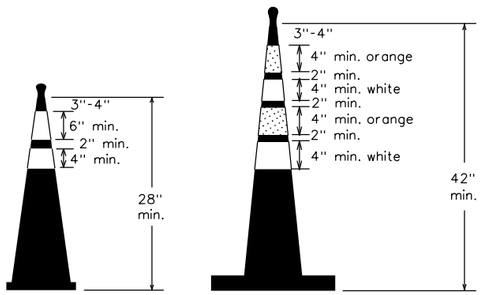
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.



PLAN VIEW

LEGEND	
	Plastic drum
	Plastic drum with steady burn light or yellow warning reflector
SB	Steady burn warning light or yellow warning reflector

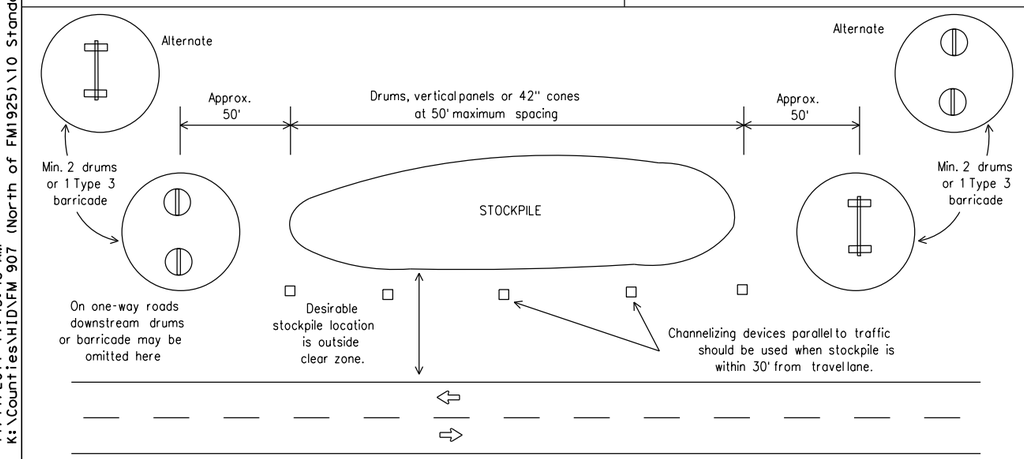
CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



28" Cones shall have a minimum weight of 9 1/2 lbs.

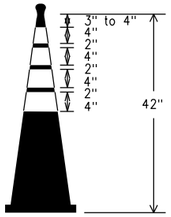
42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

1. Traffic cones and tubular markers shall be predominantly orange, and meet the height and weight requirements shown above.
2. One-piece cones have the body and base of the cone molded in one consolidated unit. Two-piece cones have a cone shaped body and a separate rubber base, or ballast, that is added to keep the device upright and in place.
3. Two-piece cones may have a handle or loop extending up to 8" above the minimum height shown, in order to aid in retrieving the device.
4. Cones or tubular markers used at night shall have white or white and orange reflective bands as shown above. The reflective bands shall have a smooth, sealed outer surface and meet the requirements of Departmental Material Specification DMS-8300 Type A.
5. 28" cones and tubular markers are generally suitable for short duration and short-term stationary work as defined on BC(4). These should not be used for intermediate-term or long-term stationary work unless personnel is on-site to maintain them in their proper upright position.
6. 42" two-piece cones, vertical panels or drums are suitable for all work zone durations.
7. Cones or tubular markers used on each project should be of the same size and shape.



TRAFFIC CONTROL FOR MATERIAL STOCKPILES

THIS DEVICE SHALL NOT BE USED ON PROJECTS LET AFTER MARCH 2014.



1. This device is intended only for use in place of a vertical panel to channelize traffic by indicating the edge of the travel lane. It is not intended to be used in transitions or tapers.
2. This device shall not be used to separate lanes of traffic (opposing or otherwise) or warn of objects.
3. This device is based on a 42 inch, two-piece cone with an alternate striping pattern: four 4 inch retroreflective bands, with an approximate 2 inch gap between bands. The color of the band should correspond to the color of the edgeline (yellow for left edgeline, white for right edgeline) for which the device is substituted or for which it supplements. The reflectorized bands shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300, unless otherwise noted.
4. The base must weigh a minimum of 30 lbs.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

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WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

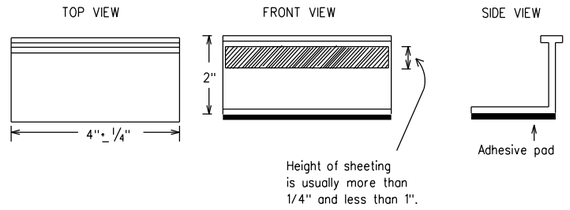
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than three days, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway as described in Item 677.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
   A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
   B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:
YELLOW - (two amber reflective surfaces with yellow body).
WHITE - (one silver reflective surface with white body).

DEPARTMENTAL MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
TRAFFIC BUTTONS	DMS-4300
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY REMOVABLE, PREFABRICATED PAVEMENT MARKINGS	DMS-8241
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS	DMS-8242

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

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Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

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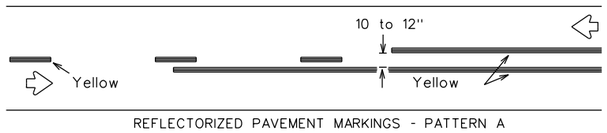
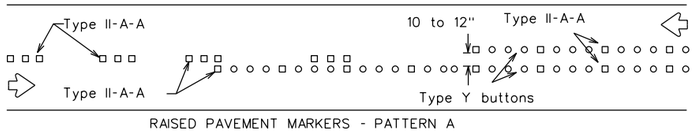
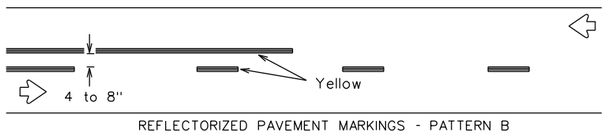
PAVEMENT MARKING PATTERNS



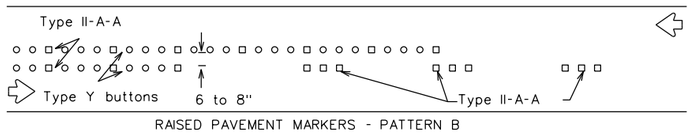
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



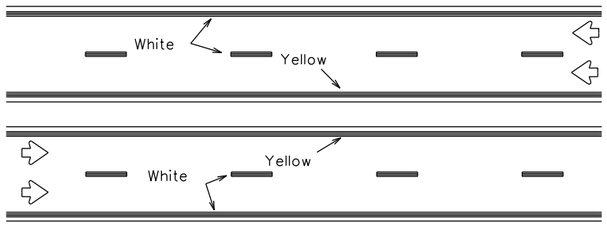
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



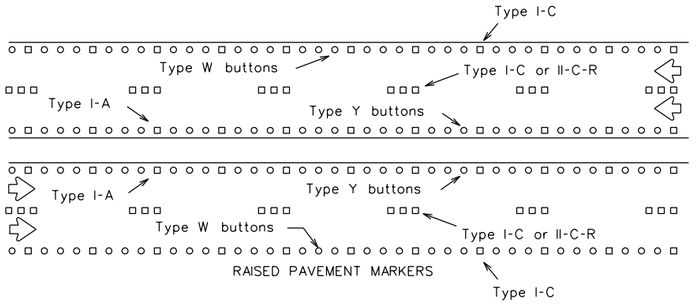
RAISED PAVEMENT MARKERS - PATTERN B

Pattern A is the TXDOT Standard, however Pattern B may be used if approved by the Engineer.
Prefabricated markings may be substituted for reflectorized pavement markings.

CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



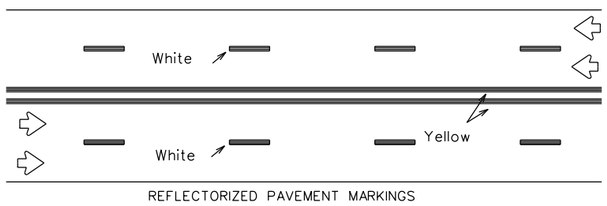
REFLECTORIZED PAVEMENT MARKINGS



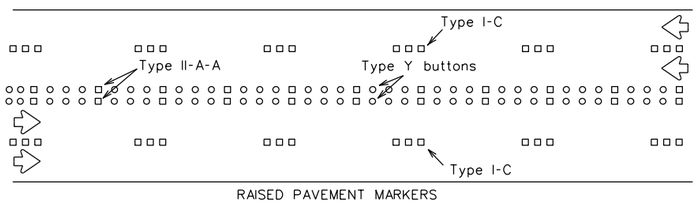
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



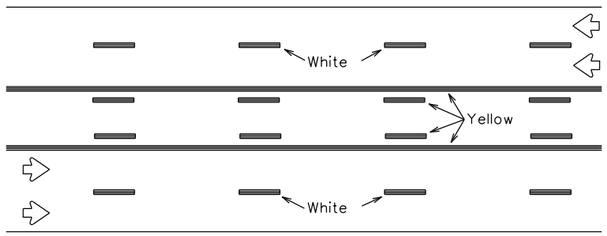
REFLECTORIZED PAVEMENT MARKINGS



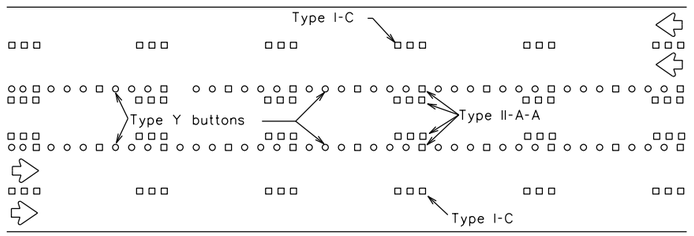
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



RAISED PAVEMENT MARKERS

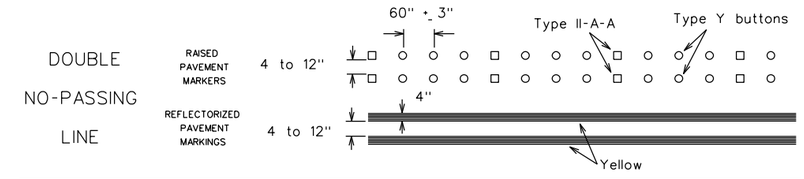
Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

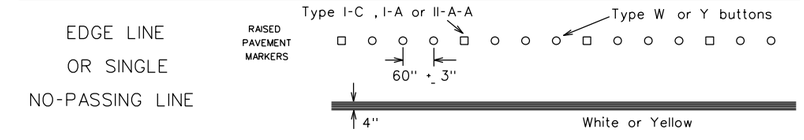
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

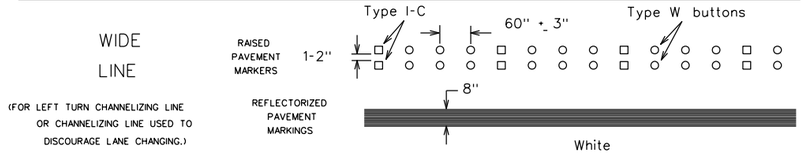


EDGE LINE OR SINGLE NO-PASSING LINE



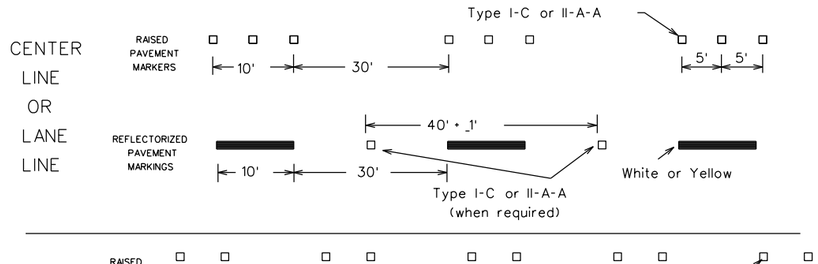
WIDE LINE

(FOR LEFT TURN CHANNELIZING LINE OR CHANNELIZING LINE USED TO DISCOURAGE LANE CHANGING.)

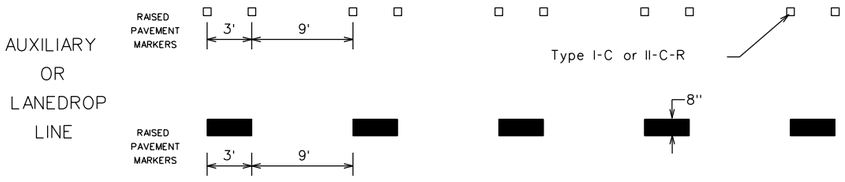


BROKEN LINES

CENTER LINE OR LANE LINE

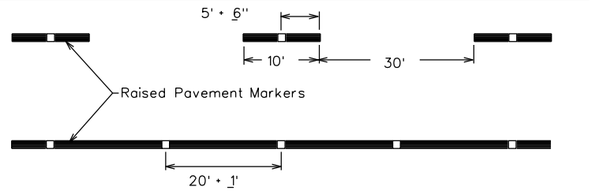


AUXILIARY OR LANEDROP LINE



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



Centerline only - not to be used on edge lines

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC(12)-14

FILE: bc-14.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
1-97 9-07	DIST	COUNTY		SHEET NO.
2-98 7-13	PHR	HIDALGO		27
11-02 8-14				

106

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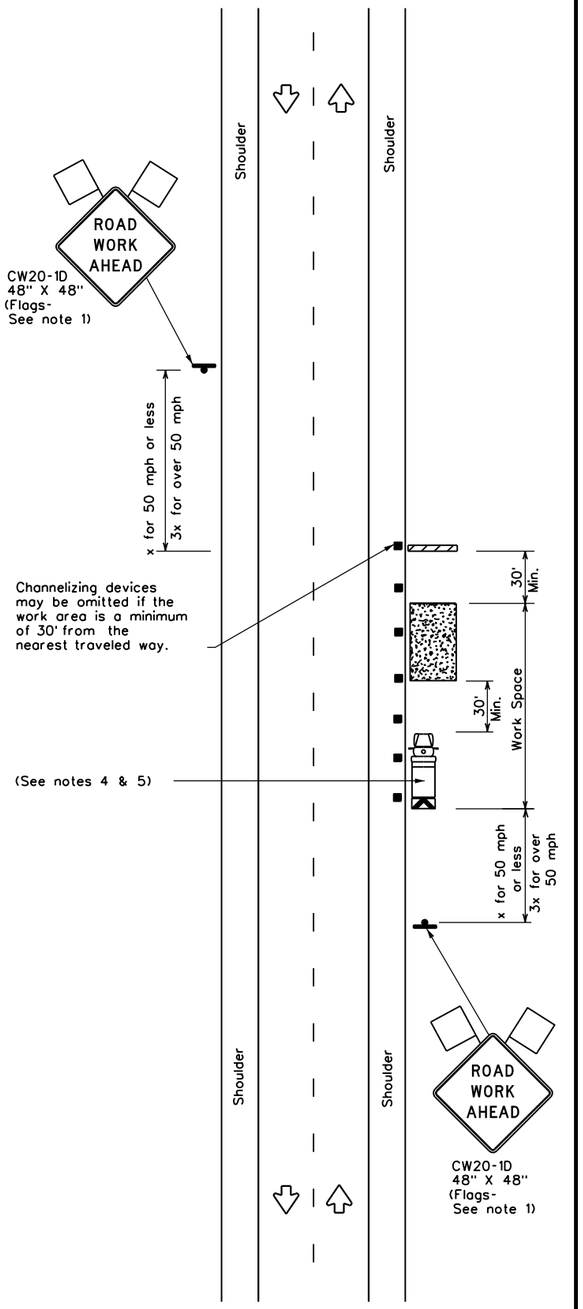
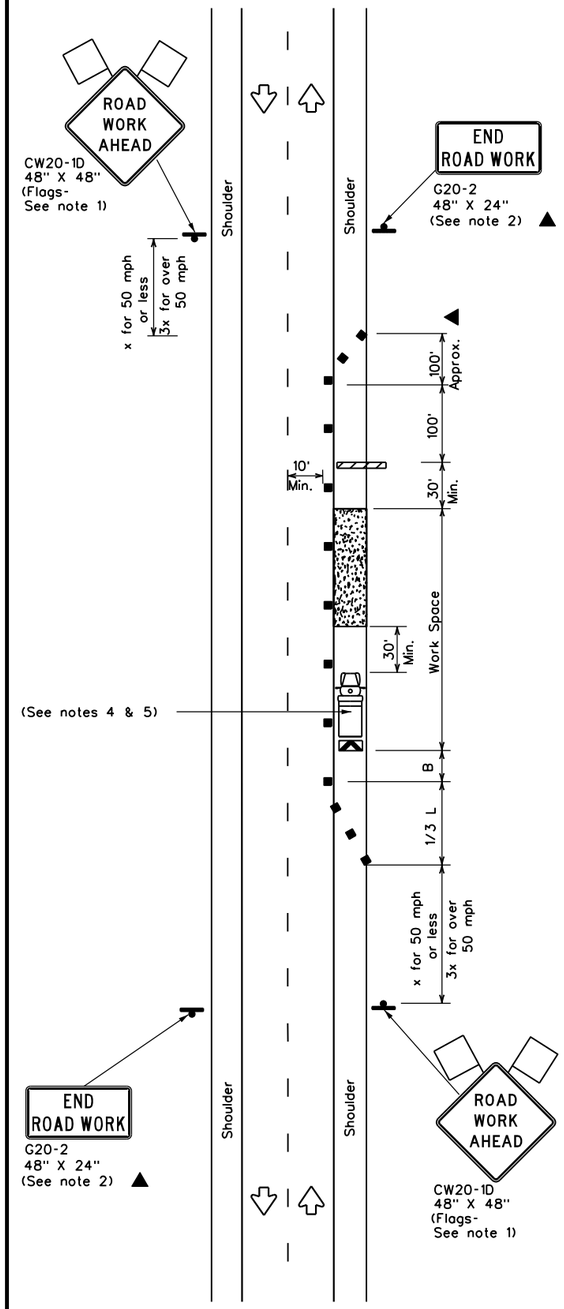


TCP (2-1a)

WORK SPACE NEAR SHOULDER

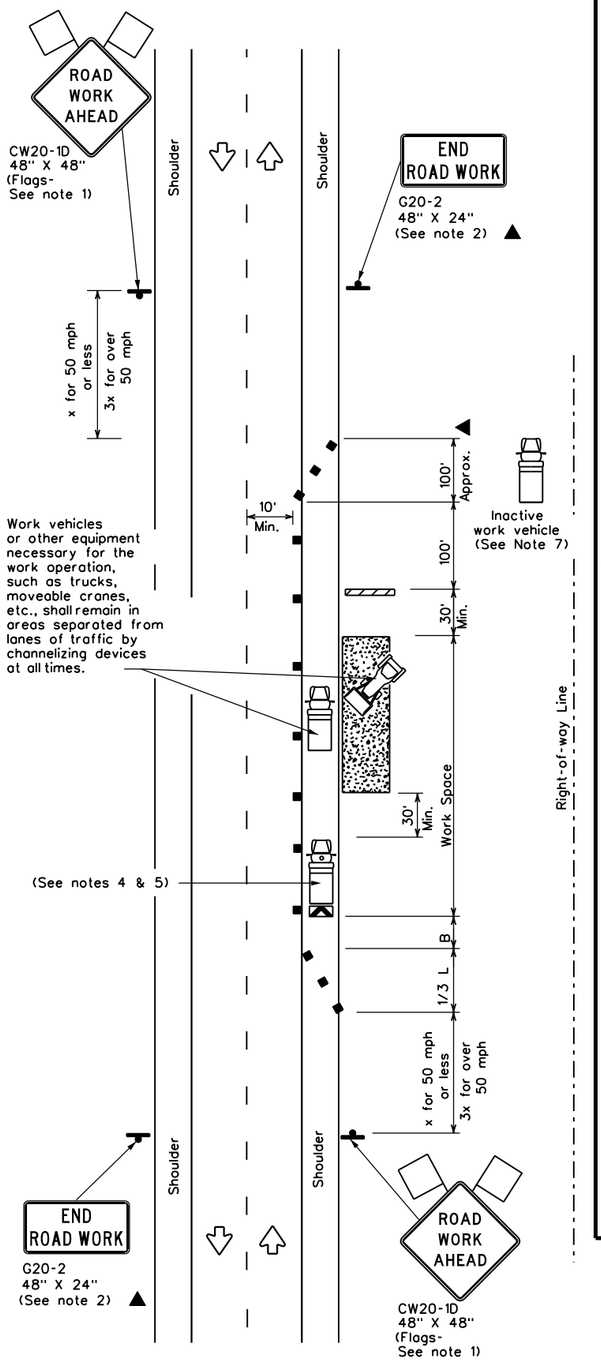
Conventional Roads



TCP (2-1b)

WORK SPACE ON SHOULDER

Conventional Roads



TCP (2-1c)

WORK VEHICLES ON SHOULDER

Conventional Roads

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths * * 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		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

* * 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
	✓	✓	✓	✓

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 in the plans, or for routine maintenance work, when approved by the Engineer.
3. Stockpiled material should be placed a minimum of 30 feet from nearest traveled way.
4. Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. 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.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.
6. See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
7. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
8. 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 of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(2-1)-18

FILE: tcp2-1-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	331	ALAMO
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 2-12	PHR	HIDALGO		28
1-97 2-18				

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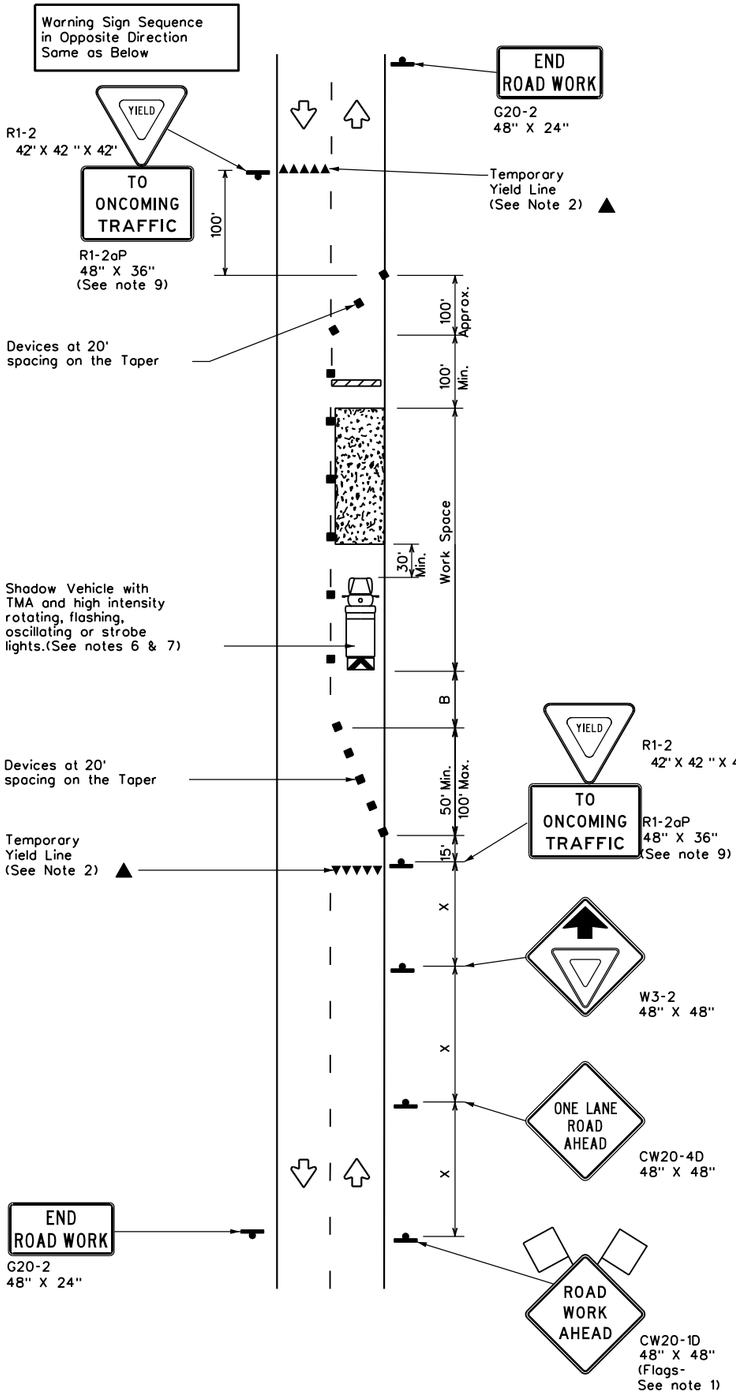
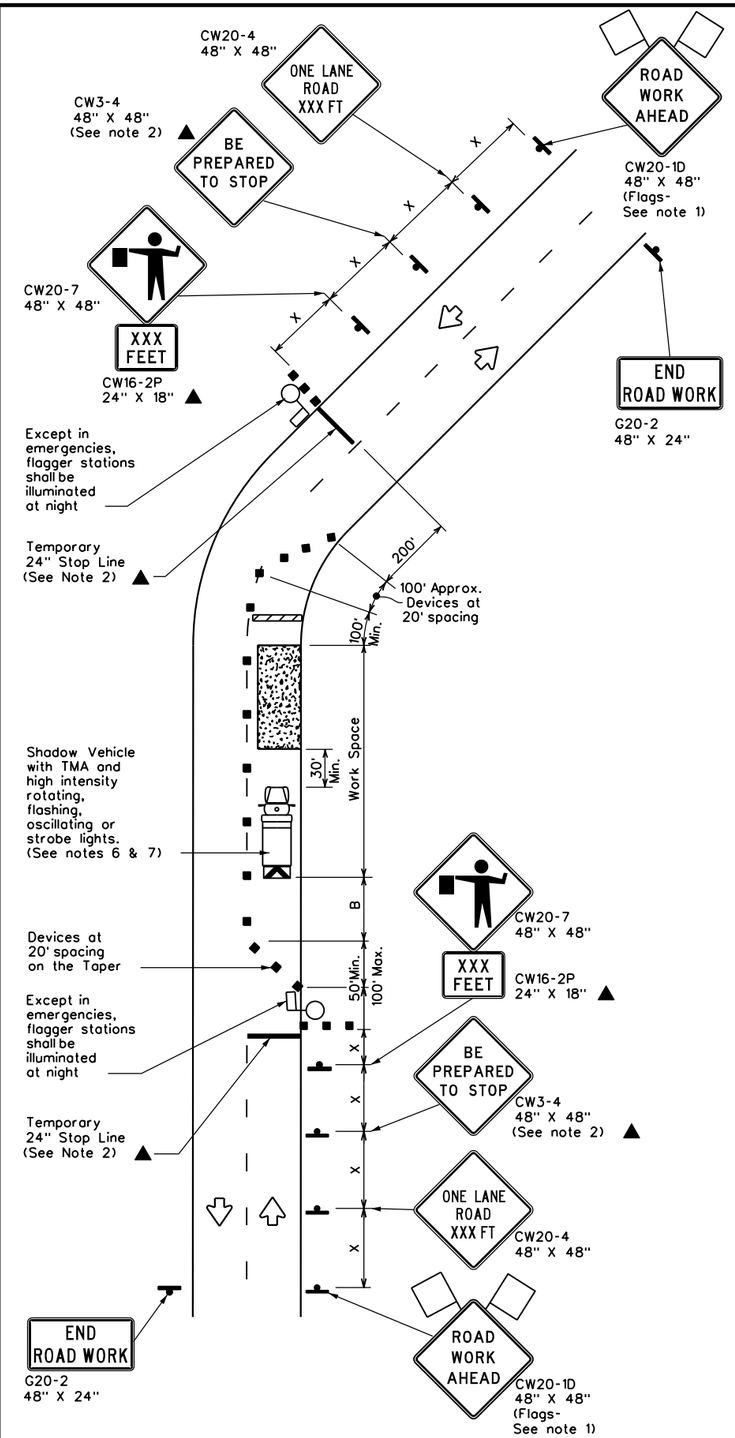


TCP (2-2a)
2-LANE ROADWAY WITHOUT PAVED SHOULDERS
ONE LANE TWO-WAY
CONTROL WITH YIELD SIGNS
(Less than 2000 ADT - See Note 9)



TCP (2-2b)
2-LANE ROADWAY WITHOUT PAVED SHOULDERS
ONE LANE TWO-WAY
CONTROL WITH FLAGGERS

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths * * 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L=WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* Conventional Roads Only
* * 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
	✓	✓	✓	

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. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4 "ONE LANE ROAD XXX FT" sign, but proper sign spacing shall be maintained.
4. Flaggers should use two-way radios or other methods of communication to control traffic.
5. Length of work space should be based on the ability of flaggers to communicate.
6. 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.
7. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.

TCP (2-2a)

8. The R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work space should be no longer than one half city block. In rural areas, roadways with less than 2000 ADT, work space should be no longer than 400 feet.
9. The R1-2aP "YIELD TO ONCOMING TRAFFIC" sign shall be placed on a support at a 7 foot minimum mounting height.

TCP (2-2b)

10. Channelizing devices on the center line may be omitted when a pilot car is leading traffic and approved by the Engineer.
11. 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 flagger and a queue of stopped vehicles. (See table above).
12. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situtations.

Texas Department of Transportation
Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
ONE-LANE TWO-WAY TRAFFIC CONTROL

TCP(2-2)-18

FILE: tcp2-2-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 8-95 3-03 1-97 2-12 4-98 2-18	0921	02	331	ALAMO
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		29

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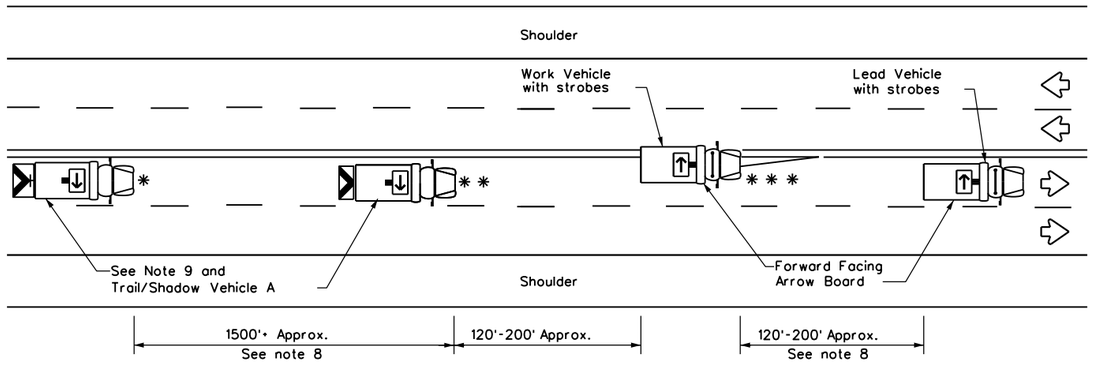
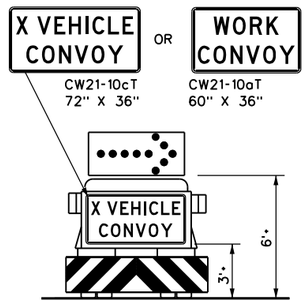


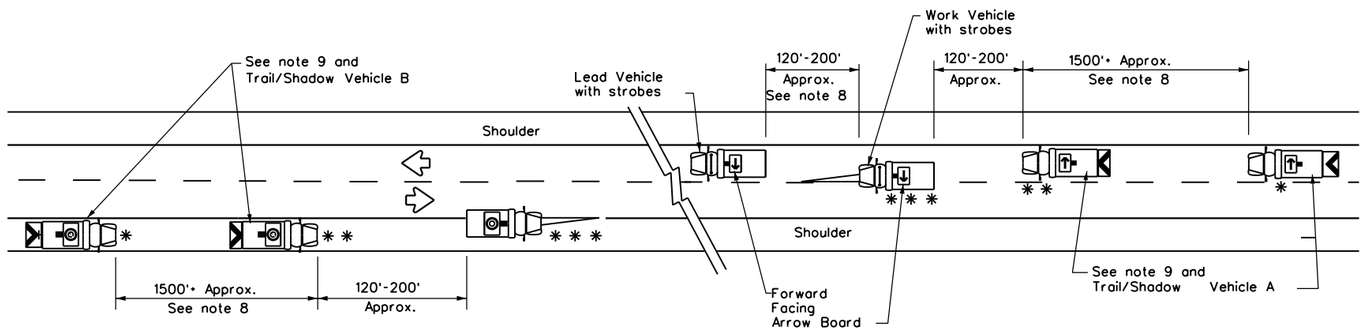
TCP (3-1a)

UNDIVIDED MULTILANE ROADWAY



TRAIL/SHADOW VEHICLE A

with RIGHT Directional display Flashing Arrow Board

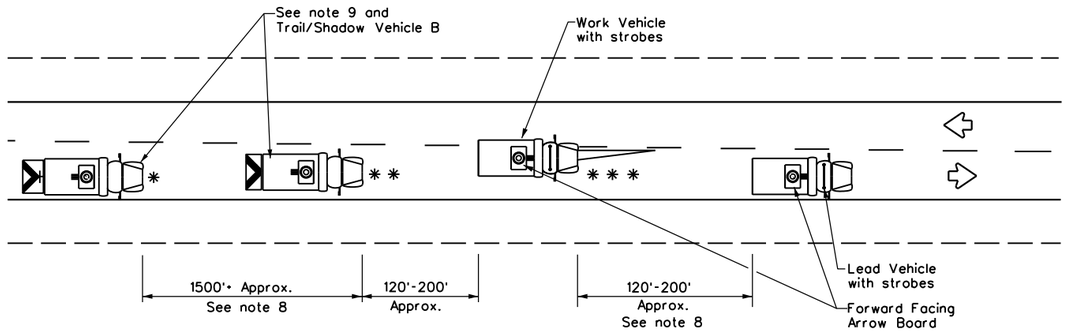


WORK ON SHOULDER

WORK ON TRAVEL LANE

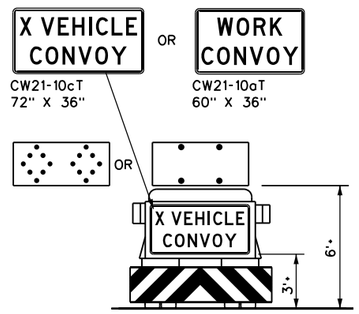
TCP (3-1b)

TWO-WAY ROADWAY WITH PAVED SHOULDERS



TCP (3-1c)

TWO-WAY ROADWAY WITHOUT PAVED SHOULDERS



TRAIL/SHADOW VEHICLE B

with Flashing Arrow Board in CAUTION display

LEGEND			
*	Trail Vehicle	ARROW BOARD DISPLAY	
* *	Shadow Vehicle		
* * *	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow		CAUTION (Alternating Diamond or 4 Corner Flash)

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

GENERAL NOTES

1. TRAIL, SHADOW, and LEAD vehicles shall be equipped with arrow boards as illustrated. When a LEAD vehicle is not used the WORK vehicle must be equipped with an arrow board. The Engineer will determine if the LEAD VEHICLE and/or TRAIL VEHICLE are required based on prevailing roadway conditions, traffic volume, and sight distance restrictions.

2. The use of amber high intensity rotating, flashing, oscillating, or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating or strobe lights when mounted on the driver's side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.

3. The use of truck mounted attenuators (TMA) on the SHADOW VEHICLE and TRAIL VEHICLE are required.

4. Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DEPARTMENTAL MATERIAL SPECIFICATION DMS 8300, Type A.

5. Flashing arrow boards shall be Type B or Type C as per the Barricade and Construction (BC) standards. The board shall be controlled from inside the vehicle.

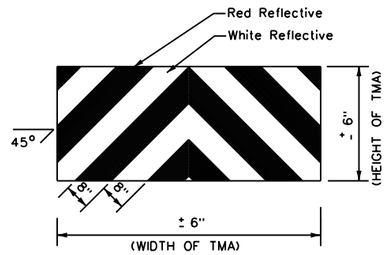
6. Each vehicle shall have two-way radio communication capability.

7. When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.

8. Vehicle spacing between the TRAIL VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the work convoy should be able to see the TRAIL VEHICLE in time to slow down and/or change lanes as they approach the TRAIL VEHICLE. Vehicle spacing between the WORK VEHICLE and SHADOW VEHICLE and vehicle spacing between WORK VEHICLE and LEAD VEHICLE may vary according to terrain, work activity and other factors.

9. "X VEHICLE CONVOY" (CW21-10cT) or "WORK CONVOY" (CW21-10aT) signs shall be used on TRAIL VEHICLES and SHADOW VEHICLES as shown. As an option 48" X 48" diamond shaped "WORK CONVOY"(CW21-10T) or "X VEHICLE CONVOY" (CW21-10bT) signs may be used where adequate mounting space exists. When used, the X VEHICLE CONVOY sign shall have the number of the convoy vehicles displayed on the sign in the number designation "X" location. The "X VEHICLE CONVOY" sign shall not be used on the SHADOW VEHICLE if a TRAIL VEHICLE is used.

10. On two-lane two-way roadways, the work and protection vehicles should pull over periodically to allow motor vehicle traffic to pass. If motorists are not allowed to pass the work convoy, a "DO NOT PASS" (R4-1) sign should be placed on the back of the rearmost protection vehicle.



STRIPING FOR TMA

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN MOBILE OPERATIONS UNDIVIDED HIGHWAYS

TCP(3-1)-13

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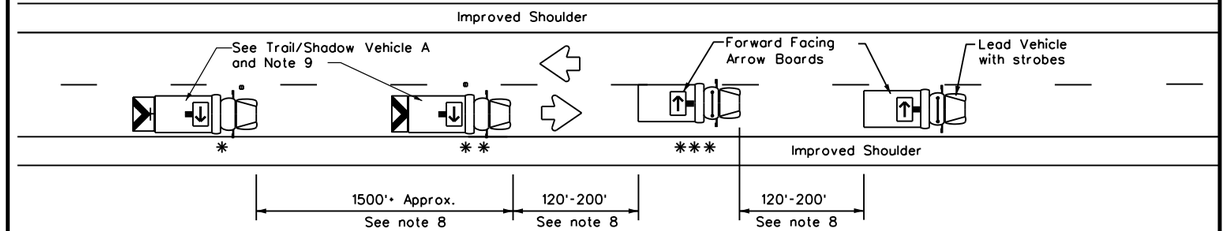
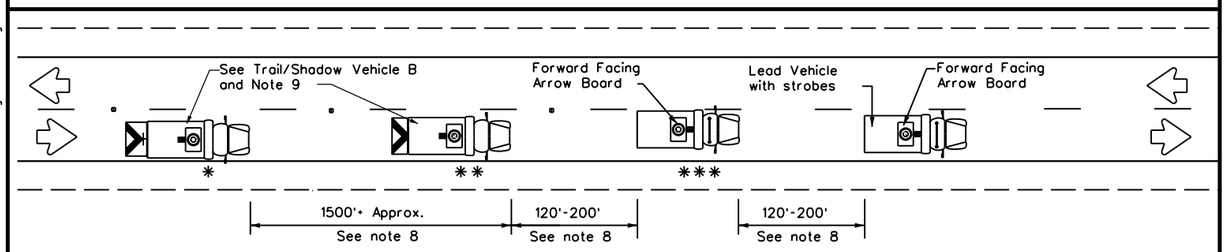
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
2-94 4-98 8-95 7-13 1-97	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		30



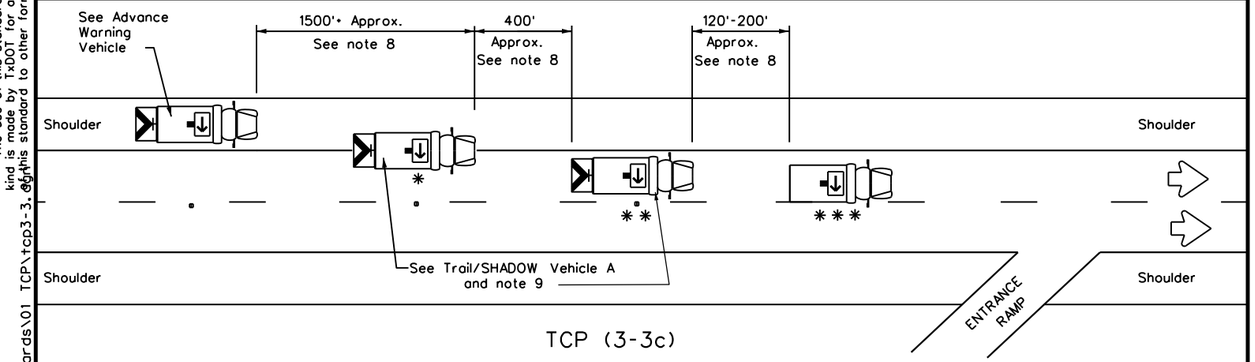
TCP (3-3a)

TWO LANE HIGHWAY WITH PAVED SHOULDERS (WORK ON TRAVEL LANE)



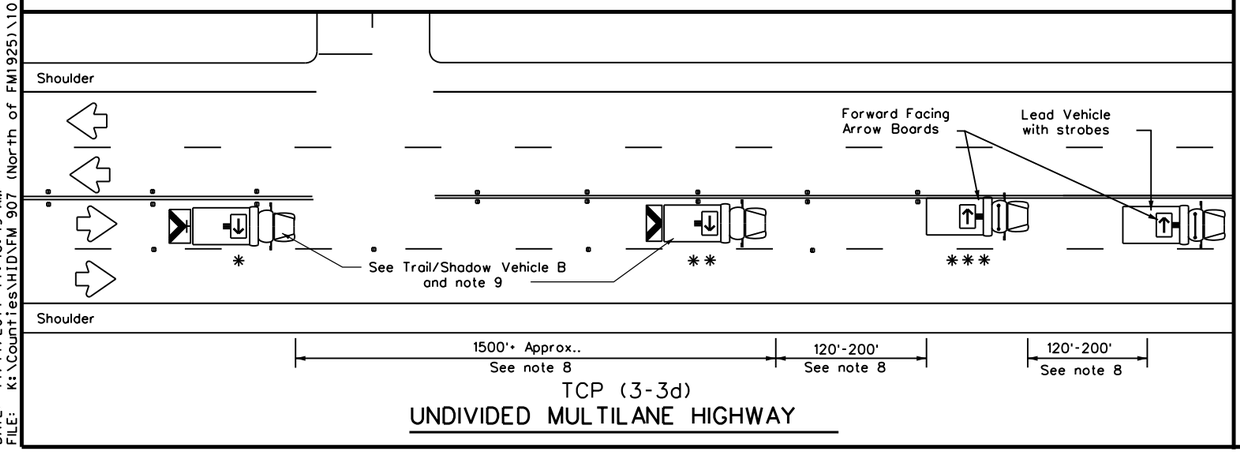
TCP (3-3b)

TWO LANE HIGHWAY WITHOUT PAVED SHOULDERS (WORK ON TRAVEL LANE)



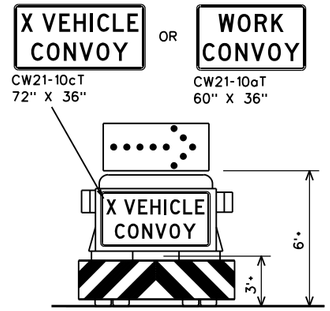
TCP (3-3c)

DIVIDED MULTILANE HIGHWAY



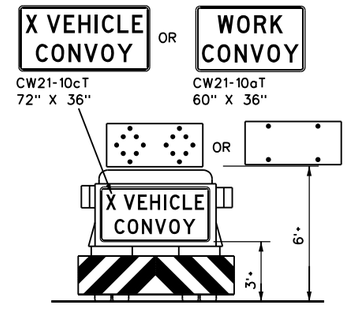
TCP (3-3d)

UNDIVIDED MULTILANE HIGHWAY



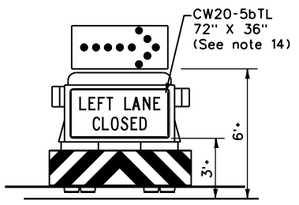
TRAIL/SHADOW VEHICLE A

with RIGHT Directional display
Flashing Arrow Board

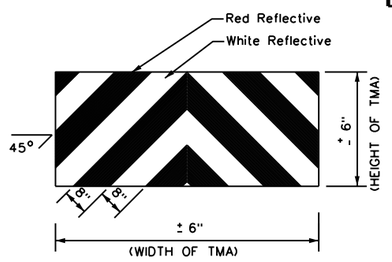


TRAIL/SHADOW VEHICLE B

with Flashing Arrow Board
in Caution Mode



ADVANCE WARNING VEHICLE



STRIPING FOR TMA

LEGEND			
*	Trail Vehicle	ARROW BOARD DISPLAY	
* *	Shadow Vehicle		
* * *	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow		CAUTION (Alternating Diamond or 4 Corner Flash)

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

GENERAL NOTES

1. TRAIL, SHADOW, and LEAD vehicles shall be equipped with arrow boards as illustrated. When a LEAD vehicle is not used on two way roads the WORK vehicle must have an arrow board. For divided roadways, the arrow board on the WORK vehicle is optional based on the type of work being performed. The Engineer will determine if the LEAD vehicle and/or TRAIL vehicle are required based on prevailing roadway conditions, traffic volume, and sight distance restrictions.
2. The use of amber high intensity rotating, flashing, oscillating, or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating, or strobe lights when mounted on the driver's side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.
3. The use of truck mounted attenuators (TMA) on the SHADOW VEHICLE, ADVANCE WARNING and TRAIL VEHICLE are required.
4. Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DEPARTMENTAL MATERIAL SPECIFICATION DMS 8300, Type A.
5. Flashing arrow boards shall be Type B or Type C as per the Barricade and Construction (BC) standards. The board shall be controlled from inside the vehicle.
6. Each vehicle shall have two-way radio communication capability.
7. When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.
8. Vehicle spacing between the TRAIL VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the convoy should be able to see the TRAIL VEHICLE in time to slow down and/or change lanes as they approach the TRAIL VEHICLE. Vehicle spacing between the WORK VEHICLE and SHADOW VEHICLE and vehicle spacing between WORK VEHICLE and LEAD VEHICLE may vary according to terrain, work activity and other factors.
9. X VEHICLE CONVOY (CW21-10cT) or WORK CONVOY (CW21-10aT) signs shall be used on TRAIL VEHICLES and SHADOW VEHICLES as shown. As an option 48" x 48" diamond shaped WORK CONVOY (CW21-10T) or X VEHICLE CONVOY (CW21-10bT) signs may be used where adequate mounting space exists. When used, the X VEHICLE CONVOY sign shall have the number of the convoy vehicles displayed on the sign in the number designation "X" location. The X VEHICLE CONVOY sign shall not be used on the SHADOW VEHICLE if a TRAIL VEHICLE is used.
10. For divided highways with two or three lanes in one direction, the appropriate LEFT LANE CLOSED (CW20-5bTL), RIGHT LANE CLOSED (CW20-5bTR), or CENTER LANE CLOSED (CW20-5dT) sign should be used on the Advance Warning Vehicle. As an option, a portable changeable message sign (PCMS) or truck mounted changeable message sign (TMCMS) with a minimum character height of 12", and displaying the same legend may be substituted for these signs. An appropriate directional arrow display, simulating the size and legibility of the flashing arrow board may be used in the second phase of the PCMS/TMCMS message. When this is done, the arrow board will not be required on the Advance Warning Vehicle.
11. A double arrow shall not be displayed on the arrow board on the Advance Warning Vehicle.
12. For divided highways with three or four lanes in each direction, use TCP(3-2).
13. Standard diamond shape versions of the CW20-5 series signs may be used as an option if the rectangular signs shown are not available.
14. The Advance Warning Vehicle may straddle the edgeline when Shoulder width makes it necessary.
15. On two-lane two-way roadways, the work and protection vehicles should pull over periodically to allow motor vehicle traffic to pass. If motorists are not allowed to pass the work convoy, a DO NOT PASS (R4-1) sign should be placed on the back of the rearmost protection vehicle.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN MOBILE OPERATIONS RAISED PAVEMENT MARKER INSTALLATION/ REMOVAL TCP(3-3)-14

FILE: tcp3-3.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT September 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 7-13	PHR	HIDALGO		31
1-97 7-14				

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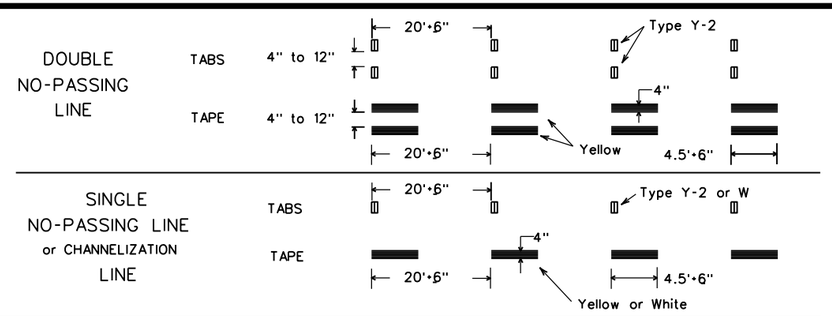
WORK ZONE SHORT TERM PAVEMENT MARKINGS DETAILS



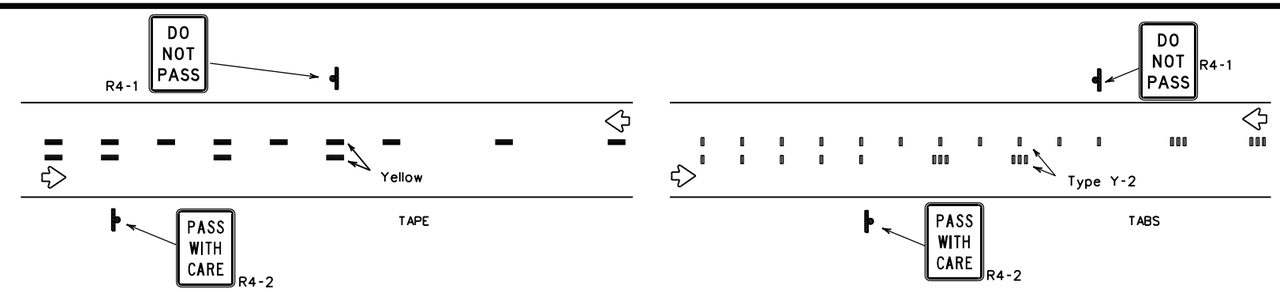
NOTES:

1. Short term pavement markings may be prefabricated markings (stick down tape) or temporary flexible-reflective roadway marker tabs unless otherwise specified elsewhere in plans.
2. Short term pavement markings shall NOT be used to simulate edge lines.
3. Dimensions indicated on this sheet are typical and approximate. Variations in size and height may occur between markers or devices made by manufacturers, by as much as 1/4 inch, unless otherwise noted.
4. Temporary flexible-reflective roadway marker tabs will require normal maintenance replacement when used on roadways with an ADT per lane of up to 7500 vehicles with no more than 10% truck mix. When roadways exceed these values, additional maintenance replacement of devices should be planned.
5. No segment of roadway open to traffic shall remain without permanent pavement markings for a period greater than 14 calendar days. The Contractor will be responsible for maintaining short term pavement markings until permanent pavement markings are in place. When the Contractor is responsible for placement of permanent pavement markings, no segment of roadway shall remain without permanent pavement markings for a period greater than 14 calendar days unless weather conditions prohibit placement. Permanent pavement markings shall be placed as soon as weather permits.
6. For two lane, two-way roadways, DO NOT PASS signs shall be erected to mark the beginning of sections where passing is prohibited and PASS WITH CARE signs shall be erected to mark the beginning of sections where passing is permitted. Signs shall be in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and may be used to indicate the limits of no-passing zones for up to 14 calendar days. Permanent pavement markings should then be placed.
7. For low volume two lane, two-way roadways of 4000 ADT or less, no-passing lines may be omitted when approved by the Engineer. DO NOT PASS and PASS WITH CARE signs shall be erected (see note 6).
8. For exit gores where a lane is being dropped place wide gore markings or retroreflective channelizing devices to guide motorist through the exit. If channelizing devices are to be used it should be noted elsewhere in the plans. One piece cones are not allowed for this purpose.

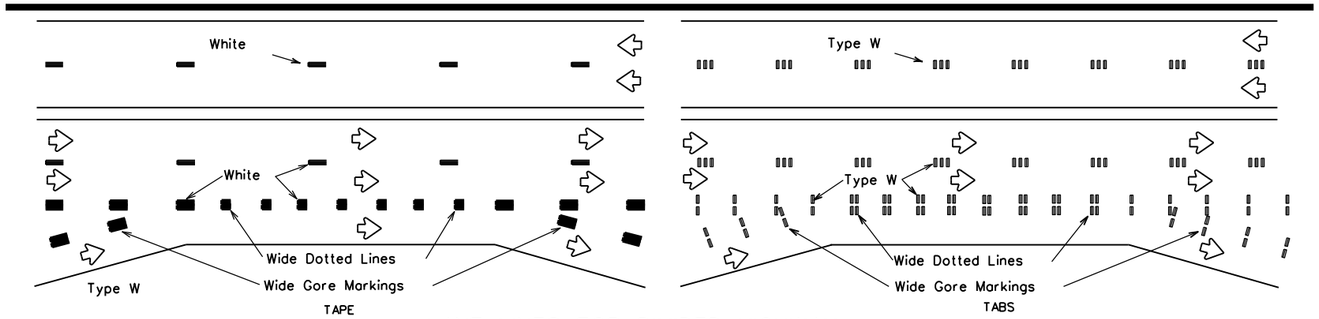
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS (TABS)

1. Temporary flexible-reflective roadway marker tabs detailed on this sheet will be designated Type Y-2 (two amber reflective surfaces with yellow body); Type Y (one amber reflective surface with yellow body); and Type W (one white or silver reflective surface with white body). Additional details may be found on BC(11).
2. Tabs shall meet requirements of Departmental Material Specification DMS-8242.
3. When dry, tabs shall be visible for a minimum distance of 200 feet during normal daylight hours and when illuminated by automobile low-beam head light at night, unless sight distance is restricted by roadway geometrics.
4. No two consecutive tabs nor four tabs per 1000 feet of line shall be missing or fail to meet the visual performance requirements of Note 3.

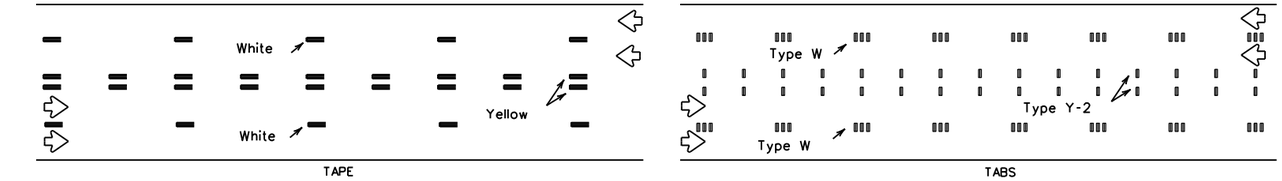
WORK ZONE SHORT TERM PAVEMENT MARKINGS PATTERNS



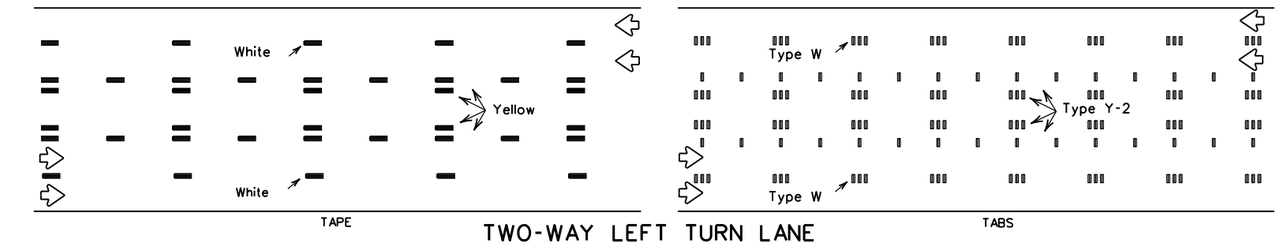
CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO LANE TWO-WAY HIGHWAYS



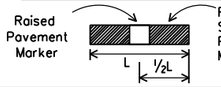
LANE LINES FOR DIVIDED HIGHWAY



LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



TWO-WAY LEFT TURN LANE



If raised pavement markers are used to supplement REMOVABLE short term markings, the markers shall be applied to the top of the tape at the approximate mid length of the tape. This allows an easier removal of raised markers and tape.

PREFABRICATED PAVEMENT MARKINGS

1. Temporary Removable Prefabricated Pavement Markings shall meet the requirements of DMS-8241.
2. Non-removable Prefabricated Pavement Markings shall meet the requirements of either DMS-8240 "Permanent Prefabricated Pavement Markings" or DMS-8243 "Temporary Costruction-Grade Prefabricated Pavement Markings."

RAISED PAVEMENT MARKERS

1. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and DMS-4200.

DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS) & MATERIAL PRODUCER LISTS (MPL)

1. DMSs referenced above can be found along with embedded links to their respective MPLs at the following website:
   http://www.txdot.gov/business/contractors_consultants/material_specifications/default.htm

Texas Department of Transportation

Traffic Operations Division Standard

WORK ZONE SHORT TERM PAVEMENT MARKINGS

WZ(STPM)-13

FILE:	wzstpm-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT	April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS		0921	02	311	ALAMO
1-97		DIST	COUNTY		SHEET NO.
3-03		PHR	HIDALGO		32
7-13					

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DATE: 11/17/2017 11:47:31 AM
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ALAMO ROAD ALIGNMENT

Beginning chain ALAMO ROAD description

Point ALAMO1 X 1,115,008.3442 Y 16,644,528.9813 Sta 100+00.00

Course from ALAMO1 to PC ALAMO1 N 8° 53' 30.00" E Dist 1,577.7822

Curve Data

Curve ALAMO1				
P.I. Station	121+72.64	X	1,115,344.1624	Y 16,646,675.5136
Delta	16° 55' 02.99" (RT)			
Degree	1° 25' 56.62"			
Tangent	594.8601			
Length	1,181.0642			
Radius	4,000.0000			
External	43.9904			
Long Chord	1,176.7785			
Mid. Ord.	43.5119			
P.C. Station	115+77.78	X	1,115,252.2168	Y 16,646,087.8023
P.T. Station	127+58.85	X	1,115,603.1497	Y 16,647,211.0359
C.C.	X 1,119,204.1462		Y 16,645,469.5355	
Back	N 8° 53' 30.00" E			
Ahead	N 25° 48' 32.99" E			
Chord Bear	N 17° 21' 01.50" E			

Curve Data

Curve ALAMO2				
P.I. Station	133+62.53	X	1,115,865.9767	Y 16,647,754.4980
Delta	17° 09' 52.60" (LT)			
Degree	1° 25' 56.62"			
Tangent	603.6796			
Length	1,198.3159			
Radius	4,000.0000			
External	45.2972			
Long Chord	1,193.8398			
Mid. Ord.	44.7899			
P.C. Station	127+58.85	X	1,115,603.1497	Y 16,647,211.0359
P.T. Station	139+57.16	X	1,115,956.7123	Y 16,648,351.3197
C.C.	X 1,112,002.1531		Y 16,648,952.5363	
Back	N 25° 48' 32.99" E			
Ahead	N 8° 38' 40.39" E			
Chord Bear	N 17° 13' 36.69" E			

Course from PT ALAMO2 to ALAMO4 N 8° 38' 40.39" E Dist 5,328.2754

Point ALAMO4 X 1,116,757.5743 Y 16,653,619.0648 Sta 192+85.44

Ending chain ALAMO ROAD description

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED
PROFESSIONAL ENGINEER
08/16/2017

P4

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
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Mission, TX. 78572
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Fax : (956) 585-1927

ALAMO ROAD HORIZONTAL ALIGNMENT DATA

SHEET 1 OF 1

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
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DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
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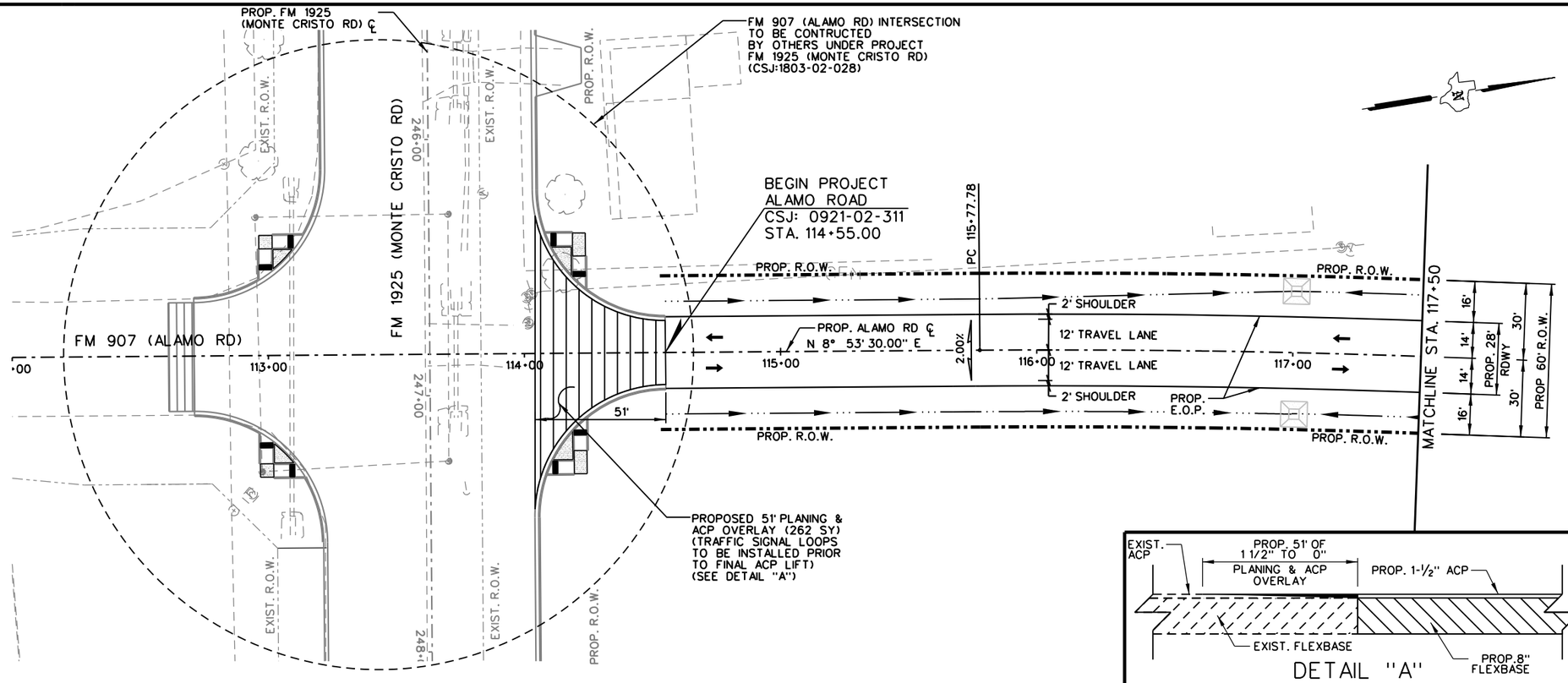
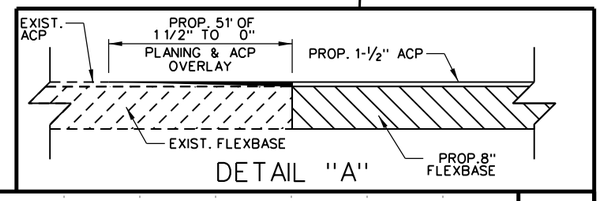




SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
354	PLANE ASPH CONC PAV (0 TO 1 1/2")	SY	262

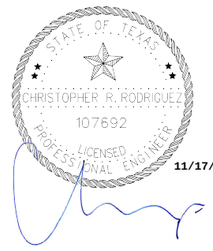
LEGEND:

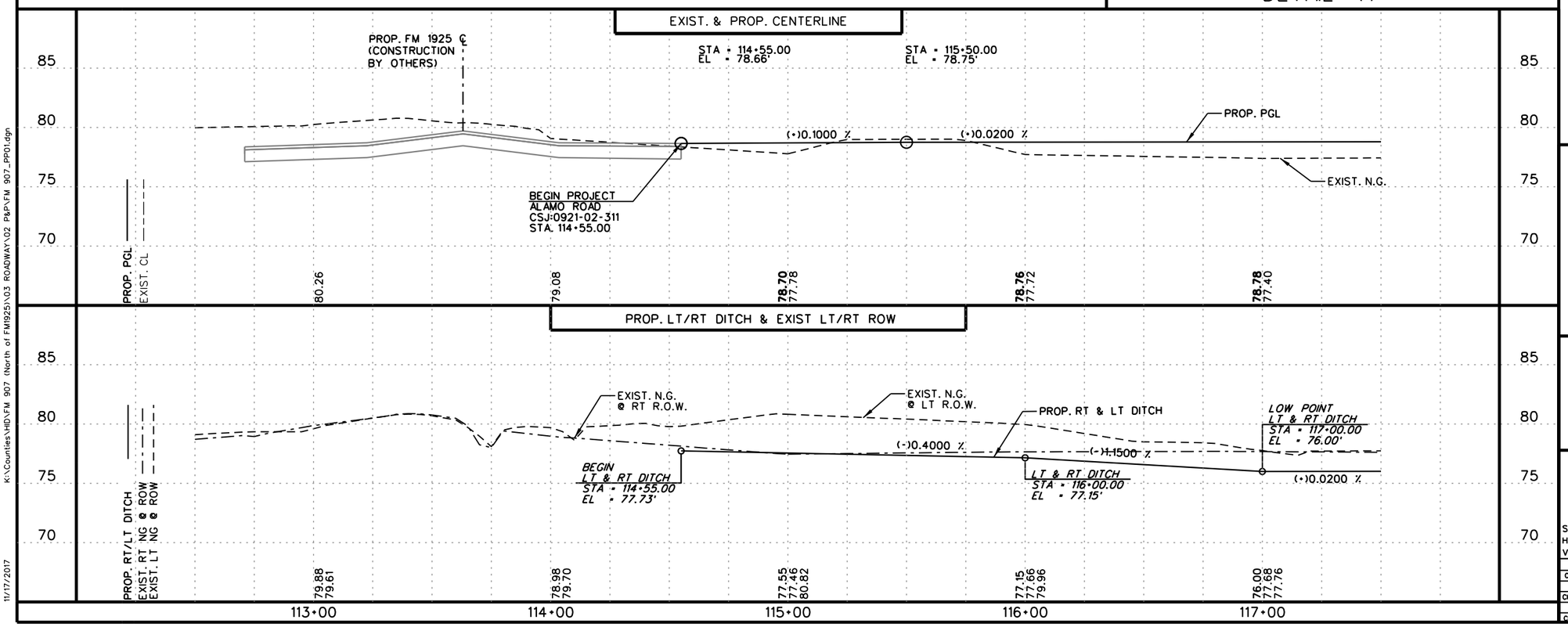
- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½") AND OVERLAY
- TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- DIRECTION OF PROPOSED ROADSIDE DITCH

NOTE:

SEE RDWY DATA SHEET FOR PROP. CENTERLINE DATA.

SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.





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ALAMO ROAD
PLAN AND PROFILE
STA. 114+55 TO STA. 117+50

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 1 OF 6

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:	FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
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						PHR	HIDALGO	0921	02	311		ALAMO

11/17/2017

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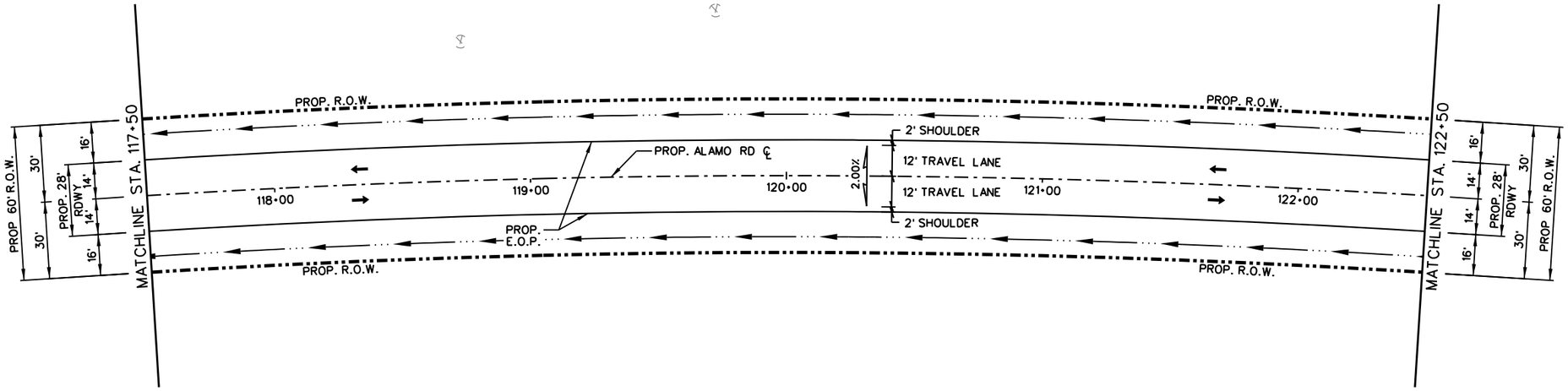

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½") AND OVERLAY
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- TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
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NOTE:

SEE RDWY DATA SHEET FOR PROP. CENTERLINE DATA.

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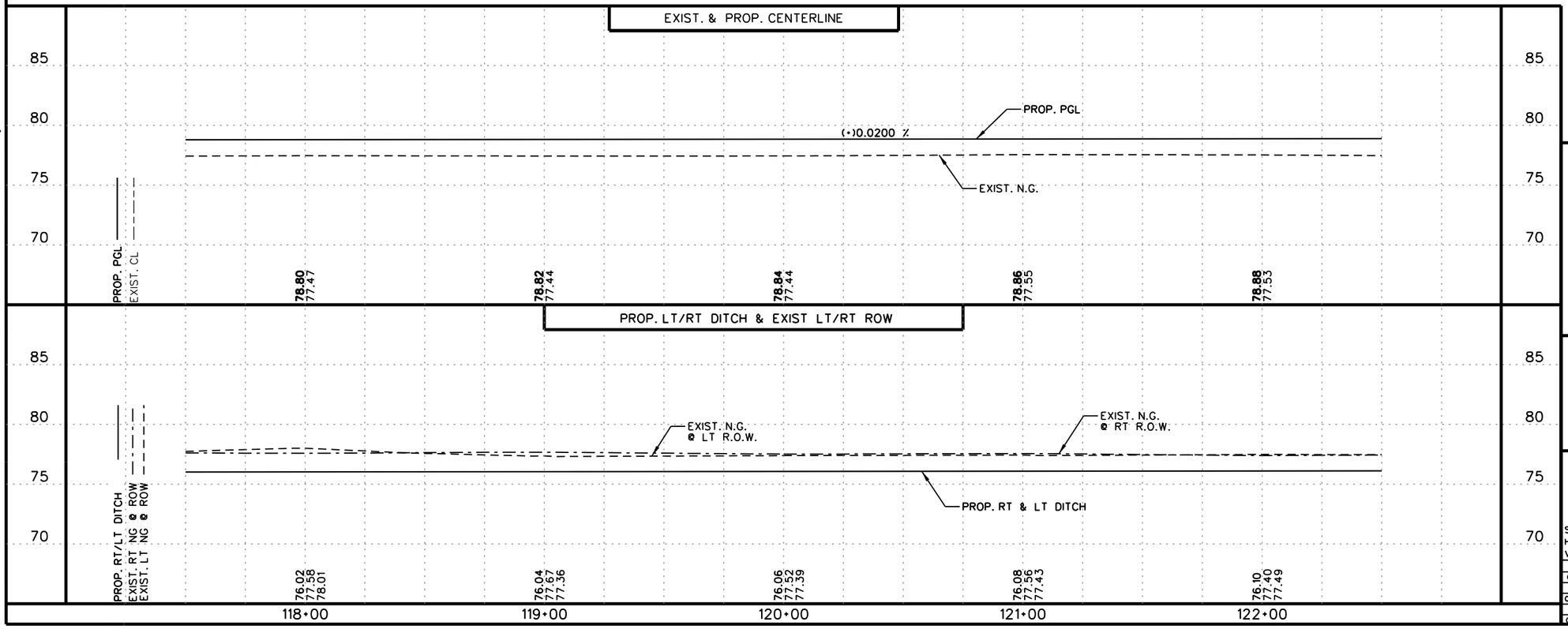
11/17/2017



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ALAMO ROAD
PLAN AND PROFILE
STA. 117+50 TO STA. 122+50

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:	FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
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11/17/2017

SHEET SUMMARY

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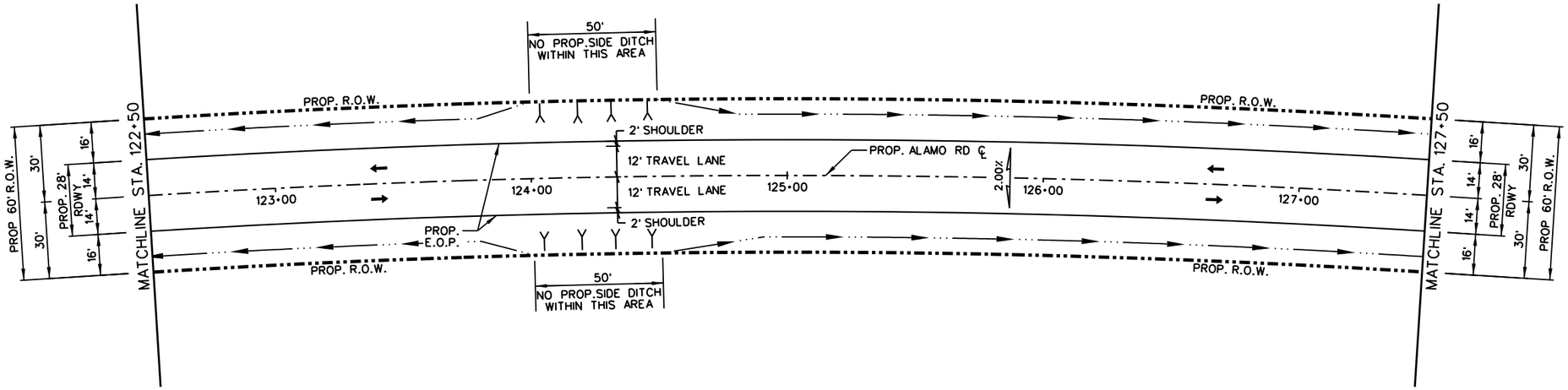

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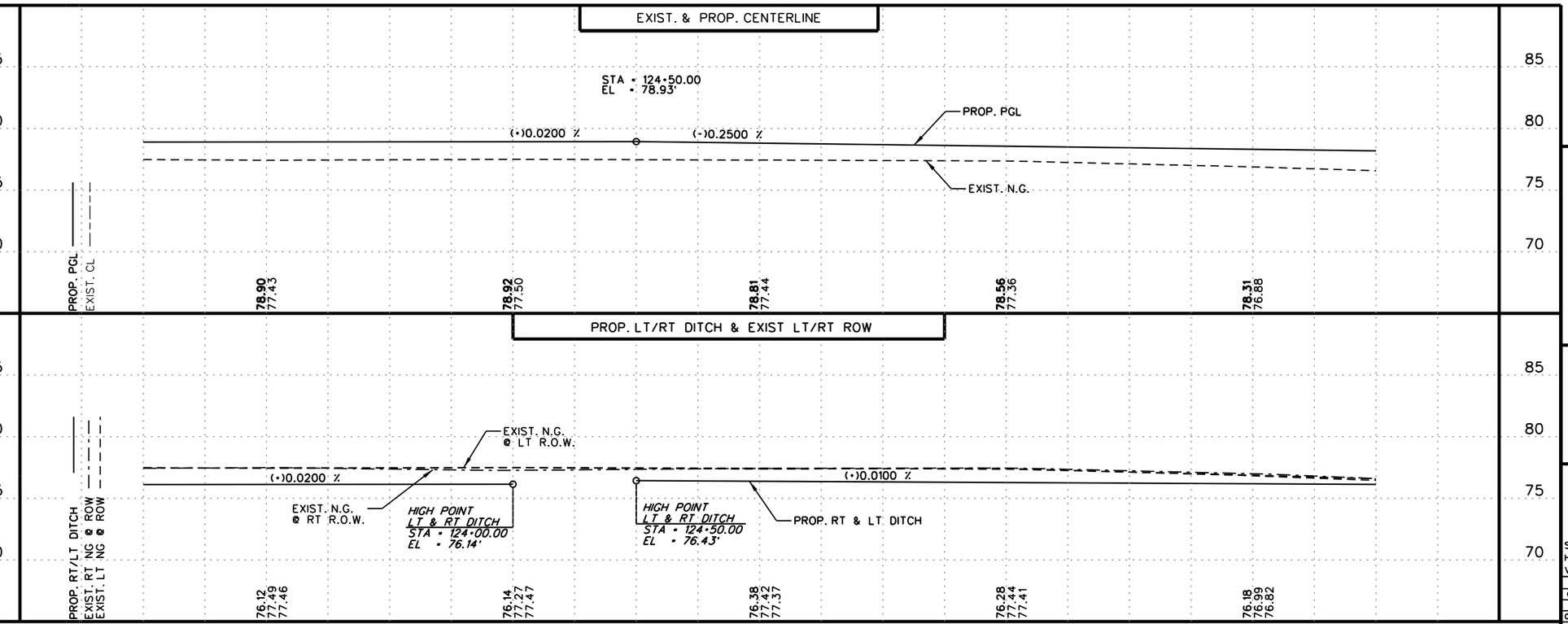
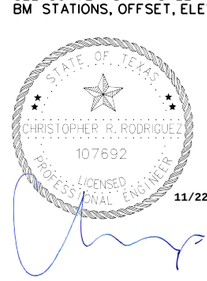
- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½") AND OVERLAY
- TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- DIRECTION OF PROPOSED ROADSIDE DITCH

NOTE:

SEE RDWY DATA SHEET FOR PROP. CENTERLINE DATA.

SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.





11/22/2017

L&G Engineering

Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
Fax : (956) 565-9018

900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

ALAMO ROAD
PLAN AND PROFILE
STA. 122+50 TO STA. 127+50

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 3 OF 6

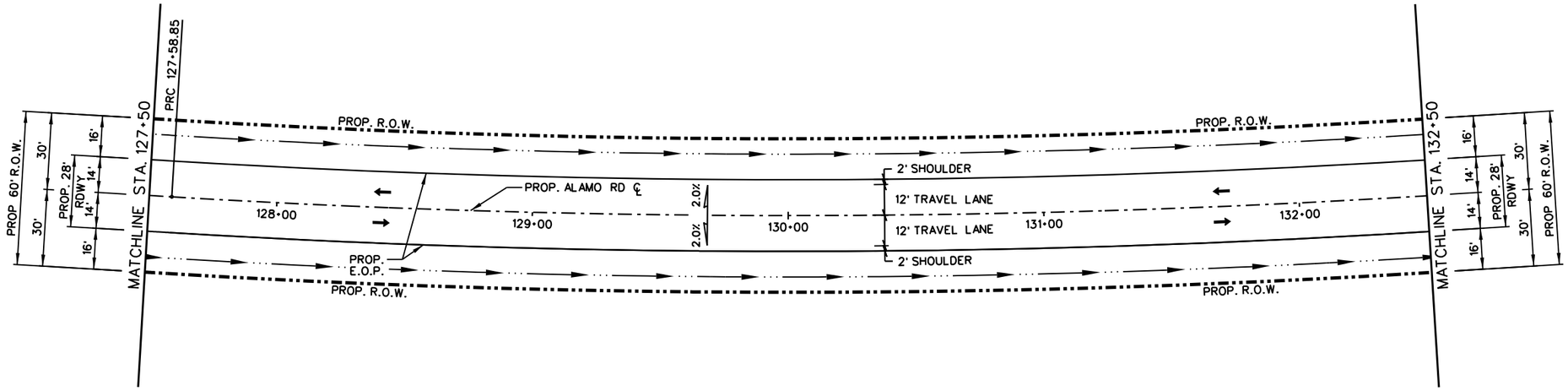
DN:	CK DN:	DW:	CK DW:	TR:	CK TR:	FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
						6	TEXAS					36
						STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
						PHR	HIDALGO	0921	02	311		ALAMO

K:\Counties\HIDALGO\FM 907 (North of FM1925)\03 ROADWAY\02 P&P\FM 907_PP03.dgn

11/22/2017

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY



LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½") AND OVERLAY
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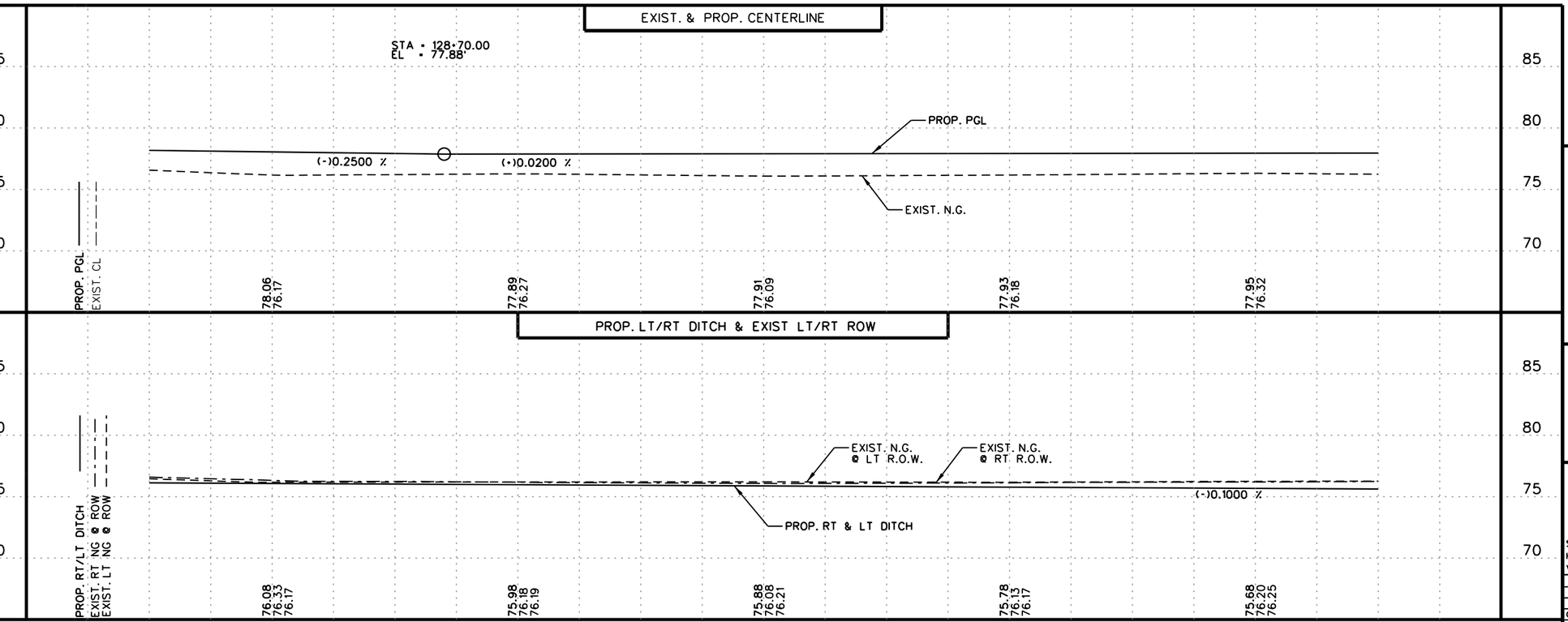
- DIRECTION OF PROPOSED ROADSIDE DITCH

NOTE:

SEE RDWY DATA SHEET FOR PROP. CENTERLINE DATA.

SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.



11/17/2017

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Structural / Bridge
Environmental
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ALAMO ROAD
PLAN AND PROFILE
STA. 127+50 TO STA. 132+50

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 4 OF 6

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

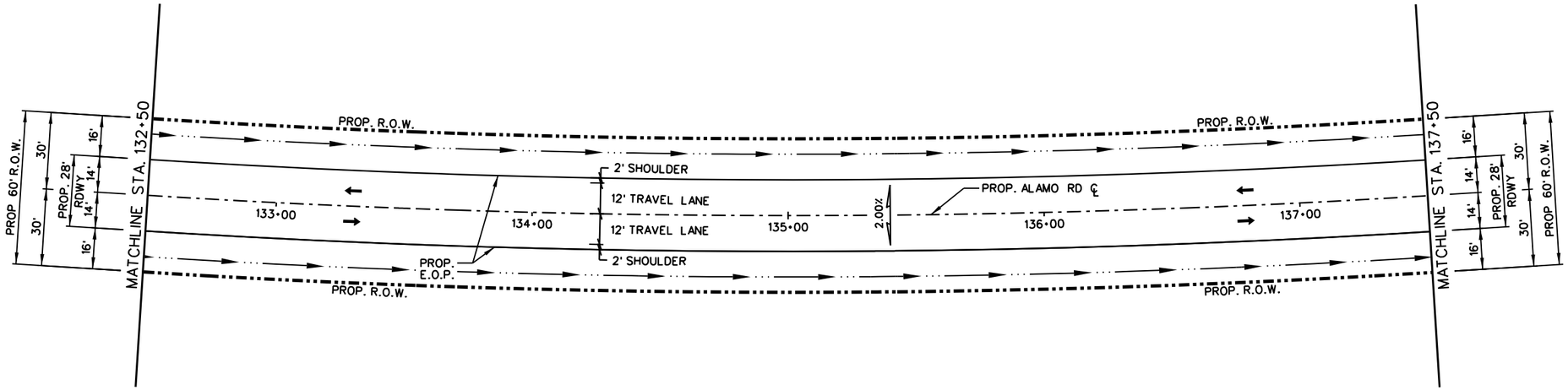
FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					37
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
PHR	HIDALGO	0921	02	311		ALAMO

K:\Counties\HID\FM 907 (North of FM1925)\03 ROADWAY\02 P&P\FM 907_PP04.dgn

11/17/2017

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY



LEGEND:

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- PROPOSED PLANING (0-1½") AND OVERLAY
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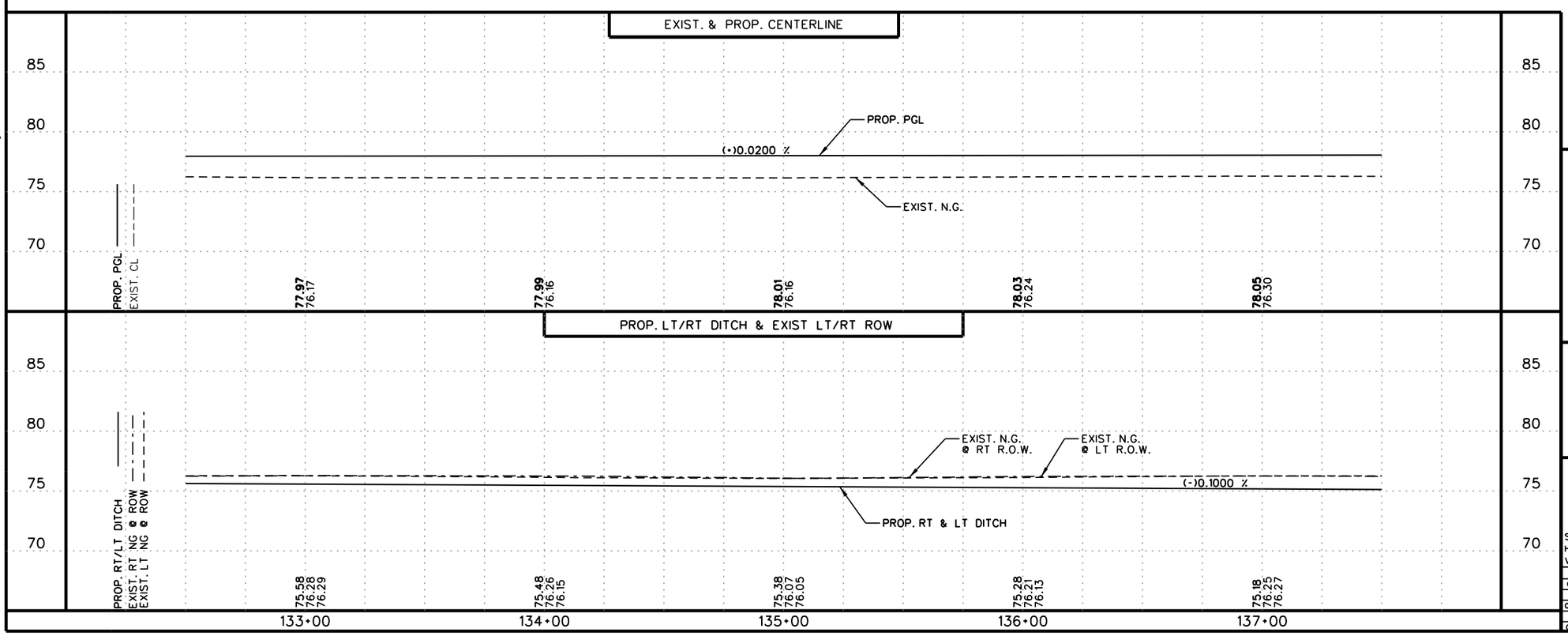
- TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- DIRECTION OF PROPOSED ROADSIDE DITCH

NOTE:

SEE RDWY DATA SHEET FOR PROP. CENTERLINE DATA.

SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.

11/17/2017



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Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
Fax : (956) 565-9018

900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

ALAMO ROAD
PLAN AND PROFILE
STA. 132+50 TO STA. 137+50

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 5 OF 6

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

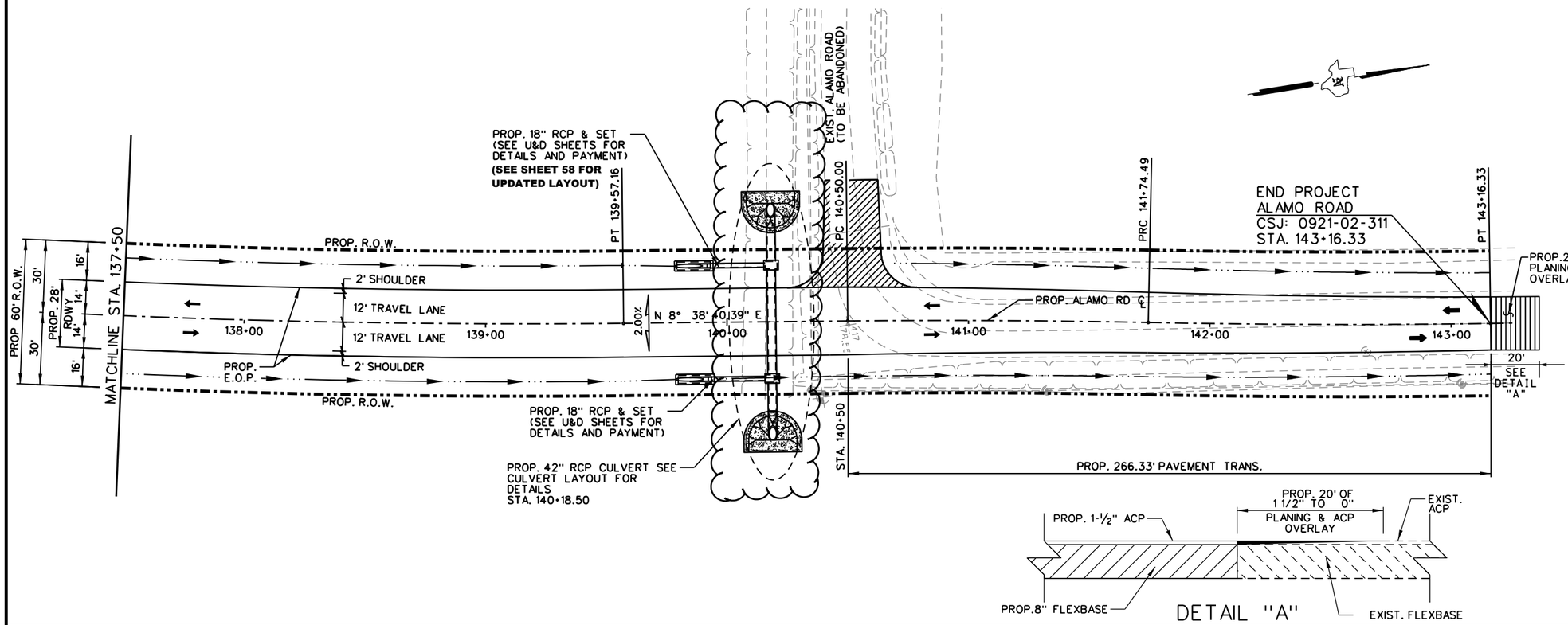
FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					38
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
PHR	HIDALGO	0921	02	311		ALAMO

K:\Counties\HIDLVFM 907 (North of FM1925)\03 ROADWAY\02 P&P\FM 907_PP05.dgn

11/17/2017

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
354	PLANE ASPH CONC.PAV.(0" TO 1 1/2")	SY	49



DETAIL "A"

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½") AND OVERLAY
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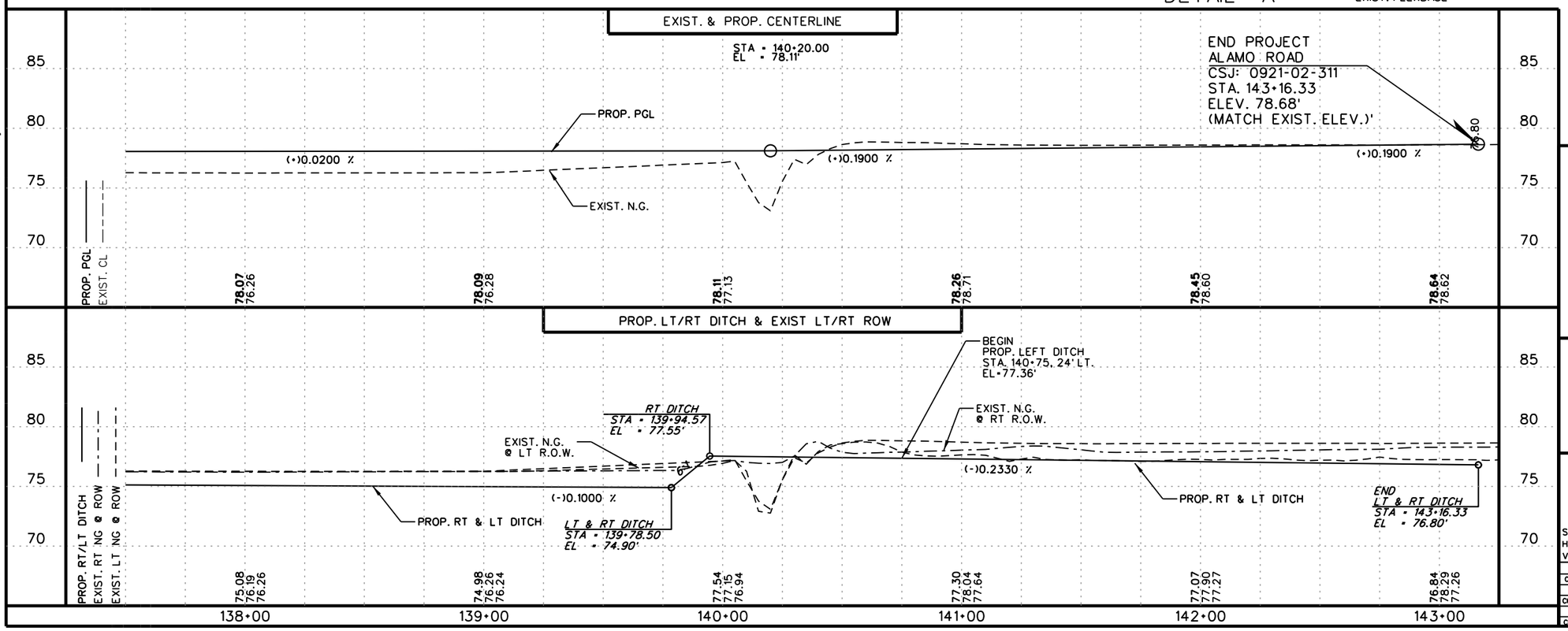
NOTE:
SEE RDWY DATA SHEET FOR PROP. CENTERLINE DATA.

SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.

11/17/2017



L&G Engineering

Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
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900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
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Fax : (956) 585-1927

ALAMO ROAD
PLAN AND PROFILE
STA. 137+50 TO STA. 143+16.33

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 6 OF 6

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:	FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
						6	TEXAS					39
						STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
						PHR	HIDALGO	0921	02	311		ALAMO

11/17/2017

K:\Counties\HIDALGO\FM 907 (North of FM1925)\03 ROADWAY\02 P&P\FM 907_PP06.dgn

SUMMARY OF PROP. PRIVATE DRIVEWAYS & INTERSECTIONS (ITEM 530)

STATION	WIDTH AT ROW (FT)	WIDTH AT RDWY (FT)	LENGTH (FT)	RADIUS (FT)	ITEM 530 2011 PRIVATE D/W (ACP) (TY PB1) (SY) EST.
ALAMO RD					
140+50.00, LT	15	-	44	15	126
GRAND TOTAL					126

NOTE:
ALL PRIVATE COMMERCIAL & RESIDENTIAL DRIVEWAYS ARE TO BE CONSTRUCTED W/ ADA REQUIRED SLOPE FOR FUTURE SIDEWALK.

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED
PROFESSIONAL ENGINEER
08/16/2017

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
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Phone : (956) 565-9813
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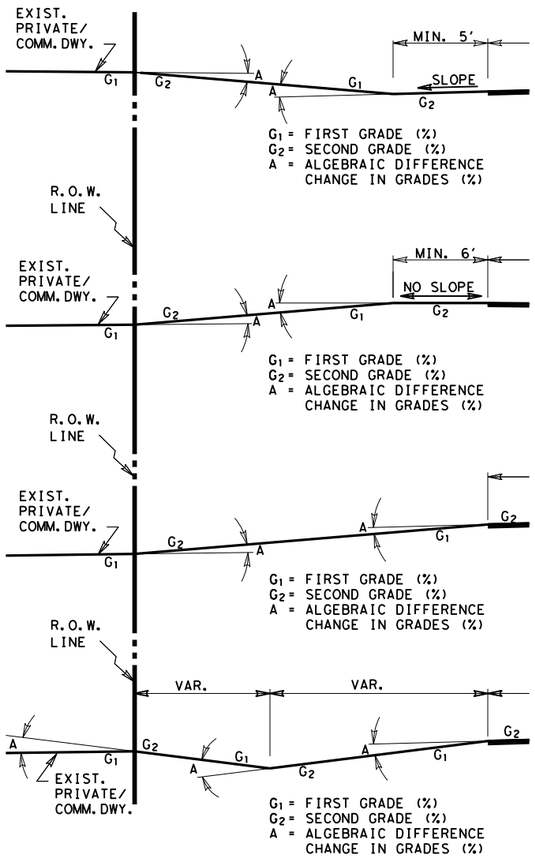
900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

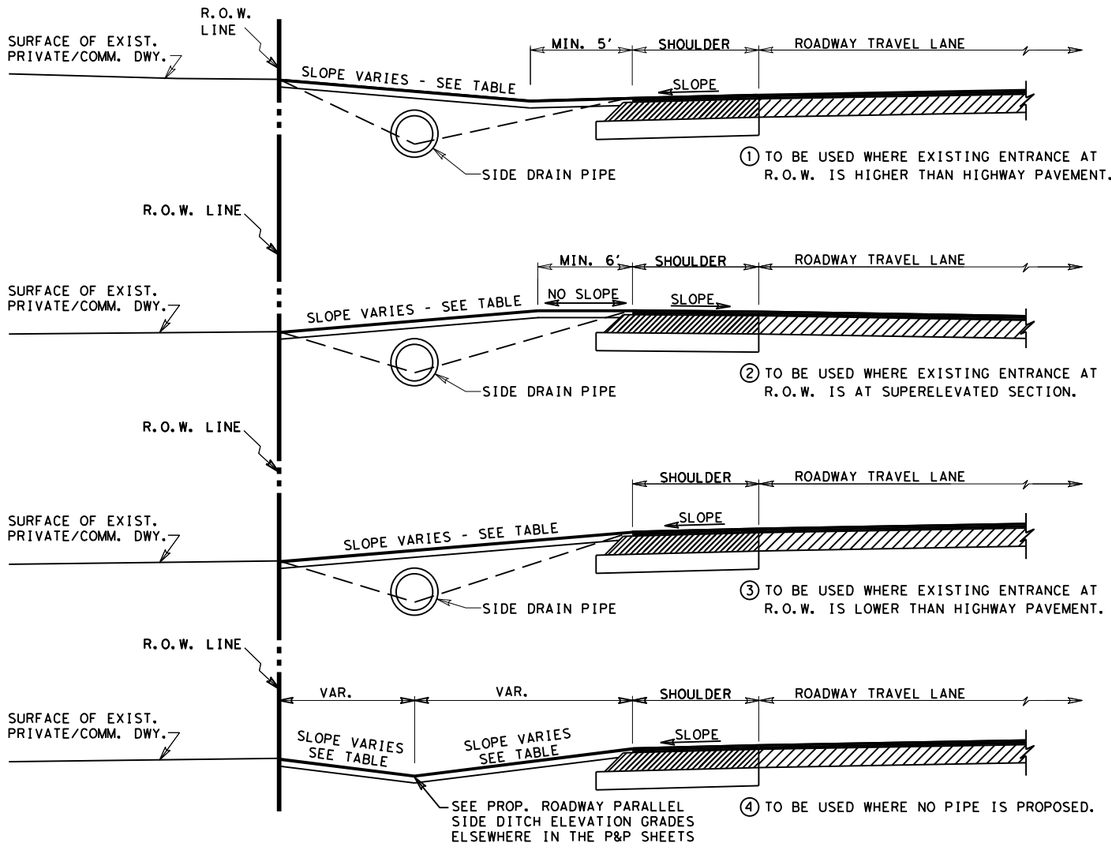
ALAMO RD DRIVEWAY TABLE

SHEET 1 OF 1

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN:		6	TEXAS				40
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:							
TR:		PHR	HIDALGO	0921	02	311	ALAMO
CK TR:							

8/16/2017 K:\Counties\HID\FM 907 (North of FM1925)\03 ROADWAY\05 Driveways\FM 907_DrwyTable.dgn

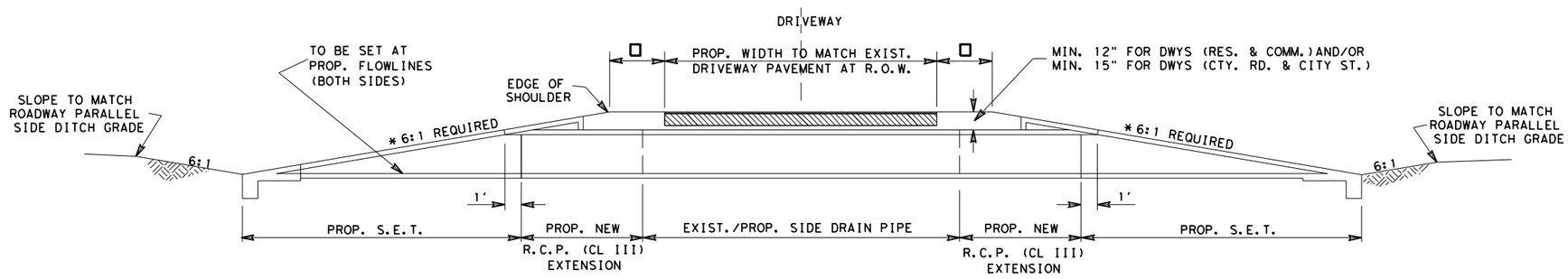




TYPICAL ENTRANCE PROFILE FOR DRIVEWAYS W/OUT C&G

PROPOSED DRIVEWAY SLOPE TABLE
COMMERCIAL DRIVEWAYS @ 12:1 MAX.
RESIDENTIAL DRIVEWAYS @ 8:1 MAX.

PROP. DWY ALGEBRAIC DIFFERENCE TABLE
COMMERCIAL DRIVEWAYS @ A = 6% MAX.
RESIDENTIAL DRIVEWAYS @ A = 8% MAX.



□ - 1' MIN. ON DRIVEWAYS (RES. & COMM.)
2' MIN. ON DRIVEWAYS (COUNTY RD. & CITY ST.)

* - 6:1 SLOPE REQUIRED

NOTES:

ALL ENTRANCES CONSTRUCTED ON THIS PROJECT ARE SUBJECT TO CONCURRENCE WITH EXISTING GOVERNING REGULATIONS AS SET OUT BY THE STATE - TEXAS TRANSPORTATION COMMISSION.

ENTRANCE'S BASE AND SURFACING MAY BE EXTENDED BEYOND R.O.W. LINE AS REQUIRED TO MEET EXISTING DRIVEWAY GRADE IN A SATISFACTORY MANNER OF WHICH NO STEEPER THAN 12:1 FOR COMMERCIAL DRIVEWAY AND 8:1 FOR RESIDENTIAL DRIVEWAY SLOPE WILL BE CONSTRUCTED.

ALL FLEXIBLE BASE USED FOR PRIVATE DRIVES & COMMERCIAL DRIVES WILL NOT REQUIRE LIME TREATMENT.

EXACT LOCATIONS, DIMENSIONS, AND TYPE TO BE ESTABLISHED DURING CONSTRUCTION BY THE ENGINEER.

PROP. WIDTH OF DRIVEWAYS TO MATCH EXISTING WIDTH AT R.O.W. LINE.

114 #/SY ACP (COMPACTED) IS EQUAL TO 1 IN. DEPTH,
171 #/SY ACP (COMPACTED) IS EQUAL TO 1½ IN. DEPTH.

SIDE DRAIN PIPES TO BE INSTALLED WHERE ROADWAY DITCH DRAINAGE IS NECESSARY, AS INDICATED ON PLANS AND/OR AS DIRECTED BY THE ENGINEER.

SIDE DRAIN PIPES TO BE INSTALLED WITH A MINIMUM OF 12" COVER WITH PROPOSED RESIDENTIAL & COMMERCIAL DRIVEWAY MATERIAL OR 15" COVER WITH PROPOSED COUNTY ROAD & CITY STREET ROADWAY MATERIAL.

AVERAGE DRIVEWAY DIMENSIONS SHOWN ON TABLE OF DRIVEWAYS (ELSEWHERE IN PLANS) ARE FOR ESTIMATING PURPOSES ONLY. ACTUAL DRIVEWAY DIMENSIONS MAY BE CHANGED BY THE ENGINEER BASED ON EXISTING FIELD CONDITIONS.

THE RATE OF PRIME COAT SHALL BE 0.10 GAL/SY FOR PRIVATE AND/OR COMMERCIAL DRIVEWAYS AND 0.20 GAL/SY FOR PUBLIC DRIVEWAYS (COUNTY ROADS AND/OR CITY STREETS).

TYPICALLY A CHANGE IN GRADE OF THREE PERCENT (3%) OR LESS AND A DISTANCE BETWEEN CHANGES IN GRADE OF AT LEAST ELEVEN FEET (11') ACCOMMODATES MOST VEHICLES. HOWEVER, LITERATURE SUGGESTS THAT A SIX PERCENT (6%) TO EIGHT PERCENT (8%) CHANGE IN GRADE MAY OPERATE EFFECTIVELY. INDIVIDUAL SITE CONDITIONS SHOULD BE EVALUATED TO ACCOMMODATE THE VEHICLE FLEET USING THE DRIVEWAY.

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PHARR DISTRICT STANDARD

TEXAS DEPARTMENT OF TRANSPORTATION

DRIVEWAY PROFILE DETAILS

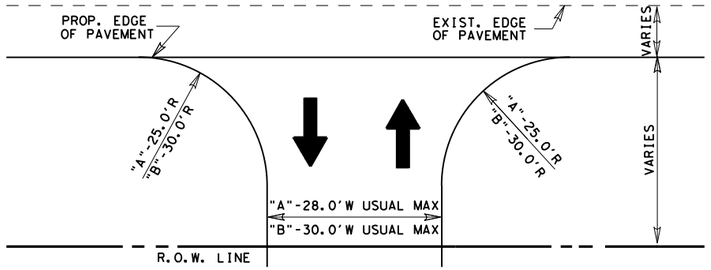
REV. 1/17

DRIVEWAY1.DGN

FED. RD. DIV. NO.	STATE AID PROJECT NO.	FILE NO.	SHEET NO.
6			41

STATE	STATE DIST. NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TEXAS	21	HIDALGO	0921	02	331	ALAMO

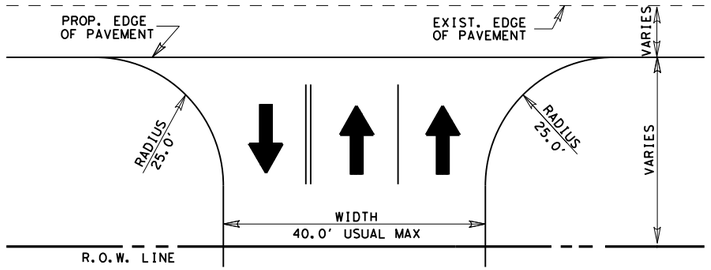
DESIGNS FOR TWO-WAY COMMERCIAL DRIVEWAYS



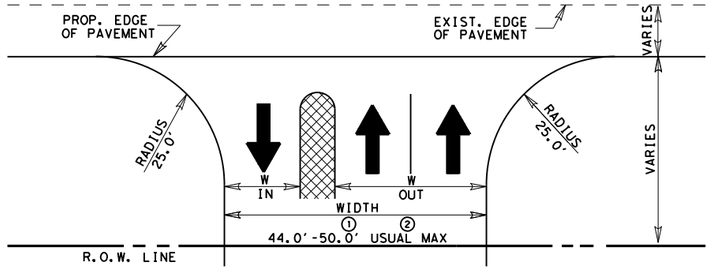
"A"- ONE ENTRY LANE AND ONE EXIT LANE, FEWER THAN 4 LARGE VEHICLES PER HOUR

"B"- ONE ENTRY LANE AND ONE EXIT LANE, 4 OR MORE SINGLE UNIT VEHICLES① PER HOUR

① - *DRIVEWAY DESIGNS FOR LARGER VEHICLES WILL BE CONSIDERED ON A CASE BY CASE BASIS*

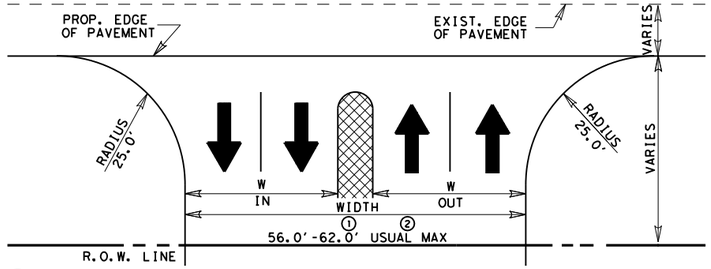


ONE ENTRY LANE AND TWO EXIT LANES (WITHOUT DIVIDERS)



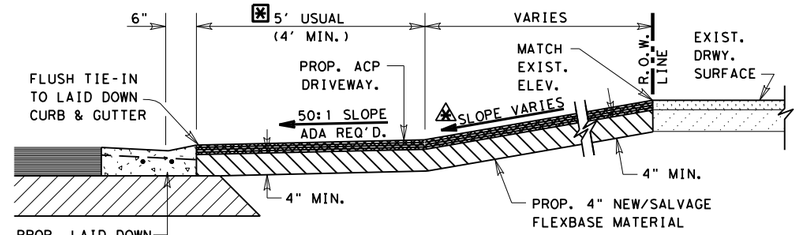
① - *4.0' WIDE DIVIDER, FACE-TO-FACE CURBS*
② - *10.0' WIDE DIVIDER, FACE-TO-FACE-CURBS*

ONE ENTRY LANE AND TWO EXIT LANES (WITH A DIVIDER)



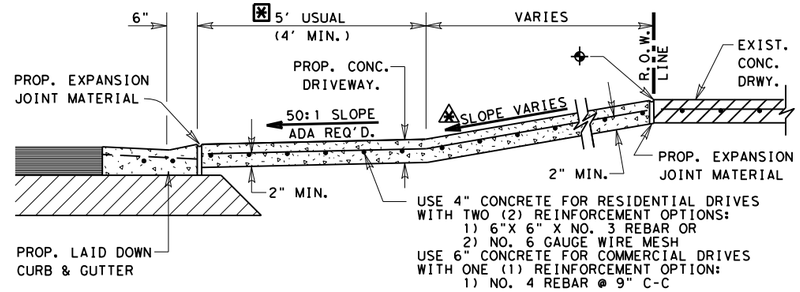
① - *4.0' WIDE DIVIDER, FACE-TO-FACE CURBS*
② - *10.0' WIDE DIVIDER, FACE-TO-FACE-CURBS*

TWO ENTRY LANES AND TWO EXIT LANES (WITH A DIVIDER)



TYPICAL ASPH. CONC. PVM'T. DRIVEWAY SECTION

N.T.S.



TYPICAL CONCRETE DRIVEWAY SECTION

N.T.S.

⊕ CONCRETE SHALL BE SAW CUT TO THE LIMITS OF REMOVAL WHERE APPLICABLE.

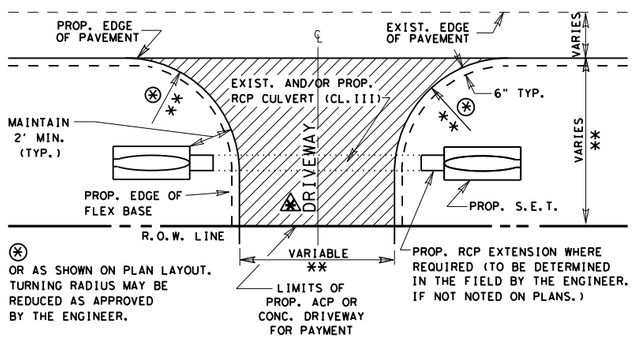
⊠ PROP./FUTURE SIDEWALK CROSSING LOCATION UNLESS SHOWN ELSEWHERE ON P&P SHEETS. SEE P&P SHEETS FOR PROP. SIDEWALK LOCATION IF SIDEWALKS ARE INCLUDED AS PART OF PROJECT. REFER TO STATE STANDARDS - PEDESTRIAN FACILITIES - FOR ADDITIONAL REQUIREMENTS.

⚠ ENTRANCE'S BASE AND SURFACING MAY BE EXTENDED BEYOND R.O.W. LINE AS REQUIRED TO MEET EXISTING GRADE IN A SATISFACTORY MANNER OF WHICH NO STEEPER THAN 12:1 FOR COMMERCIAL DRIVEWAY AND 8:1 FOR RESIDENTIAL DRIVEWAY SLOPE WILL BE CONSTRUCTED.

PROP. DWY ALGEBRAIC DIFFERENCE TABLE
COMMERCIAL DRIVEWAYS @ A = 6% MAX. RESIDENTIAL DRIVEWAYS @ A = 8% MAX.

PROPOSED DRIVEWAY SLOPE TABLE
COMMERCIAL DRIVEWAYS @ 12:1 MAX. RESIDENTIAL DRIVEWAYS @ 8:1 MAX.

PRIVATE AND COMMERCIAL DRIVES WITHOUT CURB & GUTTER



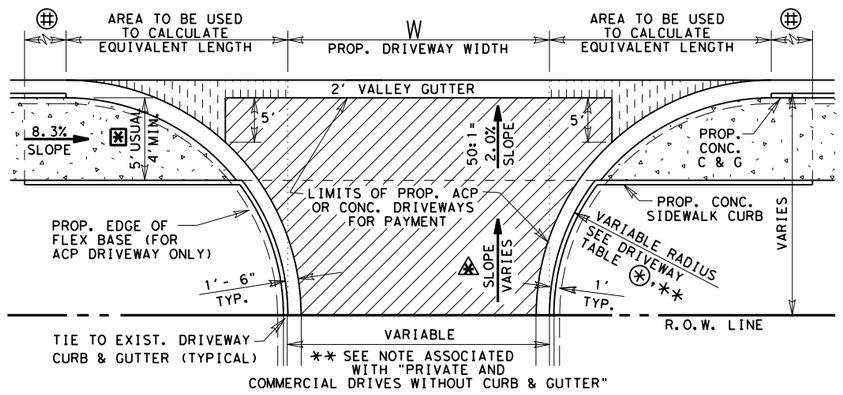
⊛ OR AS SHOWN ON PLAN LAYOUT. TURNING RADIUS MAY BE REDUCED AS APPROVED BY THE ENGINEER.

PLAN OF PRIVATE AND COMMERCIAL DRIVES

** FOR PRIVATE RESIDENTIAL DRIVES, TRY TO MATCH EXISTING WITH A MINIMUM WIDTH OF 12 FT. AND A MAXIMUM WIDTH OF 24 FT. WITH 15 FT. USUAL RADIUS. FOR COMMERCIAL DRIVES, USE ABOVE COMMERCIAL DRIVEWAY DETAILS.

⚠ SEE TYPICAL DRIVEWAY SECTIONS NOTES FOR DRIVEWAY SLOPE CRITERIA.

PRIVATE AND COMMERCIAL DRIVES WITH CURB & GUTTER



** SEE NOTE ASSOCIATED WITH "PRIVATE AND COMMERCIAL DRIVES WITHOUT CURB & GUTTER"

PLAN OF PRIVATE AND COMMERCIAL DRIVES

SEE P&P SHEETS FOR LOCATIONS OF DRIVES
N.T.S.

⊠ PROP./FUTURE CONC. SIDEWALK LOCATION UNLESS SHOWN ELSEWHERE ON P&P SHEETS. REFER TO STATE STANDARDS - PEDESTRIAN FACILITIES - FOR ADDITIONAL REQUIREMENTS.

⊕ LIMITS OF SLOPE FOR PROP. CONC. CURB BASED ON 8.3% SLOPE FOR SIDEWALK.

⚠ SEE TYPICAL DRIVEWAY SECTIONS NOTES FOR DRIVEWAY SLOPE CRITERIA.

LF EQUIVALENT TABLE FOR PAYMENT LIMITS OF 2' VALLEY GUTTER

LF OF VALLEY GUTTER= W + X1 + X2

WHERE X1 AND X2 MAY VARY DEPENDING ON RADIUS

Prop. Driveway Radius	X1 or X2 (Sq Ft Area / 2') Equivalent LF Length
5'	1
8'	2
10'	4
12'	6
15'	9
18'	12
20'	15
22'	18
25'	24
28'	30
30'	34

SEE DRIVEWAY TABLE FOR LIMITS OF LAID DOWN CURB TO BE PAID FOR AS CURB AND GUTTER

DRIVEWAY TYPES

TY PB-1
EXIST. PRIVATE OR COMMERCIAL DRIVEWAYS TO BE CONSTRUCTED AS SHOWN WITH 4" NEW AND/OR SALVAGE FLEX. BASE, PRIMED AND SURFACED WITH 114#/SY ACP.

CONCRETE (RESIDENTIAL)
EXIST. PRIVATE DRIVEWAYS TO BE CONSTRUCTED AS SHOWN WITH 4" CONCRETE. TO BE PAID FOR BY THE SQ.YD.

CONCRETE (COMMERCIAL)
EXIST. BUSINESS DRIVEWAYS TO BE CONSTRUCTED AS SHOWN WITH 6" CONCRETE. TO BE PAID FOR BY THE SQ.YD.

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PHARR DISTRICT STANDARD

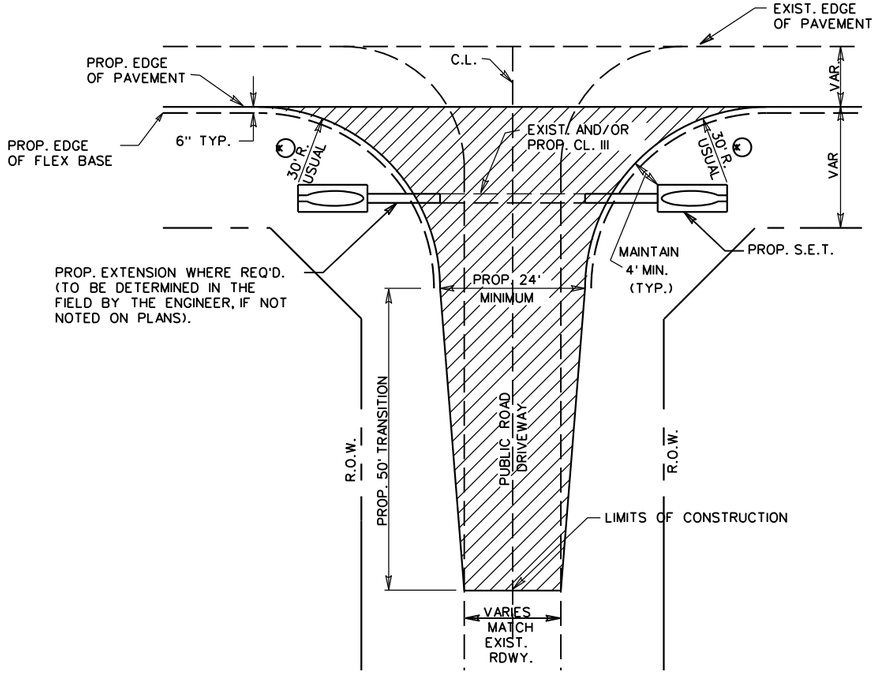
TEXAS DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS PRIVATE (RESIDENTIAL-COMMERCIAL)

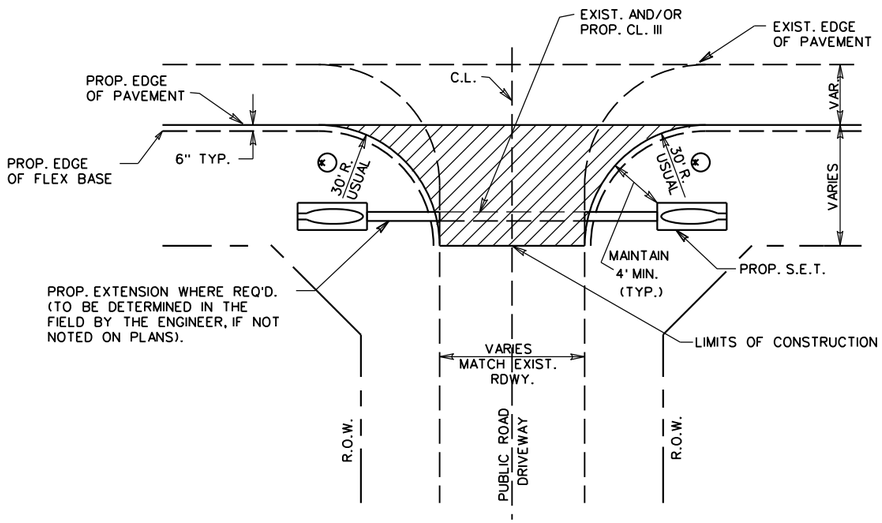
REV. 01/17

DRIVEWAY2.DGN

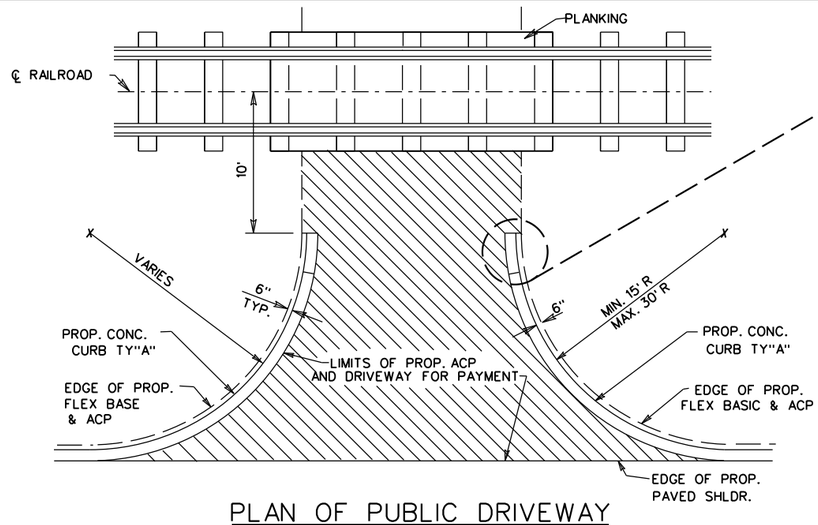
FED. RD. DIV. NO.	PROJECT NO.		FILE NO.			SHEET NO.
6						42
STATE	STATE DIST. NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TEXAS	21	HIDALGO	0921	02	331	ALAMO



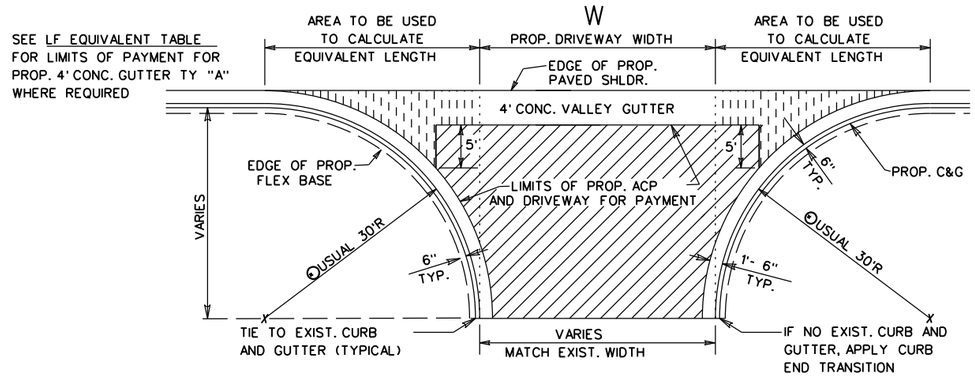
TYPICAL DETAIL
(WHEN EXIST. ROADWAY WIDTH LESS THAN 24'.)



TYPICAL DETAIL
(WHEN EXIST. ROADWAY WIDTH EQUAL TO OR GREATER THAN 24'.)



PLAN OF PUBLIC DRIVEWAY ADJACENT TO R.R. CROSSING



PLAN OF PUBLIC DRIVEWAY

TY P

EXIST. PAVED DRIVEWAYS TO BE SURFACED W/171#/SY ACP.

TY PRB1

EXIST. PAVED, CALICHE AND/OR GRAVEL DRIVEWAYS TO BE SCARIFIED AND RECONTRUCTED WITH 4" NEW FLEX. BASE W/1% LIME TO MATCH THE PROPOSED WIDENED SECTION, THEN PRIMED AND SURFACED WITH 171#/SY ACP

TY PBS1

EXIST. UNPAVED PUBLIC DRIVEWAYS TO BE CONSTRUCTED AS SHOWN WITH 12" LIME TREAT. SUBGRADE, 8" FLEX. BASE 1% LIME, THEN PRIMED AND SURFACED WITH 171#/SY ACP.

TY PBS2

EXIST. DRIVEWAY TO BE CONSTRUCTED SAME AS ROADWAY.

LF EQUIVALENT TABLE FOR PAYMENT LIMITS OF 4'CONC. GUTTER TY."A"

LF OF VALLEY GUTTER= W + X1 + X2

WHERE X1 AND X2 MAY VARY DEPENDING ON RADIUS

Prop. Driveway Radius	X1 or X2 (Sq Ft Area / 4') Equivalent LF Length
10	3
15	7
20	12
25	19
30	27
35	37
40	48
45	61
50	75
55	91
60	109
65	127
70	148
75	170

GENERAL NOTES:

AVERAGE DIMENSIONS SHOWN ON TABLE OF DRIVEWAYS ARE FOR ESTIMATING PURPOSES ONLY.

LOCATIONS LISTED ON THE TABLE ARE APPROXIMATE, EXACT LOCATIONS, DIMENSIONS, AND TYPE TO BE ESTABLISHED DURING CONSTRUCTION BY THE ENGINEER AS REQUIRED.

℄ SEE DRIVEWAY TABLE, TURNING RADIUS MAY BE REDUCED AS APPROVED BY THE ENGINEER.

SEE TABLE OF DRIVEWAYS FOR TOTAL LENGTH OF PROP. 4' CONC. VALLEY GUTTER FOR EACH LOCATION.

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PHARR DISTRICT STANDARD

TEXAS DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS PUBLIC (COUNTY ROAD-CITY STREET)

REV. 4/05 DRIVEWAY3.DGN

FED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						43
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	21	HIDALGO	0921	02	311	ALAMO

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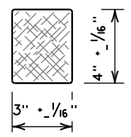
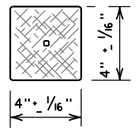
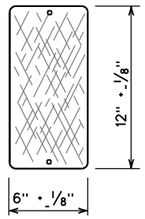
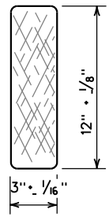
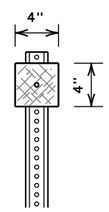
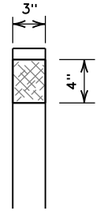
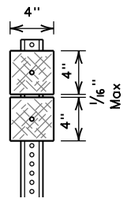
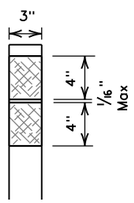
REFLECTOR UNIT SIZES FOR DELINEATORS AND OBJECT MARKERS

	SIZE 1	SIZE 2	SIZE 3	SIZE 4
DEVICE				
SHEETING	Yellow, White or Red Type B or C reflective sheeting			

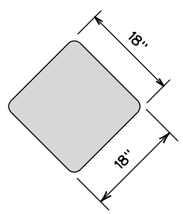
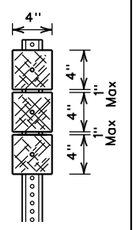
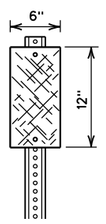
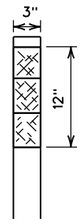
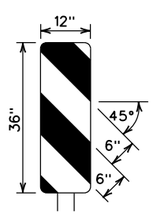
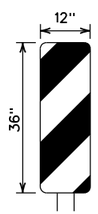
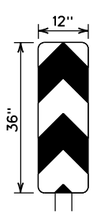
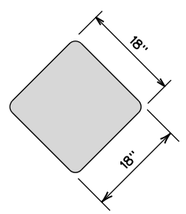
NOTE

1. Size 1 and 4 - Direct applied reflective sheeting for use on flexible post (flx).
2. Size 2 and 3 - For use on wing channel (wc) post only. Use approved metal, plastic or fiberglass backplate with 17/64" mounting holes.

DELINEATORS

	SINGLE		DOUBLE	
DEVICE	 1-Size 2 reflector unit	 1-Size 1 reflector unit	 2-Size 2 reflector units	 2-Size 1 reflector units
SHEETING	Yellow, White or Red Type B or C Reflective Sheeting			
POST TYPE	WC	FLX	WC	FLX
MOUNT TYPE	GND	GND, SRF	GND	GND, SRF

OBJECT MARKERS

	Type 1 (OM-1)	Type 2 (OM-2)			Type 3 (OM-3)			Type 4 (OM-4)
	OM-1	OM-2X	OM-2Y	OM-2Z	OM-3L	OM-3R	OM-3C	OM-4
DEVICE		 3-Size 2 reflector units	 1-Size 3 reflector unit	 3-Size 1 reflector units or 1-Size 4 reflector unit				
SHEETING	Yellow-Type B or C Sheeting (FL)	Yellow - Type B or C Sheeting			Alternating acrylic black and retroflective yellow - Type B or C Sheeting (FL)			Red -Type B or C Sheeting (FL)
POST TYPE	TWT	WC	WC	FLX	TWT			TWT
MOUNT TYPE	WAS, WAP	GND	GND	GND, SRF	WAS, WAP			WAS, WAP

D & OM DESCRIPTIVE CODES

INSTL DEL ASSM (D-XX)SZ X (XXX)XXX(XX)

NUMBER OF REFLECTORS
- S = Single
- D = Double

COLOR OF REFLECTORS
- W = White
- Y = Yellow
- R = Red

REFLECTOR UNIT SIZE
1 or 2

TYPE OF POST OR DELINEATOR
- WC = Wing Channel Post
- FLX = Flexible Post
- BRF = Barrier Reflector

TYPE OF MOUNT
- GND = Embedded (drivable or set in concrete)
- CTB = Concrete Barrier Mount
- GF1 or GF2 = Guard Fence Attachment
- SRF = Surface Mount

DIRECTION
If Required
- BI = Bi-Directional
- BR = Bi-Directional with red on back

INSTL OM ASSM (OM-XX) (XXX)XXX(XX)

TYPE OF OBJECT MARKER
1, 2, 3, or 4

NUMBER OF REFLECTORS OR DIRECTION
- X = 3-Size 2 reflector units (Type 2 only)
- Y = 1-Size 3 reflector unit (Type 2 only)
- Z = 3-Size 1 or 1-Size 4 reflector unit(s)(Type 2 only)
- L = Left Side (Type 3 Object Marker only)
- R = Right Side (Type 3 Object Marker only)
- C = Center (Type 3 Object Marker only)

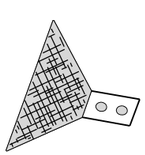
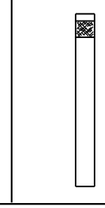
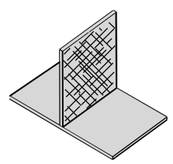
TYPE OF POST
- WC = Wing Channel Post
- FLX = Flexible Post
- TWT = Thin Walled Tubing

TYPE OF MOUNT
- GND = Embedded (drivable)
- SRF = Surface Mount
- WAS = Wedge Anchor Steel
- WAP = Wedge Anchor Plastic

DIRECTION
If Required
- BI = Bi-Directional

DEPARTMENTAL MATERIAL SPECIFICATIONS	
FLEXIBLE DELINEATOR & OBJECT MARKER POSTS (EMBEDDED & SURFACE MOUNT TYPES)	DMS-4400
SIGN FACE MATERIALS	DMS-8300
DELINEATORS, OBJECT MARKERS AND BARRIER REFLECTORS	DMS-8600

BARRIER REFLECTORS (BRF)

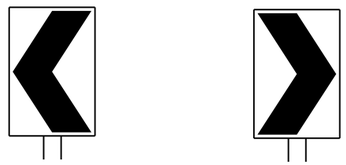
	GF1	GF2	CTB
DEVICE			

1. Barrier reflectors shall meet the requirements of DMS 8600.
2. Approved Barrier Reflectors are listed on the "Barrier Reflectors" Material Producer List at: www.txdot.gov.

SHEETING	Yellow, White, Red
NOTE	1. Minimum 9 square inches of reflective sheeting surface area.

CHEVRONS

DEVICE



W1-8

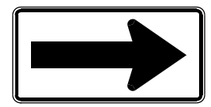
SIZE (W x L)	18"x 24" (Conventional)	24"x 30" (Conventional Oversize)	30"x 36" (Expressway)	36" x 48" (Freeway)
MOUNTING HEIGHT	4'-0" or 7'-0"		7'-0" Only	

NOTE

1. CHEVRON (W1-8) signs and ONE DIRECTION LARGE ARROW (W1-6) Signs shall be installed per Sign Mounting Details (SMD) Standard Sheets and paid under Item 644 (Small Roadside Sign Assemblies).
2. The Texas version of the ONE DIRECTION LARGE ARROW sign (W1-9T) may be used instead of the ONE DIRECTIONAL LARGE ARROW (W1-6).

ONE DIRECTION LARGE ARROW

DEVICE



W1-6

SIZE (W x L)	48" x 24" (Conventional)	60" x 30" (Expressway & Freeway)
MOUNTING HEIGHT	7'-0"	

NOTE:

Delineator and object marker backplates and sign substrates shall be 0.080" Aluminum sign blank to conform to ASTM B-209 Alloy 6061-T6 or approved alternative.

Texas Department of Transportation

Traffic Operations Division Standard

DELINEATOR & OBJECT MARKER MATERIAL DESCRIPTION

D & OM(1)-15

FILE: dom1-15.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
10-09 3-15	DIST	COUNTY		SHEET NO.
4-10	PHR	HIDALGO		44

DATE:
FILE:

20A

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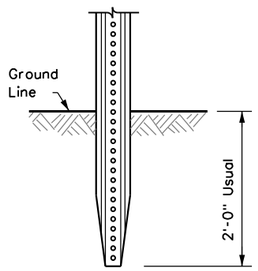
DATE:
FILE:

POST TYPE AND SUPPORT FOUNDATION DETAILS

WING CHANNEL (WC)

GND

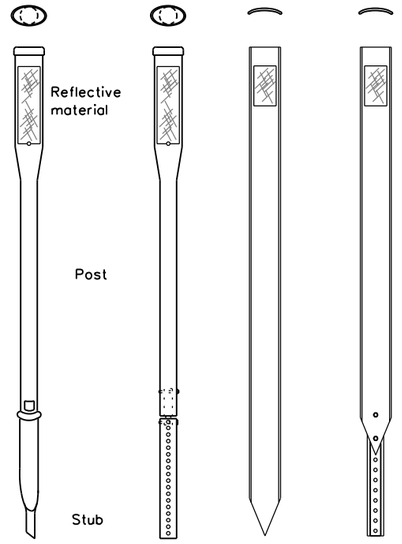


NOTES

1. Embedded Wing Channel (WC) post option may be used for Type 2 Object Markers and Delineators only.
2. 1.12 lbs/ft steel per ASTM A 1011 SS Gr. 50, or ASTM A499.

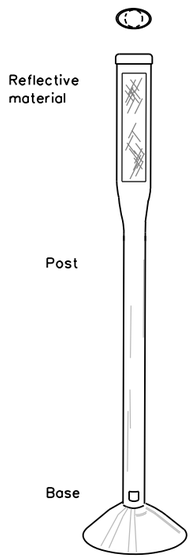
FLEXIBLE POSTS (FLX)

GND



EMBEDDED

SRF



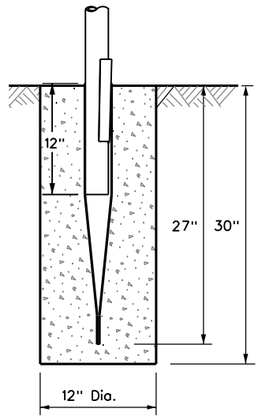
SURFACE MOUNT

NOTES

1. See "Flexible Delineator and Object Marker Posts" Material Producer List for approved devices.
2. Install per manufacturer's recommendations.
3. Post length may vary to meet field conditions.

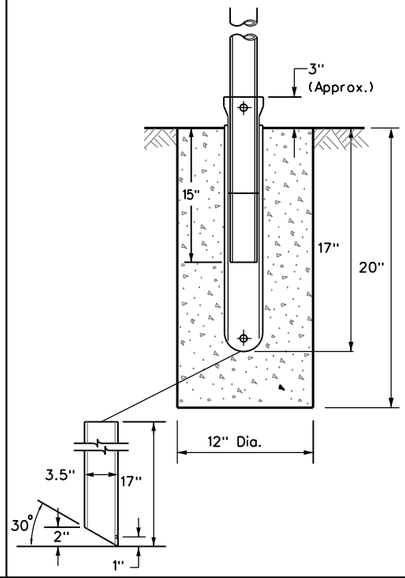
WEDGE ANCHOR SYSTEMS

WAS



STEEL

WAP



PLASTIC

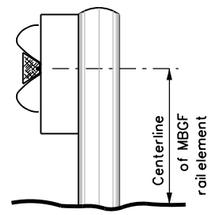
NOTE

1. Install per manufacturer's recommendations.

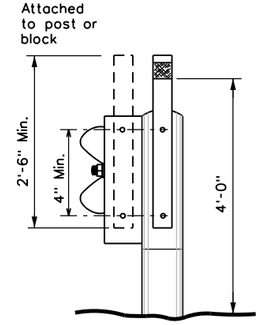
TYPE OF BARRIER MOUNTS

GUARD FENCE ATTACHMENT

GF1

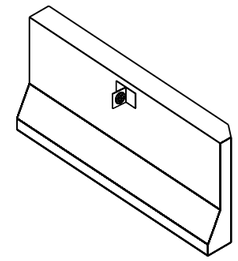


GF2



CONCRETE BARRIER / BRIDGE RAIL

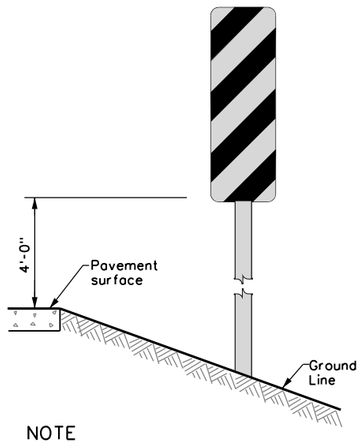
CTB



GENERAL NOTES

1. Place delineators on a section of roadway at a consistent distance from the edge of pavement.
2. Where a restriction prevents consistent placement from the pavement edge, place the affected object markers in line with the innermost edge of the obstruction.
3. When Type 2 object markers and delineators are more than 8'-0" from the edge of the pavement, it may not be possible to maintain a height of approximately 4'-0". If this is the case, place the object marker or delineator as close to the desired height as possible.
4. Install all delineators, object markers and barrier reflectors in accordance with the manufacturer's recommendation.
5. Barrier reflectors should be installed a minimum of 18 inches above the edge of the pavement surface.

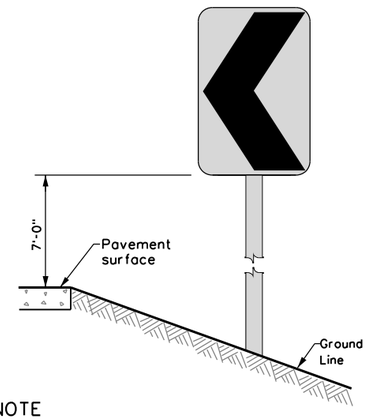
TYPES 1, 3, AND 4 OBJECT MARKERS AND CHEVRONS



NOTE

Mounting at 4 feet to the bottom of the chevron is permitted for chevrons that will not exceed a height of 6'-6" to the top of the chevron (sizes 24" x 30" and smaller)

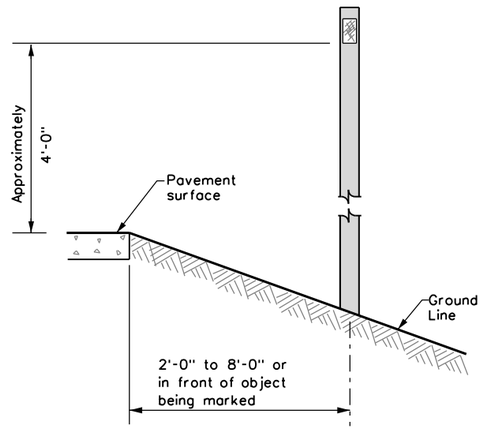
CHEVRONS AND ONE DIRECTION LARGE ARROW SIGN



NOTE

Chevrons 30" x 36" and larger shall be mounted at a height of 7' to the bottom of the chevron. Chevron sign and ONE DIRECTIONAL LARGE ARROW sign (W1-9T) shall be installed per SMD standard sheets and paid under item 644.

DELINEATORS AND TYPE 2 OBJECT MARKERS



See general notes 1, 2 and 3.

Texas Department of Transportation

Traffic Operations Division Standard

DELINEATOR & OBJECT MARKER INSTALLATION

D & OM(2)-15

FILE: dom2-15.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
© TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
10-09 3-15	DIST	COUNTY		SHEET NO.
4-10	PHR	HIDALGO		45

20B

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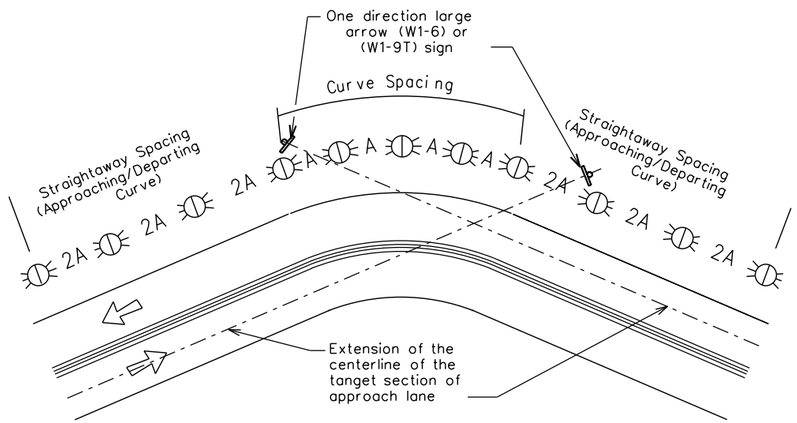
USE OF WARNING DEVICES AT CURVES WITH ADVISORY SPEED LIMITS

Amount by which Advisory Speed Is less than Posted Speed	Warning Devices Needed
5 MPH & 10 MPH	RPMs
15 MPH & 20 MPH	RPMs, and Delineators or RPMs and ONE DIRECTION LARGE ARROW (W1-6) or (W1-9T) sign
25 MPH & Greater	RPMs and Chevrons

SUGGESTED SPACING FOR DELINEATORS ON HORIZONTAL CURVES

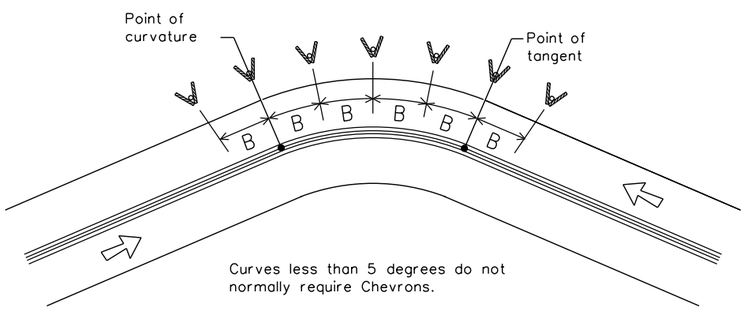


Curves less than 1 degree do not normally require delineators.

NOTE

ONE DIRECTIONAL LARGE ARROW (W1-6) or(W1-9T) sign should be located at approximately and perpendicular to the extension of the centerline of the tangent section of approach lane.

SUGGESTED SPACING FOR CHEVRONS ON HORIZONTAL CURVES



Curves less than 5 degrees do not normally require Chevrons.

DELINEATOR AND CHEVRON SPACING

WHEN DEGREE OF CURVE OR RADIUS IS KNOWN

Degree of Curve	FEET			
	Radius of Curve	Spacing in Curve	Spacing in Straightaway	Chevron Spacing in Curve
		A	2A	B
1	5730	225	450	——
2	2865	160	320	——
3	1910	130	260	200
4	1433	110	220	160
5	1146	100	200	160
6	955	90	180	160
7	819	85	170	160
8	716	75	150	160
9	637	75	150	120
10	573	70	140	120
11	521	65	130	120
12	478	60	120	120
13	441	60	120	120
14	409	55	110	80
15	382	55	110	80
16	358	55	110	80
19	302	50	100	80
23	249	40	80	80
29	198	35	70	40
38	151	30	60	40
57	101	20	40	40

Curve delineator approach and departure spacing should include 3 delineators spaced at 2A. This spacing should be used during design preparation or when the degree of curve is known.

DELINEATOR AND CHEVRON SPACING

WHEN DEGREE OF CURVE OR RADIUS IS NOT KNOWN

Advisory Speed (MPH)	Spacing in Curve	Spacing in Straightaway	Chevron Spacing in Curve
	A	2xA	B
65	130	260	200
60	110	220	160
55	100	200	160
50	85	170	160
45	75	150	120
40	70	140	120
35	60	120	120
30	55	110	80
25	50	100	80
20	40	80	80
15	35	70	40

If the degree of curve is not known, delineator spacing may be determined based on the Advisory Speed of the curve. Use the delineator curve spacing for each Advisory Speed (MPH).

DELINEATOR AND OBJECT MARKER APPLICATION AND SPACING

CONDITION	REQUIRED TREATMENT	MINIMUM SPACING
Frwy./Exp. Tangent	RPMs	See PM-series and FPM-series standard sheets
Frwy./Exp. Curve[1]	Single delineators on right side	See delineator spacing table
FRWY/EXP. Ramp	Single delineators on at least one side of ramp (should be on outside of curves) (see Detail 4 on D&OM(4))	100 feet on ramp tangents. Use delineator spacing table for ramp curves ("straightway spacing" does not apply to ramp curves).
Acceleration/Deceleration Lane	Double delineators (see Detail 4 on D&OM(4))	100 feet (See Detail 4 on D & OM (4))
Truck Escape Ramp	Single red delineators on both sides	50 feet
Bridge Rail (steel or concrete)and Metal Beam Guard Fence or CTB	Bi-Directional Delineators when undivided with one lane each direction Single Delineators when multiple lanes each direction	Equal spacing (100'max) but not less than 3 delineators
Guard Rail Terminus/Impact Head	Divided highway - Object marker on approach end. Undivided 2-lane highways - Object marker on approach and departure end.	Requires Type 3 Object Marker or reflective sheeting provided by manufacturer per D & OM(VIA).
Bridges with no Approach Rail	Type 3 Object Marker at end of rail and 3 single delineators approaching rail.	See Detail 2 on D & OM(4)
Reduced Width Approaches to Bridge Rail	Type 2 Object Markers and 3 single delineators approaching bridge.	See Detail 1 on D & OM(4)
Culverts without MBGF	Type 2 Object Markers	See Detail 3 on D & OM(4)
Crossovers	Double yellow delineators or RPM's	See Detail 5 on D & OM (4)
Pavement Narrowing (lane merge) on Freeways/Expressway	Single delineators adjacent to affected lane for full length of transition	100 feet

NOTES

1. Delineators not required in urban areas with continuous illumination.
2. Unless indicated otherwise, the delineator or barrier reflector color shall conform to the color of the pavement edge line on the side of the road where the delineators or barrier reflectors are placed.
3. Barrier reflectors may be used to replace required delineators.
4. Single red delineators may be mounted on the back side of delineator posts for wrong way driver applications

LEGEND	
	Bi-directional Delineator
	Delineator
	Sign

Texas Department of Transportation

Traffic Operations Division Standard

DELINEATOR & OBJECT MARKER PLACEMENT DETAILS

D & OM(3)-15B

FILE: dom3-15b.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
© TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	331	ALAMO
3-15	DIST	COUNTY		SHEET NO.
8-15	PHR	HIDALGO		46

20C

DATE:
FILE:

END PROJECT
CSJ:0921-02-311
STA. 143+16.33

STA=139+94.14
O/S=80.00'(RT.)

DRAINAGE AREAS INCLUDED & ANALYZED
WITH ALAMO ROAD CULVERT WATERSHED

STA=124+63.59
O/S=-662.22'(LT.)

STA=125+42.45
O/S=-557.35'(LT.)

STA=126+80.00
O/S=80.00'(RT.)

STA=123+04.99
O/S=-787.81'(LT.)

B-12
2.23

B-11
18.68

PROP. ALAMO RD.

STA=116+60.29
O/S=-712.20'(LT.)

STA=115+72.99
O/S=-61.35'(LT.)

STA=115+72.58
O/S=-654.95'(LT.)

STA=114+54.96
O/S=-25.44'(LT.)

BEGIN PROJECT
CSJ:0921-02-311
STA. 114+55.00

STA=114+55.28
O/S=81.91'(RT.)

FM 1925

FM 1925

EXIST. FM 907

LEGEND

A-13 / 1.39	DESIGNATION OF DRAINAGE AREA AREA IN ACRES
	DRAINAGE AREA BOUNDRARY
	EXISTING FLOW DIRECTION

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED
PROFESSIONAL ENGINEER

08/16/2017

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

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Mission, TX. 78572
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ALAMO ROAD
DRAINAGE AREA MAP
(SMALL AREAS)

SCALE: 1" = 300'

SHEET 1 OF 1

ED.RD. DIV.NO.	STATE AID PROJECT NO.	FILE NO.	SHEET NO.
6			48

STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	PHR	HIDALGO	0921	02	311	ALAMO

K:\Counties\HID\FM 907 (North of FM1925)\05 DRAINAGE\Network\ALAMO RD_SMALL_DAM.dgn

8/16/2017

NETWORK "B"

RUNOFF COMPUTATIONS

AREA ID	TOTAL AREA (acres)	TOTAL SUBAREA 1 (acres)	Subarea 1 Description	Subarea 1 "C" Value	TOTAL SUBAREA 2 (acres)	Subarea 2 Description	Subarea 2 "C" Value	TOTAL SUBAREA 3 (acres)	Subarea 3 Description	Subarea 3 "C" Value	Total "C" Value	Tc (min)	Intensity (in/hr)	Discharge (ft/s)
B-11	18.68	17.84	Unimproved Sand/Sandy 0-3	0.18	0.45	Lawns Sandy/Avg 2-7 0-3	0.13	0.40	Street Asph/Conc	0.90	0.19	109.12	1.80	6.52
B-12	2.23	1.39	Unimproved Sand/Sandy 0-3	0.18	0.45	Lawns Sandy/Avg 2-7 0-3	0.13	0.39	Street Asph/Conc	0.90	0.30	70.18	2.47	1.63

NODE CONFIGURATION

Node ID	Library Item Name	Node Station	Node Offset (ft)	Node Elev. (ft)	Node Type	Profile Type	Spread X-Sect. Slope 1 (%)	Spread X-Sect. Width 1 (ft.)	Spread X-Sect. Slope 2 (%)	Spread X-Sect Width 2 (ft.)	Spread X-Sect Slope 3 (%)	Spread X-Sect Width 3 (ft.)	Composite X-Sect. Spread Slope (%)	Longitudinal Slope (%)	Curb Length (ft)	Curb Depression (ft)	Curb Depression Width (ft)	Curb Height (ft)	Grate Length (ft)	Grate Width (ft)	Grate Area (ft)	Grate Perimeter (ft)
B-11	PSL FG 3x5 w 3x3 gr	117+00.00	-24.00	76.00	Grate	Sag	-33.33	6.00	20.00	10.00	2.00	14.00	0.125	n/a	n/a	n/a	n/a	n/a	3.17	3.17	4.54	12.67
B-12	PSL FG 3x5 w 3x3 gr	117+00.00	24.00	76.00	Grate	Sag	-33.33	6.00	20.00	10.00	2.00	14.00	0.125	n/a	n/a	n/a	n/a	n/a	3.17	3.17	4.54	12.67

NODE HYDRAULICS

Node ID	Node Type	Node Profile Type	Node Station	Discharge (ft/s)	Capacity (ft/s)	Max By Pass Flow (ft/s)	By Pass Flow (ft/s)	By Pass Flow Into Node (ft/s)	By Pass Node ID	Node Length Required (ft)	Node Length Actual (ft)	Max Ponded Depth (ft)	Computed Ponded Depth (ft)	Max Ponded Width (ft)	Computed Ponded Width (ft)
B-11	Grate	Sag	117+00.00	6.52	17.24	0.50	0.00	0.00		n/a	n/a	2.00	0.48	16.00	11.23
B-12	Grate	Sag	117+00.00	1.63	17.24	0.50	0.00	0.00		n/a	n/a	2.00	0.19	16.00	6.68

LINK CONFIGURATION

Link ID	Type	Upstream Node	Downstream Node	Material	Library Item Name	Number of Barrels	Actual Length (ft)	Hydraulic Length (ft)	Manning's N Value	Slope (%)	Rise (ft)	Span (ft)	Soffit Upstream (ft)	Soffit Downstream (ft)	Invert Upstream (ft)	Invert Downstream (ft)
LB-12	Pipe	B-11	B-12	Concrete	24 Inch Dia. Circular	1.00	45.00	48.00	0.012	0.20	2.00	n/a	73.68	73.59	71.68	71.59
LB-13	Pipe	B-12	B-MH2	Concrete	24 Inch Dia. Circular	1.00	289.70	294.20	0.012	0.20	2.00	n/a	73.59	73.00	71.59	71.00

LINK HYDRAULICS

Link ID	Upstream Node	Downstream Node	Discharge (ft/s)	Capacity (ft/s)	Uniform Depth (ft)	Uniform Velocity (ft/s)	Critical Depth (ft)	Critical Velocity (ft/s)	Critical Slope (%)	Frict. Slope (%)	Actual Vel. U.S. (ft/s)	Actual Vel. D.S. (ft/s)	Actual Depth U.S. (ft)	Actual Depth D.S. (ft)	HGL U.S (ft)	HGL D.S (ft)	EGL U.S. (ft)	EGL D.S. (ft)
LB-12	B-11	B-12	6.52	11.79	1.12	3.62	0.91	4.72	0.00	0.0020	2.08	2.08	2.00	2.00	75.18	75.15	75.25	75.24
LB-13	B-12	B-MH2	7.70	11.79	1.23	3.79	0.99	4.99	0.00	0.0020	2.45	2.45	2.00	2.00	75.15	74.86	75.24	75.02

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED PROFESSIONAL ENGINEER
11/17/2017

NOTES:

1. CALCULATIONS MADE BY "GEOPAK DRAINAGE" HYDRAULIC COMPUTER PROGRAM.
2. ALLOWABLE PONDING WIDTH = 16' AS PER TXDOT BRIDGE DIVISION HYDRAULIC MANUAL
3. STORM SEWER CALCULATIONS BASED ON MANNING'S FORMULA.
4. TAILWATER, TW, ELEVATION USED FOR THE STORM SEWER DESIGN WAS BASED ON A TW = 73.50' AS PROVIDED BY HIDALGO COUNTY DRAINAGE DISTRICT #1'S "MODELIING & DESIGN REPORT NORTH MAIN DRAIN DITCH, SEPTEMBER 2005".
5. RAINFALL FREQUENCY = 5 YR.
6. DRAINAGE AREA FLOWS DETERMINED BY THE RATIONAL METHOD:

   Q = C*I*A

   Q = RATE OF RUNOFF (CFS)
   C = RUNOFF COEFFICIENT (UNITLESS)
   I = AVERAGE RAINFALL INTENSITY (IN/HR)
   A = DRAINAGE AREA (AC)

L&G Engineering
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Structural / Bridge
Environmental
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Mission, TX. 78572
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Fax : (956) 585-1927

HYDRAULIC DATA
NETWORK "B"

SHEET 1 OF 1

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN:		6	TEXAS				49
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:		PHR	HIDALGO	0921	02	311	ALAMO
TR:	
CK TR:	

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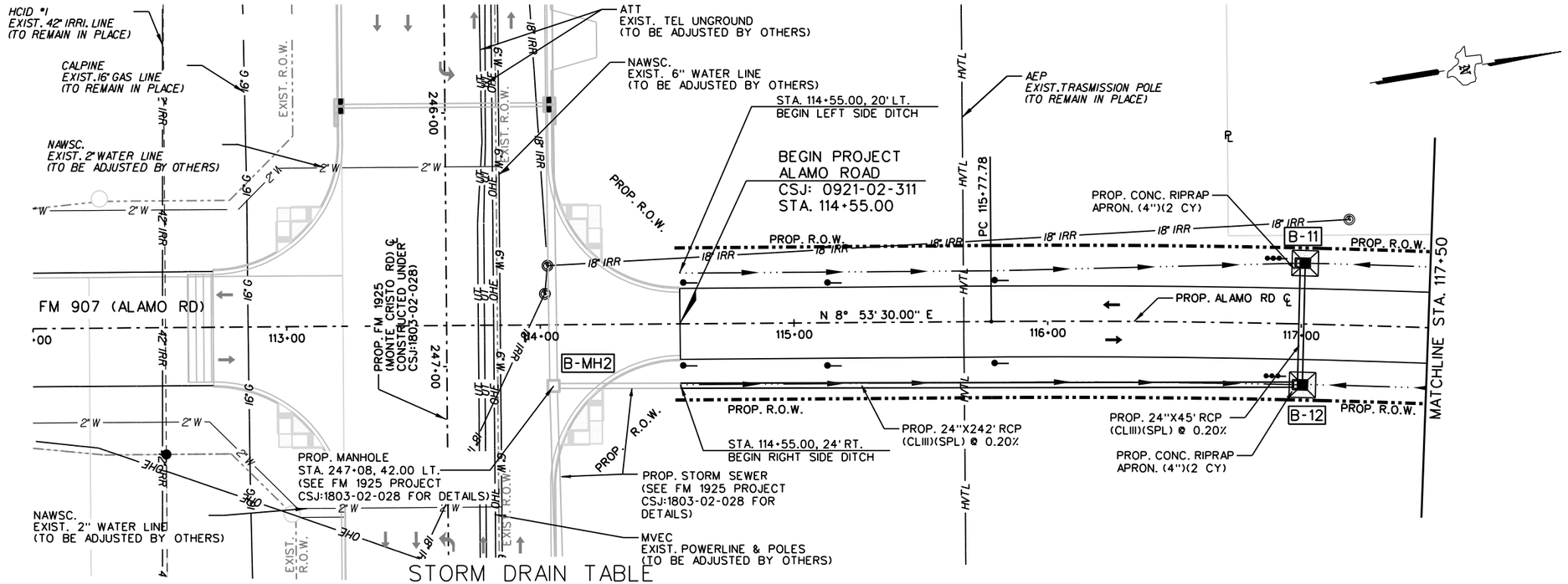
11/17/2017



STORM DRAIN TABLE

STRUCTURE ID	DESCRIPTION	STATION / OFFSET TO FACE OF CURB	TOP OF STR. ELEVATION	PROP. FL. OF STRUCTURE	PROP. FL. OF PIPE (NORTH)	PROP. FL. OF PIPE (SOUTH)	PROP. FL. OF PIPE (EAST)	PROP. FL. OF PIPE (WEST)
B-MH2	EXIST. PSL SL 4x4	STA. 114+05, 24.00 RT.	76.30	69.11	71.00	-	69.11	69.11
B-11	PSL FG 3x5 w 3x3 gr	STA. 117+00, 24.00 LT.	76.00	71.68	-	-	71.68	-
B-12	PSL FG 3x5 w 3x3 gr	STA. 117+00, 24.00 RT.	76.00	71.59	-	71.59	-	71.59

UTILITIES LEGEND

AEP	AMERICAN ELECTRIC POWER
AT&T	AMERICAN TELEPHONE & TELEGRAPH
MVEC	MAGIC VALLEY ELECTRIC COOPERATIVE
NAWSC	NORTH ALAMO WATER SUPPLY CORP.
TWC	TIME WARNER CABLE
HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1
CALPINE	NATURAL GAS COMPANY
TENNESSEE	TENNESSEE / KINDER MORGAN GAS COMPANY

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
×400	STRUCTURE EXCAVATION	CY	332
400	SAND BACKFILL	CY	115
402	TRENCH EXCAVATION PROTECTION	LF	287
432	RIPRAP (CONC) (4")	CY	4
464	24" RCP SEWER (CL III) SPL	LF	287
465	INLET (PSL)(FG)(3X5-3X3)	EA	2
658	INSTL DEL ASSM (D-SW) SZ 1(FLX) GND (BI)	EA	6
658	OM-2Z(FLX)GND(BI)	EA	2

× NON-PAY

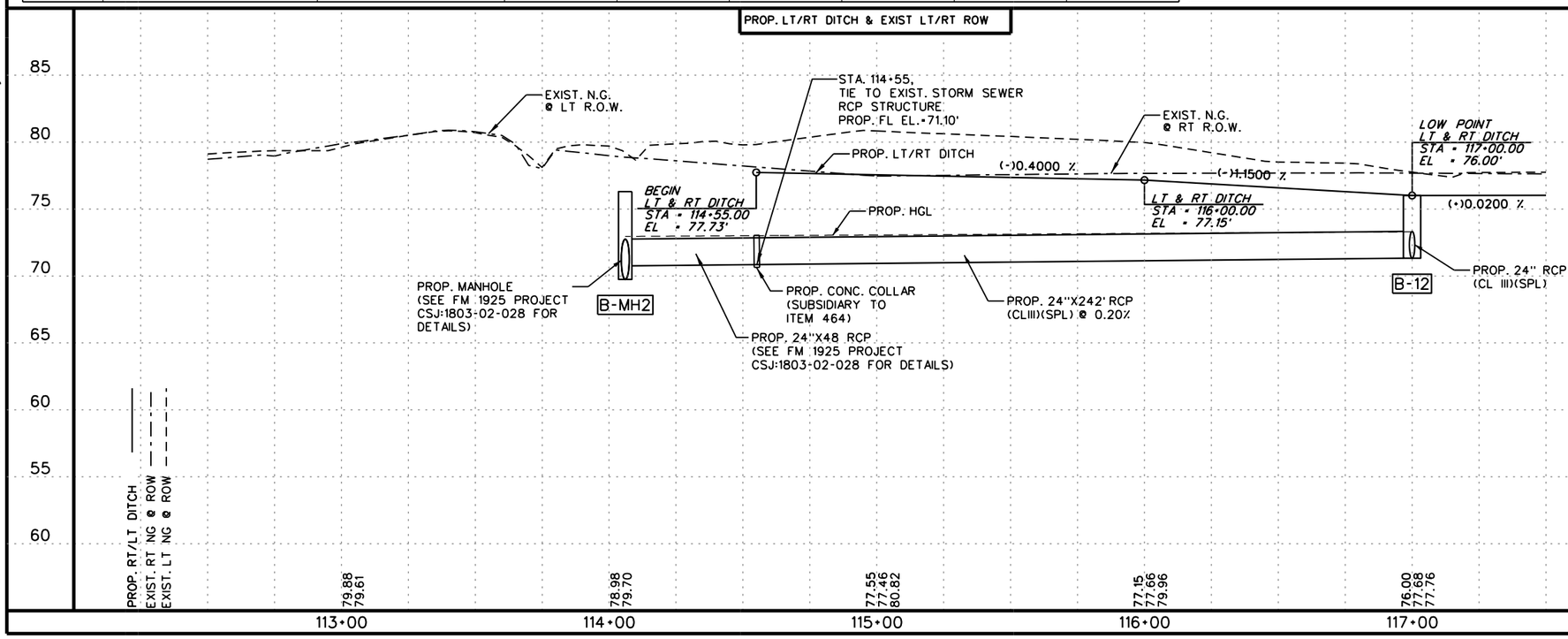
LEGEND

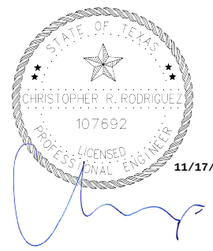
- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- DIRECTION OF PROPOSED ROADSIDE DITCH
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- PROP. DELINEATOR (D-SW)SZ 1(FLX)GND(BI)
- OBJECT MARKER OM-2Z(FLX)GND(BI)

NOTES:
SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.

ALL RCP SHALL BE CL III(SPL) UNLESS OTHERWISE NOTED.

SEE HYD. DATA SHEETS FOR HYDRAULIC GRADE LINE (H.G.L.) ELEVATIONS





L&G Engineering
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ALAMO ROAD
UTILITIES AND DRAINAGE
STA. 114+55 TO STA. 117+50

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 1 OF 6

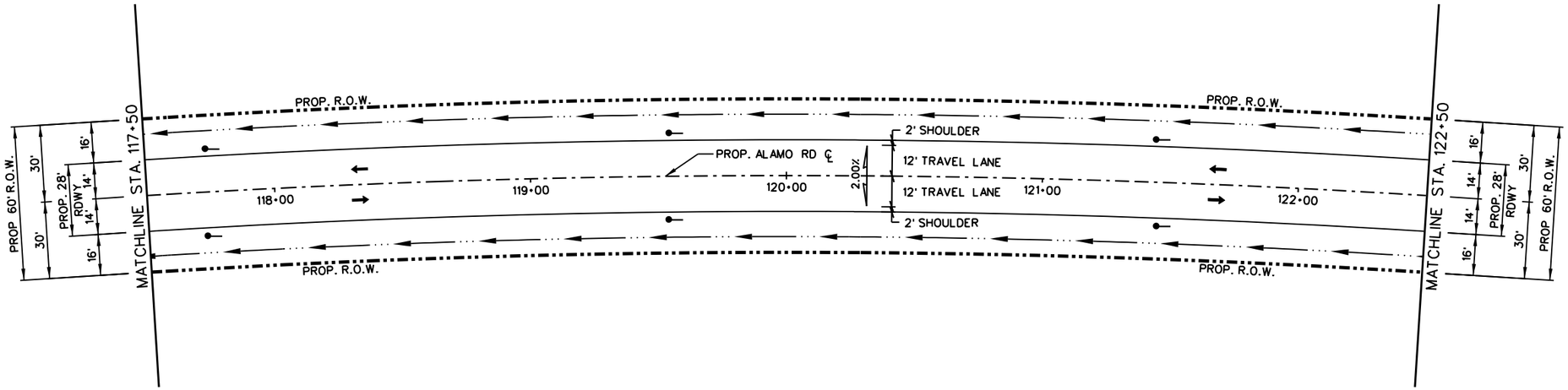
DN:	CK DN:	DW:	CK DW:	TR:	CK TR:	FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
						6	TEXAS				50
						STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
						PHR	HIDALGO	0921	02	311	ALAMO

11/17/2017

K:\Counties\HID\FM 907 (North of FM1925)\05 DRAINAGE\03 U&D\FM 907_UD01.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
658	INSTL DEL ASSM (D-SW) SZ 1(FLX) GND (BI)	EA	6



LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- DIRECTION OF PROPOSED ROADSIDE DITCH
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- PROP. DELINEATOR (D-SW)SZ 1(FLX)GND(BI)
- OBJECT MARKER OM-2Z(FLX)GND(BI)

NOTES:
SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.

ALL RCP SHALL BE CL III(SPL) UNLESS OTHERWISE NOTED.

SEE HYD. DATA SHEETS FOR HYDRAULIC GRADE LINE (H.G.L.) ELEVATIONS

STORM DRAIN TABLE

STRUCTURE ID	DESCRIPTION	STATION / OFFSET TO FACE OF CURB	TOP OF STR. ELEVATION	PROP. FL. OF STRUCTURE	PROP. FL. OF PIPE (NORTH)	PROP. FL. OF PIPE (SOUTH)	PROP. FL. OF PIPE (EAST)	PROP. FL. OF PIPE (WEST)

UTILITIES LEGEND

AEP	AMERICAN ELECTRIC POWER
AT&T	AMERICAN TELEPHONE & TELEGRAPH
MVEC	MAGIC VALLEY ELECTRIC COOPERATIVE
NAWSC	NORTH ALAMO WATER SUPPLY CORP.
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HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1
CALPINE	NATURAL GAS COMPANY
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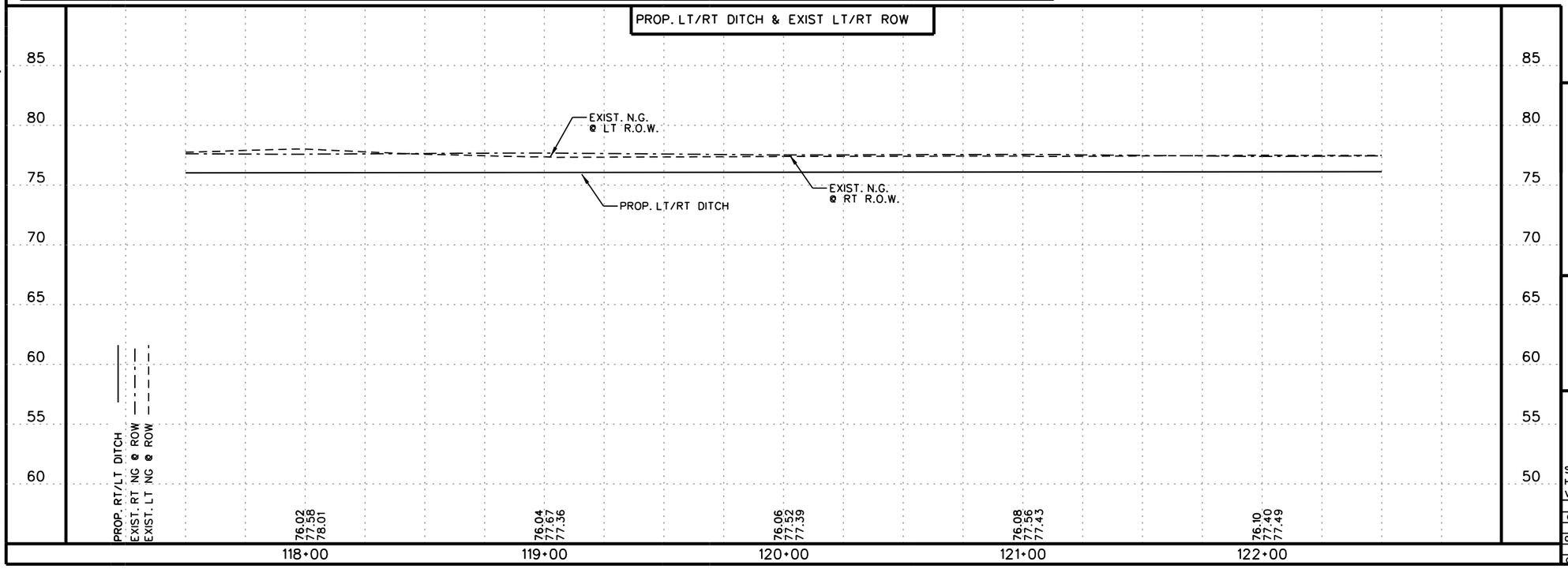

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED PROFESSIONAL ENGINEER
11/17/2017

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ALAMO ROAD
UTILITIES AND DRAINAGE
STA. 117+50 TO STA. 122+50

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 2 OF 6

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
6	TEXAS				51
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
PHR	HIDALGO	0921	02	311	ALAMO

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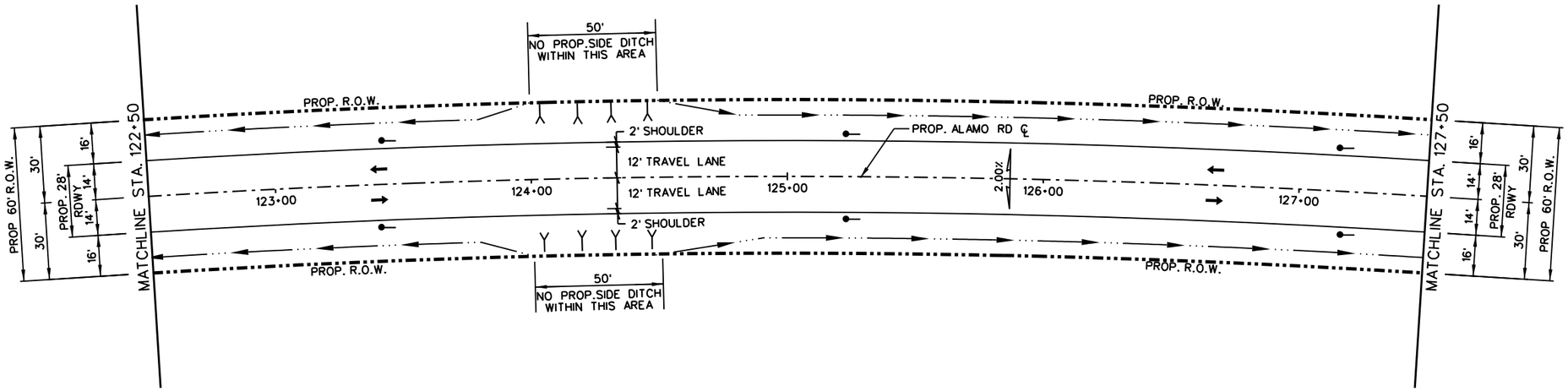
11/17/2017

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
658	INSTL DEL ASSM (D-SW) SZ 1(FLX) GND (BI)	EA	6



LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- DIRECTION OF PROPOSED ROADSIDE DITCH
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- PROP. DELINEATOR (D-SW)SZ 1(FLX)GND(BI)
- OBJECT MARKER OM-2Z(FLX)GND(BI)

NOTES:
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STORM DRAIN TABLE

STRUCTURE ID	DESCRIPTION	STATION / OFFSET TO FACE OF CURB	TOP OF STR. ELEVATION	PROP. FL. OF STRUCTURE	PROP. FL. OF PIPE (NORTH)	PROP. FL. OF PIPE (SOUTH)	PROP. FL. OF PIPE (EAST)	PROP. FL. OF PIPE (WEST)

UTILITIES LEGEND

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AT&T	AMERICAN TELEPHONE & TELEGRAPH
MVEC	MAGIC VALLEY ELECTRIC COOPERATIVE
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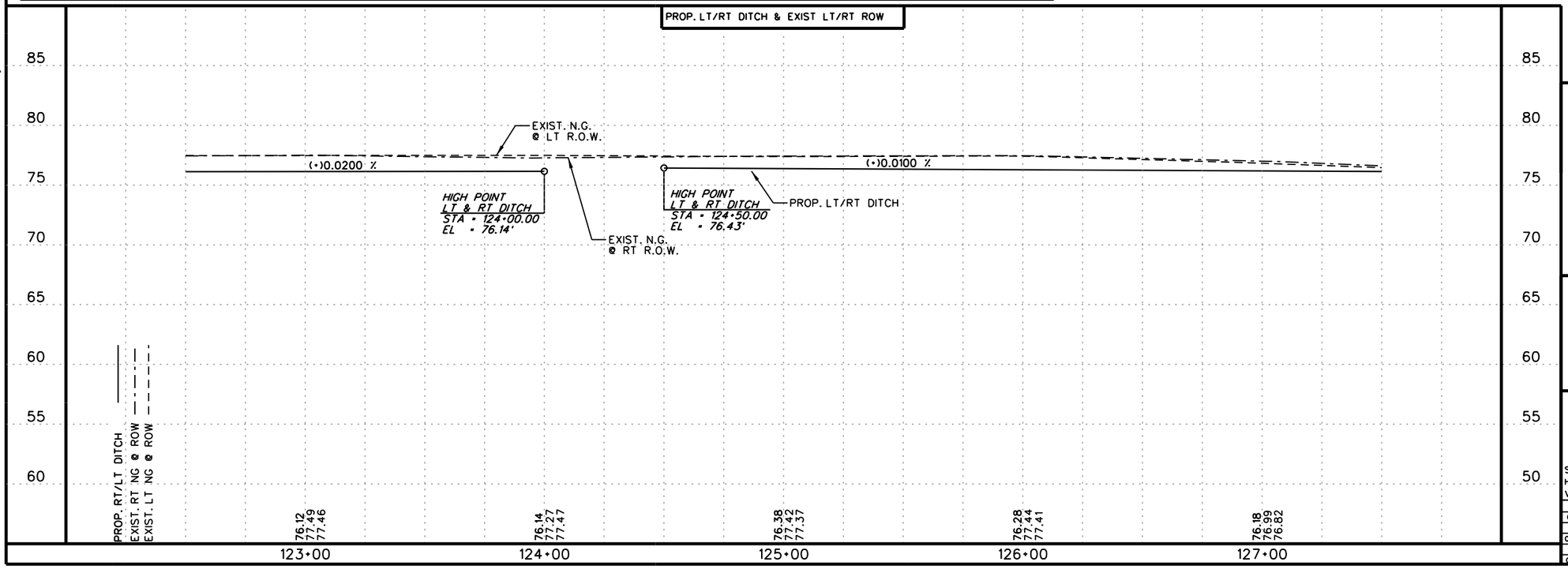

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
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Fax : (956) 585-1927

ALAMO ROAD
UTILITIES AND DRAINAGE
STA. 122+50 TO STA. 127+50

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 3 OF 6

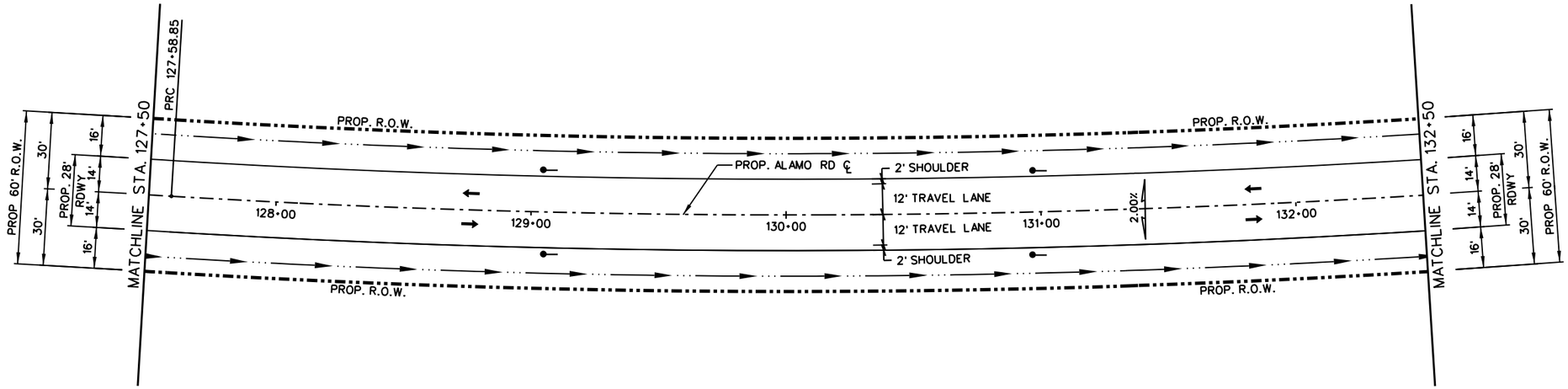
DN:	CK DN:	DW:	CK DW:	TR:	CK TR:	FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
						6	TEXAS				52
						STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
						PHR	HIDALGO	0921	02	311	ALAMO

K:\Counties\HID\FM 907 (North of FM1925)\05 DRAINAGE\03 U&D\FM 907_UD03.dgn

11/22/2017

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
658	INSTL DEL ASSM (D-SW) SZ 1(FLX) GND (BI)	EA	4



LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- DIRECTION OF PROPOSED ROADSIDE DITCH
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- PROP. DELINEATOR (D-SW)SZ 1(FLX)GND(BI)
- OBJECT MARKER OM-2Z(FLX)GND(BI)

NOTES:
SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.

ALL RCP SHALL BE CL III(SPL) UNLESS OTHERWISE NOTED.

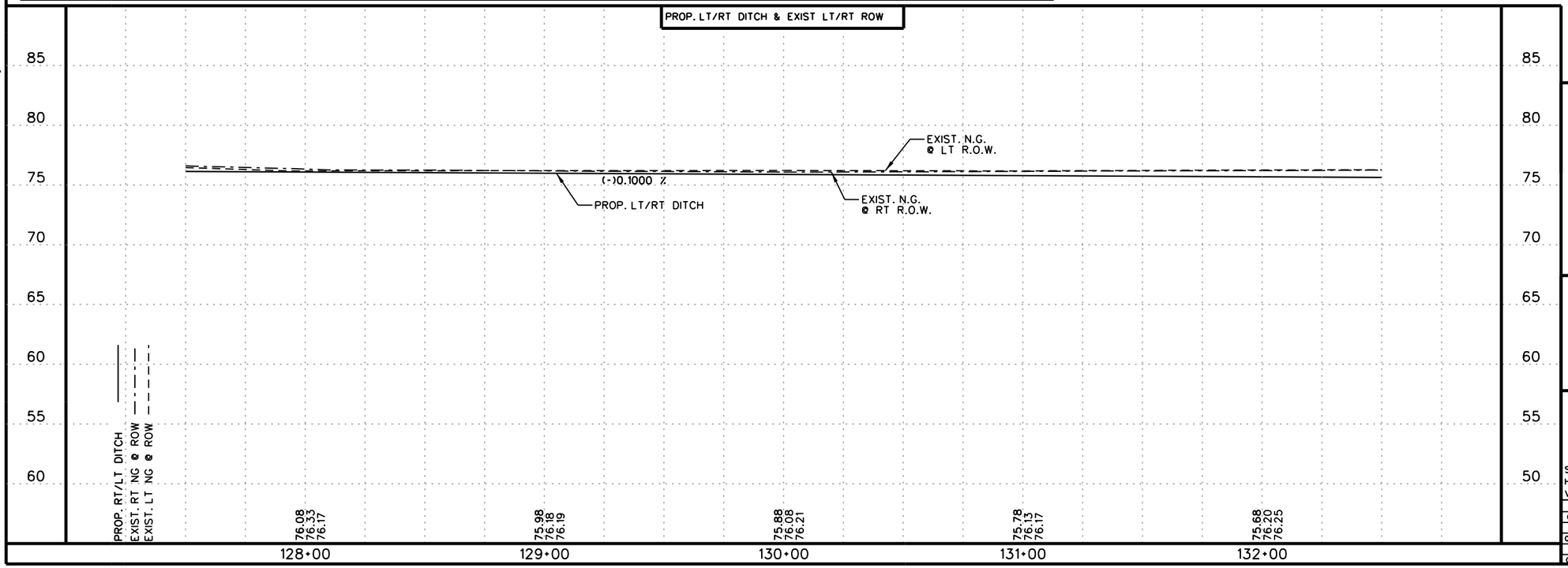
SEE HYD. DATA SHEETS FOR HYDRAULIC GRADE LINE (H.G.L.) ELEVATIONS

STORM DRAIN TABLE

STRUCTURE ID	DESCRIPTION	STATION / OFFSET TO FACE OF CURB	TOP OF STR. ELEVATION	PROP. FL. OF STRUCTURE	PROP. FL. OF PIPE (NORTH)	PROP. FL. OF PIPE (SOUTH)	PROP. FL. OF PIPE (EAST)	PROP. FL. OF PIPE (WEST)

UTILITIES LEGEND

AEP	AMERICAN ELECTRIC POWER
AT&T	AMERICAN TELEPHONE & TELEGRAPH
MVEC	MAGIC VALLEY ELECTRIC COOPERATIVE
NAWSC	NORTH ALAMO WATER SUPPLY CORP.
TWC	TIME WARNER CABLE
HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1
CALPINE	NATURAL GAS COMPANY
TENNESSEE	TENNESSEE / KINDER MORGAN GAS COMPANY



11/17/2017

L&G Engineering

Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
Fax : (956) 565-9018

900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

ALAMO ROAD
UTILITIES AND DRAINAGE
STA. 127+50 TO STA. 132+50

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

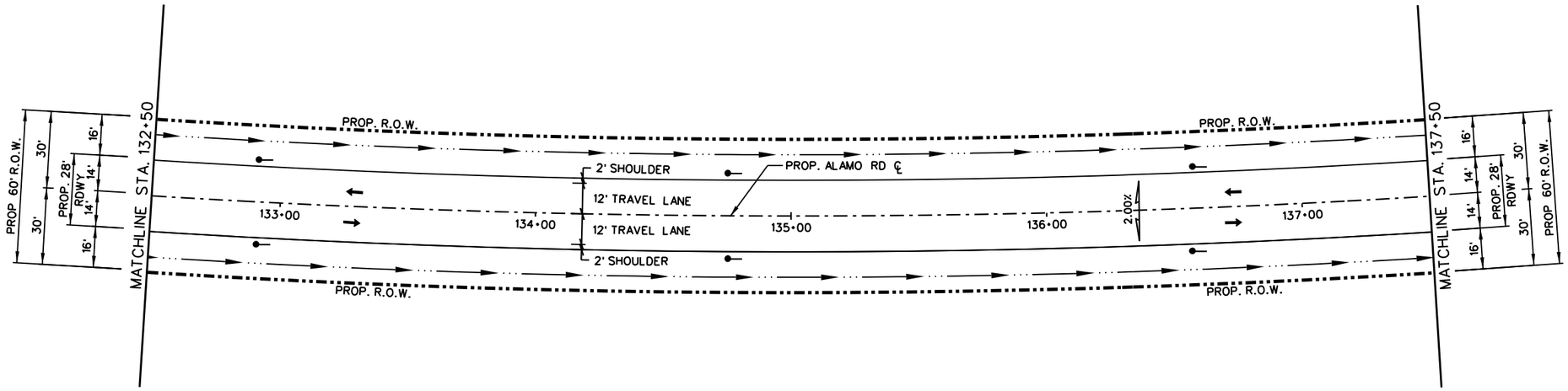
DN:	CK DN:	DW:	CK DW:	TR:	CK TR:	FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
						6	TEXAS					53
						STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
						PHR	HIDALGO	0921	02	311		ALAMO

K:\Counties\HID\FM 907 (North of FM1925)\05 DRAINAGE\03 U&D\FM 907_UD04.dgn

11/17/2017

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
658	INSTL DEL ASSM (D-SW) SZ 1(FLX) GND (BI)	EA	6



LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- DIRECTION OF PROPOSED ROADSIDE DITCH
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- PROP. DELINEATOR (D-SW)SZ 1(FLX)GND(BI)
- OBJECT MARKER OM-2Z(FLX)GND(BI)

NOTES:
SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.

ALL RCP SHALL BE CL III(SPL) UNLESS OTHERWISE NOTED.

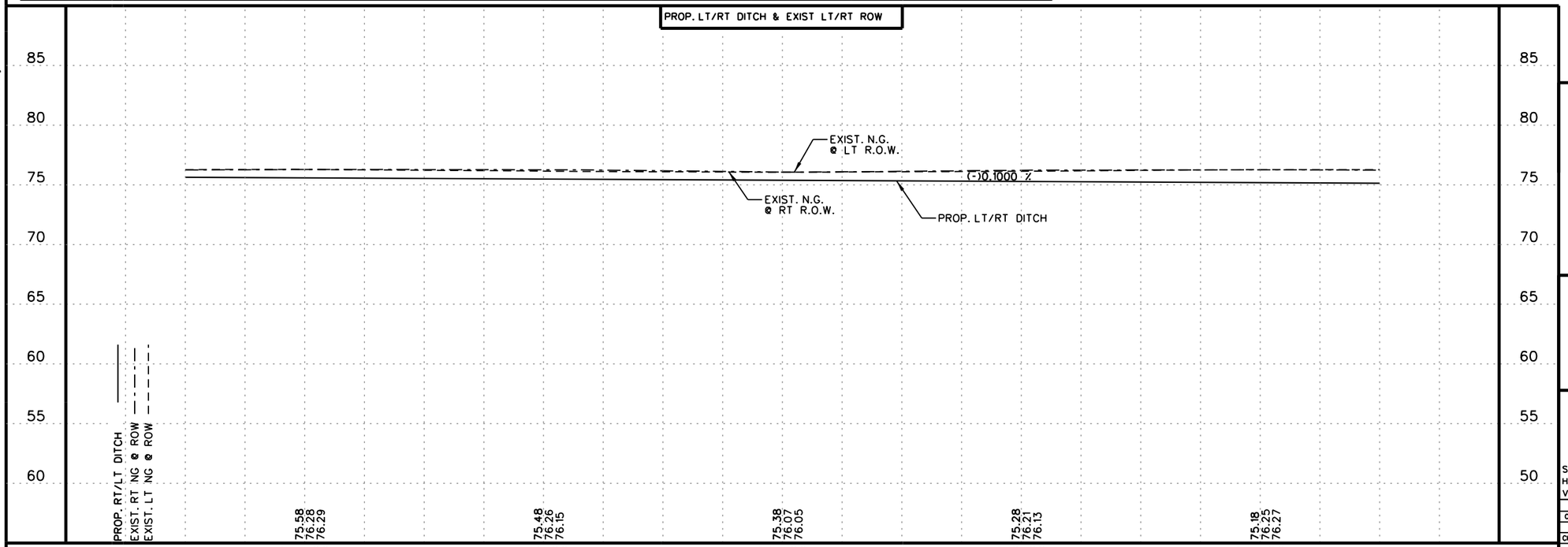
SEE HYD. DATA SHEETS FOR HYDRAULIC GRADE LINE (H.G.L.) ELEVATIONS

STORM DRAIN TABLE

STRUCTURE ID	DESCRIPTION	STATION / OFFSET TO FACE OF CURB	TOP OF STR. ELEVATION	PROP. FL. OF STRUCTURE	PROP. FL. OF PIPE (NORTH)	PROP. FL. OF PIPE (SOUTH)	PROP. FL. OF PIPE (EAST)	PROP. FL. OF PIPE (WEST)

UTILITIES LEGEND

AEP	AMERICAN ELECTRIC POWER
AT&T	AMERICAN TELEPHONE & TELEGRAPH
MVEC	MAGIC VALLEY ELECTRIC COOPERATIVE
NAWSC	NORTH ALAMO WATER SUPPLY CORP.
TWC	TIME WARNER CABLE
HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1
CALPINE	NATURAL GAS COMPANY
TENNESSEE	TENNESSEE / KINDER MORGAN GAS COMPANY



STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED PROFESSIONAL ENGINEER
11/17/2017

L&G Engineering
Highway / Civil
Structural / Bridge
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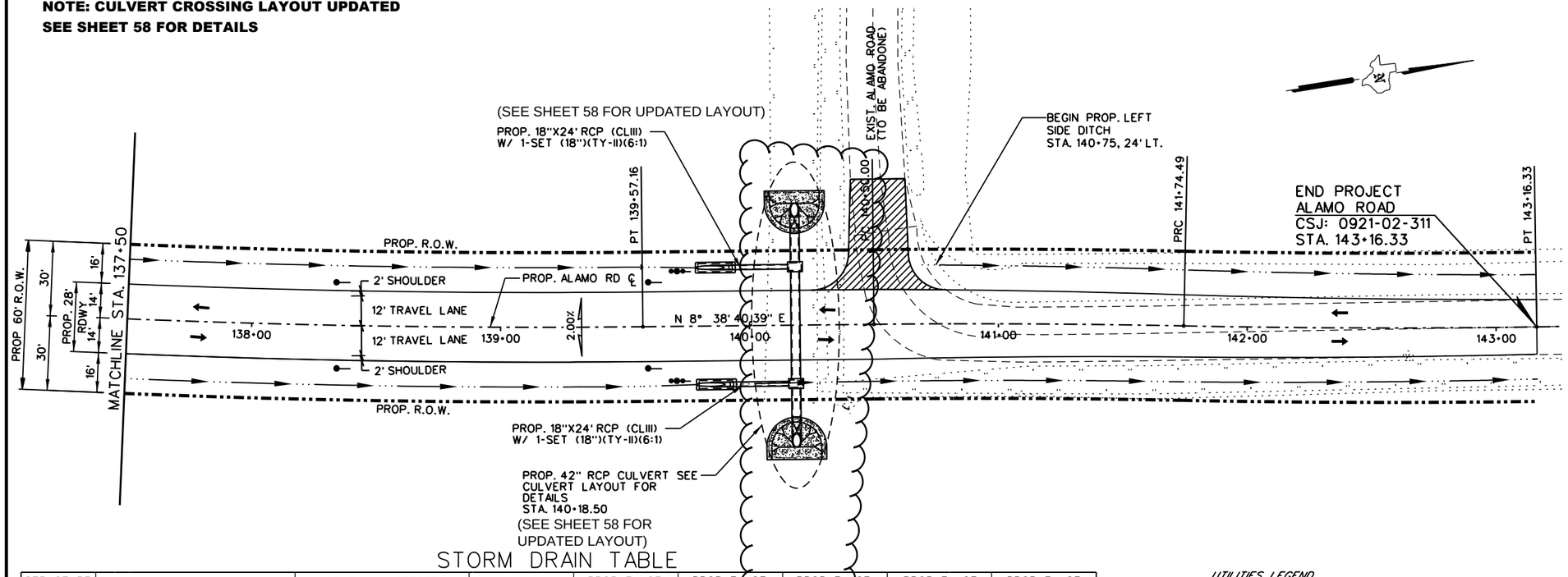
ALAMO ROAD
UTILITIES AND DRAINAGE
STA. 132+50 TO STA. 137+50

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:	FED. RD. DIV. NO.	STATE	PROJECT NO.	SHEET NO.
						6	TEXAS		54
						STATE DIST. NO	COUNTY	CONTROL NO. / SECTION NO. / JOB NO.	HIGHWAY NO.
						PHR	HIDALGO	0921 / 02 / 311	ALAMO

K:\Counties\HID\FM 907 (North of FM1925)\05 DRAINAGE\03 U&D\FM 907_UD05.dgn
11/17/2017

NOTE: CULVERT CROSSING LAYOUT UPDATED
SEE SHEET 58 FOR DETAILS



STORM DRAIN TABLE

STRUCTURE ID	DESCRIPTION	STATION / OFFSET TO FACE OF CURB	TOP OF STR. ELEVATION	PROP. FL. OF STRUCTURE	PROP. FL. OF PIPE (NORTH)	PROP. FL. OF PIPE (SOUTH)	PROP. FL. OF PIPE (EAST)	PROP. FL. OF PIPE (WEST)
			SEE CULVERT LAYOUT FOR INLET INFORMATION					

UTILITIES LEGEND

AEP	AMERICAN ELECTRIC POWER
AT&T	AMERICAN TELEPHONE & TELEGRAPH
MVEC	MAGIC VALLEY ELECTRIC COOPERATIVE
NAWSC	NORTH ALAMO WATER SUPPLY CORP.
TWC	TIME WARNER CABLE
HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1
CALPINE	NATURAL GAS COMPANY
TENNESSEE	TENNESSEE / KINDER MORGAN GAS COMPANY

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	SAND BACKFILL	CY	16
464	18" RC PIPE (CL III)	LF	48
467	SET (TY II)(18")(RCP)(6:1)(P)	EA	2
658	INSTL DEL ASSM (D-SW) SZ 1(FLX) GND (BI)	EA	4
658	OM-2Z(FLX)GND(BI)	EA	2

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- DIRECTION OF PROPOSED ROADSIDE DITCH
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- PROP. DELINEATOR (D-SW)SZ 1(FLX)GND(BI)
- OBJECT MARKER OM-2Z(FLX)GND(BI)

NOTES:
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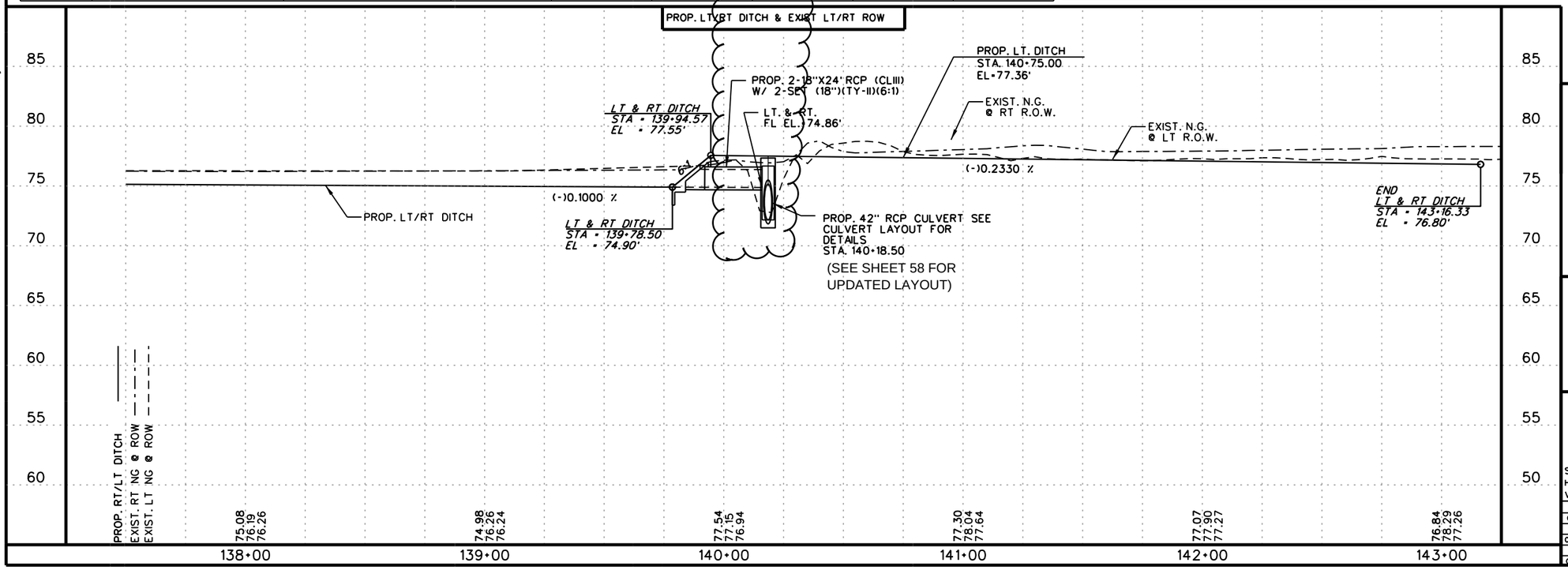

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
PROFESSIONAL ENGINEER
LICENSED
11/17/2017

L&G Engineering
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ALAMO ROAD
UTILITIES AND DRAINAGE
STA. 137+50 TO STA. 143+16.33

SCALE:
HOR: 1"= 50'
VER: 1"= 10'

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN:		6	TEXAS				55
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:		PHR	HIDALGO	0921	02	311	ALAMO
TR:	
CK TR:	

11/17/2017
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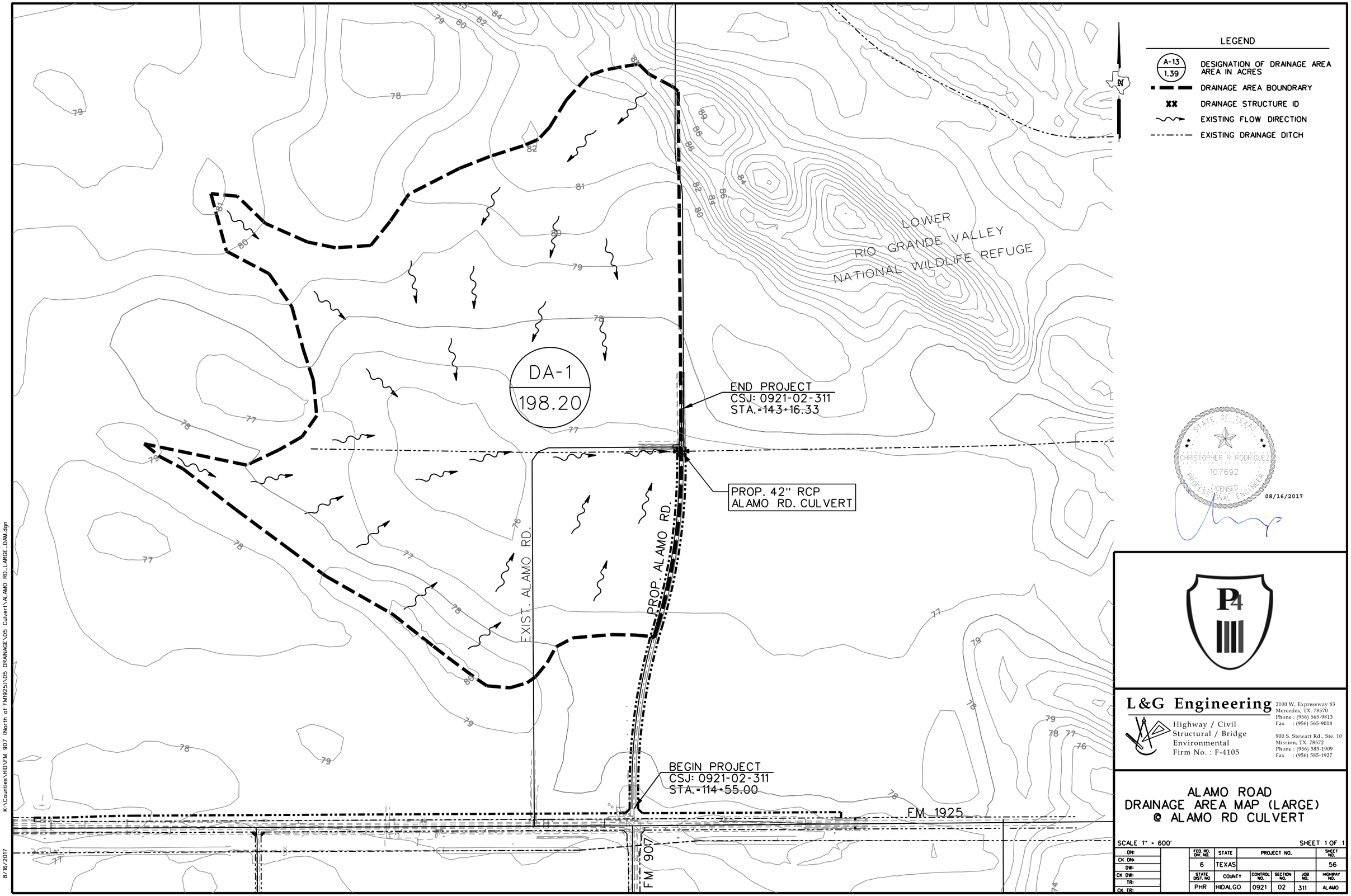

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED
PROFESSIONAL ENGINEER
08/16/2017

P4

L&G Engineering
Highway / Civil
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ALAMO ROAD
DRAINAGE AREA MAP (LARGE)
@ ALAMO RD CULVERT

SCALE 1" = 600'

SHEET 1 OF 1

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN:		6	TEXAS				56
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:		PHR	HIDALGO	0921	02	311	ALAMO
TR:	
CK TR:	

K:\Counties\HIDALGO\FM 907 (North of FM1925)\05 DRAINAGE\05 Culvert\ALAMO RD_LARGE_DAM.dgn

8/16/2017

TIME OF CONCENTRATION (tc) (NRCS METHOD)

$$tc = tsh + tsc + tch$$

$$tsh = \frac{0.007\ (nol \times Lsh)^{0.8}}{(P_2)^{0.5} \times Ssh^{0.4}}$$

$$tsc = \frac{Lsc}{3600 \times K \times Sc^{0.5}}$$

$$tch = \frac{Lch}{3600 \times \frac{1.49}{n} \times R^{2/3} \times Sch^{1/2}}$$

tc = TIME OF CONCENTRATION (HR)
tsh = SHEET FLOW TRAVEL TIME (HR)
tsc = SHALLOW CONCENTRATED FLOW TRAVEL TIME (HR)
tch = CHANNEL FLOW TRAVEL TIME (HR)

tsh = SHEET FLOW TRAVEL TIME (HR)
nol = OVERLAND FLOW ROUGHNESS COEFF.
Lsh = SHEET FLOW LENGTH (FT)
P_2 = 2-YEAR, 24-HR RAINFALL DEPTH (IN.)
Ssh = SHEET FLOW SLOPE (FT/FT)

tsc = SHALLOW CONCENTRATED FLOW TIME (HR)
Lsc = SHALLOW CONCENTRATED FLOW LENGTH (FT)
K = 16.13 FOR UNPAVED SURF., 20.32 FOR PAVED SURF.
Ssc = SHALLOW CONCENTRATED SLOPE (FT/FT)

tch = CHANNEL FLOW TIME (HR)
Lch = CHANNEL FLOW LENGTH (FT)
Sch = CHANNEL FLOW SLOPE (FT/FT)
n = MANNING'S ROUGHNESS COEFF.
R = CHANNEL HYDRAULIC RADIUS (FT)

TIME OF CONCENTRATION (tc)

DRAINAGE AREA I.D.	AREA (AC)	nol	Lsh (FT)	P2 (IN)	Ssh (FT/FT)	tsh (HR)	Lsc (FT)	K	Ssc (FT/FT)	tsc (HR)	n	Lch (FT)	R (FT)	Sch (FT/FT)	tch (HR)	tc (HR)	tc (MIN)
DA-1	198.20	0.40	300	3.4	0.020	0.84	2900	16.13	0.0024	1.02	0.03	960	2.3487	0.001	0.11	1.97	118.06

RATIONAL METHOD

$$Q = C \times I \times A$$

$$I = \frac{Pd}{tc}$$

Q = MAXIMUM RATE OF RUNOFF (CFS)
C = RUNOFF COEFF.
I = AVERAGE RAINFALL INTENSITY (IN/HR)
A = DRANAGE AREA (AC)

I = AVERAGE RAINFALL INTENSITY (IN/HR)
Pd = DEPTH OF RAINFALL (IN)
tc = DRAINAGE AREA TIME OF CONCENTRATION (HR)

DRAINAGE RUNOFF (CFS)

DRAINAGE AREA I.D.	TOTAL AREA (A) (AC)	TOTAL "C" VALUE	tc (HR)	Pd (10 YR) (IN)	I (10 YR) (IN/HR)	Pd (100 YR) (IN)	I (100 YR) (IN/HR)	Q (10 YR) (CFS)	Q (100 YR) (CFS)
DA-1	198.20	0.15	1.97	3.50	1.78	5.80	2.94	52.82	87.53

NOTES:

1. 10 YR AND 100 YR DESIGN FREQUENCY
2. TxDOT HYDRAULIC DESIGN MANUAL USED FOR TABLES & COEFFICEINTS
3. RATIONAL METHOD USED TO ANALYZE DRAINAGE AREAS UNDER 200 ACRES.
4. PRECIPITATION VALUES OBTAINED FROM THE ATLAS OF DEPTH-DURATION FREQUENCY OF PRECIPITATION ANNUAL MAXIMA FOR TEXAS (JUNE 2004)

STATE OF TEXAS
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107692
LICENSED
PROFESSIONAL ENGINEER
08/16/2017

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DRAINAGE AREA MAP CALCULATIONS (LARGE) @ ALAMO RD CULVERT

SHEET 1 OF 1

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN:		6	TEXAS				57
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:		PHR	HIDALGO	0921	02	311	ALAMO
TR:	
CK TR:	

8/16/2017 K:\Counties\HID\FM 907 (North of FM925)\05 DRAINAGE\05 Culver\ALAMO RD_COMPUTATIONS_LARGE.dgn

ITEM	DESCRIPTION	UNIT	QTY.
132	EMBANKMENT (FINAL (DC) (TY C)	CY.	1,162
400	STRUCTURE EXCAVATION (NON-PAY)	CY.	1,660
400	STRUCTURE EXCAVATION (SPL)	CY.	
400	SAND BACKFILL	CY.	225
432	RIPRAP (CONC.) (4")	CY.	126
464	RCP (CL-III)(24")	LF.	24
464	RCP (CL-III)(42")	LF.	494
465	JUNCTION BOX (COMPL)(PJB)(6'x6')	EA.	3

EXIST. 30" HPP
EXIST. 90' ROW
CAUTION: OVERHEAD POWER LINES
EXIST. 18" STEEL CASING W/ 12" WATERLINE (APPROX. DEPTH)
40' COUNTY ROAD (NOT OPEN)
LOT 29 SANTA CRUZ GARDENS UNIT NO. 2 VOL. 8, PG. 28-29 H.C.M.R.
FL: 71.83
FL: 72.21
0+00
20'
1+00
ALAMO RD.
8'
2+00
3+00
4+00
5+00
6+00
10.0'
20.0'
20.0'
EXIST. 36" HPP
PROP. CONC. RIP-RAP (46 CY)
PROP. FILL WITH COMPACTED DIRT (BY HCDD1)
PROP. PRECAST JUNCTION BOX (6' x 6') STA: 2+07.52 DEPTH: 12.28' RIM: 77.50 INV 18": 74.86 INV 42": 65.22
PROP. JUNCTION BOX (6' x 6') STA: 4+91.61 DEPTH: 12.73' RIM: 77.37 INV: 64.64
PROP. 104 LF - 42" RCP @ 0.22%
EXIST. DITCH
FL: 72.43
FL: 72.23
EXIST. 80' R.O.W. DEDICATED TO H.D.D. NO. 1 DOC. 3032893 H.C.M.R.
PROP. 24" W/ S.E.T. FL: 72.00
PROP. 24 LF - 24" RCP @ 0.20%
PROP. 284 LF - 42" RCP @ 0.20%
PROP. 64 LF - 42" RCP @ 0.22%
EXIST. 36" RCP (TO BE REMOVED)
FL: 69.40
LOT "P", BLOCK 2 SANTA CRUZ RANCH SUBDIVISION VOL. "Z", PG. 160-161 H.C.D.R.
PROP. PRECAST JUNCTION BOX (6' x 6') STA: 1+63.52 DEPTH: 12.19' RIM: 77.50 INV 18": 74.86 INV 24": 71.75 INV 42": 65.31
EXIST. 60' DOC. 2824125 H.C.O.R.
PROP. 18" RCP (CL-III) W/ SET (SEE U&D SHEETS FOR DETAILS AND PAYMENT)
PROP. 1,162 CY. OF EMBANKMENT
PROP. 42 LF - 42" RCP @ 0.22%
LOT "Q", BLOCK 2 SANTA CRUZ RANCH SUBDIVISION VOL. "Z", PG. 160-161 H.C.D.R.
EXIST. 150' R.O.W. DEDICATED TO H.D.D. NO. 1 DOC. 2936979 H.C.M.R.
PROP. 18" RCP (CL-III) W/ SET (SEE U&D SHEETS FOR DETAILS AND PAYMENT)
PROP. CONC. RIP-RAP (80 CY)

LEGEND
EMBANKMENT
PAVEMENT

POP. PRECAST JUNCTION BOX (6' x 6') STA: 1+63.52 DEPTH:12.19' RIM: 77.50 INV 18": 74.86 INV 24": 71.75 INV 42": 65.31
ALAMO RD. EXIST. 60' DOC. 2824125 H.C.O.R.
PROP. PRECAST JUNCTION BOX (6' x 6') STA: 2+07.52 DEPTH: 12.28' RIM: 77.50 INV 18": 74.86 INV 42": 65.22
PROP. JUNCTION BOX (6' X 6') STA: 4+91.61 DEPTH: 12.73' RIM: 77.37 INV: 64.64
PROP. TOP OF DITCH STA. 5+73.81 FL: 78.59
PROP. TOP OF DITCH STA. 0+87.52 FL: 77.53
PROP. 18" RCP
PROP. FG ELEV: 77.0 ±
PROP. FL OF PIPE STA. 1+42.82 FL: 72.00
EXIST. TOP OF DITCH STA. 0+77.96 ELEV: 77.50
PROP. ROAD ELEV: 78.11
PROP. CONC. RIP-RAP (80 CY)
EXIST. 30" RCP FL: 71.83
PROP. 18" RCP
EXIST. NG
EXIST. 36" RCP (TO BE REMOVED)
PROP. CONC. RIP-RAP (46 CY)
EXIST. FL OF DITCH
EXIST. 18" STEEL CASING W/ 12" WATERLINE (APPROX. DEPTH)
3.9' ±
PROP. 1,162 CY. OF EMBANKMENT
PROP. FL OF DITCH STA. 5+42.83 FL: 63.86
PROP. 24 LF - 24" RCP @ 0.20%
PROP. FL OF PIPE & FL OF DITCH STA. 0+65.49 FL: 65.57
PROP. FL OF PIPE STA. 5+57.20 FL: 64.50
EXIST. FL OF DITCH STA. 0+01.27 FL: 65.65.23
PROP. 104 LF - 42" RCP @ 0.22%
PROP. 42 LF - 42" RCP @ 0.22%
PROP. 284 LF - 42" RCP @ 0.22%
PROP. 64 LF - 42" RCP @ 0.20%
RE-GRADE DITCH FL
TRENCH PROTECTION OR CUTBACK SLOPES TO COMPLY WITH OSHA STANDARDS AND SPECIFICATIONS

80 75 70 65 60
EXIST. DITCH FL
PROP. PIPE FL
65.27 77.64 65.51 75.39 65.29 74.79 65.07 74.68 64.84 71.82 64.62
0+00 1+00 2+00 3+00 4+00 5+00 6+00

HIDALGO COUNTY DRAINAGE DISTRICT No. 1
902 N. DOOLITTLE RD
EDINBURG TX. 78542
TEL:(956) 292-7080
www.hcdd1.org

Raul E. Sesin P.E., C.F.M.
General Manager
Floodplain Administrator

ALAMO ROAD CULVERT CROSSING

PLAN AND PROFILE
STA. 0+00 - STA. 6+00

STATE OF TEXAS
OMAR CANO
120081
LICENSED PROFESSIONAL ENGINEER

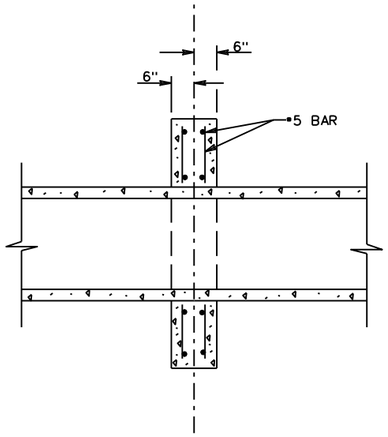
This seal appearing on this document was authorized by Omar Cano P.E. No. 120081 on the above designated date.

5/15/20

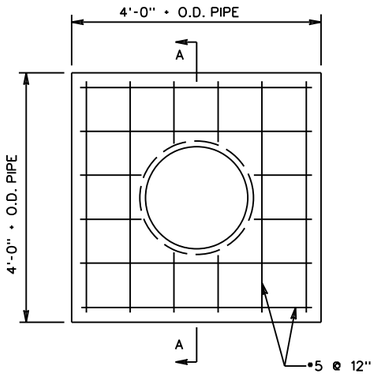
OMAR CANO P.E. No. 120081

PROJECT NO. E-20-020
SCALE: H.1"=50' / V.1"=5'
DRAWN BY: J.G.
CHECKED BY: R.S./O.C.
TOPO BY: C.T.
SHEET: 58

Drawings: S:\HCDD1 - PROJECTS\E-20-020 Alamo Road Culvert Crossing\Design\CAD\dwg\P&P Sheets\06-Sta. 0+00-6+00.dwg)
Layout Tab: Layout1 Date: 05/14/2020 Time: 02:29:16 PM

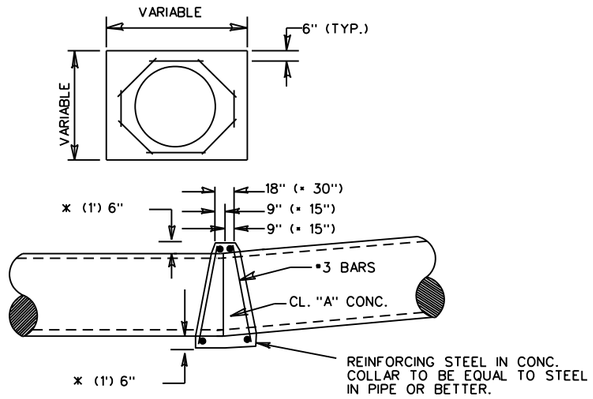


SECTION A-A



FRONT ELEVATION

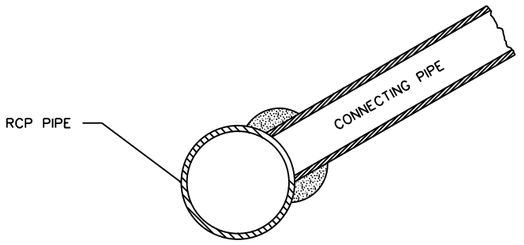
CONCRETE PIPE COLLAR

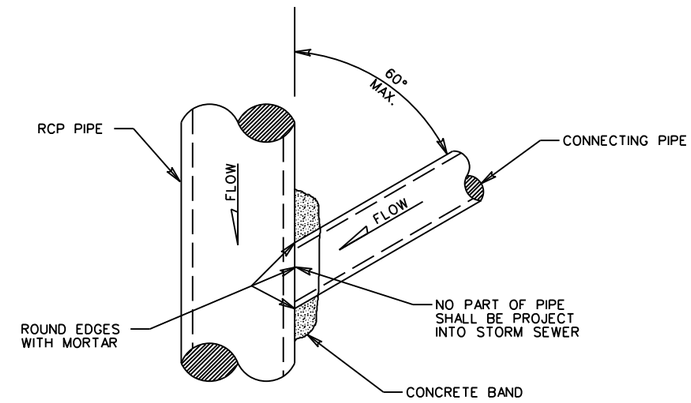


DETAIL FOR CONC. COLLARS DRAINAGE STRUCTURES AND PIPE SIPHONS (HORIZ. & VERT. BENDS)

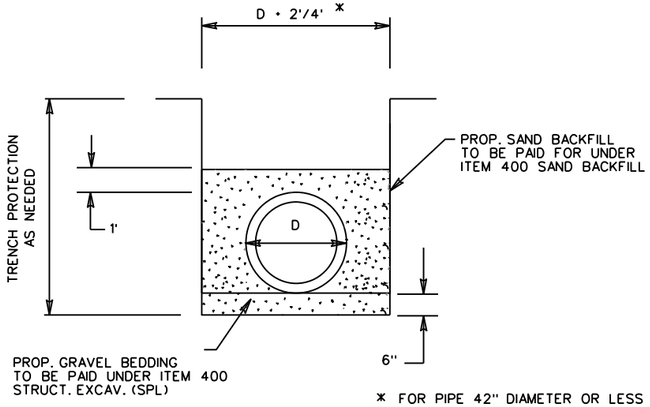
NOTE: PROP. CONC. COLLAR WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO THE BIDS ITEMS INVOLVED.

* FOR 42" DIAMETER AND LARGER PIPE



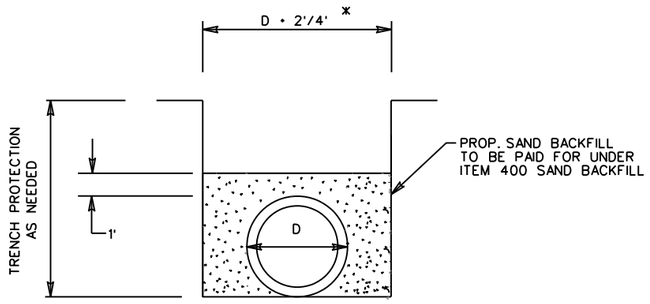


TYPICAL REINFORCED CONC. PIPE CONNECTION WITHOUT MANHOLE



* FOR PIPE 42" DIAMETER OR LESS PLACE 1'OF FILL ON EACH SIDE OF THE PIPE.
FOR PIPE LARGER THAN 42" DIAMETER PLACE 2' OF FILL ON EACH SIDE OF THE PIPE.

SPIRAL RIB CMP
TYPICAL BACKFILL DETAIL GRAVEL & SAND



* FOR PIPE 42" DIAMETER OR LESS PLACE 1'OF FILL ON EACH SIDE OF THE PIPE.
FOR PIPE LARGER THAN 42" DIAMETER PLACE 2' OF FILL ON EACH SIDE OF THE PIPE.

REINFORCED CONCRETE PIPE
TYPICAL BACKFILL DETAIL-SAND

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PHARR DISTRICT STANDARD

TEXAS DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS PIPE DETAILS

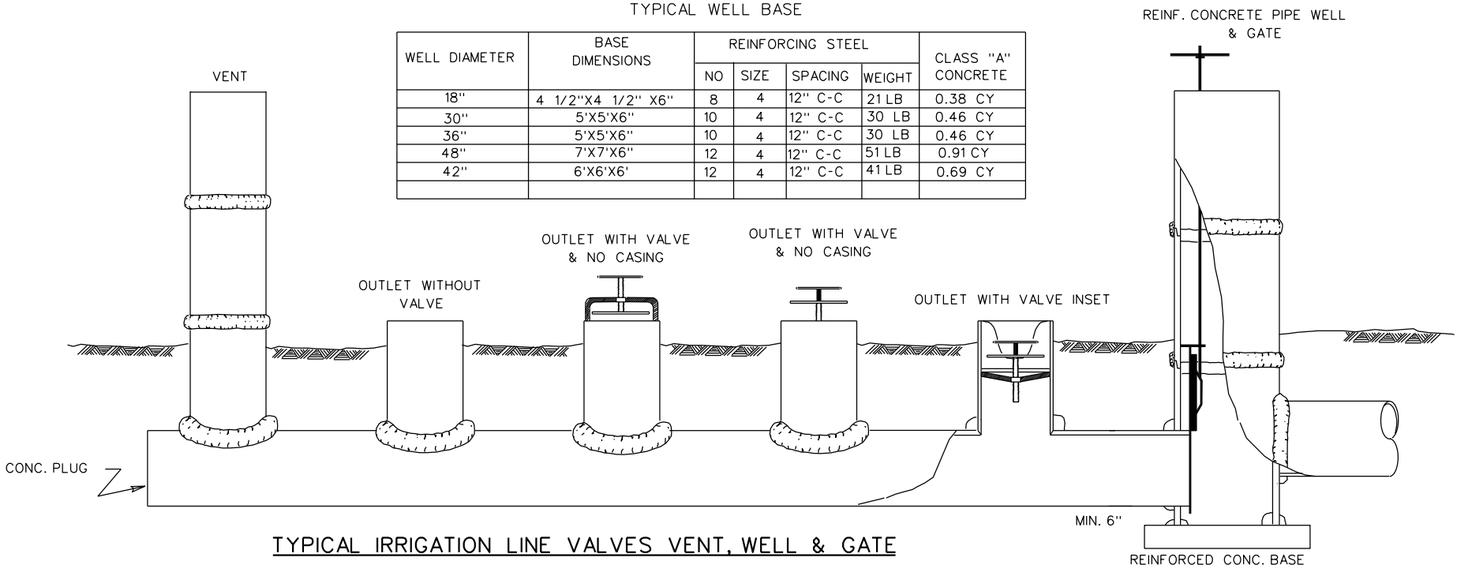
REV. 8/14 COLLAR.DGN

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		FILE NO.			SHEET NO.
6						59
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TEXAS	21	HIDALGO	0921	02	311	ALAMO

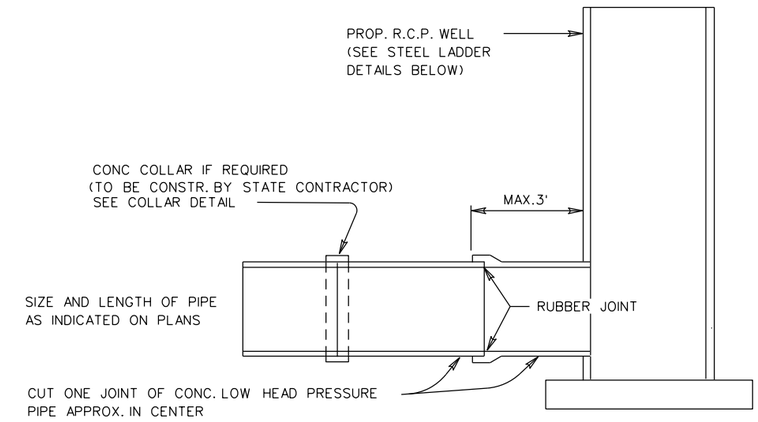
FILE: K:\Counties\HIDV\FM 907 (North of FM1925)\10 Standards\04 Drainage\collar.dgn
DATE: 11/17/2017 11:00:28 AM

ESTIMATED QUANTITIES FOR
TYPICAL WELL BASE

WELL DIAMETER	BASE DIMENSIONS	REINFORCING STEEL				CLASS "A" CONCRETE
		NO	SIZE	SPACING	WEIGHT	
18"	4 1/2"X4 1/2" X6"	8	4	12" C-C	21 LB	0.38 CY
30"	5'X5'X6"	10	4	12" C-C	30 LB	0.46 CY
36"	5'X5'X6"	10	4	12" C-C	30 LB	0.46 CY
48"	7'X7'X6"	12	4	12" C-C	51 LB	0.91 CY
42"	6'X6'X6'	12	4	12" C-C	41 LB	0.69 CY



TYPICAL IRRIGATION LINE VALVES VENT, WELL & GATE



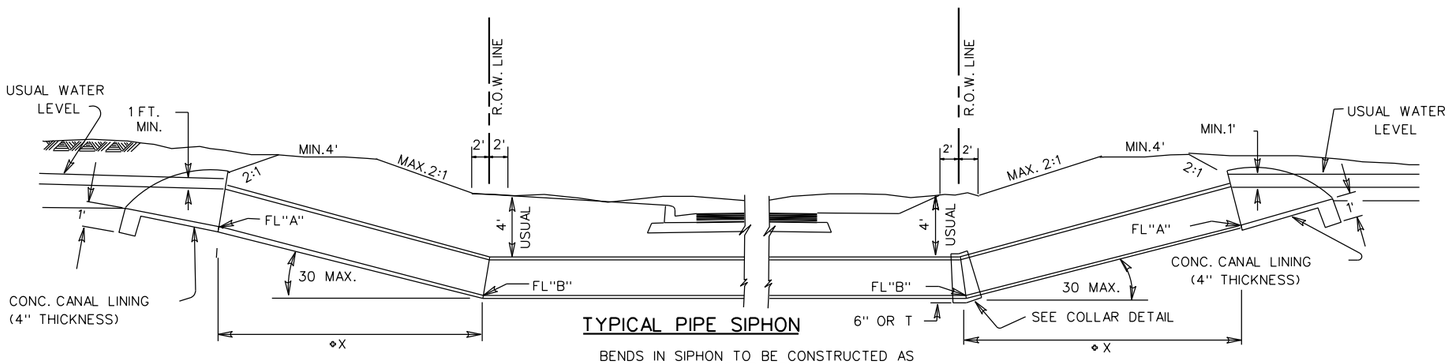
TYPICAL CONC. PIPE WELL DETAILS FOR CONNECTING CONC. LOW HEAD PRESSURE PIPE

GENERAL NOTES

HEIGHT OF RELOCATED WELLS AND VENTS TO BE EQUIVALENT TO THAT OF EXISTING STRUCTURES OR AS REQUIREDFOR PROPER OPERATION.

CONCRETE REQUIRED FOR BASE, PLUGS, OR CAPS WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED AS SUB-SIDIARY TO THE VARIOUS BID ITEMS OF THIS CONTRACT.

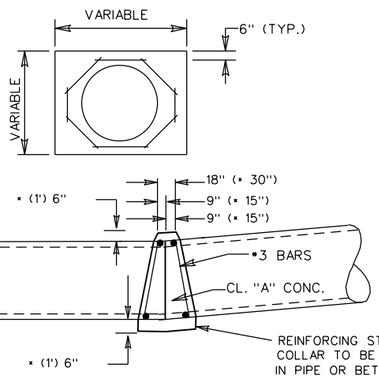
IN GENERAL THE PARTICULAR TYPE OR DESIGN OF THE EXISTING FACILITY TO BE EXTENDED OR RELOCATED SHALL BE DUPLICATED.



TYPICAL PIPE SIPHON

BENDS IN SIPHON TO BE CONSTRUCTED AS PROVIDED IN SPECIFICATIONS

◇X AND FL "A" AS SHOWN ON PLANS ARE NOMINAL DESIGN DIMENSIONS AND MAY BE VARIED IN FIELD TO FIT EXISTING CONDITIONS.



DETAIL FOR CONC. COLLARS DRAINAGE STRUCTURES AND PIPE SIPHONS (HORIZ. & VERT. BENDS)

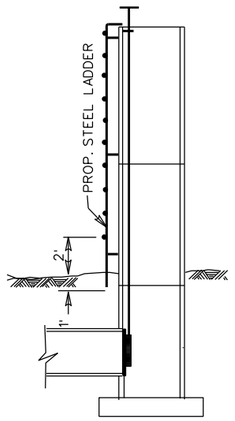
NOTE: PROP. CONC. COLLAR WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO THE BIDS ITEMS INVOLVED.

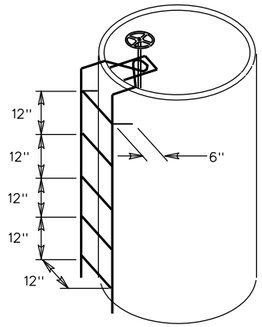
× FOR 42" AND LARGER PIPE

LADDER TO BE CONSTRUCTED OF ¾" DIA. REINF. STEEL. THE PARALLEL SIDEPIECES SPACED 12" APART TO BE HOOKED OVER TOP OF WELL AND STAND-OFFS WELDED AT TOP RUNG, AT THEIR MID-POINT AND BOTTOM. RUNGS TO BE WELDED TO SIDEPIECES AT 12" INTERVALS THE FIRST RUNG TO BE 2' FROM NATURAL GROUND.

STEEL LADDER TO BE PAID FOR AS SUBSIDIARY TO PRICE OF WELL.

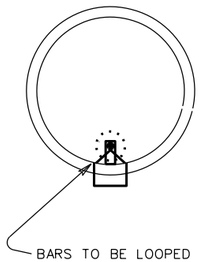
NOTE: COMMERCIAL FABRICATED OR CAST METAL STEPS MAY BE USED IF APPROVED BY THE ENGINEER AND/OR THE WATER DISTRICT INVOLVED.





STEEL LADDER DETAILS

TO BE USED ON ALL WELLS WITH GATES WHEN THE DISTANCE FROM NATURAL GROUND TO TOP OF WELL IS 6 FT. OR MORE.



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PHARR DISTRICT STANDARD

TEXAS DEPARTMENT OF TRANSPORTATION

IRRIGATION CROSSING DETAIL

REV. 4/15 IRRIG1.DGN

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.			FILE NO.			SHEET NO.
6							60
STATE	STATE DIST.NO.	COUNTY		CONT.	SECT.	JOB	HIGHWAY NO.
TEXAS	PHR	HIDALGO		0921	02	311	ALAMO

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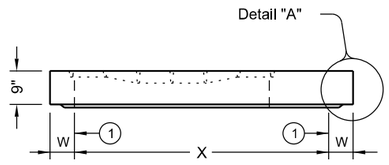
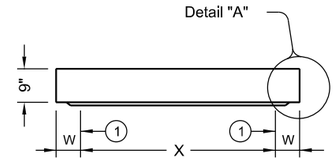
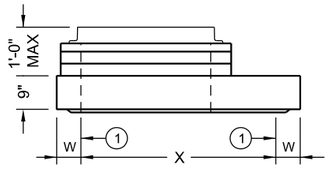
DATE:
FILE:



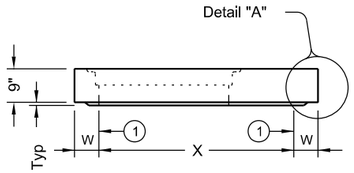
STYLE 'FG'



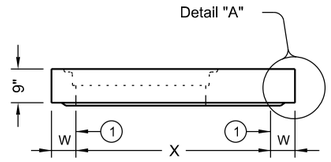
ELEVATION VIEW



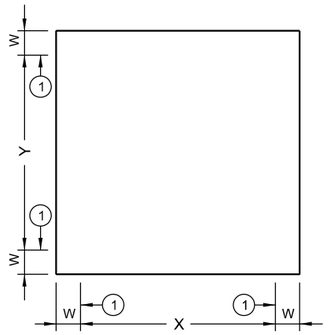
ELEVATION VIEW



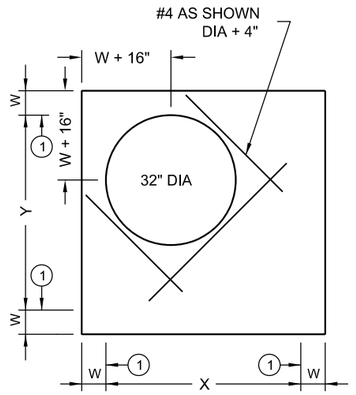
ELEVATION VIEW



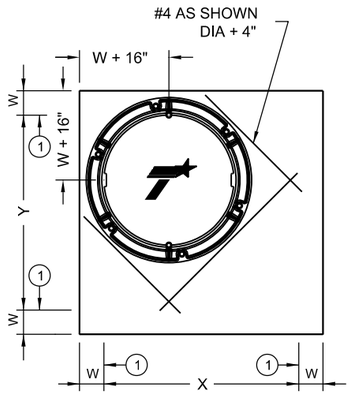
ELEVATION VIEW



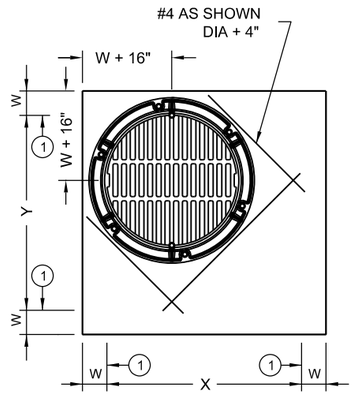
PLAN VIEW
NO OPENINGS
STYLE 'SL'



PLAN VIEW
SHIP LOOSE RING & COVER
STYLE 'RH'

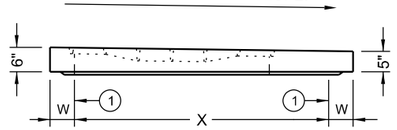


PLAN VIEW
32" DIA CAST-IN RING & COVER
STYLE 'RC'

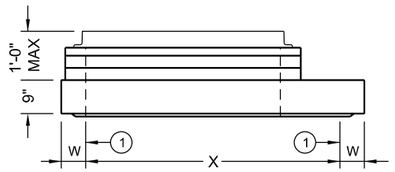


PLAN VIEW
32" DIA CAST-IN RING & GRATE
STYLE 'RG'

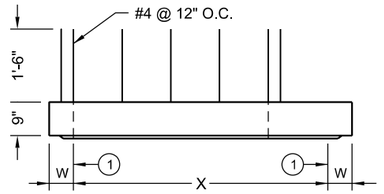
ORIENT TAPER TO CORRESPOND WITH ROADWAY CROSS-SLOPE.



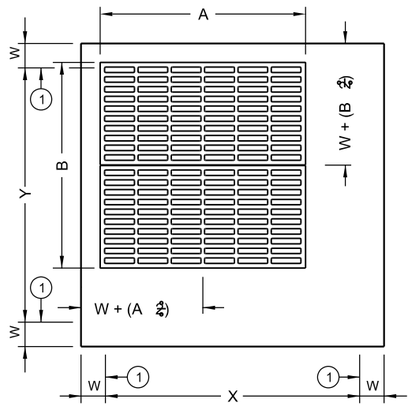
STYLE 'SFG'
ELEVATION VIEW



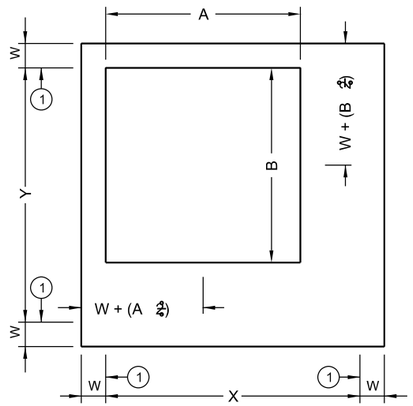
ELEVATION VIEW



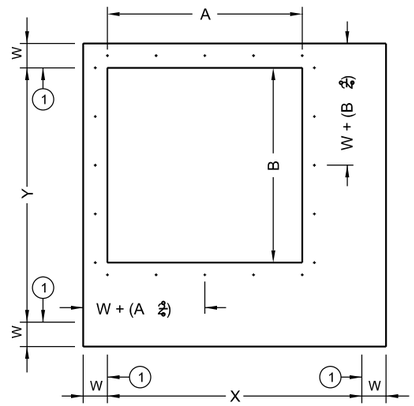
ELEVATION VIEW



PLAN VIEW
CAST-IN FRAME & GRATE
STYLES 'FG' & 'SFG'



PLAN VIEW
SHIP LOOSE FRAME & GRATE
STYLE 'SH'



PLAN VIEW
EXPOSED REBAR
STYLE 'S1'

(1) Matches inside face of wall of precast base or riser below inlet.

HL93 LOADING SHEET 1 OF 2

Texas Department of Transportation

Bridge Division Standard

PRECAST SLAB LID

PSL

FILE: prestd05.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT January 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		61

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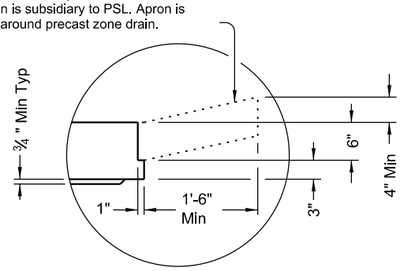
DATE:
FILE:

Style	Size (X x Y)	W (2)	A x B (nominal)	Short Span Reinf Steel Area	Long Span Reinf Steel Area
SL	3'x3'	6"	n/a	0.37 in□/ft	0.37 in□/ft
RH,RC,RG,SH,S1,FG	3'x3'	6"	3'x3' or 32" Dia	0.37 in□/ft	0.37 in□/ft
SFG	3'x3'	6"	3'x3'	0.32 in□/ft	0.32 in□/ft
SL	4'x4'	6"	n/a	0.34 in□/ft	0.34 in□/ft
RH,RC,RG,SH,S1,FG	4'x4'	6"	3'x3' or 32" Dia	0.41 in□/ft	0.41 in□/ft
SH,S1,FG	4'x4'	6"	4'x4'	0.41 in□/ft	0.41 in□/ft
SFG	4'x4'	6"	4'x4'	0.32 in□/ft	0.32 in□/ft
SL	3'x5'	6"	n/a	0.39 in□/ft	0.39 in□/ft
RH,RC,RG,SH,S1,FG	3'x5'	6"	3'x3' or 32" Dia	0.48 in□/ft	0.48 in□/ft
SH,S1,FG	3'x5'	6"	3'x5'	0.48 in□/ft	0.48 in□/ft
SFG	3'x5'	6"	3'x5'	0.32 in□/ft	0.32 in□/ft
SL	4'x5'	6"	n/a	0.42 in□/ft	0.42 in□/ft
RH,RC,RG,SH,S1,FG	4'x5'	6"	3'x3' or 32" Dia	0.42 in□/ft	0.42 in□/ft
SH,S1,FG	4'x5'	6"	4'x4'	0.63 in□/ft	0.63 in□/ft
SH,S1,FG	4'x5'	6"	3'x5'	0.66 in□/ft	0.66 in□/ft
SL	5'x5'	6"	n/a	0.36 in□/ft	0.36 in□/ft
RH,RC,RG,SH,S1,FG	5'x5'	6"	3'x3' or 32" Dia	0.43 in□/ft	0.43 in□/ft
SH,S1,FG	5'x5'	6"	4'x4'	0.63 in□/ft	0.63 in□/ft
SH,S1,FG	5'x5'	6"	3'x5'	0.63 in□/ft	0.63 in□/ft
SL	5'x6'	6"/8"	n/a	0.48 in□/ft	0.48 in□/ft
RH,RC,RG,SH,S1,FG	5'x6'	6"/8"	3'x3' or 32" Dia	0.48 in□/ft	0.48 in□/ft
SH,S1,FG	5'x6'	6"/8"	4'x4'	0.60 in□/ft	0.60 in□/ft
SH,S1,FG	5'x6'	6"/8"	3'x5'	0.60 in□/ft	0.60 in□/ft
SL	6'x6'	6"/8"	n/a	0.43 in□/ft	0.43 in□/ft
RH,RC,RG,SH,S1,FG	6'x6'	6"/8"	3'x3' or 32" Dia	0.56 in□/ft	0.56 in□/ft
SH,S1,FG	6'x6'	6"/8"	4'x4'	0.56 in□/ft	0.56 in□/ft
SH,S1,FG	6'x6'	6"/8"	3'x5'	0.59 in□/ft	0.59 in□/ft
SL	8'x8'	8"/10"	n/a	0.45 in□/ft	0.45 in□/ft
RH,RC,RG,SH,S1,FG	8'x8'	8"/10"	3'x3' or 32" Dia	0.45 in□/ft	0.45 in□/ft
SH,S1,FG	8'x8'	8"/10"	4'x4'	0.45 in□/ft	0.45 in□/ft
SH,S1,FG	8'x8'	8"/10"	3'x5'	0.45 in□/ft	0.45 in□/ft

(2) See sheet PDD for corresponding wall thickness (W) of base unit or riser.

Construct cast-in-place reinforced concrete apron, when shown elsewhere in plans. Use Class "A" concrete. Apron is subsidiary to PSL. Apron is 1'-6" Min width around precast zone drain.



DETAIL "A"

(Reinforcing not shown for clarity)

When an apron is to be cast around PSL, use detail above to create an apron ledge on all 4 sides.

FABRICATION NOTES:

1. Locate penetration (Style 'RH'), ring and cover (Style 'RC'), ring and grate (Style 'RG'), and frame and grate (Style 'FG') in a corner. Only one penetration is allowed per slab lid.
2. Provide Class "H" concrete in accordance with Item 421 and having a minimum compressive strength of 5,000 psi.
3. Provide Grade 60 reinforcing steel or equivalent area of WWR.
4. Provide clear cover of ¾" to reinforcing from lower outside shoulder of slab for structural reinforcement, and 2" from top of slab for shrinkage and temperature reinforcement. Place short span reinforcing closest to surface.
5. Slabs with a thickness of 8" or greater require shrinkage and temperature reinforcing. Provide steel area = 0.11 in²/ft each way.
6. No substitution is allowed for diagonal #4 bars around openings.
7. Design tongue and groove joints for full closure on both shoulders. Minimum spigot depth is ¾".
8. Provide lifting devices in conformance with Manufacturer's recommendations.

INSTALLATION NOTES:

1. Precast slab lids are intended for direct traffic and may be placed in roadway.
2. Seal tongue and groove joints with preformed or bulk mastic in conformance with Manufacturer's recommendations. Tongue and groove joints may be grouted no more than 1" between each section, or ½ the joint depth, whichever is greater.
3. Do not grout rubber gasket joints without Manufacturer's recommendation.
4. Initial installation of grade adjustment rings for Styles 'RH' and 'SH' is limited to 1'-0" Max as shown.
5. Grade adjustment rings for Styles 'RH' and 'SH' may be increased to 2'-0" Max when future construction affects final grade of structure. Make adjustments greater than 2'-0" with additional risers. Adjustments can be made up to Max depth shown on sheet PDD. Structure must be evaluated if Max depth will be exceeded.
6. Orient long dimension of grate slots perpendicular to traffic, unless noted otherwise on plans

GENERAL NOTES:

1. Designed according to ASTM C913.
2. Payment for lid is per Item 465, "Junction Boxes, Manholes, and Inlets" by type, style, size, and opening size (when applicable).

Cover dimensions are clear dimensions, unless noted otherwise.

HL93 LOADING SHEET 2 OF 2

Texas Department of Transportation

Bridge Division Standard

PRECAST SLAB LID

PSL

FILE: prestd05.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT January 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		62

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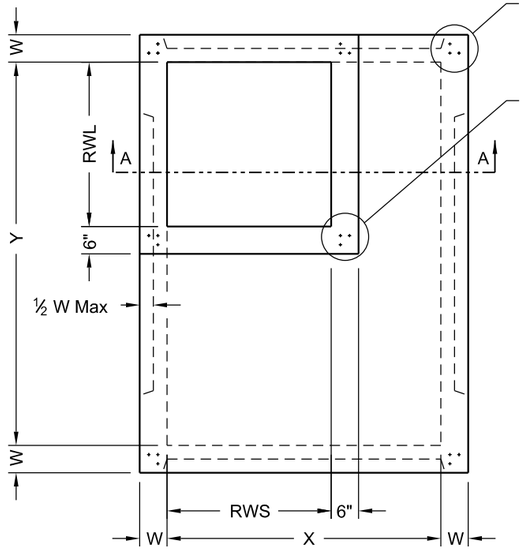
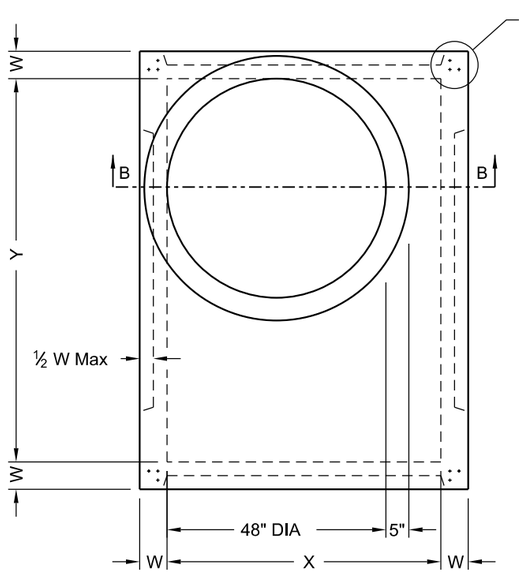
DATE:
FILE:



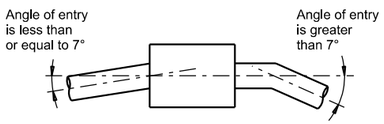
PLAN VIEW "A"

SQUARE REDUCED RISER OPTION



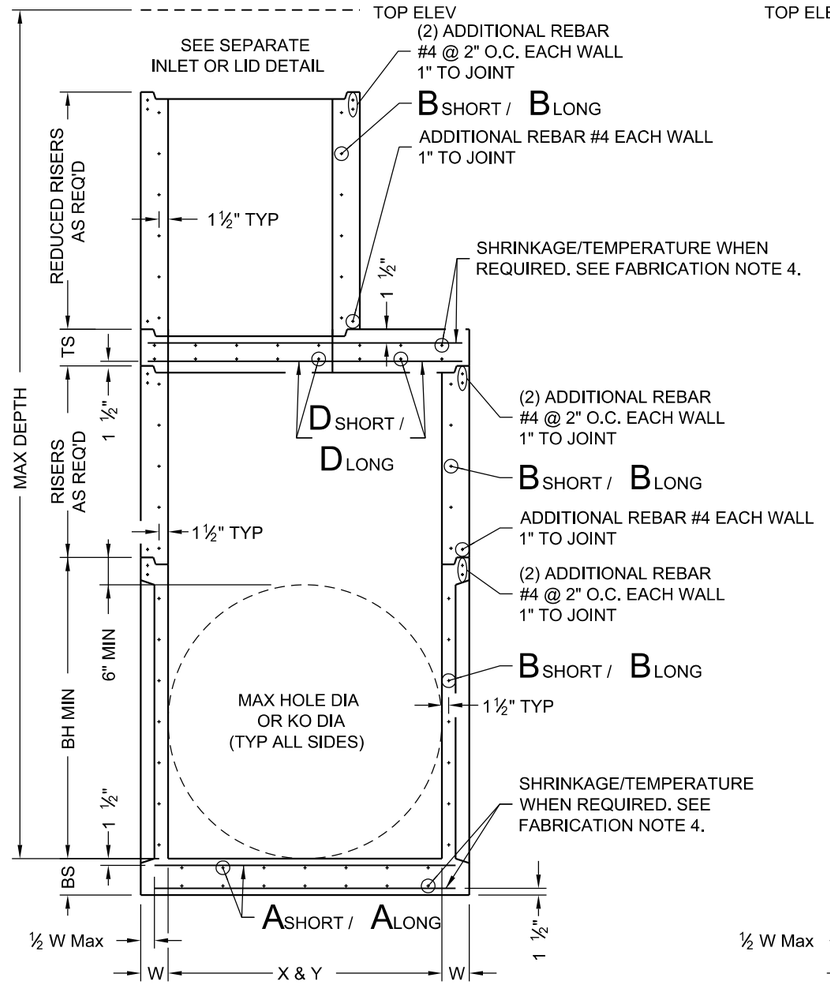
PLAN VIEW "B"

ROUND REDUCED RISER OPTION



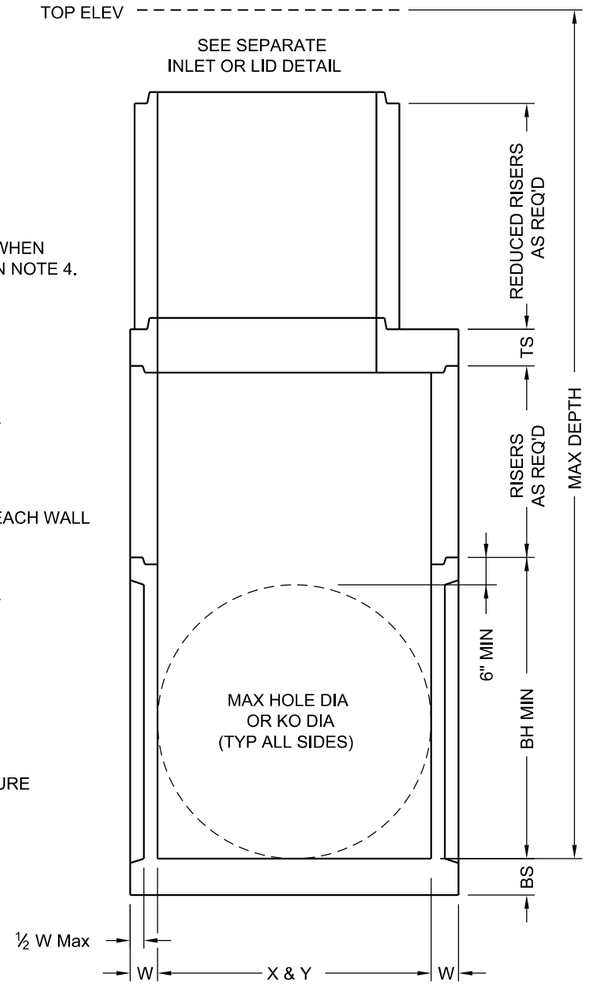
PIPE CONNECTION DETAIL

Connect pipes within 7° of normal to PB wall.
If necessary, use pipe elbow or curved approach alignment to stay within this limit.



SECTION A-A

SQUARE REDUCED RISER OPTION



SECTION B-B

ROUND REDUCED RISER OPTION

FABRICATION NOTES:

1. Provide Class "H" concrete in accordance with Item 421 and having a minimum compressive strength of 5,000 psi.
2. Provide Grade 60 reinforcing steel or equivalent area of WWR.
3. Provide typical clear cover of 1 ½" to reinforcing steel at interior or exterior walls.
4. Walls or slabs with a thickness of 8" or greater require shrinkage and temperature reinforcing steel. Provide steel area = 0.11 in²/ft each way.
5. No substitution is allowed for vertical and horizontal #4 bars in corners.
6. Manufacture base and risers to nearest 3" increment.
7. Design tongue and groove joints for full closure on both shoulders. Minimum spigot depth is ¾".
8. Provide lifting devices in conformance with Manufacturer's recommendations.
9. See sheet PDD for sizes, dimensions, and reinforcing steel not shown.

INSTALLATION NOTES:

1. Inverts (benching) to be provided by Contractor. Concrete or mortar used for invert is subsidiary to specified inlet or manhole.
2. Seal tongue and groove joints with preformed or bulk mastic in conformance with Manufacturer's recommendations. Tongue and groove joints may be grouted no more than 1" between each section, or ½ the joint depth, whichever is greater.
3. Do not grout rubber gasket joints without Manufacturer's recommendation.
4. For rigid pipe, cut hole in thin wall panel (KO) 4" Max, 2" Min larger than pipe OD.
5. For flexible pipe, consult boot/seal Manufacturer's specification for placement tolerance and hole size. Center pipe in hole and install boot/seal per Manufacturer's specification.

GENERAL NOTES:

1. Precast Base consists of base slab, base unit, risers (as required), reducing slab (as required), and reduced risers (as required). See sheet PDD for sizes.
2. Designed according to ASTM C913.
3. Payment for precast base is subsidiary to the specified inlet, per Item 465, "Junction Boxes, Manholes, and Inlets."

Cover dimensions are clear dimensions, unless noted otherwise.

HL93 LOADING

Texas Department of Transportation

Bridge Division Standard

PRECAST BASE

PB

FILE: prestd01.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT January 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		63

	Size	MAX DEPTH = 15 ft. to top of BASE SLAB										MAX DEPTH = 25 ft. to top of BASE SLAB										Min Height (See Gen Note 3)	Max HOLE DIA (See Fab Note 2)	Max KO DIA (See Fab Note 2)
		Base Slab			Base Unit or Riser Walls			Below Grade Slab (w/PJB) Reducing Slab (w/PB)				Base Slab			Base Unit or Riser Walls			Below Grade Slab (w/PJB) Reducing Slab (w/PB)						
		Short Span Reinf Steel Area	Long Span Reinf Steel Area	Thickness	Short Span Reinf Steel Area	Long Span Reinf Steel Area	Thickness	Reduced Riser Size	Short Span Reinf Steel Area	Long Span Reinf Steel Area	Thickness	Short Span Reinf Steel Area	Long Span Reinf Steel Area	Thickness	Short Span Reinf Steel Area	Long Span Reinf Steel Area	Thickness	Reduced Riser Size	Short Span Reinf Steel Area	Long Span Reinf Steel Area	Thickness			
	X x Y	Ashort	Along	BS	Bshort	Blong	W	RWSxRWL or ID	Dshort	Dlong	TS	Ashort	Along	BS	Bshort	Blong	W	RWSxRWL or ID	Dshort	Dlong	TS	BH MIN	HOLE DIA	KO DIA
	ft.	in^2/ft	in^2/ft	in.	in^2/ft	in^2/ft	in.	ft. **	in^2/ft	in^2/ft	in.	in^2/ft	in^2/ft	in.	in^2/ft	in^2/ft	in.	ft. **	in^2/ft	in^2/ft	in.	ft.	in.	in.
Precast Junction Box (PJB)	3x3	0.23	0.23	6	0.19	0.19	6	N/A	0.37	0.37	9	0.29	0.29	6	0.24	0.24	6	N/A	0.37	0.37	9	3.5	36	36
	4x4	0.29	0.29	6	0.24	0.24	6	N/A	0.41	0.41	9	0.47	0.47	6	0.38	0.38	6	N/A	0.41	0.41	9	4.5	48	48
	3x5	0.29	0.18	6	0.19	0.35	6	N/A	0.48	0.48	9	0.39	0.18	6	0.23	0.59	6	N/A	0.48	0.48	9	3.5	36/60	36/60
	4x5	0.36	0.18	6	0.22	0.34	6	N/A	0.42	0.42	9	0.53	0.26	6	0.39	0.59	6	N/A	0.42	0.42	9	4.5	48/60	48/60
	5x5	0.36	0.36	6	0.34	0.34	6	N/A	0.43	0.43	9	0.62	0.62	6	0.59	0.59	6	N/A	0.43	0.43	9	5.5	60	60
	5x6	0.27	0.27	9	0.34	0.45	6	N/A	0.48	0.48	9	0.47	0.45	9	0.38	0.54	8	N/A	0.48	0.48	9	5.5	60/72	60/72
	6x6	0.27	0.27	9	0.45	0.45	6	N/A	0.56	0.56	9	0.52	0.52	9	0.54	0.54	8	N/A	0.56	0.56	9	6.5	72	72
	8x8	0.46	0.46	9	0.51	0.51	8	N/A	0.45	0.45	12	0.87	0.87	9	0.59	0.59	10	N/A	0.45	0.45	12	8.5	96	72
Precast Base (PB)	3x3	0.23	0.23	6	0.19	0.19	6	N/A	N/A	N/A	N/A	0.29	0.29	6	0.24	0.24	6	N/A	N/A	N/A	N/A	3.5	36	36
	4x4	0.29	0.29	6	0.24	0.24	6	N/A	N/A	N/A	N/A	0.47	0.47	6	0.38	0.38	6	N/A	N/A	N/A	N/A	4.5	48	48
	3x5	0.29	0.18	6	0.19	0.35	6	3x3	0.30	0.34	9	0.39	0.18	6	0.23	0.59	6	3x3	0.40	0.40	9	3.5	36/60	36/60
	4x5	0.36	0.18	6	0.22	0.34	6	3x3	0.30	0.30	9	0.53	0.26	6	0.39	0.59	6	3x3	0.46	0.37	9	4.5	48/60	48/60
	4x5	0.36	0.18	6	0.22	0.34	6	4x4	0.30	0.30	9	0.53	0.26	6	0.39	0.59	6	4x4	0.39	0.39	9	4.5	48/60	48/60
	4x5	0.36	0.18	6	0.22	0.34	6	48"	0.39	0.39	9	0.53	0.26	6	0.39	0.59	6	48"	0.47	0.47	9	4.5	48/60	48/60
	4x5	0.36	0.18	6	0.22	0.34	6	3x5	0.33	0.40	9	0.53	0.26	6	0.39	0.59	6	3x5	0.48	0.48	9	4.5	48/60	48/60
	5x5	0.36	0.36	6	0.34	0.34	6	3x3	0.34	0.34	9	0.62	0.62	6	0.59	0.59	6	3x3	0.53	0.53	9	5.5	60	60
	5x5	0.36	0.36	6	0.34	0.34	6	4x4	0.36	0.36	9	0.62	0.62	6	0.59	0.59	6	4x4	0.64	0.64	9	5.5	60	60
	5x5	0.38	0.38	6	0.34	0.34	6	48"	0.36	0.36	9	0.62	0.62	6	0.59	0.59	6	48"	0.64	0.64	9	5.5	60	60
	5x5	0.36	0.36	6	0.34	0.34	6	3x5	0.34	0.40	9	0.62	0.62	6	0.59	0.59	6	3x5	0.53	0.53	9	5.5	60	60
	5x6	0.31	0.31	9	0.34	0.45	6	3x3	0.34	0.34	9	0.47	0.45	9	0.38	0.54	8	3x3	0.61	0.50	9	5.5	60/72	60/72
	5x6	0.27	0.27	9	0.34	0.45	6	4x4	0.36	0.45	9	0.47	0.45	9	0.38	0.54	8	4x4	0.74	0.57	9	5.5	60/72	60/72
	5x6	0.29	0.29	9	0.34	0.45	6	48"	0.36	0.45	9	0.47	0.45	9	0.38	0.54	8	48"	0.74	0.57	9	5.5	60/72	60/72
	5x6	0.29	0.29	9	0.34	0.45	6	3x5	0.45	0.45	9	0.47	0.45	9	0.38	0.54	8	3x5	0.61	0.61	9	5.5	60/72	60/72
	6x6	0.29	0.29	9	0.45	0.45	6	3x3	0.41	0.41	9	0.52	0.52	9	0.54	0.54	8	3x3	0.74	0.74	9	6.5	72	72
	6x6	0.27	0.27	9	0.45	0.45	6	4x4	0.45	0.45	9	0.52	0.52	9	0.54	0.54	8	4x4	0.87	0.87	9	6.5	72	72
	6x6	0.29	0.29	9	0.45	0.45	6	48"	0.45	0.45	9	0.52	0.52	9	0.54	0.54	8	48"	0.87	0.87	9	6.5	72	72
	6x6	0.29	0.29	9	0.45	0.45	6	3x5	0.45	0.45	9	0.52	0.52	9	0.54	0.54	8	3x5	0.87	0.87	9	6.5	72	72
	8x8	0.52	0.52	9	0.51	0.51	8	3x3	0.61	0.61	12	0.91	0.91	9	0.70	0.70	10	3x3	0.85	0.85	12	8.5	96	72
	8x8	0.52	0.52	9	0.51	0.51	8	4x4	0.70	0.70	12	0.87	0.87	9	0.70	0.70	10	4x4	1.01	1.01	12	8.5	96	72
	8x8	0.52	0.52	9	0.51	0.51	8	48"	0.70	0.70	12	0.87	0.87	9	0.70	0.70	10	48"	1.01	1.01	12	8.5	96	72
	8x8	0.52	0.52	9	0.51	0.51	8	3x5	0.70	0.85	12	0.87	0.87	9	0.70	0.70	10	3x5	1.01	1.01	12	8.5	96	72

** Unless otherwise indicated.

FABRICATION NOTES:
1. Maximum spacing of reinforcement is 8".
2. At manufacturer's option, provide cast or cored holes or thin wall panels (KO) to the maximum diameter shown for each. When no penetration is required, it is acceptable to provide a wall with no sectional reduction.

GENERAL NOTES:
1. Precast Junction Box consists of base slab, base unit, risers (as required), and below grade slab. See sheet PJB for details.
2. Precast Base consists of base slab, base unit, risers (as required), reducing slab (as required), and reduced risers (as required). See sheet PB for details.
3. Min Height shown is for stock base units. Use stock base units whenever practical. Smaller height base units can be used in special installation circumstances, when noted elsewhere in the plans. Absolute minimum height of base units is 2'-6".

HL93 LOADING

Texas Department of Transportation

Bridge Division Standard

DESIGN DATA FOR PRECAST BASE AND JUNCTION BOX

PDD

FILE: prestd10.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT January 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		64

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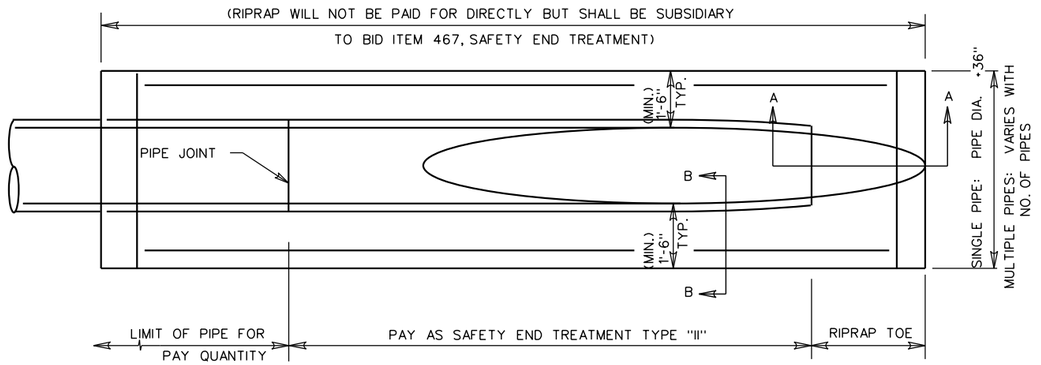
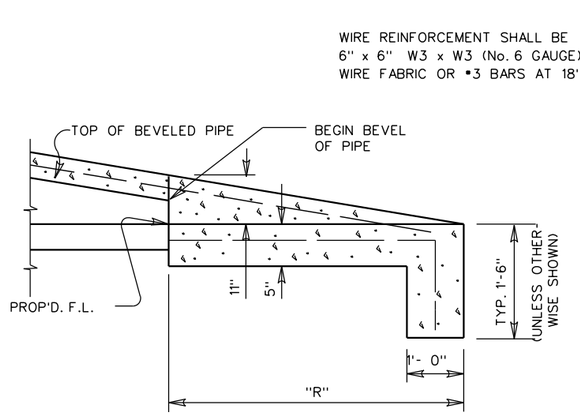
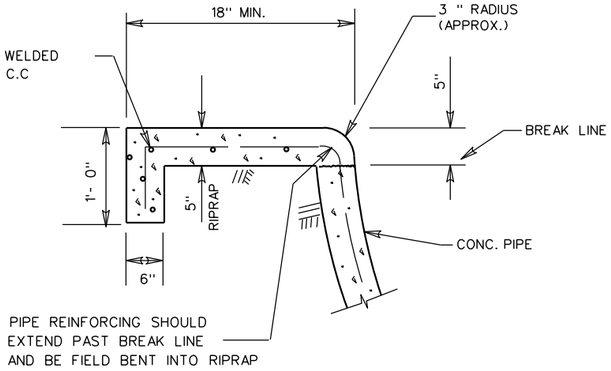
DATE:
FILE:



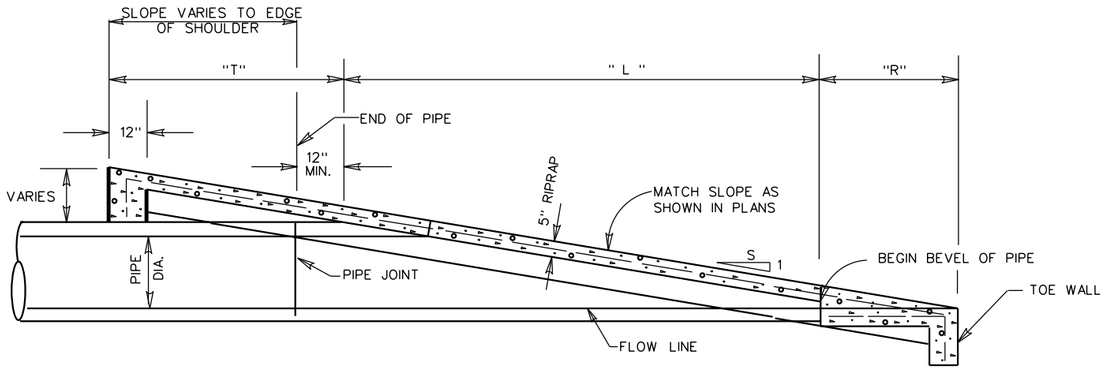
PLAN VIEW



SEC. A-A



SEC. B-B



ELEVATION
SAFETY END TREATMENT

SAFETY END TREATMENT PIPE LENGTHS

PIPE DIA. (IN.)	"L"			
	3:1	4:1	5:1	6:1
12	2'-0"	2'-8"	3'-4"	4'-0"
15	2'-9"	3'-8"	4'-7"	5'-6"
18	3'-6"	4'-8"	5'-10"	7'-0"
24	5'-1½"	6'-10"	8'-6½"	10'-3"
30	6'-9"	9-0"	11'-3"	13'-6"
36	8'-6"	11'-4"	14'-2"	17'-0"
42	10'-1½"	13'-6"	16'-10½"	20'-3"
48	11'-9"	15'-8"	19'-7"	23'-6"

Ⓔ DRIVEWAYS & TURNOUTS ARE 6:1 ONLY

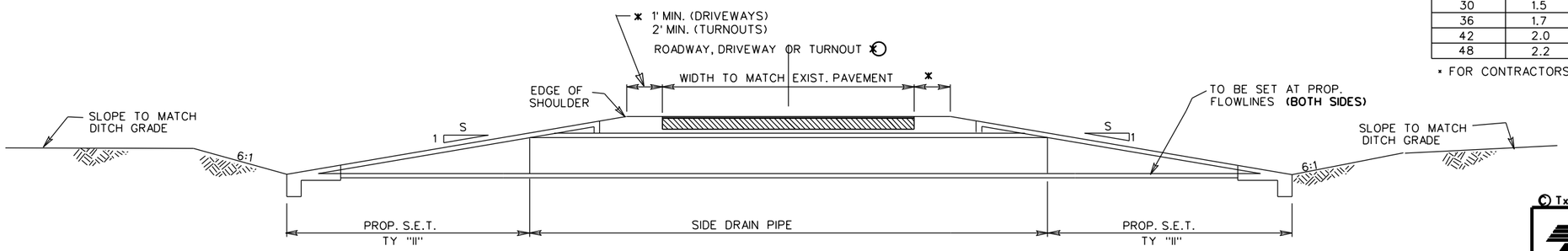
RIPRAP TOE LENGTHS

SLOPE	" R "	"T"
3:1	2'-9"	1'-9"
4:1	3'-8"	2'-4"
5:1	4'-7"	2'-11"
6:1	5'-6"	3'-6"

ESTIMATED RIPRAP VOLUME (CY)

PIPE DIA. (IN.)				
	3:1	4:1	5:1	6:1
12	.9	1.1	1.3	1.6
15	1.0	1.2	1.5	1.8
18	1.1	1.4	1.6	1.9
24	1.3	1.6	2.0	2.3
30	1.5	1.9	2.3	2.7
36	1.7	2.2	2.7	3.2
42	2.0	2.5	3.1	3.6
48	2.2	2.8	3.4	4.1

* FOR CONTRACTORS INFORMATION ONLY (SINGLE PIPE)



TYPICAL SIDEDRAIN SECTION

NOTE:

ALL EXCAVATION AND BACKFILL REQUIRED AT ALL PIPE SIDE DRAIN CONNECTIONS, ADJUSTMENTS AND/OR EXTENSIONS WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE SUBSIDIARY TO THE BID ITEMS INVOLVED AND IN ACCORDANCE WITH ITEM 400 "STRUCTURAL EXCAVATION".

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PHARR DISTRICT STANDARDS

TEXAS DEPARTMENT OF TRANSPORTATION

SAFETY END TREATMENT DETAILS

REV. 9/16

SET.DGN

FD.RD. DIV.NO.	FEDERAL AID PROJECT NO.		FILE NO.			SHEET NO.
6						65
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TEXAS	PHR	HIDALGO	0921	02	331	ALAMO

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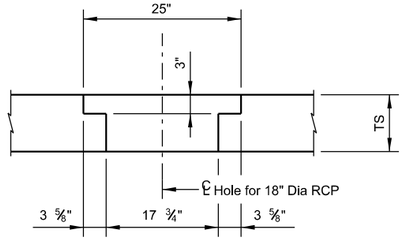
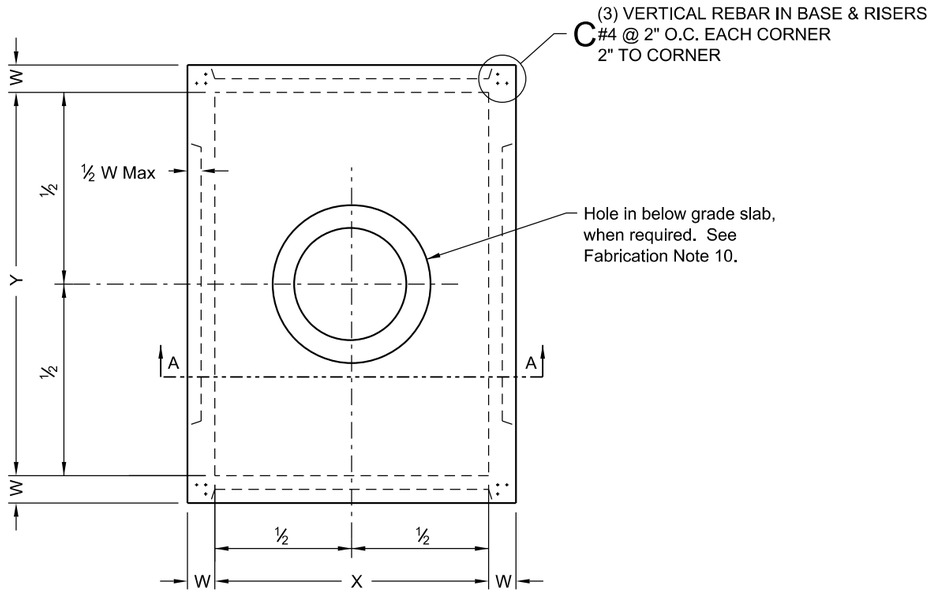
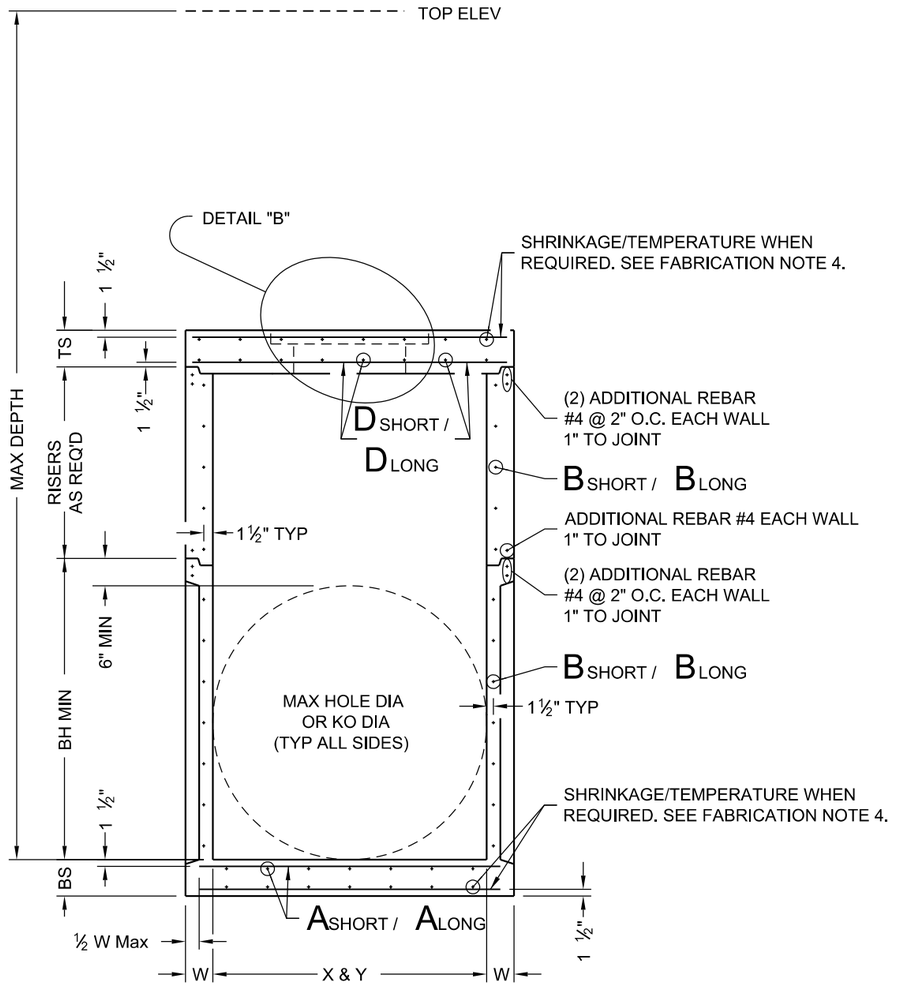
DATE:
FILE:



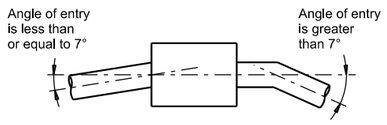
DETAIL "B"



PLAN VIEW



SECTION A-A



PIPE CONNECTION DETAIL

Connect pipes within 7° of normal to PJB wall.
If necessary, use pipe elbow or curved approach alignment to stay within this limit.

FABRICATION NOTES:

1. Provide Class "H" concrete in accordance with Item 421 and having a minimum compressive strength of 5,000 psi.
2. Provide Grade 60 reinforcing steel or equivalent area of WWR.
3. Provide typical clear cover of 1 ½" to reinforcing steel at interior or exterior walls.
4. Walls or slabs with a thickness of 8" or greater require shrinkage and temperature reinforcing steel. Provide steel area = 0.11 in²/ft each way.
5. No substitution is allowed for vertical and horizontal #4 bars in corners.
6. Manufacture base and risers to nearest 3" increment.
7. Design tongue and groove joints for full closure on both shoulders. Minimum spigot depth is ¾".
8. Provide lifting devices in conformance with Manufacturer's recommendations.
9. See sheet PDD for sizes, dimensions, and reinforcing steel not shown.
10. Provide hole in below grade slab only when PJB is installed with inlet type POD.

INSTALLATION NOTES:

1. Inverts (benching) to be provided by Contractor. Concrete or mortar used for invert is subsidiary to junction box.
2. Seal tongue and groove joints with preformed or bulk mastic in conformance with Manufacturer's recommendations. Tongue and groove joints may be grouted no more than 1" between each section, or ½ the joint depth, whichever is greater.
3. Do not grout rubber gasket joints without Manufacturer's recommendation.
4. For rigid pipe, cut hole in thin wall panel (KO) 4" Max, 2" Min larger than pipe OD.
5. For flexible pipe, consult boot/seal Manufacturer's specification for placement tolerance and hole size. Center pipe in hole and install boot/seal per Manufacturer's specification.

GENERAL NOTES:

1. Precast Junction Box consists of base slab, base unit, risers (as required), and below grade slab. See sheet PDD for sizes.
2. Designed according to ASTM C913.
3. Payment for junction box is per Item 465 "Junction Boxes, Manholes, and Inlets" by type and size.

Cover dimensions are clear dimensions, unless noted otherwise.

HL93 LOADING

Texas Department of Transportation

Bridge Division Standard

PRECAST JUNCTION BOX

PJB

FILE: prestd09.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT			
©TxDOT January 2015	CONT	SECT	JOB	HIGHWAY			
REVISIONS	0921	02	311	ALAMO			
	DIST	COUNTY		SHEET NO.			
	PHR	HIDALGO		65A			

ALAMO ROAD AT FM 1925 ADDITIONAL TRAFFIC SIGNAL QUANTITIES

ITEM	DESCR CODE	DESCRIPTION	UNIT	QUANTITIES
0618	6016	CONDT (PVC) (SCHD 40) (1")	LF	20
0618	6023	CONDT (PVC) (SCHD 40) (2")	LF	285
0624	6002	GROUND BOX TY A (122311) W/APRON	EA	3
*636		ALUMINIUM SIGNS (TYPE A)	EA	4
0680	6002	INSTALL HWY TRF SIG (ISOLATED)	EA	1
0684	6027	TRF SIG CBL (TY A) (14 AWG) (1 CONDR)	LF	40
0684	6080	TRF SIG CBL (TY C) (14 AWG) (2 CONDR)	LF	805
0688	6004	VEH LP DETECT (SAWCUT)	LF	204
*0684	6027	TRF SIG CBL (TY A) (14 AWG) (1 CONDR)	LF	502

* QUANTITIES ARE SHOWN FOR CONTRACTOR'S INFORMATION ONLY.
THESE ITEMS ARE SUBSIDIARY TO VARIOUS OTHER ITEMS.

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Texas Department of Transportation

THE COUNTY OF HIDALGO TEXAS

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

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900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

ALAMO ROAD AT FM 1925
TRAFFIC SIGNAL
QUANTITIES

ETSI
Ergonomic Transportation Solutions, Inc.
TEXAS REGISTERED ENGINEERING FIRM NO. F - 000625
5300 Hollister Road, Suite 220
Houston, Texas 77040
Tel. (713) 956-9601 Fax (713) 956-9667

DATE: 11/16/2017	CONT	SECT	JOB	HIGHWAY
DN: BB, RM	0921	02	311	ALAMO RD
CK DN: HCS	DIST	COUNTY		SHEET NO.
DW: BB, RM	PHR	HIDALGO		66
CK DW: HCS				

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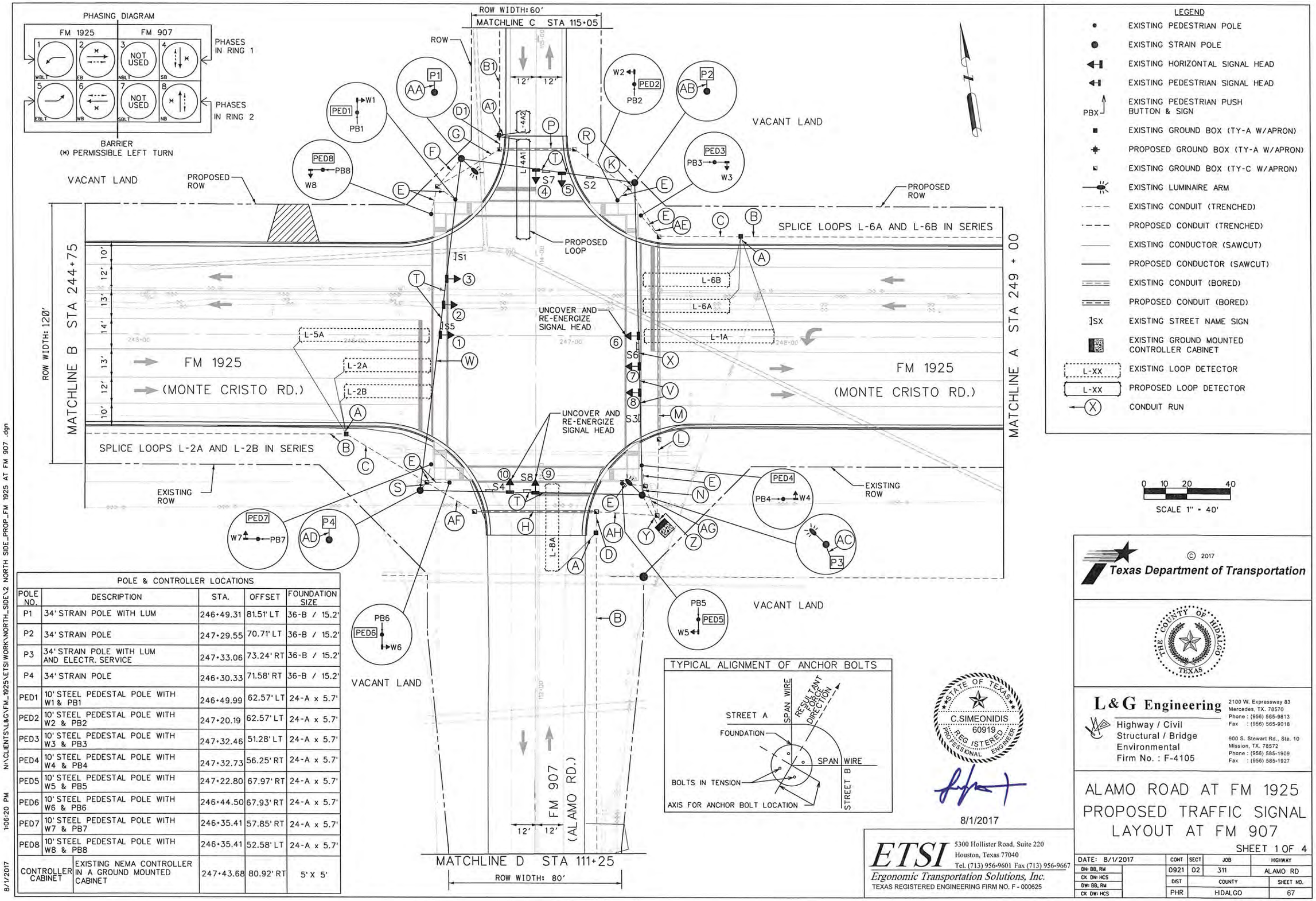

POLE & CONTROLLER LOCATIONS				
POLE NO.	DESCRIPTION	STA.	OFFSET	FOUNDATION SIZE
P1	34' STRAIN POLE WITH LUM	246+49.31	81.51' LT	36-B / 15.2'
P2	34' STRAIN POLE	247+29.55	70.71' LT	36-B / 15.2'
P3	34' STRAIN POLE WITH LUM AND ELECTR. SERVICE	247+33.06	73.24' RT	36-B / 15.2'
P4	34' STRAIN POLE	246+30.33	71.58' RT	36-B / 15.2'
PED1	10' STEEL PEDESTAL POLE WITH W1 & PB1	246+49.99	62.57' LT	24-A x 5.7'
PED2	10' STEEL PEDESTAL POLE WITH W2 & PB2	247+20.19	62.57' LT	24-A x 5.7'
PED3	10' STEEL PEDESTAL POLE WITH W3 & PB3	247+32.46	51.28' LT	24-A x 5.7'
PED4	10' STEEL PEDESTAL POLE WITH W4 & PB4	247+32.73	56.25' RT	24-A x 5.7'
PED5	10' STEEL PEDESTAL POLE WITH W5 & PB5	247+22.80	67.97' RT	24-A x 5.7'
PED6	10' STEEL PEDESTAL POLE WITH W6 & PB6	246+44.50	67.93' RT	24-A x 5.7'
PED7	10' STEEL PEDESTAL POLE WITH W7 & PB7	246+35.41	57.85' RT	24-A x 5.7'
PED8	10' STEEL PEDESTAL POLE WITH W8 & PB8	246+35.41	52.58' LT	24-A x 5.7'
CONTROLLER CABINET	EXISTING NEMA CONTROLLER IN A GROUND MOUNTED CABINET	247+43.68	80.92' RT	5' X 5'

LEGEND

- EXISTING PEDESTRIAN POLE
- EXISTING STRAIN POLE
- EXISTING HORIZONTAL SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- PBX — EXISTING PEDESTRIAN PUSH BUTTON & SIGN
- EXISTING GROUND BOX (TY-A W/APRON)
- PROPOSED GROUND BOX (TY-A W/APRON)
- EXISTING GROUND BOX (TY-C W/APRON)
- EXISTING LUMINAIRE ARM
- EXISTING CONDUIT (TRENCHED)
- PROPOSED CONDUIT (TRENCHED)
- EXISTING CONDUCTOR (SAWCUT)
- PROPOSED CONDUCTOR (SAWCUT)
- EXISTING CONDUIT (BORED)
- PROPOSED CONDUIT (BORED)
- SX — EXISTING STREET NAME SIGN
- EXISTING GROUND MOUNTED CONTROLLER CABINET
- L-XX — EXISTING LOOP DETECTOR
- L-XX — PROPOSED LOOP DETECTOR
- X — CONDUIT RUN

8/1/2017

0 10 20 40

SCALE 1" = 40'

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THE COUNTY OF HIDALGO TEXAS

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
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ALAMO ROAD AT FM 1925
PROPOSED TRAFFIC SIGNAL LAYOUT AT FM 907

SHEET 1 OF 4

ETSI
Ergonomic Transportation Solutions, Inc.
5300 Hollister Road, Suite 220
Houston, Texas 77040
Tel. (713) 956-9601 Fax (713) 956-9667
TEXAS REGISTERED ENGINEERING FIRM NO. F - 000625

DATE: 8/1/2017	CONT	SECT	JOB	HIGHWAY
DN: BB, RM	0921	02	311	ALAMO RD
CK DN: HCS	DIST	COUNTY		SHEET NO.
DW: BB, RM	PHR	HIDALGO		67
CK DW: HCS				

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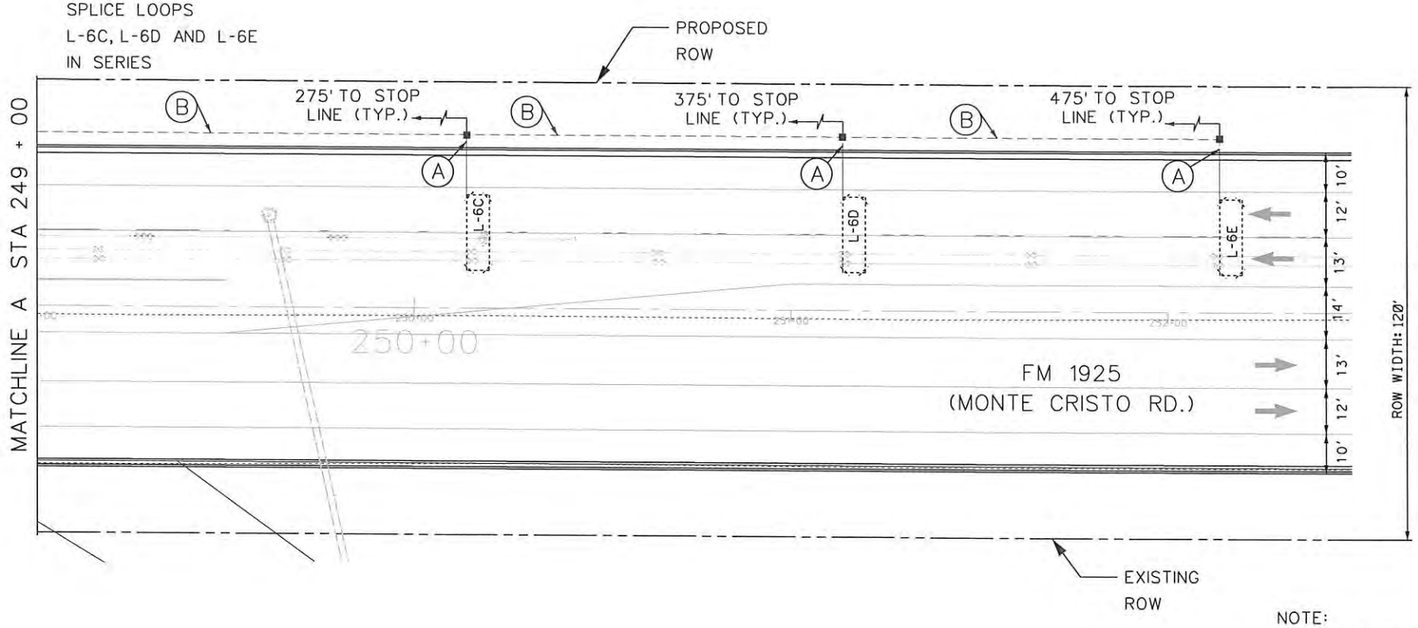

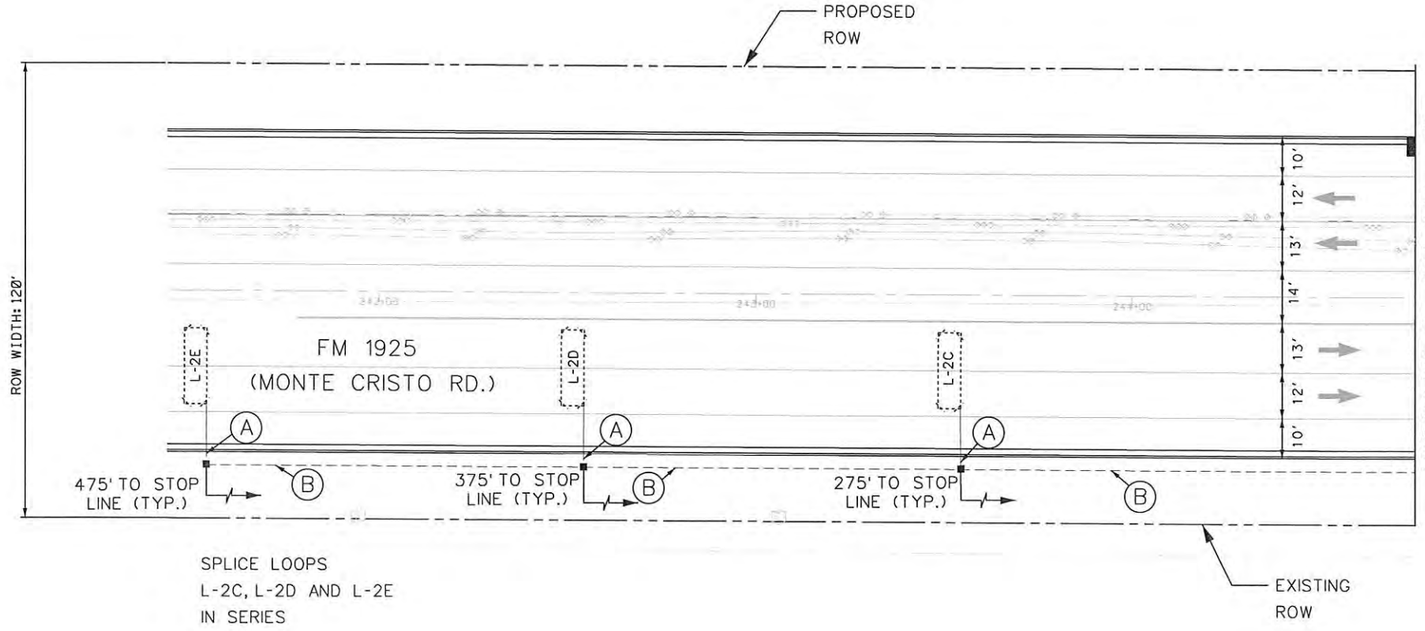

LEGEND

- EXISTING GROUND BOX (TY-A W/APRON)
- EXISTING CONDUIT (TRENCHED)
- EXISTING CONDUCTOR (SAWCUT)
- L-XX EXISTING LOOP DETECTOR

NOTE:
THIS DRAWING DEPICTS WORK PERFORMED ON PREVIOUS CONTRACT. IT IS FOR REFERENCEPURPOSES ONLY.

0 10 20 40
SCALE 1" = 40'

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Texas Department of Transportation

THE COUNTY OF HIDALGO TEXAS

STATE OF TEXAS
C.SIMEONIDIS
60919
REGISTERED PROFESSIONAL ENGINEER

8/1/2017

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

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TEXAS REGISTERED ENGINEERING FIRM NO. F - 000625

ALAMO ROAD AT FM 1925
PROPOSED TRAFFIC SIGNAL LAYOUT AT FM 907

SHEET 2 OF 4

DATE: 8/1/2017	CONT	SECT	JOB	HIGHWAY
DN: BB, RW	0921	02	311	ALAMO RD
CK DN: HCS	DIST	COUNTY		SHEET NO.
DW: BB, RW	PHR	HIDALGO		68
CK DW: HCS				

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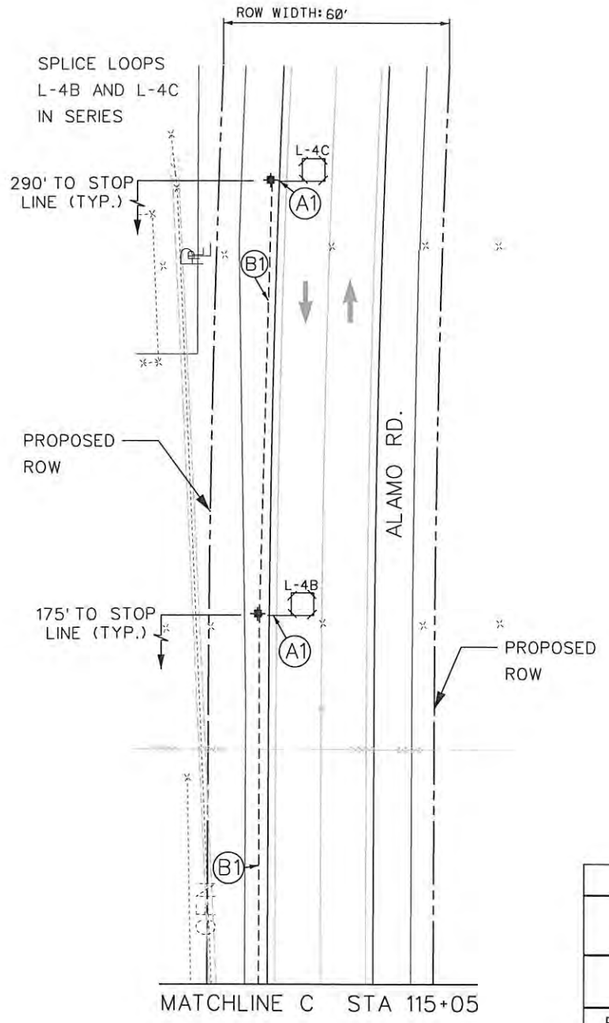

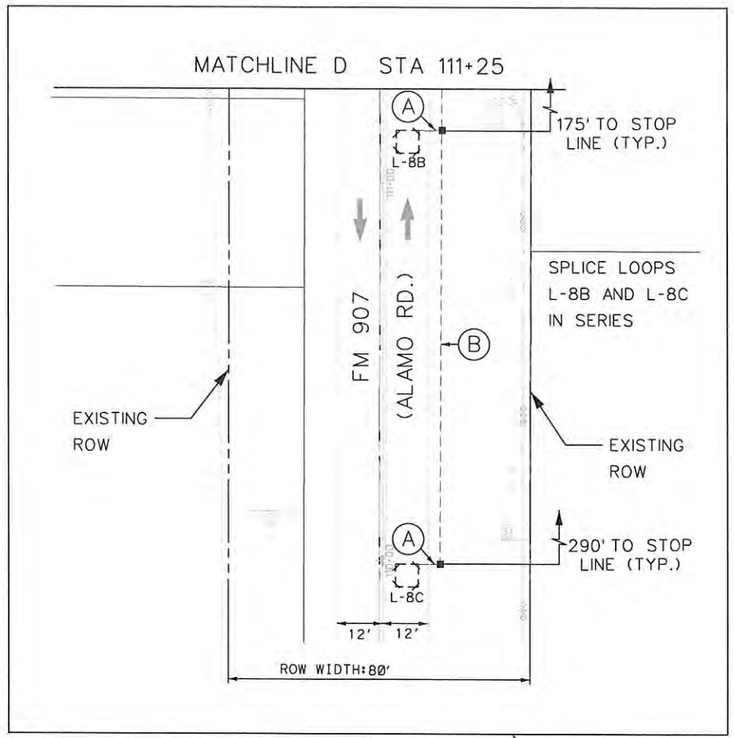

LEGEND

- EXISTING GROUND BOX (TY-A W/APRON)
- PROPOSED GROUND BOX (TY-A W/APRON)
- EXISTING CONDUIT (TRENCHED)
- PROPOSED CONDUIT (TRENCHED)
- EXISTING CONDUCTOR (SAWCUT)
- PROPOSED CONDUCTOR (SAWCUT)
- L-XX EXISTING LOOP DETECTOR
- L-XX PROPOSED LOOP DETECTOR

TIMING CHART								
PHASE	1	2	3	4	5	6	7	8
STREET	FM 1925		FM 907		FM 1925		FM 907	
MOVEMENT	WBLT	EB	NBLT	SB	EBLT	WB	SBLT	NB
MIN. GREEN	4	4		4	4	4		4
EXTENSION	3	3		3	3	3		3
MAXIMUM I	20	30		30	20	30		30
MAXIMUM II								
YELLOW	4.5	4.5		4	4.5	4.5		4
ALL RED	1	1		1	1	1		1
WALK		4		3		4		3
PED CLEAR		17		26		17		26
RECALL	OFF	ON		OFF	OFF	ON		OFF
MEMORY	OFF	OFF		OFF	OFF	OFF		OFF

NOTE:
THIS DRAWING DEPICTS WORK PERFORMED ON PREVIOUS CONTRACT. IT IS FOR REFERENCE PURPOSES ONLY.

0 10 20 40
SCALE 1" = 40'

ELECTRICAL SCHEDULE

THIS CONTRACT

ITEM	TOTAL QTY.	RUN NUMBER	A1	B1	D1	L*	M*	P*	R*	Z*	AE*
		RUN LENGTH (FT.)	20	275	10	40	100	40	35	10	30
POWER	0	1/C - # 6									
GROUND	0	1/C - # 6 BARE									
	0	1/C - # 8 BARE									
SIGNAL WIRE SIZE TYPE	0	4/C # 12 (TRAY CABLE)									
	0	5/C # 12									
	0	7/C # 12									
LOOP	40	1/C # 14 LOOP WIRE	2								
	805	2/C # 14 (SHIELDED)		1	2	2	2	2	2	2	2
CONDUIT	20	1" PVC	1								
	285	2" PVC		1	1						
	0	4" PVC				1			1	2	1
	0	4" PVC (BORE)					1	1			

* CABLES TO BE ADDED INTO EXISTING CONDUIT

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Texas Department of Transportation

THE COUNTY OF HIDALGO TEXAS

STATE OF TEXAS
C. SIMEONIDIS
60919
REGISTERED PROFESSIONAL ENGINEER

8/1/2017

L&G Engineering
Highway / Civil
Structural / Bridge
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Ergonomic Transportation Solutions, Inc.
TEXAS REGISTERED ENGINEERING FIRM NO. F - 000625

ALAMO ROAD AT FM 1925 PROPOSED TRAFFIC SIGNAL LAYOUT AT FM 907

SHEET 3 OF 4

DATE: 8/1/2017	CONT	SECT	JOB	HIGHWAY
DN: BB, RM	0921	02	311	ALAMO RD
CK DN: HCS	DIST	COUNTY		SHEET NO.
DW: BB, RM	PHR	HIDALGO		69
CK DW: HCS				

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LOOP DETECTOR SCHEDULE

	LOOP	SIZE	SAW CUT	WIRE LENGTH	AMP. NO.	SETTING	FUNCTION
	L-1A	6' x 60'	175'	350'	1	PRESENCE	CALL AND EXTEND Ø1
*	L-2A	6' x 40'	123'	246'	2	PRESENCE	CALL AND EXTEND Ø2
*	L-2B	6' x 40'	110'	220'	2	PRESENCE	CALL AND EXTEND Ø2
*	L-2C	6' x 20'	70'	140'	9	PRESENCE	CALL AND EXTEND Ø2
*	L-2D	6' x 20'	70'	140'	9	PRESENCE	CALL AND EXTEND Ø2
*	L-2E	6' x 20'	70'	140'	9	PRESENCE	CALL AND EXTEND Ø2
	L-4A1	6' x 46'	110'	220'	4	PRESENCE	CALL AND EXTEND Ø4
*	L-4A2	6' x 10'	38'	114'	4	PRESENCE	CALL AND EXTEND Ø4
	L-4B	6' x 6'	28'	84'	10	PRESENCE	CALL AND EXTEND Ø4
*	L-4C	6' x 6'	28'	84'	10	PRESENCE	CALL AND EXTEND Ø4
	L-5A	6' x 60'	171'	342'	5	PRESENCE	CALL AND EXTEND Ø5
*	L-6A	6' x 40'	122'	244'	6	PRESENCE	CALL AND EXTEND Ø6
	L-6B	6' x 40'	108'	216'	6	PRESENCE	CALL AND EXTEND Ø6
*	L-6C	6' x 30'	70'	140'	11	PRESENCE	CALL AND EXTEND Ø6
*	L-6D	6' x 30'	70'	140'	11	PRESENCE	CALL AND EXTEND Ø6
	L-6E	6' x 30'	70'	140'	11	PRESENCE	CALL AND EXTEND Ø6
	L-8A	6' x 40'	110'	220'	8	PRESENCE	CALL AND EXTEND Ø8
*	L-8B	6' x 6'	30'	90'	12	PRESENCE	CALL AND EXTEND Ø8
	L-8C	6' x 6'	30'	90'	12	PRESENCE	CALL AND EXTEND Ø8
	TOTAL PREVIOUS CONTRACT		1399	2858'			
	TOTAL THIS CONTRACT		204'	502'			

LOOPS IN THIS CONTRACT

* SPLICED IN SERIES

ELECTRICAL SCHEDULE

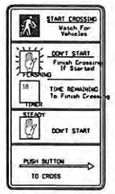
ITEM	TOTAL QTY.	RUN NUMBER	PREVIOUS CONTRACT																																
			A	B	C	D	E	F	G	H	K	L	M	N	P	R	S	T	V	W	X	Y	Z	AA	AB	AC	AD	AE	AG	AF	AH					
		RUN LENGTH (FT.)	75	1205	90	10	80	5	35	60	5	40	95	15	40	35	10	135	65	80	15	20	10	30	30	30	30	30	20	30	25					
POWER	40	1/C - # 6																				2														
GROUND	20	1/C - # 6 BARE																				1														
	545	1/C - # 8 BARE					1	1	1	1	1	1	1	1	1	1	1						2					1	1	1	1					
SIGNAL WIRE SIZE TYPE	375	4/C # 12 (TRAY CABLE)						1	1			1	1	1	1	1								1		1		1	1							
	2085	5/C # 12					1		2	3	1	5	5	2	2	2	1	1	1	1			12		1	2	1	4	4	3	3					
	400	7/C # 12								1				1			1		1	1	1		2			1	1		1	1	1					
LOOP	75	1/C # 14 LOOP WIRE	1																																
	2875	2/C # 14 (SHIELDED)		1	3	2				3		5	5		2	2							10					2		3	5					
CONDUIT	75	1" PVC	1																																
	1405	2" PVC		1	1	1	1															1													
	270	4" PVC						1	1		1	1		1		1	1						2					1	1	1	1					
	195	4" PVC (BORE)								1			1		1																					
AERIAL																		*	*	*	*															
INSIDE STRAIN POLE																								*	*	*	*									

Elec. Service No.	Sheet No.	Electrical Service Description (see ED (5) & (6) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panelbd/ Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole/Amps	Branch Circuit Amps	KVA Load
1	ALAMO RD	ELC SRV TY T 120/240 000 (NS)GS(L)TS(O)	1 1/4"	3/#6	N/A	N/A	N/A	100	T.S LIGHT	1P/50 2P/20	40 3	<5.5

S5, S6, S7, S8

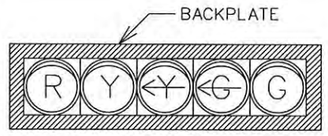
R10-12
(30"X36")

ACCESSIBLE PEDESTRIAN SIGNAL UNITS TO INCLUDE PEDESTRIAN PUSH BUTTONS

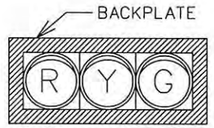


R10-3eR(L)
(9"X15")

W/ PEDESTRIAN PUSH BUTTON PB1 THRU PB8



①⑥*

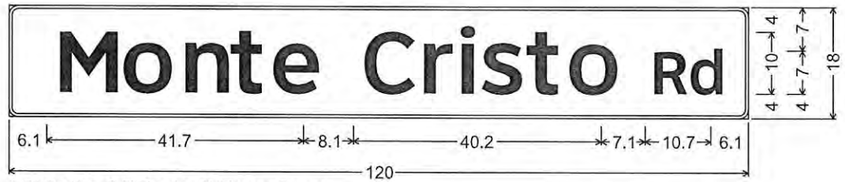


②③④⑤
⑦⑧⑨*⑩*

* SIGNAL HEADS 6, 9 AND 10 SHALL BE UNCOVERED AND RE-ENERGIZED

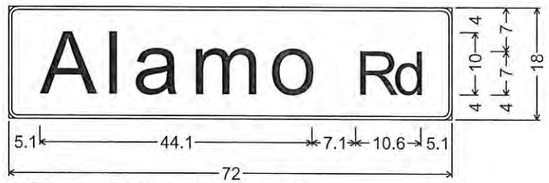
COUNTDOWN PED SIGNALS

W1 THRU W8



1.5" Radius, 0.5" Border, White on Green;
[Monte Cristo Rd] ClearviewHwy-3-W;

S2 , S4



1.5" Radius, 0.5" Border, White on Green;
[Alamo Rd] ClearviewHwy-3-W;

S1 , S3

8/1/2017

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TEXAS REGISTERED ENGINEERING FIRM NO. F - 000625

ALAMO ROAD AT FM 1925 PROPOSED TRAFFIC SIGNAL LAYOUTS

SHEET 4 OF 4

DATE: 8/1/2017	CONT	SECT	JOB	HIGHWAY
DN: BB, RM	0921	02	311	ALAMO RD
CK DN: HCS	DIST	COUNTY		SHEET NO.
DW: BB, RM	PHR	HIDALGO		70
CK DW: HCS				

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DATE:
FILE:

GENERAL NOTES FOR ALL ELECTRICAL WORK

1. The location of all conduits, junction boxes, ground boxes, and electrical services is diagrammatic and may be shifted to accommodate field conditions.

2. Provide new and unused materials. Ensure that all materials and installations comply with the applicable articles of the National Electrical Code (NEC), TxDOT standards and specifications, National Electrical Manufacturers Association (NEMA), and are listed by Underwriters Laboratories (UL) or a Nationally Recognized Testing Lab (NRTL). NRTLs such as Canadian Standard Association (CSA), Intertek Testing Services NA Inc., or FM Approvals LLC can be considered equivalent to UL. Where reference is made to NEMA listed devices, International Electrotechnical Commission (IEC) listed devices will not be considered an acceptable equal to a NEMA listed device. Acceptable devices may have both a NEMA and IEC listing. Faulty fabrication or poor workmanship in any material, equipment, or installation is justification for rejection. Replace or reinstall rejected material or equipment at no additional cost to the Department.

3. Miscellaneous nuts, bolts and hardware, except for high strength bolts, may be stainless steel when plans specify galvanized, provided the bolt size is ½ in. or less in diameter.

4. Provide the following test equipment as required by the Engineer to confirm compliance with the contract and the NEC: voltmeter, ammeter, megohm meter (1000 volt DC), ground resistance tester, torque wrenches, and torque screwdrivers. Ensure all equipment has been properly calibrated within the last year. Provide calibration certification to the Engineer upon request. Operate test equipment during inspection as requested by the Engineer.

5. Install grounding as shown on the plans and in accordance with the NEC. Ensure all metallic conduits; metal poles; luminaires; and metal enclosures are bonded to the equipment grounding conductor. Provide stranded bare copper or green insulated grounding conductors. Ground rods, connectors, and bonding jumpers are subsidiary to the various bid items.

6. When required by the Engineer, notify the Department in writing of materials from the Material Producers List (MPL) intended for use on each project. Prequalified materials are listed on the MPL on TxDOT's website under "Roadway Illumination and Electrical Supplies." No substitutions will be allowed for materials on this list.

CONDUIT

A. MATERIALS

1. Provide conduit, junction boxes, fittings, and hardware as per TxDOT Departmental Material Specification (DMS) 11030 "Conduit" and Item 618 "Conduit" of TxDOT's "Standard Specifications For Construction And Maintenance Of Highways, Streets, And Bridges," latest edition. Provide conduits listed under Item 618 on the MPL under "Roadway Illumination and Electrical Supplies." Provide conduit types according to the descriptive code or as shown on the plans. Do not substitute other types of conduits for those shown. Provide liquidtight flexible metal conduit (LFMC) when flexible conduit is called for on galvanized steel rigid metallic conduit (RMC) systems. Provide liquidtight flexible nonmetallic conduit (LFNC) when flexible conduit is called for on polyvinyl chloride (PVC) systems.

2. Provide galvanized steel RMC for all exposed conduits, unless otherwise shown on the plans. Properly bond all metal conduits.

3. Unless otherwise shown on the plans, provide junction boxes with a minimum size as shown in the following table, which applies to the greatest number of conductors entering the box through one conduit with no more than four conduits per box. When a mixture of conductor sizes is present, count the conductors as if all are of the larger size. For situations not applicable to the table, size junction boxes in accordance with NEC.

AWG	3 CONDUCTORS	5 CONDUCTORS	7 CONDUCTORS
#1	10" x 10" x 4"	12" x 12" x 4"	16" x 16" x 4"
#2	8" x 8" x 4"	10" x 10" x 4"	12" x 12" x 4"
#4	8" x 8" x 4"	10" x 10" x 4"	10" x 10" x 4"
#6	8" x 8" x 4"	8" x 8" x 4"	10" x 10" x 4"
#8	8" x 8" x 4"	8" x 8" x 4"	8" x 8" x 4"

4. Junction boxes with an internal volume of less than 100 cu. in. and supported by entering raceways must have threaded entries or hubs identified for the intended purpose and supported by connection of two or more rigid metal conduits. Secure conduit within 3 ft. of the enclosure or within 18 in. of the enclosure if all conduit entries are on the same side. Mechanically secure all junction boxes with an internal volume greater than 100 cu. inches.

5. Provide hot dipped galvanized cast iron or sand cast aluminum outlet boxes for junction boxes containing only 10 AWG or 12 AWG conductors. Do not use die cast aluminum boxes. Size outlet boxes according to the NEC.

6. Do not use intermediate metal conduit (IMC) or electrical metallic tubing (EMT) unless specifically required by the plan sheets. When EMT is called for, provide junction boxes made from galvanized steel sheeting, listed and approved for outdoor use, unless otherwise noted on the plans. Size all galvanized steel junction boxes in accordance with the NEC. Provide junction boxes for IMC conduit systems that meet the same requirements for junction boxes used with RMC systems.

7. Provide PVC junction boxes intended for outdoor use on PVC conduit systems, unless otherwise noted on the plans.

8. Provide PVC elbows in PVC conduit systems, unless otherwise shown on the plans. Use only a flat, high tensile strength polyester fiber pull tape for pulling conductors through the PVC conduit system. When galvanized steel RMC elbows are specifically called for in the plans and any portion of the RMC elbow is buried less than 18 in., ground the RMC elbow by means of a grounding bushing on a rigid metal extension. Grounding of the rigid metal elbow is not required if the entire RMC elbow is encased in a minimum of 2 in. of concrete. PVC extensions are allowed on these concrete encased rigid metal elbows. RMC or PVC elbows are subsidiary to various bid items.

9. When required, provide High-Density Polyethylene (HDPE) conduit with factory installed internal conductors according to Item 622 "Duct Cable." At the Contractor's request and with approval by the Engineer, substitute HDPE conduit with no conductors for bored schedule 40 or schedule 80 PVC conduit bid under Item 618. Ensure bored HDPE substituted for PVC is schedule 40 and of the same size PVC called for in the plans. Ensure the substituted HDPE meets the requirements of Item 622, except that the conduit is supplied without factory-installed conductors. Make the transition of the HDPE conduit to PVC (or RMC elbow when required) at the bore pit. Provide conduit of the size and schedule as shown on the plans. Do not extend substituted conduit into ground boxes or foundations. Provide PVC or galvanized steel RMC elbows as called for at all ground boxes and foundations.

10. Use two-hole straps when supporting 2 in. and larger conduits. On electrical service poles, properly sized stainless steel or hot dipped galvanized one-hole standoff straps are allowed on the service riser conduit.

B. CONSTRUCTION METHODS

1. Provide and install expansion joint conduit fittings on all structure-mounted conduits at the structure's expansion joints to allow for movement of the conduit. In addition, provide and install expansion joint fittings on all continuous runs of galvanized steel RMC conduit externally exposed on structures such as bridges at maximum intervals of 150 ft. When requested by the project Engineer, supply manufacturer's specification sheet for expansion joint conduit fittings. Repair or replace expansion joint fittings that do not allow for movement at no additional cost to the Department. Provide the method of determining the amount of expansion to the Engineer upon request. Do not use LFMC or LFNC as a substitute for the required expansion conduit fittings.

2. Space all conduit supports at maximum intervals of 5 ft. Install conduit spacers when attaching metal conduit to surface of concrete structures. See "Conduit Mounting Options" on ED(2). Install conduit support within 3 ft. of all enclosures and conduit terminations.

3. Do not attach conduit supports directly to pre-stressed concrete beams except as shown specifically in the plans or as approved by the Engineer.

4. Unless otherwise shown on the plans, jack or bore conduit placed beneath existing roadways, driveways, sidewalks, or after the base or surfacing operation has begun. Backfill and compact the bore pits below the conduit per Item 476 "Jacking, Boring, or Tunneling Pipe or Box" prior to installing conduit or duct cable to prevent bending of the connections.

5. When placing conduit in the sub-grade of new roadways, backfill all trenches with excavated material unless otherwise noted on the plans. When placing conduit in the sub-base of new roadways, backfill all trenches with cement-stabilized base as per requirements of Items 110 "Excavation", 400 "Excavation and Backfill for Structures", 401 "Flowable Backfill", 402 "Trench Excavation Protection", and 403 "Temporary Special Shoring."

6. Provide and place warning tape approximately 10 in. above all trenched conduit as per Item 618.

7. During construction, temporarily cap or plug open ends of all conduit and raceways immediately after installation to prevent entry of dirt, debris and animals. Temporary caps constructed of durable duct tape are allowed. Tightly fix the tape to the conduit opening. Clean out the conduit and prove it clear in accordance with Item 618 prior to installing any conductors.

8. Ensure conduit entry into the top of any enclosure is waterproof by installing conduit sealing hubs or using boxes with threaded bosses. This includes surface mounted safety switches, meter cans, service enclosures, auxiliary enclosures and junction boxes. Grounding bushings on water tight sealing hubs are not required.

9. Fit the ends of all PVC conduit terminations with bushings or bell end fittings. Provide and install a grounding type bushing on all metal conduit terminations.

10. Install a bonding jumper from each grounding bushing to the nearest ground rod, grounding lug, or equipment grounding conductor. Ensure all bonding jumpers are the same size as the equipment grounding conductor. Bonding of conduit used as a casing under roadways for duct cable is not required, if the duct extends the full length through the casing.

11. At all electrical services, install a 6 AWG solid copper grounding electrode conductor.

12. Place conduits entering ground boxes so that the conduit openings are between 3 in. and 6 in. from the bottom of the box. See the ground box detail on sheet ED(4).

13. Seal ends of all conduits with duct seal, expandable foam, or by other methods approved by the Engineer. Seal conduit immediately after completion of conductor installation and pull tests. Do not use duct tape as a permanent conduit sealant. Do not use silicone caulk as a conduit sealant.

14. File smooth the cut ends of all mounting strut and conduit. Before installing, paint the field cut ends of all mounting strut and RMC (threaded or non-threaded) with zinc rich paint (94% or more zinc content) to alleviate overspray. Use zinc rich paint to touch up galvanized material as allowed under Item 445 "Galvanizing." Do not paint non-galvanized material with a zinc rich paint as an alternative for materials required to be galvanized.

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS CONDUITS & NOTES

ED(1)-14

FILE:	ed1-14.dgn	DN:	CK:	DW:	CK:
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71A

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ELECTRICAL CONDUCTORS

A. MATERIAL INFORMATION

1. Provide Type XHHW insulated conductors in accordance with Departmental Material Specification (DMS)11040 "Conductors" and Item 620 "Electrical Conductors." Provide conductors as listed on the Material Producers List (MPL) on the Department web site under "Roadway Illumination and Electrical Supplies" Item 620. Color code insulated conductors in conformance with the NEC. Identify grounded (neutral) conductors with white insulation. Identify grounding conductors (ground wires) with green insulation or bare conductors. Identify ungrounded (hot) conductors with any color insulation except green, white, or gray. Keep color scheme consistent throughout the wiring system. Identify conductors 6 American Wire Gauge (AWG) and smaller by continuous color jacket. Identify electrical conductors 4 AWG and larger by continuous color jacket or by colored tape. When identifying conductors with colored tape, mark at least 6 in. of the conductor's insulation with half laps of tape.
2. Provide a solid copper 6 AWG grounding electrode conductor to bond the electrical service equipment to the concrete encased grounding electrode or the ground rod at the service location. Connect the grounding electrode conductor to the ground rod with a UL listed connector in accordance with DMS 11040. Connect the grounding electrode conductor to the concrete encased grounding electrode as shown in the plans.
3. Where two or more circuits are present in one conduit or enclosure, permanently identify the conductors of each branch circuit by attaching a non-metallic tag around both circuit conductors at each accessible location. Provide tags with two straps, large enough to indicate circuit number, letter, or other identification as shown in the plans. Print circuit identification on the tag with a permanent marker.
4. Use listed compression or screw type pressure connectors, terminal blocks, or split bolt connectors for splicing as specified in DMS 11040. Use hot melt adhesive tape to fill the gap and seal the ends of heat shrink tubing. Provide UL listed gel-filled insulating splice covers. Splicing materials, insulating materials, breakaway disconnects, splice covers, and fuse holders are subsidiary to various bid items.

B. CONSTRUCTION METHODS

1. Use only a flat, high tensile strength polyester fiber pull tape for pulling conductors through the conduit system. After installing conductors in conduit, perform conductor pull test. If a conductor cannot be freely pulled, make any needed alterations or repairs at no additional cost to the department. Perform insulation resistance tests in accordance with Item 620. Coordinate with the Engineer to witness the tests.
2. Leave 2 ft. minimum, 3 ft. maximum length for each conductor up to the splice in ground boxes. Leave 3 ft. minimum, 4 ft. maximum length of conductor in ground boxes when pulled through with no splice. Leave 1 ft. minimum, 1.5 ft. maximum length of conductor at enclosures, weatherheads and pole bases.
3. Make splices only in junction boxes, ground boxes, pole bases, or electrical enclosures and use only listed compression or screw type pressure connectors, terminal blocks, or split bolt connectors. Insulate splices with heavy wall heat shrink tubing or gel-filled insulating splice covers to provide a watertight splice. Overlap conductor insulation with heat shrink tubing a minimum of 2 in. past both sides of the splice. Where heat shrink tubing may not shrink sufficiently to provide a watertight seal around the individual conductors, prior to heating the tubing, increase the diameter of the conductor insulation using hot melt adhesive tape to provide a watertight seal between the individual conductors and the heat shrink tubing. Ensure the tape extends past the heat shrink tubing. Use hot melt adhesive tape to fill the gap and seal the ends of heat shrink tubing. Heat shrink tubing that appears to have been burned, or overheated, is considered defective and must be replaced.
4. Size and install gel-filled insulating splice covers according to manufacturer's specifications when used in place of heat shrink tubing.
5. Wire nuts with factory applied waterproof sealant may be used for 8 AWG or smaller conductors in above ground junction boxes, but not in pole bases or ground boxes. Install wire nuts in an upright position to prevent the accumulation of water.
6. Support conductors in illumination poles with a J-hook at the top of the pole.
7. When terminating conductors, remove the insulation and jacketing material without nicking the individual strands of the conductor. Conductors with nicked individual conductor strands or removed strands will be considered damaged.
8. Replace conductors and cables that are damaged beyond repair or that fail an insulation resistance test at no additional cost to the department.
9. Do not repair damaged conductors with duct tape, electrical tape, or wire nuts. Use only approved splicing methods.
10. Do not terminate more than one conductor under a single connector, unless the connector is rated for multiple conductors. Do not exceed the pressure connector's listing for maximum number and size of conductors allowed.
11. Install breakaway connectors on conductors bid under Item 620 whenever those conductors pass through a breakaway support device. Follow manufacturer's instructions when terminating conductors to breakaway connectors. Properly torque threaded connections. Proper terminations are critical to the safe operation of breakaway devices. Trim waterproofing boots on breakaway connectors to fit snugly around the conductor to ensure waterproof connection. Only one conductor may enter a single opening in a boot. Provide waterproof boots with the correct number of openings. Leave unused openings factory sealed. Use prequalified breakaway connectors as shown on the MPL.
12. Provide and install a separate stranded equipment grounding conductor (EGC) in all conduits that contain circuit wiring of 50 volts or more. Unless shown elsewhere, size the EGC to be the same size as the largest current carrying conductor contained in the conduit. Ensure all EGCs are bonded together at every accessible location. For traffic signal installations, provide a minimum size 8 AWG EGC. The EGC is paid for under Item 620.

C. TEMPORARY WIRING

1. Install temporary conductors and electrical equipment in accordance with the NEC article "Temporary Installations" and Department standard sheets.
2. Provide a ground fault circuit interrupter (GFCI) for power outlets for portable electrical equipment, power tools, ice machines, ice storage bins and refrigerators located outdoors at grade. GFCI may be any one of the following: molded cord and plug set, receptacle, or circuit breaker type.
3. Use listed wire nuts with factory applied sealant for temporary wiring where approved.
4. Enclose conductor splices within a listed enclosure or ground box, or ensure the splices are more than 10 ft. above grade vertically and more than 5 ft. horizontally from any metal structure. Where installing temporary conductors in areas subject to vehicle traffic or mobile construction equipment, ensure the vertical clearance to ground is at least 18 ft. when measured at the lowest point. Ground messenger wires that support power conductors in conformance with the NEC.
5. Protect and when necessary repair any existing electrical conduits uncovered during the construction process in a timely manner and in conformance with the NEC.

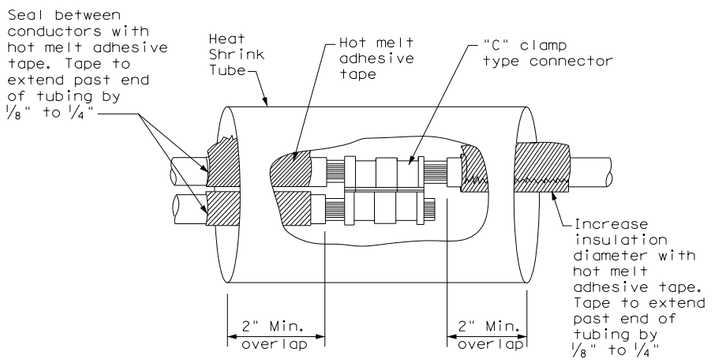
GROUND RODS & GROUNDING ELECTRODES

A. MATERIAL INFORMATION

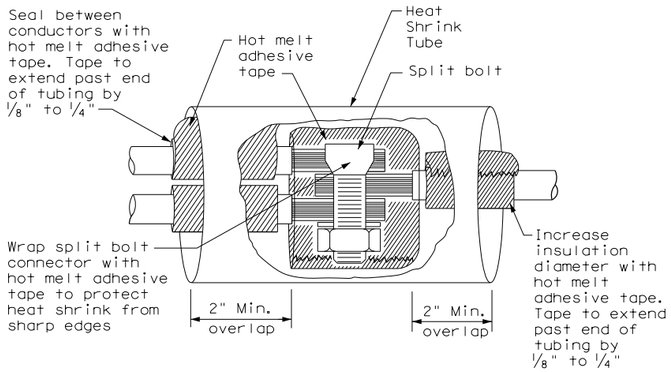
1. Provide and install a grounding electrode at electrical services. Provide ground rods according to DMS 11040 and the plans. Larger diameter or longer length rods may be called for in some specific locations, see the individual plans sheets. Concrete encased grounding electrodes may be called for in specific locations including electrical service, see individual plan sheets.

B. CONSTRUCTION METHODS

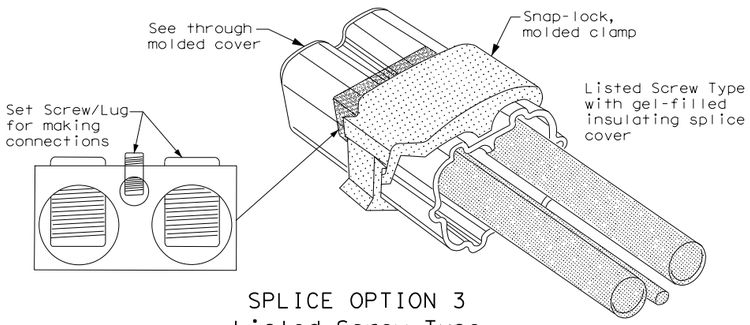
1. Furnish auxiliary ground rods for lightning protection and install in soil, concrete, or both, as called for in the plans. For ground rods installed in concrete, ensure the connection of the conductor to the ground rod is readily accessible for inspection or repairs. For ground rods installed in soil, ensure that the upper end is between 2 to 4 in. below finished grade.
2. Do not place ground rods in the same drilled hole as a timber pole.
3. Install ground rods so the imprinted part number is at the upper end of the rod.
4. Remove all non-conductive coatings such as concrete splatter from the rod at the clamp location.
5. Route all conductors as short and straight as possible for connection to lightning protection ground rods. When a bend is required, ensure a minimum radius bend of four inches for these conductors.
6. Unless otherwise called for in the plans, protect grounding electrode conductors with non-metallic conduit. When protecting grounding electrode conductors with metal conduit, provide and install a grounding type bushing and properly sized bonding jumper on each end of the metal conduit.
7. Written authorization is required before installing a ground rod in a horizontal trench for rocky soil or a solid rock bottom.



SPLICE OPTION 1
Compression Type



SPLICE OPTION 2
Split Bolt Type



SPLICE OPTION 3
Listed Screw Type

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS CONDUCTORS

ED(3)-14

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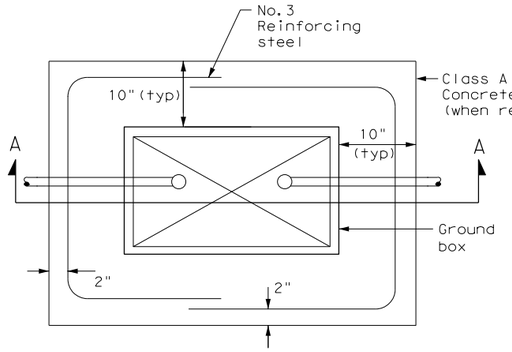
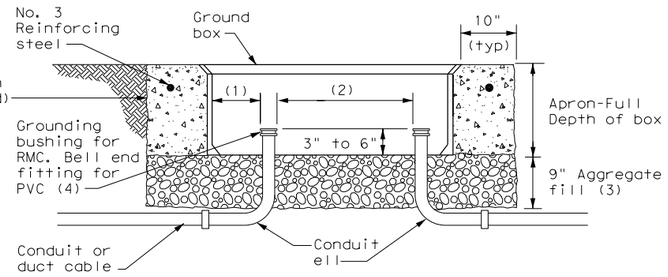


PLAN VIEW



SECTION A - A

APRON FOR GROUND BOX

(1) Uniformly space ends of conduits within the ground box. Position ends of conduits so that ground box walls do not interfere with the installation of grounding bushings or bell end fittings.

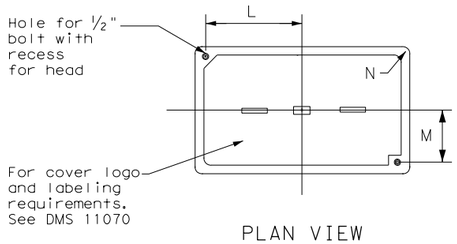
(2) Maintain sufficient space between conduits to allow for proper installation of bushings.

(3) Place aggregate under the box, not in the box. Aggregate should not encroach on the interior volume of the box.

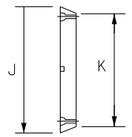
(4) Install a grounding bushing on the upper end of all RMC terminating in a ground box. Ground RMC elbows when any part of the elbow is less than 18 in. below the bottom of the ground box. Install a PVC bushing or bell end fitting on the upper end of all PVC conduits terminating in a ground box.

GROUND BOX DIMENSIONS	
TYPE	OUTSIDE DIMENSIONS (INCHES) (Width x Length X Depth)
A	12 X 23 X 11
B	12 X 23 X 22
C	16 X 29 X 11
D	16 X 29 X 22
E	12 X 23 X 17

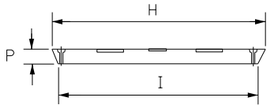
GROUND BOX COVER DIMENSIONS								
TYPE	DIMENSIONS (INCHES)							
	H	I	J	K	L	M	N	P
A, B & E	23 1/4	23	13 3/4	13 1/2	9 7/8	5 1/8	1 3/8	2
C & D	30 1/2	30 1/4	17 1/2	17 1/4	13 1/4	6 3/4	1 3/8	2



PLAN VIEW



END



SIDE

GROUND BOX COVER

GROUND BOXES

A. MATERIALS

1. Provide polymer concrete ground boxes measuring 16x30x24 in. (WxLxD) or smaller in accordance with Departmental Material Specification (DMS) 11070 "Ground Boxes" and Item 624 "Ground Boxes."

2. Provide Type A, B, C, D, and E ground boxes as shown in the plans, and as listed on the Material Producers List (MPL) on the Department web site under "Roadway Illumination and Electrical Supplies," Item 624.

3. Ensure ground box cover is correctly labeled in accordance with DMS 11070.

4. Provide larger ground boxes in accordance with Item 624 and as shown in the plans.

B. CONSTRUCTION METHODS

1. Remove all gravel and dirt from conduit. Cap all conduits prior to placing aggregate and setting ground box. Provide Grade 3 or 4 coarse aggregate as shown on Table 2 of Item 302 "Aggregates for Surface Treatments." Ensure aggregate bed is in place and at least 9 inches deep, prior to setting the ground box. Install ground box on top of aggregate.

2. Cast ground box aprons in place. Reinforcing steel may be field bent. Ensure the depth of concrete for the apron extends from finished grade to the top of the aggregate bed under the box. Ground box aprons, including concrete and reinforcing steel, are subsidiary to ground boxes when called for by descriptive code.

3. Keep bolt holes in the box clear of dirt. Bolt covers down when not working in ground boxes.

4. Install all conduits and ells in a neat and workmanlike manner. Uniformly space conduits so grounding bushings and bell end fittings can easily be installed.

5. Temporarily seal all conduits in the ground box until conductors are installed.

6. Permanently seal conduits immediately after the completion of conductor installation and pull tests. Permanently seal the ends of all conduits with duct seal, expandable foam, or other method as approved. Do not use duct tape as a permanent conduit sealant. Do not use silicone caulk as a sealant.

7. When a ground rod is present in a ground box, bond all equipment grounding conductors together and to the ground rod with listed connectors.

8. When a type B or D ground box is stacked to meet volume requirements, it is allowable to cut an appropriately sized hole for conduit entry in the side wall at least 18 inches below grade.

9. If an existing ground box in the contract has a metal cover, bond the cover to the equipment grounding conductor with a 3 ft. long stranded bonding jumper the same size as the grounding conductor. The bonding jumper is subsidiary to various bid items. Verify existing ground boxes with metal covers are shown on the plans, with notes fully describing the work required.

10. If other ground boxes with metal covers are within the project limits but are not part of the contract, the Engineer may direct the Contractor to bond the metal covers, identifying the specific boxes in writing. This work will be paid for separately.

11. Bond metal ground box covers to the grounding conductor with a tank ground type lug.

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS
GROUND BOXES

ED(4)-14

FILE: ed4-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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ELECTRICAL SERVICES NOTES

1. Provide new materials. Ensure installation and materials comply with the applicable provisions of the National Electrical Code (NEC) and National Electrical Manufacturers Association (NEMA) standards. Ensure material is Underwriters Laboratories (UL) listed. Provide and install electrical service conduits, conductors, disconnects, contactors, circuit breaker panels, and branch circuit breakers as shown on the Electrical Service Data chart in the plans. Faulty fabrication or poor workmanship in material, equipment, or installation is justification for rejection. Where manufacturers provide warranties and guarantees as a customary trade practice, furnish these to the State.

2. Provide electrical services in accordance with Electrical Details standard sheets, Departmental Material Specification (DMS) 11080 "Electrical Services,"DMS 11081 "Electrical Services-Type A," DMS 11082 "Electrical Services-Type C," DMS 11083 "Electrical Services-Type D," DMS 11084 "Electrical Services-Type T," DMS 11085 "Electrical Services-Pedestal (PS)", and Item 628 "Electrical Services" of the Standard Specifications. Provide electrical service types A, C, and D, as listed on the Material Producers List (MPL) on the Department web site under "Roadway Illumination and Electrical Supplies," Item 628. Provide other service types as detailed on the plans.

3. Provide all work, materials, services, and any incidentals needed to install a complete electrical service as specified in the plans.

4. Coordinate with the Engineer and the utility provider for metering and compliance with utility requirements. Primary line extensions, connection charges, meter charges, and other charges by the utility company to provide power to the location are paid for in accordance with Item 628. Get approval for the costs associated with these charges prior to engaging the utility company to do the work. Consult with the utility provider to determine costs and requirements, and coordinate the work as approved.

5. The enclosure manufacturer will provide Master Lock Type 2 with brass tumblers keyed #2195 for all custom electrical enclosures. Installing Contractor is to provide Master Lock #2195 Type 2 with brass tumblers for "off the shelf" enclosures. Master Lock #2195 keys and locks become property of the State. Unless otherwise approved, do not energize electrical service equipment until locks are installed.

6. Enclosures with external disconnects that de-energize all equipment inside the enclosure do not need a dead front trim. Protect incoming line terminations from incidental contact as required by the NEC.

7. When galvanized is specified for nuts, screws, bolts or miscellaneous hardware, stainless steel may be used.

8. Provide wiring and electrical components rated for 75°C. Provide red, black, and white colored XHHW service entrance conductors of minimum size 6 American Wire Gauge (AWG). Identify size 6 AWG conductors by continuous color jacket. Identify electrical conductors sized 4 AWG and larger by continuous color jacket or by colored tape. Mark at least 6 inches of the conductor's insulation with half laps of colored tape, when identifying conductors. Ensure each service entrance conductor exits through a separately bushed non-metallic opening in the weatherhead. The lengths of the conductors outside the weatherhead are to be 12 inches minimum, 18 inches maximum, or as required by utility.

9. All electrical service conduit and conductors attached to the electrical service including the riser or the elbow below ground are subsidiary to the electrical service. For an underground utility feed, all service conduit and conductors after the elbow, including service conduit and conductors for the utility pole riser when furnished by the Contractor, will be paid for separately.

10. Provide rigid metal conduit (RMC) for all conduits on service, except for the ½ in. PVC conduit containing the electrical service grounding electrode conductor. Size the service entrance conduit as shown in the plans. Ensure conduit for branch circuit entry to enclosure is the same size as that shown on the layout sheets for branch circuit conduit. Extend all rigid metal conduits a minimum of 6 inches underground and then couple to the type and schedule of the conduit shown on the layout for that particular branch circuit. Install a grounding bushing on the RMC where it terminates in the service enclosure.

11. Use of liquidtight flexible metal conduit (LFMC) is allowed between the meter and service enclosure when they are mounted 90 to 180 degrees to each other. Size the LFMC the same size as service entrance conduit. LFMC must not exceed 3 feet in length. Strap LFMC within 1 foot of each end. LFMC less than 12 inches in length need not be strapped. Each end of LFMC must have a grounding bushing or be terminated with a grounding fitting. The LFMC must contain a grounded (neutral) conductor. Ensure any bend in LFMC never exceeds 180 degrees. A pull test is required on all installed conductors, with at least six inches of free conductor movement demonstrated to the satisfaction of the Engineer.

12. Ensure all mounting hardware and installation details of services conform to utility company specifications.

13. For all electrical service enclosures listed under Item 628 on the MPL, the UL 508 enclosure manufacturers will prepare and submit a schematic drawing unique to each service. Before shipment to the job site, place the applicable laminated schematic drawings and the laminated plan sheet showing the electrical service data chart used to build the enclosure in the enclosure's data pocket. The installing contractor will copy and laminate the actual project plan sheets detailing all equipment and branch circuits supplied by that service. The laminated plan sheets are to be placed in the service enclosure's document pocket. Reduce 11 in. x 17 in. plan sheets to 8 ½ in. x 11 in. before laminating. If the installation differs from the plan sheets, the installing contractor is to redline plan sheets before laminating.

14. When providing an "Off The Shelf" Type D or Type T service, provide laminated plan sheets detailing equipment and branch circuits supplied by that service. Reduce 11 in. x 17 in. plan sheets to 8 ½ in. x 11 in before laminating. Deliver these drawings before completion of the work to the Engineer, instead of placing in enclosure that has no door pocket.

15. Do not install conduit in the back wall of a service enclosure where it would penetrate the equipment mounting panel inside the enclosure. Provide grounding bushings on all metal conduits, and terminate bonding jumpers to grounding bus. Grounding bushings are not required when the end of the metal conduit is fitted with a conduit sealing hub or threaded boss, such as a meter base hub.

SERVICE ASSEMBLY ENCLOSURE

1. Provide threaded hub for all conduit entries into the top of enclosure.

2. Type galvanized steel (GS) enclosures may be used for Type C panelboards and for Type D and T services that do not use an enclosure mounted photocell or lighting contactor. Provide GS enclosures in accordance with DMS 11080, 11082, 11083, and 11084.

3. Provide aluminum (AL) and stainless steel (SS) enclosures for Types A, C, and D in accordance with DMS 11080, 11081, 11082, 11083, and 11084. Do not paint stainless steel.

4. Provide pedestal service (PS) enclosures in accordance with ED(9) and DMS 11080 and 11085. Do not provide GS pedestal services. If GS is shown in the PS descriptive code, provide an AL enclosure.

MAIN DISCONNECT & BRANCH CIRCUIT BREAKERS

1. Field drill flange-mounted remote operator handle if needed, to ensure handle is lockable in both the "On" and "Off" positions.

2. When the utility company provides a transformer larger than 50 KVA, verify that the available fault current is less than the circuit breaker's ampere interrupting capacity (AIC) rating and provide documentation from the electric utility provider to the Engineer.

PHOTOELECTRIC CONTROL

1. Provide photocell as listed on the MPL. Move, adjust, or shield the photocell from stray or ambient night time light to ensure proper operation. Mount photocell facing north when practical. Mount top of pole photocells as shown on Top Mounted Photocell Detail.

* ELECTRICAL SERVICE DATA

Elec. Service ID	Plan Sheet Number	Electrical Service Description	Service Conduit **Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amps	Two-Pole Contractor Amps	Panelbd/ Loadcenter Amp Rating	Branch Circuit ID	Branch Ckt. Bkr. Pole/Amps	Branch Circuit Amps	KVA Load
SB 183	289	ELC SRV TY A 240/480 100(SS)AL(E)SF(U)	2"	3/#2	100	2P/100	100	N/A	Lighting NB	2P/40	26	28.1
									Lighting SB	2P/40	25	
									Underpass	1P/20	15	
NB Access	30	ELC SRV TY D 120/240 060(NS)SS(E)TS(O)	1 ¼"	3/#6	N/A	2P/60		100	Sig. Controller	1P/30	23	5.3
							30		Luminaires	2P/20	9	
									CCTV	1P/20	3	
2nd & Main	58	ELC SRV TY T 120/240 000(NS)GS(N)SP(O)	1 ¼"	3/#6	N/A	N/A	N/A	70	Flashing Beacon 1	1P/20	4	1.0
									Flashing Beacon 2	1P/20	4	

* Example only, not for construction. All new electrical services must have electrical service data chart specific to that service as shown in the plans.

** Verify service conduit size with utility. Size may change due to utility meter requirements. Ensure conduit size meets the National ELectrical Code.

EXPLANATION OF ELECTRICAL SERVICE DESCRIPTIVE CODE

ELEC SERV TY X XXX/XXX XXX (XX) XX (X) XX (X)

Schematic Type

Service Voltage V / V

Disconnect Amp Rating
000 indicates main lug only/
Typically Type T

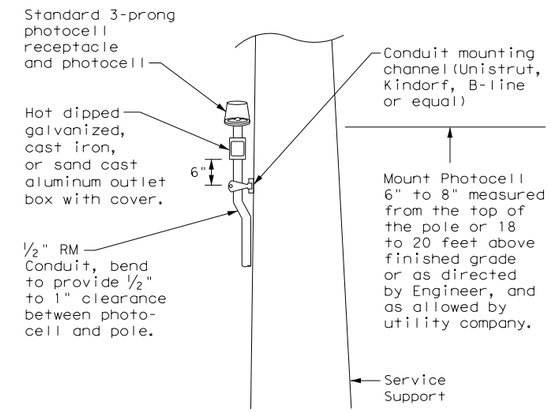
(SS)= Safety Switch Ahead of Meter-Check with Utility
(NS)= No safety Switch Ahead of Meter-Check with Utility

Enclosure Type
GS= Galvanized steel("off the shelf")
SS= Stainless steel(Custom Enclosure)See MPL
AL= Aluminum (Custom Enclosure)See MPL

Photocell Mounting Location
(E)= Inside Service/Enclosure Mounted
(T)= Top of pole
(L)= Luminaire mounted
(N)= None/No Photocell or Lighting Contactor Required

Service Support Type
GC= Granite concrete
OC= Other concrete
TP= Timber pole
SP= Steel pole
SF= Steel frame
OT= Pole by others or paid for separately
EX= Existing pole
TS= Service on traffic signal pole
PS= Pedestal Service

O= Overhead Service Feed from Utility
U= Underground Service Feed from Utility



TOP MOUNTED PHOTOCELL

Install conduit strap maximum 3 feet from box. 5 foot maximum spacing between straps supporting conduit.

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS SERVICE NOTES & DATA

ED(5)-14

FILE: ed5-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT October 2014	CONT	SECT	JOB	HIGHWAY
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71E

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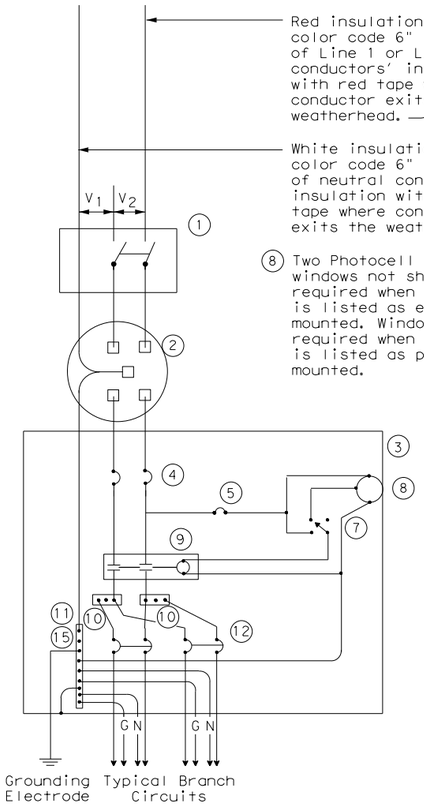
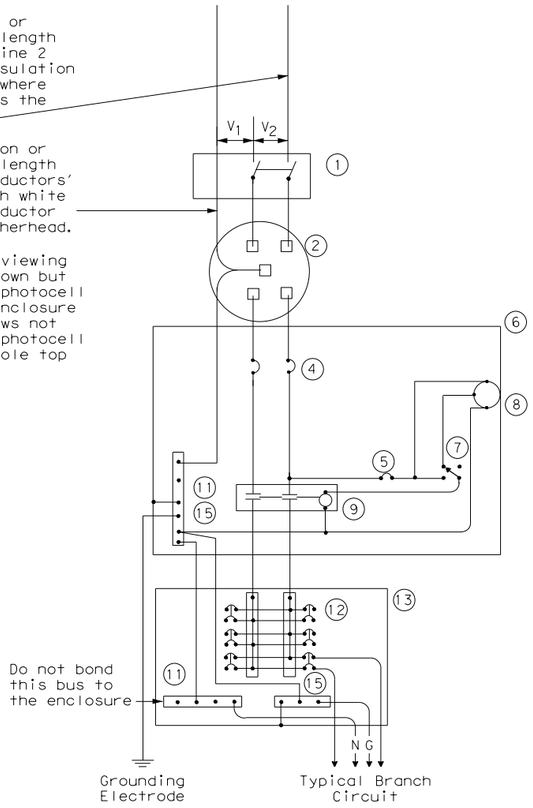
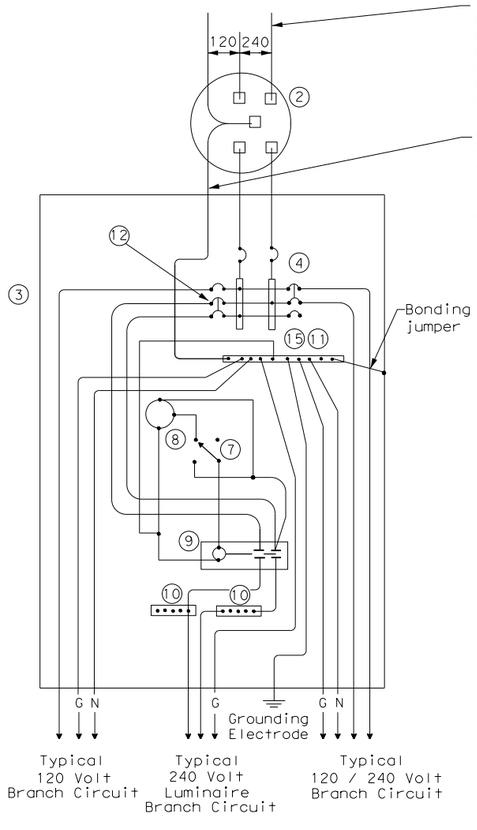


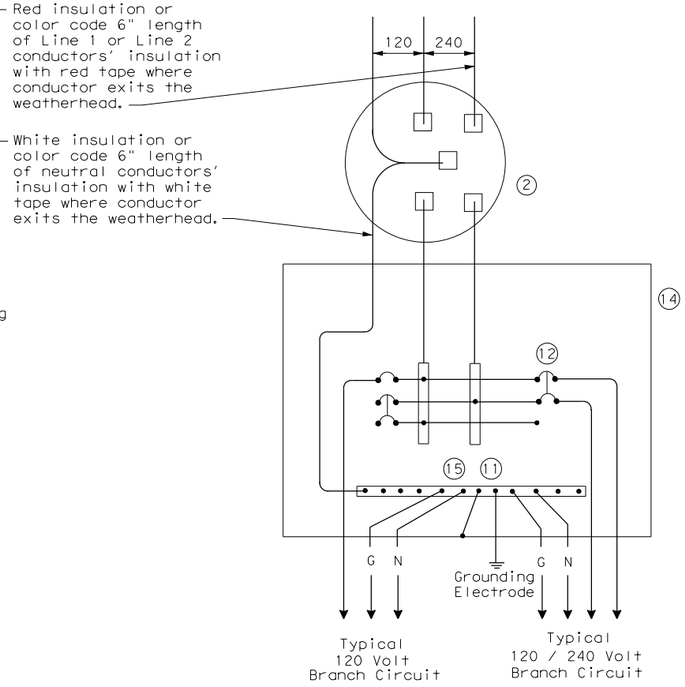
SCHEMATIC TYPE A
THREE WIRE



SCHEMATIC TYPE C
THREE WIRE



SCHEMATIC TYPE D - CUSTOM
120/240 VOLTS - THREE WIRE



SCHEMATIC TYPE T
120/240 VOLTS - THREE WIRE

Galvanized steel-"Buy Off The Shelf" only. When required install photocell top of the pole or on luminaire only, no lighting contractor will be installed.

WIRING LEGEND	
———	Power Wiring
———	Control Wiring
—N—	Neutral Conductor
—G—	Equipment grounding conductor-always required

SCHEMATIC LEGEND	
1	Safety Switch (when required)
2	Meter (when required-verify with electric utility provider)
3	Service Assembly Enclosure
4	Main Disconnect Breaker (See Electrical Service Data)
5	Circuit Breaker, 15 Amp (Control Circuit)
6	Auxiliary Enclosure
7	Control Station ("H-O-A" Switch)
8	Photo Electric Control (enclosure-mounted shown)
9	Lighting Contactor
10	Power Distribution Terminal Blocks
11	Neutral Bus
12	Branch Circuit Breaker (See Electrical Service Data)
13	Separate Circuit Breaker Panelboard
14	Load Center
15	Ground Bus

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS SERVICE ENCLOSURE AND NOTES

ED(6)-14

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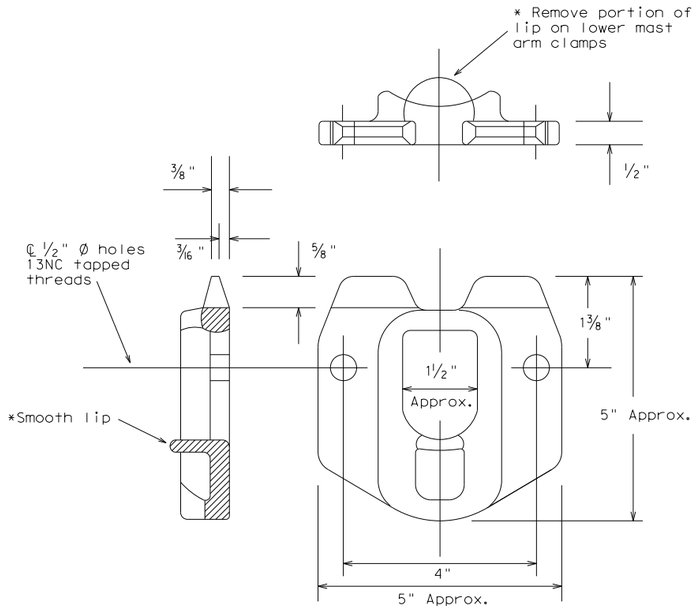
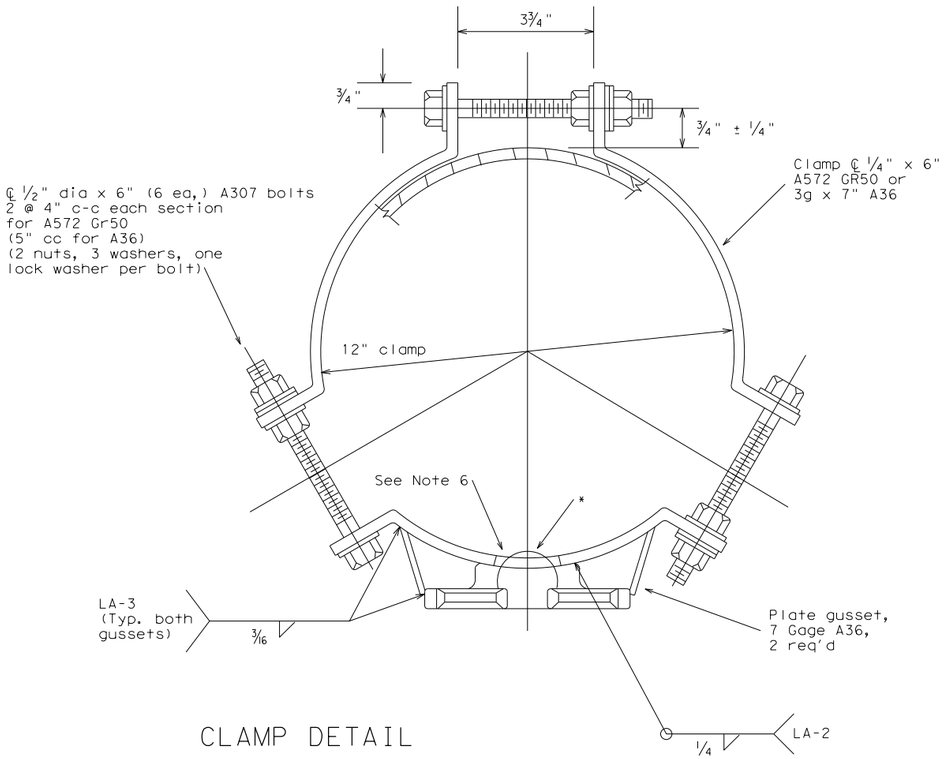
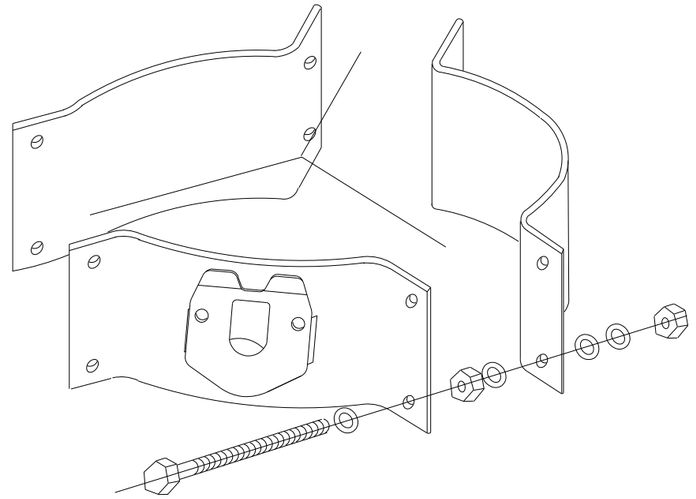


POLE SIMPLEX DETAILS



CLAMP DETAIL



PROJECTION

OTHER MATERIALS:

1. Pole simplex shall be ASTM A27 GR65-35 or A148 GR80-50 or A576 GR1021. ASTM A576 must be suitable for forging and also meet minimum tensile of 65ksi, minimum yield of 35ksi, and a minimum elongation of 22 percent in 2 inches.
2. Welded tabs and backplates shall be ASTM A-36 steel or better.
3. Nylon insert locknuts shall conform to ASTM A563.

GENERAL NOTES:

1. Materials and fabrication shall be in accordance with Standard Sheet "MA-C" and with the details, dimensions, and weld procedures shown herein. Weld references call for preapproved weld procedures which the Fabricator must obtain prior to fabrication. In the absence of specified fabrication tolerances, dimensions shall be within the tolerances generally obtainable in normal fabrication practice.
2. All parts shall be galvanized after fabrication in accordance with Item 445, "Galvanizing". The throat of the Simplex shall be made free of all rough or sharp edges resulting from the galvanizing process.
3. Each simplex fitting shall be supplied with 2 ASTM A325 bolts, 1/2in. X 1 1/2in. and 2 lock washers. The bolts and lock washers shall be secured to the clamp with the other hardware items. The Fabricator shall ship clamp assembly together in a single package, including all bolts, nuts, and washers required for the clamp and simplex fitting.
4. Design conforms to 1994 AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals" and interim revisions thereto. Design Wind Speed equals 80 mph plus a 1.3 gust factor. Clamps are designed to support a 60 lb. luminaire having an effective projected area (actual area times drag coefficient) of 1.6 sq.ft.,12 ft. maximum arm length.
5. Each assembly shall consist of one upper piece simplex fitting having a smooth lip and one lower piece simplex fitting with the lip removed.
6. Approximately 2 in. diameter hole in upper mast arm clamp.

For 8.9 - 12 inch diameter Signal Poles
(Two req'd for each mast arm)

DATE:
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Texas Department of Transportation
Traffic Operations Division

CLAMP ON FITTING ASSEMBLY FOR LUMINAIRE MAST ARM

CFA-12

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1-12

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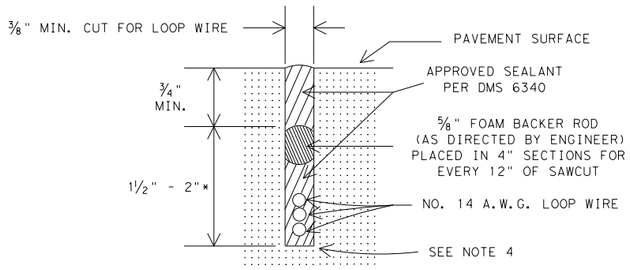
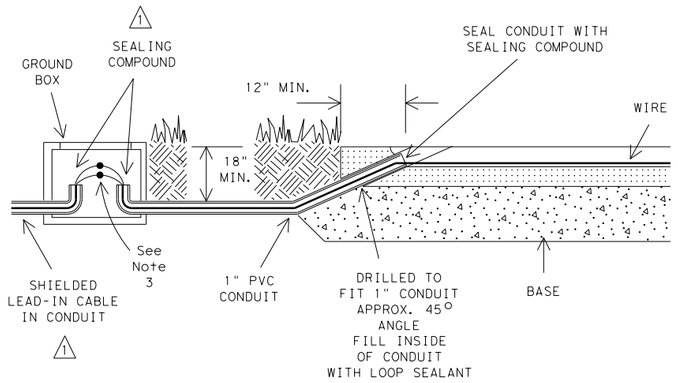
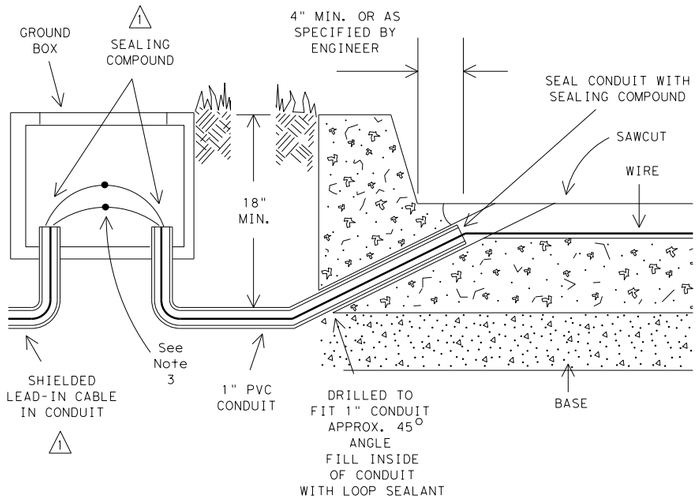


LOOP SAW CUT CROSS-SECTION

* SAWCUTS IN BRIDGE DECKS ARE TYPICALLY 1" DEPTH MAXIMUM
SAWCUTS IN BRIDGE DECKS AND ACROSS EXPANSION JOINTS
SHALL BE AS APPROVED BY ENGINEER



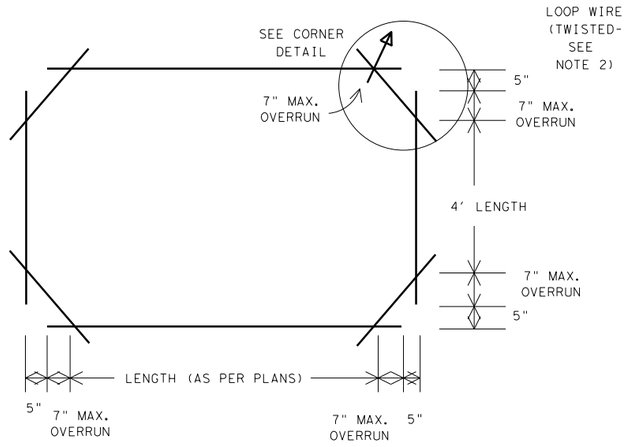
TYPICAL LEAD IN CONFIGURATION (WITHOUT CURBING)



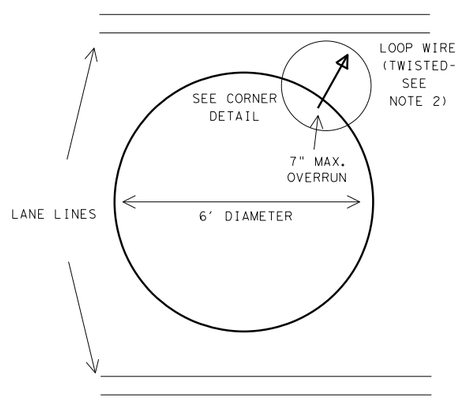
TYPICAL LEAD IN CONFIGURATION (WITH CURBING)

TYPICAL LOOP DETECTOR LAYOUTS

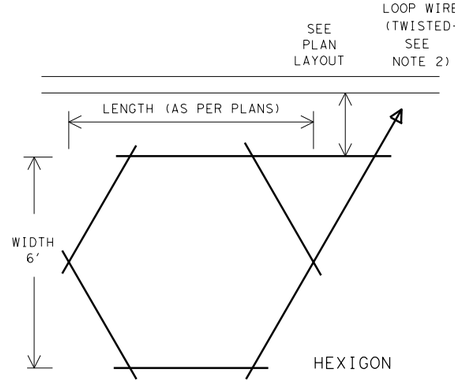
(AS SPECIFIED IN PLANS)



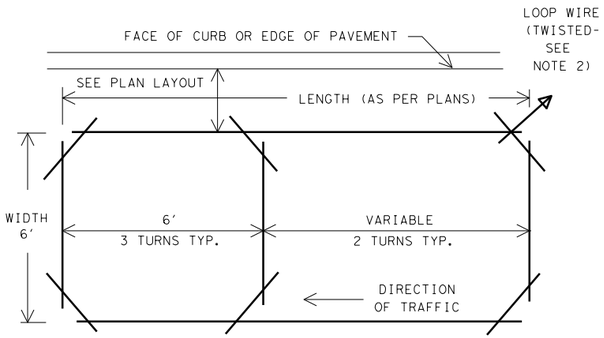
RECTANGULAR



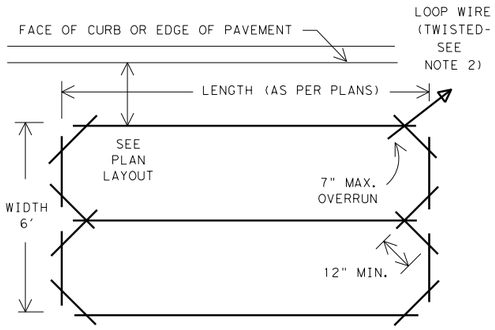
CIRCULAR



HEXIGON



POWER HEADER



QUADRAPOLE

GENERAL NOTES:

1. The pavement cut is to be made with a concrete saw to neat lines and loose material removed. The cut shall be clean and dry when the wire and sealing compound is placed.
2. Loop wire shall be 14 AWG Stranded Type XHHW. Wire from the loop to the ground box shall be twisted a minimum of 5 turns per foot. No splices shall be permitted in the loop or in the run to the ground box.
3. The home run cable from the pull box to the controller shall be IMSA 50-2 shielded cable and shall be soldered to the loop wire. The solder joints shall be sealed with Scotchcast or other method acceptable to the Engineer. The shield shall be grounded only at the controller end. Loop home run cable shall be two conductor 14 AWG shielded, Type XHHW.
4. All wire placed in the saw cut shall be sealed by fully encapsulating it in a sealant acceptable to the Engineer. Sealing compound shall be in accordance with DMS 6340.
5. The loop location, confirguration and number of turns shall be as indicated on the plans or as directed by the Engineer.

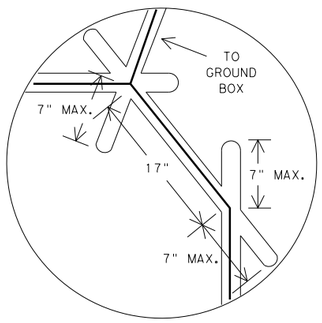
Recommended Number of Turns for Loop Detectors

LOOP PERIMETER SIZE (FT.)	NUMBER OF TURNS	APPROXIMATE LOOP SIZES INCLUDED
24' or Less	3 or 4	5' x 5', 6' x 6'
25' - 110'	2 or 3	6' x 10', 6' x 45'
110' or More	1 or 2	6' x 50' or Longer

6. A separate saw cut shall be made from each loop to the edge of pavement or as specified by the Engineer.
7. Splices between the loop lead-in cable and loop detector shall be made only in the ground box near the loop it is serving.
8. Circular loops may use prewound loops encased in continuous pvc tubing. Sawcut width may be adjusted to accommodate tubing.
9. The lead-in wire in the circular loop shall be coiled at the 3 inch drilled corner to reduce bending stress.
10. Loop duct may be used as specified by Engineer.

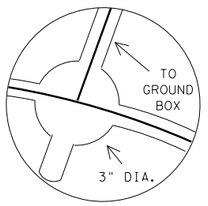
For additionhal information refer to "Texas Traffic Signal Detector" manual, TTI Report 1163-1.

TYPICAL CORNER DETAILS

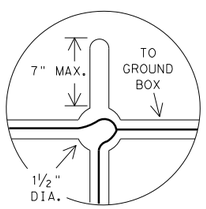


RECTANGULAR & HEXIGON LOOP
SAWCUT CORNER DETAIL

7" OVERRUN BASED ON 24" DIAMETER SAW BLADE



CIRCULAR LOOP
DRILLED CORNER DETAIL



RECTANGULAR & HEXIGON LOOP (ALT.)
DRILLED CORNER DETAIL

Texas Department of Transportation
Traffic Operations Division

LOOP DETECTOR INSTALLATION DETAILS

LD(1)-03

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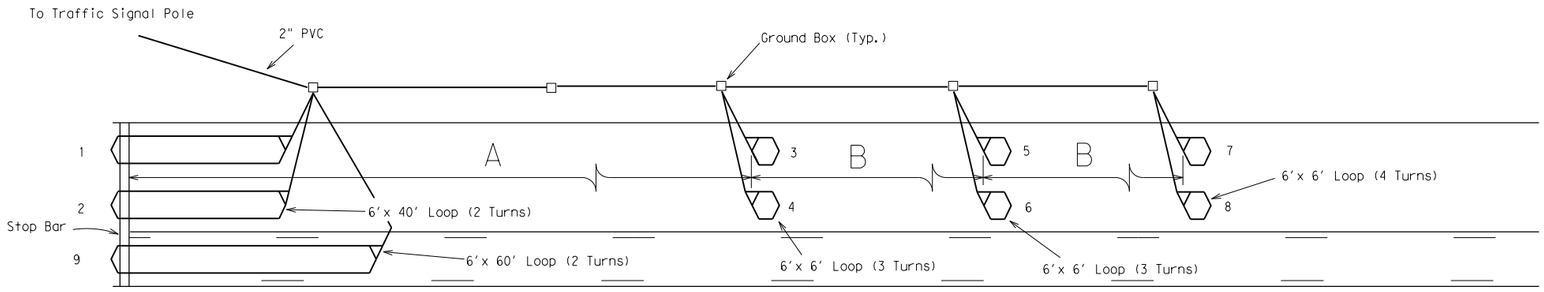
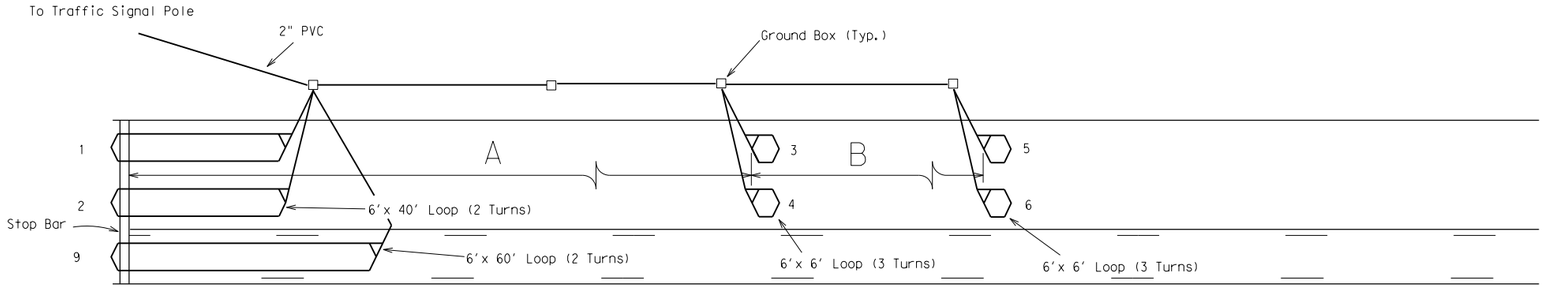
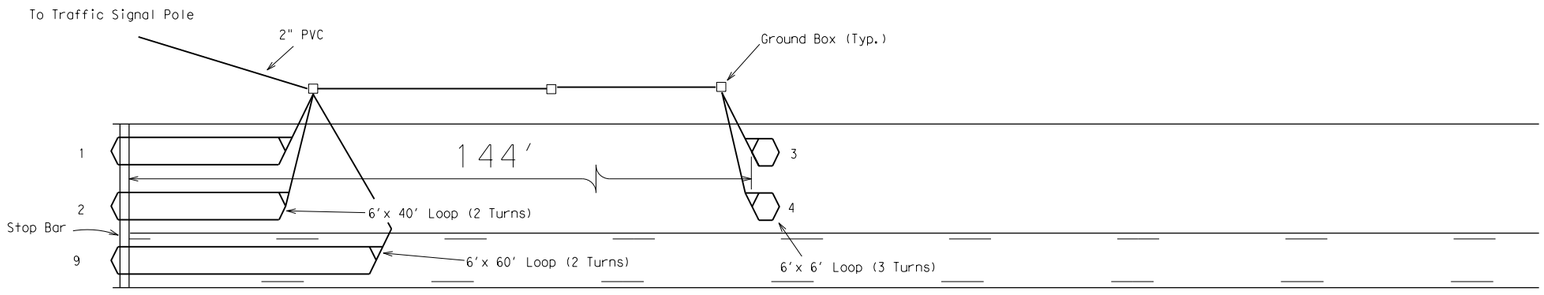


55 MPH (A=225', B=95') 60 MPH (A=275', B=100')
65 MPH (A=320', B=110') 70 MPH (A=350', B=125')



35 MPH (A=90', B=100') 40 MPH (A=110', B=130')
45 MPH (A=175', B=115') 50 MPH (A=220', B=130')



30 MPH

GENERAL NOTES:

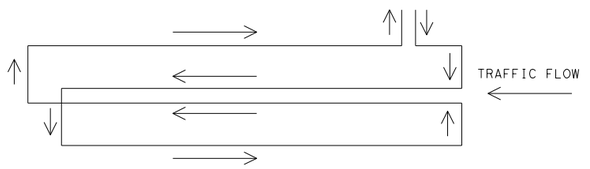
Loops 1 and 2 shall be connected to the controller cabinet by means of the same loop lead-in (2/C #14 AWG).

Loops 3 thru 6 shall be connected to the controller cabinet by means of the same loop lead-in (2/C #14 AWG).

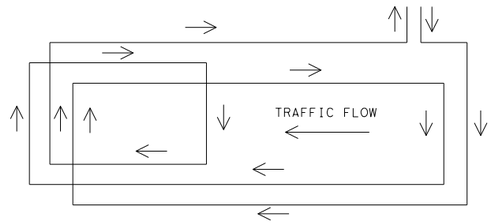
Loops 7 and 8 shall be connected to the controller cabinet by means of the same loop lead-in (2/C #14 AWG).

Loop 9 shall be connected to the controller cabinet by means of a loop lead-in (2/C #14 AWG). Loop 9 shall be placed only when a left turn lane exists.

LOOP WINDING DETAILS



QUADRAPOLE LOOP



POWER HEADER LOOP

DATE:
FILE:

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LOOP DETECTOR PLACEMENT DETAILS

LD(2)-03

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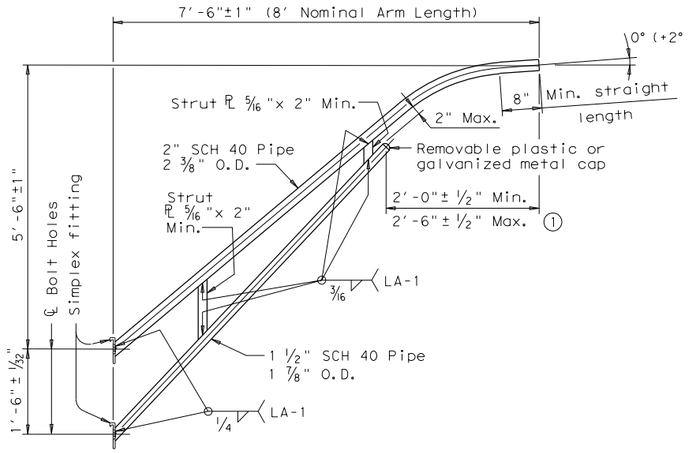
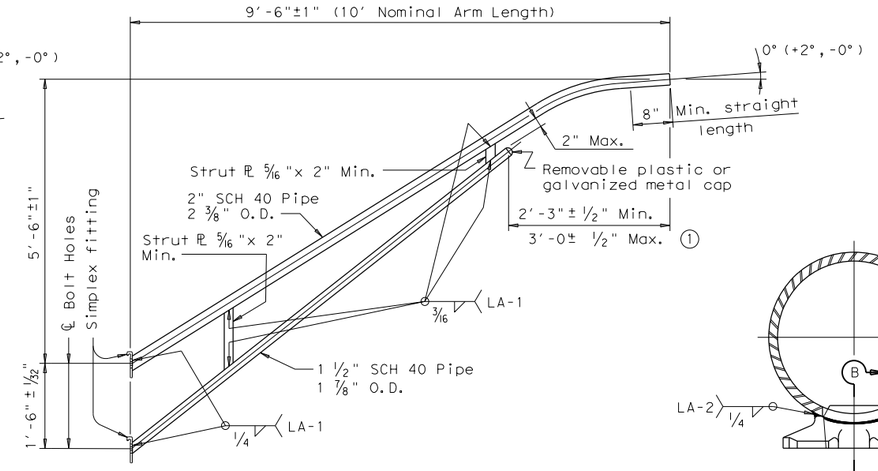
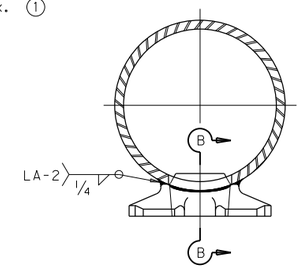


8-FOOT LUMINAIRE ARM



10-FOOT LUMINAIRE ARM



DIRECT ATTACHMENT DETAIL

MATERIALS	
Pole or Arm Simplex	ASTM A27 Gr.65-35 or A148 Gr.80-50, A576 Gr.1021 3 , or A36 (Arm only)
Arm Pipes	ASTM A53 Gr.B, A501, A1008 HSLAS-F Gr.50 4 , or A1011 HSLAS-F Gr.50 4
Arm Strut Plates 2	ASTM A36, A572 Gr.50 4 , or A588
Misc.	ASTM designations as noted

(1) Dimensional limits are given to show acceptable variation in design. All of a Fabricator's production of a particular arm length shall have the same dimensions within specified tolerances.

(2) Any of the materials listed for plates may be used where the drawings do not specify a particular ASTM designation.

(3) A576 must be suitable for forging and also meet minimum tensile strength of 65 ksi, minimum yield of 35 ksi, and elongation in 2 inches of 22 percent.

(4) ASTM A572, A1008 HSLAS-F, and A1011 HSLAS-F may have higher yield strengths but shall not have less elongation than the grade indicated.

GENERAL NOTES:

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals and Interim Revisions thereto. Design Wind Speed equals 90 mph plus a 1.3 gust factor. Arms are designed to support a 60 lb. luminaire having an effective projected area (actual area times drag coefficient) of 1.6 sq. ft.

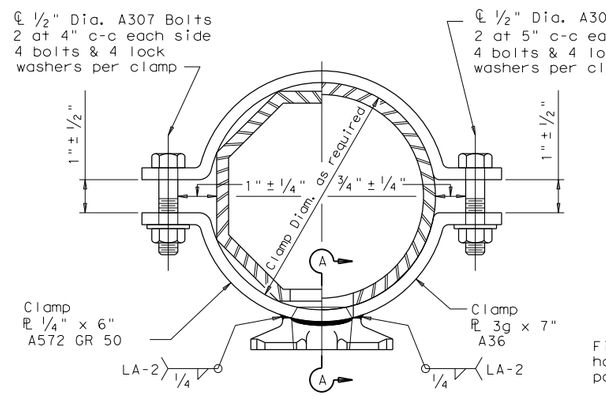
Materials and fabrication shall be in accordance with Item 686, "Traffic Signal Pole Assemblies (Steel)" and with the details, dimensions, and weld procedures shown herein. Weld references call for preapproved weld procedures which the Fabricator must obtain prior to fabrication. In the absense of specified Fabricaton tolerances, dimensions shall be within the tolerances generally obtainable in normal fabrication practice.

Unless otherwise noted, all parts shall be galvanized after fabrication in accordance with Item 445, "Galvanizing".

Deviation from the details and dimensions shown herein require submission of shop drawings in accordance with Item 441, "Steel Structures". Alternate designs are not acceptable.

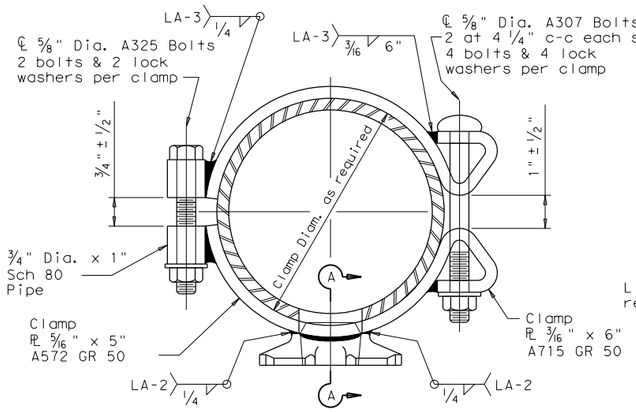
Each pole simplex fitting shall be supplied with 2 ASTM A325 bolts and 2 lock washers of the size specified. The bolts and lock washers shall be secured to the pole with the other hardware items called for in the plans. When clamp attachment is specified, the Fabricator shall ship the clamp assembly securely attached to the pole at the location shown on the plans.

If clamp assemblies are ordered without poles, the Fabricator shall ship one upper and one lower clamp assembly together in a single package, including all nuts and washers required for the clamps and simplex fittings.



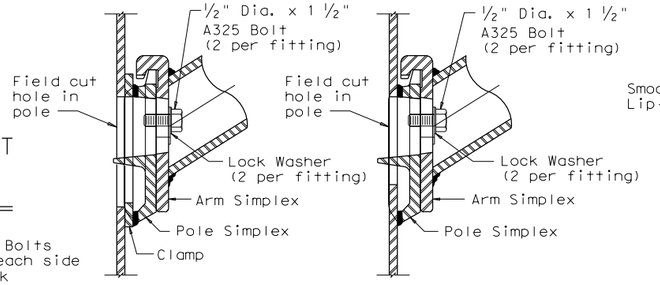
CLAMP ATTACHMENT DETAIL NO. 1 (HALF SECTION)

CLAMP ATTACHMENT DETAIL NO. 2 (HALF SECTION)



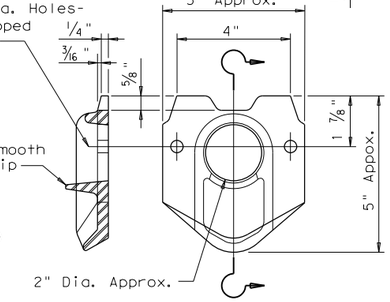
CLAMP ATTACHMENT DETAIL NO. 3 (HALF SECTION)

CLAMP ATTACHMENT DETAIL NO. 4 (HALF SECTION)

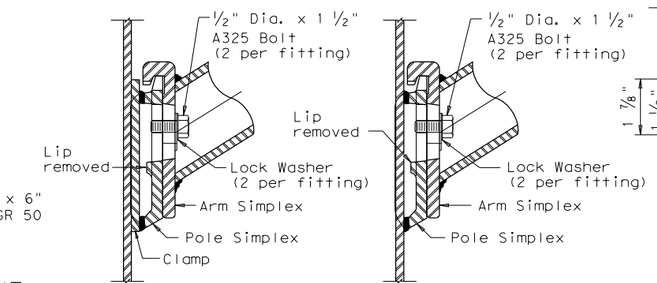


UPPER SIMPLEX FITTING

UPPER SIMPLEX FITTING



POLE SIMPLEX DETAIL

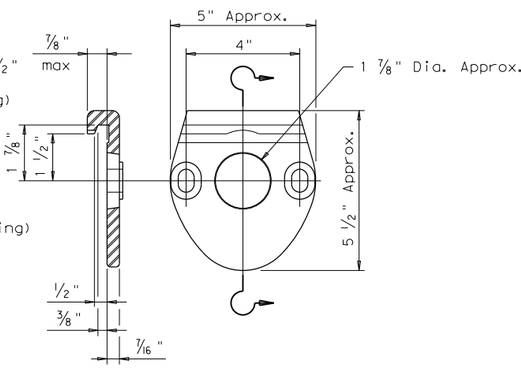


LOWER SIMPLEX FITTING

SECTON A-A

LOWER SIMPLEX FITTING

SECTON B-B



ARM SIMPLEX DETAIL

Texas Department of Transportation
Traffic Operations Division

STANDARD ASSEMBLY DRAWINGS FOR LUMINAIRE SUPPORT STRUCTURES

ARM DETAILS

LUM-A-12

©TxDOT August 1995

DN: LEH	CK: JSY	DW: LTT	CK: TEB

REVISIONS	CONT	SECT	JOB	HIGHWAY
5-96	0921	02	311	ALAMO ROAD
1-99	DIST	COUNTY		SHEET NO.
1-12	PHR	HIDALGO		79

ELECTRICAL SERVICE DATA

Service Pole No.	Sheet No.	Electrical Service Description (see ED (4)-03)	Service Conduit Size	Service Conductors No. / Size	Safety Switch Amps	Main Disconnect		Two-Pole Contactor Amps	Panelbd. / Loadcenter Amp Rating (min)	Circuit No.	Branch Ckt. Bkr. Pole / Amps	Branch Circuit Amps	KVA Load
						Switch Amp/Fuse	Ckt. Bkr. Pole / Amp						
1 thru 5		TY T 120/240 000(NS)GS(L)TS(0)	1¼"	3/#4	N/A	N/A	N/A	N/A	100	TS	1P/50	40.0	<5.5
										ILL	1P/20	6.0	
19 thru 21		TY T 120/240 000(NS)GS(L)TS(0)	1¼"	3/#4	N/A	N/A	N/A	N/A	100	FB	1P/20	12.0	<2.2
										ILL	1P/20	6.0	

NOTES:

ENSURE MAIN SERVICE DROP IS BELOW WEATHERHEAD.

BREAKER BOX & METER BOX SHALL BE ATTACHED TO WOOD POLE BY GALVANIZED CHANNEL (SEE DETAIL "B").

BOLT BOX TO GALVANIZED CHANNEL MOUNTED FLUSH WITH POLE.

CONDUIT SHALL BE ATTACHED TO POLE WITH H.D. 2-HOLE STRAPS AND 1½"x1/4" #8 S.S. SCREW OR LAG BOLT.

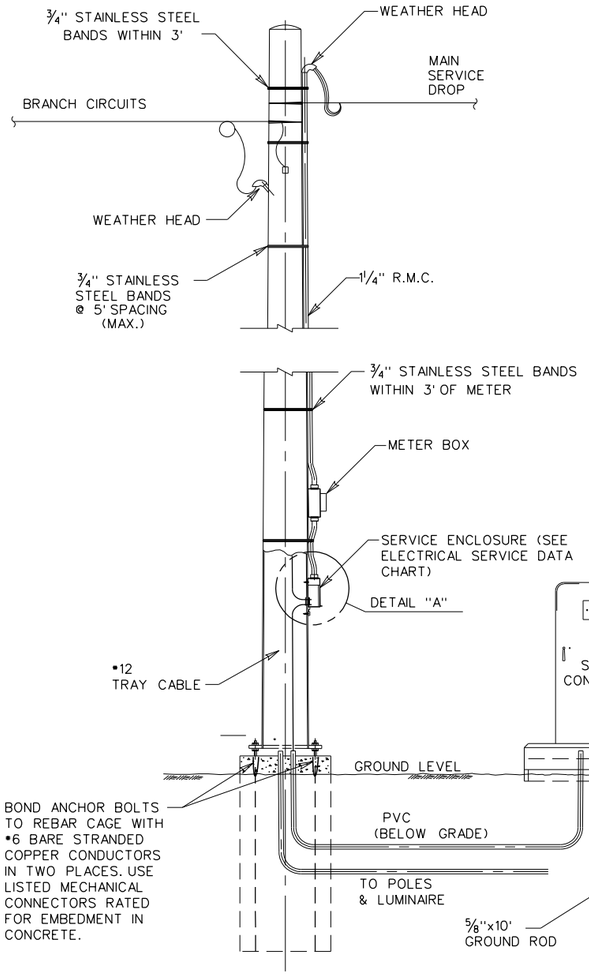
ALL EXPOSED CONDUIT SHALL BE RIGID METAL CONDUIT EXCEPT CONDUIT USED ON ELECTRICAL SERVICE GROUNDING ELECTRODE CONDUCTOR.

WHEN SERVICE IS CONNECTED WITHIN 100' OF THE CONTROLLER, NO PULL BOX SHALL BE USED.

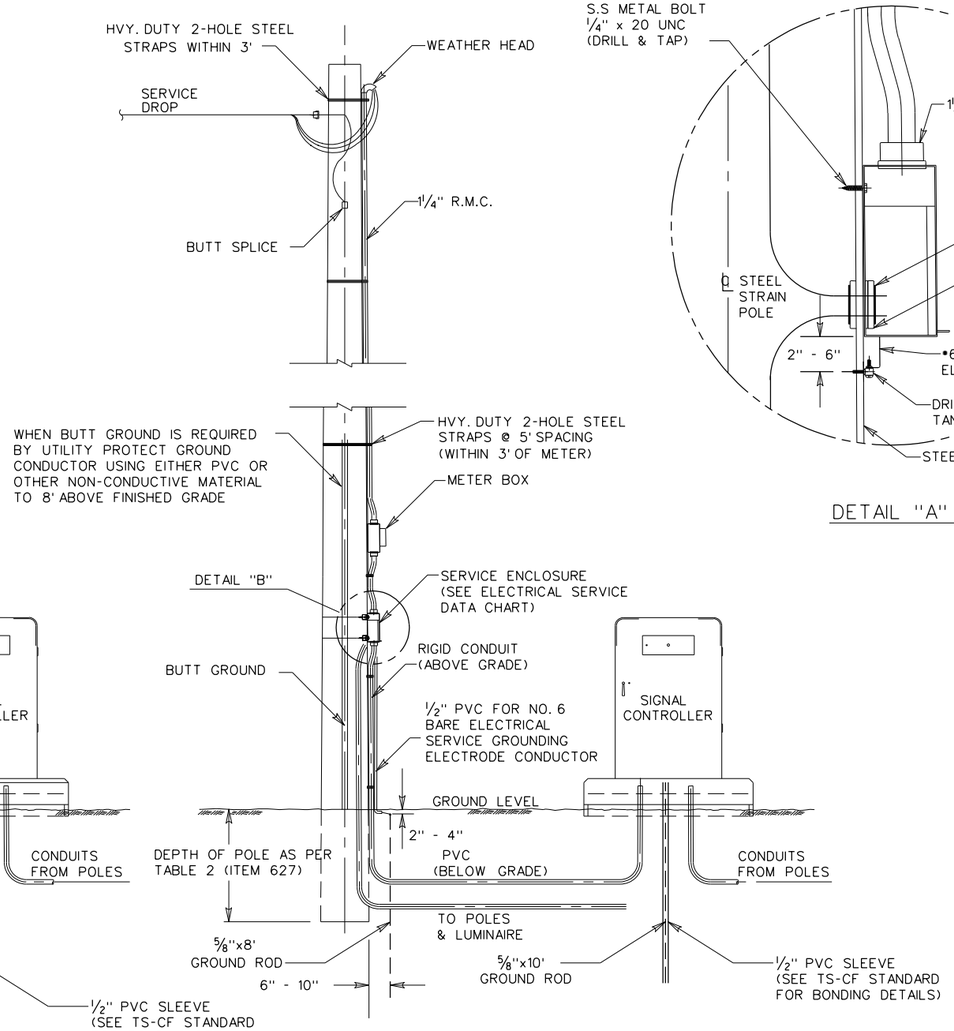
DISTRIBUTION TO LUMINAIRE SHALL BE OUT OF THE SERVICE BREAKER BOX. EACH LUMINAIRE SHALL HAVE A SEPARATE PHOTO CONTROL.

FURNISH & INSTALL 3 PRONG WEATHERPROOF LOCKTYPE BASE WITH PHOTO CELL TO CONTROL ILLUMINATION SIGN WHICH IS ATTACHED TO TRAFFIC SIGNAL SUPPORTS. LOCKBASE & PHOTO CELL SHALL BE INSTALLED ON TRAFFIC SIGNAL POLE NEAREST CABINET.

ALL CONDUIT & CONDUCTORS FROM SERVICE TO CONTROLLER CABINET SHALL BE AS PER PLANS.

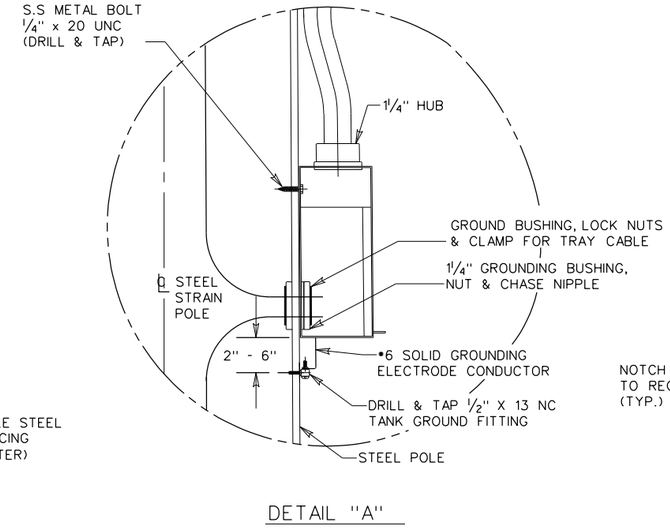


STEEL STRAIN POLE

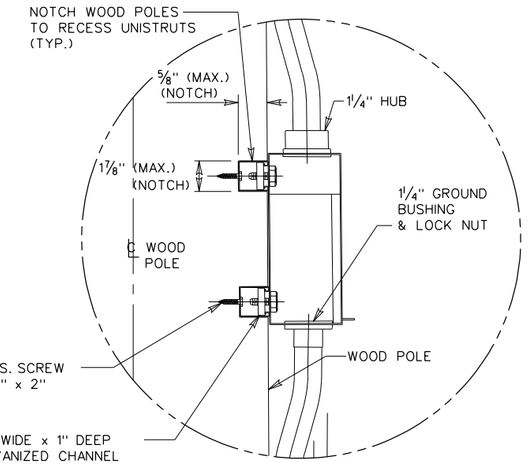


WOOD POLE

ELECTRICAL SERVICE



DETAIL "A"



DETAIL "B"

PHARR DISTRICT STANDARD

TEXAS DEPARTMENT OF TRANSPORTATION

ELECTRICAL SERVICE DESIGN WITH SIGNAL CONTROLLER

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SHEET 1 OF 1

DN: OG	DRAWING	DATE	FED.RD. DIV.NO.	STATE	FEDERAL AID PROJECT NO.			SHEET NO.
CK DN: JSL	ORIGINAL	APR. 2010	6	TEXAS				80
DW: OG		MAY 2017	STATE DIST.NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW: JSL			21	HIDALGO	0921	02	311	ALAMO

ROADWAY ILLUMINATION ASSEMBLY NOTES

1. Details apply to roadway lighting installations bid or referenced under Item 610, "Roadway Illumination Assemblies." Provide, furnish, and install all other materials not shown on the plans which may be necessary for complete and proper construction. Where manufacturers provide warranties or guarantees as a customary trade practice, furnish to the State such warranties or guarantees.

2. The locations of poles and fixtures may be shifted by the Engineer to accommodate local conditions. Install or remove poles and luminaires located near overhead electrical lines using established industry and utility safety practices and in accordance with laws governing such work. Consult with the appropriate utility company prior to beginning such work.

3. Provide new and unused materials. Ensure that all materials and installations comply with the applicable articles of the National Electrical Code (NEC), TxDOT standards and specifications, National Electrical Manufacturers Association (NEMA), and are listed by Underwriters Laboratories (UL) or a Nationally Recognized Testing Lab (NRTL). NRTLs such as Canadian Standard Association, Intertek Testing Services NA Inc., or FM Approvals LLC can be considered equivalent to UL. Faulty fabrication or poor workmanship in any material, equipment, or installation is justification for rejection.

4. Provide Roadway Illumination Light Fixtures as per TxDOT Departmental Material Specification (DMS) 11010, Item 610, and as shown on the Material Producers List (MPL) for Roadway Illumination and Electrical Supplies.

5. Fabricate steel roadway illumination poles in accordance with Roadway Illumination Poles (RIP) standards and Item 610. Poles fabricated according to RIP standards do not require shop drawing submittals.

   a. Alternate designs to RIP standards or the use of aluminum to fabricate poles will require the submission of shop drawings electronically. For instructions on submitting shop drawings electronically see "Guide to Electronic Shop Drawing Submittal" on the TxDOT web site.

   b. Limitations on use of the RIP standard: The RIP standard details were developed for installations in locations where the 3-second gust basic maximum wind speed is 110 mph, and where the elevation of the base of the pole is less than (i.e. not more than) 25' above the elevation of the surrounding terrain, in accordance with the "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals," 4th Edition (2001) (AASHTO Design Specifications). For poles to be installed in regions where the maximum basic wind speed exceeds 110 mph or to be mounted more than 25' above the surrounding terrain, provide poles meeting the following requirements:

      i. Submittals. Following the electronic shop drawing submittal process (see Guide to Electronic Shop Drawing Submittal on the TxDOT web site), submit to the Engineer for approval fabrication drawings and calculations for the poles, sealed by a Texas licensed professional engineer (P.E.).

      ii. Luminaire Structural Support Requirements. Provide light poles, arms, and anchor bolt assemblies with a 25 year design life to safely resist dead loads, ice loads and the required basic wind speeds at the location of installation in accordance with the 6th edition (2013) of the AASHTO Design Specifications. For transformer base poles, include transformer base and connecting hardware in calculations and shop drawing submittals. Structurally test all transformer bases to resist the theoretical plastic moment capacity of the pole. Submit certification of the plastic moment load test and FHWA breakaway requirement test of the model of base being furnished with the shop drawings. Show breakaway base model number, manufacturer's name, and logo on shop drawings. Include on manufacturer's shop drawings the ASTM designations for all materials to be used.

6. For both transformer and shoe-base type illumination poles, provide and install double-pole breakaway fuse holders as specified by DMS-11040. Breakaway fuse holders are listed on the MPL for Roadway Illumination and Electrical Supplies under Items 610 & 620. Provide 10 amp time delay fuses for breakaway connectors in light poles, or inside the light fixture for underpass luminaires. In each pole, connect luminaires to the breakaway connector with continuous stranded 12 AWG copper conductors as listed on the MPL. Bond all equipment grounding conductors together and to the ground lug in the transformer base or hand hole.

7. Tighten anchor bolts for shoe base, concrete traffic barrier base, and bridge mount roadway illumination poles, in accordance with Item 449.

8. Install T-Base with following procedure:

   a. Anchor Bolt Tightening.

      i. Coat the threads of the anchor bolts with electrically conductive lubricant.

      ii. Place the T-base over the anchor bolts. Foundation must be level and flat. The maximum permissible gap under any one corner of the t-base is 1/8" before nuts are tightened.

      iii. Coat the bearing surfaces of the nuts and washers with electrically conductive lubricant. Install (1) 1/2" hold down washer, (1) lock washer, and (1) nut on each anchor bolt. Turn the nuts onto the bolts so that each is hand-tight against the washer.

      iv. Using a torque wrench, tighten each nut to 150 ft-lb. Uniform contact is required between the foundation and the T-base in the corner regions of the T-base, and all corner gaps must be closed after applying torque. If a gap still exists after torquing to 150 ft-lbs, continue torquing each bolt incrementally until gap is closed or maximum allowable torque of 250 ft. pound is reached, whichever comes first. If 250 ft-lbs is not enough to close the gap the foundation must be leveled. Gaps along the straight sides of the T-bases and the foundation are permissible. Ensure that no high point of contact occurs between the straight sides of the T-base and the foundation.

      v. Check top of T-base for level. If not level then foundation must be leveled.

   b. Top Bolt Procedure

      i. Erect pole over T-base with crane. Coat bolts, nuts, washers, and lock washers with electrically conductive lubricant.

      ii. Install bolts and 1/2" connecting washers from the inside of the T-base, thread up through the pole base. Install flat washers, lock washers and nuts snug tight according to Item 447, "Structural Bolting."

      iii. Tighten each nut to 150 ft-lb. using a torque wrench.

   c. Level and Plumb

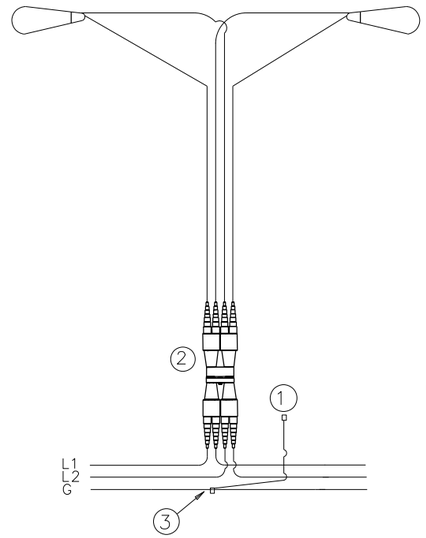
      i. Ensure pole is plumb and mast arm is perpendicular to the roadway according to plans to within 5 degrees.

9. Construct luminaire pole foundations in accordance with Item 416, "Drilled Shaft Foundations," and TxDOT standard sheet RID(2).

10. Provide and install underpass luminaires in accordance with Item 610, DMS-11010, and TxDOT standard sheet RID(3). Typical luminaire size for underpass luminaires is 150W HPS or 150W EQ LED.

11. Mount luminaires on arms level as shown by the luminaire level indicator.

12. Orient luminaires perpendicular to the roadway intended to be lit unless otherwise shown on the plans.



L1,L2 = Hot Conductors
G = Grounding Conductor

TYPICAL WIRING DIAGRAM

LUMINAIRES SERVED AT 480V ON 240/480 VOLT SERVICE OR LUMINAIRES SERVED AT 240V FOR 120/240 VOLT SERVICE.

NOTES:

1. Use 1/2 in.-13 UNC threaded, copper or tin-plated copper, pole bonding connector, sized appropriately for conductors, bonded to T-base, or use ground lug in handhole as available.

2. Use pre-qualified two-pole breakaway connectors for all luminaire pole installations. For luminaires fed by a circuit with a neutral conductor, use double pole breakaway connectors with the neutral side unfused and marked white.

3. Split Bolt or other connector.

Texas Department of Transportation

Traffic Operations Division Standard

ROADWAY ILLUMINATION DETAILS

RID(1)-17

FILE: rid1-17.dgn	DN:	CK:	DW:	CK:
©TxDOT January 2007	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO ROAD
7-17	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		81

72A

DISCLAIMER:
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DATE:
FILE:

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conver- sion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

Prequalification:

T. Use only pre-qualified fixtures. No alternates will be considered.
   1. Only materials with approved product codes or designations from prequalified producers are accepted on bids. The Construction Division (CST) of the Texas Department of Transportation (TxDOT) maintains the material producers list of approved producer product codes or designations. Use the following website to view this list:
      http://www.dot.state.tx.us/business/producer_list.htm
      Use of prequalified material does not relieve the contractor of the responsibility to provide materials that meet the specifications. All materials, including those shown on the prequalified material list, may be inspected and tested at any time and may be rejected if not in compliance with the specifications.
   2. Notify the Department in writing as to which fixture from the prequalified list of approved fixtures will be supplied on each project.
   3. To have a fixture listed as pre-qualified:
      a. Submit a sample of each type of luminaire and all pertinent data, including published photometric data and recently tested photometric data (IES format, both "averaged" and both sides of "un-averaged" data) to:
         TXDOT- TRF 118 East Riverside Dr. Austin, TX 78704
      b. Demonstrate a commitment to quality.
      c. Submit the following documentation:
         1. QA/QC program documentation with the following minimum requirements;
            a. Written statement of the companies QA/QC policy.
            b. QA/QC person employed that has special QA/QC training and has QA/QC as their primary job responsibility.
            c. A written procedure specifically for handling orders for fixtures built to TxDOT specifications.
            d. A written procedure for keeping track of fixtures built, certified, and tested for TxDOT orders.
            e. A check list of features for TxDOT fixtures with QA/QC person signature.
         2. Fixture UL certification
         3. IP 65 certification
         4. 3G certification
         5. Aluminum casting and paint analysis
         6. Socket, MOV, and shutoff ignitor data
         7. Stainless steel and aluminum bracket data
         8. Ballast electrical data
         9. Photometric data
         10. Lamp data
      d. Prequalification samples, if approved, will not be returned to the manufacturer but will be retained by the the Department for comparison testing. Once a fixture has been approved, do not change any material or manufacturing method without prior approval of the Department. Unapproved changes will result in rejection of the fixture.
      e. In addition, luminaires will be tested for compliance with this specification. Luminaires that inconsistently pass testing or that are inconsistent with published photometric information will be removed from the pre-qualified list at the discretion of the Department.

Sampling:

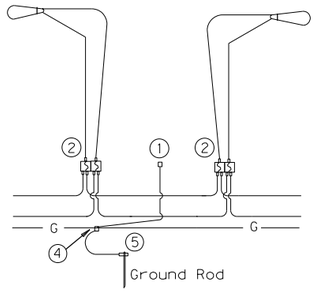
U. Sample in accordance with Test Method Tex-1110-T, "Sampling Lighting Assemblies."

Manufacturer Warranty:

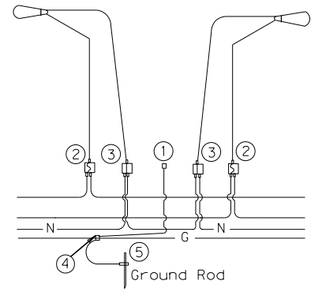
V. Replace failed fixtures, when non-operable due to defects in materials or workmanship within five years of installation with a fixture that passes all testing, delivered to the project location. Lamps and photocells are subject to the warranties of their respective manufacturers.

Testing:

W. Conduct electrical testing required in the Ballast section. Provide photometric testing of fixtures. Test fixtures at the following rates.
   1. Manufactuer Testing. Before fixtures are shipped from the manufacturer, test fixtures as follows. From each lot or manufacturing run, select one completed fixture of each 25, with a minimum of 2 and a maximum of 5. Test photometrics at an independent test lab inspected and approved by TxDOT. Electrical testing may be performed at manufacturer's facility.
      a. Provide IES photometric report in two formats:
         1. Standard averaged format for asymmetric fixtures.
         2. Un-averaged format showing both sides. Un-averaged data may be supplied in two files or as approved by the Department.
      b. Provide electrical and photometric test data directly to TRF-TE electronically for evaluation prior to shipping fixtures to the project. Do not ship fixtures until test data for each lot is approved by TRF-TE.
      c. Provide the following information on test reports:
         1. TxDOT's Control-Section-Job number, maintenance contract number, or purchase order number the fixtures are assigned to,
         2. a unique fixture test number per fixture,
         3. date of manufacture, and
         4. quantities supplied and lot number per fixture type.
      d. Write the unique lab report number on the top of the fixture housing with permanent marker. Ensure the test lab retains the results for 5 years. Provide the Department access to documentation.
      e. Retain records of manufacturing lots, test reports, lot quantities, and other pertinent details. Submit records to the Department upon request.
      f. Submit to TRF-TE a daily shipment report for shipments to each job.
      g. Make available to TxDOT inspectors upon request, all manufacturing facilities involved in the production of fixtures for use on Department projects, inventories of fixtures produced to Department specifications, and records of fixture testing and tracking.
   2. Departmental Test Reporting. Departmental test reports will be issued in accordance with Tex 1110-T.



FOR THREE-WIRE CIRCUIT-CENTER GROUNDED
LUMINAIRES SERVED AT 480V ON 240/480 VOLT SERVICE OR LUMINAIRES SERVED AT 240V FOR FOR 120/240 VOLT SERVICE.



FOUR-WIRE CIRCUIT-CENTER GROUNDED
LUMINAIRES SERVED AT 240V
(240/480 VOLT SERVICE)

NOTES:

① Use 1/2 in.-13 UNC threaded, copper or tin-plated copper, pole bonding connector, sized appropriately for conductors.
②③ Use pre-qualified Breakaway Connectors for both T-Base and Shoe-Base installations.
④ Split Bolt or other connector.
⑤ Use Ground Rod Clamp listed for its intended purpose (i.e. concrete, direct burial...)

Texas Department of Transportation
Traffic Operations Division

ROADWAY ILLUMINATION DETAILS

(RDWY ILLUM LIGHT FIXTURES)

RID(LUM2)-07

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REVISIONS

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

CONT	SECT	JOB	HIGHWAY
0921	02	311	ALAMO ROAD
DIST	COUNTY		SHEET NO.
PHR	HIDALGO		82

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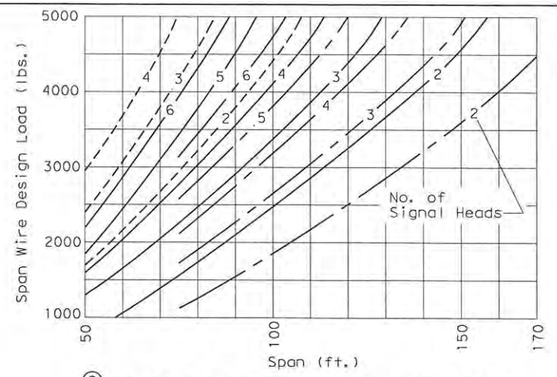
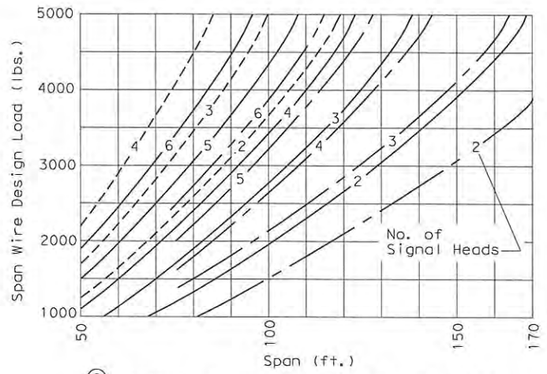
STRAIN POLE DESCRIPTION	Pole Type	Found-ation Type	Maximum Permissible Span Wire Load (lbs.)
26' Pole	A	36-A	4900
30' Pole	B	36-A	4300
30' Pole with Lum.	B	36-A	4000
30' Pole with 20' Mast Arm	C	36-B	4400
30' Pole with 24' Mast Arm	C	36-B	4000
30' Pole with 28' Mast Arm	C	36-B	3600
30' Pole with 32' Mast Arm	C	36-B	3300
30' Pole with 36' Mast Arm	C	36-B	2900
30' Pole with 20' Mast Arm & Lum.	C	36-B	4100
30' Pole with 24' Mast Arm & Lum.	C	36-B	3800
30' Pole with 28' Mast Arm & Lum.	C	36-B	3400
30' Pole with 32' Mast Arm & Lum.	C	36-B	3000
30' Pole with 36' Mast Arm & Lum.	C	36-B	2500
34' Pole	D	36-B	5200
34' Pole with Lum.	D	36-B	4900

② Numbers on Load Span Charts indicate the number of signal heads on the span. The total span wire design load is based on one 5-section head and one or more additional 3-section head(s). Design wind pressures on cables are assumed as 1.6 lb/ft. Weight of span wire cables (one per signal head) is assumed as 0.65 lb/ft which includes an allowance for conductor cables and miscellaneous hardware. The effect of the sway cable on load distribution is ignored as it is assumed to break at design wind conditions. When a pole supports 2 spans, the span wire design loads for both spans should be added vectorially to determine the design load for that pole.



② SIGNALS WITH 12-INCH LENS



② SIGNALS WITH 8-INCH LENS

Signal Head Type	Wt. Per Head	Wind Area ◆
5-Section, 12" Lens	125 lbs	9.6 sq. ft.
5-Section, 8" Lens	70 lbs	4.8 sq. ft.
3-Section, 12" Lens	75 lbs	5.64 sq. ft.
3-Section, 8" Lens	45 lbs	3.0 sq. ft.

◆ Effective projected design wind area (actual area times drag coefficient)

- - - - - - - - - Sag = 4'-6" (26' or 30' Pole)
———— Sag = 8'-0" (30' or 34' Pole)
———— — — Sag = 11'-6" (34' Pole)

SHIPPING PARTS LIST

Poles (Without Traffic Signal Arm)

Pole Type	Strain poles with Luminaire: Ship each pole with the following hardware attached: handhole at base, pole cap, 2 clamp-on simplex and 1 pipe plug.			Strain poles without Luminaire: Ship each pole with the following hardware attached: handhole at base, pole cap and 1 pipe plug.		
	Description	Designation	Quantity	Description	Designation	Quantity
A				26' Strain Pole	SP 26 A-100	
B	30' Strain Pole	SPL 30 B-100		30' Strain Pole	SP 30 B-100	
D	34' Strain Pole	SPL 34 D-100	2	34' Strain Pole	SP 34 D-100	2

Poles (With Traffic Signal Arm)

Pole Type	Strain poles with Luminaire: Ship each pole with the following hardware attached: handhole at base, pole cap, clamp-on simplex and 3 pipe plugs.			Strain poles without Luminaire: Ship each pole with the following hardware attached: handhole at base, pole cap and 3 pipe plugs.		
	Description	Designation	Quantity	Description	Designation	Quantity
C	30' SPw/TS Arm	SPL 30 C-100		30' SPw/TS Arm	SP 30 C-100	

Traffic Signal Arms (For Type C poles)

Nominal Arm Length	Type I Arm (1 Signal): Ship each Type I Arm with the following hardware attached: 2 CGB Connectors, 1 clamp with bolts and washers		Type II Arm (2 Signals): Ship each Type Arm with the following hardware attached: 1 Bracket Assembly , 3 CGB Connectors and 1 clamp with bolts and washers		Type III Arm (3 Signals): Ship each Type Arm with the following hardware attached: 2 Bracket Assemblies , 4 CGB Connectors and 1 clamp with bolts and washers	
ft.	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20□-100					
24	24□-100		24 II -100			
28	28□-100		28 II -100			
32			32 II -100		32 III -100	
36			36 II -100		36 III -100	

Anchor Bolt Assemblies (1 per pole)

Templates may be removed for shipment.

Anchor Bolt Diameter	Anchor Bolt Length	Quantity
1 ¾"	3'-10"	
2"	4'-3"	4

Luminaire Arms

Nominal Arm Length	Quantity
8' Arm	2

Each Anchor Bolt Assembly consists of the following: Top and Bottom templates, 4 anchor bolts, 8 nuts, 8 flat washers, and 4 nut anchor devices (Type 2) per Standard Drawing "TS-FD".

① See Sheet "DMA-100"

△X THIS SHEET HAS BEEN MODIFIED TO SHOW QUANTITIES

Pole Type	ROUND POLES				POLYGONAL POLES			
	D_B	D_T	④thk	H	D_B	D_T	④thk	H
	in.	in.	in.	ft.	in.	in.	in.	ft.
A	12.5	8.9	.239	26	13.0	9.0	.239	26
B	13.5	9.3	.239	30	14.0	9.0	.239	30
C	15.5	11.3	.239	30	16.0	11.0	.239	30
D	15.5	10.7	.239	34	16.0	11.0	.239	34

D_B = Pole Base O.D. D_T = Pole Top O.D. H = Pole Height

④ Thickness shown are minimum, thicker materials may be used.

STATE OF TEXAS
C. SIMEONIDIS
60919
REGISTERED PROFESSIONAL ENGINEER

8/2/2017

SHEET 1 OF 2

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES STRAIN POLE ASSEMBLIES

(100 MPH WIND ZONE)

SP-100(1)-12

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REVISIONS	DN: MS	CK: JSY	DW: BR	CK: JSY
6-96	CONT	SECT	JOB	HIGHWAY
1-12	0921	02	311	ALAMO ROAD
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		83

DATE:
FILE:

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DATE:
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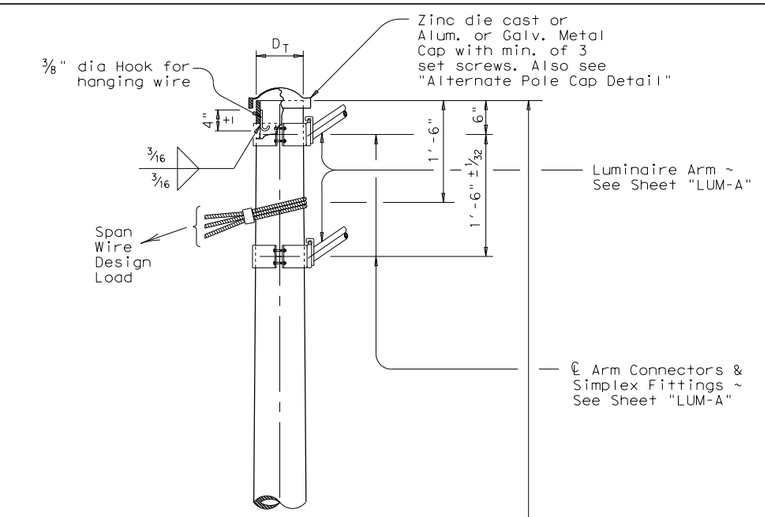
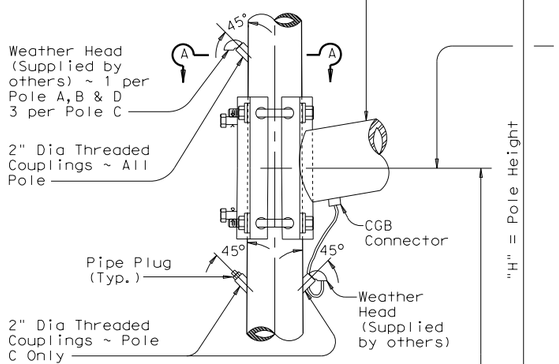
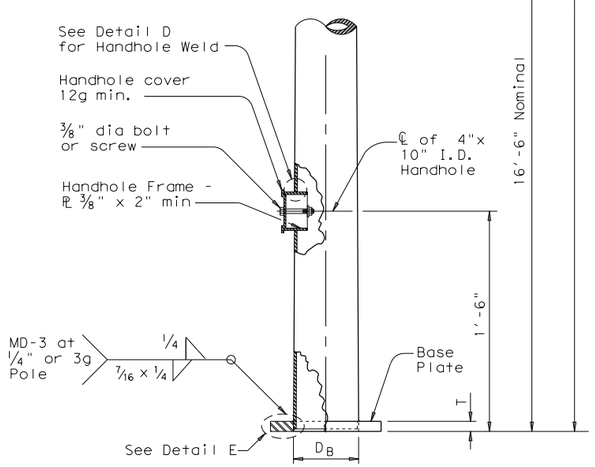


DETAIL A

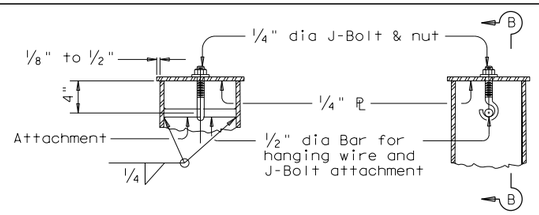


DETAIL B



DETAIL C

POLE ELEVATION



SECTION B-B

ALTERNATE POLE CAP DETAIL

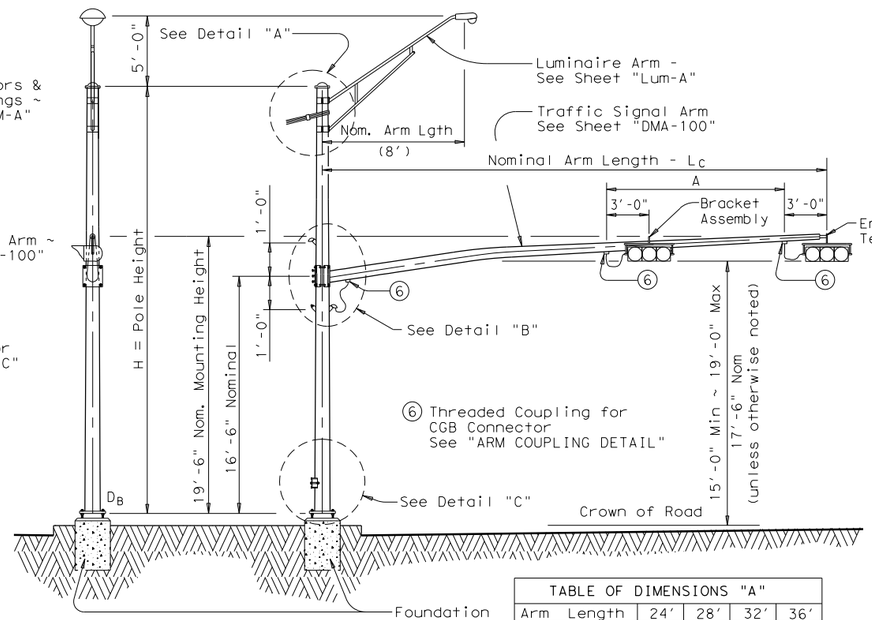
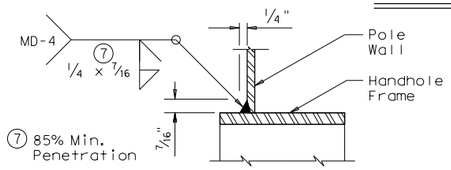
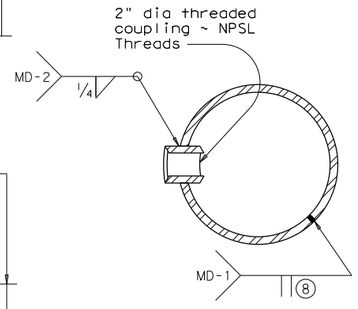


TABLE OF DIMENSIONS "A"				
Arm Length	24'	28'	32'	36'
Arm Type II	10'	11'	12'	13'
Arm Type III			10'	11'

STRUCTURE ASSEMBLY

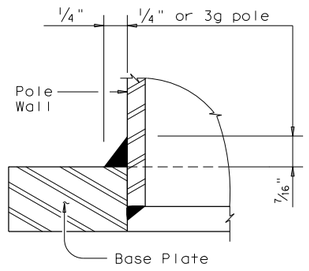


DETAIL D



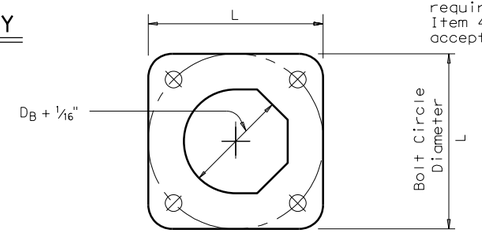
SECTION A-A

(Pole Coupling and Seam Weld Details)

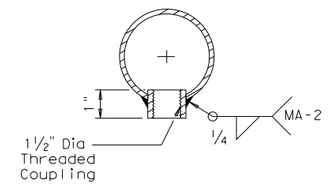


DETAIL E

⑧ 60% Min. penetration, except 100% penetration within 6" of circumferential base welds.



BASE PLATE PLAN



ARM COUPLING DETAIL

MATERIALS	
Round Shafts or Polygonal Shafts ⑨	ASTM A595 Gr.A, A588, A1008 HSLAS Gr.50 Class 2, A1011 HSLAS Gr.50 Class 2, A572 Gr.50 or A1011 SS Gr.50 ⑩
Plates ⑨	ASTM A36, A588, or A572 Gr.50
Connection Bolts	ASTM A325 except where noted
Pin Bolts	ASTM A325
Pipe ⑨	ASTM A53 Gr.B, A501, A1008 HSLAS-F Gr.50, A1011 HSLAS-F Gr.50
Steel Cable	ASTM A475, 7 Wire Utilities Grade
Misc. Hardware	Galvanized steel or stainless steel or as noted

⑨ ASTM A572, A1008 HSLAS, A1011 HSLAS, A1008 HSLAS-F, A1011 HSLAS-F, or A1011 SS may have higher yield strengths but shall not have less elongation than the grade indicated.

⑩ ASTM A1011 SS Gr.50 shall also have a minimum elongation of 18 percent in 8 inches or 23 percent in 2 inches. Material thickness in excess of those stipulated under A1011 SS will be acceptable providing the material meets all other A1011 SS requirements and the requirements of this item.

GENERAL NOTES

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals and Interim Specifications thereto. Design Wind Speed equals 100 mph plus a 1.3 gust factor. The maximum permissible span wire design loads tabulated are calculated at a stress load of 1.4 times the basic allowable stress. A simultaneous wind on the pole, mast arm, and luminaire is also included.

See standard sheet "DMA-100" for details of clamp-on traffic signal arms, sheet "MA-C" for traffic signal arm connection details, sheet "LUM-A" for luminaire arm and connection details, and sheet "TS-FD" for anchor bolt and foundation details.

Fabrication shall be in accordance with Item 686, "Traffic Signal Pole Assemblies (Steel)" and with the details, dimensions, and weld procedures shown herein. Weld references call for preapproved weld procedures which the Fabricator must obtain prior to fabrication. Materials, fabrication tolerances, and shipping practices shall meet the requirements of this sheet and Item 686, "Traffic Signal Pole Assemblies (Steel)".

Unless otherwise noted, all parts shall be galvanized in accordance with Item 445, "Galvanizing", after fabrication.

Deviation from the details and dimensions shown herein require submission of shop drawings in accordance with Item 441, "Steel Structures". Alternate designs are not acceptable.

Foundation Type	Anchor Bolt Diameter	Bolt Hole Diameter	Bolt Circle Diameter	Base PL Dim. L x T
36-A	1 3/4"	2"	19"	19" x 1 3/4"
36-B	2"	2 1/4"	21"	21" x 2"

Texas Department of Transportation
Traffic Operations Division

SUPPORT STRUCTURES STRAIN POLE ASSEMBLIES

(100 MPH WIND ZONE)

SP-100(2)-12

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DN: MS	CK: JSY	DW: BR	CK: JSY
REVISIONS	CONT	SECT	JOB	HIGHWAY
6-96	0921	02	311	ALAMO ROAD
1-12	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		84

121B

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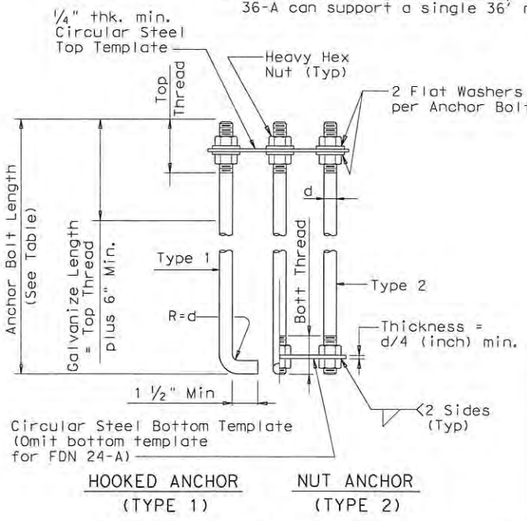
FOUNDATION DESIGN TABLE

FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		EMBEDDED DRILLED SHAFT LENGTH-ft ④, ⑤, ⑥			ANCHOR BOLT DESIGN ①				FOUNDATION DESIGN LOAD ②		TYPICAL APPLICATION
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N blows/ft			ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft	SHEAR Kips	
				10	15	40							
24-A	24"	4- #5	#2 at 12"	5.7	5.3	4.5	¾"	36	12 ¾"	1	10	1	Pedestal pole, pedestal mounted controller.
30-A	30"	8- #9	#3 at 6"	11.3	10.3	8.0	1 ½"	55	17"	2	87	3	Mast arm assembly. (see Selection Table)
36-A	36"	10- #9	#3 at 6"	13.2	12.0	9.4	1 ¾"	55	19"	2	131	5	Mast arm assembly. (see Selection Table) 30' strain pole with or without luminaire.
36-B	36"	12- #9	#3 at 6"	15.2	13.6	10.4	2"	55	21"	2	190	7	Mast arm assembly. (see Selection Table) Strain pole taller than 30' & strain pole with mast arm
42-A	42"	14- #9	#3 at 6"	17.4	15.6	11.9	2 ¼"	55	23"	2	271	9	Mast arm assembly. (see Selection Table)

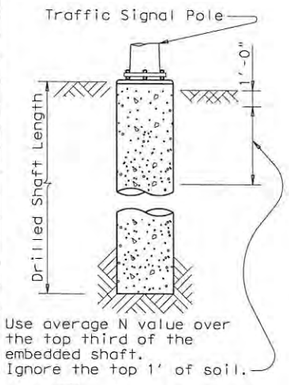
FOUNDATION SELECTION TABLE FOR STANDARD MAST ARM PLUS ILSN SUPPORT ASSEMBLIES (ft)

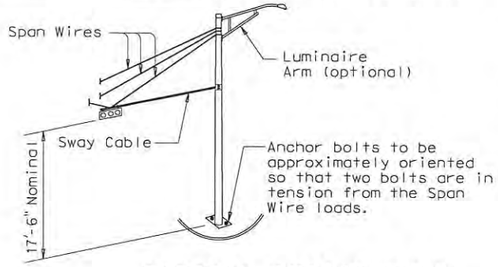
		FDN 30-A	FDN 36-A	FDN 36-B	FDN 42-A
80 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH	32'	48'		
	MAXIMUM DOUBLE ARM LENGTH COMBINATIONS	24' X 24'			
		28' X 28'			
		32' X 28'	32' X 32'		
			36' X 36'		
			40' X 36'		
			44' X 28'	44' X 36'	
100 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH		36'	44'	
	MAXIMUM DOUBLE ARM LENGTH COMBINATIONS		24' X 24'		
			28' X 28'		
			32' X 24'	32' X 32'	
				36' X 36'	
				40' x24'	40' X 36'
					44' x 36'

EXAMPLE:
1. For 80mph design wind speed, foundation 30-A can support up to a 32' arm with another arm up to 28'
2. For 100mph design wind speed, foundation 36-A can support a single 36' mast arm.

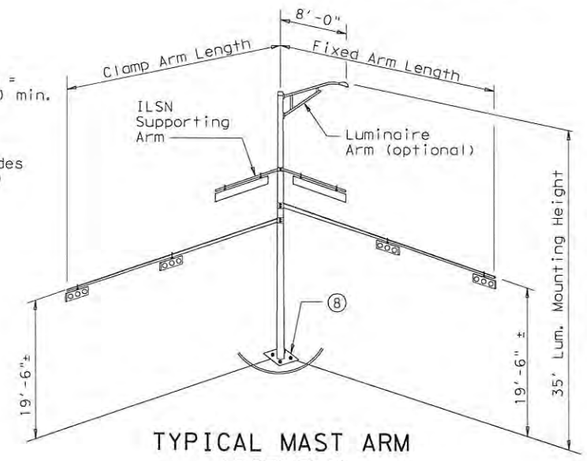


ANCHOR BOLT ASSEMBLY





TYPICAL STRAIN POLE ASSEMBLY



⑧ Orient anchor bolts orthogonal with the fixed arm direction to ensure that two bolts are in tension under dead load.

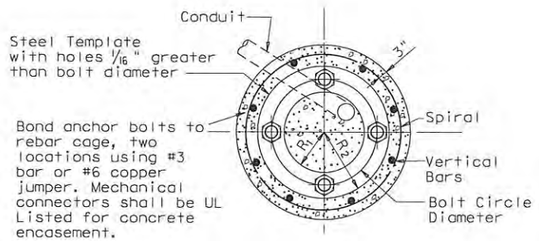
TYPICAL MAST ARM ASSEMBLY

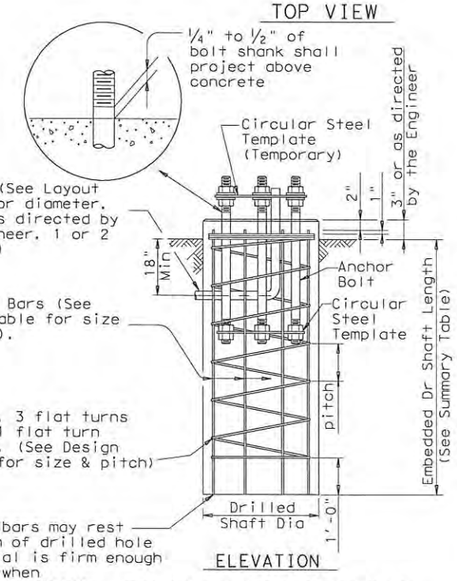
NOTES:
1. Anchor bolt design develops the foundation capacity given under Foundation Design Loads.
2. Foundation Design Loads are the allowable moments and shears at the base of the structure.
3. Foundations may be listed separately or grouped according to similarity of location and type. Quantities are for the Contractor's information only.
4. Field Penetrometer readings at a depth of approximately 3 to 5 feet may be used to adjust shaft lengths.
5. If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.
6. Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

ANCHOR BOLT & TEMPLATE SIZES

BOLT DIA IN.	⑦ BOLT LENGTH	TOP THREAD	BOTTOM THREAD	BOLT CIRCLE	R2	R1
¾"	1'-6"	3"	—	12 ¾"	7 ⅛"	5 ⅝"
1 ½"	3'-4"	6"	4"	17"	10"	7"
1 ¾"	3'-10"	7"	4 ½"	19"	11 ¼"	7 ¾"
2"	4'-3"	8"	5"	21"	12 ½"	8 ½"
2 ¼"	4'-9"	9"	5 ½"	23"	13 ¾"	9 ¼"

⑦ Min dimensions given, longer bolts are acceptable.





FOUNDATION DETAILS

FOUNDATION SUMMARY TABLE ③

LOCATION IDENTIFICATION	AVG. N BLOW /ft.	FDN TYPE	NO. EA	DRILLED SHAFT LENGTH ⑥ (FEET)				
				24-A	30-A	36-A	36-B	42-A
FM 1925 AT FM 907	10	24-A	8	45.6				
	10	36-B	4				60.8	
TOTAL DRILLED SHAFT LENGTHS				45.5			60.8	

GENERAL NOTES:

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and interim revisions thereto.

Reinforcing steel shall conform to Item 440, "Reinforcing Steel".

Concrete shall be Class "C".

Threads for anchor bolts and nuts shall be rolled or cut threads of 8UN series up to 2" in diameter or UNC series for all sizes. Bolts and nuts shall have Class 2A and 2B fit tolerances. Galvanized nuts shall be tapped after galvanizing.

Anchor bolts that are larger than 1" in diameter shall conform to "alloy steel" or "medium-strength mild steel" per Item 449, "Anchor Bolts". Anchor bolts that are 1" in diameter or less shall conform to ASTM A36. Galvanize a minimum of the top end thread length plus 6" for all anchor bolts unless otherwise noted. Exposed washers and exposed nuts shall be galvanized. All galvanizing shall be in accordance with Item 445, "Galvanizing".

Templates and embedded nuts need not be galvanized. Lubricate and tighten anchor bolts when erecting the structure in accordance with Item 449, "Anchor Bolts".

⚠X THIS SHEET HAS BEEN MODIFIED TO SHOW QUANTITIES

STATE OF TEXAS · C. SIMEONIDIS · 60919 · REGISTERED PROFESSIONAL ENGINEER

8/2/2017

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL POLE FOUNDATION

TS-FD-12

© TxDOT August 1995	DN: MS	CK: JSY	DW: MAO/MAF	CK: JSY/TEB
REVISIONS 5-96 11-99 1-12	CONT	SECT	JOB	HIGHWAY
	0921	02	311	ALAMO ROAD
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		85

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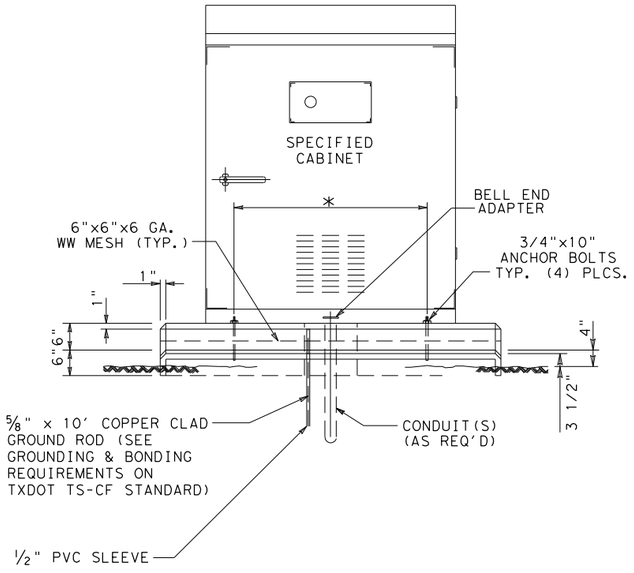
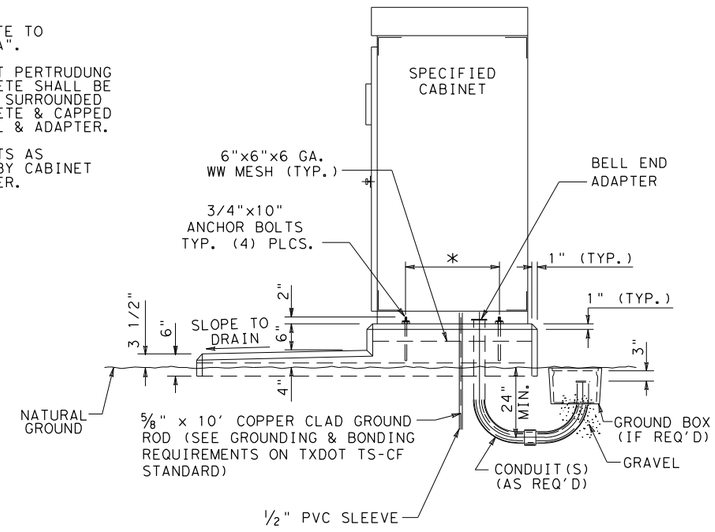
FILE:



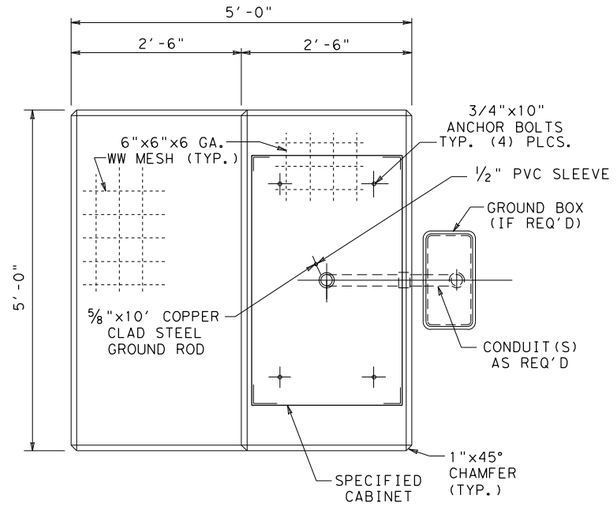
FRONT VIEW

NOTES:

1. ALL CONCRETE TO BE CLASS "A".
2. ALL CONDUIT PERTRUDUNG THRU CONCRETE SHALL BE COMPLETELY SURROUNDED WITH CONCRETE & CAPPED WITH A BELL & ADAPTER.
3. * ANCHOR BOLTS AS SPECIFIED BY CABINET MANUFACTURER.

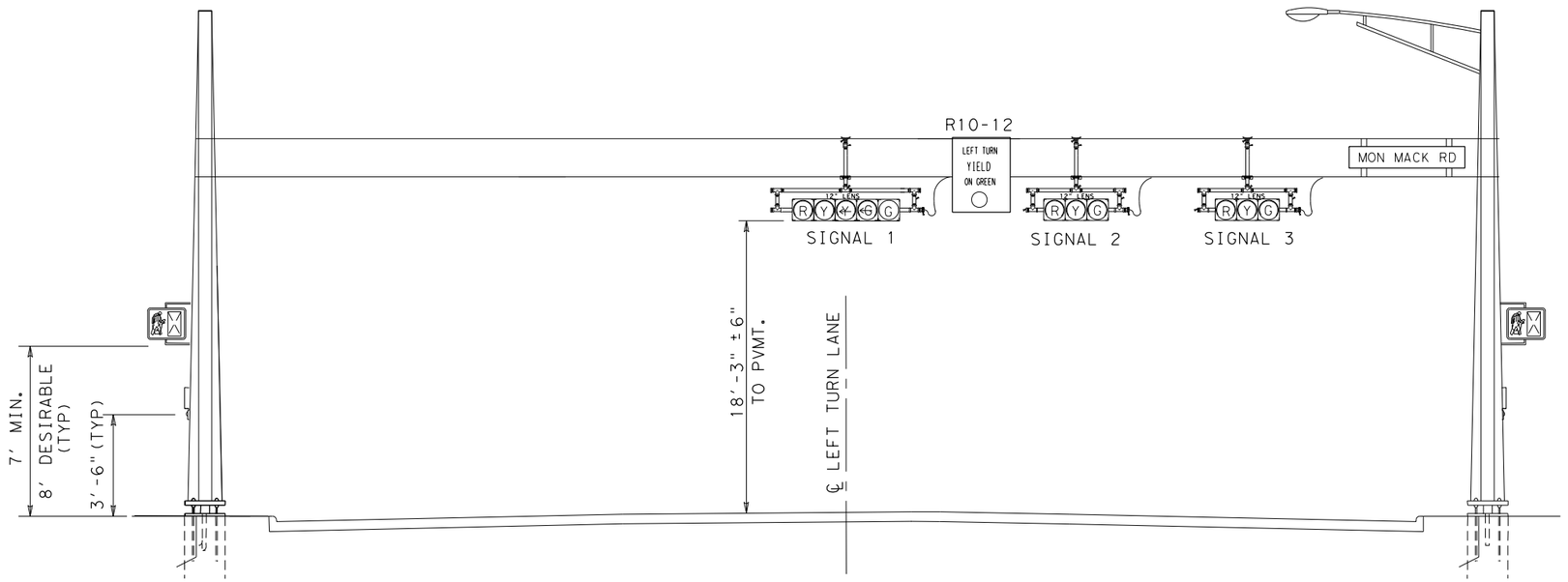


SIDE VIEW



TOP VIEW

DETAIL OF BASE MOUNT CABINET FOUNDATION



ELEVATION VIEW

DISTRICT STANDARD PLANS

TEXAS DEPARTMENT OF TRANSPORTATION

PHARR DISTRICT STANDARD

TRAFFIC SIGNAL CONSTRUCTION DETAILS

CONTROLLER FOUNDATON & LOOP DETECTOR INSTALLATION

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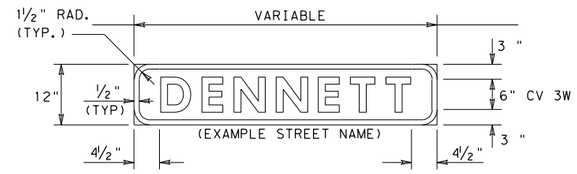
SHEET 1 OF 3

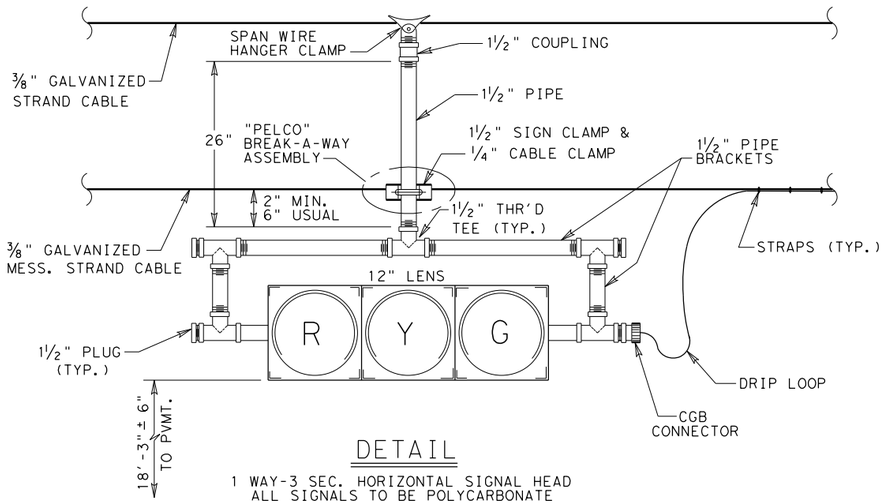
DN: OG	DRAWING	DATE	FED.RD. DIV.NO.	STATE	PROJECT NO.	SHEET NO.
CK DN: JSL	ORIGINAL	APR. 2010	6	TEXAS		86
DW: OG	REV. JUL. 2015 AUG 2016		STATE DIST. NO.	COUNTY	CONTROL NO. / SECTION NO. / JOB NO.	HIGHWAY NO.
CK DW: JSL			PHARR	HIDALGO	0921 / 02 / 311	ALAMO

D3-1



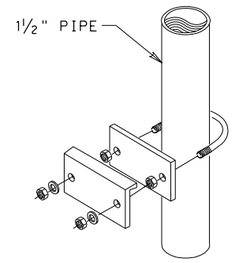
LETTERS & BORDER - WHITE (REFL)
BACKGROUND - GREEN (REFL)
MOUNT TYPE - SPAN WIRE OR MAST ARM

STREET NAME SIGN

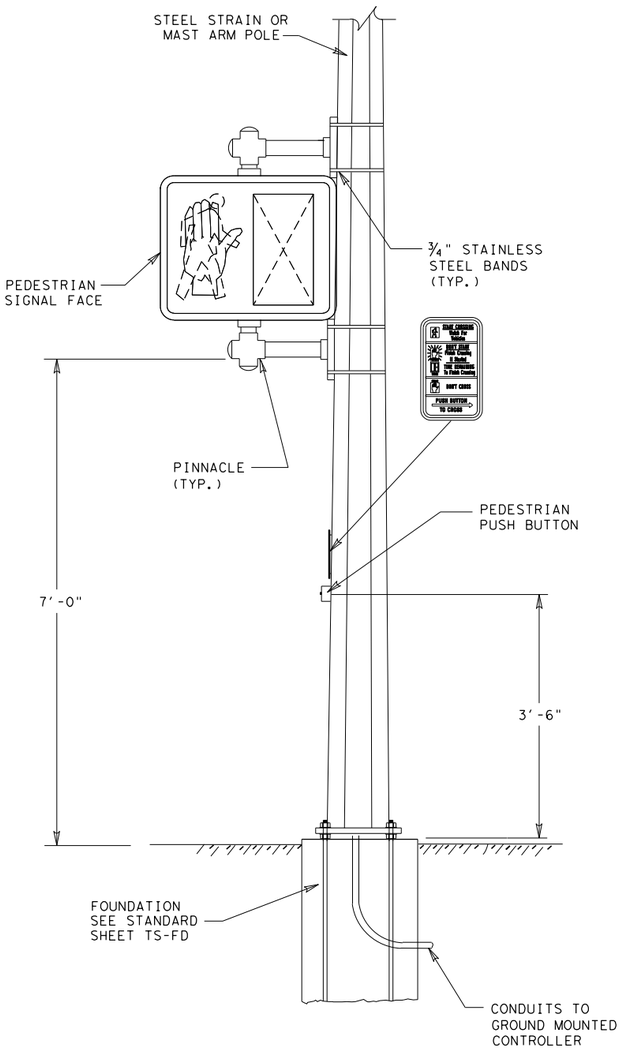


DETAIL

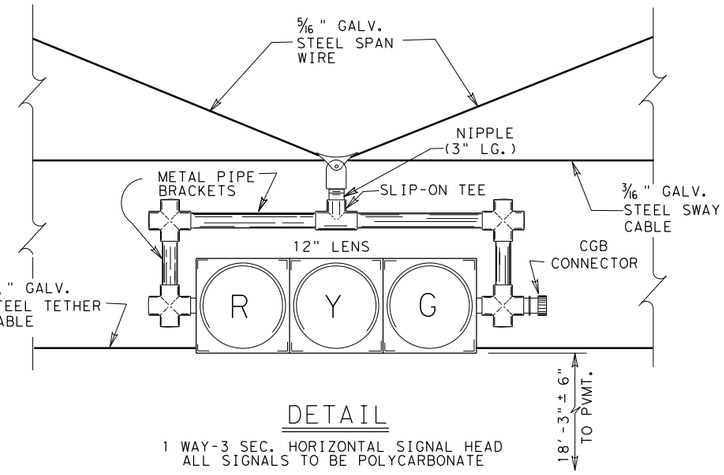
1 WAY-3 SEC. HORIZONTAL SIGNAL HEAD
ALL SIGNALS TO BE POLYCARBONATE
(TO BE USED ON SKEWED INTERSECTIONS OR WHEN SIGNAL POLES ARE NOT SQUARED TO EACH OTHER)



DETAIL-"PELCO" BREAK-A-WAY ASSEMBLY

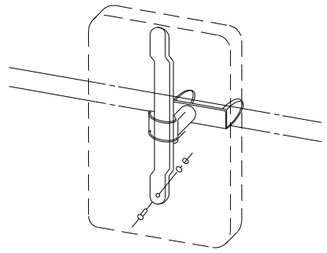


DETAIL-PEDESTRIAN SIGNALS



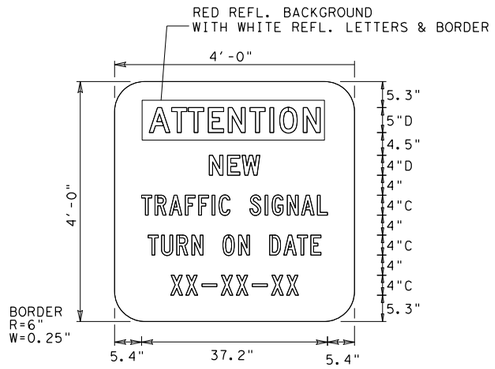
DETAIL

1 WAY-3 SEC. HORIZONTAL SIGNAL HEAD
ALL SIGNALS TO BE POLYCARBONATE

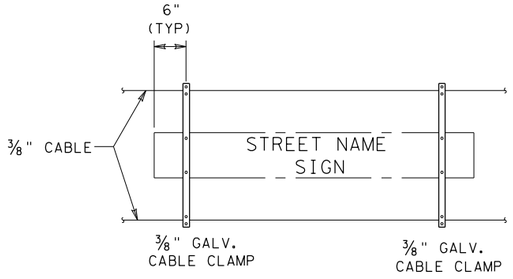


SIGN BRACKET

NOTE: THESE BRACKETS, USED IN PAIRS FOR LONGER SIGN, OR IN SINGLE UNITS FOR SMALLER SIGNS.



SPECIAL SIGN DETAIL



STREET NAME SIGN MOUNTING DETAIL

DISTRICT STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
PHARR DISTRICT STANDARD

TRAFFIC SIGNAL CONSTRUCTION DETAILS

MISCELLANEOUS DETAILS

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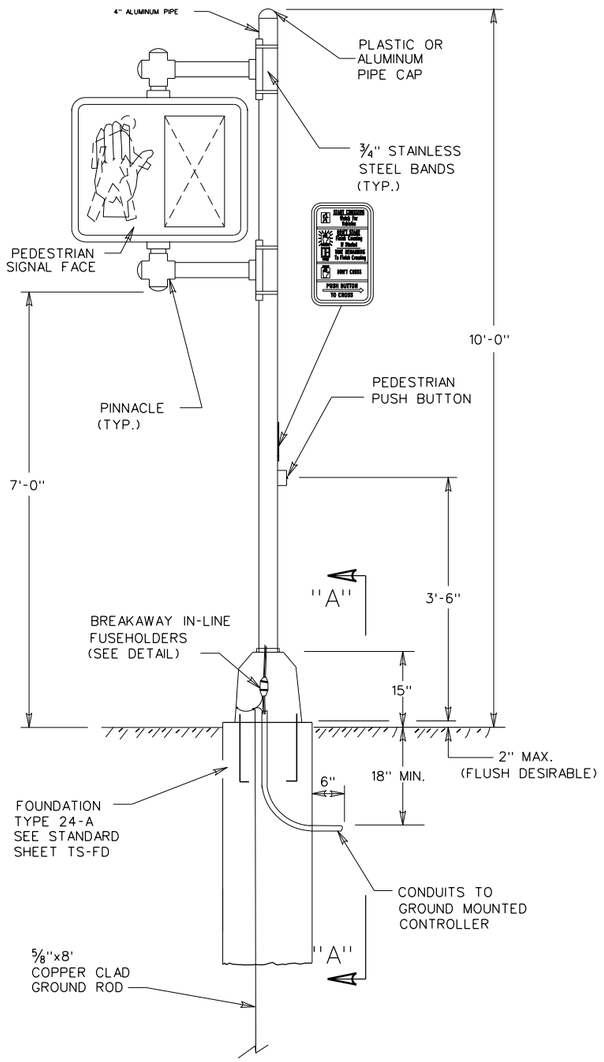
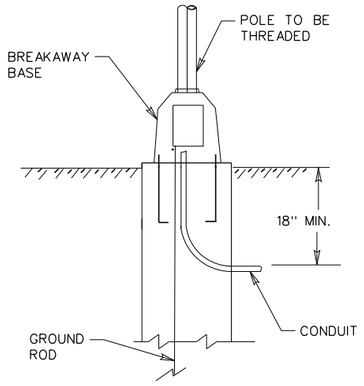
SHEET 2 OF 3

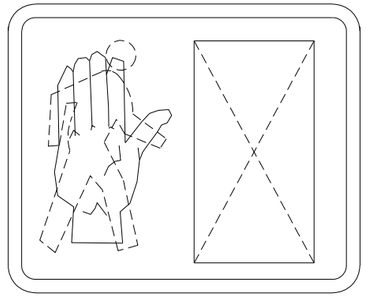
DN: OG	DRAWING	DATE	FED.RD. DIV.NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: JSL	ORIGINAL	APR. 2010	6	TEXAS					87
DW: OG	REV. MAY 2016 AUG 2016		STATE DIST.NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
CK DW: JSL			PHARR	HIDALGO	0921	02	311		ALAMO



PEDESTAL POLE DETAIL



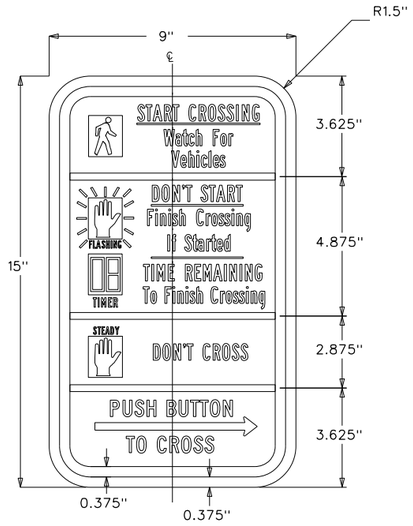
SECTION "A A"

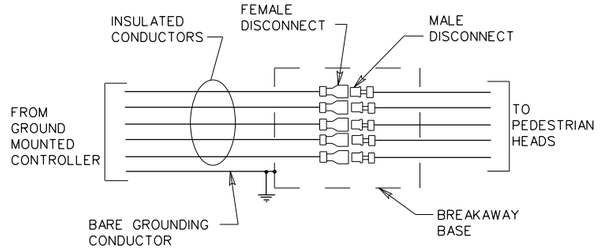


18"x16" LED PEDESTRIAN SIGNAL HEAD w/COUNTDOWN

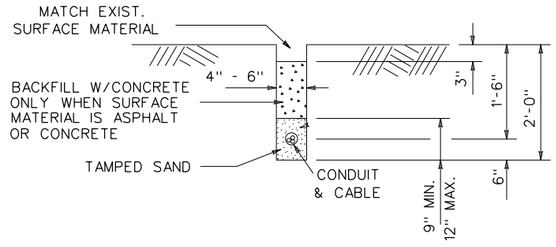
- LEGEND:
  BLACK
- BACKGROUND:
  WHITE (RETROREFLECTIVE)
- 08,HAND SYMBOL:
  ORANGE (RETROREFLECTIVE)
  ON BLACK
- PEDESTRIAN SYMBOL:
  WHITE (RETROREFLECTIVE)
  ON BLACK

NOTE:
REFER TO THE STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD) FOR MORE DETAILS AND DIMENSIONS REGARDING SIGN R10-3e



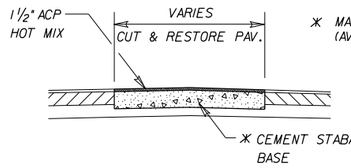


BREAKAWAY IN-LINE FUSEHOLDERS



NOTE:
ALL TRENCHES ARE TO BE MADE ONLY PARALLEL TO THE STREET. ALL CONDUIT RUNS CROSSING THE STREET SHALL BE PUSHED AND NO CUTS MADE IN THE SURFACE.

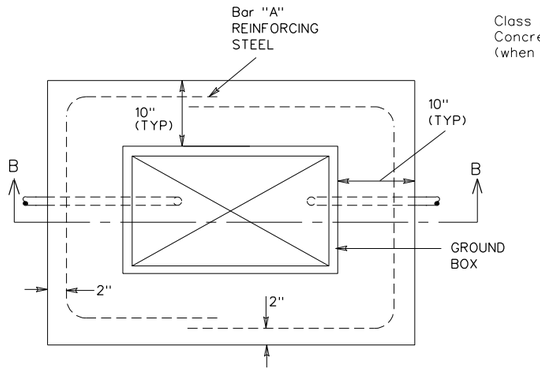
DETAIL - TRENCH LAY CONDUIT



DETAIL - CUT AND RESTORE PAVEMENT

NOTES:

1. BREAKAWAY ELECTRICAL QUICK-DISCONNECTS SHALL BE WATERTIGHT BUSSMANN HEB SERIES OR EQUAL.
2. DRILL POLE FOR WIRE ENTRY. USE BUSHING OR RUBBER GROMMET TO PROTECT CONDUCTORS.
3. POLE SHAFT SHALL BE ONE PIECE SCHEDULE 40 ALUMINUM PIPE, ASTM B429 OR B221 (ALLOY 6601-T6), DO NOT USE ALUMINUM CONDUIT.



APRON FOR GROUND BOXES

(Where required)

DISTRICT STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
PHARR DISTRICT STANDARD

TRAFFIC SIGNAL CONSTRUCTION DETAILS

MISCELLANEOUS DETAILS

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SHEET 3 OF 3

DN: OG	DRAWING	DATE	FED.RD. DIV.NO.	STATE	PROJECT NO.			SHEET NO.
CK DN: JSL	ORIGINAL	APR. 2010	6	TEXAS				88
DW: OG	REV. JUL. 2015 MAY 2016 AUG 2016 APR 2017		STATE DIST.NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW: JSL			PHARR	HIDALGO	0921	02	311	ALAMO

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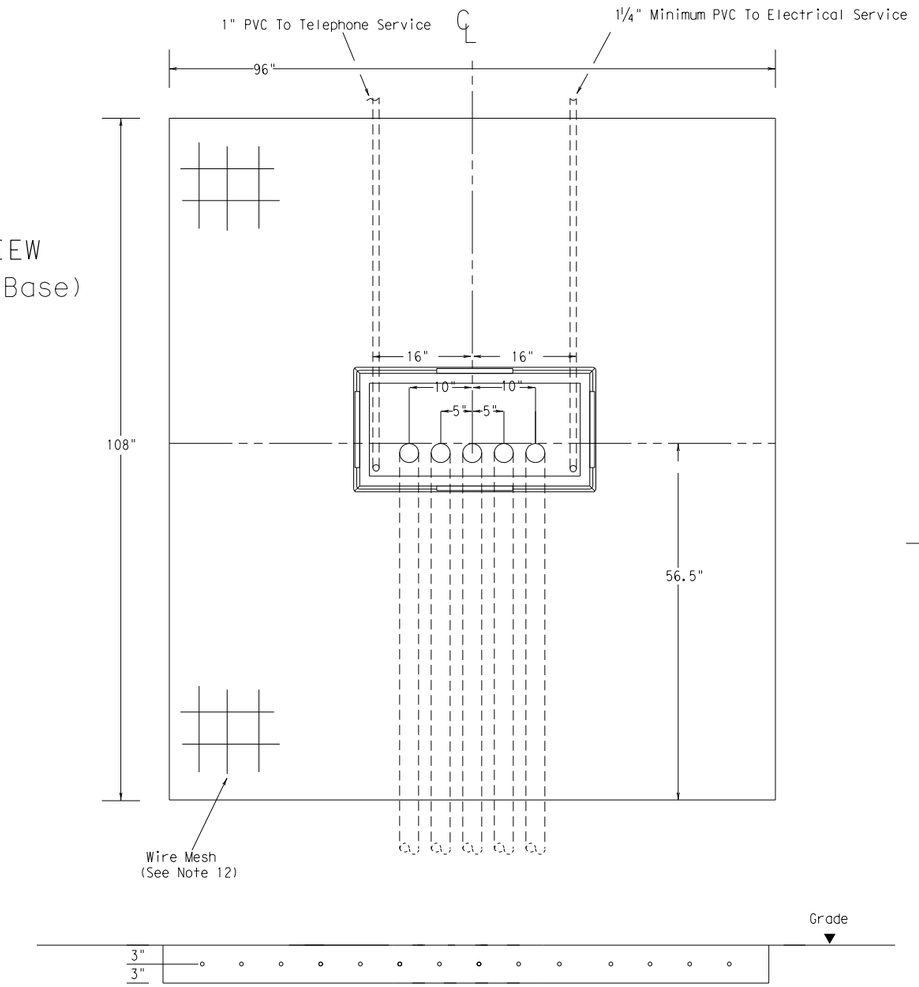
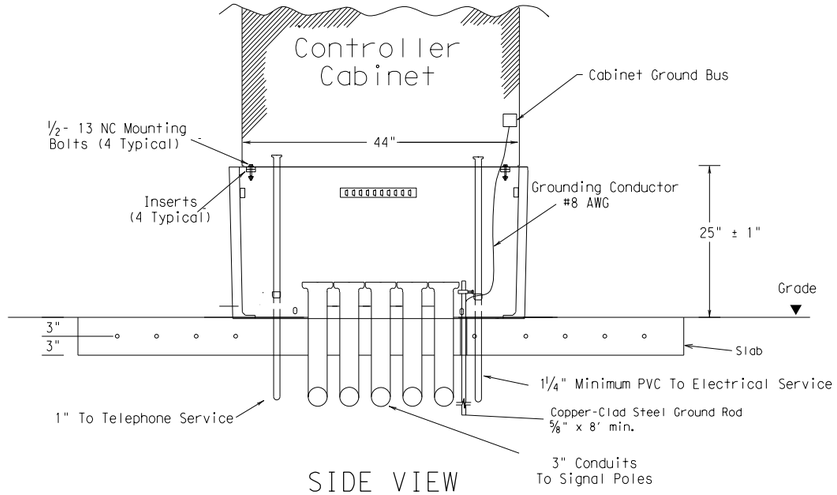
DATE:
FILE:

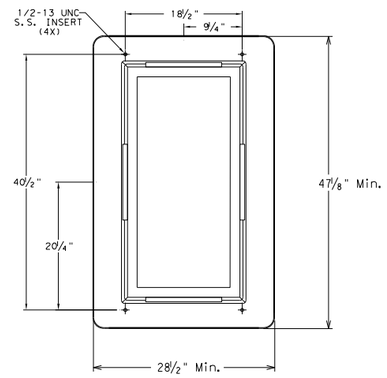
TOP VIEW (Slab & Base)



SIDE VIEW (Slab & Base)



CABINET BASE



TRAFFIC SIGNAL CONTROLLER BASE:

1. Provide a traffic signal controller base (cabinet base) manufactured of polymer concrete material consisting of calcareous and siliceous stone; glass fibers and thermoset polyester resin. The polymer concrete cabinet base must be reinforced on the inside of the cabinet base with fiberglass matting. Provide one of the following bases: Armorcast Part # A6001848X24, Quazite Model # PG3048Z709, or other as approved by TxDOT Traffic Operation Division.
2. The polymer concrete material must have a minimum compressive strength of 10,300 pounds per square inch (psi), minimum flexural strength of 3600 psi, and minimum shear strength of 3600 psi.
3. The polymer concrete cabinet base must conform to the dimensions shown and must accommodate a standard TxDOT basemount cabinet.
4. Supply the cabinet base with four ½"-13 UNC stainless steel inserts for attachment of the cabinet to the base. Inserts must withstand a minimum torque of 50 ft-lb and a minimum straight pull out strength of 750 lbs.
5. Provide the cabinet base with 4 cable racks mounted one on each side of the base 2" to 7 " from the top edge of the base. Unless approved otherwise, cable racks must be 1-1/2 x 9/16 x 3/16 inch steel channel with eight T-slots spaced at 1-1/2 inches. The cable racks must easily accommodate the insertion of tie wraps to attach field wiring to the racks to serve as strain relief. Secure cable racks to the base using ½"-13 UNC stainless steel screws and inserts.
6. The cabinet base, when secured to the concrete slab with controller cabinet attached, must withstand a minimum wind load of 125 mph or a 850 lb force applied at 49" above the bottom of the base without causing the base or cabinet to come out of their anchored position or cause any permanent deformation. The manufacturer must supply certification by an independent testing laboratory or sealed by a Texas Licensed Professional Engineer. Provide the cabinet base with hardware for attachment to a concrete slab.
7. The traffic signal base must be permanently marked either by impress or by permanent ink with the manufacturer's model number and name or logo.
8. Seal the base to the concrete with a silicone caulk bead and fastened to the slab per manufacturer's instructions.

CONCRETE SLAB:

9. Traffic signal controller pad must be a portland cement concrete slab poured in place, must conform to the dimensions shown, and must be level.
10. Bond a #8 AWG copper ground wire and an 8 ft ground rod bonded to the reinforcing mesh by a suitable UL listed clamp and terminated to the cabinet grounding bus for the purpose of providing a local ground for the electrical grounding conductor. The electrical grounding conductor specified in Item 680-3.A.4 is required and must be terminated to the cabinet ground bus.
11. Install a PVC sleeve to prevent the ground rod from direct embedment in the slab.
12. Provide welded wire mesh 6X6-W2.9 X W2.9 for reinforcement. Provide joints and splices in the mesh with a minimum 6-inch overlap. Center the mesh between top and bottom and provide a minimum 3 inch cover on the edges.
13. Provide Class B concrete minimum for the slab in accordance with Item 421. Construct the slab in accordance with Item 531.

CONDUITS:

14. Stub up and run 3-inch conduits through the slab to the various traffic signal poles and ground boxes as shown on the layouts. Install the number of conduits as shown on layouts plus two additional 3 inch conduits for future use. Terminate the conduits with a bushing between 2 and 4-inches above the slab.
15. Extend conduits for future use at least 18-inches from the edge of the slab, terminate underground with a coupling, and cap and seal so that the seal can be removed without damaging the coupling. This must also apply to unused telephone conduit.
16. Stub up two separate conduits through the slab from the electrical and telephone services. Run the conduit for the electrical feed directly to the electrical service enclosure. Run the conduit for the telephone line directly to the telephone service, usually located on the same pole as the electrical service. Telephone must not under any circumstance share a conduit with any other function.
17. Terminate electric and telephone conduits above the slab with a coupling. After the base is installed, extend the conduits above the top of the base and secure to the base using a steel one-hole strap or similar suitable substitute.

CONTROLLER CABINET:

18. Anchor the controller cabinet to the base using four stainless steel 1/2-13 NC bolts.
19. The silicone caulk bead specified in Item 680.3.B must be RTV 133.

PAYMENT:

20. Bid TS-CF as subsidiary to Item 680.

Texas Department of Transportation
Traffic Operations Division

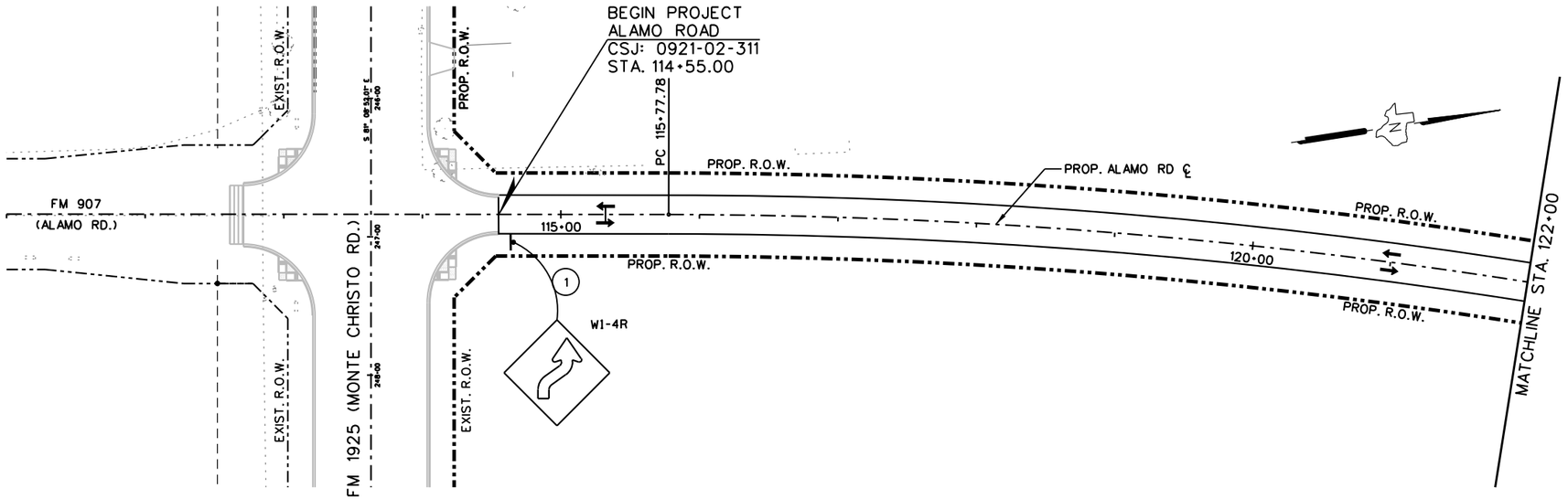
TRAFFIC SIGNAL CONTROLLER CABINET BASE AND PAD

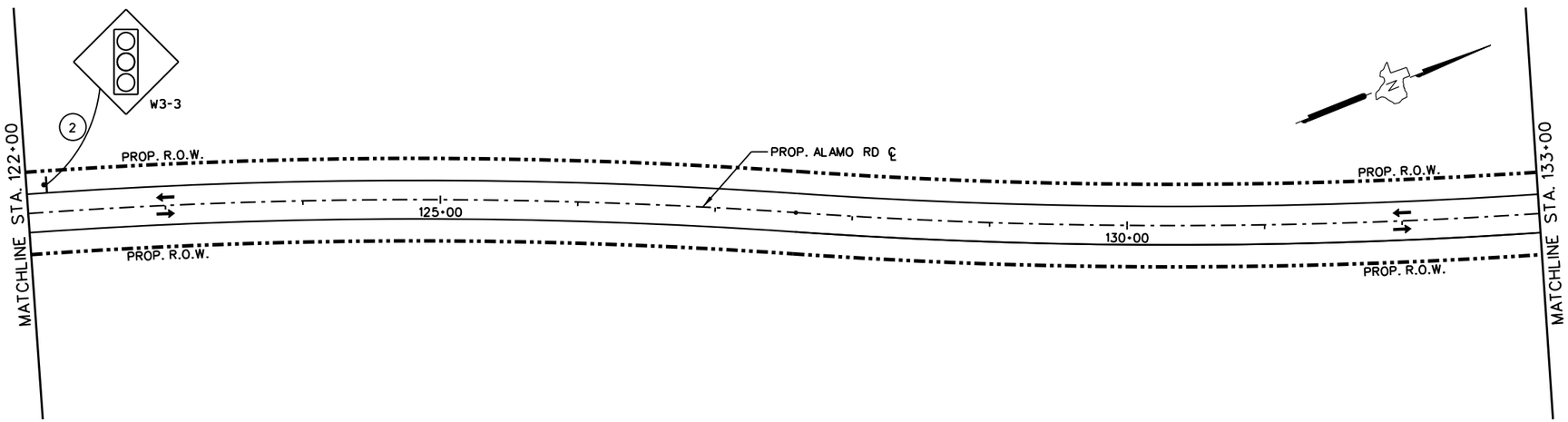
TS-CF-04

©TxDOT October 2000	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
12-04 REVISIONS	CONT	SECT	JOB	HIGHWAY
	0921	02	311	ALAMO ROAD
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		89

LEGEND:

- SIGNS TO REMAIN IN PLACE
- SIGNS TO BE INSTALLED (ITEM 644)
- SIGNS TO BE REMOVED (ITEM 649)
- SIGNS TO BE REMOVED & RELOCATED (ITEM 644)
- SIGNS SYMBOL





STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED
PROFESSIONAL ENGINEER
08/16/2017

P4

L&G Engineering

Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
Fax : (956) 565-9018

900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

ALAMO ROAD
SIGNING
STA. 114+55 TO STA. 133+00

SCALE: 1"=100' SHEET 1 OF 2

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN:		6	TEXAS				90
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:		PHR	HIDALGO	0921	02	311	ALAMO
TR:							
CK TR:							

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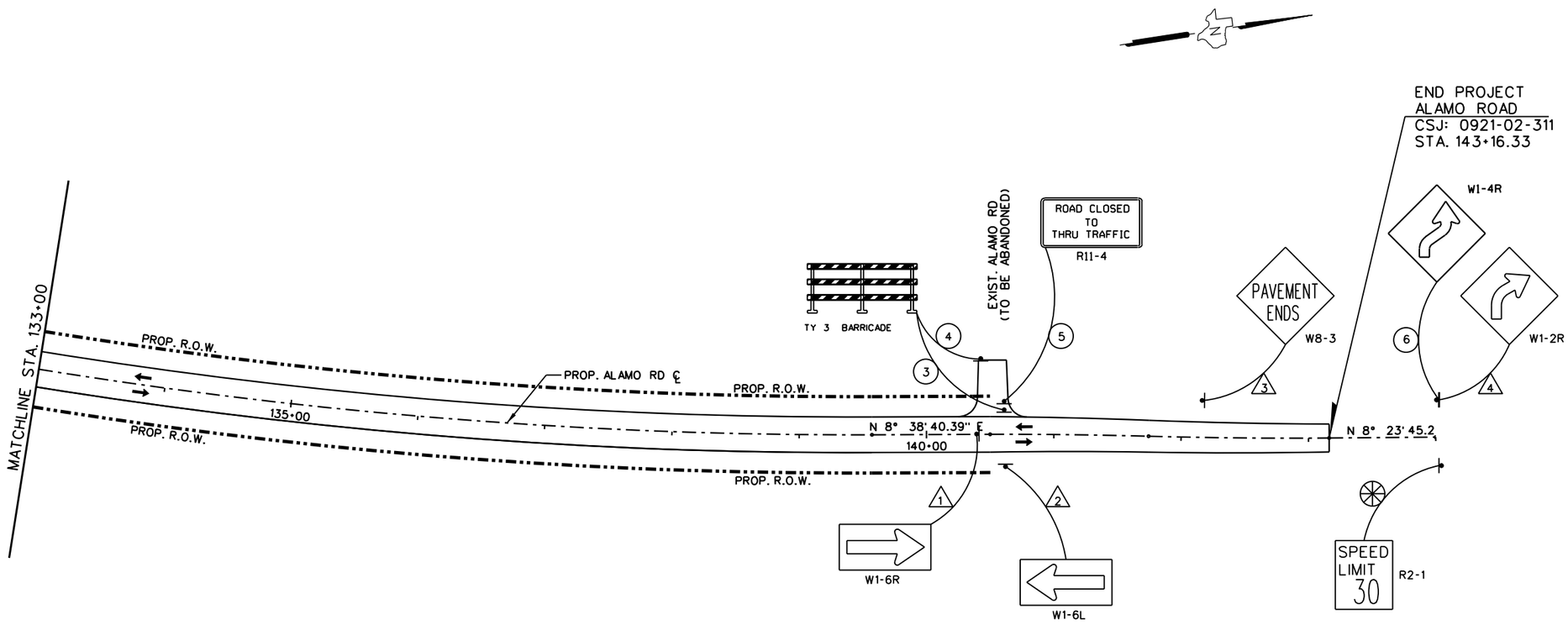
8/16/2017



LEGEND:

- SIGNS TO REMAIN IN PLACE
- SIGNS TO BE INSTALLED (ITEM 644)
- SIGNS TO BE REMOVED (ITEM 649)
- SIGNS TO BE REMOVED & RELOCATED (ITEM 644)
- SIGNS SYMBOL

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
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Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

ALAMO ROAD
SIGNING
STA. 133+00 TO STA. 143+16

SCALE: 1"=100' SHEET 2 OF 2

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN:		6	TEXAS				91
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:							
TR:		PHR	HIDALGO	0921	02	311	ALAMO
CK TR:							

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DATE:
FILE:

SUMMARY OF SMALL SIGNS

SM RD SGN ASSM TY XXXXX(X)XX(X-XXXX)

- Post Type: FRP = Fiberglass; TWT = Thin-Wall; 10BWG = 10 BWG; S80 = Sch 80
- Posts (1 or 2)
- Anchor Type: UA=Univer-Conc; UB=Univer-Bolt; SA=Slip-Conc; SB=Slip-Bolt; WS=Wedge Steel; WP=Wedge Plastic
- Mounting Designation: P = Prefab. "Plain"; T = Prefab. "T"; U = Prefab. "U"
- 1EXT or 2EXT = # of Ext.; BM = Extruded Wind Beam; WC = 1.12 #/ft Wing Chan.; EXAL= Extruded Aluminum

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN TEXT	DIMENSIONS	ALUMINUM TYPE A	ALUMINUM TYPE G	Post Type	Posts	Anchor Type	Mounting Designation	
ALAMO											
1OF2											
	1	W1-4R	CURVES AHEAD	36X36	✓		S80	1	SA	P	
	2	W3-3	SIGNAL AHEAD	36X36	✓		S80	1	SA	P	
2OF2											
*	3	-	TY 3 BARRICADE	-	-		S80	2	SA	P	
*	4	-	TY 3 BARRICADE	-	-		S80	2	SA	P	
	5	R11-4	ROAD CLOSED TO THRU TRAFFIC	60X30	✓		S80	1	SA	T	
	6	W1-2R	CURVE AHEAD	36X36	✓		S80	1	SA	P	

* SEE TCP BARRICADE AND CONSTRUCTION SHEETS, BC1-14 THRU BC12-14, FOR TY 3 BARRICADES SIGNS TO BE PAID UNDER ITEM 644.

ALUMINUM SIGN BLANKS (TYPE A)

Square Ft.	Min. Thickness
Less than 7.5	0.080"
7.5 to 15	0.100"
Greater than 15	0.125"

Sign supports shall be located as shown on the plans, except that the Engineer may shift the sign supports, within design guidelines, where necessary to secure a more desirable location or to avoid conflict with utilities. Unless otherwise shown on the plans, the Contractor shall stake and the Engineer will verify all sign support locations.

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DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT	REVISIONS
				11-93 7-02
				8-95 2-07
				1-02 9-08

SUMMARY OF SMALL SIGNS

SOSS

DIST	COUNTY	SHEET NO.
PHR	HDALGO	92

CONT	SECT	JOB	HIGHWAY
0921	02	331	ALAMO

18

SUMMARY OF SMALL SIGNS

PLAN SHT. NO.	SIGN NO.	SIGN TYPE	SIGN TEXT	SIGN DIMENS.	644 6076 REMOVE SMALL RD SIGN SUP. & ASSM.	644 2058 RELOCATE SMALL RD SIGN SUP. & ASSM. TY S80
				INCHES	EA.	EA.
ALAMO RD						
2 of 2						
	1	W1-6R	LARGE DIRECTIONAL ARROW	48X24	X	
	2	W1-6L	LARGE DIRECTIONAL ARROW	48X24	X	
	3	W8-3	PAVEMENT ENDS	36X36	X	
	4	W1-2R	CURVE AHEAD	30X30	X	
				SUB-TOTAL	4	

TABULATION OF
SIGNS TO BE REMOVED
OR RELOCATED
UNDER ITEM 644
(WITHOUT REMOVABLE COPY)

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
Fax : (956) 565-9018

900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

ALAMO RD
SUMMARY OF SMALL SIGNS
TO BE REMOVED

SHEET 1 OF 1

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN:		6	TEXAS					93
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
CK DW:		PHR	HIDALGO	0921	02	311		ALAMO
TR:								
CK TR:								

9/20/2017 K:\Counties\HID\FM 907 (North of FM1925)\07 TRAFFIC\03 Signing\FM907_SignsRemoval.dgn

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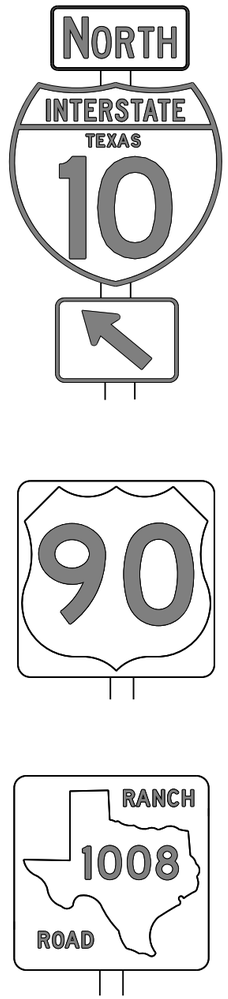
REQUIREMENTS FOR INDEPENDENT MOUNTED ROUTE SIGNS

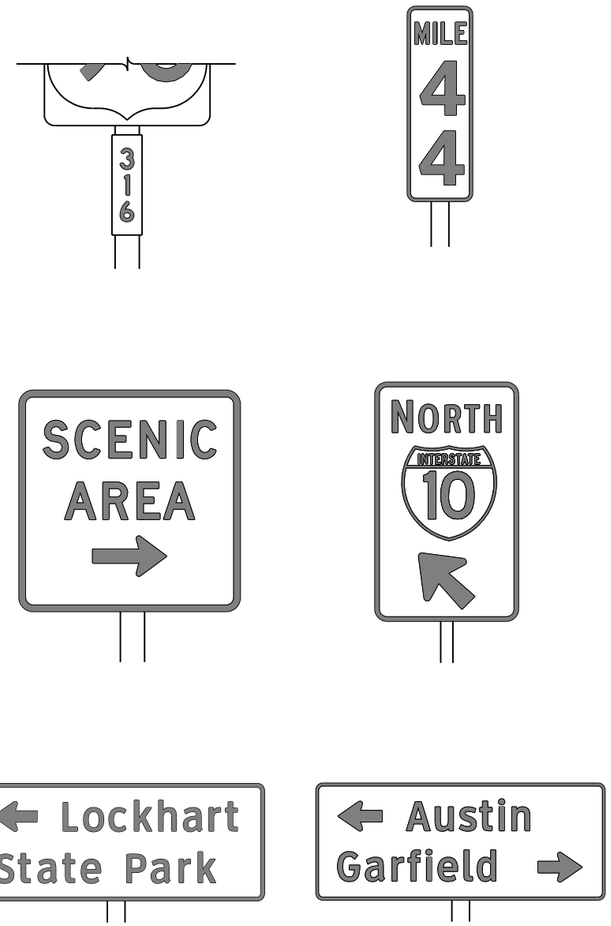
SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	ALL OTHERS	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE A SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND & BORDERS	ALL OTHERS	TYPE B or C SHEETING



TYPICAL EXAMPLES

REQUIREMENTS FOR BLUE, BROWN & GREEN D AND I SERIES GUIDE SIGNS

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	ALL	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE D SHEETING
LEGEND, SYMBOLS & BORDERS	ALL OTHERS	TYPE B OR C SHEETING



TYPICAL EXAMPLES

GENERAL NOTES

1. Signs to be furnished shall be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).

2. White legend shall use the Clearview Alphabet. The following Clearview fonts shall be used to replace the existing white Federal Highway Administration (FHWA) Standard Highway Alphabets, when not specified in the SHSD, or in the plans.

B	CV-1W
C	CV-2W
D	CV-3W
E	CV-4W
Emod	CV-5WR
F	CV-6W

3. Route sign legend (ie. IH, US, SH and FM shields) shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets B, C, D, E, Emod or F).

4. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legend shall provide a balanced appearance when spacing is not shown.

5. Independent mounted route sign with white or colored legend and borders shall be applied by screening process with transparent color ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof. White legend, symbols and borders on all other signs shall be cut-out white sheeting applied to colored background sheeting.

6. Information regarding borders and radii for signs is found in the "Standard Highway Sign Designs for Texas". Dimensions shown and described for borders and corner radii on parent sign are nominal. Borders may vary in width as much as 1/2 inch. Corner radii above 3 inches may vary in width as much as 1 inch. Borders and corner radii within a parent sign must be of matching widths. The sign area outside the corner radius should be trimmed or rounded.

7. Sign substrate shall be any material that meets the Departmental Material Specification requirements of DMS-7110 or approved alternative.

8. Mounting details of roadside signs are shown in the "SMD series" Standard Plan Sheets.

DEPARTMENTAL MATERIAL SPECIFICATIONS	
ALUMINUM SIGN BLANKS	DMS-7110
SIGN FACE MATERIALS	DMS-8300

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

http://www.txdot.gov/

Texas Department of Transportation

Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

TSR(3)-13

FILE: tsr3-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	PHR	HIDALGO		94

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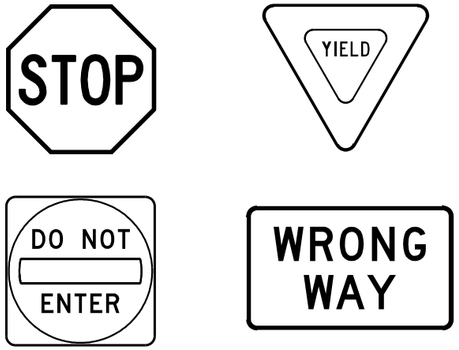
FILE: K:\Countfiles\HIDVFM 907 (North of FM1925)\10 Standards\08 Signing\tsr4-13.dgn

REQUIREMENTS FOR RED BACKGROUND REGULATORY SIGNS

(STOP, YIELD, DO NOT ENTER AND WRONG WAY SIGNS)



REQUIREMENTS FOR FOUR SPECIFIC SIGNS ONLY

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	RED	TYPE B OR C SHEETING
BACKGROUND	WHITE	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE B OR C SHEETING
LEGEND	RED	TYPE B OR C SHEETING

REQUIREMENTS FOR WHITE BACKGROUND REGULATORY SIGNS

(EXCLUDING STOP, YIELD, DO NOT ENTER AND WRONG WAY SIGNS)

TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	ALL OTHERS	TYPE B OR C SHEETING
LEGEND,BORDERS AND SYMBOLS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND,BORDERS AND SYMBOLS	ALL OTHER	TYPE B OR C SHEETING

GENERAL NOTES

1. Signs to be furnished shall be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. Sign legend shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets (B, C, D, E, Emod or F).
3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legend shall provide a balanced appearance when spacing is not shown.
4. Black legend and borders shall be applied by screening process or cut-out acrylic non-reflective black film to background sheeting, or combination thereof.
5. White legend and borders shall be applied by screening process with transparent colored ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof.
6. Colored legend shall be applied by screening process with transparent colored ink, transparent colored overlay film or colored sheeting to background sheeting, or combination thereof.
7. Sign substrate shall be any material that meets the Departmental Material Specification requirements of DMS-7110 or approved alternative.
8. Mounting details for roadside mounted signs are shown in the "SMD series" Standard Plan Sheets.

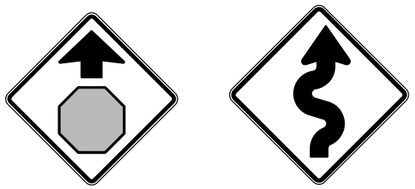
ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

DEPARTMENTAL MATERIAL SPECIFICATIONS	
ALUMINUM SIGN BLANKS	DMS-7110
SIGN FACE MATERIALS	DMS-8300

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

http://www.txdot.gov/

REQUIREMENTS FOR WARNING SIGNS



TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	FLOURESCENT YELLOW	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND & SYMBOLS	ALL OTHER	TYPE B OR C SHEETING

REQUIREMENTS FOR SCHOOL SIGNS

TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	FLOURESCENT YELLOW GREEN	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND,BORDERS AND SYMBOLS	BLACK	ACRYLIC NON-REFLECTIVE FILM
SYMBOLS	RED	TYPE B OR C SHEETING

Texas Department of Transportation

Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

TSR(4)-13

FILE: tsr4-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
12-03 7-13 9-08	DIST	COUNTY		SHEET NO.
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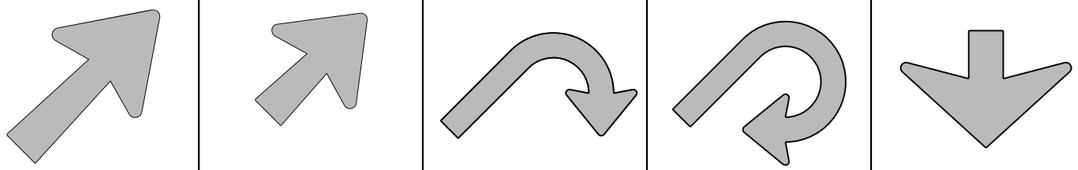
ARROW DETAILS

for Large Ground-Mounted and Overhead Guide Signs



TYPE	LETTER SIZE	USE
A-1	10.67" U/L and 10" Caps	Single Lane Exits
A-2	13.33" U/L and 12" Caps	
A-3	16" & 20" U/L	
B-1	10.67" U/L and 10" Caps	Multiple Lane Exits
B-2	13.33" U/L and 12" Caps	
B-3	16" & 20" U/L	

CODE	USED ON SIGN NO.
E-3	E5-1aT
E-4	E5-1bT

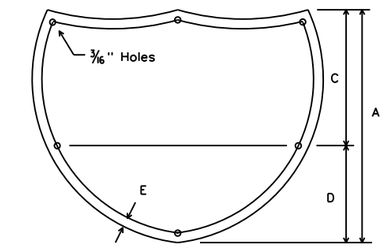
NOTE

Arrow dimensions are shown in the "Standard Highway Sign Designs for Texas" manual.

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

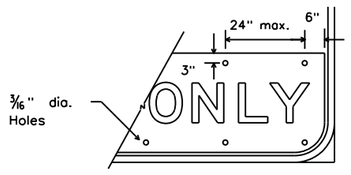
http://www.txdot.gov/

SIGN BLANK PUNCHING DETAILS FOR ATTACHMENTS WHEN SPECIFIED TO BE TYPE A ALUMINUM SIGNS (FOR MOUNTING TO GUIDE SIGN FACE)

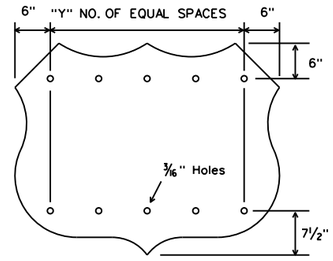


INTERSTATE ROUTE MARKERS

A	C	D	E
36	21	15	1 1/2
48	28	20	1 3/4

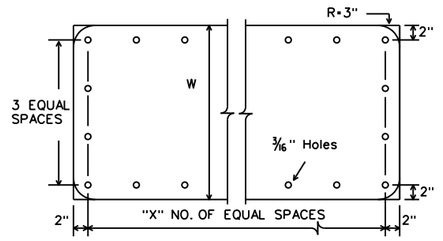


EXIT ONLY PANEL



U.S. ROUTE MARKERS

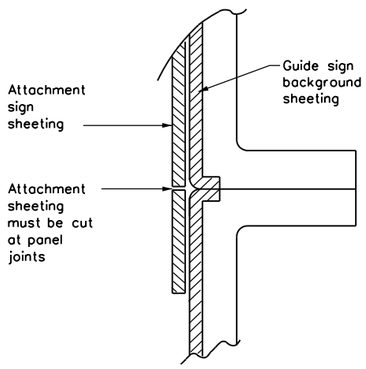
Sign Size	"Y"
24x24	2
30x24	3
36x36	3
45x36	4
48x48	4
60x48	5



STATE ROUTE MARKERS

No. of Digits	W	X
4	24	4
4	36	5
4	48	6
3	24	3
3	36	4
3	48	5

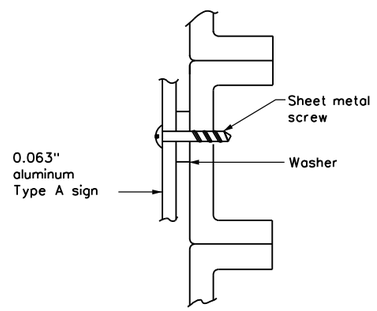
MOUNTING DETAILS OF ATTACHMENTS TO GUIDE SIGN FACE ("EXIT ONLY" AND "LEFT EXIT" PANELS, ROUTE MARKERS AND OTHER ATTACHMENTS)



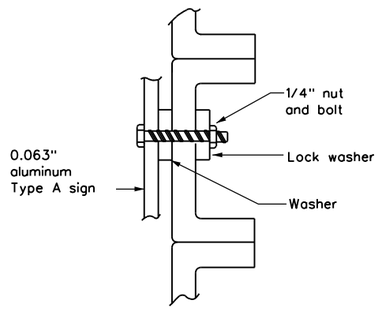
DIRECT APPLIED ATTACHMENT

NOTE:

1. Sheeting for legend, symbols, and borders must be cut at panel joints.
2. Direct applied attachment signs will be subsidiary to "Aluminum Signs" or "Fiberglass Signs".



SCREW ATTACHMENT



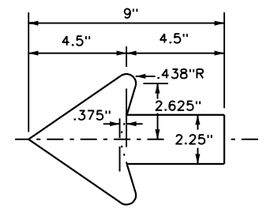
NUT/BOLT ATTACHMENT

NOTE:

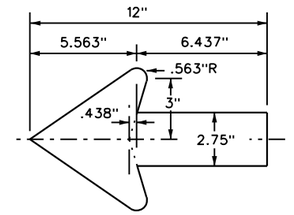
Furnish Type A aluminum sign attachments only when specified in the plans. These signs will be paid for under "Aluminum Signs".

ARROW DETAILS

for Destination Signs (Type D)



Standard arrow to be used with 6 inch letters.



Standard arrow to be used with 8 inch letters.

Texas Department of Transportation

Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

TSR(5)-13

FILE: tsr5-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	PHR	HIDALGO		96

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SIGN SUPPORT DESCRIPTIVE CODES

(Descriptive Codes correspond to project estimate and quantities sheets)

SM RD SGN ASSM TY XXXXX(X)XX(X-XXXX)

Post Type

FRP = Fiberglass Reinforced Plastic Pipe (see SMD(FRP))
TWT = Thin-Walled Tubing (see SMD(TWT))
10BWG = 10 BWG Tubing (see SMD(SLIP-1) to (SLIP-3))
S80 = Schedule 80 Pipe (see SMD(SLIP-1) to (SLIP-3))

Number of Posts (1 or 2)

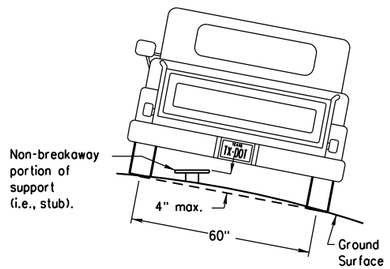
Anchor Type

UA = Universal Anchor - Concreted (see SMD(FRP) and (TWT))
UB = Universal Anchor - Bolted down (see SMD(FRP) and (TWT))
WS = Wedge Anchor Steel - (see SMD(TWT))
WP = Wedge Anchor Plastic (see SMD(TWT))
SA = Slipbase - Concreted (see SMD(SLIP-1) to (SLIP-3))
SB = Slipbase - Bolted Down (see SMD(SLIP-1) to (SLIP-3))

Sign Mounting Designation

P = Prefab. "Plain" (see SMD(SLIP-1) to (SLIP-3), (TWT), (FRP))
T = Prefab. "T" (see SMD(SLIP-1) to (SLIP-3), (TWT))
U = Prefab. "U" (see SMD(SLIP-1) to (SLIP-3))
IF REQUIRED
1EXT or 2EXT = Number of Extensions (see SMD(SLIP-1) to (SLIP-3), (TWT))
BM = Extruded Wind Beam (see SMD(SLIP-1) to (SLIP-3))
WC = 1.12 */ft Wing Channel (see SMD(SLIP-1) to (SLIP-3))
EXAL = Extruded Aluminum Sign Panels (see SMD(SLIP-3))

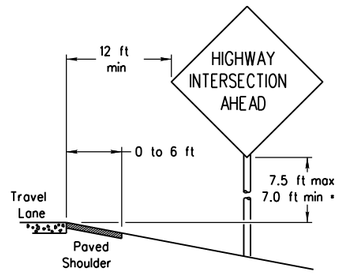
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



To avoid vehicle undercarriage snagging, any substantial remains of a breakaway support, when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel paths).

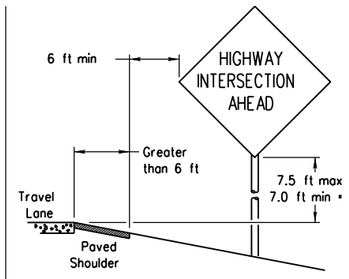
SIGN LOCATION

PAVED SHOULDERS



LESS THAN 6 FT. WIDE

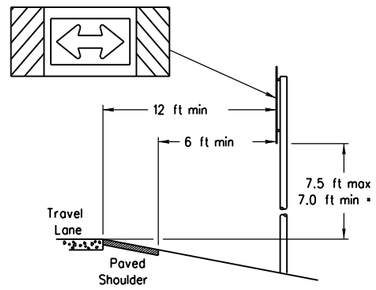
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



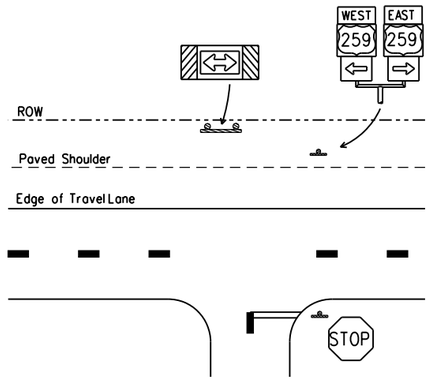
GREATER THAN 6 FT. WIDE

When the shoulder is greater than 6 ft in width, the sign must be placed at least 6 ft. from the edge of the shoulder.

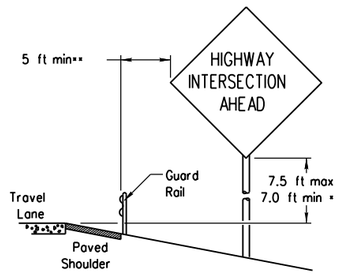
T-INTERSECTION



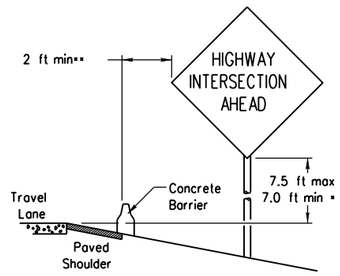
When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



BEHIND BARRIER



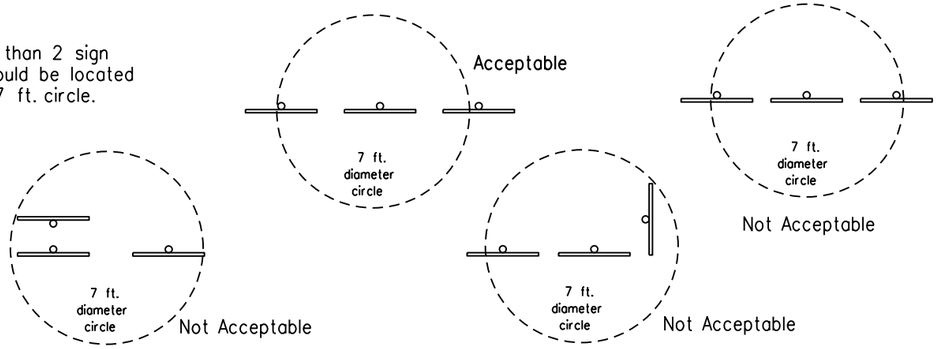
BEHIND GUARDRAIL



BEHIND CONCRETE BARRIER

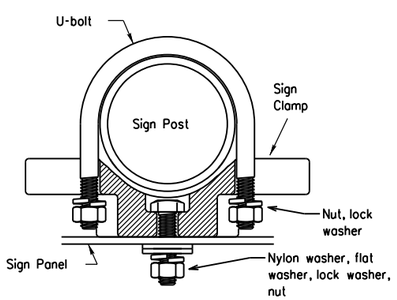
**Sign clearance based on distance required for proper guard rail or concrete barrier performance.

No more than 2 sign posts should be located within a 7 ft. circle.



TYPICAL SIGN ATTACHMENT DETAIL

Single Signs

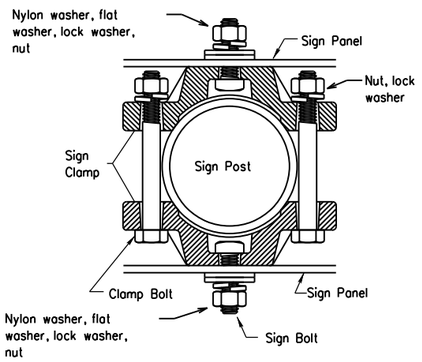


Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

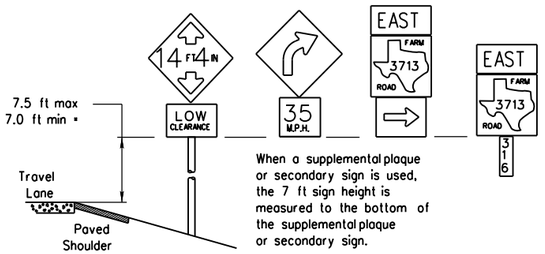
Sign clamps may be either the specific size clamp or the universal clamp.

Back-to-Back Signs



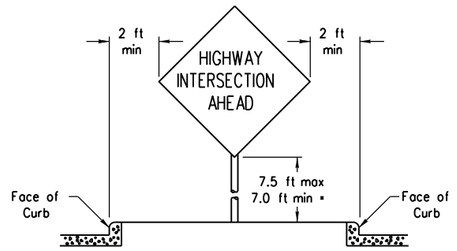
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



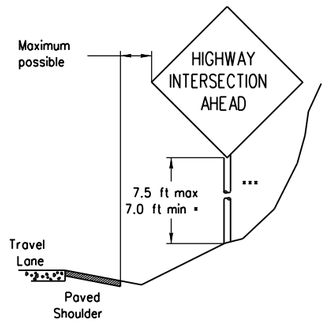
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

CURB & GUTTER OR RAISED ISLAND



RESTRICTED RIGHT-OF-WAY

(When 6 ft min. is not possible.)



Right-of-way restrictions may be created by rocks, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

*** Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme slope.

* Signs shall be mounted using the following condition that results in the greatest sign elevation:

(1) a minimum of 7 to a maximum of 7.5 feet above the edge of the travel lane or

(2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

The maximum values may be increased when directed by the Engineer.

See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.

The website address is:
http://www.txdot.gov/publications/traffic.htm

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

SMD(GEN)-08

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	DIST	COUNTY		SHEET NO.
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DATE: 11/17/2017 11:16:51 AM
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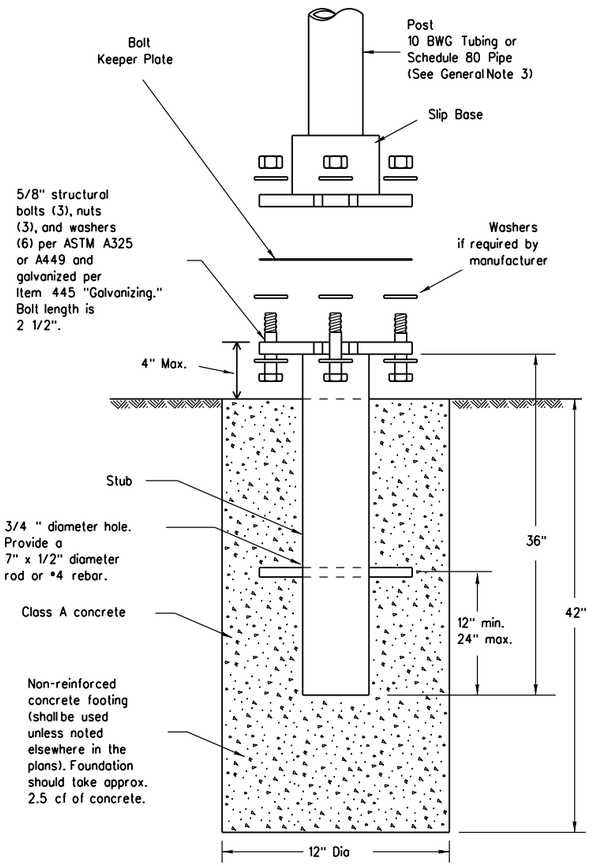
TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

NOTE

There are various devices approved
for the Triangular Slipbase System.
Please reference the Material Producer
List for approved slip base systems.
http://www.txdot.gov/business/producer list.htm_
The devices shall be installed per
manufacturers' recommendations.
Installation procedures shall be
provided to the Engineer by Contractor.

GENERAL NOTES:

1. Slip base shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
2. Material used as post with this system shall conform to the following specifications:
   - 10 BWG Tubing (2.875" outside diameter)
     - 0.134" nominal wall thickness
     - Seamless or electric-resistance welded steel tubing or pipe
     - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
     - Other steels may be used if they meet the following:
       - 55,000 PSI minimum yield strength
       - 70,000 PSI minimum tensile strength
       - 20% minimum elongation in 2"
     - Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
     - Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
     - Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
   - Schedule 80 Pipe (2.875" outside diameter)
     - 0.276" nominal wall thickness
     - Steel tubing per ASTM A500 Gr C
     - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
       - 46,000 PSI minimum yield strength
       - 62,000 PSI minimum tensile strength
       - 21% minimum elongation in 2"
     - Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
     - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
     - Galvanization per ASTM A123
3. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: http://www.txdot.gov/publications/traffic.htm
4. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

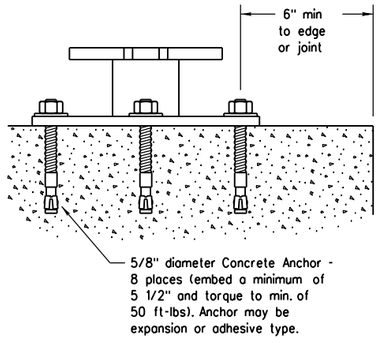
Foundation

1. Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
3. Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
4. Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
5. The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support

1. Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the travelway. The cut shall be plumb and straight.
2. Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.

CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08

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REVISIONS
9-08

CONT	SECT	JOB	HIGHWAY
0921	02	311	ALAMO

DIST	COUNTY	SHEET NO.
PHR	HIDALGO	98

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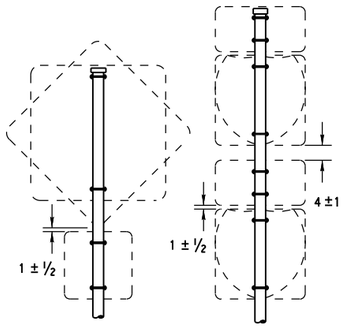
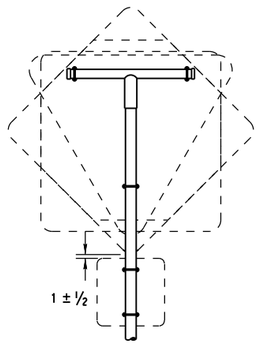


SM RD SGN ASSM TY XXXXX(1)XX(P)



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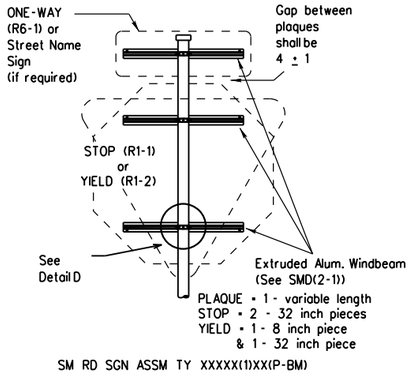
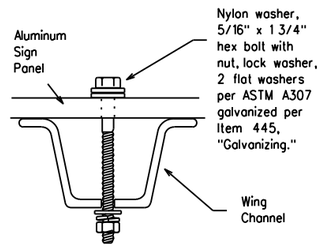
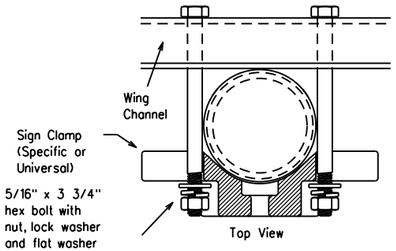


SM RD SGN ASSM TY XXXXX(1)XX(P-BM)



Detail A

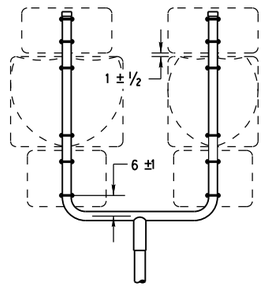


Detail B

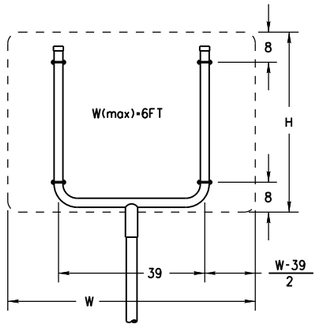
GENERAL NOTES:

1. | SIGN SUPPORT | # OF POSTS | MAX. SIGN AREA |
|---|---|---|
| 10 BWG | 1 | 16 SF |
| 10 BWG | 2 | 32 SF |
| Sch 80 | 1 | 32 SF |
| Sch 80 | 2 | 64 SF |

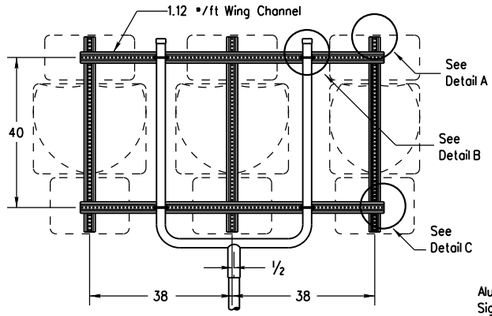
2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
11. Additional sign clamp required on the "T-bracket" post for 24 inch height signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.
13. Sign blanks shall be the sizes and shapes shown on the plans.



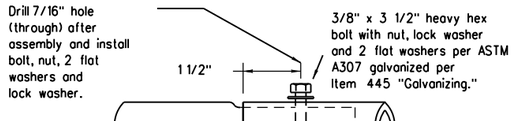
SM RD SGN ASSM TY XXXXX(1)XX(U)



SM RD SGN ASSM TY XXXXX(1)XX(U)

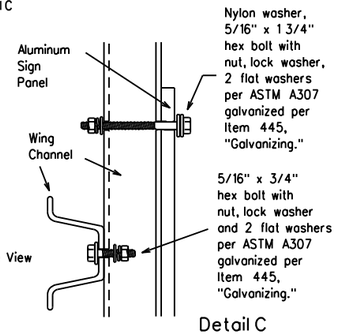


SM RD SGN ASSM TY XXXXX(1)XX(U-WC)
(See Note 11)

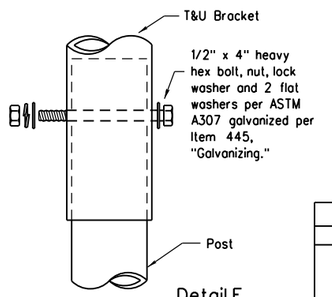


Detail F

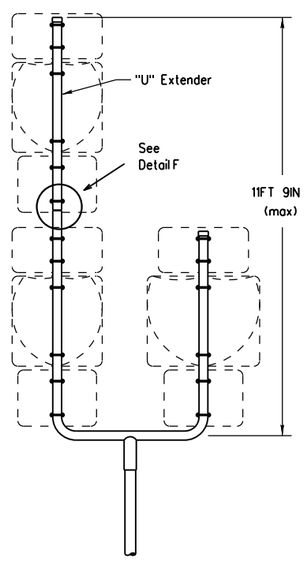
Splices shall only be allowed behind the sign substrate.



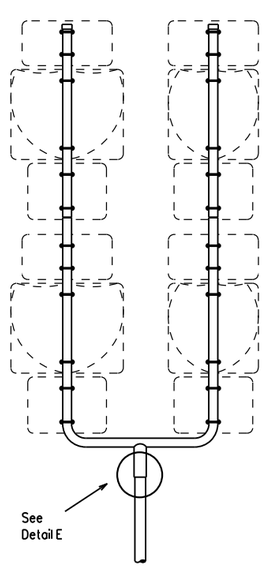
Detail C



Detail E



SM RD SGN ASSM TY S80(1)XX(U-1EXT)



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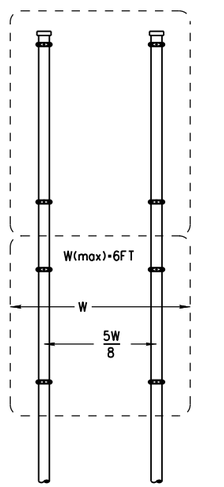
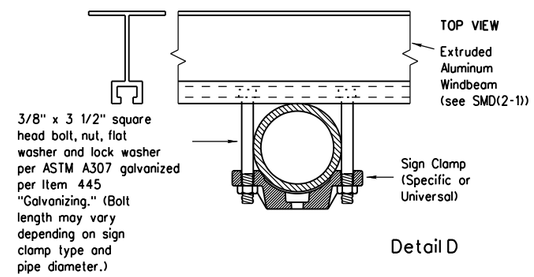
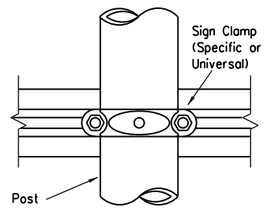


SM RD SGN ASSYM TY XXXXX(2)XX(P)

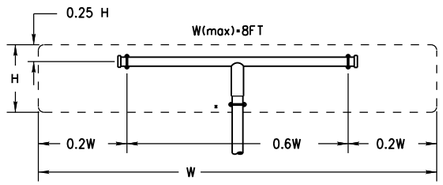
SIDE VIEW



Detail D



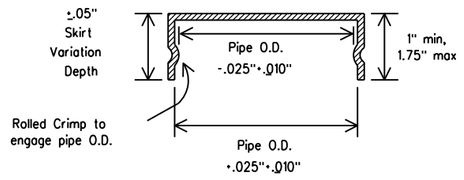
REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)



All dimensions are in english unless detailed otherwise.

SM RD SGN ASSM TY XXXXX(1)XX(T)
(* - See Note 12)

FRICTION CAP DETAIL



Friction caps may be manufactured from hot rolled or cold rolled steel sheets. The minimum sheet metal thickness shall be 24 gauge for all cap sizes.

The rim edges shall be reasonably straight and smooth. Caps shall be sized and formed in such a manner as to produce a drive-on friction fit and have no tendency to rock when seated on the pipe. The depth shall be sufficient to give positive protection against entrance of rainwater. They shall be free of sharp creases or indentations and show no evidence of metal fracture.

Caps shall have an electrodeposited coating of zinc in accordance with the requirements of ASTM B633 Class FE/ZN 8.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-2)-08

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9-08 REVISIONS

CONT	SECT	JOB	HIGHWAY
0921	02	311	ALAMO
DIST	COUNTY		SHEET NO.
PHR	HIDALGO		99

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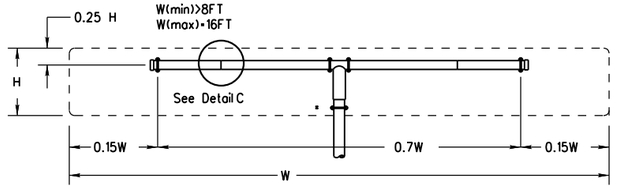
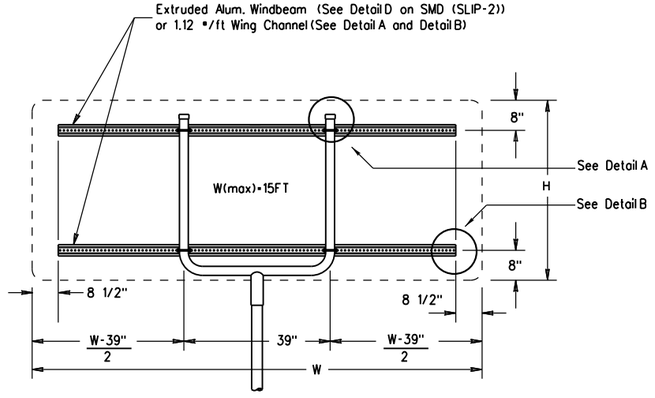


SM RD SGN ASSM TY XXXXX(1)XX(T-2EXT)
(* - See Note 12)



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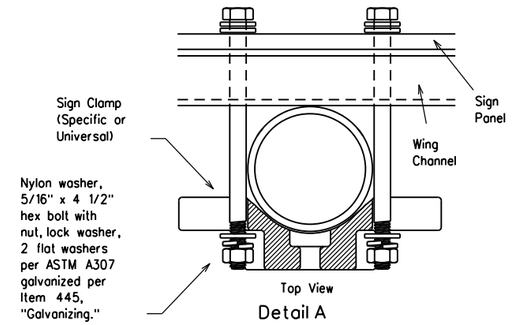
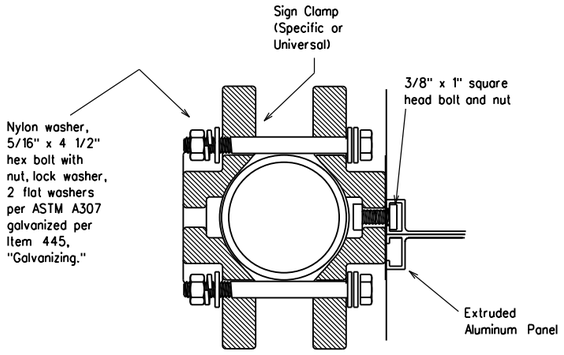
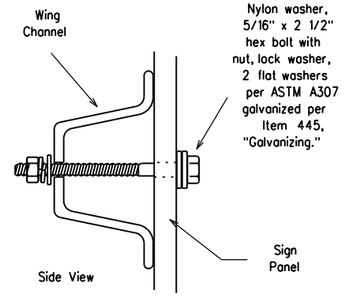


Top View

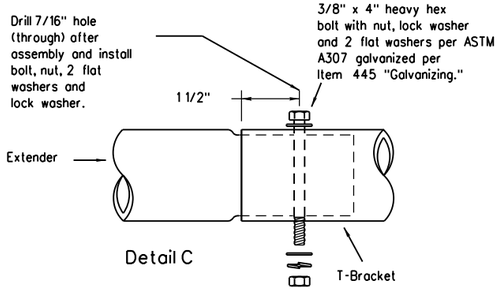
Detail A



Detail D
EXTRUDED ALUMINUM SIGN WITH T BRACKET

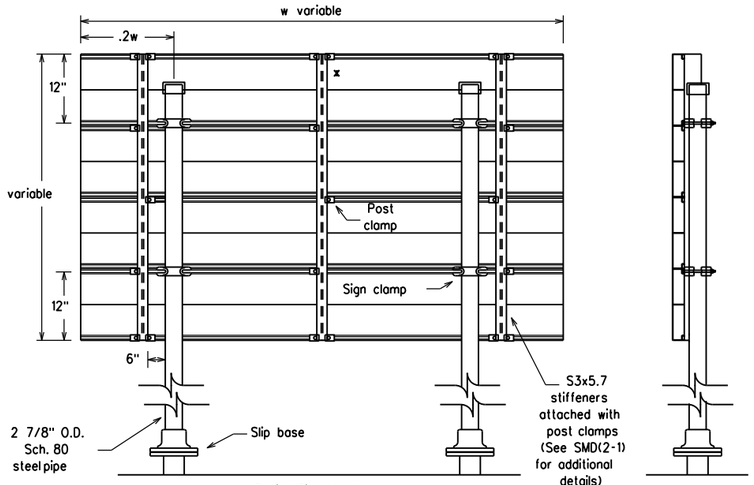


Detail B



Detail C

Splices shall only be allowed behind the sign substrate.

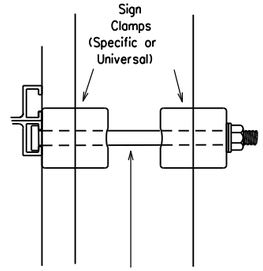


Typical Sign Mount

SM RD SGN ASSM TY S80(2)XX(P-EXAL)

x Additional stiffener placed at approximate center of signs when sign width is greater than 10'.

See Detail E
for clamp installation



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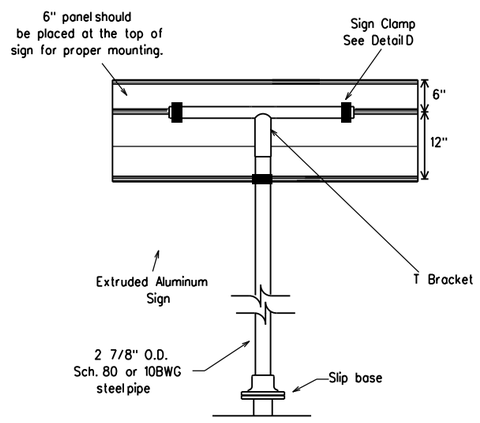
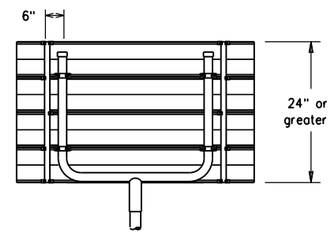


Extruded Aluminum Sign
With T Bracket



Use Extruded Alum. Windbeam as stiffeners
See SMD (2-1) for additional details

See Detail E
for clamp installation

GENERAL NOTES:

SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF

2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Sign blanks shall be the sizes and shapes shown on the plans.
11. Additional sign clamp required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.

REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-3)-08

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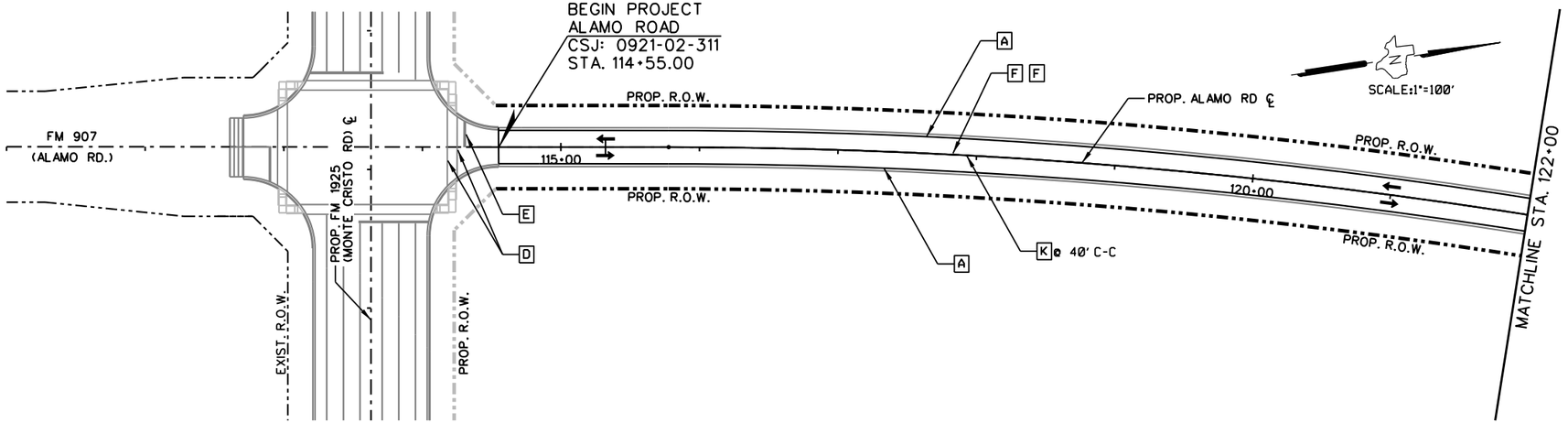
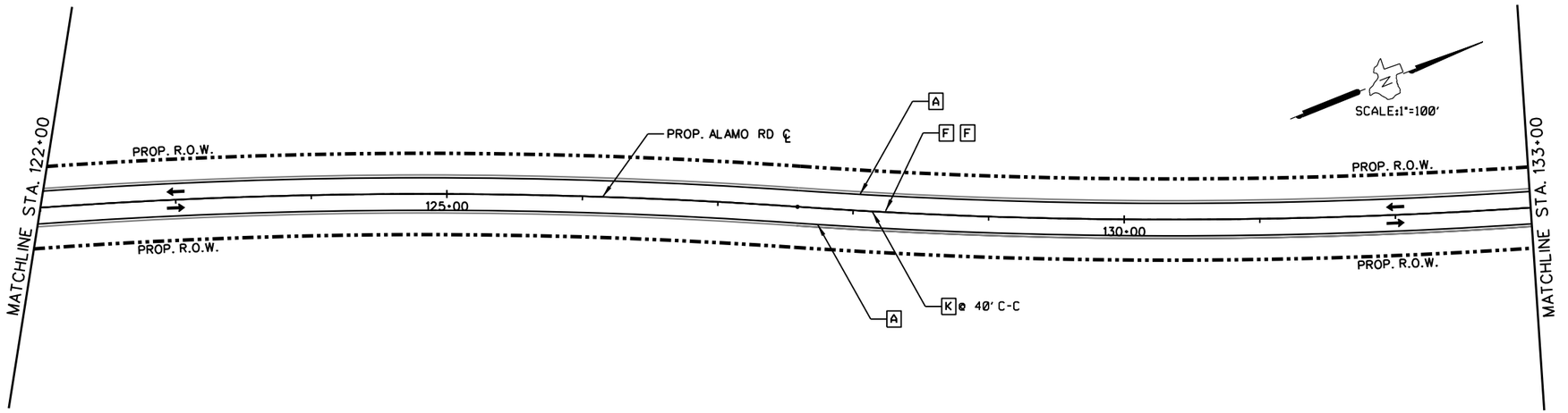
REVISIONS
9-08

CONT	SECT	JOB	HIGHWAY
0921	02	311	ALAMO
DIST	COUNTY		SHEET NO.
PHR	HIDALGO		100

SHEET SUMMARY

STATION LIMITS	REFLECTORIZED PAVEMENT MARKINGS ITEM 666							PREFAB PAV MRKS ITEM 668		RAISED PAV MRKS ITEM 672	
	TY I (W) 4" (BRK) (100 MIL) (LF)	TY I (W) 4" (SLD) (100 MIL) (LF)	TY I (W) 8" (SLD) (100 MIL) (LF)	TY I (W) 12" (SLD) (100 MIL) (LF)	TY I (W) 24" (SLD) (100 MIL) (LF)	TY I (Y) 4" (BRK) (100 MIL) (LF)	TY I (Y) 4" (SLD) (100 MIL) (LF)	TY B (W) (ARROW) (EA)	TY B (W) (WORD) (EA)	REFL PAV MRK TY I-C (EA)	REFL PAV MRK TY II-A-A (EA)
114+55 - 122+00		1,490		100	24		1,538				19
122+00 - 133+00		2,200					2,200				28
SHEET TOTAL		3,690		100	24		3,738				47





PAVEMENT MARKINGS LEGEND:

TYPE I -THERMOPLASTIC W/ RETROREFLECTIVITY REQUIREMENTS (ITEM 666)

- A 4" WHITE SOLID
- B 4" WHITE BROKEN
- F 4" YELLOW SOLID
- G 4" YELLOW BROKEN

TYPE I -THERMOPLASTIC (ITEM 666)

- C 8" WHITE SOLID
- D 12" WHITE SOLID
- E 24" WHITE SOLID
- F1 12" YELLOW SOLID

PREFAB. PAVEMENT MARKERS TYPE B (ITEM 668)

- H SINGLE ARROW WHITE
- I WORD "ONLY" WHITE

REFLECTIVE PAVEMENT MARKERS (ITEM 672)

- J TYPE I-C REFLECTIVE CL B
- K TYPE II-AA REFLECTIVE CL B

← TRAFFIC FLOW

NOTES:

1. THE PAVEMENT SURFACE SHALL BE FREE OF DELETERIOUS MATERIAL BEFORE APPLICATION OF PERMANENT STRIPING AND PAVEMENT MARKERS. IF THE SURFACE NEEDS TO BE CLEANED, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL PREPARE SURFACE IN ACCORDANCE WITH ITEM 678, "PAVEMENT SURFACE PREPARATION FOR MARKINGS", EXCEPT FOR "MEASUREMENT" AND "PAYMENT". THE PREPARATION OF PAVEMENT SURFACE SHALL BE SUBSIDIARY TO ITEM 666, 668 AND 672.
2. ALL PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED
PROFESSIONAL ENGINEER
08/16/2017

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
Fax : (956) 565-9018

900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

ALAMO ROAD PAVEMENT MARKINGS STA. 114+55 TO STA. 133+00

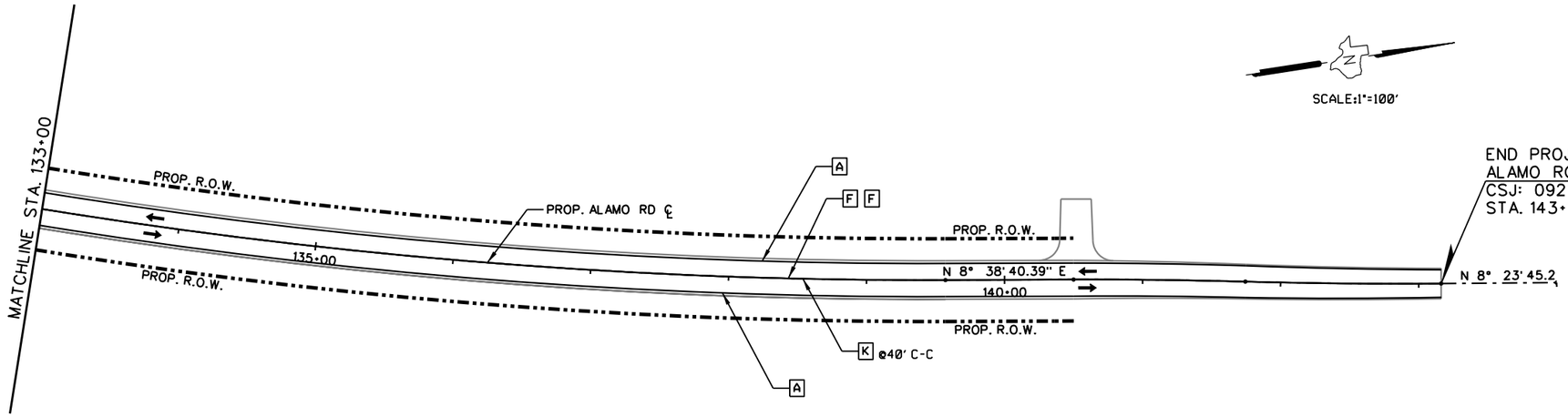
SCALE: 1"=100' SHEET 1 OF 2

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:	FED. RD. DIV. NO.	STATE	PROJECT NO.	SHEET NO.
						6	TEXAS		101
						STATE DIST. NO	COUNTY	CONTROL NO. / SECTION NO. / JOB NO.	HIGHWAY NO.
						PHR	HIDALGO	0921 / 02 / 311	ALAMO

8/16/2017 K:\Counties\HID\FM 907 (North of FM1925)\07 TRAFFIC\04 Pav Mrks\FM 907_PM01.dgn

SHEET SUMMARY

STATION LIMITS	REFLECTORIZED PAVEMENT MARKINGS ITEM 666							PREFAB PAV MRKS ITEM 668		RAISED PAV MRKS ITEM 672	
	TY I (W) 4" (BRK) (100 MIL) (LF)	TY I (W) 4" (SLD) (100 MIL) (LF)	TY I (W) 8" (SLD) (100 MIL) (LF)	TY I (W) 12" (SLD) (100 MIL) (LF)	TY I (W) 24" (SLD) (100 MIL) (LF)	TY I (Y) 4" (BRK) (100 MIL) (LF)	TY I (Y) 4" (SLD) (100 MIL) (LF)	TY B (W) (ARROW) (EA)	TY B (W) (WORD) (EA)	REFL PAV MRK TY I-C (EA)	REFL PAV MRK TY II-A-A (EA)
133+00 -- 143+16.33		2,033					2,033				26
.											
SHEET TOTAL		2,033					2,033				26



SCALE:1"=100'

PAVEMENT MARKINGS LEGEND:

TYPE I -THERMOPLASTIC W/ RETROREFLECTIVITY REQUIREMENTS (ITEM 666)

- A 4" WHITE SOLID
- B 4" WHITE BROKEN
- F 4" YELLOW SOLID
- G 4" YELLOW BROKEN

TYPE I -THERMOPLASTIC (ITEM 666)

- C 8" WHITE SOLID
- D 12" WHITE SOLID
- E 24" WHITE SOLID
- F1 12" YELLOW SOLID

PREFAB. PAVEMENT MARKERS TYPE B (ITEM 668)

- H SINGLE ARROW WHITE
- I WORD "ONLY" WHITE

REFLECTIVE PAVEMENT MARKERS (ITEM 672)

- J TYPE I-C REFLECTIVE CL B
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NOTES:

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ALAMO ROAD PAVEMENT MARKINGS STA.133+00 TO STA.143+16.33

SCALE: 1"=100' SHEET 2 OF 2

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN:		6	TEXAS				102
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:		PHR	HIDALGO	0921	02	311	ALAMO
TR:							
CK TR:							

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DATE: 11/17/2017 11:20:44 AM
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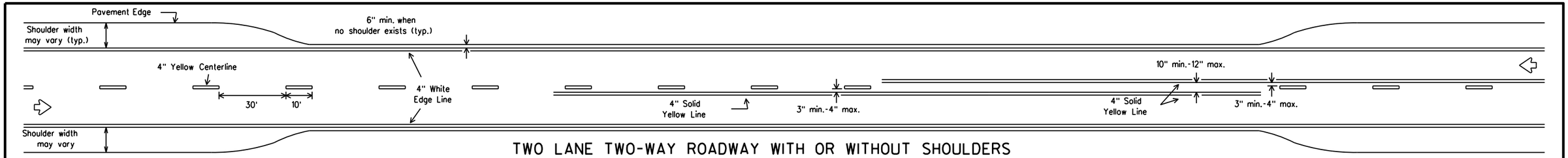
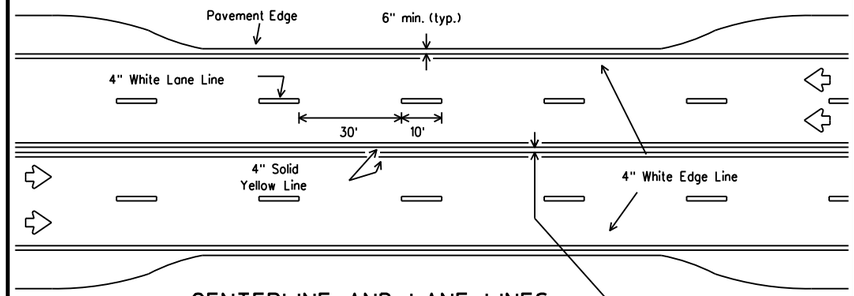
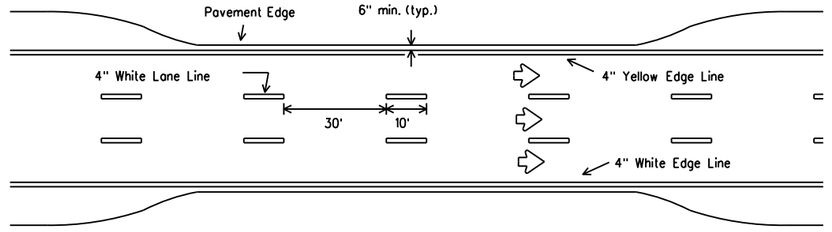


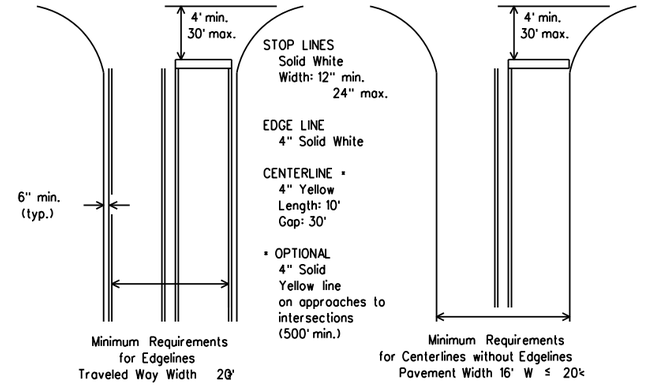
TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

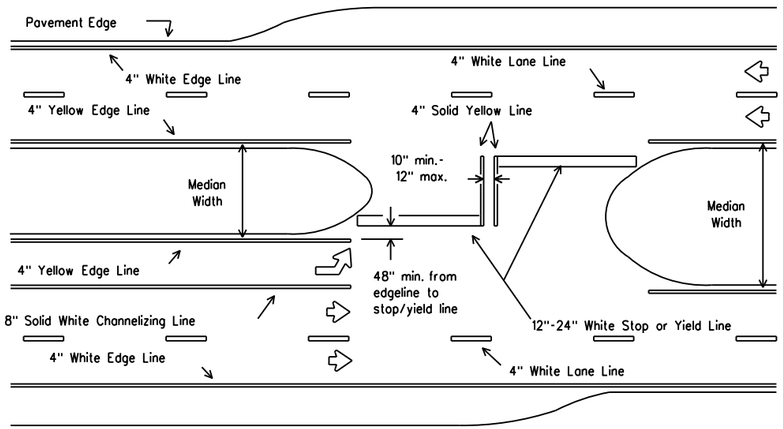


EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



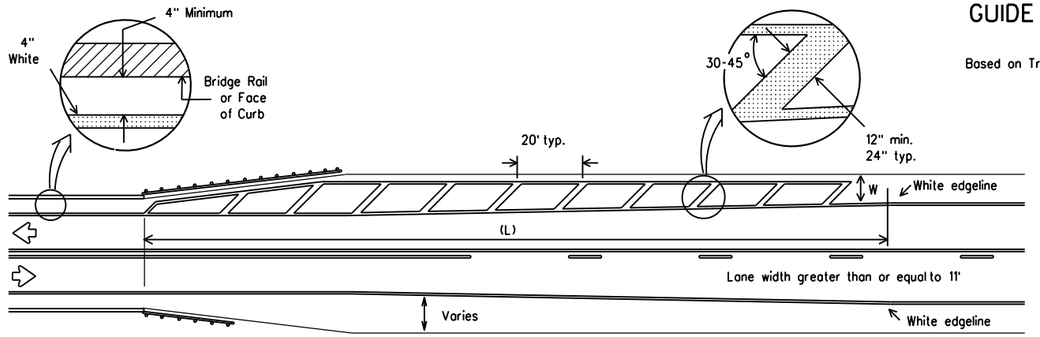
GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Highways



All medians shall be field measured to determine the location of necessary striping. Stop/Yield bars and centerlines shall be placed when the median width is greater than 30 ft. The median width is defined as the area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median excludes turn lanes. The median width might be different between intersections, interchanges and of opposite approaches of the same intersection. The narrow median width will be the controlling width to determine if markings are required.

FOUR LANE DIVIDED ROADWAY INTERSECTIONS



NOTES:

1. No-passing zone on bridge approach is optional but if used, it shall be a minimum 500 feet long.
2. For crosshatching length (L) see Table 1.
3. The width of the offset (W) and the required crosshatching width is the full shoulder width in advance of the bridge.
4. The crosshatching is not required if delineators or barrier reflectors are used along the structure.
5. For guard fence details, refer elsewhere in the plans.

ROADWAYS WITH REDUCED SHOULDER WIDTHS ACROSS BRIDGE OR CULVERT

TABLE 1 - TYPICAL LENGTH (L)

Posted Speed x	Formula
≤ 40	$L = \frac{WS^2}{60}$
≥ 45	L = WS

x 85th Percentile Speed may be used on roads where traffic speeds normally exceed the posted speed limit. Crosshatching length should be rounded up to nearest 5 foot increment.

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

EXAMPLES:

An 8 foot shoulder in advance of a bridge reduces to 4 feet on a 70 MPH roadway. The length of the crosshatching should be:

L = 8 x 70 = 560 ft.

A 4 foot shoulder in advance of a bridge reduces to 2 feet on a 40 MPH roadway. The length of the crosshatching should be:

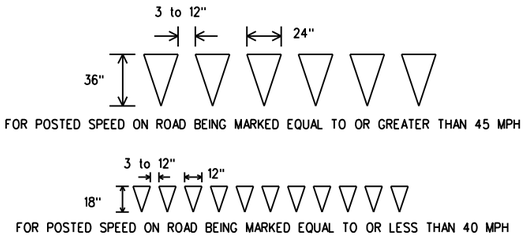
L = 4(40) ÷ 60 = 106.67 ft. rounded to 110 ft.

GENERAL NOTES

1. Edgeline striping shall be as shown in the plans or as directed by the Engineer. The edgeline should typically be placed a minimum of 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edgelines are not required in curb and gutter sections of roadways.
2. The traveled way includes only that portion of the roadway used for vehicular travel and not the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the inside of edgeline to inside of edgeline of a two lane roadway.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



YIELD LINES

Texas Department of Transportation
Traffic Operations Division

TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-12

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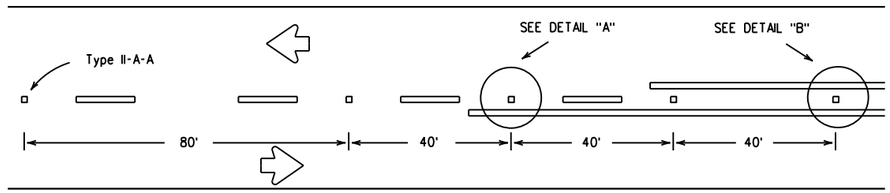
DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

REVISIONS
8-95 2-12
5-00
8-00
3-03

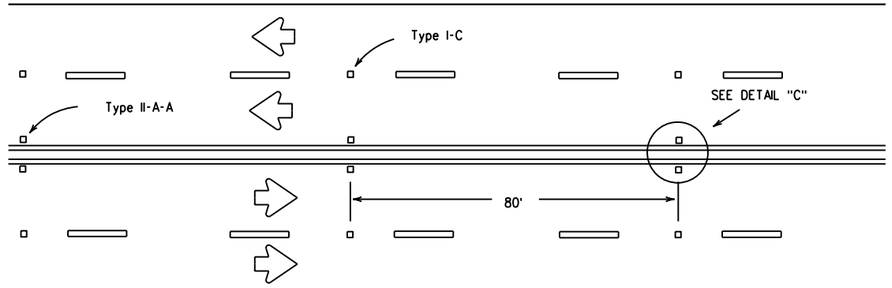
CONT	SECT	JOB	HIGHWAY
0921	02	311	ALAMO
DIST	COUNTY		SHEET NO.
PHR	HIDALGO		103

22A

REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

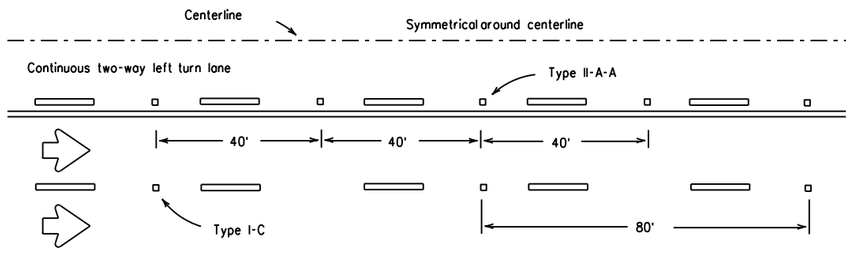


CENTERLINE FOR ALL TWO LANE ROADWAYS

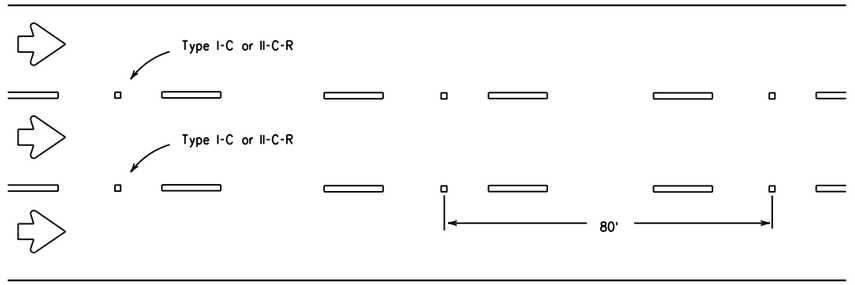


CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY HIGHWAYS

Raised pavement marker Type I-C, clear face toward normal traffic, shall be placed on 80-foot centers.

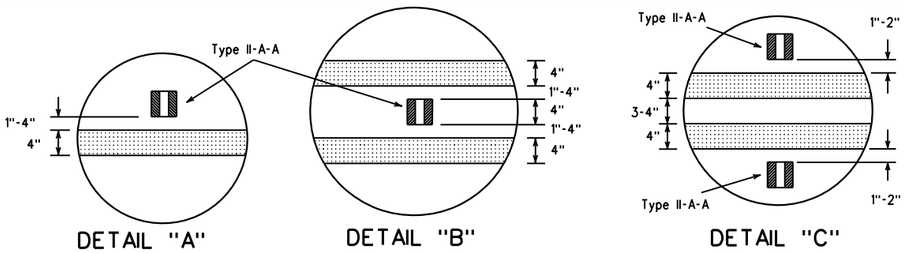


CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE

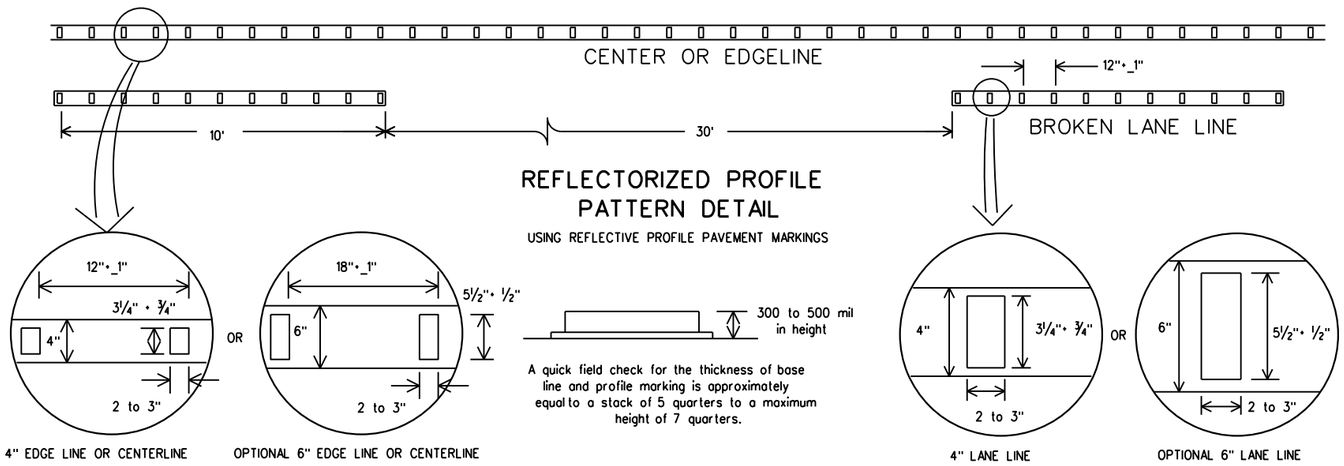


LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.



DETAIL "A" DETAIL "B" DETAIL "C"



REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

A quick field check for the thickness of base line and profile marking is approximately equal to a stack of 5 quarters to a maximum height of 7 quarters.

NOTE:

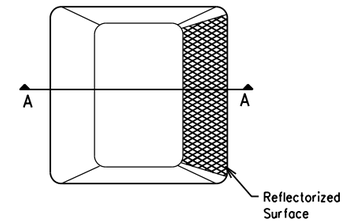
Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

GENERAL NOTES

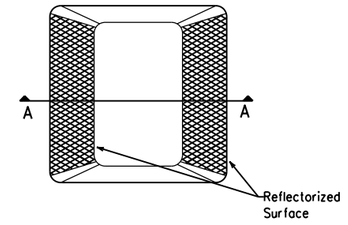
1. All raised pavement markers placed in broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

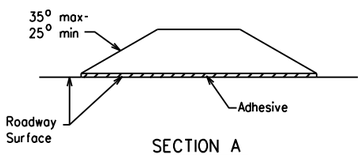
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)



Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS

Texas Department of Transportation
Traffic Operations Division

POSITION GUIDANCE USING RAISED MARKERS
REFLECTORIZED PROFILE MARKINGS

PM(2)-12

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REVISIONS		DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
4-92	2-10	CONT	SECT	JOB	HIGHWAY
5-00	2-12	0921	02	311	ALAMO
8-00		DIST	COUNTY		SHEET NO.
2-08		PHR	HIDALGO		104

22B

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FILE: K:\Counties\HIDALGO\FM 907 (North of FM1925)\10 Standards\09 Pavement Markings\PM2-12.DGN

SITE DESCRIPTION

PROJECT LIMITS: ALAMO RD: FROM FM 1925 TO 0.54 Mi. N. OF FM 1925

PROJECT SITE MAPS:
- Project Location Map: Title Sheet (Sheet 1)
- Drainage Patterns: Drainage Area Maps (Sheets 48 & 56)
- Approx. Slopes Anticipated After Major Gradings and Areas of Soil Distrubance: Typ Sects (Sheets 6)
- Major Controls and Locations of Stabilization Practices: SW3P Site Map Sheets(Sheets 108-109)
- Project Specific Locations: To be specified by Project Field Office and located in the Project SW3P File
- Surface Waters and Discharge Locations: Drainage and Culvert Layout Sheets (Sheets 50-55 & 58)

PROJECT DESCRIPTION: Reconstruct and realign an existing local facility consisting of grading, cement treated subgrade, lime treated flexible base, asph. conc. pav., drainage structures, storm sewer, signing, and striping.

MAJOR SOIL DISTURBING ACTIVITIES: Soil disturbing activities will include preparing the right-of-way; excavation and embankment for the roadway; installation of proposed storm drain system, and inlets; placement of topsoil for establishment of both temporary and final planting and seeding.

Disturbed areas on which construction activity has ceased (temporarily or permanently) shall be stabilized within 14 days unless activities are scheduled to resume and do whithin 21 days. Final seeding should be accomplished on all areas as soon as construction stage is complete.

TOTAL PROJECT AREA: 3.94 Acres

TOTAL AREA TO BE DISTURBED: 3.94 Acres (100%)

WEIGHTED RUNOFF COEFFICIENT:
Before Construction = 0.18
After Construction = 0.30

EXISTING CONDITION OF SOIL & VEGETATIVE: Existing soil conditions are:
Hidalgo Sandy Clay Loam; soil characteristics include very deep, well drained, moderate permeability. Used mostly as livestock grazing and wildlife habitat with a few areas farmed.
Hidalgo Fine Sandy Loam; soil characteristics include deep, well drained, moderate permeability on nearly level to gently sloping uplands. Soil is cleared, cultivated, and irrigated.

NAME OF RECEIVING WATERS:
All runoff drains into H.C.D.D. #1's drainage ditches that drain into the Main Floodwater Channel and ultimatley into the Laguna Madre.
The Laguna Madre is approximately 5 miles south of Port Mansfield (Stream Segment No. 2491)

ENDANGERED SPECIES, DESIGNATED CRITICAL HABITAT AND HISTORICAL PROPERTY:
See Epic For T&E Species. Designated Critical Habitat or Historic Property has been found on this project site.

The documentation satisfying TPDES Construction General Permit eligibility pertaining to the existence or of any protective action taken with regards to endangered species or designated critical habitat or historical property in this project area is contained in the project's Environmental Impact Study and can be viewed under the State Open Records Act at the address shown below:

TEXAS DEPARTMENT OF TRANSPORTATION
PHARR DISTRICT HEADQUARTERS
ATTN: ENVIRONMENTAL COORDINATOR
600 W. EXPRESSWAY 83
PHARR, TX 78577
PHONE: 956-702-6100

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES: (Select T = Temporary or P = Permanent, as applicable)

- T TEMPORARY SEEDING
- ___ MULCHING (Hay or Straw)
- ___ BUFFER ZONES
- ___ PLANTING
- P SEEDING
- ___ SODDING
- ___ OTHER: (Specify Practice)
- ___ PRESERVATION OF NATURAL RESOURCES
- ___ FLEXIBLE CHANNEL LINER
- ___ RIGID CHANNEL LINER
- ___ SOIL RETENTION BLANKET
- ___ COMPOST MANUFACTURED COMPOST
- T BIODEGRADABLE EROSION CONTROL SOCKS

STRUCTURAL PRACTICES: (Select T = Temporary or P = Permanent, as applicable)

- T SILT FENCES
- T BIODEGRADABLE EROSION CONTROL SOCKS
- ___ HAY BALES
- T ROCK FILTER DAMS
- ___ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- P DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- ___ DIVERSION DIKE AND SWALE COMBINATIONS
- ___ PIPE SLOPE DRAINS
- ___ PAVED FLUMES
- ___ ROCK BEDDING AT CONSTRUCTION EXIT
- T TIMBER MATTING AT CONSTRUCTION EXIT
- ___ CHANNEL LINERS
- ___ SEDIMENT TRAPS
- ___ SEDIMENT BASINS
- T STORM INLET SEDIMENT TRAP
- ___ STONE OUTLET STRUCTURES
- ___ CURBS AND GUTTERS
- ___ STORM SEWERS
- ___ VELOCITY CONTROL DEVICES
- ___ OTHER: (Specify Practice)

STORM WATER MANAGEMENT: Storm water drainage will be provided by a combination of roadway side ditches with grate inlets, safety end treatments, and a storm drain system outfalling into receiving ditches that drain into the North Main Drain 11.

STORM WATER MANAGEMENT ACTIVITIES: (Sequence of Construction)

The order of activities will be as follows:
1.- Install perimeter controls, clear R.O.W. where construction will take place
2. Install Proposed trunk lines/inlets, clean/regrade outfalls, install biodegradable erosion control logs along project, and install the culvert crossings.
3. Construct proposed roadway as shown on TCP.
4. Seed each section completed, with temp. seeding to right of way.
5. Once all construction activity is complete, permanent seeding on proposed areas shall be done according to plans or as instructed by the engineer.

NON-STORM WATER MANAGEMENT DISCHARGES:
Non-storm water discharges should be filtered, or held in retention basins, before being allowed to mix with storm water. These discharges consist of non-polluted ground water, spring water, foundation and/or footing drain water; and water used for dust control, pavement washing and vehicle wastewater containing no detergents.

OTHER REQUIREMENTS & PRACTICES

OTHER EROSION AND SEDIMENT CONTROLS:

MAINTENANCE: All erosion and sediment controls will be maintained in good working order. If a repair is necessary, it will be done at the earliest date possible, but no later than 7 calendar days after the surrounding exposed ground has dried sufficiently to prevent further damage from heavy equipment. The areas adjacent to creeks and drainage ways shall have priority followed by devices protecting storm sewer inlets.

INSPECTION: An inspection will be performed by a County Inspector every 14 calendar days as well as after every half inch or more of rain (as recorded on a non-freezing rain guage to be located at the Project Site). An inspection and Maintenance Report will be made per each inspection. Based on the inspection results, the controls shall be revised per the inspection report.

WASTE MATERIALS: All waste materials will be collected and stored in a securely lidded metal dumpster. The dumpster will meet all state and local solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied as necessary or as required by local regulation and the trash will be hauled to a local dump. No construction waste material will be buried on site.

HAZARDOUS WASTE (INCLUDING SPILL REPORTING): At a minimum, any products in the following categories to be hazardous: Paints, Acids for cleaning masonry surfaces, Cleaning Solvents, Asphalt products, Chemical additives for soil stabilization, or Concrete curing compounds and additives. In the event of a spill which may be hazardous, the spill Coordinator should be contacted immediately. Emptying of excess concrete should not be allowed on site. Likewise, washout of concrete trucks should not be performed on site. These discharges are considered non-allowable non-storm water discharges. Concrete trucks should never be allowed to dump into storm drains or sanitary sewers.

SANITARY WASTE: All sanitary waste will be collected from the portable units as necessary or as required by local regulation by a licensed sanitary waste management contractor.

OFFSITE VEHICLE TRACKING: The Contractor shall be required, on a regular basis or as may be directed by the Engineer, to dampen haul roads for dust control, stabilize construction entrances and to remove excess dirt from the roadway.

MANAGEMENT PRACTICES:
1. Disposal areas, stockpiles, and haul roads shall be constructed in a manner that will minimize and control the amount of sediment that may enter receiving waters. Disposal areas shall not be located in any wet land, water body or stream bed.
2. Construction staging areas and vehicle maintenance areas shall be constructed by the Contractor in a manner to minimize the runoff of pollutants.
3. All waterways shall be cleared, as soon as practical, of temporary embankment, temporary bridges, matting, false work, piling, or debris or other obstructions placed during construction operations that are not a part of the finished work.
4. This plan is a working document, and must be kept current in order to comply with EPA standards.

OTHER:
1. Construction materials stored on site to be provided by Project Field Office.
2. The project SW3P File located at the project field office shall contain the N.O.I., CGP Coverage Notice, EPA NPDES Form, Signature Authorization, Certification/Qualification Statements, Inspection Reports, Required Maps, and the NPDES Permit, Part II.

STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED PROFESSIONAL ENGINEER
09/20/2017

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Texas Department of Transportation

TxDOT STORM WATER POLLUTION PREVENTION PLAN (SW3P)

REV. 2-20-14 SW3P.DGN

FED.RD. DIV.NO.	PROJECT NO.	SHEET NO.
6		105

STATE	DIST.	COUNTY	
TEXAS	PHARR	HIDALGO	
CONT.	SECT.	JOB	HIGHWAY NO.
0921	02	331	ALAMO

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9/20/2017

During the planning phase of project development, the following Environmental Permits, Issues and Commitments have been developed during coordination with resource agencies, local governmental entities and the general public. Any change orders and/or deviations from the final design must be reported to the Engineer prior to the commencement of construction activities as additional environmental clearances may be required.

I. Clean Water Act, Section 402: Stormwater Pollution Prevention

Action Items Required : ☐ No Action Required

1. ☒ The contractor must implement the SW3P by installing Best Management Practices (BMPs) as indicated in the construction plans and maintained appropriately throughout construction. BMPs must be in place prior to the start of construction. The SW3P may need to be revised as necessary as construction progresses.
2. ☒ For all construction PSL's off the ROW, the contractor must certify compliance with all applicable laws, rules and regulations pertaining to the preservation of cultural resources, natural resources and the environment.
3. ☒ Based on the acreage of impact, select the appropriate box below:
   - ☐ This project will disturb less than 1 acre of soil and is not part of a larger common plan of development; therefore, a NOI and TPDES Site Notice are not required for this project.

   or
   - ☒ This project will disturb equal to or more than 1 acre of soil but less than 5 acres; therefore a NOI is not required but a TPDES Site Notice is required. The Construction Site Notice (CSN) is required to be posted at the construction site in a publicly accessible location for review by the public, TCEQ, EPA and other Inspectors.

   or
   - ☐ This project will disturb equal to or more than 5 acres of soil and will require a NOI and TPDES Site Notice. The NOI and Site Notice are required to be posted at the construction site in a publicly accessible location.
4. ☒ Need to address MS4 requirements (Cameron & Hidalgo Counties only) ☐ MS4 requirements not needed

II. Clean Water Act, Sections 401 and 404 Compliance

Action Items Rquired : ☐ No Action Required

1. ☒ Filling, dredging or excavating in any water bodies, rivers, creeks, streams, wetlands or wet areas is prohibited unless specified in the USACE permit and approved by the Engineer. The contractor shall adhere to all agreements, mitigation plans, and BMPs required by the NWP as regulated by the USACE.

   The Contractor must adhere to all of the terms and conditions associated with the following permit(s):

   - ☒ No Permit Required
   - ☐ Nationwide Permit 14 - PCN not Required (less than 1/10th acre waters or wetlands affected)
   - ☐ Nationwide Permit 14 - PCN Required (1/10th to <1/2 acre, 1/3 in tidal waters)
   - ☐ Individual 404 Permit Required
   - ☐ Other Nationwide Permit Required: NWP* _____
2. ☒ The contractor is responsible for obtaining new or revised Section 404 permit(s) for Contractor initiated changes in construction methods that change Impacts To Waters Of The U.S., including wetlands. The Contractor will ensure that the water quality of the State will be maintained and not degraded.
3. ☒ Best Management Practices for applicable Section 401 General Conditions:

General Condition 12 - Categories I and II BMPs required

Category I (Erosion Control)

☐ Temporary Vegetation	☐ Interceptor Swale	☒ Mulch Filter Berms and/or Socks
☐ Blankets, Matting	☐ Diversion Dike	☒ Compost Filter Berms and/or Socks
☐ Mulch	☐ Erosion Control Compost	☐ Compost Blankets
☐ Sodding		

Category II (Sedimentation Control)

☒ Silt Fence	☐ Hay (Straw) Bale Dike	☒ Mulch Filter Berms and/or Socks
☐ Rock Berm	☐ Brush Berms	☒ Compost Filter Berms and/or Socks
☐ Triangular Filter Dike	☐ Sediment Basins	☐ Stone Outlet Sediment Traps
☐ Sand Bag Berm	☐ Erosion Control Compost	

General Condition 21 - Category III BMPs required

Category III (Post-Construction TSS Control)

☐ Vegetative Filter Strips	☐ Wet Basins	☐ Mulch Filter Berms and/or Socks
☐ Retention/Irrigation	☒ Grassy Swales	☐ Compost Filter Berms and/or Socks
☐ Extended Detention Basin	☐ Vegetation-Lined Ditches	☐ Sand Filter Systems
☐ Constructed Wetlands	☐ Erosion Control Compost	☐ Sedimentation Chambers

II. Clean Water Act, Sections 401 and 404 Compliance - Continued:

4. ☒ The Contractor's designated and qualified Contractor Responsible Person Environmental (CRPe) will monitor the project site daily to ensue compliance with SW3P and TPDES General Permit TXR 150000. Daily Monitoring Reports shall be provided to TxDOT within 48 hours, in accordance with Item 506.3.1.
5. ☐ Other Project Specific Actions:

III. Cultural Resources

Action Items Required : ☐ No Action Required

1. ☒ Refer to the 2014 TxDOT Standard Specifications For Construction And Maintenance Of Highways, Streets, And Bridges, Item 7.7.1., in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer immediately.
2. ☐ Other Project Specific Actions:

IV. Vegetation Resources

Action Items Required : ☐ No Action Required

1. ☐ In accordance with the 2014 TxDOT Standard Specifications: Item 164 - Seeding For Erosion Control: provide and install temporary or permanent seeding for erosion control as shown on the plans or as directed by the Engineer for all seeding and replanting of right of way where possible. (Required for Urban Settings)
2. ☒ In accordance with Executive Order 13112 on invasive species and the Executive Memorandum on Beneficial Landscaping, native species of plants shall be used for all seeding and replanting of right of way where possible for rural roadways. (Required for Rural Settings)
3. ☒ Preserve vegetation where possible throughout the project and minimize clearing, grubbing and excavation within stream banks, bed and approach sections.
4. ☐ Other Project Specific Actions:

Pharr District Contact No. 956-702-6100 Revised 01/30/2017

List of Abbreviations

BMP: Best Management Practice
CGP: Construction General Permit
CRPe: Contractor Responsible Person Environmental
DSHS: Texas Department of State Health Services
FEMA: Federal Emergency Management Agency
FHWA: Federal Highway Administration
MOA: Memorandum of Agreement
MOU: Memorandum of Understanding
MS4: Municipal Separate Stormwater Sewer System
MSAT: Mobile Source Air Toxic
MBTA: Migratory Bird Treaty Act
NOI: Notice of Intent
NOT: Notice of Termination
NWP: Nationwide Permit
PCN: Pre-Construction Notification
PSL: Project Specific Location
SPCC: Spill Prevention Control and Countermeasure
SW3P: Storm Water Pollution Prevention Plan
TCEQ: Texas Commission on Environmental Quality
THC: Texas Historical Commission
TPDES: Texas Pollutant Discharge Elimination System
TPWD: Texas Parks and Wildlife Department
TxDOT: Texas Department of Transportation
T&E: Threatened and Endangered Species
USACE: U.S. Army Corp of Engineers
USFWS: U.S. Fish and Wildlife Service

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ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

SHEET 1 OF 2

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
6			ALAMO
STATE	DISTRICT	COUNTY	
TEXAS	PHR	HIDALGO	SHEET NO.
CONTROL	SECTION	JOB	
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V. Federal Listed, and Proposed Threatened and Endangered Species, Critical Habitat, State Listed Species, Candidate Species and Migratory Birds

Action Items Required : ☐ No Action Required

1. ☒ Under the Migratory Bird Treaty Act (MBTA) of 1918, codified at 16 U.S.C. 703-712 and as enforced by the USFWS, the proposed construction work will not remove active nests from bridges, trees, ground and other structures during migratory bird nesting season, (February 1st. through October 1st.). If the Contractor needs to perform work within the right of way during nesting season, a qualified Biologist shall conduct a survey to determine if active nests are present. If present, the Contractor shall maintain a buffer zone around the nest(s) as directed by the Biologist. The buffer zone will be protected from clearing and disturbance until such time as the Biologist has determined that the nest(s) is no longer active. Prior to the nesting season, existing bridges and culverts should be treated against migratory bird nesting by utilizing Bird Exclusion Methods. Bird Exclusion Methods should be monitored and maintained throughout the nesting season. Refer to Standard Bird Exclusion Details.

2. ☒ There is the potential for the presence of state-listed species & species of concern in the project area and state law prohibits the taking (incidental or otherwise) of state-listed species. Taking is defined as the collection, hooking, hunting, netting, shooting, or share by any means or devices. If any listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately.

3. ☒ Other Project Specific Actions:

    1. Contractors will be advised of potential occurrence of threatened or endangered species in the project area, and to avoid harming the species if encountered. State listed species that may potentially utilize habitat features include the Texas Botteri's Sparrow (Aimophila botterii texana), Western Burrowing Owl (Athene cunicularia hypugaea), Plains Spotted Skunk (Spilogale putorius interrupta), Black-Striped Snake (Coniophanes imperialis), Spot-Tailed Earless Lizard (Holbrookia lacerata), Texas Horned Lizard (Phrynosoma cornutum), Texas Indigo Snake (Drymarchon melanurus erebennus), Reticulate Collared Lizard (Crotaphytus Reticulatus), Mexican Treefrog (Smilisca baudinii), White Lipped Frog (Leptodactylus Fragilis), Mexican Mud-Plantain (Heteranthera Mexicana), & Sheep Frog (Hypopachus variolosus).

VI. Hazardous Materials on Contamination Issues

Action Items Required : ☐ No Action Required

General (applies to all projects):

Comply with the Hazard Communication Act (HCA) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropriate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the HCA.

Maintain an adequate supply of on-site spill response materials as indicated in the MSDS. In the event of a spill, take immediate action to mitigate the spill as indicated in the MSDS and in accordance with safe work practices. Contact the TxDOT Pharr District Spill Coordinator immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the Engineer if any of the following are detected:

- Dead or distressed vegetation (identified as not normal)
- Trash piles, drums, canisters, barrels, etc.
- Undesirable smells or odors
- Evidence of leaching or seepage of contaminant substances

Any other evidence indicating possible hazardous materials or contamination discovered on site.

1. ☒ If potentially hazardous material and/or contaminated media (i.e.: soil, groundwater, surface water, sediment, building materials) are unexpectedly encountered during construction, assure that such materials and contamination are handled according to applicable federal and state regulations, cease work in the immediate area and contact the Engineer immediately.

VI. Hazardous Materials on Contamination Issues - Continued:

2. Does the project involve any bridge class structure rehabilitation or replacements (bridge class structures not including box culverts)?

    ☐ Yes ☒ No

    If "No", then no further action required.
    If "Yes", then TxDOT is responsible for completing an asbestos assessment/inspection.

3. Are the results of the asbestos inspection positive (is asbestos present)?

    ☐ Yes ☐ No

    If "Yes", then TxDOT must retain a Texas Department of State Health Services (DSHS) licensed asbestos consultant to assist with the notification, develop abatement/mitigation procedures, and perform management activities as necessary. The notification form to DSHS must be postmarked at least 15 working days prior to scheduled abatement activities and/or demolition.

    If "No", then TxDOT is still required to notify DSHS 15 working days prior to any scheduled demolition.

4. ☐ The Contractor is responsible for providing the date(s) for abatement activities and/or demolition with careful coordination between the Engineer and an Asbestos Consultant in order to minimize construction delays and subsequent claims.

VII. Other Environmental Issues

Action Items Required : ☐ No Action Required

1. ☒ Noise

    Contractor shall make every reasonable effort to minimize construction noise through abatement measures such as work hour controls and proper maintenance of equipment mufflers.

2. ☒ Air

    Contractor shall practice common dust control techniques such as surface chemical treatment or watering of unpaved road surfaces and vehicle speed reduction shall be implemented to minimize and prevent airborne dust during construction.

    Contractor should minimize MSAT by utilizing measures to encourage use of EPA required cleaner diesel fuels, limits on idling, increase use of cleaner burning diesel engines, and other emission limitation techniques, as appropriate.

Pharr District Contact No. 956-702-6100 Revised 01/30/2017

List of Abbreviations

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MS4: Municipal Separate Stormwater Sewer System	TPWD: Texas Parks and Wildlife Department
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MBTA: Migratory Bird Treaty Act	T&E: Threatened and Endangered Species
NOI: Notice of Intent	USACE:U.S. Army Corp of Engineers
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ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

SHEET 2 OF 2

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
6			ALAMO
STATE	DISTRICT	COUNTY	
TEXAS	PHR	HIDALGO	SHEET NO.
CONTROL	SECTION	JOB	
0921	02	311	106B

Date Printed: X-X-XX

TPWD BMPs

The Programmatic Agreement defines Best Management Practices (BMPs) to be implemented by Texas Department of Transportation (TxDOT) per §2.213 (Programmatic Agreements) of the 2017 Memorandum of Understanding (MOU) between TxDOT and Texas Parks and Wildlife Department (TPWD). These BMPs are measures that TxDOT and TPWD agree will result in avoidance and minimization of potential impacts to natural resources and in some cases apply to particular types of TxDOT projects.

The purpose of this section is to provide BMPs to minimize impacts to species or groups of species. Implementation of these BMPs by TxDOT eliminates the need for coordination under 2.206(1) of the MOU, except as noted.

Due diligence should be used to avoid killing or harming any wildlife species in the implementation of TxDOT projects.

☒ Bird BMPs (Required)

In addition to complying with the Migratory Bird Treaty Act (MBTA) perform the following BMPs:

- ☒ Prior to construction, perform daytime surveys for nests including under bridges and in culverts to determine if they are active before removal. Nests that are active should not be disturbed.
- ☒ Do not disturb, destroy, or remove active nests, including ground nesting birds, during the nesting season.
- ☒ Avoid the removal of unoccupied, inactive nests, as practicable.
- ☒ Prevent the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair.
- ☒ Do not collect, capture, relocate, or transport birds, eggs, young, or active nests without a permit.

☐ Bald Eagle *(Haliaeetus leucocephalus)*

- ☐ Bird BMPs and Bald and Golden Eagle Protection Act compliance

☐ Reddish Egret *(Egretta rufescens)*
☐ White-faced Ibis *(Plegadis chihi)*

- ☐ Bird BMPs unless project is within 300 meters (984 feet) of a known colonial water bird rookery then coordinate with TPWD.

☐ Rookeries (Recommendations)

In general, nesting dates for herons and egrets range from early February to late August in Texas, depending on the species. Great Blue Herons (GBHE) are usually the first to nest. When GBHE get disrupted from the nest and abandon nesting, then the other species of herons and egrets may not attempt to nest at the colony that year. Breeding dates for rookery species are approximately as follows:

Species	Dates
Cattle Egret	Early April to late October
Little Blue Heron	Late March to late July
Snowy Egret	Late March to early August
Great Egret	Early March to early August
Black-crowned Night Heron	Early February to late July
Great Blue Heron	February to late August

☐ Rookeries (Recommendations) (Continued)

- ☐ Vegetation clearing in a primary buffer area of 300 meters (984 feet) from a heronry periphery should be avoided. Utilizing areas that have already been cleared within this buffer area may be acceptable depending on site-specific characteristics. Additionally, human foot-traffic or machinery use should not occur within this buffer area during the nesting season.
- ☐ Clearing activities or construction using heavy machinery in a secondary buffer area of 1,000 meters (3,281 feet) from the heronry periphery should be avoided during the breeding season (courting and nesting).

☐ Bat BMPs (Required)

To determine the appropriate BMP to avoid or minimize impacts to bats, review the habitat description for the species of interest on the TPWD Rare, Threatened, and Endangered Species of Texas by County List or other trusted resources. All bat surveys and other activities that include direct contact with bats shall comply with TPWD' recommended white-nose syndrome protocols located on the TPWD Wildlife Habitat Assessment Program website under "Project Design and Construction".

The following survey and exclusion protocols should be followed prior to commencement of construction activities. For the purposes of this document, structures are defined as bridges, culverts (concrete or metal), wells, and buildings.

- ☐ For activities that have the potential to impact structures, cliffs or caves, or trees; a qualified biologist will perform a habitat assessment and occupancy survey of the feature(s) with roost potential as early in the planning process as possible or within one year before project letting.
- ☐ For roosts where occupancy is strongly suspected but unconfirmed during the initial survey, revisit feature(s) at most four weeks prior to scheduled disturbance to confirm absence of bats.
- ☐ If bats are present or recent signs of occupation (i.e., piles of guano, distinct musky odor, or staining and rub marks at potential entry points) are observed, take appropriate measures to ensure that bats are not harmed, such as implementing non-lethal exclusion activities or timing or phasing of construction.
- ☐ Exclusion devices can be installed by a qualified individual between September 1 and March 31. Exclusion devices should be used for a minimum of seven days when minimum nighttime temperatures are above 50°F and minimum daytime temperatures are above 70°F. Prior to exclusion, ensure that alternate roosting habitat is available in the immediate area. If no suitable roosting habitat is available, installation of alternate roosts is recommended to replace the loss of an occupied roost. If alternate roost sites are not provided, bats may seek shelter in other inappropriate sites, such as buildings, in the surrounding area. See Additional Bat BMPs (Recommendations) for recommended acceptable methods for excluding bats from structures.
- ☐ If feature(s) used by bats are removed as a result of construction, replacement structures should incorporate bat-friendly design or artificial roosts should be constructed to replace these features, as practicable.
- ☐ Conversion of property containing cave or cliff features to transportation purposes should be avoided where feasible.

☐ Bat BMPs (Required)(Continued)

- ☐ Avoid unnecessary removal of dead fronds on native and ornamental palm trees in south Texas (Cameron, Hidalgo, Willacy, Kenedy, Brooks, Kleberg, Nueces, and San Patricio counties) from April 1st through October 31st. If removal of dead fronds is necessary at other times of the year, limit frond removal to extended warm periods (nighttime temperatures: 55°F for at least two consecutive nights), so bats can move away from the disturbance and find new roosts.
- ☐ Large hollow trees, snags (dead standing trees), and trees with shaggy bark should be surveyed for colonies and, if found, should not be disturbed until the bats are no longer occupying these features. Post-occupancy surveys should be conducted by a qualified biologist prior to tree removal from the landscape.
- ☐ Retain mature, large diameter hardwood forest species and native/ornamental palm trees where feasible.
- ☐ In all instances, avoid harm or death to bats. Bats should only be handled as a last resort and after communication with TPWD.

☐ Mexican Long-tongues Bat *(Choeronycteris mexicana)*

- ☐ Avoid unnecessary impacts to cacti and agave species.
- ☐ Bat BMPs.

☐ Additional Bat BMPs (Recommendations)

- ☐ Bat surveys of structures should include visual inspections of structural fissures (cracked or spalled concrete, damaged or split beams, split or damaged timber railings), crevices (expansion joints, space between parallel beams, spaces above supports piers), and alternative structures (drainage pipes, bolt cavities, open sections between support beams, swallow nests) for the presence of bats.
- ☐ Before excluding bats from any occupied structure, bat species, weather, temperature, season, and geographic location must be incorporated into any exclusion plans to avoid unnecessary harm or death to bats. Winter exclusion must entail a survey to confirm either, 1) bats are absent or 2) present but active (i.e. continuously active - not intermittently active due to arousals from hibernation).
- ☐ Avoid using materials that degrade quickly, like paper, steel wool or rags, to close holes.
- ☐ Avoid using products or making structural modifications that may block natural ventilation, like hanging plastic sheeting over an active roost entrance, thereby altering roost microclimate.
- ☐ Avoid using chemical and ultrasonic repellents.
- ☐ Avoid use of silicone, polyurethane or similar non-water-based caulk products.
- ☐ Avoid use of expandable foam products at occupied sites.
- ☐ Avoid the use of flexible netting attached with duct tape.

Pharr District Contact No. 956-702-6100

Revised 07/12/2017

List of Abbreviations

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EPIC SHEET SUPPLEMENTALS

TPWD BMPs

SHEET 1 OF 3

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
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STATE	DISTRICT	COUNTY	
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☐ Additional Bat BMPs (Recommendations) (Continued)

☐ In order to avoid entombing bats, exclusion activities should be only implemented by a qualified individual. A qualified individual or company should possess at least the following minimum qualifications:

- Experience in bat exclusion (the individual, not just the company).
- Proof of rabies pre-exposure vaccinations.
- Demonstrated knowledge of the relevant bat species, including maternity season date range and habitat requirements.
- Demonstrated knowledge of rabies and histoplasmosis in relation to bat roosts.

☐ Contact TPWD for additional resources and information to assist in executing successful bat exclusions that will avoid unnecessary harm or death in bats.

☐ Fossorial Mammal BMPs (Required)

☐ If black-tailed prairie dog (BTPD) burrows or pocket gopher mounds are to be excavated/directly impacted coordinate with TPWD WHAB.
☐ When a construction zone is adjacent to active BTPD burrows or pocket gopher mounds, erect barriers to discourage individuals moving through or into the construction area.
☐ When seeding or revegetation is planned in an area adjacent to BTPD burrows or pocket gopher mounds, a vegetative barrier should be considered in the planting to discourage dispersal into the ROW.

☐ Coues' Rice Rat *(Oryzomys couesi)*

☐ Minimize impacts to wetland, Resaca, oxbow lakes, and marsh habitats.
☐ Contractors will be advised of potential occurrence in the project area and to avoid harming the species if encountered.
☐ Water Quality BMPs.

☒ Plains Spotted Skunk *(Spilogale putorius interrupta)* or
☐ Swift Fox *(Vulpes velox)*

☐ Contractor will be advised of potential occurrence in the project area and to avoid harming the species if encountered and to avoid unnecessary impacts to dens.

☐ White nosed Coati *(Nasua narica)*
☐ Yellow nosed Cotton Rat *(Sigmodon ochrognathus)*

☐ Contractors will be advised of potential occurrence in the project area and to avoid harming the species if encountered.

☒ Terrestrial Reptile BMPs (Required)

☒ Apply hydro mulching and/or hydro seeding in areas for soil stabilization and/or revegetation of disturbed areas where feasible. If hydro mulching and/or hydro seeding are not feasible due to site conditions, utilize erosion control blankets or mats that contain no netting or contain loosely woven,natural fiber netting is preferred. Plastic netting should be avoided to the extent practicable.
☒ For open trenches and excavated pits, install escape ramps at an angle of less than 45 degrees (1 :1) in areas left uncovered. Visually inspect excavation areas for trapped wildlife prior to backfilling.
☒ Inform contractors that if reptiles are found on project site allow species to safely leave the project area.
☒ Avoid or minimize disturbing or removing downed trees, rotting stumps, and leaf litter where feasible.
☒ Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.

☐ Texas Tortoise *(Gopherus berlandieri)*

☐ Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.
☐ Utility trenches should be covered overnight or visually inspected before filling to avoid burial of the species.
☐ Terrestrial Reptile BMPs.

☒ Texas Horned Lizard *(Phrynosoma cornutum)*

☒ Avoid harvester ant mounds in the selection of Project Specific Locations (PSLs) where feasible.
☒ Terrestrial Reptile BMPs.

☐ Additional Reptile BMPs (Recommendations)

☐ Due to increased activity (mating) of reptiles during the spring, construction activities like clearing or grading should attempt to be scheduled outside of the spring (April-May) season. Also, timing ground disturbing activities before October when reptiles become less active and may be using burrows in the project area is also encouraged.
☐ When designing roadways with curbs, consider using Type I or Type III curbs to provide a gentle slope to enable turtles and small animals to get out of roadways.
☐ If Texas Tortoises are present in a project area, they should be removed from the area. After removal of the tortoises, the area that will be disturbed during active construction and project specific locations should be fenced off to exclude tortoises and other reptiles. The exclusion fence should be constructed and maintained as follows:

a. The exclusion fence should be constructed with metal flashing or drift fence material.
b. Rolled erosion control mesh material should not be used.
c. The exclusion fence should be buried at least 6 inches deep and be at least 24 inches high.
d. The exclusion fence should be maintained for the life of the project and only removed after the construction is completed and the disturbed site has been revegetated.

☒ Amphibian and Aquatic Reptile BMPs (Required)

Unless absence of the species can be demonstrated, assume presence in suitable habitat and implement the following BMPs. Absence can only be demonstrated using TPWD-approved survey efforts (contact TPWD for minimum survey protocols for species and project site conditions).

☐ For projects within one mile of a known occupied location or observation of the species recorded from 1980 until the current year and suitable habitat is present, coordinate with TPWD.
☒ For new location roadway projects, coordinate with TPWD.
☐ For projects within existing right-of-way (ROW) when work is in water or will permanently impact a water feature and potential habitat exists for the target species complete the following:

a) Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.
b) Minimize impacts to wetland, temporary and permanent open water features, including depressions, and riverine habitats.
c) Maintain hydrologic regime and connections between wetlands and other aquatic features.

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☒ Amphibian and Aquatic Reptile BMPs (Continued)

d) Use barrier fencing to direct animal movements away from construction activities and areas of potential wildlife-vehicle collisions in construction areas directly adjacent, or that may directly impact, potential habitat for the target species.
e) Apply hydromulching and/or hydroseeding in areas for soil stabilization and/or revegetation of disturbed areas where feasible. If hydromulching and/or hydroseeding are not feasible due to site conditions, using erosion control blankets or mats that contain no netting, or only contain loosely woven natural fiber netting is preferred. Plastic netting should be avoided to the extent practicable.
f) Project specific locations (PSLs) proposed within state-owned ROW should be located in uplands away from aquatic features.
g) When work is directly adjacent to the water, minimize impacts to shoreline basking sites (e.g., downed trees, sand bars, exposed bedrock) and overwinter sites (e.g., brush and debris piles, crayfish burrows) where feasible.
h) Avoid or minimize disturbing or removing downed trees, rotting stumps, and leaf litter, which may be refugia for terrestrial amphibians, where feasible.
i) If gutters and curbs are part of the roadway design, where feasible install gutters that do not include the side box inlet and include sloped (i.e. mountable) curbs to allow small animals to leave roadway. If this modification to the entire curb system is not possible, install sections of sloped curb on either side of the storm water drain for several feet to allow small animals to leave the roadway. Priority areas for these design recommendations are those with nearby wetlands or other aquatic features.

☐ For projects that require acquisition of additional ROW and work within that new ROW is in water or will permanently impact a water feature, implement a) - i) above plus j) -l) below, where applicable:

j) For sections of roadway adjacent to wetlands or other aquatic features, install wildlife barriers that prevent climbing. Barriers should terminate at culvert openings in order to funnel animals under the road. The barriers should be of the same length as the adjacent feature or 80 feet long in each direction, or whichever is the lesser of the two.
k) For culvert extensions and culvert replacement/installation, incorporate measures to funnel animals toward culverts such as concrete wingwalls and barrier walls with overhangs.
l) When riprap or other bank stabilization devices are necessary, their placement should not impede the movement of terrestrial or aquatic wildlife through the water feature. Where feasible, biotechnical streambank stabilization methods using live native vegetation or a combination of vegetative and structural materials should be used.

Revised 07/12/2017

List of Abbreviations

BMP: Best Management Practice
CGP: Construction General Permit
CRPe: Contractor Responsible Person Environmental
DSHS: Texas Department of State Health Services
FEMA: Federal Emergency Management Agency
FHWA: Federal Highway Administration
MOA: Memorandum of Agreement
MOU: Memorandum of Understanding
MS4: Municipal Separate Stormwater Sewer System
MSAT: Mobile Source Air Toxic
MBTA: Migratory Bird Treaty Act
NOI: Notice of Intent
NOT: Notice of Termination
NWP: Nationwide Permit
PCN: Pre-Construction Notification
PSL: Project Specific Location
SPCC: Spill Prevention Control and Countermeasure
SW3P: Storm Water Pollution Prevention Plan
TCEQ: Texas Commission on Environmental Quality
THC: Texas Historical Commission
TPDES:Texas Pollutant Discharge Elimination System
TPWD: Texas Parks and Wildlife Department
TxDOT:Texas Department of Transportation
T&E: Threatened and Endangered Species
USACE:U.S. Army Corp of Engineers
USFWS:U.S. Fish and Wildlife Service

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PHARR DISTRICT

EPIC SHEET SUPPLEMENTALS

TPWD BMPs

SHEET 2 OF 3

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
6			ALAMO
STATE	DISTRICT	COUNTY	
TEXAS	PHR	HIDALGO	SHEET NO.
CONTROL	SECTION	JOB	
0921	02	331	107B

Date Printed: X-X-XX

☒ Sheep Frog *(Hypopachus variolosus)*

- ☒ Minimize disturbance to burrows or downed woody debris.
- ☒ Water Quality BMPs.
- ☒ Amphibian BMPs.

☒ South Texas Siren (Large Form) *(Siren sp 1)*

- ☒ Minimize impacts to warm, shallow waters with vegetative cover such as ponds and ditches.
- ☒ Water Quality BMPs.
- ☒ Amphibian BMPs.

☐ Freshwater Mussel BMPs (Required)

- ☐ When work is in the water; survey project footprints for state listed species where appropriate habitat exists.
- ☐ When work is in the water and mussels are discovered during surveys; relocate state listed and SGCN mussels under TPWD authorization and implement Water Quality BMPs.
- ☐ When work is adjacent to the water; Water Quality BMPs implemented as part of the SWPPP for a construction general permit or any conditions of the Section 401 water quality certification for the project will be implemented.

☐ Fish BMPs (Required)

- ☐ For projects within the range of a SGCN or State-Listed fish and work is adjacent to water: Use Water Quality BMPs. No TPWD Coordination required.
- ☐ For projects within the range of a SGCN or State-Listed fish, and work is in the water: TPWD coordination is required.

☒ Water Quality BMPs (Required)

In addition to BMPs required for a TCEQ Storm Water Pollution Prevention Plan and/or Section 401 water quality permit:

- ☒ Minimize the use of equipment in streams and riparian areas during construction. When possible, equipment access should be from banks, bridge decks, or barges.
- ☒ When temporary stream crossings are unavoidable, remove stream crossings once they are no longer needed and stabilize banks and soils around the crossing.

☐ Additional Water Quality BMPs (Recommendations)

- ☐ Wet-Bottomed detention ponds are recommended to benefit wildlife and downstream water quality. Consider potential wildlife-vehicle interactions when siting detention ponds.
- ☐ Rubbish found near bridges on TxDOT ROW should be removed and disposed of properly to minimize the risk of pollution. Rubbish does not include brush piles or snags.

☐ Aquatic Mitigation (Recommendations)

- ☐ In-kind compensatory mitigation should be considered for all unavoidable impacts to aquatic resources including, but not limited to streams, wetlands, oysters, seagrass and mudflats, regardless of their jurisdictional status.
- ☐ Compensatory mitigation plans should be developed in consultation with TPWD Transportation Conservation Coordinator.

☐ Stream Crossings (Recommendations)

- ☐ Use spanning bridges rather than culverts when feasible.
- ☐ If using a culvert, staggered culverts that concentrate low flows but provide conveyance of higher flows through staggered culverts placed at higher elevations is recommended.
- ☐ Bottomless culverts are recommended to allow for fish and other aquatic wildlife passage in the low flow channel. If bottomless culverts are not feasible, making a low flow channel for fish passage is recommended.
- ☐ Avoid placing riprap across stream channels and instead use alternative stabilization such as biotechnical stream bank stabilization methods including live native vegetation or a combination of vegetative and structural materials. When riprap or other bank stabilization devices are necessary, their placement should not impede the movement of aquatic and terrestrial wildlife underneath the bridge. In some instances, riprap may be buried, back-filled with topsoil and planted with native vegetation.
- ☐ Incorporate bat-friendly design into bridges and culverts.
- ☐ Design bridges for adequate vertical and horizontal clearances under the roadway to allow for terrestrial wildlife to safely pass under the road.
- ☐ A span wide enough to cross the stream and allow for dry ground and a natural surface path under the roadway is encouraged. For culverts, incorporation of an artificial ledge inside the culvert on one or both sides for use by terrestrial wildlife is recommended.
- ☐ Riparian buffer zones should remain undisturbed where possible.

☒ Vegetation BMPs (Recommendations)

- ☒ Minimize the amount of vegetation cleared. Removal of native vegetation, particularly mature native trees and shrubs should be avoided to the greatest extent practicable. Wherever practicable, impacted vegetation should be replaced with in-kind on-site replacement/restoration of native vegetation.
- ☒ To minimize adverse effects, activities should be planned to preserve mature trees, particularly acorn, nut or berry producing varieties. These types of vegetation have high value to wildlife as food and cover.
- ☒ It is strongly recommended that trees greater than 12 inches in diameter at breast height (dbh) that are removed be replaced. TPWD's experience indicates that for ecologically effective replacement, a ratio of three trees for every one (3:1) lost should be provided to the extent practicable either on-site or off-site. Trees less than 12 inches dbh should be replaced at a 1:1 ratio.
- ☒ Replacement trees should be of equal or better wildlife quality than those removed and be regionally adapted native species.
- ☒ When trees are planted, a maintenance plan that ensures at least an 85 percent survival rate after three (3) years should be developed for the replacement trees.
- ☒ The use of any non-native vegetation in landscaping and revegetation is discouraged. Locally adapted native species should be used.
- ☒ The use of seed mix that contains seeds from only locally adapted native species is recommended.
- ☒ Avoid vegetation clearing activities during the general bird nesting season, March through August, to minimize adverse impacts to birds.

☐ Invasive Species BMPs (Recommendations)

- ☐ For all work in waters listed in the distribution of Zebra mussels on http://texasinvasives .org/ as well as those waters specified in 31 TAC 57.972 and any TPWD emergency orders regarding prevention of the spread of Zebra mussels all machinery, equipment, or vehicles coming in contact with such waters should follow clean/drain/dry protocols to prevent the potential spread of invasive Zebra mussels.
- ☐ Care should be taken to avoid the spread of aquatic invasive plants (such as Giant Salvinia, Hydrilla, Hyacinth, Watermilfoil, Water Lettuce, and Alligatorweed) from infested water bodies into areas not currently infested. All machinery/equipment/vehicles coming in contact with waters containing aquatic invasive plant species should follow clean/drain/dry protocols to prevent the potential spread of invasive plants.
- ☐ Colonization by invasive plants should be actively prevented on disturbed sites in terrestrial habitats. Vegetation management should include removing invasive species as soon as practical while allowing the existing native plants to revegetate the disturbed areas. If using hay bales for sediment control, use locally grown weed-free hay to prevent the spread of invasive species. Leave the hay bales in place and allow them to break down, as this acts as mulch assisting in revegetation.

☐ Wildlife Crossings (Recommendations)

- ☐ Design roadways on new location to incorporate wildlife crossings, particularly in areas that bisect wildlife travel corridors or seasonal movement routes.
- ☐ Consider using cable median barrier instead of concrete traffic barrier when feasible to increase permeability for animals encountering barriers.

Pharr District Contact No. 956-702-6100

Revised 07/12/2017

List of Abbreviations

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TxDOT: Texas Department of Transportation
T&E: Threatened and Endangered Species
USACE: U.S. Army Corp of Engineers
USFWS: U.S. Fish and Wildlife Service

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PHARR DISTRICT

EPIC SHEET SUPPLEMENTALS

TPWD BMPs

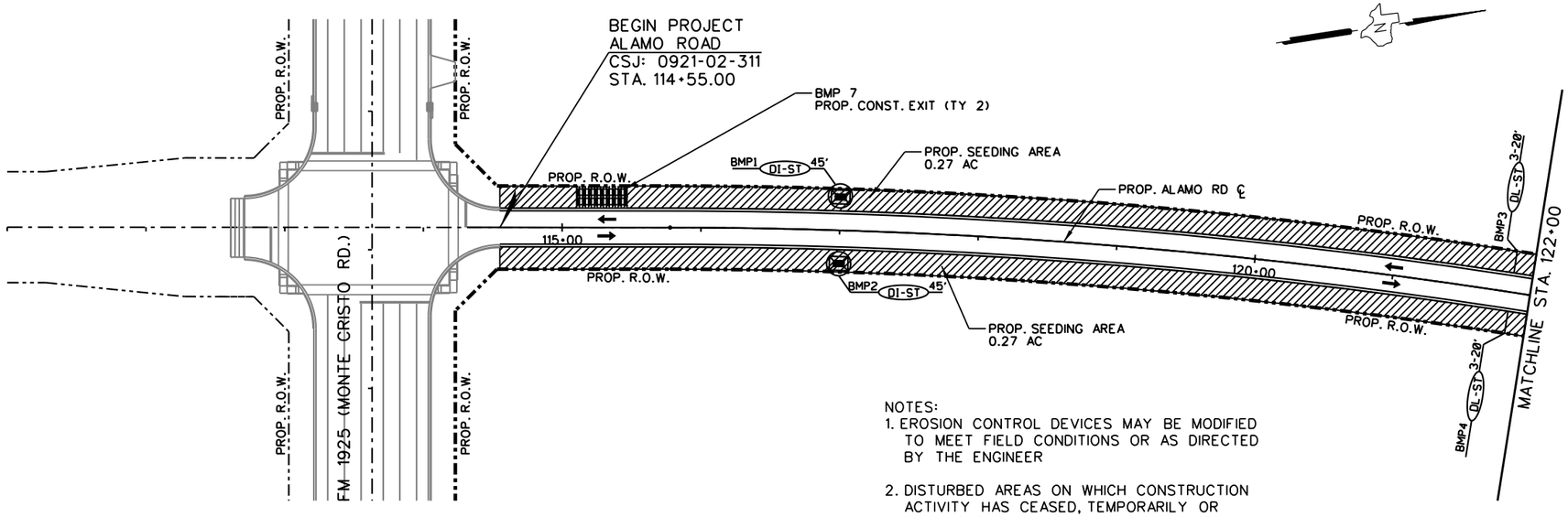
SHEET 3 OF 3

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
6			ALAMO
STATE	DISTRICT	COUNTY	
TEXAS	PHR	HIDALGO	SHEET NO.
CONTROL	SECTION	JOB	
0921	02	331	107C

Date Printed: X-X-XX

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
160	FURNISHING AND PLACING TOPSOIL	CY	-
164	DRILL SEED (TEMP)(WARM)	AC	1.34
164	DRILL SEEDING (PERM)(RURAL)(SANDY)	AC	1.34
166	FERTILIZER ***NON-PAY***	TON	0.34
168	VEGETATIVE WATERING	MG	205
506	ROCK FILTER DAMS (INSTALL) (TY 1)	LF	
506	ROCK FILTER DAMS (REMOVE)	LF	
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	78
506	CONSTRUCTION EXITS (REMOVE)	SY	78
506	FRNT END LOADER WRK (ERSN & SEDM CONT	HR	1
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	330
506	BIOGRD EROSN CONT LOGS REMOVE	LF	330
169	SOIL RETENTION BLANKETS (CL 2)(TY F)	SY	

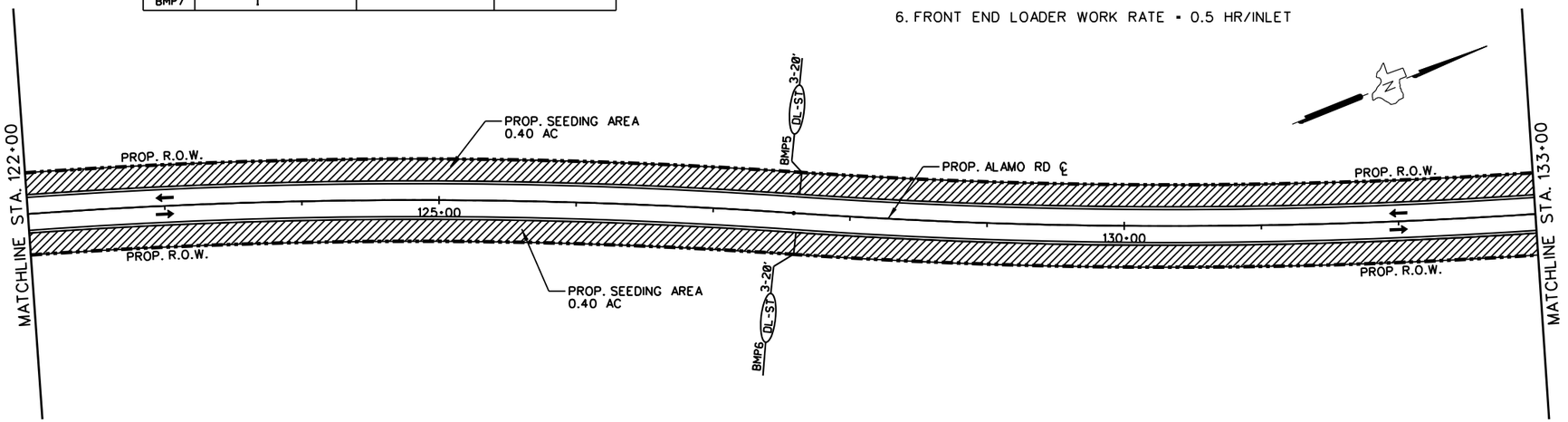


LEGEND

- PROP. PHASE II SEEDING AREA
- PROP. PHASE III SEEDING AREA
- PROP. CONSTRUCTION EXIT (TY 2)
- PROP. SOIL RETENTION BLANKET (CL2)(TYF)
- BMP CI-ST XX' — PROP. CURB INLET SEDIMENT TRAP I.D AND LENGTH (LF)
- BMP DI-ST XX' — PROP. DROP INLET SEDIMENT TRAP I.D. AND LENGTH (LF)
- BMP DL-ST XX' — PROP. DITCH LINE SEDIMENT TRAP (LOG) I.D. AND LENGTH (LF)
- BMP RFDI XX' — PROP. ROCK FILTER DAM (TYPE 1)

I.D.	TCP PHASE INSTALLED	DATE INSTALLED	DATE REMOVED
BMP1	1		
BMP2	1		
BMP3	2		
BMP4	2		
BMP5	2		
BMP6	2		
BMP7	1		

NOTES:
1. EROSION CONTROL DEVICES MAY BE MODIFIED TO MEET FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER
2. DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITY HAS CEASED, TEMPORARILY OR PERMANENTLY, SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITIES ARE SCHEDULED TO RESUME, AND DO, WITHIN 21 DAYS.
3. FERTILIZER IS NON-PAY. SUBSIDIARY TO SEEDING (ITEM 164). APPLICATION RATE = 500 LBS/AC
4. VEGETATIVE WATERING APPLICATION RATE = 3394 GAL/AC @ 45 CYCLES
5. PERMANENT SEEDING TO BE DONE AFTER ALL ROADWAY CONSTRUCTION IS COMPLETED.
6. FRONT END LOADER WORK RATE = 0.5 HR/INLET



STATE OF TEXAS
CHRISTOPHER R. RODRIGUEZ
107692
LICENSED
PROFESSIONAL ENGINEER
08/16/2017

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ALAMO ROAD
SW3P LAYOUT
STA.114+55 TO STA.133+00

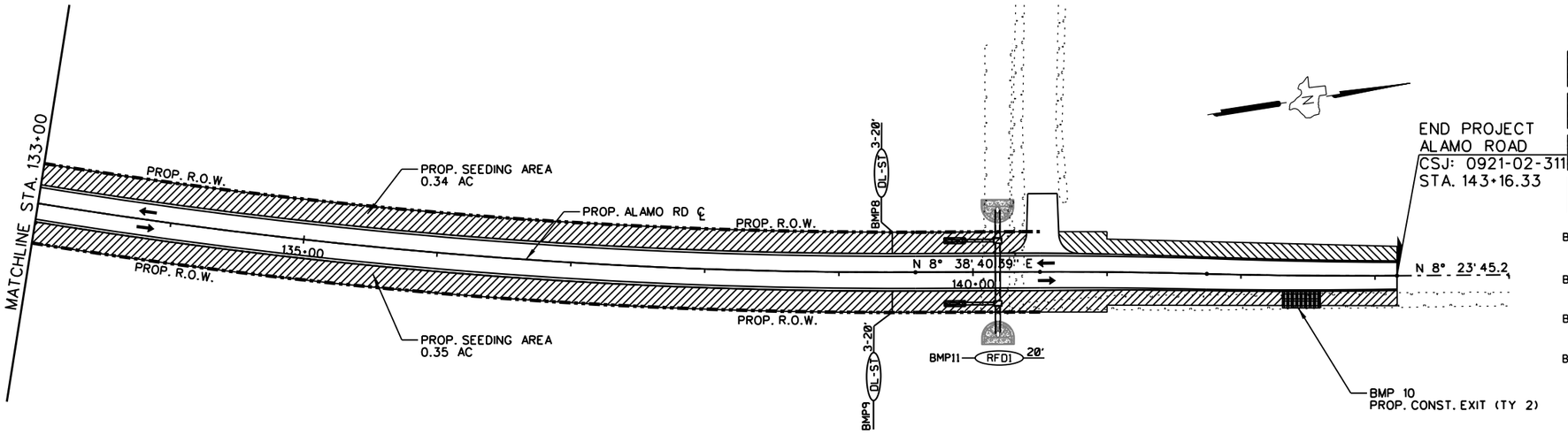
SCALE: 1" = 100' SHEET 1 OF 2

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN:		6	TEXAS				108
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:		PHR	HIDALGO	0921	02	311	ALAMO
TR:							
CK TR:							

8/16/2017 K:\Counties\HDG\FM 907 (North of FM1925)\08 ENVIRONMENTAL\03 SW3P Layouts\FM 907_SW3P01.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
160	FURNISHING AND PLACING TOPSOIL	CY	-
164	DRILL SEED (TEMP)(WARM)	AC	0.69
164	DRILL SEEDING (PERM)(RURAL)(SANDY)	AC	0.69
166	FERTILIZER ***NON-PAY***	TON	0.17
168	VEGETATIVE WATERING	MG	106
506	ROCK FILTER DAMS (INSTALL) (TY 1)	LF	20
506	ROCK FILTER DAMS (REMOVE)	LF	20
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	78
506	CONSTRUCTION EXITS (REMOVE)	SY	78
506	FRNT END LOADER WRK (ERSN & SEDM CONT	HR	1
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	120
506	BIOGRD EROSN CONT LOGS REMOVE	LF	120
169	SOIL RETENTION BLANKETS (CL 2)(TY F)	SY	



LEGEND

- PROP. PHASE II SEEDING AREA
- PROP. PHASE III SEEDING AREA
- PROP. CONSTRUCTION EXIT (TY 2)
- PROP. SOIL RETENTION BLANKET (CL2)(TYF)
- BMP CI-ST XX' — PROP. CURB INLET SEDIMENT TRAP I.D AND LENGTH (LF)
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- BMP DL-ST XX' — PROP. DITCH LINE SEDIMENT TRAP (LOG) I.D. AND LENGTH (LF)
- BMP RFDI XX' — PROP. ROCK FILTER DAM (TYPE 1)

I.D.	TCP PHASE INSTALLED	DATE INSTALLED	DATE REMOVED
BMP8	2		
BMP9	2		
BMP10	1		
BMP11	1		

NOTES:

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ALAMO ROAD
SW3P LAYOUT
STA.133+00 TO STA.143+16.33

SCALE: 1" = 100'

SHEET 2 OF 2

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN:		6	TEXAS					109
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
CK DW:		PHR	HIDALGO	0921	02	311		ALAMO
TR:								
CK TR:								

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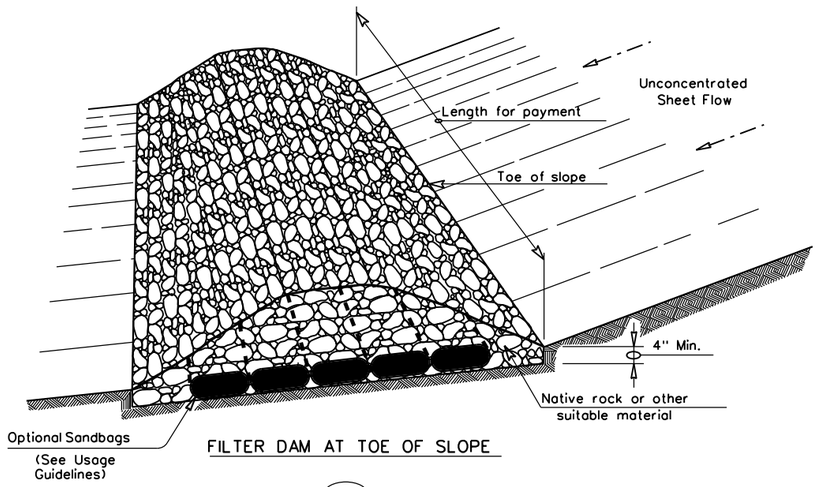
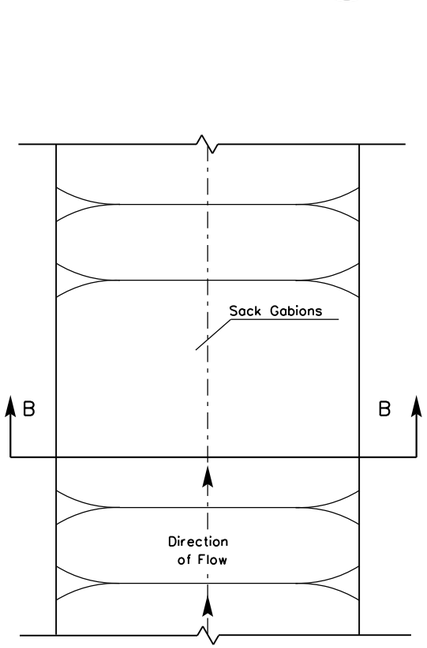
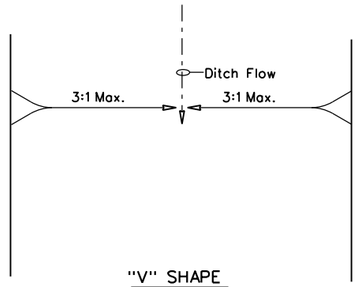


FILTER DAM AT TOE OF SLOPE

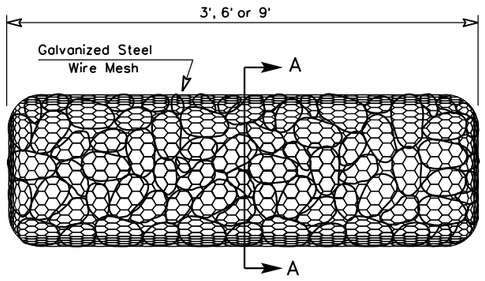
RFD1



PLAN VIEW



"V" SHAPE
PLAN VIEW

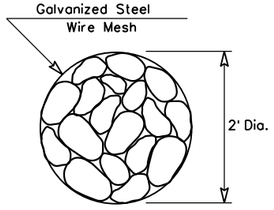


TYPE 4 (SACK GABIONS)

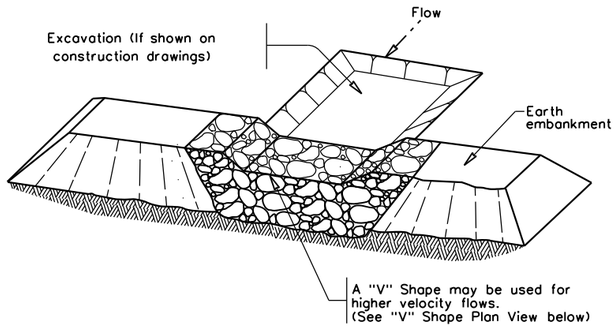
RFD4

¾" Dia.
Rebar Stakes

SECTION B-B

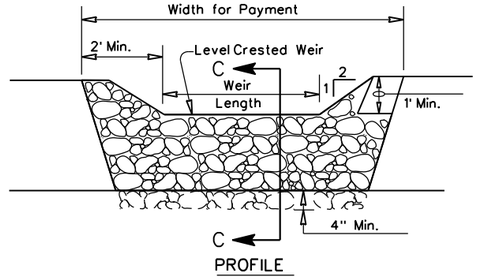


SECTION A-A

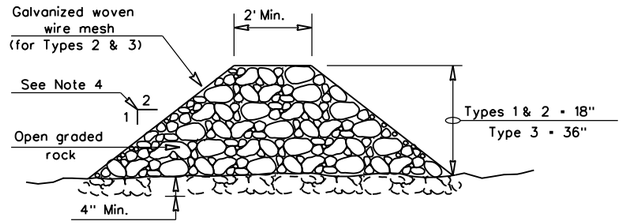


FILTER DAM AT SEDIMENT TRAP

RFD1 — OR — RFD2



PROFILE



SECTION C-C

ROCK FILTER DAM USAGE GUIDELINES

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT^2 of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

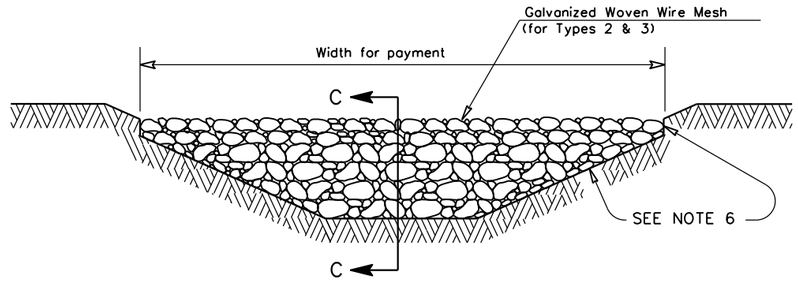
Type 1 (18" high with no wire mesh) (3" to 6" aggregate): Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approximently 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 2 (18" high with wire mesh) (3" to 6" aggregate): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh) (4" to 8" aggregate): Type 3 may be used in stream flow and should be secured to the stream bed.

Type 4 (Sack gabions) (3" to 6" aggregate): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

Type 5: Provide rock filter dams as shown on plans.



FILTER DAM AT CHANNEL SECTIONS

RFD1 — OR — RFD2 — OR — RFD3

GENERAL NOTES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. For in stream use, the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with ¾" dia. rebar stakes, and have a double-twisted hexagonal weave with a nominal mesh opening of 2 ½" x 3 ¼"
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

PLAN SHEET LEGEND

Type 1 Rock Filter Dam	RFD1
Type 2 Rock Filter Dam	RFD2
Type 3 Rock Filter Dam	RFD3
Type 4 Rock Filter Dam	RFD4

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

ROCK FILTER DAMS

EC(2)-16

FILE: ec216	DN: TxDOT	CK: HEJ	DW: BD	CK:		
© TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY	
REVISIONS	0921	02	311		ALAMO	
	DIST	COUNTY			SHEET NO.	
	PHR	HIDALGO			110	

DATE:
FILE:

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DATE:
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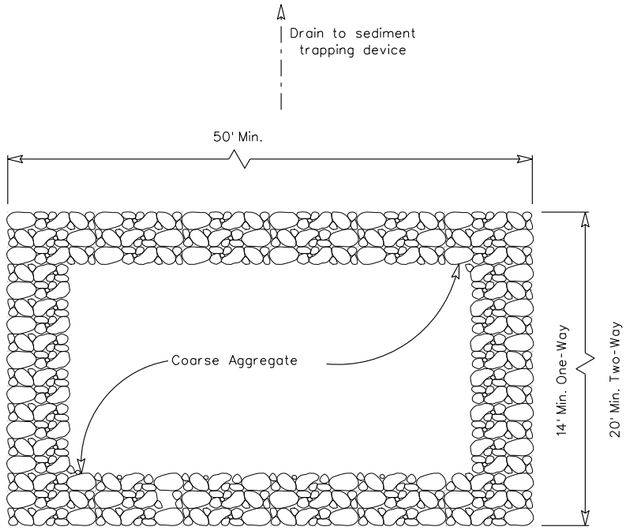
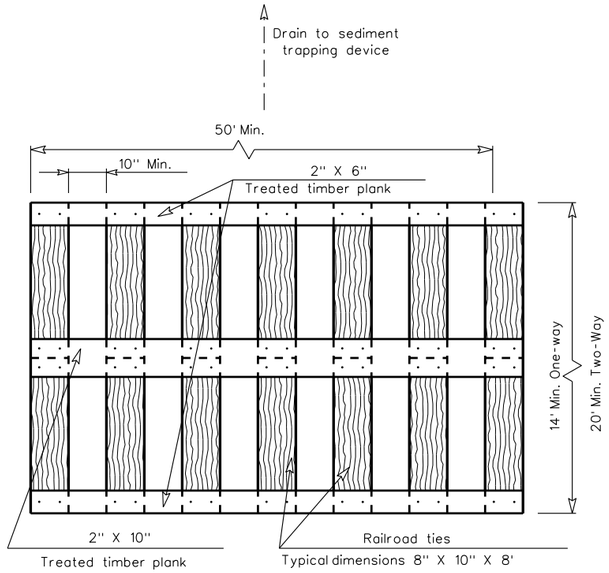
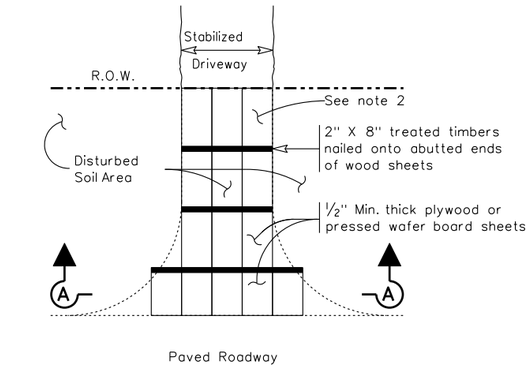


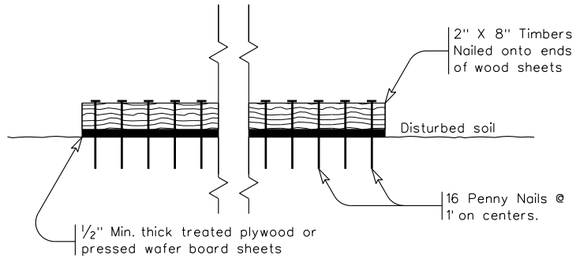
PLAN VIEW



PLAN VIEW



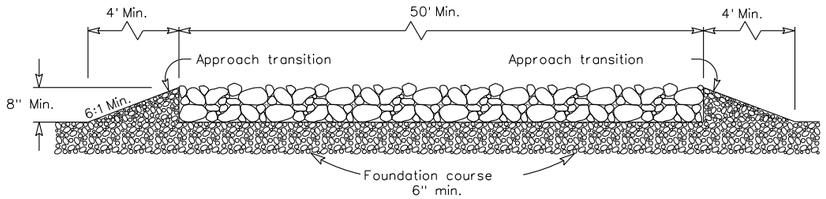
PLAN VIEW



SECTION A-A

CONSTRUCTION EXIT (TYPE 3)

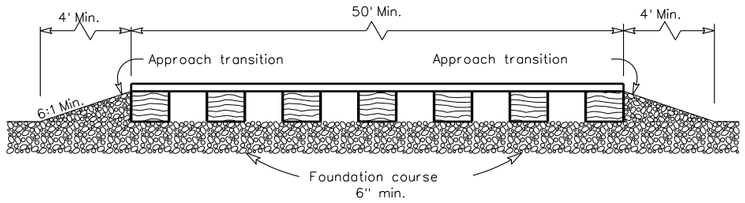
SHORT TERM



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 1)

ROCK CONSTRUCTION (LONG TERM)



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 2)

TIMBER CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 1)

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other materialas approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

GENERAL NOTES (TYPE 2)

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50'.
2. The treated timber planks shall be attached to the railroad ties with ½"x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
8. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

GENERAL NOTES (TYPE 3)

1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation

Design Division Standard

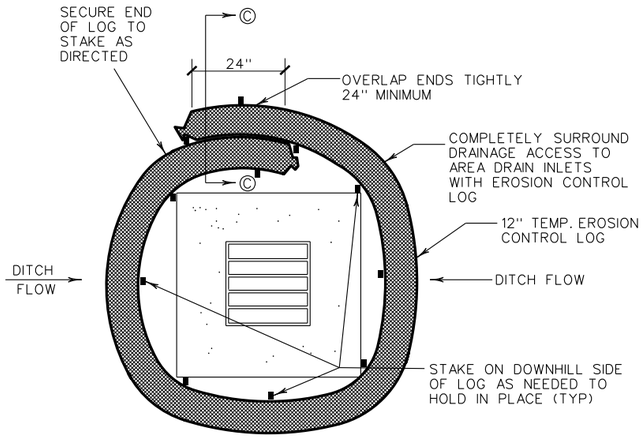
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

CONSTRUCTION EXITS

EC(3)-16

FILE:	DN: TxDOT	CK: HEJ	DW: BD	CK:
© TxDOT:	CONT	SECT	JOB	HIGHWAY
REVISIONS	0921	02	311	ALAMO
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		111

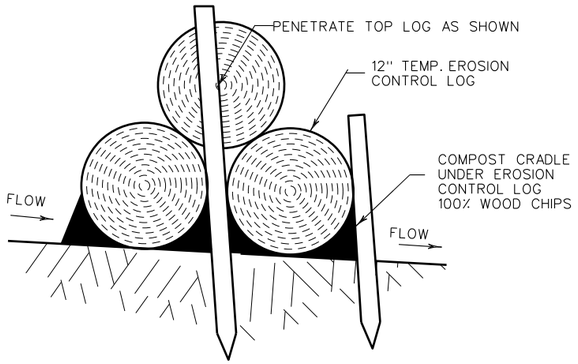
DISCLAIMER :
The use of this standard is governed by the Texas Engineering Practice Act. No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



DROP INLET SEDIMENT TRAP

NTS

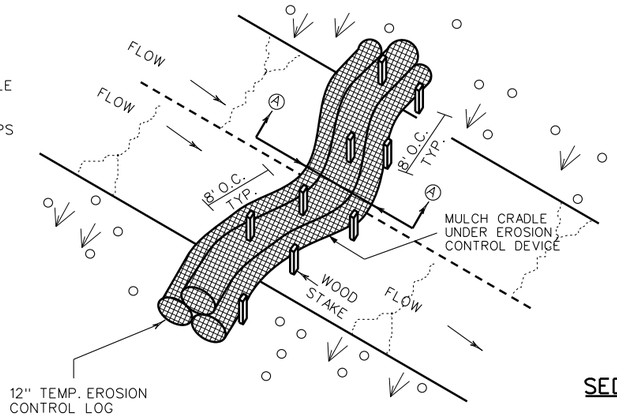
DI-ST



SECTION A-A

DITCH LINE SEDIMENT TRAP A-A

DL-ST



DITCH LINE SEDIMENT TRAP

DL-ST

PLANS SHEET LEGEND

DI-ST — DROP INLET SEDIMENT TRAP

DL-ST — DITCH LINE SEDIMENT TRAP

BOCI-ST — BACK OF CURB INLET SEDIMENT TRAP

ROW-ST — RIGHT OF WAY SEDIMENT TRAP

CI-ST — CURB INLET SEDIMENT TRAP

SEDIMENT BASIN & TRAP USAGE GUIDELINES

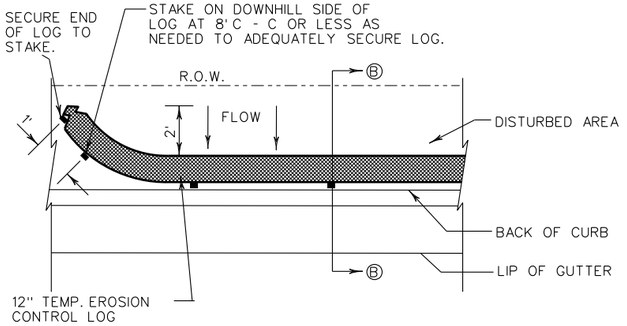
A sediment trap may be used to precipitate sediment out of runoff draining from an unstabilized area.

Traps: the drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Sediment traps should be placed in the following locations:

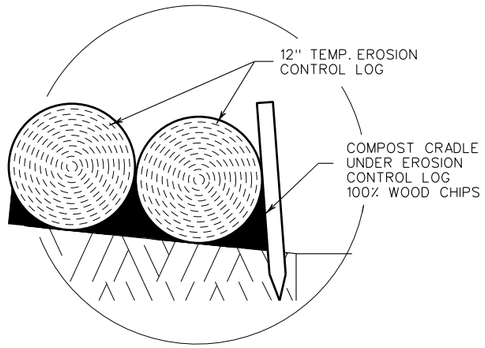
1. Immediately preceding drain inlets
2. Just before the drainage enters a water course
3. Just before the drainage leaves the right of way
4. Just before the drainage leaves the construction limits where drainage flows away from the project

The trap should be cleaned when the capacity has been reduced by ½ or the sediment has accumulated to a depth of 1', whichever is less. Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for seperately.



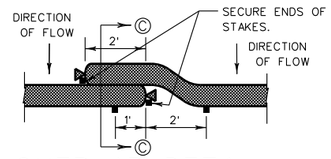
PLAN VIEW

NTS



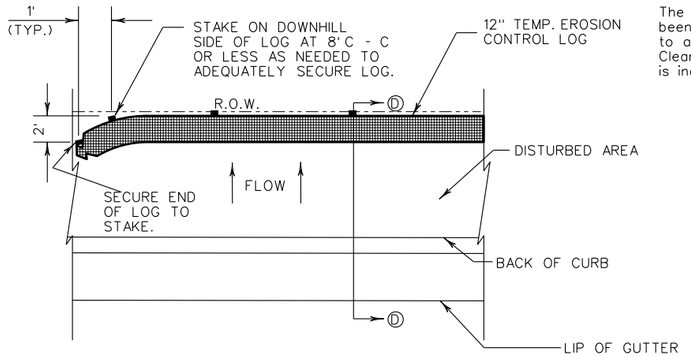
SECTION C-C

OVERLAP WITH COMPOST CRADLE



OVERLAP DETAIL PLAN VIEW

NTS

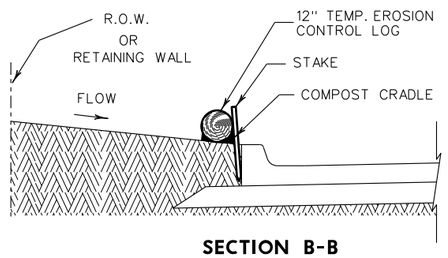


PLAN VIEW

NTS

GENERAL NOTES

1. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED. MAXIMUM LENGTH OF LOGS SHALL BE 30' FOR 12" DIAMETER LOGS.
2. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
3. STUFF LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE DENSITY THAT WILL HOLD SHAPE WITHOUT EXCESSIVE DEFORMATION.
4. STAKES SHALL BE 2" X 2" WOOD 4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG.
5. COMPOST CRADLE MATERIAL IS INCIDENTAL AND WILL NOT BE PAID FOR SEPARATELY.

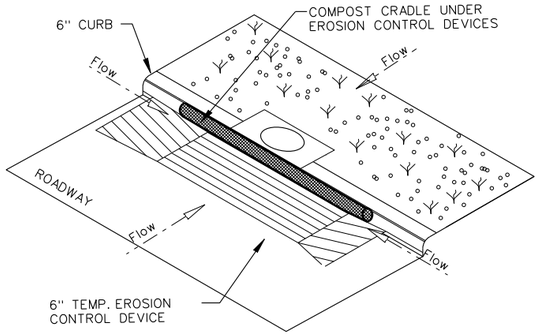


SECTION B-B

BACK OF CURB INLET SEDIMENT TRAP

NTS

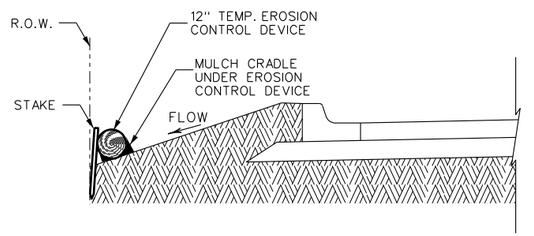
BOCI-ST



CURB INLET SEDIMENT TRAP

NTS

CI-ST



SECTION D-D

RIGHT-OF-WAY SEDIMENT TRAP

NTS

ROW-ST

PHARR DISTRICT STANDARD

Texas Department of Transportation

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TEMPORARY EROSION CONTROL LOGS
TECL-17 (PHR)

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
6			AL AMO
STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	HIDALGO	112
CONTROL	SECTION	JOB	
0921	02	311	

LEVELS DISPLAYED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

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Exhibit “A”

General Notes & Standard Specifications

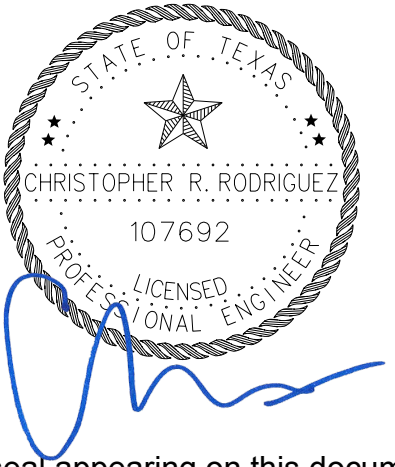
Control : **N/A**

Project : **North Alamo Road Realignment Project**

Location : **FM 1925 (Monte Christo Rd.) to 0.54 miles North**

County : **Hidalgo**

The enclosed Texas Department of Transportation Specifications, Special Specifications, Special Provisions, General Notes and Specification Data in this document have been selected by me, or under my responsible supervision as being applicable to this project. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.



The seal appearing on this document was authorized by
Christopher R. Rodriguez, P.E.
October 27, 2017

County: Hidalgo **Control:** 0921-02-311

Highway: Alamo Rd.

GENERAL NOTES:

Use the Texas Department of Transportation's "Standard Specifications for Construction And Maintenance of Highways, Streets, And Bridges" (November 2014) for item specifications information and requirements. The specification book shall read "Hidalgo County Precinct No. 4" in lieu of "The Texas Department of Transportation" and/or "The Department".

****

GENERAL REQUIREMENTS AND COVENANTS TO ITEMS 1L THRU 9L

For all pits or quarries, comply with the "Texas Aggregate Quarry and Pit Safety Act."

Provide on a weekly basis a list of equipment, including idle equipment, utilized on the project that week.

Contact the 1-800 call services for locations of utilities before beginning any scarifying or excavating operations. The 1-800 call services for utility locations do not include TxDOT facilities. Contact the Pharr District Signal Section (956-702-6225) for coordination regarding TxDOT underground lines.

ITEM 5L: Control of the Work

Prior to contract letting, bidders may obtain a free computerized transfer of files (from the Engineer's office) that contains the earthwork information. If copies of the actual cross-sections in addition to, or instead of the electronic files are requested, they will be available at the Engineer's office for borrowing by copying companies for the purpose of making copies for the bidder at the bidders' expense.

ITEM 8L: Prosecution and Progress

Prepare progress schedules using the Critical Path Method (CPM).

Working days will be completed and charged in accordance with Article 8.3.1.4 Standard Workweek.

County: Hidalgo **Control:** 0921-02-311

Highway: Alamo Rd.

ITEM 100: Preparing Right of Way

Clearing & grubbing shall be executed in accordance with the District Clearing and Grubbing detail sheets.

Preparation of ROW will be done in accordance with the construction phasing shown on the Traffic Control Plans. Performance of this item will not be allowed outside of the project's current construction phase without prior approval by the Engineer.

ITEM 132: Embankment

Embankment (DENS CONT) shall be Type C with a max. PI of 40. Material used as embankment material in the top two feet below the bottom of Flexible Base shall meet the following requirements based on preliminary tests and such other tests found necessary by the Engineer.

1. The material shall be such as to produce a well-bonded embankment and shall have a minimum PI of 8 and a maximum PI of 30.

It is the Contractor's responsibility to advise the Engineer of the location of the source sufficiently in advance to avoid delay.

ITEM 160: Topsoil

Use topsoil as needed and directed by the project engineer for select problem areas. Unless otherwise approved by the project engineer, use topsoil from approved sources outside the right of way as per standard specifications. Existing topsoil is to be salvaged and retained for re-use on the project as topsoil.

ITEM 164: Seeding for Erosion Control

During drill seeding operations, application methods shall be in accordance with the method shown in the Standard Specification Book.

SS-1 Tacking Agent shall be a ratio of 2:1, two (Emulsion) to one (water), and applied at a rate of 0.05 gallons per square yard. The SS-1 Tacking Agent required for Drill Seed operations, will not be paid for directly, but will be subsidiary to Item 164 "Drill Seeding." Watering shall not be used with the Drill Seed Method.

Cool Season or Warm Season Grasses shall be included as part of Item 164 (See Table 3 and/or Table 4 in the Standard Specification Manual for dates and seed type).

Seed mixture shall be as specified under Item 164.

ITEM 166: Fertilizer

Fertilizer rate is based on a rate of 100 Lbs. of Nitrogen per acre. The Nitrogen-Phosphorous-Potassium (NPK) ratio shall include a minimum of 5 percent phosphorous and 5 percent Potassium. Fertilizer shall be homogenized.

ITEM 247: Flexible Base

Flexible Base Type E will be composed of caliche (argillaceous Limestone, calcareous or calcareous clay particles) and may contain stone, conglomerate, gravel, sand, or granular materials when these materials are in situ with the caliche.

Flexible Base (TY E GR 4) or (TY D GR 4) crushed concrete shall conform to the following requirements:

Retained on Sq. Sieve	Percent Retained
2”	0
½”	20-60
No. 4	40-75
No. 40	70-90
Max. PI:	15
Max. Wet Ball PI:	15
Wet Ball Mill Max Amount:	50
Min. Comp. Strength PSI:	150 at 15 PSI lateral pressure
Triaxial Test	Tex-117-E

The Wet Ball Test (Tex-116-E) shall be run and the Plasticity Index of the material passing the No. 40 sieve shall be determined (Wet Ball PI).

Two (2) percent lime (by weight) will be incorporated into the Flexible Base in the field at the State's expense in accordance with the provisions of Items 260.

The percent of density as determined by Compaction Ratio (Tex-113-E) for the new Flexible Base shall be a minimum of 98%.

The Contractor's attention is called to the fact that certain existing and/or proposed structures may be within the limits of the Flexible Base. It shall be the Contractor's responsibility to perform construction operations without damage to these structures.

For water added under Item 247, the sulfate content will not exceed 3000-ppm and the chloride content will not exceed 3000-ppm.

Perform base ride quality testing for all bases with only one lift of ACP or a seal coat as the final surface in accordance with the Pharr District Special Provision for flex base ride testing. Perform base ride quality testing before placing the ACP or seal coat.

ITEM 260: Lime Treatment (Road Mixed)

The Contractor's attention is called to the fact that certain existing and/or proposed structures are within the limits of the lime-treated Subgrade. Unless otherwise directed by the Engineer, these structures shall be installed before the final rolling of this Subgrade. It shall be the Contractor's responsibility to perform the proper lime treating operation without damage to these structures.

The slurry method of applying lime will be required, except when the lime is to be added to naturally wet materials as directed by the Engineer.

For this project, the Engineer will direct a random number of lime trucks to be check weighed.

The percent of density as determined by Tex-121-E for the new and salvage Flexible Base shall be a minimum of 98% for all courses.

Proof roll all constructed lime treated subgrade and bases courses in accordance with Item 216, “Proof Rolling.” Correct soft spots as directed. Correction of soft spots in the subgrade or base courses will be at the Contractor’s expense.

ITEM 275: Cement Treatment (Road-Mixed)

Proof roll all constructed cement treated subgrade and bases courses in accordance with Item 216, “Proof Rolling.” Correct soft spots as directed. Correction of soft spots in the subgrade or base courses will be at the Contractor’s expense.

ITEM 300: Asphalts, Oils, and Emulsions

Temporary ramps/detours and driveways may use performance grade binder 64-22.

ITEM 301: Asphalt Anti-stripping Agents

Hydrated Lime shall be added as an Anti-stripping additive between the rates of 1 % minimum and 2.0% maximum by weight for item 341. If the Hamburg wheel test cannot be met within these limits, Liquid Anti-stripping agents as approved by the Engineer may be used in conjunction with lime for item 341.

ITEM 302: Aggregates for Surface Treatments

The aggregate for the surface treatment shall be surface dry before application unless otherwise directed by the Engineer.

ITEM 310: Prime Coat

The Contractor shall exercise diligence in the application of asphalt by the use of flagging and rolling procedures to keep from spraying or splattering the traveling public with asphaltic material.

Do not apply subsequent courses over the initial prime coat any earlier than the day after the prime coat was applied, unless otherwise authorized or directed by the Engineer.

ITEM 314: Emulsified Asphalt Treatment

The Contractor shall exercise diligence in the application of emulsified asphalt by the use of flagging to keep from spraying or splattering the traveling public with asphaltic material.

ITEM 316: Seal Coat

In addition to cleaning by brooming of paved surfaces to be sealed as required by this Item, blading may also be necessary to clean dirt and grass from edges of the pavement and/or turnout areas. The cost of this blading will not be paid for directly but will be considered subsidiary to the various bid Items of the project.

County: Hidalgo **Control:** 0921-02-311

Highway: Alamo Rd.

The type and grade of asphalt as shown on the plans and/or as directed by the Engineer shall be used on these projects. Asphalt cement will be used during the warm season. An emulsified asphalt will be used during the cooler season if permitted in writing by the Engineer. The emulsified asphalt, if used, shall be HFRS 2P. Estimated quantities shown for the bid Item are based on an average of the estimated rates of application for asphaltic cement and emulsified asphalt. These rates should be used for estimating and comparison purposes only.

The one or two-course surface treatment shall be in place for a sufficient period of time in the opinion of the Engineer, for the surface treatment to properly dry and cure before placing the Asphaltic Concrete Pavement.

Traffic will not be permitted on the surface treatment unless authorized by the Engineer.

When emulsified asphalt is used, do not apply subsequent courses over the surface treatment any earlier than the day after the surface treatment was applied, unless otherwise authorized or directed by the Engineer.

ITEM 341: Dense-Graded Hot-Mix Asphalt

The contractor shall exercise diligence in the application of "Tack Coat" by the use of flagging and rolling procedures to keep from spraying or splattering the traveling public with asphaltic material.

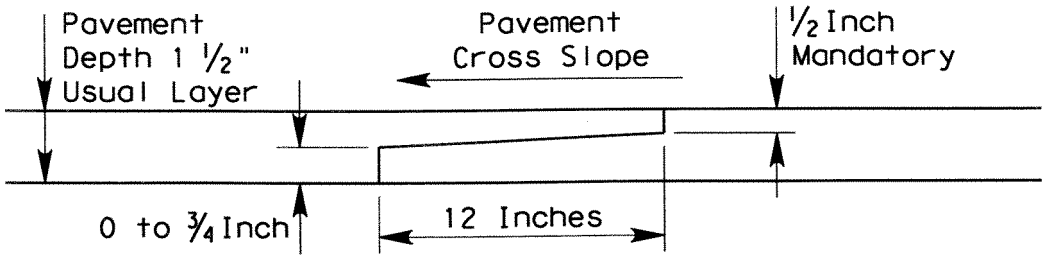
Blading (not to exceed more than 3-ft from the pavement edge) may also be necessary to clean dirt and grass from pavement edges and turnout areas as work under this bid Item. The cost of this blading will not be paid for directly but shall be considered subsidiary to this bid Item.

This project will require the following minimum surface aggregate Classifications:

County	CSJ	Highway	Classification
Hidalgo	0921-02-311	Alamo Rd.	A

Level-up will be placed before the surface course. An asphaltic concrete spreading and finishing machine and/or motor graders; when approved by the Engineer may be used to place the ACP level-up.

All unconfined longitudinal joints shall be constructed with a joint maker providing a maximum ½-inch vertical edge and a minimum 6:1 edge taper or as approved by the Engineer.



NOTCHED WEDGE JOINT

The engineer may allow for variances to the dimensions shown.

The Hamburg Wheel Test requirement for PG 64 binder will be 5,000 passes @ 0.5-inch rut depth.

Target Lab Molded Density for this project shall be 97%.

Public and private driveways need to have a smooth vertical transition between the edge of pavement and the existing driveways. The contractor is to add a vertical taper if needed which will be subsidiary to Item 341.

The use of RAP and RAS will not be allowed as part of the mix design for the final riding surface.

Use a release agent from the Department's MPL to clean and to coat the inside of truck beds for hauling equipment. Hauling equipment shall be cleaned prior to hauling material to job site. Submit a copy of the bill of lading to the Engineer as part of the QCP. Ensure the pavement is free from any spillage of hydraulic oil or diesel from construction equipment. The County may reject trucks that contain any foreign material and suspend production if the pavement is contaminated by any pollutants mentioned above.

The percentage of RAS used in the total mix shall not exceed 3% when allowed. The use of only pre-consumer shingles will be permitted when RAS is allowed.

SAC B aggregate must have material properties that require 5 or less on the magnesium sulfate soundness test and 15 or less on the Micro-Deval test.

ITEM 354: Planing and Texturing Pavement

Contractor is to place seal coat or ACP layer(s) as indicated on plans within 14-calendar days of planning/milling operation unless otherwise directed by the engineer.

All planing/milling operation drop-offs greater than 1-inch need to have a 3:1 slope taper unless otherwise directed by the engineer. The cost of the 3:1 slope taper is subsidiary to item 354.

For full-width planing/milling locations, contractor is to place seal coat or ACP layer(s) as indicated on the plans within 2-calendar days of the planing/milling operation unless otherwise directed by the engineer. Contractor will not be allowed to move onto the next planning/milling location or seal coat/ACP overlay location until the exposed area is covered as per above. Contractor cannot get paid for the planning/milling operation until exposed area is covered as per above.

ITEM 400: Excavation and Backfill for Structures

If the Contractor elects to cut pavement (existing/detour) for structural work beyond that required by the construction phasing shown in the plans and approved by the Engineer, it shall be restored at his expense and backfilled to its original condition or better in accordance with Item 400.

Unless shown otherwise in the plans, use a 1-ft depth for Item 400 Structural Excavation (Special) for gravel bedding needed below drainage structures with unstable material.

ITEM 432: Riprap

Provide Class "A" concrete minimum for riprap aprons placed around all box culvert and pipe safety end treatments. Provide ¼-inch thick dummy joints at least every 15-ft for riprap aprons placed around box and pipe culverts.

Do not use fiber-reinforced concrete RIPRAP on side slopes equal to or steeper than 6:1 unless approved by the engineer.

ITEM 464: Reinforced Concrete Pipe

Use tongue and groove pipe where the RCP extends into the lime-treated subgrade. The 4-foot depth restriction for heavy equipment passage over pipe structures is voided. The Contractor will be responsible for any construction damage to these facilities.

Do not use mortar joints.

All reinforced concrete pipes shall include rubber gaskets unless shown otherwise on the plans or directed by the engineer.

County: Hidalgo **Control:** 0921-02-311

Highway: Alamo Rd.

ITEM 465: Junction Boxes, Manholes & Inlets

For TY PSL with RG, FG, or SFG lid inlets, provide Class B concrete riprap with (6"x6" W3xW3 (no. 6 gauge) welded wire fabric) for any side that is touching the natural ground. The riprap will be 4-in thick and 3-ft wide with an 8-in deep by 6-in wide toe unless otherwise shown in the plans. The cost will be subsidiary to Item 465 unless otherwise shown in the plans.

ITEM 467: Safety End Treatment

All Type II SET's shall have riprap, Class "A" minimum, aprons as shown on the plans. The contractor may submit an alternate precast SET design for approval by the Engineer.

ITEM 471: Frames, Grates, Rings, and Covers

All grates will be tack welded to the frames in a manner satisfactory to the Engineer.

ITEM 502: Barricades, Signs, and Traffic Handling

Shadow vehicles equipped with Truck-Mounted Attenuators are required.

Replace/relocate all regulatory signs removed due to construction operations with the same sign on fixed support(s) immediately upon its removal. First, obtain project Engineer approval before removing any regulatory roadway sign. Required flaggers are to be available to direct traffic during sign intermediate downtime.

Relocate any Directional Sign Assemblies removed during construction operations immediately upon their removal.

These signs shall be relocated to a location in accordance with the Latest Version of the "Texas Manual on Uniform Traffic Control Devices". In no case will a sign be removed without a replacement sign and support(s) being readily available and a location established. Removal and relocation of these signs required for traffic control will not be paid for directly but shall be considered subsidiary to Item 502.

From the beginning to the end of the project, all traffic control devices need to be in acceptable condition as per the Texas Quality Guidelines for Work Zone Traffic Control Devices.

ITEM 504: Field Office and Laboratory

For this project, a field office will not be required at the project site.

The Contractor will furnish a Type D Structure (Asphalt Mix Laboratory) modified by the following.

Laboratory room:

The other room of this building will be used as a laboratory and will include access to a bathroom facility from the interior. The laboratory and bathroom facility will have the walls, ceiling and floor insulated such that the air temperature can be maintained at 76 degrees Fahrenheit at all times.

Furnish for the County's use in the asphalt laboratory one (1) desktop computer.

ITEM 530: Intersections, Driveways, and Turnouts

Prime coat shall meet the requirements of Item 310.

Daily testing requirements for Hot Mix Asphaltic Concrete Pavements for drives, commercial entrances, and/or turnouts may be waived by the Engineer.

Public and private driveways need to have a smooth vertical transition tie-in between the proposed driveway and the existing driveway. The contractor is to add a vertical taper if needed which will be subsidiary to Item 530.

ITEM 585: Ride Quality for Pavement Surfaces

Use Surface Test Type "A" for all pavement surfaces within the project limits.

Diamond grinding shall be used to remove localized roughness.

Pay adjustment schedules are not applicable to this project.

ITEM 618, Conduit

All conduit ends in pole bases, controllers, and ground boxes shall be plugged with 4 to 6 inches of polyurethane sealant or its equivalent after cables are in place.

Conduit shall be placed in a straight line not to exceed 2.0 feet in any direction. The depth of the conduit shall be 1.5 feet except when crossing a roadway where the depth shall not be more than 3.0 feet nor less than 1.0 foot below the bottom of the base material in the roadway when placed by the jacking or boring method. Any evidence of damage to the roadway during the jacking or boring operation shall be sufficient grounds to stop the method being used.

Conduit runs under paved roadways or driveways shall be jacked or bored and then pushed across. At these locations, galvanized rigid metal may be used. All other runs shall be made by trenching. Existing pavement that will be removed, reconstructed, or overlaid with new pavement may be trenched across.

Trenches for conduit runs shall be a minimum of 2 feet deep and 4 inches wide. The conduit shall be placed on a 2-inch sand cushion and then backfilled with a minimum of 6 inches sand fill. The remainder of the trench shall be backfilled with flexible base, soil, or two-sack concrete as required by location of conduit on the project or as directed. The top 3 inches shall match the existing surface material.

All conduit elbows and rigid extensions required to be installed on PVC conduit systems will not be paid for separately but will be considered subsidiary to the various bid items.

Use materials from prequalified material producers list as shown on the Texas Department of Transportation (TxDOT) - Construction Division's (CST) materials producers list. Category is "Roadway Illumination and Electrical Supplies."

ITEMS 636: Aluminum Signs

Complete sign blanks and panels shall be handled and stored at the job site in such a manner that corners, edges, and faces are not damaged. Finished sign blanks shall be stored in either a weather-proof warehouse or outside and off the ground in a vertical position. All paper, cardboard, and chemically treated separators and packaging shall be removed prior to outside storage.

ITEM 644: Small Roadside Sign Assemblies

All signs shall be installed as shown in the plans and in accordance with the current edition of the "Texas Manual on Uniform Traffic Control Devices" and the "Sign Crew Field Book" (SCFB).

All signs shall be erected according to the locations shown on the signing layout sheets except that a sign may be shifted in order to secure a more desirable location. All sign locations will be staked as shown in the plans and as approved. It is the intent of the plans to erect all roadside traffic signs with the sign edge a minimum of 6 feet from the edge of the shoulder, or if none, 12

feet from the edge of the travel lane. In curb and gutter sections the sign edge shall be a minimum of 2 feet from the face of the curb.

For this project, aluminum-type sign blanks as provided for under Item 636 will be required for all proposed signing installed under Item 644. Aluminum sign blanks less than 7.5 square feet shall be 0.08 inch thick, sign blanks 7.5 to 15 square feet shall be 0.100 inch thick and sign blanks greater than 15 square feet shall be 0.125 inch thick.

All excess excavation shall be spread uniformly inside the right of way as directed and shall be included in the price of these Items.

Sign types in which design details are not shown on the plans shall conform with the latest edition of the Department's "Standard Highway Sign Design for Texas" Manual.

Signs shown to be removed shall include the complete sign installation and separate the signpost at the concrete foundation. The concrete foundation shall be disposed of in accordance with this Bid Item. Except for concrete foundations, all removed sign panels, signposts, and hardware shall remain the property of the county. All removed sign installations shall be completely disassembled. All salvageable sections of sign panels shall be recycled and remain property of the county. The removed sign material will be required to be hauled to the maintenance yard closest to the project. No signs shall be removed without prior approval.

ITEM 658, Delineator and Object Marker Assemblies

Delineator assemblies shall be installed 8 feet from the edge of the shoulder unless restricted by some obstruction, in which case, the delineator assembly shall be placed between 2 and 8 feet from the edge of the shoulder.

Bi-directional object markers shall be in accordance with the D&OM standard sheets. The contractor is directed to the standards when instructed where and how to install the object markers.

ITEMS 662 and 666: Work Zone Pavement Markings and Retroreflectorized Pavement Markings

All permanent pavement markings and work zone pavement markings for this project under these Items shall be 0.100 inches (100 mil) thick thermoplastic.

Any permanent pavement markings or non-removal work zone pavement markings lacking reflectivity in accordance with test method Tex 828-B, or that fail to meet minimum retro-reflectivity requirements for longitudinal pavement markings when required, will not be paid. The roadway will be re-striped at no additional compensation.

Pavement surface preparation for markings and markers will not be paid for directly, but shall be considered subsidiary to Item 666.

Prior to any striping operations, an on-site coordination meeting between all the parties involved will be required to review striping details and requirements to ensure quality work.

The beads used on this project shall meet the requirements of Departmental Materials Specification DMS-8290, Glass Traffic Beads Texas Type II & III. Use a 50% Type II/ 50% Type III mix utilizing a double drop system with Type III beads dropped first.

For expressway projects, provide channelizing devices at the ramp connections when temporary pavement marking tabs are placed. These channelizing devices will be subsidiary to item 502.

ITEM 677: Eliminating Existing Pavement Markings and Markers

Asphalt and aggregate types and grades shall be as approved in writing when a surface treatment is used to eliminate existing pavement markings.

ITEM 680, Installation of Highway Traffic Signals

The installation of highway traffic signals shall consist of the following principal Items:

1. Conduit
2. Pull boxes
3. Loop Detectors
4. Traffic Signal cable
5. Connections of new loop detectors to existing controller cabinet, in accordance with the phasing diagram in the plans
6. Ensure traffic signal is operating properly with new Alamo Rd approach, north of FM 1925

Any deviation of location for proposed signal work shall be as approved.

Existing utilities

The exact location of existing underground utilities shall be verified with the utility companies prior to construction to avoid conflict with or damage to these utilities.

The coordination with the utility companies will be required to make any adjustments, due to utility conflicts, as defined in the specifications or deemed necessary.

Uniformity in equipment

1. All loop detector amplifiers furnished shall be by the same manufacturer and of the same type.

Handling of traffic

Roads and streets shall be kept open to traffic at all times. The setting of loop detectors shall be arranged so as to close only one lane of a roadway at a time. The installation of signal heads, poles, and conduit shall also be arranged so as to permit the continuous movement of traffic in both directions at all times.

All construction operations shall be conducted to provide the least possible interference to traffic as shown on the plans, as provided for in the specifications and/or as directed. All signing, barricading and handling of traffic shall conform to the current edition of the "Texas Manual on Uniform Traffic Control Devices".

Sequence of work

1. The existing traffic signal installations and/or flashing beacon installations shall remain in operation at all times during construction of the proposed traffic signal and/or flashing beacon installations or modifications.
2. Final inspection shall be performed in conjunction with the district signal shop.

ITEM 684: Traffic Signal Cables

All signal cable shall be #12 AWG; 2/c loop. Lead-In shall be #14 AWG shielded and loop wires in pavement.

ITEM 688: Pedestrian Detectors and Vehicle Loop Detectors

Any deviation of location for proposed loop detector work shall be as approved.

County: Hidalgo **Control:** 0921-02-311

Highway: Alamo Rd.

Install loop vehicle detectors in accordance with plan Standard Sheet LD1-03 (Loop Detector Installation Details). All loop detectors shall be rectangular.

Splices for loop wire will be permitted only at ground boxes or pole base with approved weather-proof splice kits.

A minimum length of 2 feet for each cable shall be left in each ground box.

All wiring not covered by the plans and specifications shall be in accordance with the latest edition of the National Electrical Code.

CONTROL: 0921-02-311
HIGHWAY: N. ALAMO PROJ.
COUNTY : HIDALGO

TEXAS DEPARTMENT OF TRANSPORTATION

GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

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.

STANDARD SPECIFICATIONS:

ITEMS 1L TO 9L INCL., GENERAL REQUIREMENTS, AND COVENANTS
ITEM 100 PREPARING RIGHT OF WAY (4L)(5L)(6L)(103)
ITEM 110 EXCAVATION (9L)(132)
ITEM 132 EMBANKMENT (7L)(9L)(100)(160)(204)(210)(216)(260)(400)
ITEM 160 TOPSOIL (7L)(168)
ITEM 164 SEEDING FOR EROSION CONTROL (162)(166)(168)
ITEM 168 VEGETATIVE WATERING
ITEM 204 SPRINKING
ITEM 247 FLEXIBLE BASE (4L)(9L)(105)(204)(210)(216)(520)
ITEM 260 LIME TREATMENT (ROAD-MIXED)
(4L)(105)(204)(210)(216)(247)(300)(310)(520)
ITEM 275 CEMENT TREATMENT (ROAD-MIXED)
(4L)(132)(204)(210)(216)(247)(300)(310)(520)
ITEM 310 PRIME COAT (300)(316)
ITEM 316 SEAL COAT (210)(300)(302)(520)
ITEM 341 DENSE-GRADED HOT-MIX ASPHALT (5L)(6L)(300)(301)(320)(520)(585)
ITEM 354 PLANING AND TEXTURING PAVEMENT (5L)
ITEM 400 EXCAVATION AND BACKFILL FOR STRUCTURES
(7L)(9L)(110)(132)(401)(402)(403)(416)(420)(421)(423)
ITEM 402 TRENCH EXCAVATION PROTECTION
ITEM 432 RIPRAP (247)(420)(421)(431)(440)
ITEM 464 REINFORCED CONCRETE PIPE (9L)(400)(402)(403)(467)(476)
ITEM 465 JUNCTION BOXES, MANHOLES AND INLETS (400)(420)(421)(424)(440)(471)
ITEM 467 SAFETY END TREATMENT (400)(420)(421)(432)(440)(442)(445)(460)(464)
ITEM 500 MOBILIZATION
ITEM 502 BARRICADES, SIGNS AND TRAFFIC HANDLING (5L)(9L)
ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS
(161)(432)(556)
ITEM 530 INTERSECTIONS, DRIVEWAYS, AND TURNOUTS
(247)(260)(263)(275)(276)(292)(316)(330)(340)(360)(421)(440)
ITEM 618 CONDUIT (9L)(400)(476)
ITEM 624 GROUND BOXES (420)(421)(432)(440)(618)(620)
ITEM 644 SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES
(421)(440)(441)(442)(445)(636)(643)(656)
ITEM 658 DELINEATOR AND OBJECT MARKER ASSEMBLIES (9L)(445)

ITEM 666 REFLECTORIZED PAVEMENT MARKINGS (9L)(316)(502)(662)(677)(678)
ITEM 672 RAISED PAVEMENT MARKERS (9L)(677)(678)
ITEM 680 HIGHWAY TRAFFIC SIGNALS
(416)(610)(618)(624)(625)(628)(636)(656)(682)(684)(686)(688)
ITEM 684 TRAFFIC SIGNAL CABLES (9L)
ITEM 688 PEDESTRIAN DETECTORS AND VEHICLE LOOP DETECTORS
(9L)(324)(618)(624)(682)(684)

SPECIAL PROVISIONS:

SPECIAL PROVISIONS WILL GOVERN AND TAKE PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED HEREON WHEREVER IN CONFLICT THEREWITH.

REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS
(FORM FHWA 1273, MAY, 2012)

WAGE RATES
SPECIAL PROVISION "SCHEDULE OF LIQUIDATED DAMAGES" (000---001L)
SPECIAL PROVISION "NONDISCRIMINATION" (000---002L)
SPECIAL PROVISION "CERTIFICATION OF NONDISCRIMINATION IN EMPLOYMENT"(000-003L)
SPECIAL PROVISION "NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (000---004L)"
SPECIAL PROVISION "STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS" (000---005L)
SPECIAL PROVISION "DISADVANTAGED BUSINESS ENTERPRISE IN FEDERAL AID CONTRACTS" (000-394L)
SPECIAL PROVISION "INSTRUCTIONS TO BIDDERS" (002-0011L)
SPECIAL PROVISION "LEGAL RELATIONS AND RESPONSIBILITIES" (007-001L)
SPECIAL PROVISION "EXCAVATION AND BACKFILL FOR STRUCTURES" (400-001)
SPECIAL PROVISION "TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS" (506-001L)

SPECIAL SPECIFICATIONS:

N/A

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 LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFICATIONS FOR THIS PROJECT.

Foreword

OUTLINE OF SPECIFICATIONS

Each specification is outlined by articles and sections. The basic articles required for a specification are:

1. DESCRIPTION
2. MATERIALS
3. EQUIPMENT
4. CONSTRUCTION OR WORK METHODS
5. MEASUREMENT
6. PAYMENT

Some articles are not used in every item. Measurement and Payment articles are combined when the work described is subsidiary to bid items of the Contract.

HIERARCHY OF ORGANIZATIONAL ELEMENTS

Here “XXX” represents the item number. The hierarchy of organizational elements available below the item level is as follows:

XXX.1., Article
XXX.1.1., Section
XXX.1.1.1., Section
XXX.1.1.1.1., Section
XXX.1.1.1.1.1., Section
XXX.1.1.1.1.1.1., Section

The term section is used for all breaks below the article.

Items 1L–9L

General Requirements and Covenants

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

AAN	American Association of Nurserymen
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
AWPB	American Wood Preservers Bureau
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
DFPA	Douglas Fir Plywood Association
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
ITE	Institute of Transportation Engineers
LG	Local Government
LRFD	Load and Resistance Factor Design
MASH	Manual for Assessing Safety Hardware
MPL	Material Producer List (TxDOT document)
NBFU	National Board of Fire Underwriters
NCHRP	National Cooperative Highway Research Program
NCR	Nonconformance Report (TxDOT form)
NEC	National Electrical Code (Published by NFPA)
NEMA	National Electrical Manufacturers Association
NEPA	National Environmental Policy Act
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NIST	National Institute of Standards and Technology
NRM	Nonhazardous Recyclable Material
NRMCA	National Ready Mixed Concrete Association
NSBA	National Steel Bridge Alliance
NTPEP	National Transportation Product Evaluation Program
OSHA	Occupational Safety & Health Administration, U.S. Department of Labor
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PE	Professional Engineer
PPI	Plastics Pipe Institute
PS&E	Plans, Specifications, and Estimates
PSL	Project-Specific Location
PTI	Post-Tension Institute
QA	Quality Assurance
QC	Quality Control
RCP	Reinforced Concrete Pipe

RPLS	Registered Public Land Surveyor
RRC	Railroad Commission of Texas
SBE	Small Business Enterprise
SFPA	Southern Forest Products Association
SI	International System of Units
SPIB	Southern Pine Inspection Bureau
SSPC	The Society for Protective Coatings
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TDLR	Texas Department of Licensing and Regulation
TGC	Texas Government Code
TMUTCD	Texas Manual on Uniform Traffic Control Devices
TxDOT	Texas Department of Transportation
UL	Underwriters Laboratory, Inc.
USC	United States Code
WRI	Wire Reinforcement Institute
WWPA	Western Wood Products Association

3. DEFINITIONS

3.1. Abrasive Blasting. Spraying blasts of pressurized air combined with abrasive media.

3.2. Act of God. An accident or event resulting from natural causes, without human intervention or agency, and one that could not have been prevented by reasonable foresight or care – for example, floods, lightning, earthquake, or storms.

3.3. Actual Cost. Contractor's actual cost to provide labor, material, equipment, and project overhead necessary for the work.

3.4. Addendum. Change in bid documents developed between advertising and bid submittal deadline.

3.5. Advertisement. The public announcement required by law inviting bids for work to be performed or materials to be furnished.

3.6. 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 capaOwner 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, 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.

3.7. Air Blasting. Spraying blasts of pressurized air free of oil and moisture.

3.8. 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.

3.9. Alternate. A variation in the Work in which Owner requires a price separate from the Base Bid. If an Alternate is accepted by Owner, the variation shall become a part of the Contract through award of the Contract and the Base Bid shall be adjusted to include the amount quoted as stated in the Notice of Award to Contractor. If an Alternate is accepted by Owner, and later deleted, Owner shall be entitled to a credit in the full value of the Alternate as priced in Contractor's Bid Proposal.

3.9.1. 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.

3.9.2. 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.

3.10. 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 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 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. Base Bid. The total bid amount for the Work before Alternates are considered.

3.15. 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.

3.16. Bid Bond. The security executed by the Contractor and the Surety furnished to Owner to guarantee payment of liquidated damages if the Contractor fails to enter into an awarded Contract.

3.17. Bid Documents. The complete set of documents necessary for a Bidder to submit a bid. The documents include but are not limited to plans, specifications, special specifications, special provisions, addenda, general conditions, and the prescribed form a Bidder is to submit as the Bid.

3.18. Bid Error. A mathematical mistake made by a Bidder in the unit price entered into the bid documents.

3.19. Bid Form. The portion of the bid documents that a prospective Bidder must submit to Owner for their bid to be considered.

3.20. Bidder. An individual, partnership, limited liability company, corporation, or joint venture submitting a bid for a proposed Contract.

3.21. Blast Cleaning. Using one of the blasting methods, including, but not limited to, water blasting, low-pressure water blasting, high-pressure water blasting, abrasive blasting, water-abrasive blasting, shot blasting, slurry blasting, water injected abrasive blasting, and brush blasting.

3.22. 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.

3.23. Brush Blasting. Sweeping lightly with an abrasive blast to remove loose material.

3.24. 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.

3.25. Calendar Day Contract. This is a seven (7) calendar day per week contract.

- Time will be charged for all calendar days regardless of weather conditions, materials, or supplies, which could impede the prosecution of the work.
- Owner may suspend the work and the "Time Charge" in accordance with Article 8L.5, "Temporary Suspension of Work or Day Charges" when conditions not under the control of the Contractor, other than those described above, prohibit the performance of the critical activity or activities which control the completion of the project as determined by the schedule submitted in accordance with Article 8L.1, "Prosecution of Work."
- Owner may suspend the work and the "Time Charge," in accordance with Article 8L.5, on any holiday, on the day(s) preceding the holiday and/or on the day(s) following the holiday if Owner and the Contractor mutually agree the Contractor should not work. Such suspension shall be based upon (a) past experience as to the volume of holiday traffic that may be expected and (b) the hazard that project operations would present to the traveling public and/or the Contractor's personnel.
- Work on Owner holidays will not be permitted except with the written permission of Owner.

3.26. Certificate of Insurance. A form approved by Owner covering insurance requirements stated in the Contract.

3.27. Owner. The County of Hidalgo, and identified as "Owner" in the Contract and these General Conditions, is referred throughout the Contract Documents as if singular in

number. Whenever the term "Owner" is found in this Contract or the Contract Documents, such term shall include Owner's agents, elected officials, employees, officers, directors,, representatives, successors and assigns.

3.28. Commissioners Court I. The duly elected members of the commissioners court of Hidalgo County, Texas .

3.29. Change Order / Amendment. A written modification of the Contract prepared by Owner and approved by Owner and Contractor, (and approved by the Comissioner Court Owner , if required) and utility provider if needed, which authorizes an addition, deletion or revision in the Work or an adjustment in the Contract Sum or the Contract Times and is issued on or after the Effective Date of the Contract.

3.30. Claim. A demand or assertion by one of the Parties seeking, as a matter of right, an adjustment or interpretation of Contract terms, payment of money, extension of time or other relief, with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between Owner and Contractor arising out of or relating to the Contract. Claims must be initiated by written notice. Except as contemplated by Section 8L.7 herein, every Claim of Contractor, whether for additional compensation, additional time or other relief including, but not limited to, claims arising from concealed conditions, shall be signed and sworn to by an authorized corporate officer (if not a corporation, then an official of the company authorized to bind Contractor by his/her signature) of Contractor, verifying the truth and accuracy of the Claim. The responsibility to substantiate a Claim shall rest with the Party making the Claim.

3.31. Concrete Construction Joint. A joint formed by placing plastic concrete in direct contact with concrete that has attained its initial set.

3.32. Concrete Repair Manual. TxDOT manual specifying methods and procedures for concrete repair as an extension of the standard specifications.

3.33. ConcreteWorks©. TxDOT-owned software for concrete heat analysis. Software is available on the TxDOT's website.

3.34. Construction Contract. A Contract entered under State law for the construction, reconstruction, or maintenance of a segment of Owner's transportation system.

3.35. Construction Observer/Inspector or COI. The authorized representative of the, or its designee department, assigned by Owner to observe and inspect any or all parts of the Project and the materials to be used therein. Also referred to herein as Resident Inspector.

3.36. Consultant / Design Consultant. Unless the context clearly indicates otherwise, a person registered as an Architect pursuant to Tex. Occupations Code Ann., Chapter 1051, a Landscape Architect pursuant to Texas Occupations Code, Chapter 1052, and/or a person licensed as a Professional Engineer pursuant to Texas Occupations Code, Chapter 1001, or a firm employed by Owner to provide professional architectural or engineering services and exercising overall responsibility for the design of a Project or a significant portion thereof, and performing certain contract administration responsibilities as set forth in its

Contract and these General Conditions. If the employment of a Design Consultant is terminated, Owner shall employ a new Design Consultant whose status under the Contract Documents shall be that of the former Design Consultant.

3.37. Contract. The Contract Documents which represent the entire and integrated agreement between Owner and Contractor and supersede all prior negotiations, representations or agreements, either written or oral. The terms and conditions of the Contract Documents may be changed only in writing by a Field Work Directive, Change Order or Amendment. The Contract Documents shall not be construed to create a contractual relationship of any kind between:

- Design Consultant and Contractor;
- Owner and a Subcontractor or Sub-Subcontractor; or
- Any persons or entities other than Owner and Contractor.

3.38. Contract Documents. The Construction Contract between Owner and Contractor, which consists of, but is not limited to, the following: the Notice of Award, , the solicitation documents and other contract-related documents, which include:

- General Conditions;
- Special Conditions included by Special Provisions or addenda;
- Drawings;
- Specifications
- Addenda issued prior to the close of the solicitation period;
- Other documents listed in the Contract, including Field Work Directives, Change Orders and/or Amendments; and
- A written order/field adjustment for a minor change in the Work issued by Owner.

The geotechnical and subsurface reports which Owner may have provided to Contractor specifically are excluded from the Contract Documents.

3.39. Contract Time. Unless otherwise provided, the period of time, including any authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work. When the plural (Contract Times) is used, it refers to milestones designated in the Work Progress Schedule.

3.40. Contractor. The entity entering into a Contract with Owner to complete the Work. Contractor, as used herein, includes Construction Manager at Risk or other applicable entities performing work under a Contract with Owner.

3.41. 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.

3.42. 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.

3.43. Control Point. An established point shown on the plans to provide vertical and horizontal references for geometric control for construction.

3.44. Cross-Sections. Graphic representations of the original ground and the proposed facility, at right angles to the centerline or base line.

3.45. Culvert. Any buried structure providing an opening under a roadway for drainage or other purposes. Culverts may also be classified as bridges. (See Section 1L.3.22., "Bridge.")

3.46. Cycle. The activity necessary for performing the specified work within the right of way project limits once.

3.47. Daily Road-User Cost. Damages based on the estimated daily cost of inconvenience to the traveling public resulting from the work.

3.48. Date of Written Authorization. Date of the written Notice to Proceed authorizing the Contractor to begin work.

3.49. Day. As used in the Contract Documents shall mean Calendar Day, unless otherwise specifically defined. A Calendar Day is a day of twenty-four (24) hours, measured from midnight to the next midnight, unless otherwise specifically stipulated. A working day is measured from sunrise to sundown Monday through Saturday, except Owner holidays, or the hours during which Contractor has been authorized and/or directed to work by Owner.

3.50. Debar (Debarment). Action taken by Owner, State, or federal government pursuant to regulation that prohibits a person or company from bidding on or 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.

3.51. Department. When used in the context of the party with whom the Contractor has a Construction Contract, Department refers to Owner,a precinct of Owner or a department designated by Owner When used in other contexts such as technical specifications, refers to the Texas Department of Transportation.

3.52. Departmental Material Specifications. Reference specifications for various materials published by TxDOT's Construction Division with a DMS-XXXXX numbering system.

3.53. Detour. A temporary traffic route around a closed portion of a road.

3.54. 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.

3.55. 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.

3.56. Divided Highway. A highway with separate roadways intended to move traffic in opposite directions.

3.57. Drawings. The graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of Work, generally including elevations, sections, details, schedules and diagrams.

3.58. Easement. A real property right acquired by one party to use land belonging to another party for a specified purpose.

3.59. Engineer. The Professional Engineer licensed in Texas who represents the interests of Owner.

3.60. Entity. Political subdivision for which the project is designed and constructed. Either a Municipality () or a County or other entity organized under the authority of State of Texas statutes. May also be referred to as a Owner.

3.61. Expressway. A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at intersections.

3.62. Family Member. An 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.

3.63. Field Work Directives. A written order signed by Owner directing a change in the Work prior to agreement and adjustment, if any, in the Contract Sum and/or Contract, as further defined in XXX herein.

3.64. Final Acceptance. The date certified by Owner, in accordance with Article 5L herein, when the Work is fully complete in accordance with the Contract Documents and Contractor has provided all required documentation.

3.65. Force Account. Payment for directed work based on the actual cost of labor, equipment, and materials furnished with markups for project overhead and profit, as negotiated.

3.66. Freeway. An expressway with full control of access.

3.67. 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).

3.68. Hazardous Materials, Waste or Substances. Hazardous materials or waste or substances include:

- any asbestos or any material which contains any hydrated mineral silicate, including chrysolite, amosite, crocidolite, tremolite, anthophylite or actinolite, whether friable or non-friable;
- any polychlorinated biphenyls ("PCBs"), or PCB-containing materials, or fluids;

- radon;
- any other hazardous, radioactive, toxic or noxious substance, material, pollutant, or solid, liquid or gaseous waste; any pollutant or contaminant (including but not limited to petroleum, petroleum hydrocarbons, petroleum products, crude oil or any fractions thereof, any oil or gas exploration or production waste, any natural gas, synthetic gas or any mixture thereof, lead, orother toxic metals) which in its condition, concentration or area of release could have a significant effect on human health, the environment, or natural resources;
- any substance that, whether by its nature or its use, is subject to regulation or requires environmental investigation, monitoring, or remediation under any federal, state, or local environmental laws, rules, or regulations;
- any underground storage tanks, as defined in 42 U.S.C. Section 6991(1)(A)(I) (including those defined by Section 9001(1) of the 1984 Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq.; the Texas Water Code Annotated Section 26.344; and Title 30 of the Texas Administrative Code Sections 334.3 and 334.4), whether empty, filled or partially filled with any substance; and
- any other hazardous material, hazardous waste, hazardous substance, solid waste, and toxic substance as those or similar terms are defined under any federal, state, or local environmental laws, rules, or regulations.

3.69. High-Pressure Water Blasting. Water blasting with pressures between 5,000 and 10,000 psi.

3.70. 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.

3.71. 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.

3.72. Holidays. Fourteen (14) designated Owner holidays. For dates beyond the then-current calendar year, Contractor shall assume Owner holidays are the same as the current calendar year.

3.73. 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.

3.74. Independent Assurance Tests. Tests used to evaluate the sampling and testing techniques and equipment used in the acceptance program. The tests are performed by Owner or Owner's representative and are not used for acceptance purposes.

3.75. Inspector. The person assigned by County to inspect any or all parts of the work and the materials used for compliance with the Contract.

3.76. Intelligent Transportation System. An integrated system that uses video and other electronic detection devices to monitor traffic flows.

3.77. 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.

3.78. 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.

3.79. Joint Venture. Any combination of individuals, partnerships, limited liability companies, or corporations submitting a single bid form.

3.80. 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.

3.81. Letting. The receipt, opening, tabulation, and determination of the apparent low Bidder.

3.82. Letting Official. Owner representative empowered by Owner to officially receive bids and close the receipt of bids at a letting.

3.83. 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.

3.84. 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.

3.85. Local Street or Road. A street or road primarily for access to residence, business, or other abutting property.

3.86. Low-Pressure Water Blasting. Water blasting with pressures between 3,000 and 5,000 psi.

3.87. Major Bid 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 Bid Item at the time of bid will remain a Major Bid Item. An item not originally a Major Bid Item does not become one through the course of the Contract.

3.88. Material Change in Quantity. An increase or decrease of twenty five percent (25%) or more of the units of an individual bid item or an increase or decrease of twenty five percent (25%) or more of the dollar value of a lump sum bid item.

3.89. Material Producer List. TxDOT-maintained list of approved products. Referenced as "Department's MPL".

3.90. 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 Owner.

3.91. 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.

3.92. Median. The portion of a divided highway separating the traffic lanes in opposite directions.

3.93. 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.

3.94. Monolithic Concrete Placement. The placement of plastic concrete in such manner and sequence to prevent a construction joint.

3.95. 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.

3.96. 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.

3.97. Nonresponsive Bid. A bid that does not meet the criteria for acceptance contained in the bid documents.

3.98. 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.

3.99. Notice of Award. Owner's notification to Contractor that its bid has been accepted and a contract authorized by Commissioners Court.

3.100. Notice to Proceed. Written notification given by Owner to the Contractor establishing the date on which the Contract time shall commence to run and the date on which Contractor may begin performance of its contractual obligations. Herein also referred to as Work Project Authorization or NTP.

3.101. Notification. Either written instruction to the Contractor concerning the work. Voice mail is oral notification.

3.102. Owner. See County.

3.103. Owner's Designated Representative (ODR). The Owner's Designee.

3.104. Pavement. That part of the roadway having a constructed surface for the use of vehicular traffic.

3.105. Pavement Structure. Combination of surface course and base course placed on a subgrade to support the traffic load and distribute it to the roadbed.

3.105.1. 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.

3.105.2. Base Course. One or more layers of specified material thickness placed on a subgrade to support a surface course.

3.105.3. Subgrade. The top surface of a roadbed upon which the pavement structure, shoulders, and curbs are constructed.

3.105.4. Subgrade Treatment. Modifying or stabilizing material in the subgrade.

3.106. Payment Bond. The security executed by the Contractor and the Surety, furnished to Owner to guarantee payment of all legal debts of the Contractor pertaining to the Contract.

3.107. Performance Bond. The security executed by the Contractor and the Surety, furnished to Owner to guarantee the completion of the work in accordance with the terms of the Contract.

3.108. Plans. The approved drawings, details and supplemental drawings, or reproductions thereof, produced and sealed by the Consultant and approved by Owner, showing the location, character, dimensions, and details of the work and are a part of the Contract. Plans include standard details issues and sealed by the Engineer or its representative.

3.109. Post Qualification. 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.

3.110. 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.

3.111. Prequalification. The process for determining a Contractor's eligibility to bid work.

3.112. Prequalification Statement (TxDOT). The forms on which required information is furnished concerning the Contractor's ability to perform and finance the work.

3.113. Prequalified Contractor. A contractor that is approved to bid on TxDOT contracts by satisfying their Prequalification Process.

3.114. Product Data. Illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by Contractor to illustrate materials or equipment for some portion of the Work.

3.115. Project. The total design and construction of Work performed under the Contract Documents and may be the whole or a part of the Project and which may include construction by Owner or by separate contractors. All references in these General Conditions to or concerning the Work or the Site of the Work shall use the term "Project", notwithstanding that the Work referenced only may be a part of the Project.

3.116. Project Management Team. Comprised of Owner, its representatives, Engineer and Program Manager (if any) for this Work.

3.117. 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.

3.118. Proposal Guaranty. The security furnished by the Bidder as a guarantee that the Bidder will enter into a Contract if awarded the work.

3.119. Qualification. The process for determining a Contractor's eligibility to be awarded a construction contract.

3.120. Quality Assurance. Sampling, testing, inspection, and other activities conducted by Owner to determine payment and make acceptance decisions.

3.121. Quality Control. Sampling, testing, and other process control activities conducted by the Contractor to monitor production and placement operations.

3.122. Ramp. A section of highway for the primary purpose of making connections with other highways.

3.123. Referee Tests. Tests requested to resolve differences between Contractor and Owner test results. The referee laboratory is the Owner's selected laboratory.

3.124. Regular Item. A bid item contained in the bid documents and not designated as an additive alternate or replacement alternate bid item.

3.125. Rental Rate Blue Book for Construction Equipment. Publication containing equipment rental rates.

3.126. Replacement Alternate. A bid item identified on the bid documents that a Bidder may substitute for a specific regular item of work.

3.127. Responsive Bid. A bid that meets all requirements of the advertisement and the bid documents for acceptance.

3.128. Right of Way. A general term denoting land or property devoted to transportation purposes.

3.129. Road Master. A railroad maintenance official in charge of a division of railway.

3.130. 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.

3.131. 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.

3.132. Roadway. The portion of the highway (including shoulders) used by the traveling public.

3.133. Samples. Physical samples of materials, equipment or workmanship representative of some portion of the Work, furnished by the Contractor to Owner, to assist in the establishment of workmanship and quality standards by which the Work shall be judged.

3.134. Sandblasting, Dry. Spraying blasts of pressurized air combined with sand.

3.135. Sandblasting, Wet. Spraying blasts of pressurized water combined with sand.

3.136. Shop Drawings. Drawings, diagrams, illustrations, schedules, performance charts, brochures and other data prepared and furnished by Contractor or its agents, manufacturers, suppliers or distributors and which illustrate and detail some portion of the Work.

3.137. 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.

3.138. Shot Blasting. Spraying blasts of pressurized air combined with metal shot.

3.139. Sidewalk. Portion of the right of way constructed exclusively for pedestrian use.

3.140. Site. The land(s) or area(s) (as indicated in the Contract Documents) furnished by Owner, upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

3.141. Slurry Blasting. Spraying blasts of pressurized air combined with a mixture of water and abrasive media.

3.142. 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.

3.143. Special Conditions. Terms and conditions to a contractual agreement which supplement and are superior to these General Conditions and grant greater authority or impose greater restrictions upon Contractor, beyond those granted or imposed in these General Conditions.

3.144. Special Provisions. Additions or revisions to these standard specifications or special specifications.

3.145. Special Specifications. Supplemental specifications applicable to the Contract not covered by these standard specifications.

3.146. Specifications. That portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards, workmanship for the Work, performance of related services and other technical requirements.

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. Owner will consider incorporation of subsequent changes to these documents in accordance with Item 4L, "Scope of Work."

3.147. State. The State of Texas.

3.148. Station. A unit of measurement consisting of 100 horizontal feet.

3.149. 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.

3.150. 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.

A Subcontractor is defined and used herein as a person or entity that has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor, Sub-Consultant or an authorized representative of Subcontractor or Sub-Consultant.

3.151. 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.

3.152. Substantial Completion. The date certified by Owner, in accordance with Article 5L.14 herein, when the Work, or a designated portion thereof, is sufficiently complete in accordance with the Contract Documents so as to be operational and fit for the intended use by Owner.

3.153. 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.

3.154. Superintendent. The on project site representative of the Contractor who is available at all times and able to receive and fulfill instructions from Owner or authorized Owner representatives and to act for the Contractor. The Superintendent or his/her designee shall supervise and direct the construction Work.

3.155. 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.

3.156. Supplemental Agreement. Written agreement entered into between the Contractor and Owner and approved by the Surety, covering alterations and changes in the Contract. A supplemental agreement is used by Owner whenever the modifications include assignment of the Contract from one party to another or other cases as desired by Owner.

3.157. 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.

3.158. Surplus Materials. Any debris or material related to the Contract but not incorporated into the work.

3.159. Suspension – Contract. Action taken by 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.

3.160. Suspension – Time. A period when Owner temporarily stops Work on a project.

3.161. Temporary Bench Marks / TBM. Temporary affixed marks which establish the exact elevation of a place; TBMs are used by surveyors in measuring site elevations or as a starting point for surveys.

3.162. Tex –XXX-X. TxDOT material test methods found on TxDOT's Construction Division Web Site.

3.163. Traffic Lane. The strip of roadway intended to accommodate the forward movement of a single line of vehicles.

3.164. Traveled Way. The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

3.165. Truck Owner-Operator. An individual who owns and operates 1 truck for hire.

3.166. Underground Facilities. All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilitie4s or attachments, and ay encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable televisions, water, sewage and drainage removal, traffic or other control systems.

3.167. 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.

3.168. Verification Tests. Tests used to verify accuracy of QC and QA and mixture design testing.

3.169. Water Blasting. Spraying blasts of pressurized water of at least 3,000 psi.

3.169.1. Water-Abrasive Blasting. Spraying blasts of pressurized water combined with abrasive media.

3.169.2. Water-Injected Abrasive Blasting. Abrasive blasting with water injected into the abrasive/air stream at the nozzle.

3.170. Wholly-Owned Subsidiary. A legal entity owned entirely by the Contractor or subcontractor.

3.171. Work. The construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, materials, equipment and services provided or to be provided by the Contractor, or any Subcontractors, Sub-Subcontractors, material suppliers or any other entities for which Contractor is responsible, to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

3.172. Written Notice. Any notice, payment, statement or demand required or permitted to be given under this Contract by either Party to the other may be effected by personal delivery in writing or by facsimile transmission, email or by mail, postage prepaid, or by overnight delivery to an officer, management level employee or other designated representative of either Party. Mailed or email notices shall be addressed to the Parties at an address designated by each Party, but each Party may change its address by written notice. Mailed notices shall be deemed received as of three (3) calendar days after mailing.

3.173. Other Definitions. As used in the Contract Documents, the following additional terms have the following meanings:

- "provide" means to furnish, install, fabricate, deliver and erect, including all services, materials, appurtenances and all other expenses necessary to complete in place and ready for operation or use;
- "shall" means the mandatory action of the party of which reference is being made;
- "as required" means as prescribed in the Contract Documents; and
- "as necessary" means all action essential or needed to complete the work in accordance with the Contract Documents and applicable laws, ordinances, construction codes and regulations.
- "party" shall refer to Owner or Contractor individually
- "parties" shall refer to Owner and Contractor collectively

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." 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 Owner or its designee 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

By submitting this Bid/Proposal, Respondent:

- affirms that it is duly authorized to execute the proposed contract, Respondent's company, corporation, firm, partnership or individual has not prepared this Bid/Proposal in collusion with any other Respondent and the contents of this Bid/Proposal, with regard to prices, terms or conditions of said Bid/Proposal, neither have been communicated by Respondent nor by any employee or agent of Respondent to any other person engaged in this type of business, prior to the public Bid/Proposal opening or official award of this contract, as applicable.
- represents, to the best of its knowledge, it is not indebted to the Owner (hereafter referred to as (Owner"). Respondent acknowledges indebtedness to Owner may be basis for non-award of a contract and/or cancellation of any contract award.
- This is a public works contract and Chapter 2258 of the Texas Government Code requires not less than the prevailing wage rate for work of a similar character in this locality shall be paid to all laborers, workmen and mechanics employed in the construction of this Project. This includes overtime regulations. Respondent shall refer to the wage decision posted with this solicitation to determine the prevailing wage rates that shall be utilized for work on this Project.
- certifies it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform services at any location under Respondent's control where segregated facilities are maintained.
- certifies in accordance with the guidelines referenced below, that neither Respondent nor its principal(s) presently are debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal department or agency.

2.1. Prequalification by TxDOT. Bidders on this project must be prequalified though TxDOT as of the date of the bid opening. Refer to TxDOT's web site for prequalification requirements.

2.2. Guidelines for Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions. By signing and submitting this Bid/Proposal, a prospective lower tier participant is providing the certification set out below. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it later is determined that a prospective Subcontractor and/or SubConsultant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, Owner may pursue available remedies, including suspension and/or debarment.

2.2.1. A prospective lower tier participant shall provide immediate written notice to Owner if, at any time, the prospective lower tier participant learns that its certification was erroneous when submitted or had become erroneous by reason of changed circumstances.

2.2.2. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal and voluntarily excluded, as used in this Section have the meaning set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. Owner may be contacted for assistance in obtaining a copy of those regulations.

2.2.3. A prospective lower tier participant agrees, by submitting this Bid/Proposal, should a contract be entered into, knowingly shall not enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, 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.

2.2.4. A prospective lower tier participant further agrees, by submitting this Bid/Proposal, 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.

2.2.5. Respondent may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible or voluntarily excluded from covered transactions, unless it knows that the certification is erroneous. Respondent may decide the method and frequency by which it determines the eligibility of its principals. Respondent may, but is not required to, check the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

2.2.6. 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 Respondent is not required to exceed that which normally is possessed by a prudent person in the ordinary course of business dealings.

2.2.7. Except for transactions authorized under Section 2L.2.3.4., if Respondent knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, Owner may pursue available remedies, including suspension and/or debarment.

2.3. Owner Officers or Employees of Owner. Contractor acknowledges that no officer or employee of Owner shall have financial interest in any Contract with Owner.

2.4. Non-discrimination., Contractor shall not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, veteran status, age or disability, unless Contractor is exempted by state or federal law, or as otherwise established herein. Contractor covenants that it shall take all necessary actions to insure that, in connection with any Work under this Contract, Contractor and its Subcontractor(s) shall not discriminate in the treatment or employment of any individual or groups of individuals on the grounds of race, color, religion, national origin, sex, sexual orientation, gender identity, veteran status, age or disability, either directly, indirectly or through contractual or other arrangements. Contractor also shall comply with all applicable requirements of the Americans with Disabilities Act, 42 U.S.C.A. §§12101-12213, as amended.

3. ISSUING BID DOCUMENTS

Plans and specifications are obtainable from the Engineer , as set forth in the published Invitation for Bid (IFB) or Request for Competitive Sealed Proposal (RFCSP).

The Drawings, Specifications and other documents, including those in electronic form, prepared by Engineer, its Sub-Consultants or other Consultants retained by Owner for the Project, which describe the Work to be executed by Contractor (collectively referred to as the “Construction Documents”) are and shall remain the property of Owner, whether the Project for which they are made is executed or not.

When the work is governed by reference to standards, building codes, manufacturer's instructions or other documents, unless otherwise specified, the edition currently in place as of the date of the submission of the bid shall apply.

Responses by Owner shall be given in writing to all prospective Respondents in Addendum form. All information, provisions and requirements of such issued addenda shall supersede or modify the affected portions of the Project Plans and/or Specifications. All issued addenda shall be incorporated into the Project’s Contract Documents. No other explanation or interpretation shall be considered official or binding upon the Owner.

Addenda. All addenda shall be incorporated in and made a part of the Project’s contract documents. No other explanation or interpretation shall be considered official or binding upon the Owner. All addenda related to this Project shall be posted on the Owner’s website with this solicitation. It is Respondent’s responsibility to obtain any and all issued Project addenda. Non-compliance with this provision by Respondent or its agent may result in the disqualification of Respondent’s Bid/Proposal from consideration.

Addendum Acknowledgement Form. The Respondent's submitted Bid Proposal shall be based on Respondent's investigation and knowledge of the conditions at the Project Site, the Specifications, the Plans and any Addenda to the Specifications and/or Plans issued during the time of advertisement prior to bidding. The Bidders shall sign and submit the Addendum Acknowledgement Form with the Bid Packet.

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

Respondent shall make all investigations necessary to thoroughly inform itself of conditions at the Project site, as well as the Project's Specifications, Plans and any Addenda to the Specifications and/or Plans issued by Owner. No plea of ignorance by Respondent of conditions which exist or may hereafter exist, as a result of failure or omission on the part of Respondent to make the necessary examinations and investigations, or failure to fulfill in every detail the requirements of the Contract Documents, shall be accepted as a basis for varying the requirements of Owner or the compensation to Respondent.

5.1. Examining Documents. Respondent thoroughly shall examine the drawings, specifications, schedule(s), instructions and all other solicitation and contract documents.

Prospective Respondent only shall contact Owner in writing, at minimum ten (10) calendar days prior to scheduled submittal deadline if discrepancies, ambiguities and/or omissions are found in the Project Plans and/or Specifications, or if further information or clarification is desired.

5.2. Site Investigation.

5.2.1. The submittal of a Bid/Proposal by Respondent shall constitute an admission that Respondent fully has examined the location of the proposed Work related to the subject Project and the requirements of the Project's Work. Respondent shall be familiar with all of the Contract Documents and other Owner instructions, including Respondent's ability to submit inquiries to Owner before submitting a Bid/Proposal, so that no misunderstanding shall exist with Respondent regarding the nature and character of the Work to be performed on the subject Project. No allowance shall be made by Owner for any claim made by Respondent that Respondent's Bid/Proposal is based upon incomplete information as to the nature and character of the Project site or the Work involved.

5.2.2. After investigating the Project site and comparing the Plans and Specifications and other Contract Documents with the existing conditions, Respondent immediately shall notify Owner of any conditions for which the requirements of labor and materials are not clear and pose any question regarding the quantity and extent of the Project Work involved.

Respondent inquiry/notifications to Owner shall be made in writing at least ten (10) calendar days prior to the scheduled solicitation deadline.

5.2.3. It is understood and acknowledged by Respondent that full and complete allowance for conditions under which Respondent shall be required to perform Work, or that will in any manner affect Work under this Contract, are included and reflected in the Respondent's Bid/Proposal. When applicable, if a soils investigation was conducted, in preparation of the Project Plans and Specifications, this information shall be available to Respondent for review at the Engineer's office and any cost paid by Respondent to purchase a copy of said soils investigation from Engineer is non-refundable. THIS INFORMATION SHALL BE MADE AVAILABLE TO RESPONDENT WITHOUT EXPRESS OR IMPLIED REPRESENTATION, ASSURANCE, WARRANTY OR GUARANTEE BY OWNER OR ENGINEER THAT THE INFORMATION IS COMPLETE OR CORRECT OR THAT IT REPRESENTS A TRUE OR APPROXIMATELY TRUE PICTURE OF THE SUB-SURFACE CONDITIONS TO BE ENCOUNTERED ACROSS THE PROJECT'S PROPOSED WORK SITE. THIS INFORMATION SPECIFICALLY IS NOT PART OF THE CONTRACT DOCUMENTS. Borings, soil profiles, water elevations, and underground utilities shown on the plans were obtained for the use of Owner in the preparation of plans. This information is provided for the Bidder's information only and 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.

5.2.4. Before submitting its Bid/Proposal, Respondent may, at Respondent's own expense, make reasonable work site investigations and tests as Respondent may deem necessary to determine its Bid/Proposal for performance of the Work, in accordance with the Contract Documents. Access for such investigations and tests shall be coordinated with Owner.

5.2.5. If Respondent detects an error in Project quantities reflected on the specifications or in the solicitation documents, Respondent's submitted unit price for an item shall govern. Respondent shall notify Owner in writing of such error by indicating in the comments section of the bid/pricing form or beside the item on Owner's proposal form or computer printout referenced in Section 2L.6.3. below. Respondent shall not attempt to correct the detected error on its own by inflating/deflating its unit pricing.

6. PREPARING THE BID

6.1. All information required by the solicitation shall be furnished in Respondent's submittal or the Bid/Proposal may be deemed nonresponsive.

6.2. Respondent shall complete the " Bid Form" and include the completed form in Owner's solicitation documents. Failure to complete and submit the Bid Form shall render Respondent's proposal being deemed nonresponsive.

6.3. If applicable to the Project, Respondent shall only submit unit pricing on the Unit Price Form provided by Owner with the solicitation documents or submit an original computer printout sheet bearing certification by and signature of Respondent. The unit prices shown

on acceptable printouts shall be the unit prices used to tabulate Respondent's Bid/Proposal and shall be used in the contract, if awarded by Owner. As a minimum, computer printouts shall contain the information in the arrangement shown on the Unit Pricing form, if applicable, which shall be included in Owner's solicitation documents. Unit prices, if applicable to the Project, shall be inserted on the Unit Pricing Form under the "UNIT BID PRICE" column. Extensions, which are Respondent's unit prices multiplied by the approximate quantities listed for each item, shall be inserted in figures in the "Amount" column. Bids/Proposals not submitted on Owner's Unit Pricing Form or on approved computer printout sheets shall be considered nonresponsive. Conditional Bid/Proposals or unbalanced Bid/Proposals shall be considered nonresponsive.

If the Bid/Proposal submitted by Respondent contains both the form furnished by Owner, completed according to the instructions, and also a computer printout, completed according to the instructions, only the computer printout will be used to determine Respondent's Bid/Proposal. A Schedule of Values for all of the Work shall be submitted by Contractor and shall include quantities and prices of items which, when added together, equal a contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Unless stipulated otherwise, all bonds, insurance, profit, and overhead (General Conditions costs) shall be included in the 025 Unit Price Form line items.

6.4. Alternates. If applicable to the Project, Respondent shall submit a unit price for each Work element pay item in Respondent's Bid/Proposal, except in the case of an alternate being listed in the solicitation, as described below. In the case of alternates included in the solicitation, Respondent shall follow the procedure as follows:

6.4.1. Additive Alternate(s): In the case of Additive Alternates, unit prices shall be submitted separately for the base Bid/Proposal and all items comprising the additive alternate(s).

6.4.2. Substitute Alternate(s): In the case of Substitute Alternates (Substitute Alternates appear in sets of two or more related alternates), unit prices shall be submitted separately for all items comprising the base Bid/Proposal and for all items comprising the related substitute alternates in each set.

6.5. Allowances.

6.5.1. Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by Allowances shall be supplied for such amounts and by such persons or entities as Owner may direct, but Contractor shall not be required to employ persons or entities to whom Contractor has reasonable objection.

6.5.2. Unless otherwise provided in the Contract Documents:

6.5.2.1. Allowances shall cover the cost to Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

6.5.2.2. Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses, contemplated for stated allowance, shall be included in the allowances.

6.5.2.3. Materials and equipment under an allowance shall be selected by Owner within such time as is reasonably specified by Contractor as necessary to avoid any delay in the Work.

6.6. Blank Spaces. In the event additional or extra blank spaces remain after completion of the various forms, Respondent shall enter the terms "none" or "not applicable" on any remaining blank spaces, as an indication that Respondent has considered Owner requests for information on every line presented.

6.7. Conflict of Interest Questionnaire. Effective January 1, 2006, Chapter 176 of the Texas Local Government Code requires that persons, entities or their agents, which seek to contract for the sale or purchase of property, goods or services with Owner, shall file an original completed Conflict of Interest Questionnaire (hereafter referred to as "CIQ") with Owner Clerk not later than the seventh (7th) business day after the date that the person, entity or agent:

- begins contract discussions or negotiations with Owner; or
- submits to Owner an application, a response to a request for bid, a proposal, correspondence related to a Bid/Proposal or another writing related to a potential agreement with Owner.

The CIQ form is available from the Texas Ethics Commission on line at the following web address: http://www.ethics.state.tx.us/forms/CIQ.pdf.

6.8. Certificate of Interested Parties (Form 1295). Texas Ethics Commision form is required as listed in the IFB.

7. NONRESPONSIVE BID

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 Bidder failed to acknowledge receipt of all addenda issued.
- 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 attend a specified mandatory pre-bid conference.
- The Bidder did not meet the requirements of the technical qualification.
- The Bidder did not include a signed State of Texas Child Support Business Ownership Form.
- The bidder is not prequalified by TxDOT

The bidder does not meet the Owner's qualification requirements.

8. SUBMITTAL OF BIDS

8.1. **Electronic Bids.** At this time, the Owner does not support electronic bids. The Owner reserves the right to institute an electronic bid system in the future, at which time this Section will be updated.

8.2. **Printed Bid**. By submittal of a Bid/Proposal, Respondent certifies and confirms, to the best of its knowledge, all information submitted by Respondent is true and correct. Include all required documents listed in the solicitation.

8.2.1. **Bid Form**. Use the Bid Form provided in the IFB.

8.2.1.1. Contractor acknowledges no lien rights exist, with respect to public property.

8.2.1.2. **Signature Requirement**. Each copy of the Bid shall include the legal name of Bidder and a statement whether Bidder is a sole proprietor, a partnership, or corporation, or any other legal entity, and each copy shall be signed by the person or persons legally authorized to bind the Bidder to a Contract. A Bid by a corporation shall further give the state of incorporation and affix the Corporate Seal thereto. A Bid submitted by a corporate agent for Bidder shall be accompanied by a valid Power of Attorney, attached, certifying the agent's authority to bind Bidder.

8.2.2. **Proposal Guaranty**. Each Bid/Proposal shall be accompanied by an original Bid/Proposal Bond issued by a corporate surety company licensed to conduct business in the State of Texas, in the amount of not less than five percent (5%) of the greatest total amount of the Bid/Proposal, payable without recourse to the order of the Owner. The forms of security submitted by Respondent shall serve as a guarantee, if awarded the Contract, Respondent promptly will enter into an Agreement with Owner, as required by the Contract Documents, and execute Performance and Payment Bonds on provided Owner forms. Respondent acknowledges, accepts and agrees Owner shall not accept Performance and/or Payment Bonds not provided to Owner on a Owner-provided form.

8.2.2.1. Proposal guarantees of the first, second and third-ranked respondents (for RFCSP) or first, second and third lowest bidders (for IFB) shall be retained by Owner until after a Contract Agreement has been executed and the required Payment and Performance Bonds have been received by Owner on Owner-approved forms.

8.2.3. Submittal of Bid. Respondent's Bid/Proposal shall be enclosed in a sealed envelope , as set forth in the Invitation for Bid (hereafter referred to as "IFB") or Request for Competitive Sealed Proposals (hereafter referred to as "RFCSP"). The name and address of Respondent, the date and hour of the Bid/Proposal opening and the title of the Bid/Proposal solicitation shall be placed on the outside of Respondent's envelope.

8.2.4. Revising the Bid Form. Make desired changes to the bid form in ink and submit the bid to the Letting Official. Owner will not make revisions to a bid on behalf of a Bidder.

Bids/Proposals shall be submitted on the forms furnished with this solicitation. Bids/Proposals, however, may be modified if Respondent submits a Bid/Proposal prior to the submission deadline, provided such modifications by Respondent are sealed and received by the Owner as set forth in the IFB or the RFCSP prior to the submission deadline.

Proposal amounts may not be amended or modified in any manner after the Solicitation Deadline reflected in the advertised IFB/RFCSP, except as hereinafter provided.

8.2.5. Withdrawing a Bid. Submit a written request to withdraw a bid before the time and date set for the opening. 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, Owner will accept a request from any person authorized to bind a party to the joint venture. 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.

No Bid/Proposal shall be withdrawn or terminated by Respondent without consent of Owner for a period of ninety (90) calendar days after the solicitation deadline.

8.2.6. Open Information Act. Any bid/proposal, after being opened, becomes subject to the Open Information Act, V.T.C.A. Government Code Chapter 552. Therefore, in the event of Owner receiving an Open Information Request, Respondent clearly must indicate any portion of the submitted bid/proposal which Respondent claims is not subject to public inspection under the Open Information Act.

9. OPENING AND READING OF BIDS

At the time, date, and location specified in the official advertisement, Owner will publicly open and read bids.

Owner shall perform a cursory review of the received bids/submittal to determine if the bids/submittal received and opened are complete, as to required contents, in proper form and properly signed. A Bid/Proposal that obviously is defective on its face shall not be read

aloud at the Bid/Proposal opening, nor will the Bid/Proposal prices included therein publicly be revealed. If a minor clerical error or omission committed by a Respondent is discovered and classified by Owner, in its sole discretion, as a technicality, for which Owner has reserved the right to waive or an applicable law allows Owner the right to waive, Respondent's representative shall have the opportunity to make the appropriate correction after Bid/Proposal opening.

A Bid/Proposal and/or modification received after the time set for the Bid/Proposal deadline and bid/submittal opening (also known as the solicitation deadline) shall not be considered.

10. TABULATING BIDS

10.1. Official Total Bid Amount. 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 2L.11., "Consideration of Bid Errors." 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.

If no additive alternates are included in the Bid, the Owner shall award the Contract to the lowest responsive Bidder. If there are additive/deducting alternates included, they will be considered in the evaluation. The Owner shall award the Contract to the Bidder with the lowest responsive total bid which includes the base and any selected additive/deductive alternates.

10.2. Rounding of Unit Prices. Owner will round off all unit bids involving fractional parts to the nearest tenth cent ($0.01) 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 half a cent ($0.005) or more will be rounded up to the nearest cent, while entries less than half a cent will be rounded down to the nearest cent.

10.3. Interpretation of Unit Prices.

Where there is an error in extension of price, the unit price submitted by Respondent shall govern.

Any blank unit prices shall be tabulated and evaluated as and at "no cost" to the Owner.

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. Owner's determination will be final.

10.4. "Buy America." Comply with Buy America in accordance with Section 6L.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.

Owner, at its sole discretion, may waive any minor informalities or irregularities in any Respondent Bid/Proposal, to include failure to submit sufficient copies of a submitted Bid/Proposal, failure to submit literature or similar attachments or a Respondent's business affiliation information.

12. TIE BIDS

A breaking of tie bids received shall be conducted in accordance with V.T.C.A. Local Government Code § 271.901.

13. RESTRICTION ON COMMUNICATION

Respondent is prohibited from communicating with Owner staff and Owner officials regarding the details of this solicitation, with the following exceptions:

13.1. Respondent's questions or other communication during the Pre-Bid/Pre-Submittal Conference are allowed.

13.2. Written questions and comments concerning this solicitation shall be sent to the Owner's Purchasing Department .

13.3. Respondent and/or its agent(s) are encouraged to contact the Owner's Purchasing Department for questions relating to Disadvantaged Business Enterprise requirements.

13.4. Respondent shall provide responses to any questions asked of it by Owner's Purchasing Department representative before and after Bids/Proposals are received and opened.

14. PREVAILING WAGE RATE AND LABOR STANDARD PROVISIONS

The Provisions of Chapter 2258 of the Texas Government Code, and the "Wage and Labor Standard Provisions" , expressly are made a part of this Contract. The establishment of prevailing wage rates, pursuant to Chapter 2258 of the Texas Government Code, shall not be construed to relieve Contractor from its obligation under any federal or state law, regarding the wages to be paid to or hours worked by laborers, workers or mechanics, insofar as applicable to the work to be performed hereunder. Contractor, in the execution of this Project, agrees it shall not discriminate in its employment practices against any person because of race, color, creed, sex, or origin. Contractor agrees it shall not engage in employment practices which have the effect of discriminating against employees or prospective employees because of race, color, creed, national origin, sex, age, handicap or political belief or affiliation. This Contract provision shall be included in its entirety in all

Subcontractor agreements entered into by the Contractor or any Subcontractor employed on the project.

Item 3L
Award and Execution of Contract

1. AWARD OF CONTRACT

Unless otherwise indicated on the Invitation for Bid (IFB), Owner will award or defer the Contract within 90 days after the opening of the bid or rebid if the lowest bid is higher than Owner's estimate and re-advertising is required. Owner reserves the right to reject any or all bids and to waive technicalities in the best interest of Owner.

1.1. Award.

1.1.1. For an Invitation for Bid, the contract shall be awarded to the lowest responsive and responsible Bidder whose bid, conforms to the requirements of the Owner's IFB and tabulated as per Article 2L.10., "Tabulating Bids."

1.1.2. Pursuant to an Invitation for Bid, a written award of acceptance and an appropriation of funds (as evidenced by Purchase Order) mailed or otherwise furnished to the successful Bidder results in a binding contract between Owner and Bidder without further action by either party.

1.1.3. Although the information furnished to Respondent specified the approximate quantities needed, based on the best available information when a contract is awarded on a unit price basis, payment on a project shall be based on the actual quantities supplied to the project. Following the award of an Invitation for Bid contract, Owner reserves the right to delete items and purchase said deleted items by other means and increase or decrease the quantities bid and adjust the contract value accordingly, in accordance with Chapter § 252.048 of the Texas Local Government Code. No changes in project qualities or changes in a contract's value shall be made without written notification by Owner.

1.1.4. Upon the Owner's Commissioners Court passing of an Order authorizing the issuance of a contract, a Notice of Award Letter shall be sent to Contractor byOwner's Purchasing Department notifying Contractor of the award of a contract. In its Notice of Award Letter, Contractor shall be informed of a date certain by which Contractor's bond(s) and evidence of insurance shall be delivered to Owner's Purchasing Department .

1.1.5. 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 execute a contract with Owner after Award; or
- The second low Bidder's unit bid prices are reasonable.

1.2. Deferral. Owner may defer the award of the Contract when deferral is in the best interest of Owner.

1.3. Representations and Warranties. Contractor represents and warrants the following to Owner (in addition to the other representations and warranties contained in the Contract Documents), as an inducement to Owner to execute this Contract, which representations and warranties shall survive the execution and delivery of the Contract and the Final Completion of the Work, Contractor:

1.3.1. is financially solvent, able to pay its debts as they mature and possessed of sufficient working capital to complete the Work and perform its obligations under the Contract Documents;

1.3.2. is able to furnish the plant, tools, materials, supplies, equipment and labor required to complete the Work and perform its obligations hereunder and has sufficient experience and competence to do so;

1.3.3. is authorized to do business in the State of Texas and properly is licensed by all necessary governmental, public and quasi-public authorities having jurisdiction over it, the Work and the site of the Project;

1.3.4. is acting within its duly authorized powers to execute this Contract and execute the performance and obligations thereof; and

1.3.5. had directed its duly authorized representative(s) to visit the Site of the Work, familiarize itself with the local conditions under which the Work is to be performed and correlated its observations with the requirements of the Contract Documents.

2. RESCINDING OF AWARD

In the event funds are not available, appropriated or encumbered to fund a Project, then, at Owner's discretion, this Contract may be terminated immediately with no additional liability to Owner. 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

Execution of the Contract by Contractor is a representation Contractor has been provided unrestricted access to the existing improvements and conditions on the Project Site, Contractor thoroughly has investigated the visible conditions at the Site and the general local conditions affecting the Work and Contractor's investigation was instrumental in preparing its bid or proposal submitted to Owner to perform the Work. Contractor shall not make or be entitled to any claim for any adjustment to the Contract Time or the Contract Sum arising from conditions which Contractor discovered or, in the exercise of reasonable care, should have discovered in Contractor's investigation.

The failure of Contractor to execute the Contract and deliver the required Bonds and evidence of insurance within ten (10) days after the Contract is awarded, or as soon thereafter as Owner can assemble and deliver the Contract and by the time the Owner-scheduled Pre-Construction meeting is held, shall, at Owner's option, constitute a material breach of Contractor's bid proposal and Owner shall rescind the Contract award and collect or retain the proceeds of the bid security. By reason of the uncertainty of the market prices for materials and labor and it being impracticable and difficult to determine accurately the amount of damages occurring to Owner by reason of Contractor's failure to execute the Contract within ten (10) days and deliver bonds and insurance by the Owner-scheduled Pre-Construction meeting, the filing of a bid proposal shall constitute an acceptance of this Article.

Contractor shall, prior to entering into an agreement with such Subcontractor, notify Owner in writing of the names of all proposed first-tier Subcontractors for the Work.

Contractor, in performing its obligations under this Contract, shall establish and maintain appropriate business standards, procedures and controls, including those necessary to avoid any real or apparent impropriety or adverse impact on the interest of Owner or affiliates. Contractor shall review with Owner, at a reasonable frequency during the performance of the Work hereunder, such business standards and procedures including, without limitation, those related to the activities of Contractor's employees, Subcontractors and agents in their relations with Owner's employees, Consultants, agents, representatives, vendors, Subcontractors, other third parties and those relating to the placement and administration of purchase orders and subcontracts.

4.1. Contract. Executed by Contractor and Surety.

4.2. Bonds. Not later than the Pre-Construction meeting and prior to the commencement of any Work on the Project, Contractor shall deliver such bonds as Contractor may be required to furnish, including, but not limited to, a required payment bond in the form and amount specified in the Contract Documents and these General Requirements and Covenants and a required performance bond in the form and amount specified in the Contract Documents and these General Requirements and Covenants.

Subject to the provisions of Section 3L.4.2.3 herein, Contractor shall, with the execution and delivery of the Contract, furnish and file with Owner, in the amounts required in this Article, the Surety Bonds described in this Section herein, with said Surety Bonds in accordance with the provisions of Chapter 2253, Texas Government Code, as amended. Each Surety Bond shall be signed by Contractor, as the Principal, as well as by an established corporate surety bonding company as surety, meeting the requirements of Section 3L.4.2.4 herein and approved by Owner. The Surety Bonds shall be accompanied by an appropriate Power-of-Attorney clearly establishing the extent and limitations of the authority of each signer to so sign and shall include:

4.2.1. Performance Bond. A good and sufficient Performance Bond in an amount equal to one hundred percent (100%) of the total Contract Sum, guaranteeing the full and faithful execution of the Work and performance of the Contract in accordance with Plans, Specifications and all other Contract Documents, including any extensions thereof, for the

protection of Owner. This Performance Bond also shall provide for the repair and maintenance of all defects due to faulty materials and workmanship that appear within a period of one (1) year from the date of Final Completion or acceptance of the Work by Owner, or lesser or longer periods as otherwise may be designated in the Contract Documents.

4.2.2. Payment Bond. A good and sufficient Payment Bond in an amount equal to 100% of the total Contract Sum, guaranteeing the full and prompt payment of all claimants supplying labor or materials in the prosecution of the Work provided for in the Contract, and for the use and protection of each claimant.

4.2.3. If the Contract Sum, including Owner-accepted Alternates and allowances, if any, is greater than $100,000.00, a Payment Bond and a Performance Bond equaling one hundred percent (100%) of the Contract Sum are mandatory and shall be provided by Contractor. If the Contract Sum is greater than $25,000 but less than or equal to $100,000, only a Payment Bond equaling one hundred percent (100%) of the Contract amount is mandatory; provided, however, Contractor also may elect to furnish a Performance Bond in the same amount if Contractor so chooses. If the Contract Sum is less than or equal to $25,000, Contractor may elect not to provide Performance and Payment Bonds; provided, in such event, no money shall be paid by Owner to Contractor until Final Completion of all Work. If Contractor elects to provide the required Performance Bond and Payment Bond, the Contract Sum shall be payable to Contractor through progress payments in accordance with these General Requirements and Covenants.

4.2.4. No surety shall be accepted by Owner that is in default, delinquent on any bonds or that is a party to any litigation against Owner. All bonds shall be made and shall be approved by Owner and shall be executed by not less than one (1) corporate surety that is authorized and admitted to do business in the State of Texas, is licensed by the State of Texas to issue surety bonds, is listed in the most current United States Department of the Treasury List of Acceptable Sureties and is otherwise acceptable to Owner. Each bond shall be executed by Contractor and the surety and shall specify that legal venue for enforcement of each bond exclusively shall lie in Hidalgo County, Texas. Each surety shall designate an agent resident in Hidalgo County, Texas to which any requisite statutory notices may be delivered and on which service of process may be had in matters arising out of the suretyship.

4.2.5. The person or persons, partnership, company, firm, limited liability company, association, corporation or other business entity to whom the Contract is awarded shall, within ten (10) days after such award, sign the required Contract with Owner and provide the necessary surety bonds and evidence of insurance as required under the Contract Documents. No Contract shall be binding on Owner until:

- it has been approved as to form by Owner's Attorney;
- it has been executed by any member of Owner's Commissioners Court or its designee;
- the Payment Bond and Performance Bond and evidence of the required insurance have been furnished to Owner by Contractor, as required by the Contract Documents; and
- a fully executed Contract has been delivered to Contractor (if required).

4.2.6. Contractor and Sureties Still Bound. No assignment, transfer or subletting, without the written consent of said Owner, and no order of said Owner for or approval of any alteration or modifications in said Specifications, Plans, or Work, and no change in the requirements or order for extra work made by the Owner as provided in this Contract, shall ever in any manner release or diminish the responsibility of Contract or any Surety on any bond of Contractor, but on the contrary, such responsibility shall extend to and comprehend all such changes and other matters, If any Surety upon any bond furnished in connection with the Contract becomes insolvent, or otherwise not authorized to do business in this State, the Contractor shall within forty-five (45) calendar days furnish equivalent substitute forms of security while seeking substitute bonding, to protect the interests of the Owner and of persons supplying labor or materials in the prosecution of the Work contemplated by the Contract, or may be liable for breach of Contract and default termination as referred to in Section 8L .

4.3. Insurance. Not later than the Pre-Construction meeting, and prior to the commencement of any Work under this Contract or as directed above, Contractor shall deliver evidence of insurance to Owner. Contractor shall furnish an original completed Certificate of Insurance and a copy of all insurance policies, together with all required endorsements thereto, required by the Contract Documents to the Owner's Purchasing Department or its delegated department, clearly labeled with the name of the Project and which shall contain all information required by the Contract Documents. Contractor shall be prohibited from commencing the Work and Owner shall have no duty to pay or perform under this Contract until such evidence of insurance is delivered to Owner's Purchasing Department. No officer or employee, shall have authority to waive this requirement.

4.3.1. Contractor's Liability Insurance.

4.3.1.1. Prior to the commencement of any work under this Contract, Contractor shall furnish copies of all required endorsements and completed Certificate(s) of Insurance to Owner's Purchasing Department (hereafter referred to as "Purchasing"), which shall be clearly labeled "insert name of project/contract" in the Description of Operations block of the Certificate. The Certificate(s) shall be completed by an agent and signed by a person authorized by that insurer to bind coverage on its behalf. Owner shall not accept a Memorandum of Insurance or Binder as proof of insurance. The Certificate(s) shall be signed by the Authorized Representative of the insurance carrier and shall include the agent's original signature and telephone number. The Certificate(s) shall be mailed, with copies of all applicable endorsements, directly from the insurer's authorized representative to Owner. All certificates of insurance provided must be available for public inspection. Owner shall have no duty to pay or perform its obligations under this Contract until such Certificate(s) and endorsements have been received and approved by Owner's Purchasing Department. No officer or employee of Owner, shall have authority to waive this requirement. Owner reserves the right to review the insurance requirements of this Article during the effective period of this Contract and to modify insurance coverages and limits when deemed necessary and prudent by the Owner's Purchasing Department based upon changes in statutory law, court decisions, or circumstances surrounding this Contract. In no instance will Owner allow modification whereby Owner may incur increased risk.

4.3.1.2. Contractor's financial integrity is of interest to Owner; therefore, subject to Contractor's right to maintain reasonable deductibles in such amounts as are approved by Owner, Contractor shall obtain and maintain in full force and effect, for the duration of this Contract and at Contractor's sole expense, insurance coverage written on an occurrence basis, unless otherwise indicated, by companies authorized to do business in the State of Texas and with an A.M. Best's rating of no less than A- (VII), in the following types and for an amount not less than the amount listed below:

Insurance Table

Type of Insurance	Amount of Coverage
1. Worker's Compensation *OR* 2. Employer's Liability	Statutory. $1,000,000/$1,000,000/$1,000,000 for each accident, disease for each employee and disease policy limit, respectively.
3. Commercial General Liability Insurance to include coverage for the following: a) Premises/Operations b) Products/Completed Operations c) Personal/Advertising Injury d) Environmental Impairment/Impact sufficiently broad to cover disposal liability e) Explosion, Collapse, and Underground	For Bodily Injury and Property Damage of: $1,000,000 per occurrence; $2,000,000 General Aggregate or its equivalent in Umbrella or Excess Liability Coverage.
4. Business Automobile Liability a) Owned/Leased Automobiles b) Non-owned Automobiles c) Hired Automobiles	Combined Single Limit for Bodily Injury and Property Damage of $1,000,000 per occurrence.
* 5. Professional Liability (Claims-made basis) To be maintained and in effect for no less than two (2) years subsequent to the completion of the professional services.	$1,000,000 per claim, to pay on behalf of the insured all sums which the insured shall become legally obligated to pay as damages by reason of any act, malpractice, error, or omission in professional services.
6. Umbrella or Excess Liability Coverage	$5,000,000 each occurrence $5,000,000 Aggregate
* 7. Builder's Risk	All Risk Policy written on an occurrence basis for 100% replacement cost during construction phase of any new or existing structure.
* if applicable	

4.3.1.3. Contractor agrees to require, by written contract, all Subcontractors providing goods or services pursuant to performance on the Project obtain the same categories of insurance

coverage required of Contractor herein and provide a Certificate of Insurance and endorsement that names Contractor and Owner as additional insureds. Policy limits of the coverages carried by Subcontractors shall be determined as a business decision of Contractor. Contractor shall provide Owner with said Certificate and endorsement prior to the commencement of any work by the Subcontractor. This Subcontractor insurance provision may be modified by the Owner, when deemed necessary and prudent, based upon changes in statutory law, court decisions, or circumstances surrounding this Contract. Such insurance coverage modification may be enacted by letter signed by the Owner's Designee, which shall become a part of this Contract for all purposes.

4.3.1.4. As they apply to the limits required by Owner, Owner shall be entitled, upon request and without expense, to receive copies of all insurance policies, declaration pages and all required endorsements associated with this Work. Contractor shall be required to comply with any such requests and shall submit requested documents to Owner at the address provided below within ten (10) calendar days. Contractor shall pay any and all costs incurred resulting from provision of said documents to Owner.

County of Hidalgo
Attn: Purchasing Department
2802 S. Business Hwy 281 Edinburg, Texas 78539

With copy to the Commissioner in which the Project is located and Executive Officer of Owner

4.3.1.5. Contractor agrees that with respect to the above required insurance, all insurance policies are to contain or be endorsed to contain the following provisions:

- Name Owner, its officers, officials, employees, and elected representatives as additional insureds by endorsement, with respect to operations and activities of, or on behalf of, the named insured performing under this Contract with Owner, with the exception of the workers' compensation and professional liability policies;
- Workers' compensation, employers' liability, general liability and automobile liability policies will provide a waiver of subrogation in favor of Owner.
- Provide advance written notice directly to Owner, at the address cited above, of any suspension or non-renewal in coverage of Contractor's insurance policy/policies associated with this Work and not less than ten (10) calendar days in advance notice for Contractor's nonpayment of premium(s).

4.3.1.6. Within five (5) calendar days of a suspension, cancellation or non-renewal of insurance coverage associated with this Work, Contractor shall provide a replacement Certificate(s) of Insurance and applicable endorsement(s) to Owner. Owner shall suspend Contractor's performance should there be a lapse in coverage at any time during this contract. Failure to provide and to maintain the required insurance shall constitute a material breach of this Contract.

4.3.1.7. In addition to any other remedies Owner may have upon Contractor's failure to provide and maintain any insurance and/or policy endorsements to the extent and within the time

herein required, Owner shall have the right to order Contractor to stop work hereunder, continue to charge contract time and/or withhold any payment(s) which become due to Contractor hereunder until Contractor demonstrates compliance with the insurance requirements hereof.

Nothing contained herein shall be construed as limiting in any way the extent to which Contractor may be held responsible for payments of damages to persons or property resulting from Contractor's or its Subcontractors' performance of the Work covered under this Contract.

4.3.1.8. Contractor accepts and agrees Contractor's insurance shall be deemed primary and non-contributory, with respect to any insurance or self-insurance carried by Owner, for liability arising out of Contractor's operations under this Contract.

4.3.1.9. Contractor understands, accepts and agrees the insurance required of Contractor by this Contract is in addition to and separate from any other obligation contained in this Contract and no claim or action by or on behalf of Owner shall be limited to insurance coverage provided.

4.3.1.10. Contractor and any of Contractor's Subcontractors are responsible for any and all damage to their own equipment and/or property.

4.3.1.11. Without limiting any of the other obligations or liabilities of Contractor under the Contract Documents, Contractor shall purchase and maintain, during the term of the Contract and at Contractor's own expense, the minimum liability insurance coverage described below with insurance companies duly authorized or approved to do business in the State of Texas and otherwise satisfactory to Owner. Contractor also shall require each Subcontractor performing work under the Contract, at Subcontractor's own expense, to maintain levels of insurance necessary and appropriate for the Work performed during the term of the Contract, said levels of insurance comply with all applicable laws. Subcontractor's liability insurance shall name Contractor and Owner as additional insureds by using endorsement CG 20 26 or broader. Certificates of insurance complying with the requirements prescribed in Section 3L.4.3.1.12 herein shall show the existence of each policy, together with copies of all policy endorsements showing Owner as an additional insured, and shall be delivered to Owner before any Work is started. Contractor promptly shall furnish, upon the request of and without expense to Owner, a copy of each policy required, including all endorsements, which shall indicate:

4.3.1.11.1. Workers' Compensation, with statutory limits, with the policy endorsed to provide a waiver of subrogation as to Owner; Employer's Liability Insurance of not less than that listed in the Insurance Table above;

4.3.1.11.2. Commercial General Liability Insurance, Personal Injury Liability, Products and Completed Operations Liability covering, but not limited to, the liability assumed under the indemnification provisions of this Contract, fully insuring Contractor's (and/or Subcontractor's) liability for injury to or death of Owner's employees and all third parties, and for damage to property of third parties, with a combined bodily injury (including death) and property damage minimum limit not less than that listed in the Insurance Table above.

If coverage is written on a claims-made basis, coverage shall be continuous (by renewal or extended reporting period) for no less than sixty (60) months following completion of the contract and acceptance of work by Owner. Coverage, including any renewals, shall have the same retroactive date as the original policy applicable to the Project. Owner shall be named as additional insured by using endorsement CG 20 26 or broader. The general liability policy shall include coverage extended to apply to completed operations and XCU hazards. The Completed Operations coverage must be maintained for a minimum of one (1) year after Final Completion and acceptance of the Work, with evidence of same filed with Owner. The policy shall include an endorsement CG2503 amendment of limits (designated project or premises) in order to extend the policy's limits specifically to the Project in question.

4.3.1.11.3. Business Automobile Liability Insurance, covering owned, hired and non-owned vehicles, with a combined bodily injury (including death) and property damage minimum limit of not less than that listed in the Insurance Table above. Such insurance shall include coverage for loading and unloading hazards.

4.3.1.11.4. Five (5) calendar days prior to a suspension, cancellation or non-renewal of any required line of insurance coverage, Contractor shall provide Owner a replacement certificate of insurance with all applicable endorsements included. Owner shall have the option to suspend Contractor.

4.3.1.12. If any insurance company providing insurance coverage(s) required under the Contract Documents for Contractor becomes insolvent or becomes the subject of any rehabilitation, conservatorship, liquidation or similar proceeding, Contractor immediately shall procure, upon first notice to Contractor or Owner of such occurrence and without cost to Owner, replacement insurance coverage before continuing the performance of the Work at the Project. Any failure to provide such replacement insurance coverage shall constitute a material breach of the Contract.

4.3.2. Property Insurance.

4.3.2.1. As stated in Section 3L.4.3.1 Contractor shall obtain at its expense and maintain throughout the duration of the Project, All-Risk Builder's Risk Insurance, if the Project involves complete construction of a new building, or an All-Risk Installation Floater policy, if the Project involves materials and supplies needed for additions to, renovations or remodeling of an existing building. Coverage on either policy shall be All-Risk, including, but not limited to, Fire, Extended Coverage, Vandalism and Malicious Mischief, Flood (if located in a flood zone) and Theft, in an amount equal to one hundred percent (100%) of the insurable value of the Project for the Installation Floater policy, and one hundred percent (100%) of the replacement cost of the Project for the Builder’s Risk policy. If an Installation Floater policy is provided, Owner shall be shown as a Joint Named Insured with respect to the Project. If a Builder’s Risk policy is provided, the policy shall be written on a Completed Value Form, including materials delivered and labor performed for the Project. This policy shall be in the name of Contractor and naming Owner, Engineer and Subcontractors, as well as any Sub-Subcontractors, as additional insureds as their interests may appear. The policy shall have endorsements as follows:

4.3.2.1.1. This insurance shall be specific as to coverage and not contributing insurance with any permanent insurance maintained on the property.

4.3.2.1.2. Loss, if any, shall be adjusted with and made payable to Contractor or Owner and Contractor as trustee for the insureds as their interests may appear.

4.3.2.2. Contractor shall provide to Owner a Certificate of Insurance evidencing all property insurance policies procured under this Section 3L.4.3.2 and all endorsements thereto, before any exposure to loss may occur.

4.3.2.3. Use in accordance with Article 5L.12 herein shall not commence until the insurance company/companies providing property insurance have consented to such use by endorsement or otherwise. Owner and Contractor shall take reasonable steps to obtain consent of the insurance company/companies and shall take no action without mutual written consent with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

4.3.2.4. Contractor shall take all necessary precautions to ensure no damage shall result from operations to private or public property. All damages shall be repaired or replaced by Contractor at no additional cost to Owner.

4.3.3. Umbrella Liability Insurance. Contractor shall obtain, pay for and maintain Umbrella Liability Insurance during the Contract term, insuring Contractor for an amount of not less than that listed in the Insurance Table above combined limit Bodily Injury (including death) and Property Damage, that follows form and applies in excess of the primary coverage required hereinabove. Owner shall be named as additional insured using endorsement CG 20 26 or broader. No aggregate shall be permitted for this type of coverage. The Umbrella Liability Insurance policy shall provide “drop down” coverage, where the underlying primary insurance coverage limits are insufficient or exhausted.

4.3.4. The failure of Contractor to execute the Contract (if required) and deliver the required Bonds and evidence of insurance within ten (10) days after the Contract is awarded, or as soon thereafter as Owner can assemble and deliver the Contract and by the time the Owner-scheduled Pre-Construction meeting is held, shall, at Owner's option, constitute a material breach of Contractor’s bid proposal and Owner may rescind the Contract award and collect or retain the proceeds of the bid security. By reason of the uncertainty of the market prices for materials and labor and it being impracticable and difficult to determine accurately the amount of damages occurring to Owner by reason of Contractor's failure to execute the Contract within ten (10) days and deliver bonds and insurance by the Owner Pre-Construction meeting, the filing of a bid proposal shall constitute an acceptance of this Article 3L.4.

4.4. Policy Endorsements and Special Conditions.

4.4.1. Each insurance policy to be furnished by Contractor shall address the following required provisions within the certificate of insurance, which shall be reflected in the body of the insurance contract and/or by endorsement to the policy:

4.4.1.1. Owner shall be named as additional insured on all liability coverages, using endorsement CG 20 26 or broader. When Owner employs a Construction Manager on the Project, Contractor and Subcontractor(s) shall include the Construction Manager on all liability insurance policies to the same extent as Owner is required to be named as additional insured.

4.4.1.2. Within five (5) calendar days of a suspension, cancellation or non-renewal of any required line of insurance coverage, Contractor shall provide Owner a replacement certificate of insurance with all applicable endorsements included. Owner shall have the option to suspend Contractor's performance should there be a lapse in coverage at any time during the Contract.

4.4.1.3. The terms "Owner," "County" or " "Hidalgo County"" shall include all authorities, boards, commissions, divisions, departments and offices of Owner and the individual members, employees and agents thereof in their official capacities, while acting on behalf of Owner.

4.4.1.4. The policy phrase or clause "Other Insurance" shall not apply to Owner where Owner is an additional insured on the policy. The required insurance coverage furnished by Contractor shall be the primary insurance for all purposes for the Project, as well as the primary insurance for the additional insureds named in the required policies.

4.4.1.5. All provisions of the Contract Documents concerning liability, duty and standard of care, together with the indemnification provision, shall, to the maximum extent allowable in the insurance market, be underwritten with contractual liability coverage(s) sufficient to include such obligations with the applicable liability policies.

4.4.2. Concerning the insurance to be furnished by the Contractor, it is a condition precedent to acceptability which:

4.4.2.1. All policies must comply with the applicable requirements and special provisions of this Article.

4.4.2.2. Any policy evidenced by a Certificate of Insurance shall not be subject to limitations, conditions or restrictions deemed inconsistent with the intent of the insurance requirements set forth herein, and Owner's decision regarding whether any policy contains such provisions and contrary to this requirement shall be final.

4.4.2.3. All policies required are to be written through companies duly authorized and approved to transact that class of insurance in the State of Texas and that otherwise are acceptable to Owner.

4.4.3. Contractor agrees to the following special provisions:

4.4.3.1. 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 Owner, it being the intention that the insurance policies shall protect the Parties to the Contract and be primary coverage for all losses covered by the policies. This waiver of

subrogation shall be included, by endorsement or otherwise, as a provision of all policies required under this Item 3L.

4.4.3.2. Insurance companies issuing the insurance policies and Contractor shall have no recourse whatsoever against Owner for payment of any premiums or assessments for any deductibles, as all such premiums and assessments solely are the responsibility and risk of Contractor.

4.4.3.3. Approval, disapproval or failure to act by Owner, regarding any insurance supplied by Contractor or any Subcontractor(s), shall not relieve Contractor of any responsibility or liability for damage or accidents as set forth in the Contract Documents. The bankruptcy, insolvency or denial of liability of or by Contractor's insurance company shall likewise not exonerate or relieve Contractor from liability.

4.4.3.4. Owner reserves the right to review the insurance requirements of this Article during the effective period of this Contract and to adjust insurance coverage and insurance limits when deemed necessary and prudent by Owner's based upon changes in statutory law, court decisions or the claims history of Contractor and Subcontractors. Contractor agrees to make any reasonable request for deletion, revision or modification of particular policy terms, conditions, limitations or exclusions, except where policy provisions are established by law or regulation binding upon either Party to this Contract or upon the underwriter of any such policy provisions. Upon request by Owner, Contractor shall exercise reasonable efforts to accomplish such changes in policy coverage.

4.4.3.5. No special payments shall be made for any insurance policies that Contractor and Subcontractors are required to carry. Except as provided in Section 3L.4.4.3.4 herein, all amounts payable regarding the insurance policies required under the Contract Documents are included in the Contract Sum.

4.4.3.6. Any insurance policies required under this Item 3L may be written in combination with any of the other policies, where legally permitted, but none of the specified limits neither may be lowered or otherwise negatively impacted by doing so, nor may any of the requirements or special provisions of this Article be limited or circumvented by doing so.

4.4.4. For Contracts with railroad requirements, see project-specific details for additional insurance requirements. Provide all required documents for satisfaction of railroad requirements for projects that have work which involves railroad right of way.

4.5. Submission of Project Schedule(s). Prior to commencement of Work (unless otherwise specified elsewhere in the Contract Documents), Contractor shall submit to the Purchasing Agent of Owner's Purchasing Department or his/her designee the Project schedule(s), as defined in Section 8L.6 herein, a minimum of fifteen (15) days prior to the Pre-Construction Conference.

This initial schedule shall indicate the dates for starting and completing the various aspects/phases required to complete the Work, including mobilization, procurement, installation, testing, inspection and acceptance of all the Work of the Contract, including any contractually mandated milestone dates.

5. FAILURE TO EXECUTE CONTRACT

If the Contractor fails to comply with all of the requirements in Article 3L.4., "Execution of Contract," the bid guaranty will become the property of 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 Owner.

6.1. Governing Law; Compliance with Laws and Regulations.

6.1.1. This Contract shall be governed by the laws and case decisions of the State of Texas, without regard to conflict of law or choice of law principles of Texas or of any other state.

6.1.2. This Contract is entered into subject to and controlled by all applicable laws, rules and regulations of the State of Texas and the Government of the United States of America. Contractor shall, during the performance of the Work, comply with all applicable State of Texas and Federal laws, rules and regulations, as amended.

7. RETURN OF BID GUARANTY

The bid guaranty check of the low Bidder will be retained until after the Contract has been rejected or awarded and executed. Bid bonds will not be returned.

8. BEGINNING OF WORK

No Work shall commence any earlier than the date stated on Notice to Proceed and no Work shall be performed by Contractor or any Subcontractor prior to issuance of the Notice to Proceed. Any work commenced prior to Contractor receiving a Notice to Proceed is performed at Contractor's risk.

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 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. Owner makes no guarantee that the additive or deductive alternate work will be required.

9. ASSIGNMENT OF CONTRACT

Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the promises, covenants, terms, conditions and obligations contained in the Contract Documents. Contractor shall not assign, transfer or convey its interest or rights in the Contract, in part or as a whole, without the written consent of Owner. If Contractor attempts to make an assignment, transfer or conveyance without Owner's written consent, Contractor nevertheless shall remain legally responsible for all obligations under the Contract Documents. Owner shall not assign any portion of the Contract Sum due or to become due under this Contract without the written consent of Contractor, except where assignment is compelled by court order, other operation of law or the terms of these General Conditions.

In performing the Work under this Contract, it is understood and agreed the relationship between Owner and Contractor is Contractor is and shall remain an independent contractor. No term or provision contained or inferable in the Contract Documents shall be read, deemed or construed to

- make Contractor an agent, servant or employee of Owner;
- make Contractor or any of Contractor's employees, agents or servants eligible for the fringe benefits, such as retirement, insurance and worker's compensation which Owner provides to its employees; or
- create any partnership, joint venture or other association between Owner and Contractor.

Contractor shall exercise independent judgment in performing the Work and solely is responsible for setting working hours, scheduling and/or prioritizing the Work flow and determining the means and methods of performing the Work, subject only to the requirements of the Contract Documents. Any direction or instruction by Owner, in respect of the Work, shall relate to the results Owner desires to obtain from the Work and shall in no way affect Contractor's independent contractor status, as described herein.

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 Owner or by any state or federal agency.

Contractor shall not employ any Subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom Owner may have reasonable objection. A Subcontractor or other person or organization identified in writing to Owner, prior to the Notice of Award and not objected to in writing by Owner prior to the Notice of Award, shall be deemed acceptable to Owner. Acceptance of any Subcontractor, other person or organization by Owner shall not constitute a waiver of any right of Owner to reject defective Work. If Owner, after due investigation, has reasonable objection to any Subcontractor, other person or organization proposed by Contractor after the Notice of Award, Contractor shall be required to submit an acceptable substitute. Contractor shall not be required to employ

any Subcontractor, other person or organization against whom Contractor has reasonable objection.

11. RIGHTS AND REMEDIES; NO WAIVER OF RIGHTS BY OWNER

The duties and obligations imposed on Contractor by the Contract Documents and the rights and remedies available to Owner under the Contract Documents shall be in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or made available by law.

No action or failure to act by Owner shall constitute a waiver of a right afforded Owner under the Contract Documents, nor shall any action or failure to act by Owner constitute approval of or acquiescence in a breach of the Contract by Contractor, except as may be specifically agreed in writing by Change Order, Amendment or Supplemental Agreement.

Item 4L
Scope of Work

1. CONTRACT INTENT

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by Contractor. The Contract Documents are complementary and what is required by one shall be as binding as if required by all. Performance by Contractor shall be required only to the extent consistent with the Contract Documents and which reasonably is inferable from the Contract Documents as deemed necessary to produce the indicated results.

Unless otherwise stated in the Contract Documents, words having well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

Local municipal and utility standards shall govern except in case of conflict with the Specifications. In case of a conflict between the Specifications and the state standard, the state standard shall govern unless otherwise approved by TxDOT.

Contractor shall supervise, inspect and direct the Work competently and efficiently, exercising the skill and attention of a reasonably prudent Contractor, devoting such attention and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor solely shall be responsible for the means, methods, techniques, sequences, procedures and coordination of all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods and/or techniques, Contractor then shall evaluate the jobsite safety thereof and, except as stated herein below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If, upon its evaluation, Contractor determines such means, methods, techniques, sequences or procedures may not be safe, Contractor shall give timely written notice to Owner and Contractor shall not proceed with that portion of the Work without further written instructions from Owner. Sequencing and procedures shall be coordinated and agreed upon by Owner and Contractor.

1.1. Labor and Materials. Unless otherwise provided in the Contract Documents, Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

1.2. Review of Contract Documents and Field Conditions by Contractor

1.2.1. Since the Contract Documents are complementary, before starting each portion of the Work, Contractor carefully shall:

- study and compare the various Drawings and other Contract Documents relative to that portion of the Work and the information furnished by Owner;
- take field measurements of any existing conditions related to that portion of the Work; and
- observe any conditions at the Site affecting the Work.

Any error, inconsistencies or omissions discovered by Contractor shall be reported promptly to Owner via a Request for Information in such form as Owner may require.

1.2.1.1. The exactness of existing grades, elevations, dimensions or locations given on any Drawings issued by Engineer, or the work installed by other contractors, is not guaranteed by Owner. Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions and locations.

1.2.1.2. In all cases of interconnection of its Work with existing conditions or with work performed by others, Contractor shall verify at the site all dimensions relating to such existing or other work. Any errors due to Contractor's failure to so verify all such grades, elevations, dimensions or locations promptly shall be rectified by Contractor without any additional cost to Owner.

1.2.2. As between Owner and Contractor, and subject to the provisions of Article 4L.4. below, Contractor has no responsibility for the timely delivery, completeness, accuracy and/or sufficiency of the Specifications or Drawings (or any errors, omissions, or ambiguities therein), and is not responsible for any failure of the design of the facilities or structures as reflected thereon to be suitable, sound or safe. Contractor shall be deemed to have satisfied itself as to the design contained in and reflected by the Specifications and the Drawings. In particular, but without prejudice to the generality of the foregoing, Contractor shall review the Contract Documents to establish:

1.2.2.1. the information is sufficiently complete to perform the Work; and

1.2.2.2. there are no obvious or patent ambiguities, inaccuracies or inconsistencies within or between the documents forming the Contract; and

1.2.2.3. Contractor shall work with the aforementioned Contract Documents so as to perform the Work and of each and every part thereof to ensure the Work and each and every part thereof shall, jointly and severally, be in accordance with the requirements of the Contract Documents and, in particular but without limiting the generality of the foregoing, the Work as a whole and, as appropriate, each and every part thereof, shall comply with the requirements of any performance specifications.

1.2.3. Any design errors or omissions noted by Contractor during its review promptly shall be reported to Owner, but it is recognized the Contractor's review is made in Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. Contractor is not required to ascertain if

Contact Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to Contractor shall promptly be reported to Owner.

2. PRECONSTRUCTION CONFERENCE

Before Contractor commences any Work on the Project, a Pre-Construction Conference attended by Contractor, Engineer, Owner's Designated Representative(s) and others, as appropriate, shall be held to establish a working understanding among the Parties as to the Work and discuss, at minimum: the Project Schedule(s) referenced in Article 8L.6; the procedures for handling Shop Drawings and other submittals; the processing of Applications for Payment; and Contractor maintaining required records. The Notice to Proceed may be issued at the Pre-Construction Conference or issued by Owner at any time at Owner's discretion. Said issuance of the Notice to Proceed shall not be unreasonably withheld by Owner.

Unless otherwise provided in the Contract Documents, Contractor shall be furnished, free of charge, three (3) complete set of the Plans and Specifications by Engineer. Additional complete sets of Plans and Specifications, if requested by Contractor, shall be furnished at reproduction cost to Contractor.

Work with Owner to resolve all issues during the course of the Contract. Refer to Article 4L.7., "Dispute or Claims Procedure," for all unresolved issues.

3. PARTNERING

The intent of this Article is to promote an environment of trust, mutual respect, integrity, and fair-dealing between Owner and Contractor.

Informal partnering does not make use of a facilitator, while formal partnering uses the services of a facilitator (internal or external).

3.1. Procedures for Partnering Meetings and Format. Informal partnering is required, unless formal partnering is mutually agreed to instead of the informal partnering.

3.2. Facilitators. The facilitator is to act as a neutral party seeking to initiate cooperative working relationships. This individual must have the technical knowledge and ability to lead and guide discussions. Choose either an internal or external facilitator. The facilitator must be acceptable to Owner.

3.2.1. Internal Facilitators. A Owner or Contractor internal (staff) facilitator may be selected as the facilitator at no additional cost to either party.

3.2.2. External Facilitators. A private firm or individual that is independent of the Contractor and Owner may be selected as the facilitator. Submit the facilitator's name and estimated fees for approval before contracting with the facilitator.

3.3. Meetings and Arrangements. Coordinate with Owner for meeting dates and times, locations including third party facilities, and other needs and appurtenances, including, but not limited to, audio or visual equipment. Make all meeting arrangements for formal partnering. Use Owner facilities or facilities in the vicinity of the project if available. Submit the estimated meeting costs for approval before finalizing arrangements.

Coordinate facilitator discussions before the partnering meeting to allow the facilitator time to prepare an appropriate agenda. Prepare a list of attendees with job titles and include critical Contractor, subcontractor, and supplier staff in the list. Provide the facilitator the list of attendees and invite the attendees listed.

Owner will invite and provide a list of attendees that includes, but is not limited to, Owner, TxDOT, other local governments, law enforcement, railroad, and utility representatives.

Participate in additional partnering meetings as mutually agreed.

3.4. Payment. Expenses for labor, Contractor equipment, or overhead will not be allowed. Markups as prescribed in Article 9L.7., "Payment for Extra Work and Force Account Method," will not be allowed.

Informal partnering will be conducted with each party responsible for their own costs.

For formal partnering using internal facilitators, the Contractor will be responsible for arrangements and for expenses incurred by its internal facilitator, including, but not limited to, meals, travel, and lodging. Owner facilitators, if available, may be used at no additional cost.

For formal partnering using external facilitators, submit an invoice to Owner for reimbursement. Owner will reimburse the Contractor for half of the eligible expenses as approved. For external facilitators not approved by Owner but used at the Contractor's option, the Contractor will be responsible for all costs of the external facilitator.

For meeting facilities and appurtenances, submit an invoice to Owner for reimbursement. Owner will reimburse the Contractor for half of the eligible expenses as approved.

4. 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.

Table 1
Quantity-Based Price Adjustment Factors

% of Original Quantity	Factor
≥ 50 and < 75	1.05
≥ 25 and < 50	1.15
< 25	1.25

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."

CHANGE ORDERS ARE THE ONLY METHOD OF MODIFYING THE COMPLETION DATE(S) AND CONTRACT TIME.

4.1. Change Orders.

4.1.1. A Change Order is a written modification of the Contract signed by both Owner and Contractor that authorizes an addition, deletion or revision in the Work or an adjustment in the Contract Sum or the Contract Times and is issued on or after the Effective Date of the Contract.

4.1.2. Methods used in determining adjustments to the Contract Sum may include those listed in Section 4L.4.2.4 herein.

4.1.3. Acceptance of a Change Order by Contractor shall constitute a full accord and satisfaction for any and all claims and costs of any kind, whether direct or indirect, including, but not limited to impact, delay or acceleration damages arising from the subject matter of the Change Order. Each Change Order shall be specific and final as to prices and any extensions of time, with no reservations or other provisions allowing for future additional money or time as a result of the particular changes identified and fully compensated in the Change Order. The execution of a Change Order by Contractor shall constitute conclusive evidence of Contractor's agreement to the ordered changes in the Work, cost and additional time, if any. This Contract, as amended, forever releases any Claim against Owner for additional time or compensation for matters relating to or arising out of or resulting from the Work included within or affected by the executed Change Order. This release of any Claim applies to Claims related to the cumulative impact of all Change Orders and to any Claim related to the effect of a change on unchanged Work.

4.1.4. Owner shall prepare Change Orders and Field Work Directives and shall have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time. Such changes shall be effected by written order, which Contractor promptly shall carry out and record on the As-Built record documents.

4.1.5. Contractor and Subcontractors shall be entitled to include overhead and profit in any Change Order only as provided by Project Specifications.

4.2. Minor Changes To The Work. Owner or Engineer both shall have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on Owner and Contractor. Contractor promptly shall carry out such written orders and record such changes in the As-Built drawings.

4.3. Time Required To Process Change Orders.

4.3.1. All responses by Contractor to proposal requests from Owner shall be accompanied by a complete itemized breakdown of costs. Responses to proposal requests shall be submitted sufficiently in advance of the required work to allow Owner a minimum of thirty (30) calendar days after receipt by Owner to review the itemized breakdown and to prepare or distribute additional documents as may be necessary. Each of Contractor's responses to proposal requests shall include a statement that the cost and additional time described and requested in Contractor's response represents the complete, total and final cost and additional Contract Time associated with the extra work, change, addition to, omission, deviation, substitution or other grounds for seeking extra compensation or additional time under the Contract Documents, without reservation or further recourse.

4.3.2. All Change Orders require written approval by Owner or Owner's Commissioners Court, where authorized by the state law The approval process requires a minimum of forty-five (45) calendar days after submission to Owner in final form with all supporting data. Receipt of a submission by Owner does not constitute acceptance or approval of a proposal, nor does it constitute a warranty that the proposal shall be authorized by Owner or Owner's Commissioner Court. THE TIME REQUIRED FOR THE APPROVAL PROCESS SHALL

NOT BE CONSIDERED A DELAY AND NO EXTENSIONS TO THE CONTRACT TIME OR INCREASE IN THE CONTRACT SUM SHALL BE CONSIDERED OR GRANTED AS A RESULT OF THIS PROCESS. Pending the approval of a Change Order as described above, Contractor shall proceed with the work under a pending Change Order only if directed in writing to do so by Owner.

4.4. Substitutions.

4.4.1. Contractor's proposed substitutions and alternates may be rejected by Owner without explanation and shall be considered by Owner only under one or more of the following conditions:

- the proposal is required for compliance with interpretation of code requirements or insurance regulations then existing;
- specified products are unavailable through no fault of Contractor; and
- when in the judgment of Owner, a substitution substantially would be in Owner's best interests in terms of cost, time or other considerations.

4.4.2. Contractor shall submit to Owner:

- a full explanation of the proposed substitution and submittal of all supporting data, including technical information, catalog cuts, warranties, test results, installation instructions, operating procedures and other like information necessary for a complete evaluation of the substitution;
- a written explanation of the reasons the substitution is necessary, including the benefits to Owner and to the Work, in the event the substitution is acceptable to Owner;
- the adjustment, if any, in the Contract Sum;
- the adjustment, if any, in the time of completion of the Contract and the construction schedule; and
- in the event of a substitution under Section 4L.4.5.1 herein, an affidavit stating:
  - Contractor's proposed substitution conforms to and meets all the requirements of the pertinent Specifications and requirements shown on the Drawings; and
  - Contractor accepts the warranty and correction obligations in connection with the proposed substitution as if originally specified.

Proposals for substitutions shall be submitted in sufficient time to allow no less than twenty-one (21) calendar days for review. No substitutions shall be considered or allowed without Contractor's submittal of complete substantiating data and information as stated hereinbefore.

4.4.3. In the event of a substitution submittal under this Section, and whether or not any such proposed substitution is accepted by Owner, Contractor shall reimburse Owner, at Owner's reasonable discretion, for any fees incurred and charged by Engineer or other Consultants for evaluating each proposed substitute.

4.5. Change In Unit Prices. As applicable, if unit prices are stated in the Contract Documents or subsequently are agreed upon by Owner and Contractor and if quantities originally contemplated are materially changed in a proposed Change Order or Field Work Directive, such that the application of such unit prices to quantities of Work proposed shall cause substantial inequity to Owner or Contractor, the applicable unit prices shall be equitably adjusted.

5. 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 Owner in writing when differing site conditions are encountered. Owner will notify the Contractor when it discovers differing site conditions. Unless directed otherwise, do not work on the affected items and leave the site undisturbed.

5.1. If conditions are encountered at the Site which either are subsurface or are otherwise concealed physical conditions which were not known to Contractor and which differ materially from those indicated in the Contract Documents or in the reports of investigations and tests of subsurface and latent physical conditions provided by Owner to Contractor prior to the preparation by Contractor of its Bid, as referred to above, or are unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documentsin Hidalgo County, Texas environs, then Contractor promptly shall notify Owner of such conditions before conditions and/or structures are disturbed, and in no event more than three (3) workdays after first observation of the conditions.

5.1.1. Upon notification by Contractor, Owner promptly shall investigate such conditions and shall determine whether or not the physical and/or structural conditions do materially so differ and thereby cause an increase or decrease in Contractor's cost of and/or time required for performance of any part of the Work under this Contract. In the event Owner reasonably determines the physical and/or structural conditions materially so differ, a negotiated and equitable adjustment shall be made to the Contract Time and/or Contract Sum and a Change Order promptly shall be issued by Owner.

- No claim of Contractor under this Section shall be allowed unless Contractor has given the written notice called for above, prior to disturbing the discovered conditions and/or structures. No claim by the Contractor for an equitable adjustment hereunder shall be allowed if claimed by the Contractor after final payment has been made by the Owner under the terms of this Contract.
- No Contract adjustment shall be allowed under this Section for any effects caused on unchanged work.

5.1.2. If Owner and Contractor cannot agree on an adjustment to the Contract Sum or Contract Time, the adjustment shall be subject to dispute resolution pursuant to Section 4L.7.4 herein.

6. REQUESTS FOR ADDITIONAL COMPENSATION

Notify Owner 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 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. 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 Owner to determine the basis for entitlement, adjustment in the number of days specified in the Contract, and compensation.

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 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 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 Owner.

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:

6.1. Claims For Additional Cost. If Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided in Article 4L.7 shall be given and accepted by Owner before proceeding to execute the Work, provided prior notice is not required for Claims relating to an emergency endangering life or property. Contractor shall file a Claim in accordance with Article 4L.7 if Contractor believes additional cost is involved for reasons including, but not limited to:

- a written interpretation from Engineer;
- an order by Owner to stop the Work where Contractor was not at fault;
- a written order for a minor change in the Work issued by Engineer;
- failure of payment by Owner;

- termination of the Contract by Owner for convenience;
- Owner's suspension; or
- other reasonable grounds.

6.2. Claims For Consequential Damages. Except as otherwise provided in this Contract, in calculating the amount of any Claim or any measure of damages for breach of contract (such provision to survive any termination following such breach), the following standards shall apply both to Claims by Contractor and to Claims by Owner:

6.2.1. No consequential, indirect, incidental, punitive or exemplary damages shall be allowed, whether or not foreseeable, regardless of whether based on breach of contract, tort (including negligence), indemnity, strict liability or other bases of liability.

6.2.2. No recovery shall be based on a comparison of planned expenditures to total actual expenditures, on estimated losses of labor efficiency, on a comparison of planned man loading to actual man loading or on any other similar analysis used to show total cost or other damages.

6.2.3. Damages are limited to extra costs specifically shown to directly have been caused by a proven wrong for which the other Party is claimed to be responsible.

6.2.4. The maximum amount of any recovery for delay, to the extent damages for delay are not otherwise disallowed by the terms of the Contract Documents, shall be as is provided in Item 8L herein.

6.2.5. No damages shall be allowed for home office overhead or other home office charges or any Eichleay formula calculation, except or unless as expressly authorized by the Contract Documents.

6.2.6. No profit shall be allowed on any damage Claim, except or unless as expressly authorized by the Contract Documents.

6.3. Standby Equipment Costs. Payment will be made in accordance with Section 9L.7.2.4.4., "Standby Equipment Costs."

6.4. Project Overhead. Project overhead is defined as the administrative and supervisory expenses incurred at the work locations. When delay to project completion occurs and overhead compensation has been approved by Owner, 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.

6.5. Home Office Overhead. Owner will not compensate the Contractor for home office overhead.

7. DISPUTE OR CLAIMS PROCEDURE

The dispute resolution policy promotes a cooperative attitude between Owner 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.

Owner's goal is to have a dispute settled before elevating it as a claim.

7.1. Time Limit On Claims. Except for those Claims resulting from unusually severe weather, as addressed in Section 4L.7.3 herein, Contractor Claims must be initiated within fifteen (15) calendar days after occurrence of the event giving rise to such Claim. Claims by Contractor must be submitted by written notice to Owner. Claims by Owner must be submitted by written notice to Contractor. Failure by Contractor to submit written notice of the claim within fifteen (15) calendar days shall constitute a waiver of such claim.

7.2. Continuing Contract Performance. Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Sections 4L.7.5.1, Item 3L, and Item 9L herein, Contractor shall proceed diligently with performance of the Contract and Owner shall continue to make payments in accordance with the Contract Documents.

7.3. Claims For Additional Time

7.3.1. If Contractor wishes to make Claim for an increase in the Contract Time, written notice, as required in this Article 4L.7, shall be given. Contractor's Claim shall include an estimate of probable impact of delay on progress of the Work in accordance with Section 8L.6.6.4 herein. In the case of a continuing delay, only one Claim is necessary.

7.3.2. Contractor shall be entitled to an extension of the Contract Time for delays or disruptions due to unusually severe weather in excess of weather normally experienced at the job site, as determined from climatological data set forth by National Weather Service and which affects the Project's critical path. Contractor shall bear the entire economic risk of all weather delays and disruptions. Contractor shall not be entitled to any increase in the Contract Sum by reason of such delays or disruptions. Upon Contractor reaching Substantial Completion, Owner and Contractor shall look back at the entire duration of the calendar day Project and review the totality of what Contractor claims were unusually severe weather disruptions. If the Project was delayed or disrupted due to unusually severe weather in excess of weather normally experienced over the entire duration of the Project, Contractor may make a Claim for an extension of the Contract Time for delays or disruptions due to unusually severe weather in excess of weather normally experienced at

the job site, as determined from climatological data set forth by National Weather Service and which affects the Project's critical path. Any time extension granted shall be non-compensatory.

7.4. Resolution of Claims and Disputes.

7.4.1. Claims by Contractor against Owner and Claims by Owner against Contractor, including those alleging an error or omission by Engineer but excluding those arising under Article 7L.1 herein, shall be referred initially to Engineer for consideration and recommendation to Owner.

7.4.2. An initial recommendation by Engineer shall be required as a condition precedent to mediation or litigation of all Claims by the Parties arising prior to the date final payment is due, unless thirty (30) calendar days have passed after the Claim has been referred to Engineer with no recommendation having been rendered by Engineer.

7.4.3. Engineer shall review Claims and, within ten (10) calendar days of receipt of a Claim, take one or more of the following actions:

- request additional supporting data from the Party making the Claim;
- issue an initial recommendation;
- suggest a compromise; or
- advise the Parties that Engineer is unable to issue an initial Recommendation, due to a lack of sufficient information or conflict of interest.

7.4.4. Following receipt of Engineer's initial recommendation regarding a Claim, Owner and Contractor shall attempt to reach agreement as to any adjustment to the Contract Sum and/or Contract Time. If no agreement is reached, either Party may request mediation of the dispute, pursuant to Section 4L.7.5 herein.

7.4.5. If Engineer requests either or any Party to provide a response to a Claim or to furnish additional supporting data, such requested Party shall within ten (10) calendar days provide a response or the requested supporting data to Engineer, advise Engineer when the response or supporting data shall be furnished or advise Engineer that no response of supporting data shall be furnished.

7.4.6. With receipt of all information requested by Engineer, Engineer shall review the Claim and all received information within ten (10) calendar days of receipt of the information and shall take one of the following actions:

- issue a recommendation;
- suggest a compromise; or
- advise the Parties Engineer is unable to issue a recommendation due to lack information or conflict of interest.

7.4.7. Upon Engineer's action or inaction, the Parties may agree to accept recommendations made by either Party or may request mediation of the dispute pursuant to Section 4L.7.5 herein.

7.4.8. Waiver of Lien. It is understood that, by virtue of this Contract, no mechanic, contractor, material man, artisan or laborer, whether skilled or unskilled, ever shall, in any manner, have a claim or acquire any lien upon the building or any of the improvements of whatever nature or kind so erected or to be erected by virtue of this Contract, nor upon any of the land upon which said building or any of the improvements are so erected, built or situated.

7.5. Alternative Dispute Resolution.

7.5.1. Continuation of Work Pending Dispute Resolution. Each Party is required to continue to perform its obligations under this Contract pending the final resolution of any dispute arising out of or relating to this Contract, unless it would be impossible or impracticable under the circumstances then present.

7.5.2. Requirement For Senior Level Negotiations. Before invoking mediation or any other alternative dispute process set forth herein, the Parties to this Contract agree that they first shall try to resolve any dispute arising out of or related to this Contract through discussions directly between those senior management representatives within their respective organizations who have overall managerial responsibility for similar projects. Both Owner and Contractor agree that this step shall be a condition precedent to use of any other alternative dispute resolution process. If the Parties' senior management representatives cannot resolve the dispute within thirty (30) calendar days after a Party delivers a written notice of such dispute to the other, then the Parties shall proceed with the alternative dispute resolution process contained in Section 4L.7.5 herein, including mediation and/or litigation. All negotiations pursuant to this Section 4L.7.5 are confidential and shall be treated as compromise and settlement negotiations for purposes of applicable rules of evidence.

7.5.3. Mediation. In the event that Owner and/or Contractor contend that the other has committed a material breach of this Contract, or the Parties cannot reach a resolution of a claim or dispute pursuant to Section 4L.7.4 herein, as a condition preceding to filing a lawsuit, either Party shall request mediation of the dispute with the following requirements:

7.5.3.1. Request for mediation shall be in writing, and shall request that the mediation commence not less than thirty (30) or more than ninety (90) calendar days following the date of the request, except upon agreement of both Parties.

7.5.3.2. In the event Owner and Contractor are unable to agree to a date for the mediation or to the identity of the mediator(s) within thirty (30) calendar days following the date of the request for mediation, all conditions precedent in this Section 4L.7.5 shall be deemed to have occurred.

7.5.3.3. The Parties shall share the mediator's fee and any mediation filing fees equally. Venue for any mediation or lawsuit arising under this Contract shall be in Hidalgo County, Texas. Any agreement reached in mediation shall be enforceable as a settlement agreement in any court having jurisdiction thereof. No provision of this Contract shall waive any immunity or defense. No provision of this Contract is consent to a suit.

7.6. Venue. This Contract is performed in Hidalgo County, Texas, and if legal action is necessary to enforce this Contract, exclusive venue shall lie in Hidalgo County, Texas.

7.7. Attorney Fees. The Parties hereto expressly agree, in the event of litigation, all Parties waive rights to payment of attorneys' fees that otherwise might be recoverable, pursuant to the Texas Civil Practice and Remedies Code Chapter 38, Texas Local Government Code §271.153, the Prompt Payment Act, common law or any other provision for payment of attorney's fees.

7.8. Subcontractor Pass-Through Claims. In the event any Subcontractor of Contractor asserts a Claim to Contractor that Contractor seeks to pass through to Owner under the Contract Documents, any entitlement to submit and assert the Claim as to Owner shall be subject to:

7.8.1. the requirements of Section 4L.7.4 herein of these General Requirements and Covenants; and

7.8.2. the following additional requirements being 7.8.2.1.1, 7.8.2.1.2, 7.8.2.2, and 7.8.2.3 all of which of said additional requirements shall be conditions precedent to the entitlement of Contractor to seek and assert such Claim against Owner:

7.8.2.1. Contractor shall:

7.8.2.1.1. have direct legal liability as a matter of contract, common law or statutory law to Subcontractor for the claim Subcontractor is asserting; or

7.8.2.1.2. have entered into a written liquidating agreement with Subcontractor, prior to the Claim's occurrence, under which Contractor has agreed to be legally responsible to the Subcontractor for pursuing the assertion of such Claim against Owner under said Contract and for paying to Subcontractor any amount that may be recovered, less Contractor's included markup (subject to the limits in the Contract Documents for any markup). The relationship, liability or responsibilities shall be identified in writing by Contractor to Owner at the time such Claim is submitted to Owner and a copy of any liquidating agreement shall be included by Contractor in the Claim submittal materials.

7.8.2.2. Contractor shall have reviewed the Claim of the Subcontractor prior to its submittal to Owner and independently shall have evaluated such Claim in good faith to determine the extent to which the Claim is believed in good faith to be valid. Contractor shall inform Owner it has made a review, evaluation and determination the Claim is being made in good faith and the claim is believed to be valid.

7.8.2.3. Subcontractor making the Claim to Contractor shall certify to both Contractor and Owner that Subcontractor has compiled, reviewed and evaluated the merits of such Claim and the Claim is believed in good faith by Subcontractor to be valid. A copy of the certification by Subcontractor shall be included by Contractor in the Claim submittal materials.

7.8.3. Any failure of Contractor to comply with any of the foregoing requirements and conditions precedent with regard to any such Claim shall constitute a waiver of any entitlement to submit or pursue such Claim.

7.8.4. Receipt and review of a Claim by Owner under this Article 4L.7 shall not be construed as a waiver of any defenses to the Claim available to Owner under the Contract Documents or at law.

7.9. No Waiver of Governmental Immunity. Nothing in this Contract shall be construed to waive Owner's Governmental Immunity from a lawsuit, which Immunity is expressly retained to the extent it is not clearly and unambiguously waived by State law.

7.10. Indemnity Provisions.

7.10.1. Contractor covenants and agrees to FULLY INDEMNIFY, DEFEND and HOLD HARMLESS, Owner and its elected officials, employees, officers, directors, volunteers and representatives of Owner, individually and collectively, from and against any and all costs, claims (including third-party claims), liens, damages, losses, expenses, fees, fines, penalties, proceedings, actions, demands, causes of action, liability and suits of any kind and nature, including but not limited to, personal or bodily injury, death and property damage, made upon Owner directly or indirectly arising out of, resulting from or related to Contractor's activities under this Contract, including any acts or omissions of Contractor, any agent, officer, director, representative, employee, consultant or Subcontractor of Contractor and Contractor's and its Subcontractor's respective officers, agents employees, directors and representatives while in the exercise of the rights or performance of the duties under this Contract. The indemnity provided for in this paragraph shall not apply to any liability resulting from the negligence of Owner, its officers or its employees in instances where such negligence causes personal injury, death, or property damage. IN THE EVENT CONTRACTOR AND OWNER ARE FOUND JOINTLY LIABLE BY A COURT OF COMPETENT JURISDICTION, LIABILITY SHALL BE APPORTIONED COMPARATIVELY IN ACCORDANCE WITH THE LAWS FOR THE STATE OF TEXAS, WITHOUT, HOWEVER, WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO OWNER UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW.

7.10.2. The provisions of this Indemnity solely are for the benefit of the Parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity. Contractor shall advise Owner in writing within twenty four (24) hours of any claim or demand against Owner or Contractor known to Contractor related to or arising out of Contractor's activities under this Contract and shall see to the investigation and defense of such claim or demand at Contractor's sole cost. Owner shall have the right, at its option and at its own expense, to participate in such defense without relieving Contractor of any of its obligations under this Section 4L.7.10.

7.10.3. Intellectual Property Indemnification. Contractor shall protect, indemnify, and defend and/or handle at its own cost and expense any claim or action against Owner, its elected officials, employees, officers, directors, volunteers and representatives of Owner, individually or collectively, for infringement of any United States Patent, copyright or similar

property right including, but not limited to, misappropriation of trade secrets and any infringement by Contractor and its employee or its Subcontractors and their agents, servants and employees, based on any deliverable or any other materials furnished hereunder by Contractor and used by either Owner or Contractor within the scope of this Contract (unless said infringement results directly from Contractor's compliance with Owner's written standards or specifications). Contractor does not warrant against infringement by reason of Owner's or Engineer's design of articles or their use in combination with other materials or in the operation of any process. Contractor shall have the sole right to conduct the defense of any such claim or action and all negotiations for its settlement or compromise, unless otherwise mutually agreed upon, expressed in writing and signed by the Parties hereto. Contractor agrees to consult with Owner's attorney(s) during such defense or negotiations and make good faith efforts to avoid any position adverse to the interest of Owner. Owner shall make available to Contractor any deliverables and/or works made for hire by Contractor necessary to the defense of Contractor against any claim of infringement for the duration of Contractor's legal defense.

7.10.4. If such infringement claim or action has occurred or, in Contractor's judgment, is likely to occur, Owner shall allow Contractor, at Contractor's option and expense, (unless such infringement results directly from Contractor's compliance with Owner's written standards or specifications or by reason of Owner's or Engineers' design of articles or their use in combination with other materials or in the operation of any process for which Owner shall be liable) to elect to:

- procure for Owner the right to continue using said deliverable and/or materials;
- modify such deliverable and/or materials to become non-infringing (provided such modification does not adversely affect Owner's intended use of the deliverable and/or materials as contemplated hereunder);
- replace said deliverable and/or materials with an equally suitable, compatible and functionally equivalent non-infringing deliverable and/or materials at no additional charge to Owner; or
- if none of the foregoing alternatives is reasonably available to Contractor, upon written request, Owner shall return the deliverable and/or materials in question to Contractor and Contractor shall refund all monies paid by Owner, with respect to such deliverable and/or materials, and accept return of same. If any such cure provided for in this Section 4L.7.10 shall fail to satisfy the third-party claimant, these actions shall not relieve Contractor from its defense and indemnity obligations set forth in this Section 4L.7.10.

7.10.5. The Indemnification obligations under this Section 4L.7.10 shall not be limited in any way by the limits of any insurance coverage or any limitation on the amount or type of damages, compensation or benefits payable by, for or to Contractor or any Subcontractor, supplier or any other individual or entity under any insurance policy, workers' compensation acts, disability benefit acts or other employee benefits acts.

7.10.6. Worker Safety. The Indemnification hereunder shall include, without limiting the generality of the foregoing, liability which could arise to Owner, its agents, Consultants and/or

representatives or Engineer and/or its representatives pursuant to State statutes for the safety of workers and, in addition, all Federal statutes and rules existing there under for protection, occupational safety and health to workers. It is agreed the primary obligation of Contractor is to comply with these statutes in the performance by Contractor of the Work and the obligations of Owner, its agents, Engineer and its representatives, and/or Consultants and its representatives under said statutes are secondary to that of Contractor.

7.10.7. Defense Counsel. Owner shall have the right to approve defense counsel, of which approval shall not be unreasonably withheld, to be retained by Contractor in fulfilling its obligation hereunder to defend and indemnify Owner, unless such right is expressly waived by Owner in writing. Contractor shall retain Owner-approved defense counsel within ten (10) calendar days of Owner's written notice Owner is invoking its right to Indemnification under this Contract. If Contractor fails to retain counsel within such time period, Owner shall have the right to retain defense counsel on its own behalf and Contractor shall be liable for all costs incurred by Owner. Owner also shall have the right, at its option, to be represented by advisory counsel of its own selection and at its own expense, without waiving the foregoing.

Item 5L
Control of the Work

1. AUTHORITY OF ENGINEER

1.1. Owner and its Project Management Team shall provide administration of the Contract:

- during construction;
- until final payment is due; and

The Project Management Team shall have authority if authorized by Commissioners Court to act on behalf of Owner, unless otherwise modified in writing by Owner.

1.2. Owner reserves the right to issue instructions directly to Contractor or through the Engineer or the Project Management Team. Contractor understands Owner may modify the authority of the Project Management Team. Nothing herein shall authorize independent agreements between Contractor and Engineer, nor shall the Engineer be deemed to have a legal relationship with Contractor.

1.3. Neither Engineer nor Owner shall have control over, charge of nor be responsible for the construction means, methods or techniques, or for the safety precautions, quality control program and other programs in connection with the Work, since these solely are Contractor's rights and responsibilities under the Contract Documents. Sequencing and procedures shall be coordinated and agreed upon by Owner, Engineer and Contractor and shall remain the responsibility of Contractor for implementation.

1.4. Engineer shall not be responsible for Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Engineer shall not have control over, charge of and shall not be responsible for acts or omissions of Contractor, Subcontractor, their respective agents, employees or any other persons or entities performing portions of the Work.

1.5. Interpretation by Engineer.

1.5.1. Upon written request of Owner or Contractor, Engineer shall issue its interpretation of the requirements of the plans and specifications. Engineer's response to such requests shall be made in writing within a time limit agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of Engineer shall be furnished in compliance with this Article, then no delay shall be recognized on account of any failure by Engineer to furnish such interpretations except for actual substantiated delays, for which Contractor is not responsible, occurring more than fifteen (15) calendar days after written request is made for the interpretations.

1.5.2. Interpretations and decisions of Engineer shall be consistent with the intent of and reasonable inference from the Contract Documents and shall be in writing or in the form of drawings.

1.5.3. Engineer's decisions on matters relating to aesthetic effect shall be final if consistent with the intent expressed in the Contract Documents and not expressly overruled in writing by Owner.

2. PLANS AND WORKING DRAWINGS

2.1. Contractor shall maintain, on Site and for Owner's use, one record copy of the Drawings, Specifications, Addenda, Change Orders and other Amendments, in good order and currently marked, to record field changes and selections made during construction, along with one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These record copies also shall be available to Engineer and shall be delivered to Engineer for submittal to Owner upon completion of the Work.

2.2. Contractor shall be permitted to retain one record set. Neither Contractor nor any Subcontractor, sub-Subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by Engineer or Engineers. The Drawings, Specifications and other documents prepared by Engineer and Engineer's Engineers, along with copies thereof furnished to Contractor, are for use solely with respect to this Project. The drawings, specifications or other documents are not to be used by Contractor or any Subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of Owner. Any such use without written authorization shall be at the sole risk and liability of Contractor. Contractor, Subcontractors and material or equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Engineer and the Engineer's Engineers appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this authorization shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by Engineer and Engineer's Engineers. Submittal or distribution to meet official regulatory requirements or for other purposes, in connection with this Project, is not to be construed as publication.

2.3. All of Contractor's non-proprietary, documentary Work product, including reports and correspondence to Owner, prepared pursuant to this Contract, shall be the property of Owner and, upon completion of this Contract and upon written request by Owner, promptly shall be delivered to Owner in a reasonably organized form, without restriction on its future use by Owner. For the avoidance of doubt, documentary Work product does not include privileged communications, proprietary information and documents used to prepare Contractor's Bid Proposal.

2.4. 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, Owner 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.

Table 1
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
3. Contractor-proposed temporary facilities that affect the public safety, not included on the plans		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

1. Owner 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 of Owner or Project Management Team.

3. 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.

4.1. The most recently issued Document takes precedence over previous issues of the same Document. The order of precedence is as follows, with the highest authority listed herein as "1" and in descending order:

1. Modifications to the Project Contract authorized by Contractor and Owner;
2. Addenda, with those of later date(s) having precedence over those with earlier date(s);
3. Special Provisions;
4. Special Specifications;
5. Specifications;
6. Detailed Drawings;
7. Drawings

Numerical dimensions govern over scaled dimensions.

4.2. Should the Drawings and Specifications be inconsistent, contract pricing shall be based on the better quality and greater quantity of work indicated. In the event of the above-mentioned inconsistency, Owner shall determine the resolution of the inconsistency.

4.3. Reference to manufacturer's instructions, standard specifications, manuals or codes of any technical society, organization or association, laws or regulations of any governmental authority, or to any other documents, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Contractor's Bid Proposal, except as otherwise may be specifically stated or where a particular issue is indicated.

4.4. It is not Contractor's responsibility to ascertain the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes and rules and regulations. However, if Contractor observes portions of the Contract Documents are at variance therewith, Contractor promptly shall notify Owner in writing of any variances and all necessary changes shall be accomplished by appropriate modification(s) before Contractor performs any Work affected by such modification(s).

4.5. Notify the Owner promptly of any omissions, errors, or discrepancies discovered so that necessary corrections and interpretations can be made. Failure to provide prompt notice will constitute a waiver of all claims for misunderstandings or ambiguities that result from the errors, omissions, or discrepancies discovered.

5. COOPERATION OF CONTRACTOR

Owner and Contractor shall endeavor to communicate with each other directly, through Engineer and/or through the ODR about matters arising out of or relating to the Contract. Communications by and with Engineer shall be through Engineer. Communications by Owner and Engineer with Contractor's employees Subcontractors and material suppliers shall be through Contractor. All communications by and with Owner's separate contractors shall be through Owner.

5.1. The Project Management Team may, but are not required to, be present at the construction site during progress of the Work, to verify Contractor's record of the number of workers employed on the Work site, the workers' occupational classification, the time each worker is engaged in the Work and the equipment used by the workers in the performance of the Work, for purpose of verification of Contractor's Applications for Payment and payroll records.

5.2. Superintendent. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who is able to communicate fluently in English, along with any necessary assistant(s) who is/are satisfactory to Owner. Any superintendent designee shall be identified in writing to Owner promptly after Owner issues written Notice to Proceed. The superintendent shall represent Contractor at all time and all directions given to the superintendent shall be binding on Contractor. The designated superintendent shall not be replaced without written notice to and approval by Owner, which approval shall not be unreasonably withheld, except with good reason. The superintendent may not be employed on any other project prior to Final Acceptance of the Work without the approval of Owner, which approval shall not be unreasonably withheld. The Owner may suspend work without suspending day charges if a Superintendent is not available or does not meet the above criteria.

5.3. Contractor shall, at all times, enforce strict discipline and good order among persons working on the Project and shall not employ or continue to employ any unfit person on the Project or any person not skilled in the assigned work. Contractor shall be liable for and responsible to Owner for all acts and omissions of its employees, all tiers of its Subcontractors, material suppliers, anyone who Contractor may allow to perform any Work on the Project and their respective officers, agents, employees, and Engineer who Contractor may allow to come on the job site, with the exception of Owner or Owner's Designee. Owner, at any time, for any reason, may direct Contractor to remove any employee, Subcontractor, material supplier or anyone else from the Project and Contractor promptly shall comply with Owner's direction. In addition, if Contractor receives written notice from Owner complaining about any Subcontractor, employee or anyone who is a hindrance to the proper or timely execution of the Work, Contractor shall remedy such complaint without delay to the Project and at no additional cost to Owner. This provision shall be included in all contracts between Contractor and all Subcontractors of all tiers.

5.3.1. Contractor recognizes, accepts and hereby acknowledges the Project Site is a public facility representing the County of Hidalgo. As such, Contractor shall prohibit the possession or use of alcohol, controlled substances, tobacco and any prohibited weapons on the Project Site and shall require appropriate dress of Contractor's forces consistent with the nature of the Work being performed, including the wearing of shirts at all times. Harassment of any kind, including sexual harassment, of employees of Contractor or any Subcontractor, employees or Engineer of Owner or of any visitor to the Project site, by Contractor, employee(s) of Contractor, a Subcontractor or an employee of Subcontractor strictly is forbidden. Any person, Contractor, employee of Contractor, Subcontractor or employee of Subcontractor who is found to have engaged in such conduct shall be subject to appropriate disciplinary action by Contractor and/or Owner, including the removal and exclusion of the violating person(s) or employee(s) of Contractor or Subcontractor from the Project Site and, if Owner so elects, termination from the Project.

5.3.2. Contractor has adopted or shall adopt its own policy to assure a drug and alcohol free work place while performing the Work. Contractor's employees, agents, and Subcontractors shall not perform any service for Owner while under the influence of alcohol or any controlled substance. Contractor, its employees, agents and Subcontractors shall not use, possess, distribute or sell illegal, illicit and/or prescribed controlled drugs or drug paraphernalia or misuse legitimate prescription drugs while on Site or performing the Work. Contractor, its employees, agents and Subcontractors shall not use, possess, distribute or sell alcoholic beverages while performing the Work or while on Site or performing the Work. Contractor shall remove any of its employees or Subcontractor employees from performing the Work or from the Site any time there is suspicion of alcohol and/or drug use, possession or impairment involving such employee and at any time an incident occurs where drug or alcohol use could have been a contributing factor. Owner has the right to require Contractor to remove employees or Subcontractor employees from performing the Work or from the Site any time cause exists to suspect alcohol or drug use. In such cases, Contractor's or Subcontractor's employees only may be considered for return to work after Contractor certifies, as a result of a for-cause test conducted immediately following a removal, said employee was in compliance with this Contract. Contractor shall not employ any individual, or shall not accept any Subcontractor

employees, to perform the Work who either refuses to take or tests positive in any alcohol or drug test.

5.3.3. Contractor shall comply with all applicable federal, state and local drug and alcohol related laws and regulations (e.g., Department of Transportation regulations, Department of Defense Drug-free Work-free Workforce Policy, Drug-Free Workplace Act of 1988).

5.3.4. The presence of any firearms or other lethal weapons by any person is prohibited on the Project site, regardless of whether there exists a valid permit for carrying a weapon.

5.4. Contractor fully shall be responsible to Owner for all acts and omissions of its Subcontractors, persons and organizations directly or indirectly employed by them and persons and organizations for whose acts any of them may be liable to the same extent that Contractor is responsible for the acts and omissions of persons directly employed by Contractor. Nothing in the Contract Documents shall create any contractual relationship between Owner and any Subcontractor or other person or organization having a direct contract with Contractor, nor shall it create any obligation on the part of Owner to pay or to see to the payment of any moneys due any Subcontractor or other person or organization, except as may otherwise be required by law. Owner may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to Contractor on account of specific Work done.

5.4.1. Owner, upon the showing of good and reasonable cause, may reject or require removal of any Architect, Engineer, Consultant, Sub-Consultant, job superintendent, employee of the Contractor, Subcontractor or sub-Subcontractor and/or supplier involved in the Project.

5.4.2. Contractor shall provide an adequate staff for the proper coordination and expedition of the Work. Owner reserves the right to require Contractor to remove from the Project any employee(s) of Contractor, Owner, at its sole discretion, deems incompetent, careless, insubordinate, unnecessary or in violation of any provision in these Contract Documents. This provision is applicable to Subcontractors, sub-Subcontractors and their employees.

5.5. Contractor shall 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.

5.6. Owner may suspend the work without suspending day charges until the Contractor complies Article 5L.1 through Article 5L.5. All work associated with fulfilling these requirements are subsidiary to the various items of the Contract and no direct compensation will be made.

5.7. Key Personnel.

5.7.1. Contractor shall furnish a list to Owner of all Architects, Engineers, Consultants, Sub-Consultants, job-site superintendents, Subcontractors and suppliers involved in the Project construction.

5.7.2. Owner reserves the right to utilize one or more of its employees or Engineers or Consultants to function in the capacity of Owner's Inspector, whose primary function shall be daily inspections, checking pay requests or construction timelines and the verification of the storage of supplies and materials.

5.7.3. Contractor shall not change any key personnel or key Subcontractors without the prior written consent of Owner, which consent shall not be unreasonably withheld. In the event key personnel leaves Contractor's employment, such key personnel's replacement shall be subject to Owner's reasonable approval.

5.8. Use of Site.

5.8.1. Contractor shall abide by all applicable rules and regulations of Owner with respect to conduct, including smoking, parking of vehicles, security regulations and entry into adjacent facilities owned by Owner.

5.8.2. Contractor shall provide access to residents and businesses affected by the construction of this Project to the greatest extent possible, including providing temporary base and asphalt as needed.

5.9. Access to Work. Contractor shall provide Owner, Owner's designee or Project Management Team access to Work in preparation and in progress, wherever located.

6. COOPERATING WITH UTILITIES AND EXISTING INFRASTRUCTURE

6.1. The Contractor's attention is hereby specifically directed to the information regarding the existing public utility structures, lines and mains which are known to exist and may be encountered within and/or adjacent to the limits of the Work covered by this Contract. The existence and location of underground utilities indicated on the Plans are taken from the most current utility records available to the Engineer but are not guaranteed by Owner or Engineer nor do they indicate the location of private service lines, but shall be investigated and field verified by the Contractor before starting Work. The Contractor is reminded that maintaining continuity of utility service to customers is critical.

6.2. Work Clearance Zones. "Work Clearance Zones," as used hereinafter, shall be considered to be the distance on the horizontal axis from the edge of pipe, box or other construction to the outside edge of the excavation shown on the Plans or details or to the outside edge of Contractor's Trench Excavation Protection System. The vertical restrictions of the Work Clearance Zone are subject to excavation limits as shown on the Plans and/or height limitations as required by State statutes. In the event that existing conflicting utilities cannot be relocated, see Section 5L.7.4.

6.3. Temporary Clearance. Temporary clearance of high voltage (600 volts and above) and overhead electrical lines is required prior to the operation of equipment within 10 feet of such lines (VTCS 1436C, Sec. 5A & 6). At its own expense, Contractor shall obtain the necessary temporary clearance from the high voltage line operator or utility company. Temporary clearance shall be a temporary barrier separating and preventing contact of

material, equipment, persons, communications with high voltage electrical lines, or temporary de-energization and grounding or temporary relocation, or raising of the lines.

6.4. Contractor's Responsibility. The Contractor shall be responsible for any damage to, and protection of existing utilities. Any damage caused to utilities on the part of the Contractor, or its Subcontractors, shall be repaired by the utility company and paid for by the Contractor or its Subcontractor. Temporary relocation of utilities by utility companies for the Contractor's convenience shall be paid by the Contractor directly to the affected utility company.

6.5. In instances where gas or water mains are exposed during construction, the utility company owning or operating the service shall be given at least twenty-four (24) hours notice or as required by specifications by the Contractor prior to backfilling so the protective coating on the mains may be inspected and/or repaired by utility company. If repairs are necessary, all costs incurred are to be borne by Contractor.

6.6. Bracing and Supporting. In areas where utilities are known to be near the outside edge of the Work Clearance Zone and could be damaged by soil movement, slips or cave-ins, the Contractor shall take all precautions necessary to protect such utilities from damage and shall pay for the repair of any such damages caused by Contractor failure to properly protect the utility. Use established safety practices when working near utilities. Consult with the appropriate utilities before beginning work. Notify Owner immediately of utility conflicts. Owner, in conjunction with Engineer, will decide whether to adjust utilities or adjust the work to eliminate or lessen the conflict.

6.7. 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.

6.8. 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 Owner and utility.

6.9. Public Utilities And Other Properties To Be Changed. In case it is necessary for Contractor to change or move the property of Owner or of any telecommunications or public utility, such property shall not be touched, removed or interfered with until ordered to do so by Owner. Owner reserves the right to grant any public or private utility personnel the authority to enter upon the Project site for the purpose of making such changes or repairs to their property that may become necessary during the performance of the Work. Owner reserves the right of entry for itself and any utility provider upon the Project site at any time and for any purpose, including repairing or relaying sewer and water lines and appurtenances, repairing structures and for making other repairs, changes, or extensions to any of Owner's or any utility provider's property. Owner's actions shall conform to Contractor's current and approved schedule for the performance of the Work, provided that proper notification of schedule requirements has been given to Owner by Contractor.

6.10. Temporary Storm Sewer and Drain Connections. When existing storm sewers or drains have to be taken up or removed, Contractor shall, at its expense, provide and maintain

temporary outlets and connections for all public and private storm sewers and drains. Contractor also shall provide for all storm sewage and drainage which shall be received from these storm drains and sewers. For this purpose, Contractor shall provide and maintain, at Contractor's own expense, adequate pumping facilities and temporary outlets or diversions. Contractor shall, at Contractor's own expense, construct such troughs, pipes or other structures that may be necessary and shall be prepared at all times to dispose of storm drainage and sewage received from these temporary connections until such time as the permanent connections are built and are in service. The existing storm sewers and connections shall be kept in service and maintained under the Contract, except where specified or ordered to be abandoned in the Contract Documents. All storm water and sewage shall be disposed of in a satisfactory and lawful manner so that no nuisance is created and that the Work under construction shall be adequately protected.

6.10.1. INTENTIONALLY DELETED

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:

- 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.
- Owner will coordinate with the railroad company regarding the further execution of the ROE Agreement and associated fees. Owner will pay any ROE Agreement fees directly to the railroad company.
- Once Owner has received the fully-executed ROE Agreement from the railroad company, Owner will forward the fully-executed ROE Agreement to the Contractor.

9. CONSTRUCTION SURVEYING

Owner shall furnish surveys, if in existence and in Owner's possession, describing physical characteristics, legal limitations and utility locations. The furnishing of these surveys and reports shall not relieve Contractor of any of its duties under the Contract Documents or these General Requirements and Covenants. Information or services required of Owner by the Contract Documents shall be furnished by Owner with reasonable promptness following actual receipt of a written request from Contractor. It is incumbent upon Contractor to identify, establish and maintain a current schedule of latest dates for submittal and approval by Owner, as required in Article 8L.6 herein, including when such information or services must be delivered. If Owner delivers the information or services to Contractor as scheduled and Contractor is not prepared to accept or act on such information or services, then Contractor shall reimburse Owner for all extra costs incurred by holding, storage, retention or performance, including redeliveries by Owner in order to comply with the current schedule.

As applicable, Owner shall have appropriate Temporary Bench Marks (hereafter referred to as "TBM") and a baseline established. As of the date of the Notice To Proceed, it is Contractor's responsibility to protect, preserve and reestablish (if required) the TBM and/or baseline. Construction staking and tolerances shall be in accordance with the "Manual of Practice for Land Surveying in the State of Texas Category 5".

As applicable, Contractor shall layout its work from an established baseline and TBM indicated on the drawings and shall be responsible for all measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials and labor required to layout any part of the work.

Contractor shall provide cut sheets to Owner's inspector at minimum seven (7) calendar days prior to construction of street and drainage work. Contractor shall establish the necessary offsets, hubs and guards marked showing control designation and offsets for Owner's Work, if present. Contractor shall provide cut sheets for improvements where Sewer profiles are provided for various phases of the project and cut sheets for Water profiles, if applicable. Contractor shall provide staking and preparation of cut sheets after receiving notice to proceed from Owner. If present, Contractor shall provide SAWS with cut sheets at minimum (7) calendar days prior to commence of SAWS work. Contractor shall be responsible for maintaining and preserving a baseline and TBM indicated on the drawings for duration of construction. If such marks are destroyed, Contractor shall replace them at its own expense.

10. INSPECTION

10.1. The Contractor shall provide sufficient, safe and proper facilities at all reasonable times for the observation/inspection of the Work by the duly authorized representative of the Owner. The Project Management Team may make visits to the site at intervals appropriate to the various stages of construction to observe the progress of the executed Work and to determine, in general, if the Work is progressing in general accordance with the Contract Documents.

10.1.1. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will generally conform to the Contract Documents. On the basis of such visits and on-site observations as an experienced and qualified design professional, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against obvious defects and deficiencies in the Work which is the responsibility of the Contractor to prevent and/or cure.

10.1.2. No Approval of any phase of the construction Project by any of the Owner's representatives or observer/inspectors shall relieve the Contractor from full compliance with the Contract Documents regarding the ultimate Work product. Any additional cost, damages, or delays occasioned by patent or latent defects in the Work, and/or failure to meet the requirements of the Contract Documents, at any Project phase, shall be borne by the Contractor.

10.1.3. Inspectors will be authorized to inspect all work done and all materials furnished. Such inspection may extend to all or to any part of the work and to the preparation or manufacture of the materials to be used. An Inspector will be assigned to the work by the Owner and will report to the Owner as to the progress of the work and the manner in which the work is being performed. The Inspector will also report to the Owner whenever it appears that the materials furnished and the work performed by the Contractor fail to fulfill the requirements of the specifications and contract and call the attention of the Contractor to any such failure or other infringement. Such inspection will not relieve the Contractor from any obligation to perform the work in accordance with the requirements of the specifications. In case of any dispute arising between the Contractor and the Inspector as to materials furnished or the manner of performing the work, the Inspector will have the authority to reject materials or suspend work on the operation or materials in dispute until the question at issue can be referred to and decided by the Owner. The Inspector will not be authorized to revoke, alter, enlarge or release any requirement of these specifications, nor to approve or accept any portion of work, nor to issue instructions contrary to the plans and specifications. The Inspector will in no case act as foreman or perform other duties for the Contractor nor interfere with the management of the work.

10.2. Independent Materials Testing and Inspection. In some circumstances, Owner shall retain, independent of Contractor, the inspection services, the testing of construction materials engineering and the verification testing services necessary for acceptance of the Project by Owner. Such Consultants shall be selected in accordance with Section 2254.004 of the Government Code and any other applicable state and federal statutes and regulations. The professional services, duties and responsibilities of any independent Consultants shall be described in the agreements between Owner and those Consultants. The provision of inspection services by Owner shall be for Quality Assurance and shall not reduce or lessen Contractor's responsibility for the Work or its duty to establish and implement a thorough Quality Control Program to monitor the quality of construction and guard Owner against defects and deficiencies in the Work, as required herein. Contractor fully and solely is responsible for constructing the Project in strict accordance with the Construction Documents.

10.3. Contractor shall be responsible for inspection of portions of Work already performed, to determine which such portion are in proper condition to receive subsequent Work.

10.4. 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. COMPLETION OF WORK

11.1. If, in the sole judgment of Owner, the Schedule update reflects Work is behind schedule and the rate of performance of Work is inadequate to regain scheduled progress to insure Contractor achieving any Project Milestones (including, but not limited to, Substantial Completion) in accordance with the Project Schedule, Owner may, at its sole option, give written notice to Contractor and direct Contractor, at Contractor's sole expense, to propose and adopt a plan to accelerate the Work so the Work conforms to the Project Schedule and Project Milestones previously agreed upon. Contractor may, but is not limited to, propose:

- increasing Project work forces;
- increasing Project equipment or tools;
- increasing the hours of work or number of shifts per day;
- expediting the delivery of Project materials;
- changing, with the approval of Owner, the schedule logic and Work sequences; or
- taking some other action as Contractor may proposes, if acceptable to Owner.

11.2. Within ten (10) calendar days after such notice from Owner, Contractor shall notify Owner in writing of the specific measures taken and/or planned to be taken to increase the rate of progress of Work on the Project. Contractor shall include an estimate as to the date of scheduled full progress recovery and an updated Project Schedule, illustrating Contractor's plan for achieving timely completion of the Project Milestone's and the Project's Substantial Completion.

11.3. Should Owner deem Contractor's plan of action inadequate to achieve the desired acceleration to bring the Work back on the Project Schedule and achieve Substantial Completion on time, Owner shall have the right to order Contractor, at Contractor's sole expense, to take any corrective measures Owner deems necessary to expedite the progress of Work including, without limitation:

- increasing work forces and hours, to include Contractor working additional shifts of overtime;
- supplying additional manpower, equipment and facilities;
- re-sequencing the Work;
- expediting the fabrication and supply of materials; and/or
- other similar measures Owner may direct (hereafter (1) – (5) herein above collectively referred to as "Extraordinary Measures").

Such Extraordinary Measures Owner directs shall continue until the progress of the Work complies with the Milestone required by the Contract Documents.

11.4. Owner's right to require Extraordinary Measures solely is for the purpose of ensuring Project Milestones and Substantial Completion of the Work is achieved within the Contract Time. Contractor shall not be entitled to an adjustment in the Contract Sum in connection with Extraordinary Measures required by Owner under or pursuant to Article 8L.5, except as may be provided under the provisions of Article 5L.6 herein.

11.5. Owner may exercise the rights furnished pursuant to this Article as frequently as Owner deems necessary to ensure Contractor's performance of the Work is in compliance with any milestone date or completion date(s) set forth in the Contract Documents.

11.6. If reasonably required by Owner, Contractor also shall prepare and furnish Project cash flow projections, manning data for critical activities and schedules for the purchase and delivery of all critical equipment and material, together with periodic updating thereof.

11.7. Contractor shall recommend to Owner a schedule for procurement of long-lead time items, which shall constitute part of the Work as required to meet the Project Schedule.

12. PARTIAL USE

12.1. Owner may use any completed or partially completed portion of the Work at any stage of the Work when such partially completed portion is designated, provided such use is consented to by the insurer, as authorized by public authorities having jurisdiction over the Work. Such partial use may commence whether or not the portion is Substantially Complete, provided Owner and Contractor have accepted in writing the responsibilities assigned to each of them for security, maintenance, utilities, damage to the Work, insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When Contractor considers a portion of the Work to be Substantially Complete, Contractor shall prepare and submit a list of items to be completed or corrected prior to Final Acceptance and final payment and submit such list to Owner, as provided under Section 5L.13.2 herein. Consent of Contractor to partial use shall not be unreasonably withheld. The state of the progress of the Work shall be determined by written agreement between Owner and Contractor or, if no agreement is reached, by the decision of Engineer.

12.2. Immediately prior to such partial use, the Owner's designee or Project Management Team collectively shall inspect the portion of the Work to be used in order to determine and record the condition of the Work.

12.3. Unless expressly agreed upon in writing, partial use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

12.4. Upon such partial use, and upon Substantial Completion, Owner may assume responsibility for maintenance, security and insuring that portion of the Work that it has put into use.

12.5. Partial use by Owner does not constitute substantial completion and does not start any warranty period(s).

13. SUBSTANTIAL COMPLETION

13.1. Substantial Completion is defined as the stage in the progress of the Work when the Work – or a designated portion thereof, which Owner agrees to accept separately – sufficiently is complete, in accordance with the Contract Documents, so Owner may occupy or utilize the Work or a designated portion thereof for its intended use. In the event Substantial Completion is not achieved by the designated date, or the date extended by issued and accepted Change Order(s), Owner may withhold payment of sums necessary to pay the estimated Liquidated Damages due Owner. Owner shall be entitled, at any time, to deduct out of any sums due to Contractor any or all Liquidated Damages due Owner in accordance with the Contract between Owner and Contractor.

13.2. When Contractor considers that the Work, or a portion thereof which Owner agrees to accept separately, is Substantially Complete, Contractor shall prepare and submit to Owner a preliminary comprehensive list of items to be completed or corrected prior to Final Acceptance and final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

13.3. Upon receipt of Contractor's list of items to be completed or corrected, the Owner's designee or Project Management Team shall make a Site inspection to determine whether the Work or designated portion thereof is Substantially Complete. If inspection by the Owner's designee or Project Management Team discloses any item, whether or not it was included on Contractor's list of items to be completed or corrected, which is not sufficiently complete or correct in accordance with the Contract Documents so that Owner may occupy or utilize the Work or designated portion thereof for its intended use, Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon written notification by Owner. In such case, Contractor then shall submit a request for another inspection by the Owner's designee or Project Management Team to determine Substantial Completion and Contractor shall be responsible for all costs incurred and associated with re-inspection.

13.4. When the Work – or the designated portion thereof which Owner agrees to accept separately – is Substantially Complete, Owner shall prepare a Letter of Conditional Approval which shall:

- establish the date of Substantial Completion (which shall be the date on which the Work met the requirements under the Contract Documents for Substantial Completion);
- establish responsibilities of Owner and Contractor, as agreed to by Owner and Contractor, for security, maintenance, heat, utilities, damage to the Work and insurance; and
- confirm the time limit by which Contractor shall complete all items on the list accompanying the Certificate.

14. FINAL CLEANUP

14.1. Prior to Substantial Completion of the Work, Contractor shall remove all waste materials, rubbish and debris from and about the premises, as well as all tools, appliances, construction equipment and machinery and surplus materials, and shall leave the Project Site clean and ready for occupancy by Owner. As applicable, Contractor shall clean, sweep, mop, brush and polish, to Owner's satisfaction, the interior of the improvements and/or renovated areas including, but not limited to, any floors, carpeting, ducts, fixtures and ventilation units operated during construction, and shall clean exterior gutters, drainage, walkways, driveways and roofs of debris. Contractor shall restore to their original condition those portions of the Site not designated for alteration by the Contract Documents. If Contractor fails to clean up the premises as provided in the Contract Documents, Owner may elect to do so and all costs incurred by Owner shall be paid by Contractor.

14.2. Final Cleanup. The Contractor shall at all times keep the Project premises safe and free from accumulation of waste materials or rubbish caused by the Work under this Contract.

14.3. Final Inspection. Upon completion of the Work and prior to Owner's final inspection, the Contractor shall present the premises in a neat and clean condition, prepared for acceptance by Owner.

14.4. Restoration of Project Site. Prior to final acceptance of the Work, the Contractor shall reasonably restore the Project site to its pre-Project condition (accounting for such restoration concerns as, but not limited to, cosmetic appearance, landscaping, drainage gradients, accessibility) to the extent permitted by the Project improvements. All of this incidental Work to be performed by Contractor to the satisfaction of the Owner. 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.

15. FINAL ACCEPTANCE

15.1. The Contract shall be considered completed, except as provided in any warranty or vegetative management stipulations, bond or by law, when all the Work has been finally completed, a final inspection is made by the Owner, Owner's designee or Project Management Team and final acceptance and final payment is made by Owner. Final acceptance relieves the Contractor from further Contract responsibilities.

At the end of construction of the Project, Contractor shall provide Owner a grade certificate prepared by a Registered Professional Land Surveyor. This certificate shall state the infrastructure is constructed in accordance to the construction documents or as approved by Owner and the Engineer of Record, which is noted on the record plan set.

15.1.1. Work Completed. Work completed must include work for vegetative establishment and maintenance, test, and performance periods and work to meet the requirements of Article 5L.15., "Final Cleanup."

15.1.2. Final Inspection. When all of the Work finally is completed and ready for final inspection, Contractor shall notify Owner thereof in writing. Thereupon, Owner's designee or Project Management Team shall make final inspection of the Work. No day charges will be made between Substantial Completion approval and final inspection unless Contractor has exhausted the number of days allowed in the Substantial Completion letter for punchlist items.

After the final inspection, if the work is satisfactory, the Owner will notify the Contractor in writing of the final acceptance of the work. If the final inspection finds any work to be unsatisfactory, Owner will identify in writing all deficiencies in the work requiring correction.Contractor shall correct the deficiencies identified. Day charges will resume if these deficiencies are not corrected within 7 calendar days, or the timeframes listed on the notice. Upon correction, Owner, Owner's designee or the Project Management Team will make an inspection to verify that all deficiencies were corrected satisfactorily. The Owner will provide written notice of the final acceptance.

15.1.3. Final Measurement. Final measurements and pay quantity adjustments may be made after final acceptance.

15.1.4. 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.

1.2. Provide a notarized original of the TxDOT FORM D-9-USA-1 (or equivalent) with the proper attachments for verification of compliance.

1.3. 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.).

1.4. 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.

1.5. Imported Fill Material. The Contractor shall provide to Owner the name and location of the borrow source for all fill materials imported to the construction site, including, but not limited to, rock, gravel, sand, soils, select fill, topsoil, etc. Owner reserves the right to reject any proposed imported fill materials not meeting specifications and/or due to the physical

or environmental nature of the material. The Contractor shall provide documentable evidence, to Owner's satisfaction, as to the source, quantity, and quality of the fill material in the form of trip tickets, manifests, receipts, analytical results, etc., as required by Owner. Owner reserves the right to secure such information on a form devised by Owner and require the Contractor's certification in this regard.

2. MATERIAL QUALITY

Correct or remove materials that fail to meet Contract requirements or that do not produce satisfactory results. Reimburse 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 Owner approves corrective actions. Upon rejection, immediately remove and replace rejected materials.

If the Contractor does not comply with this Article, Owner may have defective material removed and replaced. The cost of testing, removal, and replacement will be deducted from the estimate.

3. MANUFACTURER WARRANTIES

Contractor shall procure and furnish to Owner all guarantees, warranties, spares and maintenance manuals called for by the Specifications or which normally are provided by a manufacturer. The maintenance manual shall include a catalog for any equipment, materials, supplies or parts used in the inspection, calibration, maintenance or repair of the equipment and items in the catalog shall be readily available for purchase.

4. SAMPLING, TESTING, AND INSPECTION

Incorporate into the work only material that has been inspected, tested, and accepted by Owner. 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 Owner for inspection expenses.

4.1. Shop Drawings, Product Data and Samples

4.1.1. Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittals is to demonstrate, for those portions of the Work for which submittals are required by the Contract Documents, the way by which Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review and interpretations by Engineer is subject to the limitations of Section 5L.1.5.2 herein. Informational submittals, upon which Engineer is not expected to take responsive action, may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Engineer without action.

4.1.2. Contractor shall review for compliance with the Contract Documents, approve and submit to Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by Contractor may be returned by Engineer without action.

4.1.3. Engineer shall review and approve or take other appropriate action upon Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Engineer shall perform these reviews in a timely fashion so as to not delay the Work. Engineer promptly shall respond to submittals such as Shop Drawings, Product Data and Samples pursuant to the procedures set forth in the Project Specifications. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of equipment or systems, all of which remain the responsibility of Contractor as required by the Contract Documents. Engineer's review of Contractor's submittals shall not relieve the Contractor of the Contract obligations. Engineer's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by Engineer, any construction means, methods, techniques, sequences or procedures. Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

4.1.4. By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, Contractor represents it has determined and verified materials, field measurements and construction criteria related thereto, or shall do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

4.1.5. Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal and review has been approved by Engineer. Engineer shall review and return such submittals within ten (10) calendar days or within a reasonable period so as to not delay the project.

4.1.6. The Work shall be in accordance with approved submittals, except Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by

Engineer's approval of Shop Drawings, Product Data, Samples or similar submittals unless Contractor specifically has informed Engineer in writing of such deviation at the time of submittal and:

- Engineer has given written approval in the specific deviation as a minor change in the Work; or
- a Change Order has been issued authorizing the deviation. Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by Engineer's approval thereof.

4.1.7. Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by Engineer on previous submittals. In the absence of such written notice, Engineer's approval of a resubmission shall not apply to such revisions.

4.1.8. Contractor shall not be required to provide professional services which constitute the practice of architecture or engineering unless such services specifically are required by the Contract Documents for a portion of the Work or unless Contractor needs to provide such services in order to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment specifically are required of Contractor by the Contract Documents, Owner shall specify all performance and design criteria such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly Texas-licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted. Owner shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner has specified to Contractor all performance and design criteria such identified services must satisfy. Pursuant to this Section, review, approval or other appropriate action on submittals is only for the limited purpose of checking conformance with information given and the design concept expressed in the Contract Documents. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

5. PLANT INSPECTION AND TESTING

Owner 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 Owner during the inspection.

- Ensure Owner 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 Owner as an office or laboratory.
- Provide and maintain adequate safety measures and restroom facilities.
- Furnish and calibrate scales, measuring devices, and other necessary equipment.

Owner 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.

6. STORAGE OF MATERIALS

All materials shall be shipped, stored and handled in a manner which shall protect and ensure their condition at the time of incorporation in the Work. Place materials under cover, on wooden platforms, or on other hard, clean surfaces as necessary or when directed. After installation, all materials shall be properly protected against damage to ensure they are in the condition as required by Article 5L.17 herein when the Work is Substantially Completed or Owner takes over use and occupancy, whichever is earlier.

Obtain approval to store materials on the right of way. Storage space off the right of way is at the Contractor's expense.

7. OWNER-FURNISHED MATERIAL

Owner will supply materials as shown in the Contract documents. The cost of handling and placing materials supplied by 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 Project'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 Owner as directed.

9. RECYCLED MATERIALS

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 Owner immediately when a visual observation or odor indicates that materials in required material sources or on sites owned or controlled by Owner may contain hazardous materials.

In the event Contractor encounters on the Project Site materials reasonably believed to be a Hazardous Substance that have not been rendered harmless, and the removal of such materials is not a part of the scope of Work required under the Contract Documents, Contractor immediately shall stop Work in the affected area and report in writing the facts of such encounter to Owner. Work in the affected area shall not thereafter be resumed except by written order of Owner and written consent of Contractor, unless and until the material is determined not to be a Hazardous Substance or the Hazardous Substance is remediated. Unless removal of such materials is a part of the scope of Work required under the Contract Documents, Owner shall remediate the Hazardous Substance with a separate contractor or through a Change Order with Contractor. If the Hazardous Substance exists in the affected area due to the fault or negligence of Contractor or any of its Subcontractors, Contractor shall be responsible for remediating the condition at the sole expense of Contractor. If applicable, such remediation shall be in accordance with Contractor's Spill Remediation Plan. An extension of the Contract Time for any delay in the progress schedule caused as a result of the discovery and remediation of a Hazardous Substance may be granted by Owner only if the Project critical path is affected and Contractor is not the source of the Hazardous Substance. Any request for an extension of the Contract Time and Compensation related to the discovery and remediation of a Hazardous Substance is subject to the provisions of Article 4L.6, Article 4L.7, and Article 8L.6 herein.

Contractor shall be responsible for identification, abatement, cleanup, control, removal, remediation and disposal of any Hazardous Substance brought into or onto the site by Contractor or any Subcontractor or Contractor's Supplier. Contractor shall obtain any and all permits necessary for the legal and proper handling, transportation and disposal of the Hazardous Substance and shall, prior to undertaking any abatement, cleanup, control, removal, remediation and/or disposal, notify Owner so that it may observe the activities; provided, however, that it shall be Contractor's sole responsibility to comply with all applicable laws, rules, regulations or ordinances governing said activities.

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. 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 Owner 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. For work at these locations, notify Owner of proposed dates of demolition or removal of structural elements with ACM at least 60 days

before work is to begin to allow Owner enough time to abate the asbestos. At locations where previously unknown ACM has been found, Owner will coordinate with the Contractor to arrange for abatement.

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 Owner. Continue other work detailed on the plans not directly involved in the paint removal or asbestos abatement work. Provide notice to Owner regarding the progress of the work to allow Owner enough time to schedule the third party work.

11. SURPLUS MATERIALS

The Contractor shall be responsible for quantifying volumes and identifying reuse, recycling, or disposal locations of all materials removed from the construction site, including soil, rock, gravel, excavation spoils, construction debris, and contaminated materials through the use of trip tickets, manifests, or other methods, as appropriate for the type of material. Where the material has been identified in the Plans and Specifications or is suspected to be contaminated by hazardous waste, toxic waste, petroleum storage tank waste, or other regulated material, the contractor shall appropriately characterize the material for disposal, reuse, or recycling at a Texas Commission on Environmental Quality (TCEQ) and Owner-approved facility prior to removal from the project site. Owner reserves the right to devise and require use of certification forms in this regard. Owner encourages reuse and recycling of materials, where applicable. The Contractor shall also be responsible for the safe and proper reuse and recycling of materials in accordance with all federal state, and local regulations, when reuse or recycling is appropriate. Owner retains the right to require the Contractor to provide evidence to Owner's satisfaction that all waste materials have been disposed of at an approved landfill, or as legally appropriate. No waste material shall be deposited in any natural drain, creek, river or other water course. Reclamation of low areas may be performed only with the approval of the Owner. The Contractor shall, as directed by the Inspector, remove at the Contractor's own expense any fill that is blocking drainage which resulted from the Contractor's operations.

If surplus soils are anticipated, provide at the Pre-Construction Conference the name and address of no more than three (3) locations, which are not located in a Federal Emergency Management Agency (FEMA) designated floodplain, where excavated soil from the Project will be hauled.

Item 7L

Legal Relations and Responsibilities

1. SAFETY

1.1. Point of Contact. Designate a Contractor Safety Point of Contact (CSPOC). This person shall be Contractor's superintendent unless otherwise designated by Contractor in writing to Owner. Owner will assign an 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.).

It is the Contractor's responsibility to train its employees and Subcontractors on its Safety Plan and provide for required protection equipment, and the CSPOC will ensure that crew leaders and foremen (including subcontractors) have attended the required training.

1.2. Safety Precautions and Programs.

1.2.1. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. Contractor shall develop a safety program applicable to each job site and to the Work to be done, provide copy and review such program with Owner in advance of beginning the Work, and enforce such program at all times. Further, Contractor shall comply with all applicable laws and regulations including, but not limited to, the standards and regulations promulgated by the Secretary of Labor under the Occupational Safety and Health Act of 1970 (OSHA) and any other legislation enacted for the safety and health of Contractor employees.

1.2.2. Contractor shall notify Owner immediately, by telephone with prompt confirmation in writing, of all injuries and fatalities including, but not limited to, copies of all reports and other documents filed or provided to Contractor's insurers and the State of Texas in connection with such injuries or fatalities.

1.2.3. Both Owner and Contractor agree that safety and health terms are of the highest importance and that a breach or violation of any of the terms by Contractor or a Subcontractor shall be a material and substantial breach of this Contract. In the event that Owner shall determine that Contractor has breached or violated the terms of this Section, then Owner shall determine, immediately upon written notice to Contractor, whether the Work shall be suspended as a result thereof. If the Work is suspended, the Work shall not recommence until Owner is satisfied that the safety provisions hereof shall not be breached or violated thereafter. If Owner terminates the Contract as a result of such breach or violation, Owner and Contractor shall complete their obligations hereunder to one another in accordance with Article 3L.6 herein.

1.2.4. Nothing contained in this Item shall be interpreted as creating or altering the legal duty of Owner to Contractor or to Contractor's agents, employees, Subcontractors or third parties, or altering the status of Contractor as an independent contractor.

1.2.5. Notwithstanding either of the above provisions, or whether Owner exercises its rights set forth herein, Owner neither warrants nor represents to Contractor, Contractor's employees or agents, any Subcontractors or any other third party that Contractor's safety policy meets the requirements of any applicable law, code, rule or regulation, nor does Owner warrant that the proper enforcement of Contractor's policy shall insure that no accidents or injuries shall occur. In addition, any action by Owner under these provisions in no way diminishes any of Contractor's obligations under applicable law or the contract documents.

1.3. Safety of Persons and Property.

1.3.1. Contractor shall take reasonable precautions for the safety of and shall provide reasonable protection to prevent damage, injury or loss to:

- employees performing the Work and other persons who may be affected thereby;
- the Work and materials and equipment to be incorporated at street crossings, along proposed detour routes, and at material stockpiles;
- the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of Contractor or Contractor's Subcontractors or Sub-Subcontractors;
- other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of Construction; and
- the contents of a building or structure, when Contractor is working in, on or around an existing/operating Owner facility.

1.3.2. Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

1.3.3. Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Owner and users of adjacent sites and utilities.

1.3.4. Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

1.3.5. Notwithstanding the delivery of a survey or other documents by Owner, Contractor shall use reasonable efforts to perform all Work in such a manner so as to avoid damaging any utility lines, cables, pipes or pipelines on the property. Contractor acknowledges and accepts that the location of underground utilities (both public and private) reflected on any Owner-provided plans are not guaranteed and may not be completely accurate. Contractor shall locate and verify any and all utilities and associated service lines prior to beginning any Work. Contractor shall be responsible for and shall repair, at Contractor's own expense, any damage done to lines, cables, pipes and pipelines identified or not identified to Contractor.

1.3.6. Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to areas permitted by law, ordinances, permits or the requirements of the Contract Documents and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

1.4. Trench Excavation. Contractor shall bear responsibility for design and execution of acceptable trenching and shoring procedures, in accordance with Texas Government Code, Section 2166.303 and Texas Health and Safety Code, Subchapter C, Sections 756.021, et seq.

1.5. Emergency Work.

1.5.1. In an emergency affecting safety of persons or property, Contractor shall exercise its best efforts to act to prevent or minimize threatened damage, injury or loss. Additional compensation or extension of time claimed by Contractor on account of an emergency shall be determined, as provided in Article 4L.4, Article 4L.6, and Article 4.7 herein.

1.5.2. If Contractor causes damage resulting in an issue of safety and/or security to a property of Owner, Contractor immediately shall repair any damage caused. If Contractor does not or shall not act immediately to repair the damage caused by Contractor to eliminate the resulting safety and/or security issue(s), Owner shall act to repair the damage caused and deduct all costs associated with the repair from any money due Contractor.

1.6. Public Safety and Convenience. Ensure the safety and convenience of the public and property as provided in the Contract and as directed by Owner.

1.6.1. Store all equipment not in use in a manner and at locations that will not interfere with the safe passage of traffic.

1.6.2. Contractor shall place materials stored at the Project site and shall conduct the Work at all times in a manner that causes no greater obstruction to the public than is considered necessary by Owner. Sidewalks or streets shall not be obstructed, except by special permission of Owner. Materials excavated and construction materials or plants used in the performance of the Work shall be placed in a manner that does not endanger the Work or prevent free access to all fire hydrants, water mains and appurtenances, water valves, gas valves, manholes for the telephone, telegraph signal or electric conduits, wastewater mains and appurtenances and fire alarm or police call boxes in the vicinity.

1.6.3. When Contractor is required to construct temporary bridges or make other arrangements for crossing over ditches or around structures, Contractor's responsibility for access shall include the roadway approaches as well as the crossing structures.

1.6.4. Maintenance of Traffic. In accordance with the approved traffic control plan and as specified in the Contract, or when directed by Owner, Contractor shall:

- manage construction to minimize disruption to traffic;
- keep existing roadways open to traffic or construct and maintain detours and temporary structures for safe public travel;

- keep any street or streets in condition for unobstructed use by Owner departments;
- maintain the Work in passable condition, including proper drainage, to accommodate traffic;
- provide and maintain temporary approaches and crossings of intersecting roadways in a safe and passable condition;
- construct and maintain necessary access to adjoining property as shown in the plans or as directed by Owner; and
- furnish, install and maintain traffic control devices in accordance with the Contract.

The cost of maintaining traffic shall be subsidiary to the Project and shall not directly be paid for by Owner, unless otherwise stated in the Plans and Specifications. Owner shall notify Contractor if Contractor fails to meet the above traffic requirements. Owner may perform the work necessary for compliance, but any action by Owner shall not change the legal responsibilities of Contractor, as set forth in the Contract Documents. Any costs incurred by Owner for traffic maintenance shall be deducted from money due or owed to Contractor.

1.6.5. Flaggers. When flagging is required by the plans or Traffic Control Plan, provide a Contractor representative who has been certified as a flagging instructor through courses offered by the Texas Engineering Extension Service, the American Traffic Safety Services Association, the National Safety Council, or other approved organizations. A qualified flagger must be independently certified by one of the organizations listed above or trained by the Contractor's certified flagging instructor.

1.6.5.1. Provide the certificate indicating course completion when requested. This representative is responsible for training and assuring that all flaggers are qualified to perform flagging duties.

1.6.5.2. Provide Owner with a current list of qualified flaggers before beginning flagging activities. Use only flaggers on the qualified list.

1.6.5.3. Flaggers must be courteous and able to effectively communicate with the public. When directing traffic, flaggers must use standard attire, flags, signs, and signals and follow the flagging procedures set forth in the TMUTCD.

1.6.6. Right to Remedy. Owner reserves the right to remedy any neglect on the part of Contractor, in regard to public convenience and safety, which may come to Owner's attention after twenty-four (24) hours notice in writing to Contractor. In case of an emergency, Owner shall have the right immediately to remedy any neglect without notice. In either case, the cost of any work done by or for Owner to remedy Contractor's neglect shall be deducted by Owner from Contractor's Contract Sum. Contractor shall notify Owner when any street is to be closed or obstructed. The notice shall, in the case of major thoroughfares or street upon which transit lines operate, be given at least forty-eight (48) hours in advance. Owner reserves the right to postpone and/or prohibit any closure or obstruction of any streets or thoroughfares, to the extent necessary for the safety and benefit of the traveling public. This will not change the legal responsibilities set forth in the Contract.

1.7. 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.

1.8. Barricades, Warning and Detour Signs, and Traffic Handling. If the Work is carried on, in or adjacent to any street, alley or public place, Contractor shall, at Contractor's own cost and expense, furnish, erect and maintain sufficient barricades, fences, lights and danger signals, provide sufficient watchmen and take such other precautionary measures as are necessary for the protection of persons or property and of the Work. 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 Owner. When authorized or directed by Owner, provide additional signs or traffic control devices not required by the plans.

1.8.1. All barricades shall be painted in a color that shall be visible at night, and shall be illuminated by lights as required under Owner's Barricades specifications. The term "lights," as used in this Article, shall mean flares, flashers or other illuminated devices. A sufficient number of barricades with adequate markings and directional devices also shall be erected to keep vehicles from being driven on or into any Work under construction.

1.8.2. 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 Owner and Engineer. Take prudent actions until Owner or Engineer can be contacted.

1.8.3. Owner 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.

1.8.4. Contractor shall be held responsible for all damage to the Work due to failure of barricades, signs, lights and/or watchmen necessary to protect the Work. Whenever evidence is found of such damage, Owner may order the damaged portion immediately removed and replaced by Contractor at Contractor's sole cost and expense. Contractor's responsibility for maintenance of barricades, signs, lights, and for providing watchmen, as required under this Article, shall not cease until the Project has been finally accepted by Owner.

1.9. Notification to Owner of Accidents. The Contractor must promptly report in writing to Owner all accidents whatsoever arising out of, or in connection with, the performance of

the Work whether on or adjacent to the site which caused death, personal injury, or property damage, giving full details and any statements of witnesses, if documented. In addition, if death, serious injury, or serious damage is caused, the accident then shall be reported immediately by telephone or messenger to Owner.

1.10. Site Requirements. Contractor shall erect and maintain on Site a Project Bulletin Board, accessible to all Contractor and Subcontractor employees, upon which Contractor shall post and maintain, throughout the Project's duration, all employment and safety information required by law. Contractor further shall post complete Payment and Performance Bond information on the Project Bulletin Board, listing Contractor's bonding and insurance agencies/providers, to include agency contact names, address and telephone numbers.

2. LAWS TO BE OBSERVED

Contractor shall comply with and give all notices required by all federal, state, and local laws, ordinances, regulations, and lawful orders of public authorities that are applicable to and/or affect the performance of the work. Indemnify and save harmless Owner and its representatives against any claim arising from violation by the Contractor of any law, ordinance, or regulation.

Contractor and its Subcontractors are deemed to have made themselves familiar with all applicable federal, state or local laws, rules, regulations, ordinances and rules of common law now in effect (including any amendments now in effect), relating to the environment, Hazardous Substances or exposure to Hazardous Substances including, but not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C.A. §§ 9601, et seq.; the Hazardous Materials Transportation Act, 49 U.S.C.A. §§ 1801, et seq.; the Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. §§ 6901, et seq.; the Federal Water Pollution Control Act, 33 U.S.C.A §§ 1201, et seq.; the Toxic Substances Control Act, 15 U.S.C.A. §§ 2601, et seq.; the Clean Air Act, 42 U.S.C.A. §§ 7401, et seq.; the Safe Drinking Water Act, 42 U.S.C.A. §§ 3808, et seq., and any current judicial or administrative interpretation of these laws, rules, regulations, ordinances or rules of common law including, but not limited to, any judicial or administrative order, consent decree or judgment affecting the Project.

Contractor shall review Subcontractor(s) written safety programs, procedures and precautions in connection with performance of the Work. However, Contractor's duties shall not relieve any Subcontractor(s) or any other person or entity (e.g. a supplier), including any person or entity with whom Contractor does not have a contractual relationship, of their responsibility or liability relative to compliance with all applicable federal, state and local laws, rules, regulations and ordinances, which shall include the obligation to provide for the safety of their employees, persons, and property and their requirements to maintain a work environment free of recognized hazards. The foregoing notwithstanding, the requirements of this Section are not intended to impose upon Contractor any additional obligations Contractor would not have under any applicable state or federal laws including, but not limited to, any rules, regulations or statutes pertaining to the Occupational Safety and Health Administration.

This Contract is between 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

Taxes. Contractor shall not include in the Contract Sum or any modification thereto any amount for sales, use or similar taxes for which Owner is exempt. Upon request by Contractor, Owner shall provide Contractor with a tax exemption certificate or other documentation necessary to establish Owner's exemption from such taxes.

Permits. Unless otherwise provided in the Contract Documents, it is the responsibility of and Contractor shall secure all permits, licenses and inspections. Owner may assist Contractor, when necessary, in obtaining such permits, licenses and inspections necessary for the proper execution and completion of the work.

Contractor also shall assist Owner in obtaining all permits and approvals and, at Owner's request, pay all fees and expenses.

4. PATENTED DEVICES, MATERIAL, AND PROCESSES

Patent Fees and Royalies. Contractor shall pay all license fees and royalties and assume all costs incident to the use of the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

Indemnify and save harmless 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 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 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 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 Owner.

6.2. Texas Pollutant Discharge Elimination System (TPDES) Permits and Storm Water Pollution Prevention Plans (SWP3). Owner and Contractor shall prepare and submit the necessary paperwork to satisfy Texas Pollutant Discharge Elimination System (hereafter referred to as "TPDES"), regulations of the Texas Commission on Environmental Quality. Owner and Contractor 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, 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, 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 Owner 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.

During the progress of the Work, Contractor shall keep the Project Site and surrounding area including, but not limited to, creeks, drainage channels, easements and private property free from accumulations of waste materials, rubbish and other debris resulting from the Work. As applicable, Contractor shall clean, sweep, mop, brush and polish, as appropriate, the interior of the improvements and/or renovated areas including, but not limited to, any floors, carpeting, ducts, fixtures and ventilation units operated during construction, and shall clean exterior gutters, drainage, walkways, driveways and roofs of debris. If Contractor fails to clean up as provided in the Contract Documents, Owner may elect to do so and all costs incurred by Owner shall be paid by Contractor.

6.7. Air Quality.

Contractor shall limit airborne dust and debris throughout the Project site and its duration. Contractor shall apply the necessary amounts of water or other appropriate substance required to maintain sufficient moisture content for dust control. For Owner horizontal projects, Contractor shall apply appropriate amounts of water or other appropriate substance to the base on streets under construction and on detours required to maintain sufficient moisture control in the surface layer for dust control.

6.8. Land Disturbing Activities Permit. Contractor shall assist Owner and pay all fees and expenses, if any, associated with TPDES regulations of the Texas Commission on Environmental Quality, as well as local authorities, if applicable, which require completion of documentation and/or acquisition of a "Land Disturbing Activities Permit" for a Project. Contractor's obligations under this paragraph do not require it to perform engineering services during the pre-construction phase to prepare proper drainage for the Project Site.

However, any drainage alterations made by Contractor during the construction process, which require the issuance of a permit, shall be at Contractor's sole cost. It shall be Contractor's responsibility to prepare and submit the permit approval documentation provided by the regulatory agencies prior to beginning any Work.

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 and Design Consultants 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

Contractor shall ensure abatement and mitigation of excessive or unnecessary construction noise to the satisfaction of Owner and as prescribed by all applicable state and local laws.

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

When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for the execution of the Work, Contractor shall exercise extraordinary care and shall carry on such activities under the direct supervision of properly qualified personnel. Prior to the use of any explosives, Contractor shall submit a written blasting plan, shall obtain Owner's approval and shall comply with Owner's requirements/permits for such use. Do not endanger life or property. 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 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 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 Owner. Reimburse Owner for all payments, fees, or restitution 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 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, 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, renovation, or removal is changed, provide Owner, in writing, the revised dates in enough time to allow for 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 8L.5., "Temporary Suspension of Work or Day Charges," due to reasons under the control of the Contractor. 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 roadway or highway for utilities, drainage, or any other reason without written permission by Owner. Repair all openings as directed by Owner. Payment for repair of surfaces opened by permission will be made in accordance with pertinent items or Article 4L.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

Contractor shall not subject any part of the Work or adjacent property to stresses or pressures that shall endanger it.

Owner has secured right-of-way and easements, as shown on the plans, to be occupied by the finished construction, with only such additional temporary construction easements as shown for use by the Contractor in carrying out its Work. The Contractor shall take proper measures to protect all property within all construction easements, and adjacent or adjoining property which might be injured by any process of construction; and, in case of any injury or damage, it shall restore at its own expense the damaged property to a condition similar or equal to that existing before such injury or damage was done, or it shall make good such injury or damage in a manner acceptable to the private or public owner.

The Contractor shall not, except upon procuring written consent from proper private parties, enter or occupy with men, tools, materials, or equipment any privately owned land except for those on easements provided herein by Owner.

15. RESPONSIBILITY FOR DAMAGE CLAIMS

Contractor shall be responsible to Owner for the acts and omissions of Contractor's agents and employees, Subcontractors and their agents and employees and other persons or entities performing portions of the Work for or on behalf of Contractor or any of its Subcontractors.

If either Party to the Contract suffers injury or damage to person or property because of an act or omission of the other Party or an act or omission of others for whose acts such other Party legally is responsible (including, with respect to Owner, the acts or omissions of Owner's separate contractors), written notice of such injury or damage, whether or not insured, shall be given to the other Party within a reasonable time not exceeding three (3) calendar days after the discovery of the injury or damage. The written notice shall provide sufficient detail to enable the other Party to investigate the injury or damage.

Pipelines and other underground installations that may or may not be shown on the plans may be located within the right of way. Contractor shall indemnify and save harmless Owner from any suits or claims resulting from damage by the Contractor's operations to any pipeline or underground installation. Contractor shall 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

Contractor shall 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. Contractor shall provide copies of the yearly overweight tolerance permits to Owner upon request. Construction equipment is not exempt from oversize or overweight permitting requirements on roadways open to the traveling public.

Contractor shall 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 Owner for hauling purposes for the protection of certain structures. This additional fill will not be paid directly but will be subsidiary.

Contractor shall not load nor permit any part of any structure to be loaded in any manner that shall endanger the structure. Contractor shall replace or restore to original condition any structure damaged by the Contractor's operations.

Owner 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. Contractor shall submit Contractor-proposed changes to traffic control plans for approval by Owner, in accordance with Item 502, "Barricades, Signs, and Traffic Handling." The following Sections further address overweight allowances.

16.1. Steel-Tracked Equipment. Contractor shall confine the movements of all steel-tracked equipment to the limits of the Project Site and any such equipment shall not be allowed use of Owner's streets or roadways unless being transported on pneumatic-tired vehicles. Any damage to Owner's streets or roadways caused by Contractor and/or its Subcontractor and/or their equipment, either outside the limits of the Project site or within the limits of the Project site but not within the limits of the current phase then being constructed, shall be repaired by Contractor at its own expense and as prescribed by Owner's specifications and direction. If Contractor cannot or refuses to repair street damage caused by Contractor and/or Contractor's equipment, Owner may perform the repairs and all expenses incurred by Owner in performing the repairs shall be deducted for any money due or owed to Contractor.

16.2. Overweight Construction Traffic Crossing Structures. Owner 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. Contractor shall obtain written permission to make these crossings. Contractor shall submit for approval a structural analysis by a licensed professional engineer indicating that the excessive loads should be allowed. Contractor shall 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. Contractor shall submit the structural analysis and supporting documentation sufficiently in advance of the move to allow for review. Permission may be granted if Owner find 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. Contractor shall provide temporary matting or other protective measures as directed.

Contractor shall schedule loads so that only one vehicle is on any span or continuous unit at any time.Contractor shall 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.

16.3. 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, Contractor shall submit for approval a detailed structural analysis prepared by a licensed professional engineer.

Contractor shall submit the structural analysis and supporting documentation sufficiently in advance of the use to allow for review and approval. Contractor shall 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.

16.4. Loads on Structures. Contractor shall not store or stockpile material on bridge structures without written permission from Owner. If required, submit a structural analysis and supporting documentation by a licensed professional engineer for review. Permission may be granted if Owner 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. Contractor shall provide temporary matting or other protective measures as directed.

16.5. Hauling Divisible Overweight Loads on Pavement Within the Work Locations. Owner 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

Contractor shall not be relieved of its obligations, responsibilities or duties to perform the Work in accordance with the Contract Documents, either by any activities or duties of Engineer in Engineer's administration of the Contract or by tests, inspections or approvals required or performed by Owner or any person other than the Contractor.

Any part of the Work damaged by Contractor, either during installation or prior to Substantial Completion of the Work (or such earlier date established in Article 9L.10 herein), shall be repaired by Contractor so as to be equal in quality, appearance, serviceability and other respects to an undamaged item or part of the Work. Where this repair cannot fully be accomplished, a damaged item or part shall be replaced by Contactor.

Until final acceptance of the Contract, Contractor shall 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. Contractor shall 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.

Contractor shall repair damage to all work until final acceptance.

17.1. Reimbursable 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. Roadways and Structures. Until final acceptance, the Contractor is responsible for all work constructed under the Contract. Owner will not reimburse the Contractor for repair work to new construction, unless the failure or damage is due to actions of Owner.

17.3. Road Closures and Detour Routes. Contractor shall not begin construction of the Project or close any streets until adequate barricades and detour signs have been provided, erected and maintained in accordance with the detour route and details shown on the Project Plans. Contractor shall notify Owner forty eight (48) hours in advance of closing any street or road to through traffic. Local traffic shall be permitted the use of streets or roads under construction whenever feasible.

The Contractor will be responsible for the cost of maintenance of detours constructed under the Contract. Owner will be responsible for the cost of maintenance of existing streets and roadways used for detours or handling traffic. If Contractor's construction

hauling causes damage to existing streets or roadways, Contractor will be required to repair damages.

17.4. **Relief from Maintenance**. Owner 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. Relief shall be requested and granted in writing only.

17.4.1. **Isolated Work Locations**. For isolated work locations, when all work is completed, including work for Article 5L.15., "Final Cleanup," Owner may relieve the Contractor from responsibility for maintenance.

17.4.2. **Work Except for Vegetative Establishment and Test Periods**. When all work for all or isolated work locations has been completed, including work for Article 5L.15., "Final Cleanup," with the exception of vegetative establishment and maintenance periods and test and performance periods, Owner may relieve the Contractor from responsibility for maintenance of completed portions of work.

17.4.3. **Work Suspension**. When all work is suspended for an extended period of time, Owner may relieve the Contractor from responsibility for maintenance of completed portions of work during the period of suspension.

17.5. **Basis of Payment**. When reimbursement for repair work is allowed and performed, payment will be made in accordance with pertinent items or Article 4L.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 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.

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, repairs, component replacement, etc.)	Licensed electrician or workers directly supervised by a licensed electrician

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

1.1. Unless otherwise stated on the Notice to Proceed, the Contract Time shall commence to run on the date stated on the Notice to Proceed.

1.2. Contractor shall perform the Work in a good and workmanlike manner, except to the extent the Contract Documents expressly specify a higher degree of finish or workmanship.

1.3. Contractor shall prosecute the work continuously to completion within the days specified in the Contract Documents. 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. Contractor shall notify Owner at least 24 hr. before beginning work or before beginning any new operation. Contractor shall not start new operations to the detriment of work already begun.Contractor shall mnimize interference to traffic.

2. SUBCONTRACTING

Contractor shall not sublet any portion of a construction Contract without Owner's written approval. A subcontract does not relieve any responsibility under the Contract and bonds. Contractor shall 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 Owner, or any state or federal agency.

Contractor shall 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, Contractor shall submit a copy of the executed subcontract agreement.

Contractor shall submit a copy of the executed non-DBE subcontracts including all tiered non-DBE subcontracts when requested.

All Work performed for Contractor by a Subcontractor shall be performed pursuant to an appropriate agreement between Contractor and Subcontractor which specifically binds Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of Owner.

Sub-Contractual Relations. By appropriate agreement, written where legally required for validity, Contractor shall require each Subcontractor, to the extent of the Work to be

performed by Subcontractor, to be bound to Contractor by the same terms and conditions of the Contract Documents. Through that binding commitment, Subcontractor shall assume all the obligations and responsibilities, including the responsibility for safety of Subcontractor's Work and workers, which Contractor, by these Documents, assumes toward Owner and Design Consultants. Each Subcontractor agreement shall preserve and protect the rights of Owner and Engineer under the Contract Documents, with respect to the Work to be performed by Subcontractor, so that subcontracting thereof shall not prejudice such rights. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with Sub-Subcontractors. Contractor shall make available to each proposed Subcontractor, prior to the execution of all Subcontractor agreement(s), copies of the Contract Documents to which Subcontractor(s) shall be bound. Subcontractors similarly shall make copies of applicable portions of such documents available to their respective proposed Sub-Subcontractors.

2.1. Construction Contracts. The Contractor shall perform work with its own organization on contract bid items amounting to not less than thirty (30) percent of the total original contract price, excluding any specialty items. Such specialty items may be performed by subcontract. The cost of equipment counts toward work performed only when the equipment is utilized by the Prime Contractor's employees in performance of the work. 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 Owner. 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
- labor 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 law.

2.2.1. DBE Reporting and Auditing. During the term of the contract, Contractor must report the actual payments to all DBE (as applicable) Subcontractors and Suppliers in the time intervals and format prescribed by Owner. Owner reserves the right, at any time during the term of this Contract, to request additional information, documentation or verification of payments made to such Subcontractors and suppliers in connection with this Contract. Verification of amounts being reported may take the form of requesting copies of canceled checks paid to DBE Subcontractors and suppliers and/or confirmation inquiries directly to the DBE participants. Proof of payments, such as copies of canceled checks, properly must identify the Project name or Project number to substantiate a SBEDA or DBE payment for the Project.

2.2.2. Small Business Subcontractor Substitutions. Contractor shall reference DBE Requirements in the Project's Supplementary Conditions for Substitution of Subcontractors. Failure to follow such procedures is an event of default by Contractor under its Contract and may be grounds for termination.

2.3. Payment Records. Make payment records, including copies of cancelled checks, available for inspection by Owner. Contractor shall submit payment records upon request. Retain payment records for a period of 4 yr. following completion of the Contract work or as specified by Owner.

Contractor's failure to submit this information to Owner by the 20th day of each month will result in 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. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTS

3.1. Owner's Right to Perform Construction and to Award Separate Contracts.

3.1.1. Owner reserves the right to perform construction or operations related to the Project with Owner's own forces and to award separate contracts in connection with other portions of the Project or other construction or operations on the Site under General Requirements of the Contract identical or substantially similar to these. If Contractor claims that a delay or additional cost is involved, due to such action by Owner, Contractor shall make a Claim as provided in Section 4L.7 herein.

3.1.2. When separate contracts are awarded for different portions of the Project or for other construction or operations on the Project Site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor that executes each separate Owner-Contractor contract.

3.1.3. Owner shall provide for coordination of the activities of Owner's own forces and of each separate contractor with the Work of Contractor and Contractor fully shall cooperate with said coordination. Contractor shall participate with other separate contractors and Owner in reviewing all construction schedules when directed by Owner to do so. Contractor shall make any revisions to its construction schedule deemed necessary after said joint review and mutual agreement. The revised construction schedules then shall constitute the schedules to be used by Contractor, separate contractors and Owner until subsequently revised.

3.1.4. Unless otherwise provided in the Contract Documents, when Owner and Owner's own forces perform construction or operation related to the Project, Owner shall be subject to the same obligations and to have the same rights that apply to Contractor under these General Conditions and the Contract Documents.

3.2. Mutual Responsibility.

3.2.1. Contractor shall afford Owner and Owner's separate contractor(s) reasonable opportunity for the introduction and storage of materials and equipment, the performance of their activities and the coordination of Contractor's construction and operations with theirs, as required by the Contract Documents.

3.2.2. If part of Contractor's Work depends upon the construction or operations by Owner or a separate contractor for the proper execution or results, Contractor shall, prior to proceeding with that portion of the Work, promptly report to Owner apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of Contractor to so report shall constitute an acknowledgment that Owner's separate contractor's completed or partially completed construction is fit and proper to receive Contractor's Work, except as to defects not then reasonably discoverable.

3.2.3. Owner shall be reimbursed by Contractor for costs incurred by Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of Contractor. Owner shall be responsible to Contractor for costs incurred by Contractor because of delays, improperly timed activities and damage to the Work or defective construction of Owner's separate contractor(s).

3.2.4. Contractor promptly shall remedy any damage wrongfully caused by Contractor or its Subcontractor(s) to any completed or partially completed construction or to property of Owner or Owner's separate contractor(s).

3.2.5. Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for Contractor in Section 5L.3.8 herein.

3.3. Owner's Right To Clean Up. If a dispute arises among or between Contractor, Owner's separate contractor(s) and Owner, as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, Owner may clean up and those costs shall be allocated amongst those parties responsible.

4. 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 30 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.

4.1. 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:

4.1.1. 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.

4.1.2. 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.

4.1.3. 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.

4.1.4. 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.

4.1.5. 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.

4.1.6. Other. Working days will be charged as shown in the Contract documents.

4.2. 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.

4.3. 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.

4.3.1. 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.

4.3.2. Standard Workweek.

4.3.2.1. 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.

4.3.2.2. 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."

4.4. 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.

5. TEMPORARY SUSPENSION OF WORK OR DAY CHARGES

5.1. The Work, or any portion of the Work, may temporarily be suspended by Owner, for a time period not to exceed ninety (90) calendar days, immediately upon written notice to Contractor for the following reasons, including, but not limited to:

the causes described in Section 8L.9.1.1. through Section 8L.9.1.2. herein;

5.1.2. under other provisions in the Contract Documents that require or permit temporary suspension of the Work;

5.1.3. situations where the Work is threatened by, contributes to or causes an immediate threat to public health, safety, or security; or

5.1.4. other unforeseen conditions or circumstances.

5.1.5. Contractor immediately shall resume the temporarily suspended Work when ordered in writing to do so by Owner. Owner shall not, under any circumstances, be liable for any claim of Contractor arising from a temporary suspension due to a cause described in Section 8.L.5.1. herein; provided, however, that in the case of a temporary suspension for any of the reasons described under Section 8L.51.2. through 8L.5.1.4. herein, where Contractor is not a contributing cause of the suspension or where the provision of the Contract Documents in question does not specifically provide that the suspension is at no cost to Owner, Owner shall make an equitable adjustment for the following items, provided that a claim properly is made by Contractor under Article 4L.7 herein:

- an equitable extension of the Contract Time, not to exceed the actual delay caused by the temporary suspension, as determined by Owner;
- an equitable adjustment to the Contract Sum for the actual, necessary and reasonable costs of properly protecting any Work finished or partially finished during the period of the temporary suspension; provided, however, that no payment of profit and/or overhead shall be allowed on top of these costs; and
- if it becomes necessary to move equipment from the Project Site and then return it to the Project Site when the Work is ordered to be resumed, an equitable adjustment to the Contract Sum for the actual, necessary and reasonable cost of these moves; provided, however, that no adjustment to the Contract Sum shall be due if said equipment is moved to another Project site of Owner.

6. PROJECT SCHEDULES

Prepare, maintain, and submit project schedules. Project schedules are used to convey the Contractor's intended work plan to Owner and report completed work. Prepare project schedules with a level of effort sufficient for the work being performed.

Submittal of a schedule, schedule revision or schedule update constitutes Contractor's representation to Owner, as of the date of the submittal:

- of the accurate depiction of all progress to date;

- that the schedule represents the sequence in which Contractor intends to prosecute the remaining Work;
- that the schedule represents the actual sequence and duration used to prosecute the completed Work;
- that to the best of its knowledge and belief, Contractor is able to complete the remaining Work in the sequence and time indicated; and
- that Contractor intends to complete the remaining work in the sequence and time indicated.

The Project Schedule and successive updates or revisions thereof are for Contractor's use in managing the Work. The Project Schedule is for the information of Owner and to demonstrate Contractor has complied with requirements for planning the Work. Owner's acceptance of a Schedule, Schedule update(s) or revisions constitutes Owner's agreement to coordinate its own activities with Contractor's activities, as shown on the schedule.

6.1 Project Scheduler. Unless otherwise indicated in writing by Owner, Contractor shall provide an individual, who shall be referred to hereafter as "Scheduler", to create and maintain the Project Schedule. Scheduler shall be proficient in CPM ("Critical Path Method") analysis, possess sufficient experience to be able to perform required tasks on the specified software and able to prepare and interpret reports from the software. Scheduler shall be made available for discussion or meetings when requested by Owner. This individual will also be provided accurate and up-to-date Project progress information or attend the project meetings and make site visits to prepare, develop, and maintain the progress schedules.

6.2. 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.

Contractor shall create and maintain a Critical Path Method (hereafter referred to as "CPM") Project Schedule, showing the manner of execution of Work which Contractor intends to follow, in order to complete the Project within the allotted time. Contractor shall create and maintain the Project Schedule. The observance of the requirements herein is an essential part of the Work to be performed under the Contract.

Include all planned work activities and sequences and show Contract completion within the number of days specified in the Contract Documents. 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 days for each activity. Contractor shall show an estimated production rate per day for each Work activity. Durations greater than twenty (20) work days may be used for non-construction activities (mobilization, submittal preparation, curing, etc.), and other activities mutually agreeable between Owner and Contractor.

6.3 Schedule Format. Contractor shall organize the Project Schedule and provide adequate detail so the Schedule is capable of measuring and forecasting the effect of delaying events on completed and uncompleted activities.

The Project Schedule shall show the order in which Contractor proposes to carry out the Work in accordance with the final approved phasing plan, if any, and the anticipated start and completion dates of each phase of the Work. The Project Schedule shall be in the form of a time scaled work progress chart, to indicate the percentage of Work scheduled for completion at various critical milestones. Contractor shall include approval requirements for Shop Drawings and/or Sample Submittals if they impact the Project critical path.

The Project Schedule shall show the sequence and interdependence of activities required for complete performance of the Work. Contractor shall be responsible for assuring all Work sequences are logical and show a coordinated plan of Work in accordance with the sequence of work outlined in the plans. The purpose of Owner requiring the Project Schedule shall be to:

- Ensure adequate planning during the execution and progress of the Work in accordance with the allowable number of calendar days and all milestones;
- Assure coordination of the efforts of Contractor, Owner, utilities and others that may be involved in the Project and those activities are included in the Schedule highlighting coordination points with others;
- Assist Contractor and Owner in monitoring the progress of the Work and evaluating proposed changes to the Contract; and
- Assist Owner in administering the Contract time requirements.

The Project Schedule layout shall be grouped by Project and then by Work Breakdown Structure (hereafter referred to as “WBS”) for organizational purposes. An example of an acceptable WBS shall be provided, upon written request, by Owner to Contractor.

The original and remaining Work duration shall be displayed. The grouping band shall, by default, report Work days planned. One additional level of effort activity shall be added to the schedule as a “time calculator” with a seven (7) day calendar without holidays reflected. The calculation of days should be reflected in the appropriate duration columns.

Each Schedule shall segregate the Work into a sufficient number of activities to facilitate the efficient use of critical path method scheduling by Contractor and the Project Management Team. The layout shall include the following columns:

- Activity ID
- Activity Description
- Original Durations
- Remaining Durations
- Early Start and Early Finish Dates
- Late Start and Late Finish Dates
- Total Float
- Performance Percent Complete
- Display logic and target bars in the Gantt bar chart view

The Project Schedule shall:

- have all Work coded and organized by WBS;
- reflect Duration Percent complete as the percent complete type;
- reflect Fixed Units as the duration type;
- include submittals with a logical tie to what each drives;
- add proposed Change Order(s), reflected on the Schedule as proposed Change Order(s). This task shall be linked to the schedule with logical ties. Upon Owner' approval of a Change Order, a task shall be renamed and shall identify Work performed and Change Order number and resources shall be added to the task;
- only have constraints in accordance with the plans;
- include activity milestones for material delivery;
- disallow default progress; and
- include a detailed explanation in the Project narrative, if Work is performed out of sequence.

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.

Seasonal weather conditions shall be considered and included in the Project 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 (hereafter referred to as "NOAA"). These effects shall 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.

Only Owner-responsible delays in activities affecting milestone dates or the Contract completion date, as determined by CPM analysis, shall be considered for a time extension.

Each schedule shall include activities representing manufacturing, fabrication or ordering lead time for materials, equipment or other items for which Engineer is required to review submittals, shop drawings, product data or samples.

6.4. Activity Format. Contractor shall provide Owner a legend for all abbreviations used. The activities shall be coded so organized plots of the Project Schedule may be produced. Typical activity coding includes traffic control phase, location and work type. Activity durations shall be based on production rates shown. Each activity on the Project Schedule shall include:

- An activity number utilizing an alphanumeric designation system agreeable to Owner;
- A concise description of the Work represented by the activity; and
- Activity durations in whole work days

6.5. Schedule Types -Critical Path Method.

6.5.1. Baseline Schedule. At least fifteen (15) calendar days prior to the Pre-Construction Conference, the Contractor shall submit a 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.

6.5.1.1. Review. Owner shall review the Project Schedule within fifteen (15) calendar days for compliance with the specifications and notify Contractor of its acceptability or findings. If Owner requests a revision or justification, Contractor shall provide satisfaction to Owner within seven (7) calendar days. If Contractor submits a Project Schedule for acceptance, based on a sequence of work not shown in the plans, Contractor shall notify Owner in writing of said sequence of work, separate from the Schedule submittal.

Owner's review and acceptance of Contractor's Project Schedule only is for conformance to the requirements of the Contract Documents. Review and acceptance by Owner of Contractor's Project Schedule does not relieve Contractor of any of its responsibility for the Project Schedule, Contractor's ability to meet interim milestone dates (if so specified) or meeting the Contract 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 Contractor's Project Schedule. In the event Contractor fails to define any element of Work, activity or logic and Owner's review does not detect this omission or error, such omission or error, whether or when discovered by Contractor or Owner, shall be corrected by Contractor at the next monthly schedule update and shall not affect the Project or Contract completion date.

Acceptance of the Project Schedule, or update and/or revision thereto, does not indicate any approval of Contractor's proposed sequences and duration.

Acceptance by Owner of the Project Schedule or updated Project Schedule which exceeds contractual time does not alleviate Contractor from meeting the contractual completion date.

Acceptance of a Project Schedule update or revision indicating early or late completion does not constitute Owner's consent to any changes, alter the terms of the Contract, waive either Contractor's responsibility for timely completion, or waive Owner's right to damages for Contractor's failure to do so.

Contractor's scheduled dates for completion of any activity or of the entire Work do not constitute a change in terms of the Contract.

6.6. Progress Schedule. The Project Schedule shall be updated monthly, at a minimum, and is due on the tenth (10th) day of each month to reflect progress to the last day of each month and current plans for completing the Work. An electronic copy of the update shall be submitted to Owner as directed. The anticipated date of Substantial Completion shall show all extensions of time granted through Change Order(s) as of the date of the update. The Project Schedule update shall be submitted no later than the date the pay application is submitted. Maintain the project schedule for use by both the Contractor and Owner. All Project Schedule submittals shall be in the electronic form to include PDF plots of the schedule, a PDF plot defining the Critical Path and two week look-ahead, and include the native compatible scheduling file format. Contractor shall submit the schedule to Owner via electronic mail, CD-Rom or any other electronic format acceptable to Owner. 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.

Contractor shall meet with Owner each month, at a scheduled Project Schedule update meeting, to review actual progress made through the data date of the schedule update, as determined by Owner. The review of progress shall include dates of activities actually started and/or completed, the percentage of Work completed, the remaining duration of each activity started and/or completed and the amount of Work still to complete, with an analysis of the relationship between the remaining duration of the activity and the quantity of material to install over that given period of time with a citation of past productivity.

The monthly Schedule Update shall include a progress narrative, explaining the Project's progress, identifying all progress made out of sequence, defining the Critical Path, identification of any potential delays, and other relevant data. A Project Schedule Narrative template shall be required for the narrative. Upon request, Owner shall supply said template to Contractor.

Each schedule, other than the initial schedule, shall:

- indicate the activities, or portions thereof, which have been completed;
- reflect the actual time for completion of such activities; and
- reflect any changes to the sequence or planned duration of all activities.
- 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.

If any updated schedule exceeds the time limits set forth in the Contract Documents for Substantial Completion of the Work, Contractor shall include, along with its updated schedule, a statement of the reasons for the anticipated delay in achieving Substantial Completion of the Work and Contractor's planned course of action for completing the Work within the time limits set forth in the Contract Documents. If Contractor asserts the failure of Owner or Engineer to provide requested and required information to Contractor as the reason for anticipated delay in completion, Contractor also shall specify what information has been requested and is required from Owner or Engineer.

Neither Owner nor Contractor shall have exclusive ownership of float time in the schedule and all float time shall inure to the benefit of the Project.

If the Contractor desires to make major changes in the Project Schedule, the Contractor shall notify the Owner in writing and submit the proposed schedule revision. 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. Major changes are hereby defined as those that may affect compliance with the contract requirements or those that change the critical path. All other changes may be accomplished through the monthly updating process without written notification.

6.6.1. Project Schedule Summary Report (PSSR). When requested, provide a PSSR. 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.

6.6.2. Notice of Potential Time Impact. Contractor shall notify Owner when an impact may justify an extension of Contract time or adjustment of milestone dates. Said notice shall be made by Contractor 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 Contractor. Not providing notice to Owner within twenty (20) calendar days after receipt shall indicate Contractor's approval of the time charges as shown on that time statement.

6.6.3. Failure to provide this notice in the time frames outlined will compromise Owner's ability to assist with mitigation of the impacts and the Contractor forfeits the right to request a time extension or adjustment of milestone dates.

6.6.4. Time Impact Analysis. When changes are initiated or impacts are experienced, Contractor shall submit to Owner 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 Contractor's plan for constructing the Project, as represented by the schedule. The purpose of the Time Impact Analysis is to determine if the overall Project has been delayed and, if necessary, to provide Contractor and Owner a basis for making adjustments to the Contract.

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. 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 (#1 above) to the prediction of the effect of the impact (#2 above), and to the status of the work during and after the effects of the impact are over (#3 above). Note: 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 be electronically submitted to Owner. If the Project Schedule is revised after the submittal of a Time Impact Analysis but prior to its approval, Contractor promptly shall indicate in writing to Owner the need for any modification to its Time Impact Analysis. One (1) copy of each Time Impact Analysis shall be submitted within fourteen (14) calendar days after the completion of an impact. Owner may require Step #1 and Step #2 above 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 Owner shall be made within fourteen (14) calendar days after receipt, unless subsequent meetings and negotiations are necessary.

7. DELAYS AND EXTENSIONS OF TIME

7.1. Neither Owner nor Contractor, except as provided for in this Section, shall be liable to the other for any delay to Contractor's Work by reason of fire, act of God, riot, strike or any other cause beyond Owner's control. Should any of these listed factors delay the Work's critical path, as evidenced by a Time Impact Analysis developed by Contractor and verified by Engineer, Program Manager (if applicable) and Owner, Contractor shall receive an extension of the Contract Times equal to the delay if a written claim is made within five (5) calendar days of the delaying event and granted by Owner. Under no circumstances shall Owner be liable to pay Contractor any compensation for such delays. Note that any request for an extension of time due to delays or disruption caused by unusually severe weather are addressed in Section 4L.7.3.2 herein.

7.2. Should Contractor be delayed solely by the act, negligence or default of Owner or Engineer, and should any of these factors delay the Project's critical path, as evidenced by a Time Impact Analysis developed by Contractor and verified by Engineer, Program Manager (if applicable) and Owner, Contractor shall receive an extension of the Contract Time equal to the verified delay or portion thereof if a written claim is made within five (5) calendar days of the act, negligence or default of Owner or Engineer and granted by Owner. In addition, Contractor, upon timely notice to Owner, with substantiation by Owner and Engineer and upon approval of Owner, shall be compensated for its Project facilities and field management expenses on a per diem basis (said per diem includes the costs

incurred by Contractor to administer its Work and does not include costs associated for any tier of Subcontractor or supplier to administer their Work. Compensation for Subcontractor's and supplier's compensable delay affecting the Project critical path shall be separate and apart from the per diem cost due and payable to the Contractor) for the particular Project delayed and for the period of the critical path delay attributable to a Owner-caused event. In no event shall Contractor be entitled to home office or other off-site expenses or damages.

7.3. Claims relating to time shall be made in accordance with applicable provisions of Article 4L.7 herein.

8. 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, including any approved change order days, days will continue to be charged and will result in liquidated damages for each day charged over the number of 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.

9. DEFAULT OF THE CONTRACT

9.1. 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 Contractor and 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.

9.2. 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."

10. TERMINATION OF THE CONTRACT

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.

10.1. 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.

10.2. 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.

11. DOCUMENTATION

11.1. On-Site Documentation.

11.2. Contractor shall at all times maintain job records including, but not limited to, invoices, payment records, payroll records, daily reports, logs, working plan set, diaries and job meeting minutes applicable to the Project. Contractor shall make such reports and records available for inspection by the Project Management Team, during normal business hours if requested by Owner.

11.1.2. Contractor may retain for its files any copies of documents it chooses to retain and may use its Work product as it deems fit. Any materially-significant Work product lost or destroyed by Contractor shall be replaced or reproduced at Contractor's non-reimbursable sole cost. In addition, Owner shall have access during normal business hours, during the duration this Contract is in effect and for four (4) years after the final completion of the Work, unless there is an ongoing dispute under the Contract, then such access period shall extend longer until final resolution of the dispute, to all of Contractor's records and documents covering reimbursable expenses, actual base hourly rates, time cards and

annual salary escalation records maintained in connection with this Contract for purposes of auditing same at the sole cost of Owner. The purpose of any such audit shall be for the verification of such costs. Contractor shall not be required to keep records of, or provide access to, the makeup of any negotiated and agreed-to lump sums, unit prices or fixed overhead and profit multipliers. Nothing herein shall deny Contractor the right to retain duplicates. Refusal by Contractor to comply with the provisions hereof shall entitle Owner to withhold any payment(s) to Contractor until compliance is obtained.

11.1.3. All of Contractor's documentary Work product shall be maintained within Contractor's main offices, unless otherwise authorized by Owner. After expiration of this Contract, Contractor's documents may be archived in the Contractor's central record storage facility but shall remain accessible to Owner for a four (4) year period.

11.1.4. During construction of the Work and for four (4) years after final completion or longer if, during the duration of this Contract or during the four (4) years after the final completion of the Work, a dispute between any parties to this Project exists, Contractor shall retain and shall require all Subcontractors to retain for inspection and audit by Owner all books, accounts, reports, files, time cards, material invoices, payrolls and evidence of all other direct or indirect costs related to the bidding and performance of this Work. Upon request by Owner, a legible copy or the original of any or all such records shall be produced by Contractor at the administrative office of Owner. To the extent it requests copies of such documents, Owner shall reimburse Contractor and its Subcontractors for copying costs.

12. AUDIT

12.1. Right to Audit Contractor's Records. By execution of the Contract, Contractor grants Owner and Owner's Auditor's Office the right to audit, examine, inspect and/or copy, at Owner's election at all reasonable times during the term of this Contract and for a period of four (4) years following the completion or termination of the Work, all of Contractor's written and electronically stored records and billings relating to the performance of the Work under the Contract Documents. The audit, examination or inspection may be performed by a Owner, Owner's designee or Owner's Auditor's office, which may include its internal auditors or an outside representative engaged by Owner. Contractor agrees to retain its records for a minimum of four (4) years following termination of the Contract, unless there is an ongoing dispute under the Contract, then, such retention period shall extend until final resolution of the dispute, with full access allowed to authorized representatives of Owner upon request, for purposes of evaluating compliance with this and other provisions of the Contract.

12.1.1. As used in these General Requirements and Covenants, "Contractor written and electronically stored records" shall include any and all information, materials and data of every kind and character generated as a result of the work under this Contract. Example of Contractor written and electronically stores records include, but are not limited to: accounting data and reports, billings, books, general ledgers, cost ledgers, invoices, production sheets, documents, correspondences, meeting notes, subscriptions, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, daily diaries, reports, drawings, receipts, vouchers, memoranda, time sheets, payroll records, policies, procedures, Subcontractor agreements, Supplier agreements, rental equipment

proposals, federal and state tax filings for any issue in question, along with any and all other agreements, sources of information and matters that may, in Owner's sole judgment, have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any Contract Documents.

12.1.2. Owner agrees that it shall exercise the right to audit, examine or inspect Contractor's records only during regular business hours. Contractor agrees to allow Owner and/or Owner's designee access to all of the Contractor's Records, Contractor's facilities and current or former employees of Contractor, deemed necessary by Owner or its designee(s), to perform such audit, inspection or examination. Contractor also agrees to provide adequate and appropriate work space necessary for Owner or its designees to conduct such audits, inspections or examinations.

12.1.3. Contractor shall include this Article in any Subcontractor, supplier or vendor contract.

Item 9L
Measurement and Payment

1. MEASUREMENT OF QUANTITIES

Owner 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 capaOwner of each vehicle. Owner may require verification of volume through weight measurement. Use body shapes that allow the capacity Owner to be verified. Load and level the load to the equipment's approved capacity Owner. 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.

Owner 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 Owner:

- 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.

2. PLANS QUANTITY MEASUREMENT

2.1. 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.

2.2. If the quantities measured as outlined under "Measurement" vary from those shown in the bid proposal and on the "Estimate and Quantity" sheet by more than five (5) percent (or as stipulated under the measurement Paragraph for the Item), either party to the contract may request, in writing, an adjustment of the quantities by each separate bid item, except that when stated in the particular item, the adjustment will be made based upon a designated element shown in the Item. The party to the contract which requests the adjustment shall present, to the other, one copy of field measurements and calculations showing the revised quantities in question. These revised quantities, when approved by Owner, together with all other quantities under the same bid item, shall constitute the final quantity for which payment will be made.

2.3. When quantities are revised by a change in design approved by 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.

2.4. Payment for revised quantities will be paid for at the unit price bid for that bid item, except as provided for in Article 4L.4.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 4L.4., "Changes in the Work."

4. SCOPE OF PAYMENT

4.1. 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 5L.16., "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.

4.2. 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

Owner 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.

The Contract Sum is stated in the Contract and, including authorized adjustments, is the total maximum not-to-exceed amount payable by Owner to Contractor for performance of the Work under the Contract Documents. Contractor accepts and agrees that all payments pursuant to this Contract are subject to the availability and appropriation of funds by the San Antonio Owner Council. If funds are not available and/or appropriated, this Contract shall immediately be terminated with no liability to any Party to this Contract.

5.1. **Applications for Payments**.

5.1.1. Owner has no duty to make progress payments to Contractor unless Contractor's payment application is accompanied by the updated Project Schedule.

5.1.2. Applications for Payment will be created at a minimum of every thirty (30) days throughout the duration of the Project by Owner. Contractor shall attach to its Payment Request all data substantiating Contractor's right to payment as Owner may require, such as copies of requisitions from Subcontractors and material suppliers reflecting retainage, if provided for in the Contract Documents. Liquidated Damages, Retainage and any withholdings or deductions will be deducted, if applicable. Applications for Payment shall not include requests for payment for portions of the Work which Contractor does not intend to pay to a Subcontractor, or material supplier, or others.

5.1.3. Contractor warrants that, upon approval of an Payment Request, all Work for which payment previously has been received from Owner shall, to the best of Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or

encumbrances in favor of Contractor, Subcontractors, material suppliers or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work. CONTRACTOR SHALL INDEMNIFY AND HOLD OWNER HARMLESS FROM ANY LIENS, CLAIMS, SECURITY INTEREST OR ENCUMBRANCES FILED BY CONTRACTOR, SUBCONTRACTORS OR ANYONE CLAIMING BY, THROUGH OR UNDER CONTRACTOR OR SUBCONTRACTOR(S) FOR ITEMS COVERED BY PAYMENTS MADE BY OWNER TO CONTRACTOR.

5.1.4. By approval of an Payment Request, Contractor certifies that there are no known liens or bond claims outstanding as of the date of said Payment Request, that all due and payable bills with respect to the Work have been paid to date or are included in the amount requested in the current application and, except for such bills not paid but so included, there is no known basis for the filing of any liens or bond claims relating to the Work and that releases from all Subcontractors and Contractor's material men have been obtained in such form as to constitute an effective release of lien or claim under the laws of the State of Texas covering all Work theretofore performed and for which payment has been made by Owner to Contractor; provided if any of the foregoing is not true and cannot be certified, Contractor shall revise the certificate as appropriate and identify all exceptions to the requested certifications.

5.1.5. EngineerEngineer shall, within five (5) business days after the receipt of a complete Payment Request either approve the Payment Request or reject the Payment Request and state on a written notification to Contractor and Owner the Engineer's reasons for withholding approval, as provided in Section 9L.5.2.1 herein.

5.1.6. Approval of a Payment Request shall constitute a representation by Engineer to Owner, based on Engineer's evaluation of the Work and the data comprising the Payment Request, that the Work has progressed to the point indicated and that, to the best of Engineer's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to any specific qualifications expressed by Engineer. The approval of a Pay Request further shall constitute a representation that Contractor is entitled to payment in the amount certified. Approval shall not be a representation Engineer has:

- made exhaustive or continuous on-site inspections to check the quality or quantity of the Work;
- reviewed construction means, methods, techniques, sequences or procedures;
- reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by Owner to substantiate Contractor's right to payment; or
- made an examination to ascertain how or for what purpose Contractor has used money previously paid on account of the Contract Sum.

5.2. **Decisions To Reject Payment Request**.

5.2.1. The Payment Request may be rejected to protect Owner for any of the following reasons:

- Work not performed or defective;
- third party claims filed or reasonable evidence indicating a probable filing of such claims for which Contractor is responsible hereunder unless security acceptable to Owner is provided by Contractor;
- failure of Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum and Contractor has failed to provide Owner adequate assurance of its continued performance within a reasonable time after demand;
- damage to Owner or another contractor;
- reasonable evidence that the Work shall not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- persistent failure by Contractor to carry out the Work in accordance with the Contract Documents;
- the applicable liquidated damages were not included in the Payment Request;
- billing for unapproved/unverified materials stored off Site; or
- a current schedule update has not been submitted by Contractor.

5.2.2. Owner shall not be deemed in default by reason of rejecting Payment Request as provided for in Section 9L.5.2.1 herein.

5.3. **Payments**.

5.3.1. After the final approval of the Payment Request, Owner may make payment in the manner and within the time provided in the Contract Documents.

5.3.2. During the latter part of each month, as the Work progresses on all Owner Contracts regardless of Contract Sum, Owner and Contractor shall determine the cost of the labor and materials incorporated into the Work during that month and actual invoiced cost of Contractor-acquired materials stored on the Project Site, and/or within offsite storage facilities either owned or leased by Contractor. Owner personnel will upload actual quantities installed and a Pay Request will be initiated. Owner shall make payments, in accordance with Article 9L.5 herein, to Contractor within thirty (30) calendar days from the receipt of an approved Pay Request.

5.3.3. Owner's payment of installments shall not, in any way, be deemed to be a final acceptance by Owner of any part of the Work, shall not prejudice Owner in the final settlement of the Contract account and shall not relieve Contractor from completion of the Work herein provided.

5.3.4. A Certificate for Payment, a progress payment or a partial or entire use of the Project by Owner shall not constitute acceptance of Work that was not performed or furnished in accordance with the Contract Documents.

6. PAYMENT FOR MATERIAL ON HAND (MOH)

6.1. Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the Site for subsequent incorporation in the Work and verified by Engineer and/orOwner. If approved in advance in writing by Owner, payment similarly may be made for materials and equipment suitably stored off the Site at a location agreed upon in writing and verified by Owner. Payment for materials and equipment stored on or off the Site shall be conditioned upon compliance by Contractor with procedures reasonably satisfactory to Owner to establish Owner's title to such materials and equipment or otherwise protect Owner's interest. Contractor solely shall be responsible for payment of all costs of applicable insurance, storage and transportation to the site for materials and equipment stored off the site.

6.2. 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 the specific Contract and are so marked and on which an approved test report has been issued if required 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 Owner 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.

6.3. If the request is acceptable, Owner 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 actual 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.

6.4. Submit the request on forms provided by 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.

6.5. By submitting a request for MOH payment, the Contractor expressly authorizes Owner to audit MOH records, and to perform process reviews of the record-keeping system. If Owner determines noncompliance with any of the requirements of this provision, Owner may exclude payment for any or all MOH for the duration of the Contract.

6.6. Maintain all records relating to MOH payment until final acceptance. Provide these records to Owner 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 4L.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.

7.1. **Force Account**. If no Agreed Contract Change or unit price can be reached after good faith negotiations between the Owner and Contractor, Owner may direct the Work be performed by the Contractor on a Force Account basis, and payment by the Owner shall be upon the basis of Actual Cost of the Work plus the participation allowances as specified below.

The Contractor's representative and the Inspector shall compare records of extra work completed on the "Force Account" basis at the end of each day. This information shall be recorded on the appropriate forms copy to be provided to Engineer and the original to be provided to the Owner All claims for "Extra Work" performed "Force Account" shall be accompanied by actual cost documentation and turned in no later than the tenth (10^{th}) day of the month following that month in which the work was actually performed.

7.2. **Markups**. Payment for extra work may include markups as compensation for the use of small tools, overhead expense, and profit. Maximum allowable markups for Change Order and Field Work Directive pricing, when said pricing is not determined through unit prices, are established as follows:

7.2.1. **Labor**. Contractor shall be allowed the documented payroll rates for each hour laborers and foremen actually shall be engaged in the Work. Contractor shall be allowed to receive an additional twenty five percent (25%) as compensation, based on the total wages paid said laborers and foremen. No charge shall be made by Contractor for organization or overhead expenses.

7.2.2. **Insurance and Taxes**. For costs of premiums on public liability and workers compensation insurance(s), Social Security and unemployment insurance taxes, an amount equal to fifty five percent (55%) of the sum of the labor cost, excluding the twenty five percent (25%) documented payroll rate compensation allowed herein, shall be the established maximum allowable labor burden cost. No charge for superintendence shall be made unless considered necessary and approved by Owner or a Change Order includes an extension of the Contract Time.

7.2.3. **Materials**. Contractor shall be allowed to receive the actual cost, including freight charges, for materials used on such Work, including an additional twenty five percent (25%) of the

actual cost as compensation. When material invoices indicate an available discount, the actual cost shall be determined as the invoiced price less the available discount.

7.2.4. **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.

7.2.4.1. **Contractor-Owned Equipment**. For Contractor-owned machinery, trucks, power tools or other equipment, necessary for use on Change Order work, the Rental Rate Blue Book for Construction Equipment (hereafter referred to as "Blue Book") rate, as modified by the following, shall be used to establish Contractor's allowable hourly rental rates. Equipment used shall be at the rates in effect for each section of the Blue Book at the time of use. The following formula shall be used to compute the hourly rates:

$$H = \frac{M \times R1 \times R2}{176} + OP$$

Where H = Hourly Rate
M = Monthly Rate
R1 = Rate Adjustment Factor
R2 = Regional Adjustment Factor
OP = Operating Costs

If a rate has not been established for a particular piece of equipment in the *Rental Rate Blue Book*, Owner will negotiate a reasonable hourly rate. This price will include operating costs.

Payment for equipment will be made for the actual hours used in the work. 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.

In the event that the equipment is used intermittently during the work, full payment for an eight-hour day will be made if the equipment is not idle more than four (4) hours of the day. If the equipment is idle more than four (4) hours in a day, then payment will be made only for the actual hours worked.

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 208 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 56 hours per week, nor more than 243 hours per month.

7.2.4.2. **Equipment Not Owned by the Contractor**. If Contractor-owned machinery and/or equipment is not available and equipment is rented from an outside source, the hourly rate shall be established by dividing the actual invoice cost by the actual number of hours the equipment is involved in the Work. Owner reserves the right to limit the hourly rate to comparable Blue Book rates. When the invoice specifies the rental rate does not include fuel, lubricants, repairs and servicing, the Blue Book hourly operating cost shall be allowed to be added for each hour the equipment operates. The allowable equipment hourly rates shall be paid for each hour the equipment is involved in the Work and an additional maximum of fifteen percent (15%) may be added as compensation.

7.2.4.3. 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.

7.2.4.4. **Standby Equipment Costs**.

Contractor shall be entitled to standby costs only when directed to standby in writing by Owner. Standby costs may include actual documented Project overhead costs of Contractor, consisting of administrative and supervisory expenses incurred at the Project Site. Standby equipment costs shall not be allowed during periods when the equipment would otherwise have been idle.

7.2.4.4.1. **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.

7.2.4.4.2. **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. 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.

7.2.5. **Subcontracting**. Contractor shall be allowed administrative cost only when extra Work, ordered by Owner, is performed by a Subcontractor or Subcontractors. The maximum allowable payment for administrative cost shall not exceed five percent (5%) of the total Subcontractor work.

7.2.6. **Law Enforcement**. Off-duty peace officers and patrol cruisers shall be considered as Subcontractors, with regard to consideration of allowable contractor markups.

7.2.7. **Railroad Flaggers**. An additional 5% of the actual invoice cost will be paid as compensation for administrative cost, superintendence, and profit.

7.2.8. **Bond Cost**. The actual cost of the Contractor's bond on the extra work will be paid. No charge for superintendence will be made unless considered necessary and ordered by Owner.

8. RETAINAGE

Owner will withhold 5 percent 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 Owner.

These requirements apply to all tiers of subcontractors. Incorporate the provisions of this Article into all subcontract or material purchase agreements.

9.1. Contractor shall, within ten (10) calendar days following receipt of payment from Owner, pay all bills for labor and materials performed and furnished by others in connection with the construction, furnishing and equipping of the improvements and the performance of the work, and shall, if requested, provide Owner with written evidence of such payment. Contractor's failure to make payments or provide written evidence of such payments within such time shall constitute a material breach of this contract, unless Contractor is able to demonstrate to Owner bona fide disputes associated with the unpaid Subcontractor(s) or supplier(s) and its/their work. Contractor shall include a provision in each of its subcontracts imposing the same written documentation of payment obligations on its Subcontractors as are applicable to Contractor hereunder, and if Owner so requests, shall provide copies of such Subcontractor payments to Owner. If Contractor has failed to make payment promptly to Contractor's Subcontractors or for materials or labor used in the Work for which Owner has made payment to the Contractor, Owner shall be entitled to withhold payment to Contractor to the extent necessary to protect Owner.

9.2. Owner shall, if practicable and upon request, furnish to Subcontractor information regarding percentages of completion or amounts applied for by Contractor and action taken thereon by Owner on account of portions of the Work done by such Subcontractor.

9.3. Neither Owner nor Engineer shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law, if any.

9.4. Payments to material suppliers shall be treated in a manner similar to that provided in Section 9L.5.3.2, Section 9L.5.3.3 and Section 9L.9.1 herein regarding Subcontractors.

Completed subcontractor work includes vegetative establishment, test, maintenance, performance, and other similar responsibilities of the subcontractor.

For the purpose of this Section, satisfactory completion is accomplished when:

- the subcontractor has fulfilled the Contract requirements of both Engineer and the subcontract for the subcontracted work, including the submittal of all information required by the specifications and Owner; and
- the work done by the subcontractor has been inspected, approved, and paid by Owner.

9.5. Provide a certification of prompt payment in accordance with 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.

9.6. The inspection and approval of a subcontractor's work does not eliminate the Contractor's responsibilities for all the work in the Contract.

9.7. 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.

10. FINAL PAYMENT

10.1. The final payment will reflect the entire sum due, less any sums previously paid.

10.2. If the Work is complete in full accordance with this Contract and this Contract has been fully performed, the final Payment Request may be initiated. If Owner and Engineer are unable to approve the final Payment Request for reasons for which Contractor is responsible and Owner and Engineer are required to repeat a final inspection of the Work, Contractor shall be responsible for all costs incurred and associated with such repeat final inspection(s) and said costs may be deducted by Owner from the Contractor's final payment.

10.3. Contractor shall not be entitled to final payment unless and until it submits all documents required on the retainage checklist provided by the Owner. Included in the retainage checklist is the Contractor's affidavit that the payrolls, invoices for materials and equipment, and other liabilities, to include Liquidated Damages, connected with the Work for which Owner or Owner's property might be responsible fully have been paid or otherwise satisfied or shall be paid from final payment; releases and waivers of liens from all Subcontractors of Contractor and of any and all other parties required by Owner that either are unconditional or conditional on receipt of final payment; Certificates of insurance showing continuation of required insurance coverage; such other documents as Owner may request; and consent of Surety to final payment.

10.4. If, after Substantial Completion of the Work, Final Completion of the Work materially is delayed through no fault of Contractor or by Issuance of Change Orders affecting Final Completion of the Work, and Engineer so confirms, Owner shall, upon application by Contractor and certification by Engineer and without terminating the Contract, make payment of the balance due Contractor for that portion of the work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

10.5. Authorization of final payment by Contractor shall constitute a waiver of all claims against Owner, except those previously made in writing and identified by that payee as unsettled at the time of final Payment Request.

10.6. **Additional Inspections**. In addition to any Liquidated Damages accrued by and payable to Owner by Contractor, Owner shall be entitled to deduct from the Contract Sum amounts due to Contractor by Owner to compensate Engineer for any additional inspections or services Engineer undertook due to the fault or negligence of Contractor if:

- Engineer is required to make more than one inspection to determine if Substantial Completion has been achieved by Contractor;
- Engineer is required to make more than one inspection to determine if Final Completion has been achieved by Contractor; or
- the Work is not substantially complete within thirty (30) calendar days after the date established for the Work's Substantial Completion, as stated in the Contract Documents.

10.7. **Interest**. Owner shall not be liable for interest on any progress or final payment to be made under the Contract Documents, except as may be provided by the applicable provisions of the Prompt Payment Act, Chapter 2251, Texas Government Code, as amended, subject to Item 9L of these General Conditions.

11. WITHHOLDING OF PAYMENT

In the event that Owner discovers evidence of Contractor and/or Work noncompliance with the Contract Documents subsequent to Final Acceptance, Owner may revoke or otherwise amend Final Acceptance to such extent as may be necessary to withhold monies to protect Owner from loss on account of:

- Defective Work not remedied by Contractor.
- Persistent and uncured Contractor non-compliance with the administrative provisions of the Contract Documents.
- Damage to Work of another Contractor.
- Liquidated Damages assessed by Owner for Contractor failure to maintain scheduled progress in accordance with interim progress milestones, if any are specified in the Contract Documents, and/or Contractor failure to meet final completion date.
- Receipt of written notice by Owner of Contractor's unpaid bills.
- "Contractor's Responsibility for Work" as provided for in Article 7L.17.

When the above Contractor deficiencies are cured, payment will be made by Owner for amounts withheld because of the deficiencies within thirty (30) calendar days.

Special Provision to Item 000
Schedule of Liquidated Damages

The dollar amount of daily contract administration Liquidated Damages per Working Day is $620

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

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

1. GENERAL

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

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 subcontractor's failure to make good faith efforts to achieve the goals contained in these provisions. Contractors 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.

5. REPORTS

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.

Table 1
Goals for Minority Participation

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

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
Fayette	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	17.2	Lamb	19.5
Freestone	18.6	Lampasas	18.6
Frio	49.4	LaSalle	49.4
Gaines	19.5	Lavaca	27.4
Galveston	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	22.8	McMullen	49.4
Hartley	11.0	Medina	49.4
Haskell	10.9	Menard	20.0
Hays	24.1	Midland	19.1
Hemphill	11.0	Milam	18.6
Henderson	22.5	Mills	18.6
Hidalgo	72.8	Mitchell	10.9
Hill	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
Jefferson	22.6	Panola	22.5
Jim Hogg	49.4	Parker	18.2
Jim Wells	44.2	Parmer	11.0
Johnson	18.2	Pecos	18.9
Jones	11.6	Polk	27.4
Karnes	49.4	Potter	9.3
Kaufman	18.2	Presidio	49.0
Kendall	49.4	Randall	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. As used in these specifications:

- "Covered area" means the geographical area described in the solicitation from which this Contract resulted;
- "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- "Minority" includes:
  - Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
  - Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
  - 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
  - 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).

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 Subcontractors toward 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 Federal or federally assisted construction Contract will apply the minority and female goals established for the geographical area where the Contract is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or any Federal procurement contracting officer. The

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-the-street 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
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 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 2.3., "Issuing Proposal Forms," 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 2.14., "Disadvantaged Business Enterprise (DBE)," is prohibited from rebidding that specific project.

Article 2.7., "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 2.14., "Disadvantaged Business Enterprise (DBE)."

Article 2.14., "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 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, Division for Enterprise Development	Certified Flagger Instructor

Flagger Training.

Provider	Course Title
Texas Engineering Extension Services	Flaggers in Work Zones
National Safety Council	Flagger (Novice)
University of Texas at Arlington, Continuing Education Department	Flaggers in Work Zones (TxDOT Training)
University of Texas at Arlington, Continuing Education Department	WZ Traffic Control/Qualified Flagger
Associated Builders and Contractors, Austin Chapter	Flagger Training
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 400
Excavation and Backfill for Structures

Item 400, "Excavation and Backfill for 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.

Article 400.2., "Materials", is supplemented by the following:

Unless otherwise shown on the plans, the sand backfill shall have 70-100% passing a No. 10 sieve. The plastic Index (PI) as determined by Test Method Tex-106-E shall not exceed 6. At all pipe joints backfilled with sand, the Contractor shall install a filter fabric designed to prevent the migration of sand into the pipes as approved by the Engineer. Filter fabric shall meet the requirements of DMS-6200, Type I.

Unless otherwise shown on the plans, the gravel shall conform to Aggregate Grade No. 1, 2, 3 or 4 requirements shown on Table 4 of Article 421.2.

Article 400.4., "Measurement", is supplemented by the following:

4.4. Sand Backfill. Sand Backfill will be measured by the cubic yard. When shown on the plans, the excavation shall be backfilled to the elevations shown with sand. The sand backfill will be measured in accordance with the backfill diagram shown on the plans.

4.5. Structural Excavation (Special). Structural Excavation (Special) for Gravel Bedding will be measured by the cubic yard.

Section 5.1., "Structural Excavation", is supplemented by the following:

When the plans specify or when the Engineer directs the use of gravel bedding material, excavation below the footing grades will be measured and paid for as "Structural Excavation (Special)". The unit price bid for "Structural Excavation (Special)" shall also be full compensation for furnishing, hauling and placing gravel bedding material and for all labor, equipment, tools and incidentals necessary to complete the work.

Section 5.5., "Cutting and Restoring Pavement." The first sentence is voided and replaced by the following:

Cutting and restoring pavement will be paid for at the unit price bid for "Cutting and Restoring Pavement" of the type specified.

Article 400.5., "Payment", is supplemented by the following:

5.6. Sand Backfill. The unit price bid for "Sand Backfill" shall be full compensation for excavation and furnishing sand backfill and filter fabric, hauling, placing and compacting the sand backfill and filter fabric; and materials, equipment, labor, tools and incidentals.

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 voided and replaced with the following.

1. DESCRIPTION

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) in the plans and the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000.

2. MATERIALS

Furnish materials in accordance with the following:

- Item 161, "Compost"
- Item 432, "Riprap"
- Item 556, "Pipe Underdrains"

2.1. Rock Filter Dams.

2.1.1. Aggregate. Furnish aggregate with hardness, durability, cleanliness, and resistance to crumbling, flaking, and eroding acceptable to the Owner. Provide the following:

- Types 1, 2, and 4 Rock Filter Dams. Use 3 to 6 in. aggregate.
- Type 3 Rock Filter Dams. Use 4 to 8 in. aggregate.

2.1.2. Wire. Provide minimum 20 gauge galvanized wire for the steel wire mesh and tie wires for Types 2 and 3 rock filter dams. Type 4 dams require:

- a double-twisted, hexagonal weave with a nominal mesh opening of 2-1/2 in. × 3-1/4 in.;
- minimum 0.0866 in. steel wire for netting;
- minimum 0.1063 in. steel wire for selvages and corners; and
- minimum 0.0866 in. for binding or tie wire.

2.1.3. Sandbag Material. Furnish sandbags meeting Section 506.2.8., "Sandbags," except that any gradation of aggregate may be used to fill the sandbags.

2.2. Temporary Pipe Slope Drains. Provide corrugated metal pipe, polyvinyl chloride (PVC) pipe, flexible tubing, watertight connection bands, grommet materials, prefabricated fittings, and flared entrance sections that conform to the plans. Recycled and other materials meeting these requirements are allowed if approved.

Furnish concrete in accordance with Item 432, "Riprap."

2.3. Temporary Paved Flumes. Furnish asphalt concrete, hydraulic cement concrete, or other comparable non-erodible material that conforms to the plans. Provide rock or rubble with a minimum diameter of 6 in. and a maximum volume of 1/2 cu. ft. for the construction of energy dissipaters.

2.4. Construction Exits. Provide materials that meet the details shown on the plans and this Section.

2.4.1. Rock Construction Exit. Provide crushed aggregate for long- and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free from adherent coatings such as salt, alkali, dirt, clay, loam, shale, soft or flaky materials, and organic and injurious matter. Use 4- to 8-in. aggregate for Type 1. Use 2- to 4-in. aggregate for Type 3.

2.4.2. Timber Construction Exit. Furnish No. 2 quality or better railroad ties and timbers for long-term construction exits, free of large and loose knots and treated to control rot. Fasten timbers with nuts and bolts or lag bolts, of at least 1/2 in. diameter, unless otherwise shown on the plans or allowed. Provide plywood or pressed wafer board at least 1/2 in. thick for short-term exits.

2.4.3. Foundation Course. Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.

2.5. Embankment for Erosion Control. Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.

2.6. Pipe. Provide pipe outlet material in accordance with Item 556, “Pipe Underdrains,” and details shown on the plans.

2.7. Construction Perimeter Fence.

2.7.1. Posts. Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in., or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 0.5 lb. per foot.

2.7.2. Fence. Provide orange construction fencing as approved.

2.7.3. Fence Wire. Provide 11 gauge or larger galvanized smooth or twisted wire. Provide 16 gauge or larger tie wire.

2.7.4. Flagging. Provide brightly-colored flagging that is fade-resistant and at least 3/4 in. wide to provide maximum visibility both day and night.

2.7.5. Staples. Provide staples with a crown at least 1/2 in. wide and legs at least 1/2 in. long.

2.7.6. Used Materials. Previously used materials meeting the applicable requirements may be used if approved.

2.8. Sandbags. Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet stability exceeding 70%.

Use natural coarse sand or manufactured sand meeting the gradation given in Table 1 to fill sandbags. Filled sandbags must be 24 to 30 in. long, 16 to 18 in. wide, and 6 to 8 in. thick.

Table 1
Sand Gradation

Sieve #	Retained (% by Weight)
4	Maximum 3%
100	Minimum 80%
200	Minimum 95%

Aggregate may be used instead of sand for situations where sandbags are not adjacent to traffic. The aggregate size shall not exceed 3/8 in.

2.9. Temporary Sediment Control Fence. Provide a net-reinforced fence using woven geo-textile fabric. Logos visible to the traveling public will not be allowed.

2.9.1. Fabric. Provide fabric materials in accordance with DMS-6230, "Temporary Sediment Control Fence Fabric."

2.9.2. Posts. Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Furnish soft wood posts at least 3 in. in diameter, or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/2 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.3 lb. per foot.

2.9.3. Net Reinforcement. Provide net reinforcement of at least 12-1/2 gauge galvanized welded wire mesh, with a maximum opening size of 2 × 4 in., at least 24 in. wide, unless otherwise shown on the plans.

2.9.4. Staples. Provide staples with a crown at least 3/4 in. wide and legs 1/2 in. long.

2.9.5. Used Materials. Use recycled material meeting the applicable requirements if approved.

2.10. Biodegradable Erosion Control Logs.

2.10.1. Core Material. Furnish core material that is biodegradable or recyclable. Use compost, mulch, aspen excelsior wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or any other acceptable material unless specifically called out on the plans. Permit no more than 5% of the material to escape from the containment mesh. Furnish compost meeting the requirements of Item 161, "Compost."

2.10.2. Containment Mesh. Furnish containment mesh that is 100% biodegradable, photodegradable, or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material.

Furnish biodegradable or photodegradable containment mesh when log will remain in place as part of a vegetative system.

Furnish recyclable containment mesh for temporary installations.

2.10.3. Size. Furnish biodegradable erosion control logs with diameters shown on the plans or as directed. Stuff containment mesh densely so logs do not deform.

3. CONSTRUCTION

3.1. Contractor Responsibilities. Implement the Owner's Storm Water Pollution Prevention Plan (SWP3) for the project in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed by the Owner. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Owner'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.

3.2. General.

3.2.1. Phasing. Implement control measures in the area to be disturbed before beginning construction, or as directed. Limit the disturbance to the area shown on the plans or as directed. If, in the opinion of the Owner, the Contractor cannot control soil erosion and sedimentation resulting from construction operations, the Owner will limit the disturbed area to that which the Contractor is able to control. Minimize disturbance to vegetation.

3.2.2. Maintenance. Immediately correct ineffective control measures. Implement additional controls as directed. Remove excavated material within the time requirements specified in the applicable storm water permit.

3.2.3. Stabilization. Stabilize disturbed areas where construction activities will be temporarily stopped in accordance with the applicable storm water permit. Establish a uniform vegetative cover. The project will not be accepted until a 70% density of existing adjacent undisturbed areas is obtained, unless otherwise shown

on the plans. When shown on the plans, the Owner may accept the project when adequate controls are in place that will control erosion, sedimentation, and water pollution until sufficient vegetative cover can be established.

3.2.4. Finished Work. Upon acceptance of vegetative cover, remove and dispose of all temporary control measures, temporary embankments, bridges, matting, falsework, piling, debris, or other obstructions placed during construction that are not a part of the finished work, or as directed.

3.2.5. 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 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 as described in the TPDES General Permit TXR150000. Utilize 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.

3.3. Installation, Maintenance, and Removal Work. Perform work in accordance with the SWP3, according to manufacturers' guidelines, and in accordance with the TPDES General Permit TXR150000. 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 Owner. . If a device ceases to function as intended, repair or replace the device or portions thereof as necessary. Remove sediment, debris, and litter. When approved, sediments may be disposed of within embankments, or in the right of way in areas where the material will not contribute to further siltation. Dispose of removed material in accordance with federal, state, and local regulations.

Remove devices upon approval or as directed. Finish-grade and dress the area upon removal. Stabilize disturbed areas in accordance with the permit, and as shown on the plans or directed. Materials removed are considered consumed by the project. Retain ownership of stockpiled material and remove it from the project when new installations or replacements are no longer required.

3.3.1. Rock Filter Dams for Erosion Control. Remove trees, brush, stumps, and other objectionable material that may interfere with the construction of rock filter dams. Place sandbags as a foundation when required or at the Contractor's option.

Place the aggregate to the lines, height, and slopes specified, without undue voids for Types 1, 2, 3, and 5. Place the aggregate on the mesh and then fold the mesh at the upstream side over the aggregate and secure it to itself on the downstream side with wire ties, or hog rings for Types 2 and 3, or as directed. Place rock filter dams perpendicular to the flow of the stream or channel unless otherwise directed. Construct filter dams according to the following criteria unless otherwise shown on the plans:

3.3.1.1. Type 1 (Non-reinforced).

3.3.1.1.1. Height. At least 18 in. measured vertically from existing ground to top of filter dam.

3.3.1.1.2. Top Width. At least 2 ft.

3.3.1.1.3. Slopes. No steeper than 2:1.

3.3.1.2. Type 2 (Reinforced).

3.3.1.2.1. Height. At least 18 in. measured vertically from existing ground to top of filter dam.

3.3.1.2.2. Top Width. At least 2 ft.

3.3.1.2.3. Slopes. No steeper than 2:1.

3.3.1.3. Type 3 (Reinforced).

3.3.1.3.1. Height. At least 36 in. measured vertically from existing ground to top of filter dam.

3.3.1.3.2. Top Width. At least 2 ft.

3.3.1.3.3. Slopes. No steeper than 2:1.

3.3.1.4. Type 4 (Sack Gabions). Unfold sack gabions and smooth out kinks and bends. Connect the sides by lacing in a single loop–double loop pattern on 4- to 5-in. spacing for vertical filling. Pull the end lacing rod at one end until tight, wrap around the end, and twist 4 times. Fill with stone at the filling end, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires 4 times.

Place the sack flat in a filling trough, fill with stone, connect sides, and secure ends as described above for horizontal filling.

Lift and place without damaging the gabion. Shape sack gabions to existing contours.

3.3.1.5. Type 5. Provide rock filter dams as shown on the plans.

3.3.2. Temporary Pipe Slope Drains. Install pipe with a slope as shown on the plans or as directed. Construct embankment for the drainage system in 8-in. lifts to the required elevations. Hand-tamp the soil around and under the entrance section to the top of the embankment as shown on the plans or as directed. Form the top of the embankment or earth dike over the pipe slope drain at least 1 ft. higher than the top of the inlet pipe at all points. Secure the pipe with hold-downs or hold-down grommets spaced a maximum of 10 ft. on center. Construct the energy dissipaters or sediment traps as shown on the plans or as directed. Construct the sediment trap using concrete or rubble riprap in accordance with Item 432, “Riprap,” when designated on the plans.

3.3.3. Temporary Paved Flumes. Construct paved flumes as shown on the plans or as directed. Provide excavation and embankment (including compaction of the subgrade) of material to the dimensions shown on the plans unless otherwise indicated. Install a rock or rubble riprap energy dissipater, constructed from the materials specified above, to a minimum depth of 9 in. at the flume outlet to the limits shown on the plans or as directed.

3.3.4. Construction Exits. Prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits when tracking conditions exist. Construct exits for either long- or short-term use.

3.3.4.1. Long-Term. Place the exit over a foundation course as required. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.

3.3.4.1.1. Type 1. Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.

3.3.4.1.2. Type 2. Construct using railroad ties and timbers as shown on the plans or as directed.

3.3.4.2. Short-Term.

3.3.4.2.1. Type 3. Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.

3.3.4.2.2. Type 4. Construct as shown on the plans or as directed.

3.3.5. Earthwork for Erosion Control. Perform excavation and embankment operations to minimize erosion and to remove collected sediments from other erosion control devices.

3.3.5.1. Excavation and Embankment for Erosion Control Features. Place earth dikes, swales, or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed.

Create a sediment basin, where required, providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.

3.3.5.2. Excavation of Sediment and Debris. Remove sediment and debris when accumulation affects the performance of the devices, after a rain, and when directed.

3.3.6. Construction Perimeter Fence. Construct, align, and locate fencing as shown on the plans or as directed.

3.3.6.1. Installation of Posts. Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8 to 10 ft.

3.3.6.2. Wire Attachment. Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.

3.3.6.3. Flag Attachment. Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.

3.3.7. Sandbags for Erosion Control. Construct a berm or dam of sandbags that will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags 1/2 the length of the preceding row. Place a single layer of sandbags downstream as a secondary debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.

3.3.8. Temporary Sediment-Control Fence. Provide temporary sediment-control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion-control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, as specified in this Section, or as directed.

3.3.8.1. Installation of Posts. Embed posts at least 18 in. deep, or adequately anchor, if in rock, with a spacing of 6 to 8 ft. and install on a slight angle toward the runoff source.

3.3.8.2. Fabric Anchoring. Dig trenches along the uphill side of the fence to anchor 6 to 8 in. of fabric. Provide a minimum trench cross-section of 6 × 6 in. Place the fabric against the side of the trench and align approximately 2 in. of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.

3.3.8.3. Fabric and Net Reinforcement Attachment. Attach the reinforcement to wooden posts with staples, or to steel posts with T-clips, in at least 4 places equally spaced unless otherwise shown on the plans. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement by hog rings or cord every 15 in. or less.

3.3.8.4. Fabric and Net Splices. Locate splices at a fence post with a minimum lap of 6 in. attached in at least 6 places equally spaced unless otherwise shown on the plans. Do not locate splices in concentrated flow areas.

Requirements for installation of used temporary sediment-control fence include the following:

- fabric with minimal or no visible signs of biodegradation (weak fibers),
- fabric without excessive patching (more than 1 patch every 15 to 20 ft.),
- posts without bends, and
- backing without holes.

3.3.9. Biodegradable Erosion Control Logs. Install biodegradable erosion control logs near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the biodegradable erosion control logs into the erosion measures used to control sediment in areas of higher flow. Install, align, and locate the biodegradable erosion control logs as specified below, as shown in plans or as directed.

Secure biodegradable erosion control logs in a method adequate to prevent displacement as a result of normal rain events, prevent damage to the logs, and to the satisfaction of the Owner such that flow is not allowed under the logs. Temporarily removing and replacing biodegradable erosion logs as to facilitate daily work is allowed at the Contractor's expense.

3.3.10. Vertical Tracking. Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with a track undercarriage capable of producing a linear soil impression measuring a minimum of 12 in. long × 2 to 4 in. wide × 1/2 to 2 in. deep. Do not exceed 12 in. between track impressions. Install continuous linear track impressions where the 12 in. length impressions are perpendicular to the slope. Vertical tracking is required on projects where soil disturbing activities have occurred unless otherwise approved.

4. MEASUREMENT

4.1. Rock Filter Dams. Installation or removal of rock filter dams will be measured by the foot or by the cubic yard. The measured volume will include sandbags, when used.

4.1.1. Linear Measurement. When rock filter dams are measured by the foot, measurement will be along the centerline of the top of the dam.

4.1.2. Volume Measurement. When rock filter dams are measured by the cubic yard, measurement will be based on the volume of rock computed by the method of average end areas.

4.1.2.1. Installation. Measurement will be made in final position.

4.1.2.2. Removal. Measurement will be made at the point of removal.

4.2. Temporary Pipe Slope Drains. Temporary pipe slope drains will be measured by the foot.

4.3. Temporary Paved Flumes. Temporary paved flumes will be measured by the square yard of surface area. The measured area will include the energy dissipater at the flume outlet.

4.4. Construction Exits. Construction exits will be measured by the square yard of surface area.

4.5. Earthwork for Erosion and Sediment Control.

4.5.1. Equipment and Labor Measurement. Equipment and labor used will be measured by the actual number of hours the equipment is operated and the labor is engaged in the work.

4.5.2. Volume Measurement.

4.5.2.1. In Place.

4.5.2.1.1. Excavation. Excavation will be measured by the cubic yard in its original position and the volume computed by the method of average end areas.

4.5.2.1.2. Embankment. Embankment will be measured by the cubic yard in its final position by the method of average end areas. The volume of embankment will be determined between:

- the original ground surfaces or the surface upon that the embankment is to be constructed for the feature and
- the lines, grades and slopes of the accepted embankment for the feature.

4.5.2.2. In Vehicles. Excavation and embankment quantities will be combined and paid for under "Earthwork (Erosion and Sediment Control, In Vehicle)." Excavation will be measured by the cubic yard in vehicles at the point of removal. Embankment will be measured by the cubic yard in vehicles measured at the point of delivery. Shrinkage or swelling factors will not be considered in determining the calculated quantities.

4.6. Construction Perimeter Fence. Construction perimeter fence will be measured by the foot.

4.7. Sandbags for Erosion Control. Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.

4.8. Temporary Sediment-Control Fence. Installation or removal of temporary sediment-control fence will be measured by the foot.

4.9. Biodegradable Erosion Control Logs. Installation or removal of biodegradable erosion control logs will be measured by the foot along the centerline of the top of the control logs.

4.10. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

5. PAYMENT

The following will not be paid for directly but are subsidiary to pertinent Items:

- erosion-control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (such as construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter, unless a separate pay item is shown on the plans;
- repair to devices and features damaged by Contractor operations;
- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and
- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

Stabilization of disturbed areas will be paid for under pertinent Items.

Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly but is subsidiary to the excavation and embankment under this Item.

5.1. Rock Filter Dams. 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 as follows:

5.1.1. Installation. Installation will be paid for as "Rock Filter Dams (Install)" of the type specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

5.1.2. Removal. Removal will be paid for as "Rock Filter Dams (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

When the Owner directs that the rock filter dam installation or portions thereof be replaced, payment will be made at the unit price bid for "Rock Filter Dams (Remove)" and for "Rock Filter Dams (Install)" of the type specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

5.2. Temporary Pipe Slope Drains. 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 "Temporary Pipe Slope Drains" of the size specified. This price is full compensation for furnishing materials, removal and disposal, furnishing and operating equipment, labor, tools, and incidentals.

Removal of temporary pipe slope drains will not be paid for directly but is subsidiary to the installation Item. When the Owner directs that the pipe slope drain installation or portions thereof be replaced, payment will be made at the unit price bid for "Temporary Pipe Slope Drains" of the size specified, which is full compensation for the removal and reinstallation of the pipe drain.

Earthwork required for the pipe slope drain installation, including construction of the sediment trap, will be measured and paid for under "Earthwork for Erosion and Sediment Control."

Riprap concrete or stone, when used as an energy dissipater or as a stabilized sediment trap, will be measured and paid for in accordance with Item 432, "Riprap."

5.3. Temporary Paved Flumes. 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 "Temporary Paved Flume (Install)" or "Temporary Paved Flume (Remove)." This price is full compensation for furnishing and placing materials, removal and disposal, equipment, labor, tools, and incidentals.

When the Owner directs that the paved flume installation or portions thereof be replaced, payment will be made at the unit prices bid for "Temporary Paved Flume (Remove)" and "Temporary Paved Flume (Install)." These prices are full compensation for the removal and replacement of the paved flume and for equipment, labor, tools, and incidentals.

Earthwork required for the paved flume installation, including construction of a sediment trap, will be measured and paid for under "Earthwork for Erosion and Sediment Control."

5.4. Construction Exits. Contractor-required construction exits from off right of way locations or on-right of way PSLs will not be paid for directly but are subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right of way access to work areas required by the Owner will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Owner directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be measured and paid for under "Earthwork for Erosion and Sediment Control."

5.5. Earthwork for Erosion and Sediment Control.

5.5.1. Initial Earthwork for Erosion and Sediment Control. 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 "Excavation (Erosion and Sediment Control, In Place)," "Embankment (Erosion and Sediment Control, In Place)," "Excavation (Erosion and Sediment Control, In Vehicle)," "Embankment (Erosion and Sediment Control, (In Vehicle)," or "Earthwork (Erosion and Sediment Control, In Vehicle)."

This price is full compensation for excavation and embankment including hauling, disposal of material not used elsewhere on the project; embankments including furnishing material from approved sources and construction of erosion-control features; and equipment, labor, tools, and incidentals.

Sprinkling and rolling required by this Item will not be paid for directly, but will be subsidiary to this Item.

5.5.2. Maintenance Earthwork for Erosion and Sediment Control for Cleaning and Restoring Control Measures. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid under a Contractor Force Account Item from invoice provided to the Owner.

This price is full compensation for excavation, embankment, and re-grading including removal of accumulated sediment in various erosion control installations as directed, hauling, and disposal of material not used elsewhere on the project; excavation for construction of erosion-control features; embankments including furnishing material from approved sources and construction of erosion-control features; and equipment, labor, tools, and incidentals.

Earthwork needed to remove and obliterate 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.

5.6. Construction Perimeter Fence. 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 "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will be not be paid for directly but is subsidiary to the installation Item. When the Owner directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

5.7. Sandbags for Erosion Control. Sandbags will be paid for at the unit price bid for "Sandbags for Erosion Control" (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.

Removal of sandbags will not be paid for directly but is subsidiary to the installation Item. When the Owner directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for "Sandbags for Erosion Control," which is full compensation for the reinstallation of the sandbags.

5.8. Temporary Sediment-Control Fence. 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 as follows:

5.8.1. Installation. Installation will be paid for as “Temporary Sediment-Control Fence (Install).” This price is full compensation for furnishing and operating equipment finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

5.8.2. Removal. Removal will be paid for as “Temporary Sediment-Control Fence (Remove).” This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

5.9. Biodegradable Erosion Control Logs. 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 as follows:

5.9.1. Installation. Installation will be paid for as “Biodegradable Erosion Control Logs (Install)” of the size specified. This price is full compensation for furnishing and operating equipment finish backfill and grading, staking, proper disposal, labor, materials, tools, and incidentals.

5.9.2. Removal. Removal will be paid for as “Biodegradable Erosion Control Logs (Remove).” This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

5.10. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

SALES TAX AND LOCAL SALES TAX EXEMPTION CERTIFICATE FOR CONTRACTORS

This Contract is to be performed for an exempt organization as defined by Article 20.04 (H) (4) of the Texas Limited Sales, Excise, and Use Tax Act and the undersigned hereby claims an exemption from payment of taxes under Chapter 20, title 122A, revised hereby claims an exemption from payment of taxes under Chapter 20, title 122A, revised civil statues of Texas, and Article 1066 ©, entitle Local Sales and Use Tax, revised civil statutes of Texas.

The Contractor performing this Contract may purchase, rent, or lease all materials, supplies, equipment used for consumed in the performance of this Contract by issuing to his retailer an exemption certificate in lieu of the tax, said exemption certificate complying with State Comptroller's Ruling No 95-9.07. Any such exemption certificate issue by the Contractor in lieu of the tax shall be subject to the provisions of the State Comptroller's Ruling No. 95.0.09 as amended to be effective October 2, 1968.

EXECUTED this the _____ day of _____, 20_____.

_____

Contractor

GOVERNMENT CODE

CHAPTER 2258. PREVAILING WAGE RATES

SUBCHAPTER A. GENERAL PROVISIONS

§Sec. 2258.001. DEFINITIONS. In this chapter:

(1) "Locality in which the work is performed" means:

(A) For a contract for a public work awarded by the state, the political subdivision of the state in which the public work is located:

(i) Which may include a county, municipality, county and municipality, or district, except as provided by Subparagraph (ii); and

(ii) Which, in a municipality with a population of 500,000 or more, may only include the geographic limits of the municipality; or

(B) For a contract for a public work awarded by a political subdivision of the state, the geographical limits of the political subdivision.

(2) "Public body" means a public body awarding a contract for a public work on behalf of the state or a political subdivision of the state.

(3) "Worker" includes a laborer or mechanic.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995. Amended by Acts 2001, 77th Leg., ch. 1422, Sec. 14.04, eff. Sept. 1, 2001.

§Sec. 2258.002. APPLICABILITY OF CHAPTER TO PUBLIC WORKS. (a) This chapter applies only to the construction of a public work, including a building, highway, road, excavation, and repair work or other project development or improvement, paid for in whole or in part from public funds, without regard to whether the work is done under public supervision or direction.

(b) This chapter does not apply to work done directly by a public utility company under an order of a public authority.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.003. LIABILITY. An officer, agent, or employee of a public body is not liable in a civil action for any act or omission implementing or enforcing this chapter unless the action was made in bad faith.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

SUBCHAPTER B. PAYMENT OF PREVAILING WAGE RATES

§Sec. 2258.021. RIGHT TO BE PAID PREVAILING WAGE RATES. (a) A worker employed on a public work by or on behalf of the state or a political subdivision of the state shall be paid:

(1) not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed; and

(2) Not less than the general prevailing rate of per diem wages for legal holiday and overtime work.

(b) Subsection (a) does not apply to maintenance work.

(c) A worker is employed on a public work for the purposes of this section if the worker is employed by a contractor or subcontractor in the execution of a contract for the public work with the state, a political subdivision of the state, or any officer or public body of the state or a political subdivision of the state.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995. Amended by Acts 1997, 75th Leg., ch. 165, Sec. 18.01, eff. Sept. 1, 1997.

§Sec. 2258.022. DETERMINATION OF PREVAILING WAGE RATES.

(a) For a contract for a public work awarded by a political subdivision of the state, the public body shall determine the general prevailing rate of per diem wages in the locality in which the public work is to be performed for each craft or type of worker needed to execute the contract and the prevailing rate for legal holiday and overtime work by:

(1) conducting a survey of the wages received by classes of workers employed on projects of a character similar to the contract work in the political subdivision of the state in which the public work is to be performed; or

(2) using the prevailing wage rate as determined by the United States Department of Labor in accordance with the Davis-Bacon Act (40 U.S.C. Section 276a et seq.), and its subsequent amendments.

(b) This subsection applies only to a public work located in a county bordering the United Mexican States or in a county adjacent to a county bordering the United Mexican States. For a contract for a public work awarded by the state, the public body shall determine the general prevailing rate of per diem wages in the locality in which the public work is to be performed for each craft or type of worker needed to execute the contract and the prevailing rate for legal holiday and overtime work as follows. The public body shall conduct a survey of the wages received by classes of workers employed on projects of a character similar to the contract work both statewide and in the political subdivision of the state in which the public work is to be performed. The public body shall also consider the prevailing wage rate as determined by the United States Department of Labor in accordance with the Davis-Bacon Act (40 U.S.C. Section 276a et seq.), and its subsequent amendments, but only if the survey used to determine that rate was conducted within a three-year period preceding the date the public body calls for bids for the public work. The public body shall determine the general prevailing rate of per diem wages in the locality based on the higher of:

(1) The rate determined from the survey conducted in the political subdivision;

(2) The arithmetic mean between the rate determined from the survey conducted in the political subdivision and the rate determined from the statewide survey; and

(3) If applicable, the arithmetic mean between the rates determined from the survey conducted in the political subdivision and the rate determined by the United States Department of Labor.

(c) The public body shall determine the general prevailing rate of per diem wages as a sum certain, expressed in dollars and cents.

(d) A public body shall specify in the call for bids for the contract and in the contract itself the wage rates determined under this section.

(e) The public body's determination of the general prevailing rate of per diem wages is final.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995. Amended by Acts 1997, 75th Leg., ch. 165, Sec. 18.02, eff. Sept. 1, 1997; Acts 2001, 77th Leg., ch. 1422, Sec. 14.05, eff. Sept. 1, 2001.
Amended by: Acts 2007, 80th Leg., R.S., Ch. 728, Sec. 1, eff. September 1, 2007.

§Sec. 2258.023. PREVAILING WAGE RATES TO BE PAID BY CONTRACTOR AND SUBCONTRACTOR; PENALTY.

(a) The contractor who is awarded a contract by a public body or a subcontractor of the contractor shall pay not less than the rates determined under Section 2258.022 to a worker employed by it in the execution of the contract.

(b) A contractor or subcontractor who violates this section shall pay to the state or a political subdivision of the state on whose behalf the contract is made, $60 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the contract. A public body awarding a contract shall specify this penalty in the contract.

(c) A contractor or subcontractor does not violate this section if a public body awarding a contract does not determine the prevailing wage rates and specify the rates in the contract as provided by Section 2258.022.

(d) The public body shall use any money collected under this section to offset the costs incurred in the administration of this chapter.

(e) A municipality is entitled to collect a penalty under this section only if the municipality has a population of more than 10,000.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.024. RECORDS.

(a) A contractor and subcontractor shall keep a record showing:

(1) The name and occupation of each worker employed by the contractor or subcontractor in the construction of the public work; and

(2) The actual per diem wages paid to each worker.

(b) The record shall be open at all reasonable hours to inspection by the officers and agents of the public body.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.025. PAYMENT GREATER THAN PREVAILING RATE NOT PROHIBITED. This chapter does not prohibit the payment to a worker employed on a public work an amount greater than the general prevailing rate of per diem wages.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.026. RELIANCE ON CERTIFICATE OF SUBCONTRACTOR. A contractor is entitled to rely on a certificate by a subcontractor regarding the payment of all sums due those working for the subcontractor until the contrary has been determined.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

SUBCHAPTER C. ENFORCEMENT; CIVIL AND CRIMINAL PENALTIES

§Sec. 2258.051. DUTY OF PUBLIC BODY TO HEAR COMPLAINTS AND WITHHOLD PAYMENT. A public body awarding a contract, and an agent or officer of the public body, shall:

(1) Take cognizance of complaints of all violations of this chapter committed in the execution of the contract; and

(2) Withhold money forfeited or required to be withheld under this chapter from the payments to the contractor under the contract, except that the public body may not withhold money from other than the final payment without a determination by the public body that there is good cause to believe that the contractor has violated this chapter.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.052. COMPLAINT; INITIAL DETERMINATION.

(a) On receipt of information, including a complaint by a worker, concerning an alleged violation of Section 2258.023 by a contractor or subcontractor, a public body shall make an initial determination as to whether good cause exists to believe that the violation occurred.

(b) A public body must make its determination under Subsection (a) before the 31st day after the date the public body receives the information.

(c) A public body shall notify in writing the contractor or subcontractor and any affected worker of its initial determination.

(d) A public body shall retain any amount due under the contract pending a final determination of the violation.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.053. ARBITRATION REQUIRED FOR UNRESOLVED ISSUE.

(a) An issue relating to an alleged violation of Section 2258.023, including a penalty owed to a public body or an affected worker, shall be submitted to binding arbitration in accordance with the Texas General Arbitration Act (Article 224 et seq., Revised Statutes) if the contractor or subcontractor and any affected worker do not resolve the issue by agreement before the 15th day after the date the public body makes its initial determination under Section 2258.052.

(b) If the persons required to arbitrate under this section do not agree on an arbitrator before the 11th day after the date that arbitration is required under Subsection (a), a district court shall

appoint an arbitrator on the petition of any of the persons.

(c) A public body is not a party in the arbitration.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.054. ARBITRATION AWARD; COSTS. (a) If an arbitrator determines that Section 2258.023 has been violated, the arbitrator shall assess and award against the contractor or subcontractor:

(1) Penalties as provided by Section 2258.023 and this section; and

(2) All amounts owed to the affected worker.

(b) An arbitrator shall assess and award all reasonable costs, including the arbitrator's fee, against the party who does not prevail. Costs may be assessed against the worker only if the arbitrator finds that the claim is frivolous. If the arbitrator does not find that the claim is frivolous and does not make an award to the worker, costs are shared equally by the parties.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.055. ARBITRATION DECISION AND AWARD FINAL. The decision and award of the arbitrator is final and binding on all parties and may be enforced in any court of competent jurisdiction.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.056. PAYMENT BY PUBLIC BODY TO WORKER; ACTION TO RECOVER PAYMENT.

(a) A public body shall use any amounts retained under this chapter to pay the worker the difference between the amount the worker received in wages for labor on the public work at the rate paid by the contractor or subcontractor and the amount the worker would have received at the general prevailing wage rate as provided in the arbitrator's award.

(b) The public body may adopt rules, orders, or ordinances relating to the manner in which a reimbursement is made.

(c) If the amounts retained by a public body under this chapter are not sufficient for the public body to pay the worker the full amount owed, the worker has a right of action against the contractor or subcontractor and the surety of the contractor or subcontractor to recover the amount owed, reasonable attorney's fees, and court costs.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.057. WITHHOLDING BY CONTRACTOR.

(a) A contractor may withhold from a subcontractor sufficient money to cover an amount withheld from the contractor by a public body because the subcontractor violated this chapter.

(b) If the contractor has made a payment to the subcontractor, the contractor may withhold money from any future payments owed to the subcontractor or sue the subcontractor or the

subcontractor's surety for the amount withheld from the contractor by a public body because of the subcontractor's violation.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

§Sec. 2258.058. CRIMINAL OFFENSE.

(a) An officer, agent, or representative of the state or of a political subdivision of the state commits an offense if the person wilfully violates or does not comply with a provision of this chapter.

(b) A contractor or subcontractor of a public work under this chapter, or an agent or representative of the contractor or subcontractor, commits an offense if the person violates Section 2258.024.

(c) An offense under this section is punishable by:

(1) A fine not to exceed $500;

(2) Confinement in jail for a term not to exceed six months; or

(3) Both a fine and confinement.

Added by Acts 1995, 74th Leg., ch. 76, Sec. 5.49 (a), eff. Sept. 1, 1995.

"General Decision Number: TX20210003 01/01/2021

Superseded General Decision Number: TX20200003

State: Texas

Construction Types: Heavy and Highway

Counties: Cameron, Hidalgo and Webb Counties in Texas.

HEAVY & HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.95 for calendar year 2021 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, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021

* SUTX2011-003 08/02/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving & Structures)	$ 12.46	
FORM BUILDER/FORM SETTER (Structures)	$ 12.30	
FORM SETTER (Paving & Curb)	$ 12.16	
LABORER		
Asphalt Raker	$ 10.61	
Flagger	$ 9.10	
Laborer, Common	$ 9.86	
Laborer, Utility	$ 11.53	
Pipelayer	$ 11.87	
Work Zone Barricade Servicer	$ 12.88	
POWER EQUIPMENT OPERATOR:		
Asphalt Distributor	$ 13.48	
Asphalt Paving Machine	$ 12.25	
Broom or Sweeper	$ 10.33	
Crane, Lattice Boom 80 Tons or Less	$ 14.39	
Crawler Tractor	$ 16.63	
Excavator, 50,000 lbs or less	$ 12.56	
Excavator, over 50,000 lbs	$ 15.23	
Foundation Drill, Truck Mounted	$ 16.86	
Front End Loader Operator, Over 3 CY	$ 13.69	
Front End Loader, 3 CY or less	$ 13.49	
Loader/Backhoe	$ 12.77	
Mechanic	$ 15.47	
Milling Machine	$ 14.64	
Motor Grader Operator, Rough	$ 14.62	
Motor Grader, Fine Grade	$ 16.52	
Scraper	$ 11.07	
Servicer	$ 12.34	
Steel Worker (Reinforcing)	$ 14.07	

TRUCK DRIVER
Lowboy-Float.....$ 13.63
Single Axle.....$ 10.82
Single or Tandem Axle Dump..$ 14.53
Tandem Axle Tractor with
Semi Trailer.....$ 12.12

WELDER.....$ 14.02

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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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 Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. 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
"

Checklist for Documentation Required for Road Construction

Contractor: _____

Contract Amount: _____

Project/Precinct: **North Alamo Road Realignment Project**

Owner's Contract No.: _____

Item	Required Documents	Submitted & Reviewed	Approved	Comments:
	INITIATION OF PROJECT:			
1	Approval to Bid (Purchasing)			
2	Contract - Signed and Excuted			
3	Gen. Liability Insurance - (Expiration Date)			
4	Automobile Liab. Insurance - (Expiration Date)			
5	Worker's Comp. & Empl. Liab. (Expiration Date)			
6	Notice to Proceed			
7	Material Sample & Testing Table Sent to Auditor's Office			
	PAYMENT REQUESTS, INCLUDING FINAL:			
8	Application and Cerification of Payment (A)			
9	Schedule of Values a/k/a 1257/1258			
10	Estimate Quantity Update Worksheet			
11	List of Suppliers and Sub-contractors			
12	Partial Waiver of Liens (Sub-contractors/suppliers)			
13	TxDot Form 252 Contract Time Statement			
14	Payroll Report w/signed Wage Form			
15	Change Order (Requires TxDot Concurrence			
	RETAINAGE PAYMENT: - Final request and request for retainage must be billed separately and approved by C.C.			
16	Punch List			
17	Certificate of Construction Completion			
18	Approval by Commissoner's Court			
19	Contractor's Affidavit of Release (Waiver) of Liens (with power of attorney)(B)			
20	Affidavit of Payment of Debts & Claims-lien bond & indemnity bonds(w/power of attorney)(B)			
21	Consent of Surety to Final Payment(with power of attorney)(B)			
22	Final Blue Prints			

Exhibit B-d

CHANGE ORDER NUMBER ONE(1)

Project: **North Alamo Road Realignment Project**

DATE OF ISSUANCE: _____ EFFECTIVE DATE: _____

OWNER: _____
OWNER'S CONTRACT NO: _____

CONTRACTOR: _____ ENGINEER: _____

_____ _____

_____ _____

You ar directed to make the following changes in the Contract Documents.

Description:
1.
2.
3.
4.
5.
6.

Reason for Change Order:
1.
2.
3.
4.
5.
6.

Attachments:

CHANGE IN CONTRACT PRICE:		CHANGE IN CONTRACT TIME:
Original Contract Price $ 0.00		Original Contract Time for Substantial Completion: 0 calendar days or dates
Net Changes from previous Change Order $ 0.00		Net Change from previous Change Orders 0 calendar days
Contract Price prior to this Change Order $ 0.00		Contract Time prior to this Change Order Substantial Completion: 0 calendar days or dates
Net Increase(decrease) of this Change Order $ 0.00		Net Increase(decrease) of this Change Order 0 calendar days
Contract Price with all approved Change Orders $ 0.00	Net % increase(decrease)from original contract price. #DIV/O! %	Contract Time with all approved Change Orders Substantial Completion: 0 calendar days or dates

RECOMMENDED:

By: _____
Enigineer (Authorized Signature)

Date: _____

APPROVED:

By: _____
Owner (Authorized Signature)

Date: _____

ACCEPTED:

By: _____
Contractor (Authorized Signature)

Date: _____

Exhibit B-e

APPLICATION FOR PAYMENT NO.

To: _____ (OWNER)
From: _____ (CONTRACTOR)
Contract: _____
Project: **North Alamo Road Realignment Project**
Owner's Contract No. _____ Engineer's Project No. _____
For Work accomplished through the date of: _____

1. Original Contract Price:	_____
2. Net change by Change Order and Written Agreements(+or-):	_____
3. Current Contract Price (1 plus 2):	_____
4. Total completed and stored to date:	_____
5. Retainage (per Agreement):	
___5%___ of completed Work: _____	
_____ of stored material _____	
Total Retainage:	_____
6. Total completed and stored to date less retainage (4 minus 5)	_____
7. Less previous Application for Payments:	_____
8. AMOUNT DUE THIS APPLICATION (6 MINUS 7)	_____

Accompanying Documentation:

CONTRACTOR'S Certification:
The undersigned CONTRACTOR certifies that (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied on account to discharge CONTRACTOR'S legitimate obligations incurred in connection with Work covered by prior Applications for Payment numbered 1 through __2__ inclusive: (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to OWNER indemnifying OWNER against any such Lien, security interest or encumbrance); and (3) all Work covered by this Application for Payments is in accordance with the Contract Documents and not defective.

Date _____

_____
CONTRACTOR

State of _____
County of _____
Subscribed and sworn to before me this _____
day of _____

By: _____

_____
Notary Public
My Commission expires: _____

Payment of the above AMOUNT DUE THIS APPLICATION is recommended.

Date _____

_____
ENGINEER

By: _____

Exhibit B-f

Estimate Quantity Update Worksheet Date:

Colonia:
Roadway:
Control:
Project No:
County:
Est. No: 1

Contractor:
Contract Price:
Work Done this Mo.:
% Complete: #DIV/0!

Date Began: ?
Contract Time: 120
Time Charged: 90
% Time Used: 75.00%

Work Type: Paving & Drainage
Limits:
From:
To:

						FIRST MONTH			SECOND MONTH			THIRD MONTH		
ITEM NO.	DESCRIPTION	UNIT	PROJECT QTY	Unit Price	Project Amount	MONTHLY QUANTITY	QTY to Date	Item Cost (Monthly)	MONTHLY QUANTITY	QTY to Date	Item Cost (Monthly)	MONTHLY QUANTITY	QTY to Date	Item Cost (Monthly)
	(901)ADMINISTRATIVE													
	(902) PRELIMINARY ENGINEERING													
	(903) CONSTRUCTION ENGINEERING													
	(904) RIGHT-OF-WAY													
	(905) ROADWAY CONSTRUCTION													
100	PREP ROW	Sta.	1.100	$1,800.00	$1,980.00	1.000	1.000	$0.00		0	$0.00		0	0.00
110	BACKFILL (TY A)	Sta.	1.000	$600.00	$600.00	0.000	0	$0.00		0	$0.00		0	0.00
247	FLEX BASE (RDWY DEL)(TY D GR 6 CL 4)	CY	76.000	$28.00	$2,128.00	0.000	0	$0.00		0	$0.00		0	0.00
260	LIME (TY A SLURRY) OR (TY B)	TON	1036.000	$2.00	$2,072.00	0.000	0	$0.00		0	$0.00		0	0.00
260	LIME TREAT SUBGR (DC)(12")	SY	0.000	$6,000.00	$0.00	0.000	0	$0.00		0	$0.00		0	0.00
262	LIME (TY A SLURRY) OR (TY B)	TON	7.800	$3,000.00	$23,400.00	0.000	0	$0.00		0	$0.00		0	0.00
262	LME TRT FOR BS CRS (NEW/EXT BS)(DC)(6")	SY	1277.800	$6.00	$7,666.80	0.000	0	$0.00		0	$0.00		0	0.00
310	ASPH MATRL (MC-30)	GAL	246.7	$6.00	$1,480.20	0.000	0	$0.00		0	$0.00		0	0.00
500	MOBILIZATION	LS	1.000	$3,000.00	$3,000.00	0.000	0	$0.00		0	$0.00		0	0.00
502	BARRICADES, SIGNS, AND TRAF HANDLE	MO	1.000	$1,000.00	$1,000.00	0.000	0	$0.00		0	$0.00		0	0.00
529	CONC CURB AND GUTTER (TY A)(BARRIER)	LF	600.000	$7.50	$4,500.00	0.000	0	$0.00		0	$0.00		0	0.00
644	SMALL RDSD SGN ASSM (TY A)	EA	2.000	$300.00	$600.00	0.000	0	$0.00		0	$0.00		0	0.00
644	SMALL RDSD SGN ASSM (TY F)	EA	2.000	$500.00	$1,000.00	0.000	0	$0.00		0	$0.00		0	0.00
658	DEL ASM TY A (D-SY)	EA	4.000	$100.00	$400.00	0.000	0	$0.00		0	$0.00		0	0.00
666	REFL PAV MRK TY I (Y)(SLD)(4")	LF	400.000	$0.25	$100.00	0.000	0	$0.00		0	$0.00		0	0.00
666	REFL PAV MRK TY I (Y)(BRK)(4")	LF	140.000	$0.25	$35.00	0.000	0	$0.00		0	$0.00		0	0.00
672	RAIS PAV MRKR CL B (REFL)(TY II-A-A)	EA	24.000	$3.50	$84.00	0.000	0	$0.00		0	$0.00		0	0.00
3146	HOT MIX (TY D)	TON	105.5	$34.00	$3,587.00	0.000	0	$0.00		0	$0.00		0	0.00
5249	TEMP SEDMT CONT FENCE	LF	70.000	$3.00	$210.00	0.000	0	$0.00		0	$0.00		0	0.00
							0			0	$0.00		0	0.00
	(906) DRAINAGE													
464	RC PIPE (CL III)(18")	LF	404.000	$25.00	$10,100.00	0.000	0	$0.00		0	$0.00		0	0.00
464	RC PIPE (CL III)(24")	LF	120.000	$30.00	$3,600.00	0.000	0	$0.00		0	$0.00		0	0.00
465	INLET (COMPL)(TY A)	EA	2.000	$2,000.00	$4,000.00	0.000	0	$0.00		0	$0.00		0	0.00
465	INLET (COMPL)(TY C)	EA	2.000	$1,500.00	$3,000.00	0.000	0	$0.00		0	$0.00		0	0.00
465	MANH (COMPL)(TYM)	EA	1.000	$2,000.00	$2,000.00	0.000	0	$0.00		0	$0.00		0	0.00
465	INLET EXT.	EA	2.000	$700.00	$1,400.00	0.000	0	$0.00		0	$0.00		0	0.00
467	SET (TY II)(18")(RCP)(1:6)	EA	4.000	$550.00	$2,200.00	0.000	0	$0.00		0	$0.00		0	0.00
467	SET (TY II)(24")(RCP)(1:6)	EA	1.000	$650.00	$650.00	0.000	0	$0.00		0	$0.00		0	0.00

SAMPLE

Monthly Totals:	$0.00	$0.00	0.00
ADMINISTRATIVE (901)			
PRELIMINARY ENGINEERING (902)			
CONSTRUCTION ENGINEERING (903)			
RIGHT-OF-WAY (904)			
Roadway (905):	$0.00	$0.00	0.00
Drainage (906):	$0.00	$0.00	0.00

Total to Date

Roadway (905):	$0.00
Drainage (906):	$0.00
Total	$0.00

Prepared and Checked By:

Signature: _____ Date: _____

Printed Name:

Sample

_____ Contractor Name
_____ Starting Date
_____ Project Ending Date
_____ Retainage Percent

Application No.: _____
Application Date: _____
Period To: _____
Engineer Firm: _____

Summary

Bid No.#	PROJECT NAME	Original Schedule Value	Revised Schedule Value	Payment Application No 1	Payment Application No 2	Payment Application No 3	Total To Date	Balance To Finish	Retainage	Net	Payment To Date	Payment Due
		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Exhibit B-h

Texas Department of Transportation

Form 252 (Rev. 12/82)
Page 1 of 1
(GSD-EPC Word 97)

Contract Time Statement

ESTIMATE NO. 0 CONTRACTOR _____

PROJECT NO. _____ COUNTY _____ DATE WORK BEGAN _____

TIME COMPUTED FROM _____ DATE WORK COMPLETED _____

MONTH	DATE OR DAYS	WORKING DAYS CHARGED		DAYS CREDITED AND REASONS THEREFORE

XXX CONSTRUCTION
"QUALITY AND SERVICE"

John Doe
Manager

XXX Construction
XXXXXX
Mission, TX 78572
(xxx)xxx-xxxx office
(xxx)xxx-xxxx fax

October 1, 2008

Mr. XXXX
XXX Engineering
XXXXXXXXXX
McAllen, TX 78504

RE: Hidalgo County Colonia Access Program
Drainage and Paving Construction at El Sol Subdivision Unit # 1 & 2
Contract No.: C-CAP-08-021-7-01

Mr. XXXX:

The following is the list of suppliers used in the above mentioned projects as per the County's request:

XXXXX XXXX W. Exp. 83 Mission, TX 78572 (xxx) xxx-xxxx

If you have any questions, please call me at (956) 607-0741

Best regards,
John Doe
John Doe, Manger

SAMPLE

Exhibit B-k

PARTIAL/FINAL WAIVER OF LIEN

THE STATE OF TEXAS

COUNTY OF_____

The undersigned contracted with _____
_____to furnish_____
In connection with certain improvements to real property located in_____
County, Texas, and owned by_____
Which improvements are described as follows:

_____
_____
_____

In consideration of Pay Estimate No _____in the amount of_____
_____DOLLAR ($_____) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged and confessed, the undersigned does hereby waive and release any mechanic's lien or materialmen's lien or claims of lien that the undersigned has or hereafter has on the above mentioned real property on account of any labor performed or materials furnished or to be furnished or labor performed and materials furnished by the undersigned pursuant to the above-mentioned contract or any constitutional lien that the undersigned may have.

Undersigned hereby guarantees that all bids for labor performed and/or materials furnished in the erection and construction of such improvements on the Property have been fully paid and satisfied and Undersigned does further guarantee that if for any reason a lien or liens are filed for material or labor against said Property arising out of any bills for material or labor in connection with the erection or construction of said improvements thereon, Undersigned will obtain a settlement of such lien or liens and a proper release thereof shall be obtained.

_____
CONTRACTOR

BY:_____
TITLE

SWORN TO AND SUBSCRIBED BEFORE ME, on this the_____day of_____,20__to Certify which witness my hand and seal of office.

_____
NOTARY PUBLIC in and for the State of Texas

My Commission Expires: _____

CONTRACTOR'S AFFIDAVIT OF PAYMENTS OF DEBTS AND CLAIMS

PROJECT: **PROJECT NO.**
OWNER:
CONTRACTOR:
ENGINEER:

The Contactor in accordance with the Contract Documents, hereby certifies that, except as listed below, all obligations for all materials and equipment furnished, for all work labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or his property might in any way be held responsible have been paid in full or have otherwisse been satisfied in full.

EXCEPTIONS: (If none, write "NONE". The Contractor shall furnish a bond acceptable to the Owner for each exception.)

CONTRACTOR

By

Title

Subscribed and sworn to before me this day of

Notary Public:

My Commission Expires:

Prevailing Wage Rates
Certification Statement

Date _____

Project Name _____ **CSJ#** _____

Contractor _____ **Application#** _____

I, _____ do hereby state:
(Name of Project Director)

1. That a payroll (form WH-347 or similar form) was submitted for contract work Performed for the period covered by the attached application.
2. That a statement of compliance (Form WH-347 or similar form) was submitted with the payroll.
3. The certified payroll complies with the classifications and minimum wage rates Stipulated in the contract.
4. That a minimum of one interview was conducted with laborers using Form HUD-11 or similar.

_____
Signature

CERTIFICATE OF CONSTRUCTION COMPLETION

THIS IS TO CERTIFY THAT ON _____ DAY OF _____A FINAL INSPECTION was made of the project herein described.

CONTRACT

CONTRACT DATE: _____
OWNER: _____
CONSTRUCTION CONTRACTOR: _____
OF THE CITY OF _____ STATE OF _____

PROJECT DESCRIPTION

CONSTRUCTION OF _____

CONTRACT NO: _____
Located in or near the City/Precinct Of _____

THIS IS TO CERTIFY"

1. That the work has been completed in accordance with the plans and specifications and all addenda, change orders, supplemental agreements thereto, and with the following exceptions:

   _____

2. That the sum of _____, deducted from the final payment of the Contractor is a fair and equitable settlement for the foregoing except work.

3. That the contractor has presented a "Certificate of Release" starting under oath, that all claims arising out of the performance of work have been fulfilled, and the Owner is released from all claims arising under or by virtue of said contract.

4. That the CONTRACTOR has presented on behalf of itself and its sureties, satisfactory evidence that it is bound to repair, replace, and make good any faulty workmanship and/or materials discovered in the work within a period of one year from this date, as provided in said contract.

5. Amount of Original Contract _____
   Present Amount of Contract _____
   Total Amount of earned to Date _____
   Less: previous payments _____
   Balance _____
   Authorized deductions _____
   AMOUNT OF FINAL PAYMENT _____

6. That the final payment in the amount of _____ _____ is now due and payable.

_____
Engineer's Signature & License #

CONCURRED BY:

_____
Contractor's Name

By:_____

Title: _____

CONCURRED BY:

_____
City/Precinct

By:_____

Title: _____

Hidalgo County
CSJ: 0921-02-311

CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS

PROJECT: **PROJECT NO.**
OWNER:
CONTRACTOR:
ENGINEER:

The Contractor, in accordance with the Contract Documents, and in consideration for the full and final payment to the Contractor for all services in connection with the project, does hereby waive and release any and all liens, or any and all claims to liens which the Contractor may have on or affecting the project as a result of its contract(s) for the Project or for performing labor and/or furnishing materials in any way connected with the construction of any aspect of the project. The Contractor further certifies and warrants that all subcontractors of labor and/or materials for the Project, except as listed below, have been paid in full for all labor and/or materials supplied to, for through or at the direct or indirect request of the Contractor prior to, through and including the date of this affidavit.

EXCEPTIONS: (If none, write "NONE". The Contractor shall furnish a bond acceptable to the Owner for each exception.)

CONTRACTOR

By

Title

Subscribed and sworn to before me this day of

Notary Public:

My Commission Expires:

Form L

Exhibit E-m

Exhibit B-p

Hidalgo County
CSJ: 0921-02-311

Contractor Name
Starting Date
Project Ending Date
Retainage Percent

Application No.
Application Date:
Period To:
Engineer Firm

Summary													
CSJ #	CSJ Name	Original Schedule Value	Revised Schedule Value	Payment Application No 1	Payment Application No 2	Payment Application No 3	Payment Application No 4	Total To Date	Balance To Finish	Retainage	Net	Payments to Date	Payment Due
		$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -
	TOTALS:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

Exhibit B-q

Contractor Name

Starting Date

Project Ending Date

Engineer's / County Project Description

Application No.:

Application Date:

Period To:

Engineer's / County Project No.:

					Original Schedule Value			Value		First Month			Second Month			Third Month				Balance To Finish	
No.	Item Code	Description	Unit	Original Rates	Quan	Dollars	Revised Rates	Quan	Dollars	Monthly Quan	QTY to Date	Item Cost (Monthly)	Monthly Quan	QTY to Date	Item Cost (Monthly)	Monthly Quan	QTY to Date	Item Cost (Monthly)	Total to Date	Quan	Dollars
		(905) ROADWAY																			
1	100	Preparation of Right-of-Way	Sta	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
2	152	6" road Grader Work(Dens Cont.) Subgrade	SY	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
3	247	6" FL BS(Compl in Plac)	S.Y.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
4	310	Asph. Matrl. (MC-30)	Gal	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
5	340	Asph. Conc. Ty D	S.Y.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
6	500	Mobilization	L.S.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
7	502	Barricades, Signs and Traffic Handling	Mo	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
8	530	Turnouts	Ea	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
9	5249	Tem Sedmt Cont Fence (Installed)	L.F.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
10	5249	Tem Sedmt Cont Fence Handling (Removed)	L.F.	$ -	0.0	-	$ -	0.0	-	0	0	-		0	-	-	-	-	-	0.0	0.0
		Total Roadway				-			-			-			-			-	-	0.0	0.0
		(906) DRAINAGE																			
11	530	Drvwys (Asph Conc Pav) (PRB)	S.Y.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
12	247	Drvwys Flexible Base	S.Y.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
13	556	8" Storm Drain	L.F.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
14	556	18" RCP Storm Drain	L.F.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
15	465	Ty "A" Inlets	Ea.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
16	465	Concrete Manhole	Ea.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
17		15" R.C.P.	L.F.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
18		Ty "A" Inlets	Ea.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
19		Manhole	Ea	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
20		6.0" Valley Gutter	L.F.	$ -	0.0	-	$ -	0.0	-	0	0	-	0	0	-	-	-	-	-	0.0	0.0
		Total Drainage				-			-			-			-			-	-		
		TOTAL BASE AMOUNTS:				-			-			-			-			-	-	0.0	0.0

sample

Print Name

Date

Signature

Exhibit B-r

Exhibit "C"

Insurance Requirements

EXHIBIT "C"

Insurance Requirements
Applicable to the Acquisition of Goods and /or Services
(other than Professional Services)

The Bidder awarded the contract shall furnish proof of insurance, which will also include any subcontractor that is subcontracted by the bidder in at least the following limits, to be in place prior to providing any services under this Contract and to continue at all times in force in effect during the term of this Contract:

1. A Five Hundred Thousand Dollar ($500,000.00) Comprehensive General Liability insurance policy providing additional coverage to all underlying liabilities of County.

2. Automobile liability insurance policy with limits of at least Three Hundred Thousand Dollars ($300,000.00) per person and Five Hundred Thousand Dollars ($500,000.00) per occurrence. Coverage should include injury to or death of persons and property damage claims with limits up to Five Hundred Thousand ($500,000.00) arising out of the services provided to County hereunder.

3. Uninsured/Underinsured motorist coverage in an amount equal to the bodily injury limits set forth immediately above;

4. Workers compensation insurance in amounts established by Texas law, unless the Bidder is specifically exempted from the Texas Workers Compensation Act, Texas Labor Code Chapter 401, et. seq.

Hidalgo County will only accept certificates of insurance on an Acord form (as attached hereto). Certificates of insurance naming County as an **additional insured** shall be submitted to County for approval prior to any services being performed by Contractor. Each policy of insurance required hereunder shall extend for a period equivalent to, or longer than the term of the Contract, and any insurer hereunder shall be required to give at least thirty (30) days written notice to the County prior to the cancellation of any such coverage on the termination date, or otherwise. This Contract shall be automatically suspended upon the cancellation, or other termination, of any required policy of insurance hereunder, and such suspension shall continue until evidence adequate replacement coverage is provided to County. If replacement coverage is not provided within thirty (30) days following suspension of the Contract, this Contract shall automatically terminate.

ACORD CERTIFICATE OF INSURANCE

DATE (MM/DD/YY)

PRODUCER	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.
	INSURERS AFFORDING COVERAGE
INSURED	INSURER A:
	INSURER B:
	INSURER C:
	INSURER D:
	INSURER E:

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THER TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	**GENERAL LIABILITY** ☐ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS MADE ☐ OCCUR ☐ OWNER'S & CONT PROT ☐ OWNER'S PROTECTIVE LIABILITY GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PROJECT ☐ LOC				EACH OCCURRENCE	$
					FIRE DAMAGE (Any one fire)	$
					MED EXP (Any one person)	$
					PERSONAL & ADV INJURY	$
					GENERAL AGGREGATE	$
					PRODUCTS - COMP/OP AGG	$
B	**AUTOMOBILE LIABILITY** ☐ ANY AUTO ☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ☐ NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident)	$
					BODILY INJURY (Per person)	$
					BODILY INJURY (Per accident)	$
					PROPERTY DAMAGE (Per accident)	$
	GARAGE LIABILITY ☐ ANY AUTO				AUTO ONLY-EA ACCIDENT	$
					OTHER THAN AUTO ONLY: EA ACC	$
					AGG	$
C	**EXCESS LIABILITY** ☐ OCCUR ☐ CLAIMS MADE ☐ DEDUCTIBLE ☐ RETENTION $				EACH OCCURRENCE	$
					AGGREGATE	$
						$
						$
						$
D	**WORKERS COMPENSATION AND EMPLOYER'S LIABILITY**				WC STATU- ☐ OTHER JORY LIMITS	
					E.L. EACH ACCIDENT	$
					E.L. DISEASE-EA EMPLOYEE	$
					E.L. DISEASE-POLICY LIMIT	$
	OTHER					

DESCRIPTION OF OPERATIONS / LOCATION / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

County of Hidalgo shall be named as additional insured on all Commercial General Liability policies.

CERTIFICATE HOLDER	ADDITIONAL INSURED; INSURER LETTER:	CANCELLATION
Hidalgo County Attn: Purchasing Department 2812 S Highway Bus. 281 Edinburg, Texas 78539		SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BY CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE

SAMPLE

Insurance Requirement Acknowledgment

I, _____, authorized representative for _____,
Company/Vendor

hereby acknowledge receipt of the County's required insurance limits. Said requirements:

- will be acquired within 10 working days after notification from Purchasing Department of bid awarded by the Hidalgo County Commissioners' Court;
- will acquire additional amounts required to meet the County's requirements within 10 working days after notification from Purchasing Department of bid award by the Hidalgo County Commissioners' Court; currently carry the following:

  Automobile Liability: $_____ General Liability: $_____
- have already been met, see attached copy of insurance certificate.

_____ _____
Authorized Representative Date

Notice to Bidder:
A certificate of insurance for the required insurance limits shall be provided to the Purchasing Department's Contract Managers in order to qualify for award of bid and to execute a contract between your Company and the County

Failure to provide Certificates of Insurance to the Purchasing Department's Contract Managers will cause the bid award to be rescinded and re-awarded to next lowest bidder. Certificates of Insurance will be monitored and verified on a **quarterly basis** to ensure coverage policy is in place. It is the Company's obligation to maintain the appropriate insurance coverage throughout the term of the contract.

THIS FORM MUST ACCOMPANY BID PACKET

PROJECT REQUIREMENTS ACKNOWLEDGMENT

This is to certify that I, _____, possess all of the APPLICABLE:

1. Licenses: _____.
2. Bond (if applicable)_____
3. Certificates: _____.
4. Permits: _____.
5. Other: _____.

necessary to carry out the required project. Furthermore, I am providing copies of the required documentation so that, if my company is awarded this bid, I may be eligible to enter into a contract with Hidalgo County and proceed to complete the project in a timely manner.

* Any licenses, bonds (if applicable),certificates, permits, etc. which are required must be presented as part of the bid packet in order to expedite the bid evaluation process.

_____ _____.
Authorized Signature Date

_____.
Company

_____.
Address

_____.
City, State, Zip

THIS FORM MUST ACCOMPANY BID PACKET

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

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).

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. *See* 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.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

_____

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

_____ _____

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.

HIDALGO COUNTY
PURCHASING DEPARTMENT
Bidder/Vendor Application

Complete in print or type. Please return this application to the Hidalgo County Purchasing Department
thru Facsimile: (956) 318-2629 or (956) 292-7612
in person or regular mail to: 2812 S. Business Hwy. 281 , Edinburg, Texas 78539
or email: purchasing@co.hidalgo.tx.us

Company Name: **Telephone No. ( )**

dba Name:

Legal Name:

Mailing Address : **Fax No. ( )**

Physical Address:

City, State, Zip **Tax I.D. No.**

Remit to Address : **City, State, Zip**

E-Mail Address:

Representative(s) Name(s) & Title(s)

Type of Organization (check one): _____ Individual _____ Partnership _____ Corporation _____Non-Profit
_____ LLC _____ Sole Proprietor _____ Other, Specify
State Identification No._____ (Please attached completed W-9 form with this application)
Federal Identification No. or (if individual) SS No.

State of Incorporation: _____ Date:_____ Other:

Type of Business (check one): _____ Manufacturer _____ Wholesaler _____ Retailer _____ Broker
_____ Distributor _____ Service Organization _____ Other, Specify

Name & Title of Person(s) Authorized to Sign Bids, Proposals, and/or Contracts:

Small and/or Disadvantaged Business Information (check application criteria)
Small Business: **Disadvantaged Business (At Least 51% Ownership)**

☐ Less than 125,000 annual gross receipt	☐ Black American	☐ Native American
☐ Less than 250,000 annual gross receipt	☐ Hispanic American	☐ Women
☐ Less than 499,000 annual gross receipt	☐ Asian Pacific American	☐ Other
☐ More than 500,000 annual gross receipt		

Have you been certified as a HUB or an MBE/WBE source?: ☐ Yes ☐ No

Indicate Certification No.(s):_____ or are Certificate(s) attached?: ☐ Yes ☐ No

What type of product(s) is/are solicited by your company?:

Would you like to be provided with specifications for procurements of such products?: ☐ Yes ☐ No

To Be Completed by the County: Rec'd by (Purchasing):_____ Date Rec'd by (Purchasing):

Date Forwarded Information to Auditor's Office:_____Entry Date: _____ Vendor No.:

HISTORICALLY UNDERUTILIZED BUSINESS (HUB) DECLARATION

The primary objective of the Hidalgo County HUB Program is to ensure Historically Underutilized Businesses receive a fair and equal opportunity for participation in the County's procurement process. This fact holds true for Services (Professional & Non-Professional), Commodities, and Construction contracts and any subcontracts thereto. The program strongly encourages Prime Contractors to provide subcontracting opportunities to Certified Hub Contractors/Vendors. Our goal for HUB contractor/vendor participation, as well as HUB subcontractor participation is 30%. To be considered as a "Certified HUB Contractor/Vendor" the contractor/vendor must have been certified by, and hold a current and valid certification with any of the three agencies listed below.

Have you been Certified as a HUB or an MBE/WBE source?: □Yes □ No

If yes, by whom?: □ Texas Building & Procurement Commission □ Other_____

Indicate Certification No(s).:_____ or Are Certificate(s) Attached?: □ Yes □ No

---

LIST OF CERTIFIED HUB SUBCONTRACTORS

(Attach additional pages if necessary)

What percentage of the Bid, RFP,or RFQ is to be subcontracted with Certified HUB sources?: _____%
(List HUB Subcontractor information below).

HUB Subcontractor Name: _____ HUB Status:
Certifying Agency (Check all applicable): □Texas Building & Procurement Commission □ Other
Address: _____ City: _____ State: _____ Zip:
Contact Person: _____ Title: _____ Phone No.: ( )
Subcontract Amount: $_____ Description of Work to be Performed:

HUB Subcontractor Name: _____ HUB Status:
Certifying Agency (Check all applicable): □Texas Building & Procurement Commission □ Other
Address: _____ City: _____ State: _____ Zip:
Contact Person: _____ Title: _____ Phone No.: ( )
Subcontract Amount: $_____ Description of Work to be Performed:

HUB Subcontractor Name: _____ HUB Status:
Certifying Agency (Check all applicable): □Texas Building & Procurement Commission □ Other
Address: _____ City: _____ State: _____ Zip:
Contact Person: _____ Title: _____ Phone No.: ( )
Subcontract Amount: $_____ Description of Work to be Performed:

Form **W-9**
(Rev. December 2014)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

Print or type
See Specific Instructions on page 2.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification; check only **one** of the following seven boxes:

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____

Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.)

Requester's name and address (optional)

6 City, state, and ZIP code

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number

			–		–				

or

Employer identification number

		–							

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here | **Signature of U.S. person** ▶ | **Date** ▶

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at *www.irs.gov/fw9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding?* on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

Note. If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States:

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items:

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.

2. The treaty article addressing the income.

3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.

4. The type and amount of income that qualifies for the exemption from tax.

5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,

2. You do not certify your TIN when required (see the Part II instructions on page 3 for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code* on page 3 and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships* above.

What is FATCA reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code* on page 3 and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of $50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a $500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account, list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note. ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C Corporation, or S Corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box in line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box in line 3.

Limited Liability Company (LLC). If the name on line 1 is an LLC treated as a partnership for U.S. federal tax purposes, check the "Limited Liability Company" box and enter "P" in the space provided. If the LLC has filed Form 8832 or 2553 to be taxed as a corporation, check the "Limited Liability Company" box and in the space provided enter "C" for C corporation or "S" for S corporation. If it is a single-member LLC that is a disregarded entity, do not check the "Limited Liability Company" box; instead check the first box in line 3 "Individual/sole proprietor or single-member LLC."

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space in line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)

2—The United States or any of its agencies or instrumentalities

3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

4—A foreign government or any of its political subdivisions, agencies, or instrumentalities

5—A corporation

6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession

7—A futures commission merchant registered with the Commodity Futures Trading Commission

8—A real estate investment trust

9—An entity registered at all times during the tax year under the Investment Company Act of 1940

10—A common trust fund operated by a bank under section 584(a)

11—A financial institution

12—A middleman known in the investment community as a nominee or custodian

13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over $600 required to be reported and direct sales over $5,000[1]	Generally, exempt payees 1 through 5[2]
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

[1] See Form 1099-MISC, Miscellaneous Income, and its instructions.

[2] However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note. You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see *Limited Liability Company (LLC)* on this page), enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note. See the chart on page 4 for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at *www.ssa.gov*. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at *www.irs.gov/businesses* and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting IRS.gov or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note. Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: *A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.*

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 4, or 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code* earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account[1]
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor[2]
4. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee[1] The actual owner[1]
5. Sole proprietorship or disregarded entity owned by an individual	The owner[3]
6. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	**Give name and EIN of:**
7. Disregarded entity not owned by an individual	The owner
8. A valid trust, estate, or pension trust	Legal entity[4]
9. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
10. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
11. Partnership or multi-member LLC	The partnership
12. A broker or registered nominee	The broker or nominee
13. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
14. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

[1] List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

[2] Circle the minor's name and furnish the minor's SSN.

[3] You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

[4] List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships* on page 2.

*Note. Grantor also must provide a Form W-9 to trustee of trust.

Note. If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records from Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Publication 4535, Identity Theft Prevention and Victim Assistance.

Victims of identity theft who are experiencing economic harm or a system problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to *phishing@irs.gov*. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: *spam@uce.gov* or contact them at *www.ftc.gov/idtheft* or 1-877-IDTHEFT (1-877-438-4338).

Visit IRS.gov to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

Certification
Regarding Debarment, Suspension and Ineligibility

As is required by the Federal Regulations Implementing Executive Order 12549, Debarment and Suspension, 45 CFR Part 76, Government-wide Debarment and Suspension, the applicant certifies, to the best of his or her knowledge and belief, that both it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency;

b. Have not within a three-year period preceding this bid proposal and/or application 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 government entity with commission of any of the offenses enumerated herein; and

d. Have not within a three-year period preceding this bid proposal and/or application had one or more public transactions terminated for cause or default.

Signature:_____
Print Name:_____
Title:_____
Telephone Number:_____
Date:_____

If the bidder is unable to certify to all of the statements in this Certification, such bidder should attach an explanation to this proposal.

EXHIBIT "G"

APPENDICES

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations**: The contractor (hereinafter includes consultants)will comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, the Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Nondiscrimination**: The contractor, with regard to the work performed by it during the contract, will 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 will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of49 CFR Part 21.

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 will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

4. **Information and Reports**: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance**: In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

   a. withholding payments to the contractor under the contract until the contractor complies; and/or
   b. cancelling, terminating, or suspending contract, in whole or in part.

6. **Incorporation of Provisions**: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX B

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4:

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the **COUNTY OF HIDALGO** will accept title to the lands and maintain the project constructed thereon in accordance with all applicable federal statutes, the Regulations for the Administration of all Department of Transportation programs, and the policies and procedures prescribed by the Federal Highway Administration of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the **COUNTY OF HIDALGO** all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit 1 attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto **COUNTY OF HIDALGO** and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the **COUNTY OF HIDALGO**, its successors and assigns.

The **COUNTY OF HIDALGO**, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over ,or under such lands hereby conveyed [,] [and]* (2) that the **COUNTY OF HIDALGO** will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended[, and(3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land ,and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverted clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

APPENDIX C

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the **COUNTY OF HIDALGO** pursuant to the provisions of Assurance 7(a):

A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:

1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permitted, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended)such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, **COUNTY OF HIDALGO** will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued.*

C. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the **COUNTY OF HIDALGO** will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the **COUNTY OF HIDALGO** and its assigns.*

(*Reverted clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

APPENDIX D

CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by **COUNTY OF HIDALGO** pursuant to the provisions of Assurance 7(b):

A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color ,or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.

B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Nondiscrimination covenants, **COUNTY OF HIDALGO** will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said(license, permit, etc., as appropriate) had never been made or issued.*

C. With respect to deeds, in the event of breach of any of the above Nondiscrimination covenants, **COUNTY OF HIDALGO** will there upon revert to and vest in and become the absolute property of **COUNTY OF HIDALGO** and its assigns.*

(*Reverted clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

Pertinent Nondiscrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of1970, (42U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23U.S.C. § 324et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49CFRPart 27;
- The Age Discrimination Act of 1975, as amended,(42U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49U.S.C. § 4 71, Section 4 7123),as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987,(PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189)as implemented by Department of Transportation regulations at 49C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Nondiscrimination statute (49U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U .S.C. 1681 et seq).

Exhibit "H"

(If Applicable)

2 C.F.R. § 200.326 & 2 C.F.R. Part 200, Appendix II

Required Contract Clauses for Non-Federal Entity Contracts Under Federal Awards

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Required Contract Clauses for Non-Federal Entity Contracts Under Federal Awards with the Federal Emergency Management Agency (FEMA)

2 C.F.R. § 200.326 & 2 C.F.R. Part 200, Appendix II, Required Contract Clauses for Non-Federal Entity Contracts Under Federal Awards

The United States Office of Management and Budget (OMB) issued in 2 C.F.R. 200: *Uniform Administrative Requirements, Cost Principals and Audit Requirements for Federal Awards* (Uniform Guidance). Subpart D: Post Federal Award Requirements: 2 CFR §§200.317-200.326 of the Uniform Guidance contain provisions applicable to procurements made with federal grant funding.

As a non-Federal entity, the County of Hidalgo's ("County") contracts must contain the applicable contract clauses described in Appendix II to the Uniform Guidance (Contract Provisions for non-Federal Entity Contracts Under Federal Awards), which are set forth below. 2 C.F.R. §200.326. If applicable, the following clauses shall supersede any existing, similar clauses stated within the bid document, contract, and/or Terms and Conditions. *The term "Contractor" used herein refers to the proposer, bidder or other entity/individual responding to the applicable procurement packet.*

If applicable, the regulations in 2 CFR, Part 200 and Appendix II to the Uniform Guidance, as it may be amended from time to time, and the contract clauses below, are incorporated by reference as part of this procurement packet and any resulting agreement.

To procure goods and services using funds under a federal grant or contract, specific federal laws, regulations, and requirements may apply in addition to those under state law. The following provisions are required and apply when federal funds are expended by the County of Hidalgo for any contract resulting from this procurement process.

1. **Remedies.**

   a. Applicability. This requirement applies to all Federal grant and cooperative agreement programs.

   b. Standard. Contracts for more than the simplified acquisition threshold currently set at $150,000, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, 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. See 2 C.F.R. Part 200, Appendix II, ¶ A.

   c. Statement. Pursuant to Federal Rule (A) above, when federal funds are expended by the County, the County reserves all rights and privileges under the applicable laws and regulations with respect to this procurement in the event of breach of contract by either party. Contractor shall comply with all applicable Federal, State of Texas, and local laws, rules, and regulations and shall obtain all applicable licenses and permits for the conduct of its business and the performance of the services, and any provision of equipment and material ("Applicable Law"). All transactions related to any of the Contract Documents shall be governed by the laws of the State of Texas, and trial of any action brought in connection with the bid or the Contract Documents shall be held exclusively in a state court in the County of Hidalgo, Texas.

2. **Termination for Cause and Convenience**.

a. Applicability. This requirement applies to all Federal grant and cooperative agreement programs.

b. Standard. All contracts in excess of $10,000 shall 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 as follows. See 2 C.F.R. Part 200, Appendix II, ¶ B.

c. Statement. *Termination.* County may terminate this Agreement for any reason upon ten (10) days written notice to the other party. County may terminate this Agreement immediately upon written notice if Contractor breaches this Agreement. In the event of any termination, Contractor shall promptly deliver to the County any and all Work Materials prepared for the County prior to the effective date of such termination, all of which shall become County's sole property. After receipt of the Work Materials, County will pay Contractor for the services which the County determines were satisfactorily performed as of the effective date of the termination.

Excuses for Non-Performance. Either party shall be absolved from its obligations under this contract when and to the extent that performance is delayed or prevented (and in the County of Hidalgo's case when and to the extent that its need for the articles, materials or work to be supplied hereunder is reduced or eliminated) by reason of acts of God, fire explosion, war riots, strikes, labor disputes, or governmental laws, orders or regulations.

Default. If Contractor or Subcontractor shall breach any provision hereof or shall become insolvent, enter voluntary or involuntary bankruptcy or receivership proceedings or make an assignment to the benefit of creditors, County of Hidalgo shall have the right (without limiting any other rights or remedies which it may have hereunder or by operation of law) to terminate this contract by written notice to Contractor whereupon County shall be relieved of all further obligation hereunder except the obligation to pay the reasonable value of Contractor's prior performance (at not exceeding the contract rate), and Contractor shall be liable to County for all costs incurred by County in completing or procuring the completion of performance in excess of the contract price herein specified. The County's right to require strict performance of any obligation hereunder shall not be affected by any previous waiver, forbearance of course of dealing. Time is of the essence thereof.

3. **Equal Employment Opportunity**.

a. Applicability: This requirement applies to all Federal grant and cooperative agreement programs.

b. Standard. Except as otherwise provided under 41 C.F.R. Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. § 60- 1.4(b), in accordance with Executive Order 11246, *Equal Employment Opportunity* (30 Fed. Reg. 12319, 12935, 3 C.F.R. Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, *Amending Executive Order 11246 Relating to Equal Employment Opportunity*, and implementing regulations at 41 C.F.R. Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor). See 2 C.F.R. Part 200, Appendix II, ¶ C.

c. Key Definitions:

(1) *Federally Assisted Construction Contract.* The regulation at 41 C.F.R. § 60-1.3 defines a "federally assisted construction contract" as any agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the Government for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work.

(2) *Construction Work.* The regulation at 41 C.F.R. § 60-1.3 defines "construction work" as the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction

d. Statement: Contractor will comply with the Nondiscrimination Civil Rights Act of 1964, as amended and all Federal regulations relative to nondiscrimination in Federally assisted programs. The regulation at 41 C.F.R. Part 60-1.4(b) requires the insertion of the following contract clause:

"During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor 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; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the

administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States."

4. **Davis Bacon Act and Copeland Anti-Kickback Act**.

   a. Applicability of Davis-Bacon Act. The Davis-Bacon Act only applies to the emergency Management Preparedness Grant Program, Homeland Security Grant Program, Nonprofit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. **It does not apply to other Federal grant and cooperative agreement programs, including the Public Assistance Program**.

   b. Standard. 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 at 29 C.F.R. Part 5 (Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction)). See 2 C.F.R. Part 200, Appendix II, ¶ D.

   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 City.

   In contracts subject to the Davis-Bacon Act, 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 at 29 C.F.R. 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 Copeland Anti-Kickback 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 FEMA or applicable Federal entity.

c. Statement. The regulation at 29 C.F.R. § 5.5(a) does provide the required contract clause that applies to compliance with both the Davis-Bacon and Copeland Acts. However, as discussed in the previous subsection, the Davis-Bacon Act does not apply to Public Assistance recipients and subrecipients. In situations where the Davis-Bacon Act does not apply, neither does the Copeland "Anti-Kickback Act." However, for purposes of grant programs where both clauses do apply, FEMA or applicable Federal entity requires the following contract clause:

"Compliance with the Copeland "Anti-Kickback" Act.

(1) *Contractor*. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

(2) *Subcontracts*. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as Federal requirements may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

(3) *Breach*. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12."

5. **Contract Work Hours and Safety Standards Act**.

a. Applicability: This requirement applies to all Federal grant and cooperative agreement programs.

b. Standard. Where applicable (see 40 U.S.C. § 3701), 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 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II, ¶ E.

Under 40 U.S.C. § 3702, 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 40 U.S.C. § 3704 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.

The regulation at 29 C.F.R. § 5.5(b) provides the required contract clause concerning compliance with the Contract Work Hours and Safety Standards Act:

c. Statement.

"Compliance with the Contract Work Hours and Safety Standards Act.

(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.

(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 of $10 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.

(3) *Withholding for unpaid wages and liquidated damages*. The County of Hidalgo 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.

(4) *Subcontracts*. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (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."

6. **Rights to Inventions Made Under a Contract or Agreement.**

a. Applicability: Stafford Act Disaster Grants. This requirement **does not apply to the Public Assistance**, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant

Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA or Federal awards under these programs do not meet the definition of "funding agreement."

b. Standard. If the FEMA or Federal award meets the definition of "funding agreement" under 37 C.F.R. § 401.2(a) and the non-Federal entity 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 non-Federal entity must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by FEMA or applicable awarding agency. See 2 C.F.R. Part 200, Appendix II, ¶ F.

c. Key Definition: The regulation at 37 C.F.R. § 401.2(a) currently defines "funding agreement" as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

7. **Clean Air Act and the Federal Water Pollution Control Act**.

a. Applicability and Standard: Contracts of amounts in excess of $150,000 must contain a provision that requires the contractor to agree 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 awarding agency and the Regional Office of the Environmental Protection Agency. See 2 C.F.R. Part 200, Appendix II, ¶ G.

b. Statement: Included in contracts as provided in section "7a" above.

(1) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. and the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

(2) The contractor agrees to report each violation to the Federal awarding agency (e.g. Federal Emergency Management Agency-FEMA) and the Regional Office of the Environmental Protection Agency. Contractor understands and agrees that each violation reported to the County of Hidalgo will, in turn, be reported as required to assure notification to the Federal awarding agency and the appropriate Environmental Protection Agency Regional Office.

(3) The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by the applicable Federal awarding agency (e.g. FEMA).

8. **Debarment and Suspension**.

a. Applicability: This requirement applies to all Federal grant and cooperative agreement programs.

b. Standard. Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, *Debarment and Suspension* (1986) and Executive Order 12689, *Debarment and Suspension* (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Nonprocurement Debarment and Suspension).

These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. See 2 C.F.R. Part 200, Appendix II, ¶ H; and Chapter IV, ¶ 6.d and Appendix C, ¶ 2. A contract award must not be made to parties listed in the SAM Exclusions. SAM Exclusions is the list maintained by the General Services Administration that 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. SAM exclusions can be accessed at www.sam.gov. See 2 C.F.R. § 180.530; Chapter IV, ¶ 6.d and Appendix C, ¶ 2.

In general, an "excluded" party cannot receive a Federal grant award or a contract within the meaning of a "covered transaction," to include subawards and subcontracts. This includes parties that receive Federal funding indirectly, such as contractors to recipients and subrecipients. The key to the exclusion is whether there is a "covered transaction," which is any nonprocurement transaction (unless excepted) at either a "primary" or "secondary" tier. Although "covered transactions" do not include contracts awarded by the Federal Government for purposes of the nonprocurement common rule and DHS's implementing regulations, it does include some contracts awarded by recipients and subrecipient.

Specifically, a covered transaction includes the following contracts for goods or services:

(1) The contract is awarded by a recipient or subrecipient in the amount of at least $25,000.
(2) The contract requires the approval of FEMA or applicable Federal entity, regardless of amount.
(3) The contract is for Federally-required audit services.
(4) A subcontract is also a covered transaction if it is awarded by the contractor of a recipient or subrecipient and requires either the approval of FEMA or applicable Federal entity or is in excess of $25,000.

c. Statement. The following provides a debarment and suspension clause. It incorporates a method of verifying that contractors are not excluded or disqualified:

For maximum protection, provide a print or electronic document for every prime and subcontractor, from www.sam.gov in order to ensure that they are not debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities.

This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such the contractor is required to verify that none of the contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

This certification is a material representation of fact relied upon by (insert name of subrecipient). If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to (name of state agency serving as recipient and name of subrecipient), the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions."

9. **Byrd Anti-Lobbying Amendment**.

a. Applicability: This requirement applies to all Federal grant and cooperative agreement programs.

b. Standard. Contractors that apply or bid for an award of $100,000 or more must file the required certification. See 2 C.F.R. Part 200, Appendix II, ¶ I; 44 C.F.R. Part 18; Chapter IV, 6.c; Appendix C, ¶ 4. 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 City, 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 31 U.S.C. § 1352. 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. See Chapter IV, ¶ 6.c and Appendix C, ¶ 4.

c. Statement. The following statement in bold provides a Byrd Anti-Lobbying contract clause:

(IF APPLICABLE, PLEASE FILL IN BLANKS AND SIGN)

"Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended)

Contractors who apply or bid for an award of $100,000 or more shall 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 31 U.S.C. § 1352. Each tier shall 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 recipient."

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

(To be submitted with each bid or offer exceeding $100,000)

The undersigned Contractor, _____ certifies, to the best of his or her knowledge, that:

1. 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 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.

2. 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 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.

3. The undersigned shall require that the language of this certification 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 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). 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.

The Contractor, _____ , certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 *et seq.*, apply to this certification and disclosure, if any.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date"

10. **Procurement of Recovered Materials**.

a. Applicability: This requirement applies to all Federal grant and cooperative agreement programs.

b. Standard. 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, Pub. L. No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962). See 2 C.F.R. Part 200, Appendix II, ¶ J; 2 C.F.R. § 200.322; *PDAT Supplement*, Chapter V, ¶ 7.

The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 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 by 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.

c. Statement. The following provides the clause that a state agency or agency of a political subdivision of a state and its contractors can include in contracts meeting the above contract thresholds:

"(1) In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA- designated items unless the product cannot be acquired—

(i) Competitively within a timeframe providing for compliance with the contract performance schedule;
(ii) Meeting contract performance requirements; or

(iii) At a reasonable price.

(3) Information about this requirement, along with the list of EPA-designate items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program."

Additional Required Contract Clauses for Non-Federal Entity Contracts Under Federal Awards with the Federal Emergency Management Agency (FEMA)

Additional FEMA or applicable Federal Requirements. In addition to the requirements above, non-Federal entity contracts under Federal award subject to financial assistance from FEMA are required to contain the following additional contract clauses. The Uniform Guidance authorizes FEMA to require additional provisions for non-Federal entity contracts. FEMA, pursuant to this authority, requires or recommends the following:

These clauses are incorporated by reference as part of this procurement packet and any resulting agreement.

11. **Changes**.

a. Standard. To be eligible for FEMA assistance under the non-Federal entity's Federal grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope. FEMA or applicable Federal entity recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

b. Statement. The following provides a contract clause regarding access to records:

> "The contractor shall secure written authorization before proceeding with any additional work, whether requested by the County or required to complete the contract. The cost for any changes to the contract price, whether requested by the County or the Contractor will be approved only after submitting the contractor's true costs for the work and related equipment costs and site expenses."

12. **Access to Records**.

a. Standard. All non-Federal entities must place into their contracts a provision that all contractors and their successors, transferees, assignees, and subcontractors acknowledge and agree to comply with applicable provisions governing Department and FEMA or applicable Federal entity access to records, accounts, documents, information, facilities, and staff. See DHS Standard Terms and Conditions, v 3.0, ¶ XXVI (2013).

b. Statement. The following provides a contract clause regarding access to records:

> "Access to Records. The following access to records requirements apply to this contract:
>
> (1) The contractor agrees to provide the County of Hidalgo, the FEMA or applicable Federal Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
>
> (2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
>
> (3) The contractor agrees to provide the FEMA or applicable Federal Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract."

13. **DHS Seal, Logo, and Flags**.

a. Standard. All non-Federal entities must place in their contracts a provision that a contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS City

officials without specific FEMA or applicable Federal entity pre-approval. See DHS Standard Terms and Conditions, v3.0, ¶ XXV (2013).

b. Statement. The following provides a contract clause regarding DHS Seal, Logo, and Flags:

> "The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS City officials without specific FEMA or applicable Federal entity pre-approval."

14. **Compliance with Federal Law, Regulations, and Executive Orders**.

a. Standard. All non-Federal entities must place into their contracts an acknowledgement that FEMA or applicable Federal financial assistance will be used to fund the contract along with the requirement that the contractor will comply with all applicable Federal law, regulations, executive orders, and FEMA or applicable Federal policies, procedures, and directives.

b. Statement. The following provides a contract clause regarding Compliance with Federal Law, Regulations and Executive Orders:

> "This is an acknowledgement that Federal financial assistance will be used to fund the contract only. The contractor will comply will all applicable Federal law, regulations, executive orders, FEMA or applicable Federal policies, procedures, and directives."

15. **No Obligation by Federal Government**.

a. Standard. The non-Federal entity must include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

b. Statement. The following provides a contract clause regarding no obligation by the Federal Government:

> "The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

16. **Program Fraud and False or Fraudulent Statements or Related Acts**.

a. Standard. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

b. Statement. The following provides a contract clause regarding Fraud and False or Fraudulent Related Acts:

> "The contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the contractor's actions pertaining to this contract."

Contractor agrees to comply with all federal, state and local laws, rules, regulations and ordinances, as applicable. It is further acknowledged that the Contractor read and understands all provisions, laws, acts, regulations, etc. as specifically noted above and certifies compliance with the same.

Vendor's Name/Company Name: _____

Printed Name and Title of Authorized Representative: _____

Signature of Authorized Representative: _____

Date: _____

Exhibit "I"

FHWA 1273

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated 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. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

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 (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).

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.

Form FHWA-1273 must be included in all Federal-aid design-build 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). 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 bid proposal or request for proposal 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).

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.

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. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 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 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, 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 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, 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 230, 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 (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 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 35 and 29 CFR 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.

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, 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 who 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.

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, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure 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. 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, 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, 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 there under. 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, 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 and 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. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor 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 contracting agency deems appropriate.

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 non-minority 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 non-minority 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 $10,000 or more.

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, 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). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

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

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, Employment Standards Administration, 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 Wage and Hour Administrator for determination. The Wage and Hour 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

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 federally-assisted 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

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 at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor 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 §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, 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 Regulations, 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 section 1001 of title 18 and section 231 of title 31 of the United States Code.

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

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. 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.

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.

9. Disputes concerning labor standards. 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.

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

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.

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 of $10 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.

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.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (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.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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" 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:

(1) 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.

2. 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. 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.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

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 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.

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 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).

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 Federal-aid 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 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 1, 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

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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.

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.

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.

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.

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 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee 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 grantee or subgrantee 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.

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.

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. 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 Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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. 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) 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;

(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; 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.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **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)

a. By signing and submitting this proposal, the prospective lower tier 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.

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 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 grantee or subgrantee 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 grantee or subgrantee 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.

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.

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 Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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.

* * * * *

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 is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall 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 20).

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.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

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.

EXHIBIT "I-A"

COUNTY OF HIDALGO
PURCHASING DEPARTMENT

GOVERNMENT CODE CHAPTER 2252, SUBCHAPTER F CERTIFICATION

On this day, I, _____, the Purchasing Representative for the County of Hidalgo, Texas, pursuant to Texas Government Code, Chapter 2252, Subchapter F, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that are identified under Texas Government Code (including but not limited to Chapter 2270 and Section 2252.153) and I have ascertained that the below-named company is not contained in said listing of companies which do business with Iran, Sudan or any Foreign Terrorist Organization.

COMPANY NAME:

_____
RFB, RFP, RFQ, RFSQ, Contract or Extension No.
(or) Vendor number (maybe modified accordingly)

CERTIFICATION CHECK PERFORMED BY:

_____ _____
Purchasing Representative Date

Exhibit "J"

PROPOSER'S AFFIDAVIT

PROPOSER'S AFFIDAVIT OF NON-COLLUSION
NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING

STATE OF TEXAS
COUNTY OF HIDALGO

Affiant, _____, being first duly sworn, deposes that:

(1) Affiant does hereby state neither the proposer nor any of the proposer's officers, partners, owners, agents, representatives, employees, or parties in interest, has in any way colluded, conspired, agreed, directly or indirectly with any person, firm, corporation, or another proposer, or potential proposer, to provide any money or other valuable consideration for assistance in procuring or attempting to procure a contract or fix the prices in the attached proposed or the proposal of any other proposer, and further states that no such money or another reward will be hereinafter paid.

(2) Affiant further states they have neither recommended nor suggested to Hidalgo County or any of its officials or employees, any of the terms or provisions set forth in their Request for Proposal and subsequent agreement, except at a meeting open to all interested proposers, of which proper notice was given.

(3) Affiant, further states their officers, employees, or agents have not, and will not attempt to lobby, directly or indirectly, the Hidalgo County Commissioner's Court between proposal submission date and award by the Hidalgo County Commissioner's Court.

(4) Affiant further states no officer, or stockholder of the proposer is a member of the staff or related to any employee of Hidalgo County except as noted herein below:

Signature/Title: _____

Subscribed and sworn to before me this _____day of _____, 2020.

_____

Notary Public

My commission expires: _____, 20____

STATEMENT OF CREDENTIALS

1. **GENERAL:** In order to assist the Owner in determining the ability of each Bidder to properly fulfill the requirement of this proposed contract, the Bidder will complete the following items. All questions must be answered and the data given must be clear and comprehensive. **This statement must be notarized.** If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he/she desires.

   Name of Bidder: _____

   Address: _____

   _____

   Date Organized: _____ Date Incorporated: _____

   Office Number: _____ Fax Number: _____

   Number of years in business under present name: _____

   Type of work performed by your company: _____

   _____

   Have you ever failed to complete any work awarded to you? _____

   Have you ever defaulted on a contract? _____

2. **EXPERIENCE:** The Bidder will give below a list of similar projects which he/she has completed within the last five (5) years.

   1. Owner: _____

   Address: _____

   Ph/Fx Number: _____ Email: _____

   Scope of Work Description: _____

   Date Completed: _____ Total Cost: _____

   ****

2. Owner: _____

Address: _____

Ph/Fx Number: _____ Email: _____

Scope of Work Description: _____

Date Completed: _____ Total Cost: _____

****

3. Owner: _____

Address: _____

Ph/Fx Number: _____ Email: _____

Scope of Work Description: _____

Date Completed: _____ Total Cost: _____

****

4. Owner: _____

Address: _____

Ph/Fx Number: _____ Email: _____

Scope of Work Description: _____

Date Completed: _____ Total Cost: _____

****

5. Owner: _____

Address: _____

Ph/Fx Number: _____ Email: _____

Scope of Work Description: _____

Date Completed: _____ Total Cost: _____

****

3. **CONTRACTS ON HAND:** The Bidder shall provide below a list of any contracts/projects he/she currently has on hand:

_____

_____

_____

_____

_____

_____

_____

4. **SUBCONTRACTORS:** List any subcontractors you propose to use on the Hidalgo County's project that will comprise at least 20% of the total project cost. Use additional pages if necessary. This information is considered preliminary and may be revised prior if bid is awarded and re-submitted during the pre-construction phase. However, it is expressly understood that the use of any subcontractor other than those listed with bid shall require written approval from Hidalgo County.

   Failure to submit the information as required may result in a disqualification of your bid.

_____

_____

_____

_____

5. **PERFORMANCE OF WORK BY BIDDER:** Except as otherwise provided, the bidder shall perform no less than eighty percent (80%) of the work with his organization, only twenty percent (20%) of the work may be subcontracted.

   The organization of the specifications into divisions, sections, articles, etc., and the arrangement and titles of project drawings shall not control the Bidder in dividing the work among subcontractors or in establishing the extent of work to be performed by any trade.

   The awarded bidder shall assign a project superintendent who is directly employed by the Bidder. The assigned superintendent will be required to be on the job on a daily

basis. No subcontractors will be allowed to act as project superintendents at any point during the construction of said project.

Bidder shall have a significant business presence within the Rio Grande Valley Area, the business must be headquartered in either Hidalgo, Cameron, or Starr County, or a local office must be located in either of the three counties (Hidalgo, Cameron, Starr) with at least thirty percent (30%) of the total company workforce employed at the local office. The county reserves the right to request payrolls and any necessary documentation to confirm that the local office meets these requirements.

Bidders shall carefully examine the plans, specifications, and other documents, visit the site of the work and fully inform themselves as to all conditions and matters which can affect the work or cost thereof. Should the bidder find discrepancies in, or omissions from the plans, specifications, or other documents, or should he/she be in doubt as to their meaning, he/she should at once notify the Engineer and obtain clarification by addendum prior to submitting any bid.

Bidder hereby certifies that said company carried liability coverage and workers' compensation insurance coverage that meets the requirements set forth in this Request for Bids/Proposals when performing work on this project for Hidalgo County.

Furthermore, Bidder certifies that any subcontractor on the project shall provide the said company with a certificate relating that all employees of the subcontractor also are provided with workers' compensation insurance coverage. Bidder will provide copies of all of these certificates to Hidalgo County during the course of the project for all subcontractors working on the project.

All subcontractors must comply with federally determined prevailing Davis-Bacon and Related Acts wage rates.

Hidalgo County encourages the hiring of minority women subcontractors and/or suppliers whenever and wherever feasible.

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the owner in the verification of the recitals comprising this Statement of Credentials.

Executed this _____ day of _____, 20_____.

_____

By_____

Title_____

Subscribed and sworn to me this ____ day of _____, 20____.

By: _____

Notary Public in and for _____ County, Texas

My commission expires _____

HIDALGO COUNTY PRECINCT No. 4
REQUEST FOR BID
"North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925"
RFB No.: 2021-008-04-21-HGO

RFB SUBMITTAL CHECKLIST

All forms listed below must be included in the RFB response.
Indicate with a checkmark (✓) the Forms completed and included in this response.

_____ Page 11 of Legal Notice

_____ Bidder's Acknowledgement

_____ Exhibit "B" Bid Page/Bid Sheets

_____ Statement of Credentials

_____ Exhibit "C" -Acknowledgement forms (*pages 4 & 5*)

_____ Exhibit "D" CIQ Form -Copy of County Clerk File Recording fee receipt. (*if applicable*)

_____ Exhibit "E" Vendor Bidder Applications, W-9, & HUB/DBE

_____ Exhibit "F" Certification Regarding Debarment

_____ Exhibit "H" Required Contract Clauses for Contracts Under Federal award 2 – CFR 200, Appendix II & FEMA (*if applicable*)

_____ Exhibit "J" Proposer's Affidavit

_____ Wage Rate Certification Statement

_____ Bid Bond

_____ One (*1*) Original (*pages one-sided, marked ORIGINAL*), one copy, and Two (*2*) CD/USB in PDF Format (*see number 2 of Legal Notice*).

EXHIBIT “B”

BID PAGE

TOTAL BID AMOUNT

In the space provided below, please enter your total bid amount for this project. Only this figure will be read publicly at the public bid opening.

It is understood and agreed by the bidder in signing this proposal that the total bid amount entered below is not binding on either the bidder or **Hidalgo County**.

The contract will be awarded by competitive bidding and on the basis of unit pricing.

It is further agreed that **the official total bid amount for this proposal will be determined by multiplying the unit bid prices WRITTEN IN WORDS for each pay item by the respective estimated quantities shown in this proposal and then totaling all of the extended amounts.**

Unit prices must be submitted in accordance with Item 2L of the Standard Specifications or Special Provision to Item 2L FOR EACH ITEM LISTED in this proposal and with the following: For each item listed in the Bid Proposal Sheets, write in a unit bid price in words and figures in the spaces provided. Also, write in the extended amount (Item Cost) in figures for each item listed in the Bid Proposal Sheets by multiplying the unit bid price by its respective estimated quantity.

NOTE
The alternative items identified on this contract are replacement alternatives and the prospective bidder should follow the replacement alternatives bidding procedures. Additive or deductive alternatives are not part of this contract. The lowest bidder will be determined by utilizing the lowest bid based on the bid price of either the base bid items or replacement alternate items not a bid on both.

$ ~~666,821.33~~ 615,015.33

Total Base Bid Amount

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)							
Item	Code	ALT	UNIT BID PRICE ONLY, WRITTEN IN WORDS	Unit	Approx. Quantities	UNIT BID PRICE ONLY, WRITTEN IN FIGURES	ITEM COST WRITTEN IN FIGURES
100	6002		PREPARING ROW six hundred DOLLARS and CENTS	STA	28.61	600.00	17,166.00
110	6001		EXCAVATION (ROADWAY) seven DOLLARS and CENTS	CY	1,567.00	7.00	10969.00
132	6006		EMBANKMENT (FINAL)(DENS CONT)(TY C) seven DOLLARS and CENTS	CY	3,170.00	7.00	22190.00
160	6005		FURNISHING AND PLACING TOPSOIL thrity-seven DOLLARS and CENTS	CY	50.00	37.00	1850.00
164	6034		DRILL SEEDING (PERM) (RURAL) (SANDY) two thousand four hundred fifty-six DOLLARS and CENTS	AC	2.03	2,456.00	4985.68
164	6042		DRILL SEEDING (TEMP) (WARM) two thousand one hundred forty-nine DOLLARS and CENTS	AC	2.03	2,149.00	4362.47
168	6001		VEGETATIVE WATERING thirty-five DOLLARS and CENTS	MG	311.00	35.00	10885.00
204	6003		SPRINKLING (DUST CONTROL) fourty DOLLARS and CENTS	MG	252.00	40.00	10080.00
247	6225		FL BS (RDWY DEL)(TY E GR 4)(FNAL POS) twenty-seven DOLLARS and CENTS	CY	2,076.00	27.00	56052.00
260	6015	1	LIME TRT (NEW BASE)(8") pne DOLLARS and CENTS	SY	9,555.00	1.00	9555.00
260	6043	1	LIME (HYD, COM OR QK)(SLURRY) three hundred twenty-four DOLLARS and CENTS	TON	70.00	324.00	22680.00
275	6001	1	CEMENT two hundred fifty-five DOLLARS and CENTS	TON	97.00	255.00	24735.00
275	6005		CEMENT TREAT (EXIST MATL)(12") one DOLLARS and CENTS	SY	9,872.00	1.00	9872.00
310	6009		PRIME COAT (MC-30) eight DOLLARS and CENTS	GAL	1,763.00	8.00	14104.00
316	6277		ASPH (SPG 73-19) five	GAL	2,820.00	5.00	14100.00

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)							
Item	Code	ALT	UNIT BID PRICE ONLY, WRITTEN IN WORDS	Unit	Approx. Quantities	UNIT BID PRICE ONLY, WRITTEN IN FIGURES	ITEM COST WRITTEN IN FIGURES
			_____ DOLLARS and _____ CENTS				
316	6486		AGGR (TY D GR-4P)(SAC-B) one hundred twenty-five DOLLARS and CENTS	CY	73.00	125.00	9125.00
341	6047		D-GR HMA TY-D SAC-A PG76-22 one hundred twenty nine DOLLARS and CENTS	TON	780.00	129.00	100620.00
354	6051		PLANE ASPH CONC PAV (0" TO 1 1/2") seven DOLLARS and CENTS	SY	311.00	7.00	2177.00
400	6010		STRUCT EXCAV (SPECIAL) fifty-five DOLLARS and CENTS	CY	200.00	55.00	11000.00
400	6011		SAND BACKFILL eighteen DOLLARS and CENTS	CY	356.00	18.00	6408.00
402	6001		TRENCH EXCAVATION PROTECTION five DOLLARS and CENTS	LF	287.00	5.00	1435.00
432	6001		RIPRAP (CONC)(4 IN) four hundred twenty-eight DOLLARS and CENTS	CY	130.00	428.00	55640.00
464	6003		RC PIPE (CL III)(18 IN) forty-nine DOLLARS and CENTS	LF	48.00	49.00	2352.00
464	6005		RC PIPE (CL III)(24 IN) seventy-one DOLLARS and CENTS	LF	24.00	71.00	1704.00
464	6009		RC PIPE (CL III)(42 IN) one hundred twenty-seven DOLLARS and CENTS	LF	494.00	127.00	62738.00
464	6039		RC PIPE (CL III)(24 IN)(SPL) sixty-two DOLLARS and CENTS	LF	287.00	62.00	17794.00
465	6011		JCTBOX(COMPL)(PJB)(6FTX6FT) nine thousand ninty-four DOLLARS and CENTS	EA	3.00	9,094.00	27282.00
465	6129		INLET (COMPL)(PSL)(FG)(3FTX5FT-3FTX3FT) three thousand four hundred ninety-two DOLLARS and CENTS	EA	2.00	3,492.00	6984.00
467	6363		SET (TY II) (18 IN) (RCP) (6: 1) (P) one thousand one hundred nine	EA	2.00	1,109.00	2218.00

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)							
Item	Code	ALT	UNIT BID PRICE ONLY, WRITTEN IN WORDS	Unit	Approx. Quantities	UNIT BID PRICE ONLY, WRITTEN IN FIGURES	ITEM COST WRITTEN IN FIGURES
			_____ DOLLARS and _____ CENTS				
500	6001		MOBILIZATION twenty-five thousand DOLLARS and CENTS	LS	1.00	25,000.00	25000.00
502	6001		BARRICADES, SIGNS AND TRAFFIC HANDLING one thousand nine hundred DOLLARS and CENTS	MO	6.00	1,900.00	11400.00
506	6001		ROCK FILTER DAMS (INSTALL) (TY 1) forty DOLLARS and CENTS	LF	20.00	40.00	800.00
506	6011		ROCK FILTER DAMS (REMOVE) twenty DOLLARS and CENTS	LF	20.00	20.00	400.00
506	6021		CONSTRUCTION EXITS (INSTALL) (TY 2) fifteen DOLLARS and CENTS	SY	156.00	15.00	2340.00
506	6024		CONSTRUCTION EXITS (REMOVE) eight DOLLARS and CENTS	SY	156.00	8.00	1248.00
506	6031		FRNT END LOADER WORK (ERSN & SEDM CONT) one hundred eleven DOLLARS and CENTS	HR	2.00	111.00	222.00
506	6038		TEMP SEDMT CONT FENCE (INSTALL) four DOLLARS and CENTS	LF	100.00	4.00	400.00
506	6039		TEMP SEDMT CONT FENCE (REMOVE) two DOLLARS and CENTS	LF	100.00	2.00	200.00
506	6041		BIODEG EROSN CONT LOGS (INSTL) (12") five DOLLARS and CENTS	LF	450.00	5.00	2250.00
506	6043		BIODEG EROSN CONT LOGS (REMOVE) one DOLLARS and CENTS	LF	450.00	1.00	450.00
530	6005		DRIVEWAYS (ACP) forty-two DOLLARS and CENTS	SY	126.00	42.00	5292.00
618	6016		CONDT (PVC) (SCH 40) (1") nine DOLLARS and CENTS	LF	20.00	9.00	180.00
618	6023		CONDT (PVC) (SCH 40) (2") ten	LF	285.00	10.00	2850.00

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)							
Item	Code	ALT	UNIT BID PRICE ONLY, WRITTEN IN WORDS	Unit	Approx. Quantities	UNIT BID PRICE ONLY, WRITTEN IN FIGURES	ITEM COST WRITTEN IN FIGURES
			_____ DOLLARS and _____ CENTS				
624	6002		GROUND BOX TY A (122311)W/APRON six hundred twenty-five DOLLARS and CENTS	EA	3.00	625.00	1875.00
644	6027		IN SM RD SN SUP&AM TYS80(1)SA(P) four hundred seventy-eight DOLLARS and CENTS	EA	3.00	478.00	1434.00
644	6030		IN SM RD SN SUP&AM TYS80(1)SA(T) five hundred twenty five DOLLARS and CENTS	EA	1.00	525.00	525.00
644	6050		IN SM RD SN SUP&AM TYS80(2)SA(P) five hundred ten DOLLARS and CENTS	EA	2.00	510.00	1020.00
644	6076		REMOVE SM RD SN SUP&AM one hundred fifty-seven DOLLARS and CENTS	EA	4.00	157.00	628.00
658	6002		INSTL DEL ASSM (D-SW)SZ 1(FLX)GND(BI) sixty-eight DOLLARS and CENTS	EA	32.00	68.00	2176.00
658	6049		INSTL OM ASSM (OM-2Z)(FLX)GND(BI) sixty-eight DOLLARS and CENTS	EA	4.00	68.00	272.00
666	6042		REFL PAV MRK TY I (W)12"(SLD)(100MIL) six DOLLARS and CENTS	LF	100.00	6.00	600.00
666	6048		REFL PAV MRK TY I (W)24"(SLD)(100MIL) eleven DOLLARS and CENTS	LF	24.00	11.00	264.00
666	6303		RE PM W/RET REQ TY I (W)4"(SLD)(100MIL) _____ DOLLARS and fourty-seven CENTS	LF	5,723.00	0.47	2689.81
666	6315		RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL) _____ DOLLARS and fourty-seven CENTS	LF	5,771.00	0.47	2712.37
672	6009		REFL PAV MRKR TY II-A-A four DOLLARS and CENTS	EA	73.00	4.00	292.00
680	6002		INSTALL HWY TRF SIG (ISOLATED) three thousand three hundred forty-three DOLLARS and CENTS	EA	1.00	3,343.00	3343.00
684	6027		TRF SIG CBL (TY A)(14 AWG)(1 CONDR) one	LF	40.00	1.00	40.00

North Alamo Road Realignment Project (From FM 1925 (Monte Cristo Rd) to 0.54 miles North of FM 1925)

Item	Code	ALT	UNIT BID PRICE ONLY, WRITTEN IN WORDS	Unit	Approx. Quantities	UNIT BID PRICE ONLY, WRITTEN IN FIGURES	ITEM COST WRITTEN IN FIGURES
			_____ DOLLARS and _____ CENTS				
684	6080		TRF SIG CBL (TY C)(14 AWG)(2 CONDR) one _____ DOLLARS and _____ CENTS	LF	805.00	1.00	805.00
688	6004		VEH LP DETECT (SAWCUT) eleven _____ DOLLARS and _____ CENTS	LF	204.00	11.00	2244.00
			ALTERNATE 1A		-		
275	6001	1A	CEMENT two hundred fifty-three _____ DOLLARS and _____ CENTS	TON	167.00	253.00	42251.00
275	6009	1A	CEMENT TREAT (NEW BASE) (8") one _____ DOLLARS and _____ CENTS	SY	9,555.00	1.00	9555.00
					TOTAL BID	$ 666,821.33	

six hundred sixty-six thousand eight hundred twenty-one dollars and thirty-three cents
TOTAL IN WORDS

NOTE: The alternative items identified on this contract are replacement alternatives and the prospective bidder should follow the replacement alternatives bidding procedures. Additive or deductive alternatives are not part of this contract. The lowest bidder will be determined by utilizing the lowest bid based on bid price of either the base bid items or replacement alternate items not a bid on both.
(Amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will prevail.)
The above unit prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.
Bidder understands that the Owner reserves the right to reject any or all bids to waive any minor informalities in the bidding.

EXHIBIT “C”

INSURANCE

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/14/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Soules Insurance Agency, L P
701 N San Jacinto
Conroe TX 77301

CONTACT NAME:
PHONE (A/C, No, Ext): 936-756-0671 FAX (A/C, No): 936-756-6877
E-MAIL ADDRESS: soules@soulesinsurance.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Hanover Insurance Company	22292
INSURER B : The Hanover Casualty Company	41602
INSURER C : Allmerica Financial Benefit Insurance	41840
INSURER D : TEXAS MUTUAL INSURANCE COMPANY	22945
INSURER E :	
INSURER F :	

INSURED
Texas Cordia Construction, LLC
3149 Center Pointe Dr
Suite A
Edinburg TX 78539

TEXACORD

COVERAGES **CERTIFICATE NUMBER:** 438085230 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X COMMERCIAL GENERAL LIABILITY			ZDDD925785	6/1/2021	6/1/2022	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	POLICY [X] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
C	AUTOMOBILE LIABILITY			AWDD925836	6/1/2021	6/1/2022	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS / X NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
A	X UMBRELLA LIAB / X OCCUR			UHDD925788	6/1/2021	6/1/2022	EACH OCCURRENCE	$ 5,000,000
	EXCESS LIAB / CLAIMS-MADE						AGGREGATE	$ 5,000,000
	DED / RETENTION $							$
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N			0002048179	6/1/2021	6/1/2022	X PER STATUTE / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] N/A (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
A	Contractors Equipment			IHDD927456	6/1/2021	6/1/2022	$500,000	Leased/Rented

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
The General Liability & Automobile Liability policies include a blanket automatic additional insured endorsement that provides additional insured status to the certificate holder when required by contract. The General Liability, Automobile Liability, & Workers Compensation policies include a blanket automatic waiver of subrogation endorsement that provides this feature when required by contract. The policies contain a special endorsement with "primary and noncontributory" wording. The Umbrella/Excess Liability policy is Follow Form of the liability policies shown above. The policies include an endorsement providing that 30 days notice of cancellation will be furnished to the certificate holder. The General Liability applies on a per project basis.
Contract No. C-21-008
RFB No: 2021-008-04-21-HGO
"North Alamo Road Realignment" – Hidalgo County Precinct No. 4

CERTIFICATE HOLDER

Hidalgo County
2812 S. Business Hwy 281
Edinburg TX 78539

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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CRUM&FORSTER
A FAIRFAX COMPANY

TEXAS COMPLAINT NOTICE
AVISO DE QUEJA DE TEXAS

IMPORTANT NOTICE

To obtain Information or make a complaint:

You may call Crum & Forster's toll-free number for information or to make a complaint at:

1-888-890-1500

You may write to Crum & Forster at:

Crum & Forster
305 Madison Avenue
Morristown, NJ 07962

Web: www.cfins.com
E-mail: info@cfins.com

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at:

1-800-252-3439

You may write the Texas Department of Insurance:

PO Box 149104
Austin, TX 78714-9104
Fax: (512) 490-1007

Web: www.tdi.texas.gov
E-mail: ConsumerProtection@tdi.tx.gov

PREMIUM OR CLAIM DISPUTES:

Should you have a dispute concerning your premium or about a claim you should contact the agent first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

ATTACH THIS NOTICE TO YOUR POLICY: This notice is for information only and does not become a part or condition of the attached document.

AVISO IMPORTANTE

Para obtener información o para presentar una queja:

Usted puede llamar al número de teléfono gratuito de Crum & Forster's para obtener información o para presentar una queja al:

1-888-890-1500

Usted también puede escribir a Crum & Forster:

Crum & Forster
305 Madison Avenue
Morristown, NJ 07962

Sitio web: www.cfins.com
E-mail: info@cfins.com

Usted puede comunicarse con el Departamento de Seguros de Texas para obtener información sobre compañías, coberturas, derechos, o quejas al:

1-800-252-3439

Usted puede escribir al Departamento de Seguros de Texas a:

P. O. Box 149104
Austin, TX 78714-9104
Fax: (512) 490-1007

Sitio web: www.tdi.texas.gov
E-mail: ConsumerProtection@ tdi.tx.gov

DISPUTAS POR PRIMAS DE SEGUROS O RECLAMACIONES:

Si tiene una disputa relacionada con su prima de seguro o con una reclamación, usted debe comunicarse con el agente primero. Si la disputa no es resuelta, usted puede comunicarse con el Departamento de Seguros de Texas.

ADJUNTE ESTE AVISO A SU PÓLIZA: Este aviso es solamente para propósitos informativos y no se convierte en parte o en condición del documento adjunto.

POWER OF ATTORNEY
UNITED STATES FIRE INSURANCE COMPANY
PRINCIPAL OFFICE - MORRISTOWN, NEW JERSEY

02485428421

KNOW ALL MEN BY THESE PRESENTS: That United States Fire Insurance Company, a corporation duly organized and existing under the laws of the state of Delaware, has made, constituted and appointed, and does hereby make, constitute and appoint:

Brent Baldwin, Brock Baldwin, William D. Baldwin, Michael B. Hill, Brady K. Cox, Blaine Allen, Russ Frenzel, John A. Abounrad

each, its true and lawful Attorney(s)-In-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver: Any and all bonds and undertakings of surety and other documents that the ordinary course of surety business may require, and to bind United States Fire Insurance Company thereby as fully and to the same extent as if such bonds or undertakings had been duly executed and acknowledged by the regularly elected officers of United States Fire Insurance Company at its principal office, in amounts or penalties not exceeding: **Seven Million, Five Hundred Thousand Dollars ($7,500,000).**

This Power of Attorney limits the act of those named therein to the bonds and undertakings specifically named therein, and they have no authority to bind United States Fire Insurance Company except in the manner and to the extent therein stated.

This Power of Attorney revokes all previous Powers of Attorney issued on behalf of the Attorneys-In-Fact named above and expires on January 31, 2022.

This Power of Attorney is granted pursuant to Article IV of the By-Laws of United States Fire Insurance Company as now in full force and effect, and consistent with Article III thereof, which Articles provide, in pertinent part:

> Article IV, Execution of Instruments - Except as the Board of Directors may authorize by resolution, the Chairman of the Board, President, any Vice-President, any Assistant Vice President, the Secretary, or any Assistant Secretary shall have power on behalf of the Corporation:
>
> (a) to execute, affix the corporate seal manually or by facsimile to, acknowledge, verify and deliver any contracts, obligations, instruments and documents whatsoever in connection with its business including, without limiting the foregoing, any bonds, guarantees, undertakings, recognizances, powers of attorney or revocations of any powers of attorney, stipulations, policies of insurance, deeds, leases, mortgages, releases, satisfactions and agency agreements;
>
> (b) to appoint, in writing, one or more persons for any or all of the purposes mentioned in the preceding paragraph (a), including affixing the seal of the Corporation.
>
> Article III, Officers, Section 3.11, Facsimile Signatures. The signature of any officer authorized by the Corporation to sign any bonds, guarantees, undertakings, recognizances, stipulations, powers of attorney or revocations of any powers of attorney and policies of insurance issued by the Corporation may be printed, facsimile, lithographed or otherwise produced. In addition, if and as authorized by the Board of Directors, dividend warrants or checks, or other numerous instruments similar to one another in form, may be signed by the facsimile signature or signatures, lithographed or otherwise produced, of such officer or officers of the Corporation as from time to time may be authorized to sign such instruments on behalf of the Corporation. The Corporation may continue to use for the purposes herein stated the facsimile signature of any person or persons who shall have been such officer or officers of the Corporation, notwithstanding the fact that he may have ceased to be such at the time when such instruments shall be issued.

IN WITNESS WHEREOF, United States Fire Insurance Company has caused these presents to be signed and attested by its appropriate officer and its corporate seal hereunto affixed this 22nd day of August 2019.

UNITED STATES FIRE INSURANCE COMPANY

A. R. S

Anthony R. Slimowicz, President

State of Pennsylvania }
County of Philadelphia }

On this 22nd day of August 2019, before me, a Notary public of the State of Pennsylvania, came the above named officer of United States Fire Insurance Company, to me personally known to be the individual and officer described herein, and acknowledged that he executed the foregoing instrument and affixed the seal of United States Fire Insurance Company thereto by the authority of his office.

Commonwealth of Pennsylvania – Notary Seal
Tamara Watkins, Notary Public
Philadelphia County
My commission expires August 22, 2023
Commission number 1348843

Tamara Watkins

Tamara Watkins (Notary Public)

I, the undersigned officer of United States Fire Insurance Company, a Delaware corporation, do hereby certify that the original Power of Attorney of which the foregoing is a full, true and correct copy is still in force and effect and has not been revoked.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of United States Fire Insurance Company on the **29th** day of **June** 20**21**

UNITED STATES FIRE INSURANCE COMPANY

Al Wright, Senior Vice President