STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT

FEDERAL PROJECT NUMBER F 2024(623)

CSJ: 1803-02-035

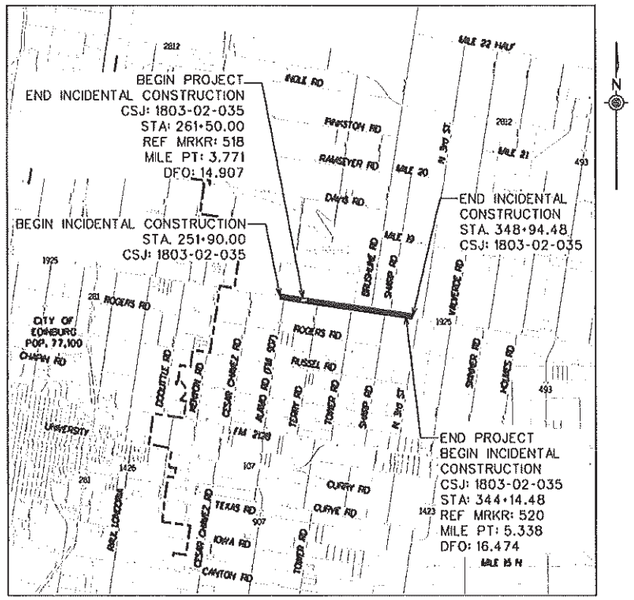
NET LENGTH OF PROJECT = 8,264.48 FEET = 1.56 MILES

HIDALGO COUNTY
F.M. 1925

FROM: FM 907 (ALAMO RD)
TO: SHARP RD.

FOR THE RECONSTRUCTION AND WIDENING OF A NON-FREEWAY FACILITY

WORK TO CONSIST OF GRADING, LIME TREATED SUBGRADE, CEMENT TREATED FLEXIBLE BASE, ASPHALTIC CONCRETE PAVEMENT, CURB & GUTTER, STORM SEWER, SIGNING, DELINEATION, AND PAVEMENT MARKINGS.



LOCATION MAP NOT TO SCALE

EXCEPTIONS: NONE
EQUATIONS: NONE
RAILROAD CROSSINGS: NONE

CONT	SECT	JOB	HIGHWAY
1803	02	035	FM 1925
DIST	COUNTY		SHEET NO.
PHR	HILDAGO		001

DESIGN SPEED

FM 1925: 60 MPH

A.D.T.

2019: 10,500 VPD
2039: 14,700 VPD

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS

FINAL PLANS

DATE OF LETTING: _____

DATE WORK BEGAN: _____

DATE WORK COMPLETED: _____

DATE WORK ACCEPTED: _____

FINAL CONTRACT COST: $ _____

CONTRACTOR: _____

LIST OF APPROVED FIELD CHANGES, CHANGE ORDERS & SUPPLEMENTAL AGREEMENTS:

THIS IS TO CERTIFY THAT ALL CONSTRUCTION SUBSTANTIAL WORK WAS PERFORMED IN ACCORDANCE WITH THE PLANS SPECIFICATIONS AND CONTRACT. ALL PROPOSED CONSTRUCTION WAS COMPLETED UNLESS OTHERWISE NOTED.

HECTOR SILLER, P.E.
PHARR AREA ENGINEER

DATE

TDLR INSPECTION NOT REQUIRED

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION ON NOVEMBER 1, 2014 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, OCTOBER 23, 2023).

LOCAL ENTITIES

HIDALGO COUNTY PRECINCT NO. 4 — CONCURRENCE: — DATE: 12/6/23
NAME: Ellis Pones — TITLE: Commissioner

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1 — CONCURRENCE: — DATE:
NAME: — TITLE:

HIDALGO COUNTY IRRIGATION DISTRICT NO. 1 — CONCURRENCE: — DATE:
NAME: — TITLE:

THE COUNTY OF HIDALGO TEXAS
DATE: 12/6/2023
APPROVED FOR LETTING:

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105
2103 W Expressway 83
Mercedes, TX. 78570
Phone: (956) 565-0393
Fax : (956) 565-9318
920 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone: (956) 565-1929
Fax : (956) 565-1927

SUBMITTED FOR LETTING: DATE: 12/06/23

RECOMMENDED FOR LETTING: DATE: 12/7/2023
DocuSigned by: Tony Dy
2B9AFAE2F319409...
DIRECTOR OF TRANSPORTATION PLANNING & DEVELOPMENT

RECOMMENDED FOR LETTING: DATE: 12/7/2023
DocuSigned by: Pedro R. Alvarez
EABA335C2DAA48C...
DISTRICT ENGINEER

SUBMITTED FOR LETTING: DATE: 12/7/2023
DocuSigned by: Romualdo Mena Jr
8D395A956F70440...
DISTRICT CENTRAL DESIGN SUPERVISOR

FILE: K:\Counties\HID\FM 1925 PHIL (907 to Urest)\01 GENERAL\01 Title Sheet\Title.dgn
DATE: 12/5/2023 3:59:59 PM

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

STANDARD SHEETS IDENTIFIED WITH (*) HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/1/2023

STANDARD SHEETS IDENTIFIED WITH (**) HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

STATE OF TEXAS
C. SIMEONIDIS
60919
LICENSED PROFESSIONAL ENGINEER
11/1/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
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900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
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Fax : (956) 585-1927

FM 1925
INDEX OF SHEETS

SHEET 1 OF 1

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CK DN:		6	TEXAS				002
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:		PHR	HIDALGO	1803	02	035	FM 1925
TR:							
CK TR:							

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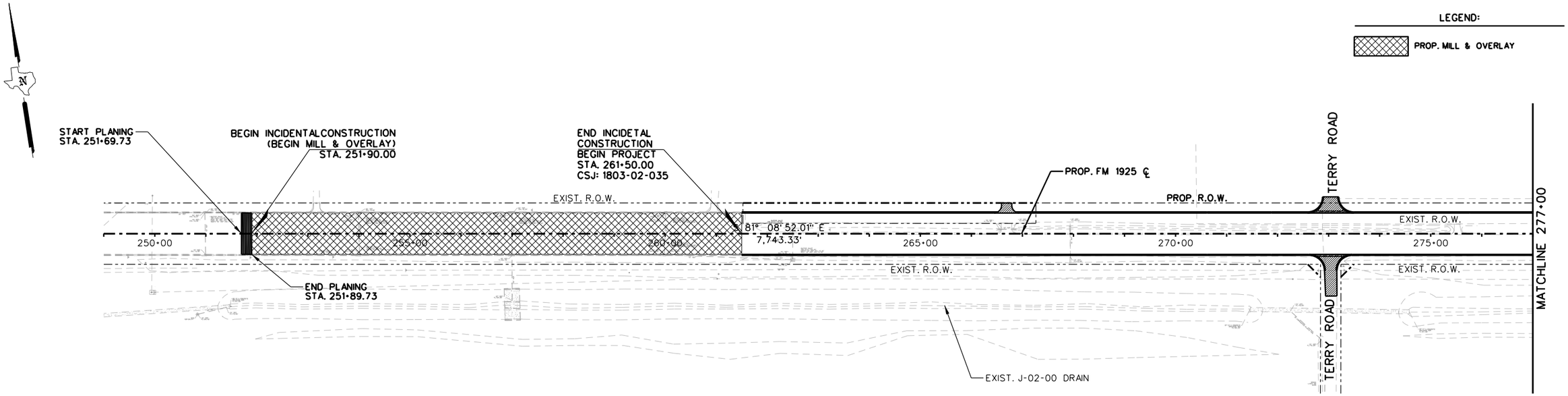
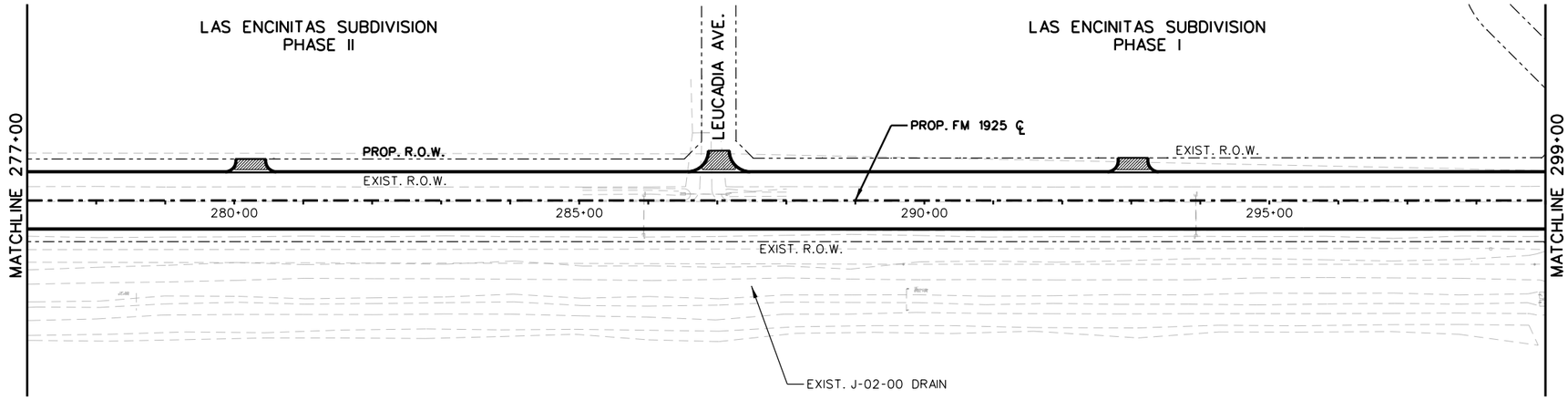
11/1/2023

LEGEND:

PROP. MILL & OVERLAY





STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED
PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO
TEXAS

Texas Department of Transportation

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FM 1925
PROJECT LAYOUT

SCALE 1" = 200'

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		003
REVIEW:	
CK:	

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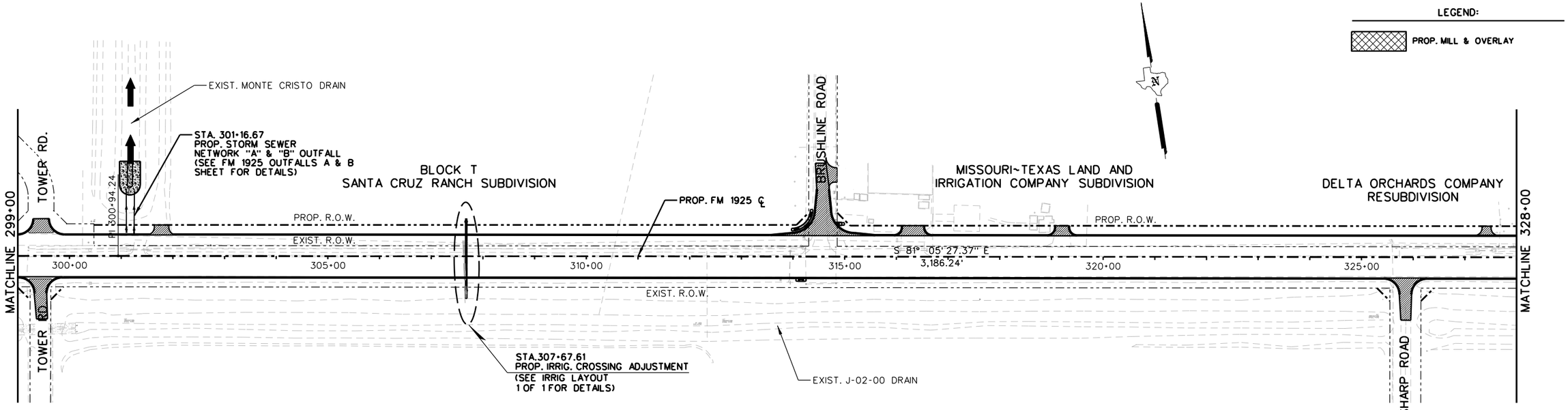
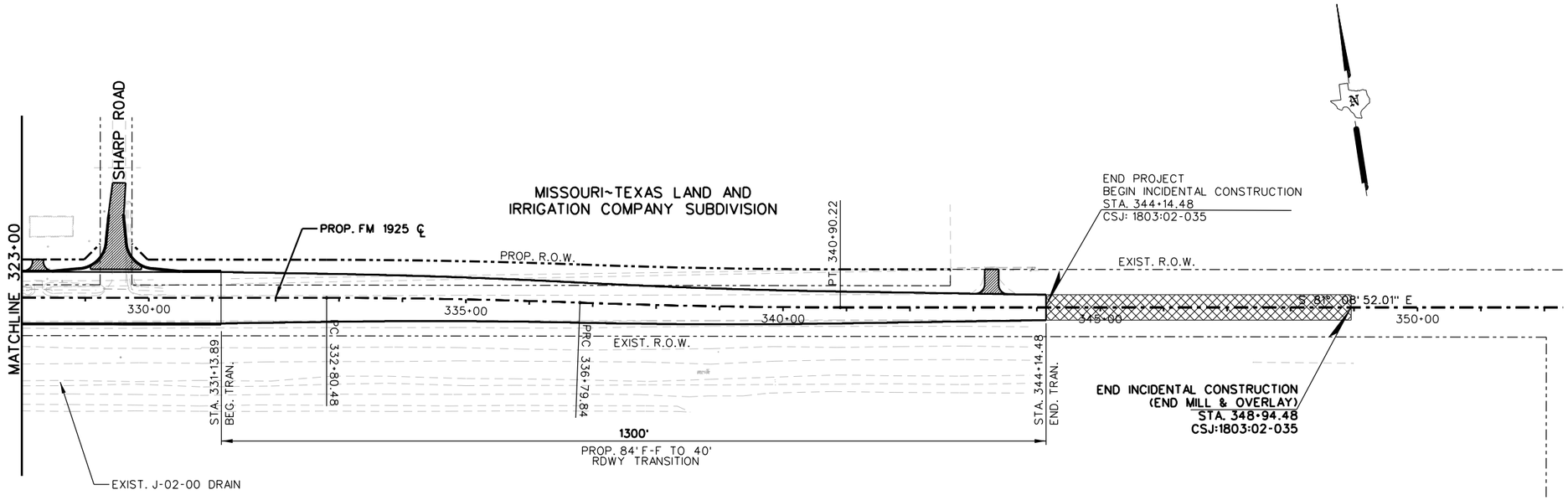
10/31/2023





STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED
PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO
TEXAS

Texas Department of Transportation

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FM 1925
PROJECT LAYOUT

SCALE 1" = 200'

SHEET 2 OF 2

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
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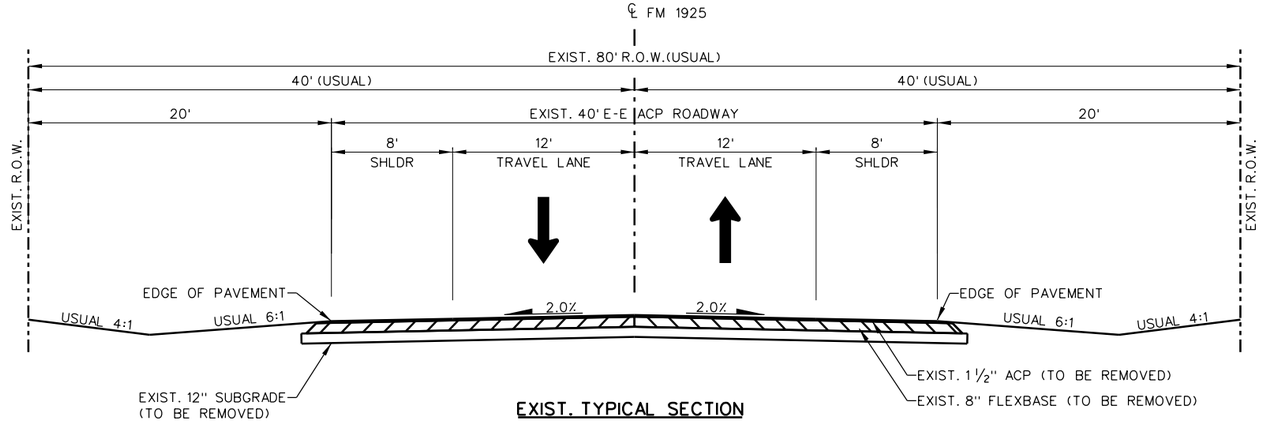
REVIEW:								
CK:								

GENERAL NOTES:

ALL EXIST. ACP AND BASE MATERIAL FROM FM 1925 ROADWAY THAT IS IN THE CUT PLAN OF THE PROP. TYPICAL SECTIONS WILL BE REMOVED UNDER ITEM 110 (EXCAVATION) AND SHALL NOT BE USED AS SALVAGE MATERIAL.



EXIST. TYPICAL SECTION

STA. 261+50.00 TO STA. 344+14.48

STATE OF TEXAS
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11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925
EXISTING TYPICAL SECTION

SHEET 1 OF 1

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		005
REVIEW:								
CK:								

GENERAL NOTES:

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

PRIME COAT SHAL BE APPLIED BETWEEN INTERFACE OF BASE AND PAVEMENT LAYERS AT A UNIFORM RATE OF 0.2 GAL/SY

BONDING COURSE SHALL BE APPLIED BETWEEN LAYERED PAVEMENTS AT A UNIFORM RATE OF 0.07 GAL OF RESIDUAL ASPHALT PER SY OF SURFACE AREA

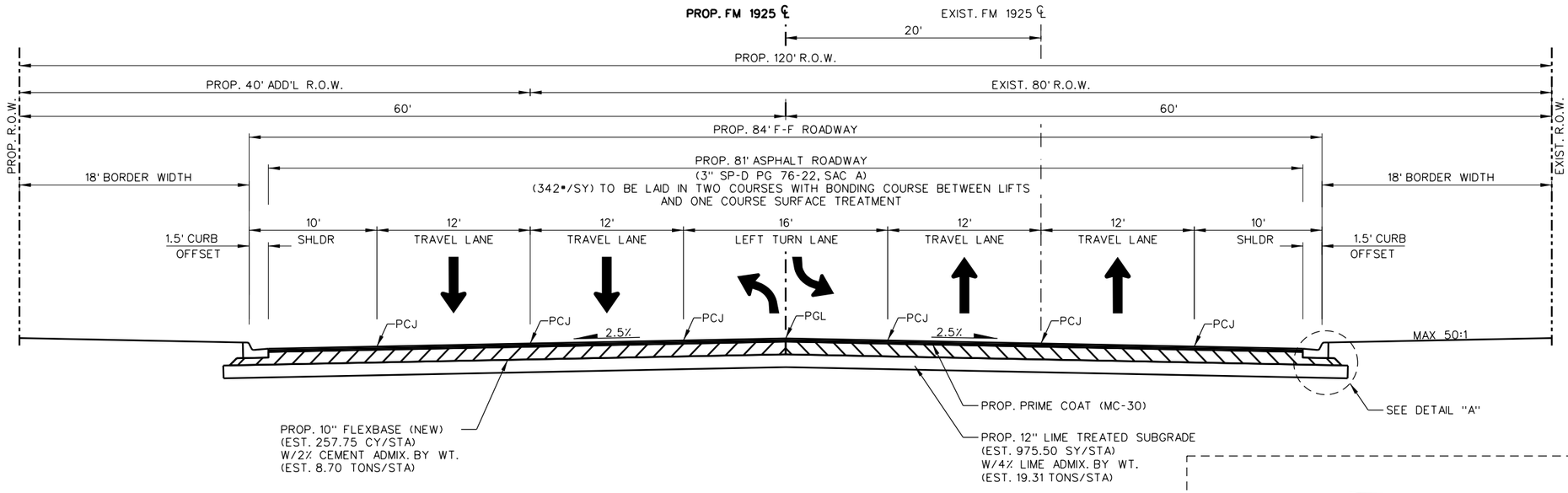
ALL GRADING SHALL BE WITHIN THE R.O.W. LIMITS.

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

PGL - DENOTES PROFILE GRADE LINE

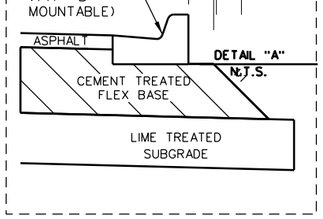
PCJ - DENOTES PERMISSIBLE CONSTRUCTION JOINT

A STATION IS EQUIVALENT TO 100 FT.

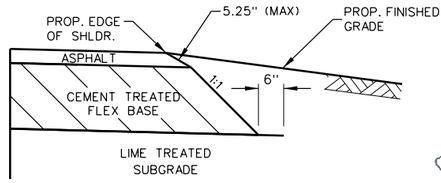


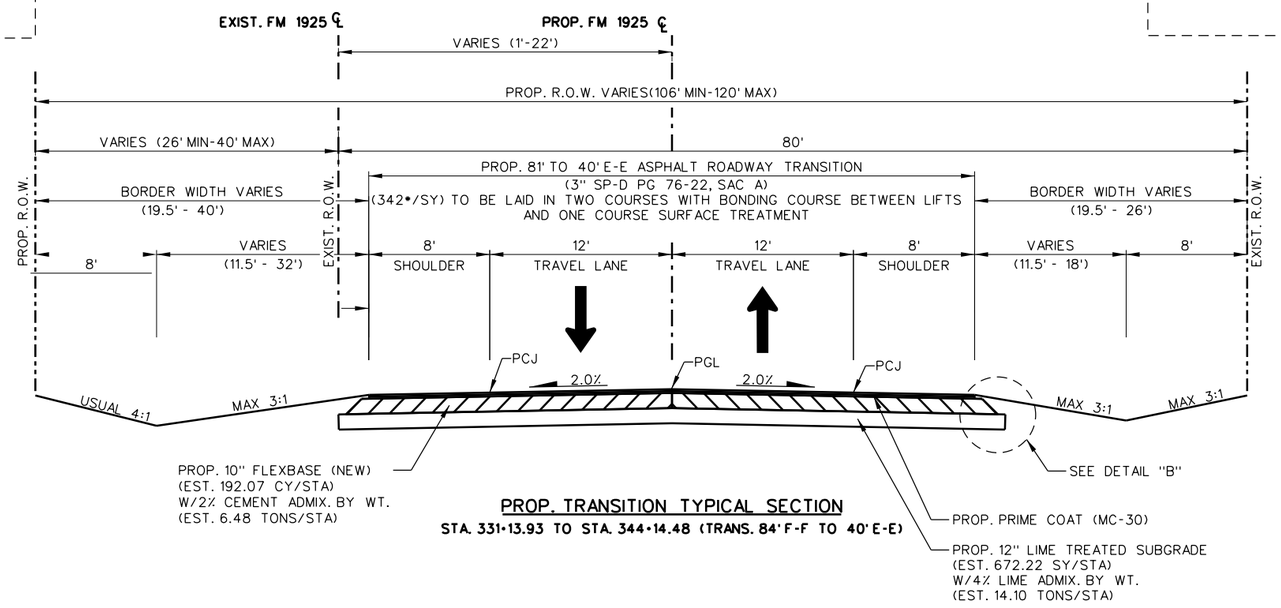
PROP. TYPICAL SECTION

STA. 261+50.00 TO STA. 331+13.93



DETAIL "A"
N.T.S.





PROP. TRANSITION TYPICAL SECTION

STA. 331+13.93 TO STA. 344+14.48 (TRANS. 84' F-F TO 40' E-E)

STATE OF TEXAS
JORDAN B. SINCLAIR
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LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925
PROPOSED TYPICAL SECTION

SHEET 1 OF 1

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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CK:							

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Project Number: **Sheet A**

County: Hidalgo **Control:** 1803-02-035

Highway: FM 1925

2014 SPECS GENERAL NOTES:

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General Requirements and Covenants to ITEMS 1 thru 9

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.

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 2: Instructions to Bidders

Contractor questions on this project are to be addressed to the following individual(s):

Hector Siller, P.E., Pharr Area Engineer; Hector.Siller@txdot.gov
Jesus Noriega, P.E., Assist. Area Engineer; Jesus.Noriega@txdot.gov

Contractor questions will be accepted through email, phone, and in person by the above individuals. Questions may also be submitted via the Letting Pre-Bid Q&A web page. This webpage can be accessed from the Notice to Contractors dashboard located at the following Address:

https://tableau.txdot.gov/views/ProjectInformationDashboard/NoticetoContractors

All contractor questions will be reviewed by the Engineer. All questions and any corresponding responses that are generated will be posted through the same Letting Pre-Bid Q&A web page.

The Letting Pre-Bid Q&A web page for each project can be accessed by using the dashboard to navigate to the project you are interested in by scrolling or filtering the dashboard using the controls on the left. Hover over the blue hyperlink for the project you want to view the Q&A for and click on the link in the window that pops up.

Information found on TxDOT's FTP server will be considered for informational purposes only.
Index of /pub/txdot-info/Pre-Letting Responses/Pharr District/21-Pharr District (Construction) (state.tx.us)

ITEM 5: Control of the Work

The responsibility for the construction surveying on this contract will be in accordance with Article 5.9.1., "Method A."

Project Number: **Sheet B**

County: Hidalgo **Control:** 1803-02-035

Highway: FM 1925

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 Engineer's office for borrowing by copying companies for the purpose of making copies for the bidder at the bidders expense.

ITEM 6: Control of Materials

To comply with the latest provisions of Build America, Buy America Act (BABA Act) of the Bipartisan Infrastructure Law, the contractor must submit an original of the TxDOT Construction Material Buy America Certification Form for all items classified as construction materials. This form is not required for materials classified as a manufactured product.

Refer to the Buy America Material Classification Sheet for clarification on material categorization.

The Buy America Material Classification Sheet is located at the below link.

https://www.txdot.gov/business/resources/materials/buy-america-material-classification-sheet.html for clarification on material categorization.

ITEM 7: Legal Relations and Responsibilities

No significant traffic generator events identified.

Roadway or Lane closures during the following key dates and/or special events are prohibited:

- National Holidays
- The day before a National Holiday
- During emergency events such as natural disasters or as directed by the engineer

ITEM 8: Prosecution and Progress

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

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

ITEM 100: Preparing Right of Way

Preparation of right of way 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.

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
Highway / Civil
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Environmental
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FM 1925 GENERAL NOTES

SHEET 1 OF 11

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN:		6	TEXAS					007
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
CK DW:		PHR	HIDALGO	1803	02	035		FM 1925
TR:								
CK TR:								

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12/4/2023

Project Number: **Sheet C**

County: Hidalgo **Control:** 1803-02-035

Highway: FM 1925

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. A biodegradable tacking agent may be used in lieu of the SS-1 tacking agent in accordance with the manufacturer's recommendations when approved by the Engineer.

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.

Project Number: **Sheet D**

County: Hidalgo **Control:** 1803-02-035

Highway: FM 1925

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) caliche 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).

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.

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.

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FM 1925
GENERAL NOTES

SHEET 2 OF 11

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN:		6	TEXAS				008
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW:		PHR	HIDALGO	1803	02	035	FM 1925
TR:							
CK TR:							

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.

Contractor is to place an underseal and/or pavement course as indicated on plans within 14 calendar days of initial prime coat application. Otherwise, reapply prime coat as directed by the Engineer. Reapplication of the prime coat will be at the Contractor's expense.

Allow the mixture to mellow for a minimum period of 48 hours for all types of lime utilized. Additional time might be required due to sulfate and organic testing requirements, as directed by Engineer.

ITEM 275: Cement Treatment (Road-Mixed)

The percent of density as determined by Tex-120-E for the new and salvage Flexible Base shall be a minimum of 98% for all courses.

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.

Contractor is to place an underseal and/or pavement course as indicated on plans within 14 calendar days of initial prime coat application. Otherwise, reapply prime coat as directed by the Engineer. Reapplication of the prime coat will be at the Contractor's expense.

ITEM 302: Aggregates for Surface Treatments

Loc.	County	CSJ	Highway	Binder	SAC
*1	Hidalgo	1803-02-035	FM 1925	SPG 79-13	B

* Crushed gravel will not be allowed on the above locations noted with (*).

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.

All existing Flexible Base, which may become exposed by the milling operation, shall be primed at the rate of 0.2 Gal/SY.

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 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.

Contractor is to place ACP layer(s) as indicated on plans within 14-calendar days of seal coat placement unless otherwise directed by the Engineer.

ITEM 3076: Dense-Graded Hot-Mix Asphalt

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

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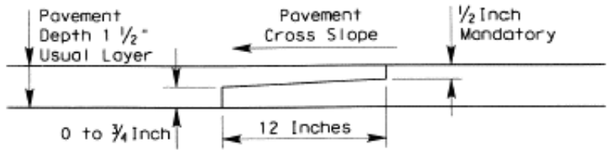
Blading (not to exceed more than 3-ft from the pavement edge) may also be necessary to clean dirt and grass from pavement edges and turnout areas as work under this bid item. The cost of this blading will not be paid for directly, but shall be considered subsidiary to this bid item.

A portion of RAP generated from this project will remain the property of the State. This quantity can be found on the Estimate and Quantity Tables under Item 305 or Item 354.

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. The Engineer may waive this requirement when no impacts to the traveling public are foreseen.



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.

Design mixture using a Superpave Gyratory Compactor.

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 3076.

The use of RAP and RAS (recycled asphalt shingles) 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 Department 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.

When SAC B aggregate is used, material properties are required to be 10 or less on the magnesium sulfate soundness test and 20 or less on the Micro-Deval test.

ITEM 3077: Superpave Mixtures

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

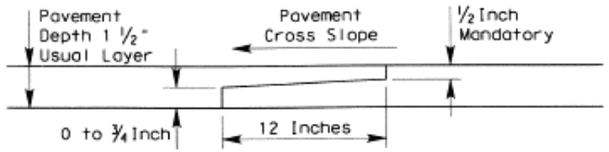
Blading (not to exceed more than 3-ft from the pavement edge) may also be necessary to clean dirt and grass from pavement edges and turnout areas as work under this bid item. The cost of this blading will not be paid for directly, but shall be considered subsidiary to this bid item.

A portion of RAP generated from this project will remain the property of the State. This quantity can be found on the Estimate and Quantity Tables under Item 305 or Item 354.

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.

Aggregates used on shoulders and ramps are required to meet SAC requirements.

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. The Engineer may waive this requirement when no impacts to the traveling public are foreseen.



NOTCHED WEDGE JOINT

The engineer may allow for variances to the dimensions shown.

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 3077.

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The use of RAP and RAS (recycled asphalt shingles) 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 Department 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.

SAC B aggregate must have material properties that require 10 or less on the magnesium sulfate soundness test and 20 or less on the Micro-Deval test.

ITEM 3084 – Bonding Course

The minimum application rates are listed in Table BC.

The target shear bond strengths are listed in Table BCS. The informational test cores shall be taken once a shift for first 5 lots of placement or a change to placement method of bonding course, bonding material, or hot mix material. The remaining informational test cores shall be taken once every 3 lots for surface mix. Informational tests are not required for non-surface mix beyond the first 5 lots unless there is a change to placement method of bonding course, bonding material, or hot mix material. Results from these informational tests will not be used for specification compliance.

Table BC

Material	Minimum Application Rate (gal. per square yard)
TRAIL – Emulsified Asphalt	0.06
TRAIL – Hot Asphalt	0.12
Spray Applied Underseal Membrane	0.10

Table BCS (For Informational Tests)

Material	Target Shear Bond Strength (Tex-249-F psi)
SMA – Stone-Matrix Asphalt	60.0
All Other Materials	40.0

ITEM 3096: Asphalts, Oils, and Emulsions

Temporary ramps/detours and driveways may use Performance Grade Binder 64-22.

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 locations on the plans that propose full width planning/milling as shown on the typical sections, 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.

All planing/milling material; RAP (recycled asphalt pavement) from this project will remain the property of the State unless otherwise noted in the plans and/or as directed by the Engineer. Stockpile 938T of material generated from the project at designated site located at 1300 TX-107, La Villa, TX 78562.

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.

Structural Excavation Special (Gravel):
Use durable natural stone when tested in accordance with Tex-411-A, has weight loss of no more than 18% after 5 cycles of magnesium sulfate solution. Provide gravel conforming to an aggregate Grade No. 1 as shown on Table 4 of Article 421.2.

ITEM 416: Drilled Shaft Foundations

Payment for furnishing and installing anchor bolts mounted in drill shafts will be included in the unit price bid for the various diameter drill shafts.

The Contractor shall coordinate with the utility companies to verify utility locations before drilling foundations.

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The Contractor shall form, or provide a smooth finish, the portions of drilled shaft that project above the ground line. Place a ¾ inch chamfer on the top edge of each pole foundation. This work will not be paid for directly, but will be considered subsidiary to this bid item.

All drilled shaft foundations will be based on the lengths shown on the plans or those established in writing. Adequate calculations for measurements of foundations have been made in accordance with Article 9.1. of the Standard Specifications. Increases or decreases in the quantities required by change in design will be measured as specified and the revised quantities will be the basis for payment.

In the presence of excess ground water and/or unstable conditions in sub-grade soils prevents excavation to the line and depths indicated on the plans for "Drilled Shaft Foundation", other proposed methods of foundation installation such as casing, etc. shall be submitted for review and approved by the Engineer.

ITEM 421: Hydraulic Cement Concrete

Provide equipment at the batch plant for determining the free moisture and/or absorption of aggregates in accordance with applicable TXDOT Test.

Provide the following items for concrete batch inspection in accordance with specifications outlined in DMS-10101, "Computer Equipment":

(1) One Desktop Microcomputer or One Laptop Microcomputer
(2) One Integrated Printer/Scanner/Copier/Fax Unit
(3) Contractor-Furnished Software
(4) Hardware

Submit to the Engineer for approval the project locations for all Portland Cement concrete washout areas prior to starting any concrete work.

Fiber Reinforced Concrete is not permitted.

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, and 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.

For all inlet extensions, provide a temporary circular curb/inlet extension opening for drainage during construction. The circular opening will be a 4-in Diameter by 2-in deep slot that matches the statewide PCO standard. Fill curb circular curb/inlet extension opening with epoxy and mortar as per Item 429 Concrete Structure Repair specifications. Epoxy and mortar is subsidiary to Item 465.

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 for traffic handling. See notes for Item 6185: Truck Mounted Attenuator/Trailer Attenuator, for additional references pertaining to the TMAs.

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.

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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.

The Contractor Force Account "Safety Contingency" that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor's Responsible Person based on weekly or more frequent traffic management reviews on the project. The "Safety Contingency" is not intended to be used in lieu of bid items established by the contract.

ITEM 504: Field Office and Laboratory

Furnish (1) Field Office (Type C).

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 Department's use in the asphalt laboratory one (1) desktop computer.

ITEM 506: Temporary Erosion, Sedimentation, and Environmental Controls

Before starting each phase of construction, review with the Engineer the SW3P used for temporary erosion control as outlined on the plans. Before construction, place the temporary erosion and sedimentation control features as shown on the SW3P. Location of Construction Exits are to be approved by the Engineer. After completing earthwork operations, restore and reseed the disturbed areas in accordance with the Department's specifications for permanent or temporary erosion control. Before starting grading operations and during the project duration, place the temporary or permanent erosion control measures to prevent sediment from leaving the right of way.

The Contractor Force Account "Erosion Control Maintenance" that has been established for this project is intended to be utilized for work zone Best Management Practice (BMP) maintenance, to improve the effectiveness of the Environmental Controls that may need maintenance attention and/or require replacement while the project is still under the construction stage. These procedures will be mutually agreed upon by the Engineer and the Contractor's Responsible Person based on weekly or more frequent BMP management reviews on the project. The "Erosion Control Maintenance" is not intended to be used in lieu of bid items established by the contract.

ITEM 508: Constructing Detours

Flexible Base, prime coat, and Asphaltic Concrete Pavement used for detours shall meet the requirements of Items 247, 310 and 3076 respectively, except for measurement and payment.

ITEM 529: Concrete Curb, Gutter, and Combined Curb and Gutter

Before final acceptance of the project, remove discoloration caused by tire marks, mud, asphalt, paint or other similar material by any method satisfactory to the Engineer to achieve a uniform color and texture of the finished surface exposed to view.

Curb attached to the MBGF thrie-beam transition section will be subsidiary to the MBGF transition.

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 560: Mailbox Assemblies

Coordinate and verify final mailbox locations with TxDOT and the US Postmaster.

ITEM 585: Ride Quality for Pavement Surfaces

Use Surface Test Type "B" for service roads and ramps.

Quality control results shall be submitted to TxDOT the next working day after each day's paving.

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Pavement areas with public turnout intersections that carry major traffic volumes will not be subjected to inertial profiler testing. These areas shall be evaluated using the 10-ft. straightedge.

Diamond grinding shall be used to remove localized roughness.

Use Surface Test Type B pay adjustment schedule 1 to evaluate ride quality of the travel lanes in accordance with Item 585, "Ride Quality for Pavement Surfaces." This includes ramps and service road travel lanes.

ITEM 610: Roadway Illumination Assemblies

Luminaires shown on the proposed Traffic Signal installation layout sheets may be shown at an angle for clarity. All luminaires shown shall be installed perpendicular to the main roadway under construction.

In addition to ED (3)-14, each cable for luminaires shall be identified in each ground box, pole base, or other accessible location with yellow electrical tape wrapped around the cable. The tape marking shall be at least 2 inches.

All luminaires on traffic signal poles shall be rated for 240 vac. All safety lighting poles shall be serviced for 480 vac.

Luminaires installed on traffic signal poles will not be paid for directly, but shall be considered subsidiary to the various bid Items of the 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 2.0 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."

ITEM 620: Electrical Conductors

For Flashing Beacons (Item 685) and Ped poles (Item 687) within the project, provide single-pole breakaway disconnects.

Use Bussman HEBW, Littelfuse LEB, Ferraz-Shawmut FEB, or equal on ungrounded conductors.

For all grounded conductors use Bussman HET, Littelfuse LET, Ferraz-Shawmut FEBN, or equal on ungrounded conductors. For all grounded conductors use Bussman HET, Littelfuse LET, Ferraz Shawmut FEBN, or equal. These breakaway connectors have a white colored marking and a permanently installed solid neutral.

ITEM 621: Tray Cable

Connect luminaires on traffic signal poles using a 4 conductor tray cable with conductor colors of red, black and green #12 AWG (XHHW). The white (neutral) conductor will not be needed and will be capped.

ITEM 628: Electrical Services

Arrange for and cooperate with the utility company to provide electrical power for the service(s) shown and as required by the plans. A meter will be required on all electrical services.

ITEMS 636: 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 weatherproof ware-house 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.

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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 Department. All removed sign installations shall be completely disassembled. All salvageable sections of sign panels shall be recycled by TxDOT. 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 656: Foundations for Traffic Control Devices

The dimensions shown on the plans for location of signal pole foundations, conduit and other items may be varied to meet existing conditions as approved.

The work area shall be cleaned up and all loose material resulting from the contract operations shall be removed from the work area each day before work is suspended.

No traffic signal pole shall be placed on the foundations prior to seven (7) days following placement of concrete.

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 the requirements of Tex 828-B, or that fail to meet minimum retro reflectivity requirements for longitudinal pavement markings when required, will be addressed per the requirements of the specification. 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.

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: Highway Traffic Signals

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

1. Furnishing and installing 16-phase full traffic actuated controllers, base mounted cabinets, conflict monitors, load switches and loop amplifiers.
2. Furnishing and installing either steel mast arm poles, or steel strain poles and span wire and pedestal poles (as shown on plans), electrical service, luminaires, signal heads, signal cables, pedestrian heads and pedestrian push buttons with signs that meet the "Americans with Disabilities Act" Standards, loop detectors, ground boxes, conduit runs and controller concrete foundations.
3. Removal and disposal of existing signal material specified in the plans.
4. All other Items not listed above which are needed to provide for complete traffic signal installations and for proper signal operation as called for in the plans and specifications shall be furnished and installed.

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

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Signal controller

The signal installations shall be wired in accordance with the phase diagrams in the plans. The proposed base mounted cabinet shall contain 16-phase conflict monitor which display the "R-Y-G" and "Walk" phases. In addition to detecting phasing conflicts, the conflict monitor shall also be able to detect multiple signal head indications within every phase. The conflict monitor shall continue to operate in the event of a power supply failure in the timer and shall be able to retain in memory the time and date of the failure detection. Time changes shall be programmable in the field without replacing components or use of external devices. The full-actuated controller shall meet N.E.M.A. Specifications.

A controller manufacturer's technician shall be required to load initial timing programs into the controllers as called for in the plans. Once the traffic signals are turned on, the same technician shall monitor the signal operation and traffic movement and shall adjust settings for best signal operation. The technician shall provide the State with a certification that the timing plan and coordination has been established according to the plans. This certification shall include a record showing all settings and functions programmed into the timer and any related units.

The controller must be delivered with two sets of wiring diagrams and operating manuals enclosed in a weatherproof bag.

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

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.

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 traffic signal heads furnished shall be by the same manufacturer.
2. All signal fittings and pipe brackets shall be of an approved metallic material and of the same design and manufacturer.
3. All traffic signal poles furnished shall be by the same manufacturer.
4. All loop detector amplifiers furnished shall be by the same manufacturer.

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 shall remain in operation at all times during construction of the proposed traffic signal installations or modifications.
2. The complete removal of the specified existing traffic signals or specified Items will be required when the proposed traffic signal installations are in place and operational.
3. All labor, tools, and materials used to remove the specified existing traffic signal material shall not be paid for directly, but be considered subsidiary to the various items of work.
4. Final inspection shall be conducted in conjunction with the district signal shop.

ITEM 682: Vehicle and Pedestrian Signal Heads

All signal heads shall be covered with burlap from the time of installation until the signal is placed in operation. All signal heads shall be of polycarbonate material and yellow in color. Signal heads shall have standard detachable visors. LED's shall be furnished for all traffic signal heads.

Signal heads shall be positioned carefully to provide the best view of signal indications to motorists. All signal heads shall be installed to a neat overall appearance.
Nominal height for signal heads above pavement surface shall be 18 feet 6 inches, plus/minus 3 inches.

Pedestrian signal heads shall be positioned carefully to provide the best view to pedestrians.

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.

THE COUNTY OF HIDALGO TEXAS

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FM 1925
GENERAL NOTES

SHEET 10 OF 11

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN:		6	TEXAS					016
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW:		PHR	HIDALGO	1803	02	035	FM 1925	
TR:								
CK TR:								

Project Number: **Sheet U**

County: Hidalgo **Control:** 1803-02-035

Highway: FM 1925

ITEM 686: Traffic Signal Pole Assemblies (Steel)

The locations for the proposed traffic signal poles are approximate. The exact locations will be determined in the field in coordination with the District Signal Shop.

Erection and/or removal of poles and luminaries located near any overhead electrical power lines shall be accomplished using established industry and utility safety practices. The appropriate utility company shall be consulted with prior to beginning such work.

ITEM 688: Pedestrian Detectors and Vehicle Loop Detectors

The Contractor shall install loop vehicle detectors in accordance with the Intersection layouts in the plans or as directed. Each loop detector Lead-In cable shall be tagged inside the controller cabinet with its loop number. The loop amplifiers shall indicate the loop and phase of control or direction of control. Loop wires in street shall be #14 AWG. Pedestrian detectors shall meet the minimum requirements called for by the "Americans with Disabilities Act".

Loop detector lead-in cable shall be continuous from ground box to the controller.

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

A minimum length of 2.0 feet for each cable shall be left in each ground box.

ITEM 1007: Irrigation Wells, Gates and Valves

If the Contractor elects, a larger size Item may be furnished and installed at no extra cost to the State.

ITEM 6185: Truck Mounted Attenuator/Trailer Attenuator

In addition to the shadow vehicles with truck mounted attenuator (TMA) that are specified as being required on the traffic control plan for the project, provide 1 additional shadow vehicle(s) with TMA as per TCP (2-3) -18 as detailed on General Note 8 of this standard sheet; provide 1 additional shadow vehicle(s) with TMA as per TCP (2-5) -18 as detailed on General Note 4 of this standard sheet.

Therefore, 2 total shadow vehicles with TMA will be required on this project for the type of work as shown on the plans. The Contractor will be responsible for determining if one or more of his construction operations will be ongoing at the same time and thus determine the total number of TMAs needed for the project.

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FM 1925
GENERAL NOTES

SHEET 11 OF 11

DN:		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN:		6	TEXAS					016A
DW:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
CK DW:		PHR	HIDALGO	1803	02	035		FM 1925
TR:								
CK TR:								

SUMMARY OF ROADWAY ITEMS

LOCATION	INCIDENTAL LENGTH (FT)	RECONST. LENGTH (FT)		Ⓐ CUT	FILL			SUBGRADE		FLEXIBLE BASE			PRIME COAT		SEAL COAT		HOT MIX ASPHALT				PLANING	
			100	110	132	160	204	260	260	247	275	275	310	310	316	316	3077	3077	3077	3084	354	
			6002	6001	6006	6005	6003	6011	6043	6225	6001	6031	INFO-ONLY	6009	6005	6486	INFO-ONLY	6065	6065	6001	6041	6051
			PREPARING ROW (STA)	EXCAVATION (ROADWAY) (CY)	EMBANKMENT (FINAL) (DENS CONT) (TY C) (CY)	FURNISHING AND PLACING TOPSOIL (CY)	SPRINK DUST CONTROL 8MG/STA (MG)	LIME TREAT (EXIST MATL) (12") (SY)	LIME HYD,COM OR QK(SLRY) 4.0% BY WT. (TON)	FLEX. BASE (RDWY DEL) TY"E" GR.4 (FINAL POS) (CY)	CEMENT 2% BY. WT (TON)	CEMENT TREAT NEW BASE (10") (SY)	AREA Ⓧ (SY)	PRIME COAT (MC-30) 0.2 GAL/SY (GAL)	ASPH (TIER II) 0.30 GAL/SY (GAL)	AGGR (TY-D GR-4P) (SAC -B) (CY)	AREA Ⓧ (SY)	SP MIXES (SP-D) (SAC-A) (PG76-22) 171#/SY (TON)	SP MIXES (SP-D) (SAC-A) (PG76-22) 342#/SY (TON)	BONDING COURSE 0.07 GAL/SY (GAL)	PLANE ASPH CONC PAV (1.5") (SY)	PLANE ASPH CONC PAV (0" TO 1 1/2") (SY)
			EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
FM 1925	1440	8264	82.64	62089	1730	50	661	77364	1532	20621	696	76446	71418	14284	21426	595	71418	938	12212	4999	10780	386
GRAND TOTAL	1440	8264	82.64	62089	1730	50	661	77364	1532	20621	696	76446	71418	14284	21426	595	71418	938	12212	4999	10780	386

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

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Ⓐ ITEM 110 (EXCAVATION) INCLUDES THE REMOVAL OF EXIST. ACP AND BASE MATERIAL FROM FM 1925 ROADWAY THAT IS IN THE CUT PLAIN OF THE PROPOSED TYPICAL SECTION AND SHALL NOT BE USED AS SALVAGE MATERIAL.

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

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

SUMMARY OF TEMPORARY & PERMANENT TRAFFIC SIGNALS

INTERSECTION LOCATION	416		618						620			621	624		625	628	680	
	NON-PAY	6032	6016	6023	6024	6029	6033	6034	6007	6009	6010	6005	6002	6008	6003	6119	6002	6004
	DRILL SHAFT (TRF SIG POLE) (24") Ⓧ (LF)	DRILL SHAFT (TRF SIG POLE) (36") (LF)	CONDT (PVC) (SCH 40) (1") (LF)	CONDT (PVC) (SCH 40) (2") (LF)	CONDT (PVC) (SCH 40) (2")(BORE) (LF)	CONDT (PVC) (SCH 40) (3") (LF)	CONDT (PVC) (SCH 40) (4") (LF)	CONDT (PVC) (SCH 40) (4")(BORE) (LF)	ELEC CONDR (NO. 8) BARE (LF)	ELEC CONDR (NO. 6) BARE (LF)	ELEC CONDR (NO. 6) INSULATED (LF)	TRAY CABLE (4 CONDR) (12 AWG) (LF)	GRND BOX TY A (122311) W/ APRON (EA)	GRND BOX TY C (162911) W/ APRON (EA)	ZINC-COAT STL WIRE STRAND (3/8 IN) (LF)	ELC SRV TY D 120/240 060 (NS)AL(T)TS(O) (LF)	INSTALL HWY TRF SIG (ISOLATED) (EA)	REMOVING TRAFFIC SIGNALS (EA)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
BRUSHLINE	5.7	60.8	65	935	130	75	60	145	285	55	110	335	8	3	1100	1	1	1
GRAND TOTAL	5.7	60.8	65	935	130	75	60	145	285	55	110	335	8	3	1100	1	1	1

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SUMMARY OF TEMPORARY & PERMANENT TRAFFIC SIGNALS CONTINUED

INTERSECTION LOCATION	681	682									684					686		687	688		
	6001	6001	6002	6003	6004	6005	6006	6018	6054	6055	6008	6010	6012	6027	6080	6019	6020	6001	6001	6003	6004
	TEMP TRAF SIGNALS (EA)	VEH SIG SEC (12 IN) LED (GRN) (EA)	VEH SIG SEC (12 IN) LED (GRN ARW) (EA)	VEH SIG SEC (12 IN) LED (YEL) (EA)	VEH SIG SEC (12 IN) LED (YEL ARW) (EA)	VEH SIG SEC (12 IN) LED (RED) (EA)	VEH SIG SEC (12 IN) LED (RED ARW) (EA)	PED SIG SEC (LED) (COUNTDOWN) (EA)	BACK PLATE W/REF BRDR (3 SEC)(VENT) ALUM (EA)	BACK PLATE W/REF BRDR (4 SEC)(VENT) ALUM (EA)	TRF SIG CBL (TY A) (12 AWG) (3 CONDR) (LF)	TRAF SIG CBL (TY A) (12 AWG) (5 CONDR) (LF)	TRAF SIG CBL (TY A) (12 AWG) (7 CONDR) (LF)	TRAF SIG CBL (TY A) (14 AWG) (1 CONDR) (LF)	TRAF SIG CBL (TY C) (14 AWG) (2 CONDR) (LF)	INS TRF SIG PL AM (S) STR (TY D) (EA)	INS TRF SIG PL AM (S) STR (TY D) LUM (EA)	PED POLE ASSEMBLY (EA)	PED DETECT PUSH BUTTON (APS) (EA)	PED DETECTOR CONTROLLER UNIT (EA)	VEH LP DETECT (SAWCUT) (LF)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
BRUSHLINE	1	6	1	6	2	6	1	4	6	1	420	975	220	130	1665	2	2	1	4	1	1270
GRAND TOTAL	1	6	1	6	2	6	1	4	6	1	420	975	220	130	1665	2	2	1	4	1	1270

SUMMARY OF REMOVE AND INSTALL SMALL ROAD SIGNS

LOCATION	636	644		
	6001	6027	6030	6076
	ALUMINUM SIGNS (TY A) (SF)	IN SM RD SN SUP&AM TY S80 (1) SA (P) (EA)	IN SM RD SN SUP&AM TY S80 (1) SA (T) (EA)	REMOVE SM RD SN SUP & AM (EA)
	EST.	EST.	EST.	EST.
FM 1925				
SHEET 1 OF 5	34	3	2	5
SHEET 2 OF 5	33	3	1	4
SHEET 3 OF 5	84	3	4	7
SHEET 4 OF 5	63	3	3	5
SHEET 5 OF 5				
GRAND TOTAL	214	12	10	21

SUMMARY OF DRIVEWAYS

LOCATION	530		
	6002	6004	6005
	INTERSECTION ⊙ (ACP) (SY)	DRIVEWAYS ⊙(CONC) (SY)	DRIVEWAYS ⊙ (ACP) (SY)
	EST.	EST.	EST.
FM 1925	2284	106	398
BRUSHLINE			78
GRAND TOTAL	2284	106	476

⊙ SEE DRIVEWAY TABLE SHEET FOR PRIVATE & INTERSECTION LOCATIONS. "INTERSECTIONS" SHALL BE CONSIDERED PUBLIC DRIVEWAYS AND SHALL BE CONSTRUCTED TO THE PROPOSED ROADWAY ACP, FLEXBASE, AND SUBGRADE THICKNESSES.

SUMMARY OF MAILBOXES

LOCATION	560
	6007
	MAILBOX INSTALL-S (WC-POST) TY 3 EA
	EST.
FM 1925	
STA. 343+24.05 (LT)	1
GRAND TOTAL	1

SUMMARY OF PROP. IRRIGATION STRUCTURES

LOCATION	400				402	464	1007		1008	
	NON-PAY	6006	6010	6011	6001	6008	6006	6005	6001	6002
	STRUCT EXCAV (CY)	CUT & RESTORING PAV (SY)	STRUCT EXCAV (SPL) (CY)	SAND BACKFILL (CY)	TRENCH EXCAVATION PROTECTION (LF)	RCP CL III (36") (LF)	IRRIG GATE (24") EA	IRRIG WELL (30") EA	PRSSR IRRIG PVC PIPE (18") (LF)	PRSSR IRRIG PVC PIPE (24") (LF)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
FM 1925										
STA. 307+67	347	67	26	81	133	120	1	2	4	140
TOTAL	347	67	26	81	133	120	1	2	4	140

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FM 1925
SUMMARY SHEET OF ESTIMATED QUANTITIES

SHEET 1 OF 3

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:		PHR	HIDALGO	1803	02	035	017
REVIEW:	
CK:	

K:\Counties\HID\FM 1925 PHII(907 to Uresti)\01 GENERAL\05 E&O\FM1925_EQ.dgn

12/5/2023

SUMMARY OF TRAFFIC CONTROL ITEMS

	502	508	512		545		662								677					6185
	6001	6001	6005	6053	6005	6019	6008	6012	6016	6017	6037	6050	6109	6111	6001	6002	6007	6008	6012	6002
TCP PHASE	BARRICADES, SIGNS AND TRAFFIC HANDLING (MO)	CONSTRUCTING DETOUR (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1) (LF)	PORT CTB (REMOVE) F-SHAPE TYPE 1 (LF)	CRASH CUSH ATTEN (REMOVE) (EA)	CRASH CUSH ATTEN (INSTL) (S)(N)(TL3) (EA)	WK ZN PAV MRK NON-REMOV (W) 6" (SLD) (LF)	WK ZN PAV MRK NON-REMOV (W) 8" (SLD) (LF)	WK ZN PAV MRK NON-REMOV (W) 24" (SLD) (LF)	WK ZN PAV MRK NON-REMOV (W) (ARROW) (LF)	WK ZN PAV MRK NON-REMOV (Y) 6" (SLD) (LF)	WK ZN PAV MRK REMOV (REFL) TY II-A-A (LF)	WK ZN PAV MRK SHT TERM TY W (LF)	WK ZN PAV MRK SHT TERM TY Y-2 (LF)	ELIM EXT PAVE MRK & MRKS (4") (LF)	ELIM EXT PAVE MRK & MRKS (6") (LF)	ELIM EXT PAVE MRK & MRKS (24") (LF)	ELIM EXT PAVE MRK & MRKS ARROW (LF)	ELIM EXT PAVE MRK & MRKS WORD (LF)	TMA (STATIONARY) (DAY)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
PHASE I																				
PHASE I - SHEET 1 OF 5																				
PHASE I - SHEET 2 OF 5		20																		
PHASE I - SHEET 3 OF 5		689																		
PHASE I - SHEET 4 OF 5		1268																		
PHASE I - SHEET 5 OF 5																				
PHASE II																				
PHASE II - SHEET 1 OF 5			522	522	1	1	3200				3200	80			4296					
PHASE II - SHEET 2 OF 5			2138	2138	4	4	4440				4440	112			5325					
PHASE II - SHEET 3 OF 5			2101	2101	4	4	4417	100	38	1	6038	151			10136		26	2	1	
PHASE II - SHEET 4 OF 5		340	162	162	1	1	4522				4522	113			8585					
PHASE II - SHEET 5 OF 5																				
PHASE II - STEP 2																				
PHASE III																				
PHASE III - SHEET 1 OF 6							620				620	16			1914					
PHASE III - SHEET 2 OF 6							3516				3516	88			3960					
PHASE III - SHEET 3 OF 6							4454				4454	111								
PHASE III - SHEET 4 OF 6							4605	100	38	1	6490	162								
PHASE III - SHEET 5 OF 6							4207				4404	110				1800				
PHASE III - SHEET 6 OF 6																				
PHASE III - STEP 2																				
PHASE IV													1193	2004						
GRAND TOTAL	17	2317	4923	4923	10	10	33981	200	76	2	37684	943	1193	2004	34216	1800	26	2	1	24

SUMMARY OF REMOVAL OF CONCRETE ITEMS AND PROPOSED CONCRETE ITEMS

	104				496					529		531	
	6009	6013	6017	6022	6002	6004	6007	6016	6051	6028	6031	6004	6005
	REMOVING CONC (RIPRAP) (SY)	REMOVING CONC (FOUNDATIONS) (SY)	REMOVING CONC (DRIVEWAYS) (SY)	REMOVING CONC (CURB & GUTTER) (LF)	REMOVE STR (INLET) (EA)	REMOVE STR (SET) (EA)	REMOVE STR (PIPE) (LF)	REMOVE STR (PIPE) (EA)	REMOVE STR (PIPE GATE) (LF)	CONC CURB & GUTTER (TY B) (MOUNT) (LF)	CONC CURB & GUTTER (VALLEY (GUTTER) (LF)	CURB RAMPS (TY 1) (EA)	CURB RAMPS (TY 2) (EA)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
P & P SHEET													
1 OF 20													
2 OF 20				10						110			
3 OF 20					2	2	85		24	1000			
4 OF 20						2	53			1000			
5 OF 20									25	991	167		
6 OF 20										970	100		
7 OF 20						4	117			1005	85		
8 OF 20										1000			
9 OF 20						2	60			974	98		
10 OF 20					2	2	102			1000	166		
11 OF 20										1000			
12 OF 20										1000			
13 OF 20			384			4	118		47	1007		1	2
14 OF 20		33	60						27	1000			
15 OF 20										1011			
16 OF 20						6	105			847	149		
17 OF 20													
18 OF 20													
19 OF 20													
20 OF 20													
U & D SHEET													
15 OF 18							40	1					
IRRIGATION													
STA. 307+67							144						
OUTFALL	18												
GRAND TOTAL	18	33	444	10	4	22	824	1	123	13915	765	1	2

SUMMARY OF REFLECTORIZED PVMT. MARKINGS, PREFAB. PVMT. MARKINGS, & REFLECTORIZED PVMT. MARKERS

PAVEMENT MARKING SHEET	666									672	
	6018	6036	6048	6054	6078	6306	6309	6318	6321	6007	6009
	REFL PAV MRK TY I (W) 6" (DOT) (100MIL) (LF)	REFL PAV TY I (W) 8" (SLD) (100MIL) (LF)	REFL PAV TY I (W) 24" (100MIL) (LF)	REFL PAV TY I (W)(ARROW) (100MIL) (EA)	REFL PAV TY I (W)(WORD) (100MIL) (EA)	RE PM W/ RET REQ TY (W) 6" (BRK) (100MIL) (LF)	RE PM W/ RET REQ TY (W) 6" (SLD) (100MIL) (LF)	RE PM W/ RET REQ TY (Y) 6" (BRK) (100MIL) (LF)	RE PM W/ RET REQ TY (Y) 6" (SLD) (100MIL) (LF)	REFL PAV MRKR TY I-C (EA)	REFL PAV MRKR TY II-A-A (EA)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
FM 1925											
SHEET 1 OF 5						300	1220	230	1220	16	40
SHEET 2 OF 6			40			1000	3830	960	3980	50	96
SHEET 3 OF 6			70			1000	3910	955	3820	50	96
SHEET 4 OF 6		620	260	2	2	960	3950	480	4380	79	161
SHEET 5 OF 6	207		60	2		450	4040	580	5460	23	129
SHEET 6 OF 6							2190		3420		84
GRAND TOTAL	207	620	430	4	2	3710	19140	3205	22280	218	606

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FM 1925
SUMMARY SHEET OF ESTIMATED QUANTITIES

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		018
REVIEW:								
CK:								

SUMMARY OF PROP. DRAINAGE STRUCTURES

	ITEM 400				ITEM 402	ITEM 432	ITEM 464								ITEM 465
	NON-PAY	6006	6010	6011	6001	6002	6003	6038	6039	6040	6041	6042	6043	6044	6006
SHEET NO.	STRUCT EXCAV ⊗ (CY)	CUT & RESTORE PAV (SY)	STRUCT EXCAV (SPL) (CY)	SAND BACKFILL (CY)	TRENCH EXCAVATION PROTECTION (LF)	RIRRAP (CONC) (5") (CY)	RC PIPE (CL III) (18") (LF)	RC PIPE (CL III) (18") (SPL) (LF)	RC PIPE (CL III) (24") (SPL) (LF)	RC PIPE (CL III) (30") (SPL) (LF)	RC PIPE (CL III) (36") (SPL) (LF)	RC PIPE (CL III) (42") (SPL) (LF)	RC PIPE (CL III) (48") (SPL) (LF)	RC PIPE (CL III) (54") (SPL) (LF)	JCTBOX (COMPL) (PJB) (4'X4') (EA)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
U&D SHEETS															
1 OF 18															
2 OF 18	331			144	295			81	295						
3 OF 18	636			268	630			240		390					
4 OF 18	839	39		266	540					540					
5 OF 18	590	41		255	508			163			345				
6 OF 18	651			280	549			159			390				
7 OF 18	1580	42		644	738			78				355	305		
8 OF 18	1391	70		639	636			156					480		
9 OF 18	1513	65		622	449									449	
10 OF 18	1450			470	724			79				645			
11 OF 18	797			294	503			79			234	190			
12 OF 18	992	29		345	687			160	86		441				1
13 OF 18	781			320	650			160		195	295				
14 OF 18	715			318	674			80		594					
15 OF 18	384	11		184	192			166	193	109					
16 OF 18															
17 OF 18															
18 OF 18							40								
OUTFALL	506		29	172	166	43						83		83	
GRAND TOTAL	13156	297	29	5221	7941	43	40	1601	574	1828	1705	1273	785	532	1

⊗ FOR CONTRACTORS USE ONLY (NON-PAY)

SUMMARY OF PROP. DRAINAGE STRUCTURES

	ITEM 465																	ITEM 467
	6014	6018	6030	6031	6032	6034	6035	6036	6038	6039	6040	6042	6043	6044	6071	6076	6149	6363
SHEET NO.	INLET (COMPL) (PCO)(3') (LEFT) (EA)	INLET (COMPL) (PCO)(4') (LEFT) (EA)	INLET (COMPL) (PCU)(3') (LEFT) (EA)	INLET (COMPL) (PCU)(3') (RIGHT) (EA)	INLET (COMPL) (PCU)(3') (BOTH) (EA)	INLET (COMPL) (PCU)(4') (LEFT) (EA)	INLET (COMPL) (PCU)(4') (RIGHT) (EA)	INLET (COMPL) (PCU)(4') (BOTH) (EA)	INLET (COMPL) (PCU)(5') (LEFT) (EA)	INLET (COMPL) (PCU)(5') (RIGHT) (EA)	INLET (COMPL) (PCU)(5') (BOTH) (EA)	INLET (COMPL) (PCU)(6') (LEFT) (EA)	INLET (COMPL) (PCU)(6') (RIGHT) (EA)	INLET (COMPL) (PCU)(6') (BOTH) (EA)	INLET (COMPL) (PSL)(RC) (4'X4') (EA)	INLET (COMPL) (PSL)(RC) (6'X6') (EA)	INLET (COMPL) (PAZD)(SL) 3FTX3FT) (EA)	SET (TY II) (18") (RCP) (6:1)(P) (EA)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
U&D SHEETS																		
1 OF 18																		
2 OF 18			1	1														
3 OF 18			1	1	1	1	1	1										
4 OF 18															1			
5 OF 18				2		2												
6 OF 18			1		1			1		1								
7 OF 18				1								1				1		
8 OF 18			1		1							1	2	1				
9 OF 18																2		
10 OF 18				1					1									
11 OF 18					1				1	1	1							
12 OF 18			1	1		1	1										1	
13 OF 18				1	1	1		1										
14 OF 18			1				1											
15 OF 18	1	1		2											1			
16 OF 18																		
17 OF 18																		
18 OF 18																		2
OUTFALL																		
GRAND TOTAL	1	1	6	10	5	5	3	3	2	2	1	2	2	1	2	3	1	2

SUMMARY OF SEDIMENT CONTROL DEVICES

	164	164	166	168	506								
	6028	6030	NON-PAY	6001	6002	6011	6021	6024	6038	6039	6041	6043	6045
SW3P LAYOUT SHEET	CELL FBR MLCH SEED (PERM)(URBAN) (CLAY) (ACRE)	CELL FBR MLCH SEED (TEMP) (WARM) (ACRE)	FERTILIZER ⊗ (TON)	VEGETATIVE WATERING (MG)	ROCK FILTER DAMS (INSTALL) (TY 2) (LF	ROCK FILTER DAMS (REMOVE) (LF	CONSTRUCTION EXIT (INSTALL) (TY 2) (SY)	CONSTRUCTION EXIT (REMOVE) (SY)	TEMP SEDMT CONT FENCE (INSTALL) (LF)	TEMP SEDMT CONT FENCE (REMOVE) (LF)	BIODEGRADABLE EROSION CNTRL LOGS (12" DIA) INSTALL (LF)	BIODEGRADABLE EROSION CNTRL LOGS REMOVE (LF)	BIODEGRADABLE EROSION CNTRL LOGS (6" DIA) INSTALL (LF)
	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.	EST.
FM 1925													
SHEET 1 OF 4 (PHASE I)													
SHEET 2 OF 4 (PHASE I)		0.09					78	78					
SHEET 3 OF 4 (PHASE I)		0.98											
SHEET 4 OF 4 (PHASE I)		0.84					78	78					
SHEET 1 OF 4 (PHASE II)	0.67	0.67	0.17	102			78	78				80	80
SHEET 2 OF 4 (PHASE II)	0.95	0.95	0.24	145	35	35	78	78	345	345		130	130
SHEET 3 OF 4 (PHASE II)	0.99	0.99	0.25	151							20	165	145
SHEET 4 OF 4 (PHASE II)	1.04	1.04	0.26	159			78	78				30	30
SHEET 1 OF 4 (PHASE III)	0.72	0.72	0.18	110			78	78				80	80
SHEET 2 OF 4 (PHASE III)	0.98	0.98	0.25	150								100	100
SHEET 3 OF 4 (PHASE III)	1.01	1.01	0.25	154								115	115
SHEET 4 OF 4 (PHASE III)	0.81	0.81	0.20	124			78	78				30	30
GRAND TOTAL	7.17	9.08	1.80	1095	35	35	546	546	345	345	20	730	710

⊗ FOR CONTRACTORS USE ONLY (NON-PAY)

NOTES:
1. FERTILIZER APPLICATION RATE = 3394 GAL/AC @ 45 CYCLES.
2. VEGETATIVE WATERING APPLICATION RATE = 3394 GAL/AC @ 45 CYCLES.

THE COUNTY OF HIDALGO TEXAS

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Structural / Bridge
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FM 1925
SUMMARY SHEET OF ESTIMATED QUANTITIES

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:		PHR	HIDALGO	1803	02	035	019
REVIEW:							
CK:							

K:\Counties\HID\FM 1925 PHII\907 to Uresti\01 GENERAL\05 E&Q\FM1925_EQ.dgn

12/5/2023

Station	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass Ordinate
261+50.00	DIRT					
	Excavation	88.6	0	0	1	
	Fill	13.2	0	0	1	0
262+00.00	DIRT					
	Excavation	85.9	162	162	1	
	Fill	20.9	32	32	1	130
263+00.00	DIRT					
	Excavation	105.1	354	354	1	
	Fill	12.3	61	61	1	423
264+00.00	DIRT					
	Excavation	133.4	442	442	1	
	Fill	10.8	43	43	1	822
265+00.00	DIRT					
	Excavation	162.7	548	548	1	
	Fill	8.9	36	36	1	1334
266+00.00	DIRT					
	Excavation	192.3	657	657	1	
	Fill	6.9	29	29	1	1962
267+00.00	DIRT					
	Excavation	187.6	704	704	1	
	Fill	6.2	24	24	1	2642
268+00.00	DIRT					
	Excavation	198.1	714	714	1	
	Fill	3.8	19	19	1	3337
269+00.00	DIRT					
	Excavation	245.3	821	821	1	
	Fill	1.7	10	10	1	4148
270+00.00	DIRT					
	Excavation	280	973	973	1	
	Fill	1	5	5	1	5116
271+00.00	DIRT					
	Excavation	266.1	1011	1011	1	
	Fill	0.5	3	3	1	6124
272+00.00	DIRT					
	Excavation	238.9	935	935	1	
	Fill	0.3	1	1	1	7058
273+00.00	DIRT					
	Excavation	181.6	779	779	1	
	Fill	0	1	1	1	7836
274+00.00	DIRT					
	Excavation	204.3	715	715	1	
	Fill	7.4	14	14	1	8537
275+00.00	DIRT					
	Excavation	218	782	782	1	
	Fill	5.9	25	25	1	9294
276+00.00	DIRT					
	Excavation	199.5	773	773	1	
	Fill	4.8	20	20	1	10047
277+00.00	DIRT					
	Excavation	252.6	837	837	1	
	Fill	2.4	13	13	1	10871
278+00.00	DIRT					
	Excavation	321.3	1063	1063	1	
	Fill	1.6	7	7	1	11927
279+00.00	DIRT					
	Excavation	325.2	1197	1197	1	
	Fill	0.9	5	5	1	13119
280+00.00	DIRT					
	Excavation	322.5	1199	1199	1	
	Fill	1.1	4	4	1	14314
281+00.00	DIRT					
	Excavation	341.2	1229	1229	1	
	Fill	0.2	2	2	1	15541
282+00.00	DIRT					
	Excavation	363	1304	1304	1	
	Fill	0.9	2	2	1	16843
283+00.00	DIRT					
	Excavation	363	1344	1344	1	
	Fill	0	2	2	1	18185
284+00.00	DIRT					
	Excavation	322.1	1269	1269	1	
	Fill	1.1	2	2	1	19452
285+00.00	DIRT					
	Excavation	263.4	1084	1084	1	
	Fill	2.6	7	7	1	20529
286+00.00	DIRT					
	Excavation	200.7	859	859	1	
	Fill	3.1	11	11	1	21377
287+00.00	DIRT					
	Excavation	210.3	761	761	1	
	Fill	3.5	12	12	1	22126
288+00.00	DIRT					
	Excavation	226.6	809	809	1	
	Fill	5.1	16	16	1	22919
289+00.00	DIRT					
	Excavation	210.6	810	810	1	
	Fill	2.9	15	15	1	23714
290+00.00	DIRT					
	Excavation	219	796	796	1	
	Fill	4.4	14	14	1	24496
291+00.00	DIRT					
	Excavation	237.1	845	845	1	
	Fill	3.6	15	15	1	25326
292+00.00	DIRT					
	Excavation	252.7	907	907	1	
	Fill	3.4	13	13	1	26220
293+00.00	DIRT					
	Excavation	281.6	989	989	1	
	Fill	1.9	10	10	1	27199
294+00.00	DIRT					
	Excavation	258.3	1000	1000	1	
	Fill	2	7	7	1	28192
295+00.00	DIRT					
	Excavation	297.7	1030	1030	1	
	Fill	2.5	8	8	1	29214
296+00.00	DIRT					
	Excavation	262.5	1037	1037	1	
	Fill	3.5	11	11	1	30240
297+00.00	DIRT					
	Excavation	232.7	917	917	1	
	Fill	2.7	11	11	1	31146
298+00.00	DIRT					
	Excavation	208.5	817	817	1	
	Fill	4	12	12	1	31951
299+00.00	DIRT					
	Excavation	173.5	707	707	1	
	Fill	2.7	12	12	1	32646
300+00.00	DIRT					
	Excavation	121.1	546	546	1	
	Fill	8.8	21	21	1	33171
301+00.00	DIRT					
	Excavation	114.4	436	436	1	
	Fill	15	44	44	1	33563
302+00.00	DIRT					
	Excavation	114.1	423	423	1	
	Fill	17.4	60	60	1	33926
303+00.00	DIRT					
	Excavation	161.1	510	510	1	
	Fill	5.6	43	43	1	34393
304+00.00	DIRT					
	Excavation	187.8	646	646	1	
	Fill	4.6	19	19	1	35020
305+00.00	DIRT					
	Excavation	210.1	737	737	1	
	Fill	4.1	16	16	1	35741
306+00.00	DIRT					
	Excavation	234.2	823	823	1	
	Fill	3.6	14	14	1	36550
307+00.00	DIRT					
	Excavation	269.3	932	932	1	
	Fill	3.1	12	12	1	37470
308+00.00	DIRT					
	Excavation	301.6	1057	1057	1	
	Fill	2.7	11	11	1	38516
309+00.00	DIRT					
	Excavation	306.9	1127	1127	1	
	Fill	2.7	10	10	1	39633
310+00.00	DIRT					
	Excavation	290.8	1107	1107	1	
	Fill	2.9	10	10	1	40730
311+00.00	DIRT					
	Excavation	263.8	1027	1027	1	
	Fill	3.9	13	13	1	41744
312+00.00	DIRT					
	Excavation	227.3	909	909	1	
	Fill	5.7	18	18	1	42635
313+00.00	DIRT					
	Excavation	184.6	763	763	1	
	Fill	6	22	22	1	43376
314+00.00	DIRT					
	Excavation	140.7	602	602	1	
	Fill	18	44	44	1	43934

K:\Counties\HDV\FM 1925 PHR\907 to Urestil\01 GENERAL\05 E&G\FM1925_EW_TABLES.dgn

10/31/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
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Structural / Bridge
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FM 1925 EARTHWORK TABLES

SHEET 1 OF 2

DRAWING:	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:	6	TEXAS					FM1925
ENGINEER:	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:	PHR	HIDALGO	1803	02	035		020
REVIEW:							
CK:							

Station	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass Ordinate
315+00.00	DIRT					
	Excavation	151.2	541	541	1	
	Fill	9.5	51	51	1	44424
316+00.00	DIRT					
	Excavation	140.1	539	539	1	
	Fill	8.4	33	33	1	44930
317+00.00	DIRT					
	Excavation	196.2	623	623	1	
	Fill	6.8	28	28	1	45525
318+00.00	DIRT					
	Excavation	249.7	826	826	1	
	Fill	5.1	22	22	1	46329
319+00.00	DIRT					
	Excavation	315.8	1047	1047	1	
	Fill	2.9	15	15	1	47361
320+00.00	DIRT					
	Excavation	303.4	1147	1147	1	
	Fill	1.5	8	8	1	48500
321+00.00	DIRT					
	Excavation	334.1	1181	1181	1	
	Fill	0	3	3	1	49678
322+00.00	DIRT					
	Excavation	353	1272	1272	1	
	Fill	0	0	0	1	50950
323+00.00	DIRT					
	Excavation	332.8	1270	1270	1	
	Fill	0	0	0	1	52220
324+00.00	DIRT					
	Excavation	299.5	1171	1171	1	
	Fill	0	0	0	1	53391
325+00.00	DIRT					
	Excavation	263	1042	1042	1	
	Fill	0	0	0	1	54433
326+00.00	DIRT					
	Excavation	245.4	941	941	1	
	Fill	0	0	0	1	55374
327+00.00	DIRT					
	Excavation	211.6	846	846	1	
	Fill	1.1	2	2	1	56218
328+00.00	DIRT					
	Excavation	216.9	794	794	1	
	Fill	4.4	10	10	1	57002
329+00.00	DIRT					
	Excavation	184.3	743	743	1	
	Fill	7.1	21	21	1	57724
330+00.00	DIRT					
	Excavation	162.9	643	643	1	
	Fill	8.6	29	29	1	58338
331+00.00	DIRT					
	Excavation	151.8	583	583	1	
	Fill	8.6	32	32	1	58889
332+00.00	DIRT					
	Excavation	125.4	513	513	1	
	Fill	0	16	16	1	59386
333+00.00	DIRT					
	Excavation	92.5	404	404	1	
	Fill	0	0	0	1	59790
334+00.00	DIRT					
	Excavation	49.6	263	263	1	
	Fill	1.3	2	2	1	60051
335+00.00	DIRT					
	Excavation	19.6	128	128	1	
	Fill	10.7	22	22	1	60157
336+00.00	DIRT					
	Excavation	6.7	49	49	1	
	Fill	30.5	76	76	1	60130
337+00.00	DIRT					
	Excavation	9.2	29	29	1	
	Fill	51.7	152	152	1	60007
338+00.00	DIRT					
	Excavation	14.4	44	44	1	
	Fill	30.3	152	152	1	59899
339+00.00	DIRT					
	Excavation	18.2	60	60	1	
	Fill	10.7	76	76	1	59883
340+00.00	DIRT					
	Excavation	33.8	96	96	1	
	Fill	6.3	31	31	1	59948
341+00.00	DIRT					
	Excavation	43.1	142	142	1	
	Fill	4.2	19	19	1	60071
342+00.00	DIRT					
	Excavation	45.7	164	164	1	
	Fill	4.3	16	16	1	60219
343+00.00	DIRT					
	Excavation	42.4	163	163	1	
	Fill	8.1	23	23	1	60359

GRAND SUMMARY TOTALS

	Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
-----	DIRT				
		Excavation	62089	62089	1
		Fill	1730	1730	1

GRAND SUMMARY TOTALS

	Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
-----	DIRT				
		Excavation	62089	62089	1
		Fill	1730	1730	1

Ⓐ ITEM 110 (EXCAVATION) INCLUDES THE REMOVAL OF EXIST. ACP AND BASE MATERIAL FROM FM 1925 ROADWAY THAT IS IN THE CUT PLAIN OF THE PROPOSED TYPICAL SECTION AND SHAL NOT BE USED AS SALVAGE MATERIAL.

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FM 1925 EARTHWORK TABLES

SHEET 2 OF 2

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:		PHR	HIDALGO	1803	02	035	021
REVIEW:							
CK:							

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 1803-02-035 **DISTRICT** Pharr **COUNTY** Hidalgo
HIGHWAY FM 1925

			CONTROL SECTION JOB		**1803-02-035**	TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00111487**		
			COUNTY		**Hidalgo**		
			HIGHWAY		**FM 1925**		
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	100-6002	PREPARING ROW	STA	82.640		82.640	
	104-6009	REMOVING CONC (RIPRAP)	SY	18.000		18.000	
	104-6013	REMOVING CONC (FOUNDATIONS)	SY	33.000		33.000	
	104-6017	REMOVING CONC (DRIVEWAYS)	SY	444.000		444.000	
	104-6022	REMOVING CONC (CURB AND GUTTER)	LF	10.000		10.000	
	110-6001	EXCAVATION (ROADWAY)	CY	62,089.000		62,089.000	
	132-6006	EMBANKMENT (FINAL)(DENS CONT)(TY C)	CY	1,730.000		1,730.000	
	160-6005	FURNISHING AND PLACING TOPSOIL	CY	50.000		50.000	
	164-6028	CELL FBR MLCH SEED(PERM)(URBAN)(CLAY)	AC	7.170		7.170	
	164-6030	CELL FBR MLCH SEED(TEMP)(WARM)	AC	9.080		9.080	
	168-6001	VEGETATIVE WATERING	MG	1,095.000		1,095.000	
	204-6003	SPRINKLING (DUST CONTROL)	MG	661.000		661.000	
	247-6225	FL BS (RDWY DEL)(TY E GR 4)(FNAL POS)	CY	20,621.000		20,621.000	
	260-6011	LIME TRT (EXST MATL) (12")	SY	77,364.000		77,364.000	
	260-6043	LIME (HYD, COM OR QK)(SLURRY)	TON	1,532.000		1,532.000	
	275-6001	CEMENT	TON	696.000		696.000	
	275-6031	CEMENT TREAT (NEW BASE) (10")	SY	76,446.000		76,446.000	
	310-6009	PRIME COAT (MC-30)	GAL	14,284.000		14,284.000	
	316-6005	ASPH (TIER II)	GAL	21,426.000		21,426.000	
	316-6486	AGGR (TY-D GR-4P)(SAC-B)	CY	595.000		595.000	
	354-6041	PLANE ASPH CONC PAV (1.5")	SY	10,780.000		10,780.000	
	354-6051	PLANE ASPH CONC PAV (0" TO 1 1/2")	SY	386.000		386.000	
	400-6006	CUT & RESTORING PAV	SY	364.000		364.000	
	400-6010	STRUCT EXCAV (SPECIAL)	CY	55.000		55.000	
	400-6011	SAND BACKFILL	CY	5,302.000		5,302.000	
	402-6001	TRENCH EXCAVATION PROTECTION	LF	8,074.000		8,074.000	
	416-6032	DRILL SHAFT (TRF SIG POLE) (36 IN)	LF	60.800		60.800	
	432-6002	RIPRAP (CONC)(5 IN)	CY	43.000		43.000	
	464-6003	RC PIPE (CL III)(18 IN)	LF	40.000		40.000	
	464-6008	RC PIPE (CL III)(36 IN)	LF	120.000		120.000	
	464-6038	RC PIPE (CL III)(18 IN)(SPL)	LF	1,601.000		1,601.000	
	464-6039	RC PIPE (CL III)(24 IN)(SPL)	LF	574.000		574.000	
	464-6040	RC PIPE (CL III)(30 IN)(SPL)	LF	1,828.000		1,828.000	
	464-6041	RC PIPE (CL III)(36 IN)(SPL)	LF	1,705.000		1,705.000	
	464-6042	RC PIPE (CL III)(42 IN)(SPL)	LF	1,273.000		1,273.000	
	464-6043	RC PIPE (CL III)(48 IN)(SPL)	LF	785.000		785.000	
	464-6044	RC PIPE (CL III)(54 IN)(SPL)	LF	532.000		532.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 1803-02-035 **DISTRICT** Pharr **COUNTY** Hidalgo
HIGHWAY FM 1925

			CONTROL SECTION JOB		**1803-02-035**	TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00111487**		
			COUNTY		**Hidalgo**		
			HIGHWAY		**FM 1925**		
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	465-6006	JCTBOX(COMPL)(PJB)(4FTX4FT)	EA	1.000		1.000	
	465-6014	INLET (COMPL)(PCO)(3FT)(LEFT)	EA	1.000		1.000	
	465-6018	INLET (COMPL)(PCO)(4FT)(LEFT)	EA	1.000		1.000	
	465-6030	INLET (COMPL)(PCU)(3FT)(LEFT)	EA	6.000		6.000	
	465-6031	INLET (COMPL)(PCU)(3FT)(RIGHT)	EA	10.000		10.000	
	465-6032	INLET (COMPL)(PCU)(3FT)(BOTH)	EA	5.000		5.000	
	465-6034	INLET (COMPL)(PCU)(4FT)(LEFT)	EA	5.000		5.000	
	465-6035	INLET (COMPL)(PCU)(4FT)(RIGHT)	EA	3.000		3.000	
	465-6036	INLET (COMPL)(PCU)(4FT)(BOTH)	EA	3.000		3.000	
	465-6038	INLET (COMPL)(PCU)(5FT)(LEFT)	EA	2.000		2.000	
	465-6039	INLET (COMPL)(PCU)(5FT)(RIGHT)	EA	2.000		2.000	
	465-6040	INLET (COMPL)(PCU)(5FT)(BOTH)	EA	1.000		1.000	
	465-6042	INLET (COMPL)(PCU)(6FT)(LEFT)	EA	2.000		2.000	
	465-6043	INLET (COMPL)(PCU)(6FT)(RIGHT)	EA	2.000		2.000	
	465-6044	INLET (COMPL)(PCU)(6FT)(BOTH)	EA	1.000		1.000	
	465-6071	INLET (COMPL)(PSL)(RC)(4FTX4FT)	EA	2.000		2.000	
	465-6076	INLET (COMPL)(PSL)(RC)(6FTX6FT)	EA	3.000		3.000	
	465-6149	INLET (COMPL)(PAZD)(SL)(3FTX3FT)	EA	1.000		1.000	
	467-6363	SET (TY II) (18 IN) (RCP) (6: 1) (P)	EA	2.000		2.000	
	496-6002	REMOV STR (INLET)	EA	4.000		4.000	
	496-6004	REMOV STR (SET)	EA	22.000		22.000	
	496-6007	REMOV STR (PIPE)	LF	824.000		824.000	
	496-6016	REMOV STR (PIPE)	EA	1.000		1.000	
	496-6051	REMOV STR (PIPE GATE)	LF	123.000		123.000	
	500-6001	MOBILIZATION	LS	1.000		1.000	
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	17.000		17.000	
	506-6002	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	35.000		35.000	
	506-6011	ROCK FILTER DAMS (REMOVE)	LF	35.000		35.000	
	506-6021	CONSTRUCTION EXITS (INSTALL) (TY 2)	SY	546.000		546.000	
	506-6024	CONSTRUCTION EXITS (REMOVE)	SY	546.000		546.000	
	506-6038	TEMP SEDMT CONT FENCE (INSTALL)	LF	345.000		345.000	
	506-6039	TEMP SEDMT CONT FENCE (REMOVE)	LF	345.000		345.000	
	506-6041	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	20.000		20.000	
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	730.000		730.000	
	506-6045	BIODEG EROSN CONT LOGS (INSTL) (6")	LF	710.000		710.000	
	508-6001	CONSTRUCTING DETOURS	SY	2,317.000		2,317.000	
	512-6005	PORT CTB (FUR & INST)(F-SHAPE)(TY 1)	LF	4,923.000		4,923.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 1803-02-035 **DISTRICT** Pharr **COUNTY** Hidalgo
HIGHWAY FM 1925

			CONTROL SECTION JOB		**1803-02-035**	TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00111487**		
			COUNTY		**Hidalgo**		
			HIGHWAY		**FM 1925**		
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	512-6053	PORT CTB (REMOVE)(F-SHAPE)(TY 1)	LF	4,923.000		4,923.000	
	529-6028	CONC CURB & GUTTER (TY B) (MOUNTABLE)	LF	13,915.000		13,915.000	
	529-6031	CONC CURB & GUTTER(VALLEY GUTTER)(48")	LF	765.000		765.000	
	530-6002	INTERSECTIONS (ACP)	SY	2,284.000		2,284.000	
	530-6004	DRIVEWAYS (CONC)	SY	106.000		106.000	
	530-6005	DRIVEWAYS (ACP)	SY	476.000		476.000	
	531-6004	CURB RAMPS (TY 1)	EA	1.000		1.000	
	531-6005	CURB RAMPS (TY 2)	EA	2.000		2.000	
	545-6005	CRASH CUSH ATTEN (REMOVE)	EA	10.000		10.000	
	545-6019	CRASH CUSH ATTEN (INSTL)(S)(N)(TL3)	EA	10.000		10.000	
	560-6007	MAILBOX INSTALL-S (WC-POST) TY 3	EA	1.000		1.000	
	618-6016	CONDT (PVC) (SCH 40) (1")	LF	65.000		65.000	
	618-6023	CONDT (PVC) (SCH 40) (2")	LF	935.000		935.000	
	618-6024	CONDT (PVC) (SCH 40) (2") (BORE)	LF	130.000		130.000	
	618-6029	CONDT (PVC) (SCH 40) (3")	LF	75.000		75.000	
	618-6033	CONDT (PVC) (SCH 40) (4")	LF	60.000		60.000	
	618-6034	CONDT (PVC) (SCH 40) (4") (BORE)	LF	145.000		145.000	
	620-6007	ELEC CONDR (NO.8) BARE	LF	285.000		285.000	
	620-6009	ELEC CONDR (NO.6) BARE	LF	55.000		55.000	
	620-6010	ELEC CONDR (NO.6) INSULATED	LF	110.000		110.000	
	621-6005	TRAY CABLE (4 CONDR) (12 AWG)	LF	335.000		335.000	
	624-6002	GROUND BOX TY A (122311)W/APRON	EA	8.000		8.000	
	624-6008	GROUND BOX TY C (162911)W/APRON	EA	3.000		3.000	
	625-6003	ZINC-COAT STL WIRE STRAND (3/8")	LF	1,100.000		1,100.000	
	628-6119	ELC SRV TY D 120/240 060(NS)AL(E)TS(O)	EA	1.000		1.000	
	636-6001	ALUMINUM SIGNS (TY A)	SF	214.000		214.000	
	644-6027	IN SM RD SN SUP&AM TYS80(1)SA(P)	EA	12.000		12.000	
	644-6030	IN SM RD SN SUP&AM TYS80(1)SA(T)	EA	10.000		10.000	
	644-6076	REMOVE SM RD SN SUP&AM	EA	21.000		21.000	
	662-6008	WK ZN PAV MRK NON-REMOV (W)6"(SLD)	LF	33,981.000		33,981.000	
	662-6012	WK ZN PAV MRK NON-REMOV (W)8"(SLD)	LF	200.000		200.000	
	662-6016	WK ZN PAV MRK NON-REMOV (W)24"(SLD)	LF	76.000		76.000	
	662-6017	WK ZN PAV MRK NON-REMOV (W)(ARROW)	EA	2.000		2.000	
	662-6037	WK ZN PAV MRK NON-REMOV (Y)6"(SLD)	LF	37,684.000		37,684.000	
	662-6050	WK ZN PAV MRK REMOV (REFL) TY II-A-A	EA	943.000		943.000	
	662-6109	WK ZN PAV MRK SHT TERM (TAB)TY W	EA	1,193.000		1,193.000	
	662-6111	WK ZN PAV MRK SHT TERM (TAB)TY Y-2	EA	2,004.000		2,004.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 1803-02-035 **DISTRICT** Pharr **COUNTY** Hidalgo
HIGHWAY FM 1925

							TOTAL EST.	TOTAL FINAL
			CONTROL SECTION JOB		**1803-02-035**			
			PROJECT ID		**A00111487**			
			COUNTY		**Hidalgo**			
			HIGHWAY		**FM 1925**			
ALT	**BID CODE**	**DESCRIPTION**		**UNIT**	EST.	FINAL		
	666-6018	REFL PAV MRK TY I (W)6"(DOT)(100MIL)		LF	207.000		207.000	
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)		LF	620.000		620.000	
	666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)		LF	430.000		430.000	
	666-6054	REFL PAV MRK TY I (W)(ARROW)(100MIL)		EA	4.000		4.000	
	666-6078	REFL PAV MRK TY I (W)(WORD)(100MIL)		EA	2.000		2.000	
	666-6306	RE PM W/RET REQ TY I (W)6"(BRK)(100MIL)		LF	3,710.000		3,710.000	
	666-6309	RE PM W/RET REQ TY I (W)6"(SLD)(100MIL)		LF	19,140.000		19,140.000	
	666-6318	RE PM W/RET REQ TY I (Y)6"(BRK)(100MIL)		LF	3,205.000		3,205.000	
	666-6321	RE PM W/RET REQ TY I (Y)6"(SLD)(100MIL)		LF	22,280.000		22,280.000	
	672-6007	REFL PAV MRKR TY I-C		EA	218.000		218.000	
	672-6009	REFL PAV MRKR TY II-A-A		EA	606.000		606.000	
	677-6001	ELIM EXT PAV MRK & MRKS (4")		LF	34,216.000		34,216.000	
	677-6002	ELIM EXT PAV MRK & MRKS (6")		LF	1,800.000		1,800.000	
	677-6007	ELIM EXT PAV MRK & MRKS (24")		LF	26.000		26.000	
	677-6008	ELIM EXT PAV MRK & MRKS (ARROW)		EA	2.000		2.000	
	677-6012	ELIM EXT PAV MRK & MRKS (WORD)		EA	1.000		1.000	
	680-6002	INSTALL HWY TRF SIG (ISOLATED)		EA	1.000		1.000	
	680-6004	REMOVING TRAFFIC SIGNALS		EA	1.000		1.000	
	681-6001	TEMP TRAF SIGNALS		EA	1.000		1.000	
	682-6001	VEH SIG SEC (12")LED(GRN)		EA	6.000		6.000	
	682-6002	VEH SIG SEC (12")LED(GRN ARW)		EA	1.000		1.000	
	682-6003	VEH SIG SEC (12")LED(YEL)		EA	6.000		6.000	
	682-6004	VEH SIG SEC (12")LED(YEL ARW)		EA	2.000		2.000	
	682-6005	VEH SIG SEC (12")LED(RED)		EA	6.000		6.000	
	682-6006	VEH SIG SEC (12")LED(RED ARW)		EA	1.000		1.000	
	682-6018	PED SIG SEC (LED)(COUNTDOWN)		EA	4.000		4.000	
	682-6054	BACKPLATE W/REF BRDR(3 SEC)(VENT)ALUM		EA	6.000		6.000	
	682-6055	BACKPLATE W/REF BRDR(4 SEC)(VENT)ALUM		EA	1.000		1.000	
	684-6008	TRF SIG CBL (TY A)(12 AWG)(3 CONDR)		LF	420.000		420.000	
	684-6010	TRF SIG CBL (TY A)(12 AWG)(5 CONDR)		LF	975.000		975.000	
	684-6012	TRF SIG CBL (TY A)(12 AWG)(7 CONDR)		LF	220.000		220.000	
	684-6027	TRF SIG CBL (TY A)(14 AWG)(1 CONDR)		LF	130.000		130.000	
	684-6080	TRF SIG CBL (TY C)(14 AWG)(2 CONDR)		LF	1,665.000		1,665.000	
	686-6019	INS TRF SIG PL AM (S)STR(TY D)		EA	2.000		2.000	
	686-6020	INS TRF SIG PL AM (S)STR(TY D)LUM		EA	2.000		2.000	
	687-6001	PED POLE ASSEMBLY		EA	1.000		1.000	
	688-6001	PED DETECT PUSH BUTTON (APS)		EA	4.000		4.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 1803-02-035 **DISTRICT** Pharr **COUNTY** Hidalgo
HIGHWAY FM 1925

			CONTROL SECTION JOB		**1803-02-035**	TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00111487**		
			COUNTY		**Hidalgo**		
			HIGHWAY		**FM 1925**		
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	688-6003	PED DETECTOR CONTROLLER UNIT	EA	1.000		1.000	
	688-6004	VEH LP DETECT (SAWCUT)	LF	1,270.000		1,270.000	
	1007-6005	IRRIGATION WELL (30")	EA	2.000		2.000	
	1007-6006	IRRIGATION GATE (24")	EA	1.000		1.000	
	1008-6001	PRSSR IRRIG PVC PIPE (18")	LF	4.000		4.000	
	1008-6002	PRSSR IRRIG PVC PIPE (24")	LF	140.000		140.000	
	3077-6065	SP MIXES SP-D SAC-A PG76-22	TON	13,150.000		13,150.000	
	3084-6001	BONDING COURSE	GAL	4,999.000		4,999.000	
	6185-6002	TMA (STATIONARY)	DAY	24.000		24.000	
	18	EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)	LS	1.000		1.000	
		SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000		1.000	

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.

ALWAYS COMPLETE THE PROPOSED DRIVEWAYS DURING THEIR TCP PHASE BEFORE SWITCHING TRAFFIC TO A NEW PHASE UNLESS DIRECTED BY THE ENGINEER.

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 AREA ENGINEER(AE) 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 DEPARTMENT'S 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 AE 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:

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF ITEM 7, "LEGAL RELATIONS AND RESPONSIBILITIES" OF THE STANDARD SPECIFICATIONS

IRRIGATION AND DRAINAGE STRUCTURES SHALL BE CONSTRUCTED ONCE COORDINATION BETWEEN THE CONTRACTOR, IRRIGATION DISTRICT & DRAINAGE DISTRICT HAS BEEN COMPLETED. CONTRACTOR SHALL THEN NOTIFY THE IRRIGATION / DRAINAGE DISTRICT(S) TWO (2) WEEKS PRIOR TO CONSTRUCTION OF THE STRUCTURES.

THE PORTION OF THE PROJECT WHICH COINCIDES WITH EXISTING ROADS AND/OR PRIVATE DRIVES SHALL BE KEPT OPEN TO TRAFFIC AT ALL TIMES UNLESS OTHERWISE PROVIDED FOR OR APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY TXDOT AND COUNTY OFFICIALS A MINIMUM OF THREE (3) DAYS PRIOR TO CLOSING ANY ROADWAYS AND/OR TURNOUTS.

THE CONTRACTOR SHALL USE THE NECESSARY TCP STANDARDS FOR INSTALLATION OF THE IRRIGATION CROSSING IN CONJUNCTION WITH THE CUT & RESTORE WORK PER PHASE OF CONSTRUCTION.

CONSTRUCT DETOUR AND ADJUST/RELOCATE EXISTING SIDE DRAINS AS NECESSARY TO MAINTAIN PROPER DRAINAGE. ADJUSTMENT/RELOCATION OF EXISTING SIDE DRAINS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO ITEM 508 "CONSTRUCTING DETOURS."

ALL STORM DRAIN LATERALS SHALL BE PLUGGED TEMPORARILY DURING CONSTRUCTION WHEN CONSTRUCTED HALF AT A TIME.

WHEN CONNECTING PROPOSED ROADWAY AND/OR DETOURS TO SECTIONS OF EXISTING PAVEMENT BEING USED BY TRAFFIC AND SUCH OPERATIONS RESULT IN A DROPOOFF OF MORE THAN TWO (2) INCHES, A FOUR (4) FOOT BUFFER ZONE OR 3:1 SLOPE WILL BE REQUIRED. THE SLOPE MUST BE CONSTRUCTED WITH A COMPACTED MATERIAL CAPABLE OF SUPPORTING VEHICLES, AS APPROVED BY THE ENGINEER. THIS WORK SHALL BE DONE EXPEDITIOUSLY DURING DAYLIGHT HOURS.

INTERSECTIONS SHALL BE CONSTRUCTED ONE AT A TIMEI AND RE-OPENED TO TRAFFIC WHEN CONSTRUCTION OF INTERSECTING ROADWAY IS COMPLETED.

THE CONTRACTOR WILL NOT BE ALLOWED TO PARK EQUIPMENT WITHIN IRRIGATION DISTRICT ROW AS TO AVOID DAMAGE TO EXISTING IRRIGATION LINES / STRUCTURES.

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID DAMAGING THE FINAL PAVEMENT LAYER.

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

PHARR DISTRICT STANDARD

TRAFFIC CONTROL PLAN NOTES

SHEET 1 OF 1 SHEETS

Texas Department of Transportation

Rev 03/22/2017

STATE	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.			SHEET NO.
TEXAS	6				025
DIST.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
PHR	HIDALGO	1803	02	035	FM 1925

PHASE I

THIS PHASE CONSISTS OF THE CONSTRUCTION OF IRRIGATION CROSSING, TEMPORARY DETOUR

1. 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 FINAL ACCEPTANCE OF THE PROJECT BY THE TXDOT ENGINEER

2. THE CONTRACTOR SHALL CONSTRUCT THE IRRIGATION CROSSING (STA. 307+67.61) USING THE NECESSARY TCP STANDARDS IN CONJUNCTION WITH THE CUT & RESTORE WORK.

3. THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY DETOUR FROM STA. 300+94.24 (RT) TO STA. 346+48.47 (RT). AS SHOWN ON THE TCP TYPICAL SECTIONS AND LAYOUTS. TRAFFIC TO REMAIN ON THE EXISTING ROADWAY.

4. INSTALL EROSION CONTROL LOGS, SILT FENCES, AND ANY OTHER REQUIRED STORM WATER POLLUTION PREVENTION (SW3P) STRUCTURES AS SHOWN ON THE SW3P LAYOUTS AND STANDARDS PERTAINING TO PHASE I CONSTRUCTION.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE AT ALL TIMES DURING CONSTSRUCTION.

PHASE II - STEP 1

THIS PHASE CONSISTS OF THE CONSTRUCTION OF NORTH HALF OF ROADWAY, STORM DRAIN TRUNKLINE & LATERALS

1. ELIMINATE EXISTING ROADWAY STRIPING, AS REQUIRED, AND RESTRIPE AND UTILIZE EXISTING FM 1925 FOR TWO 11' LANES OF TRAFFIC AS SHOWN ON THE TCP LAYOUTS AND TYPICAL SECTIONS.

2. ADJUST THE EXISTING TRAFFIC SIGNAL AT INTERSECTION OF BRUSHLINE ROAD AS SHOWN ON TEMPORARY TRAFFIC SIGNAL LAYOUT PHASE II. PROVIDE APPROPRIATE TRAFFIC CONTROL DEVICES AND SIGNING AS REQUIRED.

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

4. THE CONTRACTOR SHALL INSTALL CONCRETE SAFETY BARRIER FROM STA. 273+78.45 TO STA. 328+61.57 AS SHOWN ON THE TCP LAYOUTS

5. INSTALL EROSION CONTROL LOGS, SILT FENCES, AND ANY OTHER REQUIRED STORM WATER POLLUTION PREVENTION (SW3P) STRUCTURES AS SHOWN ON THE SW3P LAYOUTS AND STANDARDS PERTAINING TO PHASE II CONSTRUCTION.

6. CONTRACTOR TO CONSTRUCT THE NORTH HALF OF THE PROPOSED FM1925 ROADWAY UP TO THE FIRST 1-1/2" COURSE OF ACP INCLUDING ALL APPROPRIATE DRAINAGE APPURTENANCES AS SHOWN ON THE TCP LAYOUTS AND TYPICAL SECTIONS AND AS PER THE CONSTRUCTION DESIGN PLANS, MAINTAINING IN GOOD WORKING ORDER ALL APPROPRIATE TEMPORARY EROSION CONTROL PROTECTION ELEMENTS.

7. THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY DETOUR FROM STA. 336+79.84 (LT) TO STA. 346+42.64 (LT). AS SHOWN ON THE TCP TYPICAL SECTIONS AND LAYOUTS. TRAFFIC TO REMAIN ON THE EXISTING ROADWAY.

8. ROADWAY ACCESS TO ALL INTERSECTING ROADWAYS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.

PHASE II - STEP 2

THIS PHASE CONSISTS OF THE CONSTRUCTION OF NORTH HALF OF BURHLINE RD AND SHARP RD INTERSECTIONS

1. THE CONTRACTOR SHALL TEMPORARILY CLOSE THE NORTH HALF OF BRUSHLINE RD AND SHARP RD INTERSECTIONS IN ORDER TO EXPEDITE THE WORK IN THESE LOCATIONS, STARTING WITH BRUSHLINE RD. FIRST AND THEN SHARP RD.

2. PRIOR TO COMMENCING WITH THIS STEP, CONTRACTOR SHALL HAVE ALL TRAFFIC CONTROL DEVICES AND SIGNING AS PER THE PROPOSED TRAFFIC CONTROL PLANS.

3. THE CONTRACTOR SHALL SWITCH, INSTALL, AND REMOVE SIGNS, CHANNELIZING DEVICES, AND BARRICADES, AS PER THE BRUSHLINE RD PHASE II - STEP II TCP LAYOUT AND BRUSHLINE RD DETOUR LAYOUT.

4. ADJUST TRAFFIC SIGNAL HEADS AND ALL APPURTENANCES TO ACCOMMODATE THIS STEP OF THE PHASE II TCP.

5. CONSTRUCT THE NORTH HALF OF THE BRUSHLINE RD INTERSECTION UP TO AND INCLUDING THE FIRST 1-1/2" COURSE OF ACP AS SHOWN ON THE TCP LAYOUTS, TYPICAL SECTIONS, AND CONSTRUCTION DESIGN PLANS.

6. THE CONTRACTOR SHALL SWITCH, INSTALL, AND REMOVE SIGNS, CHANNELIZING DEVICES, AND BARRICADES, AS REQUIRED AND RE-OPEN THE BRUSHLINE RD INTERSECTION PRIOR TO COMMENCING WITH THE SHARP RD INTERSECTION.

7. THE CONTRACTOR SHALL SWITCH, INSTALL, AND REMOVE SIGNS, CHANNELIZING DEVICES, AND BARRICADES, AS PER THE SHARP RD PHASE II - STEP II TCP LAYOUT AND SHARP RD DETOUR LAYOUT.

8. CONSTRUCT THE NORTH HALF OF THE SHARP RD INTERSECTION UP TO AND INCLUDING THE FIRST 1-1/2" COURSE OF ACP AS SHOWN ON THE TCP LAYOUTS, TYPICAL SECTIONS, AND CONSTRUCTION DESIGN PLANS.

9. THE CONTRACTOR SHALL SWITCH, INSTALL, AND REMOVE SIGNS, CHANNELIZING DEVICES, AND BARRICADES, AS REQUIRED AND RE-OPEN THE SHARP RD INTERSECTION PRIOR TO COMMENCING WITH THE NEXT CONSTRUCTION PHASE.

PHASE III - STEP 1

THIS PHASE CONSISTS OF THE CONSTRUCTION OF SOUTH HALF OF ROADWAY AND STORM DRAIN LATERALS

1. INSTALL EROSION CONTROL LOGS, SILT FENCES, AND ANY OTHER REQUIRED STORM WATER POLLUTION PREVENTION (SW3P) STRUCTURES AS SHOWN ON THE SW3P LAYOUTS AND STANDARDS PERTAINING TO PHASE II CONSTRUCTION

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

3. STRIPE NEWLY CONSTRUCTED NORTH HALF OF THE FM1925 ROADWAY FOR TWO 11' LANES OF TRAFFIC AS SHOWN ON THE TCP LAYOUTS AND TYPICAL SECTIONS.

4. ADJUST THE TRAFFIC SIGNAL HEADS AT THE BRUSHLINE RD INTERSECTION AS SHOWN ON TEMPORARY TRAFFIC SIGNAL LAYOUT PHASE III.

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

6. SHIFT THE EXISTING EAST AND WEST BOUND TRAFFIC ONTO THE NEWLY CONSTRUCTED FM 1925 ROADWAY.

7. CONTRACTOR TO CONSTRUCT THE SOUTH HALF OF THE PROPOSED FM1925 ROADWAY UP TO THE FIRST 1-1/2" LIFT OF ACP INCLUDING ALL APPROPRIATE DRAINAGE APPURTENANCES AS SHOWN ON THE TCP LAYOUTS AND TYPICAL SECTIONS AND AS PER THE CONSTRUCTION DESIGN PLANS, MAINTAINING IN GOOD WORKING ORDER ALL APPROPRIATE TEMPORARY EROSION CONTROL PROTECTION ELEMENTS.

8. ROADWAY ACCESS TO ALL INTERSECTING ROADWAYS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR.

PHASE III - STEP 2

THIS PHASE CONSISTS OF THE CONSTRUCTION OF SOUTH HALF OF TERRY RD, TOWER RD, AND SHARP RD INTERSECTIONS

1. THE CONTRACTOR SHALL TEMPORARILY CLOSE THE SOUTH HALF OF TERRY RD, TOWER RD, AND SHARP RD INTERSECTIONS IN ORDER TO EXPEDITE THE WORK IN THESE LOCATIONS, STARTING WITH TERRY RD, THEN TOWER RD, AND THEN SHARP RD.

2. PRIOR TO COMMENCING WITH THIS STEP, CONTRACTOR SHALL HAVE ALL TRAFFIC CONTROL DEVICES AND SIGNING AS PER THE PROPOSED TRAFFIC CONTROL PLANS.

3. THE CONTRACTOR SHALL SWITCH, INSTALL, AND REMOVE SIGNS, CHANNELIZING DEVICES AND BARRICADES, AS PER THE TERRY PHASE III - STEP II TCP LAYOUT AND TERRY RD DETOUR LAYOUT.

4. CONSTRUCT THE SOUTH HALF OF THE TERRY RD INTERSECTION UP TO AND INCLUDING THE FIRST 1-1/2" COURSE OF ACP AS SHOWN ON THE TCP LAYOUTS, TYPICAL SECTIONS, AND CONSTRUCTION DESIGN PLANS.

5. THE CONTRACTOR SHALL SWITCH, INSTALL, AND REMOVE SIGNS, CHANNELIZING DEVICES AND BARRICADES, AS REQUIRED AND RE-OPEN THE TERRY RD INTERSECTION PRIOR TO COMMENCING WITH THE TOWER RD INTERSECTION.

6. CONSTRUCT THE SOUTH HALF OF THE TOWER RD INTERSECTION UP TO AND INCLUDING THE FIRST 1-1/2" COURSE OF ACP AS SHOWN ON THE TCP LAYOUTS, TYPICAL SECTIONS, AND CONSTRUCTION DESIGN PLANS.

7. THE CONTRACTOR SHALL SWITCH, INSTALL, AND REMOVE SIGNS, CHANNELIZING DEVICES AND BARRICADES, AS REQUIRED AND RE-OPEN THE TOWER RD INTERSECTION PRIOR TO COMMENCING WITH THE SHARP RD INTERSECTION.

8. THE CONTRACTOR SHALL SWITCH, INSTALL, AND REMOVE SIGNS, CHANNELIZING DEVICES AND BARRICADES, AS PER THE SHARP RD PHASE III - STEP II TCP LAYOUT AND SHARP RD DETOUR LAYOUT.

9. CONSTRUCT THE SOUTH HALF OF THE SHARP RD INTERSECTION UP TO AND INCLUDING THE FIRST 1-1/2" COURSE OF ACP AS SHOWN ON THE TCP LAYOUTS, TYPICAL SECTIONS, AND CONSTRUCTION DESIGN PLANS.

10. THE CONTRACTOR SHALL SWITCH, INSTALL, AND REMOVE SIGNS AND BARRICADES, AS REQUIRED AND RE-OPEN THE SHARP RD INTERSECTION PRIOR TO COMMENCING WITH THE NEXT CONSTRUCTION PHASE.

PHASE IV

THIS PHASE CONSISTS OF THE CONSTRUCTION OF THE FINAL ROADWAY ASPHALT COURSE AND STRIPING

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

2. PLACE FINAL 1 1/2 ASPHALT COURSE ON PROPOSED PROJECT ROADWAY USING TCP 2-2-18 AND 2-4-18 AS NEEDED

3. INSTAL GUIDE MARKS AND SHORT TERM MARKINGS.

4. INSTALL FINAL STRIPING AND SIGNING.

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

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
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PROFESSIONAL ENGINEER
11/01/2023

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

THE COUNTY OF HIDALGO
TEXAS

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Mission, TX. 78572
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FM 1925
TRAFFIC CONTROL PLAN
SEQUENCE OF CONSTRUCTION

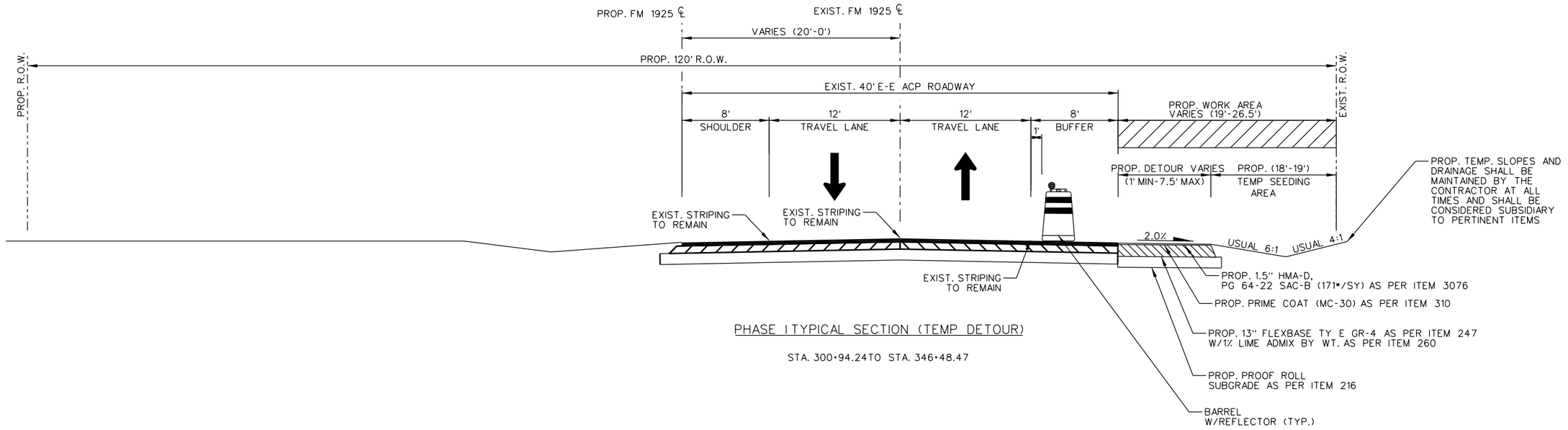
SHEET 1 OF 1

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:		PHR	HIDALGO	1803	02	035	026
REVIEW:							
CK:							

K:\Counties\HID\FM 1925 PHR\907 to Urest\\02 TCP\00 NOTE-SEQ\FM1925_TCP_SEQCONST.dgn
10/31/2023

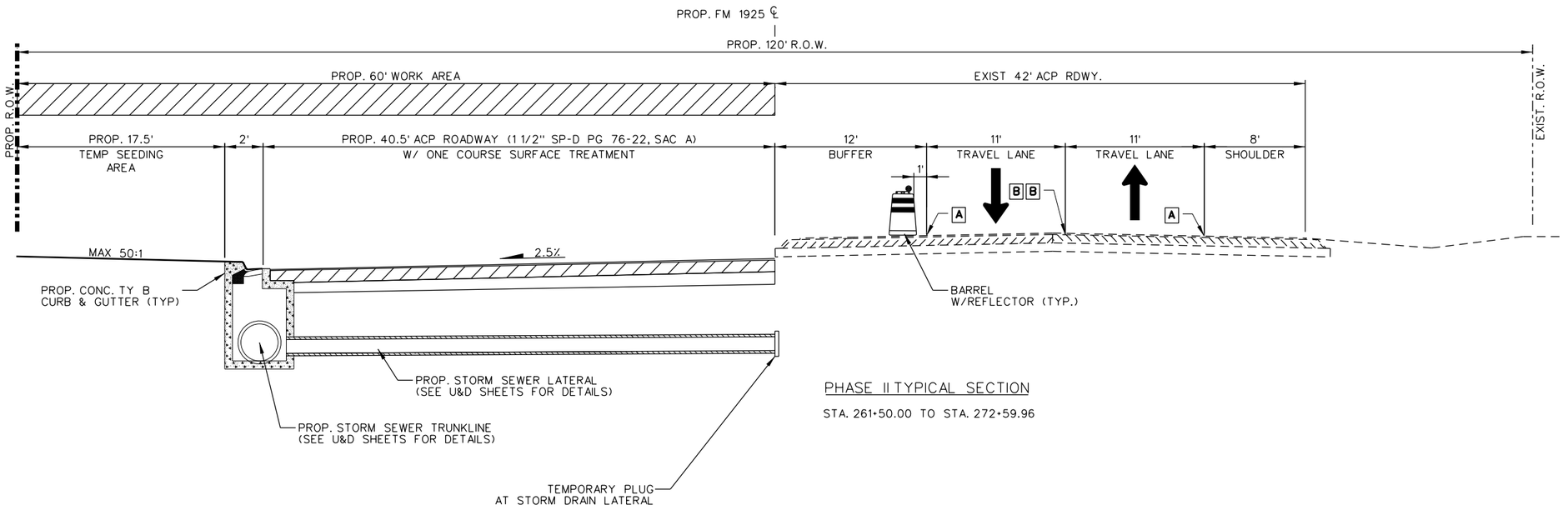
LEGEND:

WORK AREA



PHASE I TYPICAL SECTION (TEMP DETOUR)

STA. 300+94.24 TO STA. 346+48.47



PHASE II TYPICAL SECTION

STA. 261+50.00 TO STA. 272+59.96

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FM 1925
TRAFFIC CONTROL PLAN
PHASE I & II
TYPICAL SECTION

SHEET 1 OF 1

DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: RP		6	TEXAS					027
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925	
TR:								
CK TR:								

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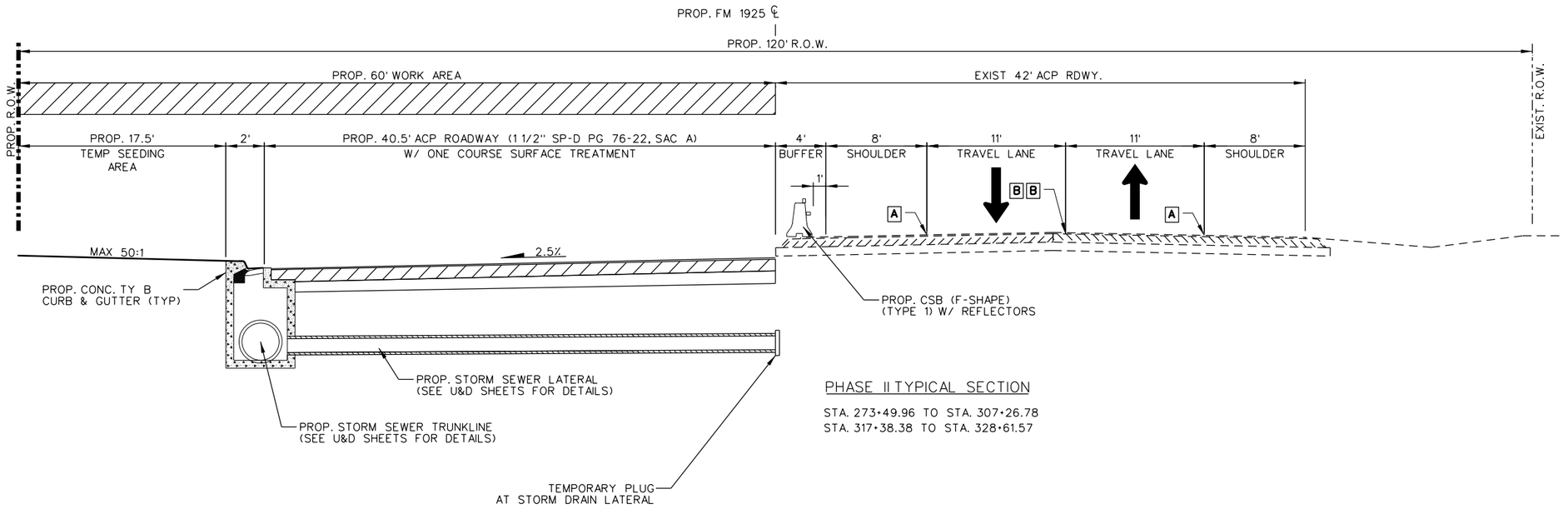
10/31/2023



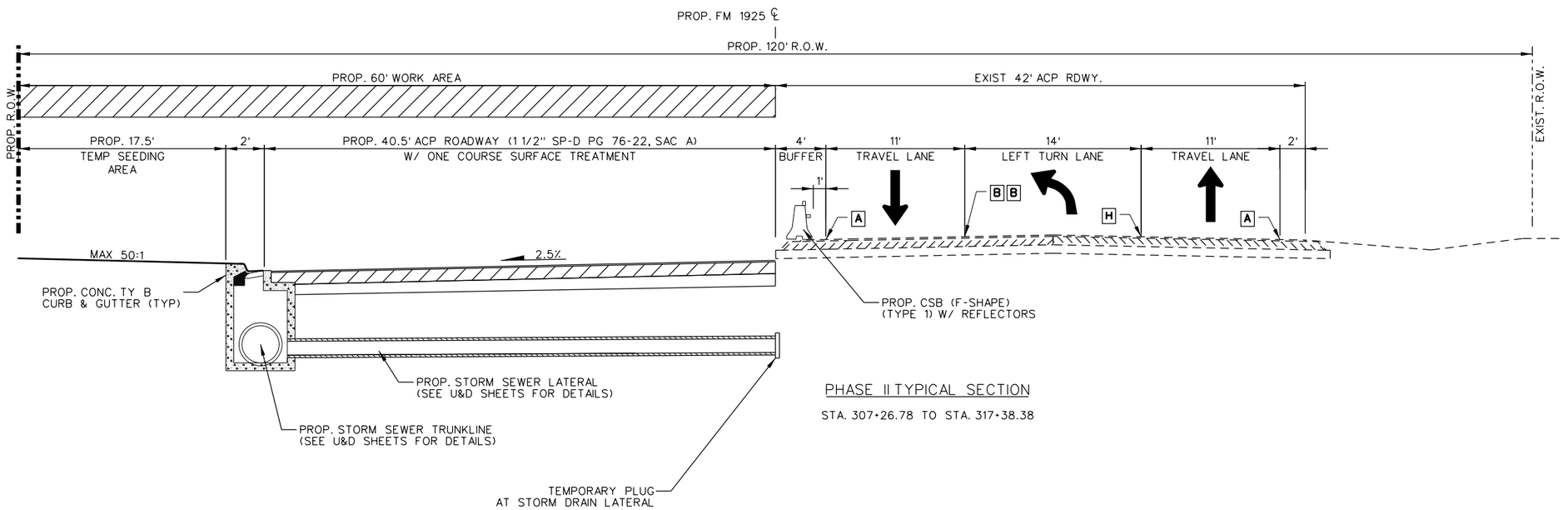
PHASE II TYPICAL SECTION

STA. 273+49.96 TO STA. 307+26.78
STA. 317+38.38 TO STA. 328+61.57

LEGEND	
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40' C-C
H	WORK ZONE PVMT MARK (NON-REM) 8" WHITE SOLID

LEGEND:

WORK AREA



PHASE II TYPICAL SECTION

STA. 307+26.78 TO STA. 317+38.38

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FM 1925
TRAFFIC CONTROL PLAN
PHASE II
TYPICAL SECTION

SHEET 1 OF 1

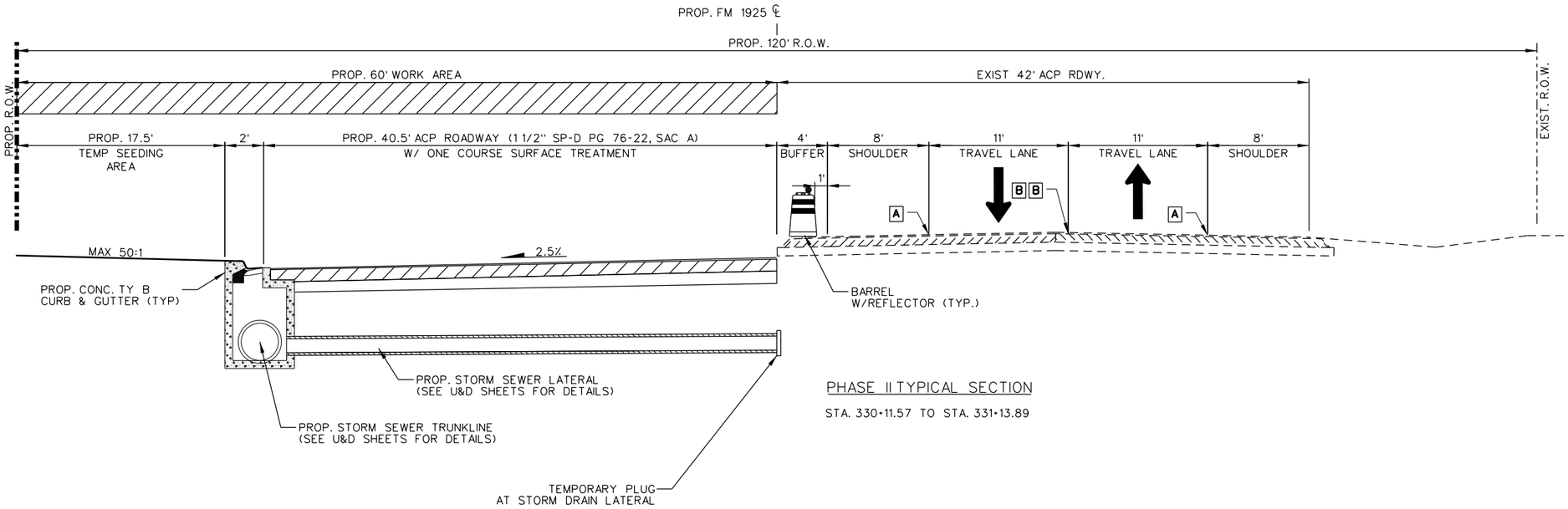
DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: RP		6	TEXAS					028
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925	
TR:	
CK TR:	

10/31/2023 K:\Counties\HID\FM 1925 PHII (907 to Urest)\02 TCP\TCP_TYP\FM1925_TYPICAL_PHASE_II.dgn

LEGEND	
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40' C-C

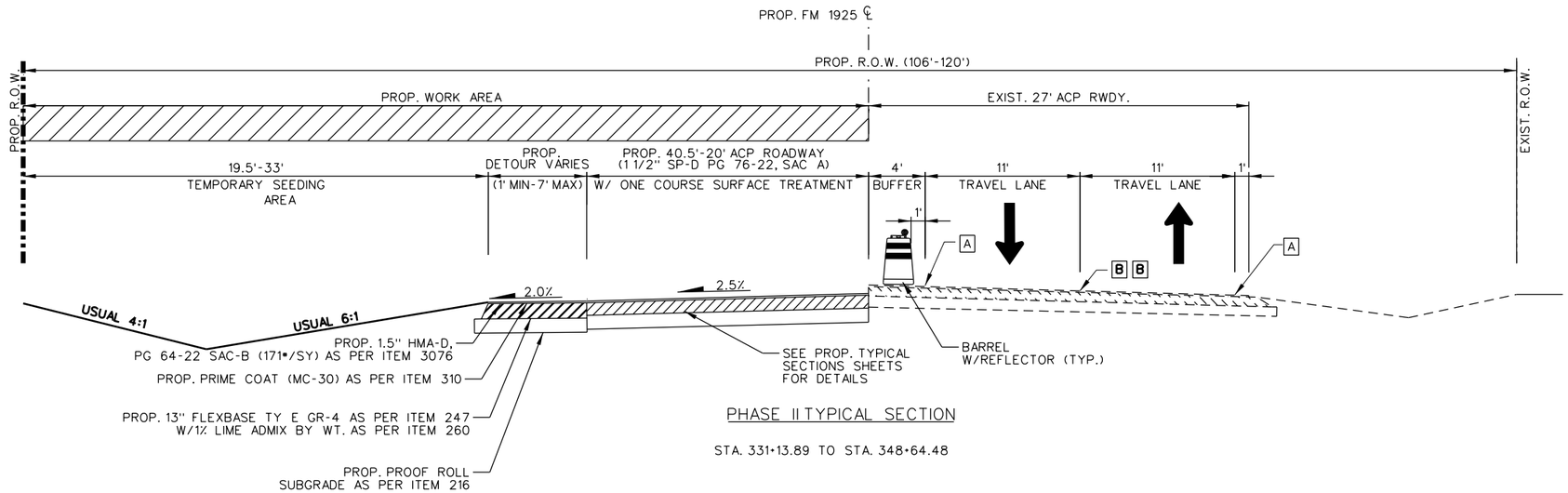
LEGEND:

WORK AREA



PHASE II TYPICAL SECTION

STA. 330+11.57 TO STA. 331+13.89



PHASE II TYPICAL SECTION

STA. 331+13.89 TO STA. 348+64.48

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FM 1925
TRAFFIC CONTROL PLAN
PHASE II
TYPICAL SECTION

SHEET 1 OF 1

DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

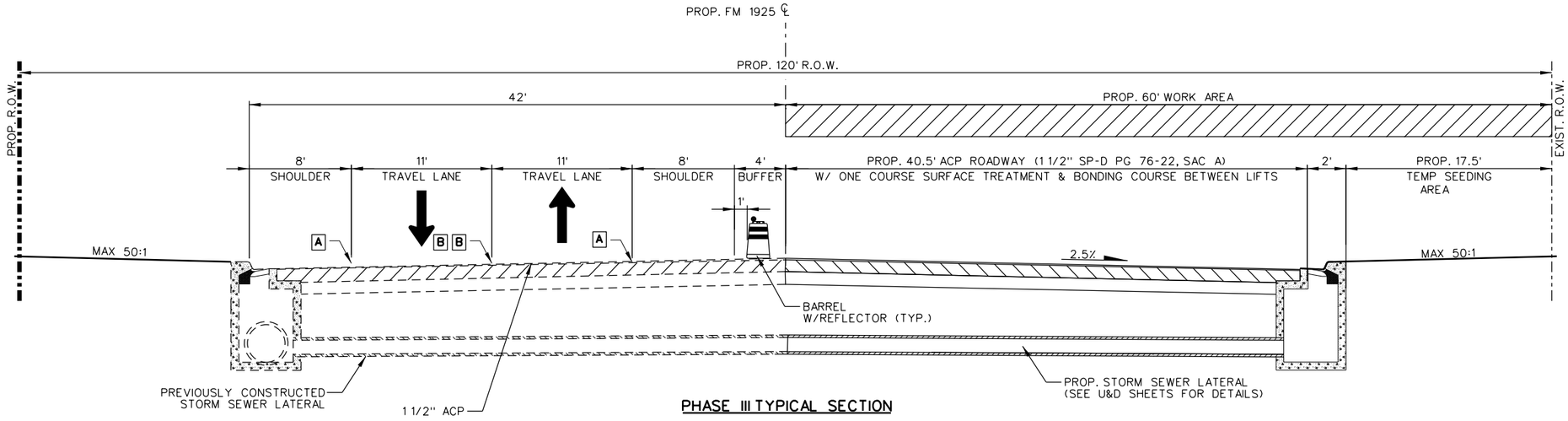
FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					029
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
PHR	HIDALGO	1803	02	035	FM 1925	

10/31/2023 K:\Counties\HID\FM 1925 PHII (907 to Uresti)\02 TCP\TCP_TYP\FM1925_TYPICAL_PHASE_II.dgn

LEGEND	
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40' C-C
H	WORK ZONE PVMT MARK (NON-REM) 8" WHITE SOLID

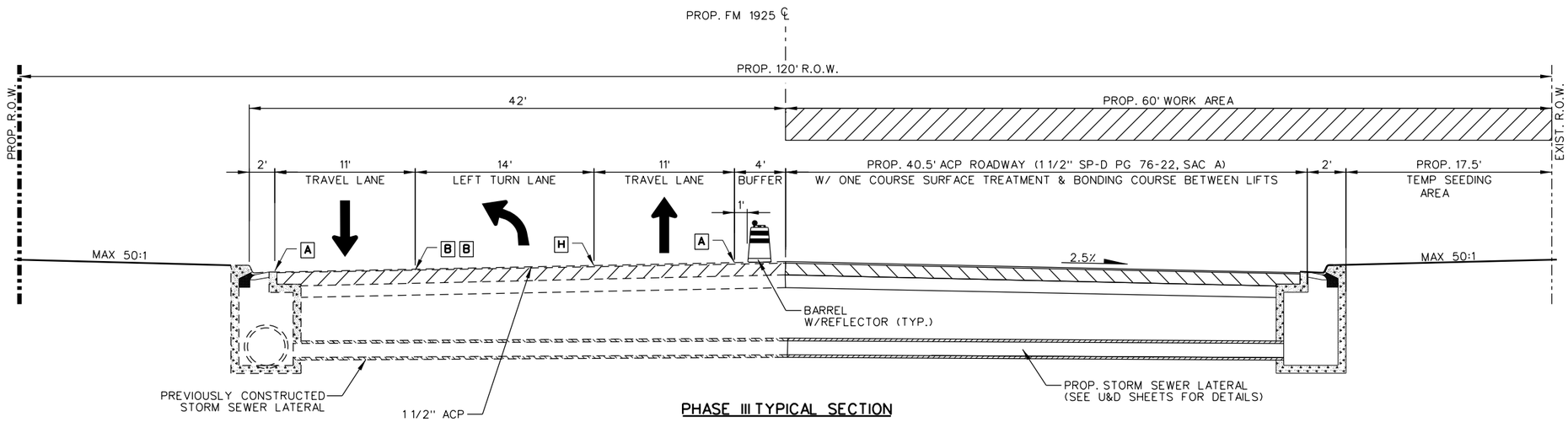
LEGEND:

WORK AREA



PHASE III TYPICAL SECTION

STA. 261+50.00 TO STA. 331+13.89
STA. 317+60.40 TO STA. 331+13.89



PHASE III TYPICAL SECTION

STA. 306+95.52 TO STA. 317+60.40

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FM 1925
TRAFFIC CONTROL PLAN
PHASE III
TYPICAL SECTION

SHEET 1 OF 1

DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

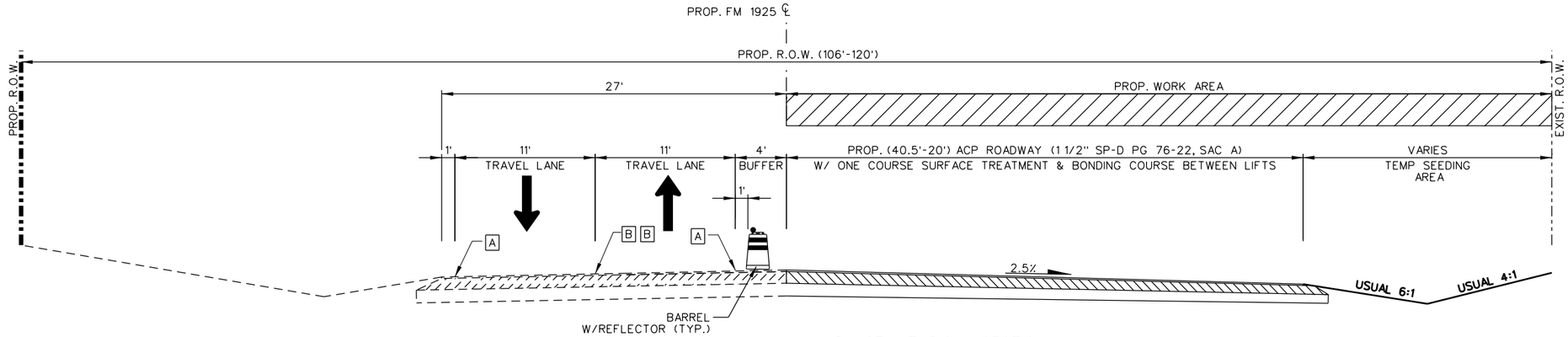
FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
6	TEXAS				030
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
PHR	HIDALGO	1803	02	035	FM 1925

10/31/2023 K:\Counties\HIDALGO\FM 1925 PH III (907 to Uresti)\02 TCP\TCP_TYP\FM1925_TYPICAL_PHASEIII.dgn

LEGEND	
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40' C-C

LEGEND:

WORK AREA



PHASE III TYPICAL SECTION

STA. 331+13.89 TO STA. 348+64.48

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FM 1925
TRAFFIC CONTROL PLAN
PHASE III
TYPICAL SECTION

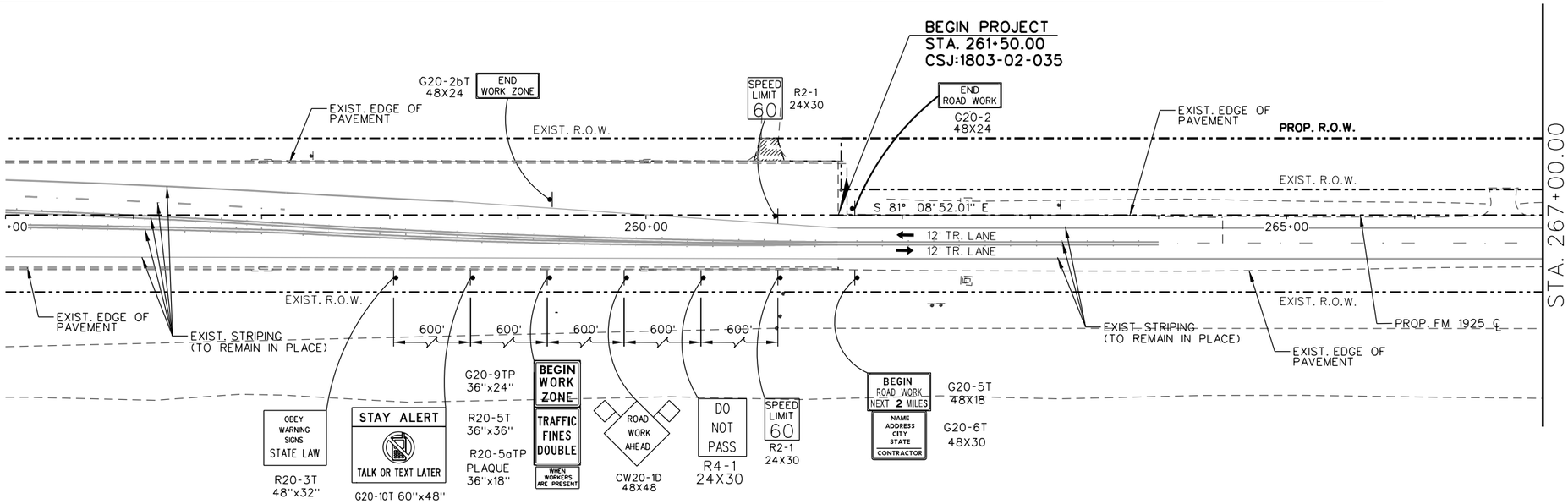
SHEET 1 OF 1

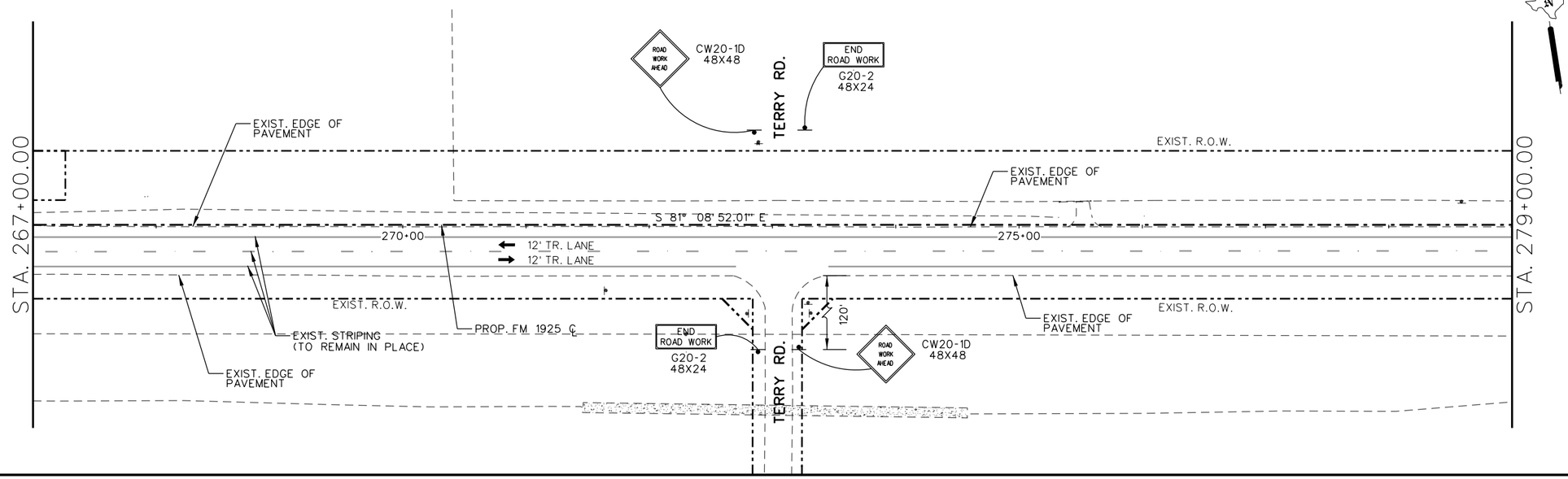
DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN: RP		6	TEXAS				031
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925
TR:							
CK TR:							

10/31/2023 K:\Counties\HIDALGO\FM 1925 PH III (90.7 to Uresti)\02 TCP\TCP_TYP\FM1925_TYPICAL_PHASEIII.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
255+00 TO 267+00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
267+00 TO 279+00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHEET TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

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FM 1925
TRAFFIC CONTROL PLAN
PHASE I
STA. 255+00 TO STA. 279+00

SCALE: 1"= 100' SHEET 1 OF 5

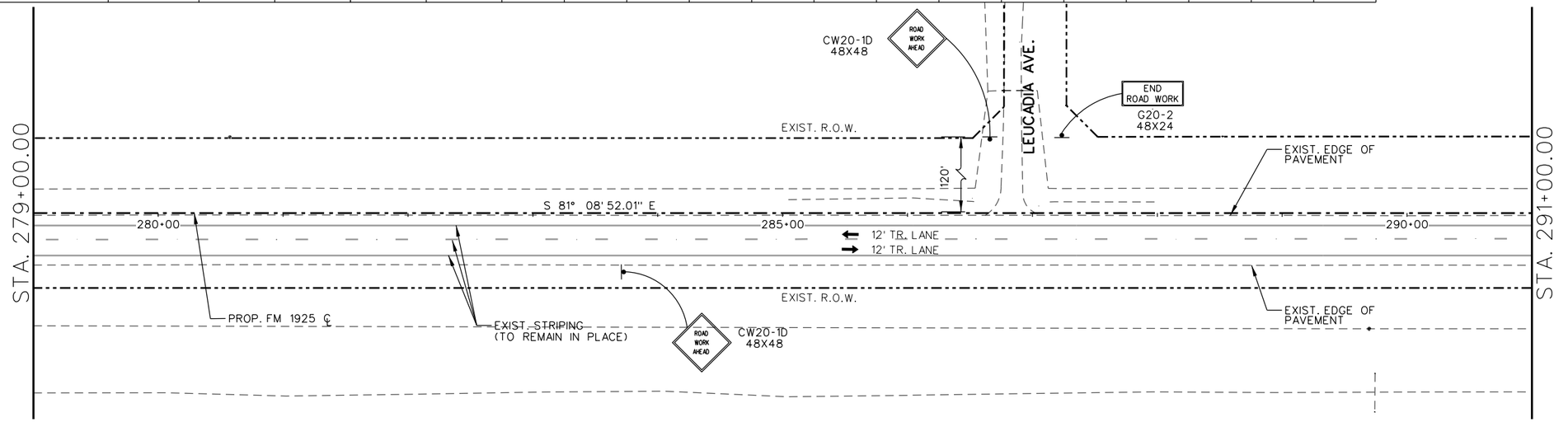
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

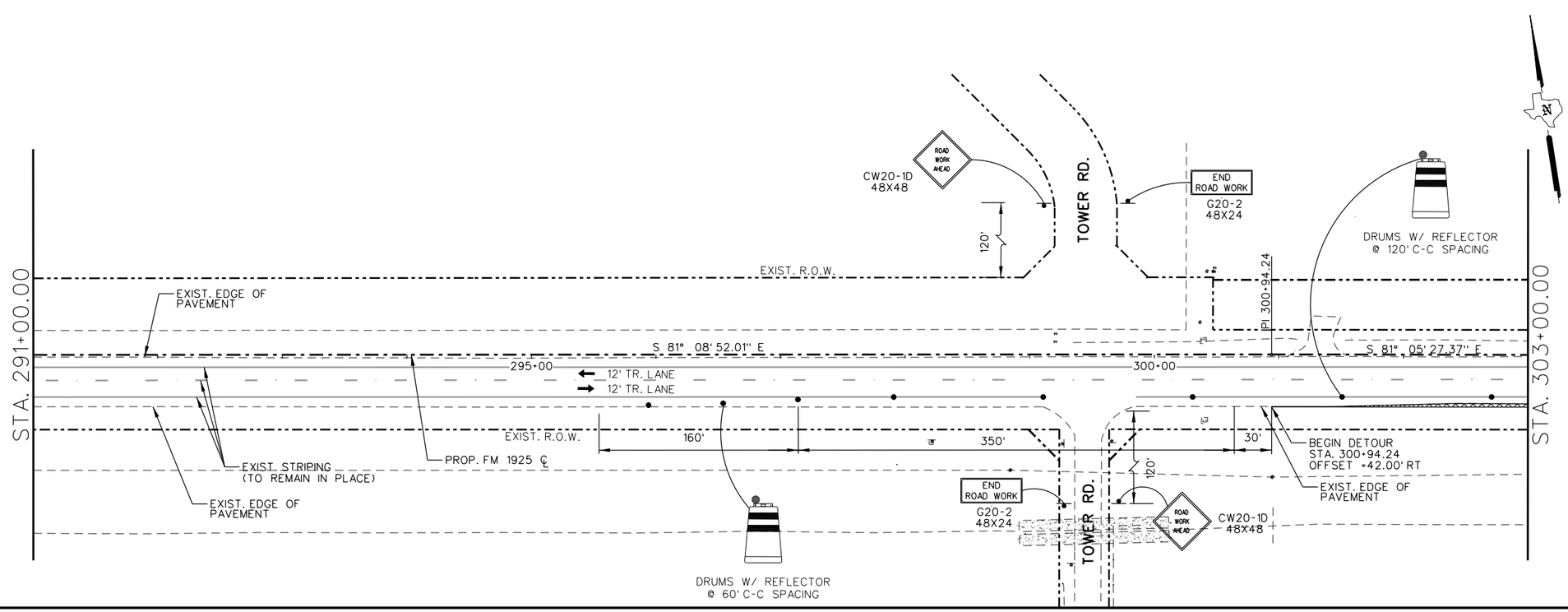
FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					032
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
PHR	HIDALGO	1803	02	035	FM 1925	

10/31/2023 K:\Counties\HID\FM 1925 PHII(907 to Urest)\02 TCP\01 TCP_PHASE_I_DETOUR\PHASE1_TCP1.dgn

SHEET SUMMARY

STATION LIMITS	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
279+00 TO 291+00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291+00 TO 303+00	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHEET TOTAL	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●,■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

FM 1925
TRAFFIC CONTROL PLAN
PHASE I
STA. 279+00 TO STA. 303+00

SCALE: 1"= 100'

SHEET 2 OF 5

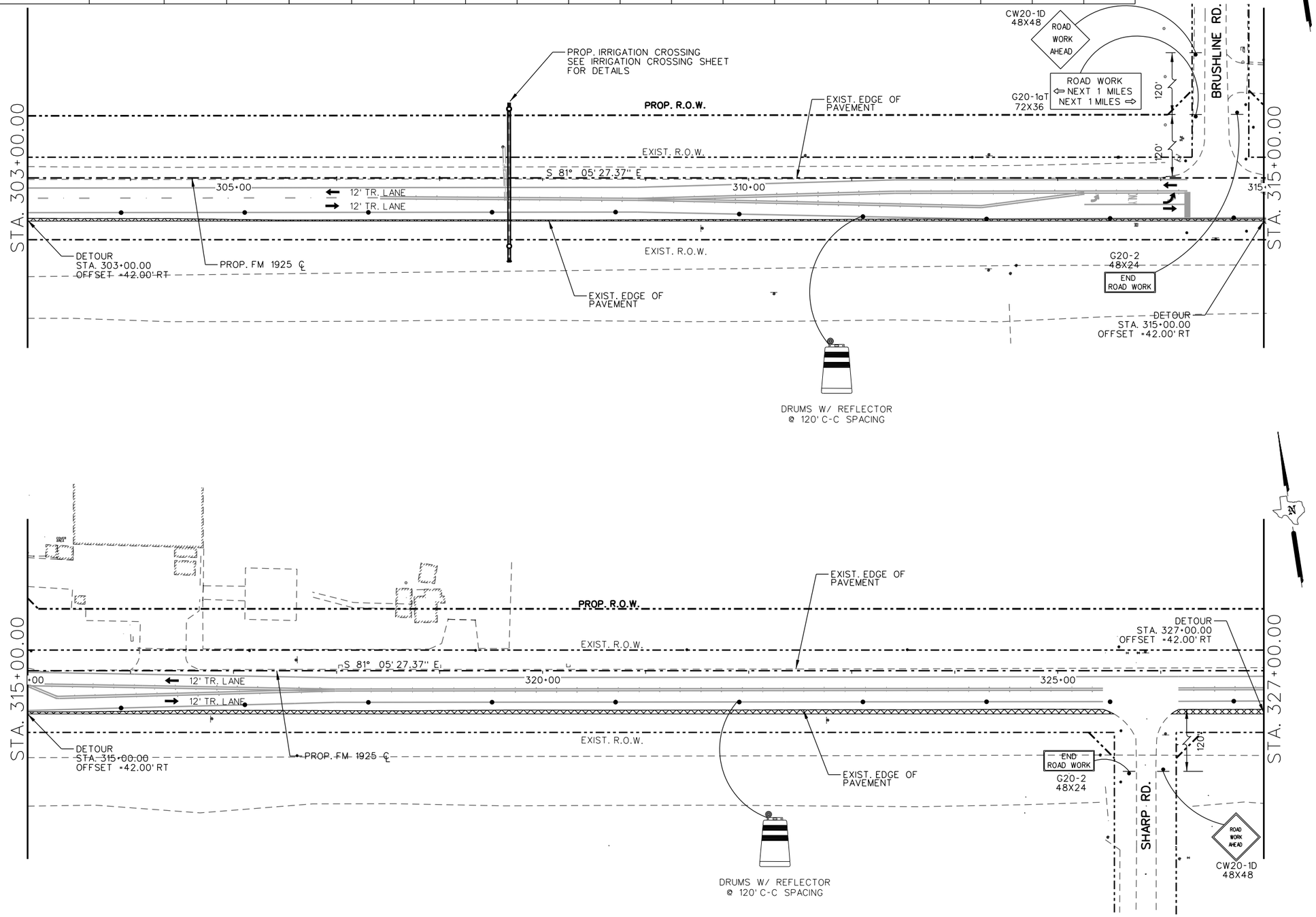
DN:	RP
CK DN:	RP
DW:	JBS
CK DW:	JBS
TR:	
CK TR:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					033
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
PHR	HIDALGO	1803	02	035		FM 1925

10/31/2023 K:\Counties\HID\FM 1925 PHII(907 to Urest)\02 TCP\01 TCP_PHASE_I_DETOUR\PHASE1_TCP2.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
303+00 TO 315+00	232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
315+00 TO 327+00	457	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHEET TOTAL	689	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED
PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO
TEXAS

Texas Department of Transportation

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
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FM 1925
TRAFFIC CONTROL PLAN
PHASE I
STA. 303+00 TO STA. 327+00

SCALE: 1"= 100' SHEET 3 OF 5

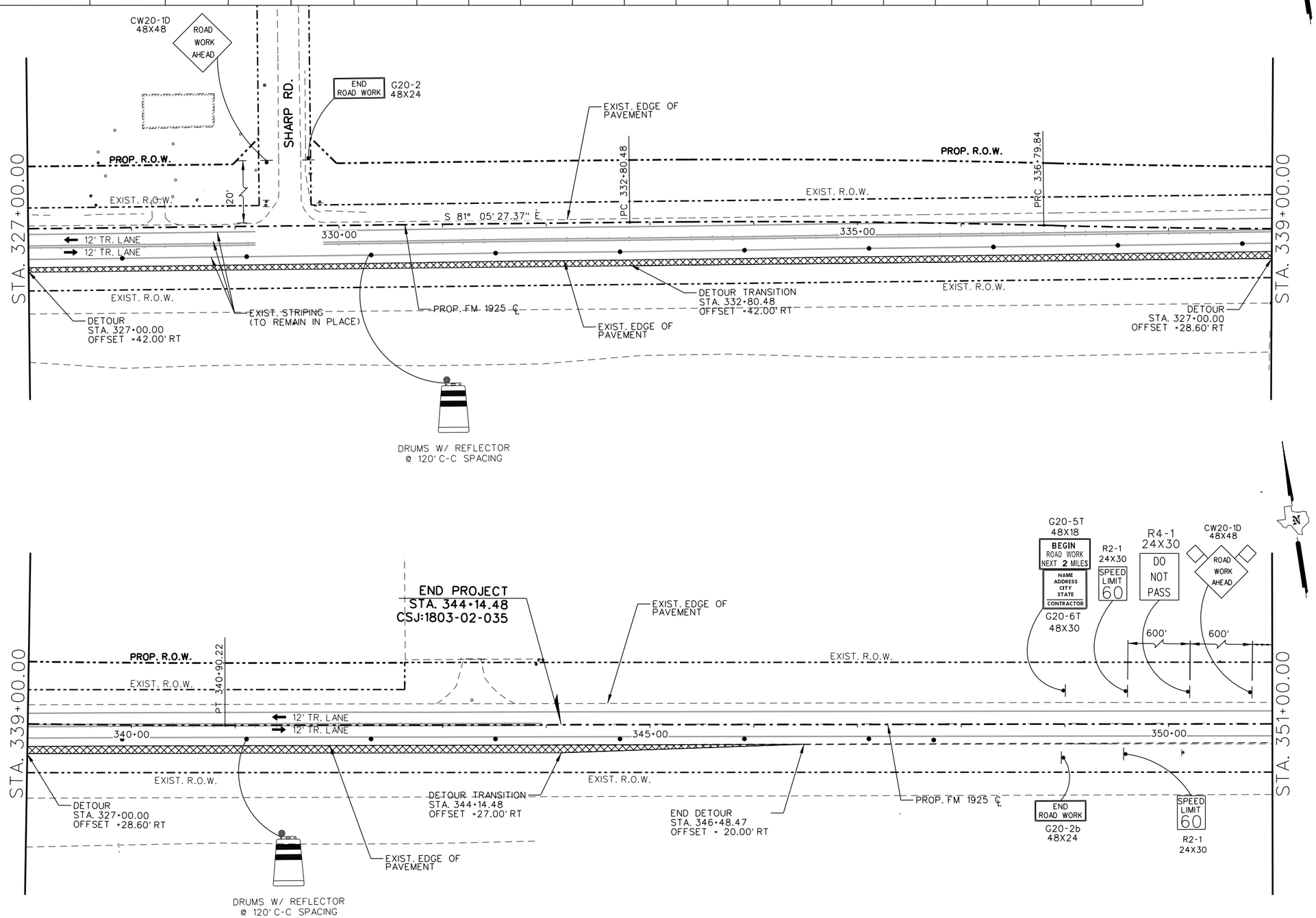
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					034
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
PHR	HIDALGO	1803	02	035	FM 1925	

10/31/2023 K:\Counties\HID\FM 1925 PHII(907 to Urest)\02 TCP\01 TCP_PHASE_I_DETOUR\PHASE1_TCP3.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
327+00 TO 339+00	752	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
339+00 TO 351+00	516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHEET TOTAL	1268	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925
TRAFFIC CONTROL PLAN
PHASE I
STA. 327+00 TO STA. 351+00

SCALE: 1"= 100' SHEET 4 OF 5

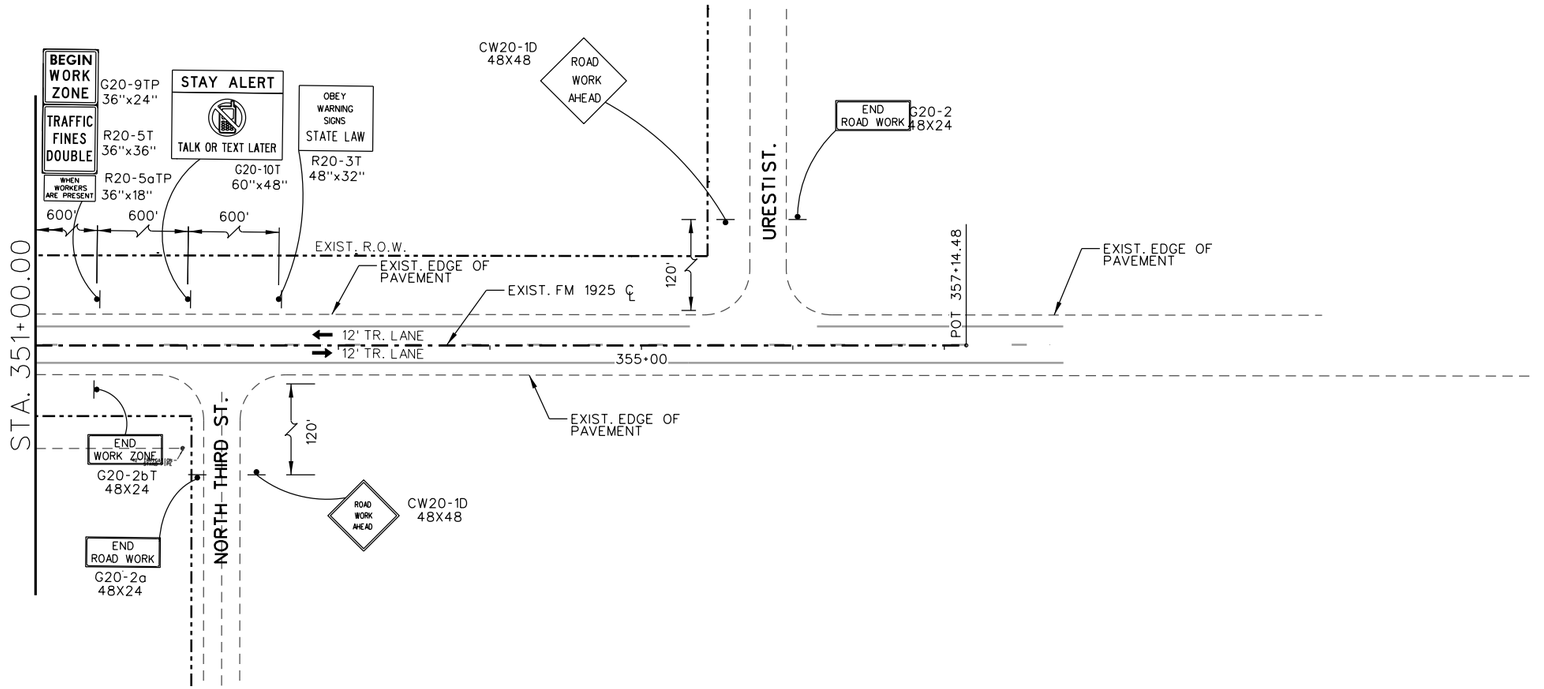
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					035
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
PHR	HIDALGO	1803	02	035	FM 1925	

10/31/2023 K:\Counties\HID\FM 1925 PHI\(907 to Uresti)\02 TCP\01 TCP_PHASE_I_DETOUR\PHASE1_TCP4.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
351+00 TO 357+00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHEET TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
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FM 1925
TRAFFIC CONTROL PLAN
PHASE I
STA. 351+00 TO STA. 357+14.48

SCALE: 1"= 100'

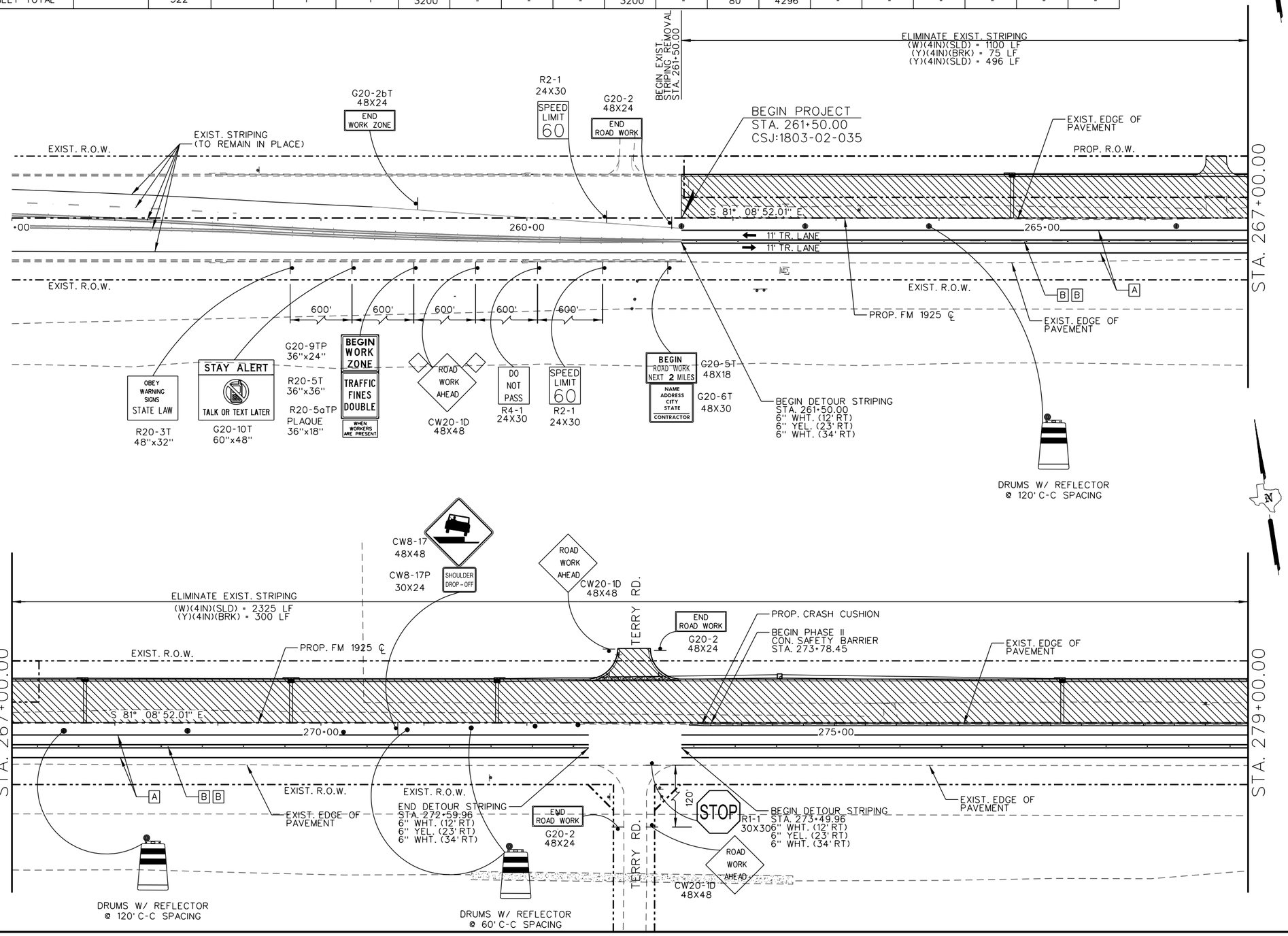
SHEET 5 OF 5

DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN: RP		6	TEXAS				036
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925
TR:							
CK TR:							

10/31/2023 K:\Counties\HID\FM 1925 PHI(907 to Uresti)\02 TCP\01 TCP_PHASE_I_DETOUR\PHASE1_TCP5.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
261+50 TO 267+00	-	-	-	-	-	1100	-	-	-	1100	-	28	1671	-	-	-	-	-	-
267+00 TO 279+00	-	522	-	1	1	2100	-	-	-	2100	-	53	2625	-	-	-	-	-	-
SHEET TOTAL	-	522	-	1	1	3200	-	-	-	3200	-	80	4296	-	-	-	-	-	-



LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" YELLOW (DOT)
G	WORK ZONE PVMT MARK (NON-REM) 24" WHITE SOLID
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J	WORK ZONE PVMT MARK (NON-REM) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

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FM 1925
TRAFFIC CONTROL PLAN
PHASE II
STA. 255+00 TO STA. 279+00

SCALE: 1"= 100'

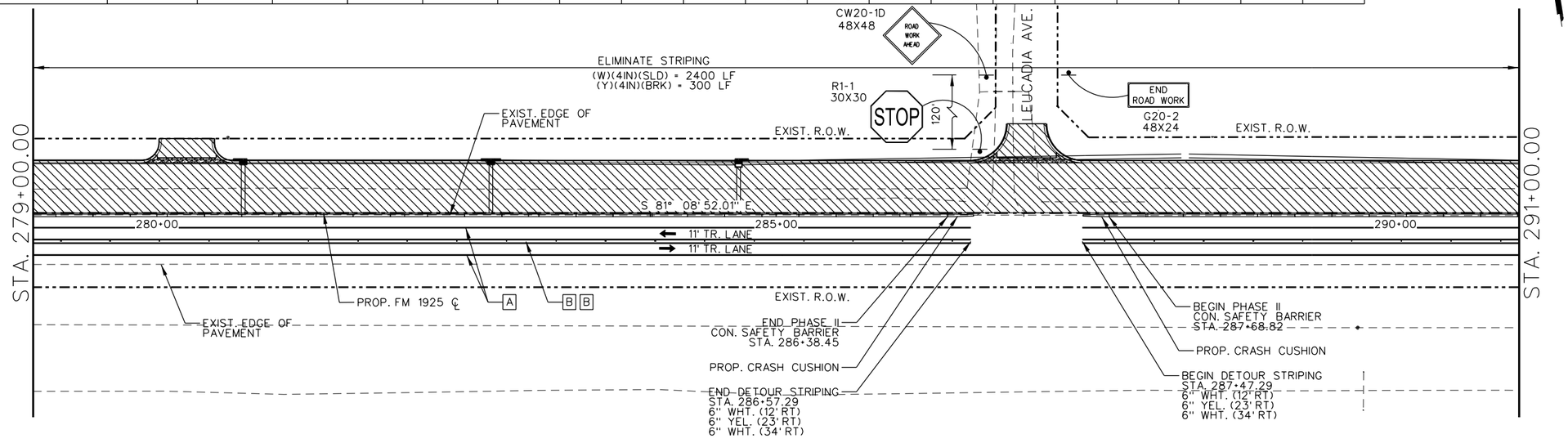
SHEET 1 OF 5

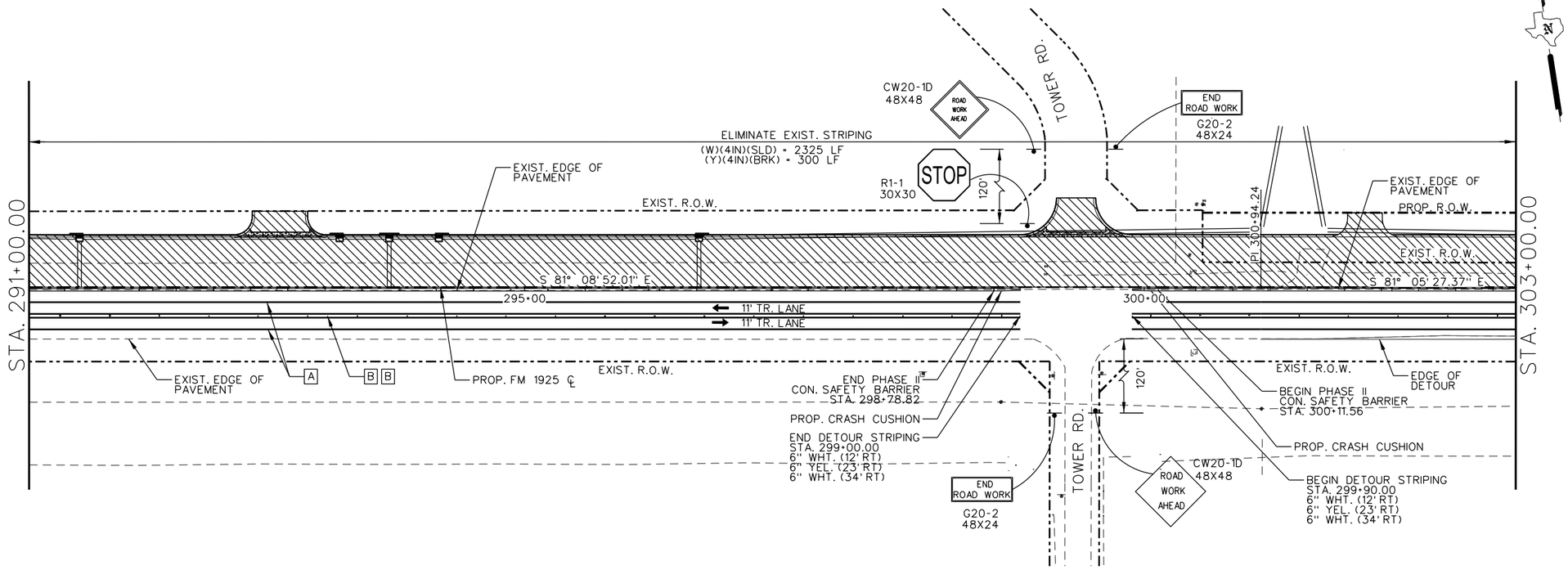
DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: RP		6	TEXAS					037
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925	
TR:								
CK TR:								

10/31/2023
K:\Counties\HID\FM 1925 PHII(907 to Ures)\02 TCP\02 TCP PHASE_II\PHASE2_TCP1.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
279+00 TO 291+00	-	1070	1070	2	2	2220	-	-	-	2220	-	56	2700	-	-	-	-	-	-
291+00 TO 303+00	-	1068	1068	2	2	2220	-	-	-	2220	-	56	2625	-	-	-	-	-	-
SHEET TOTAL	-	2138	2138	4	4	4440	-	-	-	4440	-	112	5325	-	-	-	-	-	-





LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" YELLOW (DOT)
G	WORK ZONE PVMT MARK (NON-REM) 24" WHITE SOLID
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I	WORK ZONE PVMT MARK (REM) 8" WHITE (DOT)
J	WORK ZONE PVMT MARK (NON-REM) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
JORDAN B. SINCLAIR
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LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
Highway / Civil
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FM 1925
TRAFFIC CONTROL PLAN
PHASE II
STA. 279+00 TO STA. 303+00

SCALE: 1"= 100'

SHEET 2 OF 5

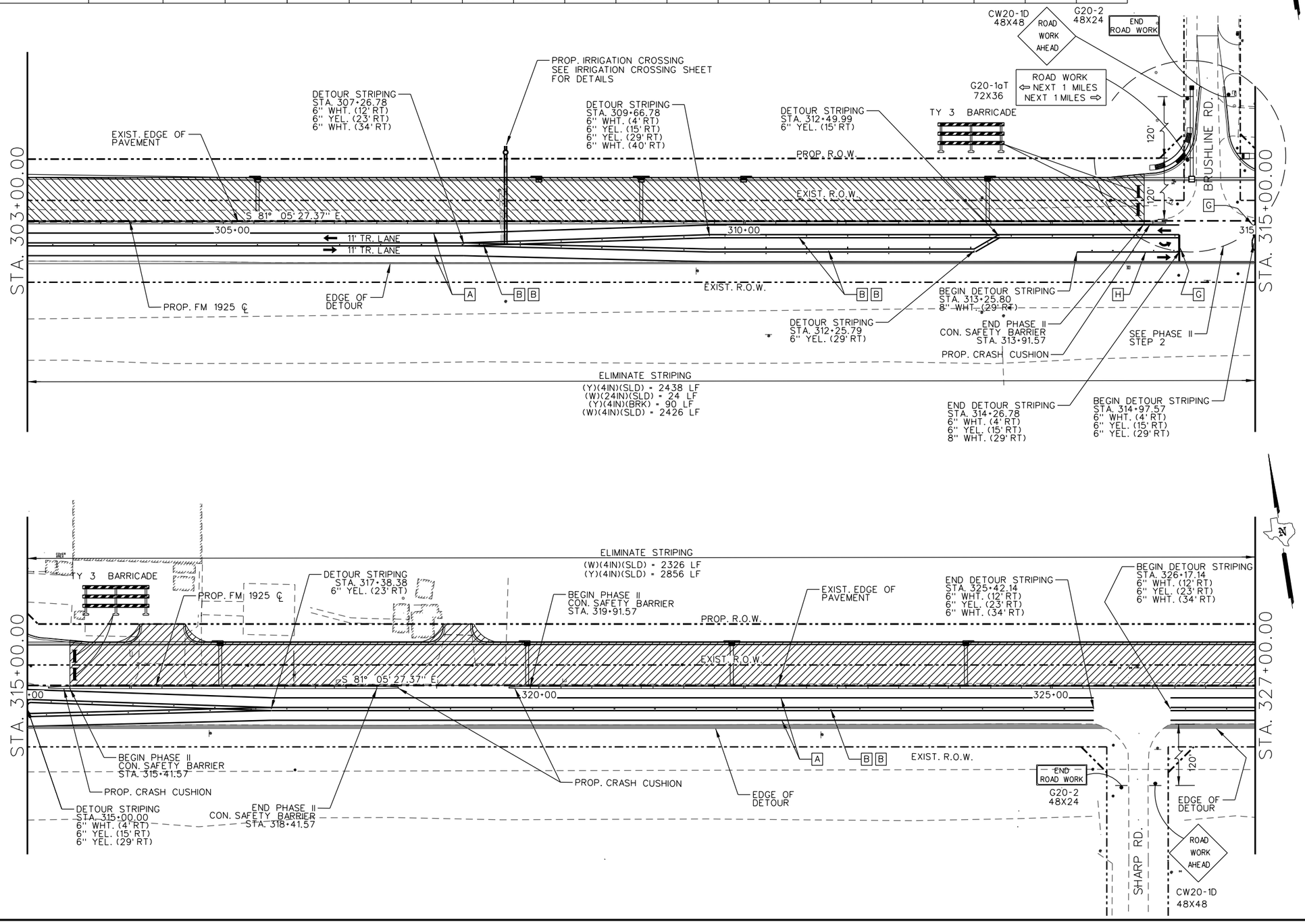
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					038
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
PHR	HIDALGO	1803	02	035	FM 1925	

10/31/2023
K:\Counties\HID\FM 1925 PHII (907 to Uresti)\02 TCP\02 TCP PHASE_II\PHASE2_TCP2.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
303+00 TO 315+00	-	1092	1092	1	1	2163	100	38	1	3308	-	83	4954	-	-	-	26	1	2
315+00 TO 327+00	-	1009	1009	3	3	2254	-	-	-	2730	-	68	5182	-	-	-	-	-	-
SHEET TOTAL	-	2101	2101	4	4	4417	100	38	1	6038	-	151	10136	-	-	-	26	1	2



LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

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FM 1925
TRAFFIC CONTROL PLAN
PHASE II
STA. 303+00 TO STA. 327+00

SCALE: 1"= 100'

SHEET 3 OF 5

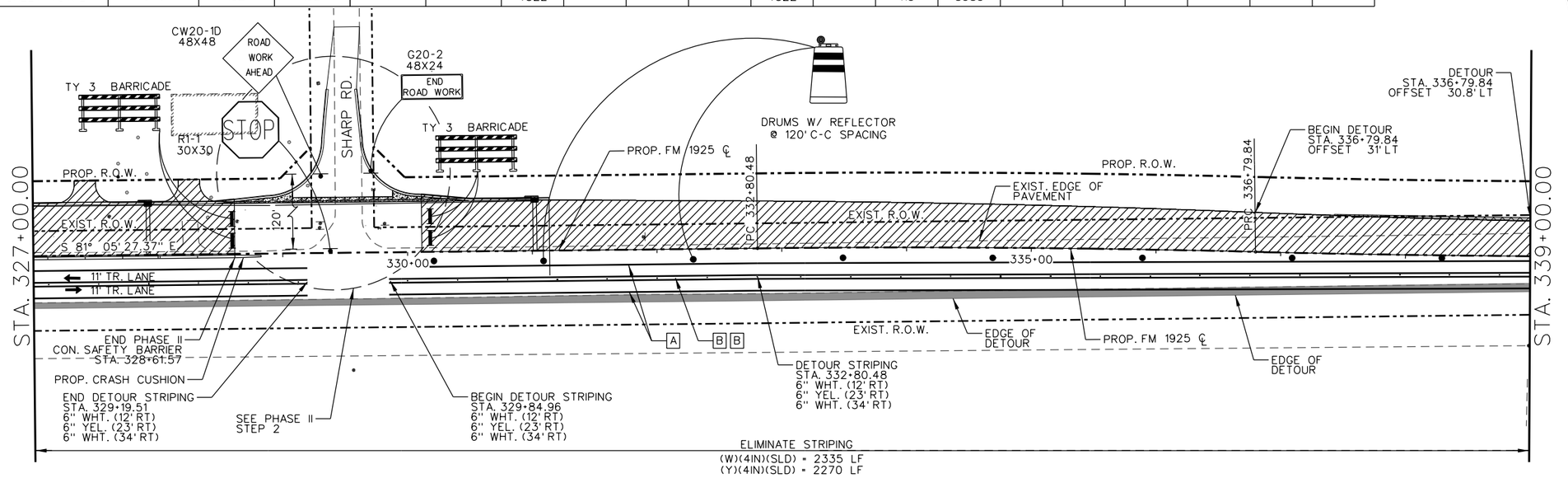
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

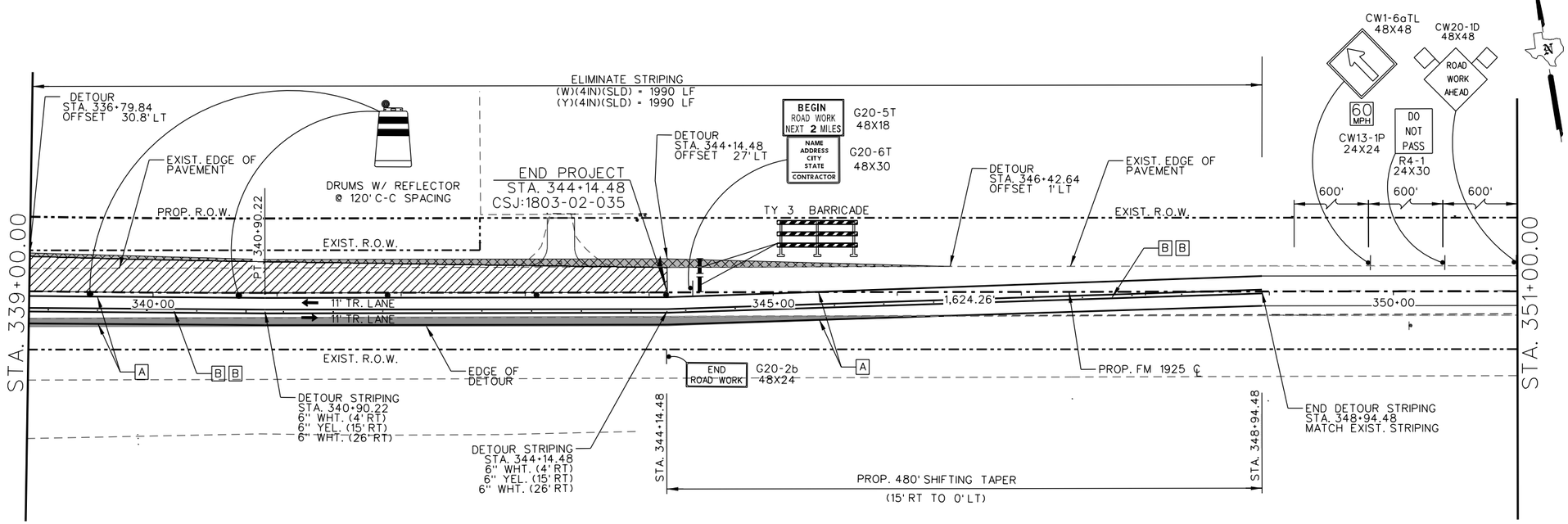
FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					039
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
PHR	HIDALGO	1803	02	035		FM 1925

10/31/2023 K:\Counties\HID\FM 1925 PHII (907 to Uresti)\02 TCP\02 TCP PHASE_II\PHASE2_TCP3.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
327+00 TO 339+00	37	162	162	1	1	2532	-	-	-	2532	-	63	4605	-	-	-	-	-	-
339+00 TO 351+00	303	-	-	-	-	1990	-	-	-	1990	-	50	3980	-	-	-	-	-	-
SHEET TOTAL	340	162	162	1	1	4522	-	-	-	4522	-	113	8585	-	-	-	-	-	-





LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
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127491
PROFESSIONAL LICENSED ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
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Environmental
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FM 1925
TRAFFIC CONTROL PLAN
PHASE II
STA. 327+00 TO STA. 351+00

SCALE: 1"= 100'

SHEET 4 OF 5

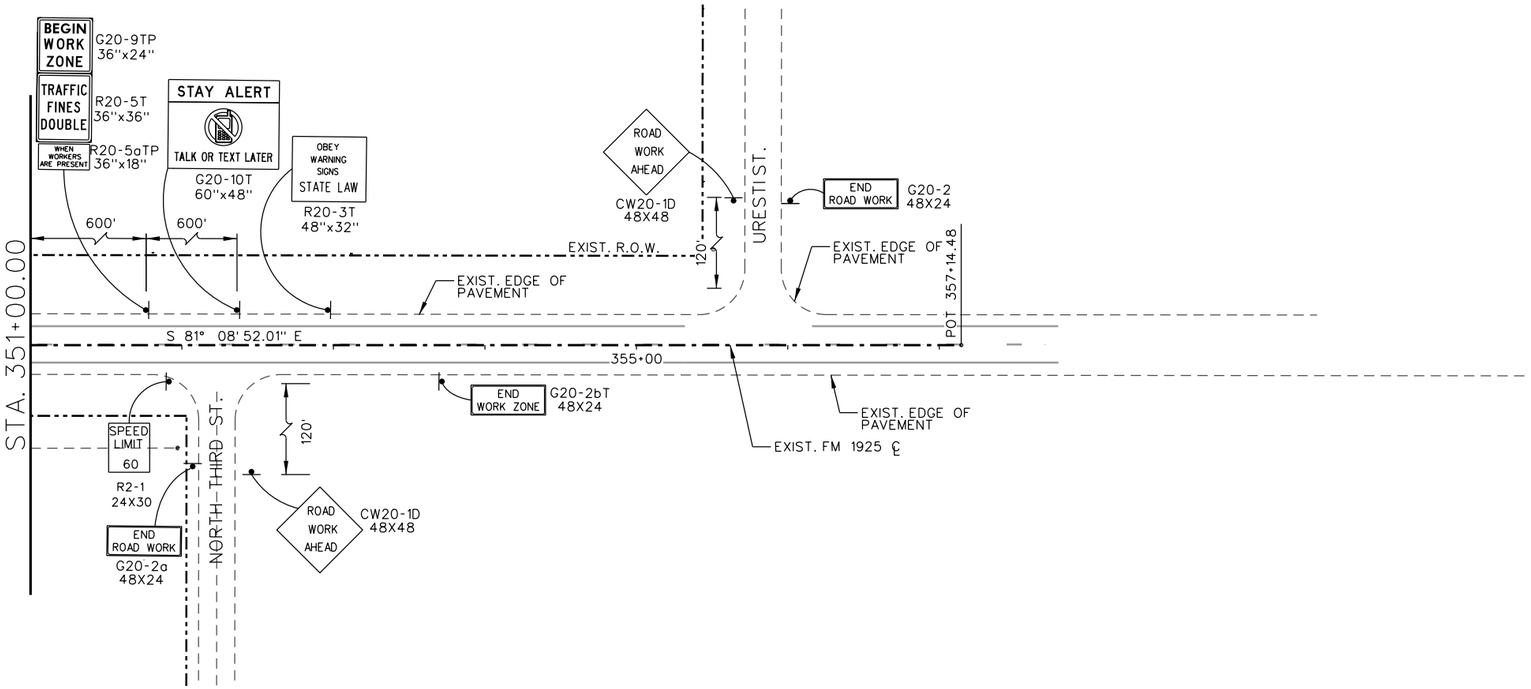
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					040
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
PHR	HIDALGO	1803	02	035	FM 1925	

10/31/2023 K:\Counties\HID\FM 1925 PHII(907 to Urest)\02 TCP\02 TCP PHASE_II\PHASE2_TCP4.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
351+00 TO 357+00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHEET TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
JORDAN B. SINCLAIR
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LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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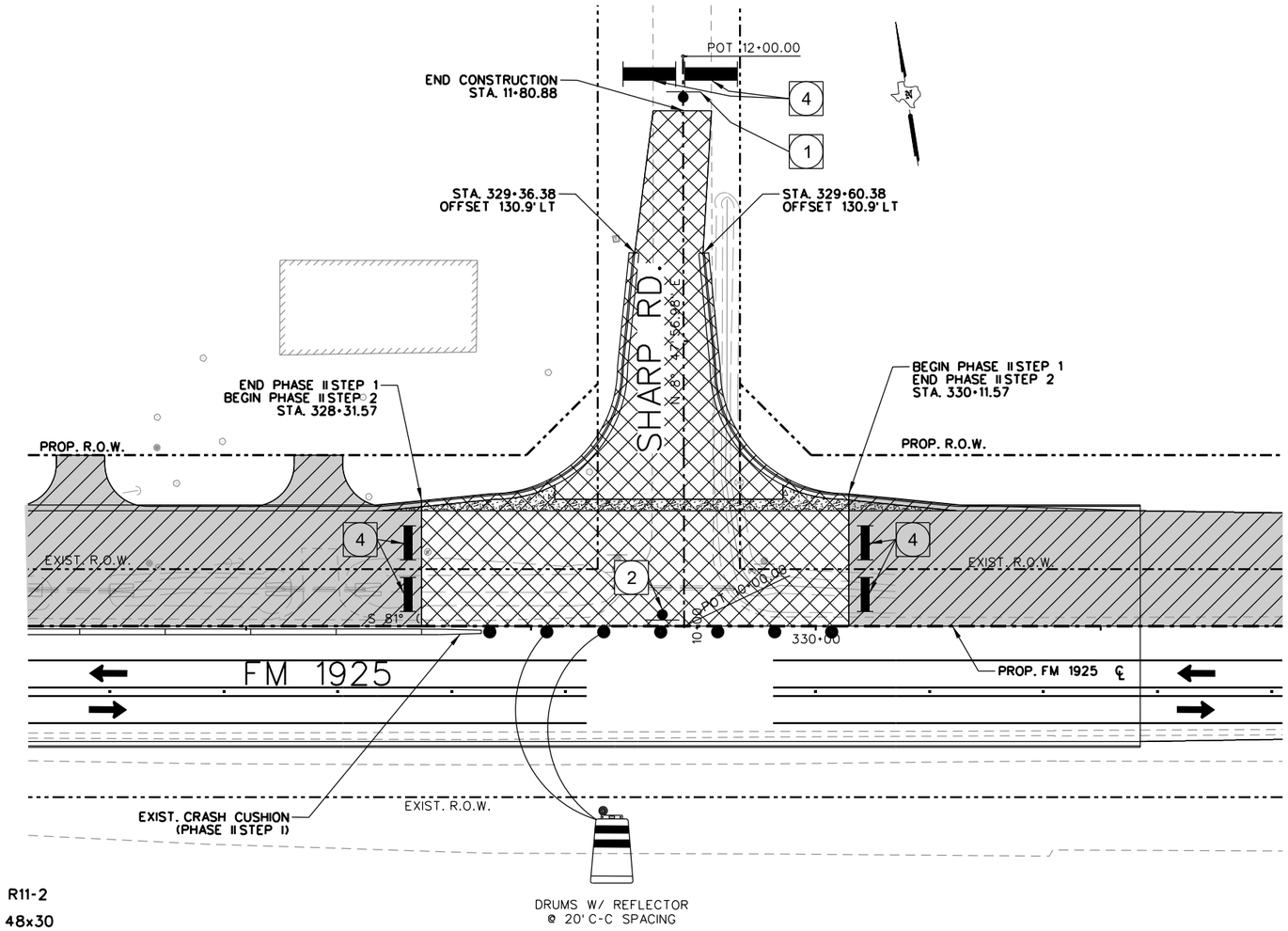
FM 1925
TRAFFIC CONTROL PLAN
PHASE II
STA. 351+00 TO STA. 357+14.48

SCALE: 1" = 100' SHEET 5 OF 5

DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN: RP		6	TEXAS				041
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925
TR:							
CK TR:							

10/31/2023 K:\Counties\HID\FM 1925 PHII(907 to Uresti)\02 TCP\02 TCP PHASE_II\PHASE2_TCP5.dgn



LEGEND	
	CONSTRUCTION PHASE II STEP 1
	CONSTRUCTION PHASE II STEP 2
	PREVIOUSLY CONSTRUCTED
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

ROAD CLOSED

R11-2
(48" X 30")

1

R11-2
48x30

ROAD CLOSED
DETOUR

M4-10L
48X18

2

R11-2
48x30

ROAD CLOSED
DETOUR

M4-10R
48X18

3

TY 3 BARRICADE

4

STATE OF TEXAS
JORDAN B. SINCLAIR
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PROFESSIONAL ENGINEER

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THE COUNTY OF HIDALGO TEXAS

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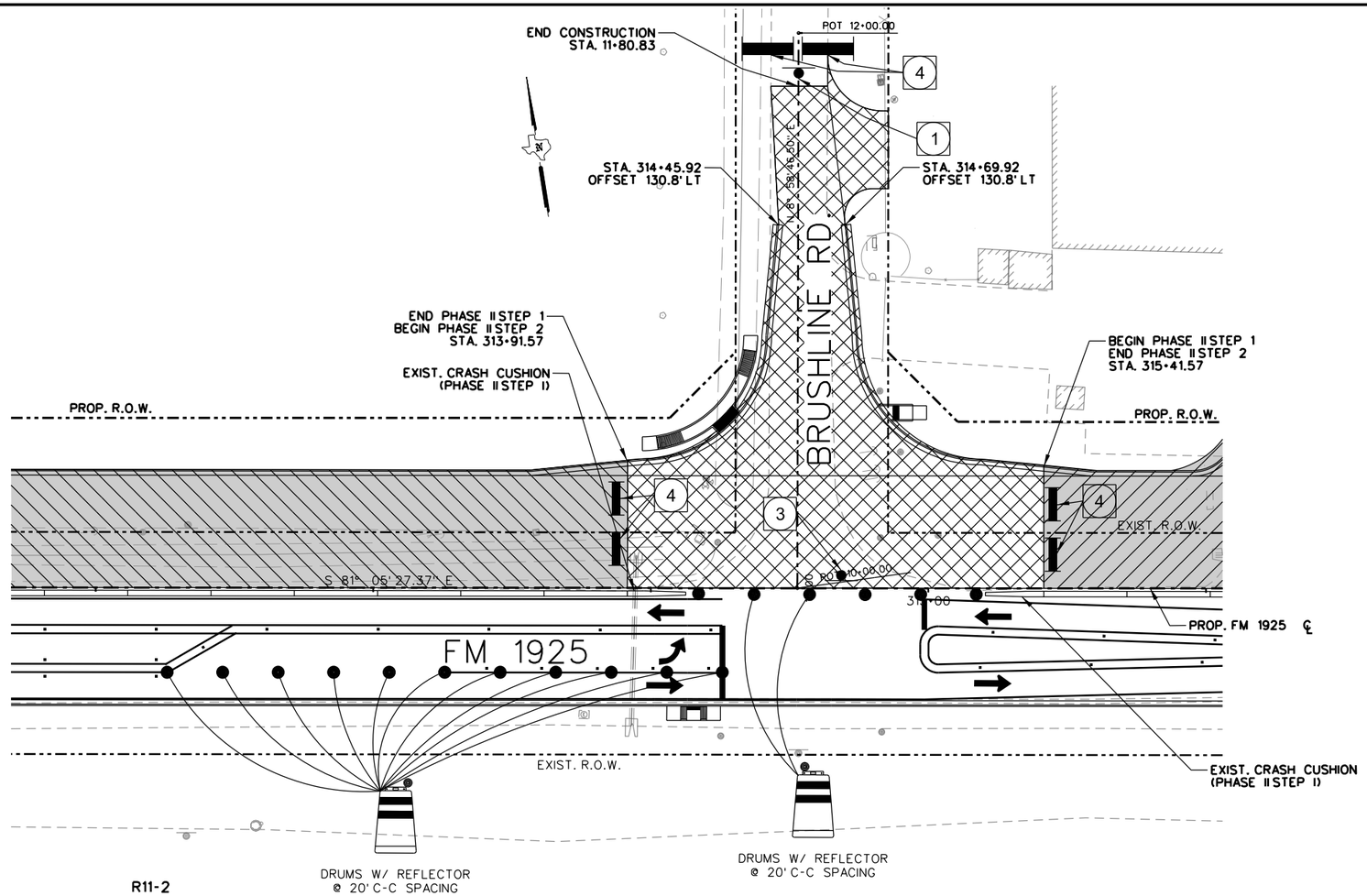
FM 1925
TRAFFIC CONTROL PLAN
PHASE II
STEP 2

SHEET 2 OF 2

DRAWING: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP		6	TEXAS					FM1925
ENGINEER: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS		PHR	HIDALGO	1803	02	035		043
REVIEW:								
CK:								

11/1/2023 K:\Counties\HID\FM 1925 PH II(907 to Urest)\02 TCP\02 TCP PHASE_II\PHASE2_STEP_2.dgn



LEGEND	
	CONSTRUCTION PHASE II STEP 1
	CONSTRUCTION PHASE II STEP 2
	PREVIOUSLY CONSTRUCTED
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

NOTE:
FOR PHASE II STEP 2, TURN OFF SIGNAL AND COVER SIGNAL HEADS.

ROAD CLOSED

R11-2
(48" X 30")

1

R11-2
48x30

ROAD CLOSED
DETOUR

M4-10L
48X18

2

R11-2
48x30

ROAD CLOSED
DETOUR

M4-10R
48X18

3

TY 3 BARRICADE

4

STATE OF TEXAS
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11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925
TRAFFIC CONTROL PLAN
PHASE II
STEP 2

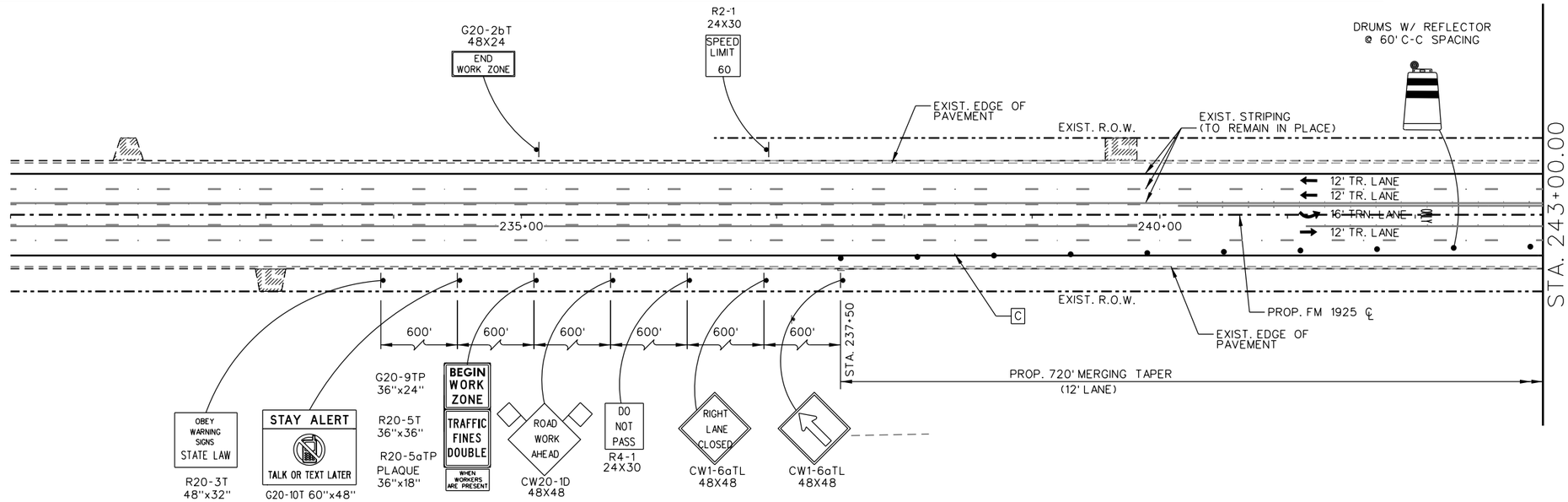
SCALE: 1"= 50'

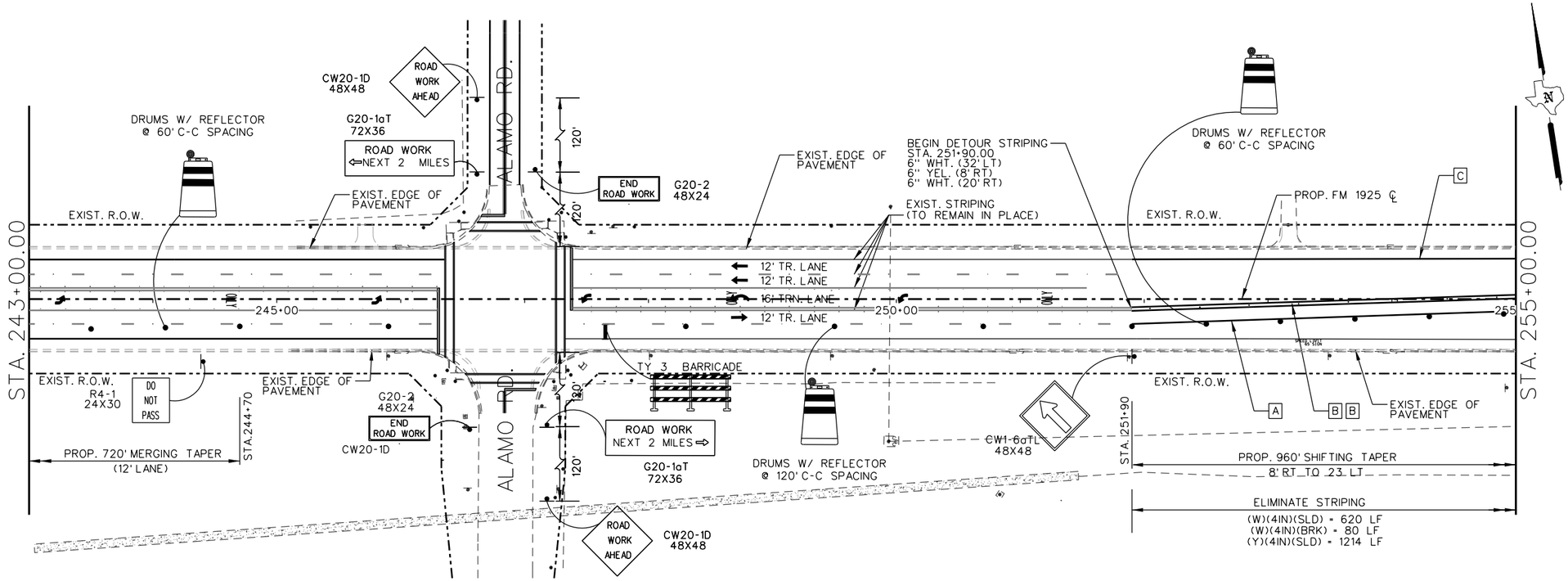
DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		042
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHII(907 to Uresti)\02 TCP\02 TCP PHASE_II\PHASE2_STEP_2.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
231+00 TO 243+00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
243+00 TO 255+00	-	-	-	-	-	620	-	-	-	620	-	16	1914	-	-	-	-	-	-
SHEET TOTAL	-	-	-	-	-	620	-	-	-	620	-	16	1914	-	-	-	-	-	-





LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●,■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
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PROFESSIONAL LICENSED ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925
TRAFFIC CONTROL PLAN
PHASE III
STA. 231+00 TO STA. 255+00

SCALE: 1"= 100' SHEET 1 OF 6

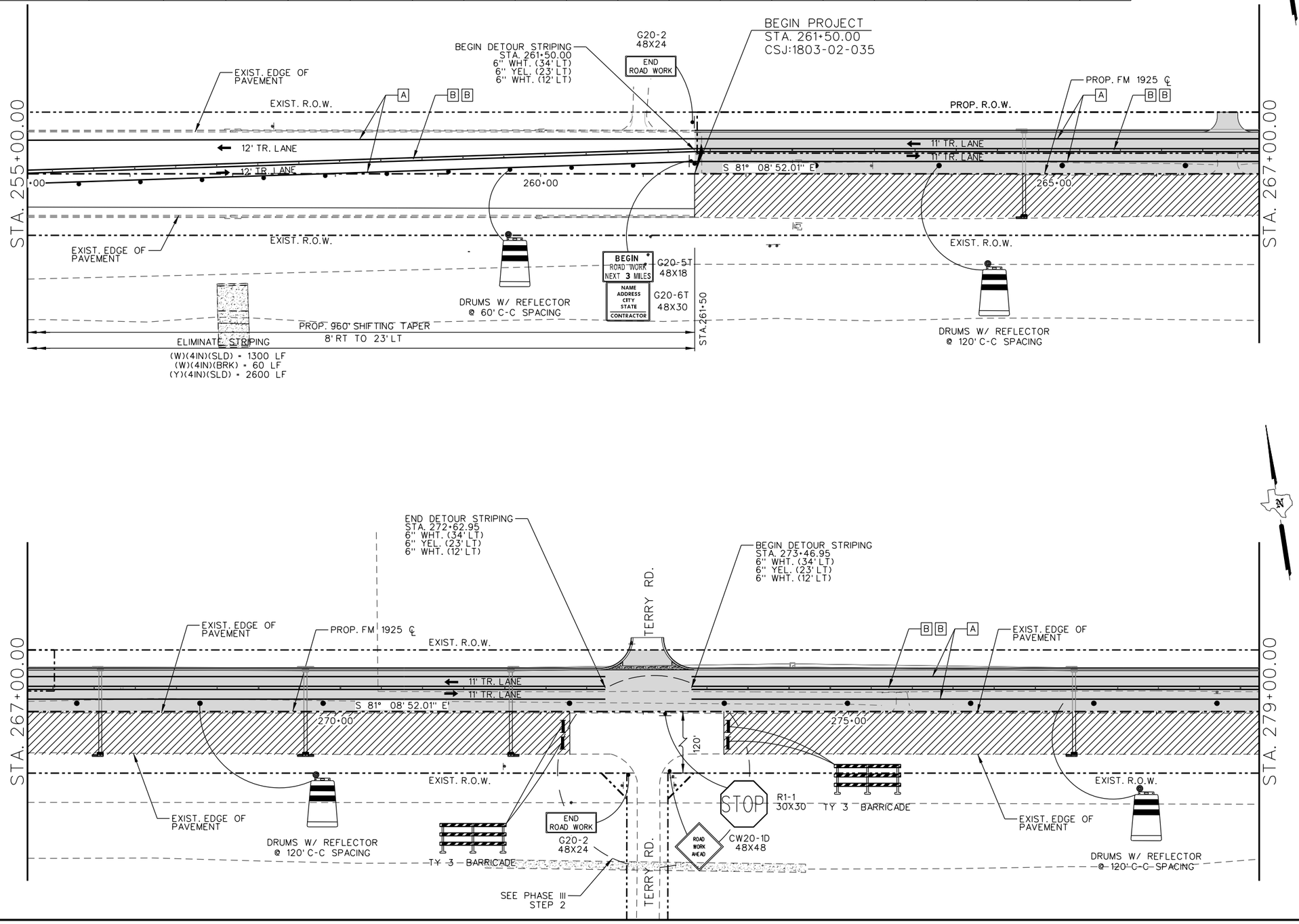
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					044
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
PHR	HIDALGO	1803	02	035	FM 1925	

10/31/2023 K:\Counties\HID\FM 1925 PHII(907 to Urest)\02 TCP\03 TCP PHASE_III\PHASE3_TCP1.dgn

SHEET SUMMARY

STATION LIMITS	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
255+00 TO 267+00	-	-	-	-	-	2400	-	-	-	2400	-	60	3960	-	-	-	-	-	-
267+00 TO 279+00	-	-	-	-	-	1116	-	-	-	1116	-	28	-	-	-	-	-	-	-
SHEET TOTAL	-	-	-	-	-	3516	-	-	-	3516	-	88	3960	-	-	-	-	-	-



LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
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11/01/2023

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FM 1925
TRAFFIC CONTROL PLAN
PHASE III
STA. 255+00 TO STA. 279+00

SCALE: 1" = 100'

SHEET 2 OF 6

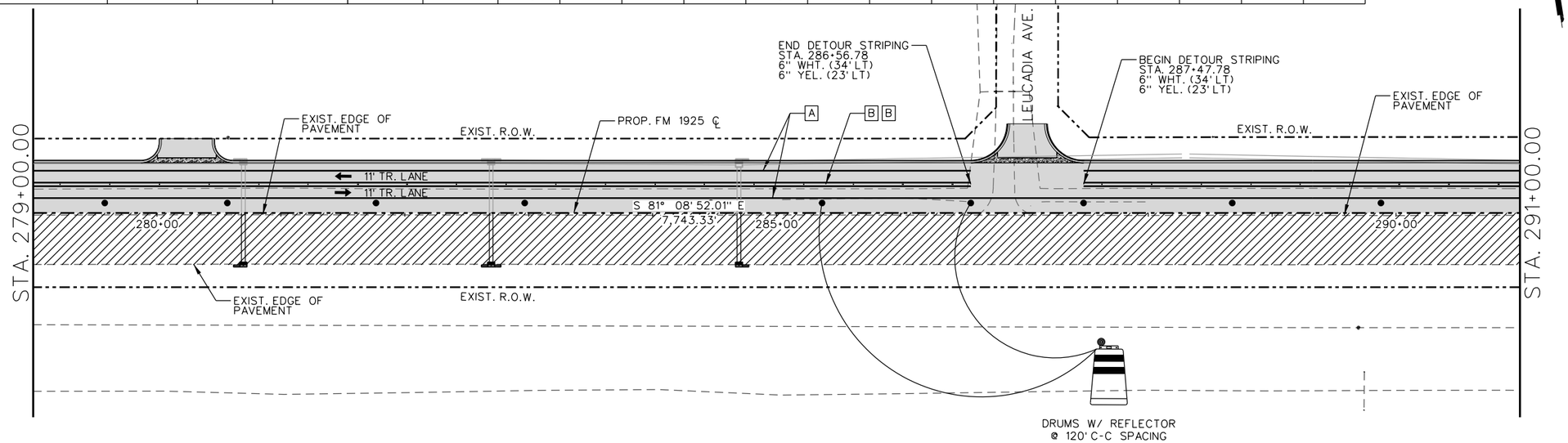
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

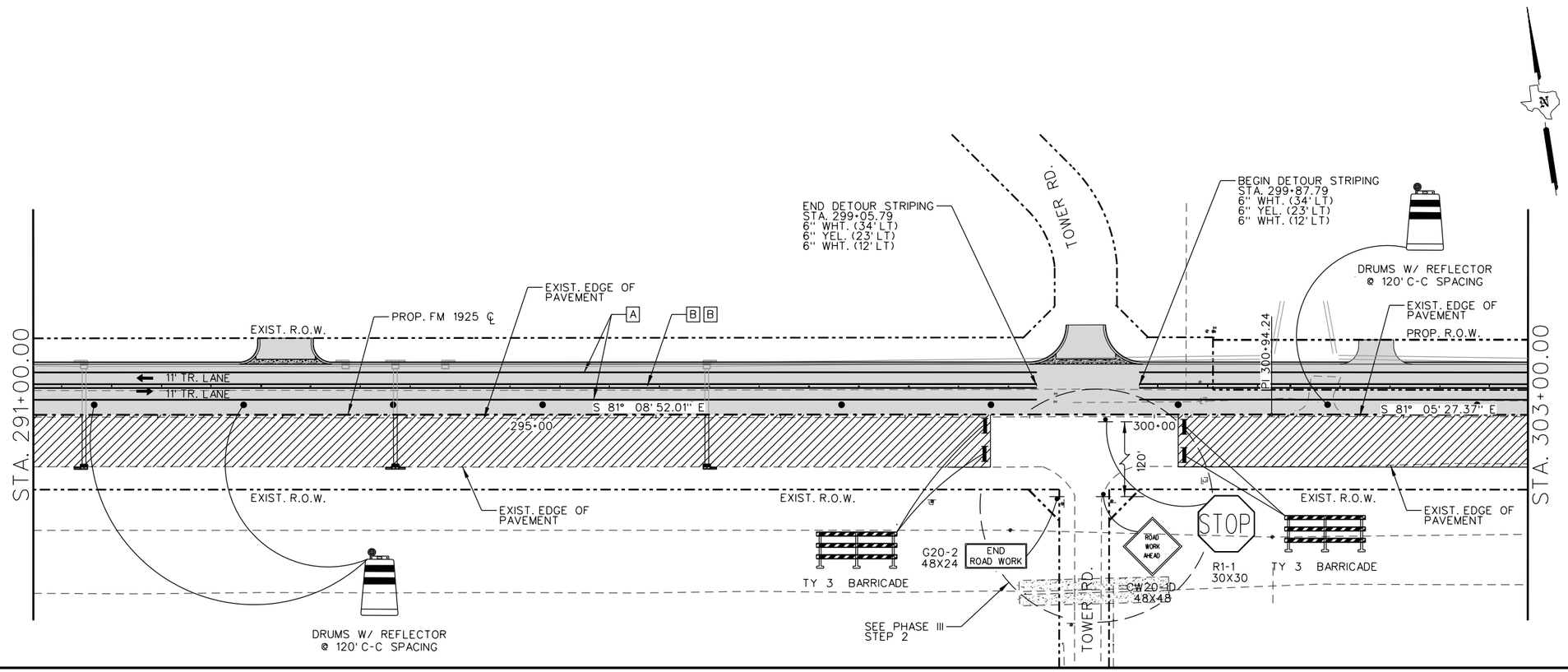
FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					045
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
PHR	HIDALGO	1803	02	035		FM 1925

10/31/2023 K:\Counties\HID\FM 1925 PHII(907 to Urest)\02 TCP\03 TCP PHASE_III\PHASE3_TCP2.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
279+00 TO 291+00	-	-	-	-	-	2218	-	-	-	2218	-	55	-	-	-	-	-	-	-
291+00 TO 303+00	-	-	-	-	-	2236	-	-	-	2236	-	56	-	-	-	-	-	-	-
SHEET TOTAL	-	-	-	-	-	4454	-	-	-	4454	-	111	-	-	-	-	-	-	-





LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

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Fax : (956) 565-9018

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

FM 1925
TRAFFIC CONTROL PLAN
PHASE III
STA. 279+00 TO STA. 303+00

SCALE: 1"= 100' SHEET 3 OF 6

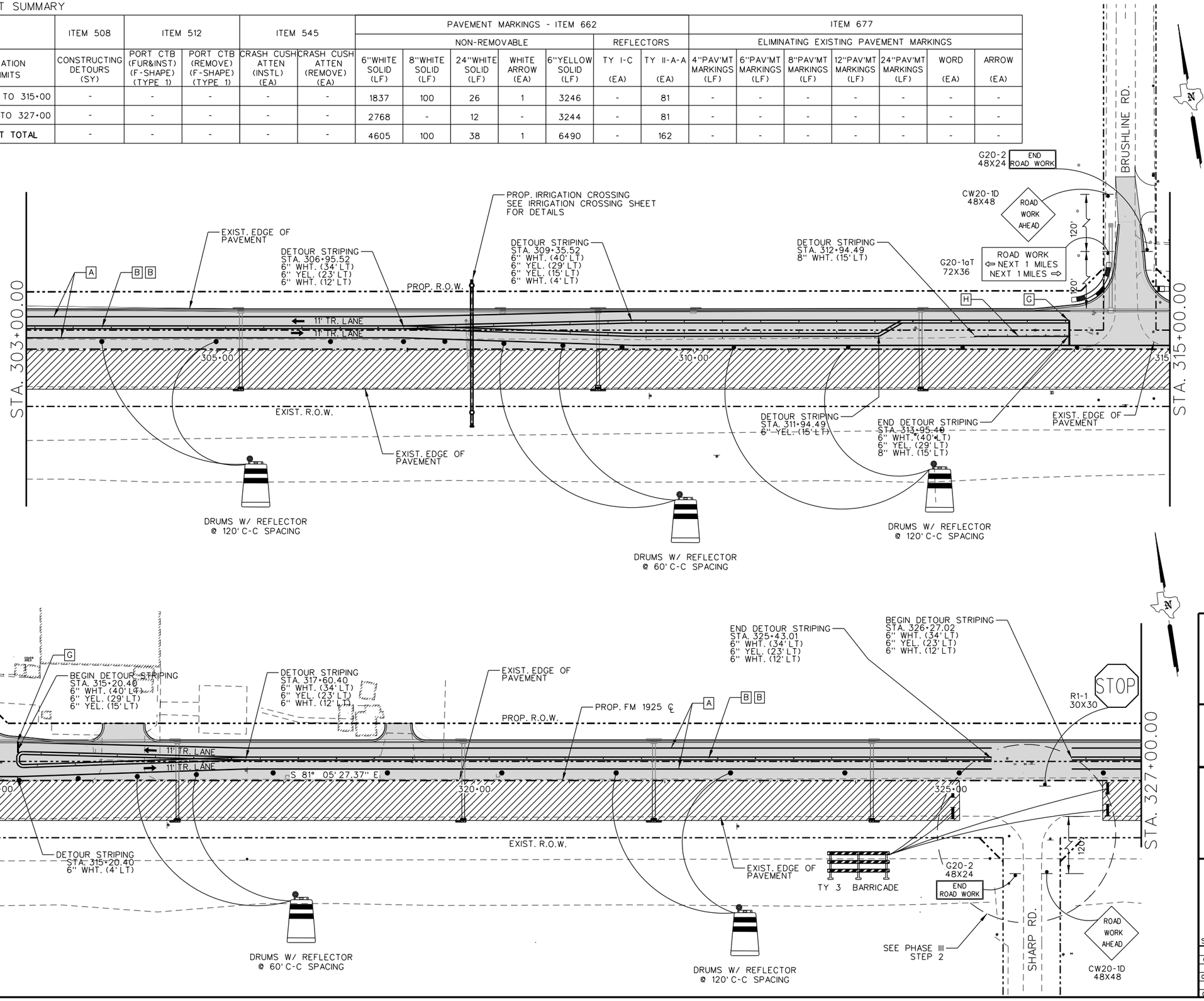
DN:	RP
CK DN:	RP
DW:	JBS
CK DW:	JBS
TR:	
CK TR:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					046
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
PHR	HIDALGO	1803	02	035		FM 1925

10/31/2023 K:\Counties\HID\FM 1925 PHII(907 to Urest)\02 TCP\03 TCP PHASE_III\PHASE3_TCP3.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
303+00 TO 315+00	-	-	-	-	-	1837	100	26	1	3246	-	81	-	-	-	-	-	-	-
315+00 TO 327+00	-	-	-	-	-	2768	-	12	-	3244	-	81	-	-	-	-	-	-	-
SHEET TOTAL	-	-	-	-	-	4605	100	38	1	6490	-	162	-	-	-	-	-	-	-



LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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Mission, TX. 78572
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FM 1925
TRAFFIC CONTROL PLAN
PHASE III
STA. 303+00 TO STA. 327+00

SCALE: 1"= 100'

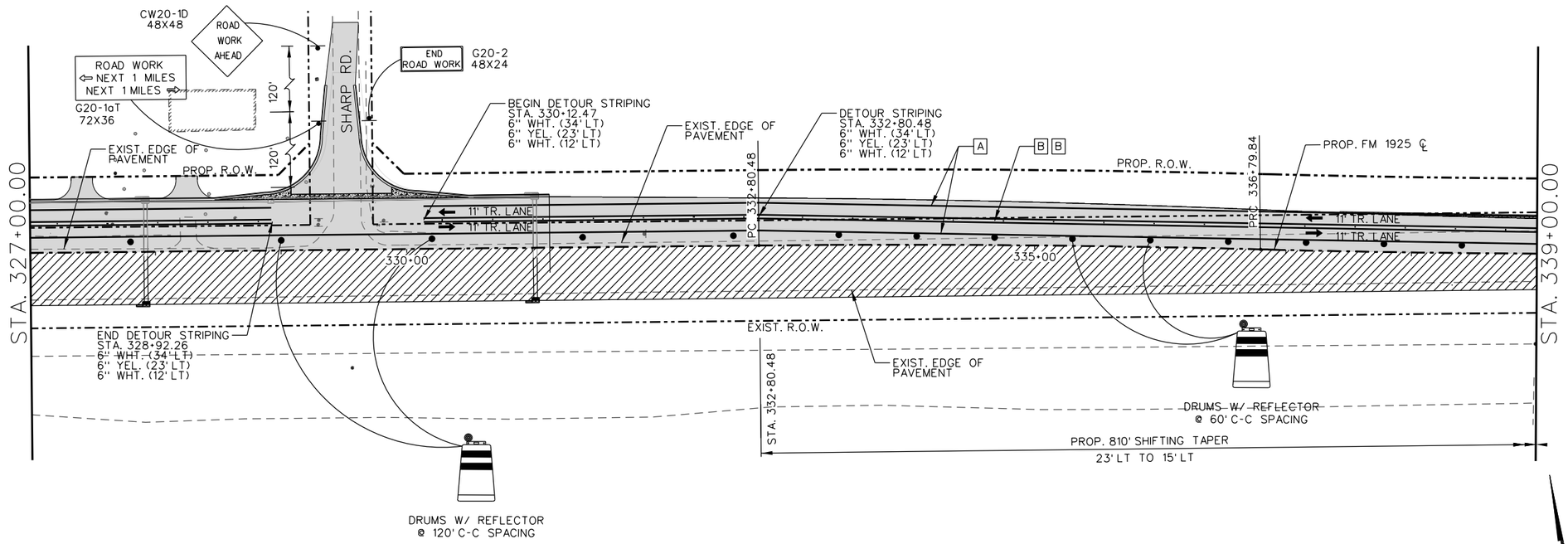
SHEET 4 OF 6

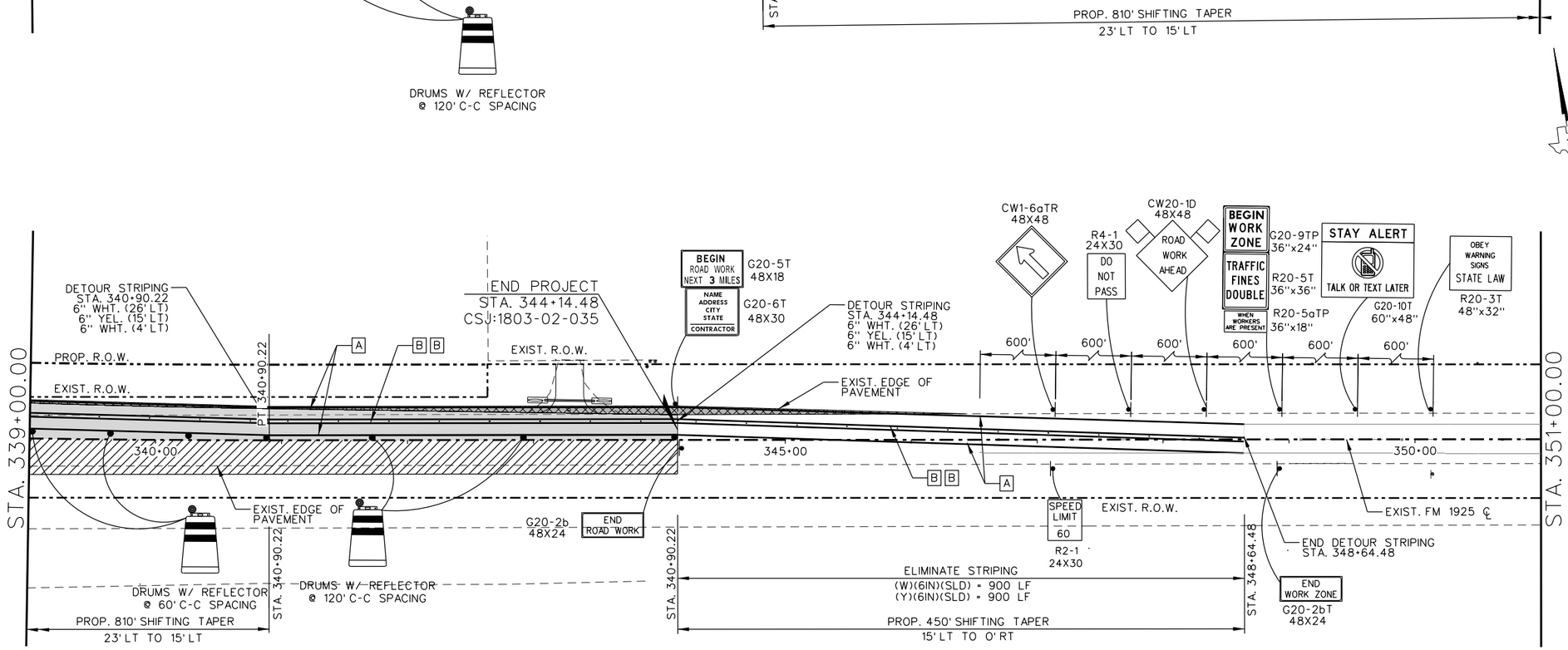
DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: RP		6	TEXAS					047
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
CK DW: JBS		PHR	HIDALGO	1803	02	035		FM 1925
TR:								
CK TR:								

10/31/2023 K:\Counties\HIDV\FM 1925 PHE(907 to Uresti)\02 TCP\03 TCP PHASE_III\PHASE3_TCP4.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
327+00 TO 339+00	-	-	-	-	-	2279	-	-	-	2476	-	62	-	-	-	-	-	-	-
339+00 TO 351+00	-	-	-	-	-	1928	-	-	-	1928	-	48	-	1800	-	-	-	-	-
SHEET TOTAL	-	-	-	-	-	4207	-	-	-	4404	-	110	-	1800	-	-	-	-	-





LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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Structural / Bridge
Environmental
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FM 1925
TRAFFIC CONTROL PLAN
PHASE III
STA. 327+00 TO STA. 351+00

SCALE: 1"= 100'

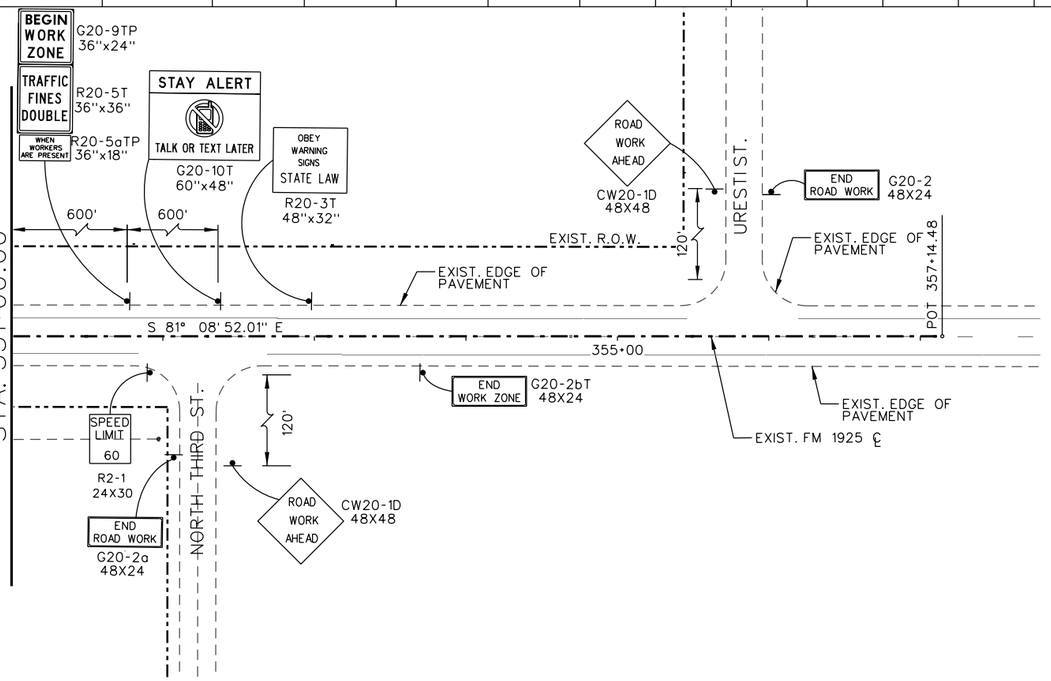
SHEET 5 OF 6

DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: RP		6	TEXAS					048
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925	
TR:								
CK TR:								

10/31/2023 K:\Counties\HIDALGO\FM 1925 PHII (907 to Uresti)\02 TCP\03 TCP PHASE_III\PHASE3_TCP5.dgn

SHEET SUMMARY

	ITEM 508	ITEM 512		ITEM 545		PAVEMENT MARKINGS - ITEM 662							ITEM 677						
						NON-REMOVABLE					REFLECTORS		ELIMINATING EXISTING PAVEMENT MARKINGS						
STATION LIMITS	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR&INST) (F-SHAPE) (TYPE 1)	PORT CTB (REMOVE) (F-SHAPE) (TYPE 1)	CRASH CUSH ATTEN (INSTL) (EA)	CRASH CUSH ATTEN (REMOVE) (EA)	6"WHITE SOLID (LF)	8"WHITE SOLID (LF)	24"WHITE SOLID (LF)	WHITE ARROW (EA)	6"YELLOW SOLID (LF)	TY I-C (EA)	TY II-A-A (EA)	4"PAV'MT MARKINGS (LF)	6"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	12"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	WORD (EA)	ARROW (EA)
351+00 TO 357+00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHEET TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



LEGEND	
	CONSTRUCTION PHASE
	TEMPORARY CONST. DETOUR
	PREVIOUSLY CONSTRUCTED
A	WORK ZONE PVMT MARK (NON-REM) 6" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
C	WORK ZONE PVMT MARK (REM) 6" WHITE SOLID
D	WORK ZONE PVMT MARK (REM) WHITE 6" (DOT)
E E	WORK ZONE PVMT MARK (REM) 6" DOUBLE YELLOW SOLID W/ ONE TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
F	WORK ZONE PVMT MARK (REM) 6" 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) 6" WHITE BROKEN W/ TY I-C PAVMENT MARKER SPACED AT EVERY 80'
K	WORK ZONE PVMT MARK (NON-REM) 6" YELLOW BROKEN W/ TY II-A-A PAVMENT MARKER SPACED AT EVERY 40'
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN

STATE OF TEXAS
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11/01/2023

THE COUNTY OF HIDALGO TEXAS

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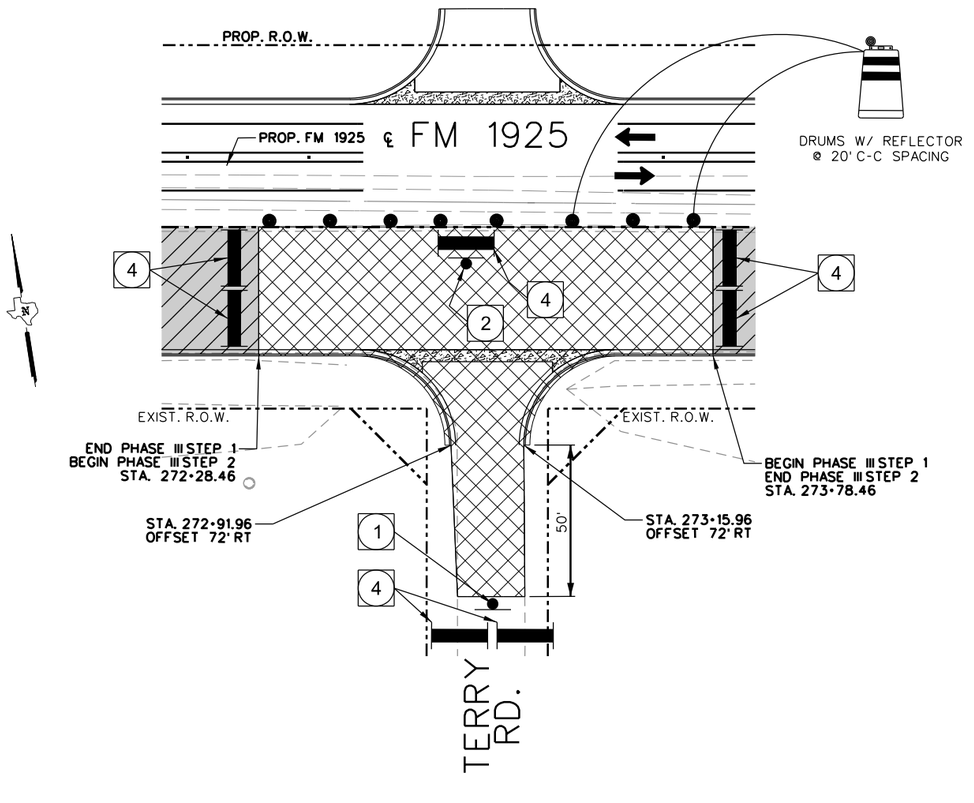
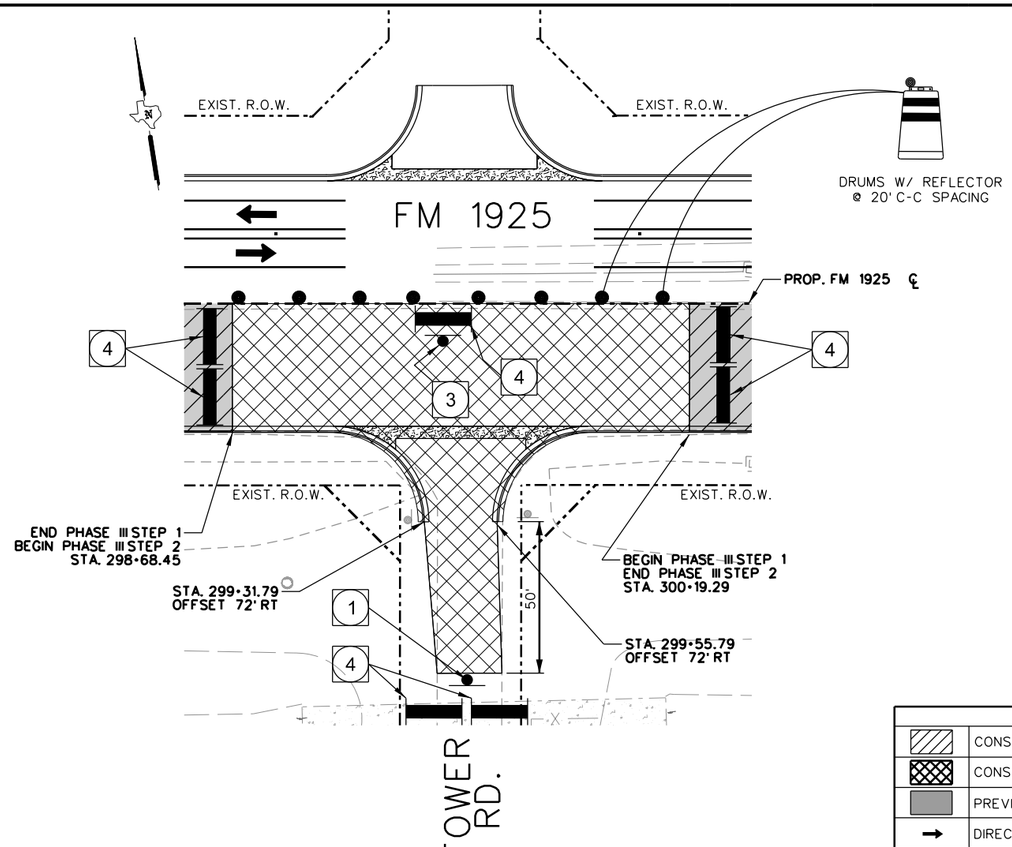
FM 1925
TRAFFIC CONTROL PLAN
PHASE III
STA. 351+00 TO STA. 357+14.48

SCALE: 1" = 100'

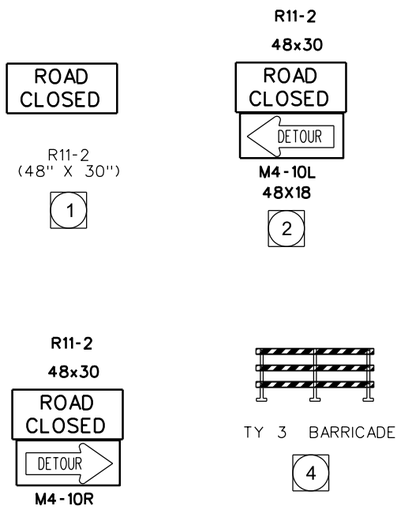
DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN: RP		6	TEXAS				049
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925
TR:							
CK TR:							

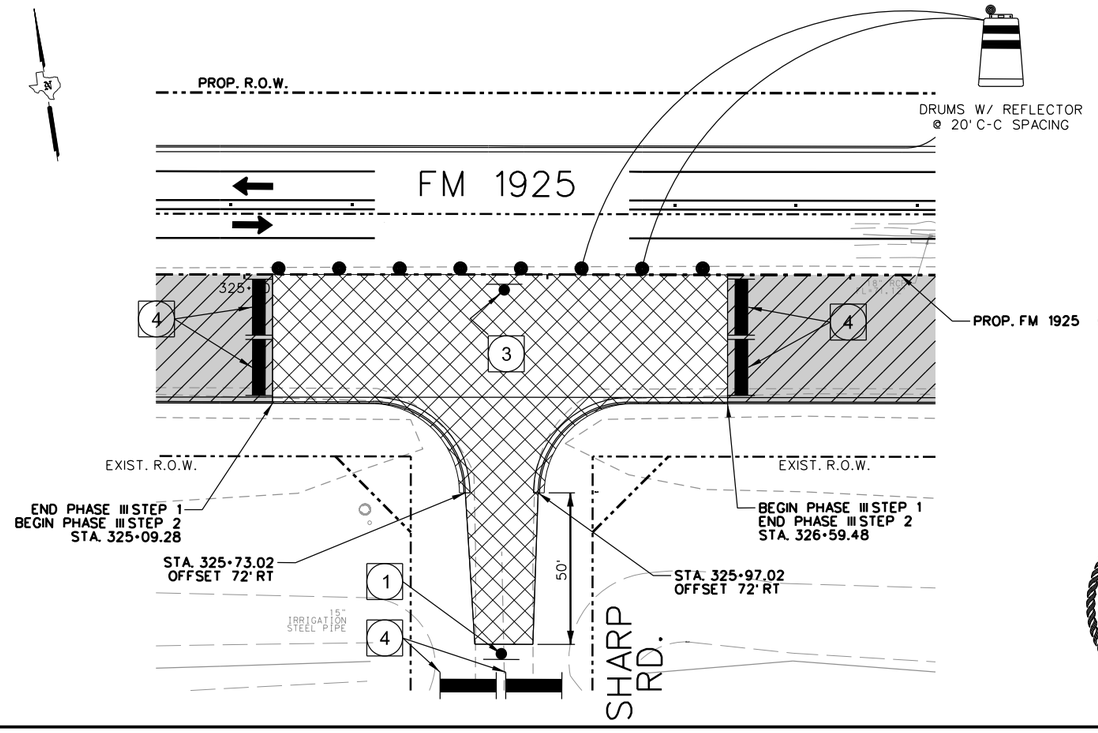
10/31/2023 K:\Counties\HID\FM 1925 PHII(907 to Uresti)\02 TCP\03 TCP PHASE_III\PHASE3_TCP6.dgn





LEGEND	
	CONSTRUCTION PHASE III STEP 1
	CONSTRUCTION PHASE III STEP 2
	PREVIOUSLY CONSTRUCTED
→	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
●, ■	CHANNELIZING DEVICE
	CONSTRUCTION SIGN





THE COUNTY OF HIDALGO TEXAS

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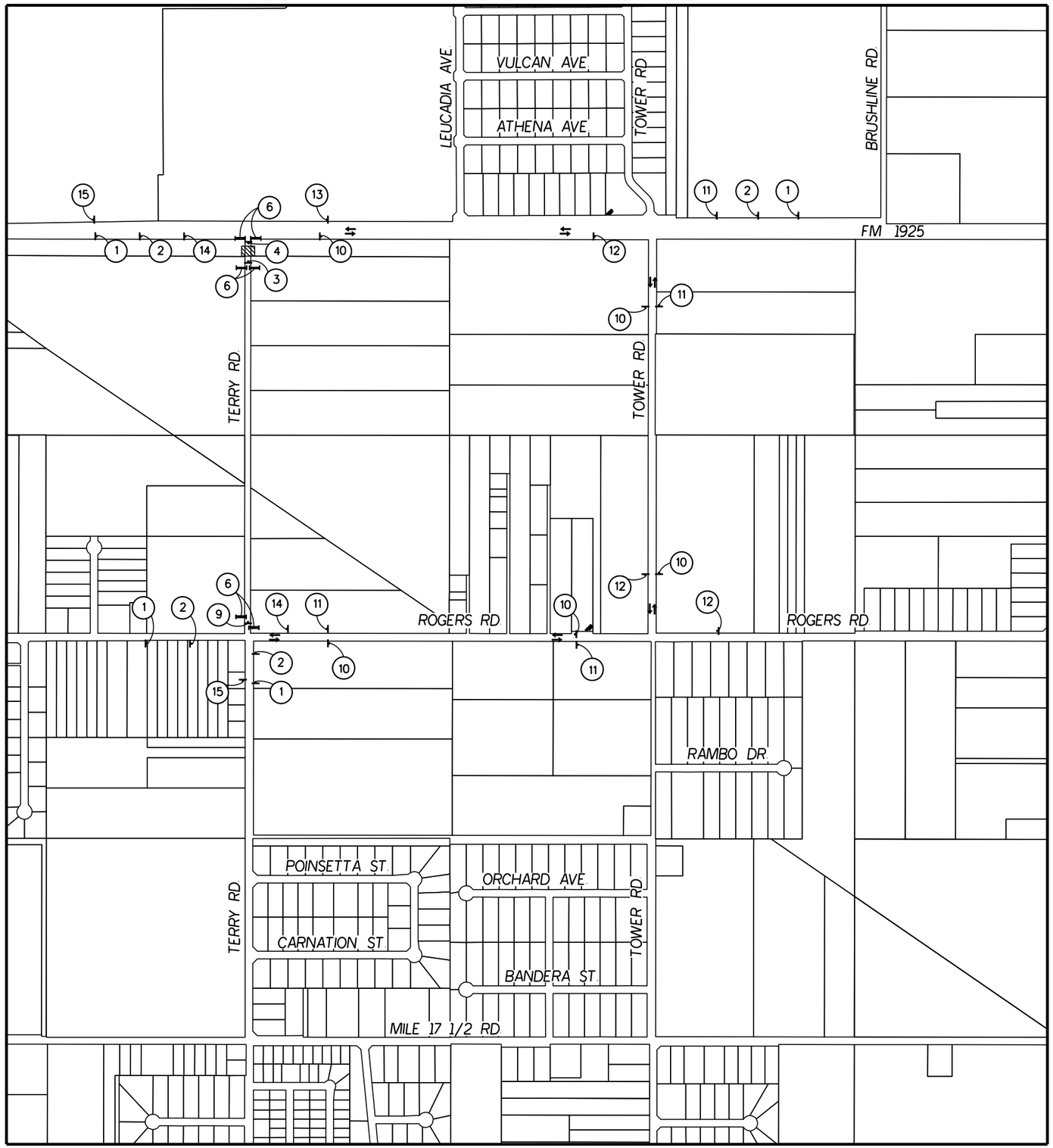
FM 1925
TRAFFIC CONTROL PLAN
PHASE III
STEP 2

SCALE: 1"= 50' SHEET 1 OF 1

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		050

10/31/2023 K:\Counties\HID\FM 1925 PHII(907 to Ures)\02 TCP\03 TCP PHASE_III\PHASE3_STEP_2.dgn



LEGEND	
	CONSTRUCTION PHASE
	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
	CONSTRUCTION SIGN
M	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

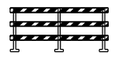
CW20-3D
48X48
1

CW20-2D
48X48
2

R11-2
48x30
3

M4-10L
48X18
4

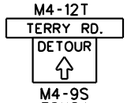
M4-10R
48X18
5


TY 3 BARRICADES
6

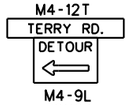
M4-9S
30X24
7

M4-10L
48X18
8

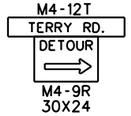
M4-10R
48X18
9



M4-9S
30X24
10



M4-9L
30X24
11



M4-9R
30X24
12

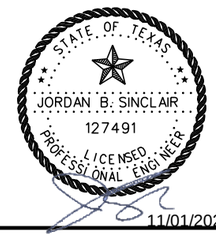

R3-2
24X24
13


R3-1
24X24
14

M4-8A
48X30
15

SPECIAL NOTES:

ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCEPTABLE CONDITION, AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AS PER TEXAS MUTCD GUIDELINES.



11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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Fax : (956) 585-1927

TRAFFIC CONTROL PLAN
TERRY RD. DETOUR

SCALE: 1"= 750'

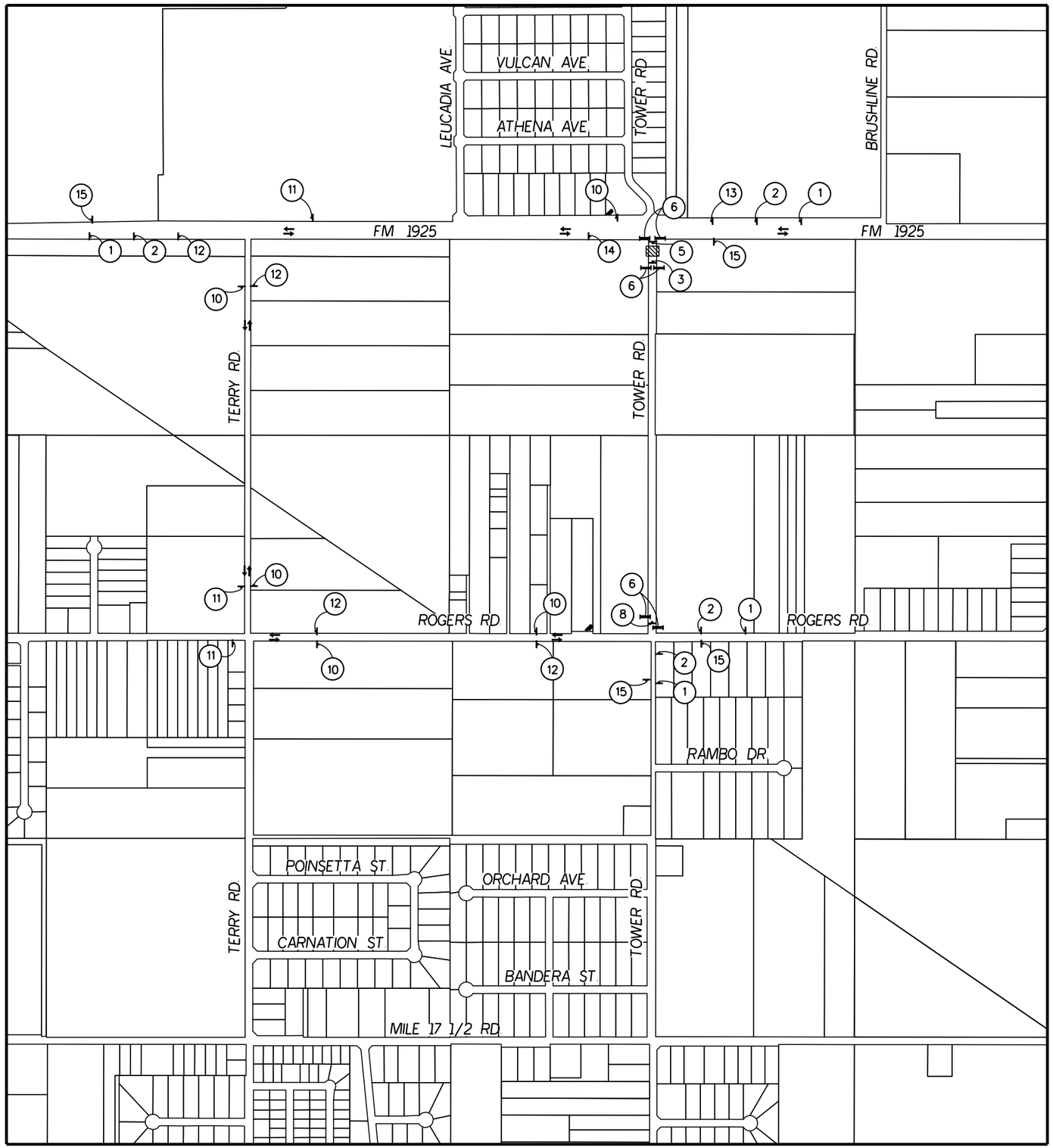
SHEET 1 OF 1

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
PHR	HIDALGO	1803	02	035	051

K:\Counties\HID\FM 1925 PHII(907 to Uresti)\02 TCP\Intersection Detour\DETOUR_TERRY.dgn

11/1/2023



LEGEND	
	CONSTRUCTION PHASE
	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
	CONSTRUCTION SIGN
M	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

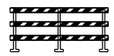
CW20-3D
48X48
(1)

CW20-2D
48X48
(2)

R11-2
48x30
(3)

M4-10L
48X18
(4)

M4-10R
48X18
(5)

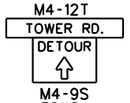


TY 3 BARRICADES
(6)

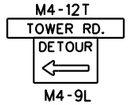
M4-9S
30X24
(7)

M4-10L
48X18
(8)

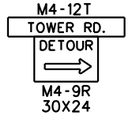
M4-10R
48X18
(9)



M4-9S
30X24
(10)



M4-9L
30X24
(11)



M4-9R
30X24
(12)

R3-2
24X24
(13)

R3-1
24X24
(14)

M4-8A
48X30
(15)

SPECIAL NOTES:

ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCEPTABLE CONDITION, AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AS PER TEXAS MUTCD GUIDELINES.

11/01/2023

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TRAFFIC CONTROL PLAN
TOWER RD. DETOUR

SCALE: 1"= 750'

SHEET 1 OF 1

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
PHR	HIDALGO	1803	02	035	052

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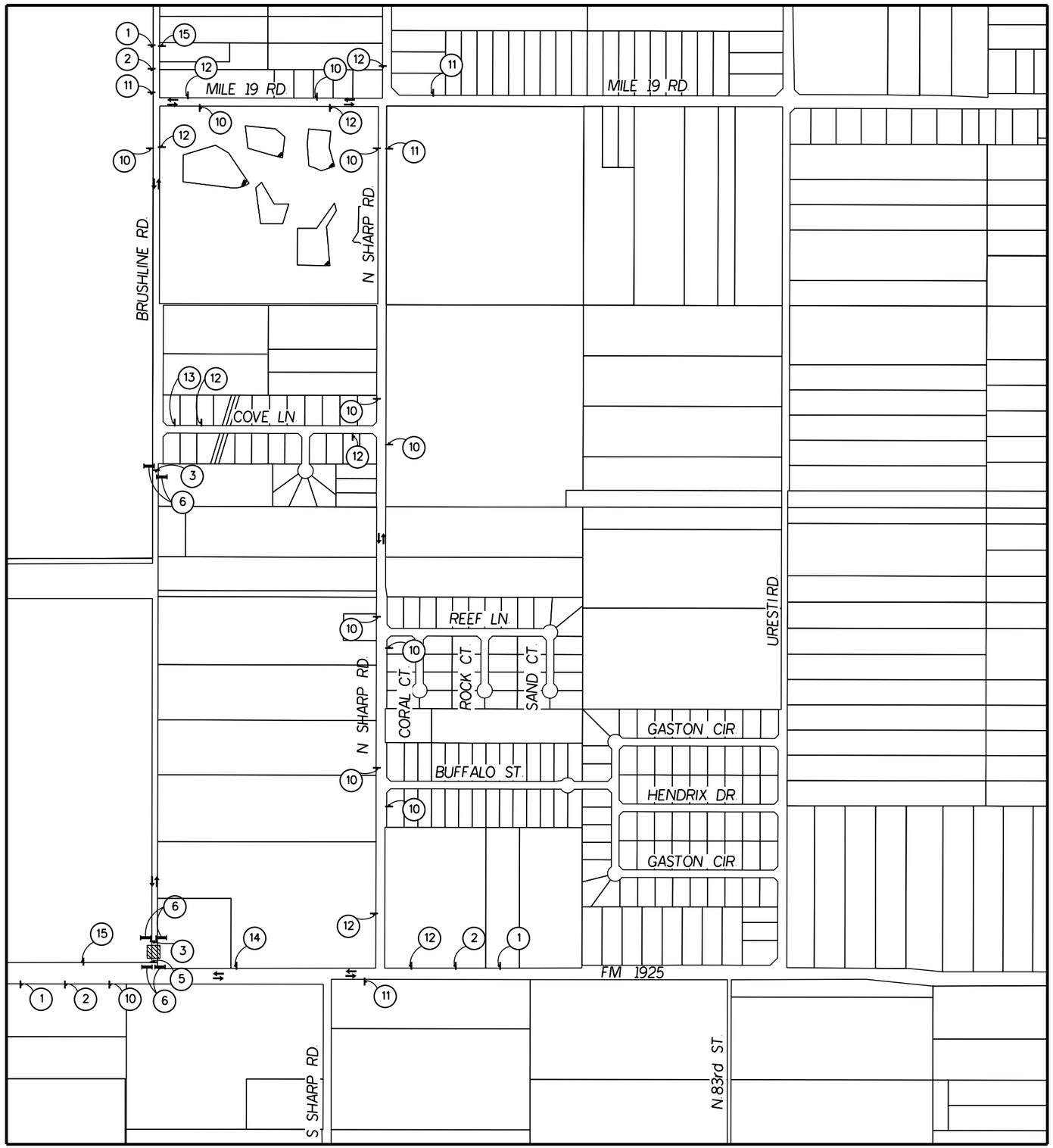
11/1/2023



LEGEND	
	CONSTRUCTION PHASE
	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
	CONSTRUCTION SIGN
M	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

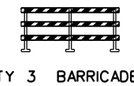
CW20-3D
48X48
1

CW20-2D
48X48
2

R11-2
48x30
3

M4-10L
48X18
4

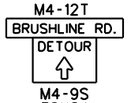
M4-10R
48X18
5


TY 3 BARRICADES
6

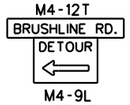
M4-9S
30X24
7

M4-10L
48X18
8

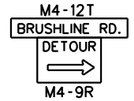
M4-10R
48X18
9



M4-9S
30X24
10



M4-9L
30X24
11



M4-9R
30X24
12

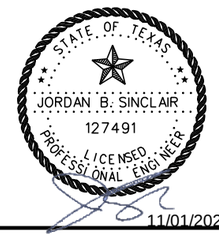

R3-2
24X24
13


R3-1
24X24
14

M4-8A
48X30
15

SPECIAL NOTES:

ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCEPTABLE CONDITION, AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AS PER TEXAS MUTCD GUIDELINES.



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Fax : (956) 585-1927

TRAFFIC CONTROL PLAN
BRUSHLINE RD. DETOUR

SCALE: 1"= 750'

SHEET 1 OF 1

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
PHR	HIDALGO	1803	02	035	053

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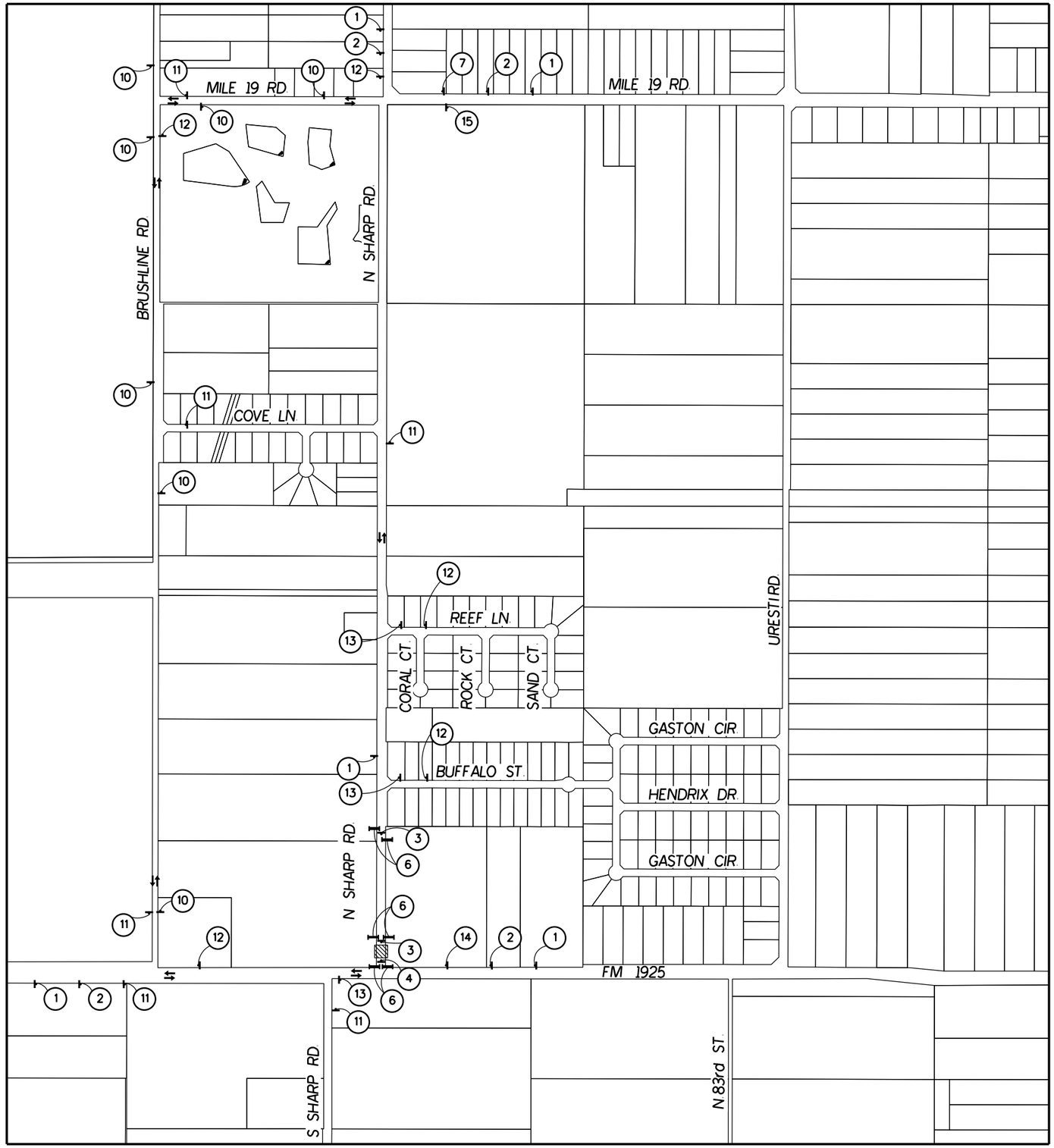


LEGEND	
	CONSTRUCTION PHASE
	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
	CONSTRUCTION SIGN
M	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

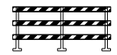
CW20-3D 48X48 (1)

CW20-2D 48X48 (2)

R11-2 48x30 (3)

M4-10L 48X18 (4)

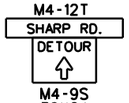
M4-10R 48X18 (5)


TY 3 BARRICADES (6)

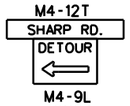
M4-9S 30X24 (7)

M4-10L 48X18 (8)

M4-10R 48X18 (9)



M4-9S 30X24 (10)



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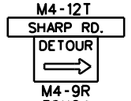


M4-9R 30X24 (12)

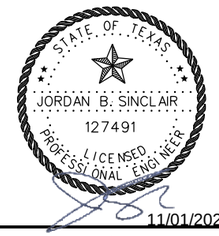

R3-2 24X24 (13)


R3-1 24X24 (14)

M4-8A 48X30 (15)

SPECIAL NOTES:

ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCEPTABLE CONDITION, AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AS PER TEXAS MUTCD GUIDELINES.



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TRAFFIC CONTROL PLAN
SHARP RD. DETOUR (PHASE II)

SCALE: 1"= 750' SHEET 1 OF 1

DRAWING: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP		6	TEXAS					FM1925
ENGINEER: JBS		STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS		PHR	HIDALGO	1803	02	035		054
REVIEW:	
CK:	

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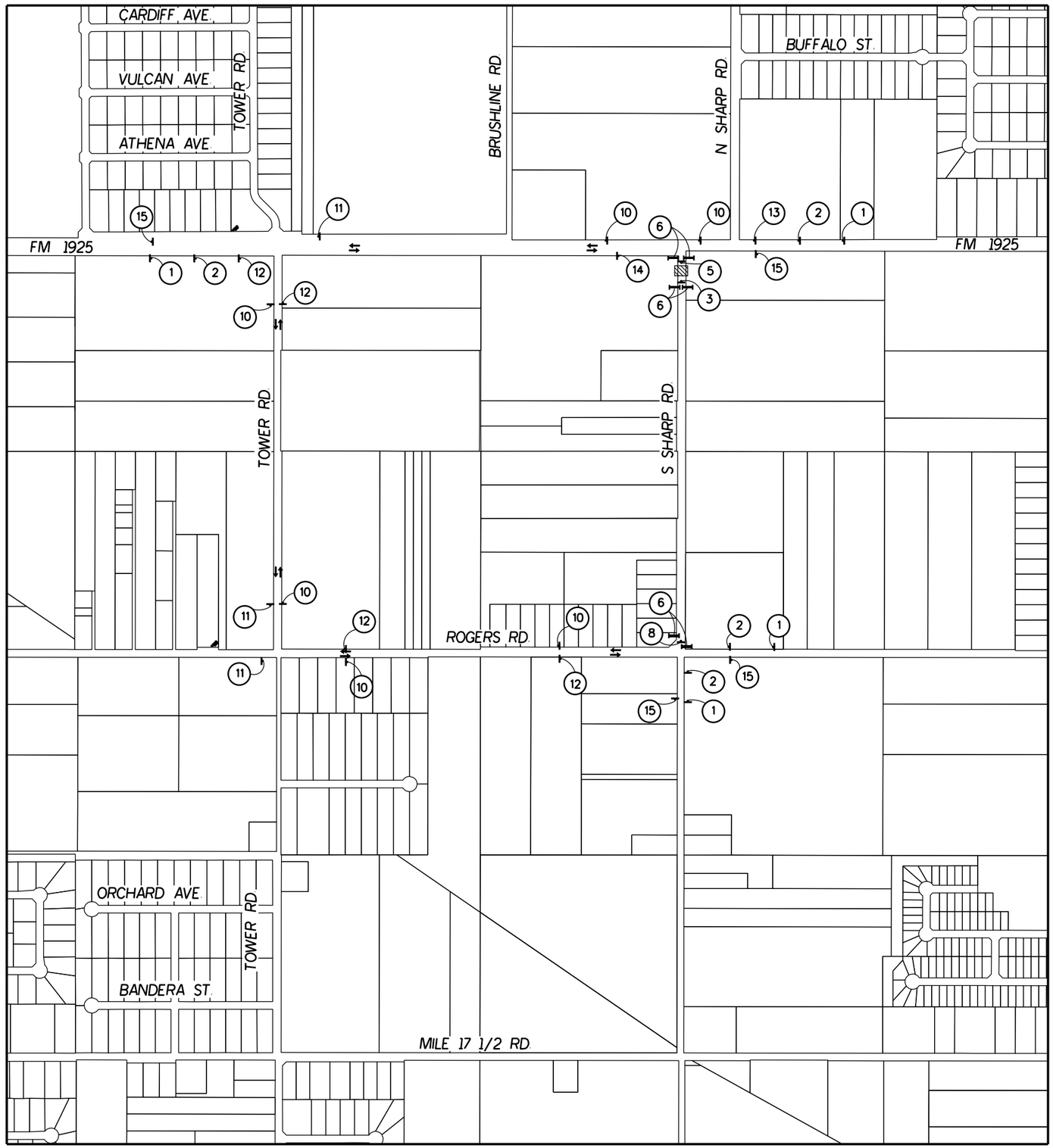

LEGEND	
	CONSTRUCTION PHASE
	DIRECTION OF TRAFFIC FLOW
	TYPE 3 BARRICADE
	CONSTRUCTION SIGN
M	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

1. CW20-3D 48X48
2. CW20-2D 48X48
3. R11-2 48x30 ROAD CLOSED
4. R11-2 48x30 ROAD CLOSED / DETOUR — M4-10L 48X18
5. R11-2 48x30 ROAD CLOSED / DETOUR — M4-10R 48X18
6. TY 3 BARRICADES
7. M4-12T SHARP RD. / ROAD CLOSED TO THRU TRAFFIC / DETOUR — M4-9S 30X24
8. ROAD CLOSED TO THRU TRAFFIC / DETOUR — M4-10L 48X18
9. ROAD CLOSED TO THRU TRAFFIC / DETOUR — M4-10R 48X18
10. M4-12T SHARP RD. / DETOUR — M4-9S 30X24
11. M4-12T SHARP RD. / DETOUR — M4-9L 30X24
12. M4-12T SHARP RD. / DETOUR — M4-9R 30X24
13. R3-2 24X24
14. R3-1 24X24
15. END DETOUR — M4-8A 48X30

SPECIAL NOTES:

ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCEPTABLE CONDITION, AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AS PER TEXAS MUTCD GUIDELINES.

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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TRAFFIC CONTROL PLAN
SHARP RD. DETOUR (PHASE III)

SCALE: 1"= 750'

SHEET 1 OF 1

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
PHR	HIDALGO	1803	02	035	055

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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. Where highway construction or maintenance work is being undertaken, other than mobile operations as defined by the Texas Manual on Uniform Traffic Control Devices, CSJ limit signs are required. CSJ limit signs are shown on BC(2). The OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits. For mobile operations, CSJ limit signs are not required.

11. 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 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.

2. Except in emergency situations, flagger stations shall be illuminated when flagging is used at night.

COMPLIANT WORKZONE TRAFFIC CONTROL DEVICES

1. Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources.

2. Work zone traffic control devices shall be compliant with the Manual for Assessing safety Hardware (MASH).

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 Safety Division Standard

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

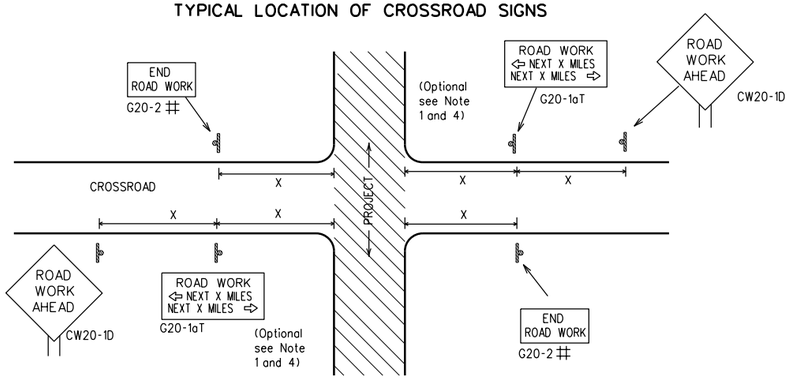
BC(1)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
4-03 7-13	DIST	COUNTY		SHEET NO.
9-07 8-14	PHR	HIDALGO		056
5-10 5-21				

95

DATE:
FILE:

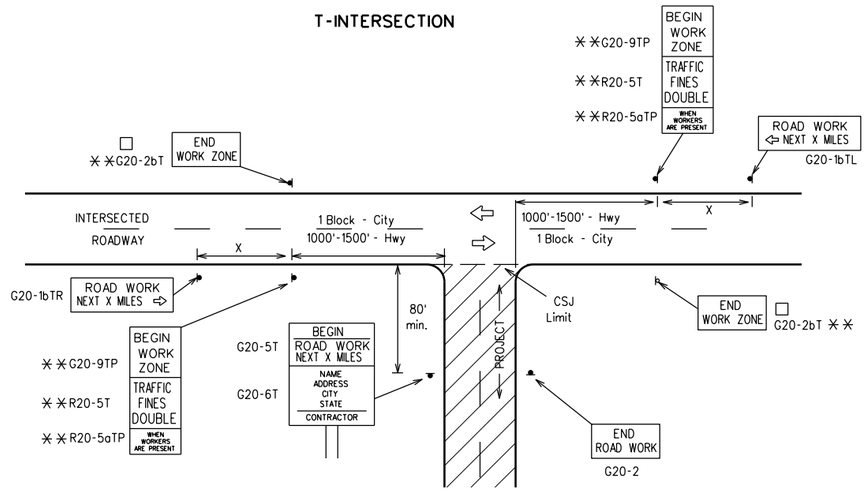
TYPICAL LOCATION OF CROSSROAD SIGNS



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 as per TMUTCD Part 5. 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"
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]

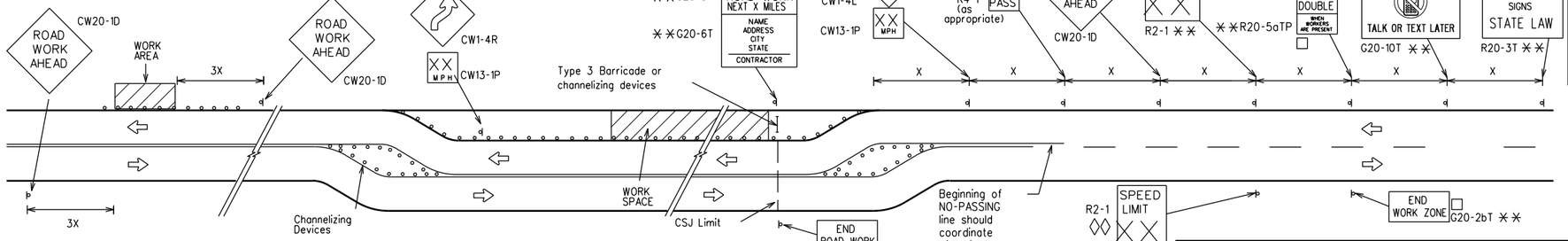
✳ For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ 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 as per TMUTCD Part 5. 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.

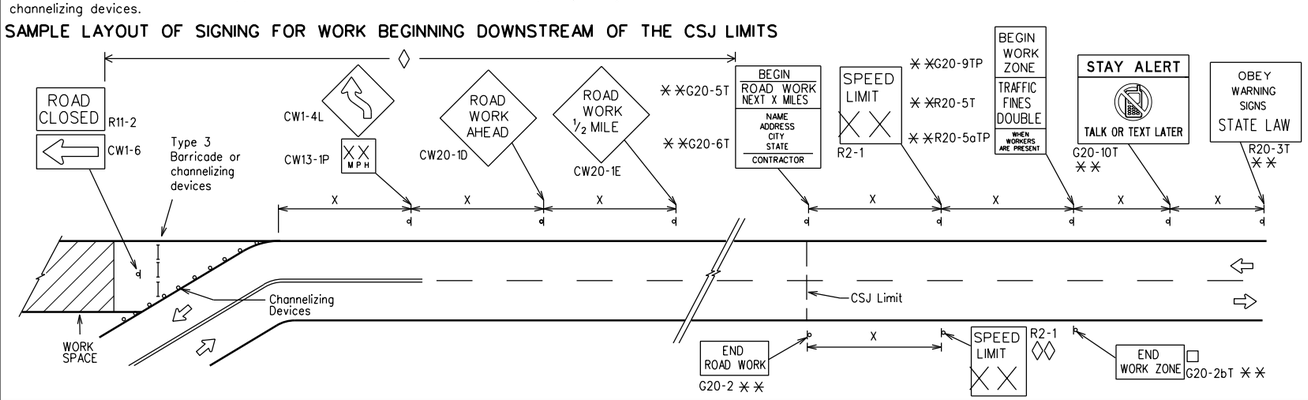
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



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.

□ 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.

✳✳ CSJ limit signing is required for highway construction and maintenance work, with the exception of mobile operations.

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

◊◊ Contractor will install a regulatory speed limit sign at the end of the work zone.

LEGEND

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

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-21

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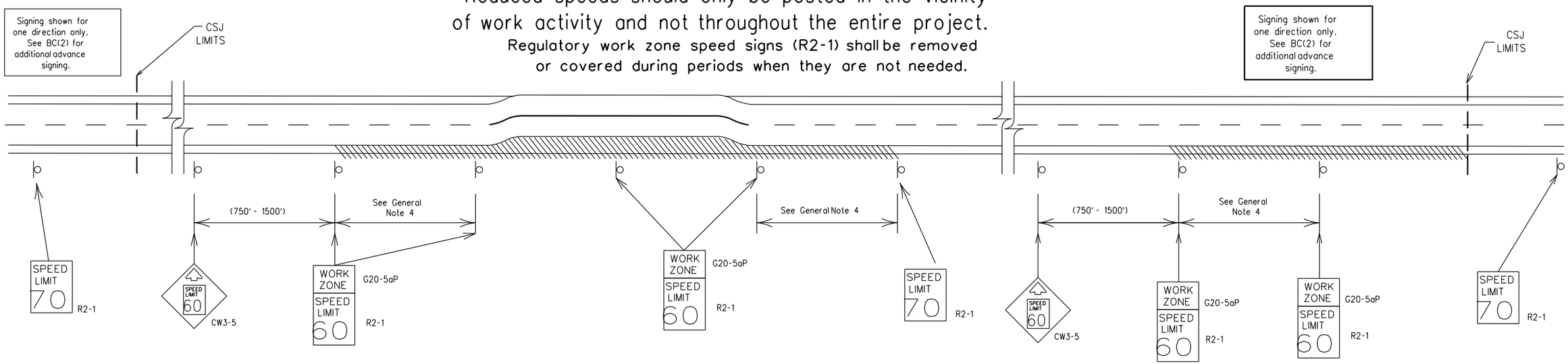
TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

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 traveled 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 Safety Division Standard

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

BC(3)-21

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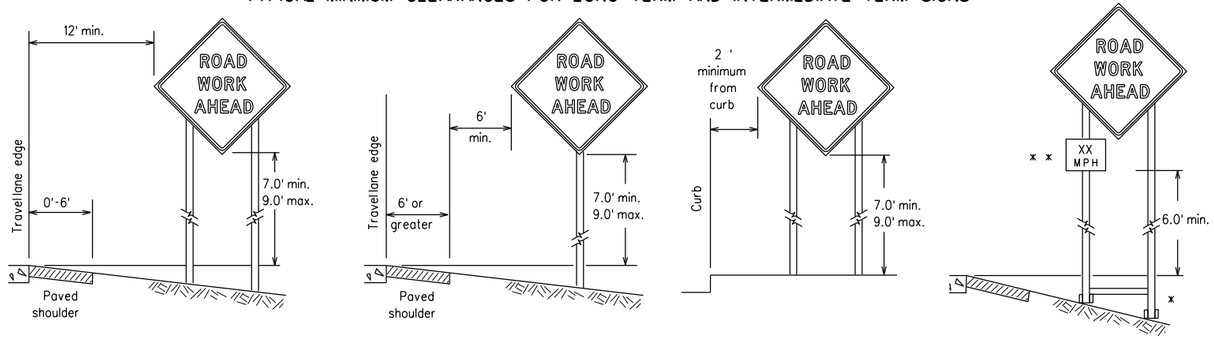
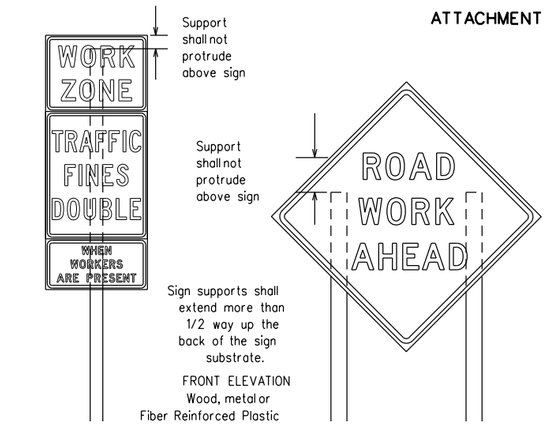
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS

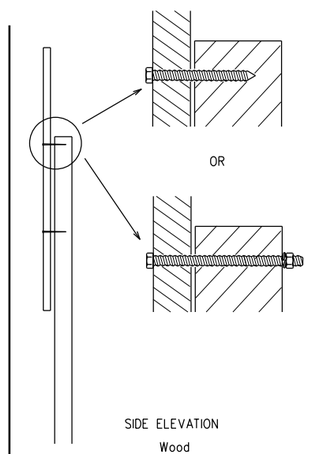


x When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

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





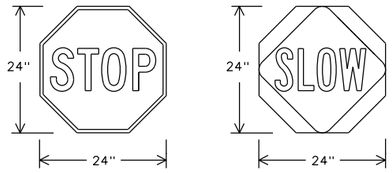
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

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.

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.

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".
2. STOP/SLOW paddles shall be retroreflectorized when used at night.
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.



SHEETING REQUIREMENTS (WHEN USED AT NIGHT)		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	RED	TYPE B OR C SHEETING
BACKGROUND	ORANGE	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND & BORDER	WHITE	TYPE B OR C SHEETING
LEGEND & BORDER	BLACK	ACRYLIC NON-REFLECTIVE FILM

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, specific service (LOGO), 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. For details for covering large guide signs see the TS-CD standard.
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 standard sheets, TLRS standard sheets or the CWZTCD list. The signs shall meet the required mounting heights shown on the BC, or the SMD standard sheets 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) for small roadside signs. Supports for temporary large roadside signs shall meet the requirements detailed on the Temporary Large Roadside Signs (TLRS) standard sheets. 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_{FL}, 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 Safety Division Standard

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-21

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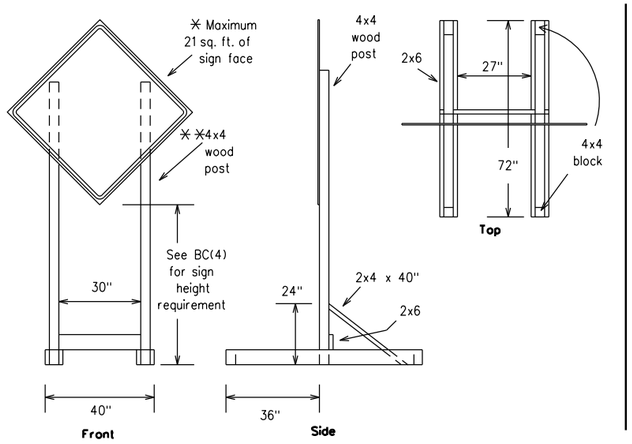
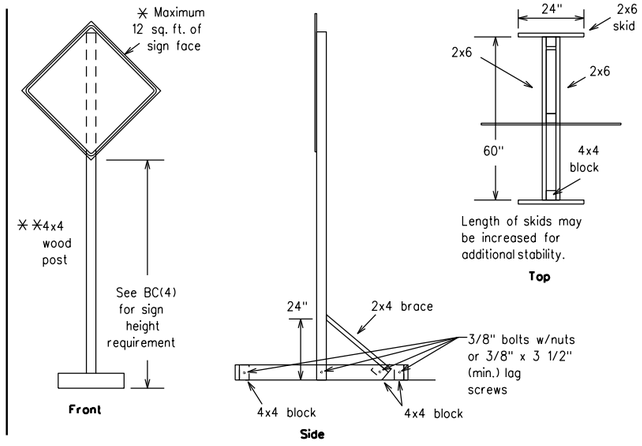
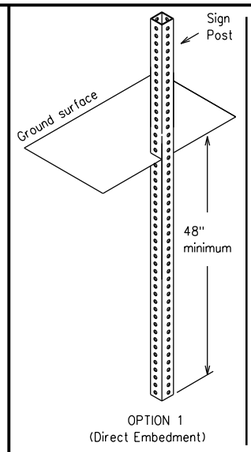
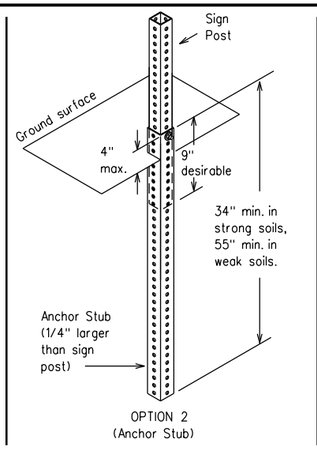


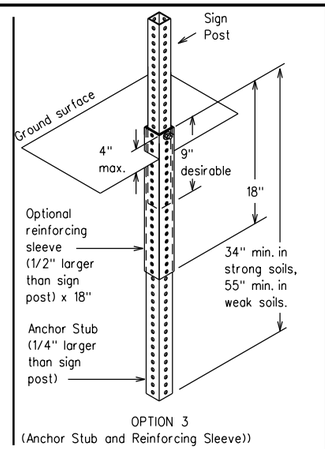


SKID MOUNTED WOOD SIGN SUPPORTS

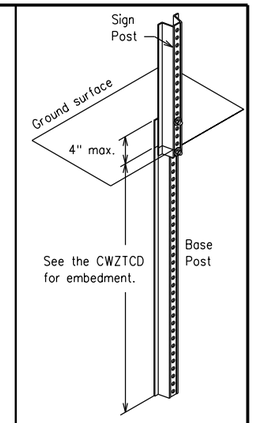
* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS







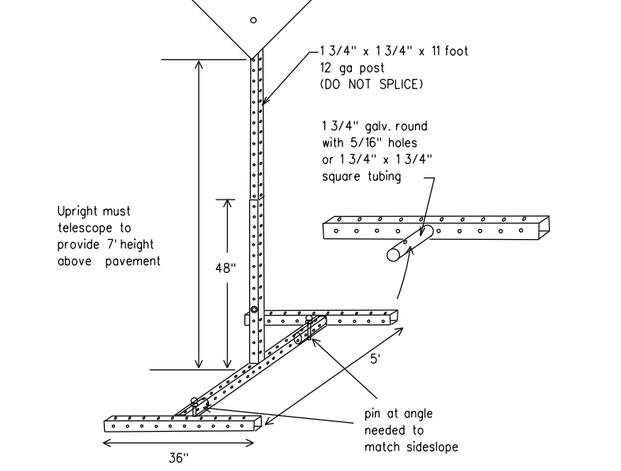
PERFORATED SQUARE METAL TUBING

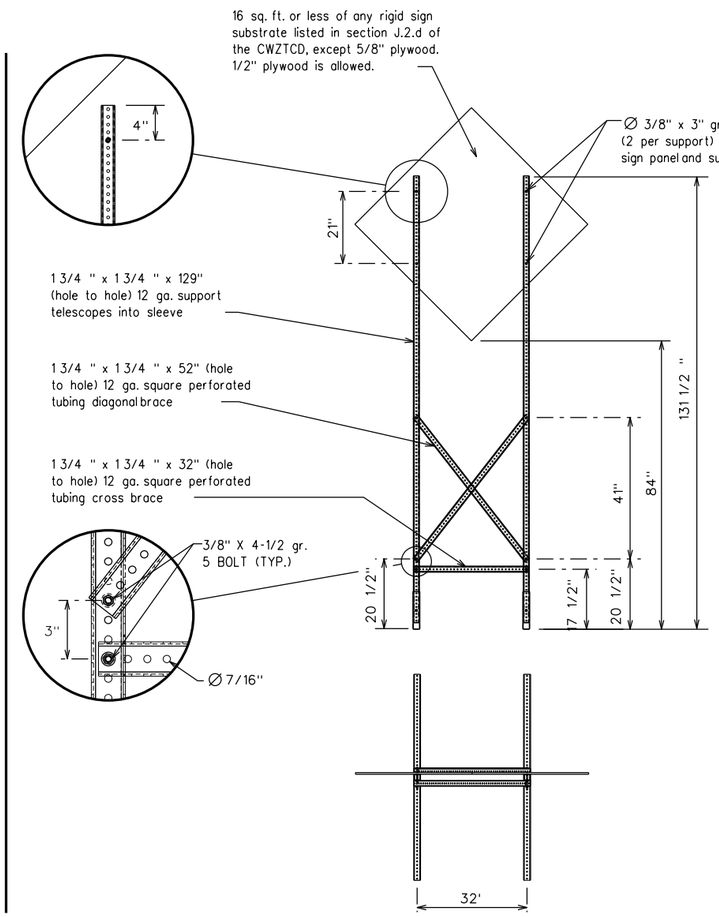


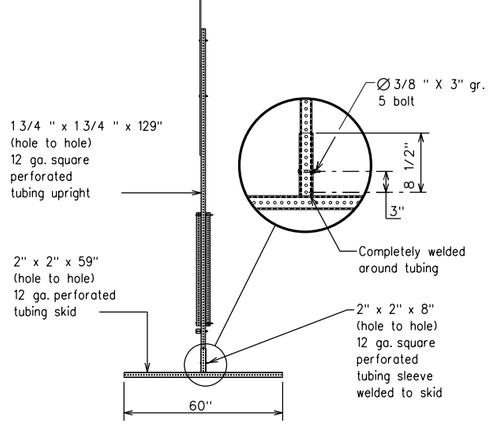
WING CHANNEL
Lap-splice/base bolted anchor

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.







SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS

* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID 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 Safety Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-21

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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
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 Safety Division Standard

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

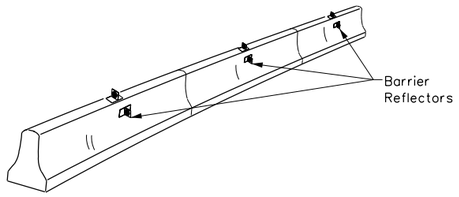
BC(6)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	PHR	HIDALGO		061

100

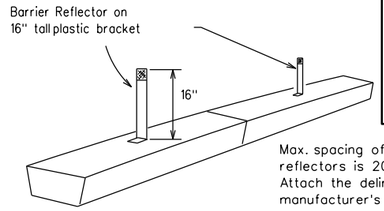
DATE:
FILE:

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.



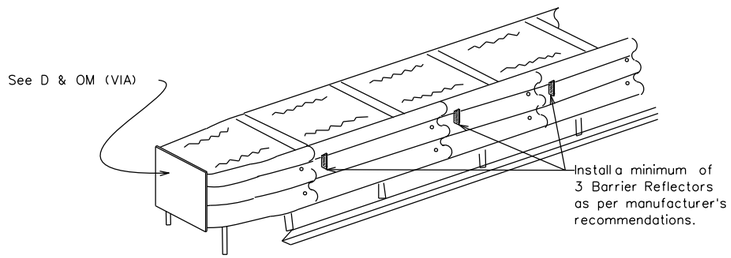
CONCRETE TRAFFIC BARRIER (CTB)

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.



Max. spacing of barrier reflectors is 20 feet. Attach the delineators as per manufacturer's recommendations.

LOW PROFILE CONCRETE BARRIER (LPCB)



DELINEATION OF END TREATMENTS

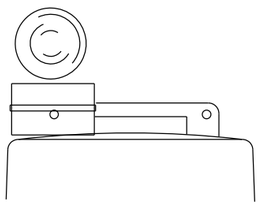
LOW PROFILE CONCRETE BARRIER (LPCB) USED IN WORK ZONES

LPCB is approved for use in work zone locations, where the posted speed is 45mph, or less. See Roadway Standard Sheet LPCB.

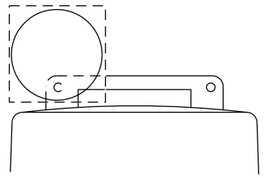
END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet the apppropriate crashworthy standards as defined in the Manual for Assessing Safety Hardware (MASH). 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

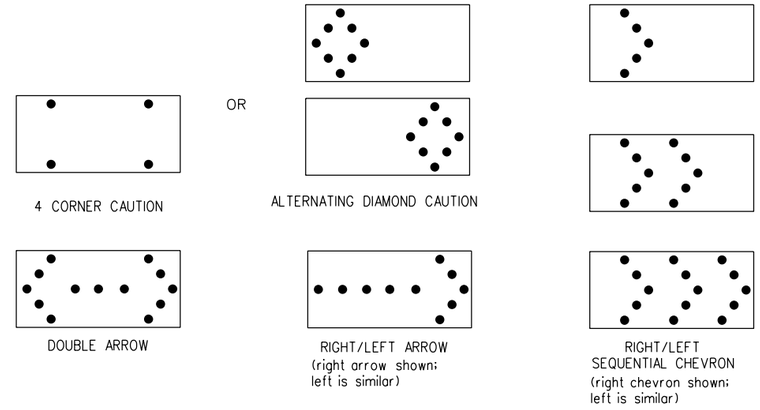
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing 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:



4 CORNER CAUTION

ALTERNATING DIAMOND CAUTION

DOUBLE ARROW

RIGHT/LEFT ARROW
(right arrow shown;
left is similar)

RIGHT/LEFT
SEQUENTIAL CHEVRON
(right chevron shown;
left is similar)

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 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 Safety Division Standard

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

BC(7)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	PHR	HIDALGO		062

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DATE:
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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:

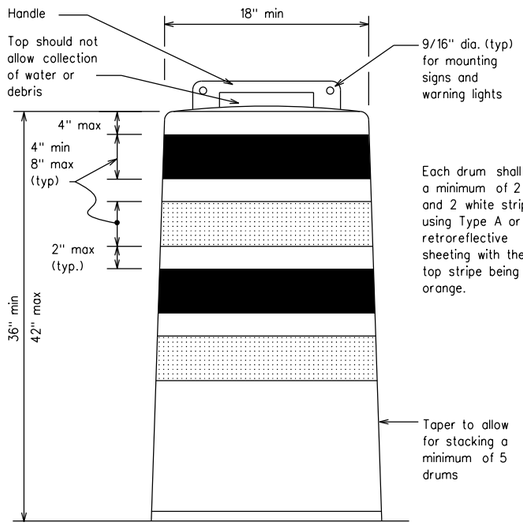
1. Plastic drums shall be a two-piece design: the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents 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.

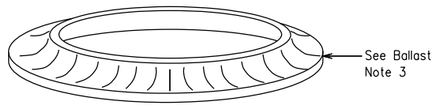
RETROREFLECTIVE SHEETING

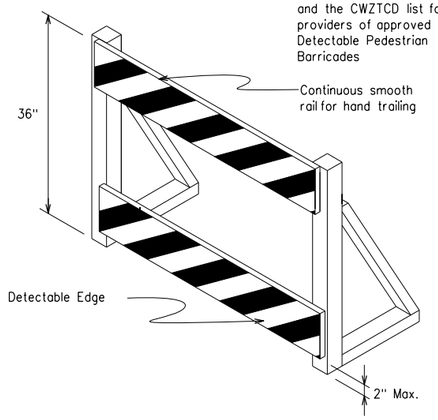
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall 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.

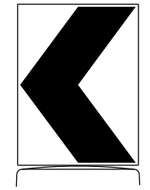




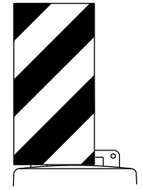


DETECTABLE PEDESTRIAN BARRICADES

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. Refer to WZ(BTS-2) for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
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 (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 should 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$_{FL}$ 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 or Type B. 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 Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

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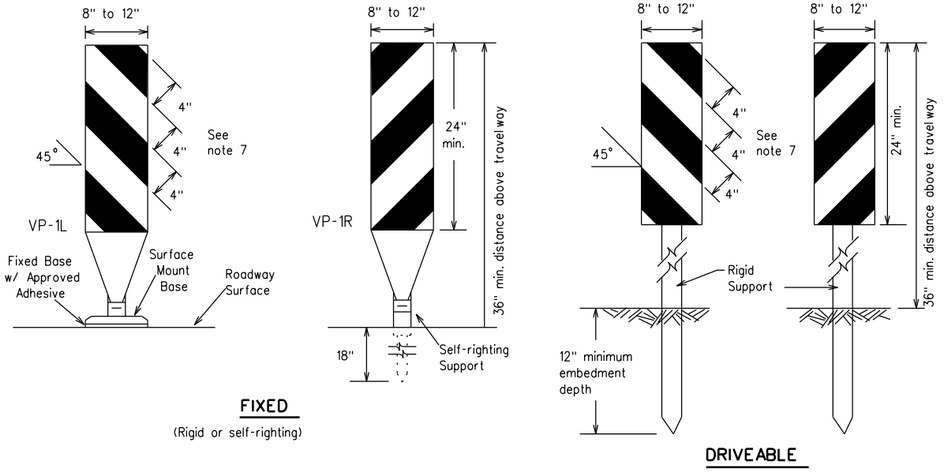
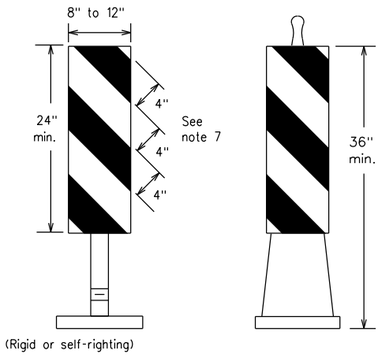


FIXED

(Rigid or self-righting)

DRIVEABLE

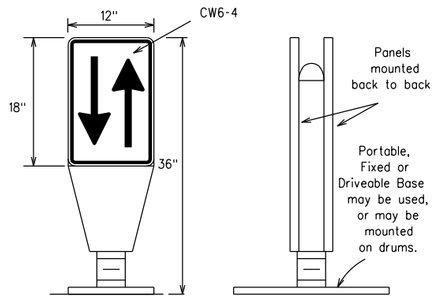


(Rigid or self-righting)

PORTABLE

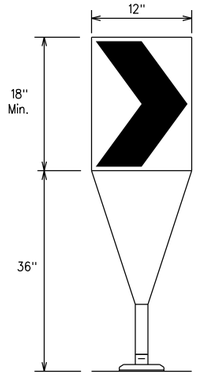
1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual for additional requirements on the use 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 or Type B 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)



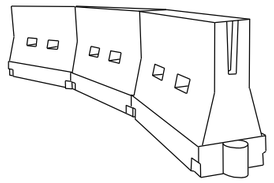
Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

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). Place reflective sheeting 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 Manual for Assessing Safety Hardware (MASH) 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 Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-21

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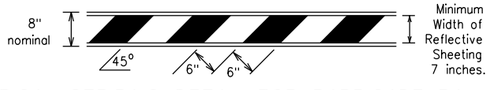
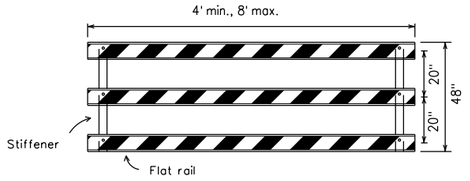
TYPE 3 BARRICADES

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 or Type B conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.



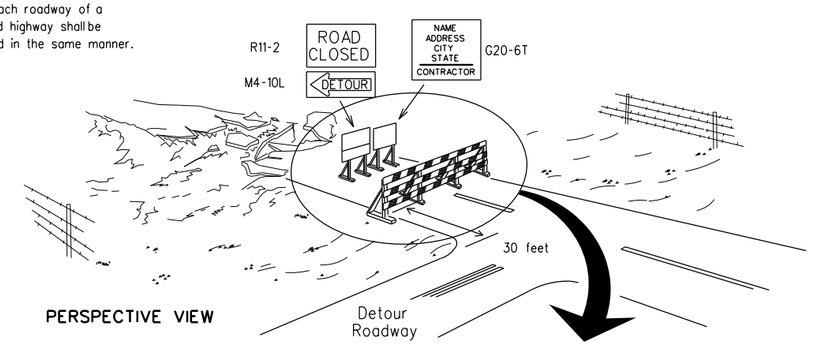
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



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

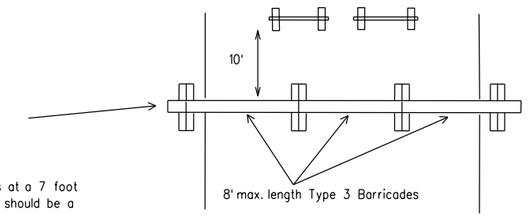
Each roadway of a divided highway shall be barricaded in the same manner.



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.

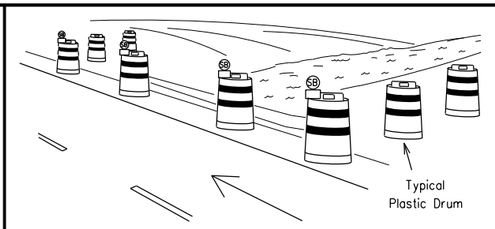
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

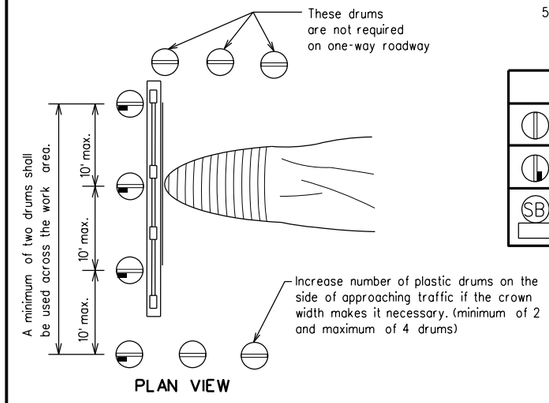
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

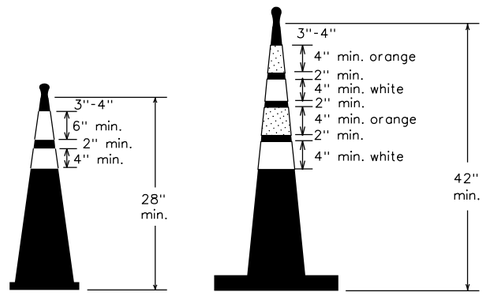
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder 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.



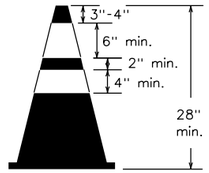
PLAN VIEW

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

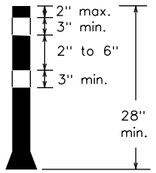
CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



Two-Piece cones



One-Piece cones

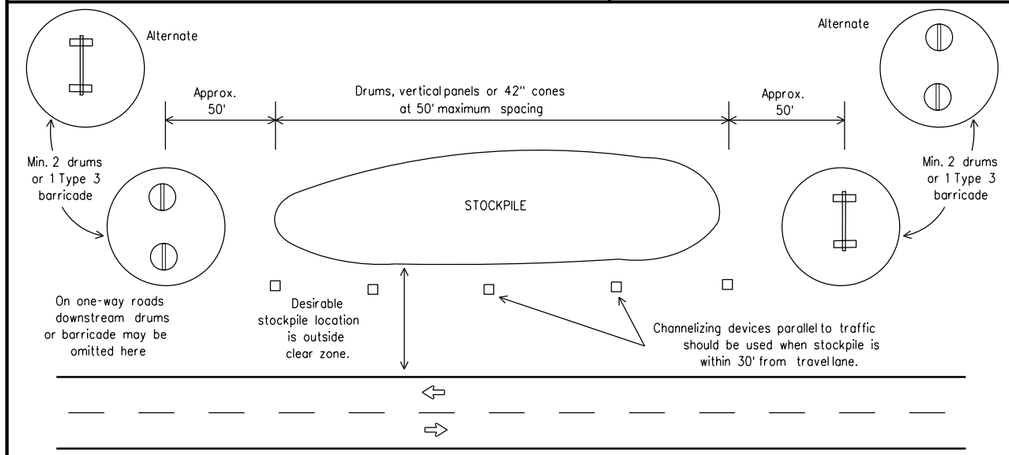


Tubular Marker

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 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 or Type B.
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

SHEET 10 OF 12

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(10)-21

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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.

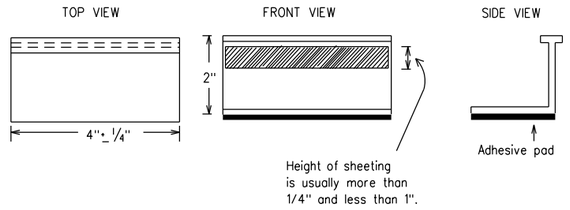
MAINTAINING WORK ZONE PAVEMENT MARKINGS

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 Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

BC(11)-21

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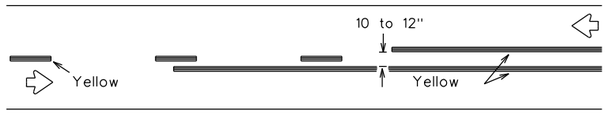
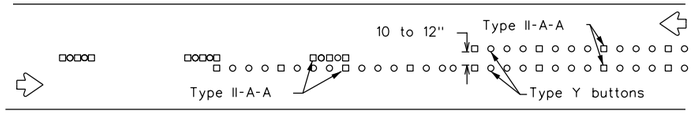
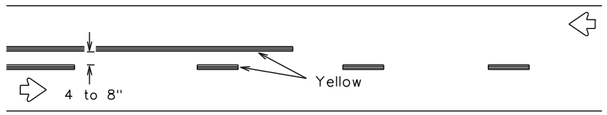
PAVEMENT MARKING PATTERNS



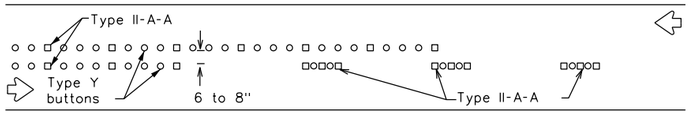
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



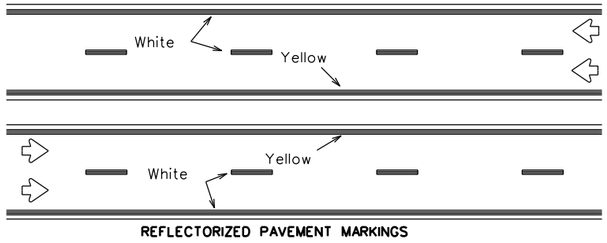
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



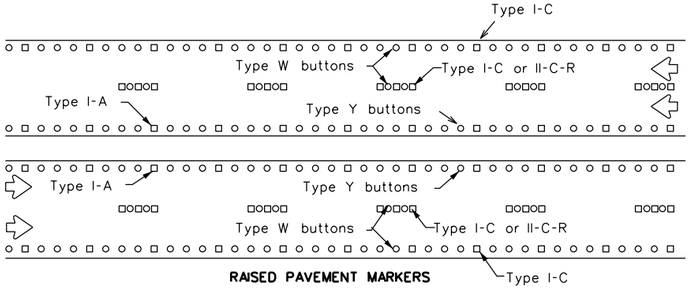
RAISED PAVEMENT MARKERS - PATTERN B

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



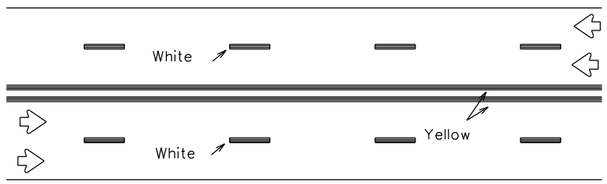
REFLECTORIZED PAVEMENT MARKINGS



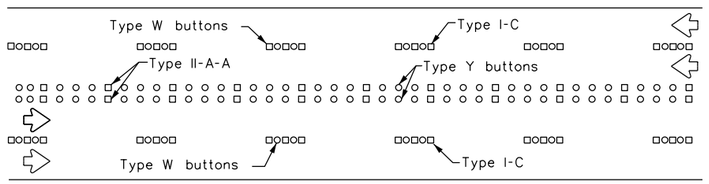
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



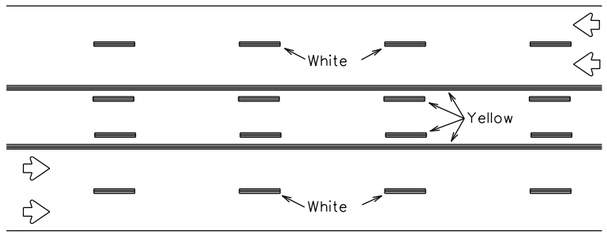
REFLECTORIZED PAVEMENT MARKINGS



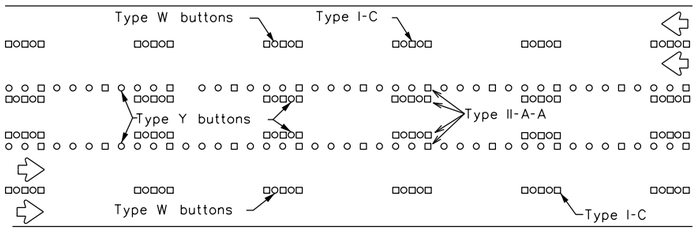
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



RAISED PAVEMENT MARKERS

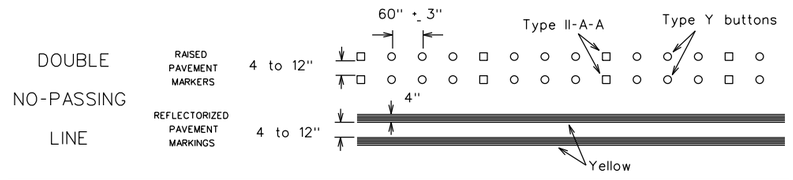
Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

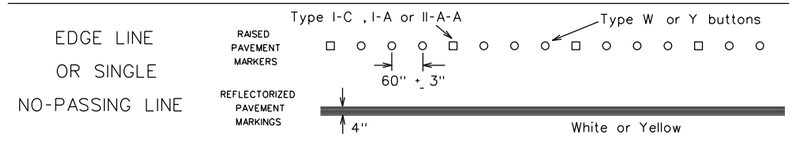
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

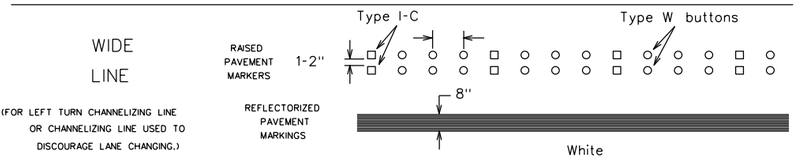


EDGE LINE OR SINGLE NO-PASSING LINE



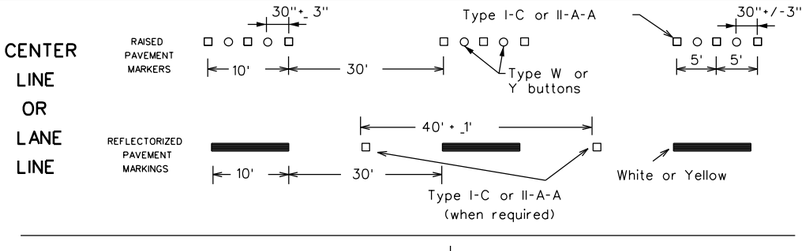
WIDE LINE

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

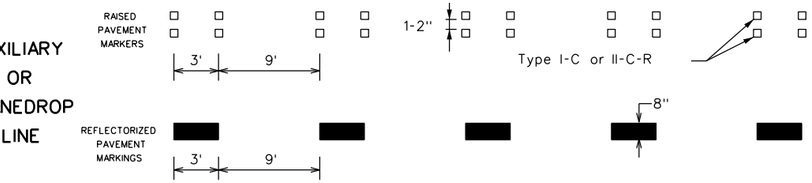


BROKEN LINES

CENTER LINE OR LANE LINE

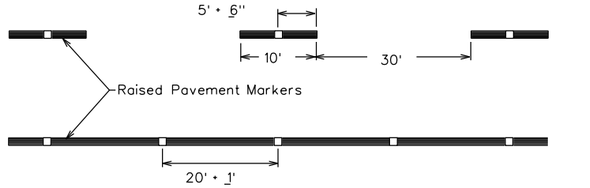


AUXILIARY OR LANEDROP LINE



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 Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

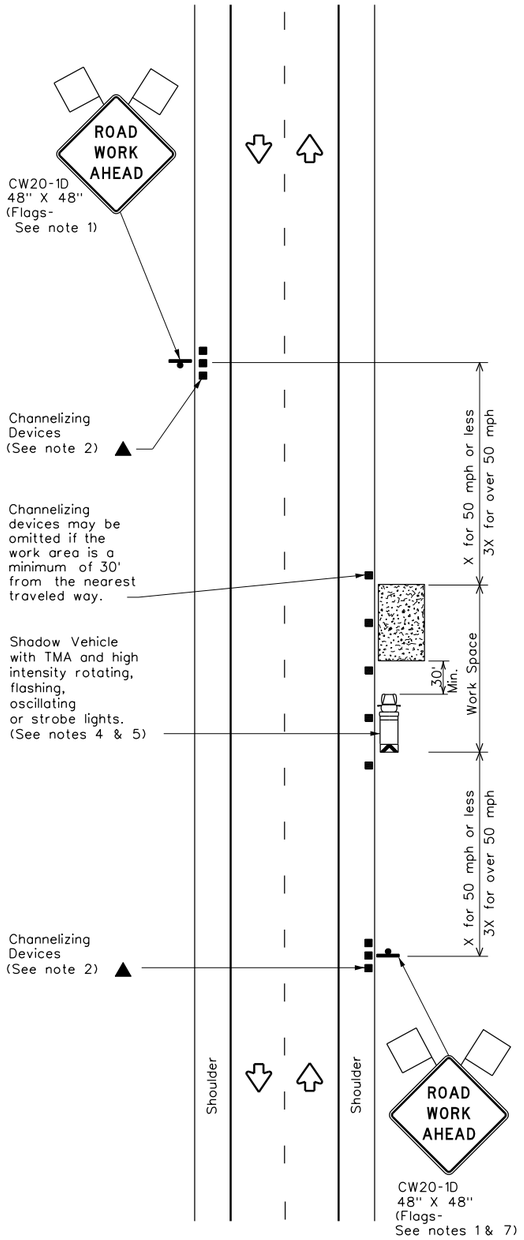
BC(12)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS 1-97 9-07 5-21 2-98 7-13 11-02 8-14	1803	02	035	FM1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		067

106

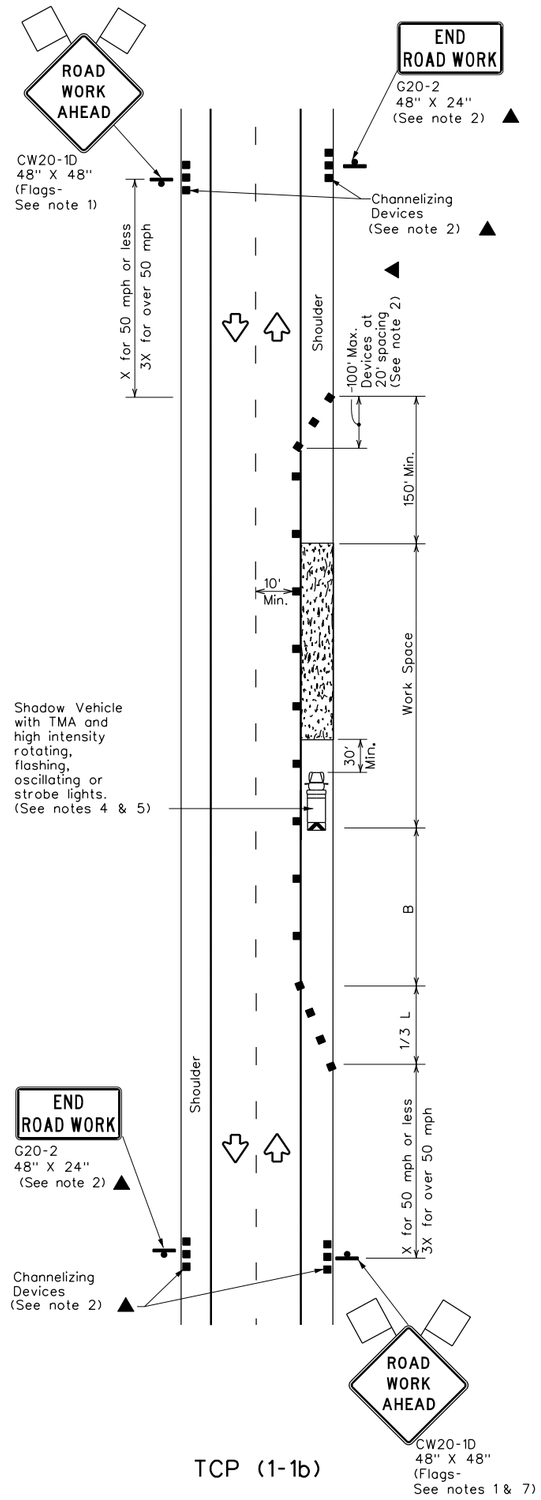
DATE:
FILE:

DATE:
FILE:



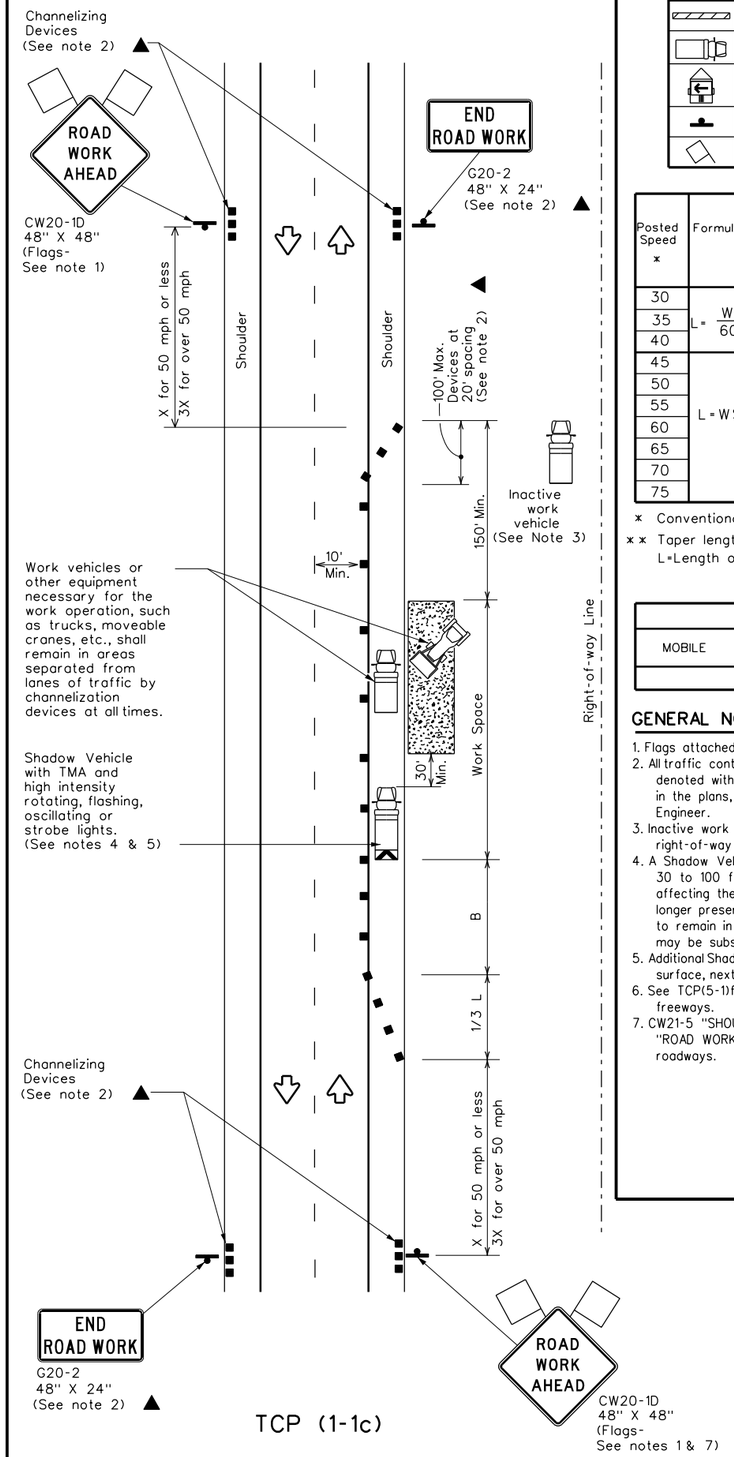
TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (1-1c)

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

Texas Department of Transportation

Traffic Operations Division Standard

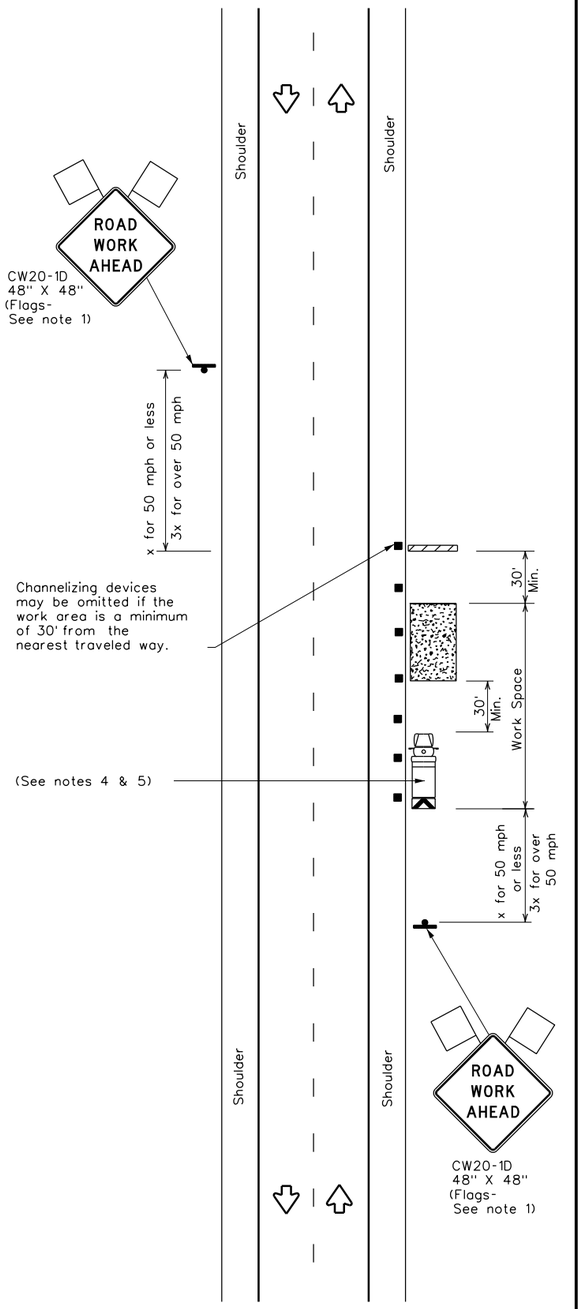
TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-18

FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 2-12	PHR	HIDALGO		068
1-97 2-18				

151

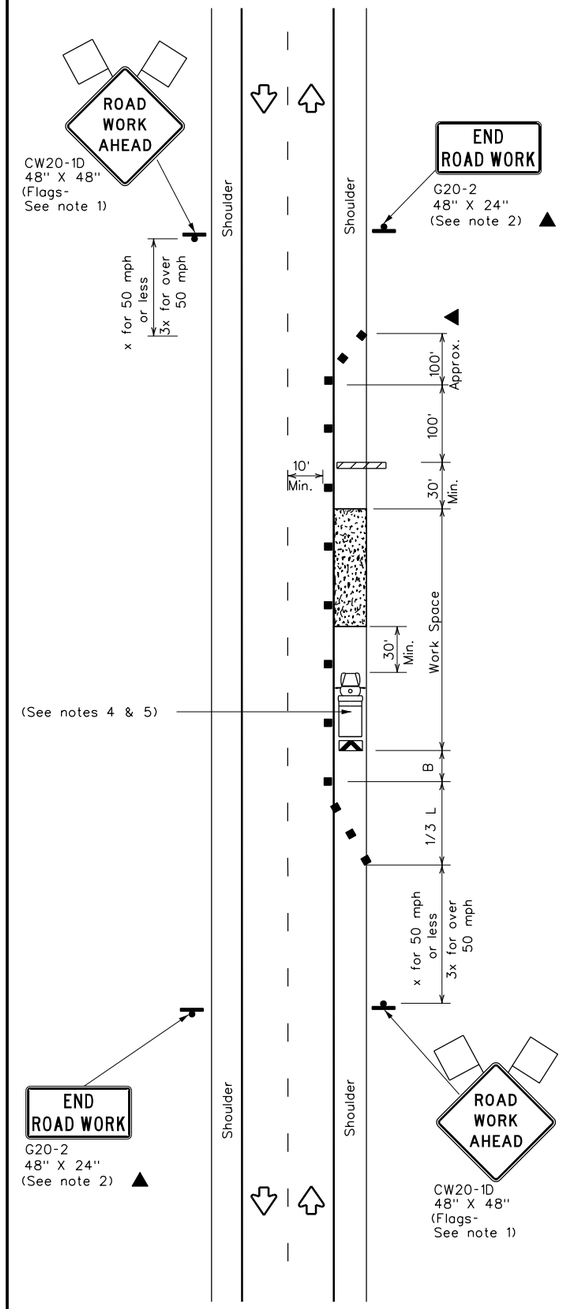
DATE:
FILE:



TCP (2-1a)

WORK SPACE NEAR SHOULDER

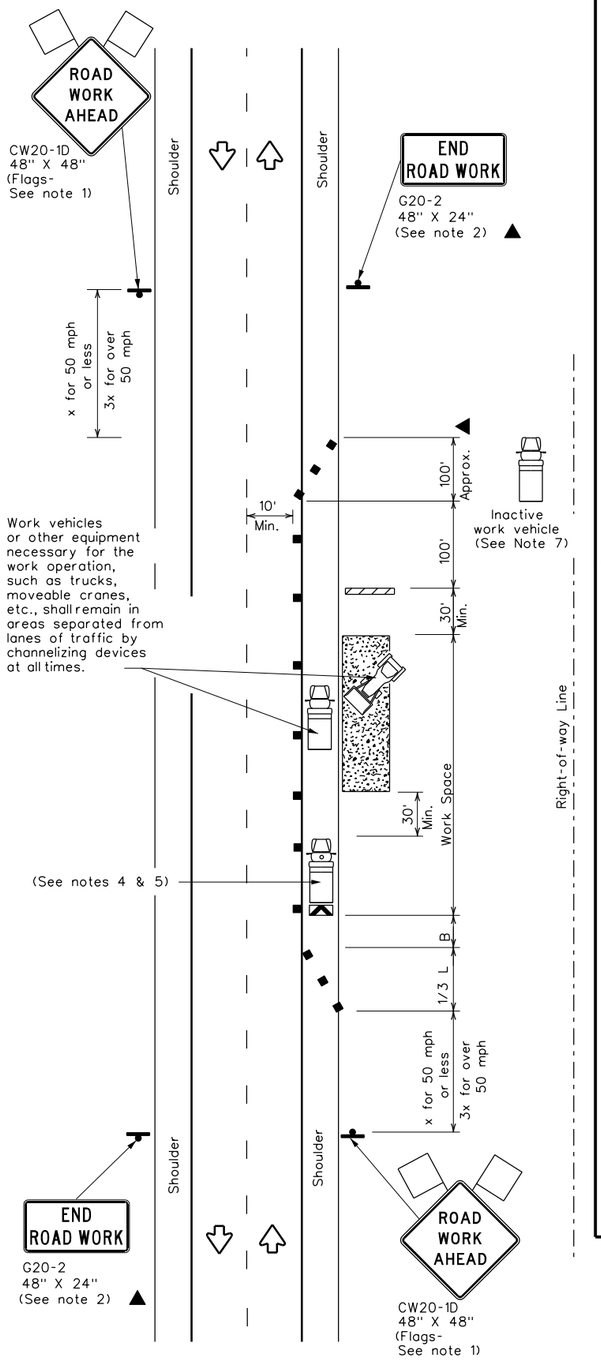
Conventional Roads



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

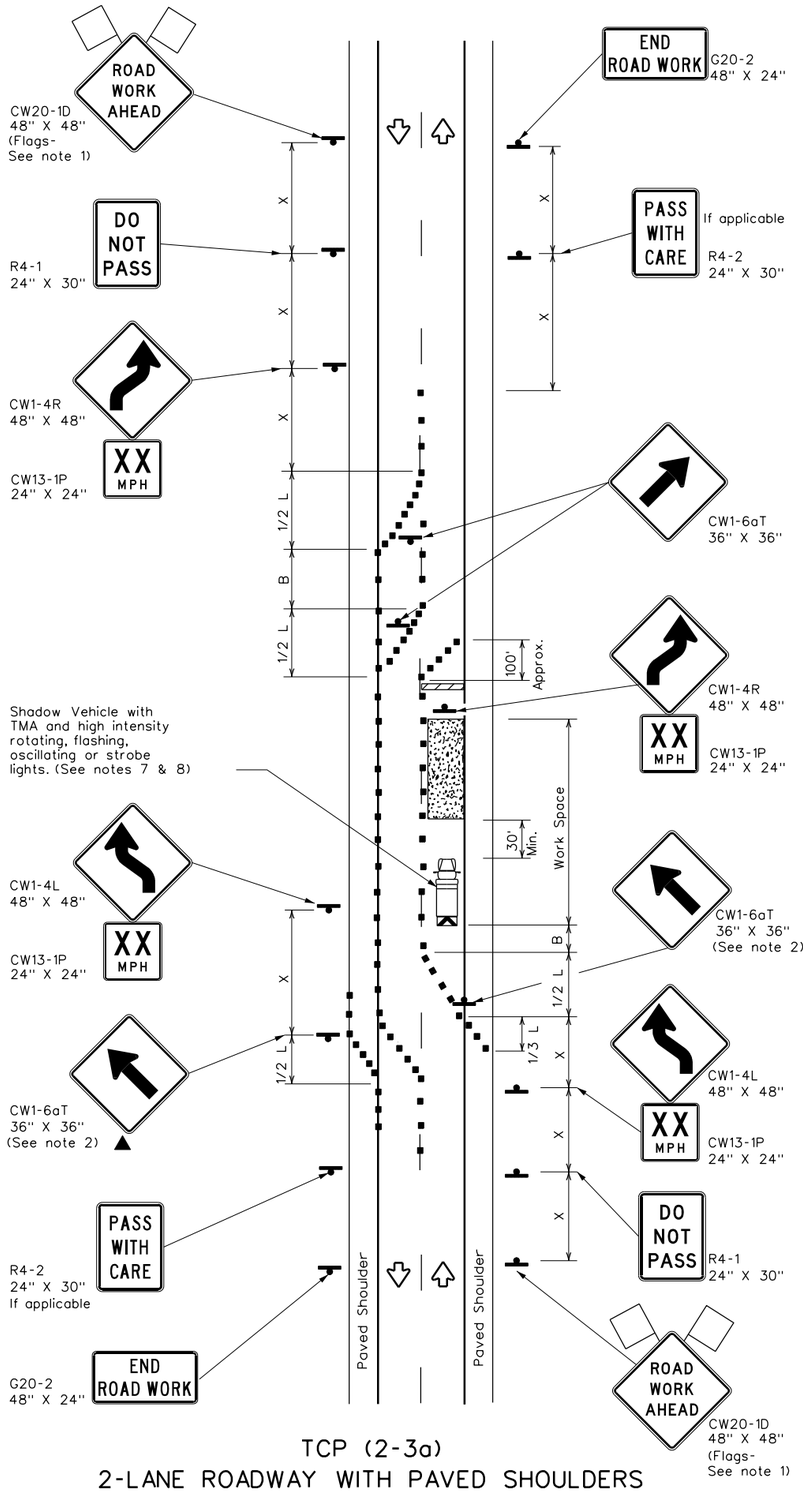
Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(2-1)-18

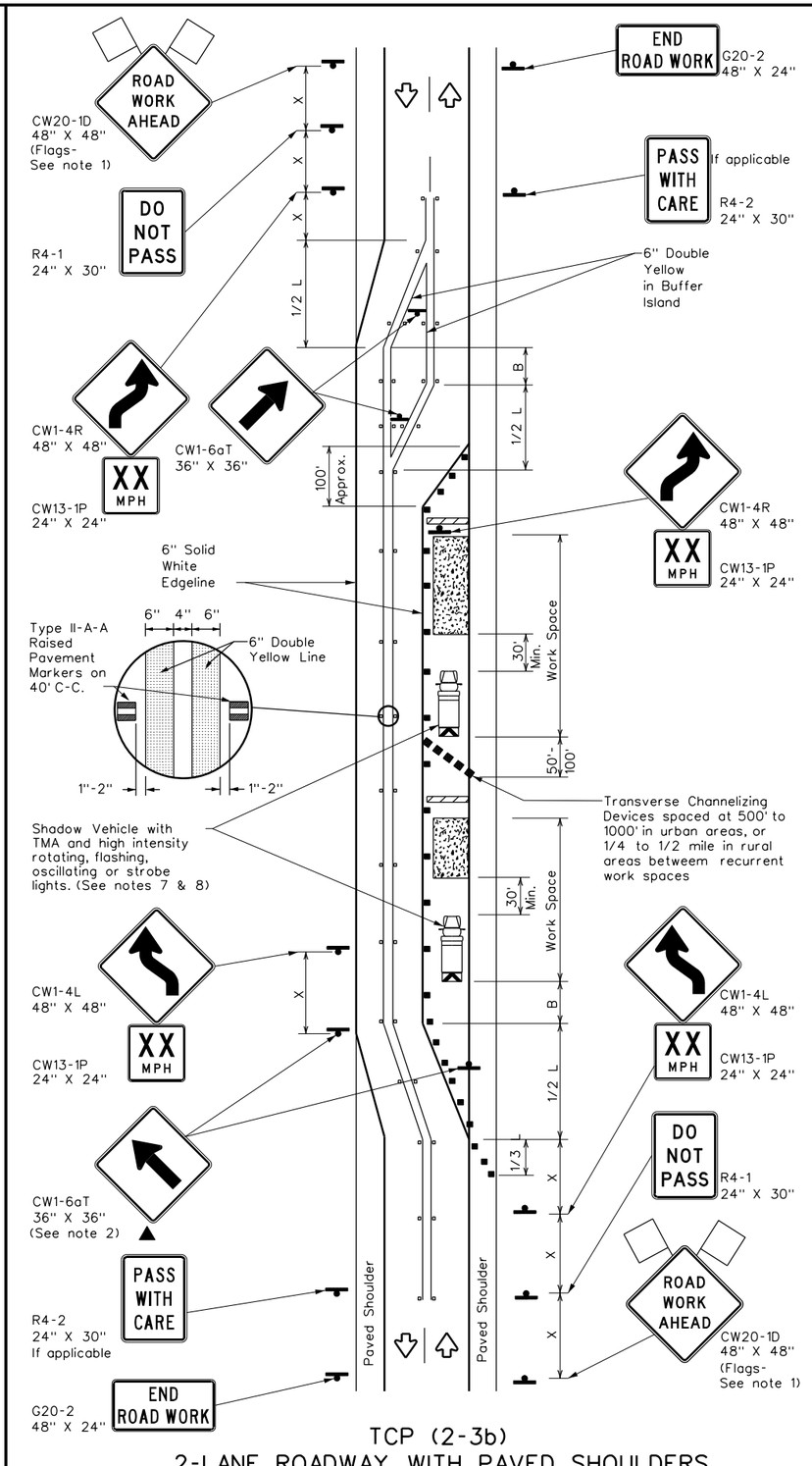
FILE: tcp2-1-18.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 2-12	PHR	HIDALGO		069
1-97 2-18				

DATE:
FILE:



TCP (2-3a)
2-LANE ROADWAY WITH PAVED SHOULDERS

ONE LANE CLOSED
ADEQUATE FIELD OF VIEW



TCP (2-3b)
2-LANE ROADWAY WITH PAVED SHOULDERS

ONE LANE CLOSED
INADEQUATE FIELD OF VIEW

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Raised Pavement Markers Ty II-AA
	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
				TCP(2-3b)ONLY
			✓	✓

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. When work space will be in place less than three days existing pavement markings may remain in place. Channelizing devices shall be used to separate traffic.
4. Flagger control should NOT be used unless roadway conditions or heavy traffic volume require additional emphasis to safely control traffic. Flagger should be positioned at end of traffic queue.
5. The R4-1 "DO NOT PASS," R4-2 " PASS WITH CARE" and construction regulatory speed zone signs may be installed within CW20-1D "ROAD WORK AHEAD" signs. Proper spacing of signs shall be maintained.
6. Conflicting pavement marking shall be removed for long term projects.
7. 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.
8. 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 (2-3a)

9. Conflicting pavement markings shall be removed for long-term projects. For shorter durations where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2(S) where S is the speed in mph. This tighter device spacing is intended for the area of the conflicting markings, not the entire work zone.

Texas Department of Transportation

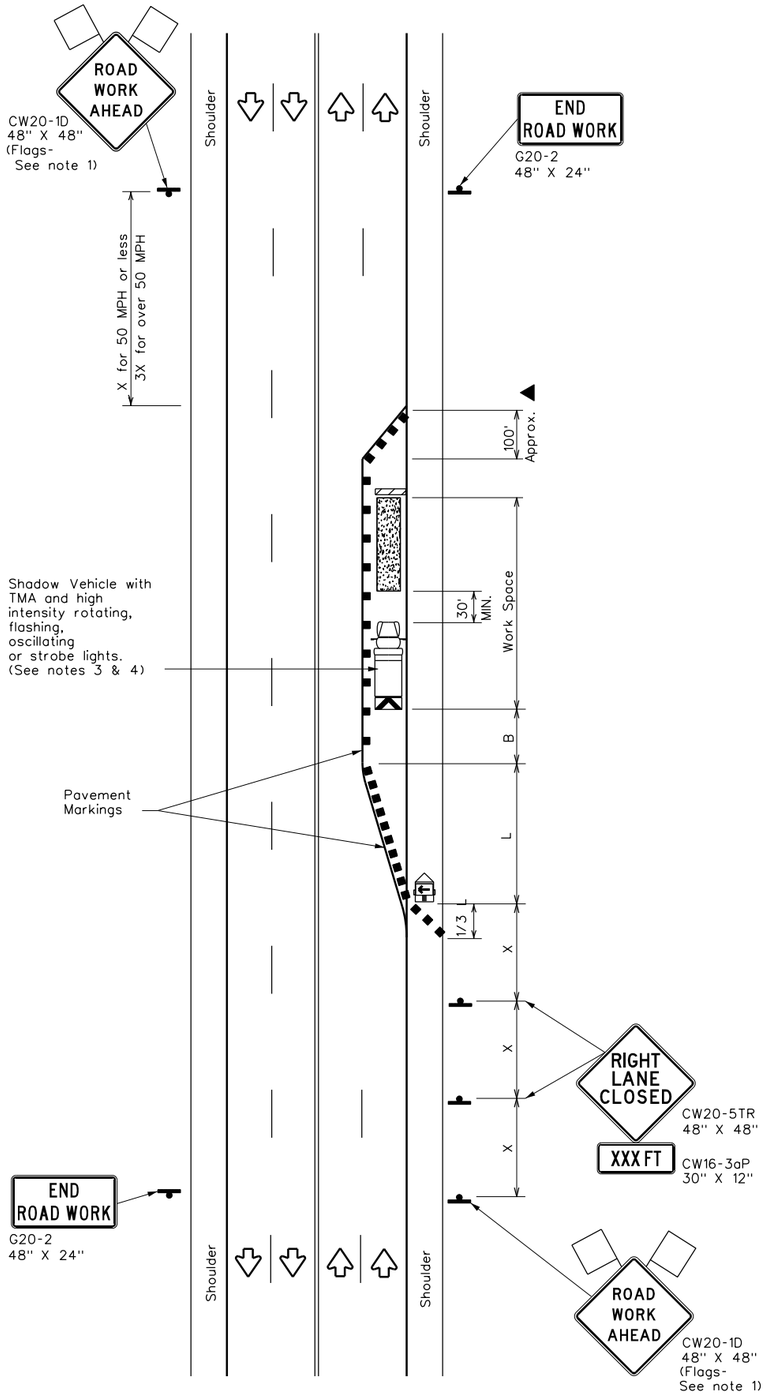
Traffic Safety Division Standard

TRAFFIC CONTROL PLAN TRAFFIC SHIFTS ON TWO-LANE ROADS

TCP(2-3)-23

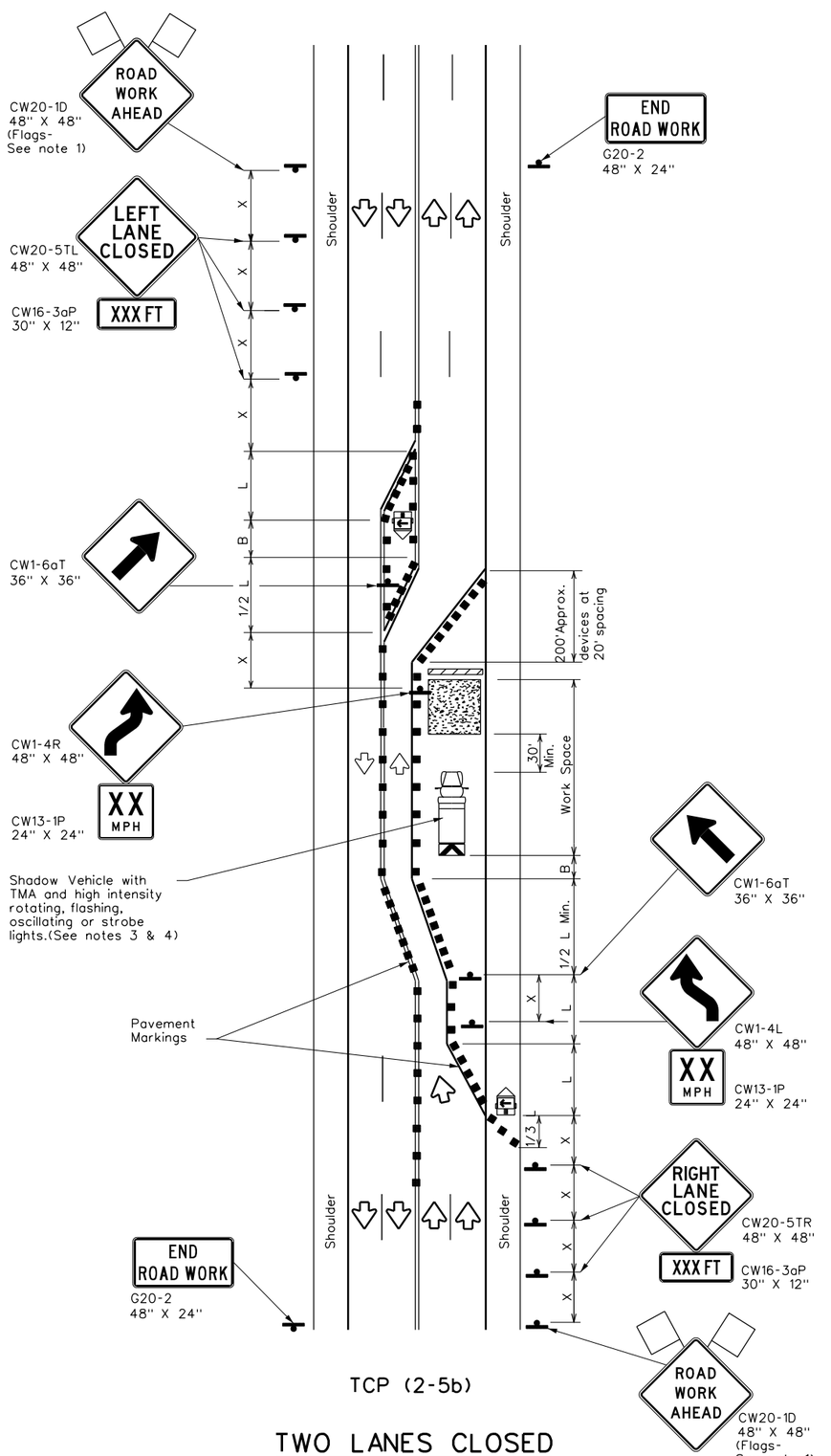
FILE: tcp(2-3)-23.dgn	DN:	CK:	DW:	CK:
© TxDOT April 2023	CONT	SECT	JOB	HIGHWAY
REVISIONS 12-85 4-98 2-18	1803	02	035	FM 1925
8-95 3-03 4-23	DIST	COUNTY		SHEET NO.
1-97 2-12	PHR	HIDALGO		070

DATE:
FILE:



TCP (2-5a)

ONE LANE CLOSED



TCP (2-5b)

TWO LANES CLOSED

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 elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. 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 eposure 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 substitutued for the Shadow Vehicle and TMA.
4. Additional Shadow Vehicles with TMAs may be positioned in each closed lane, on the shoulder or off the paved surface, next to those shown in order to protect a wider work space.
5. The downstream taper is optional. When used, it should be 100 feet approximately per lane, with channelizing devices spaced at 20 feet.

TCP (2-5a)

6. If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline to protect the work space from opposing traffic, with the arrow board placed in the closed lane near the end of the merging taper.

TCP (2-5b)

7. Conflicting pavement markings shall be removed for long-term projects.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN LONG TERM LANE CLOSURES MULTILANE CONVENTIONAL RDS.

TCP(2-5)-18

FILE: tcp2-5-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
8-95 2-12	DIST	COUNTY		SHEET NO.
1-97 3-03	PHR	HIDALGO		071
4-98 2-18				

DATE:
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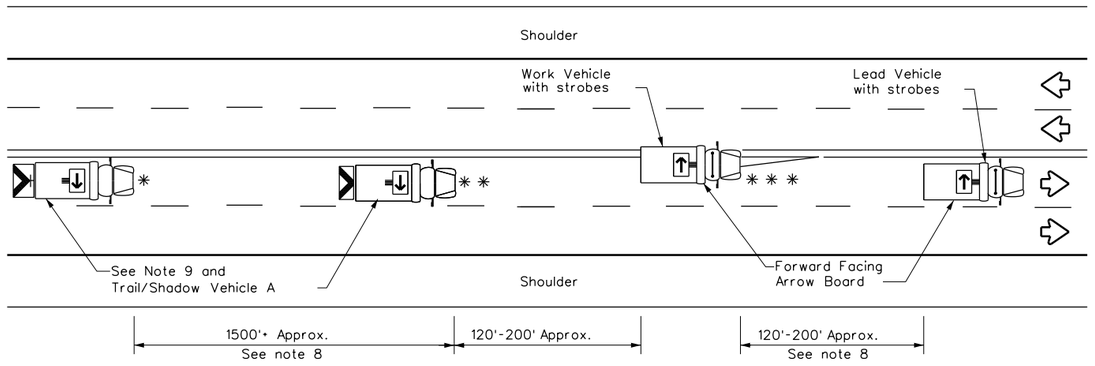
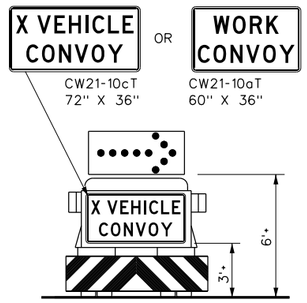


TCP (3-1a)

UNDIVIDED MULTILANE ROADWAY



TRAIL/SHADOW VEHICLE A

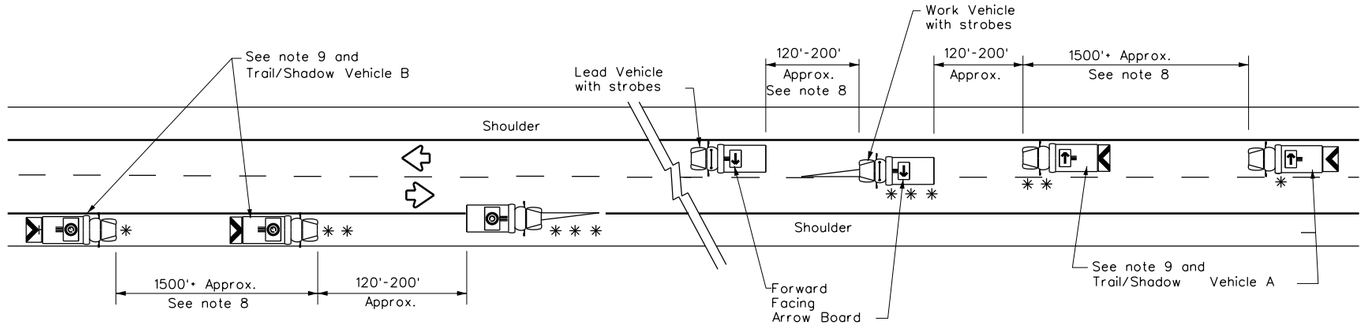
with RIGHT Directional display Flashing Arrow Board

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.

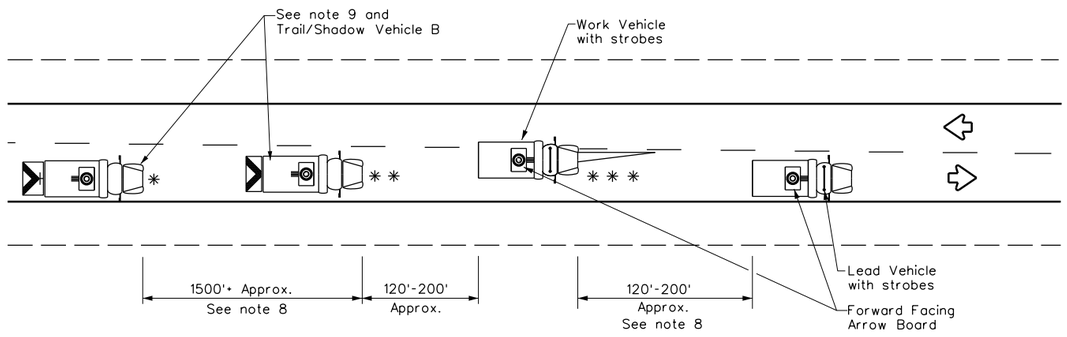


WORK ON SHOULDER

WORK ON TRAVEL LANE

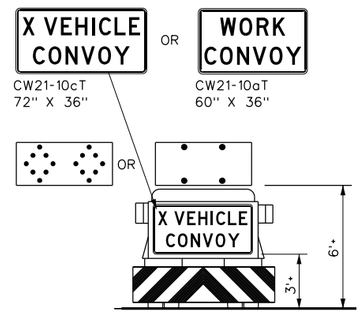
TCP (3-1b)

TWO-WAY ROADWAY WITH PAVED SHOULDERS



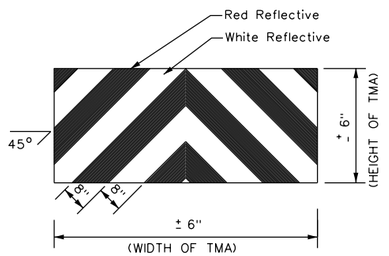
TCP (3-1c)

TWO-WAY ROADWAY WITHOUT PAVED SHOULDERS



TRAIL/SHADOW VEHICLE B

with Flashing Arrow Board in CAUTION display



STRIPING FOR TMA

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN MOBILE OPERATIONS UNDIVIDED HIGHWAYS

TCP(3-1)-13

FILE: tcp3-1.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
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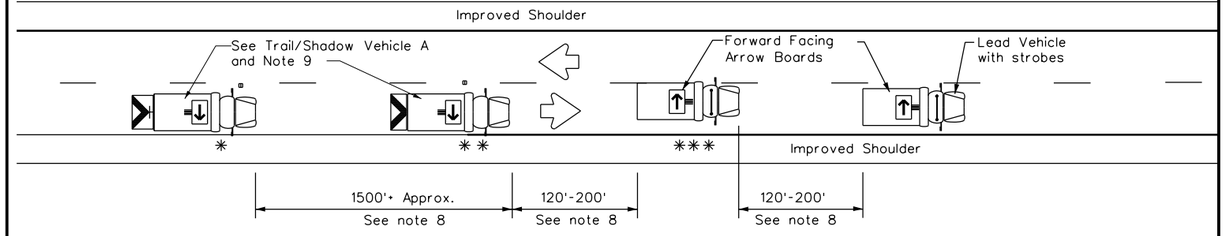
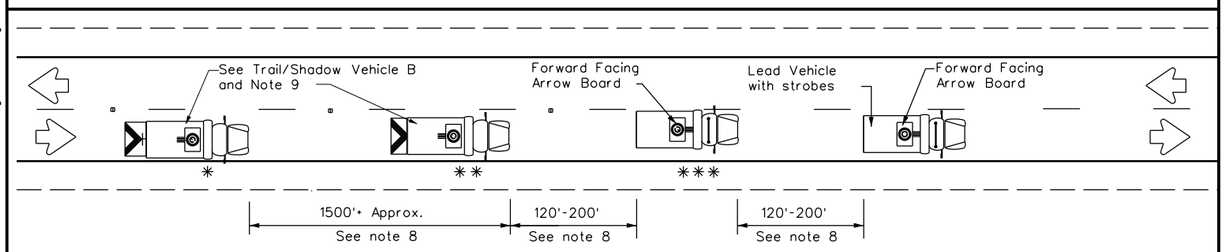
2-94 4-98 8-95 7-13 1-97	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		072



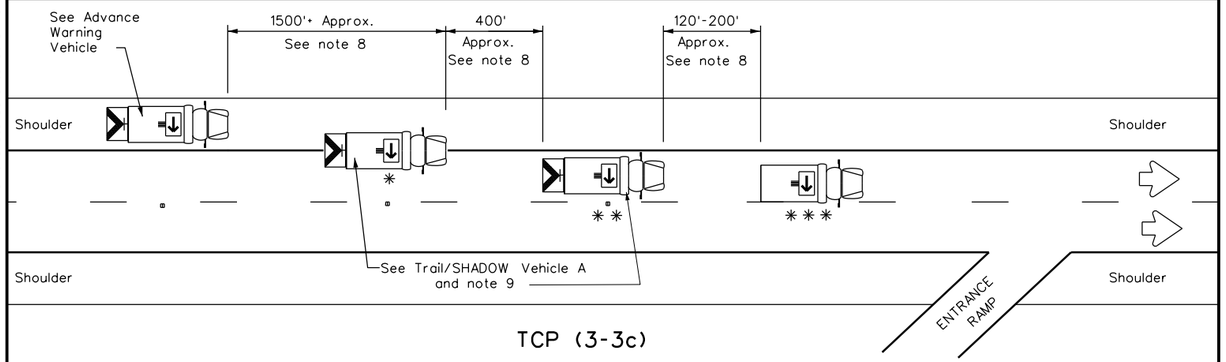
TCP (3-3a)

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



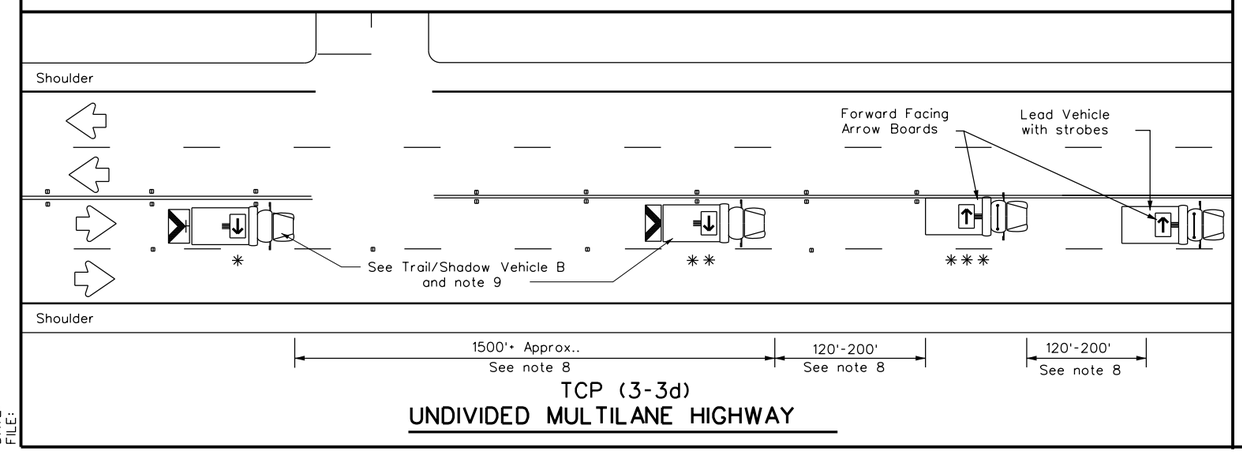
TCP (3-3b)

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



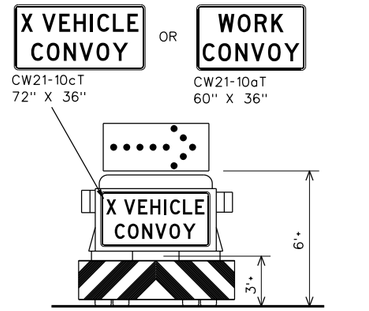
TCP (3-3c)

DIVIDED MULTILANE HIGHWAY



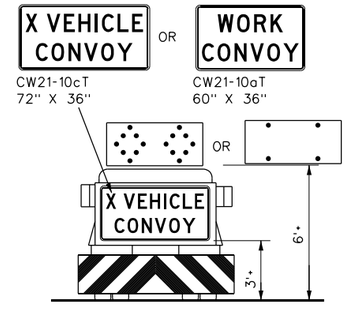
TCP (3-3d)

UNDIVIDED MULTILANE HIGHWAY



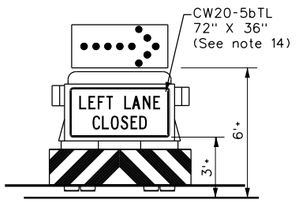
TRAIL/SHADOW VEHICLE A

with RIGHT Directional display
Flashing Arrow Board

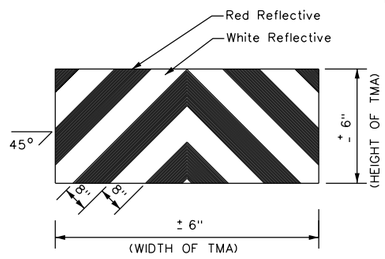


TRAIL/SHADOW VEHICLE B

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

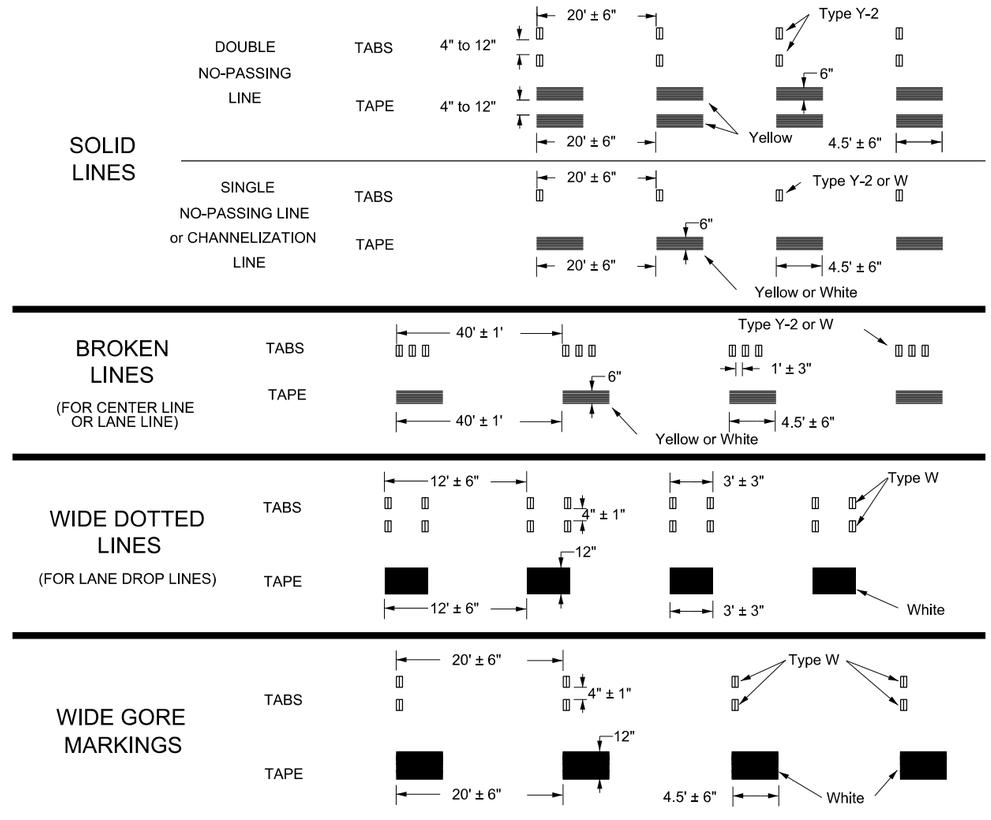
TRAFFIC CONTROL PLAN MOBILE OPERATIONS RAISED PAVEMENT MARKER INSTALLATION/ REMOVAL TCP(3-3)-14

FILE: tcp3-3.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT September 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 7-13	PHR	HIDALGO		073
1-97 7-14				

DATE:
FILE:

177

WORK ZONE SHORT TERM PAVEMENT MARKINGS DETAILS



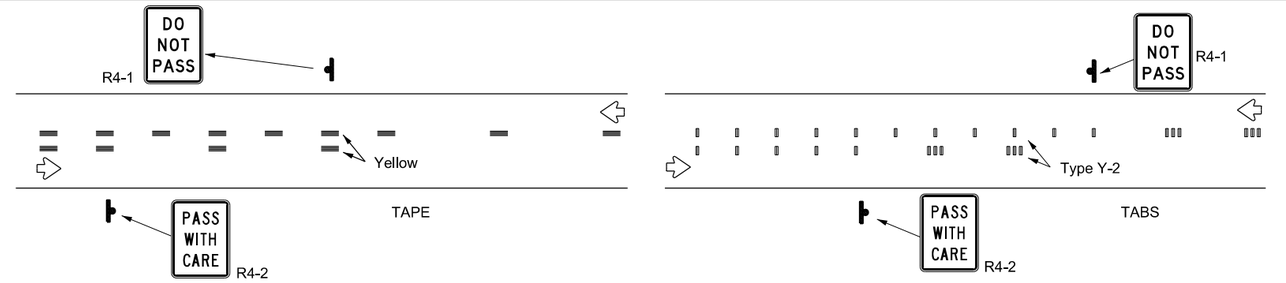
NOTES:

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.

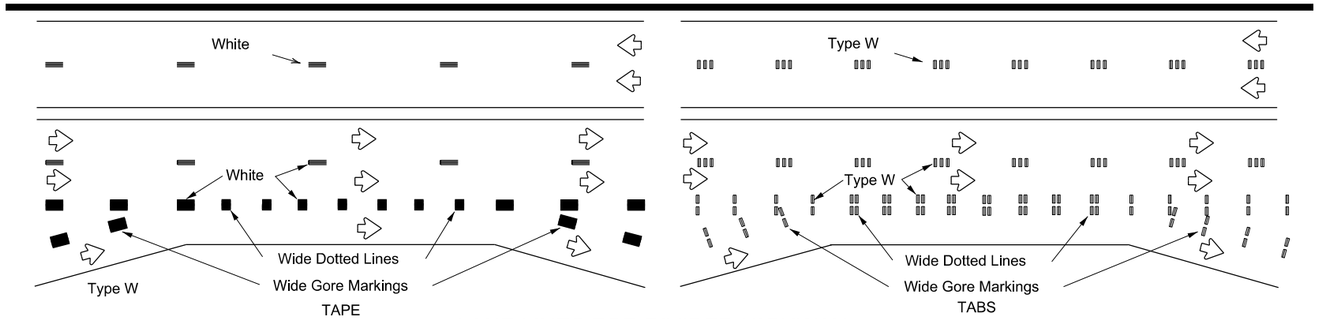
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS (TABS)

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.

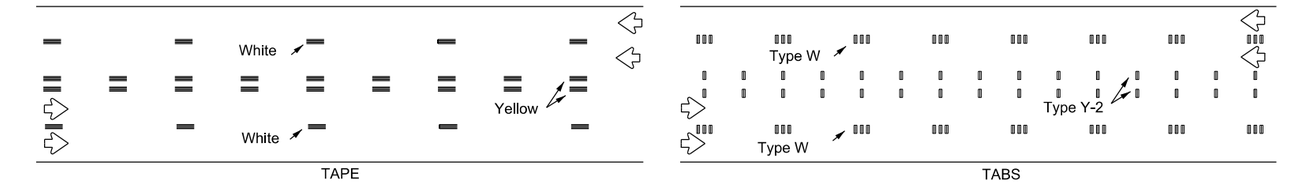
WORK ZONE SHORT TERM PAVEMENT MARKINGS PATTERNS



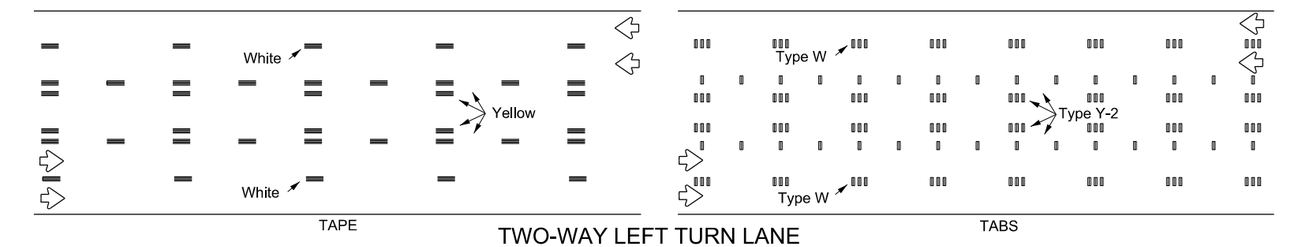
CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO LANE TWO-WAY HIGHWAYS



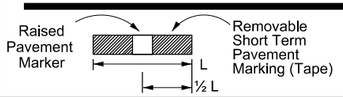
LANE LINES FOR DIVIDED HIGHWAY



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 Safety Division Standard

WORK ZONE SHORT TERM PAVEMENT MARKINGS

WZ(STPM)-23

FILE: wzstpm-23.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT February 2023	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
4-92 7-13 1-97 2-23 3-03	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		074

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DATE:
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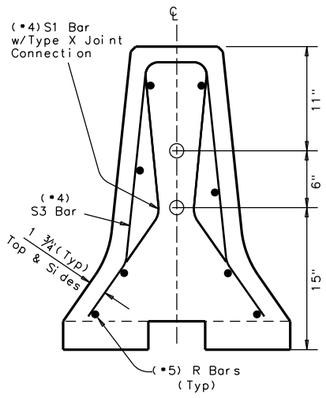
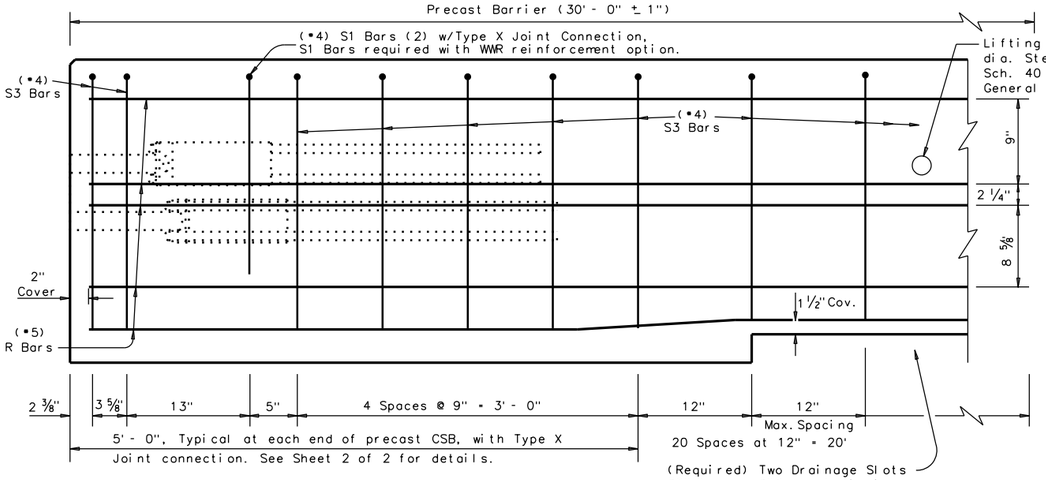


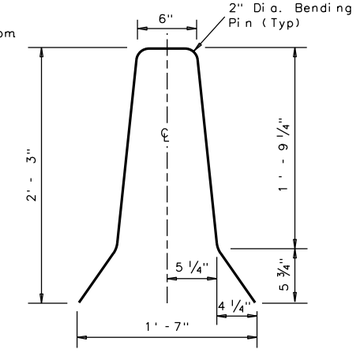
End View Precast Barrier

See sheet 2 of 3 for Joint connection Type X



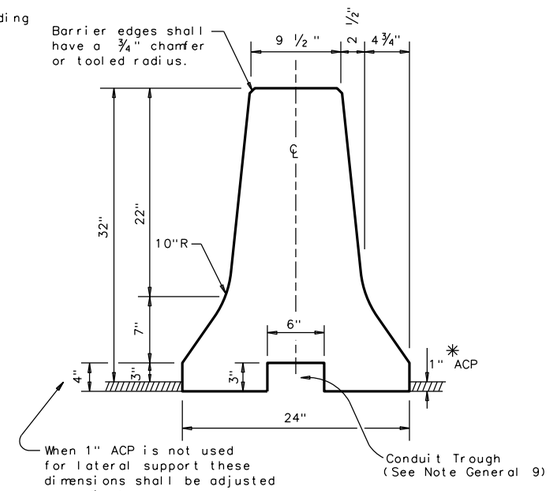
Reinforcement for Precast (CSB) Concrete Safety Barrier (Type 1)

Showing reinforcement for Joint Type X



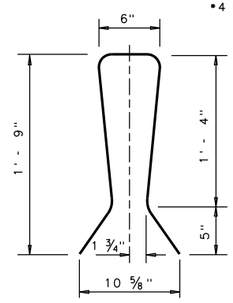
S3 Bar

•4 Bar



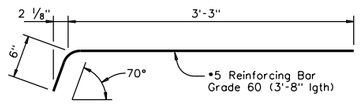
Concrete Safety Barrier

✳ When 1" ACP is "not" used as lateral support for permanent barrier placement. A permissible method of attaining the equivalent lateral support may be used, See CSB(6) sheet.



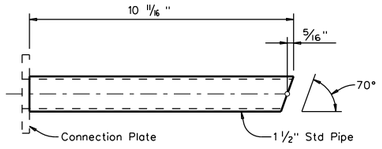
S1 Bar

•4 Bar (2)
(Joint Type X)



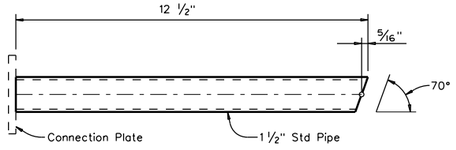
DEFORMED BAR ANCHOR DETAILS

Two (2) Bars required per assembly.
Eight (8) required per Joint.



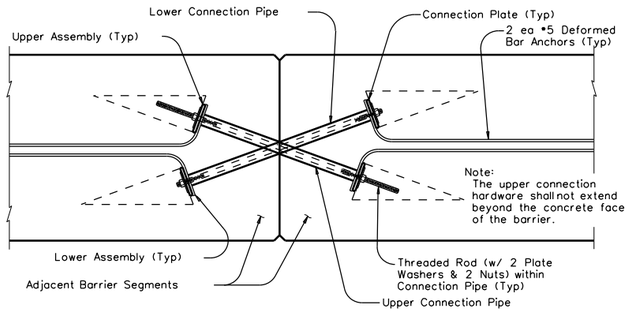
UPPER CONNECTION PIPE DETAILS

One (1) Steel Pipe required per Upper Assembly.
Two (2) required per Joint.



LOWER CONNECTION PIPE DETAILS

One (1) Steel Pipe required per Lower Assembly.
Two (2) required per Joint.



TYPE X JOINT INSTALLATION DETAIL

Barrier reinforcing and Type X Joint Leave-Out dimensions not shown for clarity.

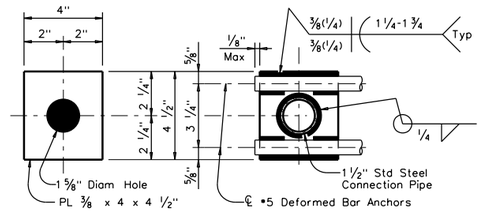
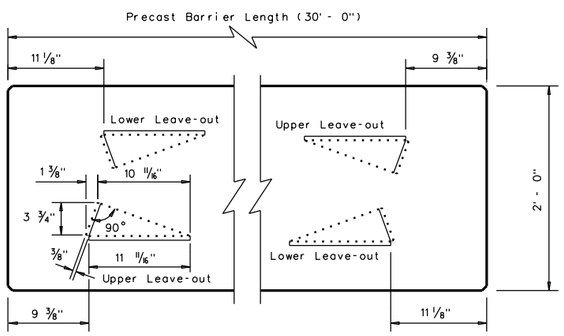


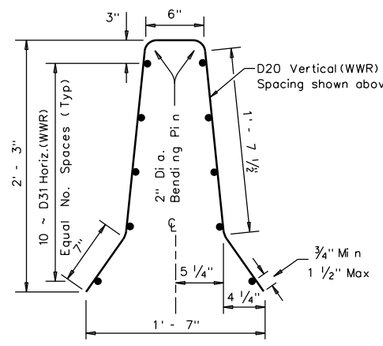
PLATE DIMENSIONS WELDING DETAILS

CONNECTION PLATE DETAILS

One (1) Plate required per assembly.
Four (4) required per Joint. All steel fittings for joint Type X shall be galvanized after fabrication in accordance with Item 445.



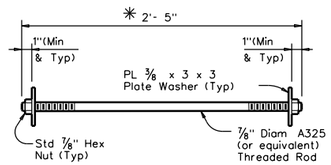
BARRIER PLAN AT END JOINTS



Welded Wire Reinforcement (WWR) Option for Bars R and S3

(WWR) General Notes

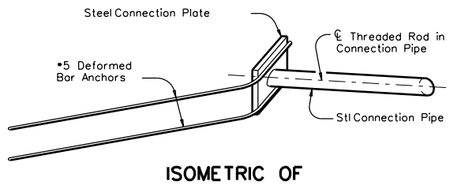
1. Deformed Welded Wire Reinforcement (WWR) shall conform to ASTM A497.
2. Welded wire cage may be cut or bent to accommodate the Type X joint connection and drainage slots, as directed by the Engineer.
3. All reinforcement shall comply with Item 440, "Reinforcing Steel."
4. Combinations of reinforcing steel and WWR will be permitted, as directed by the Engineer. The dimension from the end of the barrier section to the first wire shall not exceed 3".



CONNECTION BOLT OR THREADED ROD DETAIL

Two (2) Threaded Rods (Or Equivalent Hex Hd. Bolts) (w/ Two (2) PL 3/8 x 3 x 3 Plate Washers & Two (2) Std Hex Nuts) required per Joint.

✳ The connection hardware shall not extend beyond the concrete face of the barrier. Hex head bolts may be provided. The proper length of all hardware should be verified.



ISOMETRIC OF TYPICAL WELDED ASSEMBLY

Four (4) [2 Upper & 2 Lower] Assemblies required per Joint.

Weight of one Precast 30 ft. (CSB) segment = Approx. 6.5 Tons or 440 lbs per ft.

GENERAL NOTES

1. Concrete shall be Class H with a minimum compressive strength of 3,600 psi.
2. Where used, rebar reinforcement shall be Grade 60 and conform to ASTM A615.
3. Precast barrier length shall be 30 ft. unless otherwise specified on the plans.
4. All precast barrier edges shall have a 3/4" chamfer or tooled radius.
5. All concrete, reinforcement, joint connection systems, grout etc. as shown, are considered as part of the barrier payment.
6. All steel assemblies for joint shall be galvanized after fabrication in accordance with Item 445, "Galvanizing."
7. Regardless of the method of handling, barrier lifting points shall be approx. 7.5 feet from the ends of the barrier. Lifting devices and attachments to barrier sections shall be approved by the Engineer.
8. Surface finishing and grouting (where required) shall be two parts sand one part cement with enough water to make the mixture plastic. Grouting shall be done in a manner that will assure a smooth surface. Surface finishing shall be considered subsidiary to the various bid items involved.
9. Conduit trough when required shall be shown elsewhere on the plans, or as directed by the Engineer.

SHEET 1 OF 2

Texas Department of Transportation

Design Division Standard

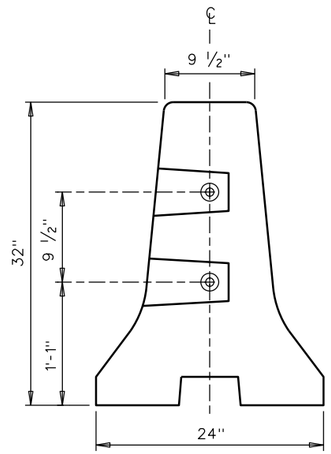
CONCRETE SAFETY BARRIER (F-SHAPE)

PRECAST BARRIER (TYPE 1)

CSB(1)-10

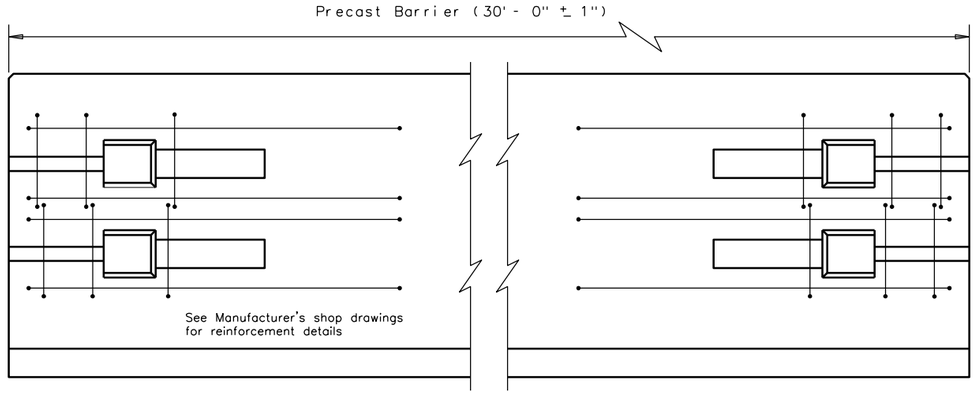
FILE: csb110.dgn	DN: TxDOT	CK: AM	DW: BD	CK: VP
©TxDOT December 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		075

DATE:
FILE:



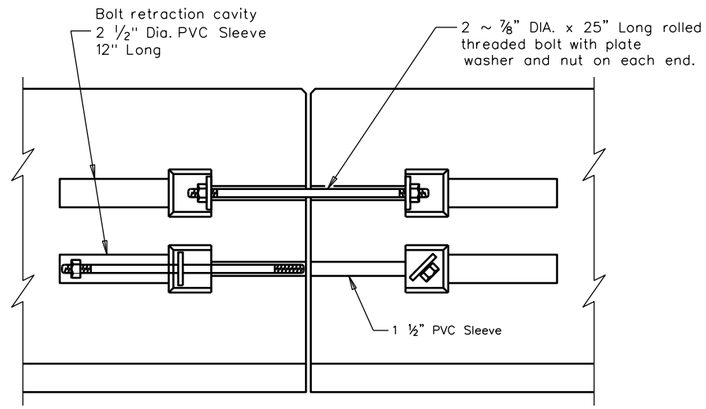
END VIEW (CSB) QUICK-BOLT

QUICK-BOLT POCKET LOCATIONS



ELEVATION (CSB) QUICK-BOLT

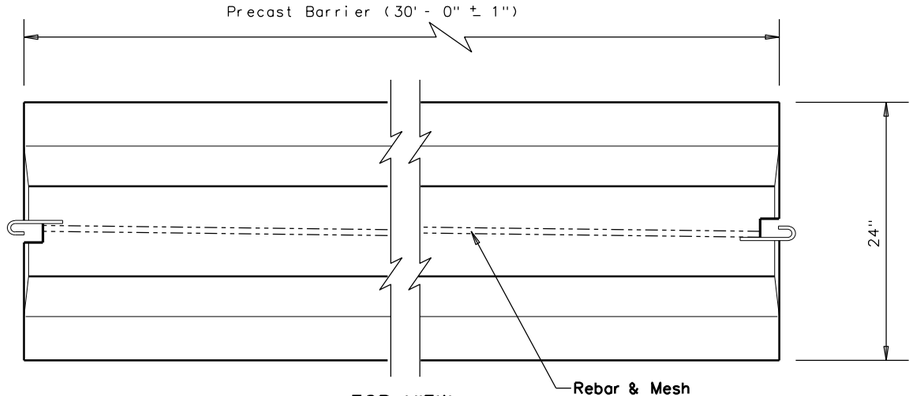
See Manufacturer's shop drawing for additional details



ELEVATION VIEW SHOWING JOINT CONNECTION

"QUICK-BOLT"

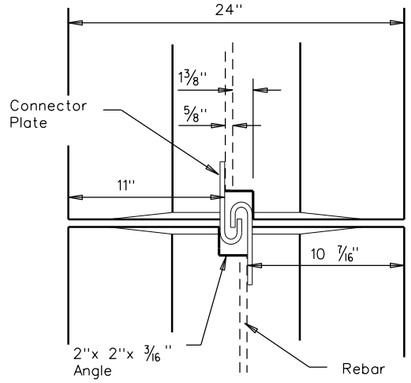
Joint Connection (Type Q)



TOP VIEW

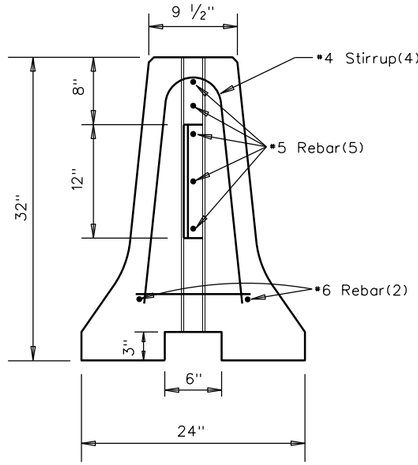
PRECAST (CSB) WITH J-J HOOKS

See Manufacturer's shop drawing for additional details



VIEW FROM ABOVE

J-J HOOK CONNECTION



END VIEW

J-J HOOK CONNECTION

Joint Connection (Type J)

Proprietary Joint Connections (CSB)

Two proprietary joint connections are acceptable as alternates to the (Type X) connection shown, here on. These joint connections types are:

J-J Hooks by Easi-Set Industries, (800)547-4045
Quick-Bolt by Bexar Concrete, (210)497-3773

If one of these connection systems are exclusively specified in the plans, prior approval for sole source use must be obtained. Details of the connection components and barrier reinforcement for these systems, will be shown on the manufacturer's shop drawing(s) furnished to the Engineer.

SHEET 2 OF 2

Texas Department of Transportation

Design Division Standard

CONCRETE SAFETY BARRIER (F-SHAPE)

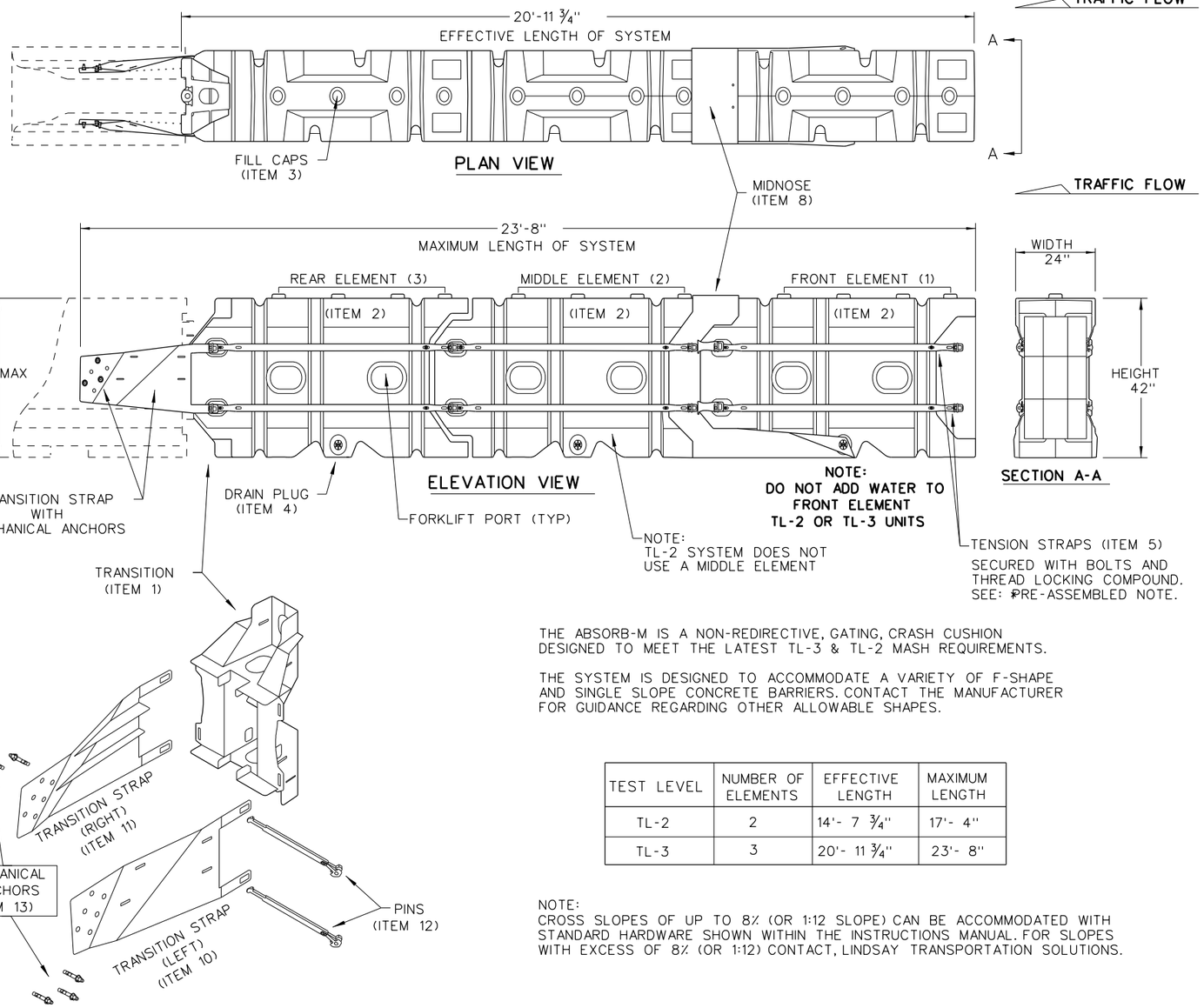
PRECAST BARRIER (TYPE 1)

CSB(1)-10

FILE: csb110.dgn	DN: TxDOT	CK: AM	DW: BD	CK: VP
© TxDOT December 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		076

DATE:
FILE:

SYSTEM SHOWN - ABSORB-M TL-3



THE ABSORB-M IS A NON-REDIRECTIVE, GATING, CRASH CUSHION DESIGNED TO MEET THE LATEST TL-3 & TL-2 MASH REQUIREMENTS.

THE SYSTEM IS DESIGNED TO ACCOMMODATE A VARIETY OF F-SHAPE AND SINGLE SLOPE CONCRETE BARRIERS. CONTACT THE MANUFACTURER FOR GUIDANCE REGARDING OTHER ALLOWABLE SHAPES.

TEST LEVEL	NUMBER OF ELEMENTS	EFFECTIVE LENGTH	MAXIMUM LENGTH
TL-2	2	14'- 7 3/4"	17'- 4"
TL-3	3	20'- 11 3/4"	23'- 8"

NOTE:
CROSS SLOPES OF UP TO 8% (OR 1:12 SLOPE) CAN BE ACCOMMODATED WITH STANDARD HARDWARE SHOWN WITHIN THE INSTRUCTIONS MANUAL. FOR SLOPES WITH EXCESS OF 8% (OR 1:12) CONTACT, LINDSAY TRANSPORTATION SOLUTIONS.

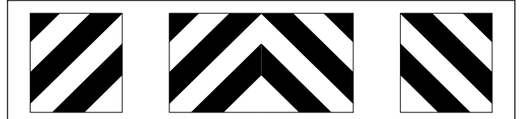
GENERAL NOTES

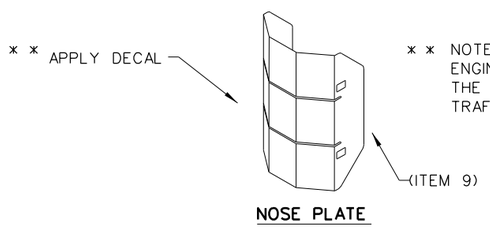
1. FOR SPECIFIC INFORMATION REGARDING THE INSTALLATION AND TECHNICAL GUIDANCE, CONTACT: LINDSAY TRANSPORTATION SOLUTIONS (LTS) - BARRIER SYSTEMS,INC. AT (707) 374-6800. 180 RIVER ROAD, RIO VISTA, CA 94571
2. THE ABSORB-M SYSTEM IS ONLY APPROVED FOR USE IN (TEMPORARY WORK ZONE) LOCATIONS.
3. THE ABSORB-M IS A WATER FILLED NON-REDIRECTIVE, GATING CRASH CUSHION THAT DOES NOT NEED TO BE ATTACHED TO A FOUNDATION AND CAN BE INSTALLED ON TOP OF CONCRETE, ASPHALT, OR ANY SURFACE CAPABLE OF BEARING THE WEIGHT OF THE SYSTEM.
4. MAXIMUM PERMISSIBLE CROSS-SLOPE IS 8%.
5. THE INSTALLATION AREA SHOULD BE FREE FROM CURBS, ELEVATED OBJECTS, OR DEPRESSIONS.
6. THE ABSORB-M SHOULD BE LOCATED APPROXIMATELY PARALLEL WITH THE BARRIER.
7. THE USE OF THE ABSORB-M IS RESTRICTED TO A BARRIER HEIGHT OF UP TO 42 INCHES.
8. DO NOT ADD WATER TO FRONT ELEMENT (TL-2 OR TL-3 UNIT).

BILL OF MATERIALS (BOM) ABSORB-M TL-3 & TL-2 SYSTEMS			QTY	QTY
ITEM #	PART NUMBER	PART DESCRIPTION	TL-2 SYSTEM	TL-3 SYSTEM
1	BSI-1809036-00	TRANSITION-(GALV)	1	1
* 2	BSI-1808002-00	PRE-ASSEMBLED ABSORBING (ELEMENTS)	2	3
* 3	BSI-4004598	FILL CAPS	8	12
* 4	BSI-4004599	DRAIN PLUGS	2	3
* 5	BSI-1809053-00	TENSION STRAP-(GALV)	8	12
* 6	BSI-2001998	C-SCR FH 3/8-16 X 1 1/2 GR5 PLT	8	12
* 7	BSI-2001999	C-SCR FH 3/8-16 X 1 GR5 PLT	8	12
8	BSI-1809035-00	MIDNOSE-(GALV)	1	1
9	BSI-1808014-00	NOSE PLATE	1	1
10	BSI-1809037-00	TRANSITION STRAP (LEFT-HAND)-(GALV)	1	1
11	BSI-1809038-00	TRANSITION STRAP (RIGHT-HAND)-(GALV)	1	1
12	BSI-1808005-00	PIN ASSEMBLY	8	10
13	BSI-2002001	ANC MECH 5/8-11X5 (GALV)	6	6
14	ABSORB-M	INSTALLATION AND INSTRUCTIONS MANUAL	1	1

* COMPONENTS PRE-ASSEMBLED WITH ELEMENT ASSEMBLY

DELINEATION DECAL PLACEMENT GUIDE





NOSE PLATE

* * NOTE: (PROVIDED BY OTHERS)
ENGINEER OR CONTRACTOR SHALL COORDINATE WITH THE MANUFACTURER FOR THE CORRECT DECAL PER TRAFFIC FLOW, LEFT, RIGHT OR BOTH-SIDES.

NOTE:
APPLY A HIGH REFLECTIVE DECAL TO THE NOSE PLATE. DELINEATION DECAL ORIENTATION IS SHOWN ON THE CONSTRUCTION PLAN SET AND SHALL BE IN ACCORDANCE WITH THE TEXAS MUTCD FOR (TRAFFIC CONTROL DEVICES). DECALs ARE AVAILABLE FOR TRAFFIC FLOW ON THE LEFT-SIDE, BOTH -SIDES AND RIGHT-SIDE.

NOTE:
THIS STANDARD IS A BASIC REPRESENTATION OF THE ABSORB-M, IT IS NOT INTENDED TO REPLACE THE INSTALLATION INSTRUCTIONS MANUAL.

SACRIFICIAL

Texas Department of Transportation — Design Division Standard

LINDSAY TRANSPORTATION SOLUTIONS

CRASH CUSHION
(MASH TL-3 & TL-2)
TEMPORARY - WORK ZONE
ABSORB(M)-19

FILE: absorbm19	DN: TxDOT	CK: KM	DW: VP	CK:
REVISIONS	CONT	SECT	JOB	HIGHWAY
	1803	02	035	FM1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		077

LOC NO.	TCP PHASE	PLAN SHEET NUMBER	LOCATION	STA	TEST LEVEL	DIRECTION OF TRAFFIC (UNI/BI)	FOUNDATION PAD		BACKUP SUPPORT			AVAILABLE SITE LENGTH	CRASH CUSHION									
															MOVE / RESET		L	L	R	R	S	S
							PROPOSED MATERIAL	PROPOSED THICKNESS	DESCRIPTION	WIDTH	HEIGHT		INSTALL	REMOVE	MOVE/ RESET	FROM LOC.*	N	W	N	W	N	W
1	TCP PHASE II	37	TERRY RD.	273+78.45	3	UNIDIRECTIONAL	N/A	N/A	CONCRETE SAFETY BARRIER	24"	3'-6"	21'	X	X							X	
2	TCP PHASE II	38	LEUCADIA AVE.	286+57.29	3	UNIDIRECTIONAL	N/A	N/A	CONCRETE SAFETY BARRIER	24"	3'-6"	21'	X	X							X	
2	TCP PHASE II	38	LEUCADIA AVE.	287+68.82	3	UNIDIRECTIONAL	N/A	N/A	CONCRETE SAFETY BARRIER	24"	3'-6"	21'	X	X							X	
3	TCP PHASE II	38	TOWER RD.	298+78.82	3	UNIDIRECTIONAL	N/A	N/A	CONCRETE SAFETY BARRIER	24"	3'-6"	21'	X	X							X	
3	TCP PHASE II	38	TOWER RD.	300+11.56	3	UNIDIRECTIONAL	N/A	N/A	CONCRETE SAFETY BARRIER	24"	3'-6"	21'	X	X							X	
4	TCP PHASE II	39	BRUSHLINE RD.	313+91.57	3	UNIDIRECTIONAL	N/A	N/A	CONCRETE SAFETY BARRIER	24"	3'-6"	21'	X	X							X	
4	TCP PHASE II	39	BRUSHLINE RD.	315+41.57	3	UNIDIRECTIONAL	N/A	N/A	CONCRETE SAFETY BARRIER	24"	3'-6"	21'	X	X							X	
5	TCP PHASE II	39	HOMERITO (SMALL BUSINESS)	318+41.57	3	UNIDIRECTIONAL	N/A	N/A	CONCRETE SAFETY BARRIER	24"	3'-6"	21'	X	X							X	
5	TCP PHASE II	39	HOMERITO (SMALL BUSINESS)	319+91.57	3	UNIDIRECTIONAL	N/A	N/A	CONCRETE SAFETY BARRIER	24"	3'-6"	21'	X	X							X	
6	TCP PHASE II	40	SHARP RD.	328+61.57	3	UNIDIRECTIONAL	N/A	N/A	CONCRETE SAFETY BARRIER	24"	3'-6"	21'	X	X							X	
												TOTALS	10	10	0							

LEGEND:
L=LOW MAINTENANCE
R=REUSABLE
S=SACRIFICIAL
N=NARROW
W=WIDE

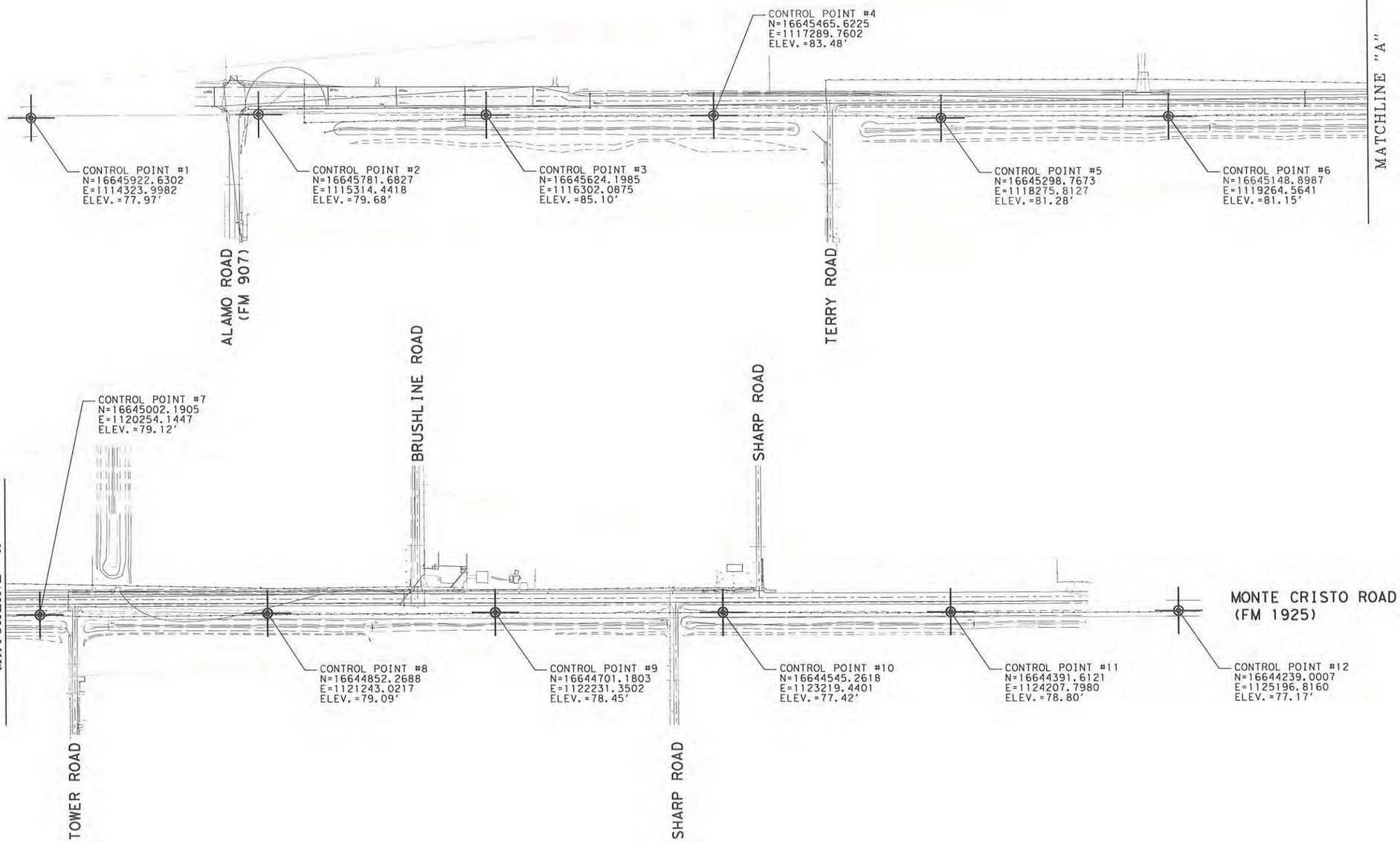
FOR DEFINITIONS SEE THE "CRASH CUSHION CATEGORIZATION CHART.PDF" AT THE DESIGN DIVISION (ROADWAY STANDARDS) WEBSITE. USE QUICK LINKS TO ACCESS ATTENUATORS / CRASH CUSHIONS SECTION.
http://www.dot.state.tx.us/insdtdot/orgchart/cmd/cserve/standard/rdwylse.htm

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED
PROFESSIONAL ENGINEER
11/01/2023

CRASH CUSHION SUMMARY SHEET

FILE: ccss.dgn	DN: TxDOT	CK:		CK:
© TxDOT	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
	DIST	COUNTY		
	PHARR	HIDALGO		
	FEDERAL AID PROJECT			SHEET NO.
				078

SURVEY CONTROL INDEX SHEET
MONTE CRISTO ROAD (FM 1925)
LIMITS: ALAMO ROAD (FM 907) TO SHARP ROAD



NOTES:

1. COORDINATES AND DISTANCES ARE IN U.S. SURVEY FEET. DISPLAYED IN SURFACE VALUES AND MAY BE CONVERTED TO GRID BY DIVIDING BY THE TXDOT SURFACE ADJUSTMENT FACTOR OF 1.00004.

2. ALL HORIZONTAL VALUES ARE NAD 83(2011) STATE PLANE COORDINATES, TEXAS SOUTH ZONE ESTABLISHED BY RTK METHODS.

3. VERTICAL VALUES ESTABLISHED BY DIGITAL LEVELS AND REFERENCED TO NAVD88.

4. THE VERTICAL CONTROL WAS ESTABLISHED BY LEVEL LOOPS FROM PRIMARY CONTROL POINTS 402 AND 406 THROUGH SECONDARY POINTS SET AND TIED TO A PREVIOUS FM-1925 SURVEY CONTROL SET BY RODS SURVEYING, INC.
SURVEY DATE: FEBRUARY, 2013

CP 402 N 16646252.93 E 1112167.43 ELEV=78.79'
STA. 216+10.53 OFFSET 96.80' RT
CP 406 N 16645608.81 E 1116438.53 ELEV=83.55'
STA. 259+29.88 OFFSET 75.98' RT

5. R.O.W.S.S. PROJECT NUMBER R18126
WA=41_MONTE CRISTO ROAD (FM 1925)
LIMITS: ALAMO ROAD (FM 902) TO SHARP ROAD
COUNTY: HIDALGO

NOT TO SCALE

DATE: JUNE 16, 2020

STATE OF TEXAS
REGISTERED
JUAN E. GALVAN
4011
PROFESSIONAL
LAND SURVEYOR

JUAN E. GALVAN, R.P.L.S. #4011
06/16/2020

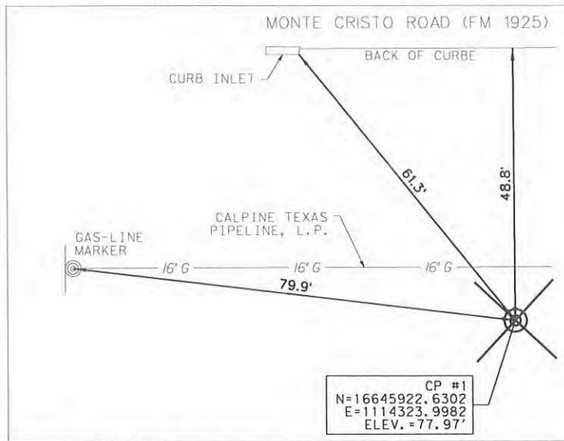
THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

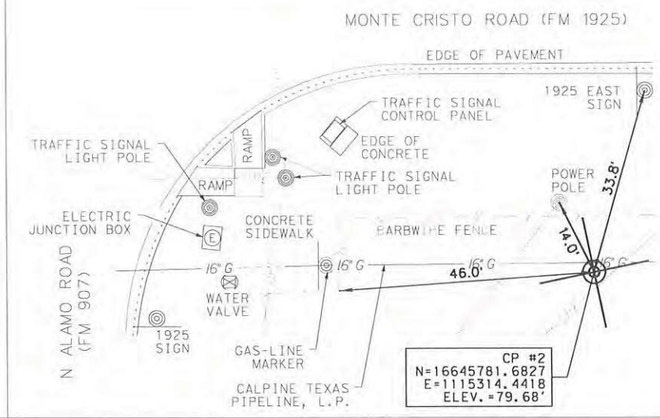
ROW SURVEYING SERVICES, LLC.
900 S. STEWART RD. SUITE 13
ROBSTOWN, TEXAS 78372
TEL.: (956) 424-2232
FAX.: (956) 424-2122
TBPLS #10193989

MONTE CRISTO ROAD (FM 1925)
HORIZONTAL & VERTICAL CONTROL

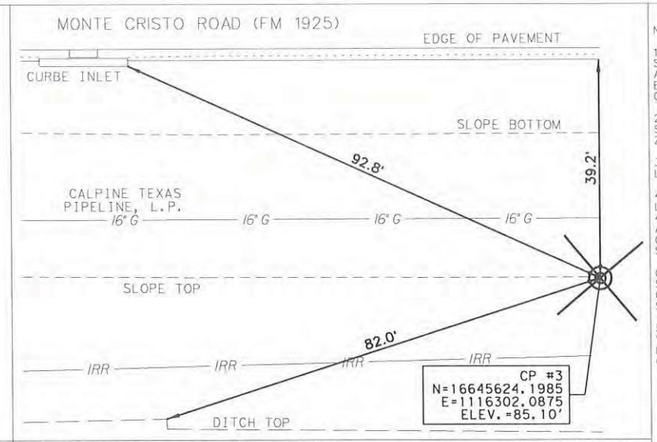
DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					MONTE CRISTO ROAD (FM 1925)
ENGINEER:		STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO					079
REVIEW:								
CK:								



DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED APPROXIMATELY 898 FT. NORTHWEST OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND ALAMO ROAD (FM 907).



DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED AT THE SOUTHEAST QUADRANT OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND ALAMO ROAD (FM 907).



DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED APPROXIMATELY 1110 FT. SOUTHEAST OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND ALAMO ROAD (FM 907).

NOTES:

1. COORDINATES AND DISTANCES ARE IN U.S. SURVEY FEET, DISPLAYED IN SURFACE VALUES AND MAY BE CONVERTED TO GRID BY DIVIDING BY THE TXDOT SURFACE ADJUSTMENT FACTOR OF 1.00004.

2. ALL HORIZONTAL VALUES ARE NAD 83(2011) STATE PLANE COORDINATES, TEXAS SOUTH ZONE ESTABLISHED BY RTK METHODS.

3. VERTICAL VALUES ESTABLISHED BY DIGITAL LEVELS AND REFERENCED TO NAV088.

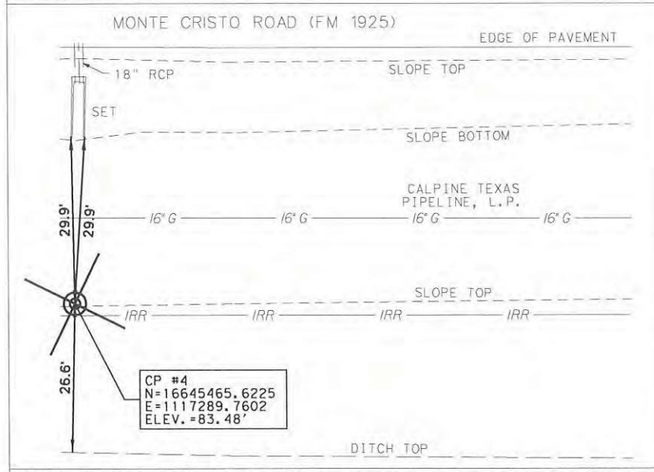
4. THE VERTICAL CONTROL WAS ESTABLISHED BY LEVEL LOOPS FROM PRIMARY CONTROL POINTS 402 AND 406 THROUGH SECONDARY POINTS SET AND TIED TO A PREVIOUS FM-1925 SURVEY CONTROL SET BY RODS SURVEYING, INC. SURVEY DATE: FEBRUARY, 2013

CP 402 N 16646252.93 E 1112167.43 ELEV=78.79'
STA. 216+10.53 OFFSET 96.80' RT
CP 406 N 16645608.81 E 1116438.53 ELEV=83.55'
STA. 259+29.88 OFFSET 75.98' RT

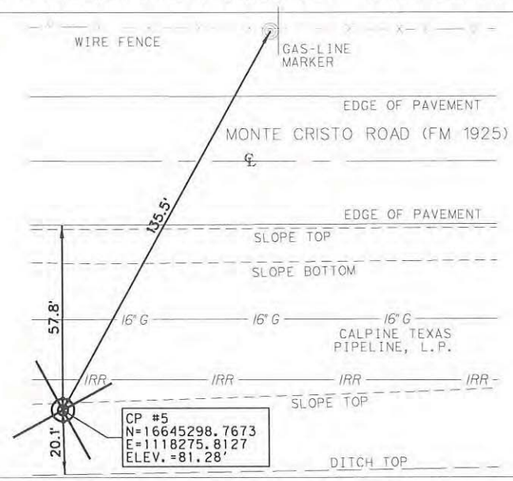
5. R.O.W.S.S. PROJECT NUMBER R18126
WA=41_MONTE CRISTO ROAD (FM 1925)
LIMITS: ALAMO ROAD (FM 902) TO SHARP ROAD
COUNTY: HIDALGO

NOT TO SCALE

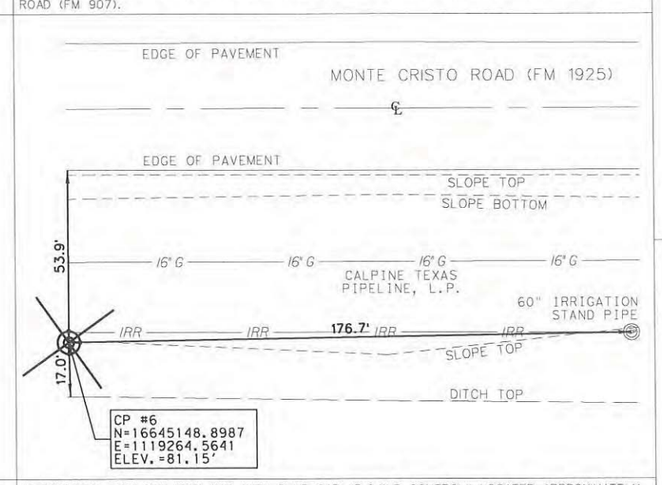
DATE: JUNE 16, 2020



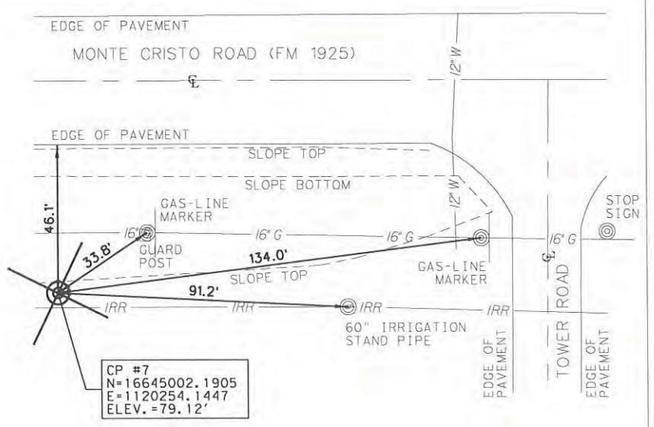
DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED APPROXIMATELY 516 FT. SOUTHWEST OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND TERRY ROAD.



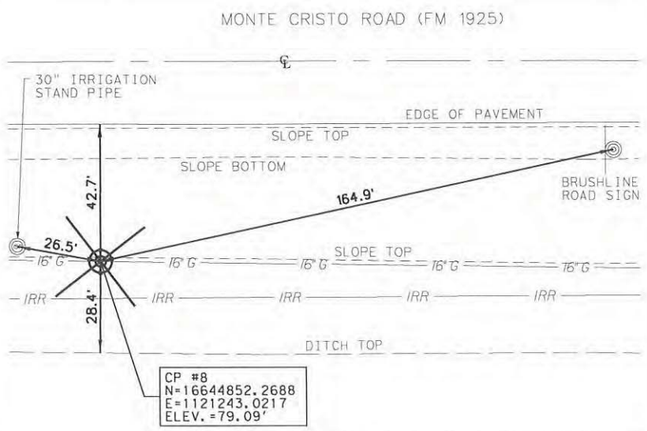
DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED APPROXIMATELY 494 FT. SOUTHEAST OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND TERRY ROAD.



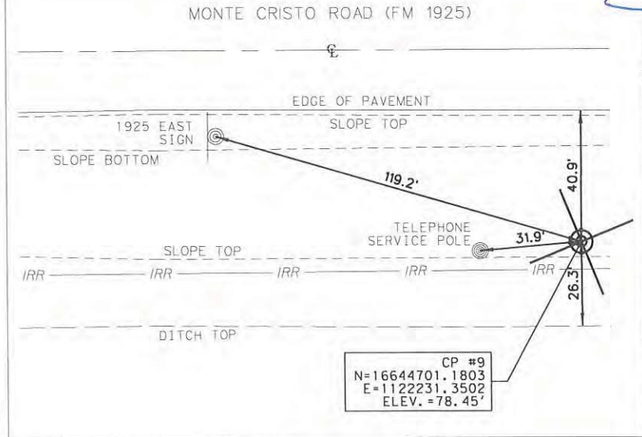
DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED APPROXIMATELY 1157 FT. SOUTHWEST OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND TOWER ROAD.



DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED AT THE SOUTHWEST QUADRANT OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND TOWER ROAD.



DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED APPROXIMATELY 848 FT. SOUTHEAST OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND TOWER ROAD.



DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED APPROXIMATELY 796 FT. SOUTHWEST OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND SHARP ROAD.

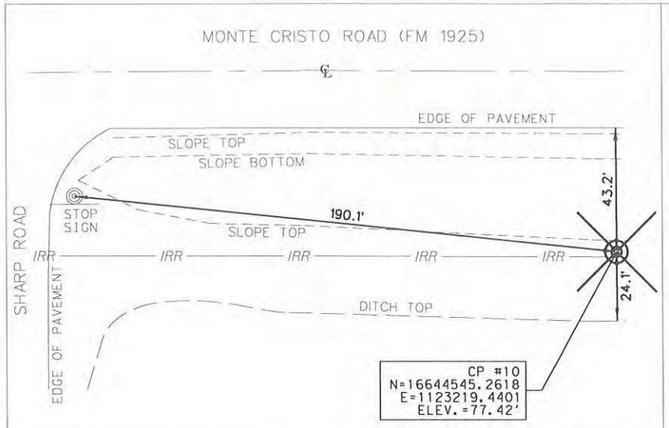
STATE OF TEXAS REGISTERED JUAN E. GALVAN 4011 PROFESSIONAL LAND SURVEYOR

JUAN E. GALVAN, R.P.L.S. #4011
06/16/2020

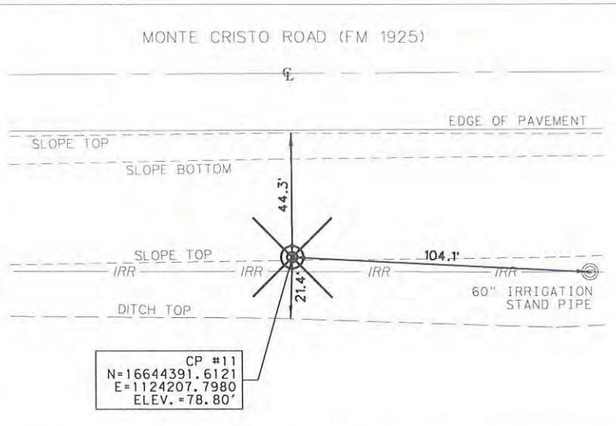
ROW SURVEYING SERVICES, LLC.
909 S. STEWART RD. SUITE 13
MISSION, TEXAS 78572
TEL.: (956) 424-3235
FAX.: (956) 424-0132
TBPLS #10193885

MONTE CRISTO ROAD (FM 1925)
HORIZONTAL & VERTICAL CONTROL

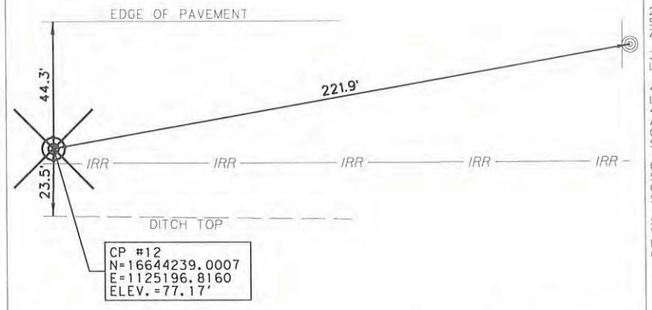
DRAWING:	FED. RD. DIV. NO.	STATE	PROJECT NO			HIGHWAY NO.
CK:	6	TEXAS				MONTE CRISTO ROAD (FM 1925)
ENGINEER:						
CK:	STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
REVIEW:	PHR	HIDALGO	XXXX	XX	XXX	080
CK:						



DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED AT THE SOUTHEAST QUADRANT OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND SHARP ROAD.



DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED APPROXIMATELY 1208 FT. SOUTHEAST OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND SHARP ROAD.



DESCRIPTION: 5/8" SET IRON ROD WITH BLUE CAP "R.O.W.S. CONTROL", LOCATED APPROXIMATELY 1842 FT. SOUTHEAST OF THE INTERSECTION OF THE MONTE CRISTO ROAD (FM 1925) AND SHARP ROAD.

NOTES:

1. COORDINATES AND DISTANCES ARE IN U.S. SURVEY FEET, DISPLAYED IN SURFACE VALUES AND MAY BE CONVERTED TO GRID BY DIVIDING BY THE TXDOT SURFACE ADJUSTMENT FACTOR OF 1.00004.

2. ALL HORIZONTAL VALUES ARE NAD 83(2011) STATE PLANE COORDINATES, TEXAS SOUTH ZONE ESTABLISHED BY RTK METHODS.

3. VERTICAL VALUES ESTABLISHED BY DIGITAL LEVELS AND REFERENCED TO NAVD88.

4. THE VERTICAL CONTROL WAS ESTABLISHED BY LEVEL LOOPS FROM PRIMARY CONTROL POINTS 402 AND 406 THROUGH SECONDARY POINTS SET AND TIED TO A PREVIOUS FM-1925 SURVEY CONTROL SET BY RODS SURVEYING, INC. SURVEY DATE: FEBRUARY, 2013

CP 402 N 16646252.93 E 1112167.43 ELEV=78.79'
STA. 216+10.53 OFFSET 96.80' RT
CP 406 N 16645608.81 E 1116438.53 ELEV=83.55'
STA. 259+29.88 OFFSET 75.98' RT

5. R.O.W.S.S. PROJECT NUMBER R18126
WA#41_MONTE CRISTO ROAD (FM 1925)
LIMITS: ALAMO ROAD (FM 902) TO SHARP ROAD
COUNTY: HIDALGO

NOT TO SCALE

DATE: JUNE 16, 2020

JUAN E. GALVAN, R.P.L.S. #4011
06/16/2020

ROW SURVEYING SERVICES, LLC.
900 S. STEWART RD. SUITE 13
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TEL.: (956) 424-3335
FAX.: (956) 424-3132
TBPLS #10193886

MONTE CRISTO ROAD (FM 1925)
HORIZONTAL & VERTICAL CONTROL

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					MONTE CRISTO (FM 1925)
ENGINEER:		STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	XXXX	XX	XXX		081
REVIEW:								
CK:								

FM 1925 ALIGNMENT

Chain NEWCLPROP contains:
6000 6001 CUR NEWCLPROP1 CUR NEWCLPROP2 6002

Beginning chain NEWCLPROP description

Point 6000 X 1,112,913.8841 Y 16,646,234.6426 Sta 223+50.91

Course from 6000 to 6001 S 81° 08' 52.01" E Dist 7,743.3258

Point 6001 X 1,120,564.9755 Y 16,645,043.0496 Sta 300+94.24

Course from 6001 to PC NEWCLPROP1 S 81° 05' 27.37" E Dist 3,186.2396

Curve Data

Curve NEWCLPROP1
P.I. Station 334+80.18 X 1,123,910.0689 Y 16,644,518.6798
Delta = 2° 03' 41.16" (RT)
Degree = 0° 30' 58.24"
Tangent = 199.7039
Length = 399.3647
Radius = 11,100.0000
External = 1.7963
Long Chord = 399.3432
Mid. Ord. = 1.7960
P.C. Station 332+80.48 X 1,123,712.7743 Y 16,644,549.6072
P.T. Station 336+79.84 X 1,124,106.1233 Y 16,644,480.6754
C.C. X 1,121,993.7543 Y 16,633,583.5245
Back = S 81° 05' 27.37" E
Ahead = S 79° 01' 46.21" E
Chord Bear = S 80° 03' 36.79" E

Curve Data

Curve NEWCLPROP2
P.I. Station 338+85.05 X 1,124,307.5850 Y 16,644,441.6229
Delta = 2° 07' 05.80" (LT)
Degree = 0° 30' 58.24"
Tangent = 205.2119
Length = 410.3770
Radius = 11,100.0000
External = 1.8968
Long Chord = 410.3537
Mid. Ord. = 1.8964
P.C. Station 336+79.84 X 1,124,106.1233 Y 16,644,480.6754
P.T. Station 340+90.22 X 1,124,510.3525 Y 16,644,410.0435
C.C. X 1,126,218.4923 Y 16,655,377.8263
Back = S 79° 01' 46.21" E
Ahead = S 81° 08' 52.01" E
Chord Bear = S 80° 05' 19.11" E

Course from PT NEWCLPROP2 to 6002 S 81° 08' 52.01" E Dist 1,624.2602

Point 6002 X 1,126,115.2654 Y 16,644,160.0919 Sta 357+14.48

Ending chain NEWCLPROP description

Beginning chain BRUSHLINE_CL description

Point 50 X 1,121,907.1282 Y 16,644,832.6565 Sta 10+00.00

Course from 50 to 51 N 8° 58' 46.50" E Dist 200.0002

Point 51 X 1,121,938.3447 Y 16,645,030.2055 Sta 12+00.00

Ending chain BRUSHLINE_CL description

Beginning chain SHARP_CL description

Point 55 X 1,123,389.9856 Y 16,644,600.2069 Sta 10+00.00

Course from 55 to 56 N 8° 47' 56.98" E Dist 200.0004

Point 56 X 1,123,420.5799 Y 16,644,797.8534 Sta 12+00.00

Ending chain SHARP_CL description

STATE OF TEXAS
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11/01/2023

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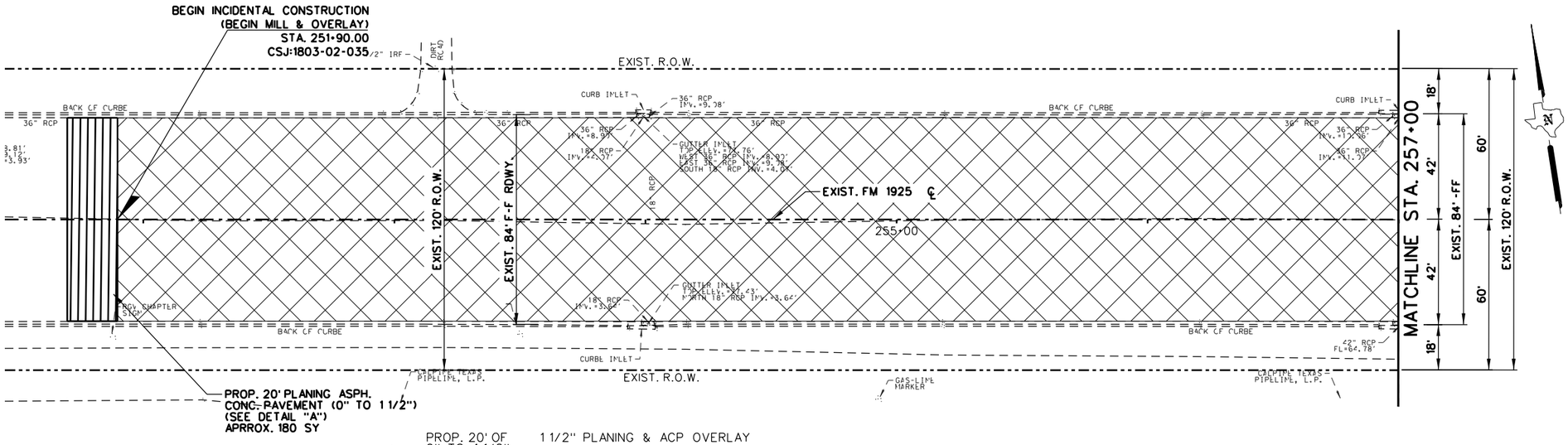
Fax : (956) 585-1927

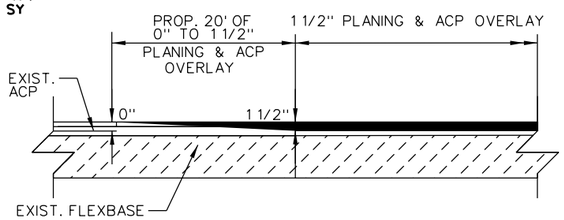
FM 1925
HORIZONTAL ALIGNMENT DATA

SHEET 1 OF 1

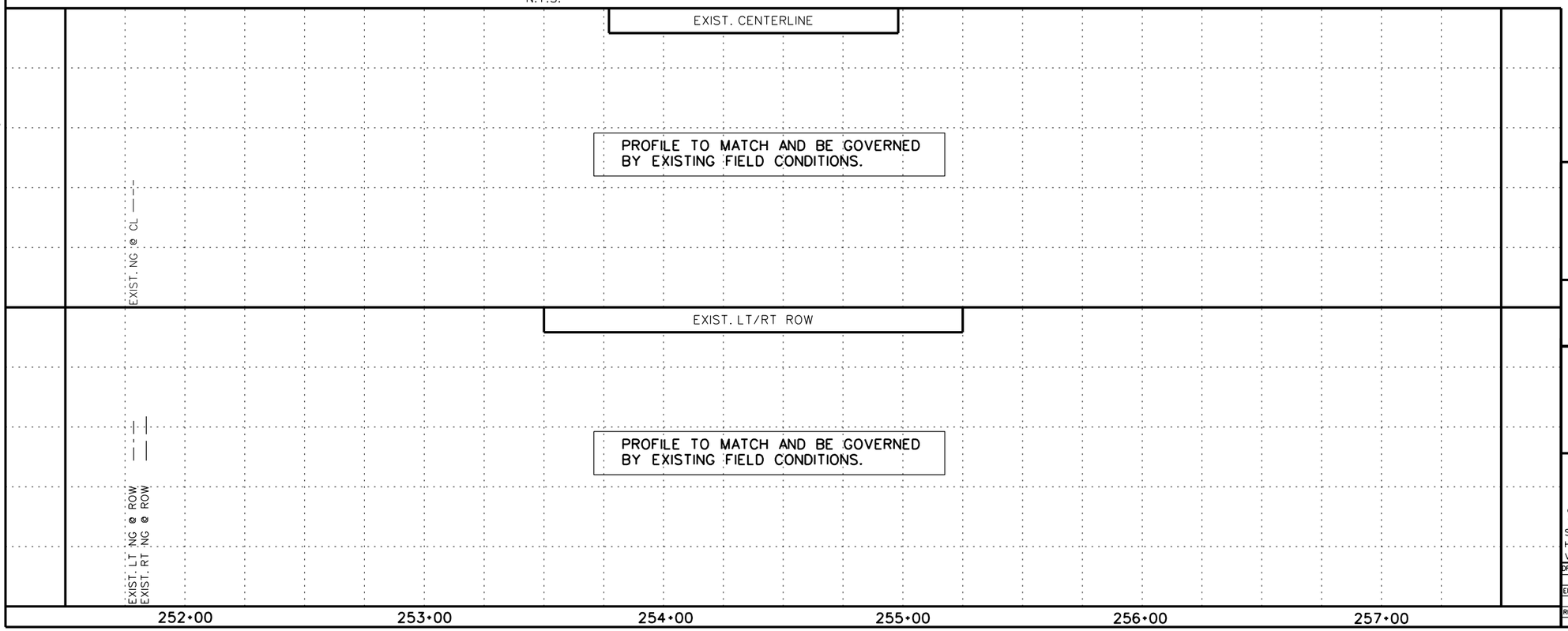
DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		082
REVIEW:								
CK:								

10/31/2023 K:\Counties\HID\FM 1925 PHR(1907 to Urest)\03 ROADWAY\01 AlignData\FM1925_ALIGNDATA.dgn





DETAIL "A"
N.T.S.



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
354	PLANING ACP (0"-1½")	SY	180
3077	SUPERPAVE	SY	4591

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- PROPOSED MILL & OVERLAY (1½")
- ✖ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⍟ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ REMOVING CONCRETE BASED OFF ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

FM 1925
PLAN AND PROFILE
STA. 251+89.73 TO STA. 257+00

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

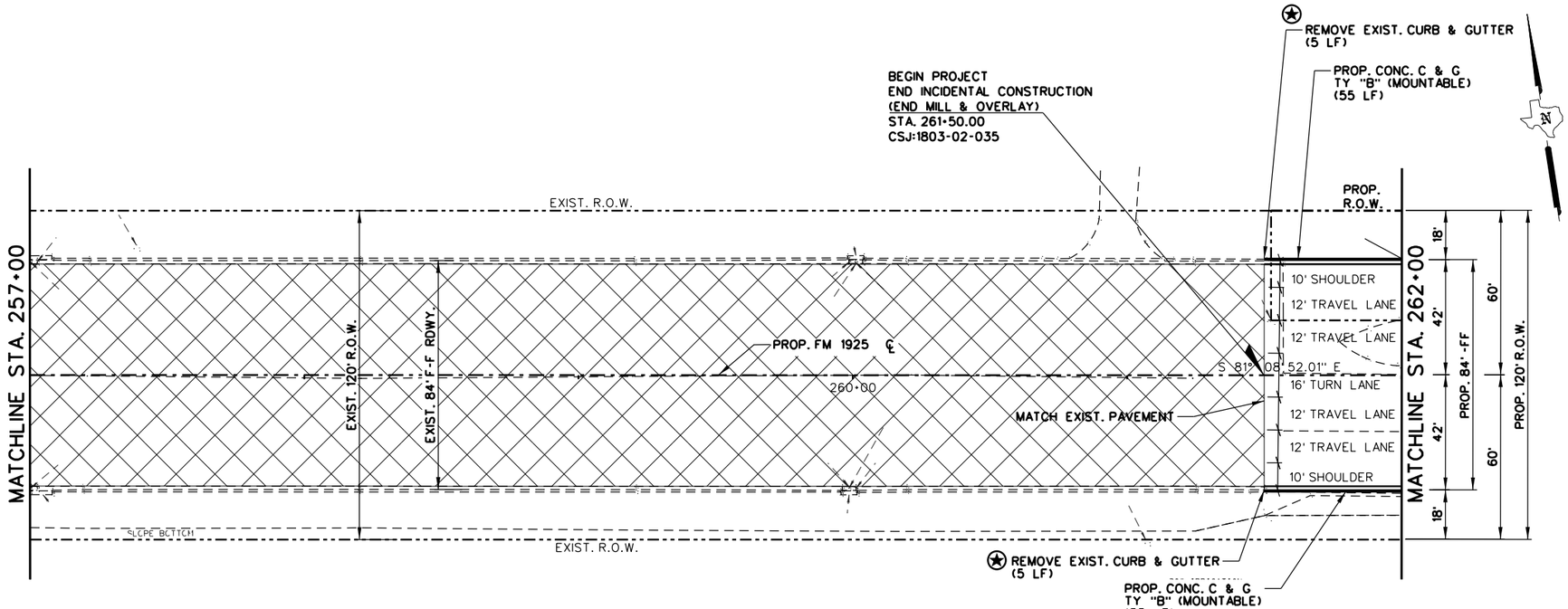
SHEET 1 OF 20

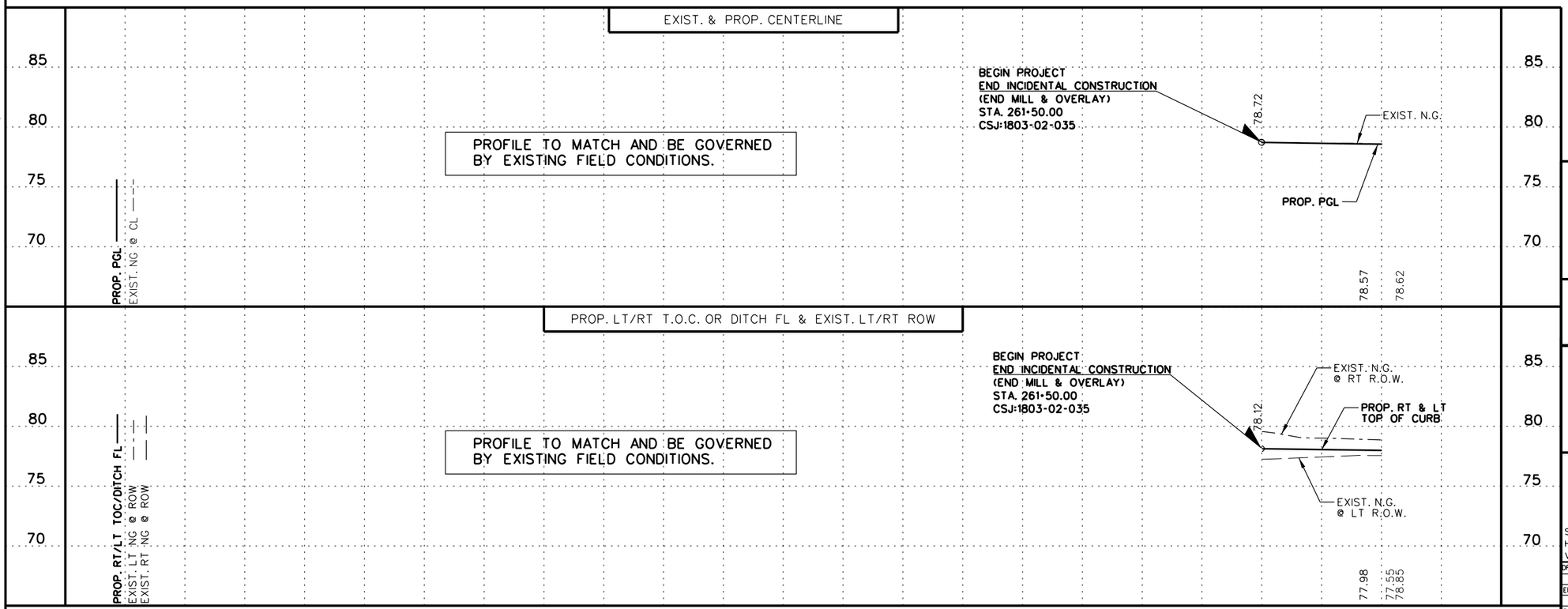
DRAWING: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP		6	TEXAS					FM1925
ENGINEER: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS		PHR	HIDALGO	1803	02	035		083
REVIEW:	
CK:	

K:\Counties\HID\FM 1925 PHII(907 to Urest)\03 ROADWAY\02 P&P\FM1925 E-2_PP1.dgn
11/1/2023

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
104	REMOVING CONC (CURB AND GUTTER)	LF	10
529	CONC CURB & GUTTER (TY B)	LF	110
3077	SUPERPAVE	SY	4050





LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- PROPOSED MILL & OVERLAY (1½")
- ✱ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⍟ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ REMOVING CONCRETE BASED OFF ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

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

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

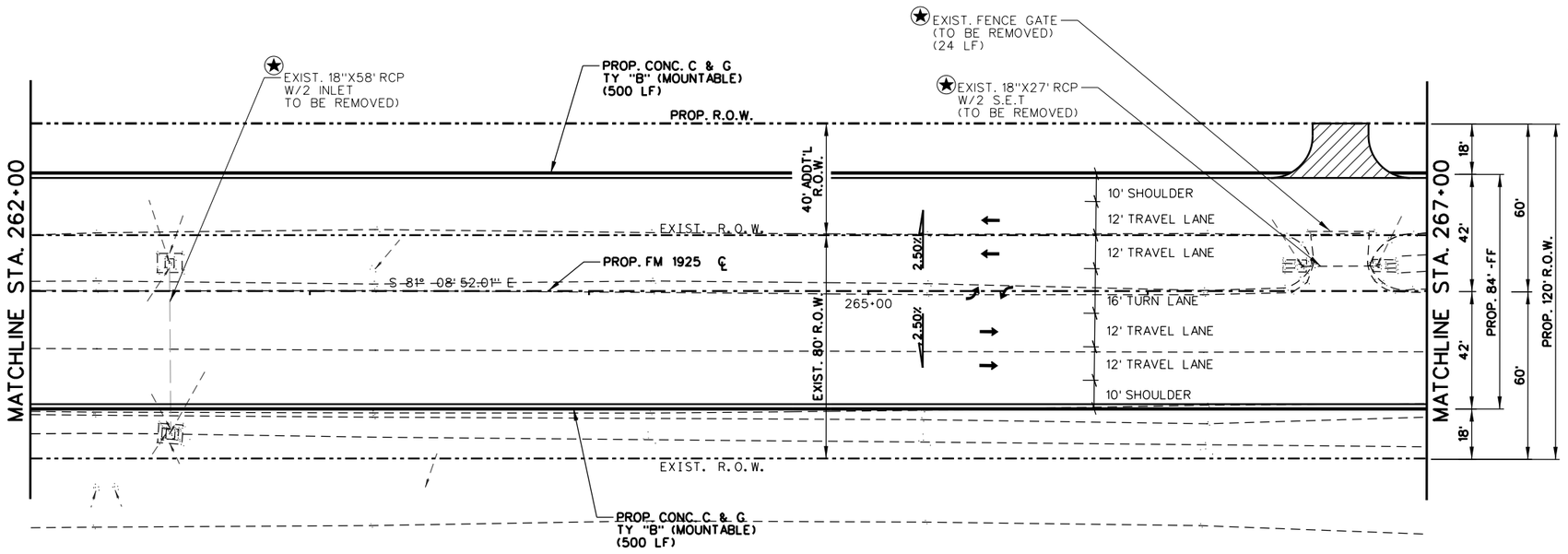
FM 1925
PLAN AND PROFILE
STA. 261+50 TO STA. 262+00

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

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		084

11/1/2023
K:\Counties\HID\FM 1925 PHII(907 to Urest)\03 ROADWAY\02 P&P\FM1925 E-2_PP1_A.dgn



SHEET SUMMARY

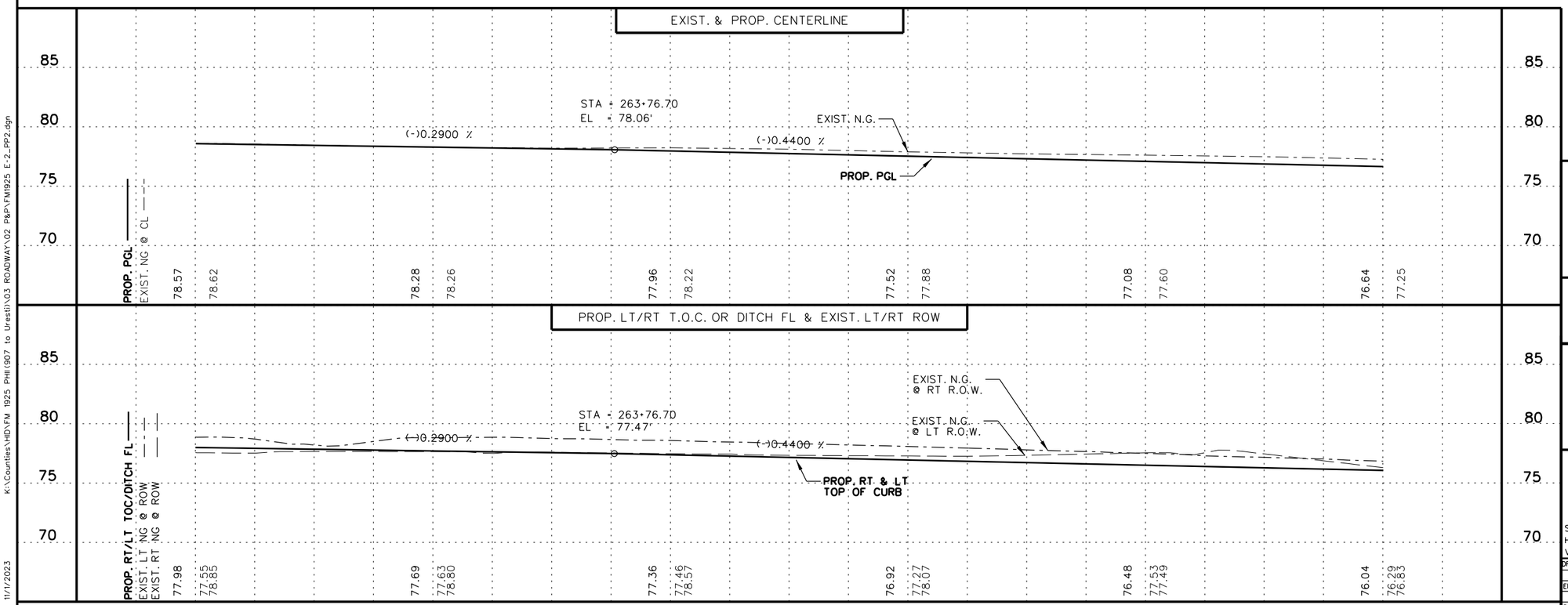
ITEM	DESCRIPTION	UNIT	QUANTITY
496	REMOV STR (INLET)	EA	2
496	REMOV STR (SET)	EA	2
496	REMOV STR (PIPE)	LF	85
496	REMOV STR (PIPE GATE)	LF	24
529	CONC CURB & GUTTER (TY B)	LF	1000

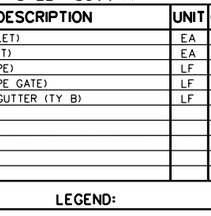
LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- DIRECTION OF TRAFFIC
- TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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





THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
Highway / Civil
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900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

FM 1925
PLAN AND PROFILE
STA. 262+00 TO STA. 267+00

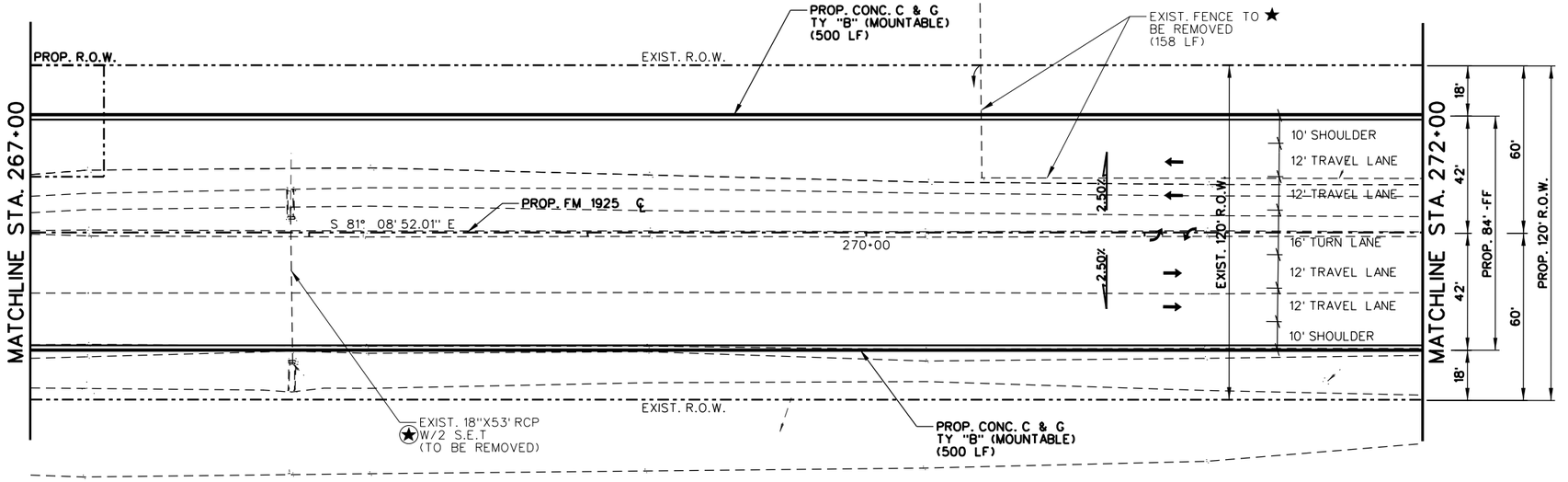
SCALE:
HOR: 1" = 50'
VER: 1" = 10'

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		085
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHII (907 to Uresti)\03 ROADWAY\02 P&P\FM1925 E-2_PP2.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
496	REMOV STR (SET)	EA	2
496	REMOV STR (PIPE)	LF	53
529	CONC CURB & GUTTER (TY B)	LF	1000

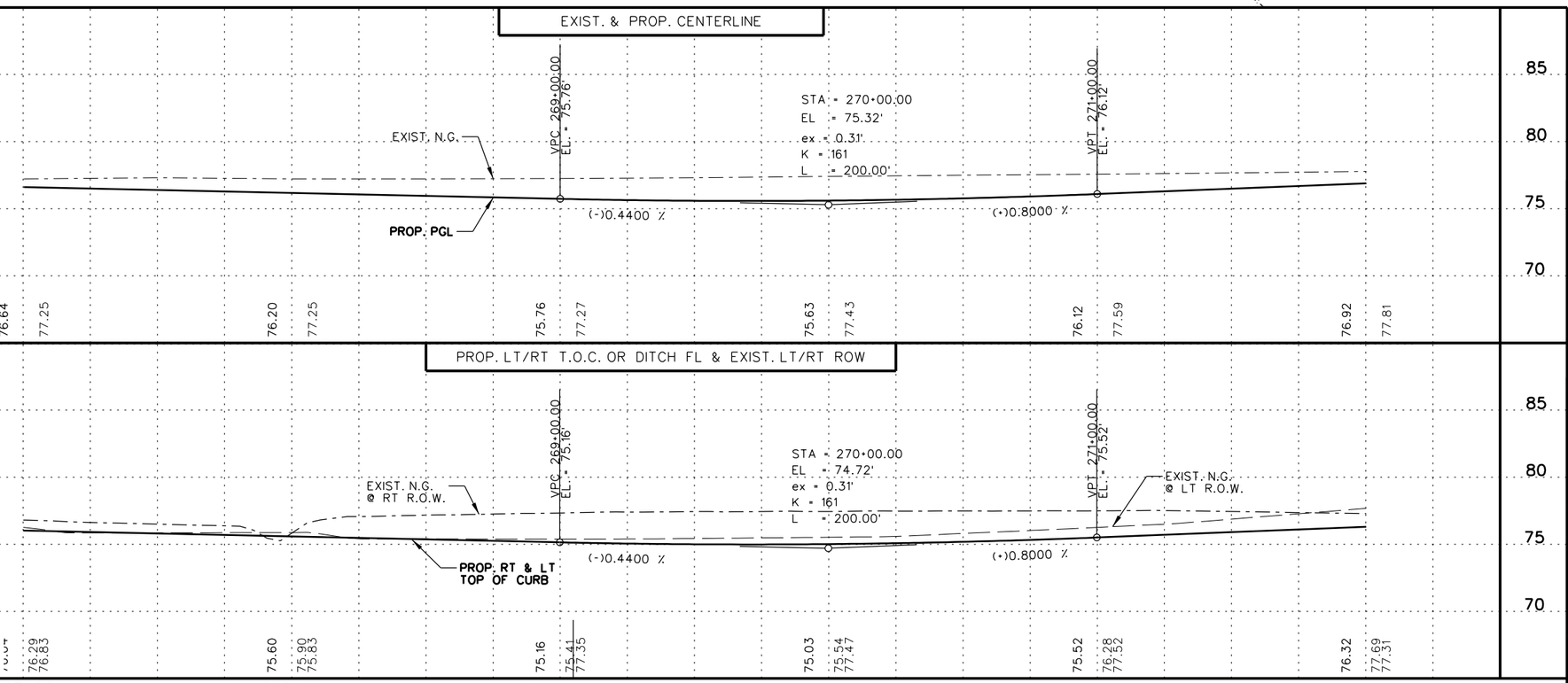


LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- ✖ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⍟ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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



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LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
11/01/2023

THE COUNTY OF HIDALGO TEXAS

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Fax : (956) 585-1927

FM 1925
PLAN AND PROFILE
STA. 267+00 TO STA. 272+00

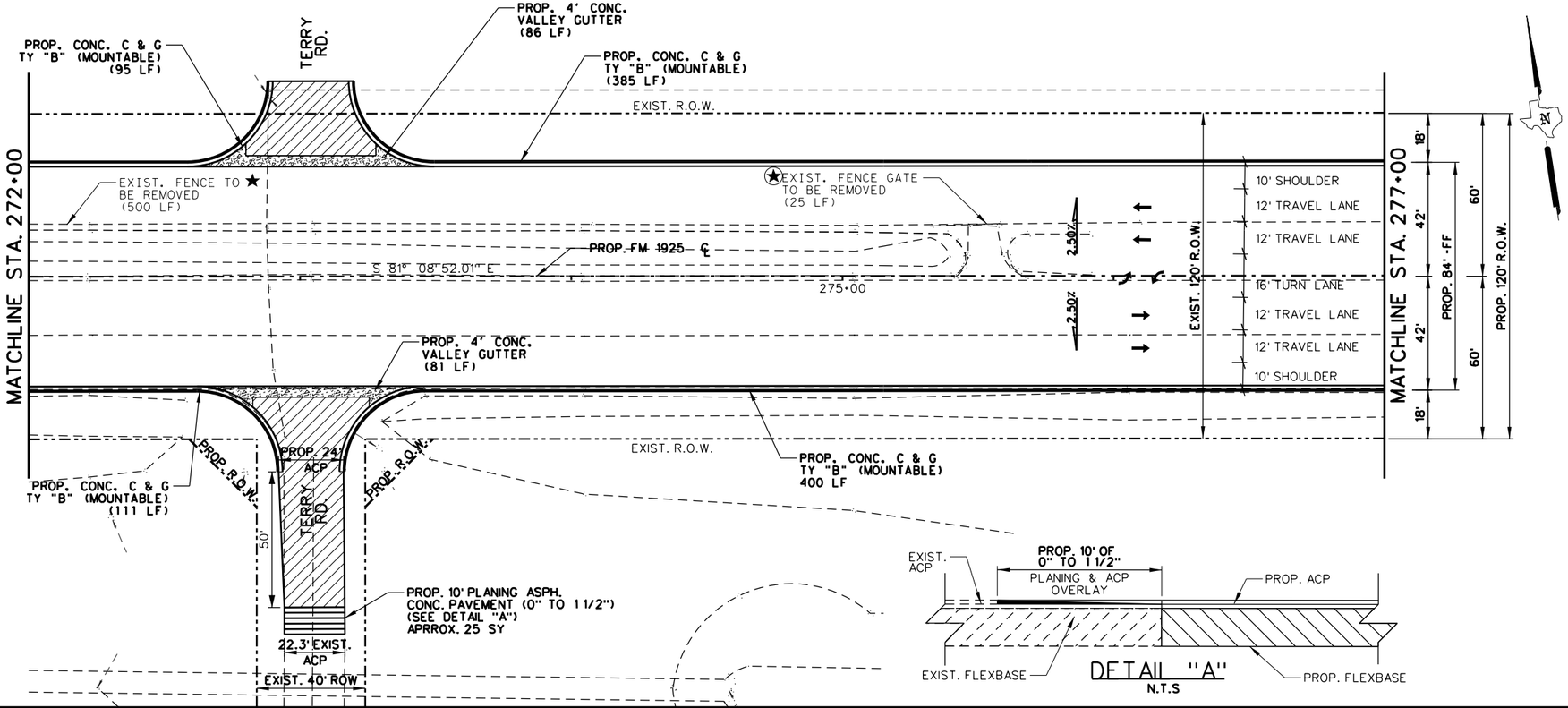
SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 4 OF 20

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		086

11/1/2023
K:\Counties\HD\FM 1925 PHII\907 to Urest\\03 ROADWAY\02 P&P\FM1925 E-2_PP3.dgn



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
354	PLAN ASPH CONC PAVE (0" TO 1 1/2")	SY	25
496	REMOV STR (PIPE GATE)	LF	25
529	CONC CURB & GUTTER (TY B)	LF	991
529	CONC CURB & GUTTER (VALLEY GUTTER 48")	LF	167

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- DIRECTION OF TRAFFIC
- TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
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Structural / Bridge
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900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
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FM 1925
PLAN AND PROFILE
STA. 272+00 TO STA. 277+00

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

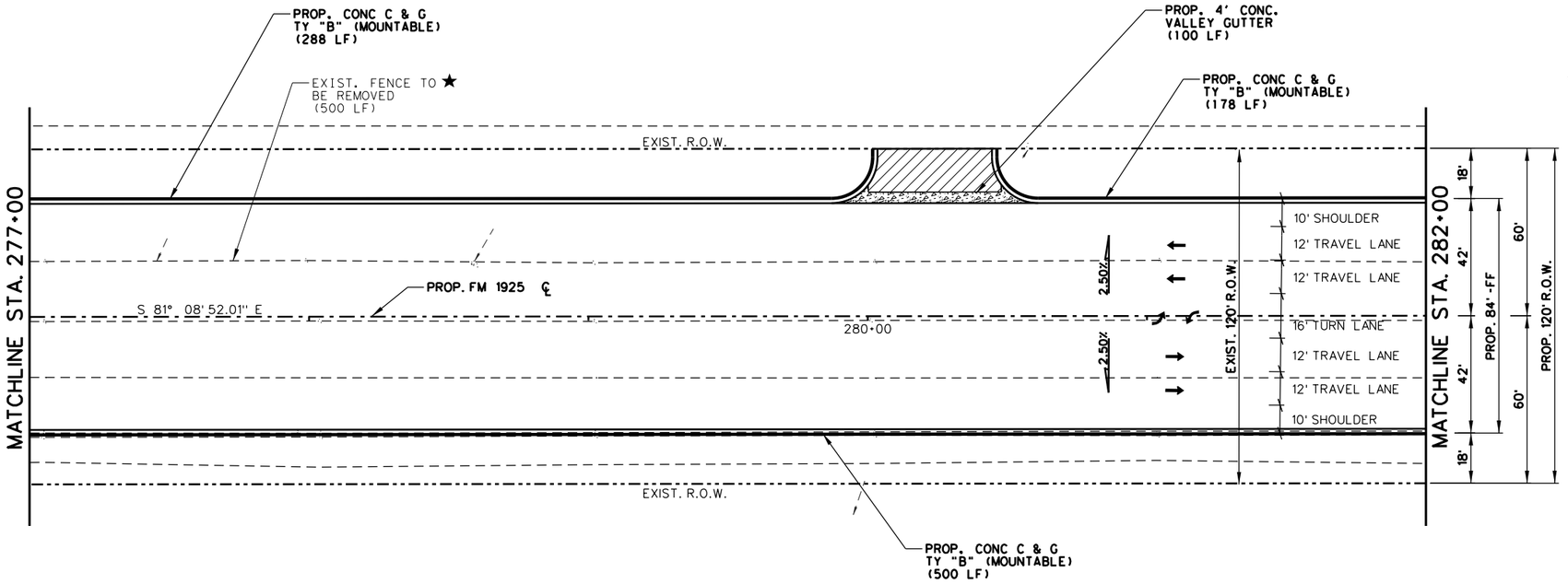
SHEET 5 OF 20

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK: RP	6	TEXAS				FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035	087
REVIEW:						
CK:						

11/1/2023
K:\Counties\HID\FM 1925 PHII(907 to Urest)\03 ROADWAY\02 P&P\FM1925 E-2_PP4.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
529	CONC CURB & GUTTER (TY B)	LF	970
529	CONC CURB & GUTTER (VALLEY GUTTER 48")	LF	100

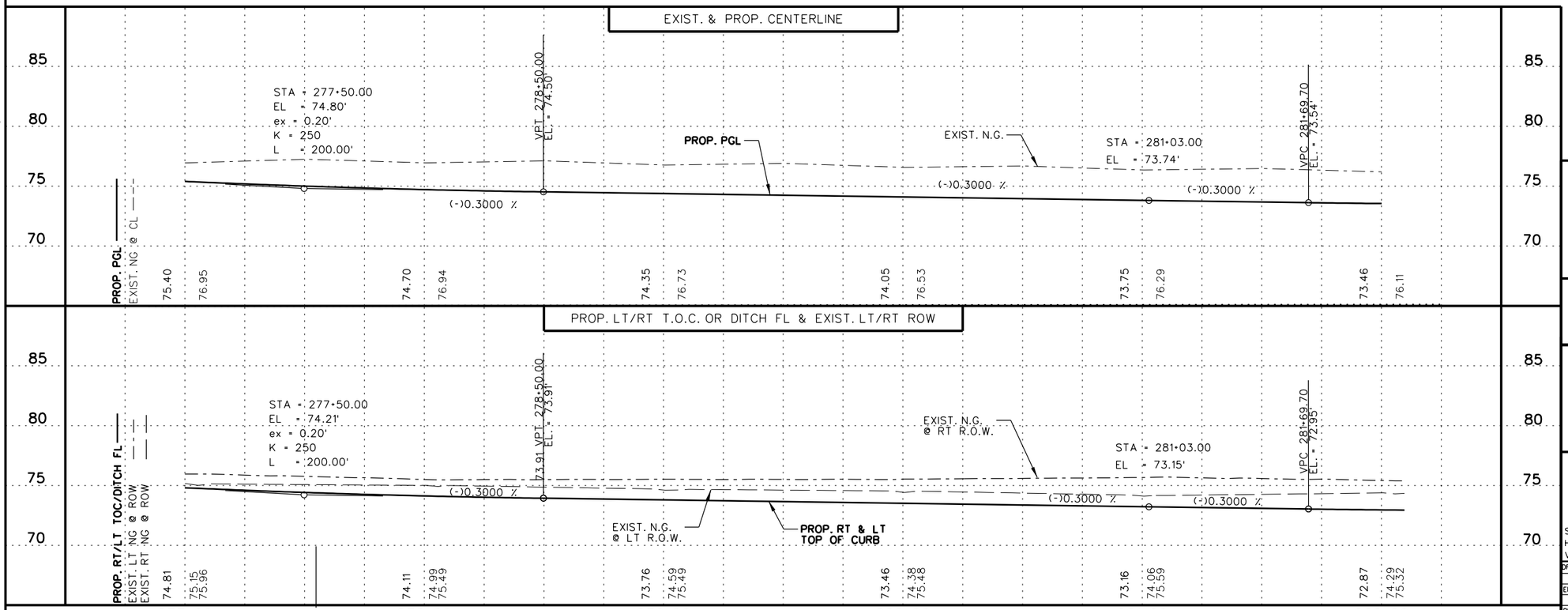


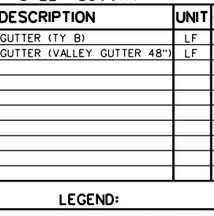
LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- ✕ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⍟ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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





11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
Highway / Civil
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Environmental
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Fax : (956) 565-9018

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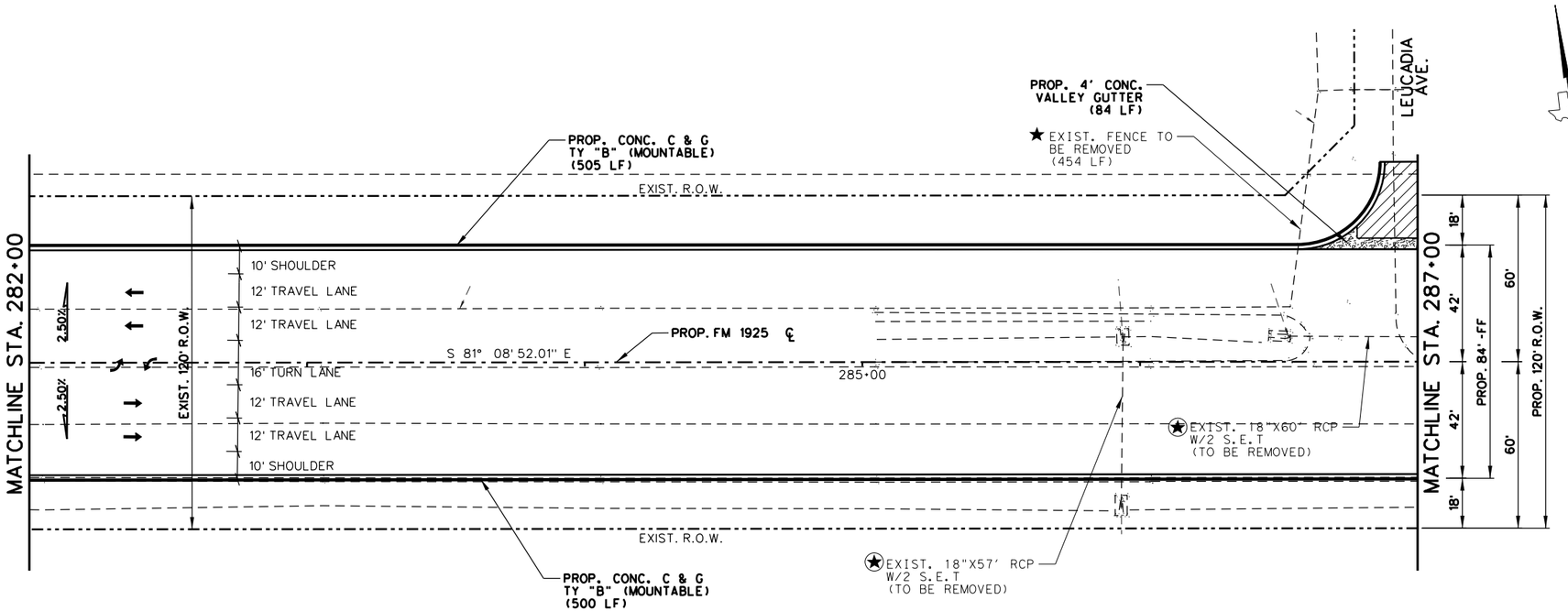
Fax : (956) 585-1927

FM 1925
PLAN AND PROFILE
STA. 277+00 TO STA. 282+00

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

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		088
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHII (907 to Uresti)\03 ROADWAY\02 P&P\FM1925 E-2_PP5.dgn



SHEET SUMMARY

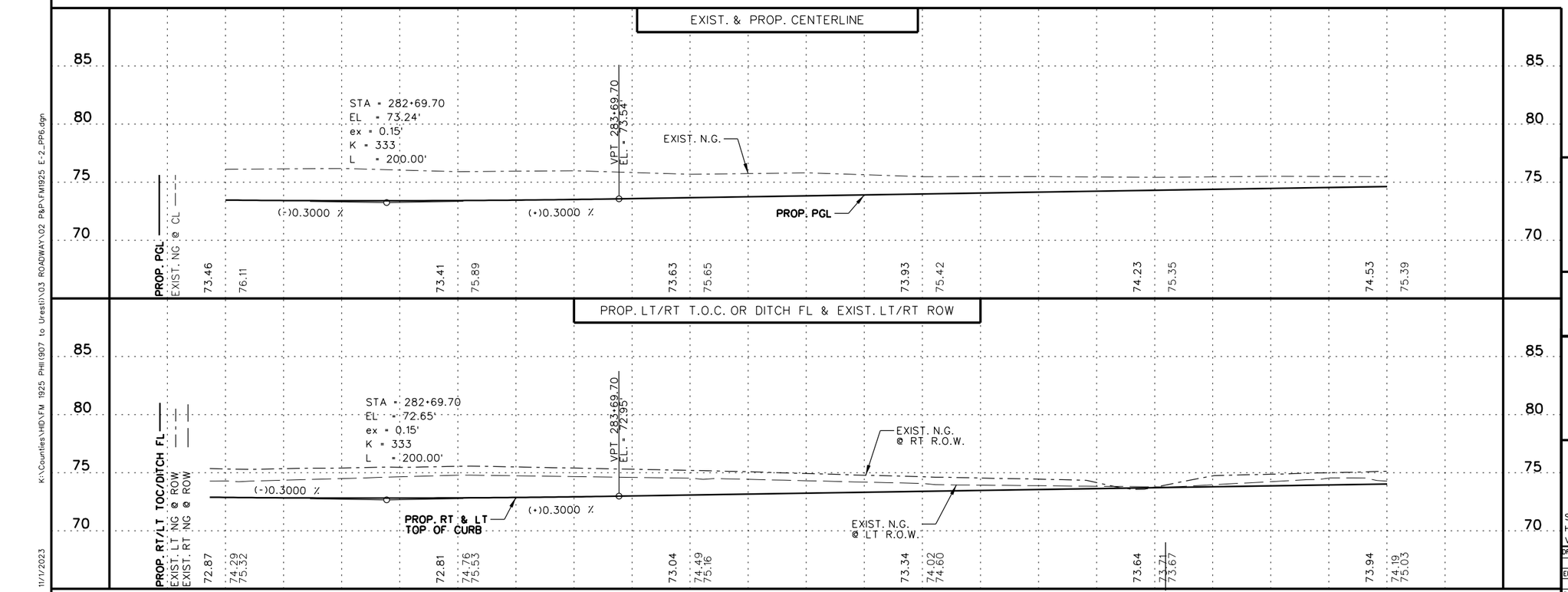
ITEM	DESCRIPTION	UNIT	QUANTITY
496	REMOVE STR (SET)	EA	4
496	REMOVE STR (PIPE)	LF	117
529	CONC CURB & GUTTER (TY B)	LF	1005
529	CONC CURB & GUTTER (VALLEY GUTTER 48")	LF	85

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- DIRECTION OF TRAFFIC
- TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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



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LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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FM 1925
PLAN AND PROFILE
STA. 282+00 TO STA. 287+00

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

SHEET 7 OF 20

DRAWING: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK: RP		6	TEXAS				FM1925
ENGINEER: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK: JBS		PHR	HIDALGO	1803	02	035	089
REVIEW:	
CK:	

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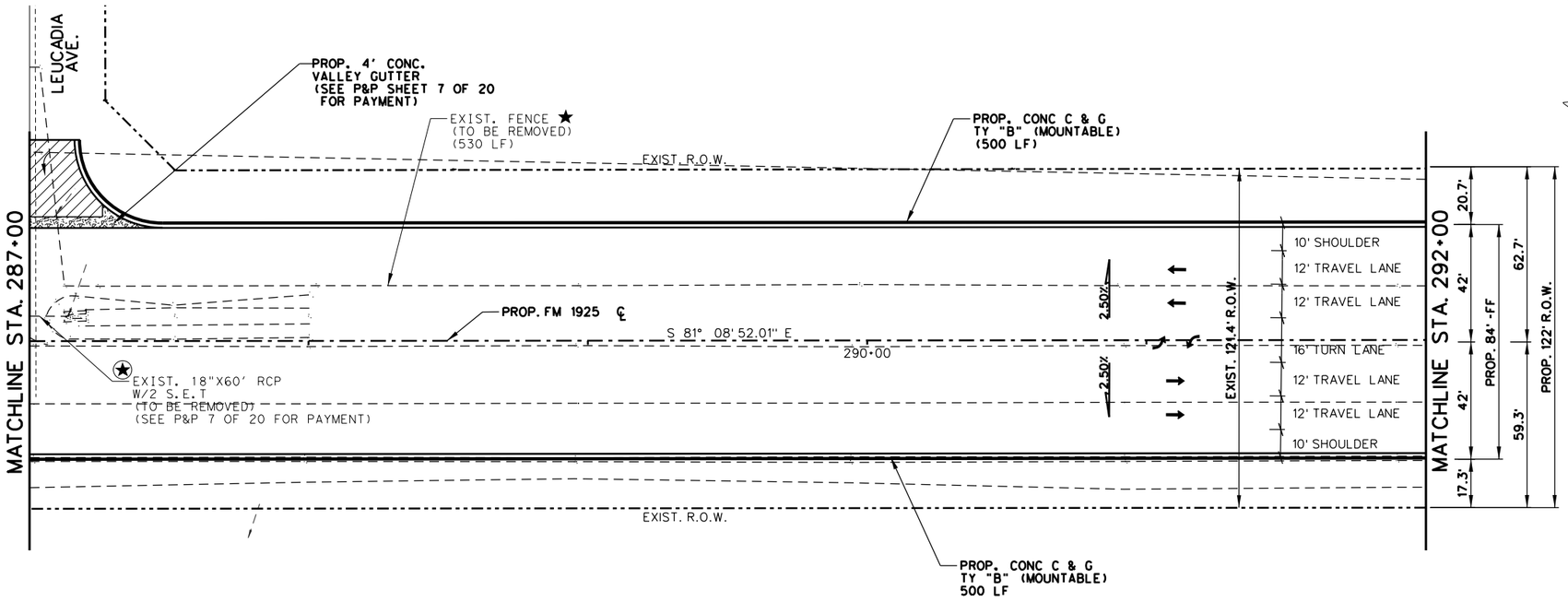
11/1/2023



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
529	CONC CURB & GUTTER (TY B)	LF	1000

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- ✕ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⊛ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

STATE OF TEXAS
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FM 1925
PLAN AND PROFILE
STA. 287+00 TO STA. 292+00

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

SHEET 8 OF 20

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		090
REVIEW:							
CK:							

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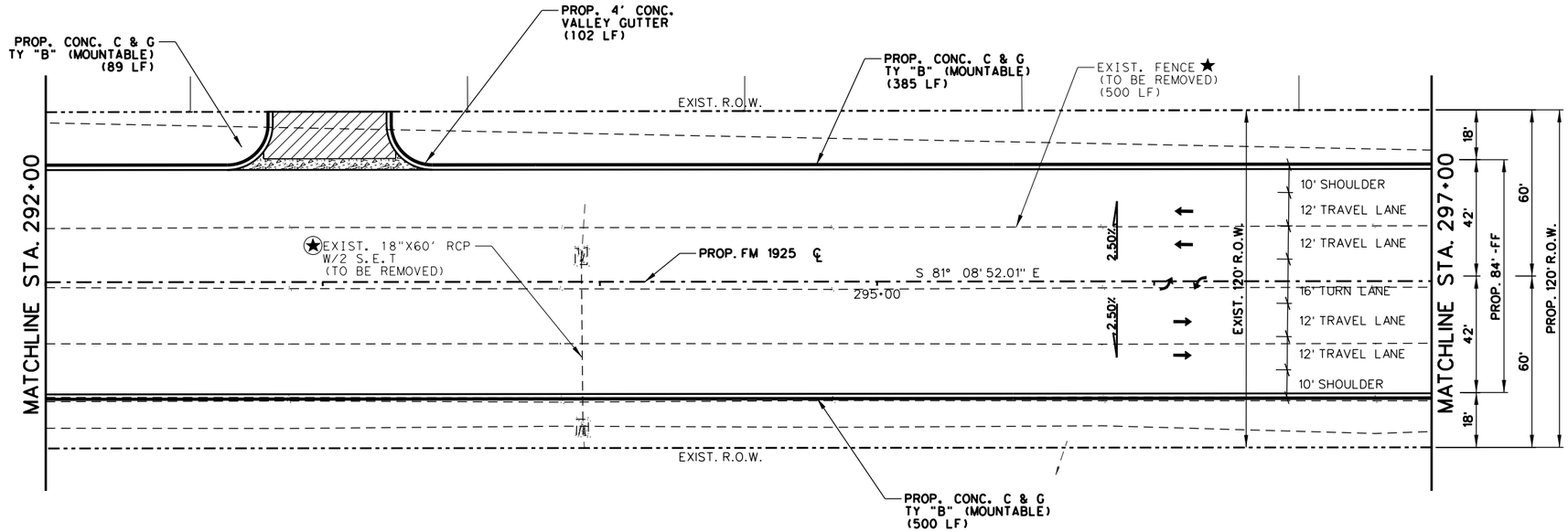

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
496	REMOV STR (SET)	EA	2
496	REMOV STR (PIPE)	LF	60
529	CONC CURB & GUTTER (TY B)	LF	974
529	CONC CURB & GUTTER (VALLEY GUTTER 48")	LF	98

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⍟ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

THE COUNTY OF HIDALGO TEXAS

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FM 1925
PLAN AND PROFILE
STA. 292+00 TO STA. 297+00

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

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		091
REVIEW:							
CK:							

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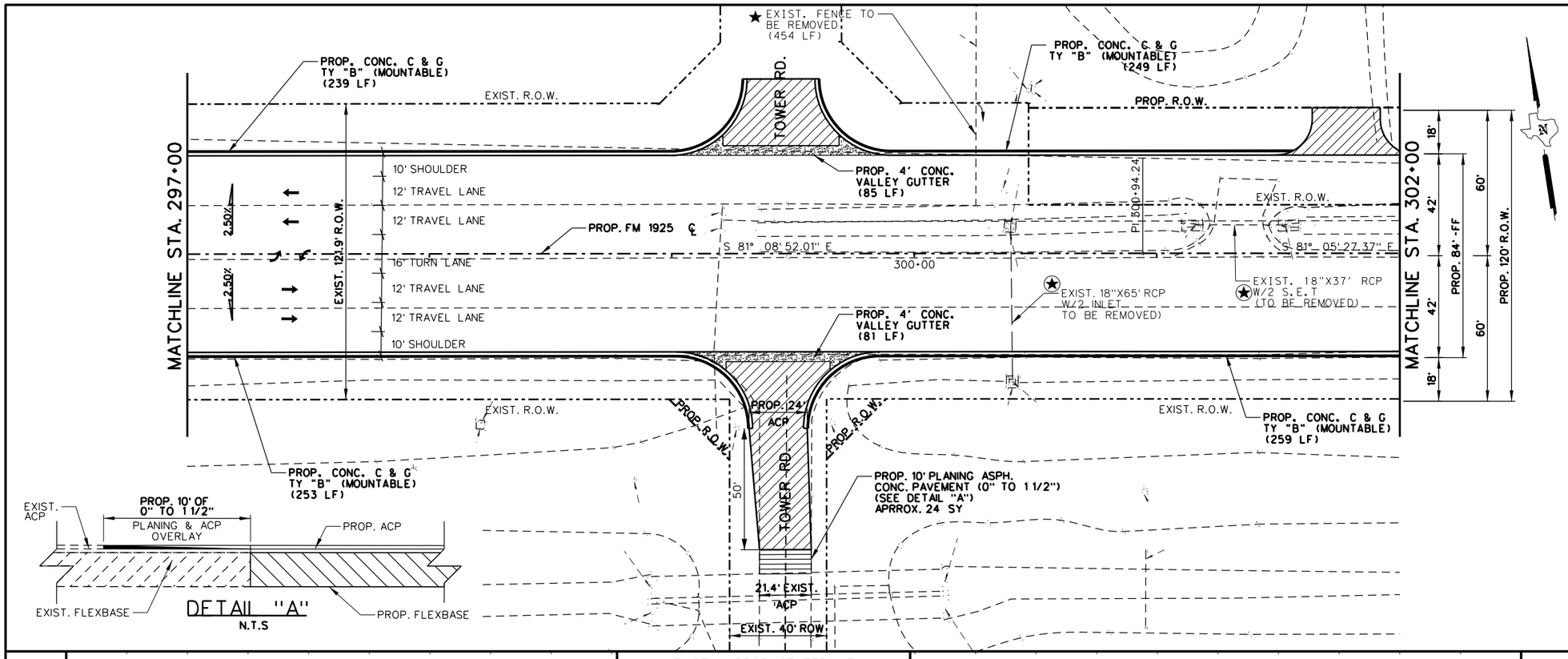

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
354	PLAN ASPH CONC PAVE (0" TO 1 1/2")	SY	24
496	REMOV STR (INLET)	EA	2
496	REMOV STR (SET)	EA	2
496	REMOV STR (PIPE)	LF	102
529	CONC CURB & GUTTER (TY B)	LF	1000
529	CONC CURB & GUTTER (VALLEY GUTTER 48")	LF	166

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- DIRECTION OF TRAFFIC
- TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

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Mission, TX. 78572
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FM 1925
PLAN AND PROFILE
STA. 297+00 TO STA. 302+00

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

SHEET 10 OF 20

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		092
REVIEW:							
CK:							

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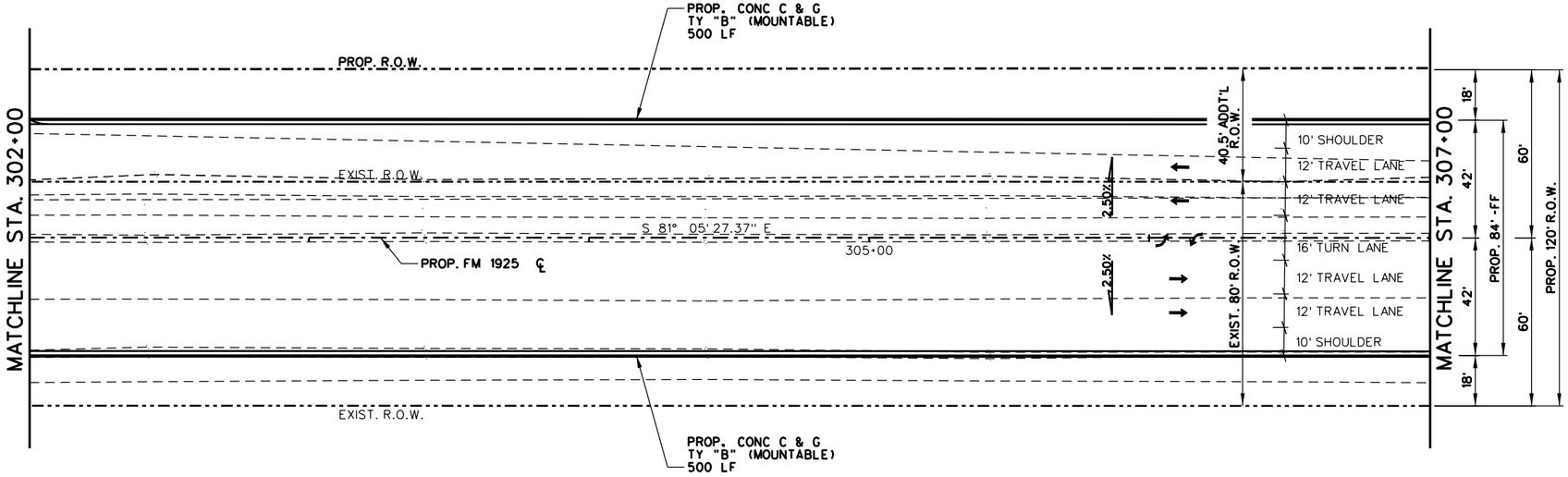
11/1/2023



SHEET SUMMARY

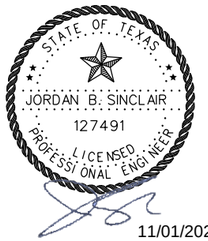
ITEM	DESCRIPTION	UNIT	QUANTITY
529	CONC CURB & GUTTER (TY B)	LF	1000

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- DIRECTION OF TRAFFIC
- TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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



11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

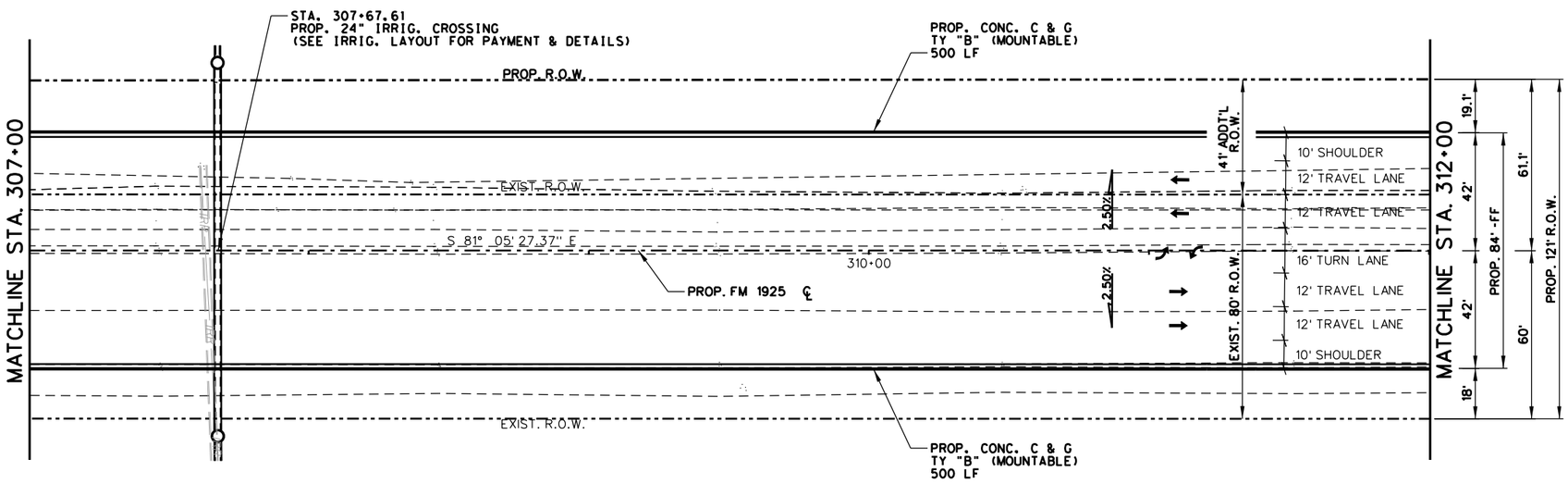
FM 1925
PLAN AND PROFILE
STA. 302+00 TO STA. 307+00

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

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		093

11/1/2023 K:\Counties\HID\FM 1925 PHII(907 to Urest)\03 ROADWAY\02 P&P\FM1925 E-2_PP10.dgn



SHEET SUMMARY

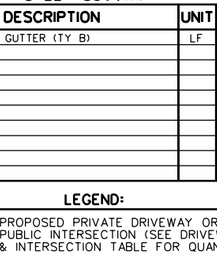
ITEM	DESCRIPTION	UNIT	QUANTITY
529	CONC CURB & GUTTER (TY B)	LF	1000

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- ✕ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⍟ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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



11/01/2023

THE COUNTY OF HIDALGO TEXAS

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

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Mission, TX. 78572
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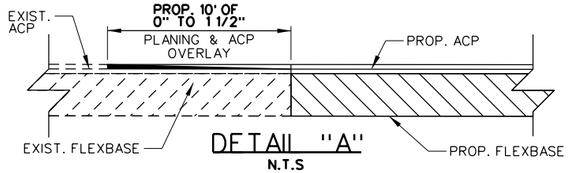
FM 1925
PLAN AND PROFILE
STA. 307+00 TO STA. 312+00

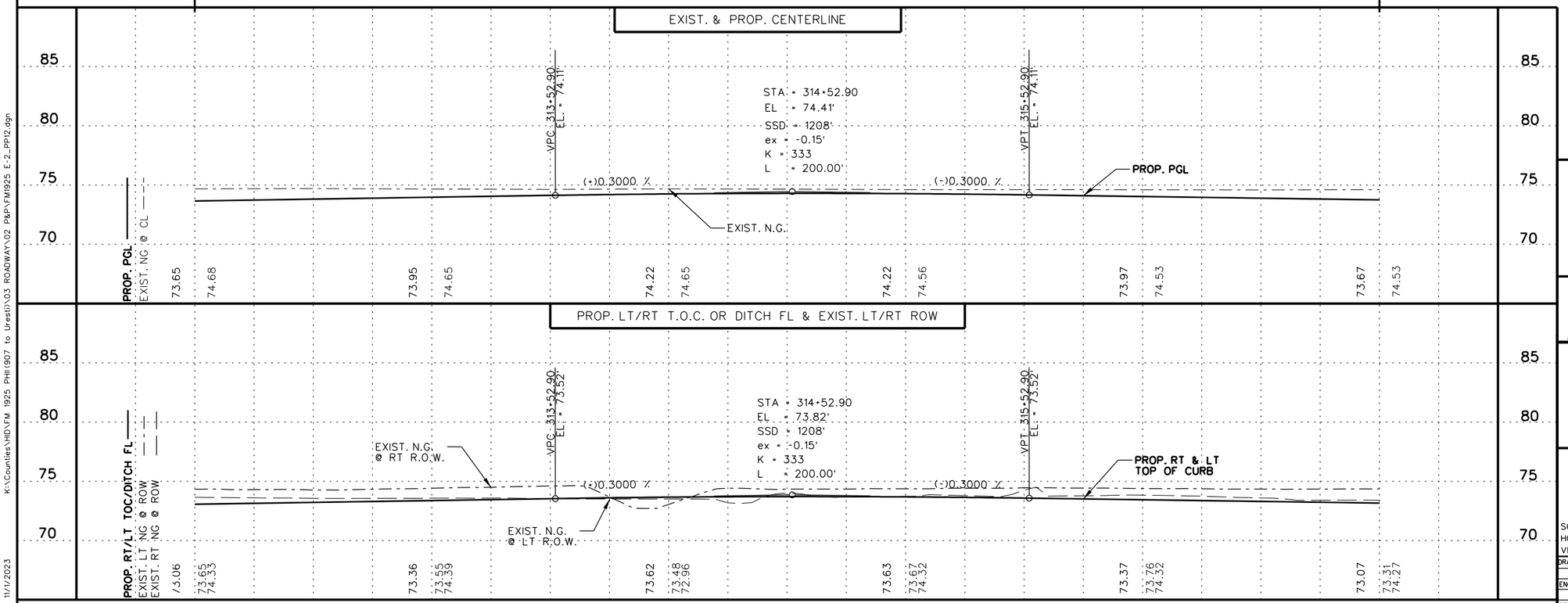
SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 12 OF 20

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK: RP	6	TEXAS				FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035	094
REVIEW:						
CK:						

11/1/2023
K:\Counties\HID\FM 1925 PHR (907 to Urestis)\03 ROADWAY\02 P&P\FM1925 E-2_PP11.dgn





SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
354	PLAN ASPH CONC PAVE (0" TO 1 1/2")	SY	23
104	REMOVE CONC (DRIVEWAYS)	SY	384
496	REMOVE STR (PIPE GATE)	LF	47
496	REMOVE STR (SET)	EA	4
496	REMOVE STR (PIPE)	LF	118
529	CONC CURB & GUTTER (TY B)	LF	1007
531	CURB RAMPS (TY 1)	EA	1
531	CURB RAMPS (TY 2)	EA	2

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⍟ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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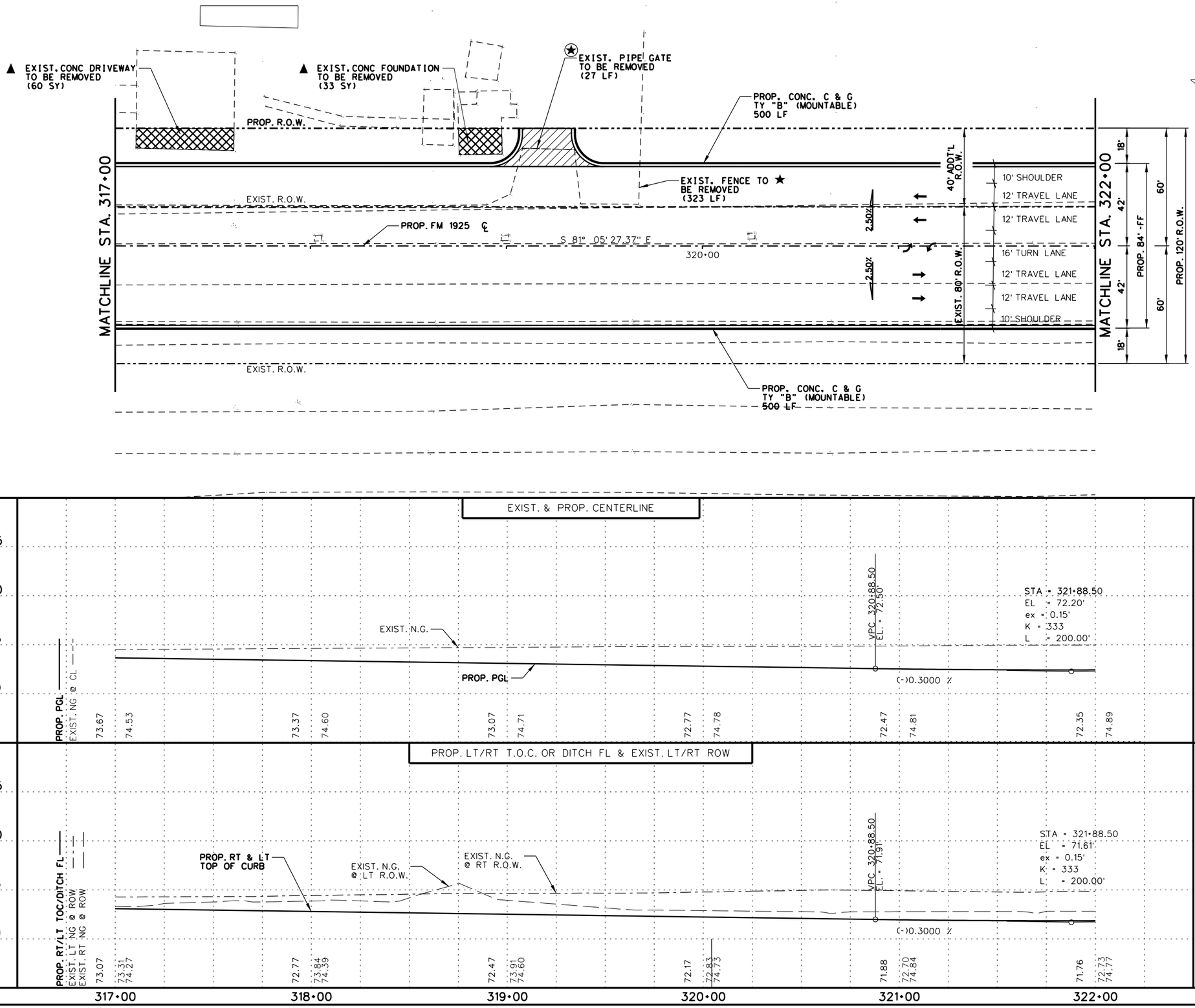
FM 1925
PLAN AND PROFILE
STA. 312+00 TO STA. 317+00

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

SHEET 13 OF 20

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK: RP	6	TEXAS				FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035	095
REVIEW:						
CK:						

11/1/2023
K:\Counties\HID\FM 1925 PHII(907 to Urest)\03 ROADWAY\02 P&P\FM1925 E-2_PP12.dgn



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
104	REMOVE CONC (FOUNDATIONS)	SY	33
104	REMOVE CONC (DRIVEWAYS)	SY	60
496	REMOVE STR (PIPE GATE)	LF	27
529	CONC CURB & GUTTER (TY B)	LF	1000

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- ✕ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⍟ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104
- PROPOSED CONCRETE FOUNDATION REMOVAL

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

STATE OF TEXAS
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FM 1925
PLAN AND PROFILE
STA. 317+00 TO STA. 322+00

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

SHEET 14 OF 20

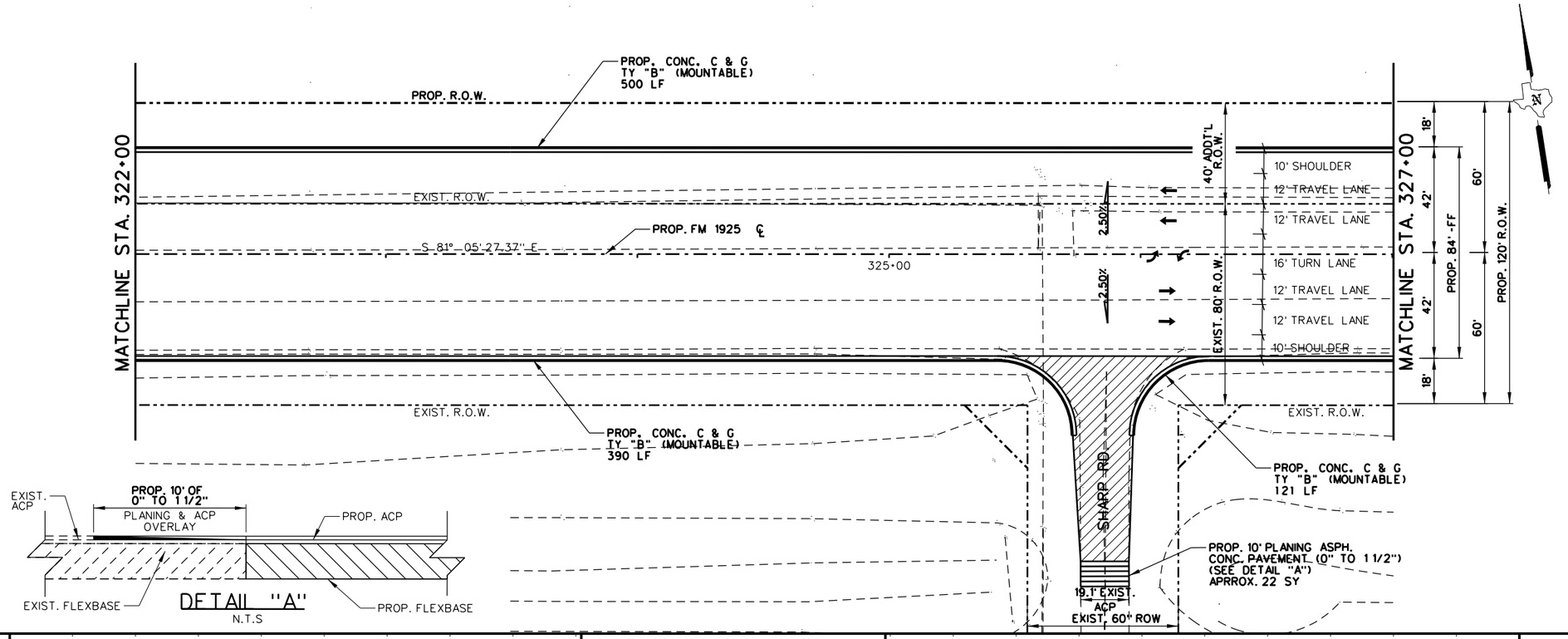
DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		096

11/1/2023
K:\Counties\HID\FM 1925 PHR(907 to Urest)\03 ROADWAY\02 P&P\FM1925 E-2_PP13.dgn

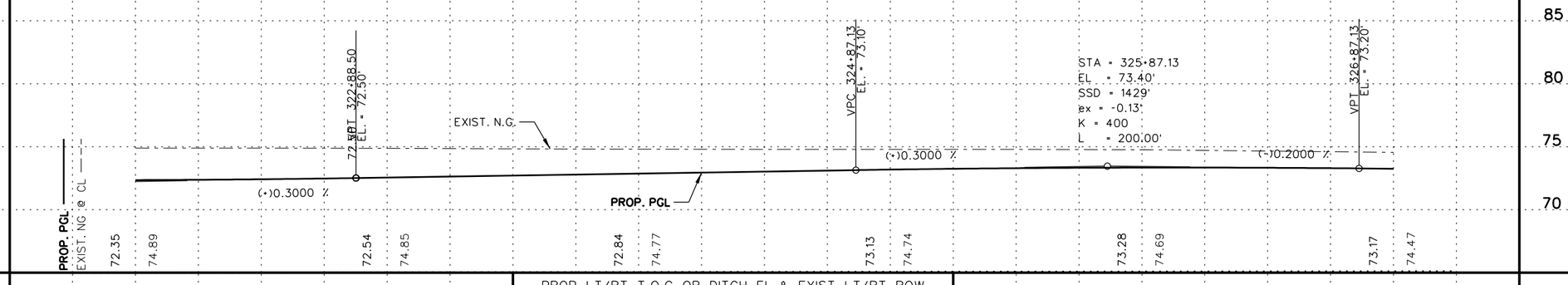
SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
354	PLAN ASPH CONC PAVE (0" TO 1 1/2")	SY	22
529	CONC CURB & GUTTER (TY B)	LF	1011

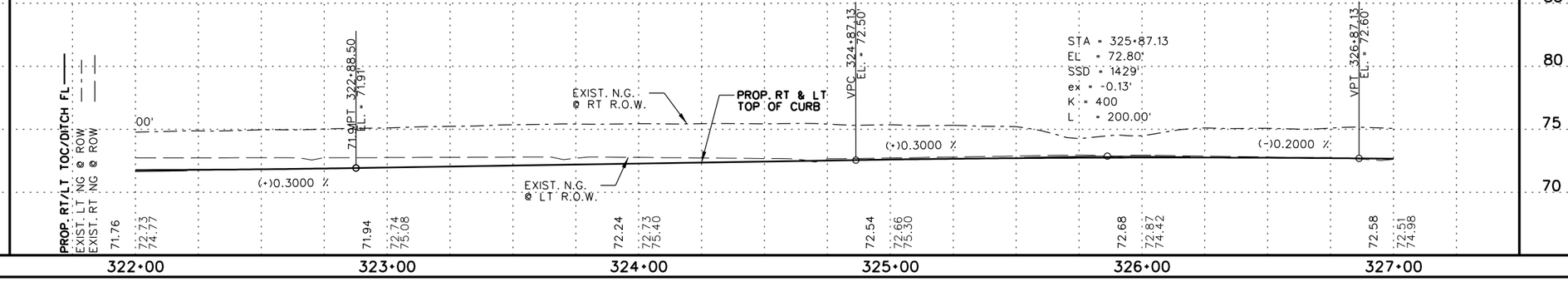


DETAIL "A"
N.T.S

EXIST. & PROP. CENTERLINE



PROP. LT/RT T.O.C. OR DITCH FL & EXIST. LT/RT ROW



322+00 323+00 324+00 325+00 326+00 327+00

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- ✕ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⊛ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

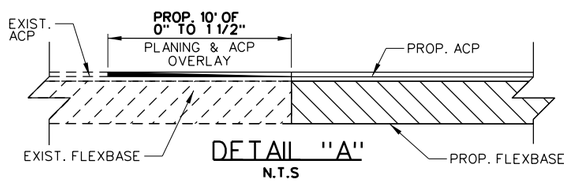
FM 1925
PLAN AND PROFILE
STA. 322+00 TO STA. 327+00

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

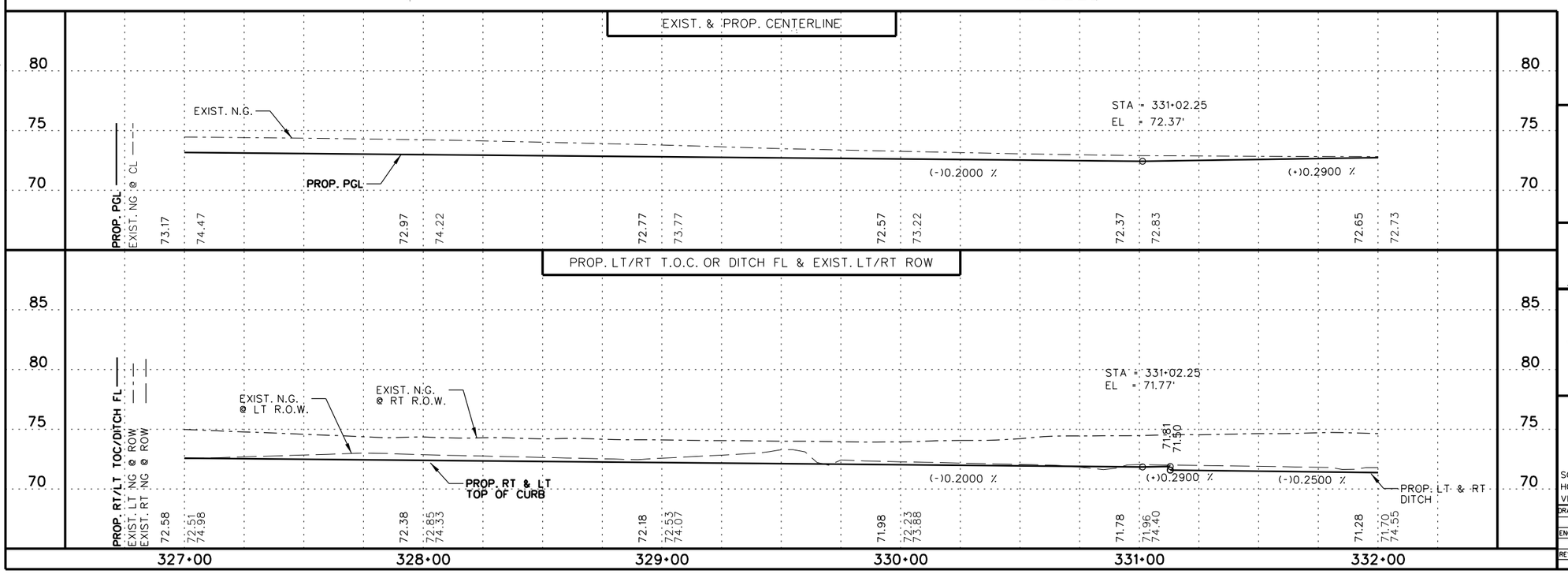
SHEET 15 OF 20

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		097
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHR\907 to Urest\\03 ROADWAY\02 P&P\FM1925 E-2_PP14.dgn



DETAIL "A"
N.T.S



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
354	PLAN ASPH CONC PAVE (0" TO 1 1/2")	SY	23
496	REMOVE STR (SET)	EA	6
496	REMOVE STR (PIPE)	LF	149
529	CONC CURB & GUTTER (TY B)	LF	847
529	CONC CURB & GUTTER (VALLEY GUTTER 48")	LF	149

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- ✖ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⍟ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

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FM 1925
PLAN AND PROFILE
STA. 327+00 TO STA. 332+00

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

SHEET 16 OF 20

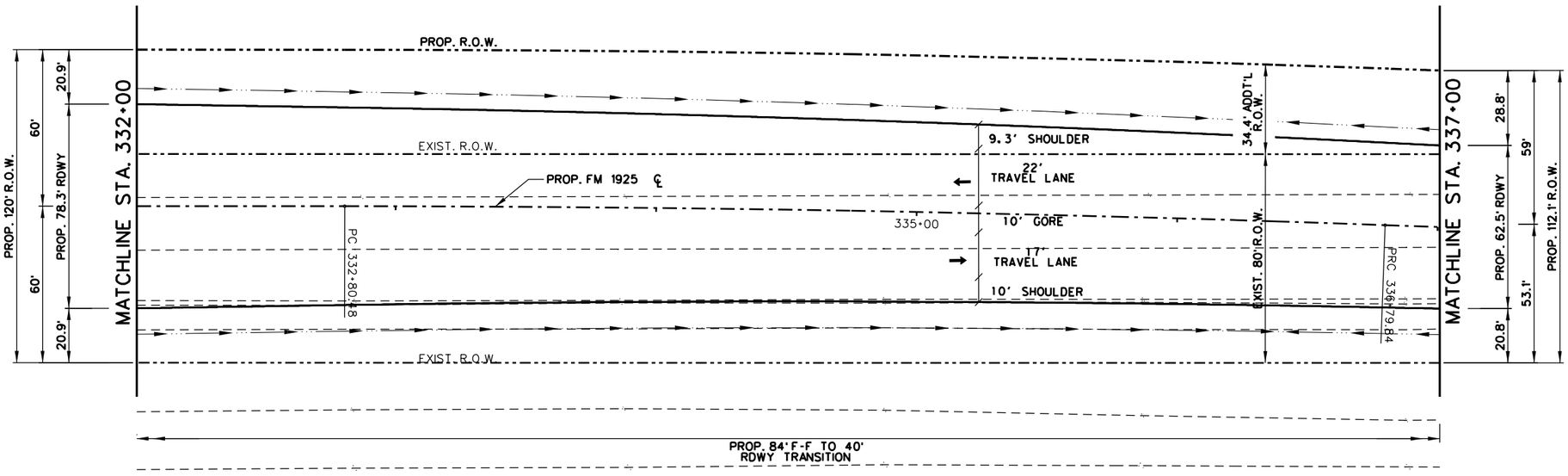
DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

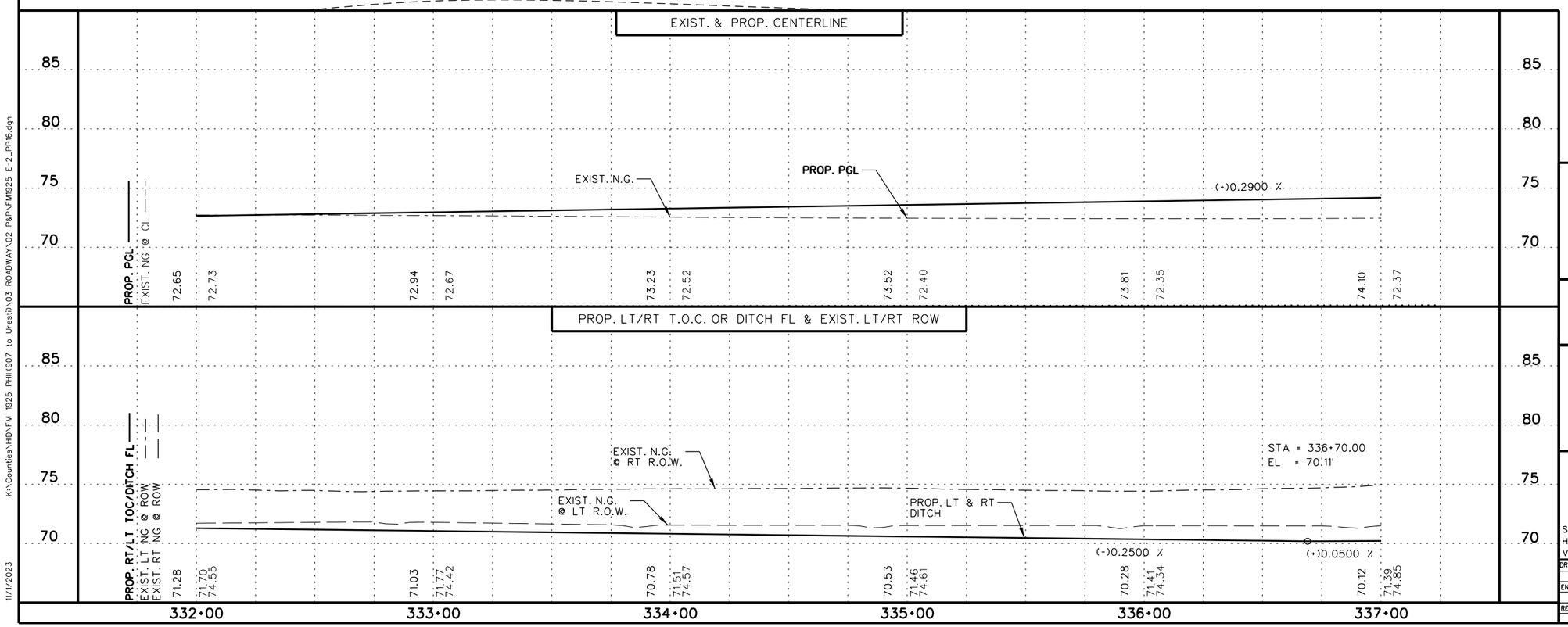
FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		098

11/1/2023
K:\Counties\HID\FM 1925 PHII(907 to Urest)\03 ROADWAY\02 P&P\FM1925 E-2_PP15.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY





LEGEND:

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- ➡ DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

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FM 1925
PLAN AND PROFILE
STA. 332+00 TO STA. 337+00

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

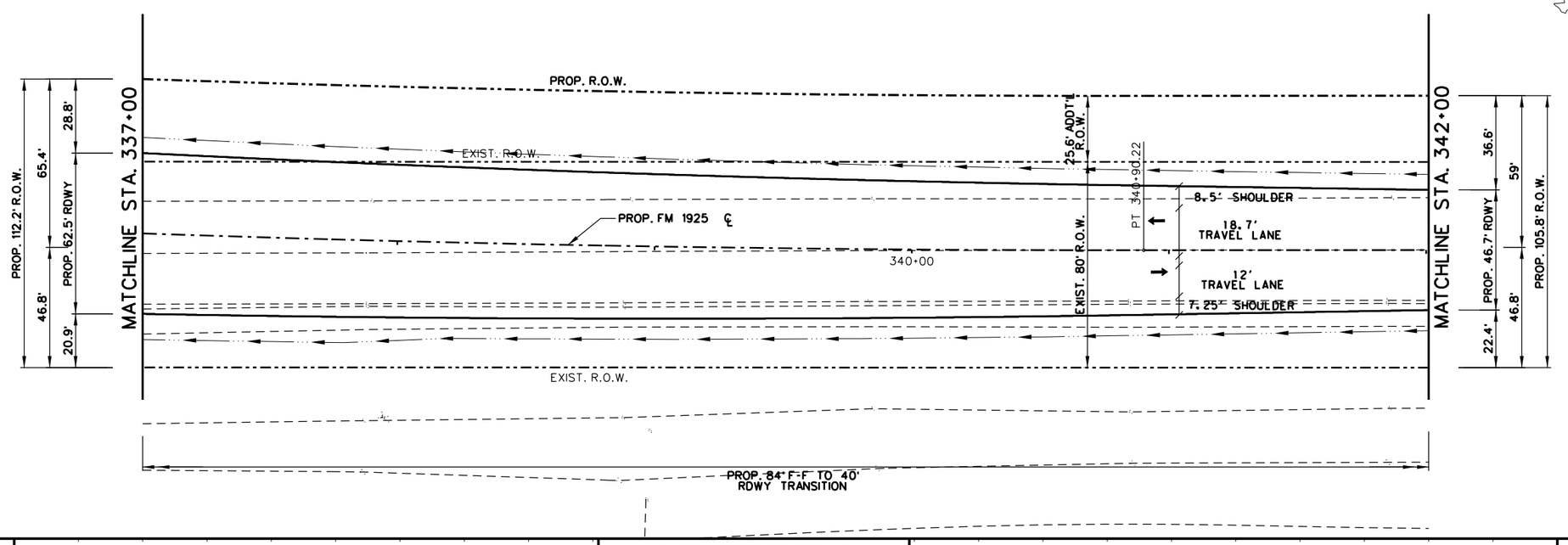
SHEET 17 OF 20

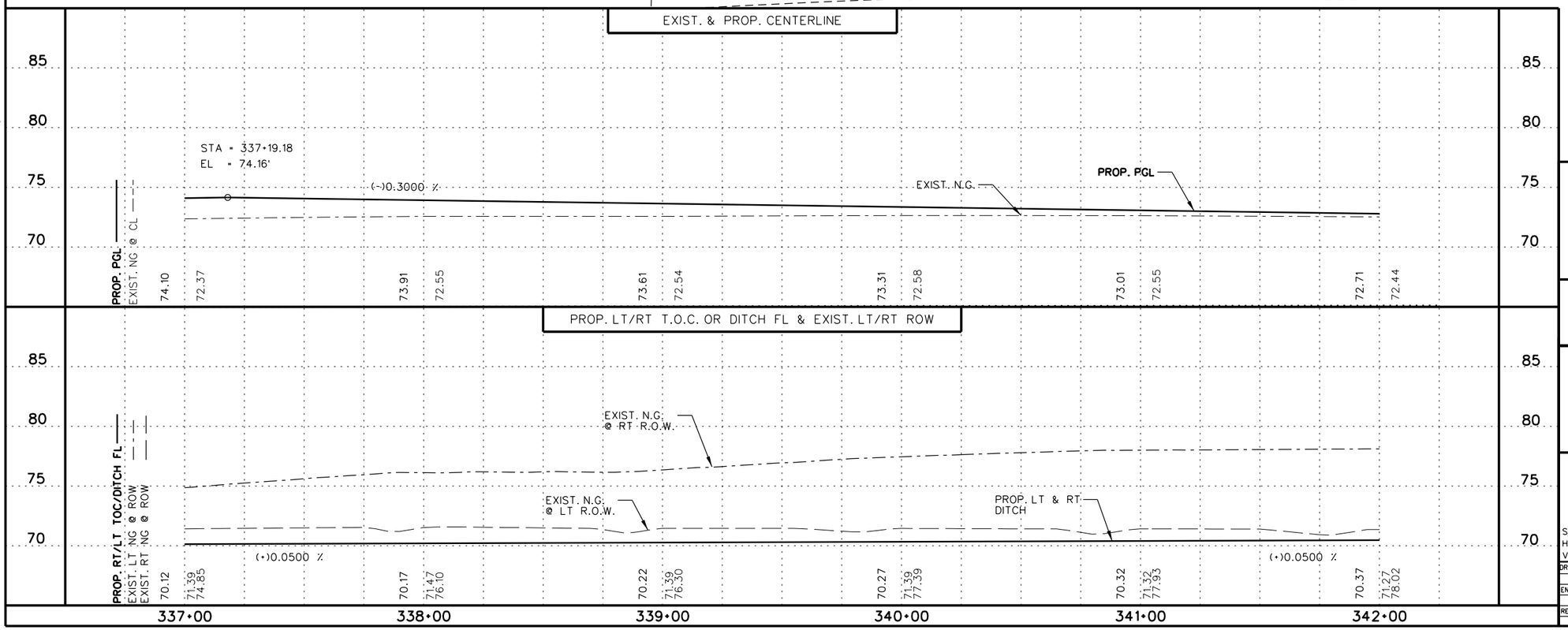
DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		099

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY





LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
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- ➡ DIRECTION OF TRAFFIC
- ▲ TO BE REMOVED UNDER ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

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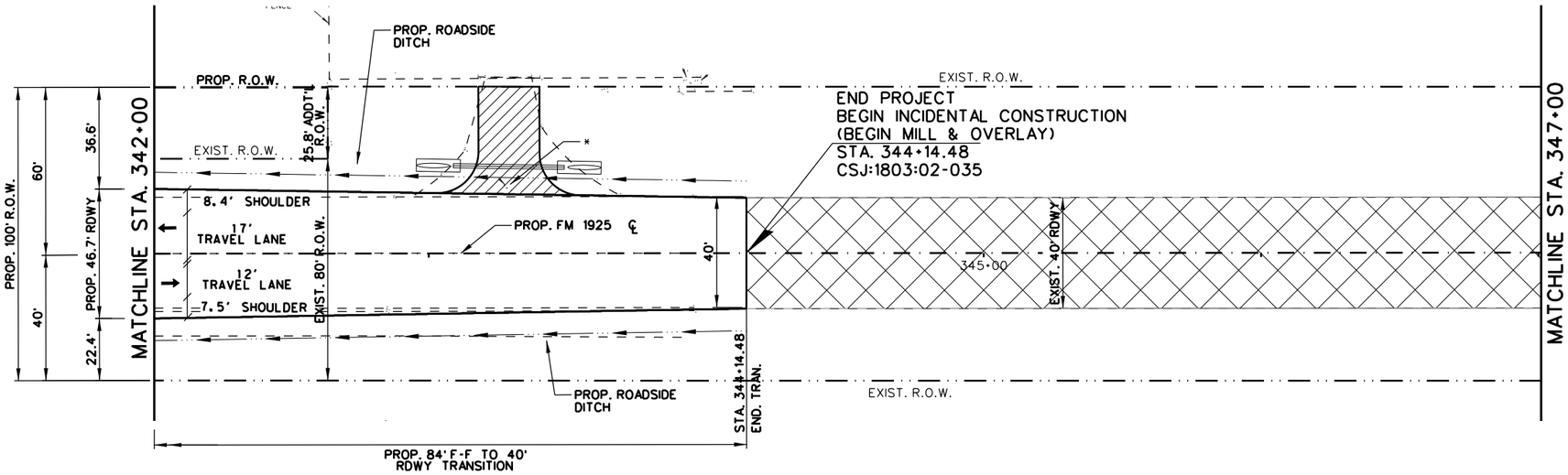
FM 1925
PLAN AND PROFILE
STA. 337+00 TO STA. 342+00

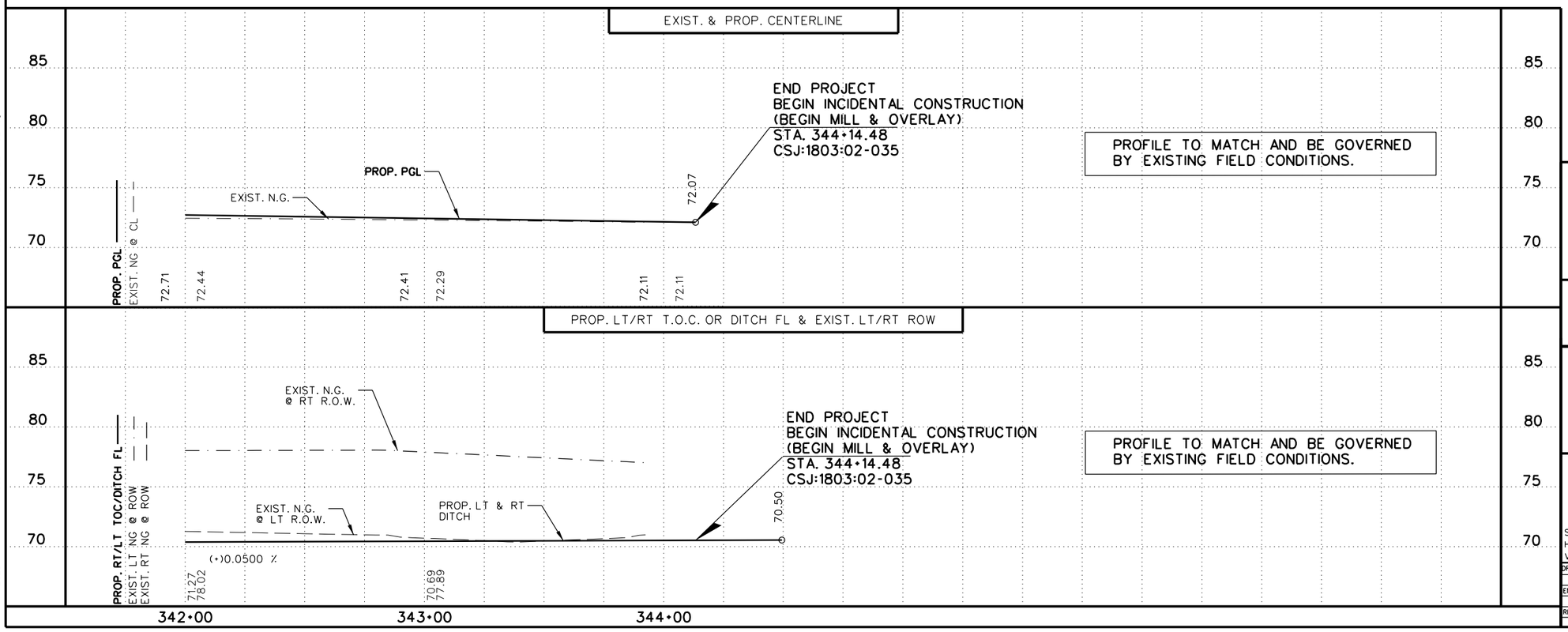
SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 18 OF 20

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK: RP	6	TEXAS				FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035	100
REVIEW:						
CK:						

11/1/2023
K:\Counties\HID\FM 1925 PHII(907 to Uresti)\03 ROADWAY\02 P&P\FM1925 E-2_PP17.dgn





SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
560	MAILBOX INTSALL (SINGLE)	SY	1
3077	SUPERPAVE	SY	1274

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- PROPOSED MILL & OVERLAY (1½")
- ✱ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- ★ TO BE REMOVED UNDER ITEM 100 "PREP. ROW"
- ⊛ TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
- → DIRECTION OF TRAFFIC
- ▲ REMOVING CONCRETE BASED OFF ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

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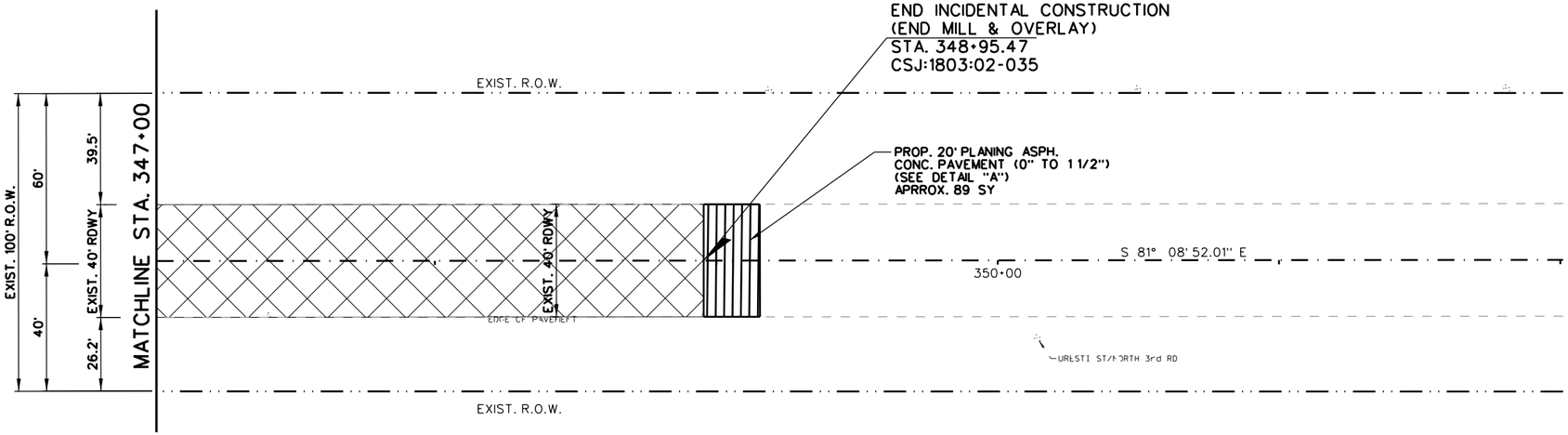
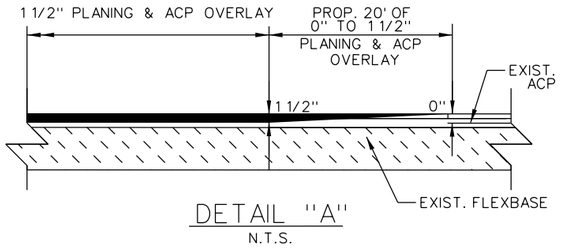
FM 1925
PLAN AND PROFILE
STA. 342+00 TO STA. 347+00

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

SHEET 19 OF 20

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		101
REVIEW:							
CK:							





DETAIL "A"
N.T.S.

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
354	PLANING ACP (0"-1½")	SY	89
3077	SUPERPAVE	SY	865

LEGEND:

- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY & INTERSECTION TABLE FOR QUANTITIES)
- PROPOSED PLANING (0-1½")
- PROPOSED MILL & OVERLAY (1½")
- ✱ REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
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- → DIRECTION OF TRAFFIC
- ▲ REMOVING CONCRETE BASED OFF ITEM 104

NOTE:
SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.

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

EXIST. CENTERLINE

PROFILE TO MATCH AND BE GOVERNED BY EXISTING FIELD CONDITIONS.

EXIST. NG @ CL

EXIST. LT/RT ROW

PROFILE TO MATCH AND BE GOVERNED BY EXISTING FIELD CONDITIONS.

EXIST. LT NG @ ROW
EXIST. RT NG @ ROW

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FM 1925
PLAN AND PROFILE
STA. 347+00 TO STA. 348+95.47

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

SHEET 20 OF 20

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		102
REVIEW:							
CK:							

K:\Counties\HID\FM 1925 PHR(907 to Uresti)\03 ROADWAY\02 P&P\FM1925 E-2_PP18.dgn
11/1/2023

SUMMARY OF PROP. PRIVATE DRIVEWAYS

STATION LIMITS	WIDTH (FT)	LENGTH (FT)	RADIUS (FT)	ITEM 530 6004 DRIVEWAYS (CONC) (SY)	ITEM 530 6005 DRIVEWAYS (ACP) (SY)
FM 1925				EST.	EST.
LEFT SIDE					
266+69.10 LT	20	19.5	15		54
301+78.12 LT	28	19.5	15		71
316+32.21 LT	44	19.5	15	106	
319+20.65 LT	28	19.5	15		71
327+41.88 LT	17	19.5	15		48
328+25.39 LT	17	19.5	15		48
343+28.89 LT	22	39	15		106
BRUSHLINE AT BUSINESS	28	19	20		78
RIGHT SIDE					
GRAND TOTAL				106	476

SUMMARY OF PROP. PUBLIC INTERSECTIONS

STATION LIMITS	WIDTH (FT)	LENGTH (FT)	RADIUS (FT)	ITEM 530 6002 INTERSECTION (ACP) (SY)
FM 1925				EST.
LEFT SIDE				
TERRY RD. LT	31	27.5	30	138
280+23.82 LT	44	15.5	15	87
LEUCADIA RD. LT	31	27.5	30	138
293+02.55 LT	44	17.0	15	94
TOWER RD. LT	31	27.5	30	138
BRUSHLINE RD. LT	24	140	45	470
SHARP RD. LT	24	136	45	459
RIGHT SIDE				
TERRY RD. RT	24	78	30	250
TOWER RD. RT	24	78	30	250
SHARP RD. RT	24	82	30	260
GRAND TOTAL				2284

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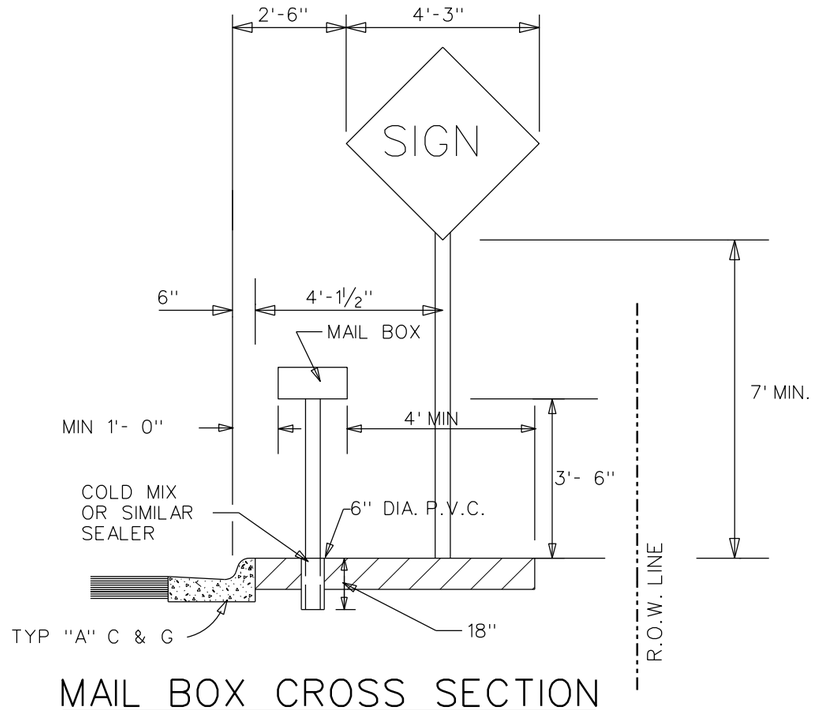
11/01/2023

FM 1925
DRIVEWAY & INTERSECTION TABLE

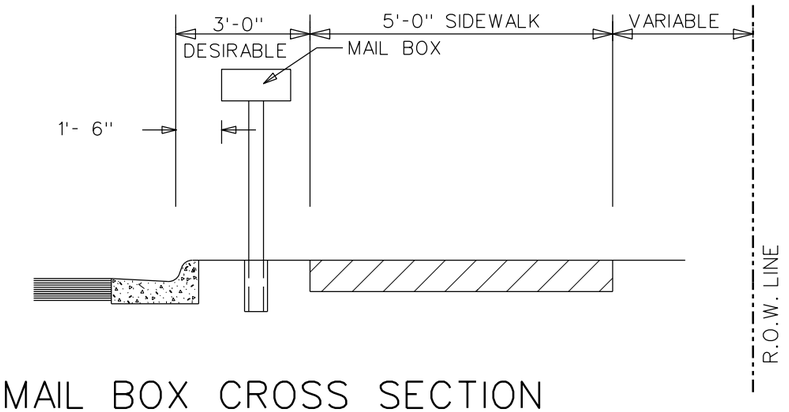
SHEET 1 OF 1

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:		PHR	HIDALGO	1803	02	035	103
REVIEW:							
CK:							



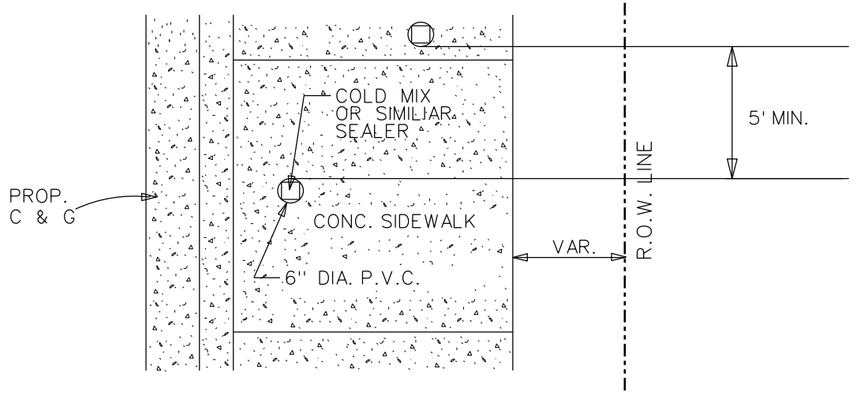
MAIL BOX CROSS SECTION

(MINIMUM BORDER DISTANCE)

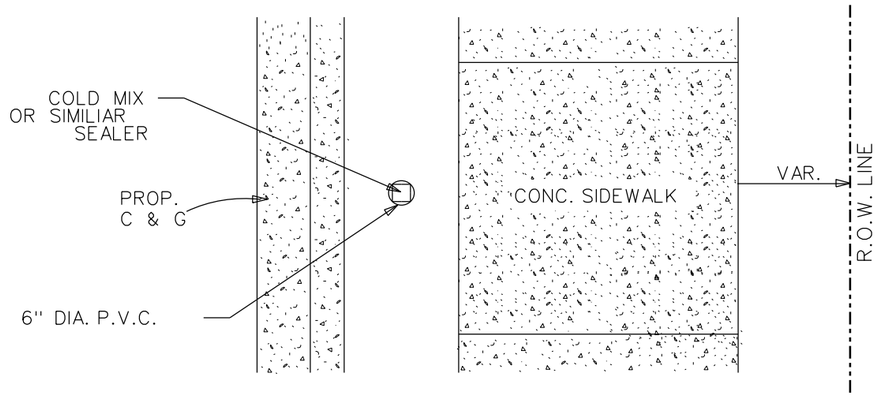


MAIL BOX CROSS SECTION

(DESIRABLE BORDER DISTANCE)



PLAN VIEW



PLAN VIEW

PHARR DISTRICT STANDARDS

TEXAS DEPARTMENT OF TRANSPORTATION

MAILBOX DETAIL

REV. 5/03

MAILBOX.DGN

FED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						104
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	21	HIDALGO	1803	02	035	FM1925

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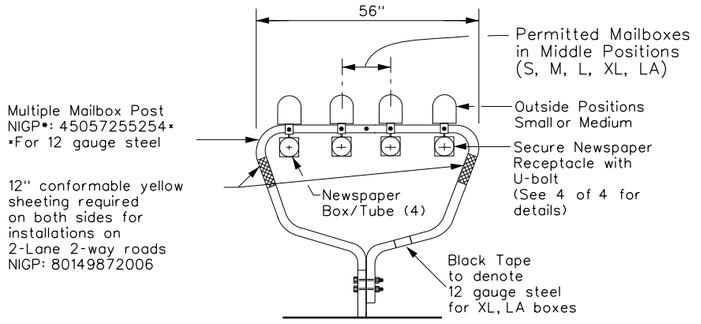
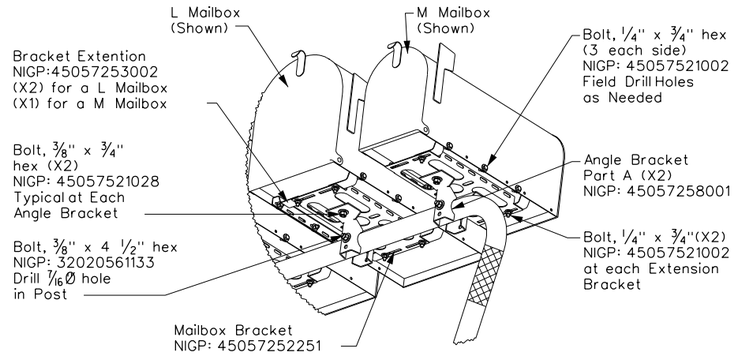
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

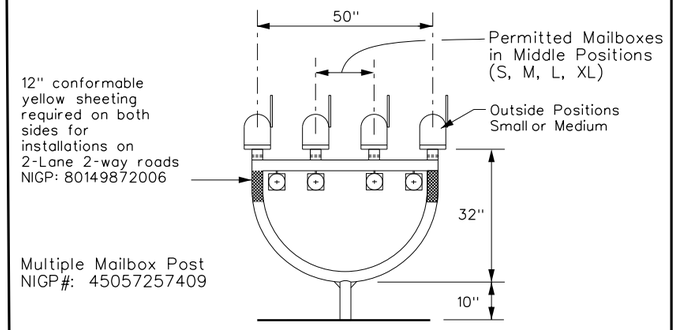
DATE:
FILE:

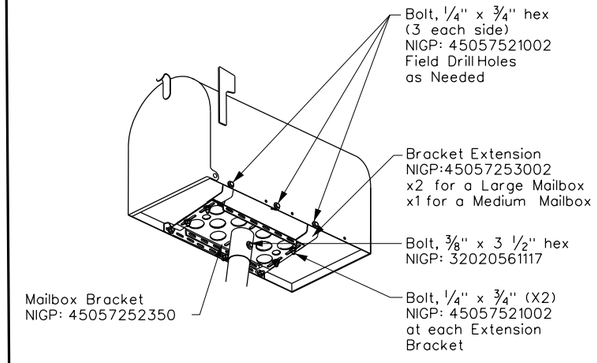
TYPE 1 - MULTIPLE





TYPE 4 - MULTIPLE





MAILBOX SIZES

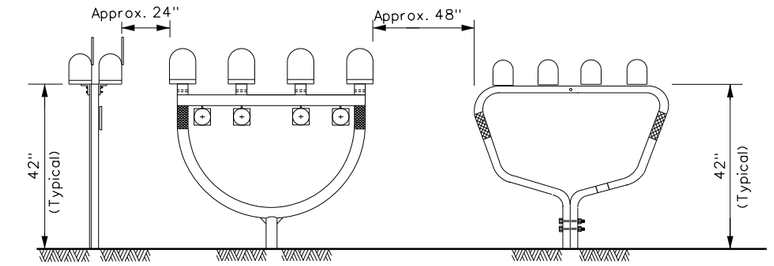
MAILBOX SIZE	TYPICAL DIMENSIONS			MAX ** WEIGHT
	LENGTH	WIDTH	HEIGHT	
SMALL	19 1/2"	6"	7"	6 LBS
MEDIUM	22 1/2" *	8" *	11 1/2" *	8 LBS
LARGE	23 1/2"	11 1/2"	13 1/2"	11 LBS
EXTRA LARGE	18"	14"	12"	13 LBS
LOCKABLE	18"	11 1/2"	15"	23 LBS

* See Note 1.
** Excluding Molded Plastic on 4 X 4 Post

GENERAL NOTES:

1. Dimensions shown (length, width, and height) are typical, not maximums. However, anytime a medium size mailbox is mounted on a single/double mount or on the outside position on a multi mount, the dimensions shown are maximums.
2. Mailboxes shall be made of light weight sheet metal or light weight plastic. Heavy steel, cast iron or decorative mailboxes shall not be used on the state highway system.

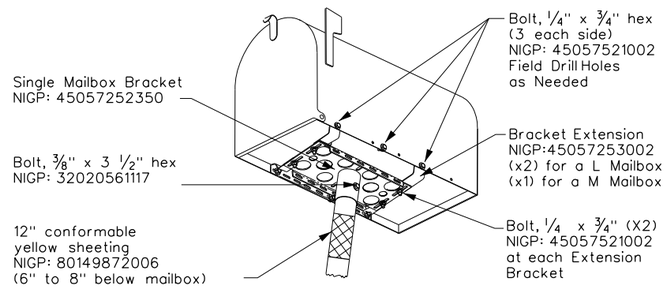
TYPICAL INSTALLATION MEASUREMENTS

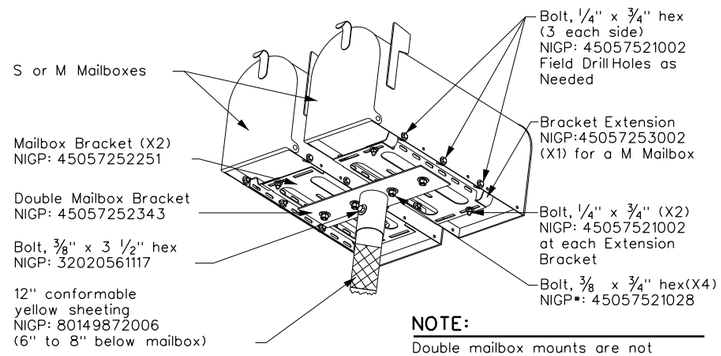


NOTE:

Mailbox installations in sidewalk areas shall be in accordance with the latest TxDOT Design Standard sheets PED-Pedestrian Facilities Curb Ramps.

TYPE 2 and 4 - SINGLE/DOUBLE

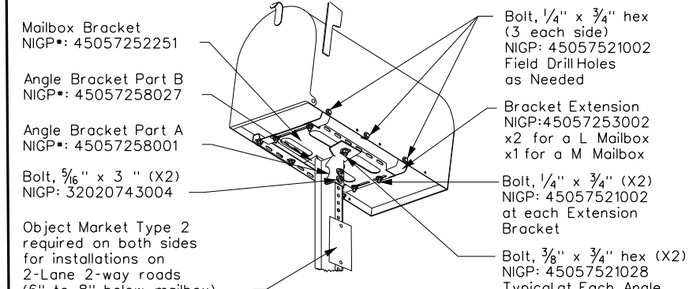


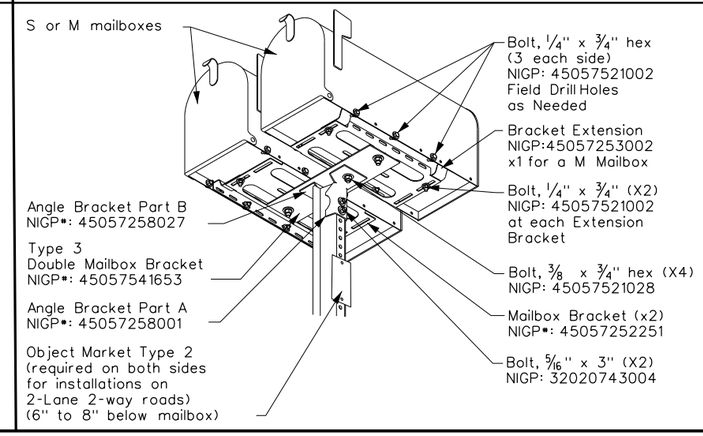


NOTE:

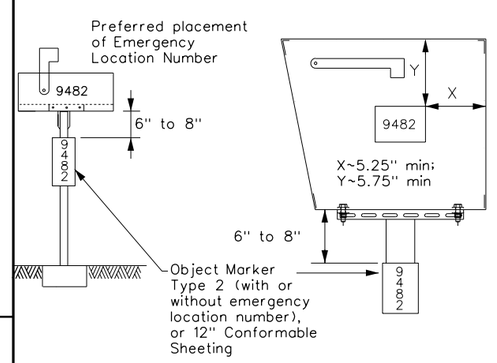
Double mailbox mounts are not allowed with a type 4 multiple mailbox installation

TYPE 3 - SINGLE/DOUBLE





PLACEMENT OF EMERGENCY LOCATION NUMBER

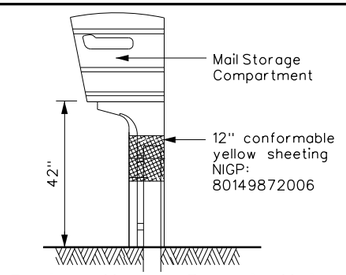


NOTES:

1. Location numbers are provided by homeowner. Minimum size 1" height.
2. Location number is typically placed on the mailbox in a contrasting color.
3. Black numbers may be placed on the Type 2 object marker if the numbers cannot be placed on the mailbox.
4. Alternatively, a green or blue plate with white numbers attached may be mounted below the object marker. Other contrasting color configuration, as approved, may be used.
5. See 3 of 4 for Foundation details.
6. See 4 of 4 for Hardware details.

SHEET 1 OF 4

TYPE 5



Typical Molded Plastic Mailbox

Texas Department of Transportation

Maintenance Division Standard

MAILBOX MOUNTING AND ASSEMBLY

MB(1)-21

FILE: MB-21.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
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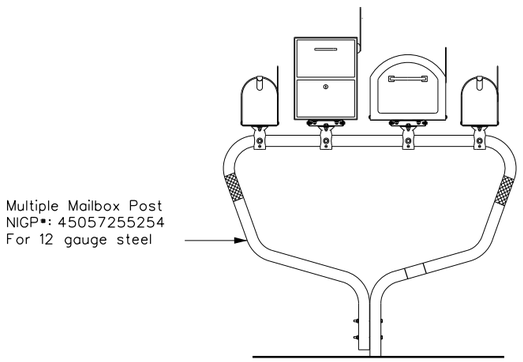
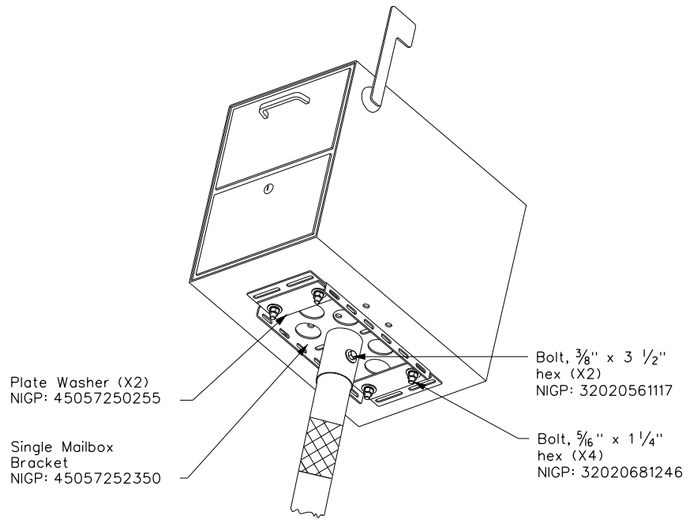
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		105

DATE:
FILE:

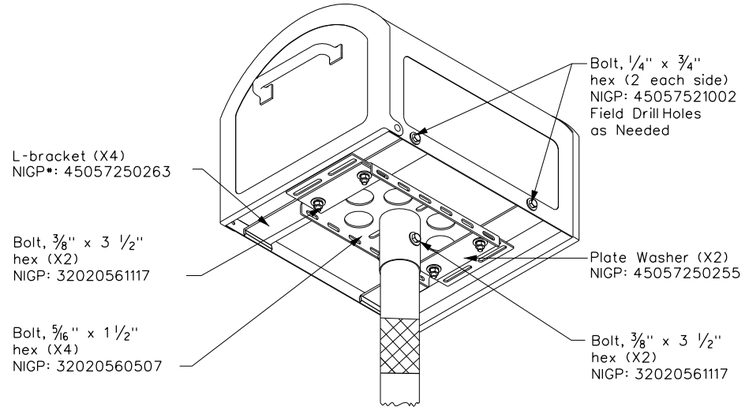
TYPE 1- MULTI LOCKABLE AND XL MAILBOX



TYPE 2/4 - SINGLE LOCKABLE MAILBOX

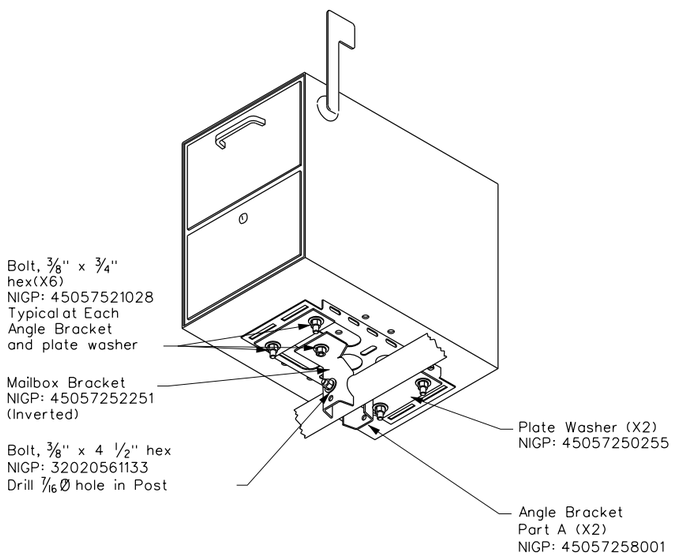


TYPE 2/4 - SINGLE XL MAILBOX

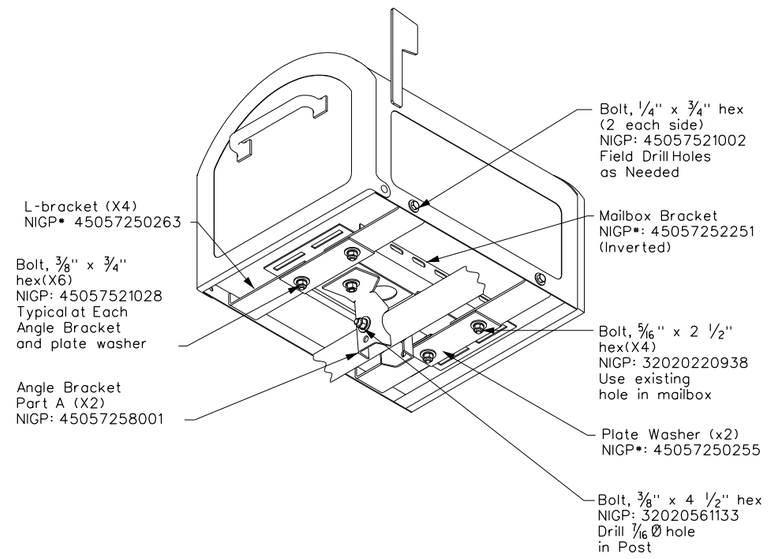


NOTE:
Follow same configuration when mounting an XL mailbox on a Type 4 multi post.

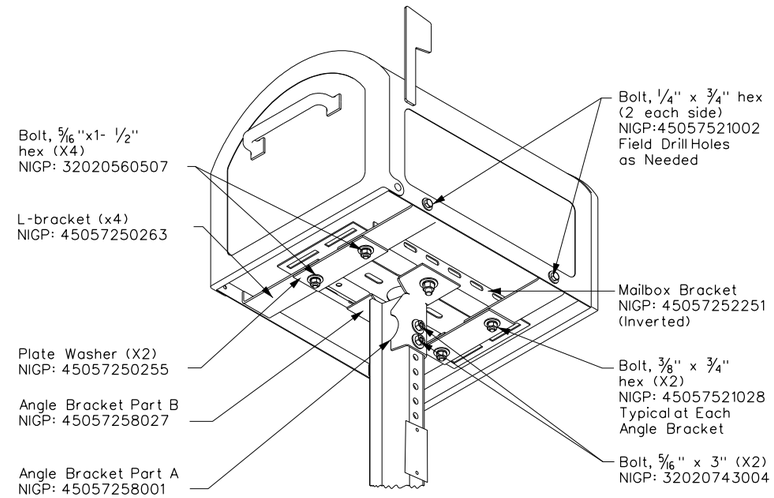
TYPE 1 MULTI – LOCKABLE ARCHITECTURAL (LA)



TYPE 1 MULTI – XL MAILBOX



TYPE 3 - XL MAILBOX MOUNTING



Texas Department of Transportation

Maintenance Division Standard

XL AND LOCKABLE ARCHITECTURAL MAILBOX ASSEMBLY

MB(2)-21

FILE: MB-21.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
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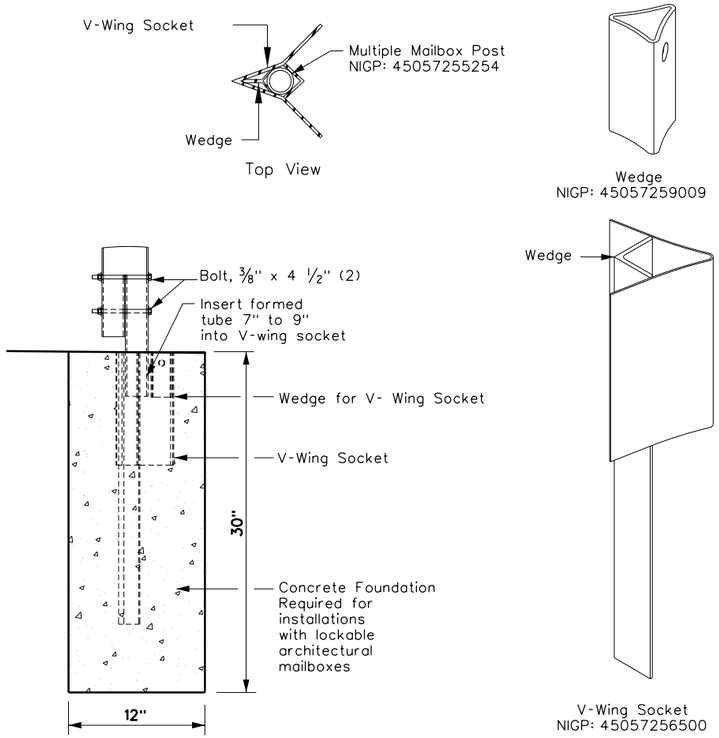
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		106

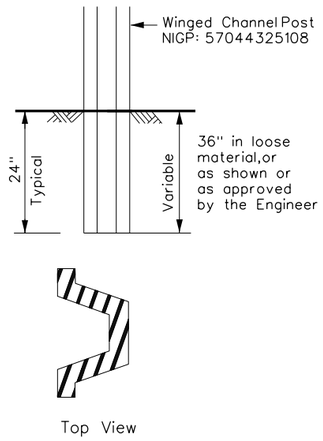
DATE:
FILE:

TYPE 1 - SUPPORT/FOUNDATION

Thin Wall Tube w/ V-LOC Anchorage



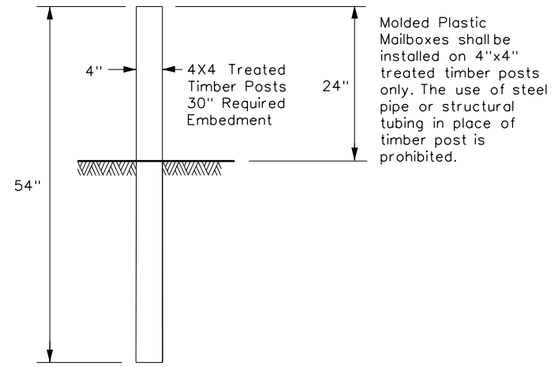
TYPE 3 - SUPPORT/FOUNDATION



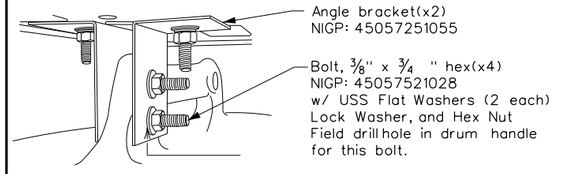
NOTES:

1. Attach Object Marker(OM) facing direction of traffic.
2. OM will also be required on opposite side if installed on a 2-Lane, 2-Way roadway.

TYPE 5 - SUPPORT/FOUNDATION



TYPE 6 - TEMPORARY MAILBOX SUPPORT



Plastic Drum NIGP: 55093383655
Rubber Collar NIGP: 55093387102

NOTES:

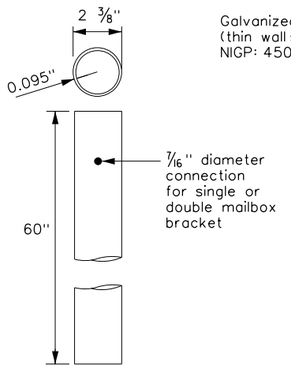
1. Place on approved plastic drum as shown in the Compliant Work Zone Traffic Control Devices (CWZTCD).
2. Existing attachment hardware shall be used unless damaged. Damaged hardware shall be replaced.

GENERAL NOTES:

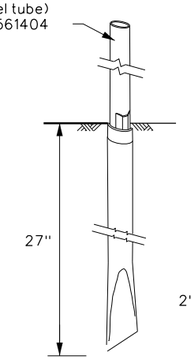
1. Erect post plumb or vertical.
2. When galvanized part is required galvanize in accordance with Item 445.
3. Use a concrete footing as shown or when directed. Concrete footing will be required when soils do not hold the support/foundations in a stable condition, only on Type 1, Type 2, and Type 4

TYPE 2 - SUPPORT/FOUNDATION

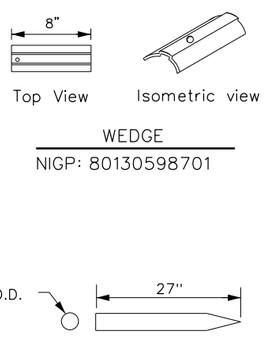
Thin Wall Steel Tube w/Wedge Anchor System



MAILBOX POST



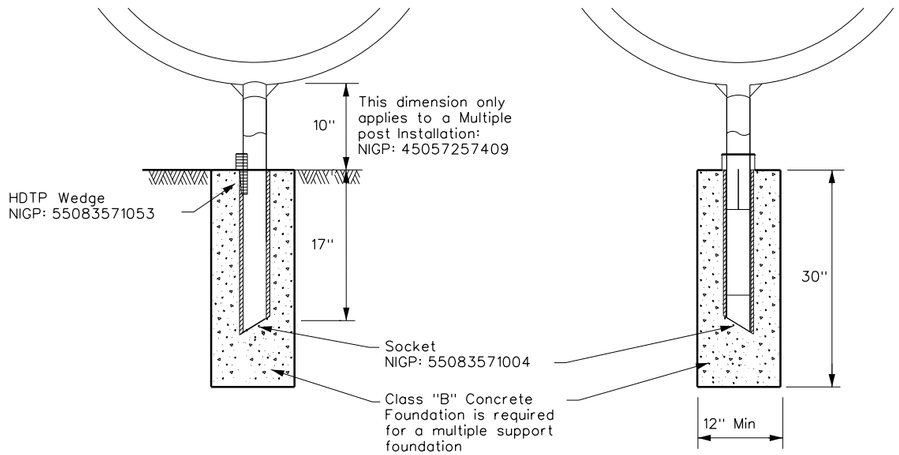
WEDGE ANCHOR
NIGP: 80130238407



WEDGE
NIGP: 80130598701

TYPE 4 - SUPPORT/FOUNDATION

Whitecoated steel post NIGP: 45057561107
Multiple post NIGP: 45057257409
Recycled Rubber post (RR) NIGP: 45057561057



SHEET 3 OF 4

Texas Department of Transportation

Maintenance Division Standard

MAILBOX SUPPORT AND FOUNDATION

MB(3)-21

FILE: MB-21.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
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	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		107

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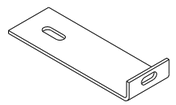
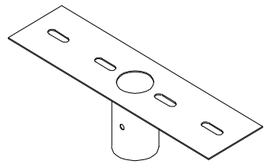
DATE:
FILE:

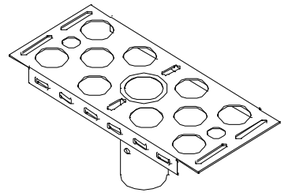
TYPE	TYPE 1	TYPE 2	TYPE 3	TYPE 4			TYPE 5	TYPE 6
Configuration	Multiple	Single or Double	Single or Double	Single	Double	Multiple	Single	Single
Mailbox Size NIGP #	Outside Position: S or M Inside Position: S, M, L, XL, or LA	Single: S, M, L, XL, or LA Double: SS, SM, MM	Single: S, M, L, or XL Double: SS, SM, MM	S, M, L, XL, or LA	SS, SM, or MM	Outside Position: S or M Inside Position: S, M, L, or XL	Molded Plastic	S, or M
Mailbox Post NIGP #	45057255254 (Galvanized Multiple)	45057561404 (Thin Walled Gavanize)	57044325108 (Wing Channel Post)	45057561107 (Thin walled white powder coated) 45057561057 (Recycled Rubber Post: S or M only)	45057561107 (Thin Walled White Powder Coated)	45057257409 (White Powder Coated Multiple)	4x4 Timber	Construction Barrel
Post and Mailbox Hardware NIGP #	45057259009 (Wedge) 45057256500 (V-Wing Socket) 45057253002 (Bracket Extension) 45057252251 (Mailbox Bracket) 45057258001 (Part A Angle Bracket x2) 45057250255 (Plate Washer for XL/LA x2) 45057250263 (L-Bracket for XL x4)	80130598701 (Wedge) 80130238407 (Wedge Anchor) 45057253002 (Bracket Extension) 45057252343 (Double MB Bracket) 45057252350 (S. Mailbox Bracket) 45057252251 (Mailbox Bracket) 45057250255 (Plate Washer for XL/LA x2) 45057250263 (L-Bracket forXL x4)	45057541653 (Type 3 Double Mailbox Bracket) 45057252251 (Mailbox Bracket) 45057253002 (Bracket Extension) 45057258001 (Part A Angle Bracket) 45057258027 (Part B Angle Bracket) 45057250255 (Plate Washer for XL x2) 45057250263 (L-Bracket for XL x4)	55083571053 (Wedge) 55083571004 (Socket) 45057252350 (Single Mailbox Bracket) 45057253002 (Bracket Extension) 45057250255 (Plate Washer for XL/LA x2) 45057250263 (L-Bracket for XL x4)	55083571053 (Wedge) 55083571004 (Socket) 45057253002 (Bracket Extension) 45057252343 (Double Mount Bracket) 45057252251 (Mailbox Bracket x2)	55083571053 (Wedge) 55083571004 (Socket) 45057253002 (Bracket Extension) 45057252350 (Single Mount Bracket) 45057250255 (Plate Washer for XL x2) 45057250263 (L-Bracket for XL x4)	None	45057251055 Angle Bracket (x2)
Foundation Used	Class B Concrete (Required for LA Mailboxes)	Class B Concrete (Required for LA Mailboxes)	None	Class B Concrete (not used with recycled rubber post, required for LA Mailboxes)	Class B Concrete (not required)	Class B Concrete	None	None



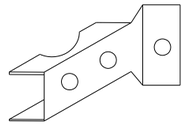
NIGP: 45057250263
L-Bracket x4 for
XL sized mailboxes



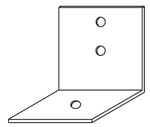
NIGP: 45057252343
Double Mailbox Bracket
For Type 2 and Type 4
double mount



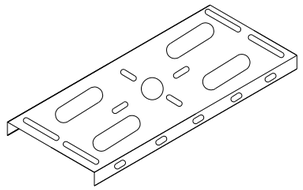
NIGP: 45057252350
Single Mailbox Bracket
For Type 2 single and for
Type 4 single and multi mount



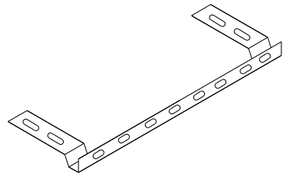
NIGP: 45057258001
Part "A" Angle Bracket
For Type 1 multi (2 per mailbox)
and Type 3 single and double



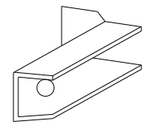
NIGP: 45057251055
Type 6 Angle Bracket
(2 per mailbox)



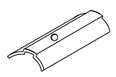
NIGP: 45057252251
Mailbox Bracket
For Type 1 multi and
any double mount (use 2)



NIGP: 45057253002
Bracket Extension
Use 1 for a medium Mailbox
Use 2 for a Large Mailbox



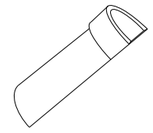
NIGP: 45057258027
Part "B" Angle Bracket
For Type 3 single
and double



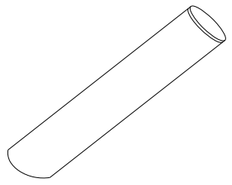
NIGP: 80130598701
Wedge for Type 2

NIGP: 45057250255
Plate Washer for Architecural
and XL Mailboxes

NIGP: 45057541653
Type 3 double mailbox bracket

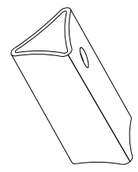


NIGP: 55083571053
Type 4 Mailbox Wedge

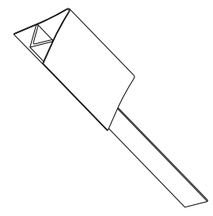


NIGP: 55083571004
Type 4 Mailbox Socket

NIGP: 80130238407
Type 2 Wedge Anchor



NIGP: 45057259009
Wedge for Type 1 V-wing Socket



NIGP: 45057256500
V-wing Socket for
Type 1 Foundation

NIGP #	OBJECT MARKERS AND CONFORMABLE SHEETING
55008311759	Type 2 OM 4"x4" (3 Needed) for Type 3 Wing Channel Post
55008312906	Type 2 OM 6"x12" (1 needed) for Type 3 Wing Channel Post
80149872006	12" Conformable Reflective Yellow Sheeting for Flexible Posts

NOTES:

1. Type 2 object marker in accordance with Traffic Engineering Standard Delineators & Object Markers.
2. A light weight receptacle for newspaper delivery can be attached to mailbox posts if the receptacle does not touch the mailbox, present a hazard to traffic or delivery of the mail, extend beyond the front of the mailbox, or display advertising, except the publication title.

BID CODES FOR CONTRACTS

MB-(X) ASSM TY (XXX) (X)

Type of Mailbox
- S = Single
- D = Double
- M = Multiple
- MP = Molded Plastic

Type of Post
- WC = Winged Channel Post
- RR = Recycled Rubber
- TWW = Thin Walled White Tubing
- TWG = Thin Walled Galvanized Tubing
- TIM = Timber

Type of Foundation
- Ty 1 = V-Loc
- Ty 2 = Wedge Anchor Steel System
- Ty 3 = Winged Channel post
- Ty 4 = Wedge Anchor Plastic System
- Ty 5 = 4 X 4 Post

Texas Department of Transportation — Maintenance Division Standard

NIGP PARTS LIST AND COMPATIBILITY

MB(4)-21

FILE: MB-21.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
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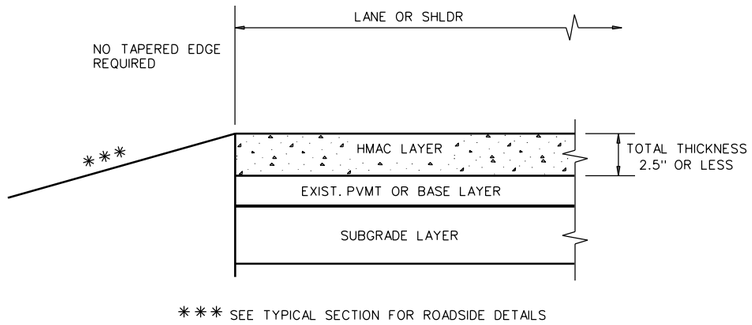
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		108

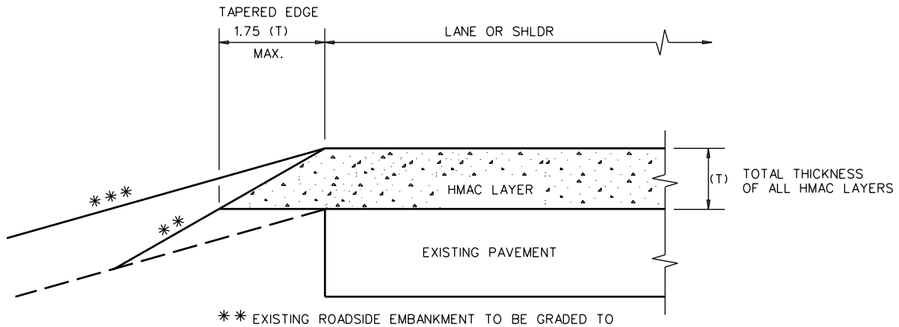
DATE:
FILE:



*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

CONDITION - 1

THIN HMAC SURFACES OR HMAC OVERLAY WITH THICKNESS OF 2.5" OR LESS

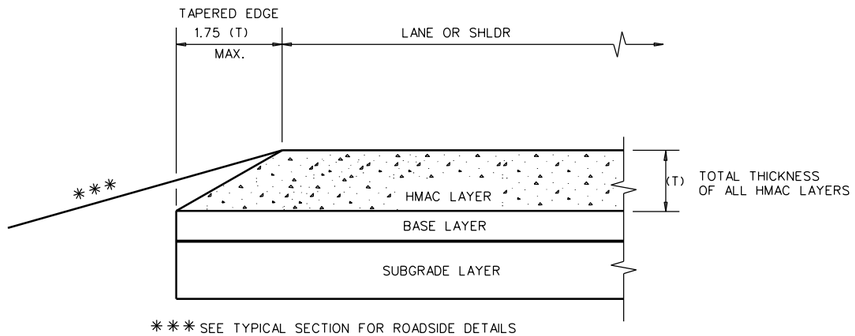


** EXISTING ROADSIDE EMBANKMENT TO BE GRADED TO PRODUCE A SMOOTH LEVEL SURFACE FOR PLACEMENT OF TAPERED EDGE. THIS WORK IS SUBSIDIARY TO THE VARIOUS BID ITEMS.

*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

CONDITION - 2

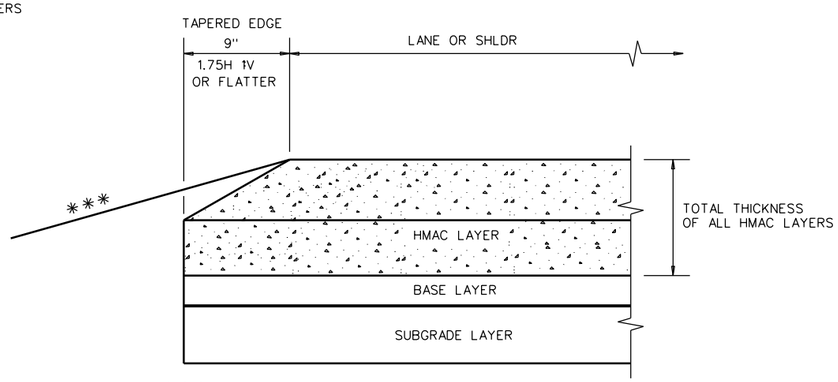
OVERLAY OF EXISTING PAVEMENT HMAC THICKNESS 2.5" TO 5"



*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

CONDITION - 3

NEW OR RECONSTRUCTED PAVEMENT HMAC THICKNESS 2.5" TO 5"



*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

CONDITION - 4

NEW OR RECONSTRUCTED PAVEMENT HMAC THICKNESS 5" OR GREATER

(NOT TO SCALE)

GENERAL NOTES

1. UNLESS OTHERWISE SHOWN IN THE PLANS, A VERTICAL EDGE IS PERMISSIBLE FOR HMAC PLACED GREATER THAN 5" BELOW THE EDGE OF PAVEMENT AND FOR THICKNESS OF HMAC LESS THAN 2.5".
2. FOR FURTHER INFORMATION REGARDING THE ROADSIDE AND PAVEMENT DETAILS, SEE TYPICAL SECTIONS.
3. PAYMENT FOR TAPERED EDGE WILL BE IN ACCORDANCE WITH APPLICABLE ITEMS IN THE CONTRACT.
4. THE SLOPE OF THE TAPERED EDGE SHALL BE 1.75H 1V : OR FLATTER.
5. THE TAPERED EDGE SHALL BE PRODUCED BY USE OF A SCREED ATTACHMENT CAPABLE OF PRODUCING A SMOOTH COMPACTED SURFACE. ADDITIONAL COMPACTING EFFORT BEHIND THE SCREED IS NOT REQUIRED.

Texas Department of Transportation

Design Division Standard

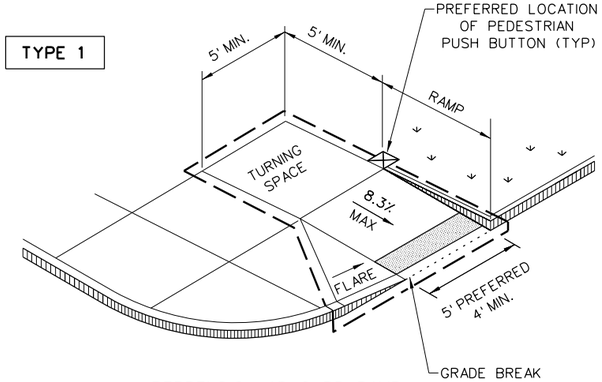
TAPERED EDGE DETAILS HMAC PAVEMENT

TE(HMAC)-11

FILE: tehmac11.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
© TxDOT January 2011	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		109

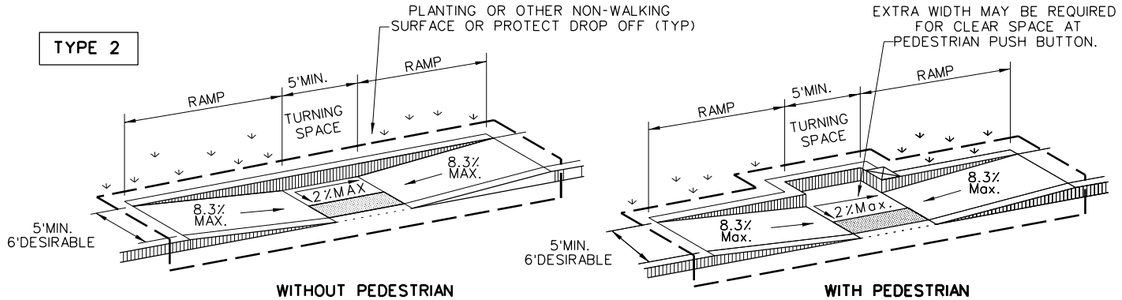
DATE:
FILE:

TYPE 1



PERPENDICULAR CURB RAMP

TYPE 2

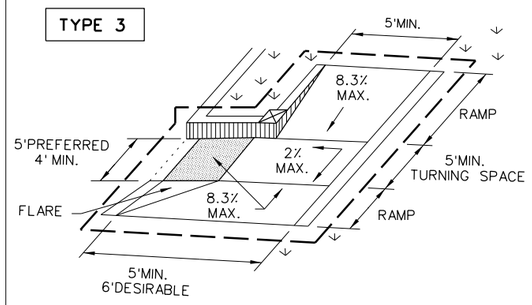


WITHOUT PEDESTRIAN PUSH BUTTON

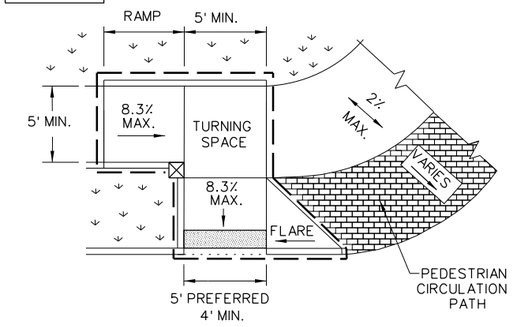
WITH PEDESTRIAN PUSH BUTTON

PARALLEL CURB RAMP

TYPE 3

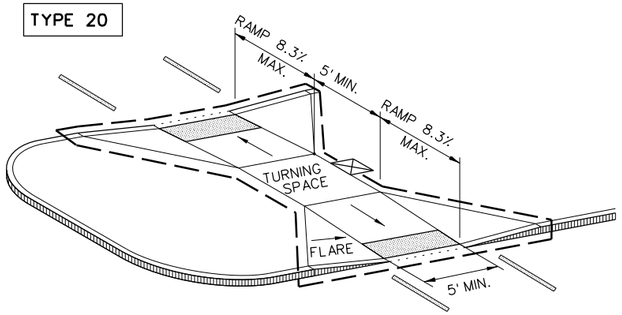


TYPE 6



COMBINATION CURB RAMPS

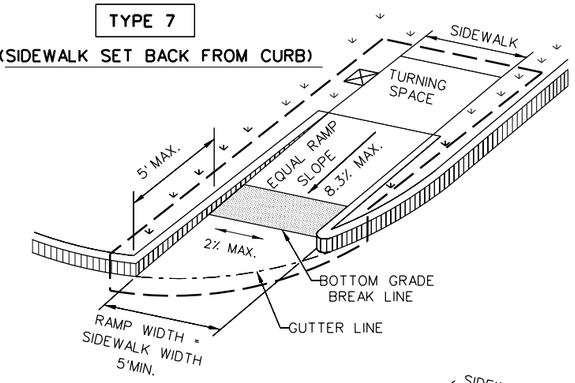
TYPE 20



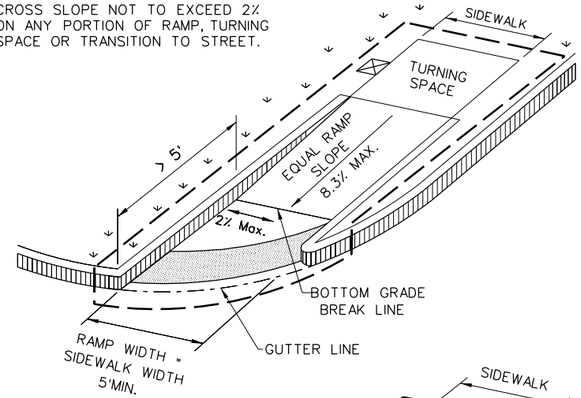
CURB RAMPS AT MEDIAN ISLANDS

TYPE 7

(SIDEWALK SET BACK FROM CURB)

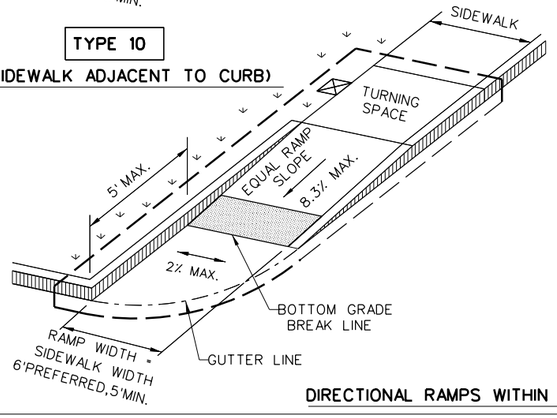


CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.

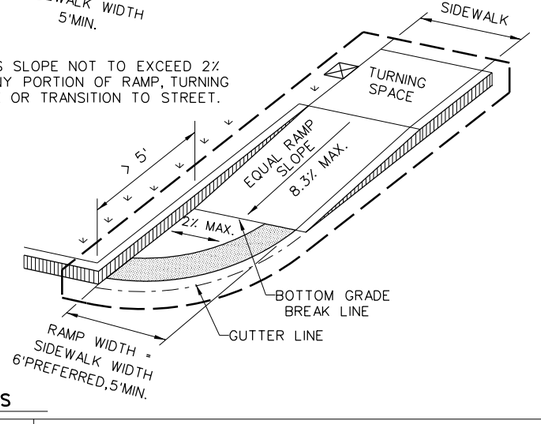


TYPE 10

(SIDEWALK ADJACENT TO CURB)

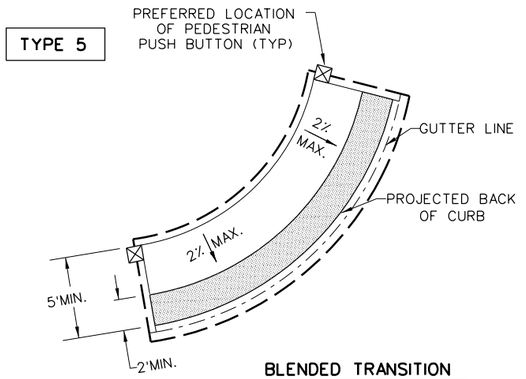


CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.



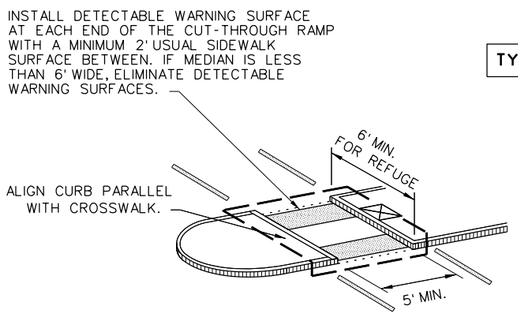
DIRECTIONAL RAMPS WITHIN RADIUS

TYPE 5



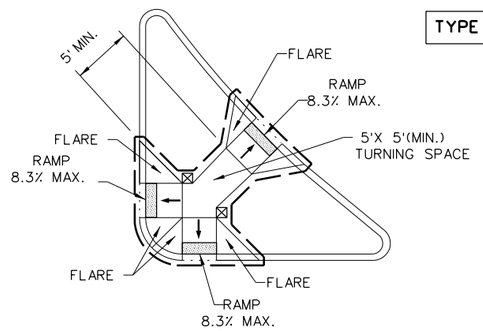
BLENDED TRANSITION
(FLUSH LANDING)

TYPE 21

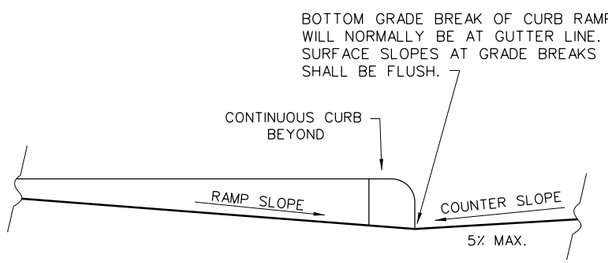


NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 22



COMBINATION ISLAND RAMPS



TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY

NOTES / LEGEND:

SEE GENERAL NOTES ON SHEET 2 OF 4 FOR MORE INFORMATION.

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

DETECTABLE WARNING SURFACE

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.

GUTTER LINE

GRADE BREAK .....

RAMP LIMITS OF PAYMENT

SHEET 1 OF 4

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		110

DATE:
FILE:

GENERAL NOTES

CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.

2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.

3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.

4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.

5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.

6. Clear space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.

7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.

8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).

9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.

10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.

11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.

12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.

13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".

14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.

15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.

16. Provide a smooth transition where the curb ramps connect to the street.

17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.

18. Existing features that comply with applicalble standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.

20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.

21. Detectable warning surfaces must be firm, stable and slip resistant.

22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.

23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.

24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

DETECTABLE WARNING PAVERS (IF USED)

25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.

26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

SIDEWALKS

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.

28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.

29. Street grades and cross slopes shall be as shown elsewhere in the plans.

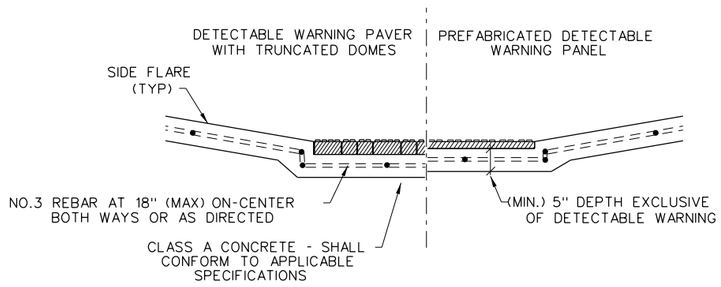
30. Changes in level greater than 1/4 inch are not permitted.

31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.

32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.

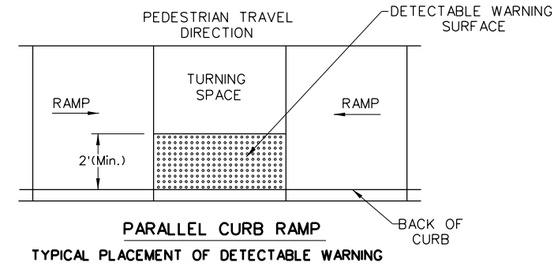
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".

34. Sidewalk details are shown elsewhere in the plans.

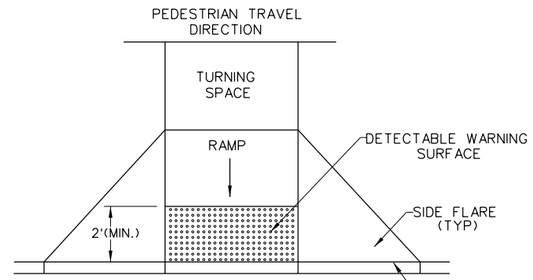


SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS

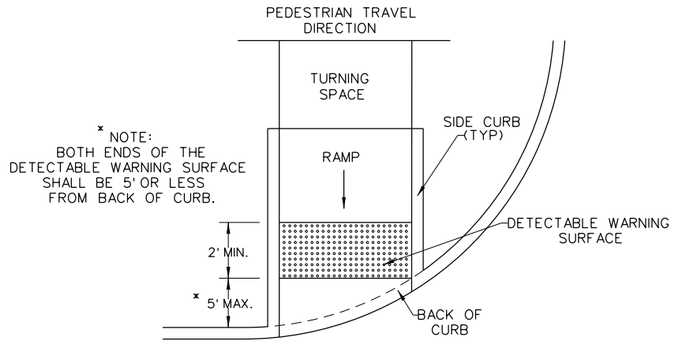
DETECTABLE WARNING SURFACE DETAILS



PARALLEL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



DIRECTIONAL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

SHEET 2 OF 4

Texas Department of Transportation

Design Division Standard

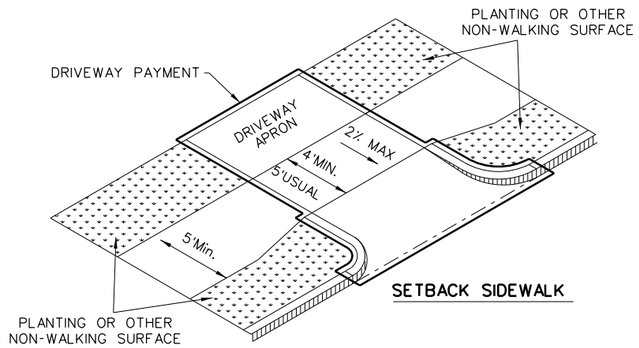
PEDESTRIAN FACILITIES
CURB RAMPS

PED-18

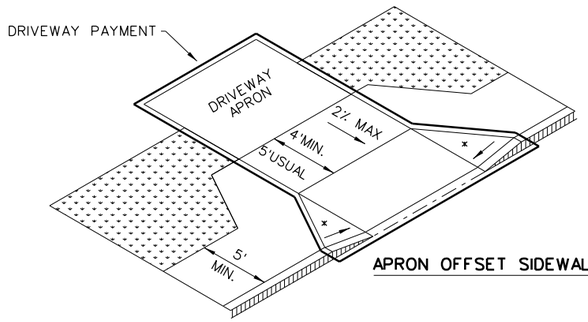
FILE: ped18	DN: TxDOT		DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
REVISIONS	1803	02	035		FM1925
REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY			SHEET NO.
	PHR	HIDALGO			111

DATE:
FILE:

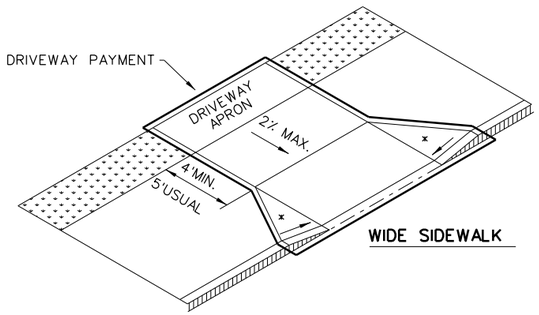
SIDEWALK TREATMENT AT DRIVEWAYS



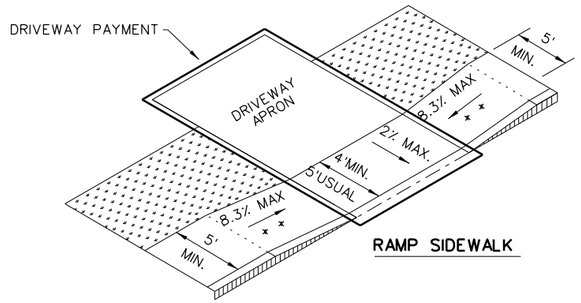
SETBACK SIDEWALK



APRON OFFSET SIDEWALK



WIDE SIDEWALK

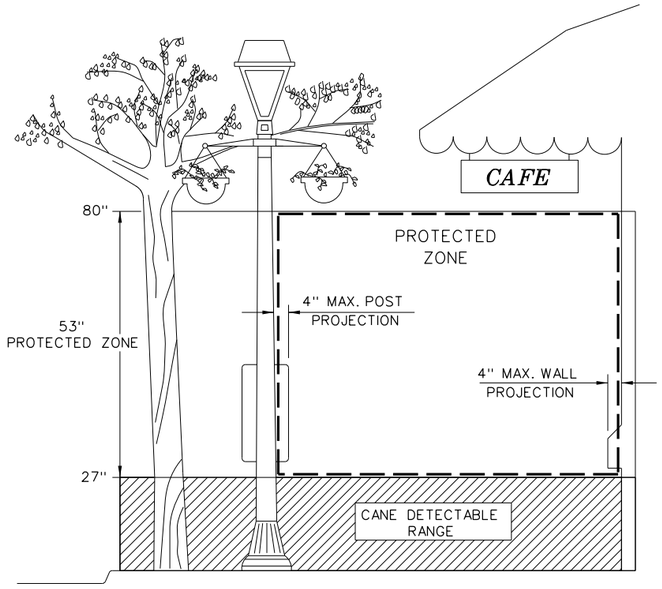


RAMP SIDEWALK

NOTES:

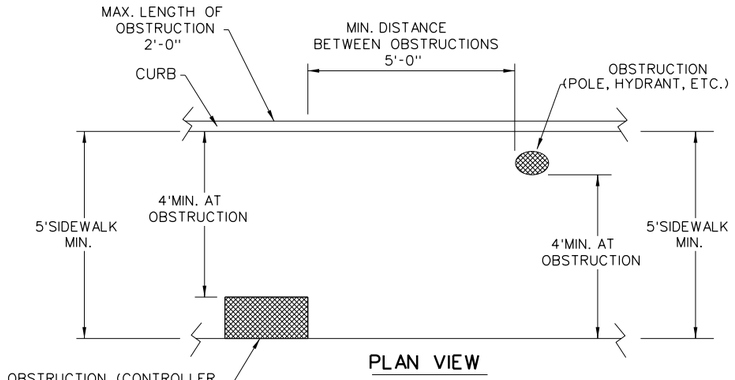
* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.

* * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.



PROTECTED ZONE

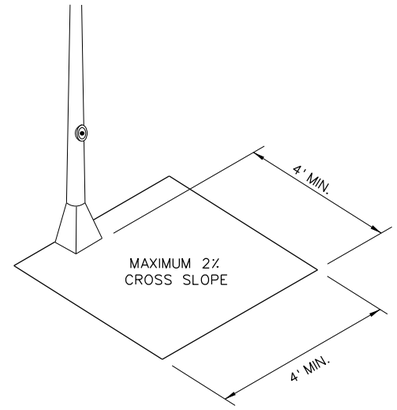
NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



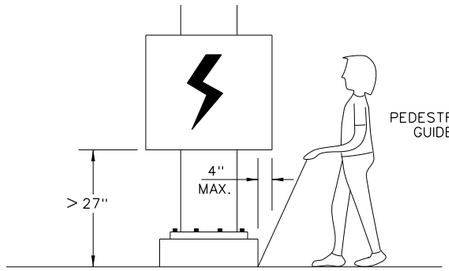
PLAN VIEW

PLACEMENT OF STREET FIXTURES

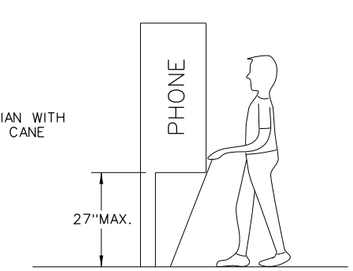
NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



WHEN AN OBSTRUCTION OF A HEIGHT GREATER THAN 27" FROM THE SURFACE WOULD CREATE A PROTRUSION OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.



PROTRUDING OBJECTS OF A HEIGHT ≥27" ARE DETECTABLE BY CANE AND DO NOT REQUIRE ADDITIONAL TREATMENT.

DETECTION BARRIER FOR VERTICAL CLEARANCE <80"

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

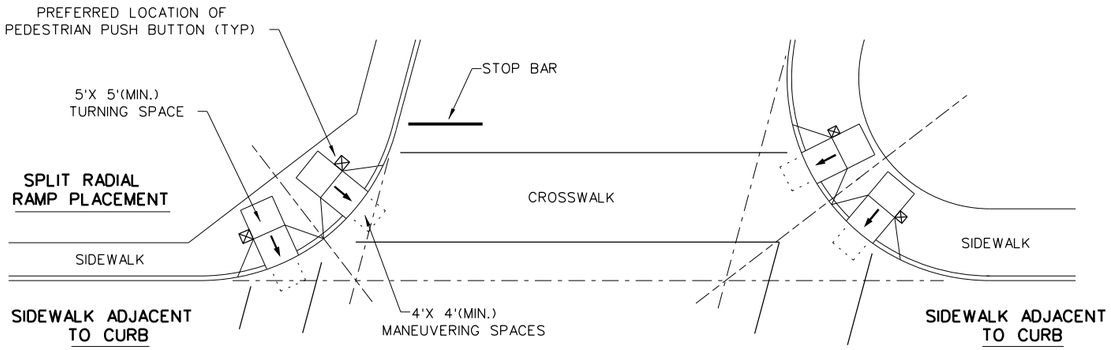
PED-18

FILE: ped18	DN: TxDOT		DW: VP	CK: KM	CK: PK & JG	
© TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY	
REVISIONS	1803	02	035		FM1925	
REVISED 08.2005 REVISED 06.2012 REVISED 01.2018	DIST	COUNTY			SHEET NO.	
	PHR	HIDALGO			112	

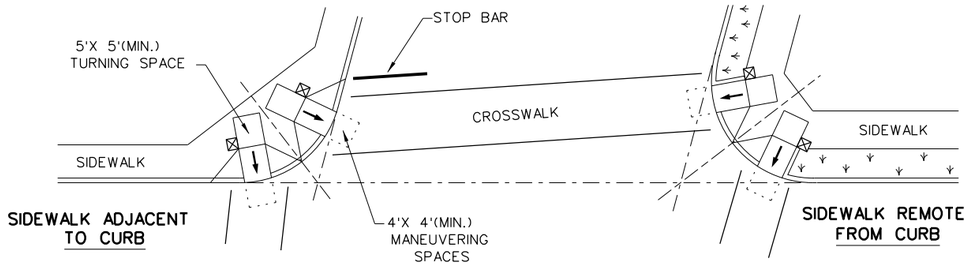
DATE:
FILE:

TYPICAL CROSSING LAYOUTS

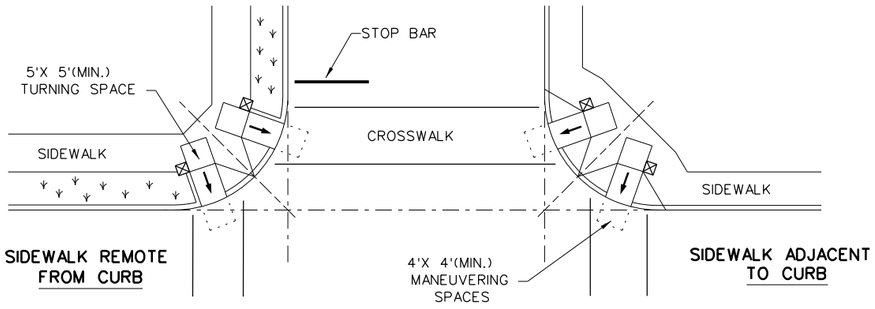
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



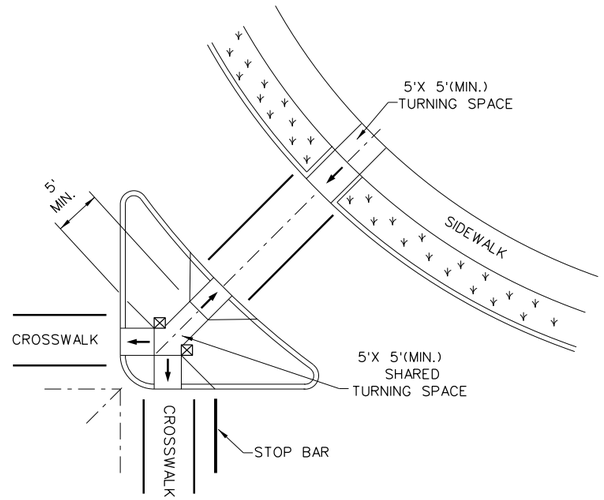
SKEWED INTERSECTION WITH "LARGE" RADIUS



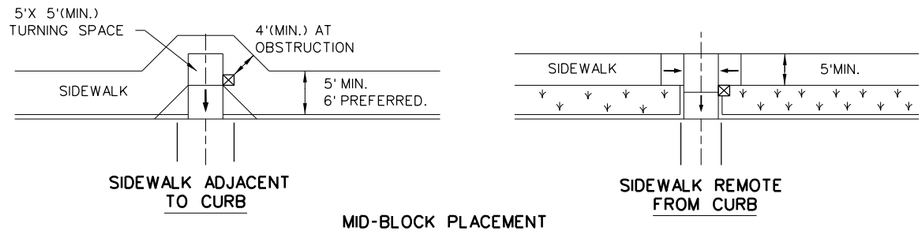
SKEWED INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS

LEGEND:

SHOWS DOWNWARD SLOPE. →

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (IF APPLICABLE). ☒

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT		DW: VP	CK: KM	CK: PK & JG
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REVISIONS	1803	02	035		FM1925
REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY			SHEET NO.
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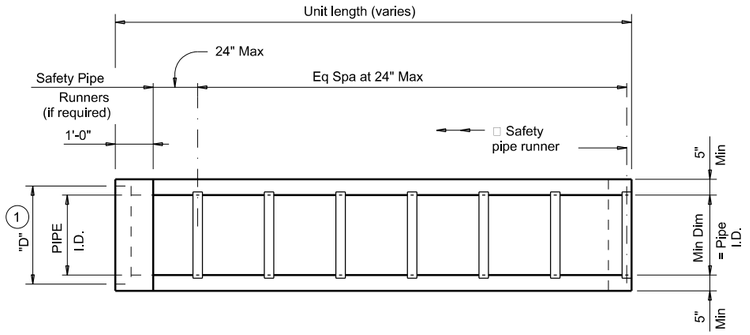
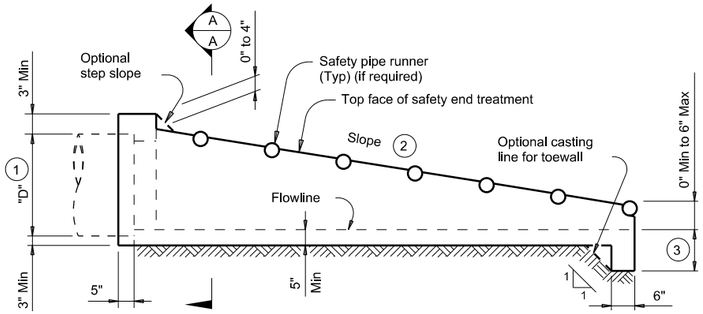
DATE:
FILE:



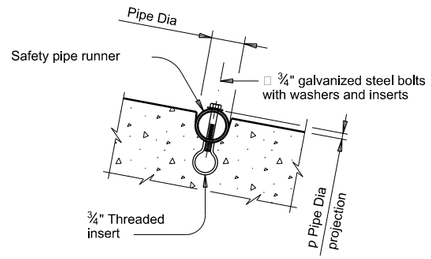
PLAN

(Showing bell end connection.)



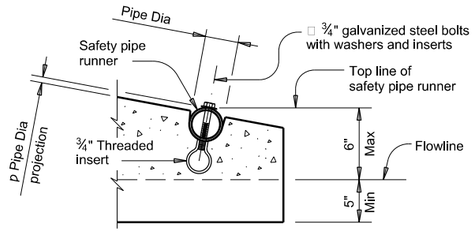
LONGITUDINAL ELEVATION

(Showing bell end connection.)

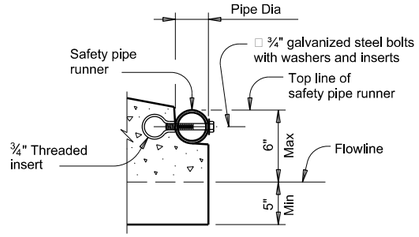


INSTALLATION DETAIL FOR SAFETY PIPE RUNNERS

(If required)



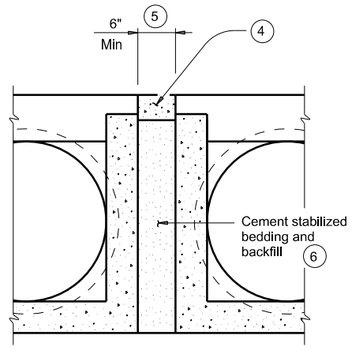
OPTION A



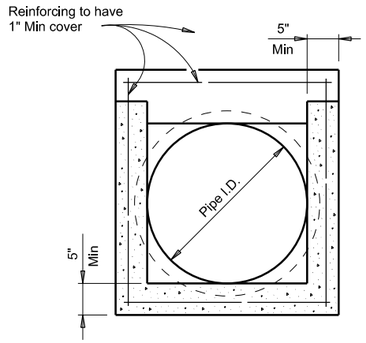
OPTION B

END DETAILS FOR INSTALLATION OF SAFETY PIPE RUNNERS

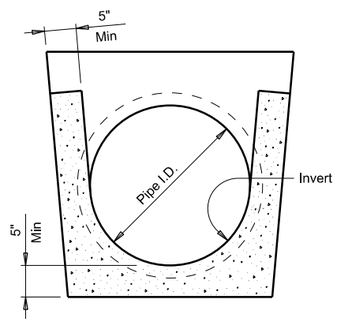
(If required)



MULTIPLE PIPE INSTALLATION

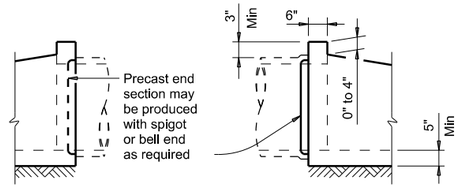


OPTION WITH SQUARE BOTTOM



OPTION WITH INVERT BOTTOM

SECTION A-A



OPTIONAL JOINT FOR RCP

(Showing joint between RCP and precast safety end treatment.)

REQUIREMENTS FOR CULVERT PIPES AND SAFETY PIPE RUNNERS

Pipe I.D.	RCP Wall "B" Thickness	TP Wall Thickness (7)	"D" (1)	Slope	Min Length	Pipe Runners Required		Required Pipe Runner Size		
						Single Pipe	Multiple Pipe	Nominal Dia.	O.D.	I.D.
12"	2"	1.15"	17.00"	6:1	4' - 9"	No	Yes, for > 2 pipes	3" STD	3.500"	3.068"
15"	2 ¼"	1.30"	20.50"	6:1	6' - 5"	No	Yes, for > 2 pipes	3" STD	3.500"	3.068"
18"	2 ½"	1.60"	24.00"	6:1	8' - 0"	No	Yes, for > 2 pipes	3" STD	3.500"	3.068"
24"	3"	1.95"	31.00"	6:1	11' - 3"	No	Yes, for > 2 pipes	3" STD	3.500"	3.068"
30"	3 ½"	2.65"	38.50"	6:1	14' - 8"	No	Yes	4" STD	4.500"	4.026"
36"	4"	2.75"	45.50"	6:1	17' - 11"	Yes	Yes	4" STD	4.500"	4.026"
42"	4 ½"	2.7"	52.50"	6:1	21' - 2"	Yes	Yes	4" STD	4.500"	4.026"

(1) Dimension "D" is based on reinforced concrete pipe (RCP) meeting the requirements of ASTM C-76, Class III, (RCP Wall "B" thickness). Adjust "D" for any other wall thickness used. For thermoplastic pipe (TP) take into account the annular space requirements for grouted connections.

(2) Slope as shown elsewhere in the plans. Slope of 6:1 or flatter is required for vehicle safety.

(3) Toewall to be used only when dimension is shown elsewhere in the plans.

(4) Fill the top 4" of void between precast end treatments with concrete riprap. Concrete riprap is considered subsidiary to the Item 467, "Safety End Treatment."

(5) Adjust clear distance between pipes to provide for the minimum distance between safety end treatments.

(6) Provide cement stabilized bedding and backfill in accordance with the Item 400, "Excavation and Backfill for Structures." Bedding and backfill is considered subsidiary to the Item 467, "Safety End Treatment." When concrete riprap is specified around the safety end treatment, backfill as directed by Engineer.

(7) Thermoplastic pipe wall thickness may vary. Adjust accordingly. Thermoplastic pipe requires the safety end treatments to have a bell end for grouted connections.

GENERAL NOTES:

Precast safety end treatment for reinforced concrete pipe (RCP), and thermoplastic pipe (TP) may be used for TYPE II end treatment as specified in Item "Safety End Treatment."

When precast safety end treatment is used as a Contractor's alternate to mitered RCP, riprap will not be required unless noted otherwise on the plans.

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Manufacture this product in accordance with Item 467, "Safety End Treatment" except as noted below :

A. Provide minimum reinforcing of #4 at 6" (Grade 40) or #4 at 9" (Grade 60) each way or 6"x6" - D12 x D12 or 5"x5" - D10 x D10 welded wire reinforcement (WWR).

B. For precast (steel formed) sections, provide Class "C" concrete (f'c = 3,600 psi).

At the option and expense of the Contractor the next larger size of safety end treatment may be furnished; as long as the "D" dimension cast is that of the required size of pipe.

Pipe runners are designed for a traversing load of 10,000 Lbs at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

Provide pipe runners meeting the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Galvanize all steel components except reinforcing steel after fabrication. Repair galvanizing damaged during transport or construction in accordance with the specifications.

Connect RCP using the Optional Joint for RCP detail shown or in accordance with Item 464, "Reinforced Concrete Pipe." Connect TP by grouting. See Pipe and Box Grouted Connections (PBGC) standard for grouted connections with TP and precast safety end treatment.

Texas Department of Transportation

Bridge Division Standard

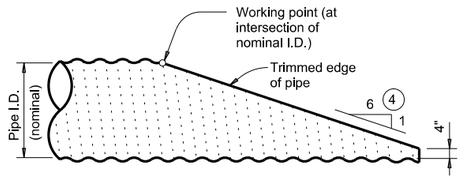
PRECAST SAFETY END TREATMENT

TYPE II ~ PARALLEL DRAINAGE

PSET-SP

FILE:	DN: RLW	CK: KLR	DW: JTR	CK: GAF
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS 12-21: Added 42" TP	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		114

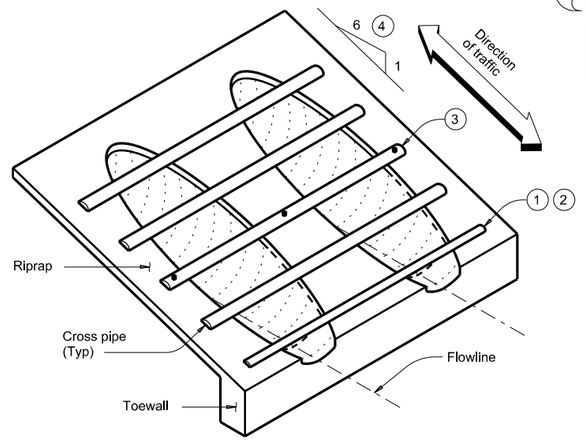
DATE:
FILE:



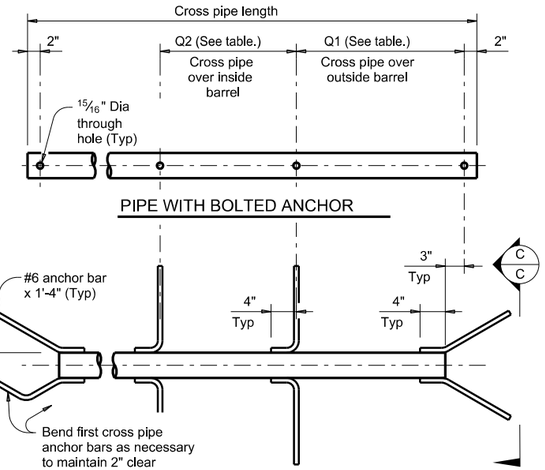
NOTE: All cross pipes, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

(Showing corrugated metal pipe (CMP) culvert Details at reinforced concrete pipe (RCP) culvert are similar.)

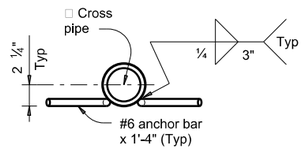


ISOMETRIC VIEW OF TYPICAL INSTALLATION



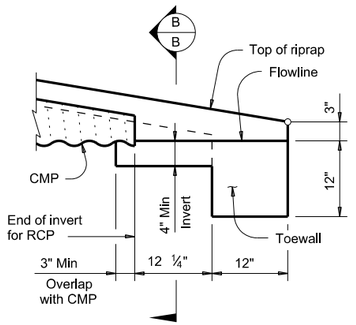
PIPE WITH BOLTED ANCHOR

PIPE WITH ANCHOR BARS



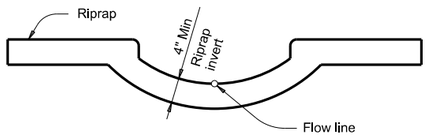
SECTION C-C

CROSS PIPE DETAILS



DETAIL "A"

(Showing invert with corrugated metal pipe (CMP) culvert. Reinforced concrete pipe (RCP) culvert details are similar. Cross pipes not shown for clarity.)



SECTION B-B

(Cross pipes not shown for clarity.)

CROSS PIPE LENGTHS, REQUIRED PIPE SIZES, AND RIPRAP QUANTITIES (2)

Nominal Culvert I.D.	Conc Riprap (CY) (6)	Pipe Culvert Spa ~ G	Single Barrel ~ Q1	Multi-Barrel ~ Q1	Q2	Conditions for Use of Cross Pipes	Cross Pipe Sizes
12"	0.6	0' - 9"	N/A	2' - 1"	1' - 9"	3 or more pipe culverts	3" Std (3.500" O.D.)
15"	0.7	0' - 11"	N/A	2' - 5"	2' - 2"		
18"	0.8	1' - 2"	N/A	2' - 10"	2' - 8"		
21"	0.9	1' - 4"	N/A	3' - 2"	3' - 1"		
24"	0.9	1' - 7"	N/A	3' - 6"	3' - 7"		
27"	1.0	1' - 8"	N/A	3' - 10"	3' - 11"	3 or more pipe culverts	3 ½" Std (4.000" O.D.)
30"	1.1	1' - 10"	N/A	4' - 2"	4' - 4"	2 or more pipe culverts	
33"	1.2	1' - 11"	4' - 2"	4' - 5"	4' - 8"	All pipe culverts	
36"	1.3	2' - 1"	4' - 5"	4' - 9"	5' - 1"	All pipe culverts	4" Std (4.500" O.D.)
42"	1.5	2' - 4"	4' - 11"	5' - 5"	5' - 10"		
48"	1.7	2' - 7"	5' - 5"	6' - 0"	6' - 7"	All pipe culverts	5" Std (5.563" O.D.)
54"	2.0	3' - 0"	5' - 11"	6' - 9"	7' - 6"		
60"	2.2	3' - 3"	6' - 5"	7' - 4"	8' - 3"		
66"	2.4	3' - 3"	6' - 11"	7' - 10"	8' - 9"		
72"	2.7	3' - 4"	7' - 5"	8' - 5"	9' - 4"		

(1) The proper installation of the first cross pipe is critical for vehicle safety. Place the top of the first cross pipe no more than 6" above the flow line.

(2) Provide cross pipes, except the first bottom pipe, of the size shown in the table. Provide a 3 1#2" standard pipe (4" O.D.) for the first bottom pipe.

(3) Install the third cross pipe from the bottom of the culvert using a bolted connection. Ensure that riprap concrete does not flow into the cross pipe so as to permit disassembly of the bolted connection to allow cleanout access. At the Contractor's option, install all other cross pipes using the bolted connection details.

(4) Match cross slope as shown elsewhere in the plans. Cross slope of 6:1 or flatter is required for vehicle safety.

(5) Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap".

(6) Quantities shown are for one end of one reinforced concrete pipe (RCP) culvert. For multiple pipe culverts or for corrugated metal pipe (CMP) culverts, quantities will need to be adjusted. Riprap quantities are for contractor's information only.

MATERIAL NOTES:

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Provide cross pipes that meet the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 (Gr B), or API 5LX52.

Provide ASTM A307 bolts and nuts.

Galvanize all steel components, except concrete reinforcing, after fabrication. Repair galvanizing damaged during transport or construction in accordance with the specifications.

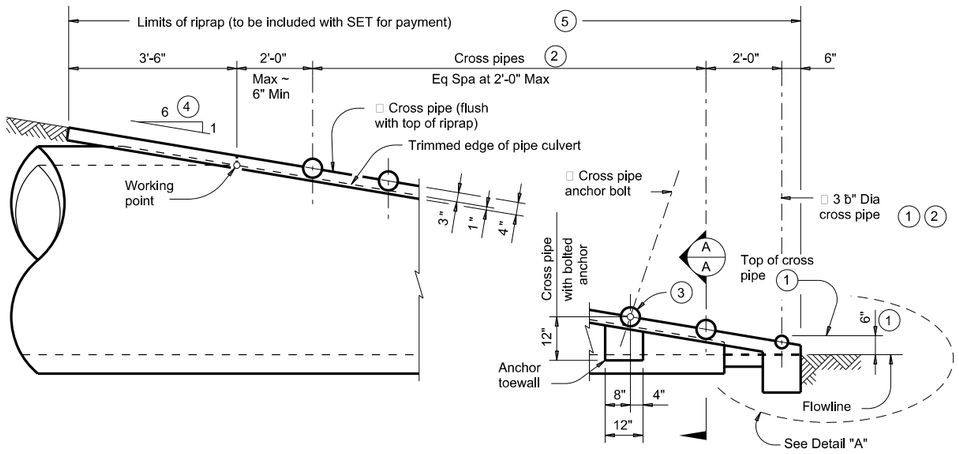
GENERAL NOTES:

Cross pipes are designed for a traversing load of 10,000 pounds at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

Safety end treatments (SET) shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the cross pipes.

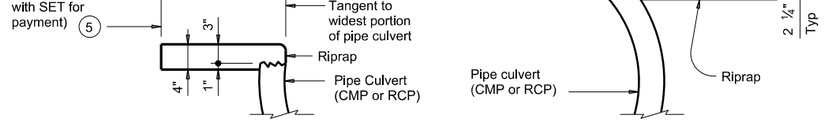
Construct concrete riprap and all necessary inverts in accordance with the requirements of Item 432, "Riprap".

Payment for riprap and toewall is included in the Price Bid for each Safety End Treatment.



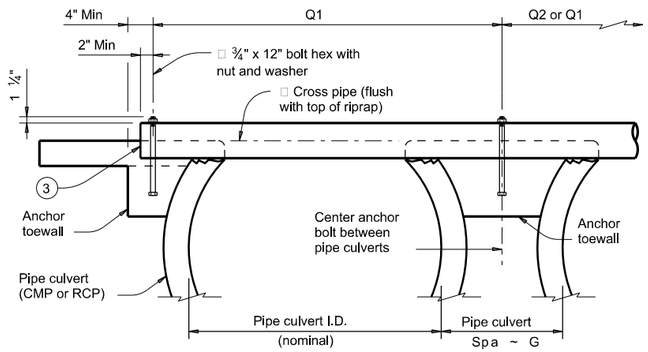
SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing reinforced concrete pipe (RCP) culvert. Details at corrugated metal pipe (CMP) culvert are similar.)



SHOWING TYPICAL PIPE CULVERT AND RIPRAP

SHOWING CROSS PIPE WITH ANCHOR BAR



SHOWING CROSS PIPE WITH BOLTED ANCHOR

SECTION A-A

Texas Department of Transportation

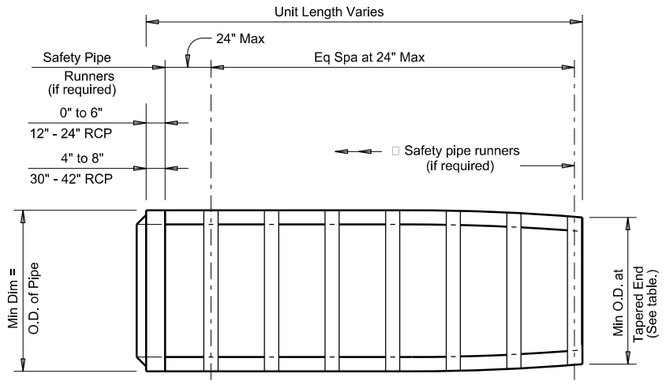
Bridge Division Standard

SAFETY END TREATMENT

FOR 12" DIA TO 72" DIA
PIPE CULVERTS
TYPE II ~ PARALLEL DRAINAGE

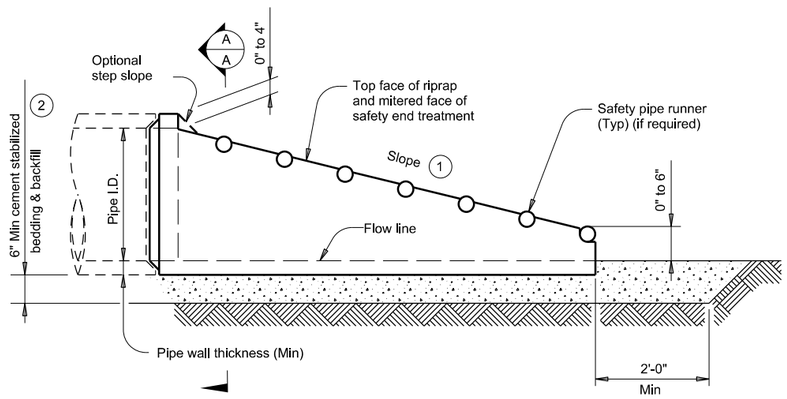
SETP-PD

FILE: setppdse-20.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		115



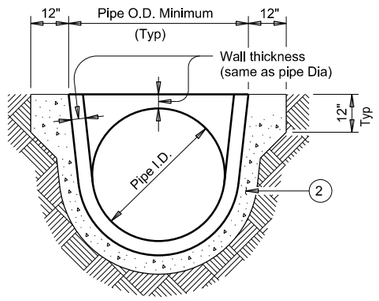
PLAN VIEW - 12" THRU 24"

(Showing spigot end connection.)

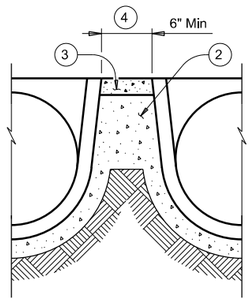


LONGITUDINAL ELEVATION - 12" THRU 24"

(Showing spigot end connection.)



SECTION A-A



MULTIPLE PIPE INSTALLATION

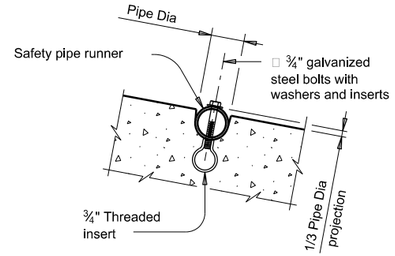
1. Slope as shown elsewhere in the plans. Slope of 6:1 or flatter is required for vehicle safety.

   Provide cement stabilized bedding and backfill in accordance with the Item, "Excavation and Backfill for Structures". Bedding and backfill is considered subsidiary to the Item 467, "Safety End Treatment". When concrete riprap is specified around the safety end treatment, backfill as directed by Engineer.

3. Fill the top 4" of void between precast end treatments with concrete riprap. Concrete riprap is considered subsidiary to the Item 467, "Safety End Treatment".

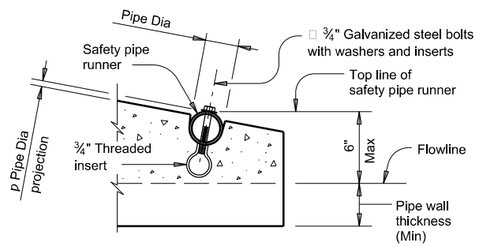
4. Adjust clear distance between pipes to provide for the minimum distance between safety end treatments.

5. Safety pipe runners are required for multiple pipe culverts with more than two pipes.

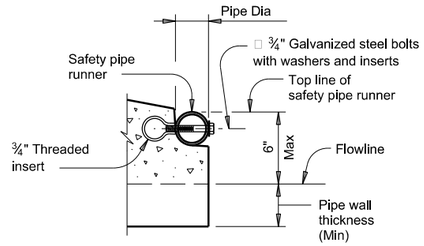


INSTALLATION DETAIL FOR SAFETY PIPE RUNNERS

(If required)



OPTION A



OPTION B

END DETAILS FOR INSTALLATION OF SAFETY PIPE RUNNERS

(If required)

REQUIREMENTS FOR CULVERT PIPES AND SAFETY PIPE RUNNERS

Pipe I.D.	Min Wall Thickness	Min O.D.	Min O.D. at Tapered End	Min Reinf Requirements (sq. in. per ft. of Pipe)	Max Slope	Min Length of Unit	Pipe Runner Requirements		Required Pipe Runner Sizes		
							Single Pipe	Multiple Pipe	Nominal Dia	O.D.	I.D.
12"	2"	16"	16"	0.07 Circ.	6:1	4' - 0"	No	(5)	3" STD	3.500"	3.068"
15"	2 ¼"	19 ½"	19"	0.07 Circ.	6:1	5' - 8"	No	(5)	3" STD	3.500"	3.068"
18"	2 ½"	23"	21 ½"	0.07 Circ.	6:1	7' - 3"	No	(5)	3" STD	3.500"	3.068"
24"	3"	30"	27"	0.07 Circ.	6:1	10' - 6"	No	(5)	3" STD	3.500"	3.068"
30"	3 ½"	37"	31"	0.18 Circ.	6:1	12' - 1"	No	Yes	4" STD	4.500"	4.026"
36"	4"	44"	36"	0.19 Ellip.	6:1	15' - 4"	Yes	Yes	4" STD	4.500"	4.026"
42"	4 ½"	51"	41 ½"	0.23 Ellip.	6:1	18' - 7"	Yes	Yes	4" STD	4.500"	4.026"

MATERIAL NOTES:

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Provide pipe runners meeting the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5LX52.

Galvanize steel components except reinforcing steel after fabrication. Repair galvanizing damaged during transport or construction in accordance with the specifications.

GENERAL NOTES:

Precast safety end treatment for reinforced concrete pipe (RCP) may be used for TYPE II end treatment as specified in Item 467, "Safety End Treatment".

When precast safety end treatment is used as a Contractor's alternate to mitered RCP, riprap will not be required unless noted otherwise on the plans.

Manufacture precast concrete end sections in accordance with Item 464, "Reinforced Concrete Pipe" and in accordance with ASTM Specification C-76, Class III, Wall B for circular pipe.

Provide precast concrete end sections with a spigot or bell end for compatibility to upstream or downstream end conditions with sufficient annular space to allow for grout, mortar, cold applied asphalt joint compound or pre-formed plastic gasket material.

Methods of lifting shall be provided by the manufacturer for ease of loading, unloading and installation.

Pipe runners are designed for a traversing load of 10,000 Lbs at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

Texas Department of Transportation

Bridge Division Standard

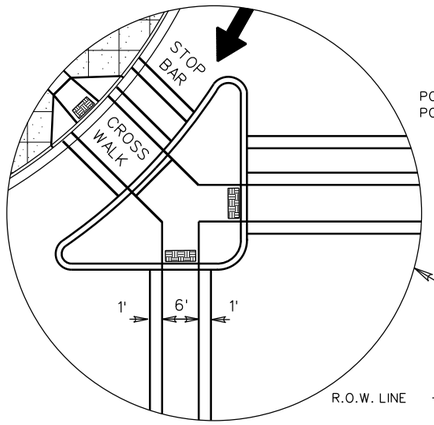
PRECAST SAFETY END TREATMENT

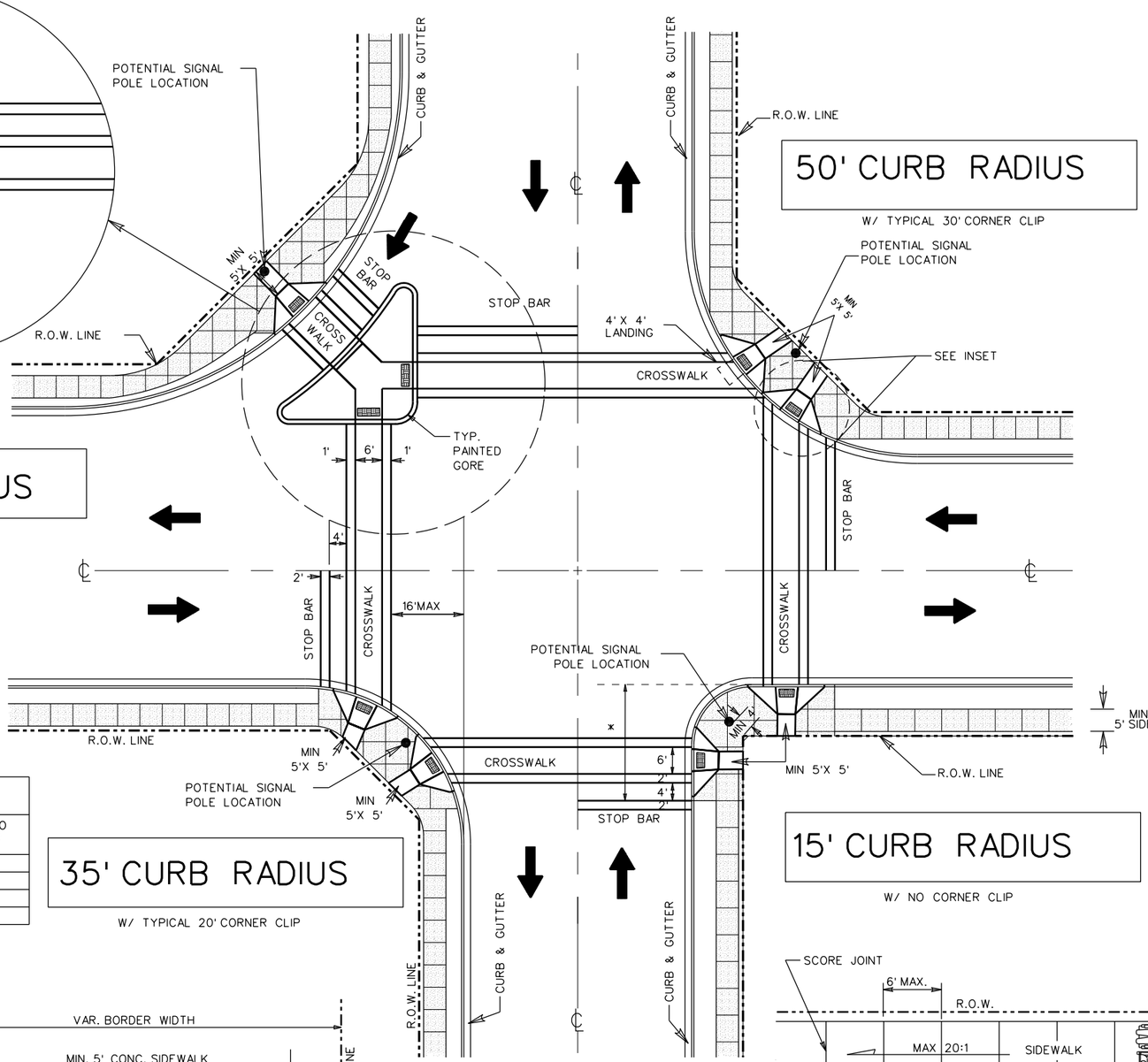
TYPE II ~ PARALLEL DRAINAGE

PSET-RP

FILE: psetrpss-20.dgn	DN: RLW	CK: KLR	DW: JTR	CK: GAF
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		116

DATE:
FILE:





75' CURB RADIUS

W/ TYPICAL 45' CORNER CLIP

50' CURB RADIUS

W/ TYPICAL 30' CORNER CLIP

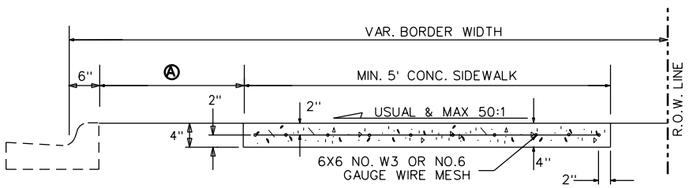
* FOR 90° INTERSECTION		
RADIUS	DISTANCE TO RAMP CONTROL	DISTANCE TO STOPBAR
5' R	10'	16'
10' R	15'	21'
15' R	20'	26'
>20' R	25'	30'

35' CURB RADIUS

W/ TYPICAL 20' CORNER CLIP

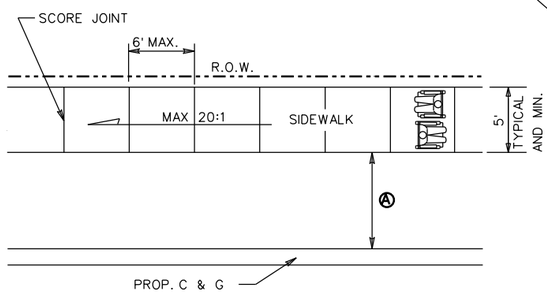
15' CURB RADIUS

W/ NO CORNER CLIP



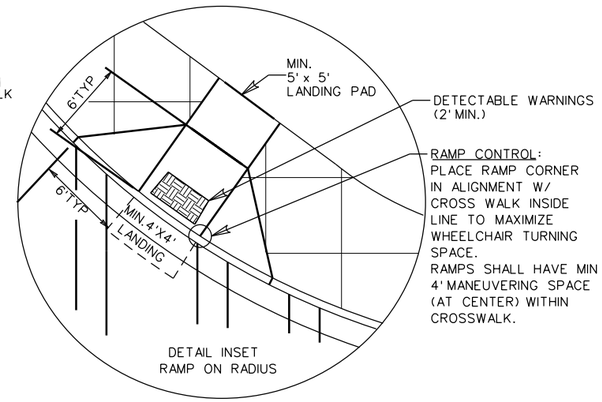
TYPICAL CONC. SIDEWALK

TYPICAL WHEEL CHAIR RAMP LOCATION



SCORE JOINTS 1/4" THICKNESS
EXPANSION JOINT EVERY 30'
JOINT IN CENTER OF SIDEWALK IF OVER 15' WIDE.

PLAN VIEW



DETECTABLE WARNINGS (2' MIN.)

RAMP CONTROL: PLACE RAMP CORNER IN ALIGNMENT W/ CROSS WALK INSIDE LINE TO MAXIMIZE WHEELCHAIR TURNING SPACE. RAMPS SHALL HAVE MIN 4' MANEUVERING SPACE (AT CENTER) WITHIN CROSSWALK.

DETAIL INSET RAMP ON RADIUS

GENERAL NOTES

- ALL RAMPS SHALL HAVE A 5' x 5' LANDING PAD.
- RAMP CENTER TO BE PERPENDICULAR TO FACE OF CURB. A PERPENDICULAR RAMP MAY BE LOCATED WITHIN THE RADIUS OF A CURBLINE.
- SIDEWALK GRADE TO BE PARALLEL TO TOP OF CURB AND GUTTER UNLESS OTHERWISE SHOWN ON PLANS OR DIRECTED BY THE ENGINEER.
- SIDEWALK WIDTH AS SHOWN ELSEWHERE IN PLANS. MIN WIDTH 5'. PROVIDE DROPPED CURBS AT INTERSECTIONS. ALL CONCRETE SHALL BE CLASS "A" PROPOSED SIDEWALKS TO MATCH EXIST. SIDEWALK.
- NO VERTICAL CHANGES SHALL EXCEED 1/4" IN ELEVATION AT ADJOINING SURFACES.
- TO PROVIDE ACCESS TO PEDESTRIAN BUTTON, SIDEWALK / LANDING PAD SHALL EXTEND AND/ OR ABUT TO SIGNAL POLE CONC. FOUNDATION.
- COLOR TEXTURIZED CONCRETE SHALL BE USED TO COLOR AREAS AT RAMPS. COLOR SHALL BE " BRICK RED " AS PER L.M. SCOFIELD COMPANY STANDARDS COLOR A-26 OR EQUAL. COLOR TEXTURIZED CONCRETE SHALL BE SUBSIDIARY TO CURB RAMP ITEM
- IF THE DETAIL IS TO BE USED IN A PLAN SET, IT MUST BE SIGNED AND SEALED.

Ⓐ DESIRABLE 3' OR GREATER FOR HIGH SPEED TRAFFIC. FOR BORDER WIDTHS OF 8' OR LESS, PLACE SIDEWALK ADJACENT TO CURB.

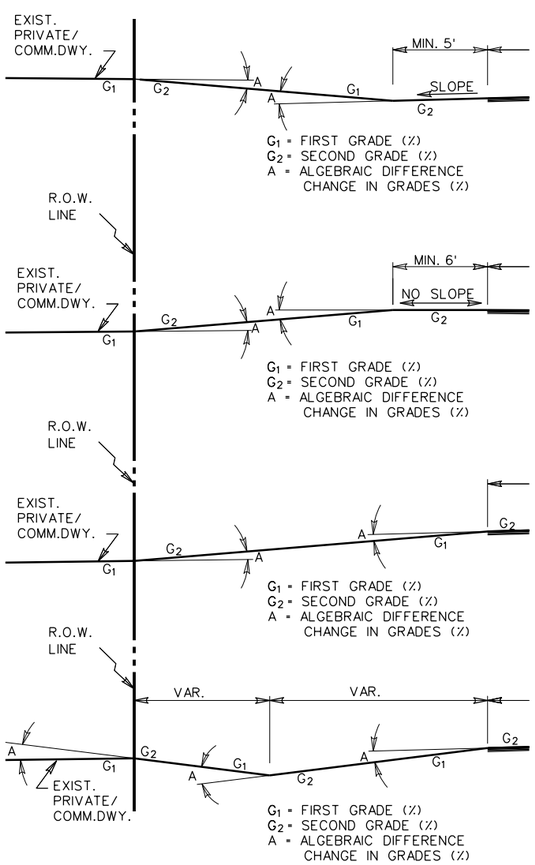
Texas Department of Transportation

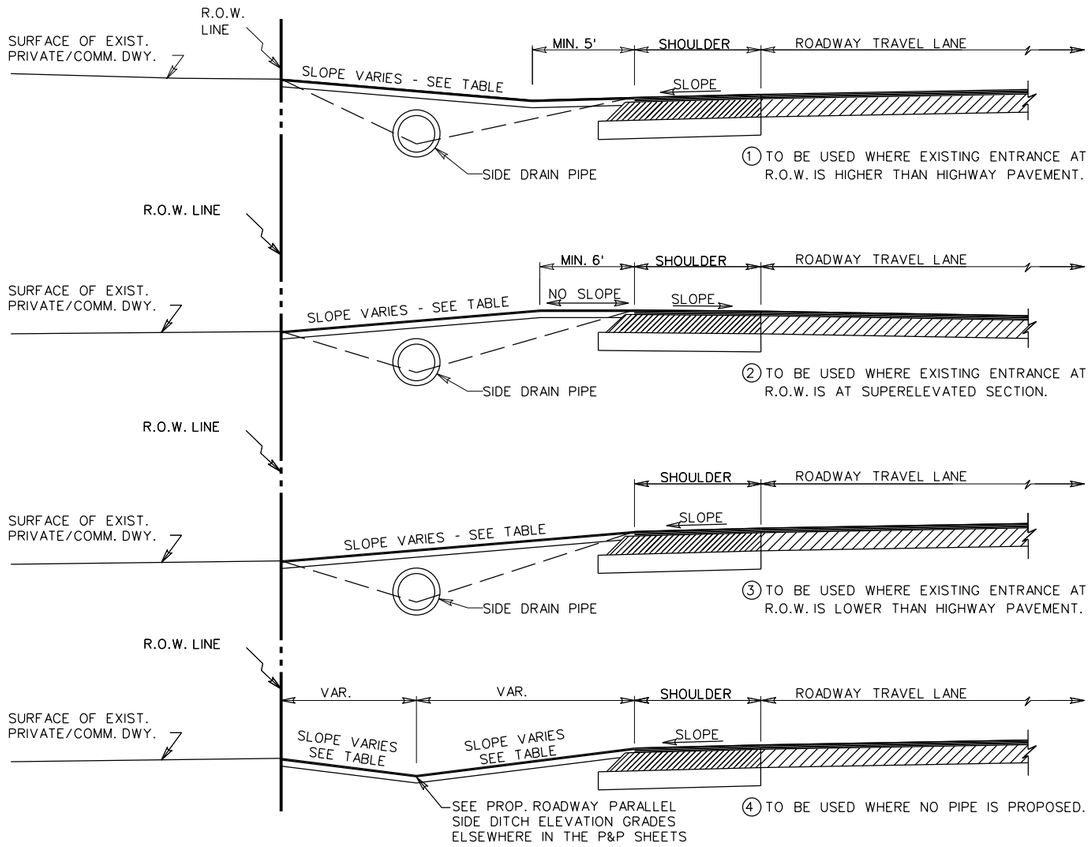
SIDEWALK & WHEELCHAIR RAMP DESIGN GUIDE

REV. 5/18

SIDEWALK.DGN

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		FILE NO.			SHEET NO.
						117
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TEXAS	21	HIDALGO	1803	02	035	FM1925

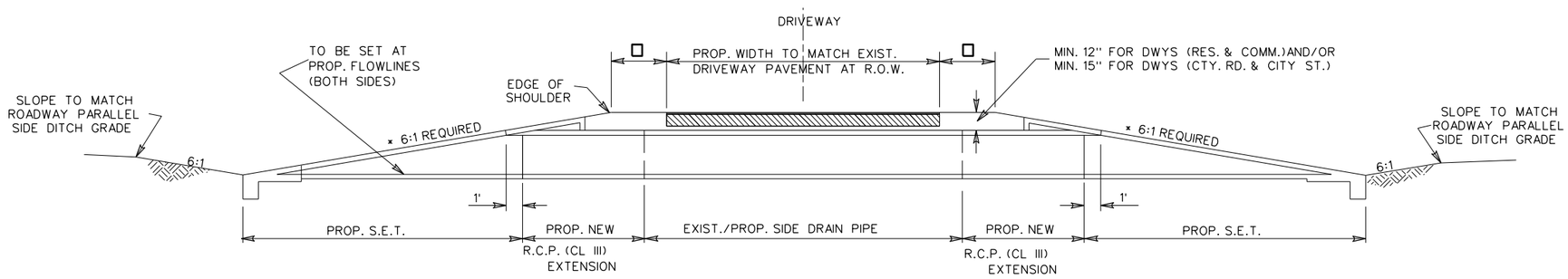




TYPICAL ENTRANCE PROFILE FOR DRIVEWAYS W/OUT C&G

PROPOSED DRIVEWAY SLOPE TABLE
COMMERCIAL DRIVEWAYS @ 12:1 MAX.
RESIDENTIAL DRIVEWAYS @ 8:1 MAX.

PROP. DWY ALGEBRAIC DIFFERENCE TABLE
COMMERCIAL DRIVEWAYS @ A = 6% DESIRABLE
RESIDENTIAL DRIVEWAYS @ A = 8% DESIRABLE
FORMULA, A=G2-G1



□ - 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 1½IN. 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.

PHARR DISTRICT STANDARD

TEXAS DEPARTMENT OF TRANSPORTATION

DRIVEWAY PROFILE DETAILS

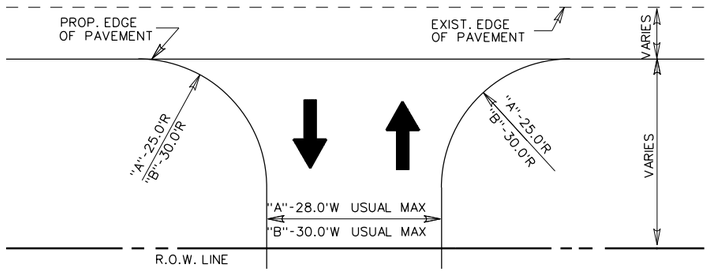
REV. 3/2020

DRIVEWAY1.DGN

FED.RD. DIV.NO.	STATE AID PROJECT NO.	FILE NO.	SHEET NO.
6			118

STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	21	HIDALGO	1803	02	035	FM1925

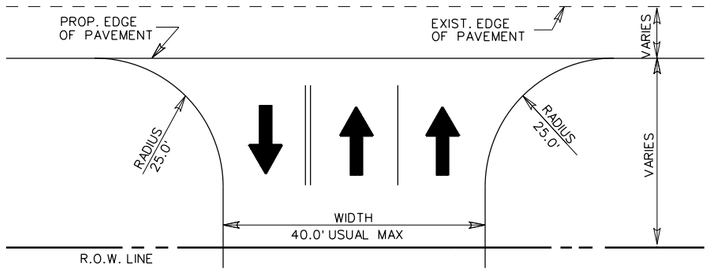
DESIGNS FOR TWO-WAY COMMERCIAL DRIVEWAYS



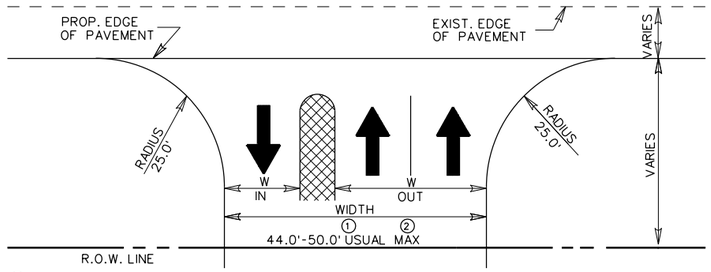
"A"- ONE ENTRY LANE AND ONE EXIT LANE, FEWER THAN 4 LARGE VEHICLES PER HOUR

"B"- ONE ENTRY LANE AND ONE EXIT LANE, 4 OR MORE SINGLE UNIT VEHICLES PER HOUR (1)

(1) - *DRIVEWAY DESIGNS FOR LARGER VEHICLES WILL BE CONSIDERED ON A CASE BY CASE BASIS*



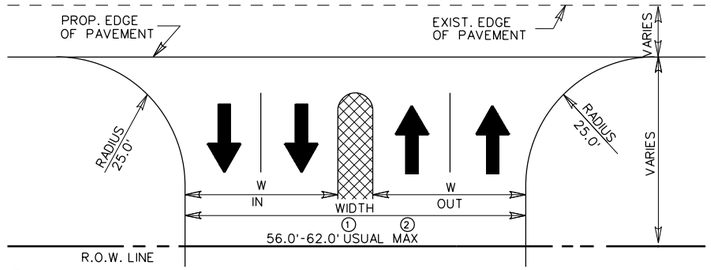
ONE ENTRY LANE AND TWO EXIT LANES (WITHOUT DIVIDERS)



(1) - *4.0' WIDE DIVIDER, FACE-TO-FACE CURBS*

(2) - *10.0' WIDE DIVIDER, FACE-TO-FACE-CURBS*

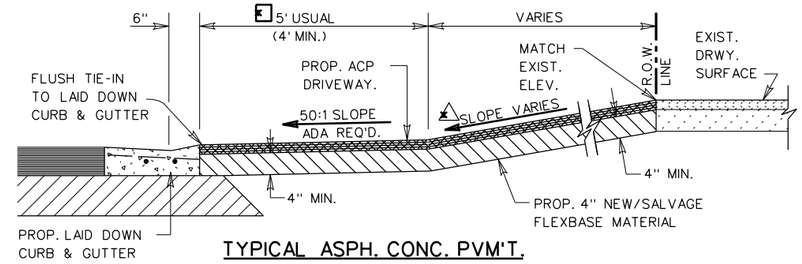
ONE ENTRY LANE AND TWO EXIT LANES (WITH A DIVIDER)



(1) - *4.0' WIDE DIVIDER, FACE-TO-FACE CURBS*

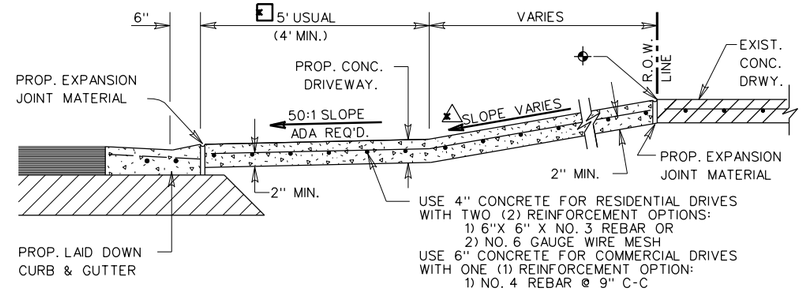
(2) - *10.0' WIDE DIVIDER, FACE-TO-FACE-CURBS*

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.

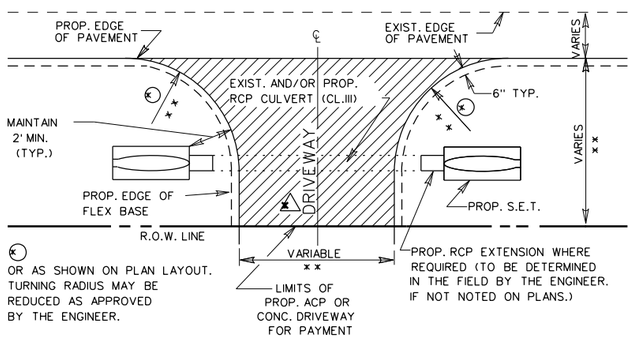
PROP./FUTURE SIDEWALK CROSSING LOCATION UNLESS SHOWN ELSEWHERE ON P&P SHEETS. SEE P&P SHEETS FOR PROP. SIDEWALK LOCATION IF SIDEWALKS ARE INCLUDED AS PART OF PROJECT. REFER TO STATE STANDARDS - PEDESTRIAN FACILITIES - FOR ADDITIONAL REQUIREMENTS.

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

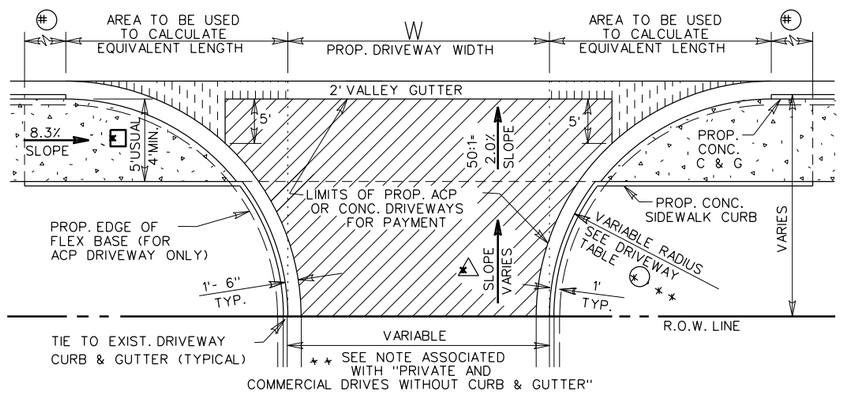


PLAN OF PRIVATE AND COMMERCIAL DRIVES

** 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



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 171#/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.

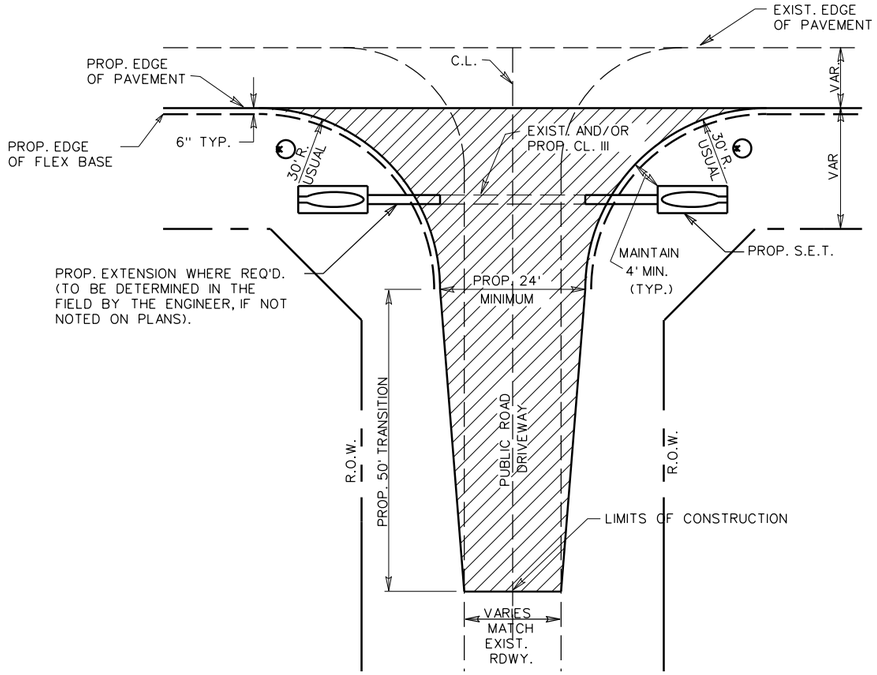
 PHARR DISTRICT STANDARD

TEXAS DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS PRIVATE (RESIDENTIAL-COMMERCIAL)

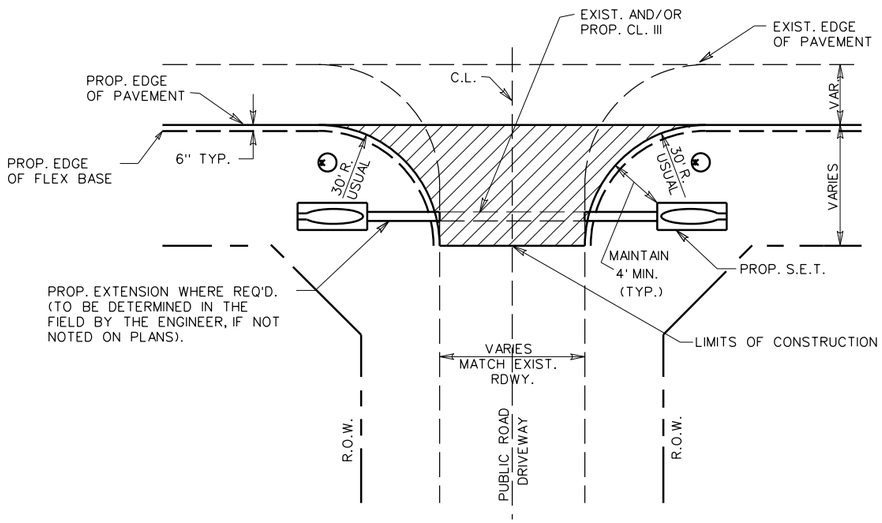
REV. 09/21 DRIVEWAY2.DGN

ED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						119
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	21	HIDALGO	1803	02	035	FM1925



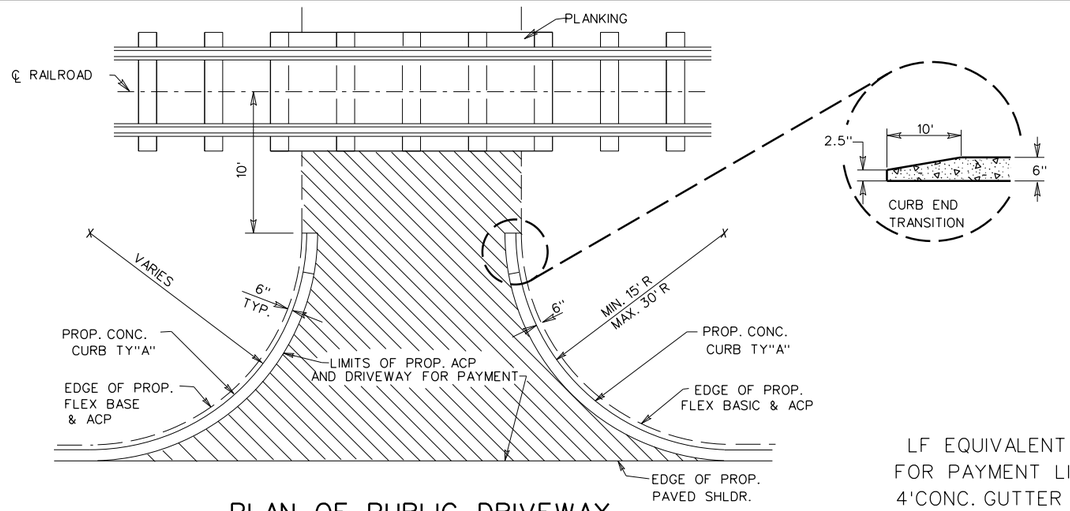
TYPICAL DETAIL

(WHEN EXIST. ROADWAY WIDTH LESS THAN 24'.)

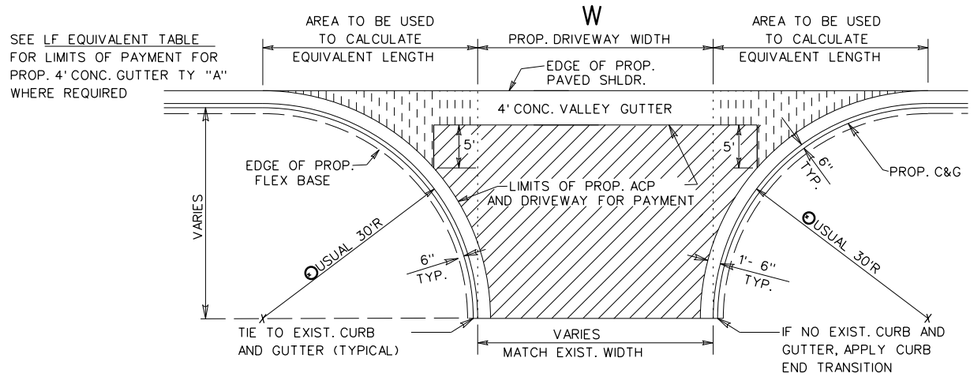


TYPICAL DETAIL

(WHEN EXIST. ROADWAY WIDTH EQUAL TO OR GREATER THAN 24'.)



PLAN OF PUBLIC DRIVEWAY ADJACENT TO R.R. CROSSING



PLAN OF PUBLIC DRIVEWAY

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

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 PROPOSED ROADWAY.

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.

(E) 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.

PHARR DISTRICT STANDARD

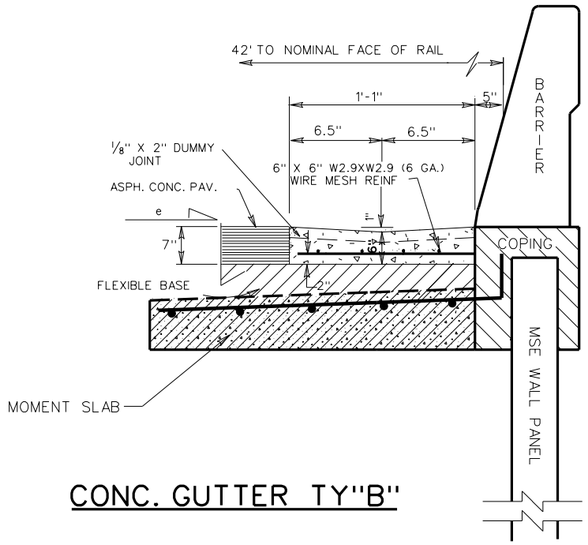
TEXAS DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS PUBLIC (COUNTY ROAD-CITY STREET)

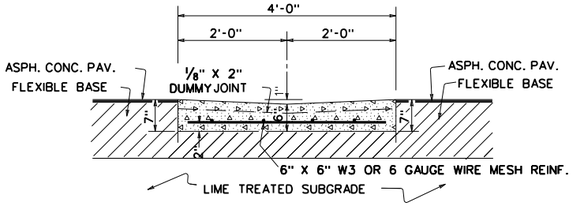
REV. 8/19

DRIVEWAY3.DGN

FED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						120
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TX	21	HIDALGO	1803	02	035	FM1925

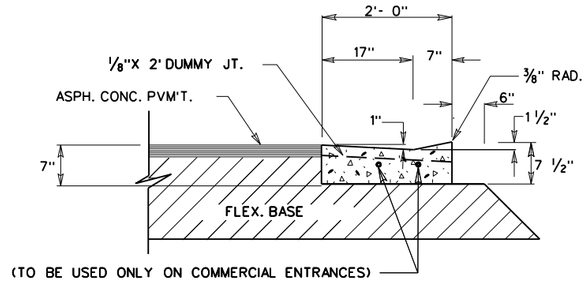


CONC. GUTTER TY"B"



4' CONC. VALLEY GUTTER (TY"A")

TO BE USED WHERE REQUIRED TO CARRY DRAINAGE WATER ACROSS SIDE STREETS



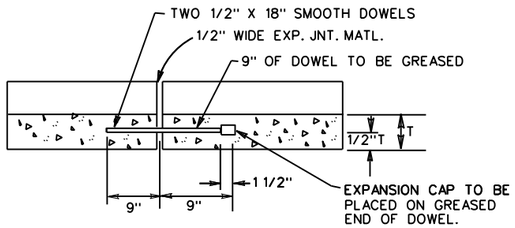
(TO BE USED ONLY ON COMMERCIAL ENTRANCES)
2-NO. 5 LONGITUDINAL REINF. BAR REINF. STEEL TO BE MADE PART OF ITEM "CONC. CURB & GUTTER." THE LENGTH OF REINFORCING STEEL WILL BE THE WIDTH OF THE PROP. COMMERCIAL ENTRANCE PLUS FOUR FEET.

CONC. GUTTER

NOTE:

CONCRETE GUTTER TO BE USED ONLY WHERE PERMITTED BY TEXAS DEPARTMENT OF TRANSPORTATION REGULATIONS FOR ACCESS DRIVEWAYS.

2' VALLEY GUTTER SHALL BE PAID FOR AS CONC. CURB AND GUTTER . CONCRETE CURB & GUTTER & CONCRETE CURB SHALL BE MEASURED FOR PAYMENT ALONG FACE OF CURB AT FLOW LINE.

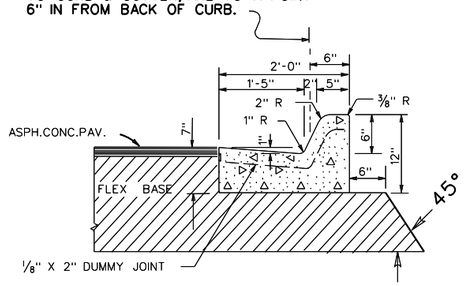


DETAIL EXPANSION JOINT

LONGITUDINAL SECTION THRU CURB AND/OR C&G. REINFORCING STEEL (WHEN USED) SHALL NOT CROSS EXPANSION JOINTS. STEEL SHALL BE TERMINATED 3" ± 1" FROM FACE OF THE JOINT.

1/2" PREMOLDED EXPANSION JOINT MATERIAL SHALL BE INSTALLED WHERE CONC. CURB & GUTTER ABUTS CONC. CURB, OR WHERE CONC. CURB & GUTTER OR CONC. CURB ABUT INLETS, BRIDGE WINGWALLS, BRIDGE ABUT-MENTS AND/OR ANY OTHER LOCATIONS SPECIFIED BY THE ENGINEER. MAX. SPACING = 105'

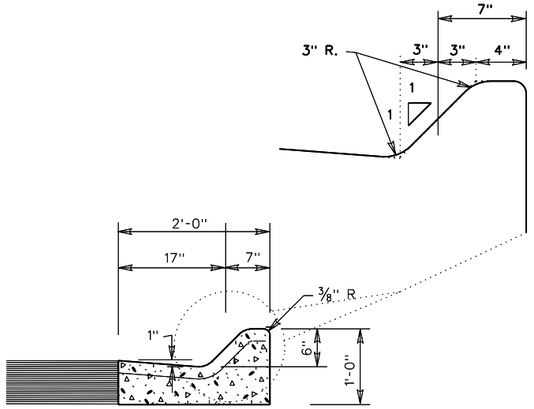
ALL HORIZONTAL DIMENSIONS AND RADII SHOWN ON PLANS, RELATING TO CURB & GUTTER, ARE TO A POINT 6" IN FROM BACK OF CURB.



CONC. CURB & GUTTER TY "A" (BARRIER)

NOTE:
EXPANSION JOINTS

1/2" PREMOLDED EXPANSION JOINT MATERIAL SHALL BE INSTALLED WHERE CONC. CURB & GUTTER ABUTS CONC. CURB, OR WHERE CONC. CURB & GUTTER OR CONC. CURB ABUT INLETS, BRIDGE WINGWALLS, BRIDGE ABUT-MENTS AND/OR ANY OTHER LOCATIONS SPECIFIED BY THE ENGINEER. MAX. SPACING = 105'

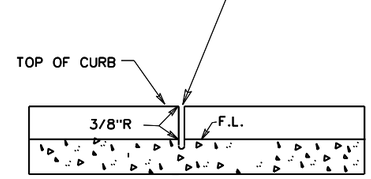


CONC. CURB & GUTTER TY. "B" (MOUNTABLE)

NOTE:
WHERE PROPOSED CURB & GUTTER IS TO BE CONNECTED TO EXIST. CURB & GUTTER IT SHOULD BE DONE AT THE EXIST. GUTTER FLOW LINE ELEVATION.

1/2" PREMOLDED EXPANSION JOINT MATERIAL SHALL BE INSTALLED WHERE CONC. CURB & GUTTER ABUTS CONC. CURB, OR WHERE CONC. CURB & GUTTER OR CONC. CURB ABUT INLETS, BRIDGE WINGWALLS, BRIDGE ABUT-MENTS AND/OR ANY OTHER LOCATIONS SPECIFIED BY THE ENGINEER. MAX. SPACING = 105'

JOINTS MAY BE FORMED WITH 1/8" METAL PLATES NO FILLER REQUIRED. USUAL SPACING 10' O.C., MAX. SPACING 15' O.C.



DETAIL DUMMY JOINT

NOTE:
DUMMY JOINTS TO BE USED ON CURB & CUTTER, CONC. MEDIAN AND ALL TYPE OF VALLEY GUTTERS JOINTS TO BE LOCATED BY THE ENGINEER.

PHARR DISTRICT STANDARD

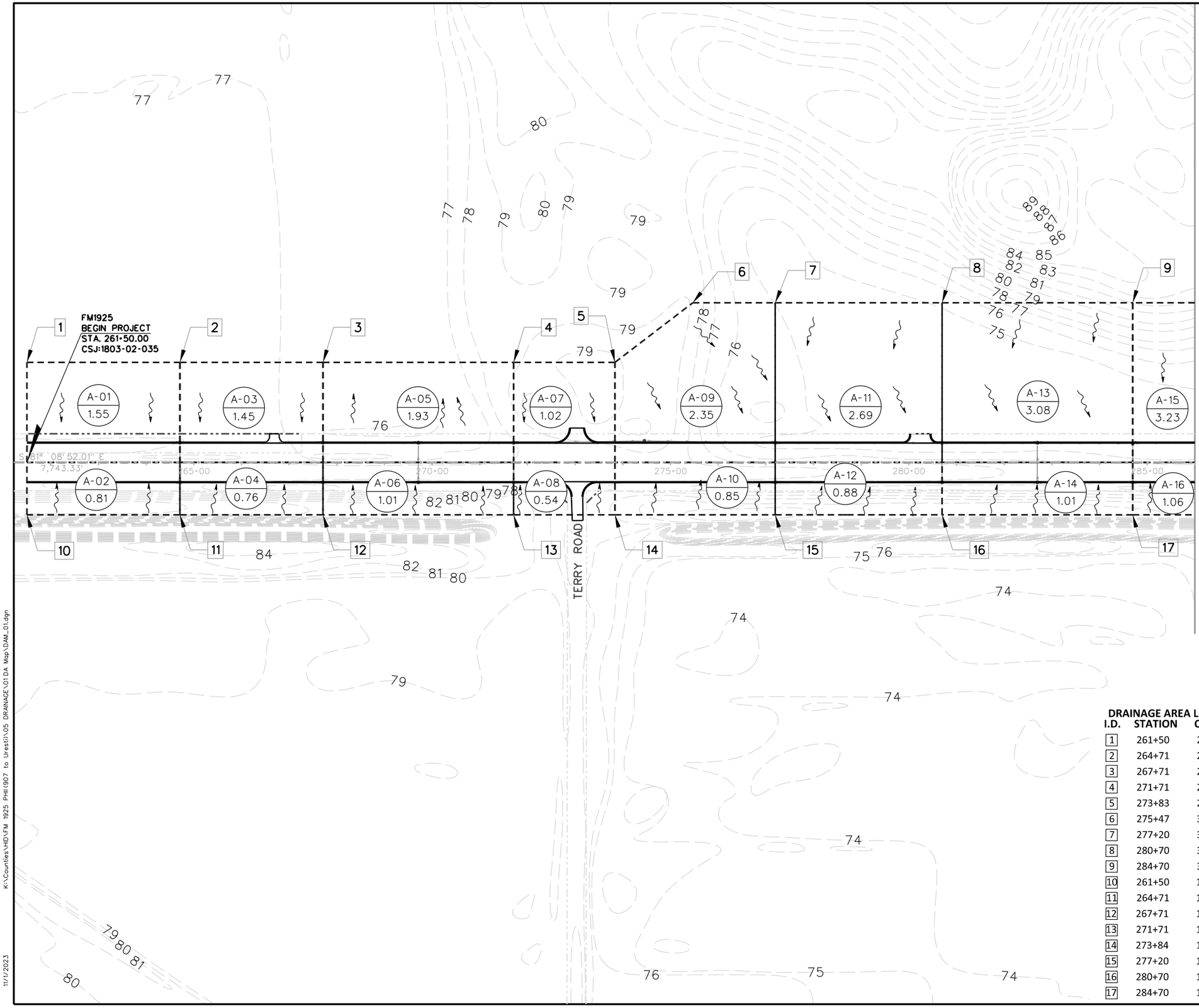
TEXAS DEPARTMENT OF TRANSPORTATION

CURB & GUTTER DETAILS

REV. 4/02

C&G.DGN

FED.RD. DIV.NO.	STATE AID PROJECT NO.		FILE NO.			SHEET NO.
6						121
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TEXAS	21	HIDALGO	1803	02	035	FM 1925



LEGEND

- A-13 / 1.39 — DESIGNATION OF DRAINAGE AREA, AREA IN ACRES
- DRAINAGE AREA BOUNDRARY
- XX — DRAINAGE STRUCTURE ID
- EXISTING FLOW DIRECTION
- PROPOSED STORM SEWER

DRAINAGE AREA LIMITS

I.D.	STATION	OFFSET
1	261+50	210' LT
2	264+71	210' LT
3	267+71	210' LT
4	271+71	210' LT
5	273+83	210' LT
6	275+47	335' LT
7	277+20	335' LT
8	280+70	335' LT
9	284+70	335' LT
10	261+50	110' RT
11	264+71	110' RT
12	267+71	110' RT
13	271+71	110' RT
14	273+84	110' RT
15	277+20	110' RT
16	280+70	110' RT
17	284+70	110' RT

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

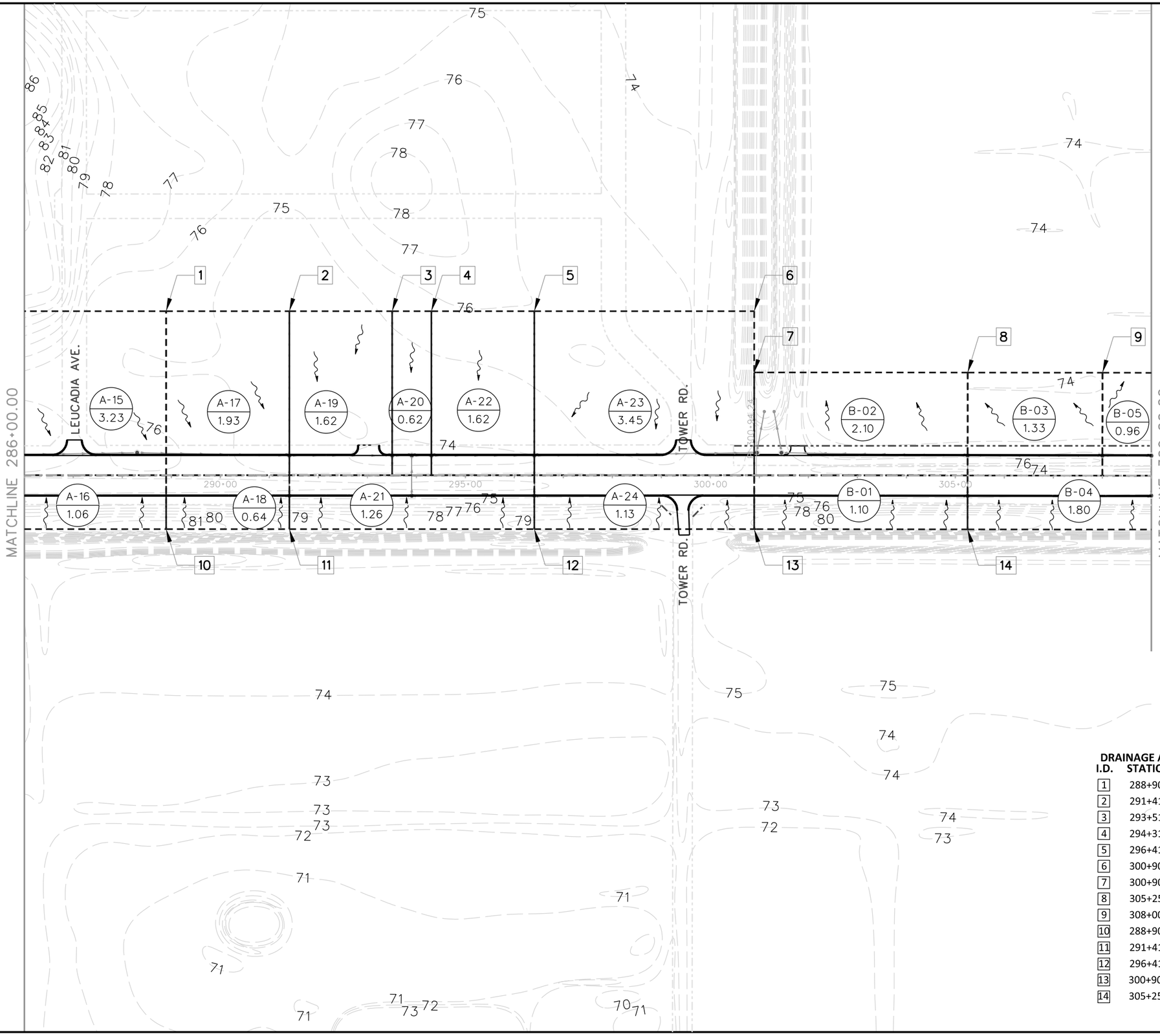
L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
Firm No. : F-4105
2100 W. Expressway 83
Mercedes, TX. 78570
Phone : (956) 565-9813
Fax : (956) 565-9018
900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

FM 1925
DRAINAGE AREA MAP
(STORM DRAIN)

SCALE: 1"=200' SHEET 1 OF 4

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		122
REVIEW:								
CK:								

11/1/2023
K:\Counties\HID\FM 1925 PHR(1907 to Urest)\05 DRAINAGE\01 DA Map\DAM_01.dgn



LEGEND

- A-13 / 1.39 — DESIGNATION OF DRAINAGE AREA, AREA IN ACRES
- DRAINAGE AREA BOUNDRARY
- XX — DRAINAGE STRUCTURE ID
- EXISTING FLOW DIRECTION
- PROPOSED STORM SEWER

DRAINAGE AREA LIMITS

I.D.	STATION	OFFSET
1	288+90	335' LT
2	291+41	335' LT
3	293+51	335' LT
4	294+31	335' LT
5	296+41	335' LT
6	300+90	335' LT
7	300+90	210' LT
8	305+25	210' LT
9	308+00	210' LT
10	288+90	110' RT
11	291+41	110' RT
12	296+41	110' RT
13	300+90	110' RT
14	305+25	110' RT

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER

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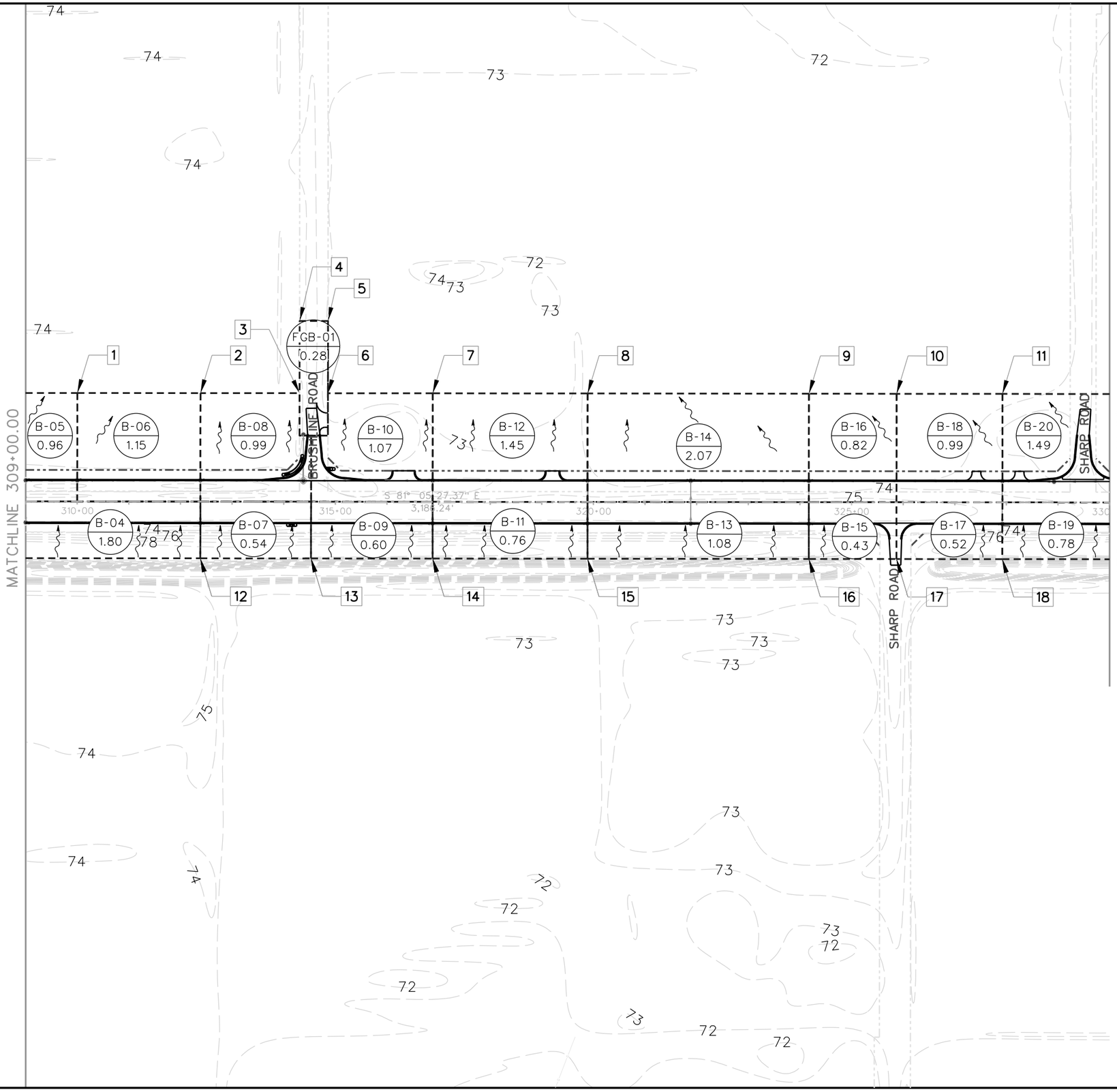
CK:	6	TEXAS				FM1925
ENGINEER:	STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:	PHR	HIDALGO	1803	02	035	123
REVIEW:						
CK:						

K:\Counties\HID\FM 1925 PHII (907 to Uresti)\05 DRAINAGE\01 DA Map\DAM_02.dgn

11/1/2023



LEGEND

- A-13 / 1.39 — DESIGNATION OF DRAINAGE AREA, AREA IN ACRES
- DRAINAGE AREA BOUNDRARY
- XX — DRAINAGE STRUCTURE ID
- EXISTING FLOW DIRECTION
- PROPOSED STORM SEWER

DRAINAGE AREA LIMITS

I.D.	STATION	OFFSET
1	310+00	210' LT
2	312+39	210' LT
3	314+31	210' LT
4	314+31	350' LT
5	314+86	350' LT
6	316+89	210' LT
7	317+57	150' LT
8	319+89	210' LT
9	324+18	210' LT
10	325+88	210' LT
11	327+93	210' LT
12	312+39	110' RT
13	314+53	110' RT
14	316+89	110' RT
15	319+89	110' RT
16	324+18	110' RT
17	325+88	110' RT
18	327+93	110' RT

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(STORM DRAIN)

SCALE: 1"=200'

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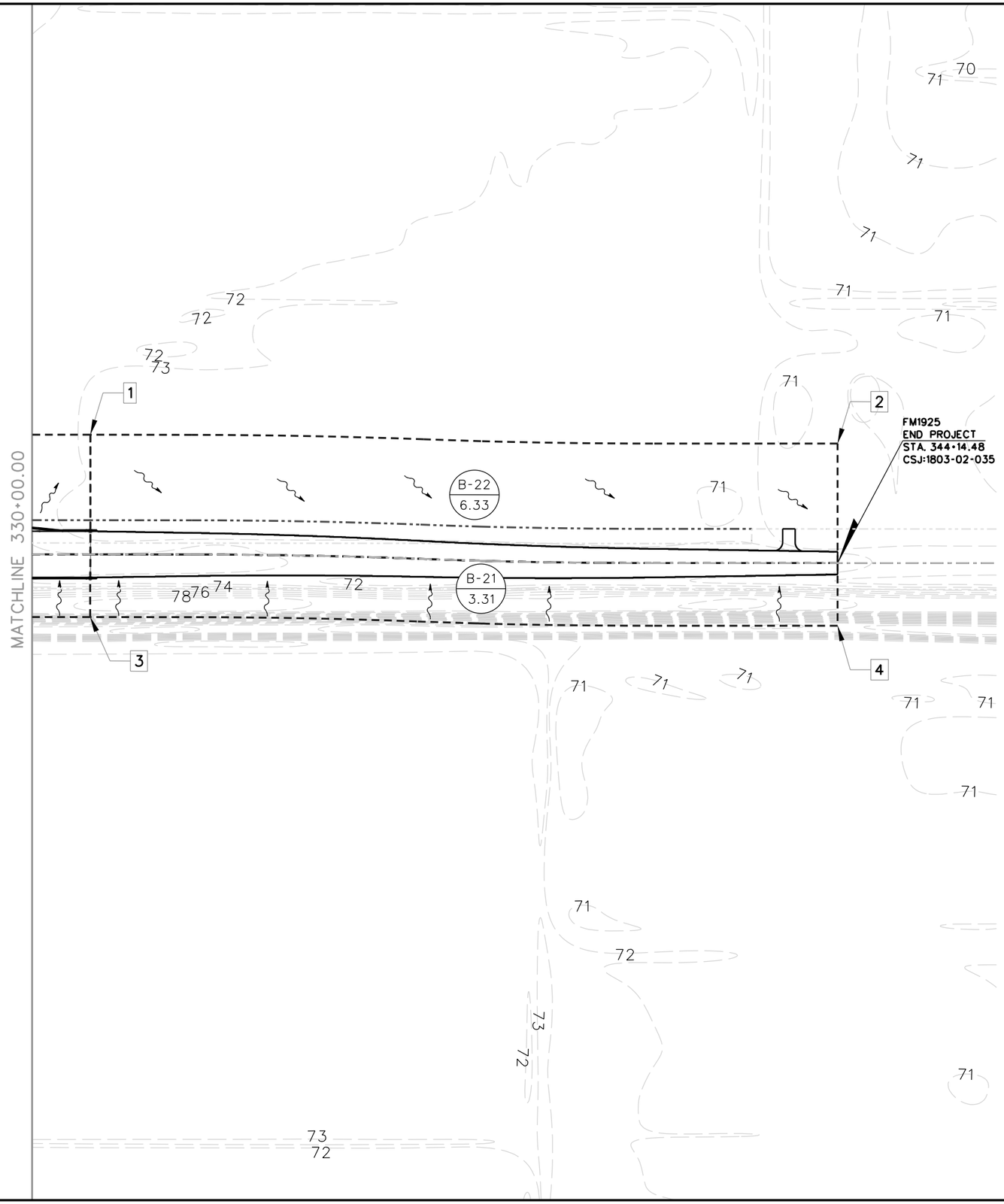
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		124
REVIEW:								
CK:								



LEGEND

- A-13 / 1.39 — DESIGNATION OF DRAINAGE AREA, AREA IN ACRES
- DRAINAGE AREA BOUNDRARY
- XX — DRAINAGE STRUCTURE ID
- EXISTING FLOW DIRECTION
- PROPOSED STORM SEWER

DRAINAGE AREA LIMITS

I.D.	STATION	OFFSET
1	331+03	210' LT
2	344+15	210' LT
3	331+03	110' RT
4	344+15	110' RT

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(STORM DRAIN)

SCALE: 1"=200'

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CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:		PHR	HIDALGO	1803	02	035	125
REVIEW:	
CK:	

11/1/2023 K:\Counties\HID\FM 1925 PHR(907 to Uresti)\05 DRAINAGE\01 DA Map\DAM_04.dgn

RUNOFF COMPUTATIONS

AREA ID	TOTAL AREA (acres)	TOTAL SUBAREA 1 (acres)	Subarea 1 Description	Subarea 1 "C" Value	TOTAL SUBAREA 2	Subarea 2 Description	Subarea 2 "C" Value	TOTAL SUBAREA 3	Subarea 3 Description	Subarea 3 "C" Value	Total "C" Value	Tc (min)	Intensity (in/hr)	Discharge (ft/s)
A-01	1.55	0.31	Roadway/Pavement	0.90	1.23	Agricultural/Unimproved	0.20	0.00		0.00	0.34	22.71	4.39	2.32
A-02	0.81	0.31	Roadway/Pavement	0.90	0.50	Agricultural/Unimproved	0.20	0.00		0.00	0.47	10.72	6.20	2.36
A-03	1.45	0.29	Roadway/Pavement	0.90	1.15	Agricultural/Unimproved	0.20	0.00		0.00	0.34	21.86	4.48	2.22
A-04	0.76	0.29	Roadway/Pavement	0.90	0.47	Agricultural/Unimproved	0.20	0.00		0.00	0.47	10.00	6.36	2.27
A-05	1.93	0.39	Roadway/Pavement	0.90	1.54	Agricultural/Unimproved	0.20	0.00		0.00	0.34	20.79	4.60	3.03
A-06	1.01	0.39	Roadway/Pavement	0.90	0.62	Agricultural/Unimproved	0.20	0.00		0.00	0.47	10.00	6.36	3.02
A-07	1.02	0.37	Roadway/Pavement	0.90	0.65	Agricultural/Unimproved	0.20	0.00		0.00	0.46	19.87	4.71	2.20
A-08	0.54	0.27	Roadway/Pavement	0.90	0.27	Agricultural/Unimproved	0.20	0.00		0.00	0.55	10.65	6.22	1.84
A-09	2.35	0.53	Roadway/Pavement	0.90	1.82	Agricultural/Unimproved	0.20	0.00		0.00	0.36	24.22	4.24	3.57
A-10	0.85	0.33	Roadway/Pavement	0.90	0.52	Agricultural/Unimproved	0.20	0.00		0.00	0.47	11.61	6.01	2.40
A-11	2.69	0.61	Roadway/Pavement	0.90	2.08	Agricultural/Unimproved	0.20	0.00		0.00	0.36	30.74	3.71	3.58
A-12	0.88	0.34	Roadway/Pavement	0.90	0.54	Agricultural/Unimproved	0.20	0.00		0.00	0.47	11.41	6.05	2.52
A-13	3.08	0.63	Roadway/Pavement	0.90	2.45	Agricultural/Unimproved	0.20	0.00		0.00	0.34	25.88	4.09	4.32
A-14	1.01	0.39	Roadway/Pavement	0.90	0.62	Agricultural/Unimproved	0.20	0.00		0.00	0.47	10.27	6.30	2.99
A-15	3.23	0.18	Commercial	0.50	0.86	Roadway/Pavement	0.90	2.20	Agricultural/Unimproved	0.20	0.40	28.61	3.87	5.01
A-16	1.06	0.41	Roadway/Pavement	0.90	0.65	Agricultural/Unimproved	0.20	0.00		0.00	0.47	13.01	5.74	2.86
A-17	1.93	0.30	Commercial	0.50	0.40	Roadway/Pavement	0.90	1.24	Agricultural/Unimproved	0.20	0.39	25.74	4.10	3.09
A-18	0.64	0.25	Roadway/Pavement	0.90	0.39	Agricultural/Unimproved	0.20	0.00		0.00	0.47	10.00	6.36	1.90
A-19	1.62	0.95	Commercial	0.50	0.39	Roadway/Pavement	0.90	0.28	Agricultural/Unimproved	0.20	0.55	25.22	4.15	3.65
A-20	0.62	0.38	Commercial	0.50	0.13	Roadway/Pavement	0.90	0.11	Agricultural/Unimproved	0.20	0.53	21.74	4.50	1.47
A-21	1.26	0.49	Roadway/Pavement	0.90	0.78	Agricultural/Unimproved	0.20	0.00		0.00	0.47	11.04	6.13	3.64
A-22	1.62	0.58	Commercial	0.50	0.33	Roadway/Pavement	0.90	0.70	Agricultural/Unimproved	0.20	0.45	22.51	4.41	3.22
A-23	3.45	0.86	Roadway/Pavement	0.90	2.59	Agricultural/Unimproved	0.20	0.00		0.00	0.38	31.79	3.64	4.70
A-24	1.13	0.50	Roadway/Pavement	0.90	0.63	Agricultural/Unimproved	0.20	0.00		0.00	0.51	13.43	5.66	3.26

NOTES:

1. CALCULATIONS MADE BY "GEOPAK DRAINAGE" HYDRAULIC COMPUTER PROGRAM.
2. ALLOWABLE PONDING WIDTH = 22' AS PER TXDOT BRIDGE DIVISION HYDRAULIC MANUAL
3. SEWER CALCULATIONS BASED ON MANNING'S FORMULA.
4. RAINFALL FREQUENCY = 5 YR.
5. DRAINAGE AREA FLOWS DETERMINED BY THE RATIONAL METHOD:

   $Q = C \times I \times A$

   Q = RATE OF RUNOFF (CFS)
   C = RATE OF RUNOFF (CFS)
   I = AVERAGE RAINFALL INTENSITY (IN/HR)
   A = DRAINAGE AREA (AC)

RUNOFF COMPUTATIONS

AREA ID	TOTAL AREA (acres)	TOTAL SUBAREA 1 (acres)	Subarea 1 Description	Subarea 1 "C" Value	TOTAL SUBAREA 2	Subarea 2 Description	Subarea 2 "C" Value	TOTAL SUBAREA 3	Subarea 3 Description	Subarea 3 "C" Value	Total "C" Value	Tc (min)	Intensity (in/hr)	Discharge (ft/s)
B-01	1.10	0.43	Roadway/Pavement	0.90	0.67	Agricultural/Unimproved	0.20	0.00		0.00	0.47	12.94	5.75	2.98
B-02	2.10	0.42	Roadway/Pavement	0.90	1.68	Agricultural/Unimproved	0.20	0.00		0.00	0.34	22.95	4.37	3.13
B-03	1.33	0.27	Roadway/Pavement	0.90	1.06	Agricultural/Unimproved	0.20	0.00		0.00	0.34	22.29	4.44	2.01
B-04	1.80	0.70	Roadway/Pavement	0.90	1.11	Agricultural/Unimproved	0.20	0.00		0.00	0.47	12.85	5.77	4.89
B-05	0.96	0.20	Roadway/Pavement	0.90	0.77	Agricultural/Unimproved	0.20	0.00		0.00	0.34	20.08	4.68	1.54
B-06	1.15	0.23	Roadway/Pavement	0.90	0.92	Agricultural/Unimproved	0.20	0.00		0.00	0.34	21.71	4.50	1.77
B-07	0.54	0.21	Roadway/Pavement	0.90	0.33	Agricultural/Unimproved	0.20	0.00		0.00	0.47	11.20	6.10	1.55
B-08	0.99	0.26	Roadway/Pavement	0.90	0.73	Agricultural/Unimproved	0.20	0.00		0.00	0.39	20.60	4.62	1.77
B-09	0.60	0.23	Roadway/Pavement	0.90	0.37	Agricultural/Unimproved	0.20	0.00		0.00	0.47	10.33	6.29	1.76
B-10	1.07	0.60	Commercial	0.50	0.30	Roadway/Pavement	0.90	0.17	Agricultural/Unimproved	0.20	0.57	20.87	4.59	2.79
FGB-01	0.28	0.11	Roadway/Pavement	0.90	0.17	Agricultural/Unimproved	0.20	0.00		0.00	0.47	20.26	4.66	0.62
B-11	0.76	0.29	Roadway/Pavement	0.90	0.47	Agricultural/Unimproved	0.20	0.00		0.00	0.47	11.35	6.06	2.16
B-12	1.45	0.83	Commercial	0.50	0.29	Roadway/Pavement	0.90	0.32	Agricultural/Unimproved	0.20	0.52	22.67	4.40	3.27
B-13	1.08	0.42	Roadway/Pavement	0.90	0.67	Agricultural/Unimproved	0.20	0.00		0.00	0.47	11.68	6.00	3.05
B-14	2.07	0.42	Roadway/Pavement	0.90	1.65	Agricultural/Unimproved	0.20	0.00		0.00	0.34	22.03	4.46	3.15
B-15	0.43	0.20	Roadway/Pavement	0.90	0.23	Agricultural/Unimproved	0.20	0.00		0.00	0.53	10.00	6.36	1.43
B-16	0.82	0.17	Roadway/Pavement	0.90	0.65	Agricultural/Unimproved	0.20	0.00		0.00	0.34	20.55	4.63	1.30
B-17	0.52	0.23	Roadway/Pavement	0.90	0.29	Agricultural/Unimproved	0.20	0.00		0.00	0.51	10.00	6.36	1.67
B-18	0.99	0.20	Roadway/Pavement	0.90	0.70	Agricultural/Unimproved	0.20	0.09	Residential (Single-Family)	0.40	0.36	21.87	4.48	1.59
B-19	0.78	0.30	Roadway/Pavement	0.90	0.48	Agricultural/Unimproved	0.20	0.00		0.00	0.47	12.03	5.92	2.18
B-20	1.49	0.47	Roadway/Pavement	0.90	0.74	Agricultural/Unimproved	0.20	0.28	Residential (Single-Family)	0.40	0.46	23.84	4.28	2.93
B-21	3.31	0.91	Roadway/Pavement	0.90	2.40	Agricultural/Unimproved	0.20	0.00		0.00	0.39	41.53	3.09	4.01
B-22	6.33	0.98	Roadway/Pavement	0.90	4.83	Agricultural/Unimproved	0.20	0.52	Residential (Single-Family)	0.40	0.32	53.34	2.62	5.38

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FM 1925
HYDRAULIC CALCULATION

SHEET 1 OF 5

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		126
REVIEW:								
CK:								

NETWORK "A"

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 Actual (ft)	Max Ponded Depth (ft)	Computed Ponded Depth	Max Ponded Width (ft)	Computed Ponded Width	Ponded Width Right (ft)	Ponded Width Left (ft)
A-01	Curb and Grate	On Grade	264+70.97	2.32	2.31	0.50	0.02	0.00	A-03	9.50	0.50	0.29	22.00	9.72	n/a	n/a
A-02	Curb and Grate	On Grade	264+70.97	2.36	2.34	0.50	0.02	0.00	A-04	9.50	0.50	0.29	22.00	9.78	n/a	n/a
A-03	Curb and Grate	On Grade	267+70.97	2.23	2.22	0.50	0.02	0.02	A-05	9.50	0.50	0.29	22.00	9.57	n/a	n/a
A-04	Curb and Grate	On Grade	267+70.97	2.29	2.27	0.50	0.02	0.02	A-06	9.50	0.50	0.29	22.00	9.66	n/a	n/a
A-05	Curb and Grate	Sag	269+70.97	3.08	17.80	0.50	0.00	0.05		14.00	0.50	0.41	22.00	14.38	9.47	8.40
A-06	Curb and Grate	Sag	269+70.97	3.05	17.80	0.50	0.00	0.03		14.00	0.50	0.40	22.00	14.29	9.44	8.37
A-07	Curb and Grate	On Grade	271+70.97	2.20	2.16	0.50	0.03	0.00	A-05	9.50	0.50	0.26	22.00	8.43	n/a	n/a
A-08	Curb and Grate	On Grade	271+70.97	1.84	1.82	0.50	0.02	0.00	A-06	9.50	0.50	0.24	22.00	7.84	n/a	n/a
MHA-01	Junction	On Grade	274+45.33	2.48	2.47	0.50	0.00	0.00		n/a	0.50	0.32	22.00	10.83	n/a	n/a
A-09	Curb and Grate	On Grade	277+19.70	3.57	3.38	0.50	0.19	0.00	A-11	9.50	0.50	0.30	22.00	10.18	n/a	n/a
A-10	Curb and Grate	On Grade	277+19.70	2.40	2.35	0.50	0.05	0.00	A-12	9.50	0.50	0.26	22.00	8.69	n/a	n/a
A-11	Curb and Grate	On Grade	280+69.70	3.76	3.69	0.50	0.07	0.19	A-13	9.50	0.50	0.36	22.00	12.65	n/a	n/a
A-12	Curb and Grate	On Grade	280+69.70	2.57	2.55	0.50	0.02	0.05	A-14	9.50	0.50	0.32	22.00	10.90	n/a	n/a
A-13	Curb and Grate	Sag	282+69.70	4.59	17.80	0.50	0.00	0.27		14.00	0.50	0.53	22.00	19.31	11.94	11.94
A-14	Curb and Grate	Sag	282+69.70	3.03	17.80	0.50	0.00	0.04		14.00	0.50	0.40	22.00	14.22	10.15	10.15
A-15	Curb and Grate	On Grade	284+69.70	5.08	4.89	0.50	0.19	0.00	A-13	9.50	0.50	0.40	22.00	14.21	n/a	n/a
A-16	Curb and Grate	On Grade	284+69.70	2.86	2.83	0.50	0.03	0.00	A-14	9.50	0.50	0.33	22.00	11.37	n/a	n/a
MHA-02	Junction	On Grade	288+30.22	2.48	2.47	0.50	0.00	0.00		n/a	0.50	0.32	22.00	10.83	n/a	n/a
A-17	Curb and Grate	On Grade	291+40.74	3.21	3.15	0.50	0.06	0.00	A-20	9.50	0.50	0.33	22.00	11.24	n/a	n/a
A-18	Curb and Grate	On Grade	291+40.74	1.90	1.90	0.50	0.00	0.00	A-21	9.50	0.50	0.27	22.00	9.14	n/a	n/a
A-19	Curb and Grate	On Grade	293+50.74	3.99	3.95	0.50	0.04	0.00	A-20	9.50	0.50	0.41	22.00	14.53	n/a	n/a
A-20	Curb and Grate	Sag	293+90.74	1.87	17.80	0.50	0.00	0.26		14.00	0.50	0.29	22.00	9.78	7.90	8.37
A-21	Curb and Grate	Sag	293+90.74	3.69	17.80	0.50	0.00	0.05		14.00	0.50	0.46	22.00	16.45	10.36	10.97
A-22	Curb and Grate	On Grade	294+30.74	3.46	3.45	0.50	0.01	0.00	A-20	9.50	0.50	0.41	22.00	14.74	n/a	n/a
A-23	Curb and Grate	On Grade	296+40.74	4.70	4.55	0.50	0.15	0.00	A-20	9.50	0.50	0.39	22.00	13.79	n/a	n/a
A-24	Curb and Grate	On Grade	296+40.74	3.26	3.22	0.50	0.04	0.00	A-21	9.50	0.50	0.35	22.00	11.96	n/a	n/a
MHA-03	Junction	On Grade	300+95.00	2.48	2.47	0.50	0.00	0.00		n/a	0.50	0.32	22.00	10.83	n/a	n/a
OUT-A	Outlet	On Grade	301+10.00	2.48	2.47	0.50	0.00	0.00		n/a	0.50	0.32	22.00	10.83	n/a	n/a

NOTES:

1. CALCULATIONS MADE BY "GEOPAK DRAINAGE" HYDRAULIC COMPUTER PROGRAM.
2. ALLOWABLE PONDING WIDTH = 22' AS PER TXDOT BRIDGE DIVISION HYDRAULIC MANUAL
3. SEWER CALCULATIONS BASED ON MANNING'S FORMULA.
4. RAINFALL FREQUENCY = 5 YR.

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.)	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)
A-01	PCU10L-3x5	264+70.97	-42.00	77.05	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.440	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-02	PCU10R-3x5	264+70.97	42.00	77.05	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.440	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-03	PCU10L-4x5	267+70.97	-42.00	75.73	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.440	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-04	PCU10R-3x5	267+70.97	42.00	75.73	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.440	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-05	PCU15-4x5	269+70.97	-42.00	75.01	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.028	n/a	14.00	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-06	PCU15-3x5	269+70.97	42.00	75.01	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.028	n/a	14.00	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-07	PCU10R-4x5	271+70.97	-42.00	76.09	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.800	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-08	PCU10L-3x5	271+70.97	42.00	76.09	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.031	0.800	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
MHA-01	MH4x4JB	274+45.33	-45.00	77.16	Junction	On Grade	5.560	1.50	2.500	40.50	0.029	0.393	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
A-09	PCU10L-4x5	277+19.70	-42.00	74.64	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.821	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-10	PCU10R-3x5	277+19.70	42.00	74.64	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.821	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-11	PCU10L-4x5	280+69.70	-42.00	73.25	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.029	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-12	PCU10R-3x5	280+69.70	42.00	73.25	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.029	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-13	PCU15-4x5	282+69.70	-42.00	72.80	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.027	n/a	14.00	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-14	PCU15-3x5	282+69.70	42.00	72.80	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.028	n/a	14.00	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-15	PCU10R-5x5	284+69.70	-42.00	73.25	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.028	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-16	PCU10L-3x5	284+69.70	42.00	73.25	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.029	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
MHA-02	MH6X6JB	288+30.22	-46.00	74.31	Junction	On Grade	5.560	1.50	2.500	40.50	0.029	0.194	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
A-17	PCU10L-6x5	291+40.74	-42.00	73.57	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.029	0.400	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-18	PCU10R-3x5	291+40.74	42.00	73.57	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.400	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-19	PCU10L-6x5	293+50.74	-42.00	72.81	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.028	0.165	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-20	PCU15-6x5	293+90.74	-42.00	72.77	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.030	n/a	14.00	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-21	PCU15-3x5	293+90.74	42.00	72.77	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.028	n/a	14.00	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-22	PCU10R-6x5	294+30.74	-42.00	72.79	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.028	0.115	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-23	PCU10R-6x5	296+40.74	-42.00	73.37	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.028	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
A-24	PCU10L-3x5	296+40.74	-42.00	73.37	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.029	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
MHA-03	MH6X6JB	300+95.00	-46.00	74.58	Junction	On Grade	5.560	1.50	2.500	40.50	0.029	0.031	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
OUT-A	OUTLET	301+10.00	-130.00	74.57	Outlet	On Grade	5.560	1.50	2.500	40.50	0.029	0.000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Structural / Bridge
Environmental
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STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

FM 1925
HYDRAULIC CALCULATION
NETWORK "A"

SHEET 2 OF 5

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		127
REVIEW:	
CK:	

11/1/2023 K:\Counties\HID\FM 1925 PHII (907 to Ureste)\05 DRAINAGE\02 HydraulicData\FM1925_HYD_DATA.dgn

NETWORK "A"

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)
LA-01	Pipe	A-02	A-01	Concrete	18 Inch Dia. Circular	1.00	80.50	83.50	0.012	0.100	1.50	n/a	74.05	73.97	72.55	72.47
LA-02	Pipe	A-01	A-03	Concrete	24 Inch Dia. Circular	1.00	295.00	300.00	0.012	0.440	2.00	n/a	73.47	72.15	71.47	70.15
LA-03	Pipe	A-04	A-03	Concrete	18 Inch Dia. Circular	1.00	79.50	83.00	0.012	0.101	1.50	n/a	72.73	72.65	71.23	71.15
LA-04	Pipe	A-03	A-05	Concrete	30 Inch Dia. Circular	1.00	195.00	200.00	0.012	0.362	2.50	n/a	72.15	71.42	69.65	68.92
LA-05	Pipe	A-06	A-05	Concrete	18 Inch Dia. Circular	1.00	79.50	83.00	0.012	0.100	1.50	n/a	72.01	71.92	70.51	70.42
LA-06	Pipe	A-05	A-07	Concrete	30 Inch Dia. Circular	1.00	195.00	200.00	0.012	0.148	2.50	n/a	71.42	71.13	68.92	68.63
LA-07	Pipe	A-08	A-07	Concrete	18 Inch Dia. Circular	1.00	79.50	83.00	0.012	0.250	1.50	n/a	71.93	71.72	70.43	70.22
LA-08	Pipe	A-07	MHA-01	Concrete	30 Inch Dia. Circular	1.00	269.89	274.39	0.012	0.148	2.50	n/a	71.13	70.72	68.63	68.22
LA-09	Pipe	MHA-01	A-09	Concrete	30 Inch Dia. Circular	1.00	269.90	274.40	0.012	0.149	2.50	n/a	70.72	70.31	68.22	67.81
LA-10	Pipe	A-10	A-09	Concrete	18 Inch Dia. Circular	1.00	82.50	86.00	0.012	0.250	1.50	n/a	71.39	71.17	69.89	69.67
LA-11	Pipe	A-09	A-11	Concrete	36 Inch Dia. Circular	1.00	345.00	350.00	0.012	0.235	3.00	n/a	70.81	69.99	67.81	66.99
LA-12	Pipe	A-12	A-11	Concrete	18 Inch Dia. Circular	1.00	79.50	83.00	0.012	0.100	1.50	n/a	70.50	70.41	69.00	68.91
LA-13	Pipe	A-11	A-13	Concrete	36 Inch Dia. Circular	1.00	195.00	200.00	0.012	0.250	3.00	n/a	69.99	69.49	66.99	66.49
LA-14	Pipe	A-14	A-13	Concrete	18 Inch Dia. Circular	1.00	79.50	83.00	0.012	0.100	1.50	n/a	70.30	70.21	68.80	68.71
LA-15	Pipe	A-13	A-15	Concrete	36 Inch Dia. Circular	1.00	195.00	200.00	0.012	0.144	3.00	n/a	69.50	69.21	66.50	66.21
LA-16	Pipe	A-16	A-15	Concrete	18 Inch Dia. Circular	1.00	78.50	82.50	0.012	0.250	1.50	n/a	67.92	67.71	66.42	66.21
LA-17	Pipe	A-15	MHA-02	Concrete	42 Inch Dia. Circular	1.00	355.06	360.56	0.012	0.100	3.50	n/a	69.71	69.35	66.21	65.85
LA-18	Pipe	MHA-02	A-17	Concrete	48 Inch Dia. Circular	1.00	305.07	310.57	0.012	0.100	4.00	n/a	69.85	69.54	65.85	65.54
LA-19	Pipe	A-18	A-17	Concrete	18 Inch Dia. Circular	1.00	77.50	82.00	0.012	0.250	1.50	n/a	69.75	69.54	68.25	68.04
LA-20	Pipe	A-17	A-19	Concrete	48 Inch Dia. Circular	1.00	205.00	210.00	0.012	0.100	4.00	n/a	69.54	69.33	65.54	65.33
LA-21	Pipe	A-19	A-20	Concrete	48 Inch Dia. Circular	1.00	35.00	40.00	0.012	0.100	4.00	n/a	69.33	69.29	65.33	65.29
LA-22	Pipe	A-21	A-20	Concrete	18 Inch Dia. Circular	1.00	77.50	82.00	0.012	0.250	1.50	n/a	69.50	69.29	68.00	67.79
LA-23	Pipe	A-20	A-22	Concrete	48 Inch Dia. Circular	1.00	35.00	40.00	0.012	0.100	4.00	n/a	69.29	69.25	65.29	65.25
LA-24	Pipe	A-22	A-23	Concrete	48 Inch Dia. Circular	1.00	205.00	210.00	0.012	0.100	4.00	n/a	69.25	69.04	65.25	65.04
LA-25	Pipe	A-24	A-23	Concrete	18 Inch Dia. Circular	1.00	77.50	82.00	0.012	0.250	1.50	n/a	69.25	69.04	67.75	67.54
LA-26	Pipe	A-23	MHA-03	Concrete	54 Inch Dia. Circular	1.00	448.84	454.34	0.012	0.100	4.50	n/a	69.04	68.59	64.54	64.09
LA-27	Pipe	MHA-03	OUT-A	Concrete	54 Inch Dia. Circular	1.00	82.38	85.38	0.012	0.100	4.50	n/a	68.59	68.50	64.09	64.00

NOTES:

1. CALCULATIONS MADE BY "GEOPAK DRAINAGE" HYDRAULIC COMPUTER PROGRAM.
2. ALLOWABLE PONDING WIDTH = 22' AS PER TXDOT BRIDGE DIVISION HYDRAULIC MANUAL
3. SEWER CALCULATIONS BASED ON MANNING'S FORMULA.
4. RAINFALL FREQUENCY = 5 YR.

LINK HYDRAULICS

Link ID	Upstream Node	Downstream Node	Discharge (ft³/s)	Capacity (ft³/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)
LA-01	A-02	A-01	2.36	3.87	0.88	2.19	0.58	3.73	0.004	0.001	1.34	1.34	1.50	1.50	74.94	74.88	74.97	74.90
LA-02	A-01	A-03	4.00	17.49	0.68	4.29	0.70	4.07	0.004	0.004	1.27	1.27	2.00	2.00	74.88	74.76	74.90	74.80
LA-03	A-04	A-03	2.27	3.88	0.88	2.10	0.57	3.69	0.004	0.001	1.28	1.28	1.50	1.50	74.82	74.76	74.85	74.80
LA-04	A-03	A-05	7.53	28.76	0.91	4.68	0.91	4.65	0.004	0.004	1.53	1.53	2.50	2.50	74.76	74.14	74.80	74.24
LA-05	A-06	A-05	3.02	3.87	1.06	2.27	0.66	4.03	0.004	0.001	1.71	1.71	1.50	1.50	74.25	74.14	74.29	74.24
LA-06	A-05	A-07	12.18	18.36	1.54	3.84	1.17	5.40	0.004	0.002	2.48	2.48	2.50	2.50	74.14	73.86	74.24	74.01
LA-07	A-08	A-07	1.84	6.12	0.58	2.89	0.51	3.47	0.004	0.003	1.04	1.04	1.50	1.50	73.90	73.86	73.92	74.01
LA-08	A-07	MHA-01	15.09	18.36	1.83	3.91	1.31	5.79	0.004	0.001	3.08	3.08	2.50	2.50	73.86	73.39	74.01	73.53
LA-09	MHA-01	A-09	15.09	18.48	1.83	3.91	1.31	5.79	0.004	0.001	3.08	3.08	2.50	2.50	73.39	73.06	73.53	73.18
LA-10	A-10	A-09	2.40	6.12	0.68	3.07	0.59	3.75	0.004	0.002	1.36	1.36	1.50	1.50	73.13	73.06	73.16	73.18
LA-11	A-09	A-11	19.24	37.71	1.58	5.08	1.41	5.91	0.004	0.002	2.72	2.72	3.00	3.00	73.06	72.20	73.18	72.37
LA-12	A-12	A-11	2.52	3.87	0.92	2.20	0.60	3.80	0.004	0.001	1.42	1.42	1.50	1.50	72.27	72.20	72.31	72.37
LA-13	A-11	A-13	23.27	38.86	1.76	5.40	1.55	6.30	0.004	0.002	3.29	3.29	3.00	3.00	72.20	71.88	72.37	72.14
LA-14	A-14	A-13	2.99	3.87	1.06	2.25	0.66	4.02	0.004	0.001	1.69	1.69	1.50	1.50	71.98	71.88	72.03	72.14
LA-15	A-13	A-15	28.61	29.45	2.82	4.15	1.73	6.77	0.004	0.001	4.05	4.05	3.00	3.00	71.88	71.38	72.14	71.58
LA-16	A-16	A-15	2.86	6.12	0.75	3.25	0.64	3.96	0.004	0.003	1.62	1.62	1.50	1.50	71.47	71.38	71.51	71.58
LA-17	A-15	MHA-02	34.73	37.07	2.88	4.11	1.83	6.84	0.004	0.001	3.61	3.61	3.50	3.50	71.38	70.29	71.58	70.40
LA-18	MHA-02	A-17	34.73	52.94	2.46	4.28	1.75	6.55	0.003	0.001	2.76	2.76	4.00	4.00	70.29	70.12	70.40	70.25
LA-19	A-18	A-17	1.90	6.12	0.59	2.92	0.52	3.50	0.004	0.003	1.08	1.08	1.50	1.50	70.16	70.12	70.18	70.25
LA-20	A-17	A-19	36.82	52.94	2.58	4.29	1.81	6.68	0.003	0.001	2.93	2.93	4.00	4.00	70.12	69.85	70.25	70.00
LA-21	A-19	A-20	39.57	52.94	2.82	4.19	1.88	6.83	0.003	0.001	3.15	3.15	4.00	4.00	69.85	69.82	70.00	70.00
LA-22	A-21	A-20	3.64	6.12	0.88	3.38	0.73	4.27	0.005	0.002	2.06	2.06	1.50	1.50	69.97	69.82	70.03	70.00
LA-23	A-20	A-22	42.68	52.94	2.82	4.51	1.95	7.00	0.003	0.001	3.40	3.40	4.00	4.00	69.82	69.73	70.00	69.93
LA-24	A-22	A-23	45.21	52.94	3.05	4.40	2.01	7.14	0.003	0.001	3.60	3.60	4.00	4.00	69.73	69.55	69.93	69.71
LA-25	A-24	A-23	3.26	6.12	0.81	3.33	0.69	4.13	0.004	0.002	1.84	1.84	1.50	1.50	69.67	69.55	69.72	69.71
LA-26	A-23	MHA-03	50.84	72.47	2.90	4.68	2.06	7.15	0.003	0.001	3.20	3.20	4.50	4.50	69.55	68.71	69.71	68.87
LA-27	MHA-03	OUT-A	50.84	72.47	2.90	4.68	2.06	7.15	0.003	0.001	3.20	3.20	4.50	4.50	68.71	68.50	68.87	68.66

STATE OF TEXAS
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127491
LICENSED
PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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Highway / Civil
Structural / Bridge
Environmental
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FM 1925
HYDRAULIC CALCULATION
NETWORK "A"

SHEET 3 OF 5

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:		PHR	HIDALGO	1803	02	035	128
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHII\907 to Urest\05 DRAINAGE\02 HydraulicData\FM1925_HYD_DATA.dgn

NETWORK "B"

NOTES:

1. CALCULATIONS MADE BY "GEOPAK DRAINAGE" HYDRAULIC COMPUTER PROGRAM.
2. ALLOWABLE PONDING WIDTH = 22' AS PER TXDOT BRIDGE DIVISION HYDRAULIC MANUAL
3. SEWER CALCULATIONS BASED ON MANNING'S FORMULA.
4. RAINFALL FREQUENCY = 5 YR.

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)	Ponded Width Right (ft)	Ponded Width Left (ft)
OUT-B	Outlet	On Grade	301+30.00	2.48	2.47	0.50	0.00	0.00		6.87	n/a	0.50	0.32	22	10.83	n/a	n/a
MHB-01	Junction	On Grade	301+45.00	2.48	2.47	0.50	0.00	0.00		6.87	n/a	0.50	0.32	22	10.83	n/a	n/a
B-01	Curb and Grate	On Grade	305+25.00	2.98	2.95	0.50	0.03	0.00	B-04	n/a	9.50	0.50	0.34	22	11.55	n/a	n/a
B-02	Curb and Grate	On Grade	305+25.00	3.13	3.10	0.50	0.04	0.00	B-03	n/a	9.50	0.50	0.34	22	11.78	n/a	n/a
B-03	Curb and Grate	On Grade	308+00.00	2.05	2.04	0.50	0.00	0.04	B-05	n/a	9.50	0.50	0.30	22	9.97	n/a	n/a
B-04	Curb and Grate	Sag	309+00.00	4.92	17.80	0.50	0.00	0.03		n/a	14.00	0.50	0.55	22	20.32	12.27	12.27
B-05	Curb and Grate	Sag	309+00.00	1.55	17.80	0.50	0.00	0.00		n/a	14.00	0.50	0.26	22	8.41	7.76	7.76
B-06	Curb and Grate	On Grade	310+00.00	1.77	1.77	0.50	0.00	0.00	B-05	n/a	9.50	0.50	0.28	22	9.41	n/a	n/a
B-07	Curb and Grate	On Grade	312+38.50	1.55	1.55	0.50	0.00	0.00	B-04	n/a	9.50	0.50	0.27	22	8.93	n/a	n/a
B-08	Curb and Grate	On Grade	312+38.50	1.77	1.76	0.50	0.00	0.00	B-06	n/a	9.50	0.50	0.28	22	9.40	n/a	n/a
FGB-01	Other	On Grade	314+38.00	1.67	1.67	0.50	0.00	0.00		5.10	n/a	0.50	0.30	6	9.97	n/a	n/a
JBB-01	Junction	On Grade	314+38.00	1.67	1.67	0.50	0.00	0.00		5.10	n/a	0.50	0.30	22	9.97	n/a	n/a
B-09	Curb and Grate	On Grade	316+88.50	1.76	1.76	0.50	0.00	0.00	B-11	n/a	9.50	0.50	0.28	22	9.39	n/a	n/a
B-10	Curb and Grate	On Grade	316+88.50	2.79	2.77	0.50	0.02	0.00	B-12	n/a	9.50	0.50	0.33	22	11.26	n/a	n/a
B-11	Curb and Grate	On Grade	319+88.50	2.16	2.16	0.50	0.01	0.00	B-13	n/a	9.50	0.50	0.30	22	10.19	n/a	n/a
B-12	Curb and Grate	On Grade	319+88.50	3.30	3.25	0.50	0.05	0.02	B-14	n/a	9.50	0.50	0.35	22	12.02	n/a	n/a
B-13	Curb and Grate	Sag	321+88.50	3.06	17.80	0.50	0.00	0.01		n/a	14.00	0.50	0.40	22	14.31	10.19	10.19
B-14	Curb and Grate	Sag	321+88.50	3.20	17.80	0.50	0.00	0.05		n/a	14.00	0.50	0.42	22	14.79	10.37	10.37
B-15	Curb and Grate	On Grade	324+17.25	1.43	1.43	0.50	0.00	0.00	B-13	n/a	9.50	0.50	0.26	22	8.65	n/a	n/a
B-16	Curb and Grate	On Grade	324+17.25	1.30	1.30	0.50	0.00	0.00	B-14	n/a	9.50	0.50	0.25	22	8.31	n/a	n/a
B-17	Curb and Grate	On Grade	327+92.25	1.67	1.67	0.50	0.00	0.00	B-19	n/a	9.50	0.50	0.30	22	9.97	n/a	n/a
B-18	Curb	On Grade	327+92.25	1.59	1.59	0.50	0.00	0.00	B-20	4.97	9.50	0.50	0.29	22	9.78	n/a	n/a
MHB-02	Junction	On Grade	329+05.25	1.67	1.67	0.50	0.00	0.00		5.10	n/a	0.50	0.30	22	9.97	n/a	n/a
B-19	Curb and Grate	Sag	331+02.25	2.18	14.14	0.00	0.00	0.00		n/a	9.50	0.50	0.32	22	11.05	0.00	0.00
B-20	Curb	On Grade	331+02.25	2.93	2.93	0.00	0.00	0.00	B-19	6.81	9.50	0.50	0.36	22	12.42	n/a	n/a

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.)	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)
OUT-B	OUTLET	301+30.00	-130.00	74.55	Outlet	On Grade	5.560	1.50	2.500	40.50	0.029	0.000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MHB-01	MH6X6JB	301+45.00	-46.00	74.52	Junction	On Grade	5.560	1.50	2.500	40.50	0.029	0.206	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
B-02	PCU10L-5x5	305+25.00	-42.00	73.28	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.029	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-01	PCU10R-3x5	305+25.00	42.00	73.28	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.029	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-03	PCU10L-5x5	308+00.00	-42.00	72.45	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-05	PCU15-5x5	309+00.00	-42.00	72.30	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.030	n/a	14.00	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-04	PCU15-3x5	309+00.00	42.00	72.30	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.027	n/a	14.00	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-06	PCU10R-5x5	310+00.00	-42.00	72.45	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-08	PCU10R-4x5	312+38.50	-42.00	73.17	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-07	PCU10L-3x5	312+38.50	42.00	73.17	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
JBB-01	4x4JB	314+38.00	-40.75	73.16	Junction	On Grade	5.560	1.50	2.500	40.50	0.030	0.045	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FGB-01P	AZD FG 3x3-3	314+38.00	-130.00	71.50	Other	On Grade	25.000	6.00	0.000	0.00	0.030	0.001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
B-10	PCU10L-4x5	316+88.50	-42.00	73.11	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.029	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-09	PCU10R-3x5	316+88.50	42.00	73.11	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-12	PCU10L-4x5	319+88.50	-42.00	72.21	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.029	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-11	PCU10R-3x5	319+88.50	42.00	72.21	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-14	PCU15-4x5	321+88.50	-42.00	71.76	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.028	n/a	14.00	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-13	PCU15-3x5	321+88.50	42.00	71.76	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.028	n/a	14.00	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-16	PCU10R-4x5	324+17.25	-42.00	72.29	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.031	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-15	PCU10L-3x5	324+17.25	42.00	72.29	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.300	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
B-18	PCO10L-4x5	327+92.25	-42.00	72.39	Curb	On Grade	5.560	1.50	2.500	40.50	0.030	0.200	9.50	0.25	1.50	0.50	n/a	n/a	n/a	n/a
B-17	PCU10R-3x5	327+92.25	42.00	72.39	Curb and Grate	On Grade	5.560	1.50	2.500	40.50	0.030	0.200	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73
MHB-02	MH4x4JB	329+05.25	-44.25	71.67	Junction	On Grade	5.560	1.50	2.500	40.50	0.030	0.200	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
B-20	PCO10L-3x5	331+02.25	-42.00	71.77	Curb	On Grade	5.560	1.50	2.500	40.50	0.029	0.200	9.50	0.25	1.50	0.50	n/a	n/a	n/a	n/a
B-19	PCU10R-3x5	331+02.25	42.00	71.77	Curb and Grate	Sag	5.560	1.50	2.500	40.50	0.029	n/a	9.50	0.25	1.50	0.50	4.96	1.39	3.13	7.73

STATE OF TEXAS
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LICENSED
PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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Highway / Civil
Structural / Bridge
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FM 1925
HYDRAULIC CALCULATION
NETWORK "B"

SHEET 4 OF 5

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		129
REVIEW:								
CK:								

11/1/2023 K:\Counties\HID\FM 1925 PHII (907 to Ureste)\05 DRAINAGE\02 HydraulicData\FM1925_HYD_DATA.dgn

NETWORK "B"

NOTES:

1. CALCULATIONS MADE BY "GEOPAK DRAINAGE" HYDRAULIC COMPUTER PROGRAM.
2. ALLOWABLE PONDING WIDTH = 22' AS PER TXDOT BRIDGE DIVISION HYDRAULIC MANUAL
3. SEWER CALCULATIONS BASED ON MANNING'S FORMULA.
4. RAINFALL FREQUENCY = 5 YR.

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-01	Pipe	MHB-01	OUT-B	Concrete	42 Inch Dia. Circular	1.00	82.38	85.38	0.012	0.100	3.50	n/a	67.59	67.50	64.09	64.00
LB-02	Pipe	B-02	MHB-01	Concrete	42 Inch Dia. Circular	1.00	374.54	380.04	0.012	0.100	3.50	n/a	67.97	67.59	64.47	64.09
LB-03	Pipe	B-01	B-02	Concrete	18 Inch Dia. Circular	1.00	78.50	82.50	0.012	0.250	1.50	n/a	66.17	65.97	64.67	64.47
LB-04	Pipe	B-03	B-02	Concrete	42 Inch Dia. Circular	1.00	270.00	275.00	0.012	0.100	3.50	n/a	68.24	67.97	64.74	64.47
LB-05	Pipe	B-05	B-03	Concrete	42 Inch Dia. Circular	1.00	95.00	100.00	0.012	0.100	3.50	n/a	68.34	68.24	64.84	64.74
LB-06	Pipe	B-04	B-05	Concrete	18 Inch Dia. Circular	1.00	78.50	82.50	0.012	0.250	1.50	n/a	66.55	66.34	65.05	64.84
LB-07	Pipe	B-06	B-05	Concrete	42 Inch Dia. Circular	1.00	95.00	100.00	0.012	0.100	3.50	n/a	68.44	68.34	64.94	64.84
LB-08	Pipe	B-08	B-06	Concrete	36 Inch Dia. Circular	1.00	233.50	238.50	0.012	0.100	3.00	n/a	68.18	67.94	65.18	64.94
LB-09	Pipe	B-07	B-08	Concrete	18 Inch Dia. Circular	1.00	79.50	83.00	0.012	0.250	1.50	n/a	66.89	66.68	65.39	65.18
LB-10	Pipe	JBB-01	B-08	Concrete	36 Inch Dia. Circular	1.00	195.00	199.50	0.012	0.100	3.00	n/a	68.38	68.18	65.38	65.18
LB-11	Pipe	FGB-01	JBB-01	Concrete	24 Inch Dia. Circular	1.00	85.75	89.25	0.012	0.250	2.00	n/a	67.60	67.38	65.60	65.38
LB-12	Pipe	B-10	JBB-01	Concrete	36 Inch Dia. Circular	1.00	246.00	250.50	0.012	0.100	3.00	n/a	68.63	68.38	65.63	65.38
LB-13	Pipe	B-09	B-10	Concrete	18 Inch Dia. Circular	1.00	79.50	83.00	0.012	0.250	1.50	n/a	67.34	67.13	65.84	65.63
LB-14	Pipe	B-12	B-10	Concrete	36 Inch Dia. Circular	1.00	295.00	300.00	0.012	0.100	3.00	n/a	68.93	68.63	65.93	65.63
LB-15	Pipe	B-11	B-12	Concrete	18 Inch Dia. Circular	1.00	79.50	83.00	0.012	0.250	1.50	n/a	67.64	67.43	66.14	65.93
LB-16	Pipe	B-14	B-12	Concrete	30 Inch Dia. Circular	1.00	195.00	200.00	0.012	0.100	2.50	n/a	68.63	68.43	66.13	65.93
LB-17	Pipe	B-13	B-14	Concrete	18 Inch Dia. Circular	1.00	79.50	83.00	0.012	0.250	1.50	n/a	67.84	67.63	66.34	66.13
LB-18	Pipe	B-16	B-14	Concrete	30 Inch Dia. Circular	1.00	223.75	228.75	0.012	0.100	2.50	n/a	68.86	68.63	66.36	66.13
LB-19	Pipe	B-15	B-16	Concrete	18 Inch Dia. Circular	1.00	79.50	83.00	0.012	0.250	1.50	n/a	68.07	67.86	66.57	66.36
LB-20	Pipe	B-18	B-16	Concrete	30 Inch Dia. Circular	1.00	370.01	375.01	0.012	0.100	2.50	n/a	69.24	68.86	66.74	66.36
LB-21	Pipe	B-17	B-18	Concrete	18 Inch Dia. Circular	1.00	82.75	86.25	0.012	0.250	1.50	n/a	68.45	68.24	66.95	66.74
LB-22	Pipe	MHB-02	B-18	Concrete	30 Inch Dia. Circular	1.00	108.50	113.00	0.012	0.100	2.50	n/a	69.35	69.24	66.85	66.74
LB-23	Pipe	B-20	MHB-02	Concrete	24 Inch Dia. Circular	1.00	192.50	197.00	0.012	0.100	2.00	n/a	69.05	68.85	67.05	66.85
LB-24	Pipe	B-19	B-20	Concrete	18 Inch Dia. Circular	1.00	82.75	85.75	0.012	0.250	1.50	n/a	68.76	68.55	67.26	67.05

LINK HYDRAULICS

Link ID	Upstream Node	Downstream Node	Discharge (ft/s)	Capacity (ft/s)	Uniform Depth (ft)	Uniform Velocity	Critical Depth (ft)	Critical Velocity	Critical Slope (%)	Frict. Slope (%)	Actual Vel. U.S. (ft/s)	Actual Vel. D.S. (ft/s)	Actual Depth U.S.	Actual Depth D.S.	HGL U.S. (ft)	HGL D.S. (ft)	EGL U.S. (ft)	EGL D.S. (ft)
LB-01	MHB-01	OUT-B	31.19	37.08	2.67	3.96	1.73	6.59	0.003	0.001	3.24	3.24	3.50	3.50	68.74	68.50	68.90	68.66
LB-02	B-02	MHB-01	31.19	37.07	2.67	3.96	1.73	6.59	0.003	0.001	3.24	3.24	3.50	3.50	69.19	68.74	69.35	68.90
LB-03	B-01	B-02	2.98	6.12	0.77	3.26	0.66	4.00	0.004	0.003	1.68	1.68	1.50	1.50	69.29	69.19	69.33	69.35
LB-04	B-03	B-02	27.65	37.07	2.46	3.82	1.62	6.34	0.003	0.001	2.87	2.87	3.50	3.50	69.36	69.19	69.49	69.35
LB-05	B-05	B-03	26.30	37.07	2.26	4.01	1.58	6.24	0.003	0.001	2.73	2.73	3.50	3.50	69.44	69.36	69.56	69.49
LB-06	B-04	B-05	4.89	6.12	1.06	3.68	0.85	4.73	0.005	0.003	2.77	2.77	1.50	1.50	69.72	69.44	69.83	69.56
LB-07	B-06	B-05	22.46	37.08	2.05	3.83	1.46	5.94	0.003	0.001	2.33	2.33	3.50	3.50	69.49	69.44	69.58	69.56
LB-08	B-08	B-06	21.51	24.58	2.29	3.72	1.49	6.13	0.004	0.001	3.04	3.04	3.00	3.00	69.76	69.49	69.90	69.58
LB-09	B-07	B-08	1.55	6.12	0.54	2.72	0.47	3.30	0.004	0.002	0.88	0.88	1.50	1.50	69.78	69.76	69.79	69.90
LB-10	JBB-01	B-08	19.60	24.58	2.11	3.69	1.42	5.95	0.004	0.001	2.77	2.77	3.00	3.00	69.91	69.76	70.03	69.90
LB-11	FGB-01	JBB-01	0.62	13.18	0.31	2.01	0.26	2.51	0.005	0.002	0.20	0.20	2.00	2.00	69.92	69.91	69.91	70.03
LB-12	B-10	JBB-01	19.53	24.58	2.11	3.67	1.42	5.94	0.004	0.001	2.76	2.76	3.00	3.00	70.15	69.91	70.27	70.03
LB-13	B-09	B-10	1.76	6.12	0.57	2.84	0.50	3.42	0.004	0.003	1.00	1.00	1.50	1.50	70.19	70.15	70.20	70.27
LB-14	B-12	B-10	16.76	24.58	1.94	3.47	1.31	5.66	0.003	0.001	2.37	2.37	3.00	3.00	70.83	70.15	70.92	70.27
LB-15	B-11	B-12	2.16	6.12	0.64	3.02	0.56	3.63	0.004	0.003	1.22	1.22	1.50	1.50	70.89	70.83	70.91	70.92
LB-16	B-14	B-12	12.91	15.12	1.91	3.21	1.21	5.50	0.004	0.001	2.63	2.63	2.50	2.50	71.09	70.83	71.20	70.92
LB-17	B-13	B-14	3.05	6.12	0.78	3.28	0.67	4.04	0.004	0.003	1.73	1.73	1.50	1.50	71.20	71.09	71.24	71.20
LB-18	B-16	B-14	8.49	15.12	1.39	3.02	0.97	4.82	0.004	0.001	1.73	1.73	2.50	2.50	71.21	71.09	71.25	71.20
LB-19	B-15	B-16	1.43	6.12	0.52	2.65	0.45	3.23	0.004	0.002	0.81	0.81	1.50	1.50	71.23	71.21	71.24	71.25
LB-20	B-18	B-16	6.84	15.12	1.25	2.79	0.87	4.52	0.004	0.001	1.39	1.39	2.50	2.50	71.33	71.21	71.36	71.25
LB-21	B-17	B-18	1.67	6.12	0.56	2.77	0.49	3.37	0.004	0.002	0.95	0.95	1.50	1.50	71.36	71.33	71.37	71.36
LB-22	MHB-02	B-18	4.50	15.12	0.95	2.62	0.70	4.01	0.004	0.001	0.92	0.92	2.50	2.50	71.34	71.33	71.35	71.36
LB-23	B-20	MHB-02	4.50	8.34	1.12	2.50	0.75	4.22	0.004	0.001	1.43	1.43	2.00	2.00	71.45	71.34	71.48	71.35
LB-24	B-19	B-20	2.18	6.12	0.64	3.05	0.56	3.64	0.004	0.003	1.23	1.23	1.50	1.50	71.51	71.45	71.53	71.48

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED
PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

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Phone : (956) 565-9813
Fax : (956) 565-9018

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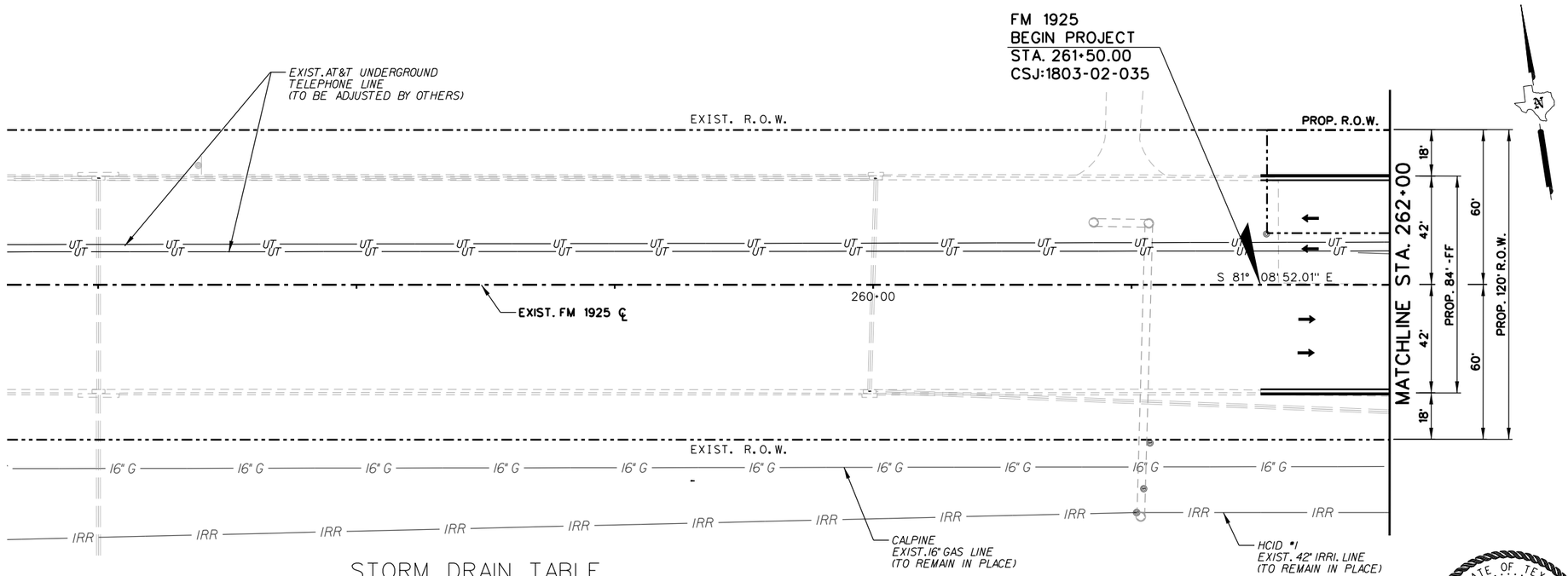
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

FM 1925
HYDRAULIC CALCULATION
NETWORK "B"

SHEET 5 OF 5

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		130
REVIEW:								
CK:								

11/1/2023 K:\Counties\HID\FM 1925 PHII(907 to Uresti)\05 DRAINAGE\02 HydraulicData\FM1925_HYD_DATA.dgn



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)

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

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

CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

INLET OFFSETS ARE TO FACE OF ROADWAY CURB. MANHOLE OFFSETS ARE TO CENTER OF PRECAST BASE. VERIFY ALL INFORMATION WITH HYDRAULIC DATA SHEETS FOR INLET LOCATIONS, ELEVATIONS, PIPE LENGTHS, FLOWLINES, ETC.

STATE OF TEXAS
JORDAN B. SINCLAIR
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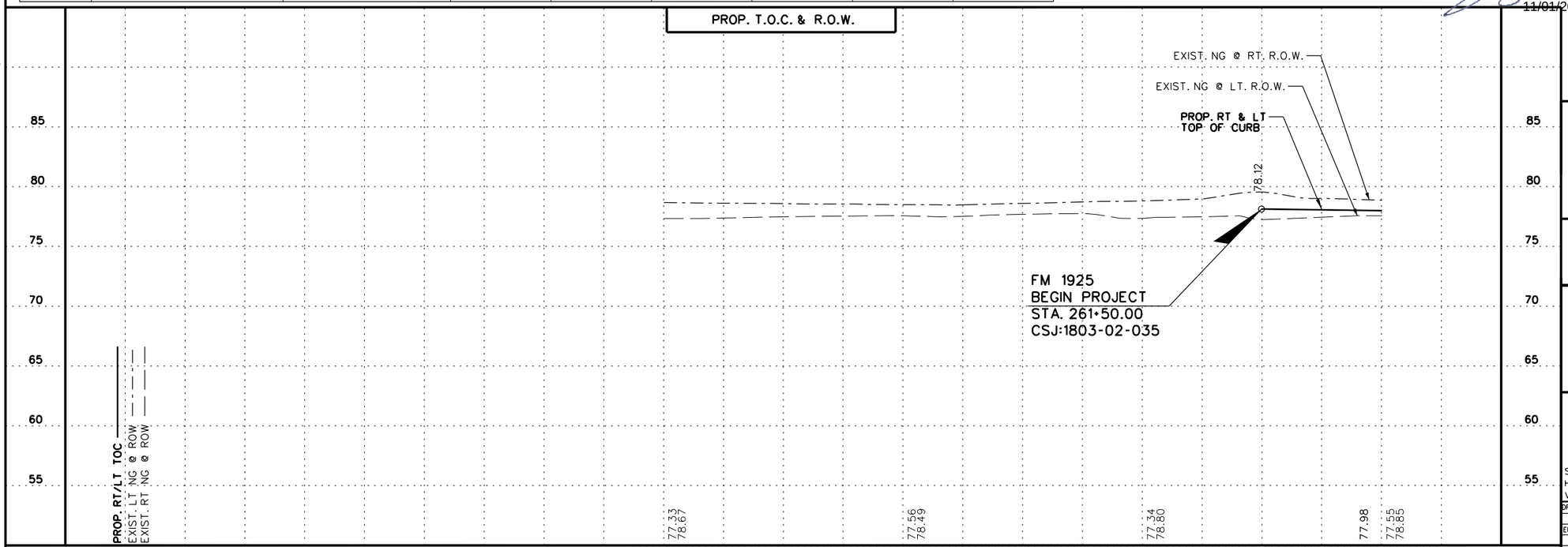
11/01/2023



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FM 1925
UTILITIES AND DRAINAGE
STA. 261+50 TO STA. 262+00

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

SHEET 1 OF 18

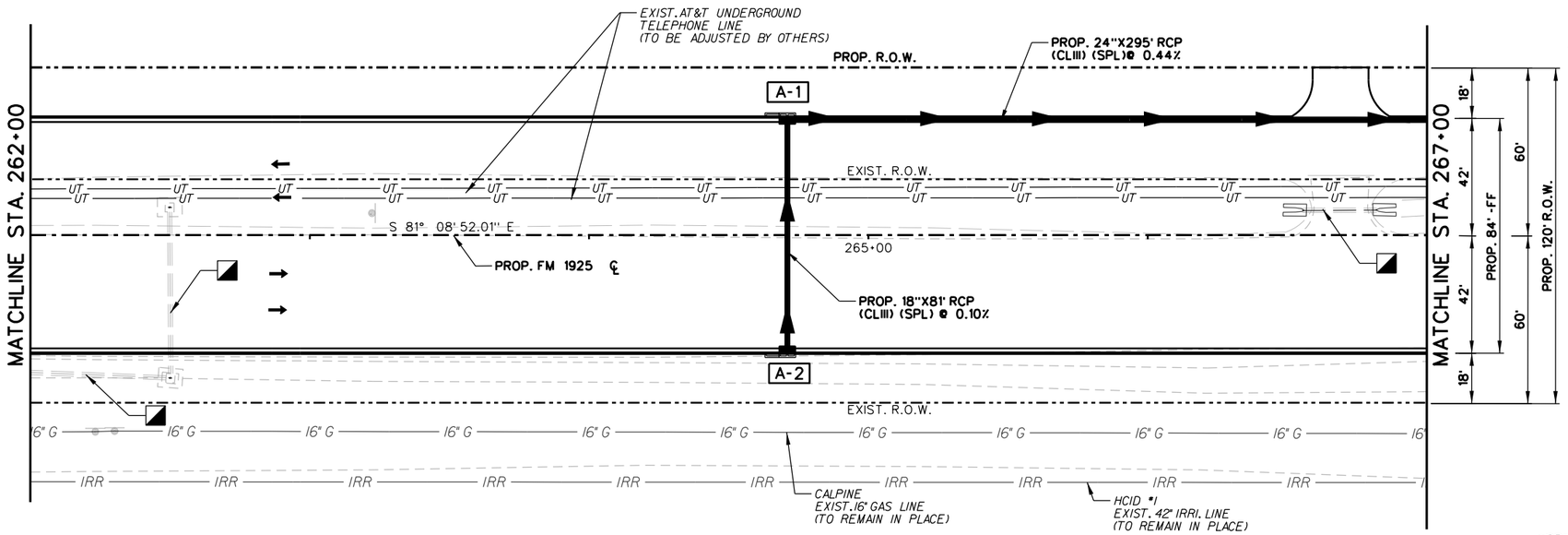
DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		131

11/1/2023
K:\Counties\HD\FM 1925 PHII\907 to Urest\\05 DRAINAGE\03 U&D\FM1925 E-2_UD1.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	331
400	SAND BACKFILL	CY	144
402	TRENCH EXCAVATION PROT.	LF	295
464	18" RCP (CL III)(SPL)	LF	81
464	24" RCP (CL III)(SPL)	LF	295
465	INLET(COMPL)(PCU)(3')(RIGHT	EA	1
465	INLET(COMPL)(PCU)(3')(LEFT)	EA	1



LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

NOTES:
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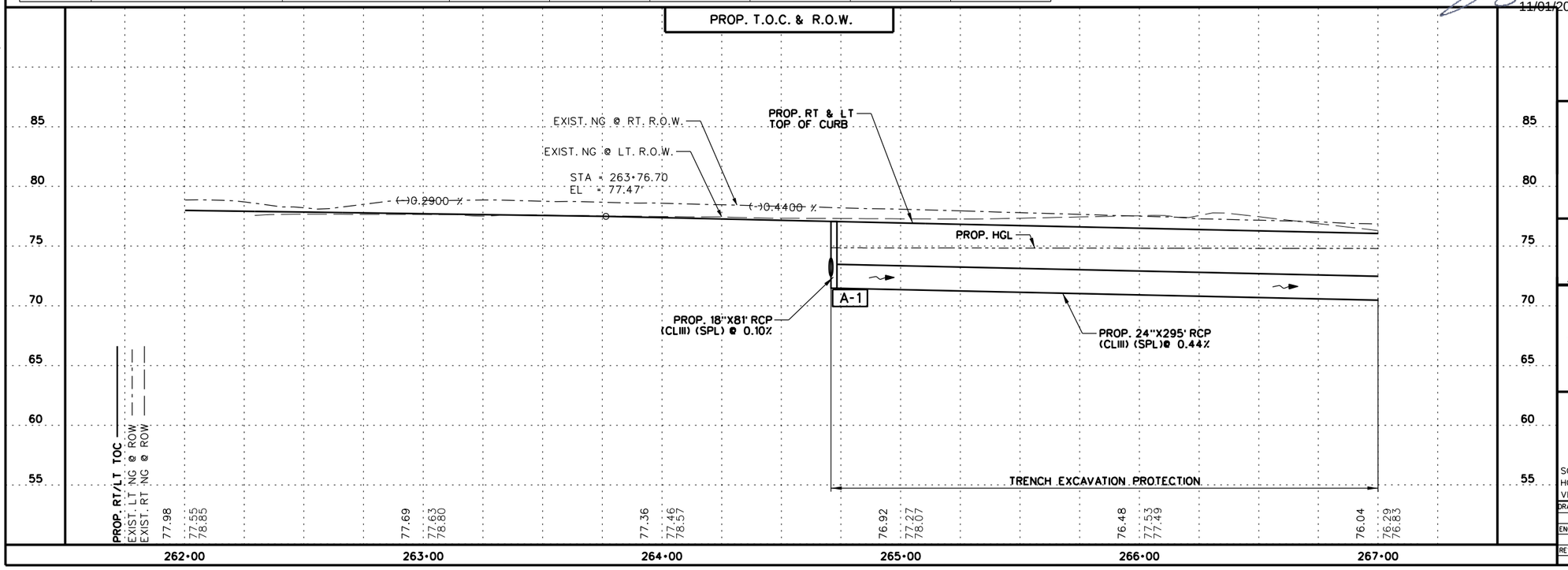
STORM DRAIN TABLE

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)
A-1	PCU10-3X5-LEFT	STA. 264+70.97, 42.00 LT.	77.05	71.97	-	72.47	71.47	-
A-2	PCU10-3X5-RIGHT	STA. 264+70.97, 42.00 RT.	77.05	72.55	72.55	-	-	-

UTILITIES LEGEND

AT&T	AMERICAN TELEPHONE & TELEGRAPH
CALPINE	CALPINE CORP
HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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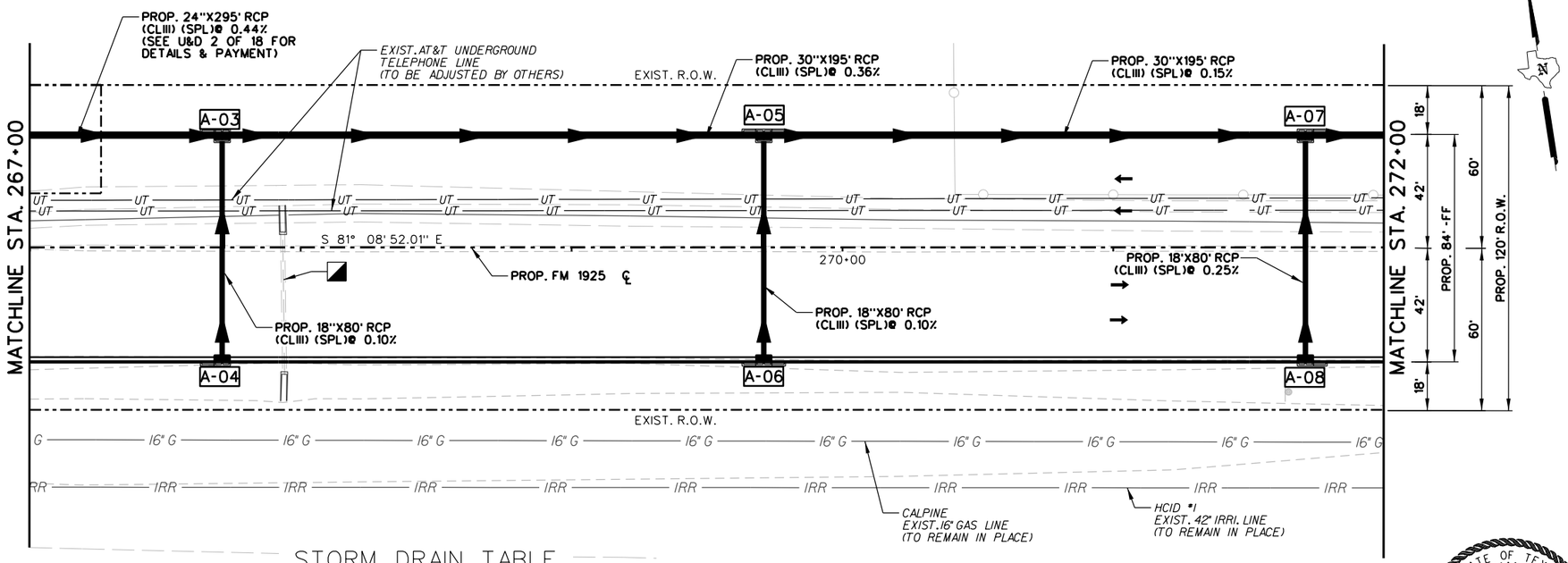
FM 1925
UTILITIES AND DRAINAGE
STA. 262+00 TO STA. 267+00

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

SHEET 2 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		132
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHII (907 to Ures)\05 DRAINAGE\03 U&D\FM1925 E-2_UD2 - REV.dgn



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)
A-03	PCU10-4X5-LEFT	STA. 267+70.97, 42.00 LT.	75.73	69.65	-	71.15	69.95	70.15
A-04	PCU10-4X5-RIGHT	STA. 267+70.97, 42.00 RT.	75.73	71.23	71.23	-	-	-
A-05	PCU15-4X5-LEFT-RIGHT	STA. 269+70.97, 42.00 LT.	75.01	69.42	-	70.42	68.92	68.92
A-06	PCU15-3X5-LEFT-RIGHT	STA. 269+70.97, 42.00 RT.	75.01	70.51	70.51	-	-	-
A-07	PCU10-4X5-RIGHT	STA. 271+70.97, 42.00 LT.	76.09	69.22	-	70.22	68.63	68.63
A-08	PCU10-3X5-LEFT	STA. 271+70.97, 42.00 RT.	76.09	70.43	70.43	-	-	-

UTILITIES LEGEND

AT&T	*AMERICAN TELEPHONE & TELEGRAPH*
CALPINE	*CALPINE CORP*
HCID#1	*HIDALGO COUNTY IRRIGATION DISTRICT No 1*

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	636
400	SAND BACKFILL	CY	268
402	TRENCH EXCAVATION PROT.	LF	630
464	18" RCP (CL III)(SPL)	LF	240
464	30" RCP (CL III)(SPL)	LF	390
465	INLET(COMPL)(PCU)(3')(LEFT)	EA	1
465	INLET(COMPL)(PCU)(3')(BOTH)	EA	1
465	INLET(COMPL)(PCU)(4')(RIGHT)	EA	2
465	INLET(COMPL)(PCU)(4')(BOTH)	EA	1
465	INLET(COMPL)(PCU)(4')(LEFT)	EA	1

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

NOTES:
SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.

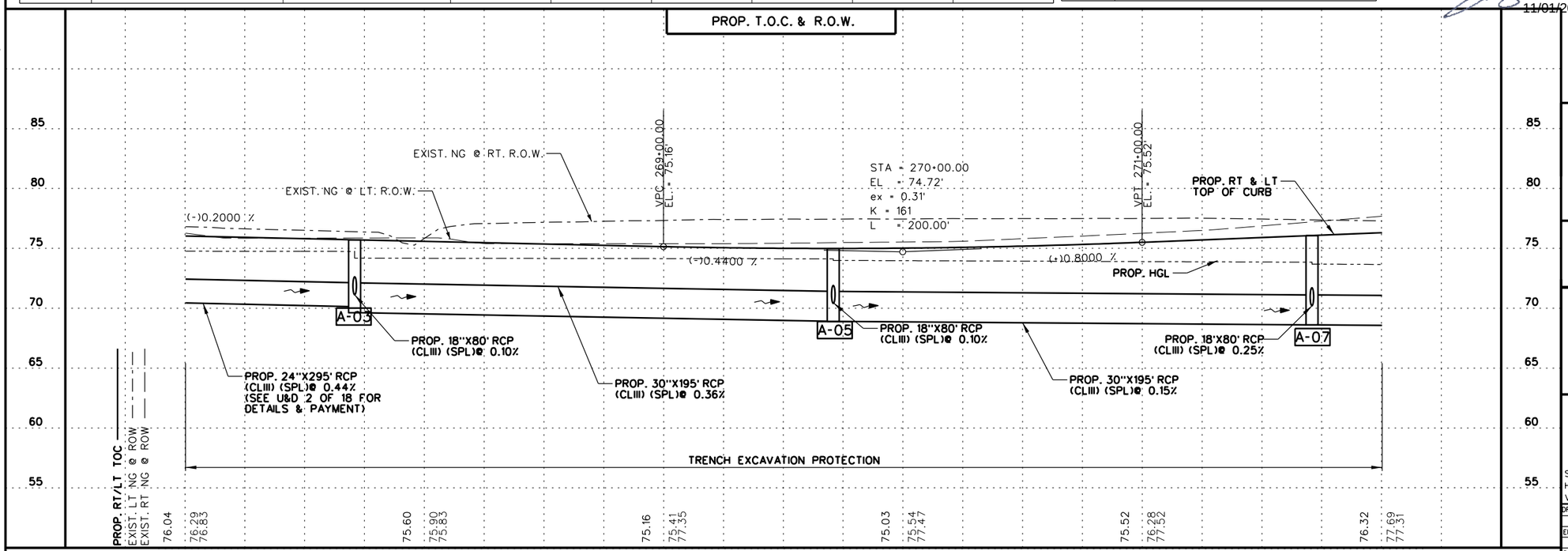
ALL RCP SHALL BE CL III(SPL) UNLESS OTHERWISE NOTED.

SEE HYD. DATA SHEETS FOR HYDRAULIC GRADE LINE (H.G.L.) ELEVATIONS

CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

INLET OFFSETS ARE TO FACE OF ROADWAY CURB. MANHOLE OFFSETS ARE TO CENTER OF PRECAST BASE. VERIFY ALL INFORMATION WITH HYDRAULIC DATA SHEETS FOR INLET LOCATIONS, ELEVATIONS, PIPE LENGTHS, FLOWLINES, ETC.

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023



L&G Engineering
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Structural / Bridge
Environmental
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FM 1925
UTILITIES AND DRAINAGE
STA. 267+00 TO STA. 272+00

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

SHEET 3 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		133
REVIEW:							
CK:							

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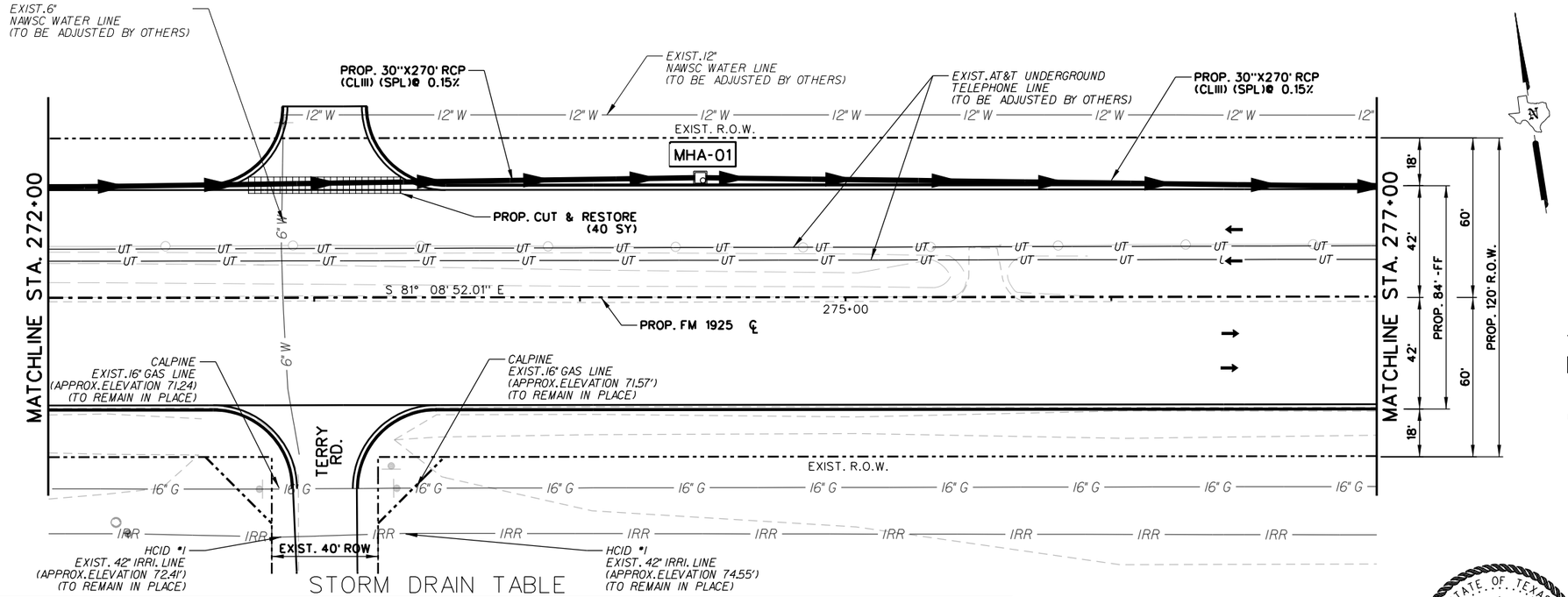

STORM DRAIN TABLE

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)
MHA-01	MH4X4JB	STA. 274+45.33, 45.00 LT.	77.16	68.22	-	-	68.22	68.22

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
CALPINE	CALPINE CORP
HCID #1	HIDALGO COUNTY IRRIGATION DISTRICT No 1

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	839
400	SAND BACKFILL	CY	266
400	CUT & RESTORE	SY	41
402	TRENCH EXCAVATION PROT.	LF	540
464	30" RCP (CL III)(SPL)	LF	540
465	INLET (COMPL)(PSL)(RC)(4'x4')	EA	1

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

NOTES:
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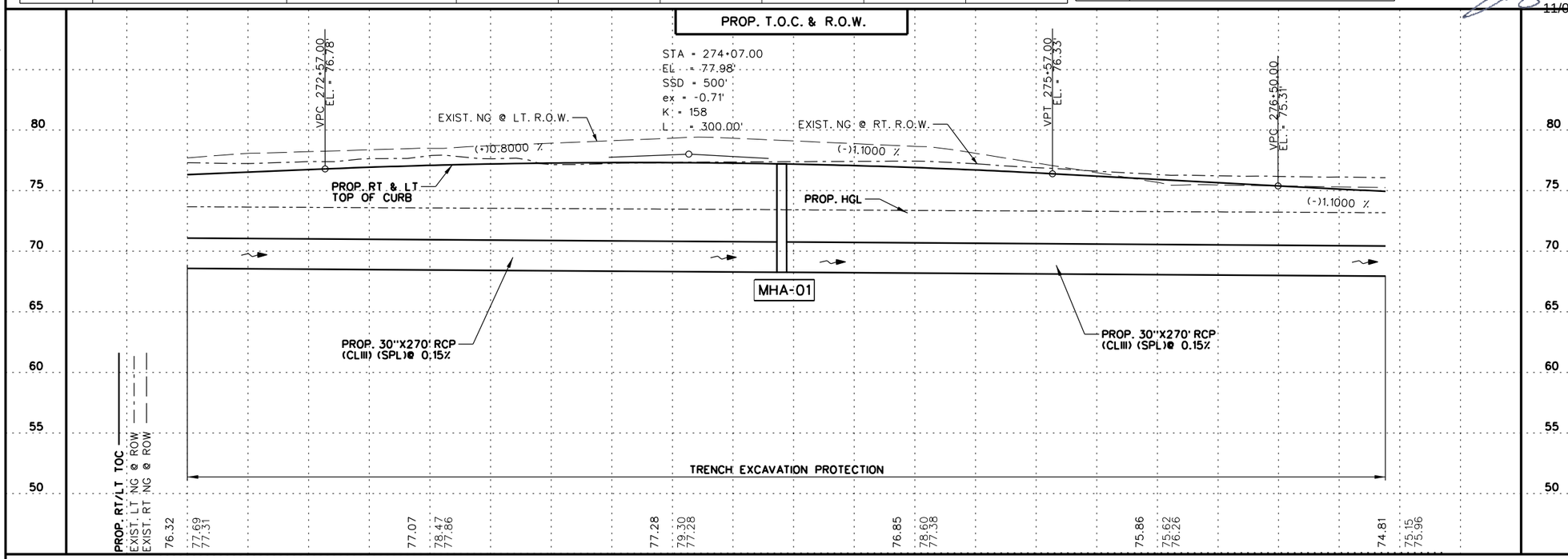

STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925
UTILITIES AND DRAINAGE
STA. 272+00 TO STA. 277+00

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

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK: RP	6	TEXAS				FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035	134
REVIEW:						
CK:						

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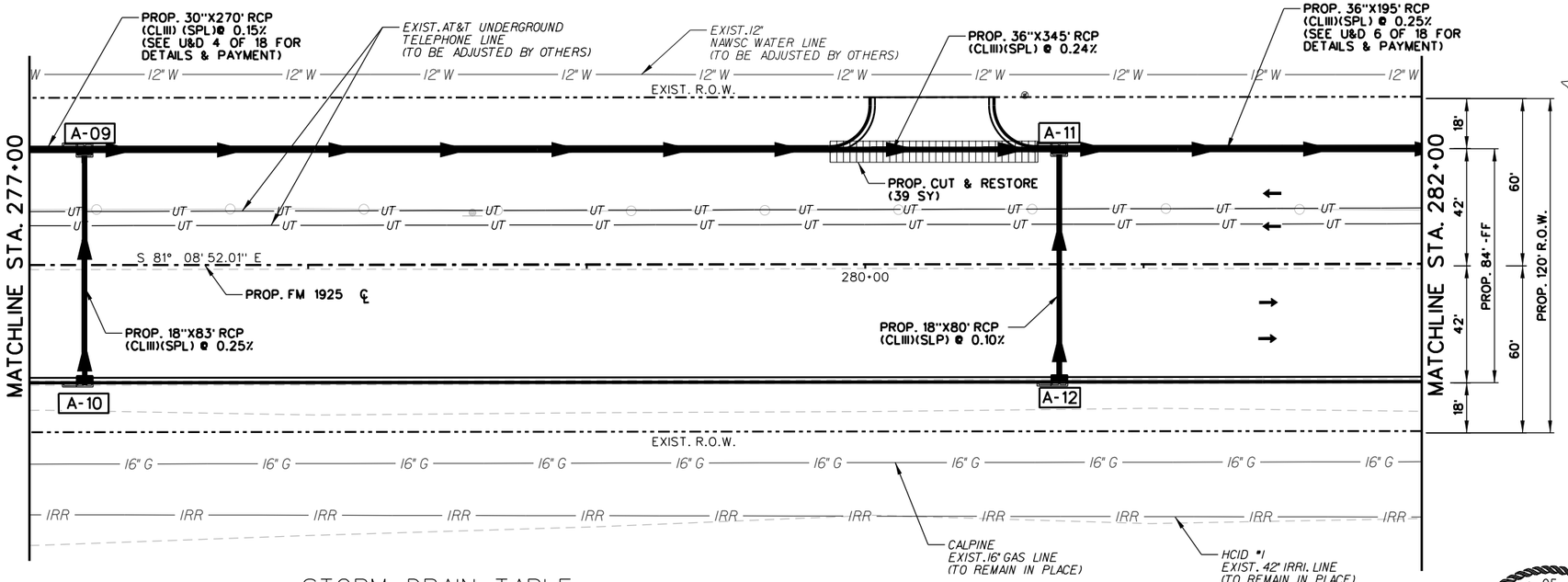
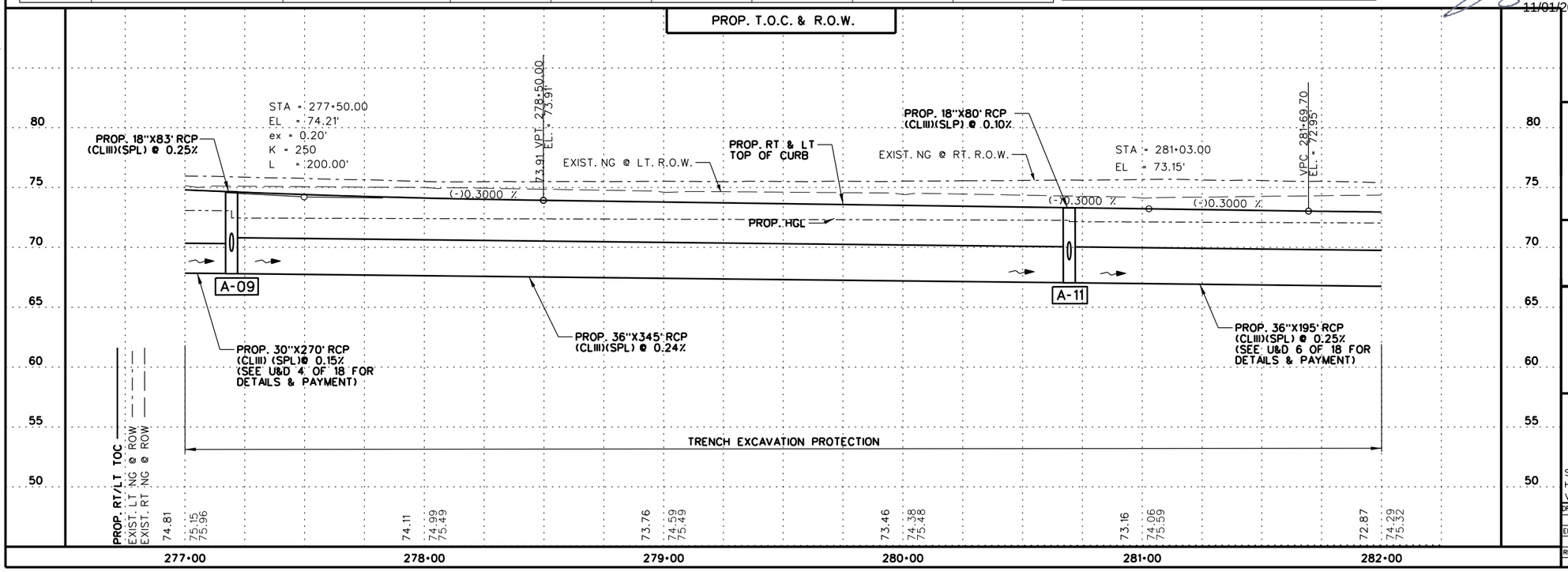


STORM DRAIN TABLE

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)
A-09	PCU10-4x5-LEFT	STA. 277+19.70, 42.00 LT.	74.64	68.17	-	69.67	67.81	67.81
A-10	PCU10-3X5-RIGHT	STA. 277+19.70, 42.00 RT.	74.64	69.89	69.89	-	-	-
A-11	PCU10-4x5-LEFT	STA. 280+69.70, 42.00 LT.	73.25	66.99	-	68.91	66.99	66.99
A-12	PCU10-3x5-RIGHT	STA. 280+69.70, 42.00 RT.	73.25	69.00	69.00	-	-	-

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
CALPINE	CALPINE CORP
HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	572
400	SAND BACKFILL	CY	255
400	CUT & RESTORE	SY	39
402	TRENCH EXCAVATION PROT.	LF	508
464	18" RCP (CL III)(SPL)	LF	163
464	36" RCP (CL III)(SPL)	LF	345
465	INLET(COMPL)(PCU)(3') RIGHT	EA	2
465	INLET(COMPL)(PCU)(4') LEFT	EA	2

LEGEND

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- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

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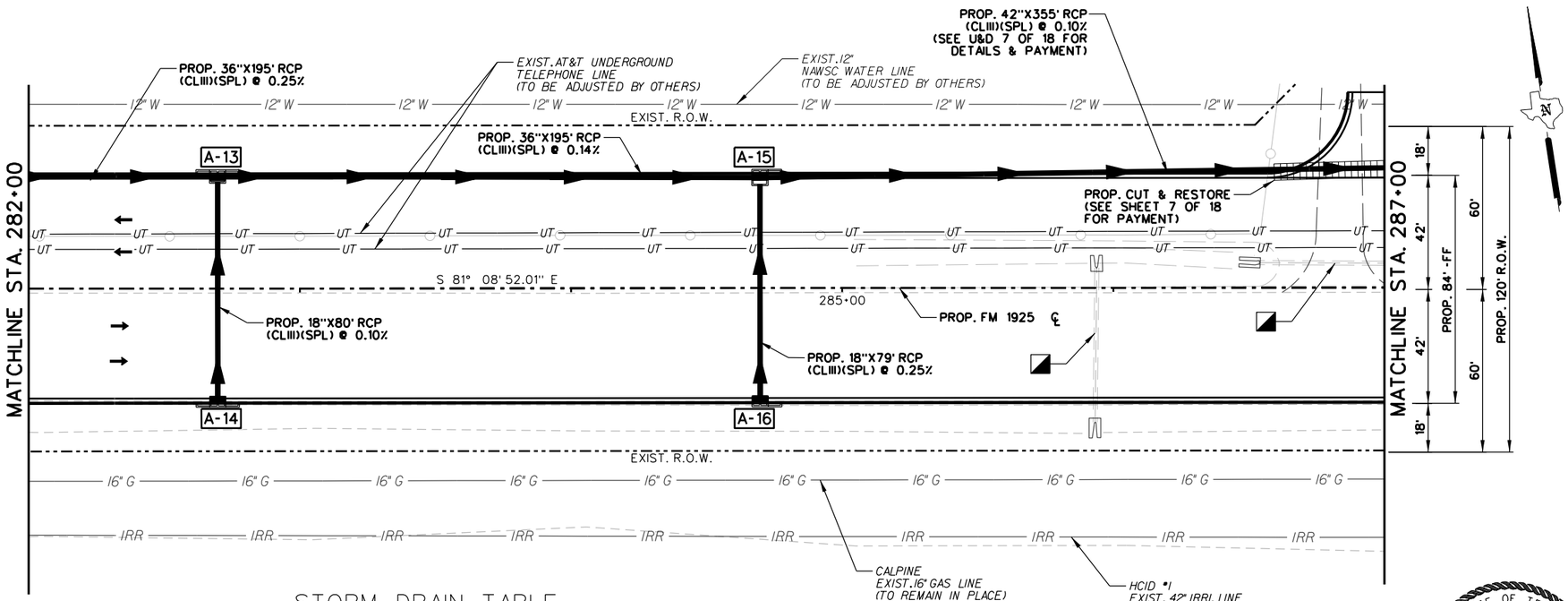
FM 1925
UTILITIES AND DRAINAGE
STA. 277+00 TO STA. 282+00

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

SHEET 5 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		135
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHII (907 to Uresti)\05 DRAINAGE\03 U&D\FM1925 E-2_U05 - REV.dgn



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	677
400	SAND BACKFILL	CY	299
402	TRENCH EXCAVATION PROT.	LF	547
464	18" RCP (CL III)(SPL)	LF	157
464	36" RCP (CL III)(SPL)	LF	195
464	42" RCP (CL III)(SPL)	LF	195
465	INLET(COMPL)(PCU)(3')(LEFT)	EA	1
465	INLET(COMPL)(PCU)(3')(BOTH)	EA	1
465	INLET(COMPL)(PCU)(4')(BOTH)	EA	1
465	INLET(COMPL)(PCU)(5')(RIGHT)	EA	1

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

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

CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

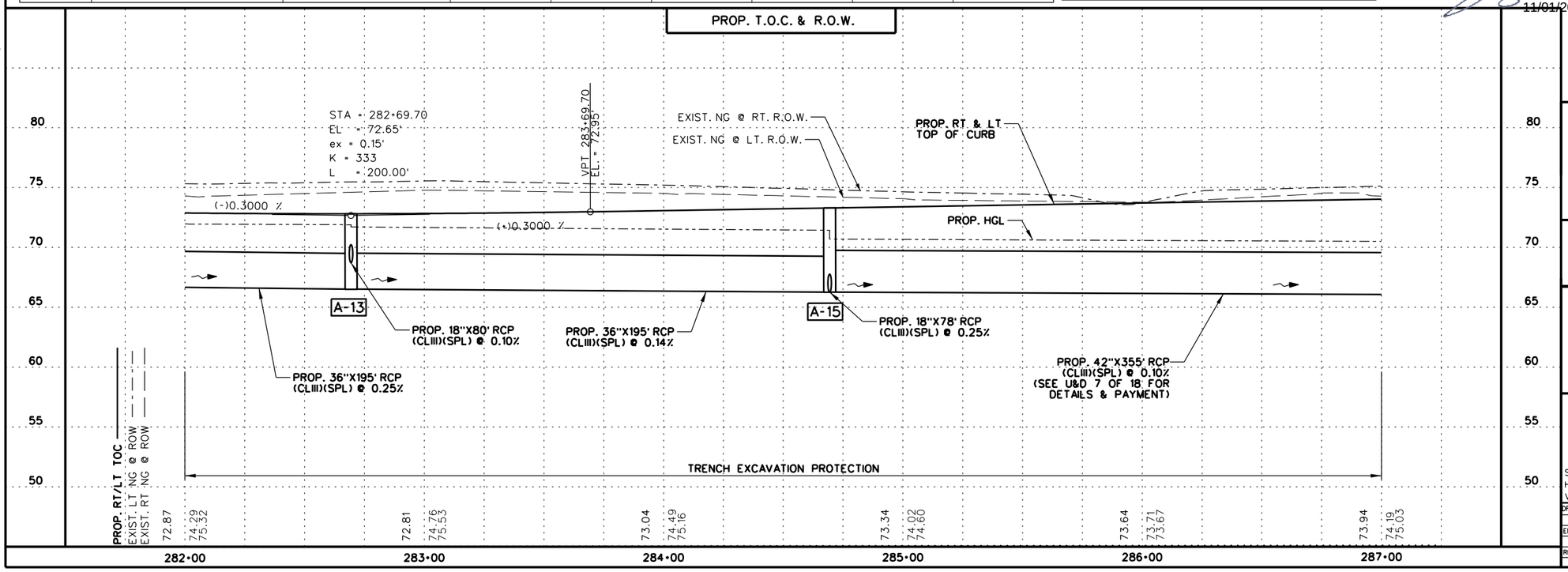
INLET OFFSETS ARE TO FACE OF ROADWAY CURB. MANHOLE OFFSETS ARE TO CENTER OF PRECAST BASE. VERIFY ALL INFORMATION WITH HYDRAULIC DATA SHEETS FOR INLET LOCATIONS, ELEVATIONS, PIPE LENGTHS, FLOWLINES, ETC.

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)
A-13	PCU15-4x5-LEFT-RIGHT	STA. 282+69.70, 42.00 LT.	72.80	66.49	-	68.71	66.50	66.49
A-14	PCU15-3x5-LEFT-RIGHT	STA. 282+69.70, 42.00 RT.	72.80	68.80	68.80	-	-	-
A-15	PCU10-5X5-RIGHT	STA. 284+69.70, 42.00 LT.	73.25	66.21	-	66.21	66.21	66.21
A-16	PCU10-3X5-LEFT	STA. 284+69.70, 42.00 RT.	73.25	66.42	66.42	-	-	-

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
CALPINE	CALPINE CORP
HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

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Mercedes, TX. 78570
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Fax : (956) 565-9018

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

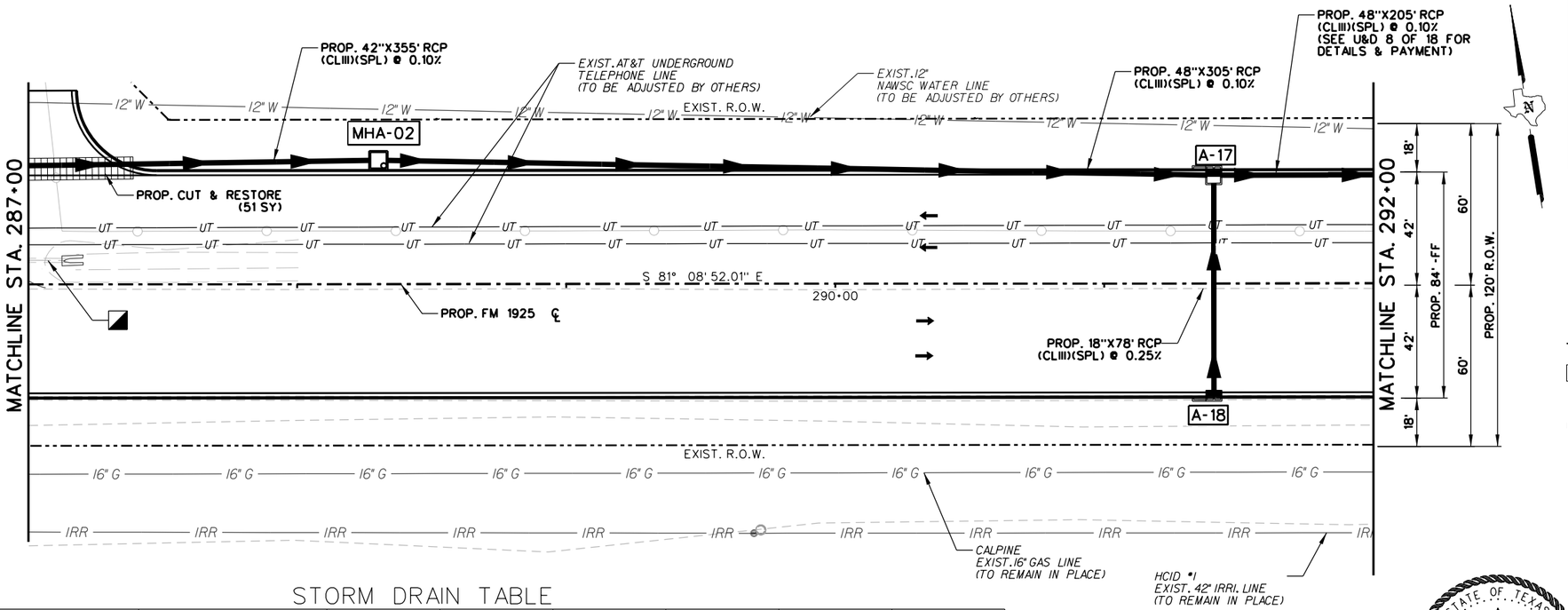
FM 1925
UTILITIES AND DRAINAGE
STA. 282+00 TO STA. 287+00

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

SHEET 6 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		136
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHII (907 to Uresti)\05 DRAINAGE\03 U&D\FM1925 E-2_UD6 - REV.dgn



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)
MHA-02	MH6x6JB	STA. 288+30.22, 46.00 LT.	74.31	65.85	-	-	65.85	65.85
A-17	PCU10-6x5-LEFT	STA. 291+40.74, 42.00 LT.	73.57	65.54	-	68.04	65.54	65.54
A-18	PCU10-3X5-RIGHT	STA. 291+40.74, 42.00 RT.	73.57	68.25	68.25	-	-	-

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
CALPINE	CALPINE CORP
HCID #1	HIDALGO COUNTY IRRIGATION DISTRICT No 1

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	1580
400	SAND BACKFILL	CY	644
400	CUT & RESTORE	SY	42
402	TRENCH EXCAVATION PROT.	LF	738
464	18" RCP (CL III)(SPL)	LF	78
464	42" RCP (CL III)(SPL)	LF	355
464	48" RCP (CL III)(SPL)	LF	305
465	INLET(COMPL)(PCU)(3')(RIGHT	EA	1
465	INLET(COMPL)(PCU)(6')(LEFT)	EA	1
465	INLET (COMPL)(PSL)(RC)(6'x6')	EA	1

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

NOTES:
SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.

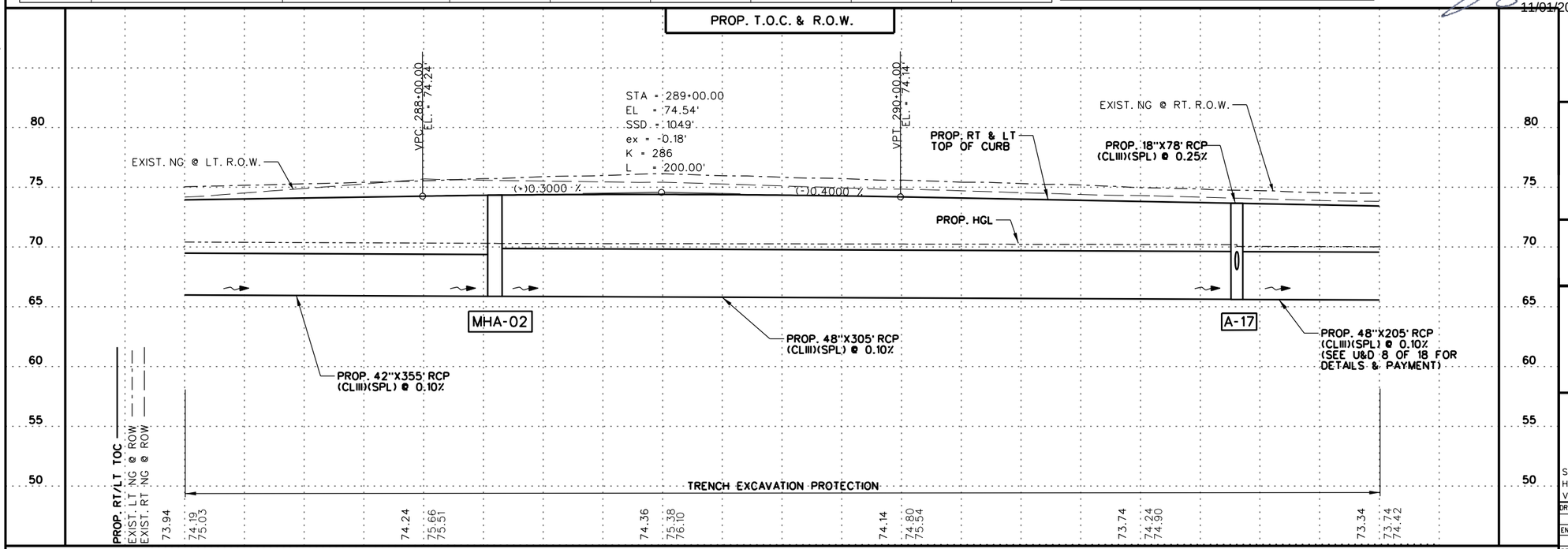
ALL RCP SHALL BE CL III(SPL) UNLESS OTHERWISE NOTED.

SEE HYD. DATA SHEETS FOR HYDRAULIC GRADE LINE (H.G.L.) ELEVATIONS

CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

INLET OFFSETS ARE TO FACE OF ROADWAY CURB. MANHOLE OFFSETS ARE TO CENTER OF PRECAST BASE. VERIFY ALL INFORMATION WITH HYDRAULIC DATA SHEETS FOR INLET LOCATIONS, ELEVATIONS, PIPE LENGTHS, FLOWLINES, ETC.

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023



THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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Environmental
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FM 1925
UTILITIES AND DRAINAGE
STA. 287+00 TO STA. 292+00

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

SHEET 7 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		137
REVIEW:							
CK:							

11/1/2023
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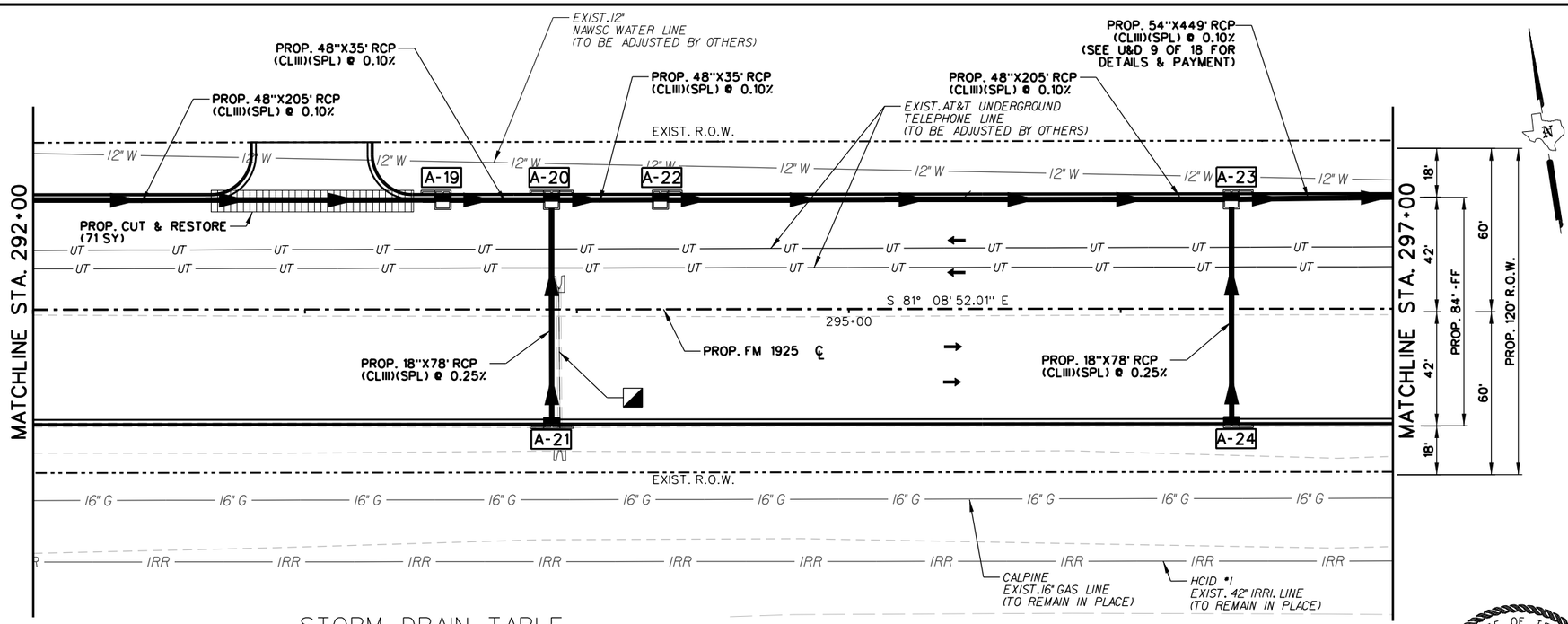


SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	1391
400	SAND BACKFILL	CY	639
400	CUT & RESTORE	SY	70
402	TRENCH EXCAVATION PROT.	LF	636
464	18" RCP (CL III)(SPL)	LF	156
464	48" RCP (CL III)(SPL)	LF	480
465	INLET(COMPL)(PCU)(3')(LEFT)	EA	1
465	INLET(COMPL)(PCU)(3')(BOTH)	EA	1
465	INLET(COMPL)(PCU)(6')(RIGHT)	EA	2
465	INLET(COMPL)(PCU)(6')(LEFT)	EA	1
465	INLET(COMPL)(PCU)(6')(BOTH)	EA	1

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

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

CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

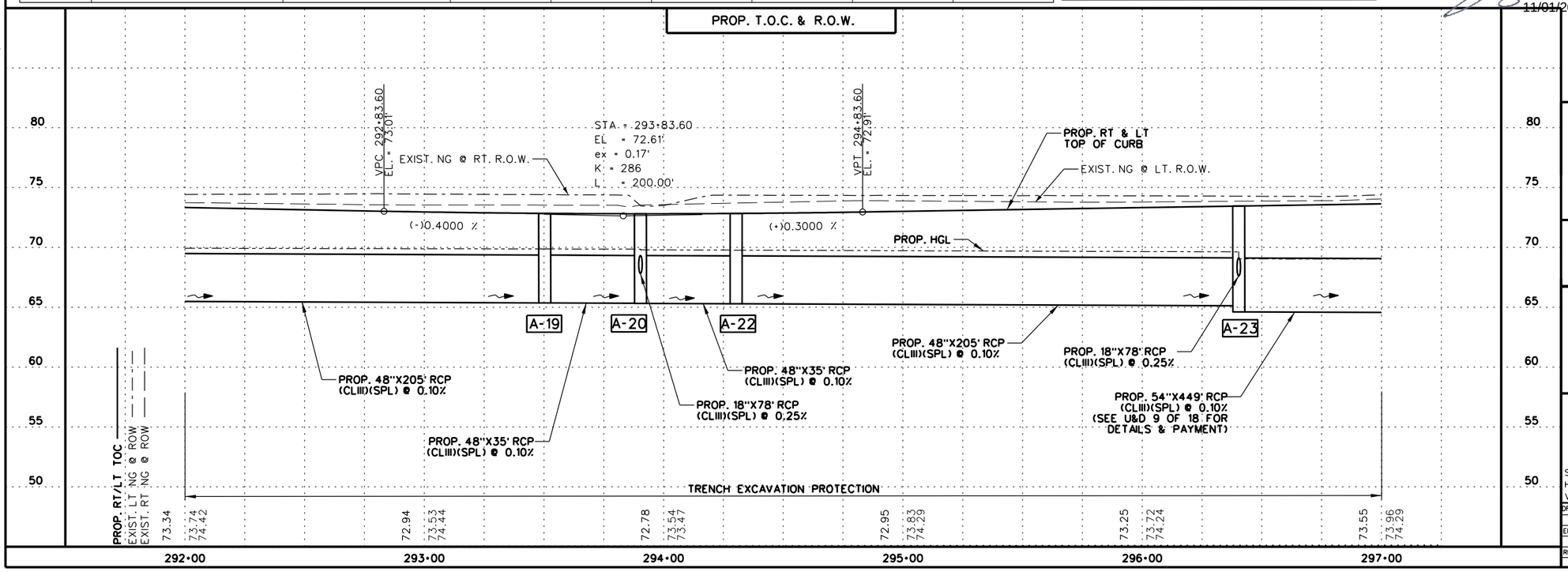
INLET OFFSETS ARE TO FACE OF ROADWAY CURB. MANHOLE OFFSETS ARE TO CENTER OF PRECAST BASE. VERIFY ALL INFORMATION WITH HYDRAULIC DATA SHEETS FOR INLET LOCATIONS, ELEVATIONS, PIPE LENGTHS, FLOWLINES, ETC.

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)
A-19	PCU10-6X5-LEFT	STA. 293+50.74, 42.00 LT.	72.81	65.33	-	-	65.33	65.33
A-20	PCU15-6X5-LEFT-RIGHT	STA. 293+90.74, 42.00 LT.	72.77	65.29	-	67.79	65.29	65.29
A-21	PCU15-3X5-LEFT-RIGHT	STA. 293+90.74, 42.00 RT.	72.77	68.00	68.00	-	-	-
A-22	PCU10-6x5-RIGHT	STA. 294+30.74, 42.00 LT.	72.79	65.25	-	-	65.25	65.25
A-23	PCU10-6x5-RIGHT	STA. 296+40.74, 42.00 LT.	73.37	64.54	-	67.54	64.54	65.04
A-24	PCU10-3X5-LEFT	STA. 296+40.74, 42.00 RT.	73.37	67.75	67.75	-	-	-

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
CALPINE	CALPINE CORP
HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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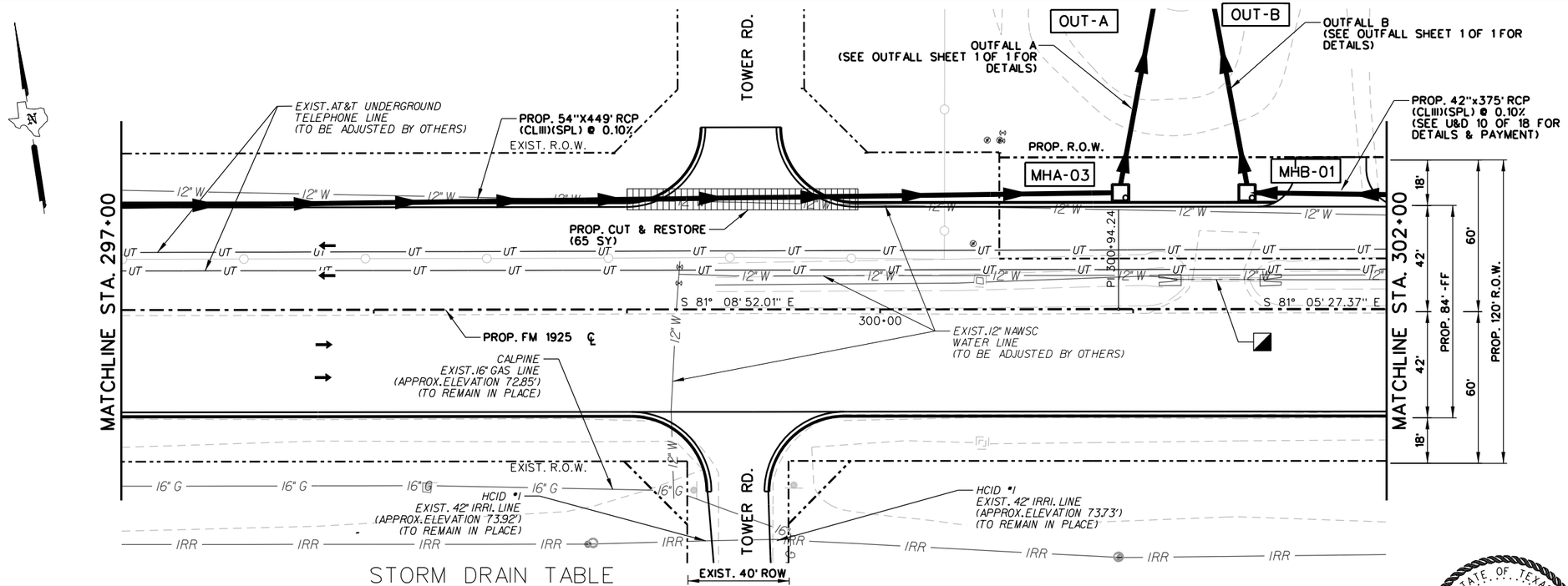
FM 1925
UTILITIES AND DRAINAGE
STA. 292+00 TO STA. 297+00

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

SHEET 8 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		138
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHII (907 to Urest)\05 DRAINAGE\03 U&D\FM1925 E-2_UDB - REV.dgn



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	1513
400	SAND BACKFILL	CY	622
400	CUT & RESTORE	SY	65
402	TRENCH EXCAVATION PROT.	LF	449
464	54" RCP (CL III)(SPL)	LF	449
465	INLET (COMPL)(PSL)(RC)(6'x6')	EA	2

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

NOTES:
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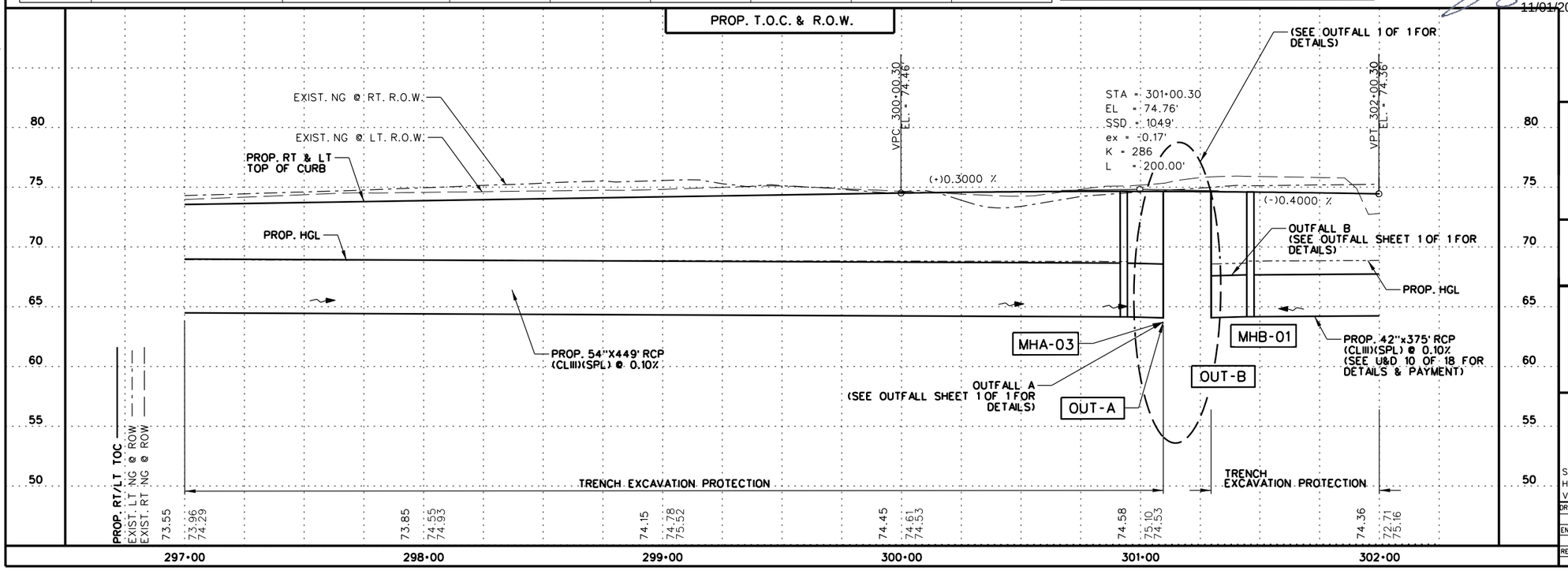
STORM DRAIN TABLE

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)
MHA-03	MH6x6JB	STA. 300+95.00, 46.00 LT.	74.58	64.09	64.09	-	-	64.09
OUT-A	STORM DRAIN OUTLET	STA. 301+10.00, 130.00 LT.	74.57	64.00	-	64.00	-	-
MHB-01	MH6X6JB	STA. 301+45.00, 46.00 LT.	74.52	64.09	64.09	-	64.09	-
OUT-B	STORM DRAIN OUTLET	STA. 301+30.00, 130.00 LT.	74.55	64.00	-	64.00	-	-

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
CALPINE	CALPINE CORP
HCID #1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
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FM 1925
UTILITIES AND DRAINAGE
STA. 297+00 TO STA. 302+00

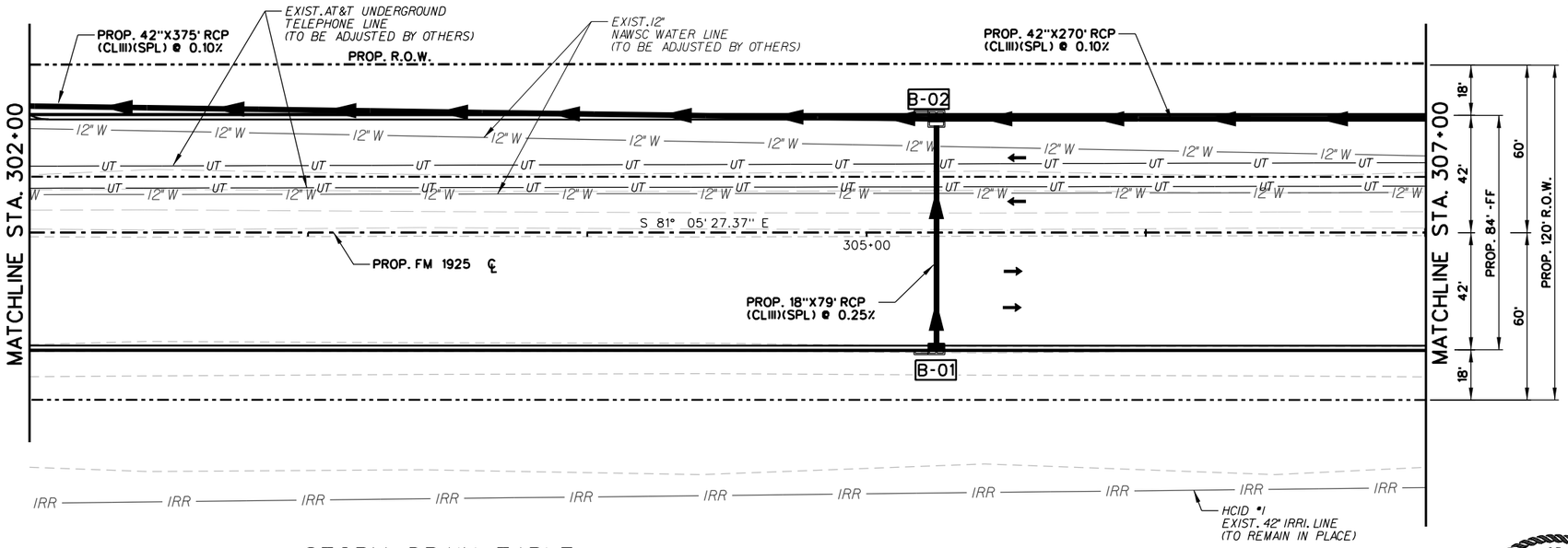
SCALE:
HOR: 1"= 50'
VER: 1"= 10'

SHEET 9 OF 18

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		139

11/1/2023 K:\Counties\HID\FM 1925 PHII (907 to Uresti)\05 DRAINAGE\03 U&D\FM1925 E-2_UD9 - REV.dgn



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	1450
400	SAND BACKFILL	CY	470
402	TRENCH EXCAVATION PROT.	LF	724
464	18" RCP (CL III)(SPL)	LF	79
464	42" RCP (CL III)(SPL)	LF	645
465	INLET(COMPL)(PCU)(3')(RIGHT)	EA	1
465	INLET(COMPL)(PCU)(5')(LEFT)	EA	1

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

NOTES:
SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.

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SEE HYD. DATA SHEETS FOR HYDRAULIC GRADE LINE (H.G.L.) ELEVATIONS

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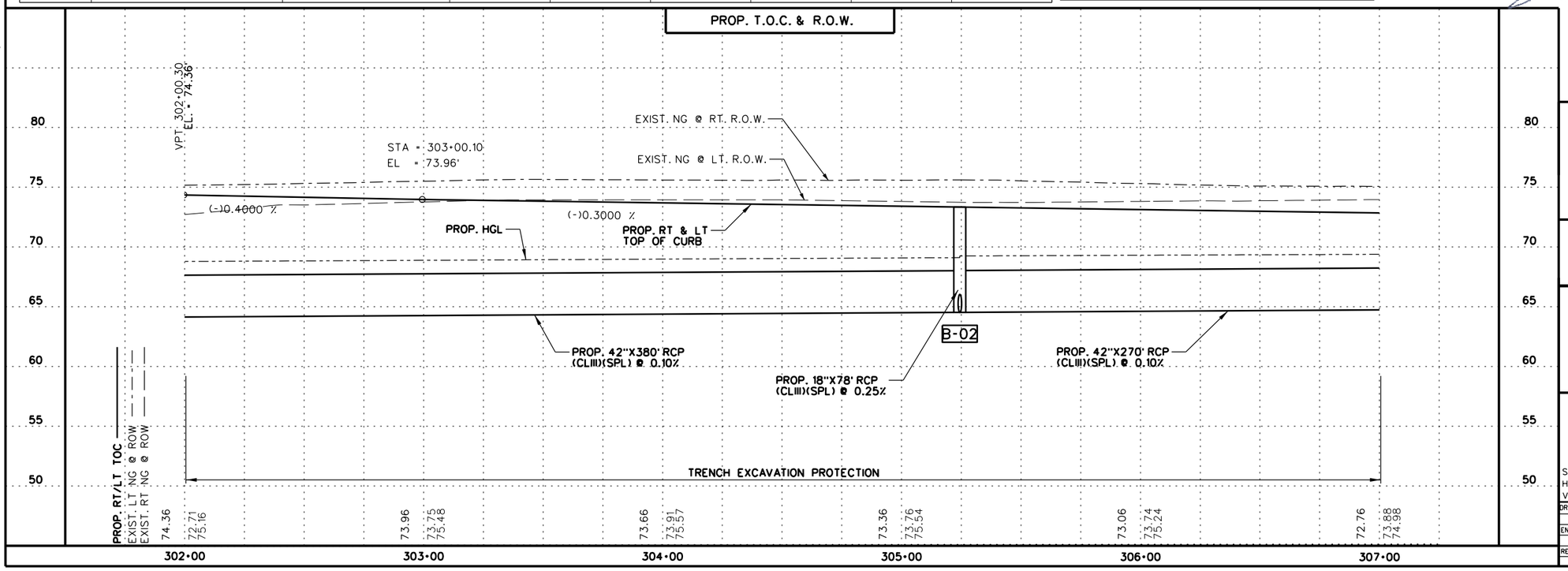
STORM DRAIN TABLE

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)
B-01	PCU10-3X5-RIGHT	STA. 305+25.00 42.00 RT.	73.28	64.67	64.67	-	-	-
B-02	PCU10-5X5-LEFT	STA. 305+25.00 42.00 LT.	73.28	64.47	-	64.47	64.47	64.47

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
CALPINE	CALPINE CORP
HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



STATE OF TEXAS
JORDAN B. SINCLAIR
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11/01/2023

THE COUNTY OF HIDALGO TEXAS

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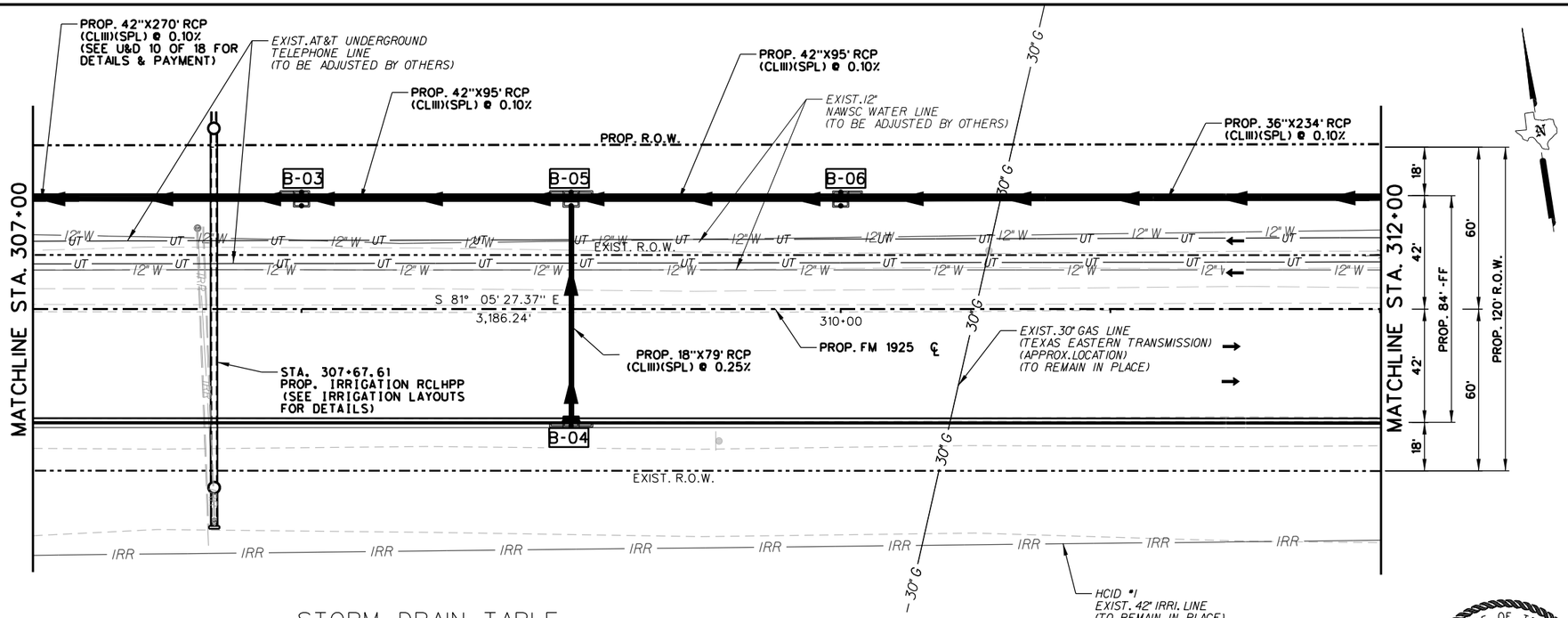
FM 1925
UTILITIES AND DRAINAGE
STA. 302+00 TO STA. 307+00

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

SHEET 10 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		140
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHR\907 to Urest\05 DRAINAGE\03 U&D\FM1925 E-2_UD10 - REV.dgn



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	797
400	SAND BACKFILL	CY	294
402	TRENCH EXCAVATION PROT.	LF	503
464	18" RCP (CL III)(SPL)	LF	79
464	36" RCP (CL III)(SPL)	LF	234
464	42" RCP (CL III)(SPL)	LF	190
465	INLET(COMPL)(PCU)(3')(BOTH)	EA	1
465	INLET(COMPL)(PCU)(5')(RIGHT)	EA	1
465	INLET(COMPL)(PCU)(5')(BOTH)	EA	1
465	INLET(COMPL)(PCU)(5')(LEFT)	EA	1

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

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

CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

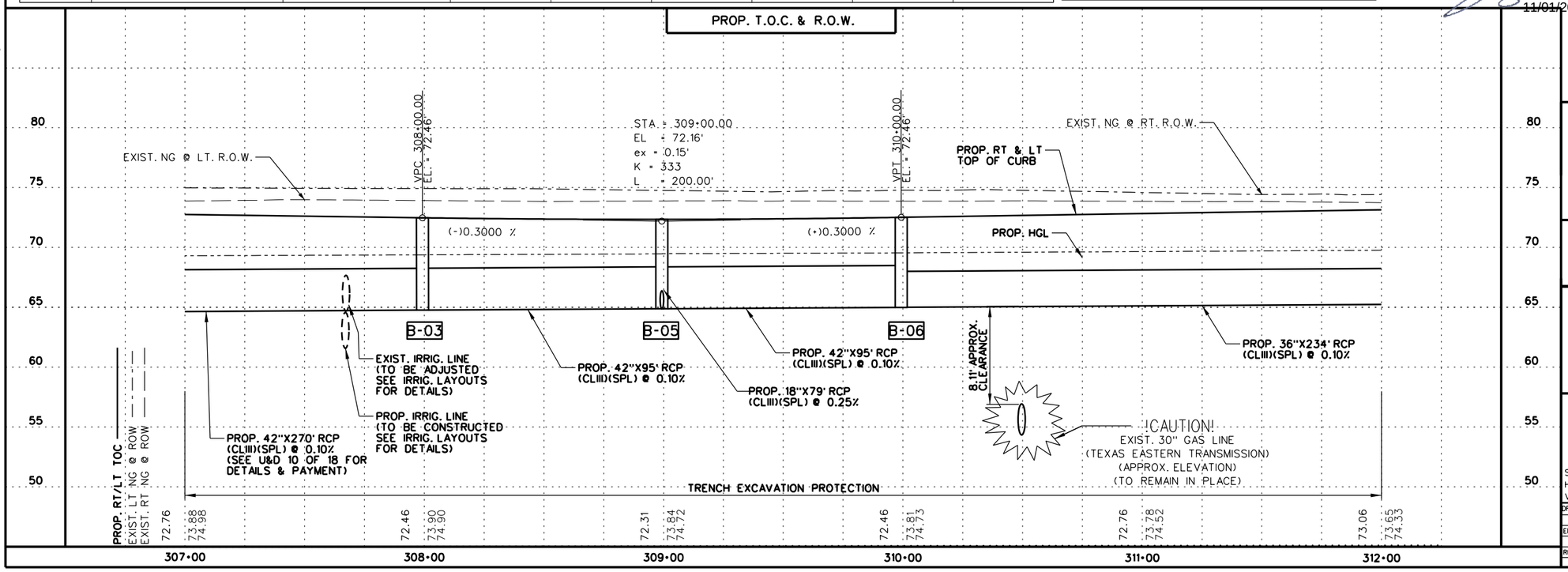
INLET OFFSETS ARE TO FACE OF ROADWAY CURB. MANHOLE OFFSETS ARE TO CENTER OF PRECAST BASE. VERIFY ALL INFORMATION WITH HYDRAULIC DATA SHEETS FOR INLET LOCATIONS, ELEVATIONS, PIPE LENGTHS, FLOWLINES, ETC.

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-03	PCU10-5x5-LEFT	STA. 308+00.00, 42.00 LT.	72.45	64.74	-	-	64.74	64.74
B-04	PCU15-3x5-LEFT-RIGHT	STA. 309+00.00, 42.00 RT.	72.30	65.05	65.05	-	-	-
B-05	PCU15-5x5-LEFT-RIGHT	STA. 309+00.00, 42.00 LT.	72.30	64.84	-	64.84	64.84	64.84
B-06	PCU10-5x5-RIGHT	STA. 310+00.00, 42.00 LT.	72.45	64.94	-	-	64.94	64.94

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
TX EAST	TEXAS EASTERN TRANSMISSION
CALPINE	CALPINE CORP
HCID #1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

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Fax : (956) 565-9018

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

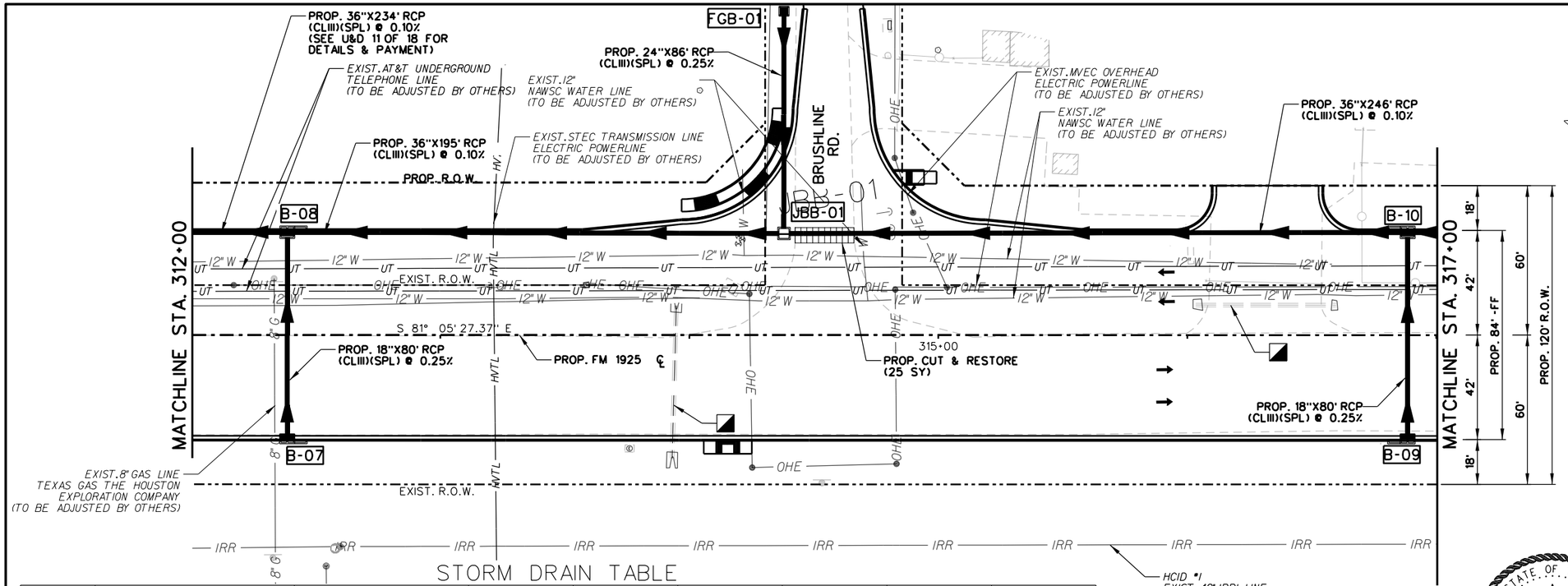
FM 1925
UTILITIES AND DRAINAGE
STA. 307+00 TO STA. 312+00

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

SHEET 11 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		141
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHII (907 to Uresti)\05 DRAINAGE\03 U&D\FM1925 E-2_UD11 - REV.dgn



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-07	PCU10-3x5-LEFT	STA. 312+38.50, 42.00 RT.	73.17	65.39	65.39	-	-	-
B-08	PCU10-4x5-RIGHT	STA. 312+38.50, 42.00 LT.	73.17	65.18	-	65.18	65.18	65.18
JBB-01	4x4JB	STA. 314+38.00, 40.75 LT.	73.16	65.38	65.38	-	65.38	65.38
FGB-01	PAZD-FG-3x3-3	STA. 314+38.00, 130.00 LT.	71.50	65.60	-	65.60	-	-
B-09	PCU10-3x5-RIGHT	STA. 316+88.50, 42.00 RT.	73.11	65.84	65.84	-	-	-
B-10	PCU10-4x5-LEFT	STA. 316+88.50, 42.00 LT.	73.11	65.63	-	65.63	65.63	65.63

UTILITIES LEGEND

MVEC	MAGIC VALLEY ELECTRIC COOP.
STEC	SOUTH TEXAS ENERGY COOP.
NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
TX GAS	TEXAS GAS HOUSTON EXPLORATION CO.
HCID*1	HIDALGO COUNTY IRRIGATION DISTRICT No 1

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	992
400	SAND BACKFILL	CY	345
400	CUT & RESTORE	SY	29
402	TRENCH EXCAVATION PROT.	LF	687
464	18" RCP (CL III)(SPL)	LF	160
464	24" RCP (CL III)(SPL)	LF	86
464	36" RCP (CL III)(SPL)	LF	441
465	INLET (COMPL)(PCU)(3')(RIGHT)	EA	1
465	INLET (COMPL)(PCU)(3')(LEFT)	EA	1
465	INLET (COMPL)(PCU)(4')(RIGHT)	EA	1
465	INLET (COMPL)(PCU)(4')(LEFT)	EA	1
465	JCTBOX (COMPL)(PJB)(4'X4')	EA	1
465	INLET (COMPL)(PAZD)(SL)(3'X3')	EA	1

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

NOTES:
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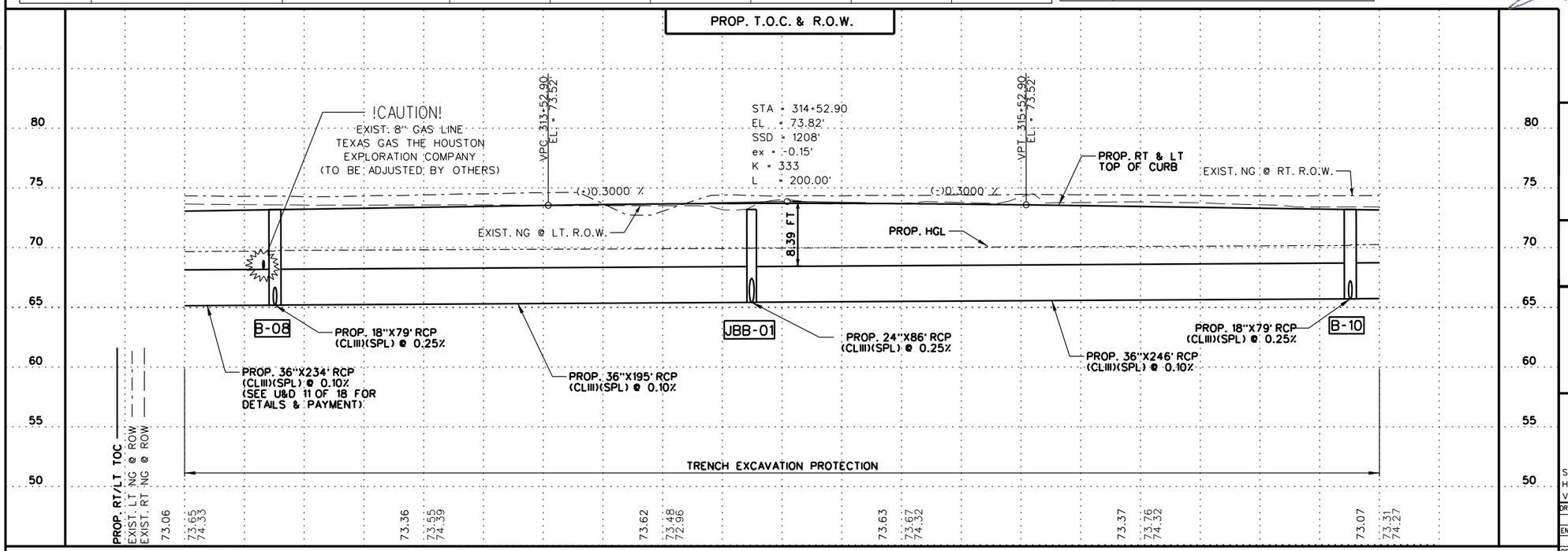
STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER

11/01/2023



THE COUNTY OF HIDALGO TEXAS

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FM 1925
UTILITIES AND DRAINAGE
STA. 312+00 TO STA. 317+00

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

SHEET 12 OF 18

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		142

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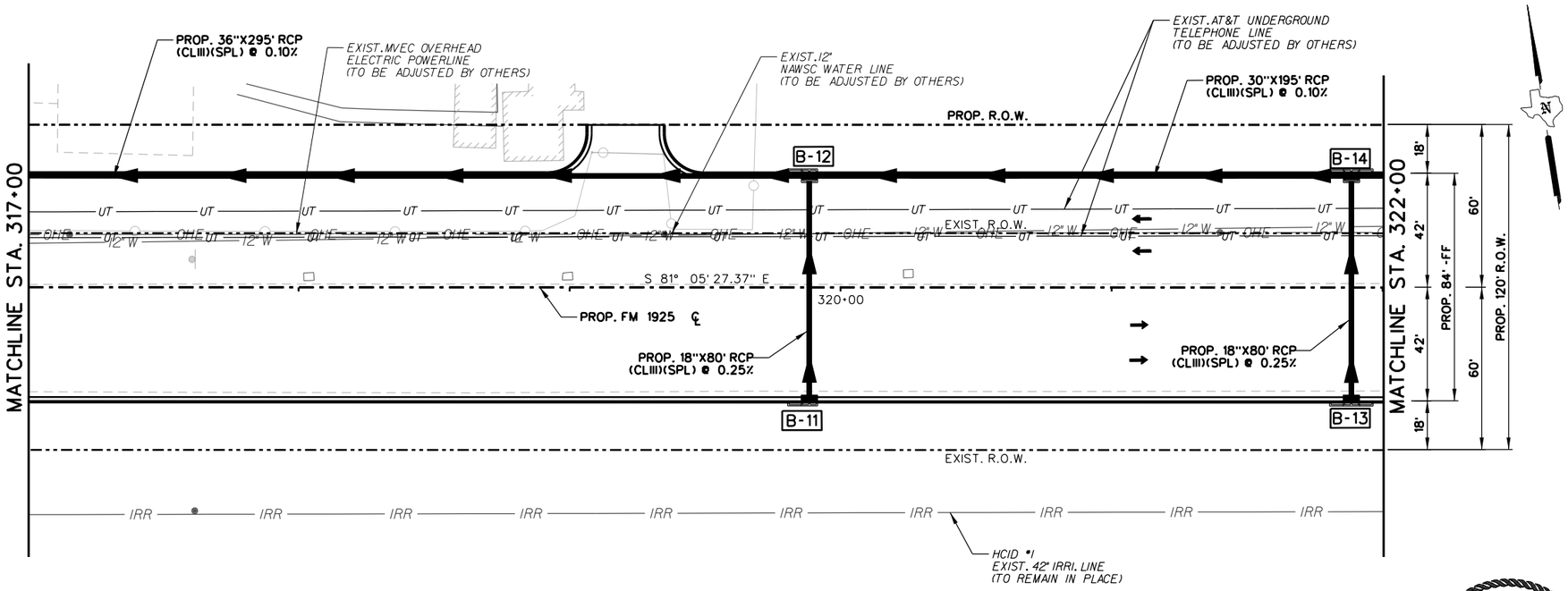
11/1/2023



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	781
400	SAND BACKFILL	CY	320
402	TRENCH EXCAVATION PROT.	LF	650
464	18" RCP (CL III)(SPL)	LF	160
464	30" RCP (CL III)(SPL)	LF	195
464	36" RCP (CL III)(SPL)	LF	295
465	INLET (COMPL)(PCU)(3')(RIGHT)	EA	1
465	INLET (COMPL)(PCU)(3')(BOTH)	EA	1
465	INLET (COMPL)(PCU)(4')(LEFT)	EA	1
465	INLET (COMPL)(PCU)(4')(BOTH)	EA	1

LEGEND

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- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

NOTES:
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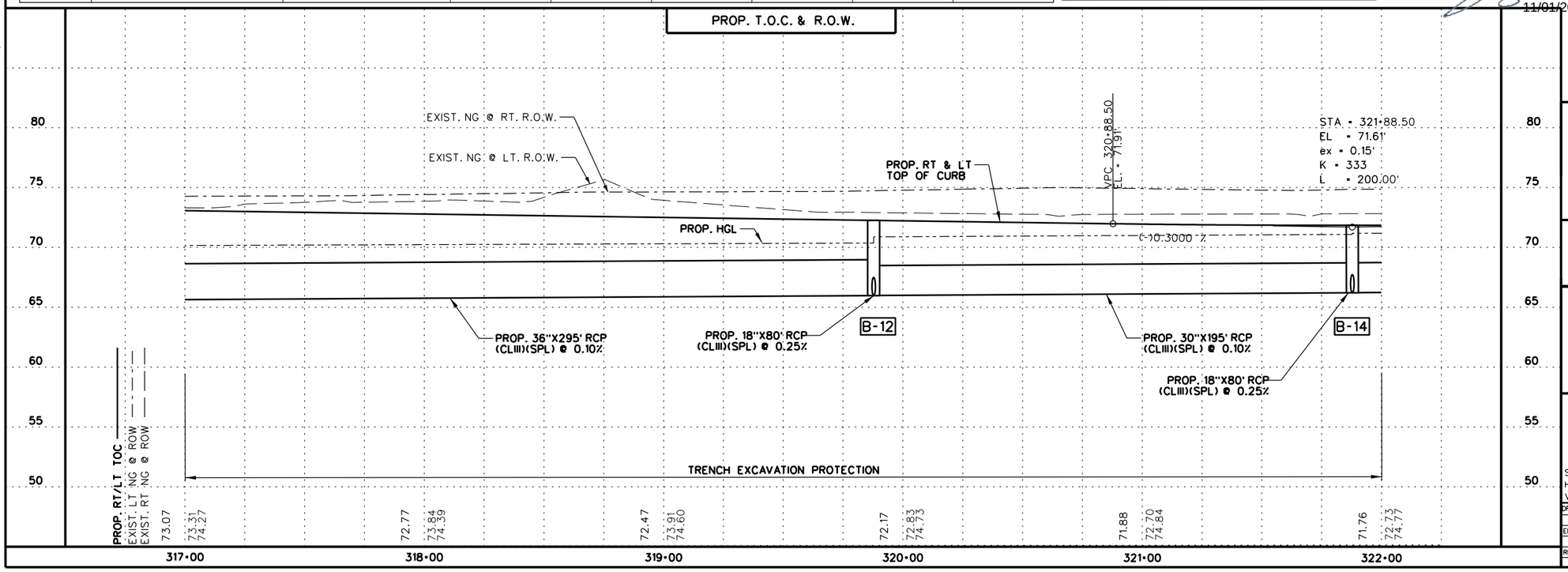
STORM DRAIN TABLE

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)
B-11	PCU10-3x5-RIGHT	STA. 319+88.50, 42.00 RT.	72.21	66.14	66.14	-	-	-
B-12	PCU10-4x5-LEFT	STA. 319+88.50, 42.00 LT.	72.21	65.93	-	65.93	65.93	65.93
B-13	PCU15-3x5-LEFT-RIGHT	STA. 321+88.50, 42.00 RT.	71.76	66.34	66.34	-	-	-
B-14	PCU15-4x5-LEFT-RIGHT	STA. 321+88.50, 42.00 LT.	71.76	66.13	-	66.13	66.13	66.13

UTILITIES LEGEND

MVEC	MAGIC VALLEY ELECTRIC COOP.
NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
HCID#1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
Highway / Civil
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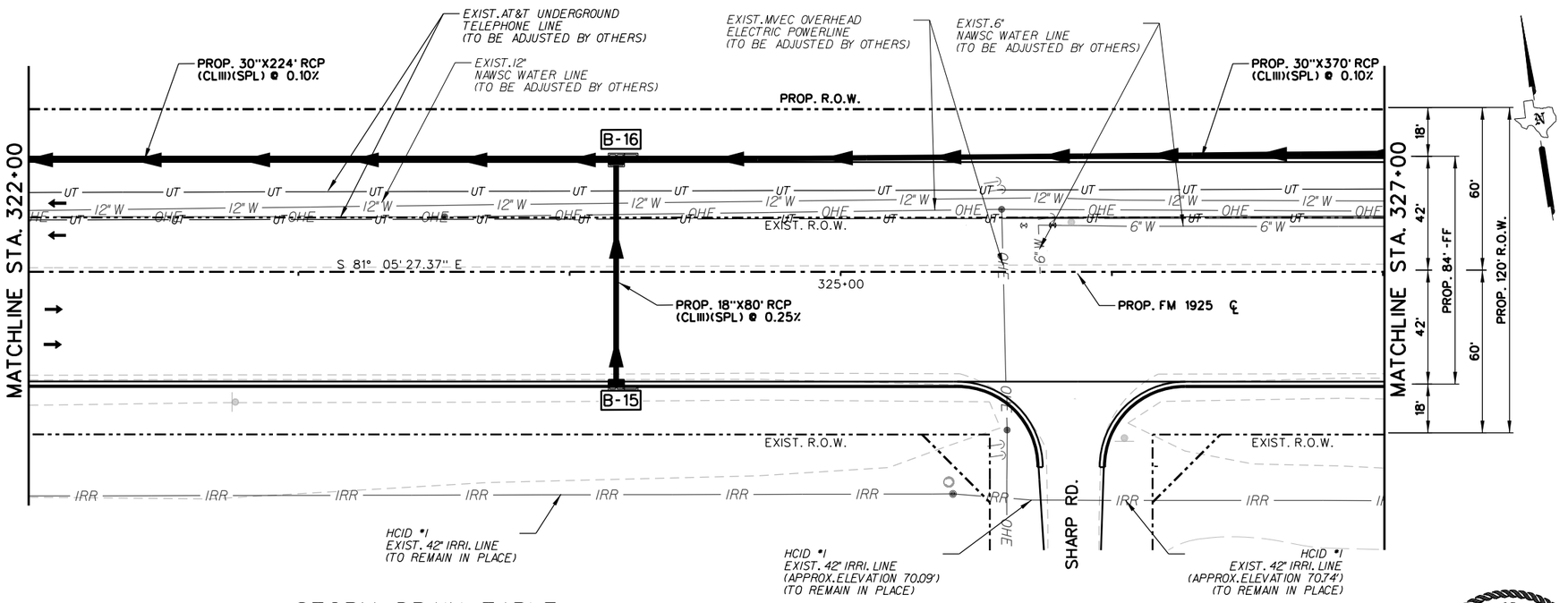
FM 1925
UTILITIES AND DRAINAGE
STA. 317+00 TO STA. 322+00

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

SHEET 13 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		14.3
REVIEW:							
CK:							

11/1/2023 K:\Counties\HID\FM 1925 PHR\1907 to Urest\\05 DRAINAGE\03 U&D\FM1925 E-2_UD13 - REV.dgn



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	715
400	SAND BACKFILL	CY	318
402	TRENCH EXCAVATION PROT.	LF	674
464	18" RCP (CL III)(SPL)	LF	80
464	30" RCP (CL III)(SPL)	LF	594
465	INLET (COMPL)(PCU)(3')(LEFT)	EA	1
465	INLET (COMPL)(PCU)(4')(RIGHT)	EA	1

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

NOTES:
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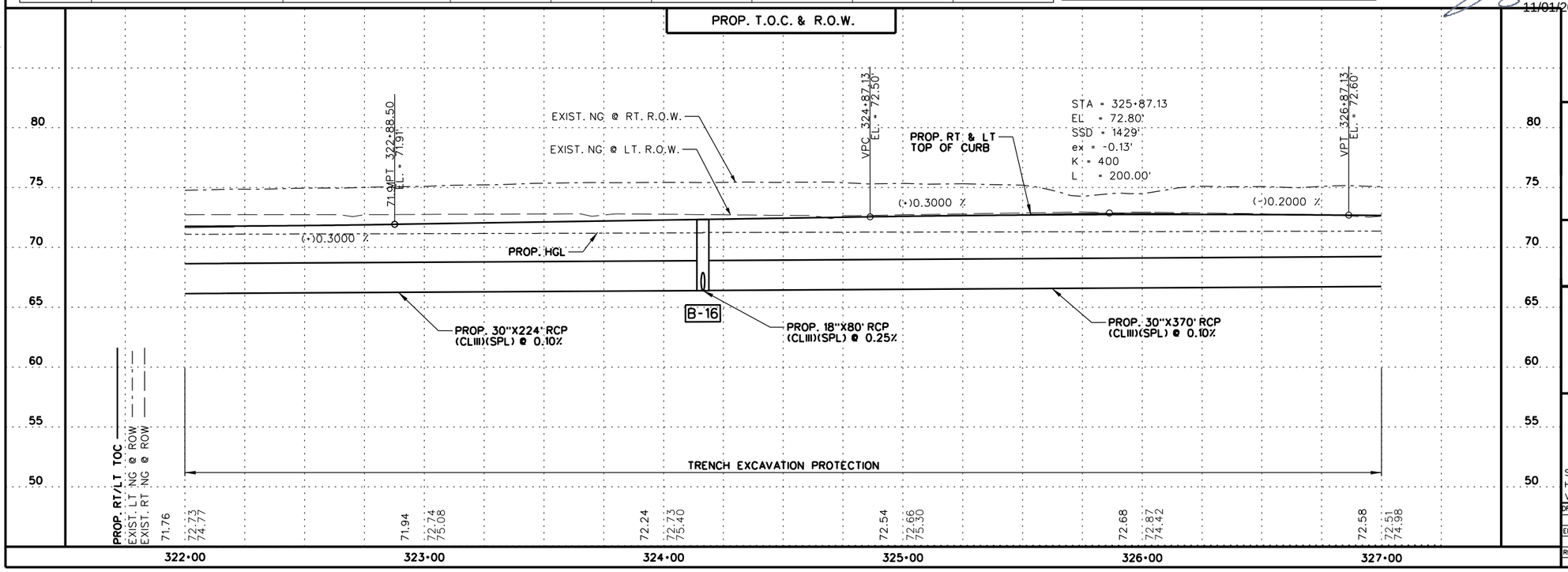
STORM DRAIN TABLE

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)
B-15	PCU10-3x5-LEFT	STA. 324+17.25, 42.00 RT.	72.29	66.57	66.57	-	-	-
B-16	PCU10-4x5-RIGHT	STA. 324+17.25, 42.00 LT.	72.29	66.36	-	66.36	66.36	66.36

UTILITIES LEGEND

MVEC	MAGIC VALLEY ELECTRIC COOP.
NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
HCID*1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
11/01/2023

THE COUNTY OF HIDALGO TEXAS

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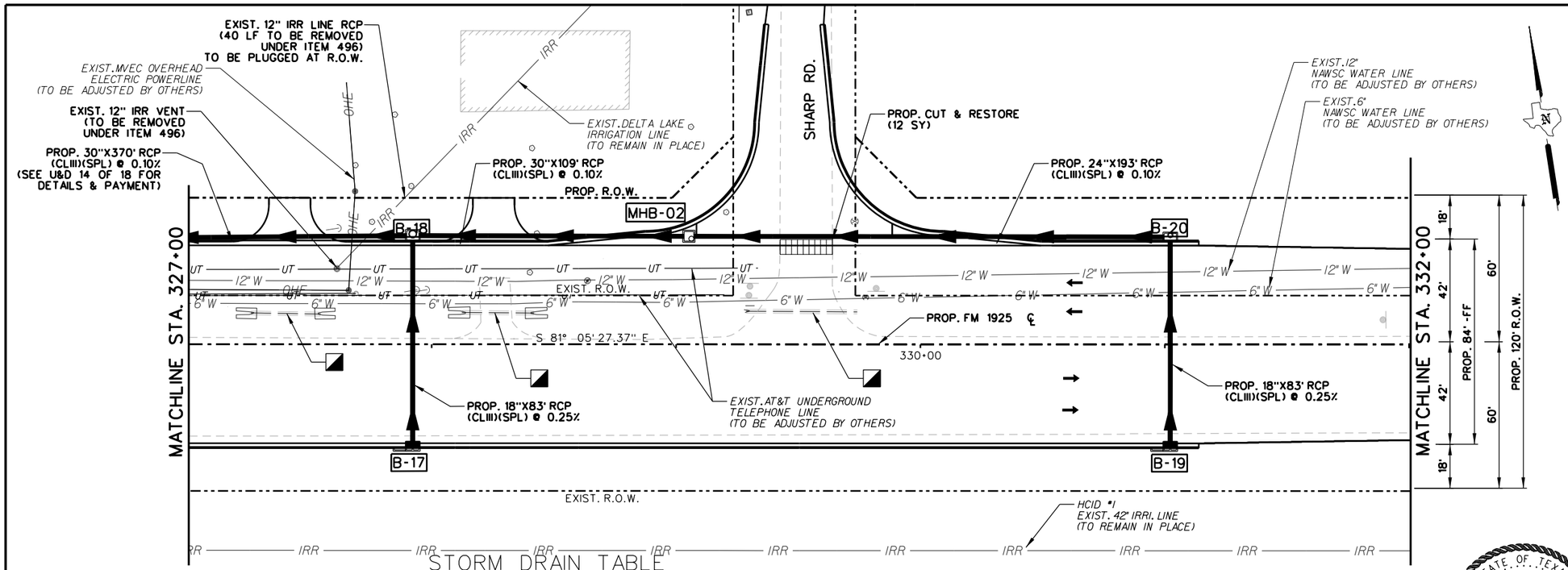
FM 1925
UTILITIES AND DRAINAGE
STA. 322+00 TO STA. 327+00

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

SHEET 14 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK: RP	6	TEXAS				FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035	144
REVIEW:						
CK:						

11/1/2023 K:\Counties\HID\FM 1925 PHII(907 to Urest)\05 DRAINAGE\03 U&D\FM1925 E-2_UD14 - REV.dgn



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-17	PCU10-3x5-RIGHT	STA. 327+92.25, 42.00 RT.	72.39	66.95	66.95	-	-	-
B-18	PCO10-4x5-LEFT	STA. 327+92.25, 42.00 LT.	72.39	66.74	-	66.74	66.74	66.74
MHB-02	MH4x4JB	STA. 329+05.25, 44.25 LT.	71.68	66.85	-	-	66.85	66.85
B-19	PCU10-3x5-RIGHT	STA. 331+02.25, 42.00 RT.	71.77	67.26	67.26	-	-	-
B-20	PCO10-3x5-LEFT	STA. 331+02.25, 42.00 LT.	71.77	67.05	-	67.05	-	67.05

UTILITIES LEGEND

MVEC	MAGIC VALLEY ELECTRIC COOP.
NAWSC	NORTH ALAMO WATER SUPPLY CORP
AT&T	AMERICAN TELEPHONE & TELEGRAPH
HCID #1	HIDALGO COUNTY IRRIGATION DISTRICT No 1

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAVATION (NON-PAY)	CY	384
400	SAND BACKFILL	CY	184
400	CUT & RESTORE	SY	11
402	TRENCH EXCAVATION PROT.	LF	192
464	18" RCP (CL III)(SPL)	LF	166
464	24" RCP (CL III)(SPL)	LF	193
464	30" RCP (CL III)(SPL)	LF	109
465	INLET (COMPL) (PCO)(3')(LEFT)	EA	1
465	INLET (COMPL) (PCU)(3')(RIGHT)	EA	2
465	INLET (COMPL)(PCO)(4')(LEFT)	EA	1
465	INLET (COMPL)(PSL)(RC)(4'x4')	EA	1
496	REMOVE STR (PIPE)	LF	40
496	REMOVE STR (PIPE)	EA	1

LEGEND

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- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

NOTES:
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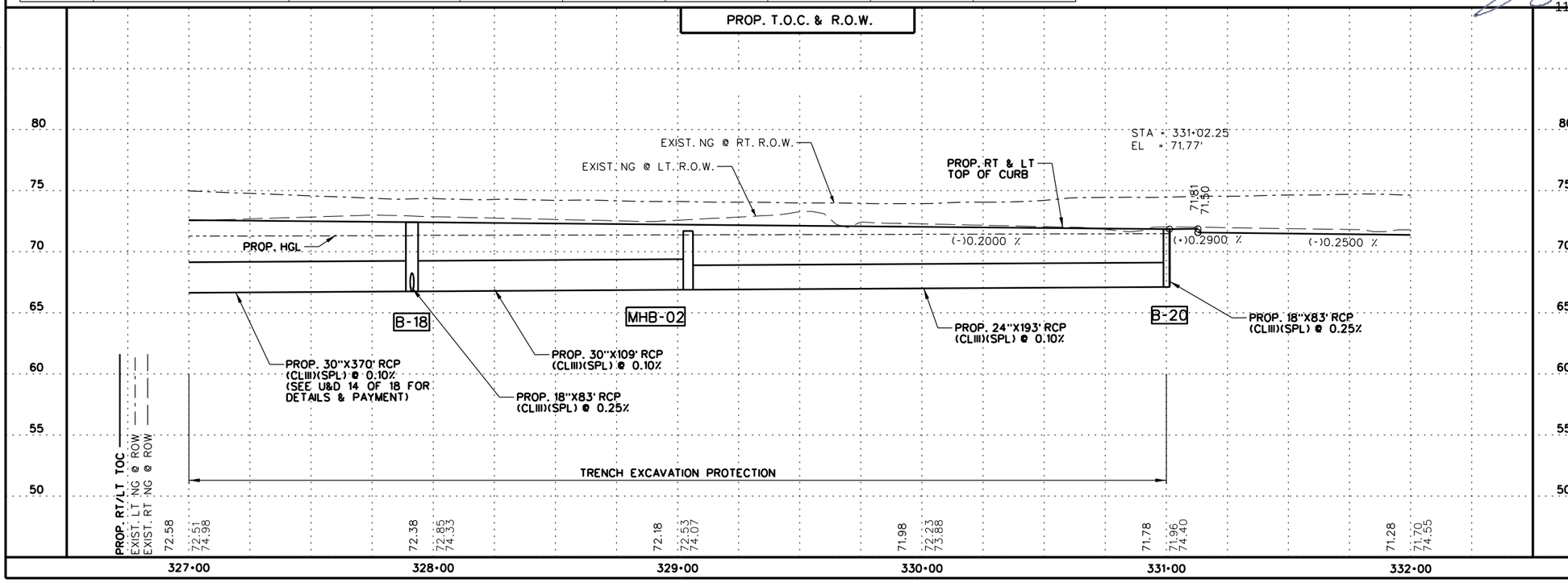
11/01/2023



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UTILITIES AND DRAINAGE
STA. 327+00 TO STA. 332+00

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

SHEET 15 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK: RP	6	TEXAS				FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035	145
REVIEW:						
CK:						

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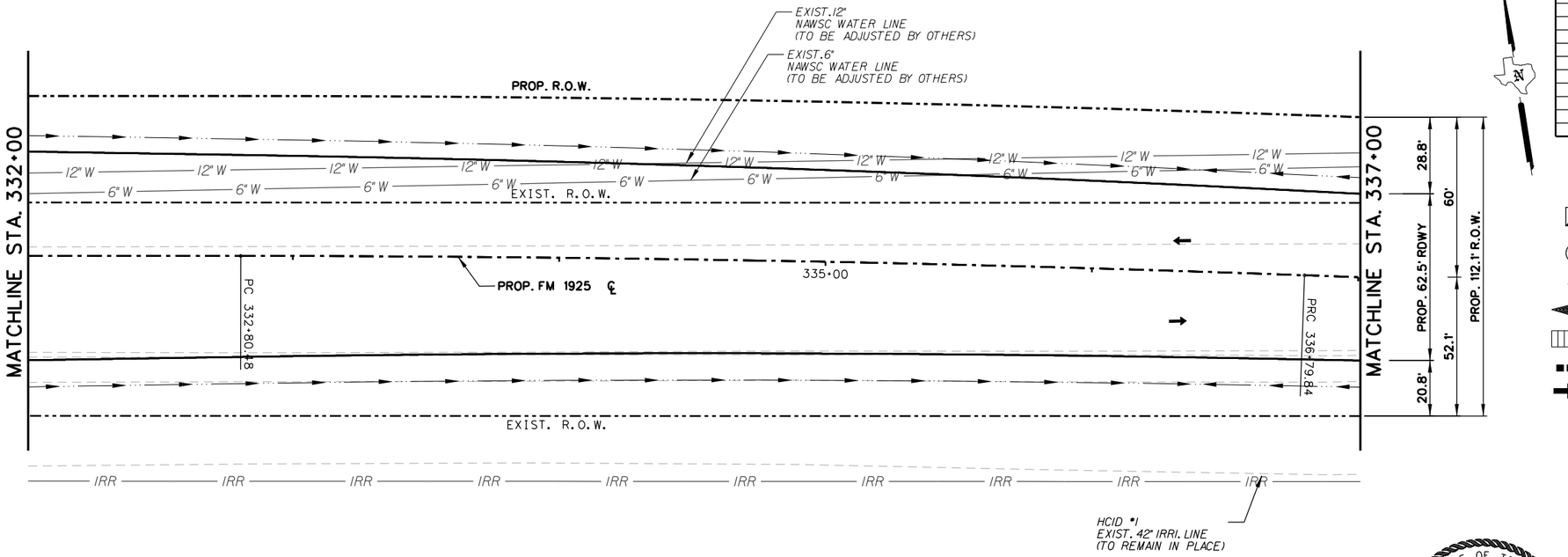
11/1/2023



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY

LEGEND

- SEE P&P SHEETS FOR DETAILS
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- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
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STATE OF TEXAS
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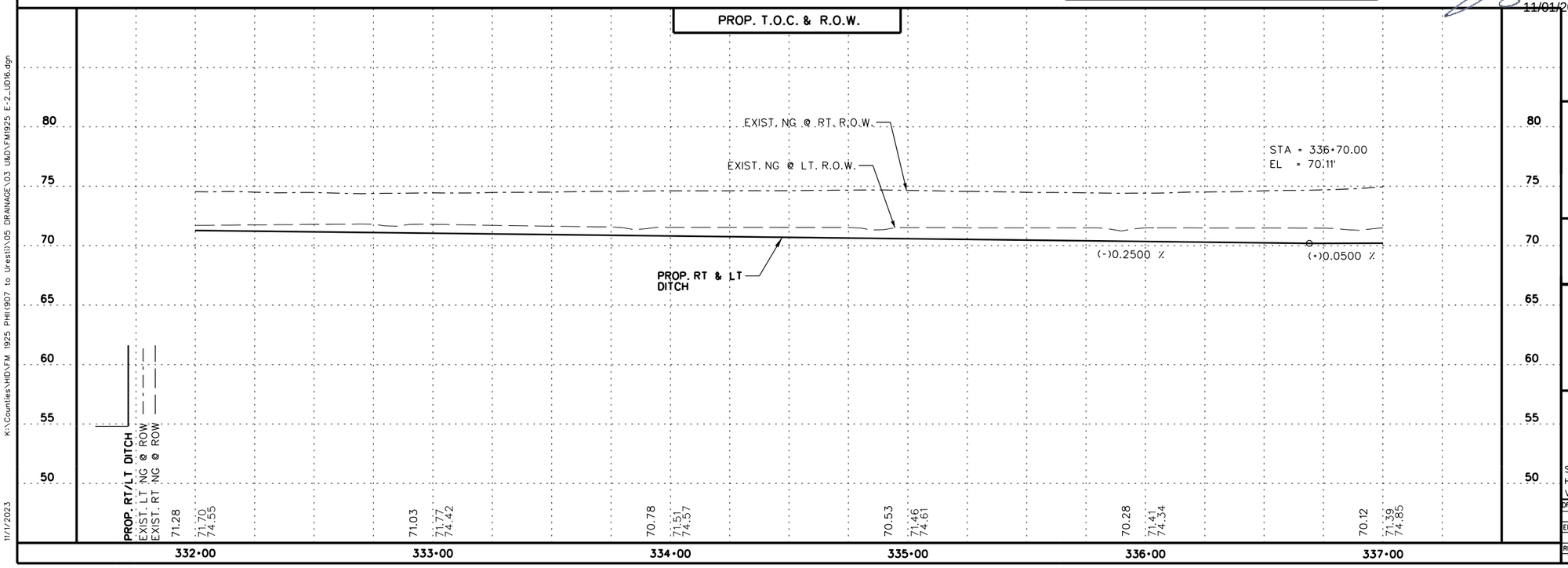
11/01/2023

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
HCID #1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

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Mercedes, TX. 78570
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Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

FM 1925
UTILITIES AND DRAINAGE
STA. 332+00 TO STA. 337+00

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

SHEET 16 OF 18

DRAWING:	RP
CK:	RP
ENGINEER:	JBS
CK:	JBS
REVIEW:	
CK:	

FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
6	TEXAS					FM1925
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
PHR	HIDALGO	1803	02	035		146

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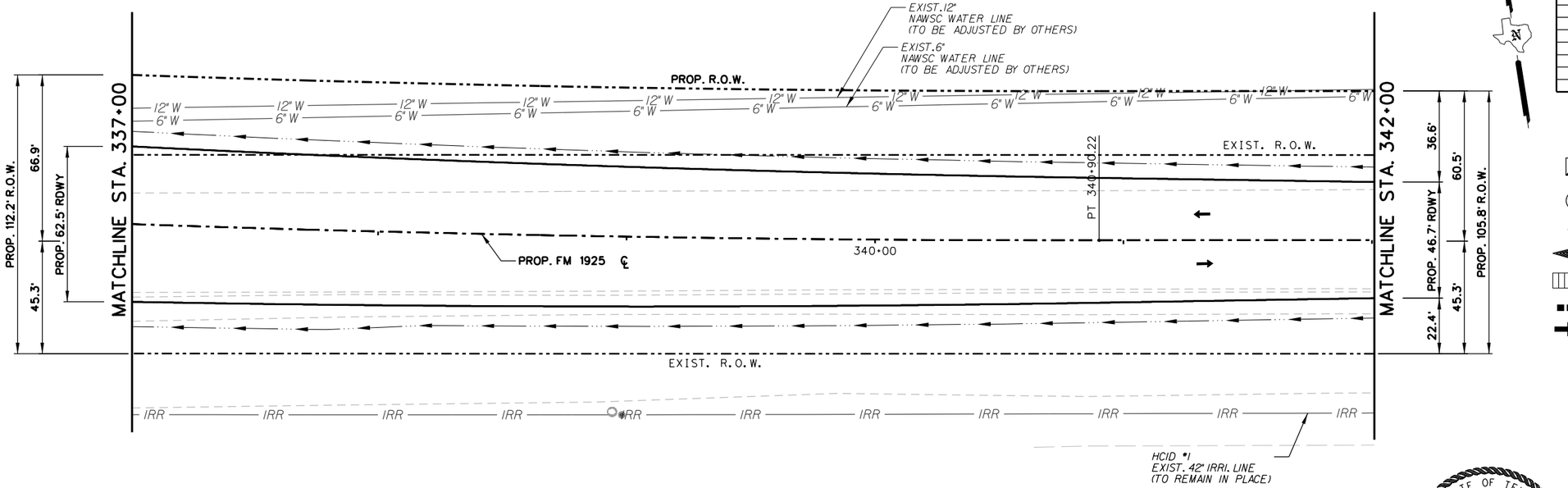
11/1/2023



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

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

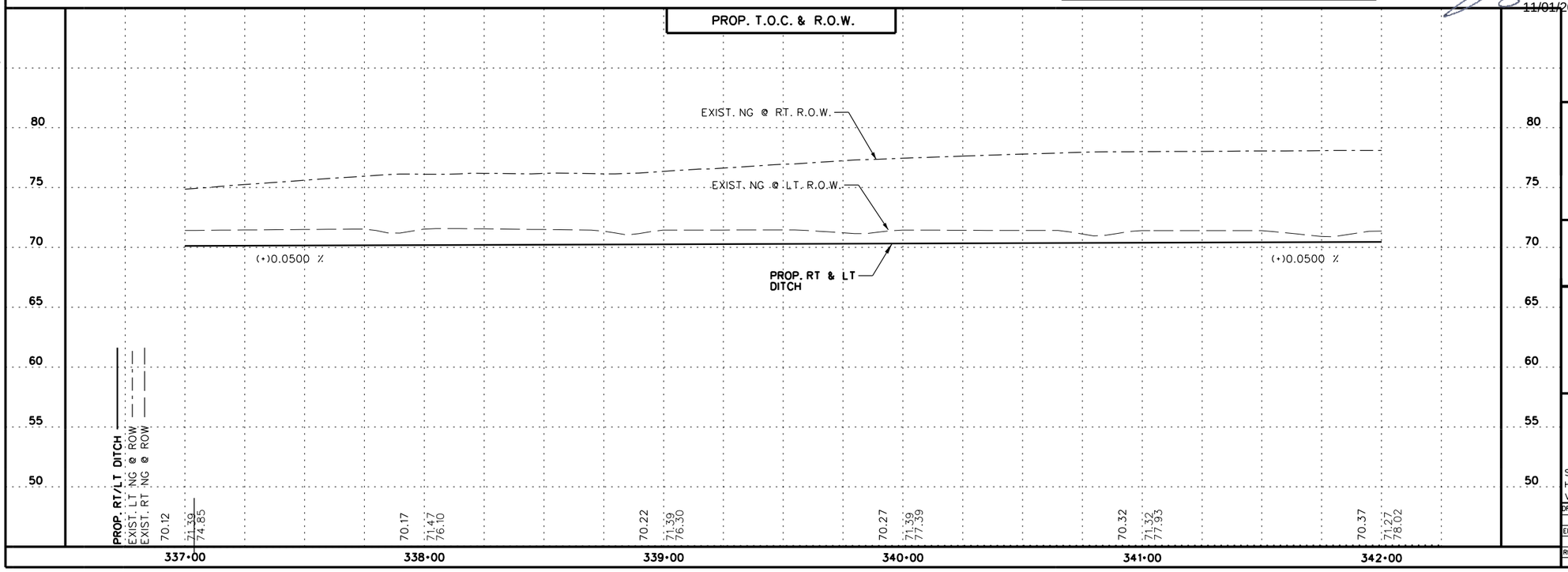
CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

INLET OFFSETS ARE TO FACE OF ROADWAY CURB. MANHOLE OFFSETS ARE TO CENTER OF PRECAST BASE. VERIFY ALL INFORMATION WITH HYDRAULIC DATA SHEETS FOR INLET LOCATIONS, ELEVATIONS, PIPE LENGTHS, FLOWLINES, ETC.

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
HCID #1	HIDALGO COUNTY IRRIGATION DISTRICT No 1



THE COUNTY OF HIDALGO TEXAS

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FM 1925
UTILITIES AND DRAINAGE
STA. 337+00 TO STA. 342+00

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

SHEET 17 OF 18

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		147
REVIEW:							
CK:							

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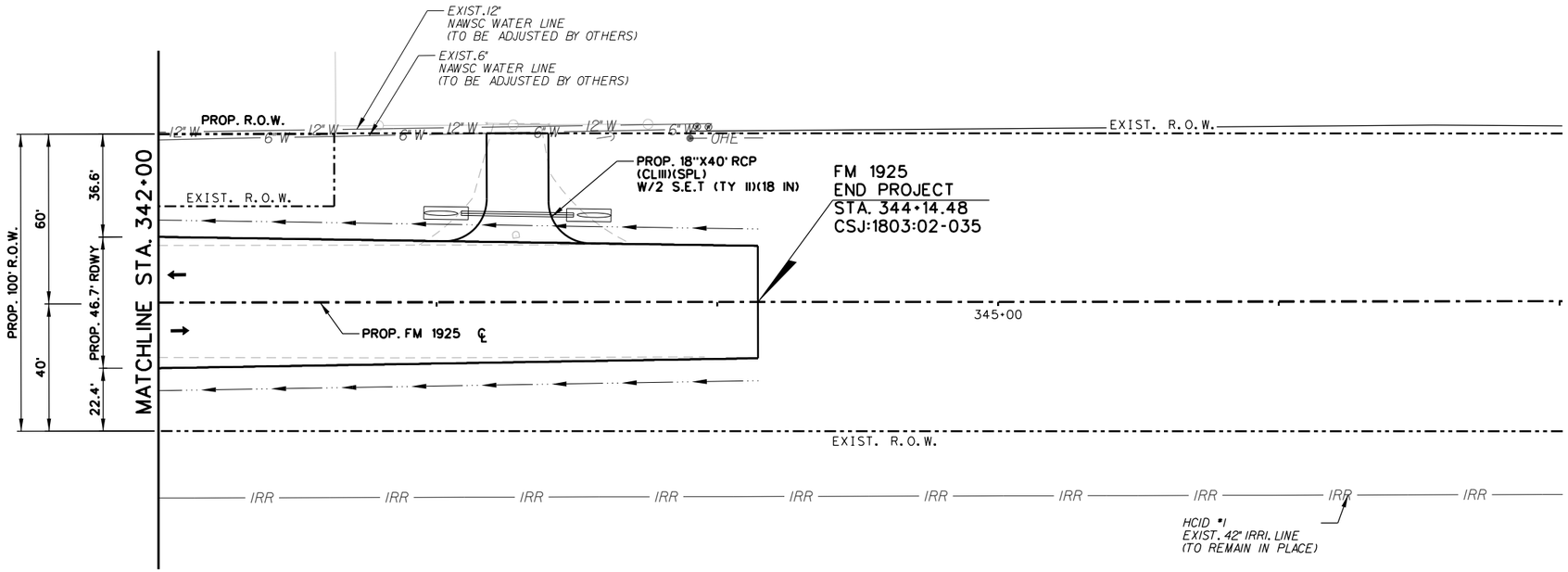

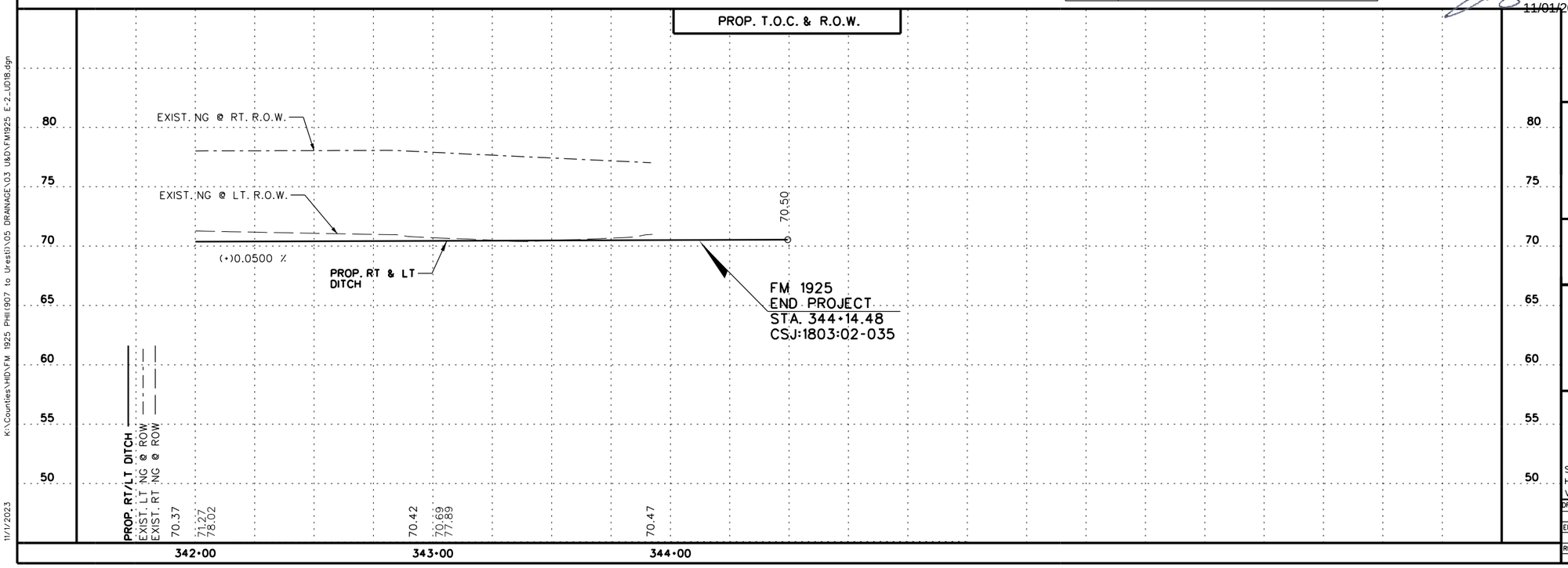

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
464	RC PIPE (CL III)(18 IN)	LF	40
467	SET (TY II) (18 IN) (RCP) (6:1) (P)	EA	2

LEGEND

- SEE P&P SHEETS FOR DETAILS
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- TO BE REMOVED UNDER ITEM 110
- DIRECTION OF STORM SEWER FLOW
- LIMITS OF PROP. CUT & RESTORE (ITEM 400)
- INST. OM ASSM (OM-2Z)(FLX) GND (BI)
- PROPOSED TRUNK LINE

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

CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

INLET OFFSETS ARE TO FACE OF ROADWAY CURB. MANHOLE OFFSETS ARE TO CENTER OF PRECAST BASE. VERIFY ALL INFORMATION WITH HYDRAULIC DATA SHEETS FOR INLET LOCATIONS, ELEVATIONS, PIPE LENGTHS, FLOWLINES, ETC.

UTILITIES LEGEND

NAWSC	NORTH ALAMO WATER SUPPLY CORP
HCID #1	HIDALGO COUNTY IRRIGATION DISTRICT No 1

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925
UTILITIES AND DRAINAGE
STA. 342+00 TO STA. 344+15

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

DRAWING: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK: RP	6	TEXAS					FM1925
ENGINEER: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK: JBS	PHR	HIDALGO	1803	02	035		148
REVIEW:							
CK:							

11/1/2023 K:\Counties\HIDALGO\FM 1925 PHII(907 to Urest)\05 DRAINAGE\03 U&D\FM1925 E-2_UD18.dgn

SHEET SUMMARY

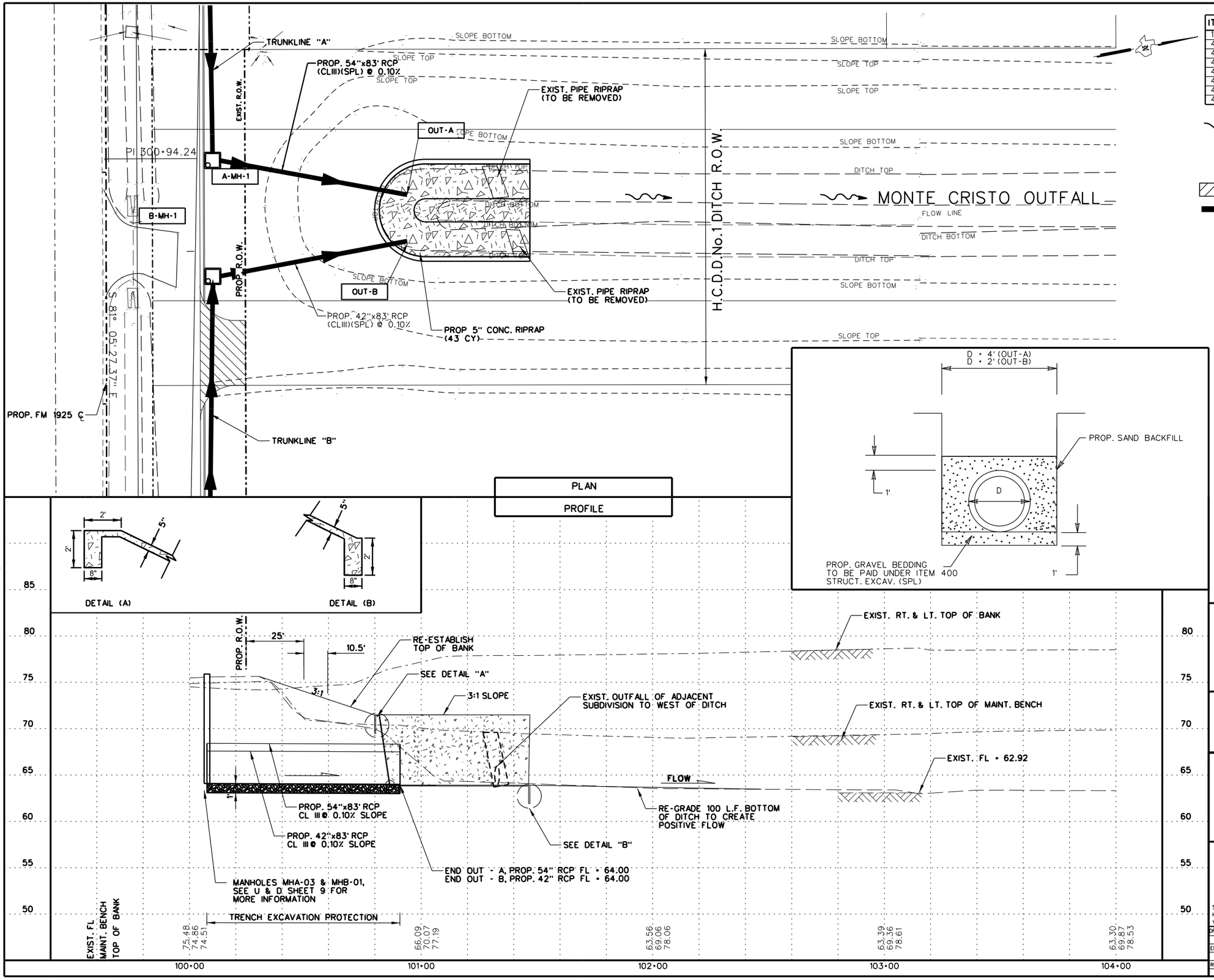
ITEM	DESCRIPTION	UNIT	QUANTITY
104	REMOVE CONC. (RIPRAP)	SY	18
400	STRUCT EXCAVATION (NON-PAY)	CY	506
400	SAND BACKFILL	CY	172
400	STRUCT EXCAVATION (SPL)	CY	29
402	TRENCH EXCAVATION PROT.	LF	166
432	CONC. RIPRAP (5")	CY	43
464	42" RCP (CL III)(SPL)	LF	83
464	54" RCP (CL III)(SPL)	LF	83

LEGEND:

- DIRECTION OF FLOW
- SEE P&P SHEETS FOR DETAILS
- FOR CONTRACTORS INFOMATION ONLY, NON PAY
- PROPOSED FILL
- PROPOSED STORM SEWER TRUNK LINE

NOTES:

1. WHEN WORKING OUTSIDE THE ROW, CAUTION SHALL BE TAKEN NOT TO DAMAGE EXISTING FENCES, TREES, ETC. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS WHEN WORKING OUTSIDE THE ROW. ANY DAMAGES DONE TO THEIR PROPERTY SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
2. CULVERT STRUCTURES TO BE DONE IN PHASE I. IF CONTRACTOR OPTS TO DO IT IN ANY OTHER PHASE, ANY SPECIAL SHORING REQUIRED WILL BE SUBSIDIARY TO CULVERT ITEMS.
3. SEE ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.



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PROFESSIONAL LICENSED ENGINEER
STATE OF TEXAS
11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925 OUTFALL A & B DETAIL

SCALE:
HOR: 1"= 40'
VER: 1"= 10'

SHEET 1 OF 1

DRAWING:	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:	6	TEXAS					FM1925
ENGINEER:	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.	
CK:	PHR	HIDALGO	1803	02	035	149	
REVIEW:							
CK:							

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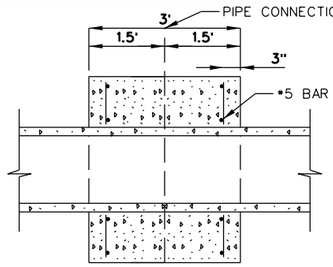
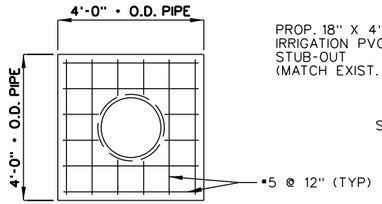
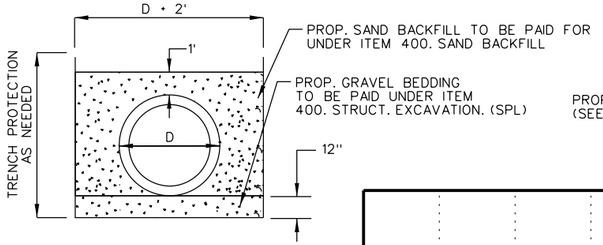
10/31/2023



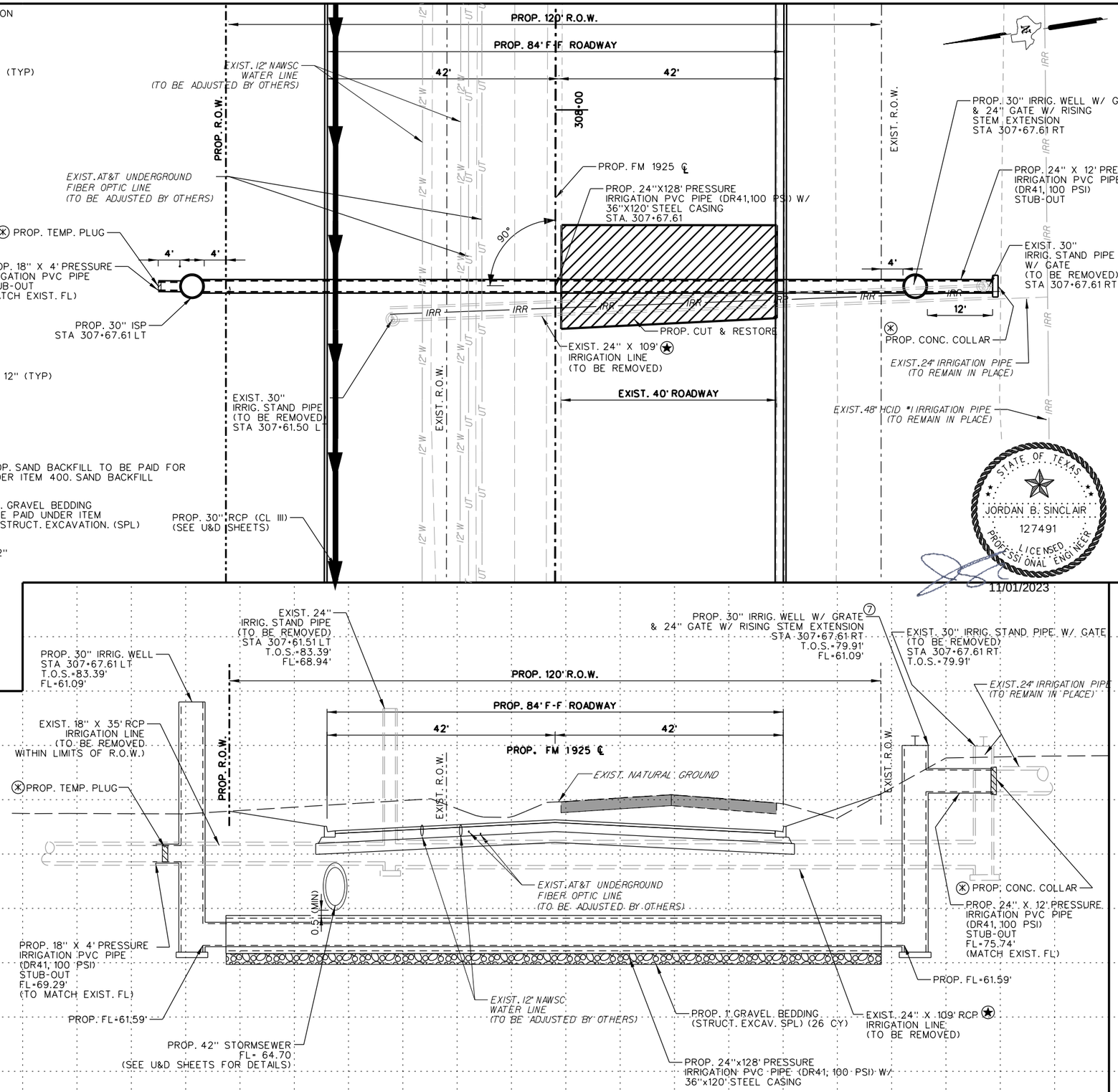
CONCRETE COLLAR



COLLAR REINFORCEMENT



BACKFILL DETAIL



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
⊛ 400	STRUCTURAL EXCAVATION	CY	347
400	STRUCTURAL EXCAV. (SPL)	CY	26
400	SAND BACKFILL	CY	81
400	CUT & RESTORE	SY	67
402	TRENCH EXCAV. PROTECTION	LF	133
460	CMP (GAL STL 36 IN) CASING	LF	120
496	REMOVE STRUCTURE (PIPE)	LF	144
1007	IRRIGATION WELL (30")	EA	2
1007	IRRIGATION GATE (24")	EA	1
1008	PRSSR IRRIG PVC PIPE (18")	LF	4
1008	PRSSR IRRIG PVC PIPE (24")	LF	140

LEGEND

⊛ NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.

⊕ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.

★ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.

LIMITS OF PROP. CUT & RESTORE (ITEM 400)

PROPOSED TRUNK LINE

NOTE:

1. THE CONTRACTOR WILL COORDINATE WITH HCID NO. 1 TWO (2) WEEKS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES. ANY CONSTRUCTION SCHEDULE THAT AFFECTS THE DELIVERY OF WATER OR OPERATION OF THE HCID NO. 1 MUST BE APPROVED IN WRITING BY THE HCID NO. 1, INCLUDING BUT NOT LIMITED TO, SUSPENSION OF SCHEDULE DURING ANY HIGH-WATER DELIVERY SEASON. ANY APPROVED AND SCHEDULED INTERRUPTION OF WATER DELIVERY MAY NOT EXCEED 7 CALENDAR DAYS.
2. PRIOR TO WORKING OUTSIDE THE ROW THE CONTRACTOR SHALL CONTACT THE AREA ENGINEER, CAUTION SHALL BE TAKEN NOT TO DAMAGE EXISTING FENCES, TREES, ETC. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS WHEN WORKING OUTSIDE THE ROW. ANY DAMAGES DONE TO THEIR PROPERTY SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
3. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO CONSTRUCTION.
4. ALL PVC ELBOWS, AND CONNECTIONS SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPES IS AT THE SAME ELEVATION AS THE EXIST. STANDPIPE
6. GATE SEATING HEAD IS 26 FT. UNSEATING HEAD IS 10 FT.
7. IRRIGATION WELL TO HAVE A GALVANIZED STEEL GRATE ANCHORED TO THE TOP OF STANDPIPE (TO BE SUBSIDIARY TO ITEM 1007). CONTRACTOR SHALL SUBMIT ANCHORING DETAILS TO HCID NO. 1 FOR APPROVAL PRIOR TO CONSTRUCTION.

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11/01/2023

THE COUNTY OF HIDALGO TEXAS

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

FM 1925
IRRIG. LAYOUT
STA. 307+67.61

SCALE:
HOR: 1"= 20'
VER: 1"= 10'

SHEET 1 OF 1

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		150
REVIEW:								
CK:								

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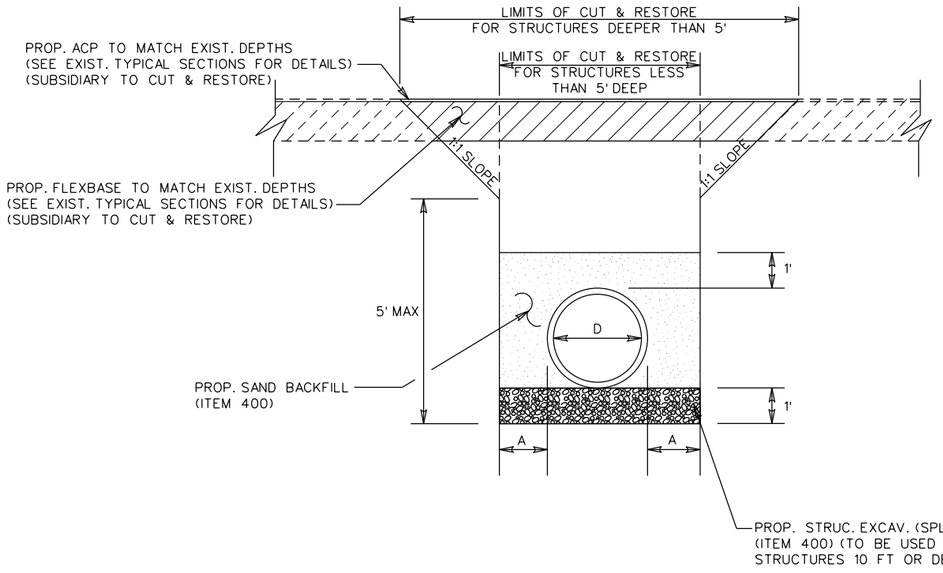
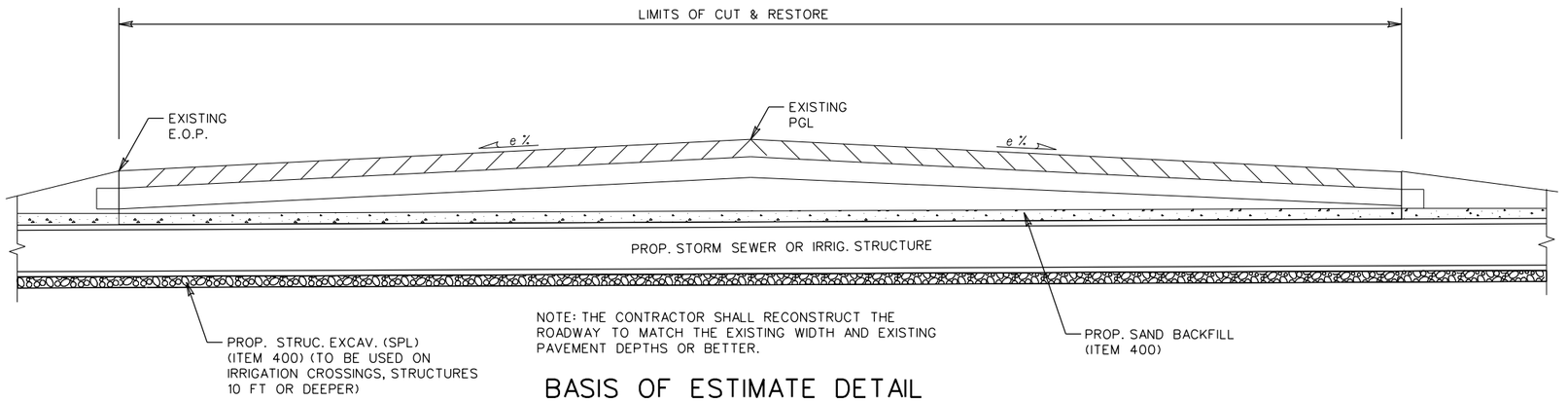
10/31/2023



PIPE		
D (IN)	A (FT)	WALL THICKNESS
18"	1'	3 1/4"
24	1'	3 3/4"
30"	1'	4 1/4"
36"	1'	4 3/4"
42"	1'	5 1/4"
48"	2'	5 3/4"
54"	2'	6 1/4"
60"	2'	6 3/4"
72"	2'	7 3/4"



NOTE: THE CONTRACTOR SHALL RECONSTRUCT THE ROADWAY TO MATCH THE EXISTING WIDTH AND EXISTING PAVEMENT DEPTHS OR BETTER.

BASIS OF ESTIMATE DETAIL

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FM 1925
CUT AND RESTORE DETAIL

DN: -		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: -		6	TEXAS					151
DW: -		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: -		PHR	HIDALGO	1803	02	035	FM 1925	
TR:								
CK TR:								

DATE: 10/31/2023 1:36:18 PM
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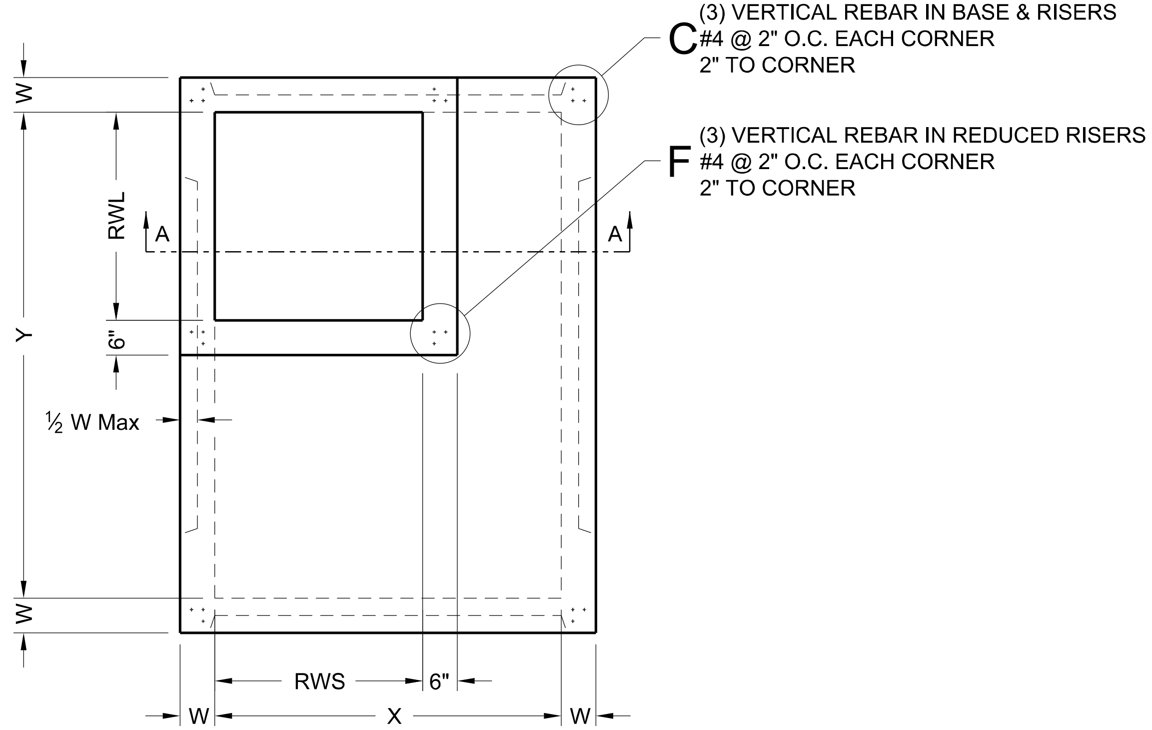
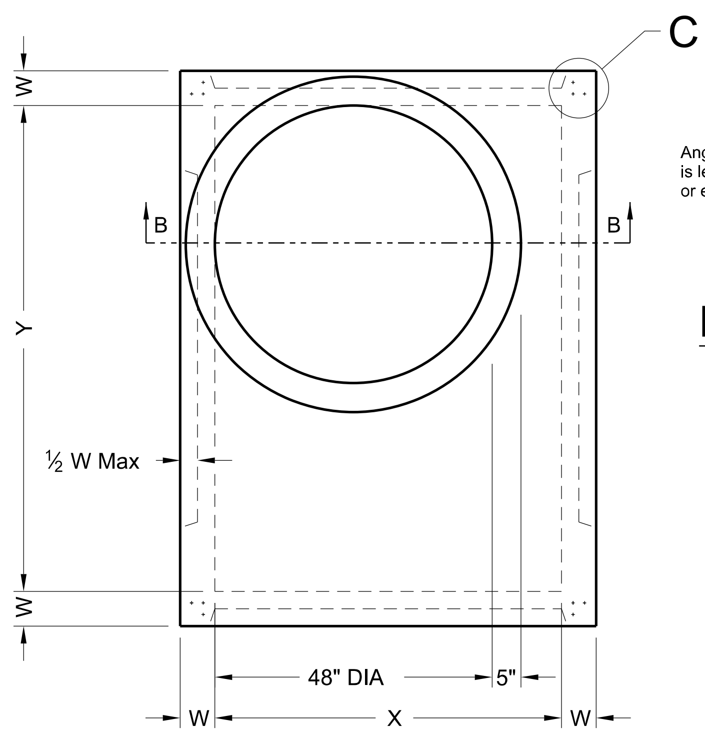


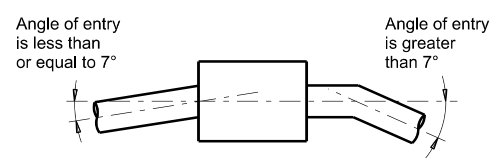
PLAN VIEW "A"

SQUARE REDUCED RISER OPTION



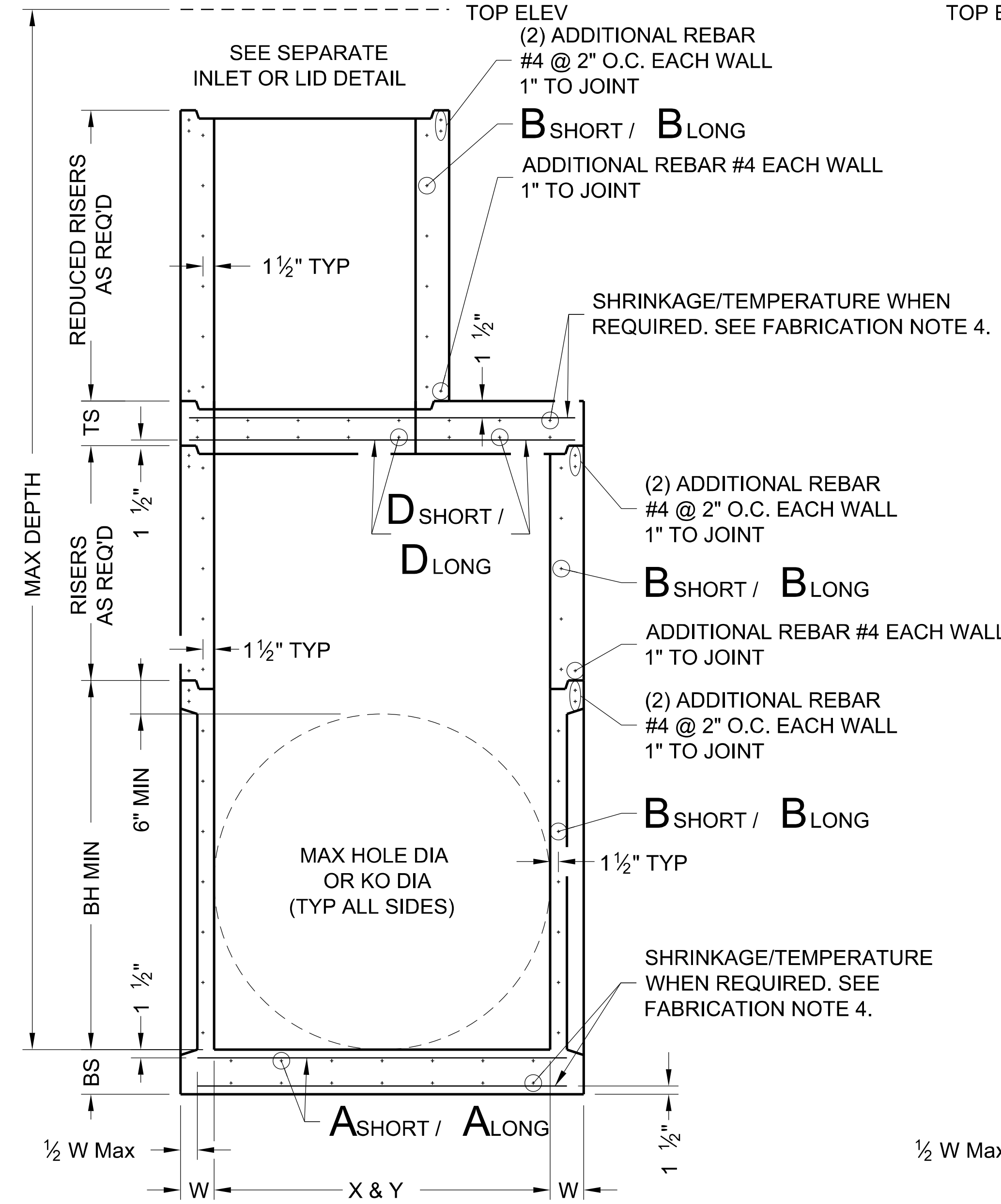
PLAN VIEW "B"

ROUND REDUCED RISER OPTION



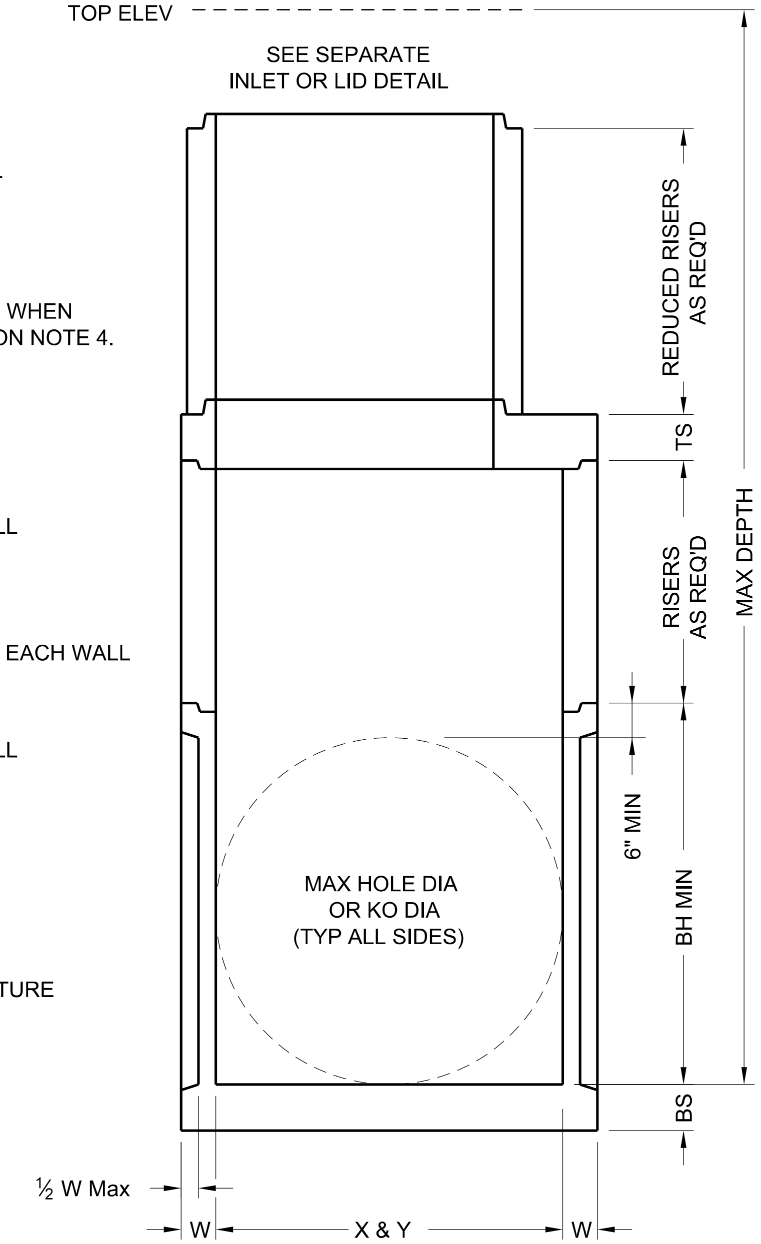
PIPE CONNECTION DETAIL

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 in^2/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. If required elsewhere. 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

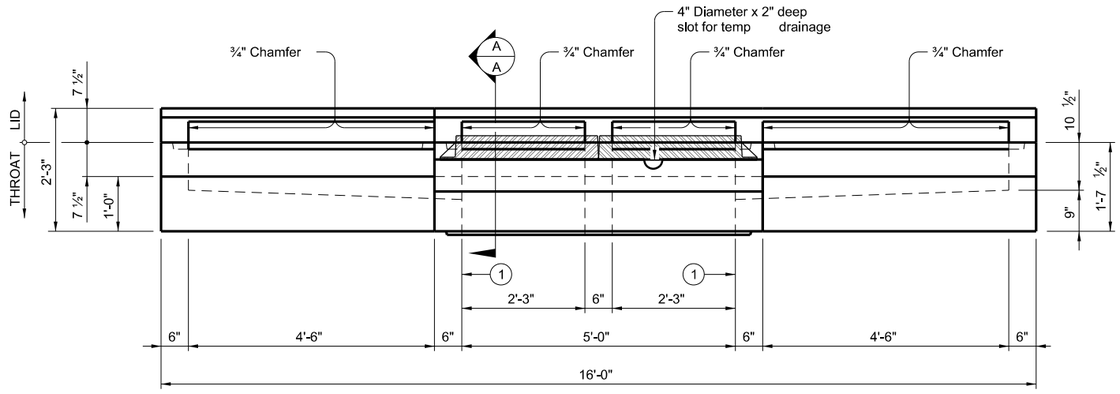
Texas Department of Transportation | Bridge Division Standard

PRECAST BASE

PB

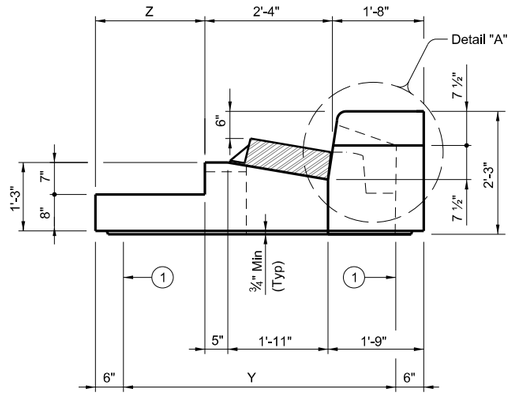
FILE: prestd01-20.dgn		DN: TxDOT		CK: TxDOT	DW: TxDOT		CK: TxDOT
©TxDOT February 2020		CONT	SECT	JOB		HIGHWAY	
REVISIONS		1803	02	035		FM 1925	
		DIST		COUNTY			SHEET NO.
		PHR		HIDALGO			152

DATE:
FILE:

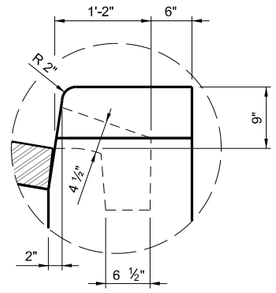


FRONT VIEW

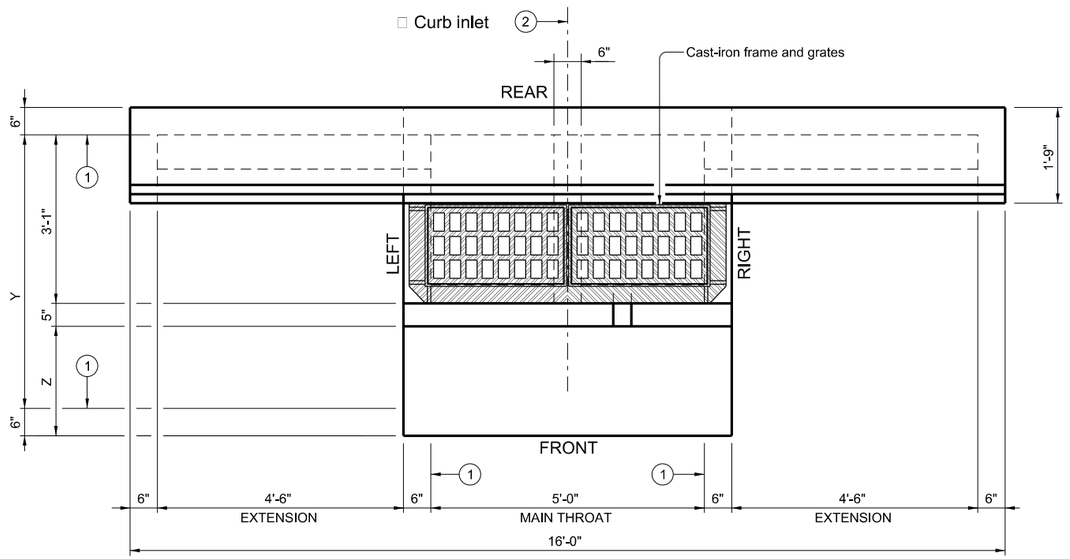
(Showing left and right extensions)



SECTION A-A



DETAIL "A"



PLAN VIEW

(Showing left and right extensions)

TABLE OF VARIABLE DIMENSIONS	
Size (Y)	Z
3'	0'
4'	1'
5'	2'
6'	3'

(1) Matches inside face of wall of precast base or riser below inlet.

(2) Reference point is located where the ¡ of the main throat intersects the normal gutter line. See Curb and Gutter Transition Details for PCO Inlet (CGT-PCO) standard for more information.

HS20 LOADING

SHEET 1 OF 2

Texas Department of Transportation

Bridge Division Standard

PRECAST CURB INLET UNDER ROADWAY

PCU

FILE: CD-PCU-23.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
06-2023: Added reference point.	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		153

DATE:
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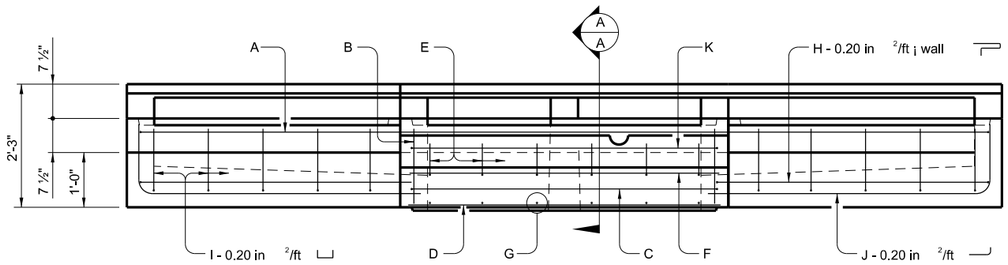
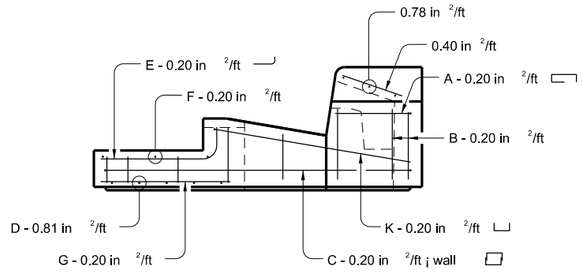
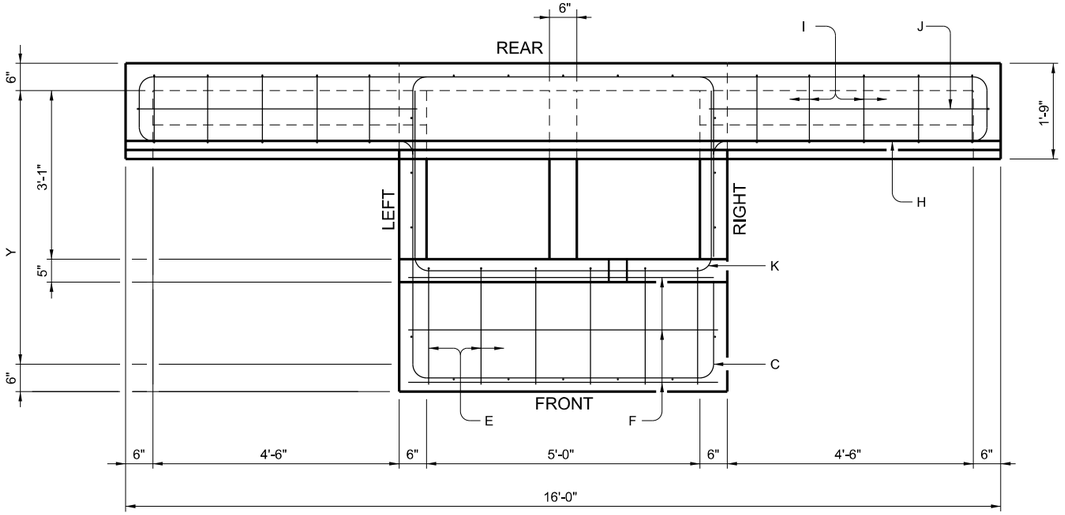


FRONT VIEW

(Showing left and right extensions)



SECTION A-A



PLAN VIEW

(Showing left and right extensions)

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 from surface of concrete or lower outside shoulder.
4. Extensions may be right, left, both or none. Provide extensions as specified elsewhere in plans.
5. Design tongue and groove joints for full closure on both shoulders. Minimum spigot depth is ¾". Top slab may employ a butt joint with dowels at the Contractor's option.
6. Provide lifting devices in conformance with Manufacturer's recommendations.
7. Chamfer vertical edges on inlet lid ¾" as shown in Front View, sheet 1.

INSTALLATION NOTES:

1. Inlet throat is placed under roadway and intended for direct traffic. Inlet lid is not for direct traffic. Do not place Inlet lid in roadway.
2. Seal tongue and groove joints and butt 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.

GENERAL NOTES:

1. Designed according to ASTM C913.
2. Open area of main throat = 324 sq in. Open area of one extension throat = 324 sq in.
3. Payment for inlet is per Item 465, "Junction Boxes, Manholes and Inlets" by type, size and extension placement. Extensions are subsidiary to inlet.

HS20 LOADING

Texas Department of Transportation

Bridge Division Standard

PRECAST CURB INLET UNDER ROADWAY

PCU

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©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
05-2023: Added reference point.	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		154

DATE:
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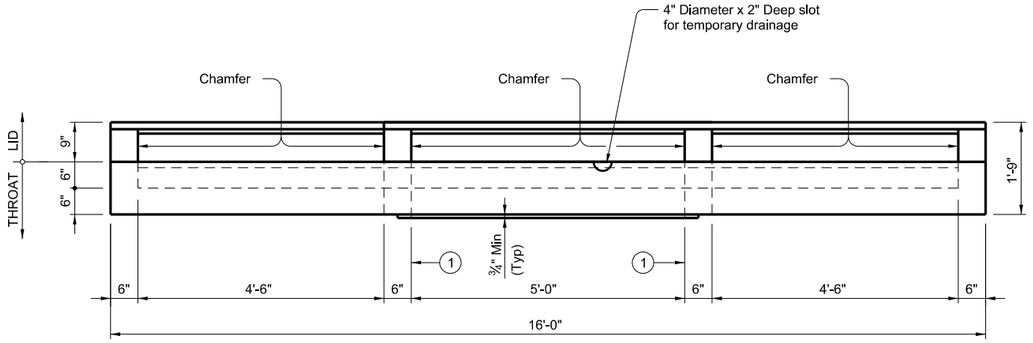
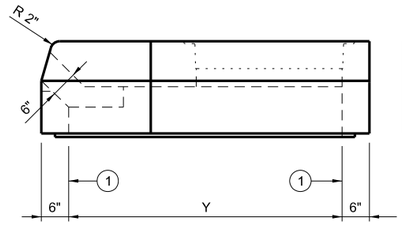


FRONT VIEW

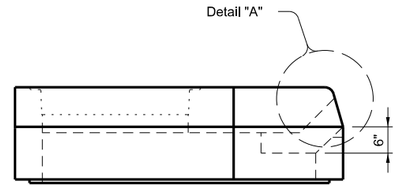
(Showning left and right extensions)



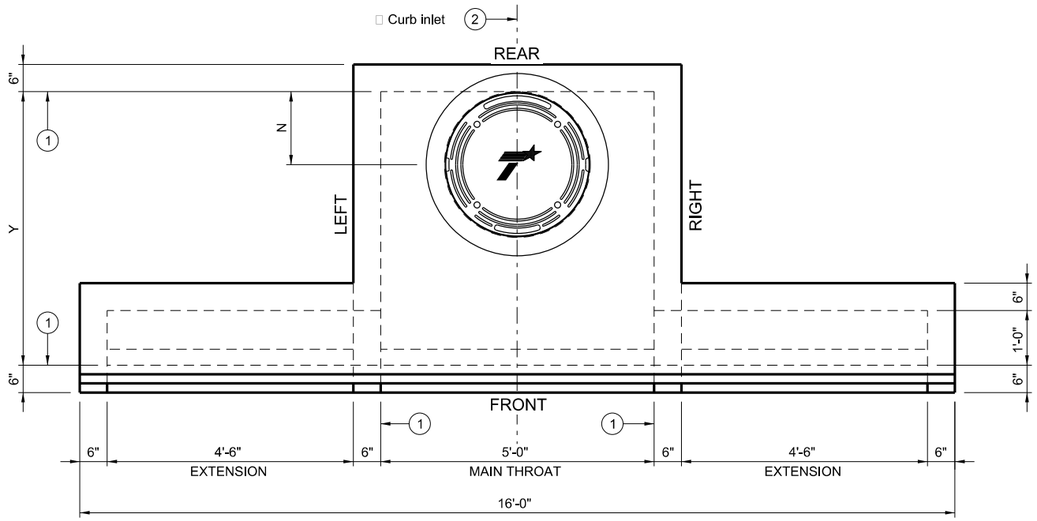
RIGHT VIEW

REAR VIEW

(Extensions not shown)



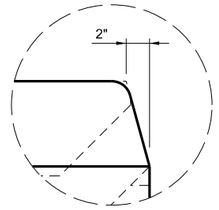
LEFT VIEW



PLAN VIEW

(Showning left and right extensions)

1. Matches inside face of wall of precast base or riser below inlet.
2. Reference point is located where the □ of the main throat intersects the normal gutter line. See Curb and Gutter Transition Details for PCO Inlet (CGT-PCO) standard for more information.



DETAIL "A"

HS20 LOADING

SHEET 1 OF 2

Texas Department of Transportation

Bridge Division Standard

PRECAST CURB INLET OUTSIDE ROADWAY

PCO

FILE: CD-PCO-23.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS	1803	02	035	FM 1925
06-2023: Added reference point.	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		155

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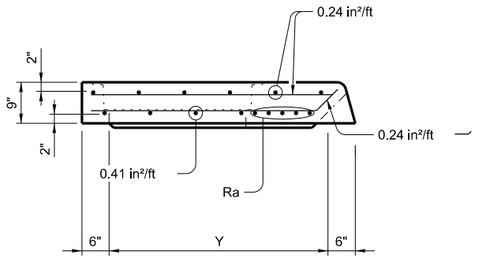
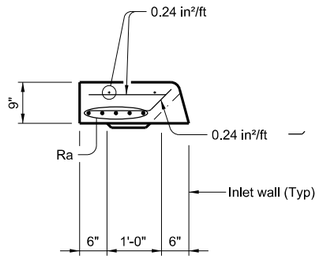
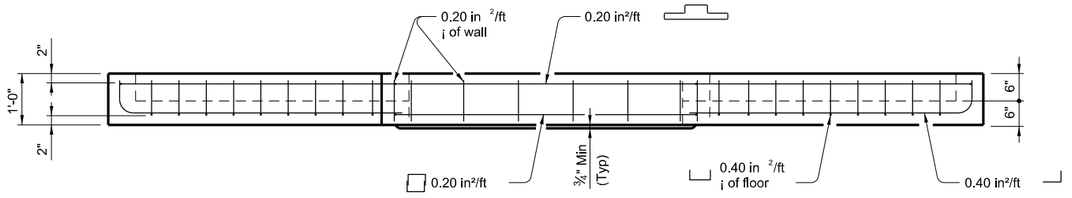


LID SECTION A-A

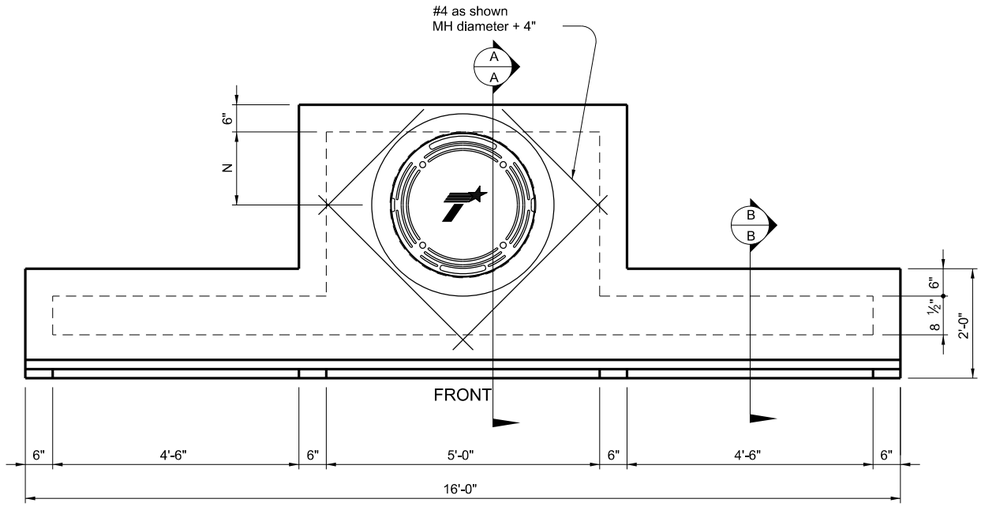


LID SECTION B-B



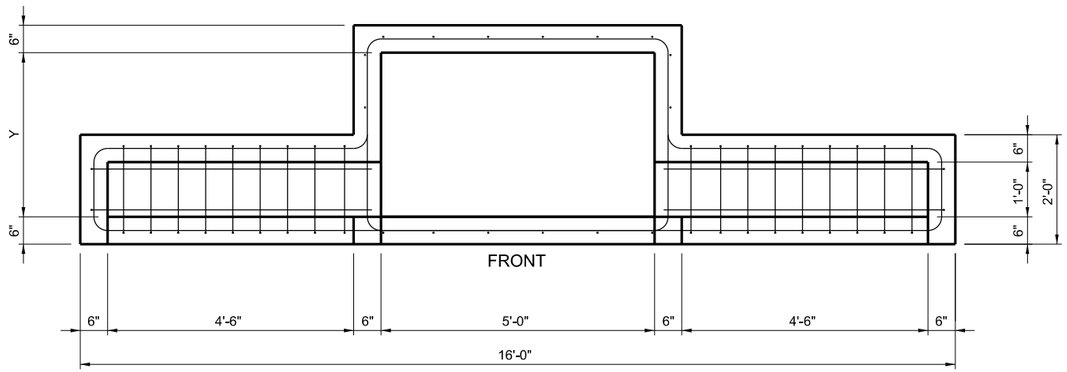
THROAT ELEVATION VIEW

(Showning left and right extensions)



LID PLAN VIEW

(Showning left and right extensions)



THROAT PLAN VIEW

(Showning left and right extensions)

Size (Y)	N	MH Dia*	Ra
3'	9"	18"	(4) #5 Additional
4'	16"	32"	(4) #5 Additional
5'	16"	32"	(4) #5 Additional
6'	16"	32"	(4) #5 Additional

*Nominal ring and cover size.

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. Extensions may be right, left, both or none. Provide extensions as specified elsewhere in the plans.
4. Design tongue and groove joints for full closure on both shoulders. Minimum spigot depth is ¾". Lid may employ a butt joint with dowels at the Contractor's option.
5. Provide lifting devices in conformance with Manufacturer's recommendations.
6. Provide cast iron solid cover, unless noted otherwise elsewhere in the plans.
7. Chamfer vertical edges of inlet lid ¾" as shown in Front View, sheet 1.

INSTALLATION NOTES:

1. Inlet throat and lid are not intended for direct traffic. Do not place in roadway.
2. Seal tongue and groove joints and butt 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.

GENERAL NOTES:

1. Designed according to ASTM C913.
2. Open area of main throat = 360 sq in. Open area of one extension throat = 324 sq in.
3. Payment for inlet is per Item 465, "Junction Boxes, Manholes, and Inlets" by type, size, and extension placement. Extensions are subsidiary to inlet.

Cover dimensions are clear dimensions, unless noted otherwise.

HS20 LOADING SHEET 2 OF 2

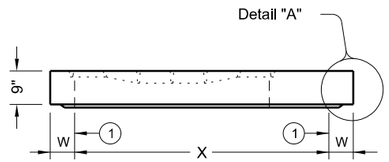
Texas Department of Transportation

Bridge Division Standard

PRECAST CURB INLET OUTSIDE ROADWAY

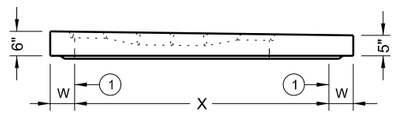
PCO

FILE: CD-PCO-23.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
06-2023: Added reference point.	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		156

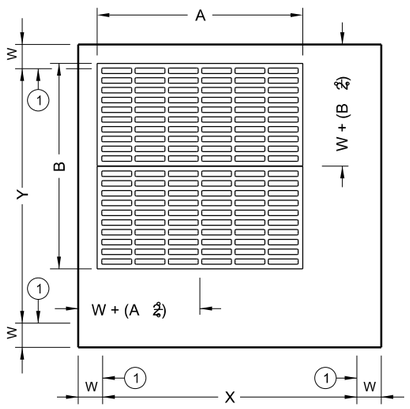


STYLE 'FG'

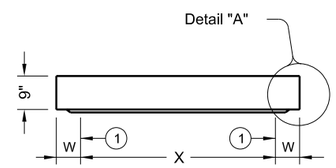
ORIENT TAPER TO CORRESPOND WITH ROADWAY CROSS-SLOPE.



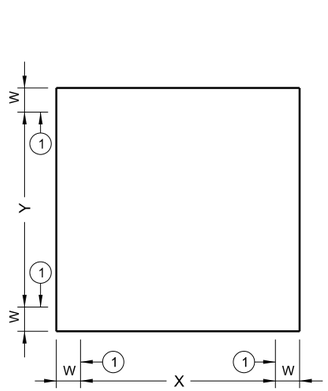
STYLE 'SFG'
ELEVATION VIEW



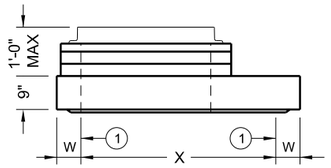
PLAN VIEW
CAST-IN FRAME & GRATE
STYLES 'FG' & 'SFG'



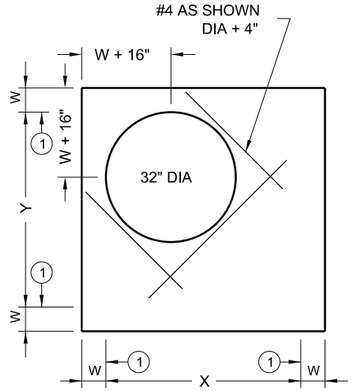
ELEVATION VIEW



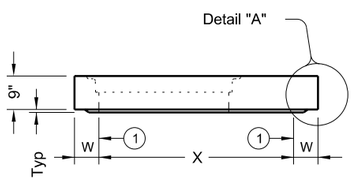
PLAN VIEW
NO OPENINGS
STYLE 'SL'



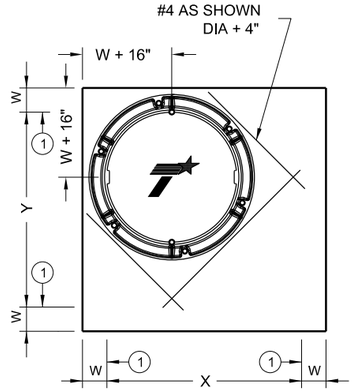
ELEVATION VIEW



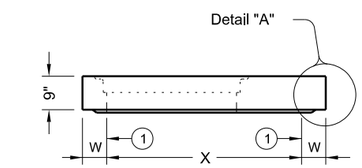
PLAN VIEW
SHIP LOOSE RING & COVER
STYLE 'RH'



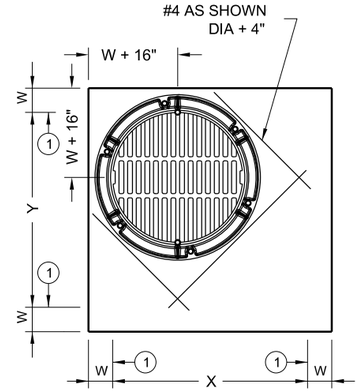
ELEVATION VIEW



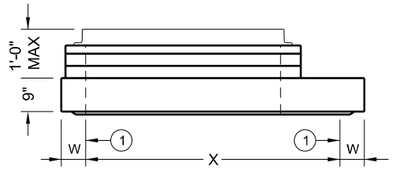
PLAN VIEW
32" DIA CAST-IN RING & COVER
STYLE 'RC'



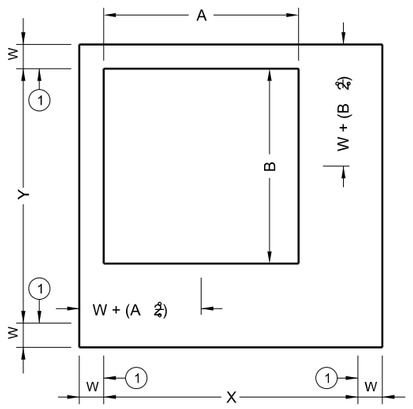
ELEVATION VIEW



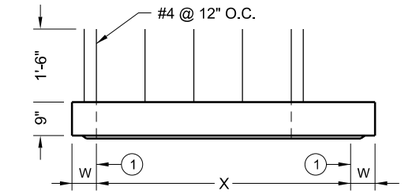
PLAN VIEW
32" DIA CAST-IN RING & GRATE
STYLE 'RG'



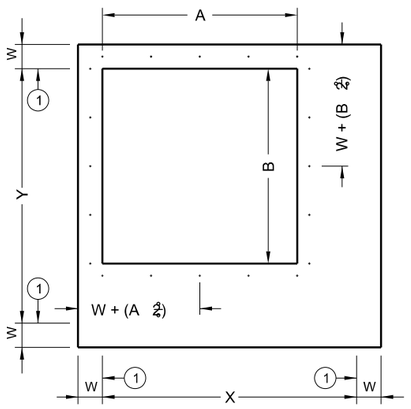
ELEVATION VIEW



PLAN VIEW
SHIP LOOSE FRAME & GRATE
STYLE 'SH'



ELEVATION VIEW



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: prestd05-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS	1803	02	035	FM 1925
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	PHR	HIDALGO		157

DATE: DATE: 7/2/2023 1:36:21 PM
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DATE: DATE 6/17/2023 1:36:22 PM
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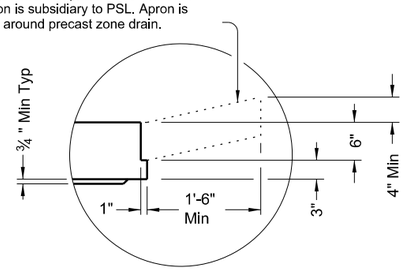
Style	Size (X x Y)	W (2)	A x B (nominal)	Short Span Reinf Steel Area	Long Span Reinf Steel Area
SL	3'x3'	6"	n/a	0.37 in□/ft	0.37 in□/ft
RH,RC,RG,SH,S1,FG	3'x3'	6"	3'x3' or 32" Dia	0.37 in□/ft	0.37 in□/ft
SFG	3'x3'	6"	3'x3'	0.32 in□/ft	0.32 in□/ft
SL	4'x4'	6"	n/a	0.34 in□/ft	0.34 in□/ft
RH,RC,RG,SH,S1,FG	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

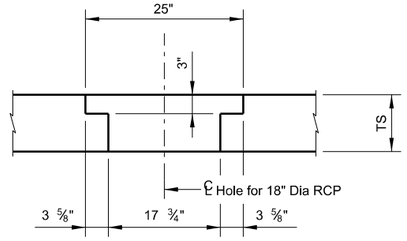
Bridge Division Standard

PRECAST SLAB LID

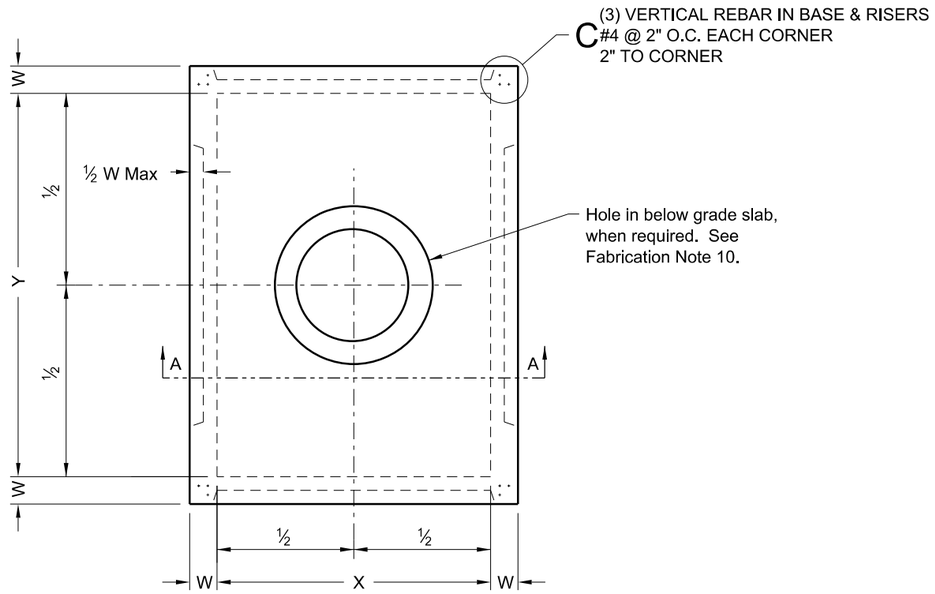
PSL

FILE: presta05-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		158

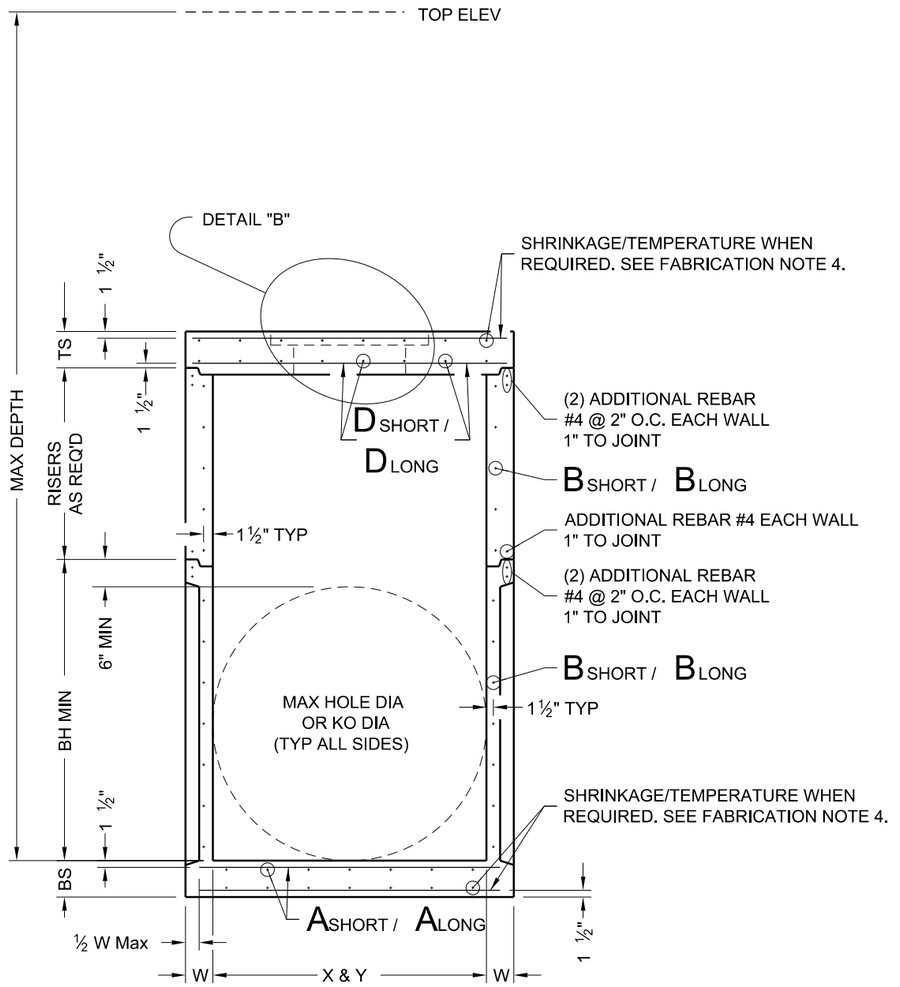
DATE: DATE/TIME
FILE: DOCUMENT NAME



DETAIL "B"



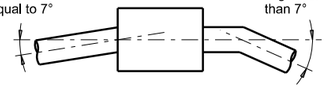
PLAN VIEW



SECTION A-A

Angle of entry is less than or equal to 7°

Angle of entry is greater than 7°



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.

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Texas Department of Transportation

Bridge Division Standard

PRECAST JUNCTION BOX

PJB

FILE: prestd09-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		159

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DATE: 1/17/2023 1:36:23 PM
FILE: DOCUMENT NAME ...ID\FM 1925 PHII (907 to Uresti)\10 STANDARDS\04 Drainage\PB prstd10-20.dgn

	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".

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DESIGN DATA FOR PRECAST BASE AND JUNCTION BOX

PDD

FILE: prestd10-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
	DIST		COUNTY	SHEET NO.
	PHR		HIDALGO	160

DATE:
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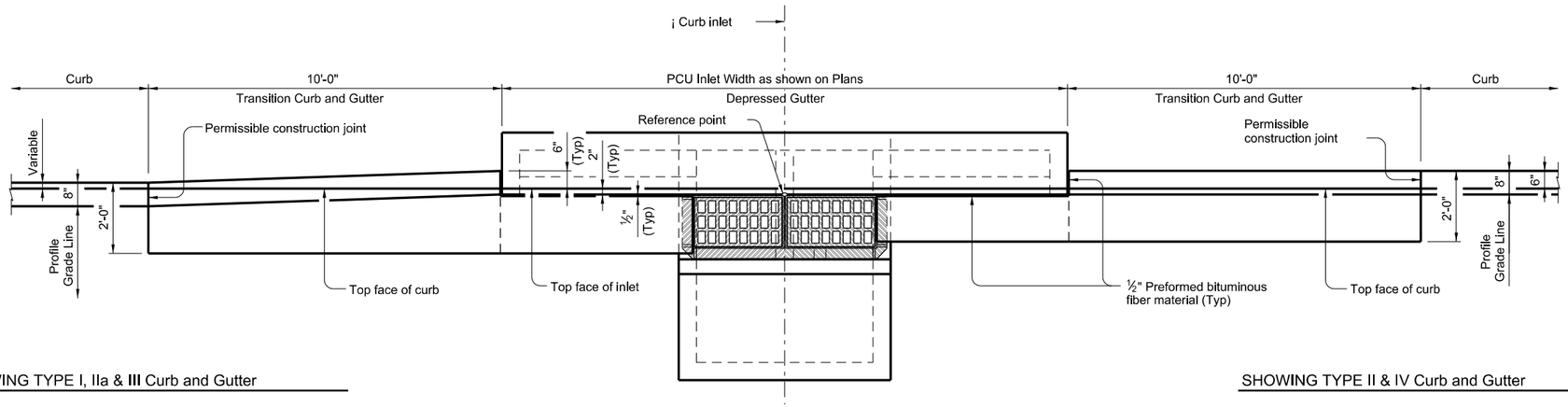
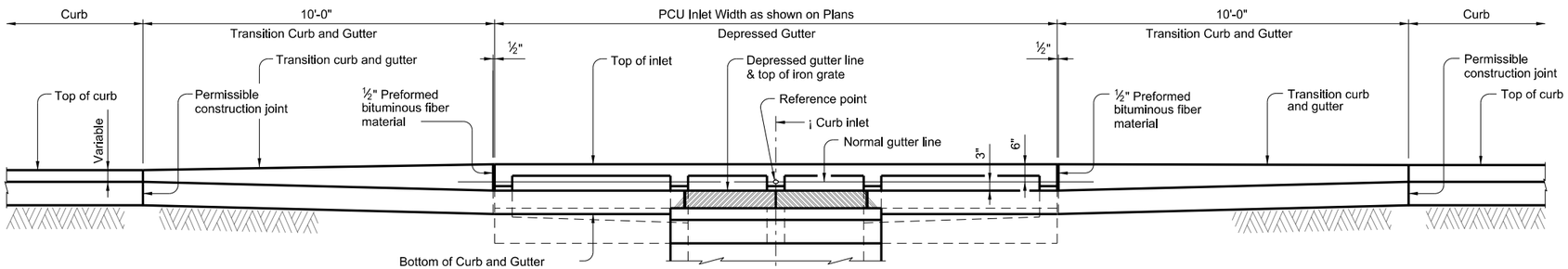


SHOWING TYPE I, IIa & **III** Curb and Gutter

SHOWING TYPE II & IV Curb and Gutter

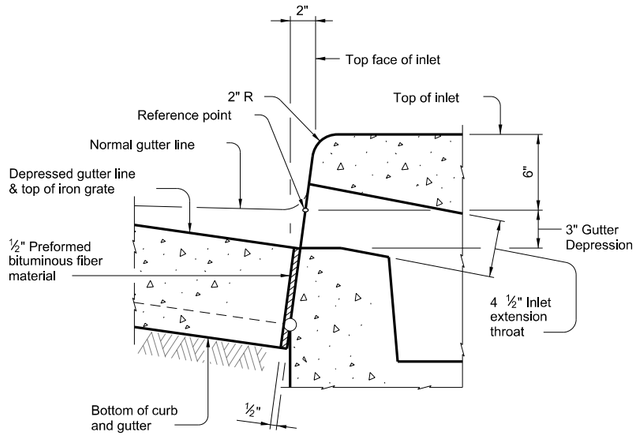
PLAN



SHOWING TYPE I, IIa & **III** Curb and Gutter

SHOWING TYPE II & IV Curb and Gutter

ELEVATION



SECTION AT GUTTER AND INLET

(Reinforcing steel not shown for clarity.)

CONSTRUCTION NOTES:
Align top face of curb with PCU Inlet as shown.

MATERIAL NOTES:
Provide ½" Preformed Bituminous Fiber Material.

GENERAL NOTES:
Reference point is located where the ℄ of the main throat intersects the normal gutter line.
See Precast Curb Inlet Under Roadway standard PCU for details and notes not shown.
See Concrete Curb and Curb and Gutter standard CCCG-22 for details and notes not shown.
Curb and Gutter Transitions is paid for and in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
Preformed Bituminous Fiber Material is subsidiary to PCU Inlet.

Texas Department of Transportation

Bridge Division Standard

CURB AND GUTTER TRANSITION DETAILS FOR PCU INLET

CGT-PCU

FILE: CD-CGT-PCU-23.dgn	DN: TxDOT	CK: AES	DW: JTR	CK: AES
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
06-2023: Added reference point.	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		161

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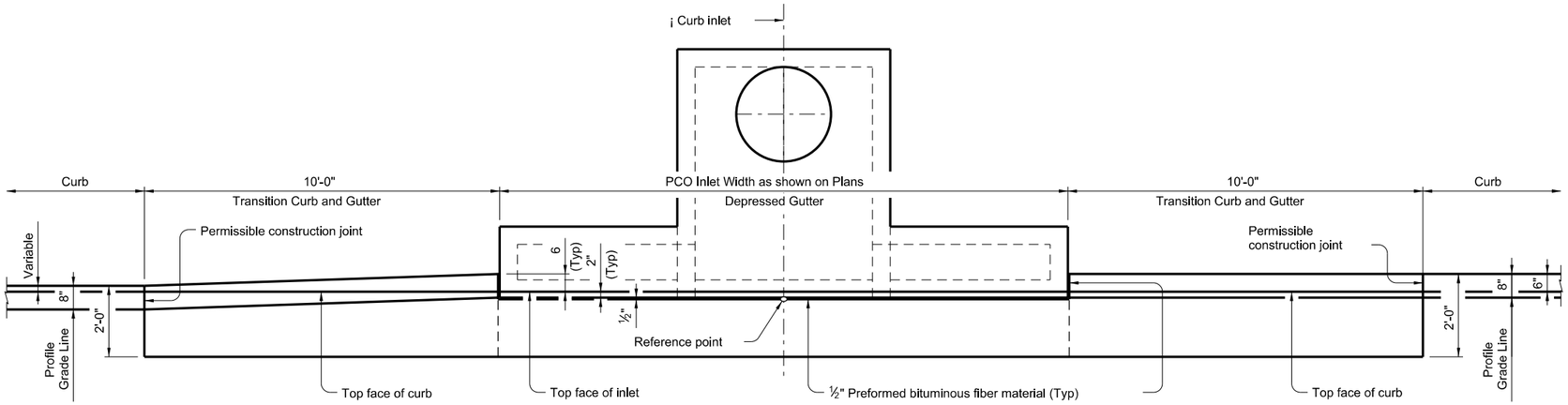
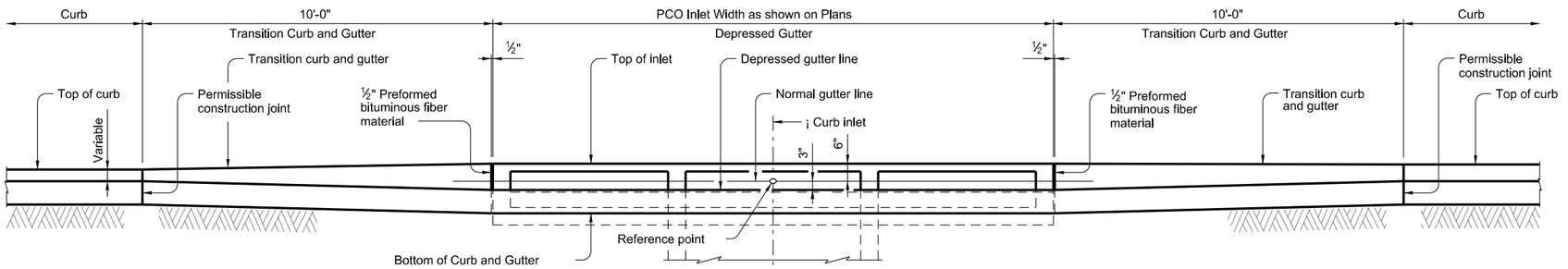


SHOWING TYPE I, IIa & III Curb and Gutter

SHOWING TYPE II & IV Curb and Gutter

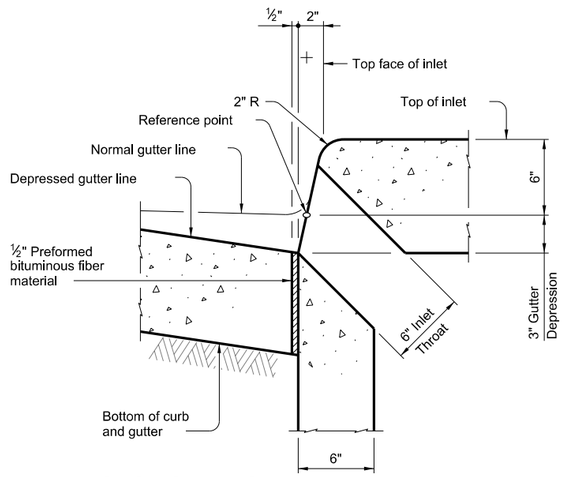
PLAN



SHOWING TYPE I, IIa & III Curb and Gutter

SHOWING TYPE II & IV Curb and Gutter

ELEVATION



SECTION AT GUTTER AND INLET

(Reinforcing steel not shown for clarity.)

CONSTRUCTION NOTES:
Align top face of curb with PCO Inlet as shown.

MATERIAL NOTES:
Provide ½" preformed bituminous fiber material.

GENERAL NOTES:
Reference point is located where the ¡ of the main throat intersects the normal gutter line.

See Precast Curb Inlet Outside Roadway (PCO) standard for details and notes not shown.

See Concrete Curb and Curb and Gutter (CCCG-22) standard for details and notes not shown.

Curb and Gutter Transitions is paid for and in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."

Preformed bituminous fiber material is subsidiary to PCO Inlet.

Texas Department of Transportation

Bridge Division Standard

CURB AND GUTTER TRANSITION DETAILS FOR PCO INLET

CGT-PCO

FILE: CD-CGT-PCO-23.dgn	DN: TxDOT	CK: AES	DW: JTR	CK: AES
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
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06-2022: Added reference point.	DIST	COUNTY		SHEET NO.
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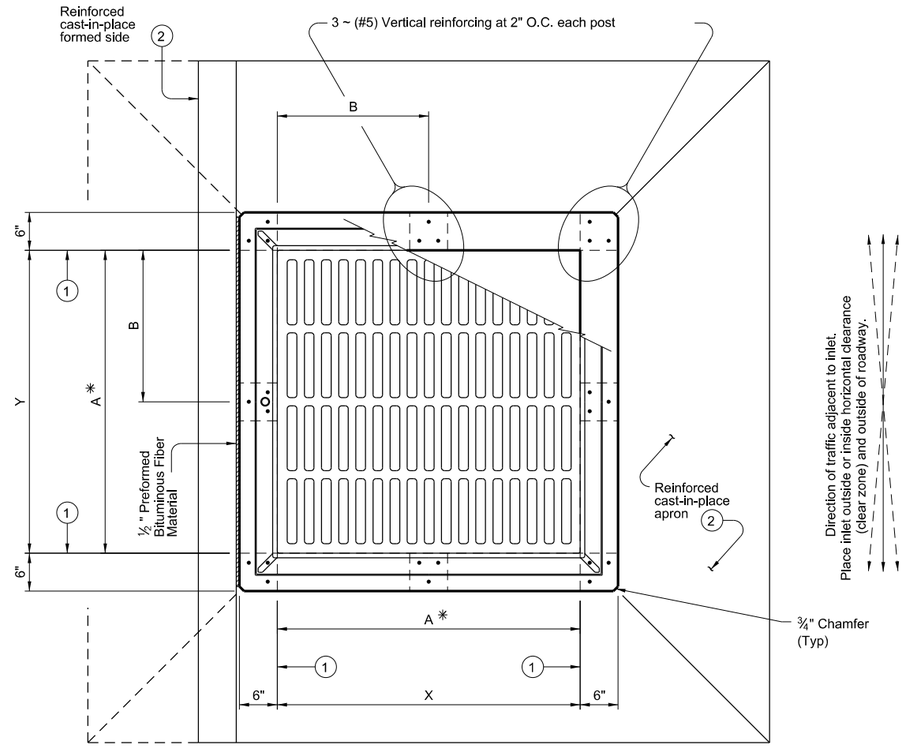
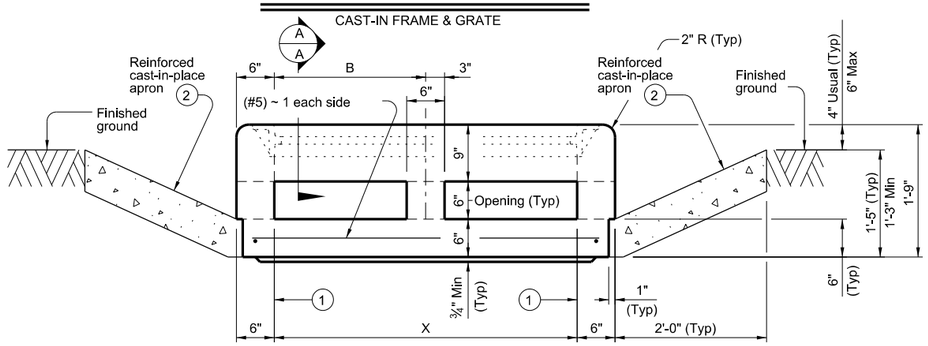
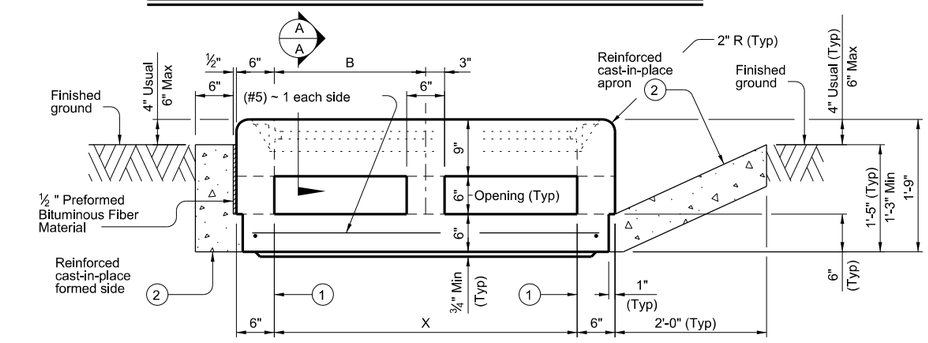


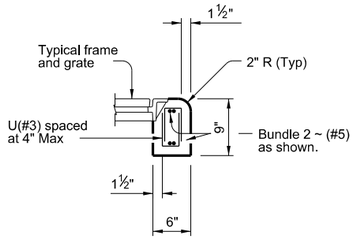
PLAN VIEW ~ STYLE 'FG' (3)



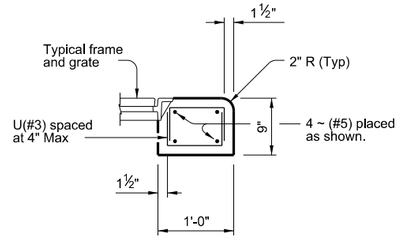
ELEVATION VIEW WITHOUT FORMED SIDE (4)



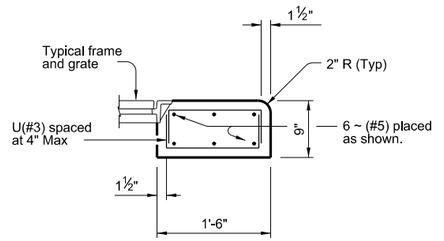
ELEVATION VIEW WITH FORMED SIDE (4)



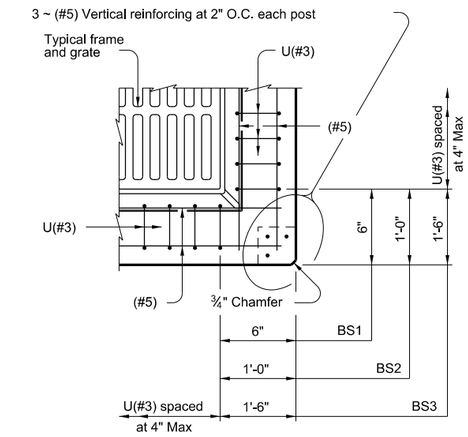
SECTION A-A ~ BS1



SECTION A-A ~ BS2

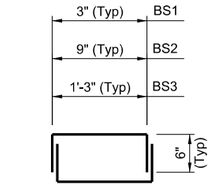


SECTION A-A ~ BS3



TYPICAL CORNER REINFORCING PLAN DETAIL

Showing BS2 other beam sections similar.



BARS U (#3)

Showing one complete bar.

Style	Size (X x Y)	A x A *	B x B	Beam Section
FG	3'x3'	3'x3'	1.5'x1.5'	BS1
FG	4'x4'	3'x3'	2'x2'	BS2
FG	4'x4'	4'x4'	2'x2'	BS1
FG	5'x5'	3'x3'	2.5'x2.5'	BS3
FG	5'x5'	4'x4'	2.5'x2.5'	BS2

* Nominal frame/grate size.

1. Matches inside face of wall of precast base or riser below inlet.
2. Construct cast-in-place reinforced concrete with or without formed side. Place formed side/sides as directed elsewhere in the plans. Formed sides may only be used on sides parallel to traffic. Use Class "C" concrete. Apron and formed side reinforcing not shown for clarity. Apron and formed side are subsidiary to PAZD-CZ. Apron is 2'-0" width around precast zone drain, unless an optional formed side is used. For apron and formed side, provide (#4) reinforcing at 12" O.C.
3. Top slab reinforcing not shown for clarity.
4. Top slab reinforcing and post reinforcing not shown for clarity.

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 clear cover of ¾" to reinforcing from bottom of slab and 2" to reinforcing from top of slab for structural reinforcement.
4. Provide 1 ½" end cover on (#5) reinforcing.
5. Design tongue and groove joints for full closure on both shoulders. Minimum spigot depth is ¾".
6. Provide lifting devices in conformance with Manufacturer's recommendations.

INSTALLATION NOTES:

1. Precast Area Zone Drain within Clear Zone (PAZD-CZ) is for use in ditches and medians outside and inside of the horizontal clearance (clear zone). PAZD-CZ is never placed in the 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.

GENERAL NOTES:

1. Designed according to ASTM C913.
2. Payment for inlet 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.
Reinforcing bar dimensions shown are out-to-out of bar.

HL93 LOADING

Texas Department of Transportation

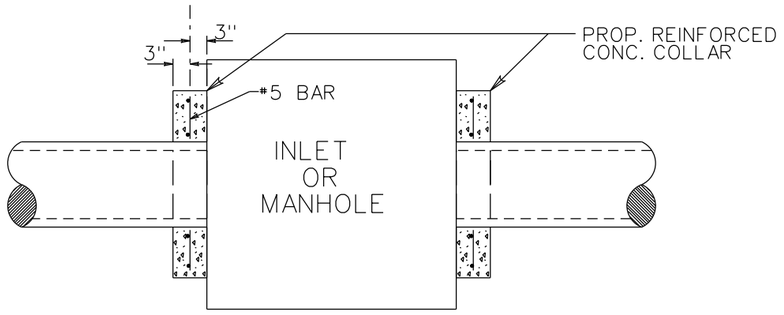
Bridge Division Standard

PRECAST AREA ZONE DRAIN WITHIN CLEAR ZONE

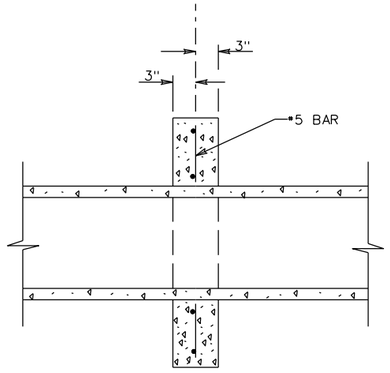
PAZD-CZ

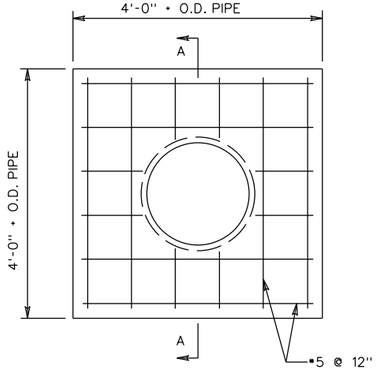
FILE: prestd15-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		163

DATE: DATE: 7/1/2023 1:36:25 PM
FILE: DOCUMENT NAME: D:\FM 1925 PHI (907 to Uresti)\10 STANDARDS\04 Drainage\prestd15-20.dgn



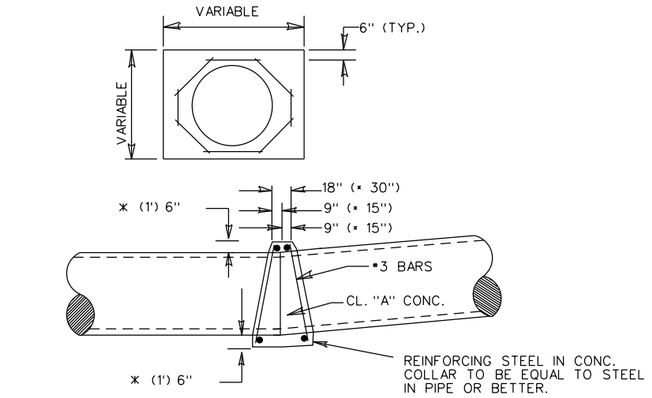
INLET OR MANHOLE CONNECTION
PLAN VIEW





SECTION A-A FRONT ELEVATION

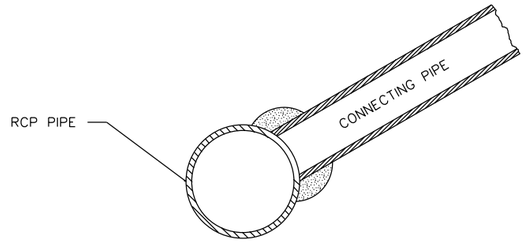
CONCRETE PIPE COLLAR

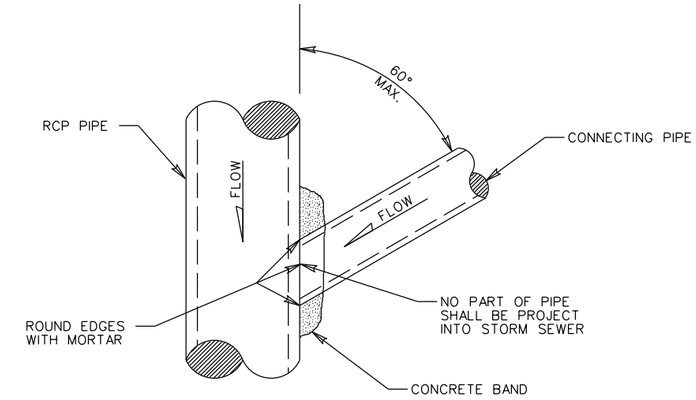


DETAIL FOR CONC. COLLARS DRAINAGE STRUCTURES AND PIPE SIPHONS (HORIZ. & VERT. BENDS)

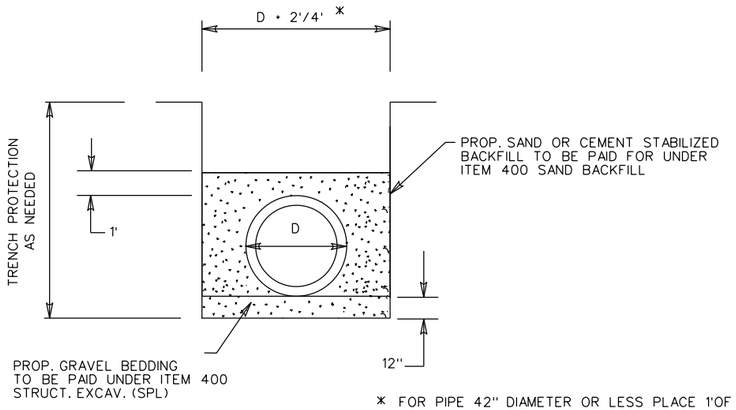
NOTE: PROP. CONC. COLLAR WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO THE BIDS ITEMS INVOLVED.

* FOR 42" DIAMETER AND LARGER PIPE



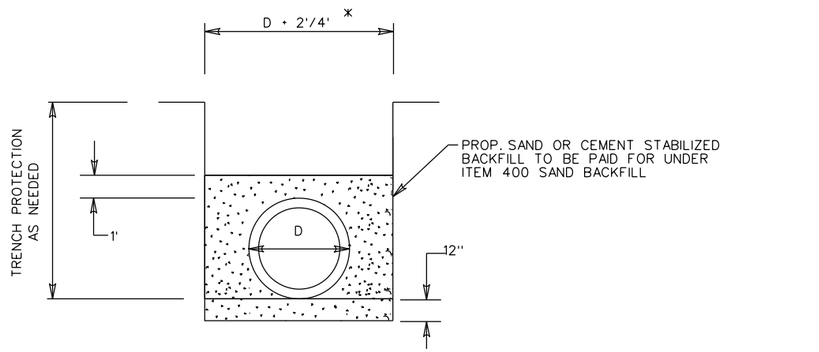


TYPICAL REINFORCED CONC. PIPE CONNECTION WITHOUT MANHOLE



* 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-GRAVEL & SAND

PHARR DISTRICT STANDARD

TEXAS DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS PIPE STANDARD

REV. 2/19

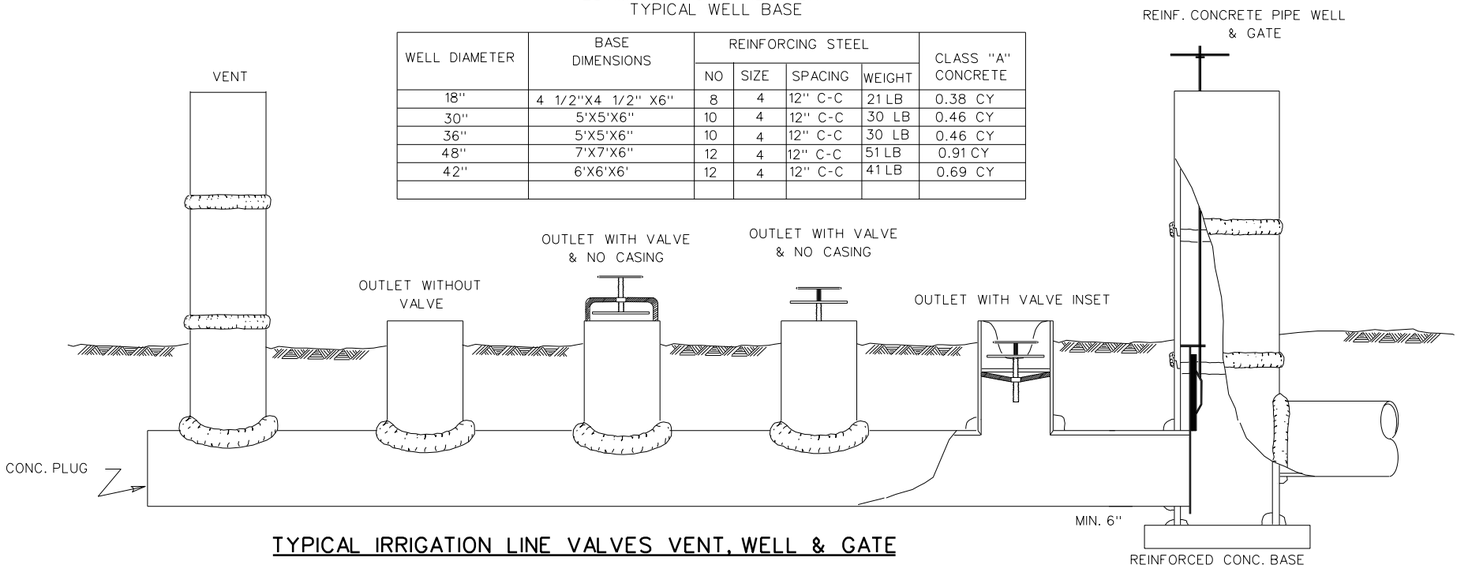
MISC.PIPE.DGN

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		FILE NO.			SHEET NO.
6						164
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TEXAS	21	HIDALGO	1803	02	035	FM1925

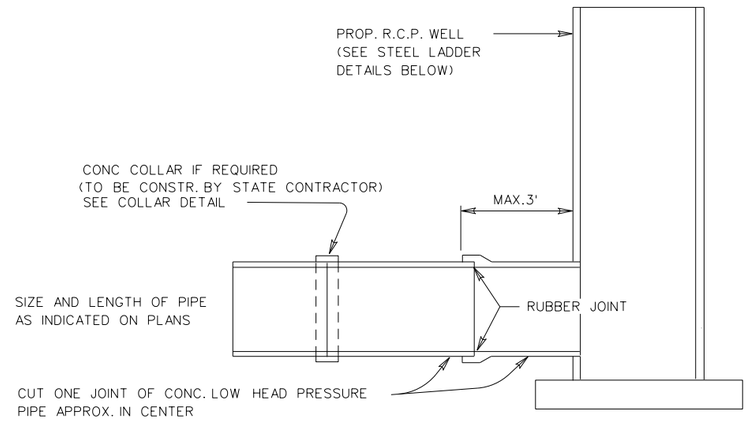
FILE: K:\Counties\HID\FM 1925 PHII(907 to Uresti)\10 STANDARDS\04 Drainage\MISC. PIPE.dgn
DATE: 10/31/2023 1:36:26 PM

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



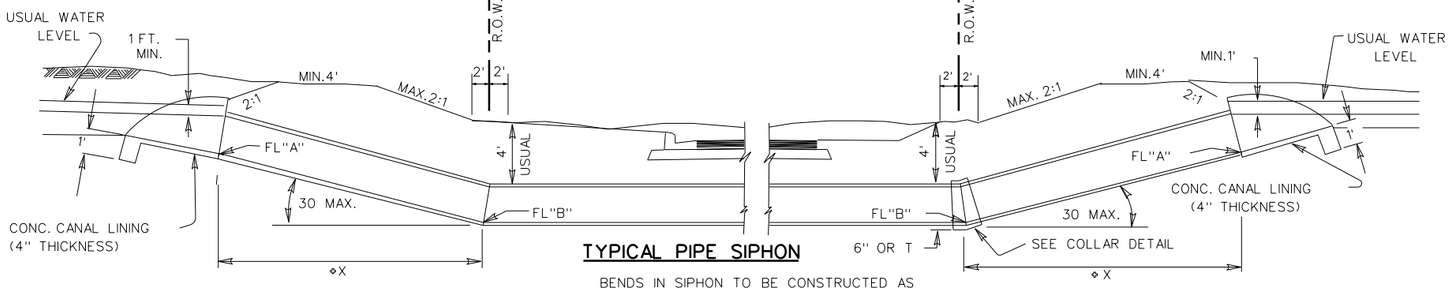
TYPICAL CONC. PIPE WELL DETAILS FOR CONNECTING CONC. LOW HEAD PRESSURE PIPE

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.

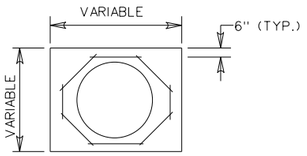
IN GENERAL THE PARTICULAR TYPE OR DESIGN OF THE EXISTING FACILITY TO BE EXTENDED OR RELOCATED SHALL BE DUPLICATED.

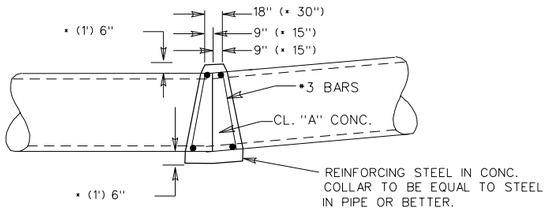


TYPICAL PIPE SIPHON

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)

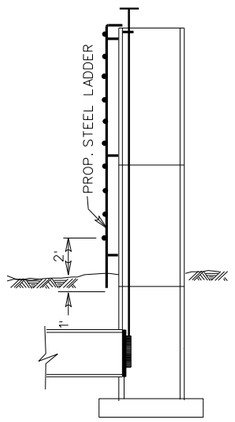
NOTE: PROP. CONC. COLLAR WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO THE BIDS ITEMS INVOLVED.

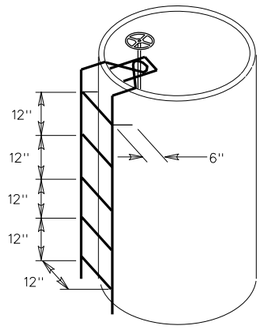
× FOR 42" AND LARGER PIPE

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.

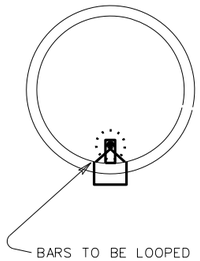
NOTE: COMMERCIAL FABRICATED OR CAST METAL STEPS MAY BE USED IF APPROVED BY THE ENGINEER AND/OR THE WATER DISTRICT INVOLVED.





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.



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							165
STATE	STATE DIST.NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.	
TEXAS	PHR	HIDALGO	1803	02	035	FM1925	

FM 1925 TRAFFIC SIGNAL QUANTITIES

ITEM	DESCR CODE	DESCRIPTION	UNIT	TRAFFIC SIGNAL BRUSHLINE RD	TOTAL
416*	6030*	DRILL SHAFT (TRF SIG POLE) (24 IN)	LF	5.7	5.7
416	6032	DRILL SHAFT (TRF SIG POLE) (36 IN)	LF	60.8	60.8
618	6016	CONDT (PVC) (SCH 40) (1")	LF	65	65.0
618	6023	CONDT (PVC) (SCH 40) (2")	LF	935	935.0
618	6024	CONDT (PVC) (SCH 40) (2") (BORE)	LF	130	130.0
618	6029	CONDT (PVC) (SCH 40) (3")	LF	75	75.0
618	6033	CONDT (PVC) (SCH 40) (4")	LF	60	60.0
618	6034	CONDT (PVC) (SCH 40) (4") (BORE)	LF	145	145.0
620	6007	ELEC CONDR (NO.8) BARE	LF	285	285.0
620	6009	ELEC CONDR (NO.6) BARE	LF	55	55.0
620	6010	ELEC CONDR (NO.6) INSULATED	LF	110	110.0
621	6005	TRAY CABLE (4 CONDR) (12 AWG)	LF	335	335.0
624	6002	GROUND BOX TY A (122311)W/APRON	EA	8	8.0
624	6008	GROUND BOX TY C (162911)W/APRON	EA	3	3.0
625	6003	ZINC-COAT STL WIRE STRAND (3/8")	LF	1100	1,100.0
628	6119	ELC SRV TY D 120/240 060(NS)AL(T)TS(O)	EA	1	1.0
680	6002	INSTALL HWY TRF SIG (ISOLATED)**	EA	1	1.0
	*	TRAFFIC SIGNAL CONTROLLER IN MODEL TS TYPE 2 CABINET	EA	1	1.0
	*	CONTROLLER FOUNDATION	EA	1	1.0
	*	ROD, 5/8" X 10' COPPER-CLAD STEEL GROUND (CONTROLLER ONLY)	EA	1	1.0
	*	SIGN, PEDESTRIAN PUSHBUTTON (SYMBOL TYPE) (9"X15") (R10-3eR(L))	EA	4	4.0
	*	LED LUMINAIRE	EA	2	2.0
	*	POWER SUPPLY	EA	1	1.0
	*	CONTROL, PHOTOELECTRIC	EA	1	1.0
	*	LOOP AMPLIFIER	EA	6	6.0
	*	ALUMINIUM SIGNS (TY A) (STREET NAME)	SF	12	12.0
	*	ALUMINIUM SIGNS (TY A) (REGULATORY)	SF	15	15.0
680	6004	REMOVING TRAFFIC SIGNALS	EA	1	1.0
681	6001	TEMP TRAF SIGNALS	EA	1	1.0
682	6001	VEH SIG SEC (12")LED(GRN)	EA	6	6.0
682	6002	VEH SIG SEC (12")LED(GRN ARW)	EA	1	1.0
682	6003	VEH SIG SEC (12")LED(YEL)	EA	6	6.0
682	6004	VEH SIG SEC (12")LED(YEL ARW)	EA	2	2.0
682	6005	VEH SIG SEC (12")LED(RED)	EA	6	6.0
682	6006	VEH SIG SEC (12")LED(RED ARW)	EA	1	1.0
682	6018	PED SIG SEC (LED)(COUNTDOWN)	EA	4	4.0
682	6054	BACKPLATE W/REF BRDR(3 SEC)(VENT)ALUM	EA	6	6.0
682	6055	BACKPLATE W/REF BRDR(4 SEC)(VENT)ALUM	EA	1	1.0
684	6008	TRF SIG CBL (TY A)(12 AWG)(3 CONDR)	LF	420	420.0
684	6010	TRF SIG CBL (TY A)(12 AWG)(5 CONDR)	LF	975	975.0
684	6012	TRF SIG CBL (TY A)(12 AWG)(7 CONDR)	LF	220	220.0
684	6027	TRF SIG CBL (TY A)(14 AWG)(1CONDR)	LF	130	130.0
684	6080	TRF SIG CBL (TY C)(14 AWG)(2 CONDR)	LF	1,665	1,665.0
686	6019	INS TRF SIG PLAM (S)STR(TY D)	EA	2	2.0
686	6020	INS TRF SIG PLAM (S)STR(TY D)LUM	EA	2	2.0
687	6001	PED POLE ASSEMBLY	EA	1	1.0
688	6001	PED DETECT PUSH BUTTON (APS)	EA	4	4.0
688	6003	PED DETECTOR CONTROLLER UNIT	EA	1	1.0
688	6004	VEH LP DETECT (SAWCUT)	LF	1,270	1,270.0

* QUANTITIES ARE SHOWN FOR CONTRACTOR'S INFORMATION ONLY. THESE ITEMS ARE SUBSIDIARY TO VARIOUS OTHER ITEMS.

** PROPOSED TRAFFIC SIGNAL CABINET AND CONTROLLER SHALL BE COMPATIBLE WITH PHARR DISTRICT'S EXISTING TRAFFIC SIGNAL MANAGEMENT SOFTWARE ATMS.NOW.

N:\CLIENTS\L&G\FM 1925*FM907 SHARP\ETSI*WORK\BASIS OF ESTIMATE.dgn

11/21/2022

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
Fax : (956) 565-9018

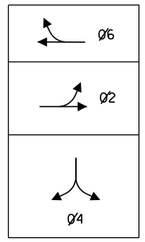
900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

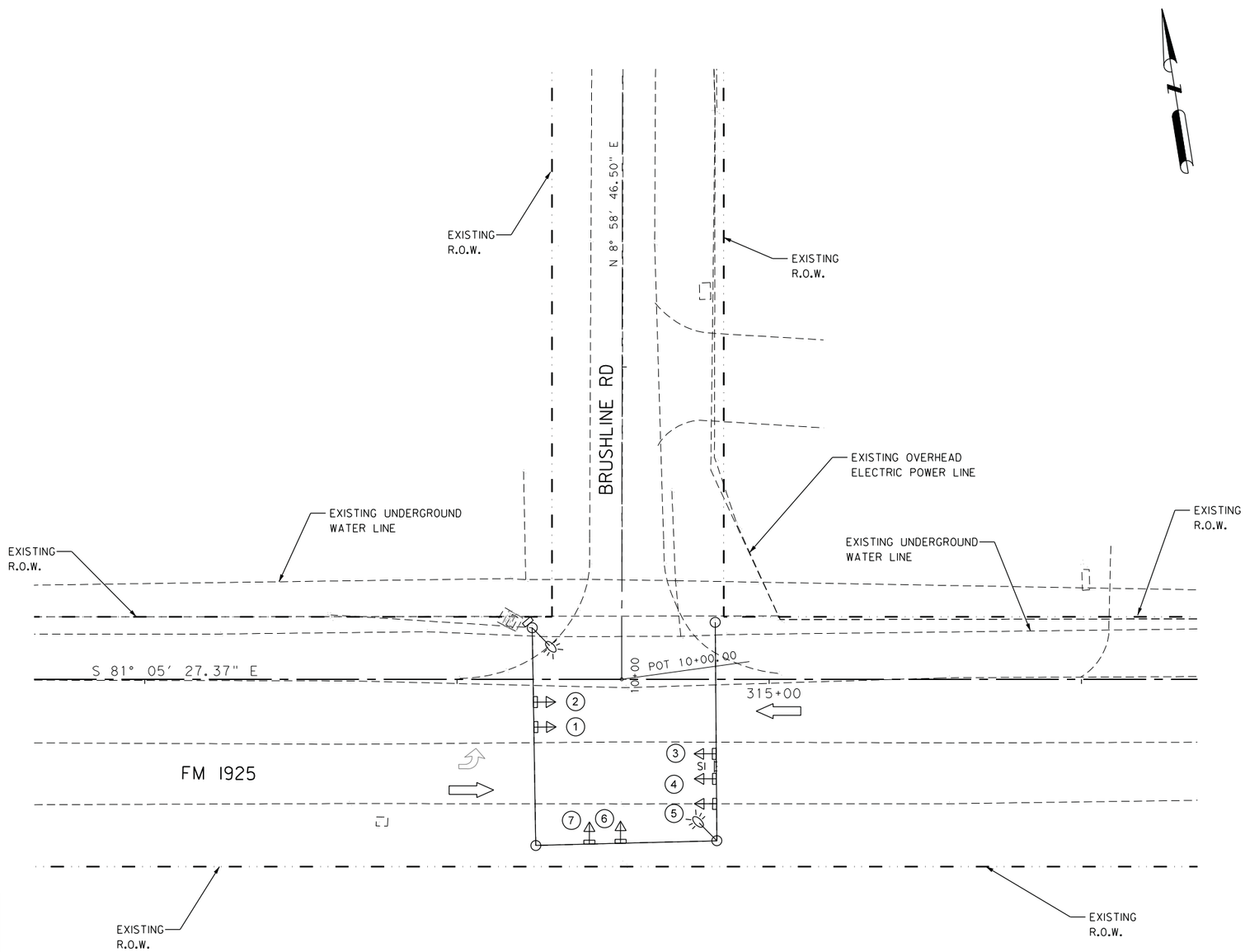
ETSI
5300 Hollister Road, Suite 220
Houston, Texas 77040
Tel. (713) 956-9601 Fax (713) 956-9667
Ergonomic Transportation Solutions, Inc.
TEXAS REGISTERED ENGINEERING FIRM NO. F - 000625

PROPOSED TRAFFIC SIGNAL BASIS OF ESTIMATE AT BRUSHLINE ROAD

DATE: 11/21/2022		CONT	SECT	JOB	HIGHWAY
DN:		1803	02	035	FM 1925
CK DN:		DIST	COUNTY		SHEET NO.
DW:		PHR	HIDALGO		166
CK DW:					

EXISTING PHASING





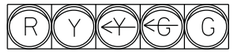
LEGEND

- EXISTING SIGNAL POLE TO BE REMOVED
- EXISTING TRAFFIC SIGNAL HEAD
- EXISTING GROUND MOUNTED CONTROLLER CABINET
- DIRECTION OF TRAFFIC FLOW
- SI EXISTING TRAFFIC SIGN
- EXISTING LUMINAIRE ARM
- EXISTING ELECTRICAL SERVICE

0 10 20 40

SCALE 1" = 40'

EXISTING SIGNAL EQUIPMENT



R10-12
(30"X36")
SI

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
Fax : (956) 565-9018

900 S. Stewart Rd., Ste. 10
Mission, TX. 78572
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5300 Hollister Road, Suite 220
Houston, Texas 77040
Tel. (713) 956-9601 Fax (713) 956-9667
Ergonomic Transportation Solutions, Inc.
TEXAS REGISTERED ENGINEERING FIRM NO. F - 000625

STATE OF TEXAS
C. SIMEONIDIS
60919
REGISTERED PROFESSIONAL ENGINEER

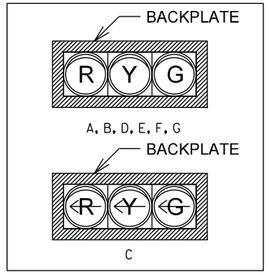
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SIMEONIDIS, P.E. 60919
11/16/2022

EXISTING CONDITIONS DIAGRAM
FM 1925 AT BRUSHLINE ROAD

DATE: 11/16/2022	CONT	SECT	JOB	HIGHWAY
DN:	1803	02	035	FM 1925
CK DN:	DIST	COUNTY		SHEET NO.
DW:	PHR	HIDALGO		167
CK DW:				

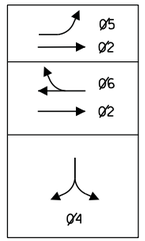
11/16/2022 N:\CLIENTS\L&G\FM 1925*FM907 SHARP\ETSI*WORK\SIGNALS\EXISTING\FM 1925 at BRUSHLINE.dgn

TEMPORARY SIGNAL HEAD SCHEDULE



PHASE	CAMERA	DETECTION ZONE
2 & 5	V2	EBT AND EBL
4	V3	SBL AND SBR
6	VI	WBT AND WBR

RECOMMENDED PHASING



NOTES:

I. INSTALL TEMPORARY WOOD POLES TI,T2,T3 & T4, AS SHOWN IN THE LAYOUT AND IN ACCORDANCE WITH THE SHEET "SIGNAL DETAILS/STANDARDS CONSTRUCTION DETAILS FOR TRAFFIC SIGNALS (WOOD POLE) CD/TS/WP". EXCAVATE INSTALLATION HOLES A MINIMUM OF 2 FEET DIAMETER BY 9 FEET DEEP AND FILL THE LOWER 2 FEET WITH CEMENT STABILIZED SAND, COMPACTED IN LIFTS, PRIOR TO INSTALLATION OF THE POLE. THE GRANNULAR AREA SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND IN LIFTS NOT TO EXCEED 6 INCHES AND THOROUGHLY TAMPED FOR EACH LIFT. CEMENT STABILIZED SAND SHALL CONFORM TO TXDOT SPECIFICATION. DO NOT INSTALL SPAN OR GUY WIRES ON THE SAME DAY AS THE POLE.

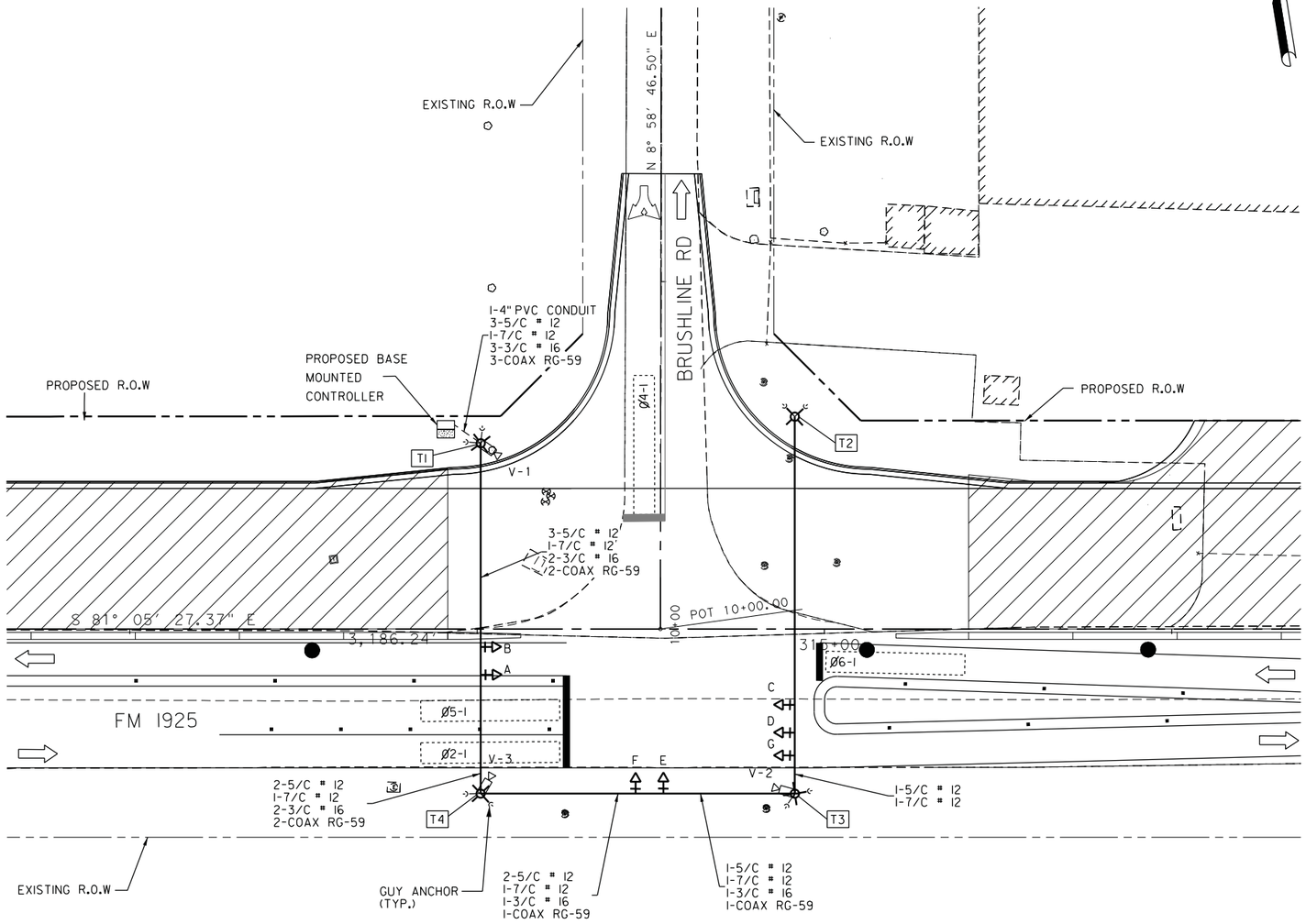
2. REMOVE EXISTING SIGNAL POLES, FOUNDATONS AND SIGNAL HEADS. USE PROPOSED CONTROLLER AND ELECTRICAL SERVICE POLE DURING TEMPORARY OPERATION.

3. SET CAMERAS TO DETECTION ZONES AS SHOWN ON THIS LAYOUT. SET CONTROLLER TO ACTUATED MODE AS SHOWN IN THE PHASING SEQUENCE. PHASING AND TIMING MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

4. VIVDS CAMERA(S) MOUNTED ON TEMPORARY WOOD POLES SHALL BE USED TO DETECT VEHICLES DURING THE VARIOUS PHASES/STEPS OF CONSTRUCTION.

5. SIGNAL HEAD POSITIONS MAY BE ADJUSTED TO FIT SPECIFIC TRAFFIC CONTROL PHASES.

6. THE VIVDS DETECTION SYSTEM SHALL BE REMOVED AFTER CONSTRUCTION. ALL MATERIALS AND LABOR TO INSTALL THE VIVDS SYSTEM ARE INCIDENTAL TO THE TEMPORARY SIGNAL CONSTRUCTION.



NOTE: FOR PHASE II STEP 2, TURN OFF SIGNAL AND COVER ALL SIGNAL HEADS.

LEGEND

- CONSTRUCTION ZONE
- TEMPORARY GUY ANCHOR
- TEMPORARY HORIZONTAL SIGNAL HEAD
- DIRECTION OF TRAFFIC FLOW
- TEMPORARY VIVID CAMERA
- DETECTION ZONE
- TEMPORARY WOOD POLE
- TEMPORARY 4" PVC CONDUIT

TEMPORARY TRAFFIC SIGNAL HARDWARE TO BE FURNISHED, INSTALLED & MAINTAINED BY THE CONTRACTOR DURING ALL PHASE(S) AND / OR STEPS(S) OF CONSTRUCTION

ITEM *	UNIT	QUANTITY *
VIVDS CAMERA	EA	3
COAXIAL (RG 59)	LF	430
3/C - # 16 CABLE (VIVDS POWER)	LF	430
5/C # 12 (SIGNAL HEAD)	LF	600
7/C # 12 (SIGNAL HEAD)	LF	300
TEMPORARY WOOD POLE W/ GUY WIRE	EA	4
4" PVC CONDUIT	LF	10
ZINC-COAT STL WIRE STRAND (3/16")	LF	630

* NOT FOR BIDDING PURPOSES. FOR CONTRACTOR'S INFORMATION ONLY.

0 10 20 40

SCALE I" = 40'

THE COUNTY OF HIDALGO TEXAS

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

2100 W. Expressway 83
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Mission, TX. 78572
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Ergonomic Transportation Solutions, Inc.
TEXAS REGISTERED ENGINEERING FIRM NO. F - 000625

STATE OF TEXAS
C. SIMEONIDIS
60919
REGISTERED PROFESSIONAL ENGINEER

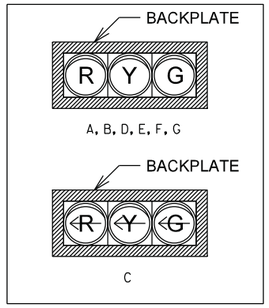
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SIMEONIDIS, P.E. 60919
11/16/2022

TEMPORARY TRAFFIC SIGNAL PHASE II FM 1925 AT BRUSHLINE ROAD

DATE: 11/16/2022	CONT	SECT	JOB	HIGHWAY
DN:	1803	02	035	FM 1925
CK DN:	DIST	COUNTY		SHEET NO.
DW:	PHR	HIDALGO		168
CK DW:				

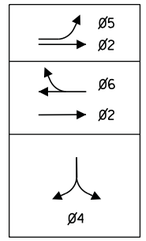
11/16/2022 N:\CLIENTS\L&G\FM 1925*FM907 SHARP\ETSI*WORK\SIGNALS\TEMPORARY\FM 1925 at BRUSHLINE PH2.dgn

TEMPORARY SIGNAL HEAD SCHEDULE



PHASE	CAMERA	DETECTION ZONE
2 & 5	V2	EBT AND EBL
4	V3	SBL AND SBR
6	VI	WBT AND WBR

RECOMMENDED PHASING



LEGEND

- CONSTRUCTION ZONE
- TEMPORARY GUY ANCHOR
- TEMPORARY HORIZONTAL SIGNAL HEAD
- DIRECTION OF TRAFFIC FLOW
- TEMPORARY VIVID CAMERA
- DETECTION ZONE
- TEMPORARY WOOD POLE
- TEMPORARY 4" PVC CONDUIT

TEMPORARY TRAFFIC SIGNAL HARDWARE TO BE FURNISHED, INSTALLED & MAINTAINED BY THE CONTRACTOR DURING ALL PHASE(S) AND / OR STEPS(S) OF CONSTRUCTION

ITEM *	UNIT	QUANTITY *
VIVDS CAMERA	EA	3
COAXIAL (RG 59)	LF	430
3/C - # 16 CABLE (VIVDS POWER)	LF	430
5/C # 12 (SIGNAL HEAD)	LF	600
7/C # 12 (SIGNAL HEAD)	LF	300
TEMPORARY WOOD POLE W/ GUY WIRE	EA	4
ZINC-COAT STL WIRE STRAND (3/16")	LF	630
4" PVC CONDUIT	LF	10

* NOT FOR BIDDING PURPOSES. FOR CONTRACTOR'S INFORMATION ONLY.

0 10 20 40

SCALE 1" = 40'

NOTES:

1. INSTALL TEMPORARY WOOD POLES T1,T2,T3 & T4, AS SHOWN IN THE LAYOUT AND IN ACCORDANCE WITH THE SHEET "SIGNAL DETAILS/STANDARDS CONSTRUCTION DETAILS FOR TRAFFIC SIGNALS (WOOD POLE) CD/TS/WP". EXCAVATE INSTALLATION HOLES A MINIMUM OF 2 FEET DIAMETER BY 9 FEET DEEP AND FILL THE LOWER 2 FEET WITH CEMENT STABILIZED SAND, COMPACTED IN LIFTS, PRIOR TO INSTALLATION OF THE POLE. THE GRANNULAR AREA SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND IN LIFTS NOT TO EXCEED 6 INCHES AND THOROUGHLY TAMPED FOR EACH LIFT. CEMENT STABILIZED SAND SHALL CONFORM TO TXDOT SPECIFICATION. DO NOT INSTALL SPAN OR GUY WIRES ON THE SAME DAY AS THE POLE.

2. REMOVE EXISTING SIGNAL POLES, FOUNDATONS AND SIGNAL HEADS. USE PROPOSED CONTROLLER AND ELECTRICAL SERVICE POLE DURING TEMPORARY OPERATION.

3. SET CAMERAS TO DETECTION ZONES AS SHOWN ON THIS LAYOUT. SET CONTROLLER TO ACTUATED MODE AS SHOWN IN THE PHASING SEQUENCE. PHASING AND TIMING MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

4. VIVDS CAMERA(S) MOUNTED ON TEMPORARY WOOD POLES SHALL BE USED TO DETECT VEHICLES DURING THE VARIOUS PHASES/STEPS OF CONSTRUCTION.

5. SIGNAL HEAD POSITIONS MAY BE ADJUSTED TO FIT SPECIFIC TRAFFIC CONTROL PHASES.

6. THE VIVDS DETECTION SYSTEM SHALL BE REMOVED AFTER CONSTRUCTION. ALL MATERIALS AND LABOR TO INSTALL THE VIVDS SYSTEM ARE INCIDENTAL TO THE TEMPORARY SIGNAL CONSTRUCTION.

THE COUNTY OF HIDALGO TEXAS

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C. SIMEONIDIS
60919
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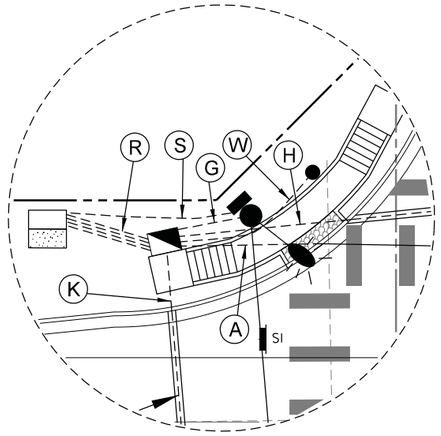
11/16/2022

TEMPORARY TRAFFIC SIGNAL PHASE III FM 1925 AT BRUSHLINE ROAD

DATE: 11/16/2022	CONT	SECT	JOB	HIGHWAY
DN:	1803	02	035	FM 1925
CK DN:	DIST	COUNTY		SHEET NO.
DW:	PHR	HIDALGO		169
CK DW:				

11/16/2022 N:\CLIENTS\L&G\FM 1925*FM907 SHARP\ETSI*WORK\SIGNALS\TEMPORARY\FM 1925 at BRUSHLINE PH3.dgn



DETAIL A (SCALE 1"=20')

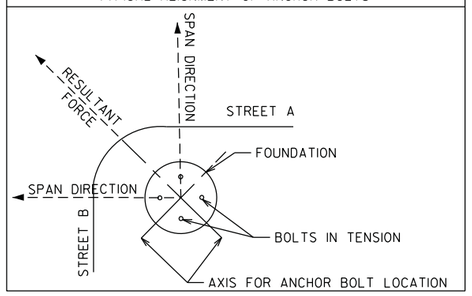
LEGEND

- PROPOSED PEDESTRIAN POLE
- PROPOSED STRAIN POLE
- PROPOSED HORIZONTAL SIGNAL HEAD
- PROPOSED PEDESTRIAN SIGNAL HEAD
- PBX → PROPOSED PEDESTRIAN PUSH BUTTON & SIGN
- PROPOSED GROUND BOX (TY-A W/APRON)
- PROPOSED GROUND BOX (TY-C W/APRON)
- PROPOSED LUMINAIRE ARM
- PROPOSED CONDUIT (TRENCHED)
- PROPOSED CONDUCTOR (SAWCUT)
- PROPOSED CONDUIT (BORED)
- SX PROPOSED SPAN WIRE MOUNTED SIGN
- PROPOSED GROUND MOUNTED CONTROLLER CABINET
- L-XX PROPOSED LOOP DETECTOR
- (X) CONDUIT RUN
- PROPOSED ELECTRICAL SERVICE
- DIRECTION OF TRAFFIC

0 10 20 40

SCALE 1" = 40'

TYPICAL ALIGNMENT OF ANCHOR BOLTS



PROPOSED TRAFFIC SIGNAL PHASING

Ø2 + Ø5	Ø2 + Ø6	Ø4
Ø5, Ø2	Ø6 PED, Ø6, Ø2	Ø4, Ø4, PED

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11/16/2022

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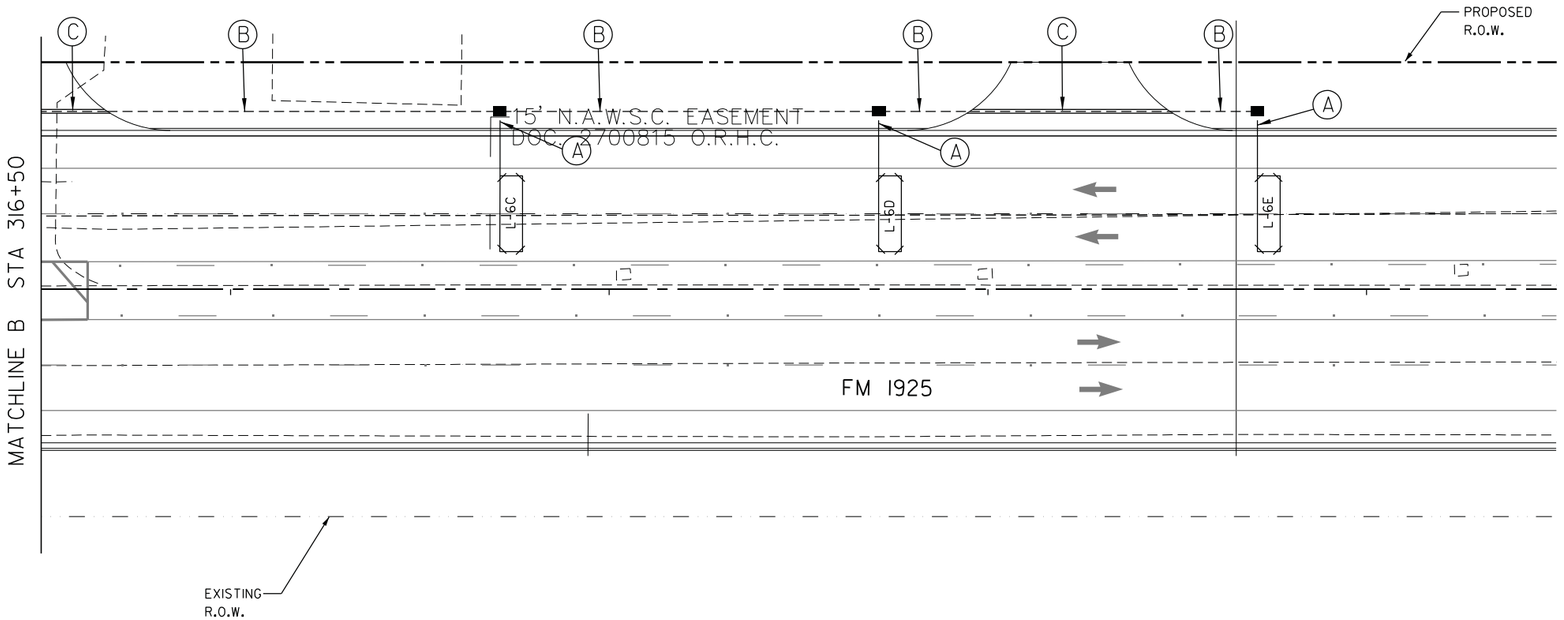
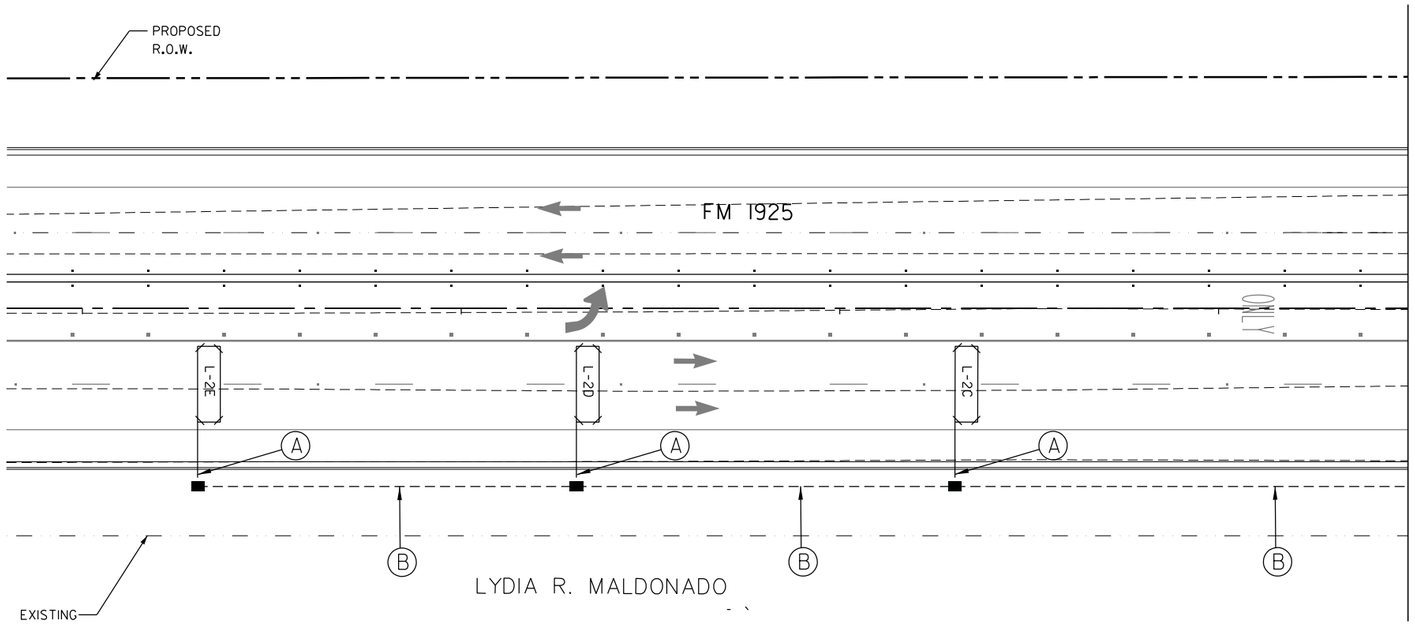
PROPOSED TRAFFIC SIGNAL FM 1925 AT BRUSHLINE RD

DATE: 11/16/2022	CONT	SECT	JOB	HIGHWAY
DN:	1803	02	035	FM 1925
CK DN:	DIST	COUNTY		SHEET NO.
DW:	PHR	HIDALGO		170
CK DW:				

11/16/2022 N:\CLIENTS\L&G\FM 1925*FM907 SHARP\ETSI*WORK\SIGNALS\PROPOSED\FM 1925 at BRUSHLINE.dgn





LEGEND

- PROPOSED PEDESTRIAN POLE
- PROPOSED STRAIN POLE
- PROPOSED HORIZONTAL SIGNAL HEAD
- PROPOSED PEDESTRIAN SIGNAL HEAD
- PBX → PROPOSED PEDESTRIAN PUSH BUTTON & SIGN
- PROPOSED GROUND BOX (TY-A W/APRON)
- PROPOSED GROUND BOX (TY-C W/APRON)
- PROPOSED LUMINAIRE ARM
- PROPOSED CONDUIT (TRENCHED)
- PROPOSED CONDUCTOR (SAWCUT)
- PROPOSED CONDUIT (BORED)
- SX PROPOSED SPAN WIRE MOUNTED SIGN
- PROPOSED GROUND MOUNTED CONTROLLER CABINET
- L-XX PROPOSED LOOP DETECTOR
- X CONDUIT RUN
- PROPOSED ELECTRICAL SERVICE
- DIRECTION OF TRAFFIC

0 10 20 40

SCALE 1" = 40'

THE COUNTY OF HIDALGO TEXAS

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PROPOSED TRAFFIC SIGNAL FM 1925 AT BRUSHLINE RD

DATE: 11/16/2022		CONT	SECT	JOB	HIGHWAY
DN:		1803	02	035	FM 1925
CK DN:		DIST	COUNTY		SHEET NO.
DW:		PHR	HIDALGO		171
CK DW:					

11/16/2022 N:\CLIENTS\L&G\FM 1925*FM907 SHARP\ETSI*WORK\SIGNALS\PROPOSED\FM 1925 at BRUSHLINE.dgn

ELECTRICAL SCHEDULE

ITEM	TOTAL QTY.	RUN NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
		RUN LENGTH (.)	65'	785'	130'	25'	15'	15'	15'	45'	55'	15'	90'	80'	60'	30'	25'	15'	25'	30'	30'	30'	20'	35'
POWER	110'	1/C - # 6																	2	2				
GROUND	55'	1/C - # 6 BARE																	1	1				
	285'	1/C - # 8 BARE					1	1	1	1	1	1	1					1					1	
SIGNAL WIRE SIZE TYPE	420'	3/C # 12 (PUSH BUTTON)					1	1	1	1	1	1	1					4		1	1	1	1	
	335'	4/C # 12 (TRAY CABLE)						1	1	1	1			1	1	1				2	1			
	975'	5/C # 12					2	2	2	2	2	2	2	1	1	1		7		2	2	2	1	
	220'	7/C # 12						1		1	1				1			1			1			
LOOP	130'	1/C # 14 LOOP WIRE	2																					
	1665'	2/C # 14 (SHIELDED)		1	1	3				2	2	3	3					6						2
CONDUIT	65'	1" PVC	1																					
	935'	2" PVC		1		1	1	1	1										1				1	1
	60'	4" PVC								1		1												
	130'	2" PVC (BORE)			1																			
	75'	3" PVC																5						
	145'	4" PVC (BORE)									1		1											
AERIAL														*	*	*	*							
INSIDE POLE																				*	*	*		

LOOP DETECTOR SCHEDULE

LOOP	SIZE	SAW CUT	WIRE LENGTH	AMP. NO.	SETTING	FUNCTION
L-2A ┐**	6' x 40'	130'	236'	2	PRESENCE	CALL AND EXTEND Ø2
L-2B ┘	6' x 40'	117'	210'	2	PRESENCE	CALL AND EXTEND Ø2
L-2C ┐	6' x 20'	76'	128'	9	PULSE	CALL AND EXTEND Ø2
L-2D **	6' x 20'	76'	128'	9	PULSE	CALL AND EXTEND Ø2
L-2E ┘	6' x 20'	76'	128'	9	PULSE	CALL AND EXTEND Ø2
L-4A	6' x 40'	129'	234'	3	PRESENCE	CALL AND EXTEND Ø4
L-5A	6' x 60'	187'	350'	5	PRESENCE	CALL AND EXTEND Ø5
L-6A ┐**	6' x 40'	132'	240'	6	PRESENCE	CALL AND EXTEND Ø6
L-6B ┘	6' x 40'	119'	214'	6	PRESENCE	CALL AND EXTEND Ø6
L-6C ┐	6' x 20'	76'	128'	11	PULSE	CALL AND EXTEND Ø6
L-6D **	6' x 20'	76'	128'	11	PULSE	CALL AND EXTEND Ø6
L-6E ┘	6' x 20'	76'	128'	11	PULSE	CALL AND EXTEND Ø6
TOTAL		1270'	2252'			

** SPLICED IN SERIES
SPEED LIMIT ON BRUSHLINE RD : 45 MPH
SPEED LIMIT ON FM 1925 : 60 MPH

NOTES:

1. THE LOCATION SHOWN FOR THE TRAFFIC CONTROLLER, STEEL POLES, LOOP DETECTORS, CONDUIT RUNS AND CONTROLLER FOUNDATION IS APPROXIMATE. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER IN COORDINATION WITH THE PHARR DISTRICT TRAFFIC SECTION.

2. ALL SIGNAL CABLE SHALL BE #12 AWG, SERVICE CABLE SHALL BE #6 AWG, 2/C LOOP LEAD- IN CABLE SHALL BE #14 AWG SHIELDED AND LOOP WIRES IN STREET SHALL BE #14 AWG.

3. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW LED TRAFFIC SIGNAL AND PEDESTRIAN SIGNAL HEADS.

4. ALL SIGNAL HEADS SHALL HAVE BACKPLATES W/ REFL BORDER.

5. THE LUMINAIRES SHALL BE OPERATED UNDER THEIR OWN PHOTO ELECTRIC CONTROL.

6. PEDESTRIAN SIGNAL HEADS SHALL BE ALIGNED WITH CROSSWALKS.

7. THE CONTRACTOR SHALL VERIFY WITH THE UTILITY COMPANIES AS TO THE EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION TO AVOID CONFLICT WITH OR DAMAGE TO THESE UTILITIES.

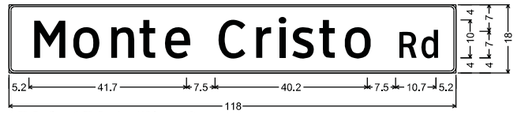
8. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO MAKE ANY ADJUSTMENTS, DUE TO UTILITY CONFLICTS, AS DEFINED IN THE SPECIFICATIONS OR DEEMED NECESSARY BY THE ENGINEER.

9. ALL LUMINAIRES SHALL BE 250W LED EQUIVALENT.

10. PROPOSED TRAFFIC SIGNAL CABINET AND CONTROLLER SHALL BE COMPATIBLE WITH PHARR DISTRICT'S EXISTING TRAFFIC SIGNAL MANAGEMENT SOFTWARE ATMS.NOW.

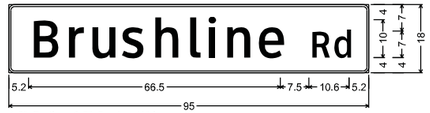
Elec. Service No.	Sheet No.	Electrical Service Description (see ED (5) & (6) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panelbd/ Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole/Amps	Branch Circuit Amps	KVA Load
TS1	BRUSHLINE RD	ELC SRV TY D 120/240 060 (NS)AL(T)TS(O)	1 1/4"	3/#6	N/A	2P/60	N/A	100	TS	1P/50	40	5.0
									LIGHT	1P/15	2	

PROPOSED SIGNS



1.5" Radius, 0.5" Border, White on Green;
[Monte] ClearviewHwy-3-W; [Cristo] ClearviewHwy-3-W; [Rd] ClearviewHwy-3-W;

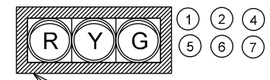
S4



1.5" Radius, 0.5" Border, White on Green;
[Brushline] ClearviewHwy-3-W; [Rd] ClearviewHwy-3-W;

S1, S3

PROPOSED SIGNAL EQUIPMENT



VENTED BACKPLATE WITH RETROREFLECTIVE BORDER

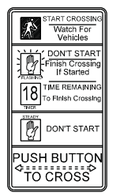
PEDESTRIAN SIGNALS W1, W2, W3 AND W4

18"x16"

R10-17T (36"X42")

S2

ACCESSIBLE PEDESTRIAN SIGNAL UNITS TO INCLUDE PEDESTRIAN PUSH BUTTONS



R10-3eR(L)

(9"X15")

W/ PEDESTRIAN PUSH BUTTON PB1, PB2, PB3 AND PB4

POLE & CONTROLLER LOCATIONS

POLE NO.	DESCRIPTION	STA.	OFFSET	FOUNDATION SIZE
P1	34' STRAIN POLE WITH 10' LUMINAIRE ARM, W1, & PB1	314+11.25	59.26' LT	36-B x 15.2
P2	34' STRAIN POLE WITH W2 & PB2	314+97.34	58.65' LT	36-B x 15.2
P3	34' STRAIN POLE WITH 10' LUMINAIRE ARM	314+97.34	49.06' RT	36-B x 15.2
P4	34' STRAIN POLE WITH W3 & PB3	314+20.43	49.06' RT	36-B x 15.2
PED1	10' STEEL PEDESTAL POLE WITH W4 & PB4	314+19.45	64.99' LT	24-A x 5.7'
CONTROLLER CABINET	PROPOSED NEMA CONTROLLER IN A GROUND MOUNTED CABINET	313+91.00	58.75' LT	5' X 7'

NOTE:
STATION NUMBERS ARE WITH REFERENCE TO THE CENTER LINE OF FM 1925. EXACT LOCATION SHALL BE DETERMINED AND VERIFIED WITH THE ENGINEER PRIOR TO ANY CONSTRUCTION.

THE COUNTY OF HIDALGO TEXAS

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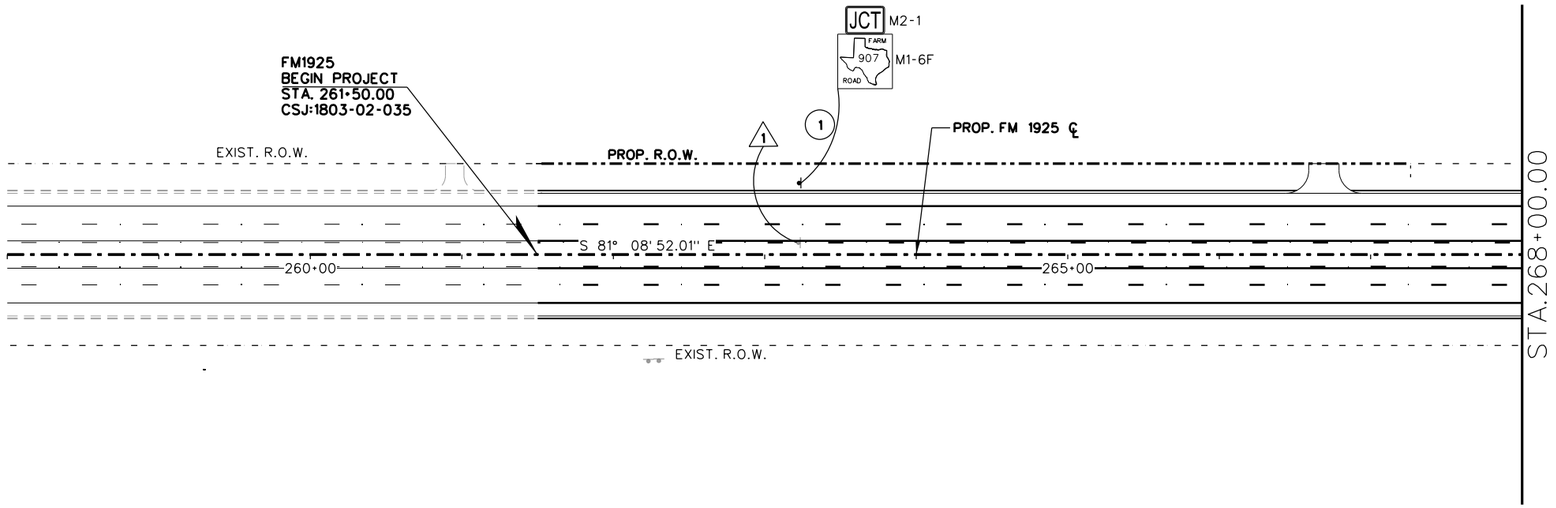
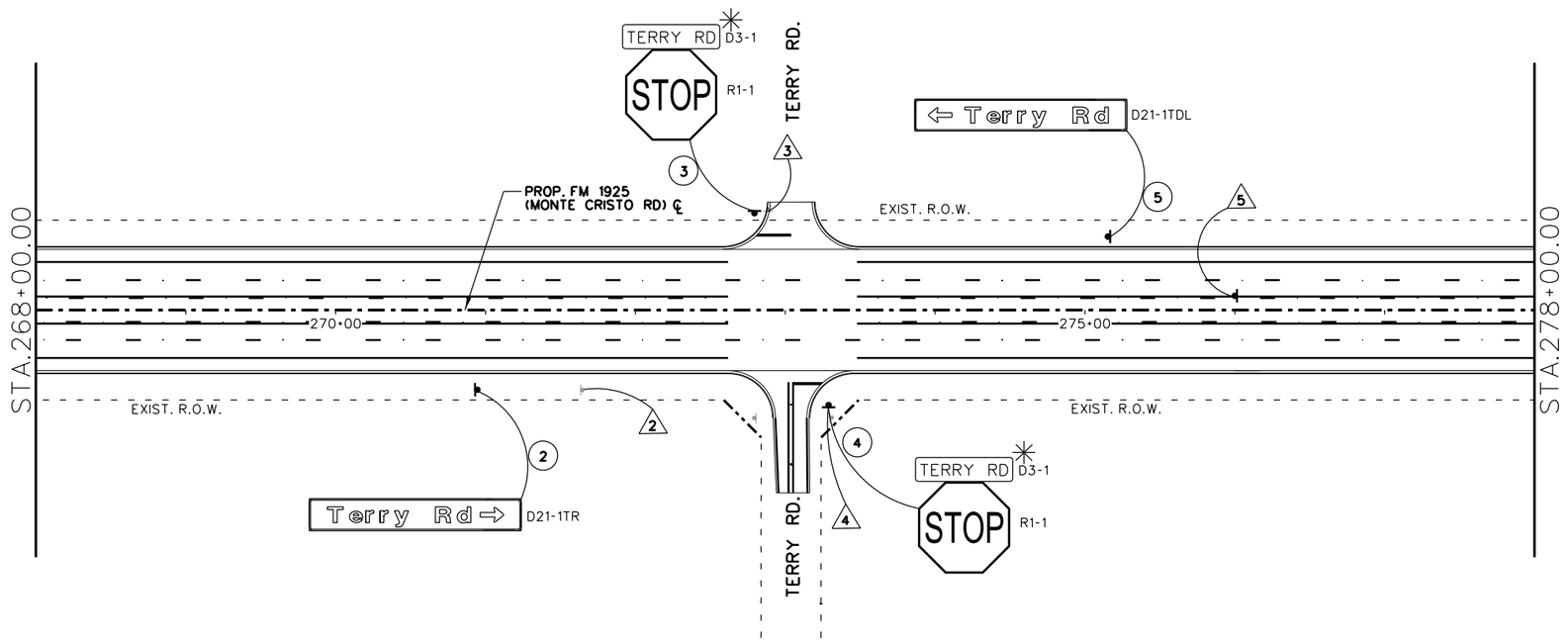
11/16/2022

PROPOSED TRAFFIC SIGNAL FM 1925 AT BRUSHLINE RD

DATE: 11/16/2022		CONT	SECT	JOB	HIGHWAY
DN:		1803	02	035	FM 1925
CK DN:		DIST	COUNTY		SHEET NO.
DW:		PHR	HIDALGO		172
CK DW:					

11/16/2022 N:\CLIENTS\L&G\FM 1925*FM907 SHARP\ETSI*WORK\SIGNALS\PROPOSED\FM 1925 at BRUSHLINE.dgn





LEGEND:

- SIGNS TO REMAIN IN PLACE
- SIGNS TO BE REMOVED (ITEM 644)
- SIGNS TO BE RELOCATED (ITEM 644)
- SIGNS TO BE INSTALLED (ITEM 644)
- SIGN/RDSD FLASHERS TO BE INSTALLED (ITEM 685)
- SIGN/RDSD FLASHERS TO BE RELOCATED (ITEM 685)
- SIGN TO BE INSTALLED BY OTHERS
- SIGNS SYMBOL

GENERAL NOTES

1. ALL SIGNS IN WORKING AREAS DESIGNATED TO BE RELOCATED SHALL BE REMOVED AND STORED WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL MAKE THE PRECAUTIONARY MEASURES TO PREVENT DAMAGE DURING CONSTRUCTION. COORDINATE WITH THE PROJECT ENGINEER FOR STORAGE APPROVAL.
2. CONTRACTOR IS RESPONSIBLE FOR ALL SIGNS DAMAGED DURING CONSTRUCTION. THESE DAMAGED SIGNS WILL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
3. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO MAKE ANY ADJUSTMENTS, DUE TO CONFLICTS ON ANY SIGNS THAT ARE TO BE RELOCATED.

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
PROFESSIONAL LICENSED ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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Highway / Civil
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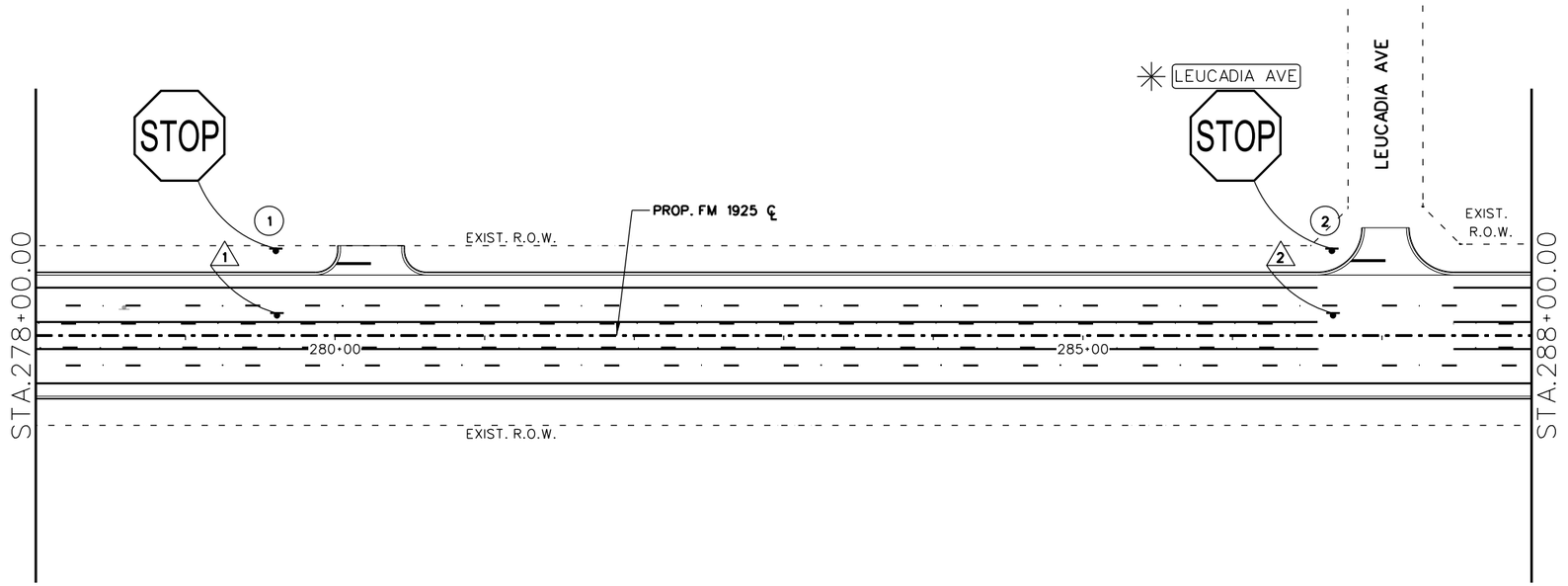
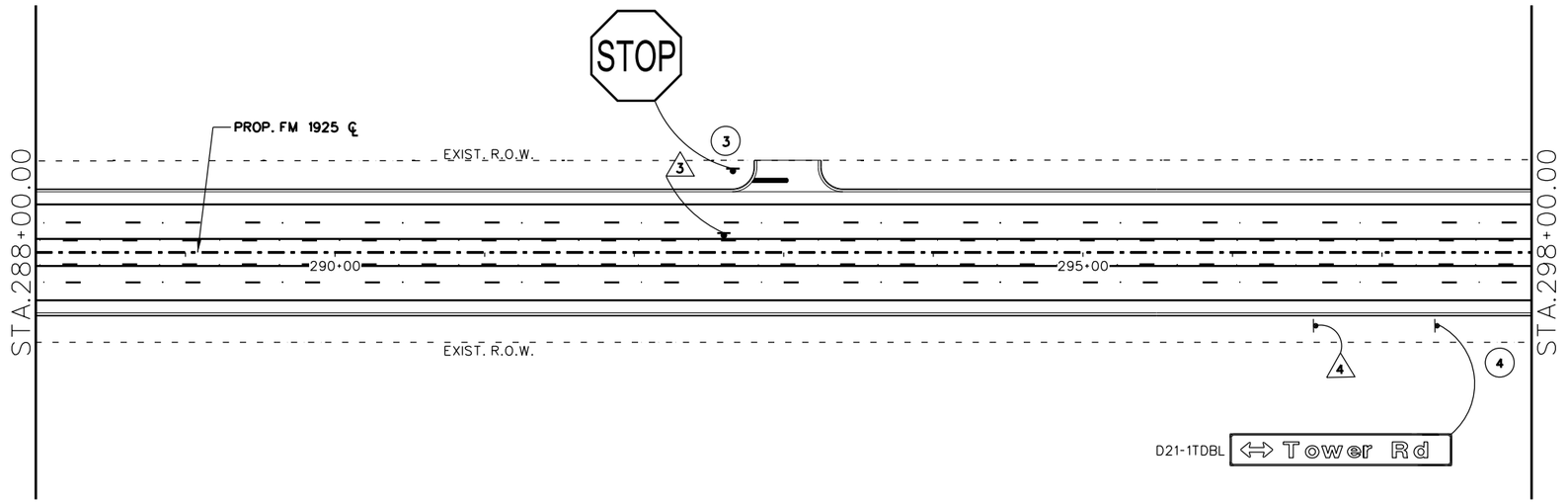
FM 1925
SIGNING LAYOUT

SCALE: 1"=100' SHEET 1 OF 5

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		173
REVIEW:								
CK:								

K:\Counties\HDG\FM 1925 PHII (907 to Uresti)\07 TRAFFIC\03 Signing\SIGNING_1.dgn
10/31/2023





LEGEND:

- SIGNS TO REMAIN IN PLACE
- SIGNS TO BE REMOVED (ITEM 644)
- SIGNS TO BE RELOCATED (ITEM 644)
- SIGNS TO BE INSTALLED (ITEM 644)
- SIGN/RDSD FLASHERS TO BE INSTALLED (ITEM 685)
- SIGN/RDSD FLASHERS TO BE RELOCATED (ITEM 685)
- SIGN TO BE INSTALLED BY OTHERS
- SIGNS SYMBOL

GENERAL NOTES

1. ALL SIGNS IN WORKING AREAS DESIGNATED TO BE RELOCATED SHALL BE REMOVED AND STORED WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL MAKE THE PRECAUTIONARY MEASURES TO PREVENT DAMAGE DURING CONSTRUCTION. COORDINATE WITH THE PROJECT ENGINEER FOR STORAGE APPROVAL.
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STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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Environmental
Firm No. : F-4105

2100 W. Expressway 83
Mercedes, TX. 78570
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Mission, TX. 78572
Phone : (956) 585-1909
Fax : (956) 585-1927

FM 1925
SIGNING LAYOUT

SCALE: 1"=100'

SHEET 2 OF 5

DRAWING:	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:	6	TEXAS					FM1925
ENGINEER:	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:	PHR	HIDALGO	1803	02	035		174
REVIEW:							
CK:							

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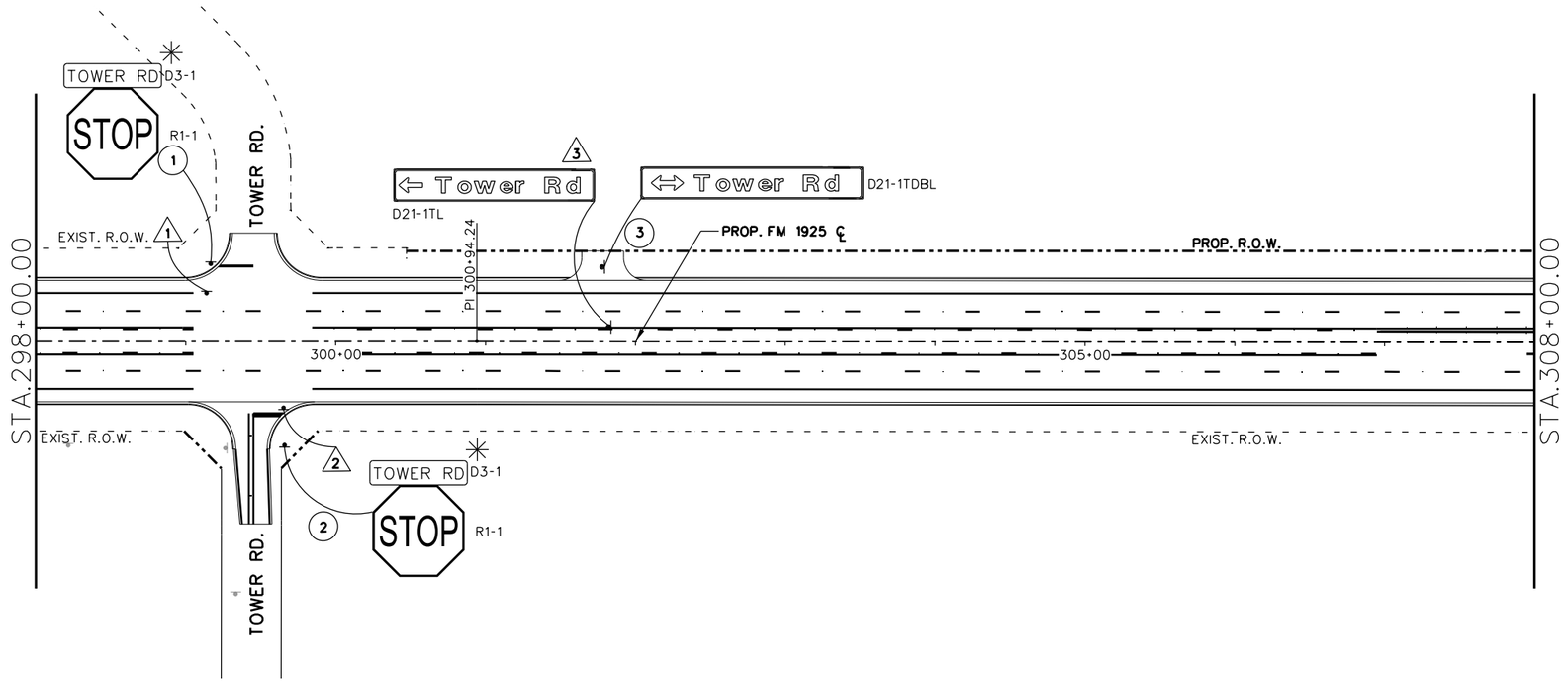
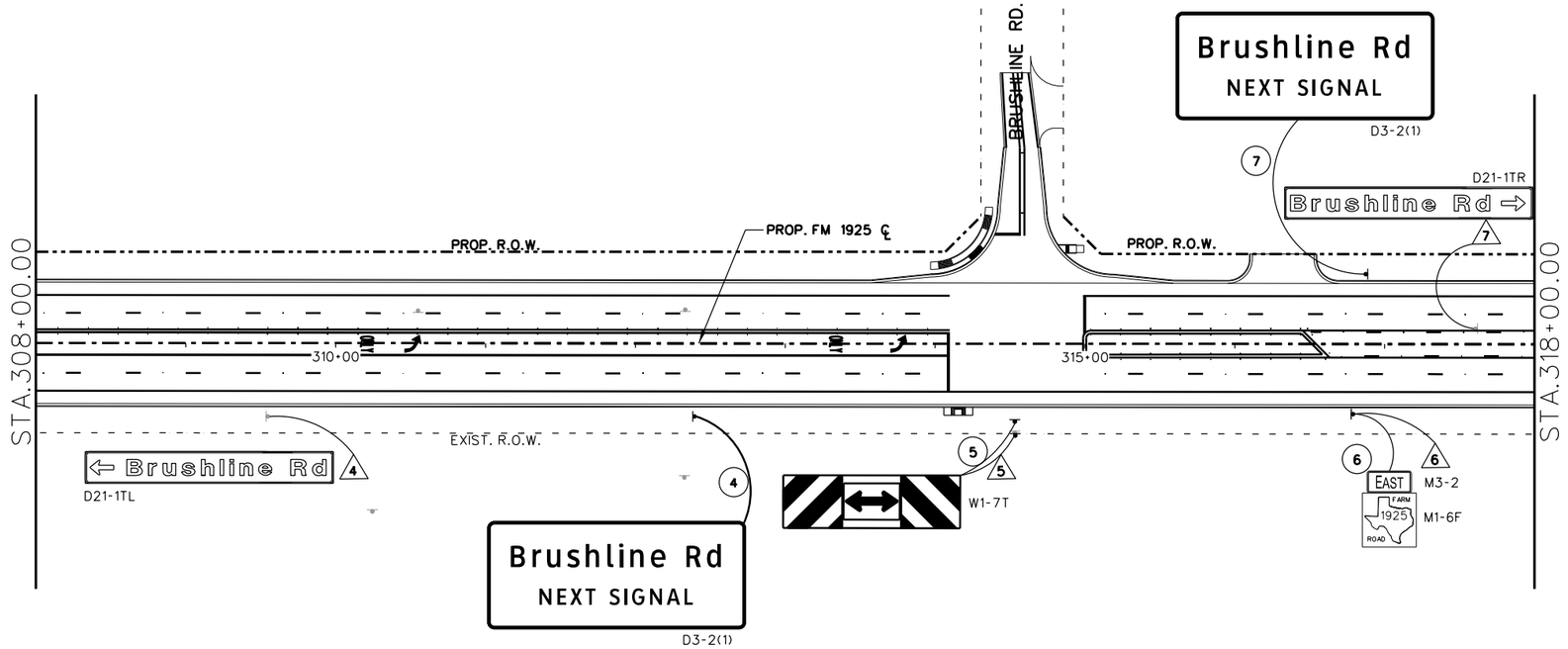
10/31/2023





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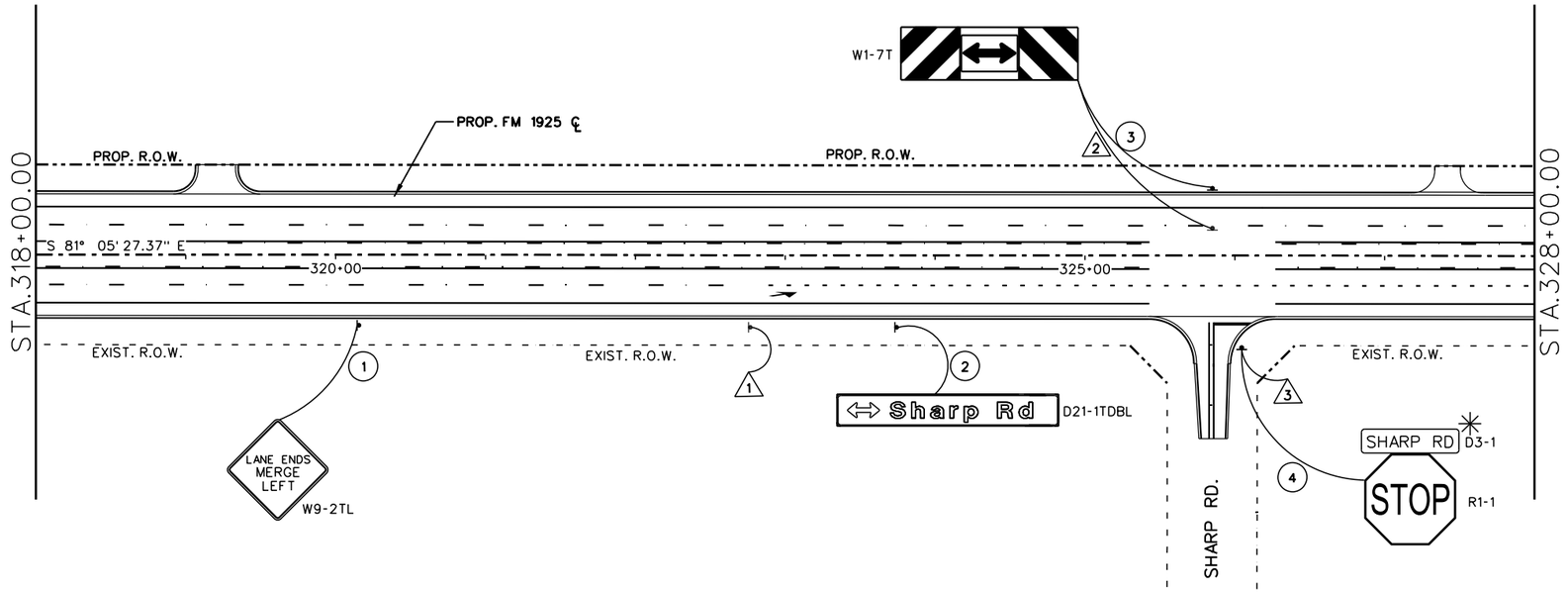
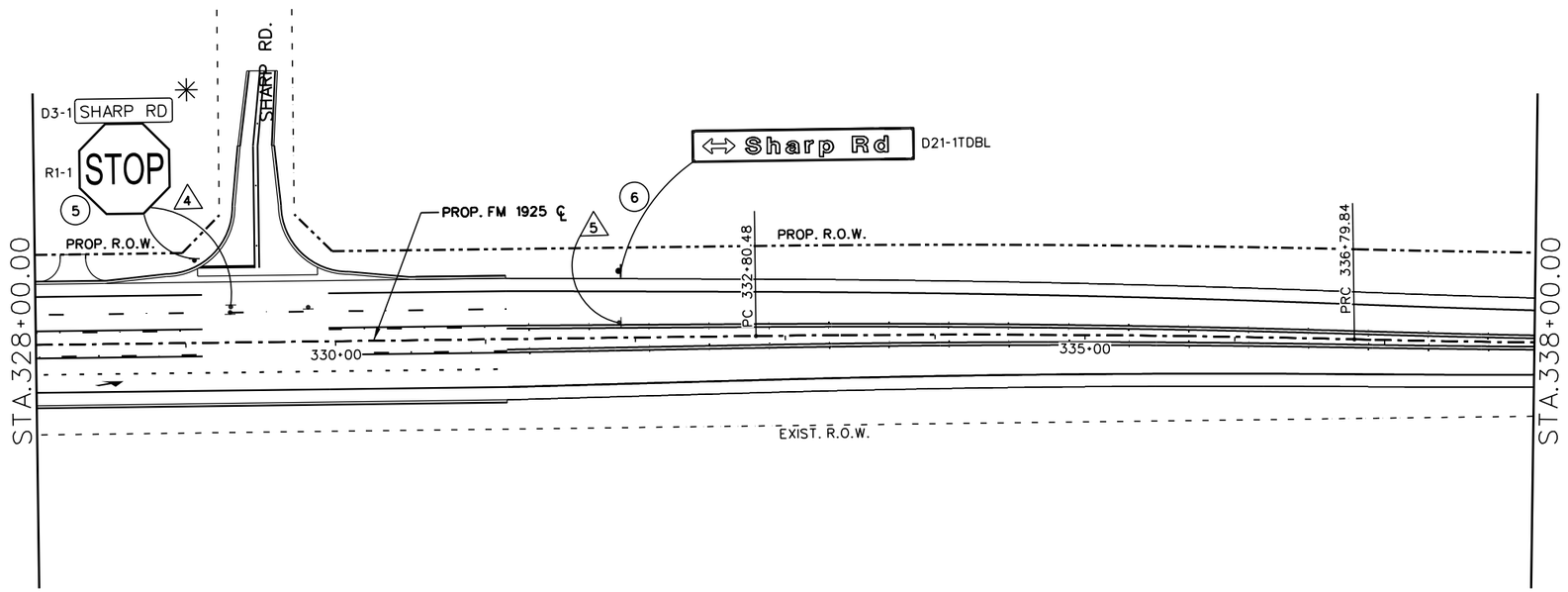
SCALE: 1"=100' SHEET 3 OF 5

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		175
REVIEW:								
CK:								





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FM 1925
SIGNING LAYOUT

SCALE: 1"=100'

SHEET 4 OF 5

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		176
REVIEW:								
CK:								

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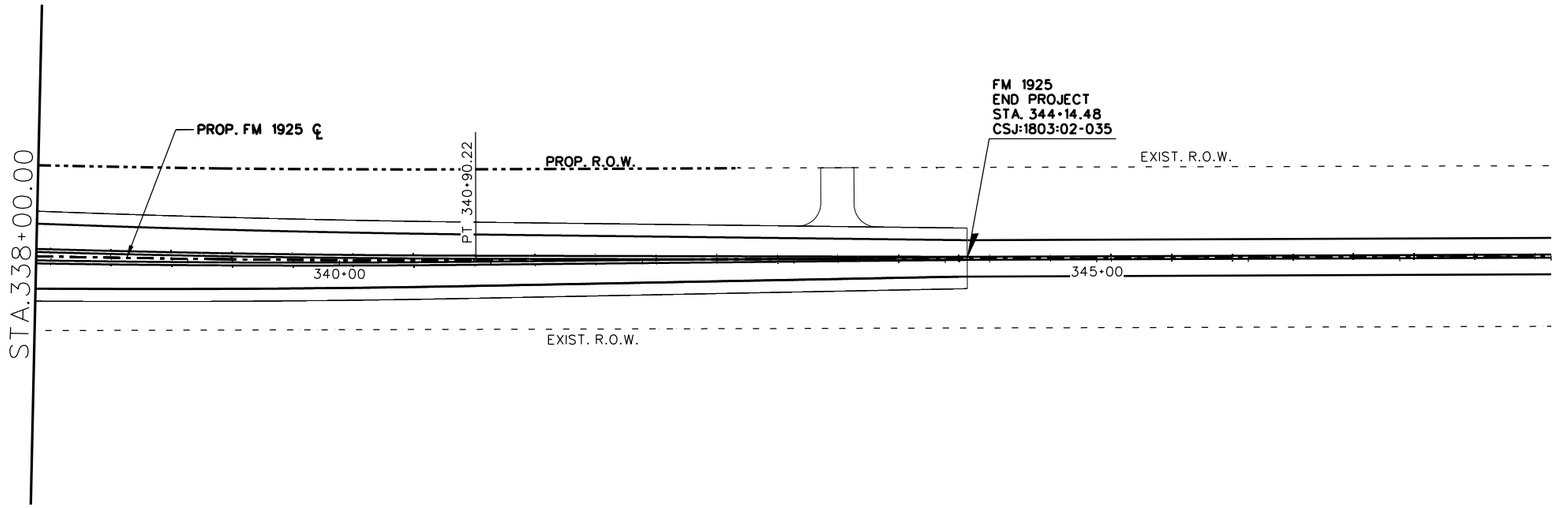

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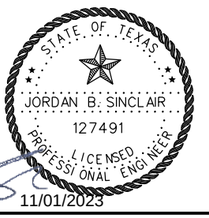

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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FM 1925
SIGNING LAYOUT

SCALE: 1"=100'

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		177
REVIEW:	
CK:	

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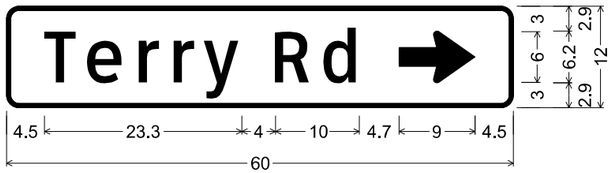
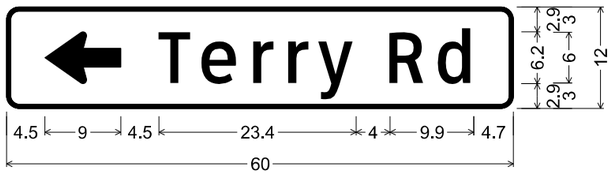


D21-1T(R) 6in;
1.5" Radius, 0.5" Border, White on Green;
"Terry", ClearviewHwy-3-W; "Rd", ClearviewHwy-3-W;
Standard Arrow Custom 9.0" X 6.1" 0°;
Table of widths and spaces

4.5	T 4.1	1.0	e 4.5	1.7	r 2.6	1.5	r 2.6	0.9	y 4.4	4.0	R 4.4	1.4	d 4.2	

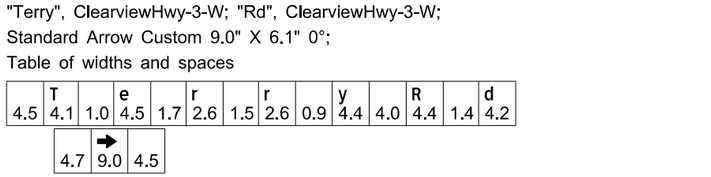
4.7	→ 9.0	4.5



D21-1T(L) 6in;
1.5" Radius, 0.5" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 180°;
"Terry", ClearviewHwy-3-W; "Rd", ClearviewHwy-3-W;
Table of widths and spaces

4.5	← 9.0	4.5	T 4.1	1.0	e 4.5	1.7	r 2.6	1.5	r 2.7	0.8	y 4.5	

4.0	R 4.4	1.3	d 4.2	4.7



D21-1T(DBL) 6in;
1.5" Radius, 0.5" Border, White on Green;
Double Headed Arrow Custom - 14.0" 0°; "Tower", ClearviewHwy-3-W;
"Rd", ClearviewHwy-3-W;
Table of widths and spaces

4.5	↔ 14.0	4.5	T 4.1	1.0	o 4.6	1.2	w 7.0	1.1	e 4.5	1.7	r 2.6	4.0	R 4.4	1.3	d 4.2	7.3

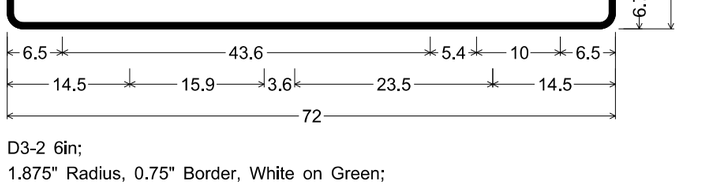
D3-2 6in;
1.875" Radius, 0.75" Border, White on Green;
"Brushline Rd", ClearviewHwy-3-W;
"NEXT SIGNAL", ClearviewHwy-3-W;
Table of widths and spaces

6.5	B 4.4	1.7	r 2.7	1.3	u 4.1	1.6	s 3.7	1.5	h 4.0	2.0	l 1.8	1.5	i 1.3	1.8	n 4.0	1.7	e 4.5	

5.4	R 4.4	1.4	d 4.2	6.5	

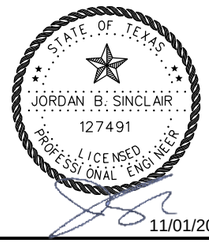
14.5	N 3.7	1.4	E 2.6	0.8	X 3.7	0.7	T 3.0	

3.6	S 3.2	1.1	I 0.8	1.3	G 3.7	1.3	N 3.6	1.0	A 4.1	0.9	L 2.5	14.5		



D21-1T(DBL) 6in;
1.5" Radius, 0.5" Border, White on Green;
Double Headed Arrow Custom - 14.0" 0°; "Sharp", ClearviewHwy-3-W;
"Rd", ClearviewHwy-3-W;
Table of widths and spaces

4.5	↔ 14.0	4.5	S 4.2	1.5	h 4.0	1.7	a 4.3	1.9	r 2.6	1.4	p 4.2	4.5	R 4.4	1.3	d 4.2	8.8



11/01/2023

THE COUNTY OF HIDALGO
TEXAS

Texas Department of Transportation

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FM 1925 SIGNING DETAILS

SHEET 1 OF 1

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:		PHR	HIDALGO	1803	02	035	178
REVIEW:							
CK:							

SUMMARY OF SMALL SIGNS

SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX)

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	POST TYPE FRP = Fiberglass TWT = Thin-Wall 10BWG = 10 BWG S80 = Sch 80	POSTS 1 or 2	ANCHOR TYPE UA=Universal Conc UB=Universal Bolt SA=Slipbase-Conc SB=Slipbase-Bolt WS=Wedge Steel WP=Wedge Plastic	MOUNTING DESIGNATION: PREFABRICATED P = "Plain" T = "T" U = "U"	MOUNTING DESIGNATION 1EXT or 2EXT = # of Ext BM = Extruded Wind Beam WC = 1.12 #/ft Wing Channel EXAL= Extruded Alum Sign Panels	BRIDGE MOUNT CLEARANCE SIGNS (See Note 2) TY = TYPE TY N TY S
1 OF 5												
	1	M2-1	JCT	21X15	✓		S80	1	SA	P		
		M1-6F	FARM 907 ROAD	24X24	✓							
	2	D21-1T(R)	Terry Rd ⇨	60X12	✓		S80	1	SA	T		
	3	R1-1	STOP	36X36	✓		S80	1	SA	P		
	4	R1-1	STOP	36X36	✓		S80	1	SA	P		
	5	D21-1T(L)	⇦ Terry Rd	60X12	✓		S80	1	SA	T		
2 OF 5												
	1	R1-1	STOP	36X36	✓		S80	1	SA	P		
	2	R1-1	STOP	36X36	✓		S80	1	SA	P		
	3	R1-1	STOP	36X36	✓		S80	1	SA	P		
	4	D21-1T(DBL)	⇔ Tower Rd	72X12	✓		S80	1	SA	T		
3 OF 5												
	1	R1-1	STOP	36X36	✓		S80	1	SA	P		
	2	R1-1	STOP	36X36	✓		S80	1	SA	P		
	3	D21-1T(DBL)	⇔ Tower Rd	72X12	✓		S80	1	SA	T		

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/

NOTE:

1. 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.
2. For installation of bridge mount clearance signs, see Bridge Mounted Clearance Sign Assembly (BMCS)Standard Sheet.
3. For Sign Support Descriptive Codes, see Sign Mounting Details Small Roadside Signs General Notes & Details SMD(GEN).

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Texas Department of Transportation — Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

SOSS SHEET 1 OF 2

FILE: sums16.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
© TxDOT May 1987	CONT 1803	SECT 02	JOB 035	HIGHWAY FM1925
REVISIONS 4-16 8-16	DIST PHR	COUNTY HIDALGO		SHEET NO. 179

18

SUMMARY OF SMALL SIGNS

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX) POST TYPE	POSTS	ANCHOR TYPE	MOUNTING DESIGNATION		BRIDGE MOUNT CLEARANCE SIGNS (See Note 2) TY = TYPE TY N TY S
										PREFABRICATED	1EXT or 2EXT = # of Ext BM = Extruded Wind Beam WC = 1.12 #/ft Wing Channel EXAL= Extruded Alum Sign Panels	
							FRP = Fiberglass TWT = Thin-Wall 10BWG = 10 BWG S80 = Sch 80	1 or 2	UA=Universal Conc UB=Universal Bolt SA=Slipbase-Conc SB=Slipbase-Bolt WS=Wedge Steel WP=Wedge Plastic	P = "Plain" T = "T" U = "U"		
3 OF 5												
	4	D3-2	Brushline Rd NEXT SIGNAL	72X30	✓		S80	1	SA	T		
	5	W1-7T		96X36	✓		S80	1	SA	T		
	6	M2-1	EAST FARM 1925 ROAD	21X15	✓		S80	1	SA	P		
		M1-6F		24X24	✓							
	7	D3-2	Brushline Rd NEXT SIGNAL	72X30	✓		S80		SA	T		
4 OF 5												
	1	W9-2TL(R)	LANE ENDS MERGE LEFT	36X36	✓		S80	1	SA	P		
	2	D21-1T(DBL)	⇔ Sharp Rd	72X12	✓		S80	1	SA	T		
	3	W1-7T		96X36	✓		S80	1	SA	T		
	4	R1-1	STOP	36X36	✓		S80	1	SA	P		
	5	R1-1	STOP	36X36	✓		S80	1	SA	P		
	6	D21-T(DBL)	⇔ Sharp Rd	72X12	✓		S80	1	SA	T		

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"

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Texas Department of Transportation — Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

SOSS — SHEET 2 OF 2

FILE: sums16.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT May 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
4-16	DIST	COUNTY		SHEET NO.
8-16	PHR	HIDALGO		180

18

DATE: 10/31/2023 1:36:34 PM
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SUMMARY OF SMALL SIGNS

PLAN SHT. NO.	SIGN NO.	SIGN TYPE	SIGN TEXT	SIGN DIMENS.	644 6076 REMOVE SMALL SIGN ASSM.	644 6070 RELOCATE SMALL SIGN ASSM.
			CSJ: 1803-02-035	INCHES	EA.	EA.
1of5	1	M2-1	JUNCTION AUXILIARY SIGN	21X15	X	
	2	D21-1T(R)	TERRY ROAD	VARX12	X	
	3	R1-1	STOP	36X36	X	
	4	R1-1	STOP	36X36	X	
	5	D21-1T(L)	TERRY ROAD	VARX12	X	
2of5	1	D21-1T(R)	STOP	36X36	X	
	2	D21-1T(R)	STOP	36X36	X	
	3	D21-1T(R)	STOP	36X36	X	
	4	D21-1T(DBL)	TOWER ROAD	VARX12	X	
3of5	1	R1-1	STOP	36X36	X	
	2	R1-1	STOP	36X36	X	
	3	D21-1T(L)	TOWER ROAD	VARX12	X	
	4	D21-1T(L)	BRUSHLINE ROAD	VARX12	X	
	5	W1-7T	TWO DIRECTION ARROW SIGN	96X36	X	
	6	M3-2	EAST	24X12	X	
	7	D21-1T(R)	BRUSHLINE ROAD	VARX12	X	
4of5	1	D21-1T(DBL)	SHARP ROAD	VARX12	X	
	2	W1-7T	TWO DIRECTION ARROW SIGN	96X36	X	
	3	R1-1	STOP	36X36	X	
	4	R1-1	STOP	36X36	X	
	5	D21-1T(DBL)	SHARP ROAD	VARX12	X	
				TOTAL	21	

TABULATION OF
SIGNS TO BE REMOVED
OR RELOCATED
UNDER ITEM 644
(WITHOUT REMOVABLE COPY)

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER

11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

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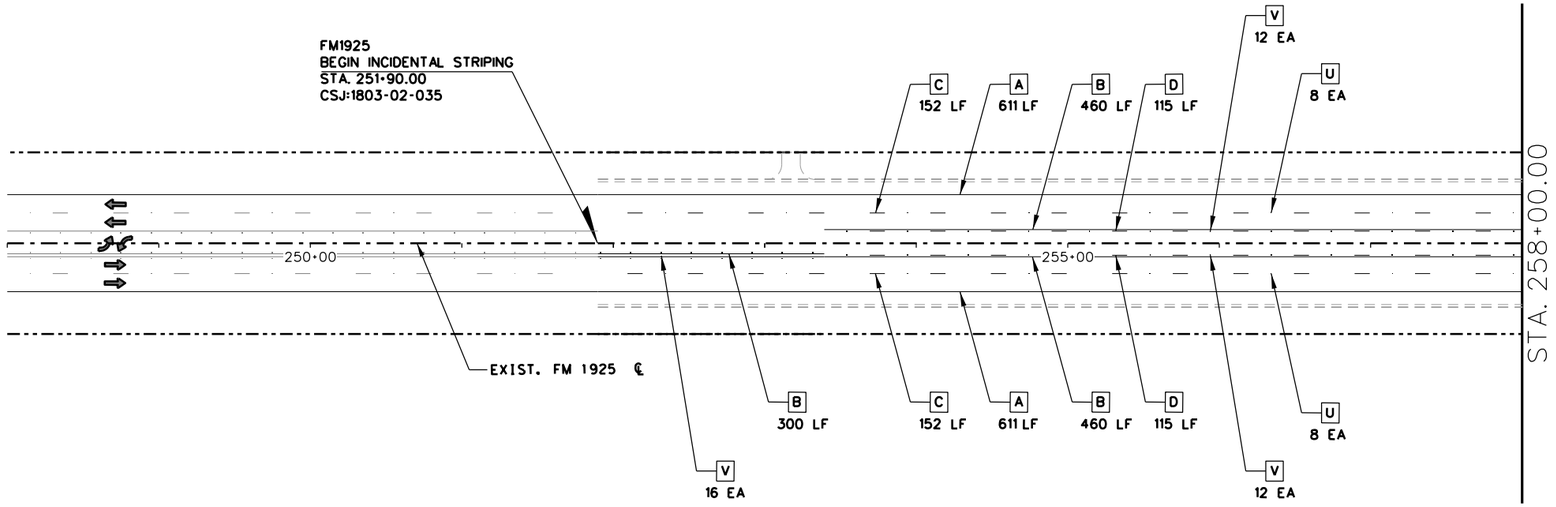
FM 1925
SUMMARY OF SMALL SIGNS
TO BE REMOVED

SHEET 1 OF 1

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:							
REVIEW:		PHR	HIDALGO	1803	02	035	181
CK:							

10/31/2023 K:\Counties\HID\FM 1925 PHR(907 to Uresti)\07 TRAFFIC\03 Signing\FM1925_SIGNSREMOVAL.dgn

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	T	U	V
1220	1220	300	230														16	40



PAVEMENT MARKINGS LEGEND:

TYPE I THERMOPLASTIC (ITEM 666)

- A 6" WHITE SOLID
- B 6" YELLOW SOLID
- C 6" WHITE BROKEN
- D 6" YELLOW BROKEN
- E 8" WHITE SOLID
- F 8" YELLOW SOLID
- G 6" WHITE DOTTED
- H 24" WHITE SOLID
- I 24" YELLOW SOLID
- J 12" WHITE SOLID

TYPE B (ITEM 668)

- K WORD "ONLY" WHITE
- L SINGLE ARROW WHITE
- M DOUBLE ARROW WHITE
- N STR. ARROW/LEFT ARROW WHITE
- O STR. ARROW WHITE
- P SINGLE U-TURN ARROW
- Q RR XING SYMBOL WHITE

RAISED PAVEMENT MARKERS (ITEM 672)

- U TYPE I-C REFLECTIVE CL B
- V TYPE II-AA REFLECTIVE CL B
- W TYPE II-C-R 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 100 MIL.

STATE OF TEXAS
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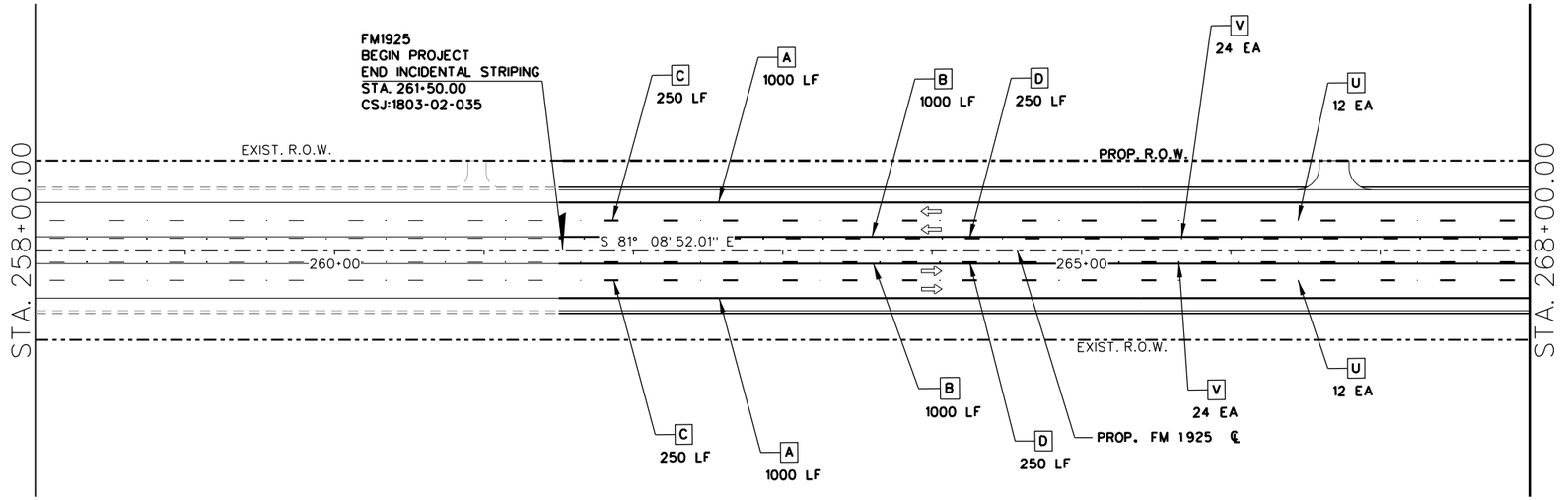
FM 1925
PAVEMENT MARKINGS

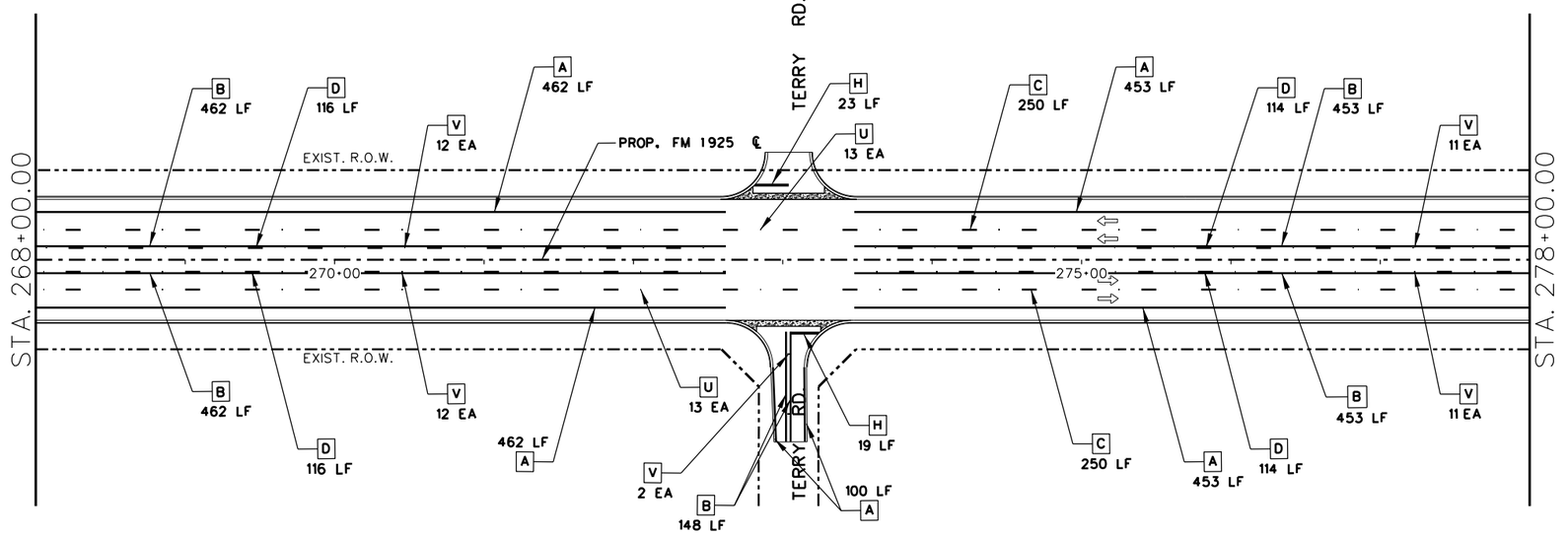
SCALE: 1"=100' SHEET 1 OF 6

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		182
REVIEW:	
CK:	

10/31/2023 K:\Counties\HID\FM 1925 PHR(907 to Urest)\07 TRAFFIC\04 Pavement Markings\STRIPING_1.dgn

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	T	U	V
3830	3980	1000	960				40										50	96





PAVEMENT MARKINGS LEGEND:

TYPE I THERMOPLASTIC (ITEM 666)

- A 6" WHITE SOLID
- B 6" YELLOW SOLID
- C 6" WHITE BROKEN
- D 6" YELLOW BROKEN
- E 8" WHITE SOLID
- F 8" YELLOW SOLID
- G 6" WHITE DOTTED
- H 24" WHITE SOLID
- I 24" YELLOW SOLID
- J 12" WHITE SOLID

TYPE B (ITEM 668)

- K WORD "ONLY" WHITE
- L SINGLE ARROW WHITE
- M DOUBLE ARROW WHITE
- N STR. ARROW/LEFT ARROW WHITE
- O STR. ARROW WHITE
- P SINGLE U-TURN ARROW
- Q RR XING SYMBOL WHITE

RAISED PAVEMENT MARKERS (ITEM 672)

- U TYPE I-C REFLECTIVE CL B
- V TYPE II-AA REFLECTIVE CL B
- W TYPE II-C-R 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 100 MIL.

STATE OF TEXAS
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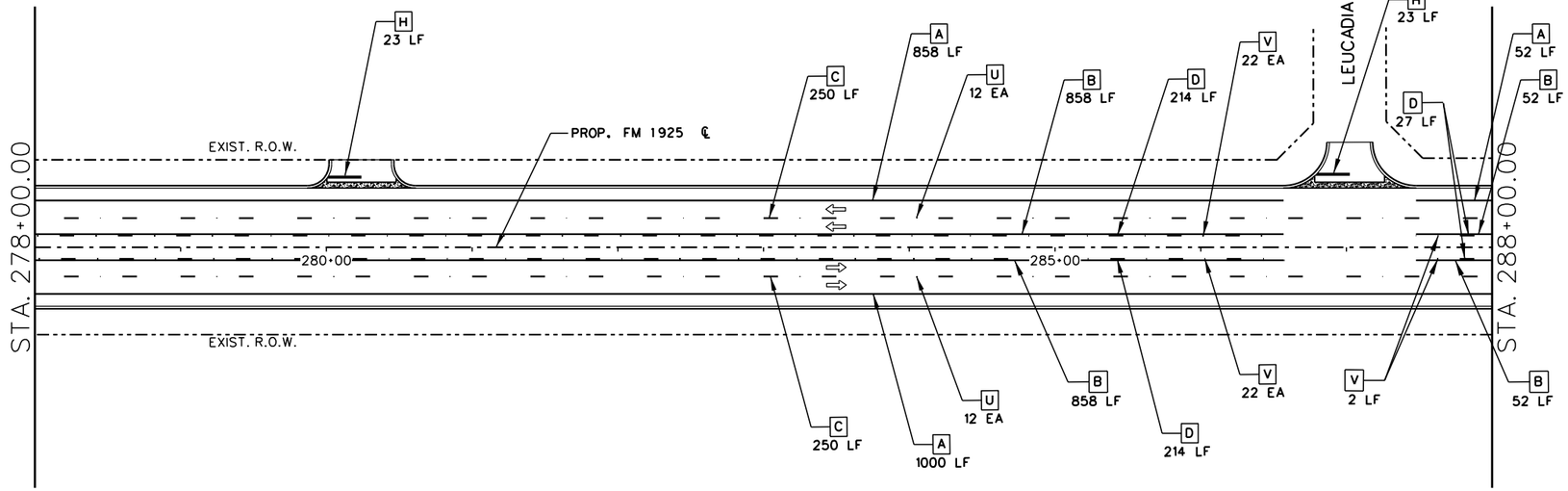
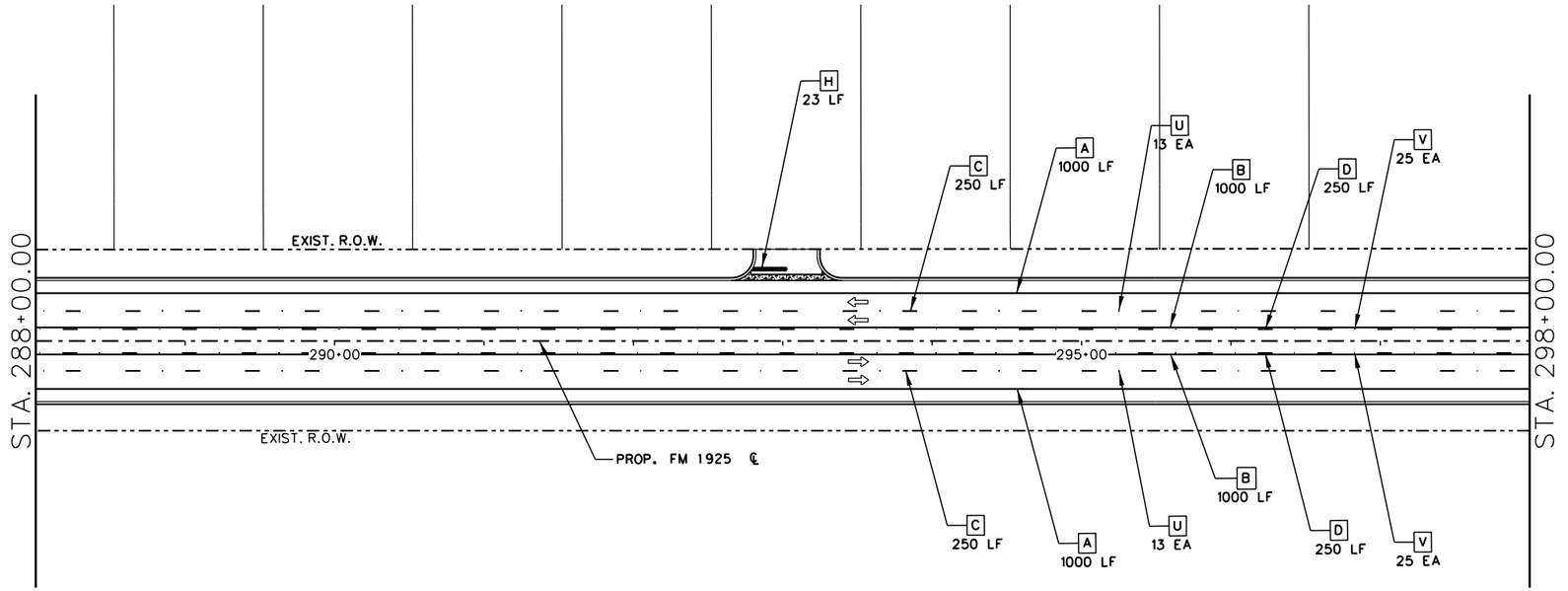
FM 1925
PAVEMENT MARKINGS

SCALE: 1"=100' SHEET 2 OF 6

DRAWING:	FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:	6	TEXAS					FM1925
ENGINEER:	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:	PHR	HIDALGO	1803	02	035		183
REVIEW:							
CK:							

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	T	U	V
3910	3820	1000	955				70										50	96





PAVEMENT MARKINGS LEGEND:

TYPE I THERMOPLASTIC (ITEM 666)

- A 6" WHITE SOLID
- B 6" YELLOW SOLID
- C 6" WHITE BROKEN
- D 6" YELLOW BROKEN
- E 8" WHITE SOLID
- F 8" YELLOW SOLID
- G 6" WHITE DOTTED
- H 24" WHITE SOLID
- I 24" YELLOW SOLID
- J 12" WHITE SOLID

TYPE B (ITEM 668)

- K WORD "ONLY" WHITE
- L SINGLE ARROW WHITE
- M DOUBLE ARROW WHITE
- N STR. ARROW/LEFT ARROW WHITE
- O STR. ARROW WHITE
- P SINGLE U-TURN ARROW
- Q RR XING SYMBOL WHITE

RAISED PAVEMENT MARKERS (ITEM 672)

- U TYPE I-C REFLECTIVE CL B
- V TYPE II-AA REFLECTIVE CL B
- W TYPE II-C-R 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 100 MIL.

STATE OF TEXAS
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11/01/2023

THE COUNTY OF HIDALGO TEXAS

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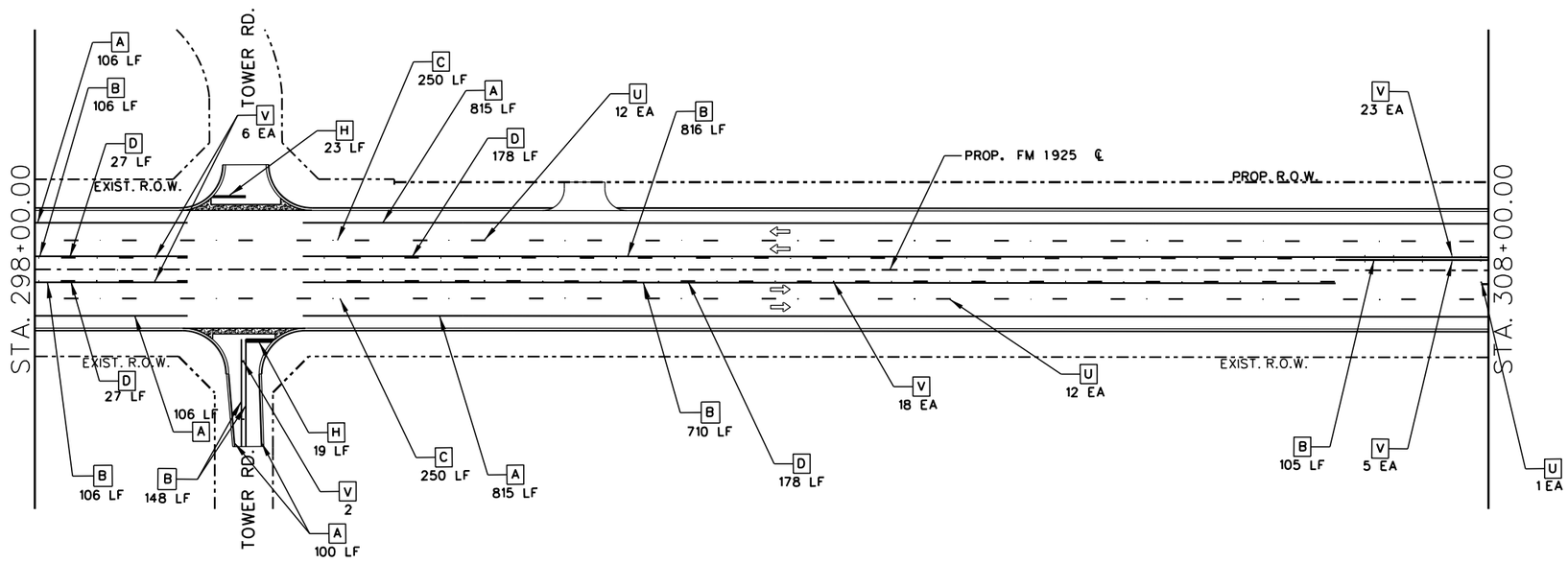
FM 1925
PAVEMENT MARKINGS

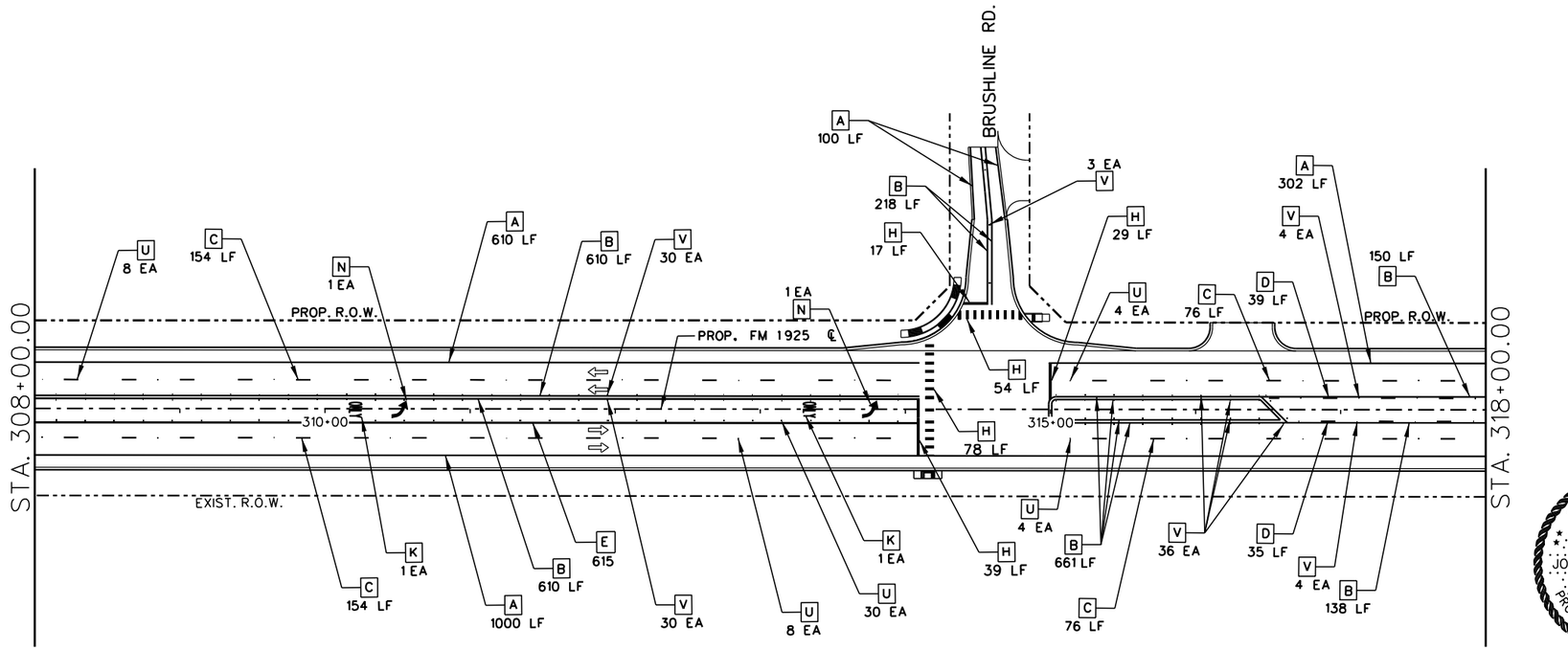
SCALE: 1"=100' SHEET 3 OF 6

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:							
REVIEW:		PHR	HIDALGO	1803	02	035	184
CK:							

10/31/2023 K:\Counties\HID\FM 1925 PHR\907 to Urest\\07 TRAFFIC\04 Pavement Markings\STRIPING_3.dgn

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	T	U	V
3950	4380	960	480	620			260			2			2				79	161





PAVEMENT MARKINGS LEGEND:

TYPE I THERMOPLASTIC (ITEM 666)

- A 6" WHITE SOLID
- B 6" YELLOW SOLID
- C 6" WHITE BROKEN
- D 6" YELLOW BROKEN
- E 8" WHITE SOLID
- F 8" YELLOW SOLID
- G 6" WHITE DOTTED
- H 24" WHITE SOLID
- I 24" YELLOW SOLID
- J 12" WHITE SOLID

TYPE B (ITEM 668)

- K WORD "ONLY" WHITE
- L SINGLE ARROW WHITE
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- N STR. ARROW/LEFT ARROW WHITE
- O STR. ARROW WHITE
- P SINGLE U-TURN ARROW
- Q RR XING SYMBOL WHITE

RAISED PAVEMENT MARKERS (ITEM 672)

- U TYPE I-C REFLECTIVE CL B
- V TYPE II-AA REFLECTIVE CL B
- W TYPE II-C-R REFLECTIVE CL B

⇦ TRAFFIC FLOW

NOTES:

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THE COUNTY OF HIDALGO TEXAS

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STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

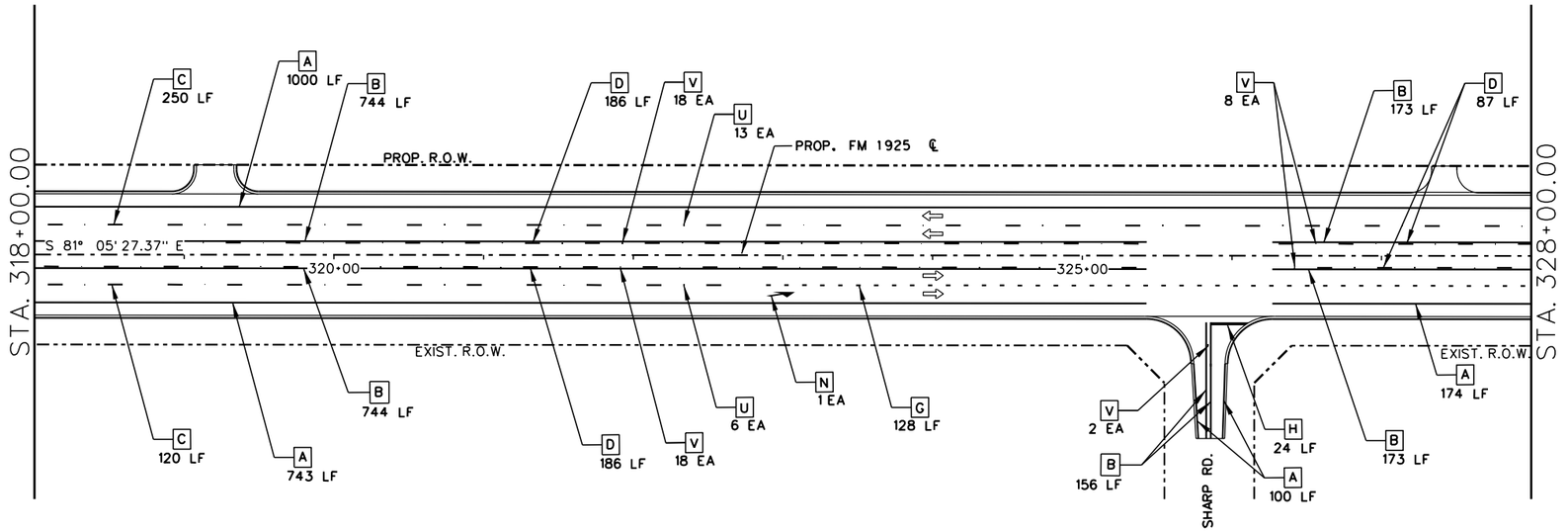
FM 1925
PAVEMENT MARKINGS

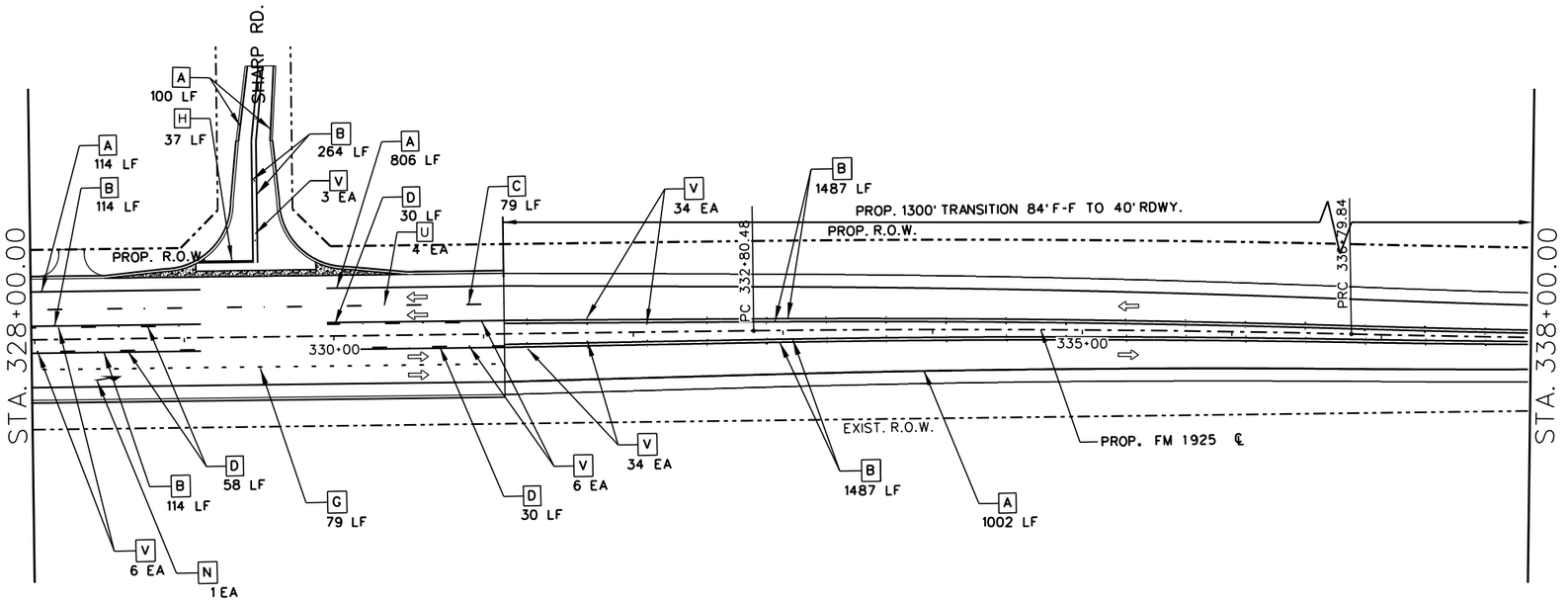
SCALE: 1"=100' SHEET 4 OF 6

DRAWING:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				FM1925
ENGINEER:	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:	PHR	HIDALGO	1803	02	035	185
REVIEW:						
CK:						

10/31/2023 K:\Counties\HD\FM 1925 PHR(1907 to Uresti)\07 TRAFFIC\04 Pavement Markings\STRIPING_4.dgn

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	T	U	V
4040	5460	450	580			207	60						2				23	129





PAVEMENT MARKINGS LEGEND:

TYPE I THERMOPLASTIC (ITEM 666)

- A 6" WHITE SOLID
- B 6" YELLOW SOLID
- C 6" WHITE BROKEN
- D 6" YELLOW BROKEN
- E 8" WHITE SOLID
- F 8" YELLOW SOLID
- G 6" WHITE DOTTED
- H 24" WHITE SOLID
- I 24" YELLOW SOLID
- J 12" WHITE SOLID

TYPE B (ITEM 668)

- K WORD "ONLY" WHITE
- L SINGLE ARROW WHITE
- M DOUBLE ARROW WHITE
- N STR. ARROW/LEFT ARROW WHITE
- O STR. ARROW WHITE
- P SINGLE U-TURN ARROW
- Q RR XING SYMBOL WHITE

RAISED PAVEMENT MARKERS (ITEM 672)

- U TYPE I-C REFLECTIVE CL B
- V TYPE II-AA REFLECTIVE CL B
- W TYPE II-C-R REFLECTIVE CL B

⇦ TRAFFIC FLOW

NOTES:

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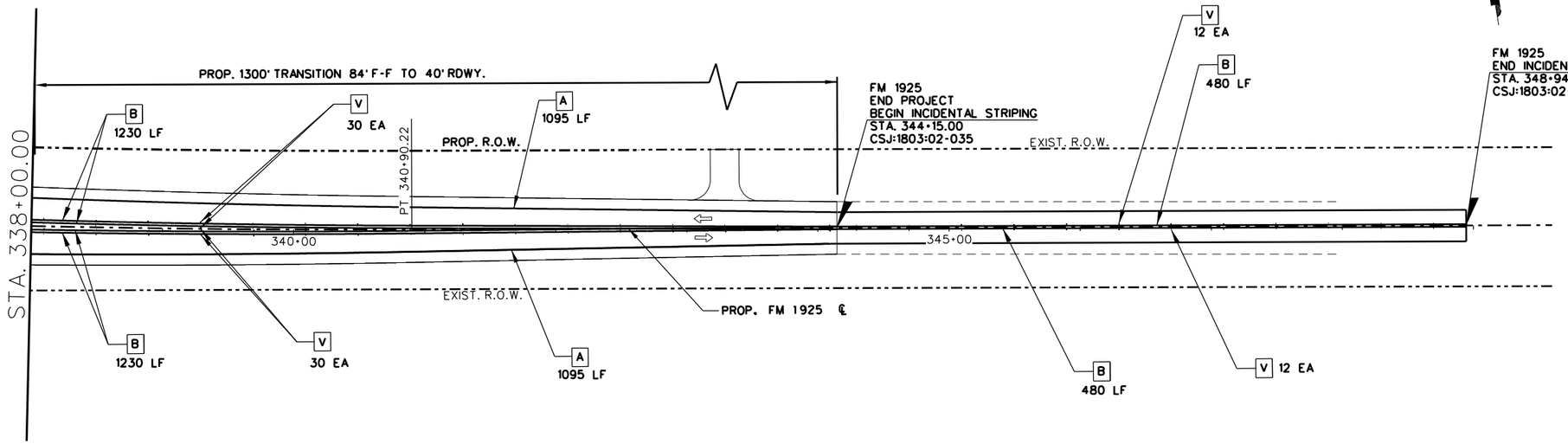
FM 1925
PAVEMENT MARKINGS

SCALE: 1"=100' SHEET 5 OF 6

DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.				HIGHWAY NO.
CK:		6	TEXAS					FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		SHEET NO.
CK:		PHR	HIDALGO	1803	02	035		186
REVIEW:								
CK:								

11/1/2023 K:\Counties\HID\FM 1925 PHR\907 to Urest\\07 TRAFFIC\04 Pavement Markings\STRIPING_5.dgn

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	T	U	V
2190	3420																	84



PAVEMENT MARKINGS LEGEND:

TYPE I THERMOPLASTIC (ITEM 666)

- A 6" WHITE SOLID
- B 6" YELLOW SOLID
- C 6" WHITE BROKEN
- D 6" YELLOW BROKEN
- E 8" WHITE SOLID
- F 8" YELLOW SOLID
- G 6" WHITE DOTTED
- H 24" WHITE SOLID
- I 24" YELLOW SOLID
- J 12" WHITE SOLID

TYPE B (ITEM 668)

- K WORD "ONLY" WHITE
- L SINGLE ARROW WHITE
- M DOUBLE ARROW WHITE
- N STR. ARROW/LEFT ARROW WHITE
- O STR. ARROW WHITE
- P SINGLE U-TURN ARROW
- Q RR XING SYMBOL WHITE

RAISED PAVEMENT MARKERS (ITEM 672)

- U TYPE I-C REFLECTIVE CL B
- V TYPE II-AA REFLECTIVE CL B
- W TYPE II-C-R REFLECTIVE CL B

⇦ TRAFFIC FLOW

NOTES:

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STATE OF TEXAS
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11/01/2023

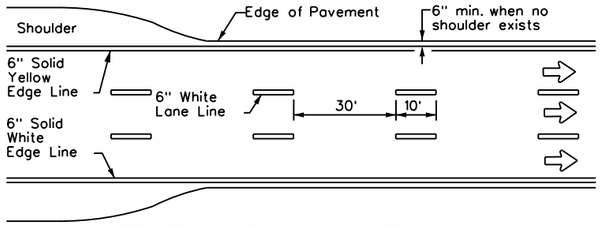
FM 1925
PAVEMENT MARKINGS

SCALE: 1"=100' SHEET 6 OF 6

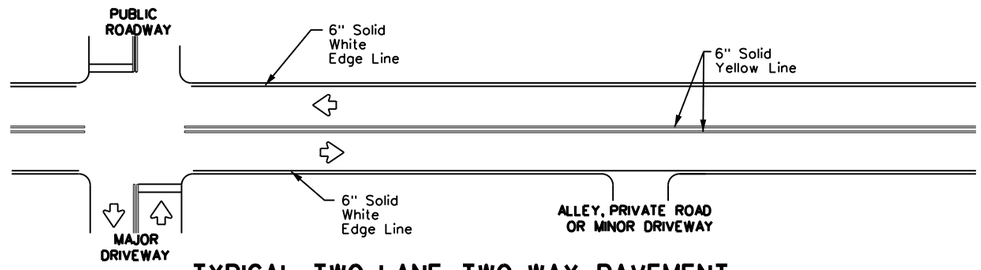
DRAWING:		FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:		6	TEXAS				FM1925
ENGINEER:		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:		PHR	HIDALGO	1803	02	035	187
REVIEW:							
CK:							

10/31/2023 K:\Counties\HID\FM 1925 PHII (907 to Uresti)\07 TRAFFIC\04 Pavement Markings\STRIPING_6.dgn

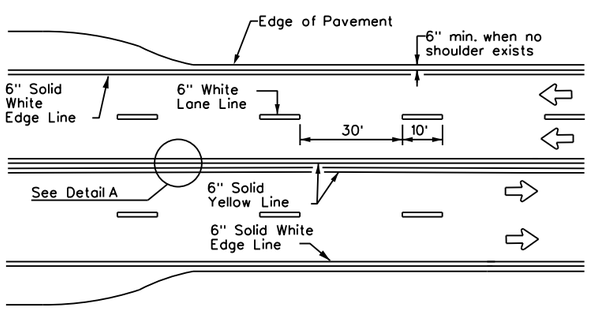
DATE:
FILE:

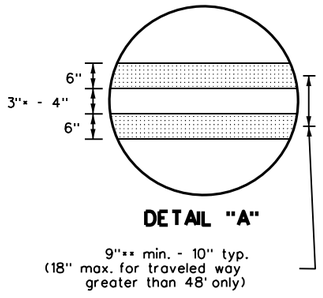


EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS

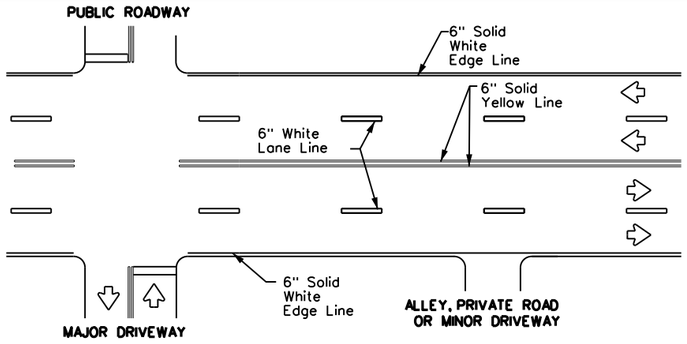




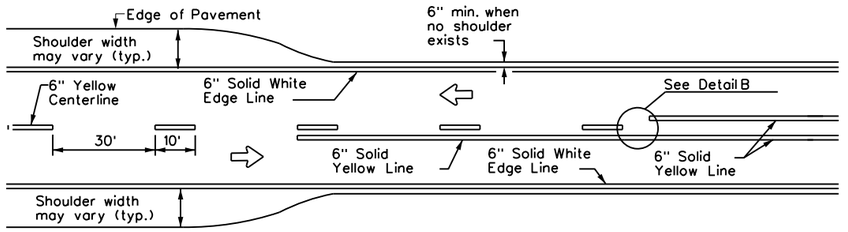
CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

* 2" minimum for restripe projects when approved by the Engineer.

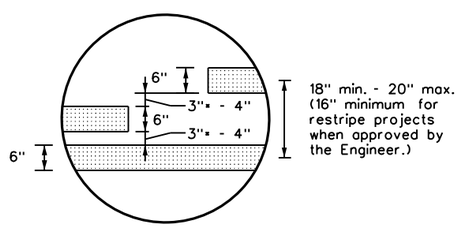
** 8" minimum for restripe projects when approved by the Engineer.



TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS

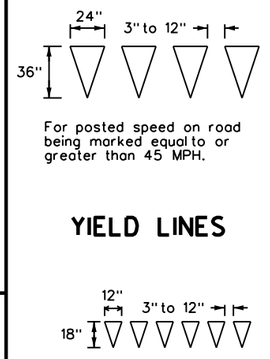


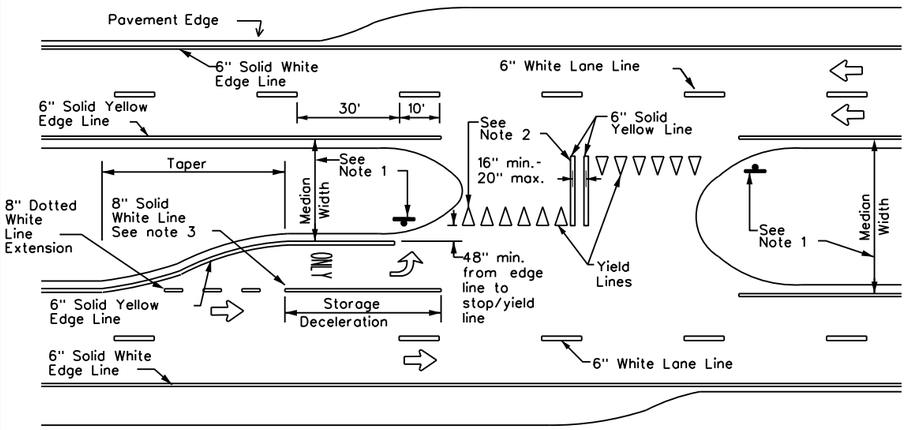
TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



DETAIL "B"

* 2" minimum for restripe projects when approved by the Engineer.





FOUR LANE DIVIDED ROADWAY CROSSOVERS

NOTES

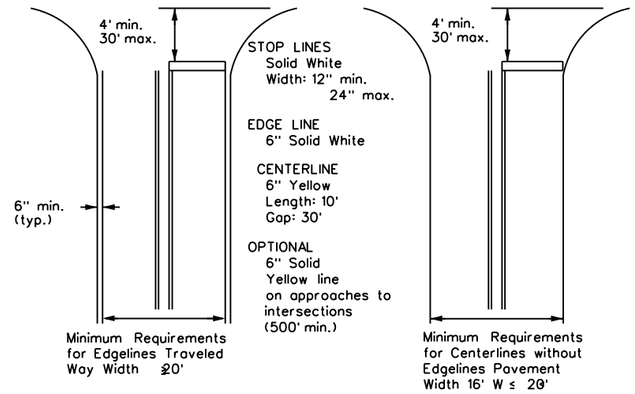
1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections.
   Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs and stop bars are optional as determined by the Engineer.
2. Install median striping (double yellow centerlines and stop lines/yield lines) when a 50' or greater median centerline can be placed. Stop lines shall only be used with stop signs. Yield lines shall only be used with yield signs.
3. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

GENERAL NOTES

1. Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edge lines 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. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the center of edge line to the center of edge line 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.



NOTE: Traveled way is exclusive of shoulder widths. Refer to General Note 2 for additional details.

GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Roadways

Texas Department of Transportation

Traffic Safety Division Standard

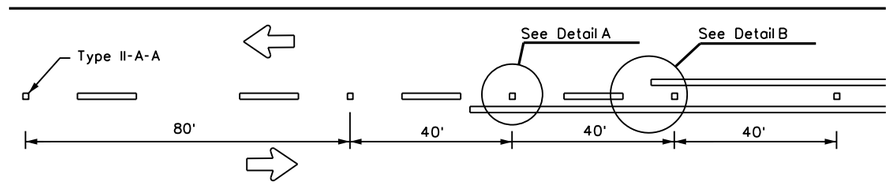
TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-22

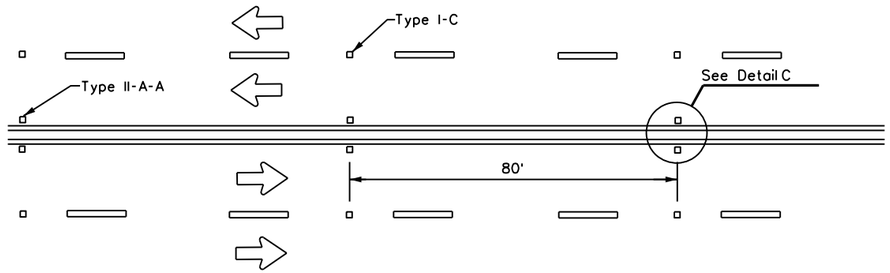
FILE: pm1-22.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
11-78 8-00 6-20	DIST	COUNTY		SHEET NO.
8-95 3-03 12-22	PHR	HIDALGO		188
5-00 2-12				

22A

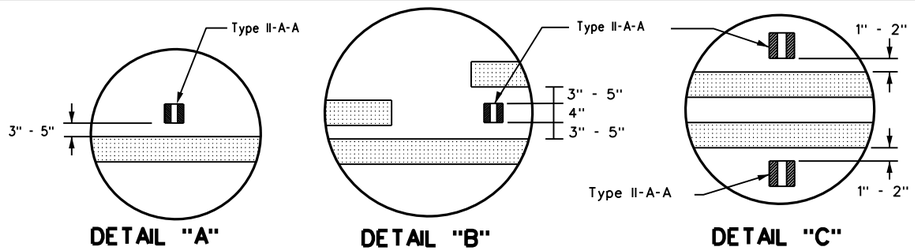
REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

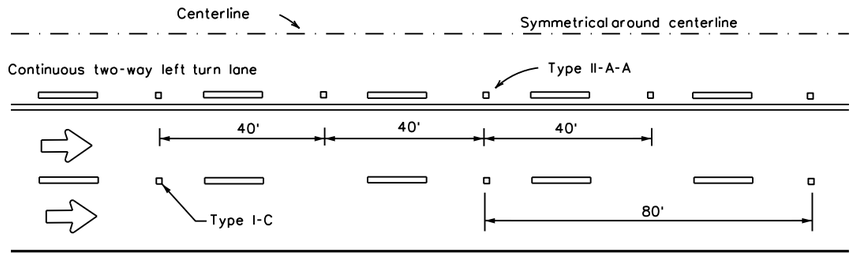


CENTERLINE FOR ALL TWO LANE TWO-WAY ROADWAYS

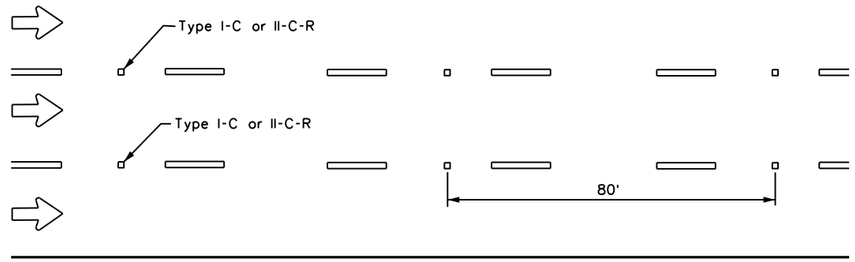


CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY ROADWAYS





CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



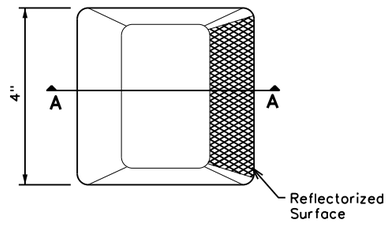
LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.

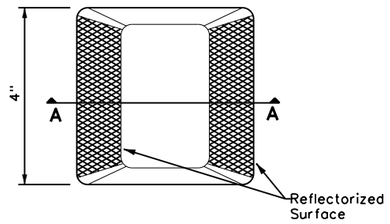
See Note 3.

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

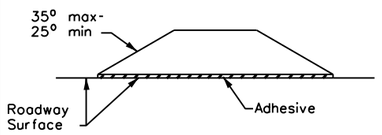
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)

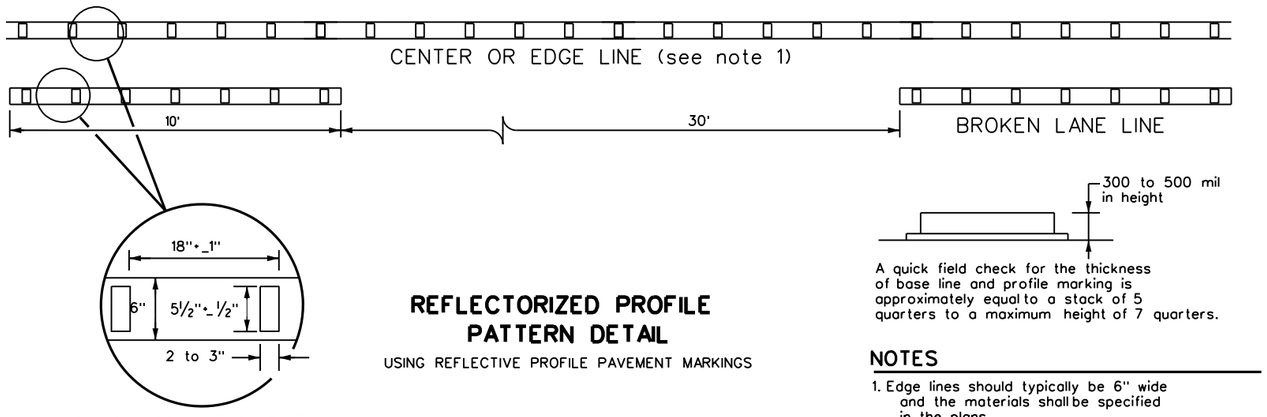


Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS



REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

NOTES

1. Edge lines should typically be 6" wide and the materials shall be specified in the plans.
2. 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 along 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.
3. Use raised pavement marker Type I-C with undivided roadways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.

Texas Department of Transportation

Traffic Safety Division Standard

POSITION GUIDANCE USING RAISED MARKERS RELECTORIZED PROFILE MARKINGS PM(2)-22

FILE: pm2-22.dgn	DN:	CK:	DW:	CK:
©TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-77 8-00 6-20 4-92 2-10 12-22 5-00 2-12	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		189

22B

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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.

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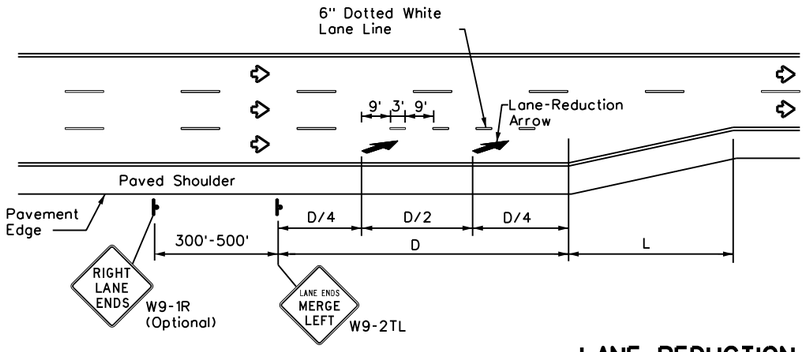


LANE REDUCTION

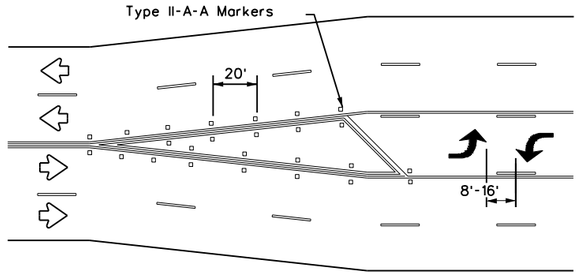
NOTES

1. Lane reduction pavement markings are used where the number of through lanes is reduced because of narrowing of the roadway or because of a section of on-street parking in what would otherwise be a through lane. For Texas Super 2 Passing Lanes, see TS2(PL) standard sheets.
2. On divided highways, an additional RIGHT LANE ENDS (W9-1R) sign may be installed in the median aligned with the W9-1R sign on the right side of the highway.
3. Lane reduction arrows are required for speeds of 45 mph or greater. An optional third lane reduction arrow may be added based on engineering judgement. If used, the optional third lane reduction arrow should be centered between the first and last lane reduction arrows.
4. For lane reductions on Freeways and Expressways, signing shall conform to the TxDOT Freeway Signing Handbook.

ADVANCED WARNING SIGN DISTANCE (D)		
Posted Speed	D (ft)	L (ft)
30 MPH	460	$L = \frac{WS^2}{60}$
35 MPH	565	
40 MPH	670	
45 MPH	775	L = WS
50 MPH	885	
55 MPH	990	
60 MPH	1,100	
65 MPH	1,200	
70 MPH	1,250	
75 MPH	1,350	

GENERAL NOTES

1. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows are as shown in the Standard Highway Sign Designs for Texas.
2. When lane-use words and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 180 feet. When a single lane use arrow or word and arrow marking is used for a short turn lane, it should be located at or near the upstream end of the full-width turn lane.
3. Use raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.
4. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer. See Chapter 3 of the Roadway Design Manual for additional information on turning lanes or storage lengths.

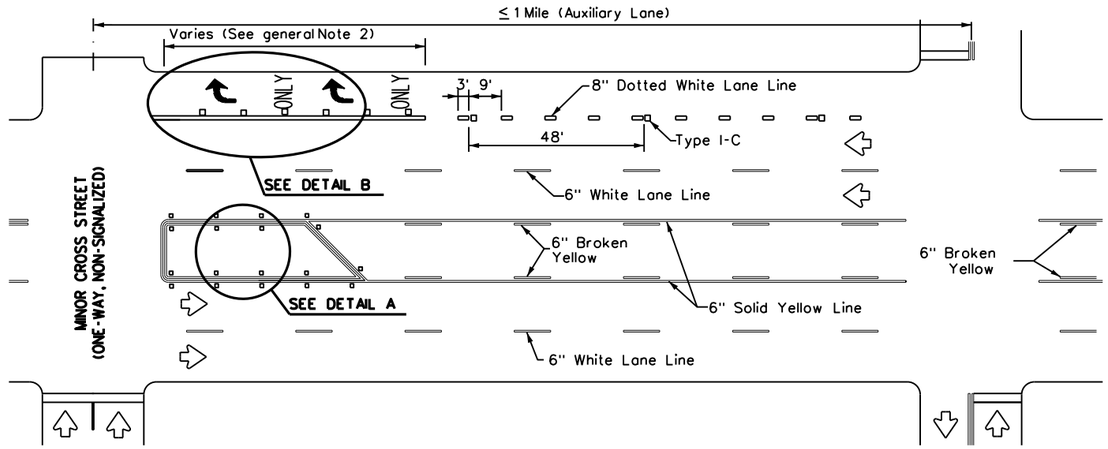


A two-way left-turn (TWLT) lane-use arrow pavement marking should be used at or just downstream from the beginning of a two-way left-turn lane within a corridor. Repeating the marking after each intersection or dedicated turn bay is not required unless stated elsewhere in the plans.

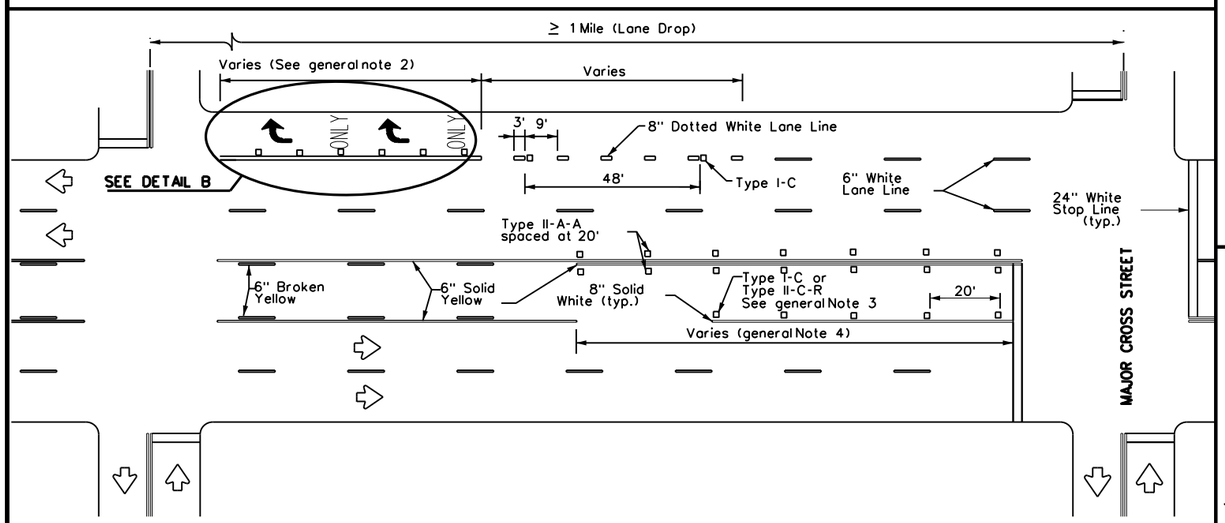
TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

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

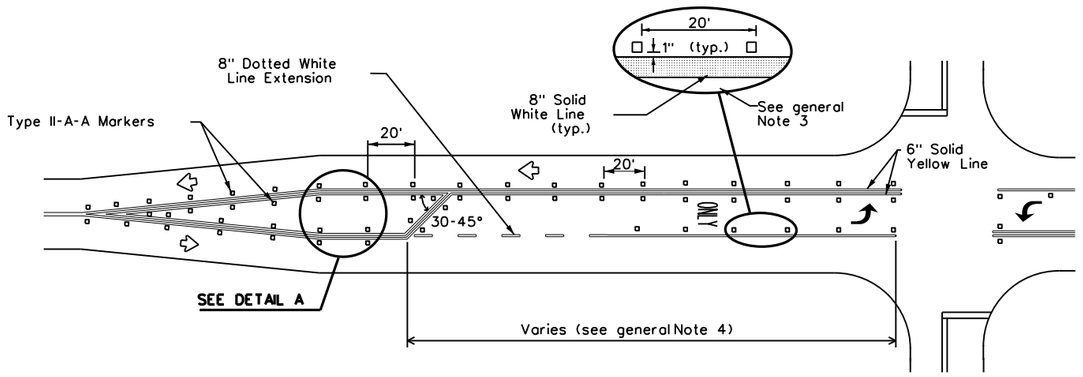
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



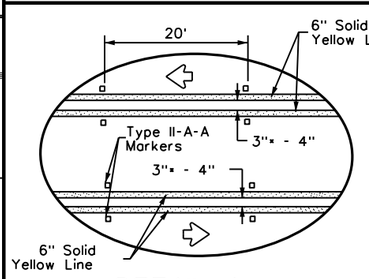
TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



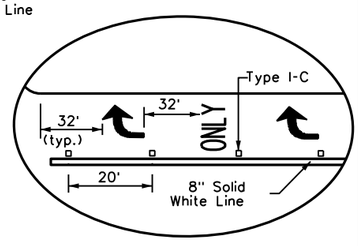
TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP



TYPICAL TWO-LANE ROADWAY INTERSECTION WITH LEFT TURN BAYS



DETAIL A



DETAIL B

* 2" minimum allowed for restripe projects when approved by the Engineer.

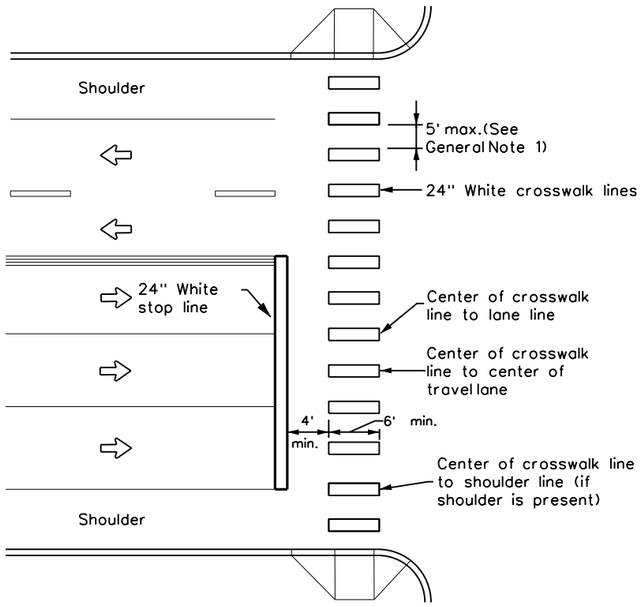
Texas Department of Transportation

Traffic Safety Division Standard

TWO-WAY LEFT TURN LANES, RURAL LEFT TURN BAYS, AND LANE REDUCTION PAVEMENT MARKINGS PM(3)-22

FILE: pm3-22.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
4-98 3-03 6-20	DIST	COUNTY		SHEET NO.
5-00 2-10 12-22	PHR	HIDALGO		190
8-00 2-12				

22C



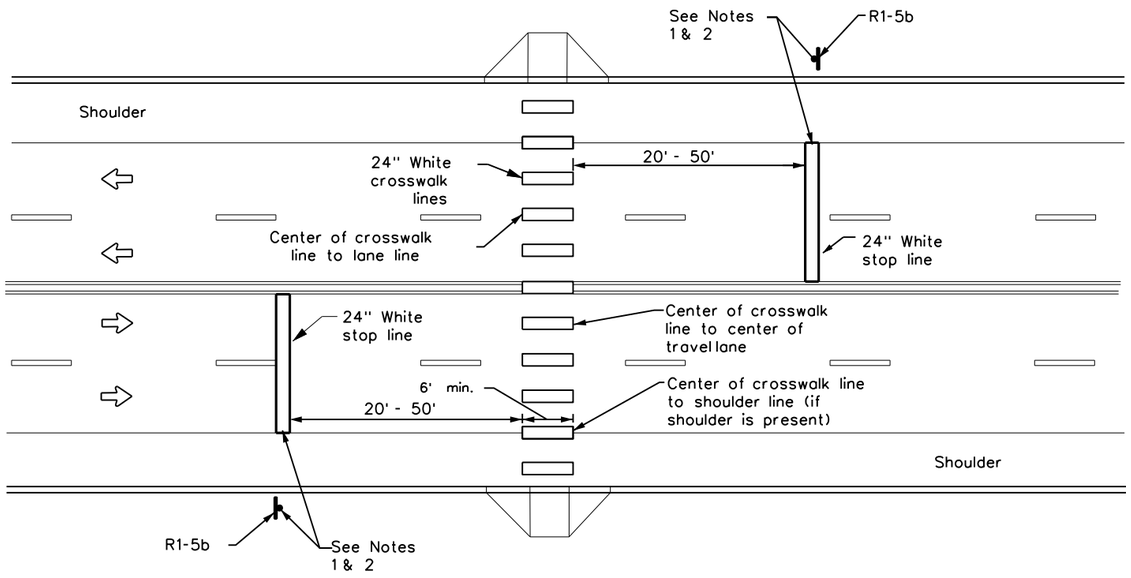
HIGH-VISIBILITY LONGITUDINAL CROSSWALK AT CONTROLLED APPROACH

GENERAL NOTES

1. Longitudinal crosswalk lines should not be placed in the wheel path of vehicles. Center the crosswalk lines on travel lanes, lane lines, and shoulder lines (if present).
2. A minimum 6" clear distance shall be provided to the curb face. If the last crosswalk line falls into this distance it must be omitted.
3. For divided roadways, adjustments in spacing of the crosswalk lines should be made in the median so that the crosswalk lines are maintained in their proper location across the travel portion of the roadway.
4. At skewed crosswalks, the crosswalk lines are to remain parallel to the lane lines.
5. Each crosswalk shall be a minimum of 6' wide.
6. The High-Visibility Longitudinal Crosswalk is the preferred crosswalk pattern on State Highways. Other crosswalk patterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used. All crosswalk designs and dimension shall comply with the "Texas Manual on Uniform Traffic Control Devices."
7. Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field.

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.



UNSIGNALIZED MIDBLOCK HIGH-VISIBILITY LONGITUDINAL CROSSWALK

NOTES:

1. Use stop bars with Stop Here For Pedestrians (R1-5b) signs at unsignalized midblock cross walks.
2. Use stop bars with STOP HERE ON RED (R10-6 or R10-6a) signs at mid block crosswalks controlled by traffic signals or pedestrian hybrid beacons.

Texas Department of Transportation

Traffic Safety Division Standard

CROSSWALK PAVEMENT MARKINGS

PM(4)-22A

FILE: pm4-22a.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
6-20	DIST	COUNTY		SHEET NO.
6-22	PHR	HIDALGO		191
12-22				

22D

DATE:
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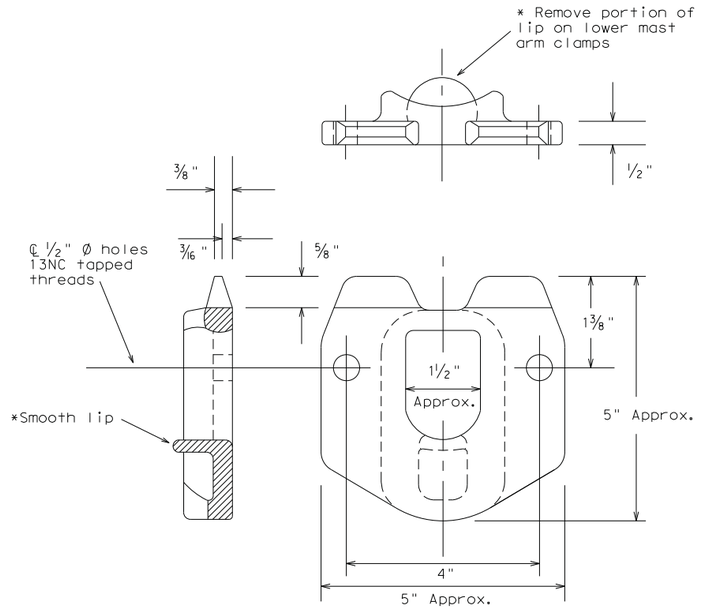
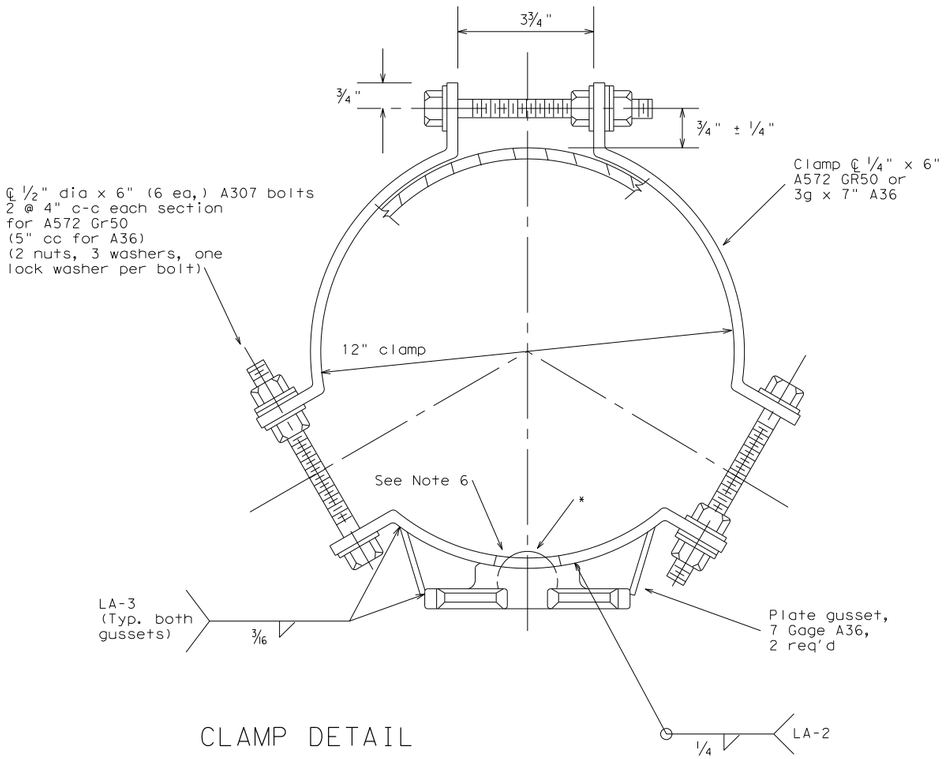
DATE:
FILE:



POLE SIMPLEX DETAILS



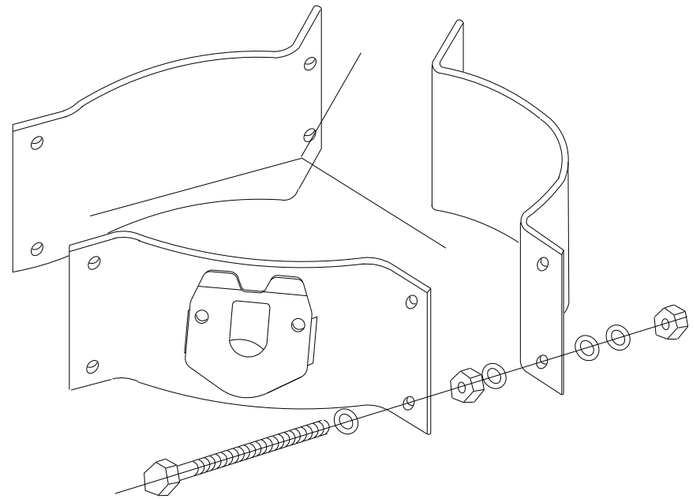
CLAMP DETAIL

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.



PROJECTION

For 8.9 - 12 inch diameter Signal Poles
(Two req'd for each mast arm)

Texas Department of Transportation
Traffic Operations Division

CLAMP ON FITTING ASSEMBLY FOR LUMINAIRE MAST ARM

CFA-12

©TxDOT	DN: KAB	CK: RES	DW: FDN	CK: CAL
REVISIONS	CONT	SECT	JOB	HIGHWAY
11-99	1803	02	035	FM 1925
1-12	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		192

130

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:
© TxDOT	October 2014	CONT	SECT	JOB	HIGHWAY
	REVISIONS	1803	02	035	FM 1925
		DIST	COUNTY		SHEET NO.
		PHR	HIDALGO		193

71A

DATE:
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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.

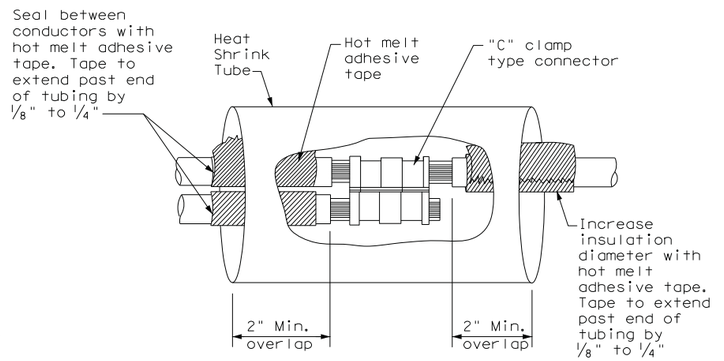
GROUND RODS & GROUNDING ELECTRODES

A. MATERIAL INFORMATION

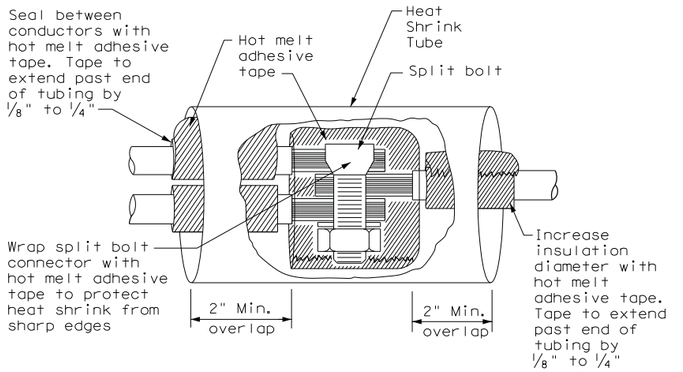
1. Provide and install a grounding electrode at electrical services. Provide ground rods according to DMS 11040 and the plans. Larger diameter or longer length rods may be called for in some specific locations, see the individual plans sheets. Concrete encased grounding electrodes may be called for in specific locations including electrical service, see individual plan sheets.

B. CONSTRUCTION METHODS

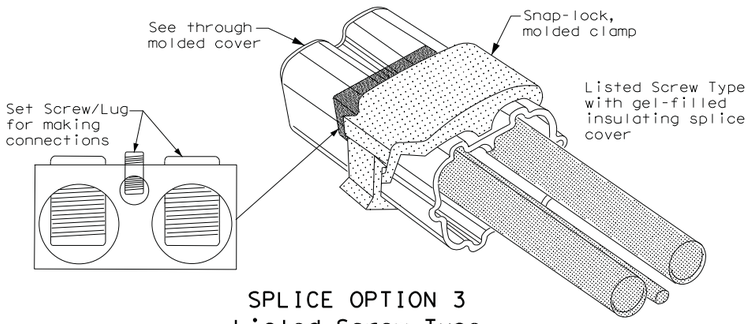
1. Furnish auxiliary ground rods for lightning protection and install in soil, concrete, or both, as called for in the plans. For ground rods installed in concrete, ensure the connection of the conductor to the ground rod is readily accessible for inspection or repairs. For ground rods installed in soil, 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

FILE: ed3-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		194

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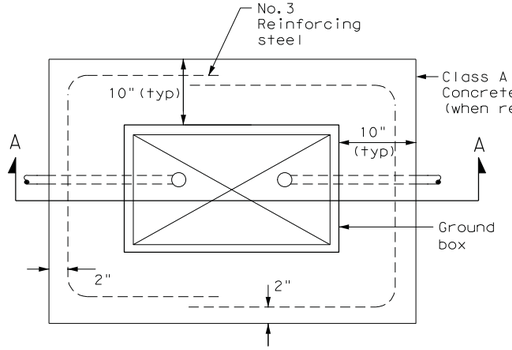
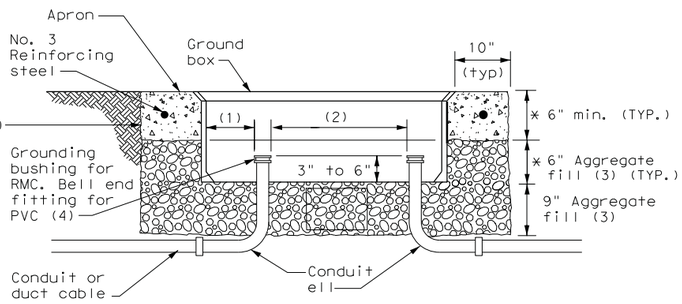


PLAN VIEW



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.

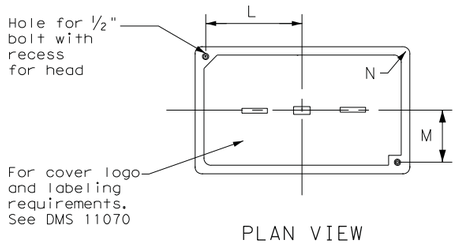
(2) Maintain sufficient space between conduits to allow for proper installation of bushing.

(3) Place aggregate under the box, not in the box. Aggregate should not encroach on the interior volume of the box.

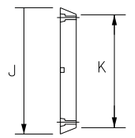
(4) Install a grounding bushing on the upper end of all RMC terminating in a ground box. Ground RMC elbows when any part of the elbow is less than 18 in. below the bottom of the ground box. Install a PVC bushing or bell end fitting on the upper end of all PVC conduits terminating in a ground box.

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

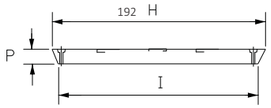
GROUND BOX COVER DIMENSIONS								
TYPE	DIMENSIONS (INCHES)							
	H	I	J	K	L	M	N	P
A, B & E	23 1/4	23	13 3/4	13 1/2	9 7/8	5 1/8	1 3/8	2
C & D	30 1/2	30 1/4	17 1/2	17 1/4	13 1/4	6 3/4	1 3/8	2



PLAN VIEW



END



SIDE

GROUND BOX COVER

* = REVISED, PHARR DISTRICT

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 six inches below the finished grade. 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

Pharr District Standard

ELECTRICAL DETAILS
GROUND BOXES

ED(4)-14 (PHR)

FILE: ed4-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		195

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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

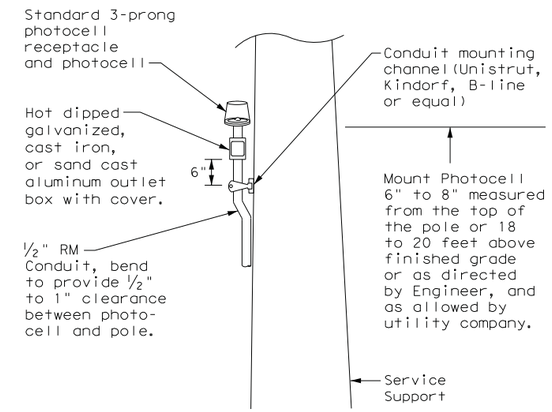
(SS)= Safety Switch Ahead of Meter-Check with Utility
(NS)= No safety Switch Ahead of Meter-Check with Utility

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
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DATE:
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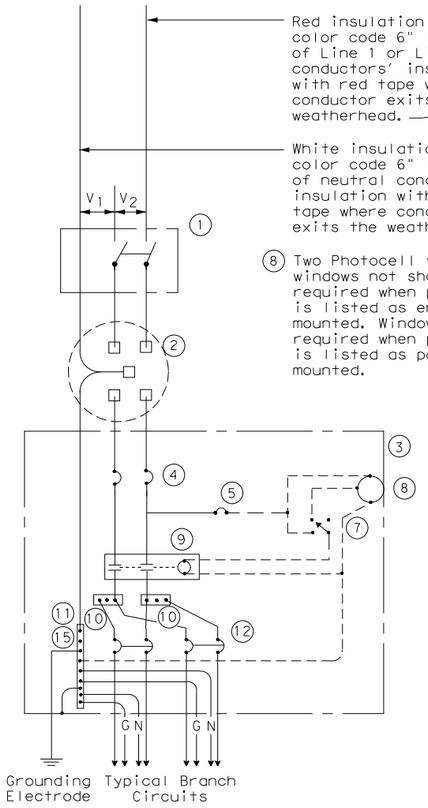
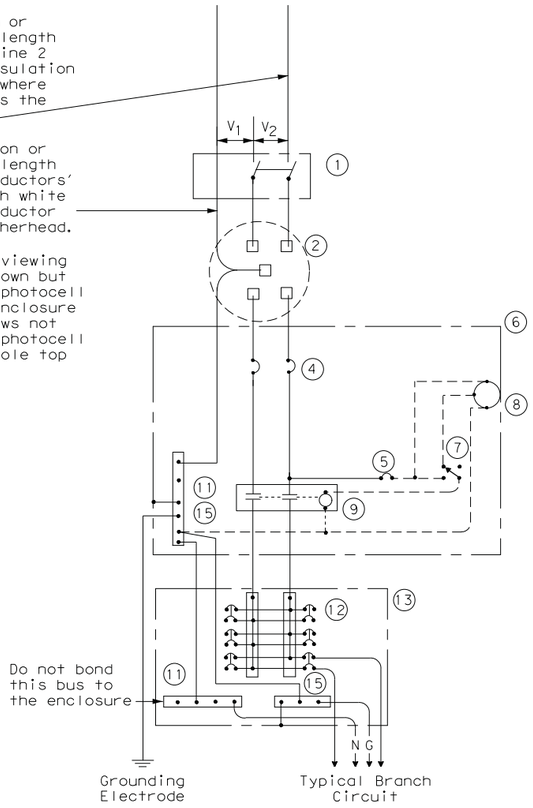
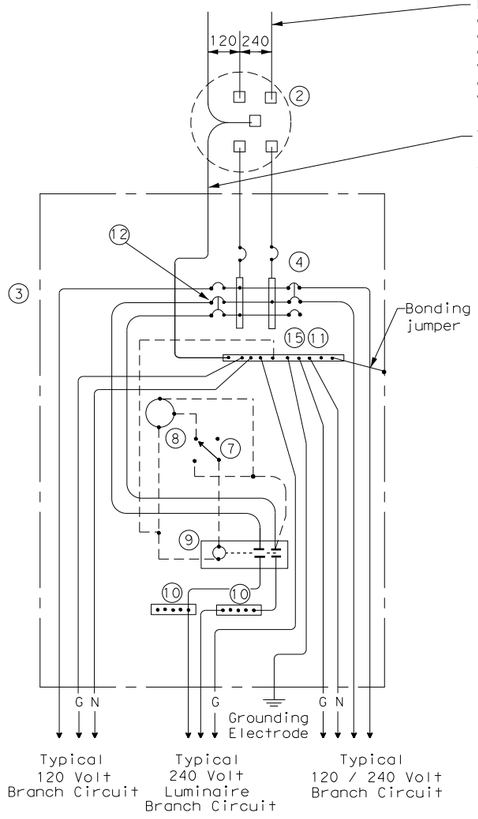


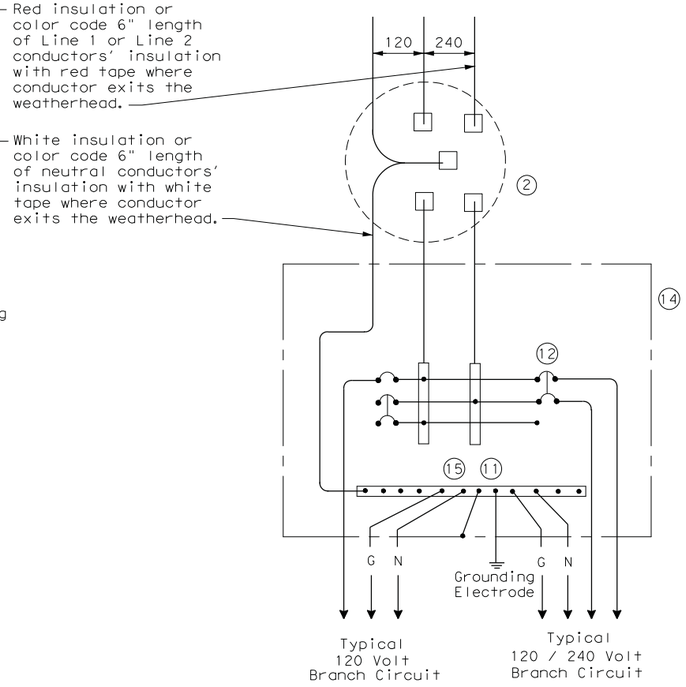
SCHEMATIC TYPE A
THREE WIRE



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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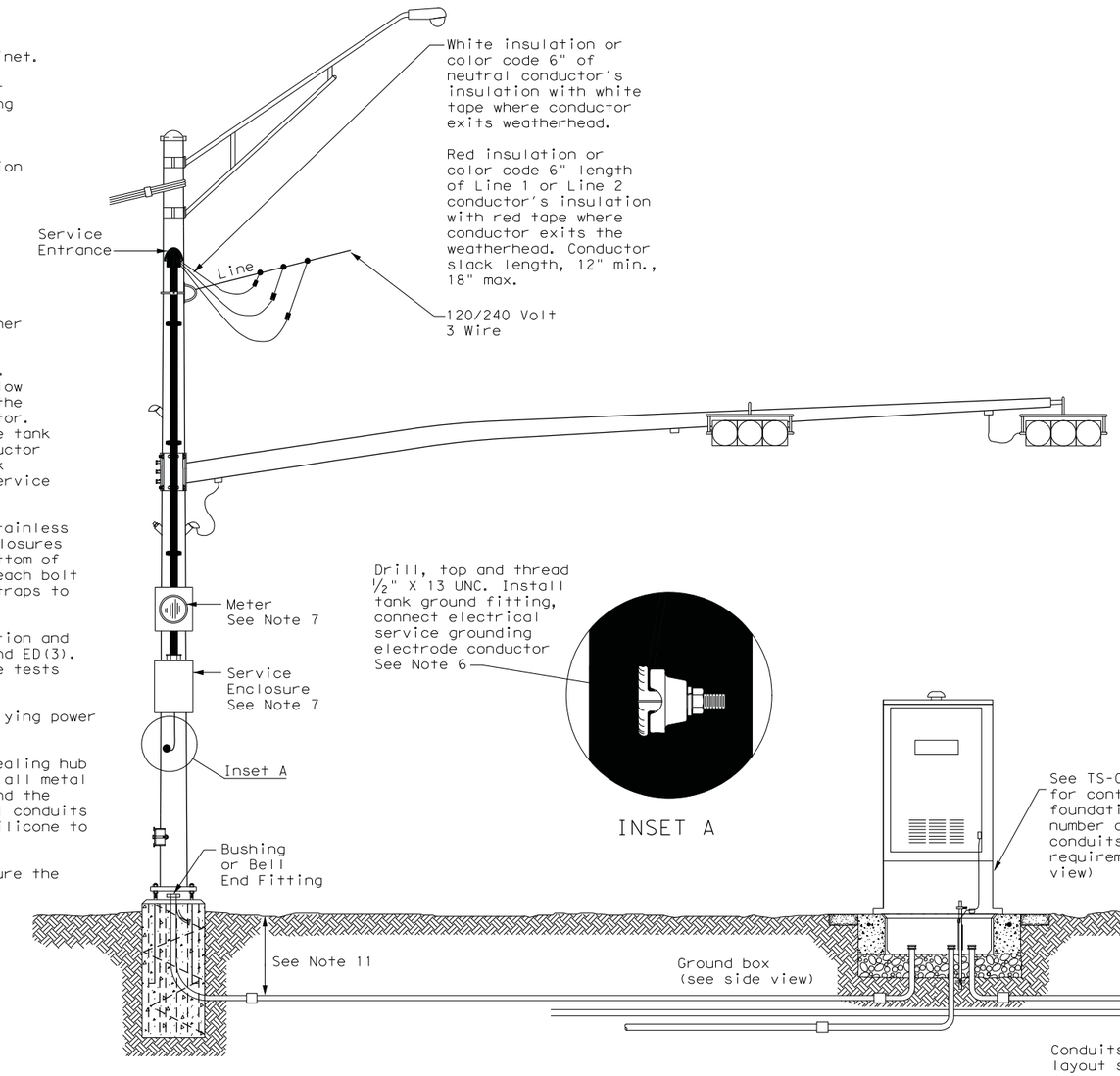
FILE:

TRAFFIC SIGNAL NOTES

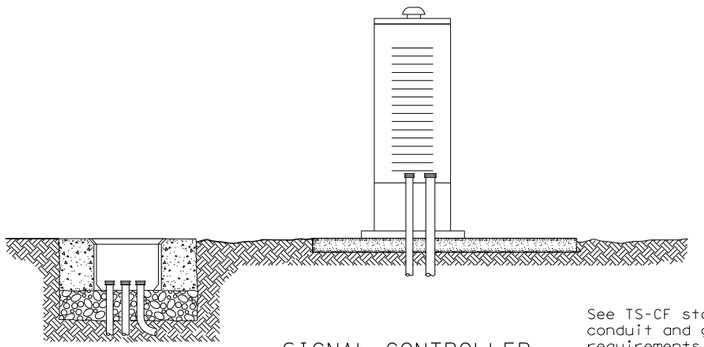
1. Do not pass luminaire conductors through the signal controller cabinet.
2. Include an equipment grounding conductor in all conduits throughout the electrical system. Bond all exposed metal parts to the grounding conductor.
3. Provide roadway luminaires, when required, in accordance with the material and construction sections of Item 610, "Roadway Illumination Assemblies," except for performance testing of luminaires. Test installed roadway luminaires for proper operation as a part of the associated traffic signal system test.
4. If internally illuminated street name signs are approved for use, ground the fixture to the pole with a 12 AWG green XHHW conductor.
5. Bond anchor bolts to rebar cage in two locations using #3 bars or 6 AWG stranded copper conductors. Use listed mechanical connectors rated for embedment in concrete. See TXDOT standard TS-FD for further details.
6. Drill and tap signal poles for ½ in. X 13 UNC tank ground fitting. Provide and install tank ground fitting 4 in. to 6 in. directly below electrical service enclosure. Provide properly sized hole through the bottom of the enclosure for the service grounding electrode conductor. Connect the electrical service grounding electrode conductor to the tank ground fitting. Ensure electrical service grounding electrode conductor is as short and straight as possible from the enclosure to the tank ground fitting. See Inset A detail for further information. Size service entrance conduit and branch circuit conduit as shown in the plans.
7. Mount electrical service enclosure and meter to signal pole with stainless steel bands. Ensure bands are a minimum width of ¾ in. Secure enclosures to bands using two-bolt brackets. Install brackets near top and bottom of each enclosure. Install properly sized stainless steel washers on each bolt in the enclosure. Band or drill and tap properly sized stand-off straps to signal pole for attaching conduit.
8. Conduct pull tests and insulation resistance tests on all illumination and power conductors as required in Item 620 "Electrical Conductors" and ED(3). To prevent electronics damage, do not conduct insulation resistance tests on traffic signal cables after termination.
9. Lock all enclosures and bolt down all ground box covers before applying power to the signal installation.
10. Terminate conduits entering the top of enclosures with a conduit-sealing hub or threaded boss such as meter hub. Install a grounding bushing on all metal conduits not connected to conduit-sealing hub or threaded boss. Bond the grounding bushing to the ground bus with a bonding jumper. Seal all conduits entering enclosures with duct seal or expanding foam. Do not use silicone to seal conduit ends.
11. For all conduits, ensure the burial depth is a minimum of 18". Ensure the minimum burial depth for conduit placed under a roadway is 24".



SIGNAL POLE WITH SERVICE

Type T electrical service mounted on signal pole shown as an example. See electrical details, layout sheets, and electrical service data chart for additional details.

INSET A



SIGNAL CONTROLLER SIDE VIEW

See TS-CF standard for conduit and grounding requirements. See layout sheets for ground box locations and any additional conduits that are required.

SIGNAL CONTROLLER FRONT VIEW

SIGNAL POLE

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS
TYPICAL TRAFFIC SIGNAL SYSTEM DETAILS
ED(8)-14

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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.

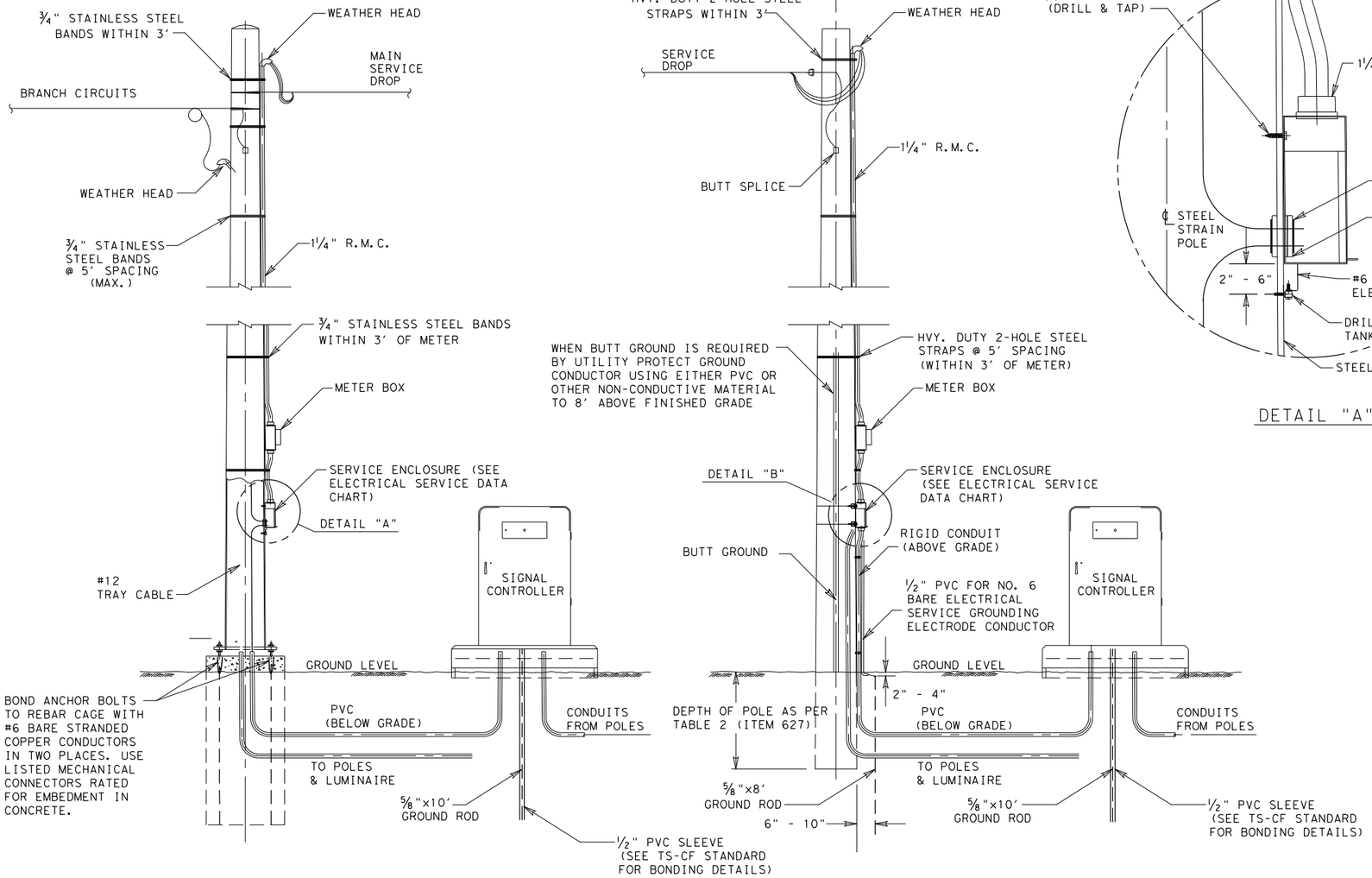
ALL EXPOSED CONDUIT SHALL BE RIGID METAL CONDUIT EXCEPT CONDUIT USED ON ELECTRICAL SERVICE GROUNDING ELECTRODE CONDUCTOR.

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.

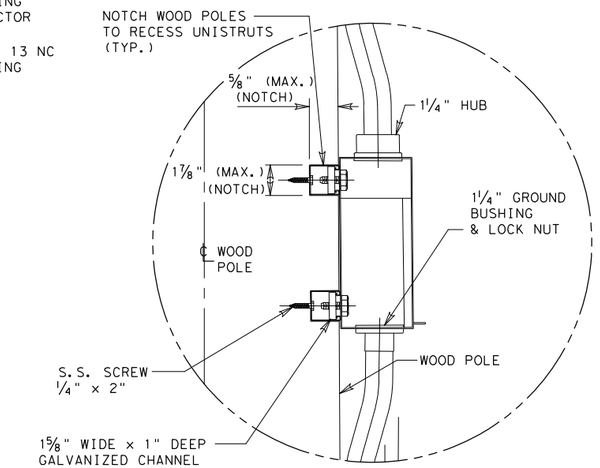


STEEL STRAIN POLE

WOOD POLE

ELECTRICAL SERVICE

DETAIL "A"



DETAIL "B"

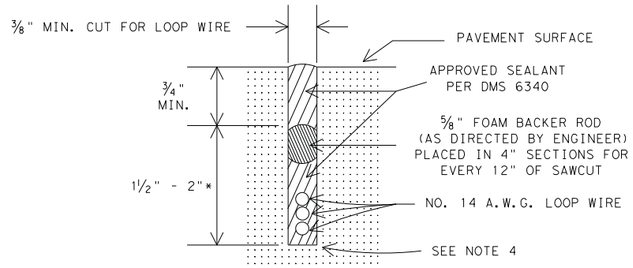
PHARR DISTRICT STANDARD

TEXAS DEPARTMENT OF TRANSPORTATION

ELECTRICAL SERVICE DESIGN WITH SIGNAL CONTROLLER

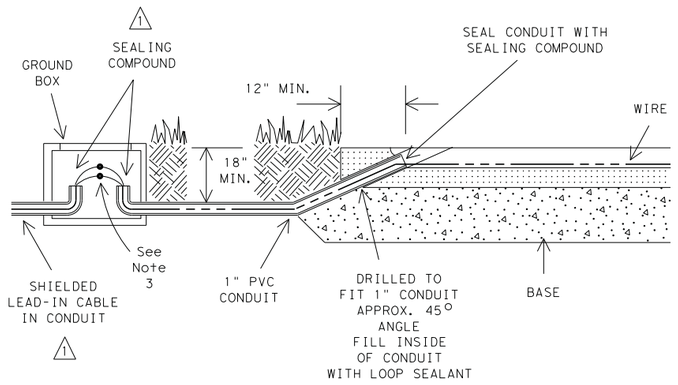
SHEET 1 OF 1

DN: OG	DRAWING	DATE	FED.RD. DIV.NO.	STATE	FEDERAL AID PROJECT NO.				SHEET NO.
CK DN: JSL	ORIGINAL	APR. 2010	6	TEXAS					199
DW: OG			STATE DIST.NO.	COUNTY		CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW: JSL			21	HIDALGO		1803	02	035	FM 1925

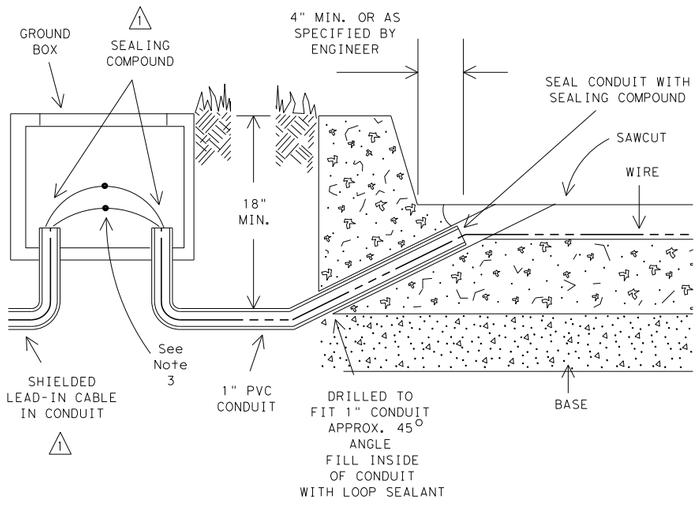


LOOP SAW CUT CROSS-SECTION

* SAWCUTS IN BRIDGE DECKS ARE TYPICALLY 1" DEPTH MAXIMUM
SAWCUTS IN BRIDGE DECKS AND ACROSS EXPANSION JOINTS
SHALL BE AS APPROVED BY ENGINEER



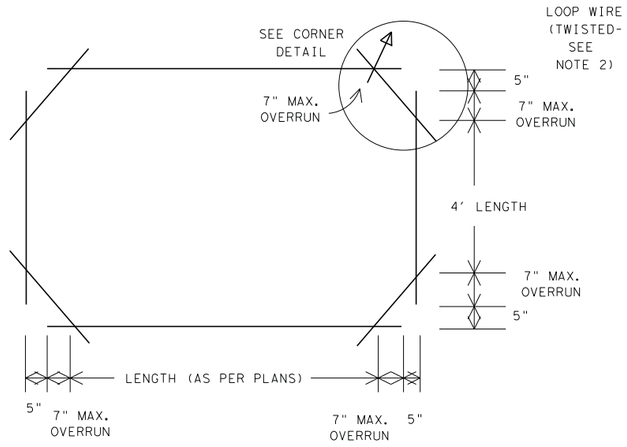
TYPICAL LEAD IN CONFIGURATION (WITHOUT CURBING)



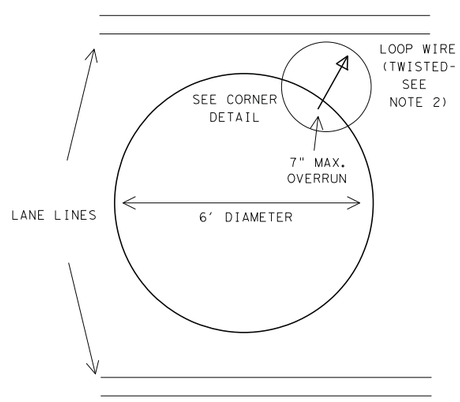
TYPICAL LEAD IN CONFIGURATION (WITH CURBING)

TYPICAL LOOP DETECTOR LAYOUTS

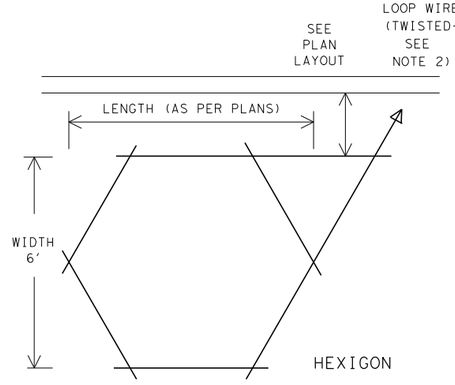
(AS SPECIFIED IN PLANS)



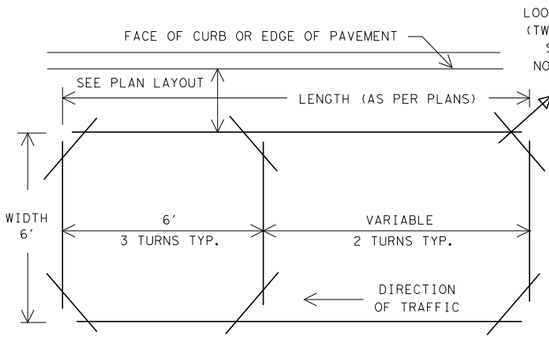
RECTANGULAR



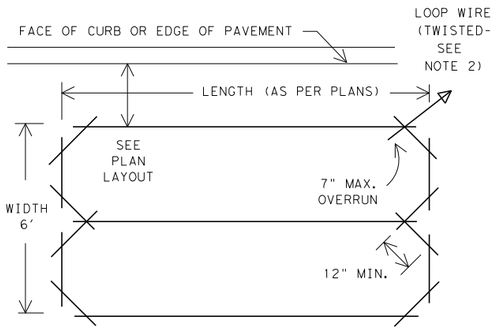
CIRCULAR



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.

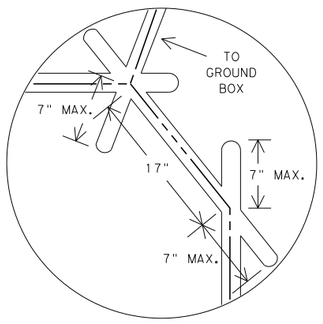
Recommended Number of Turns for Loop Detectors

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.

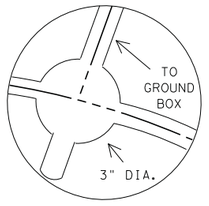
For additionhal information refer to "Texas Traffic Signal Detector" manual, TTI Report 1163-1.

TYPICAL CORNER DETAILS

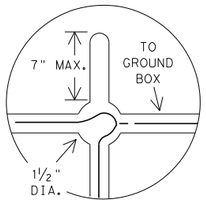


RECTANGULAR & HEXIGON LOOP
SAWCUT CORNER DETAIL

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

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

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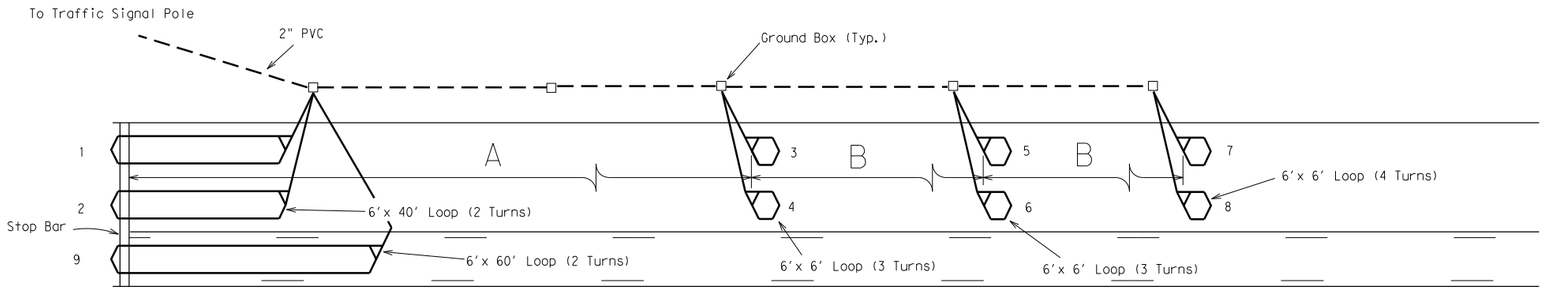
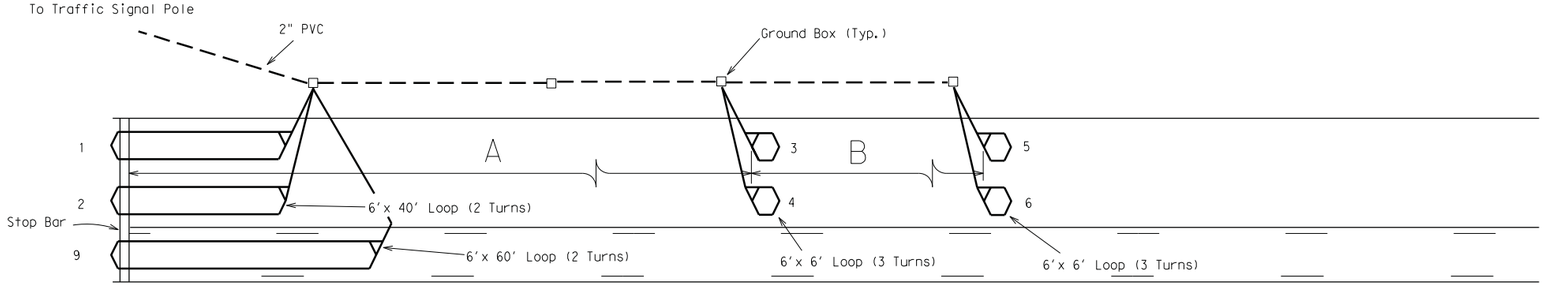
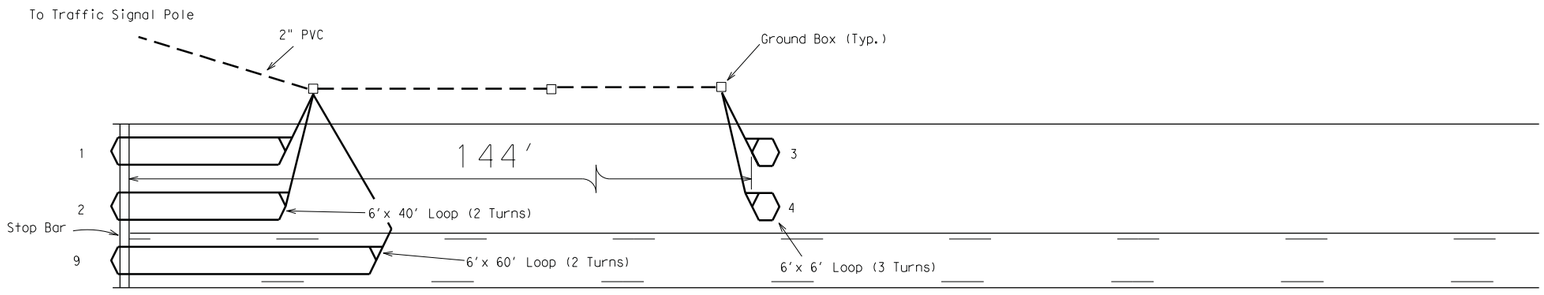


55 MPH (A=225', B=95') 60 MPH (A=275', B=100')
65 MPH (A=320', B=110') 70 MPH (A=350', B=125')



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:

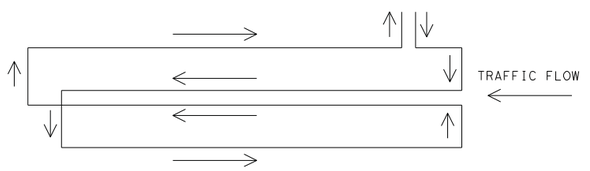
Loops 1 and 2 shall be connected to the controller cabinet by means of the same loop lead-in (2/C #14 AWG).

Loops 3 thru 6 shall be connected to the controller cabinet by means of the same loop lead-in (2/C #14 AWG).

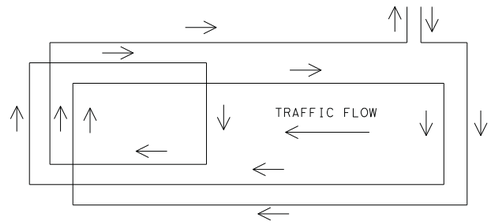
Loops 7 and 8 shall be connected to the controller cabinet by means of the same loop lead-in (2/C #14 AWG).

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

Texas Department of Transportation
Traffic Operations Division

LOOP DETECTOR PLACEMENT DETAILS

LD(2)-03

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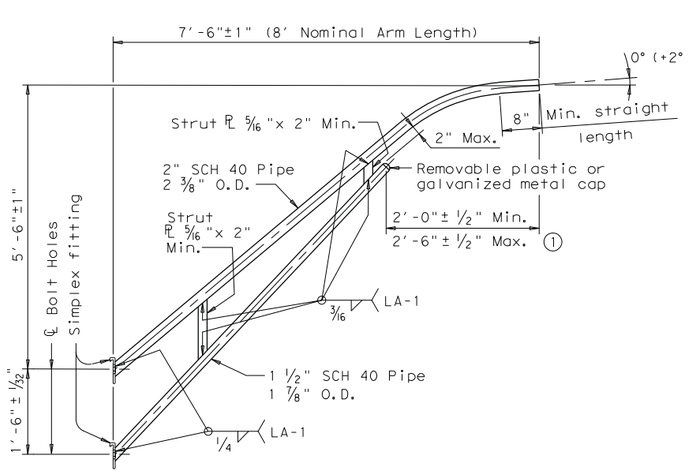
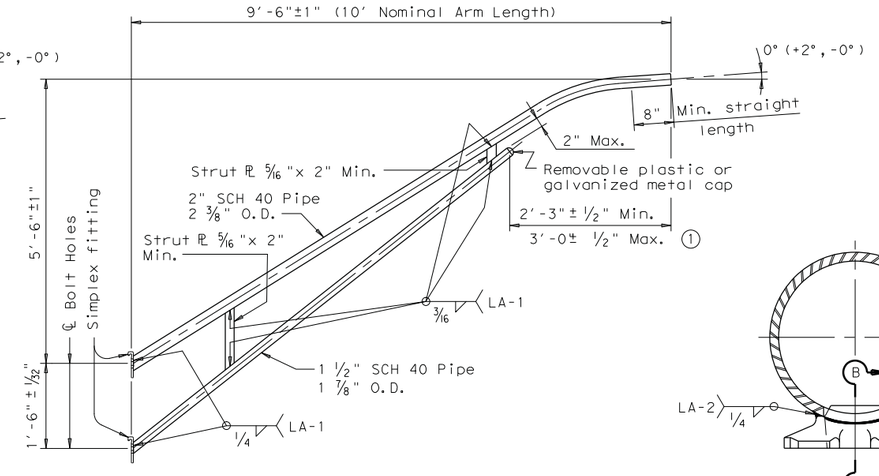


8-FOOT LUMINAIRE ARM



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.

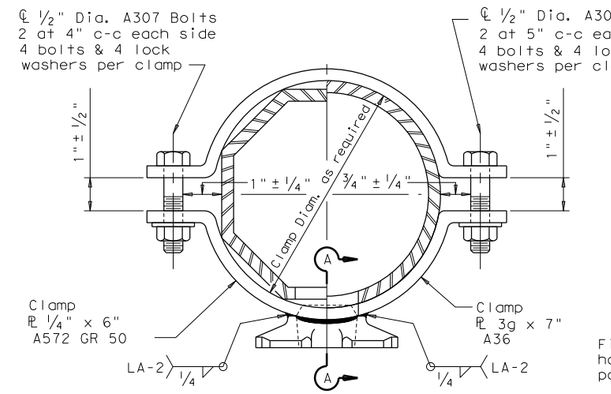
Materials and fabrication shall be in accordance with Item 686, "Traffic Signal Pole Assemblies (Steel)" and with the details, dimensions, and weld procedures shown herein. Weld references call for preapproved weld procedures which the Fabricator must obtain prior to fabrication. In the absense of specified 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.

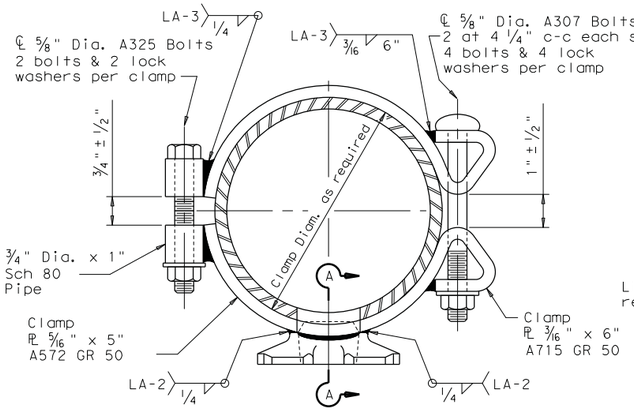
Each pole simplex fitting shall be supplied with 2 ASTM A325 bolts and 2 lock washers of the size specified. The bolts and lock washers shall be secured to the pole with the other hardware items called for in the plans. When clamp attachment is specified, the Fabricator shall ship the clamp assembly 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.



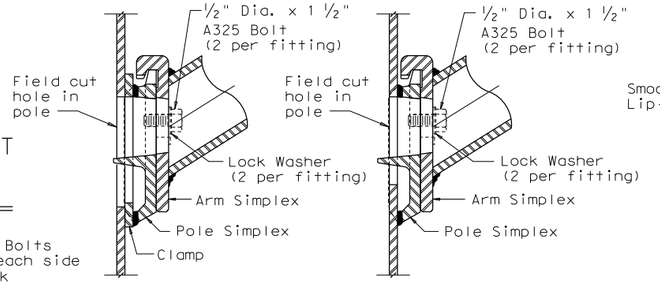
CLAMP ATTACHMENT DETAIL NO. 1 (HALF SECTION)

CLAMP ATTACHMENT DETAIL NO. 2 (HALF SECTION)



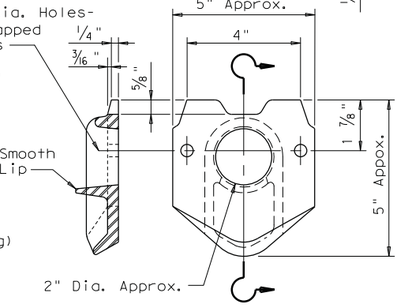
CLAMP ATTACHMENT DETAIL NO. 3 (HALF SECTION)

CLAMP ATTACHMENT DETAIL NO. 4 (HALF SECTION)

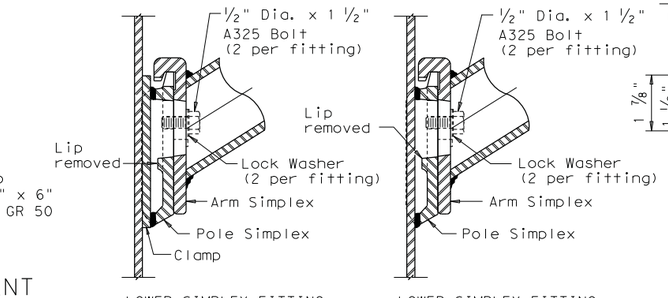


UPPER SIMPLEX FITTING

UPPER SIMPLEX FITTING



POLE SIMPLEX DETAIL

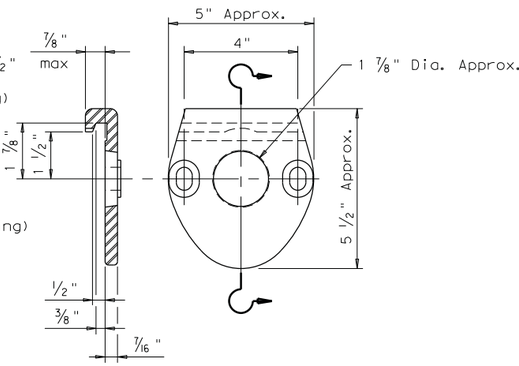


LOWER SIMPLEX FITTING

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

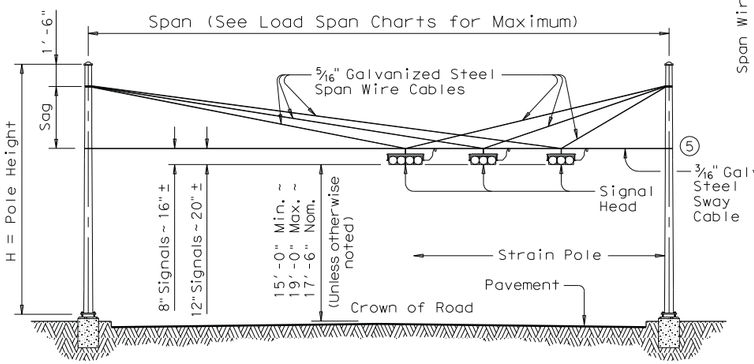
LUM-A-12

DN: LEH	CK: JSY	DW: LTT	CK: TEB

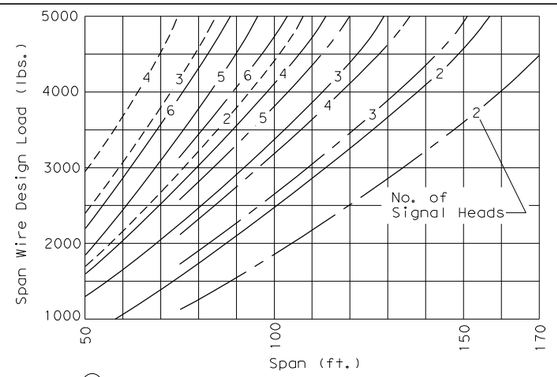
REVISIONS	CONT	SECT	JOB	HIGHWAY
5-96	1803	02	035	FM 1925
1-99	DIST	COUNTY		SHEET NO.
1-12	PHR	HIDALGO		202

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

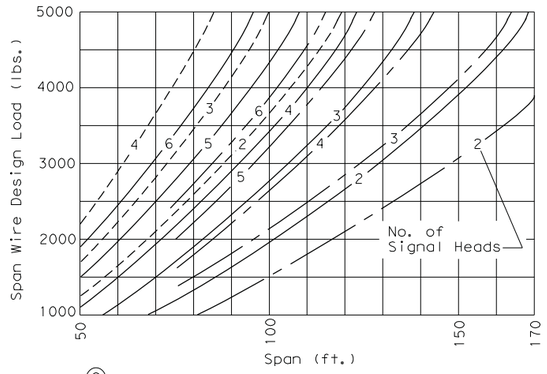
② Numbers on Load Span Charts indicate the number of signal heads on the span. The total span wire design load is based on one 5-section head and one or more additional 3-section head(s). Design wind pressures on cables are assumed as 1.6 lb/ft. Weight of span wire cables (one per signal head) is assumed 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.



STRAIN POLE ELEVATIONS HORIZONTAL SIGNALS



② SIGNALS WITH 12-INCH LENS

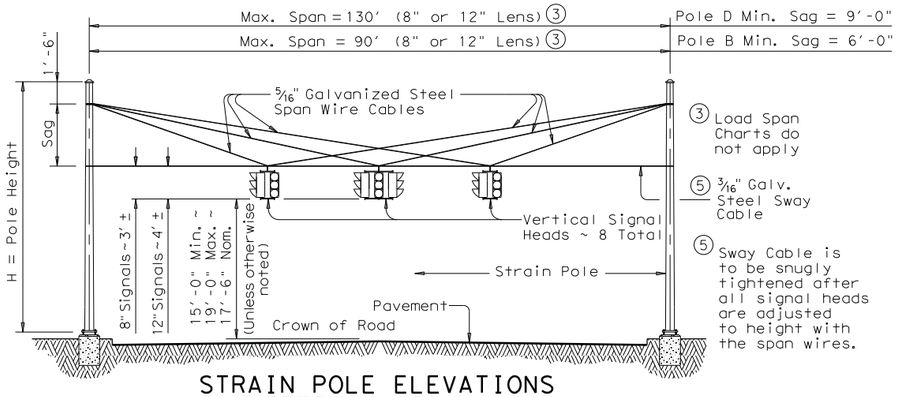


② SIGNALS WITH 8-INCH LENS

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)



③ Load Span Charts do not apply

⑤ 3/16" Galv. Steel Sway Cable

⑤ Sway Cable is to be snugly tightened after all signal heads are adjusted to height with the span wires.

STRAIN POLE ELEVATIONS VERTICAL SIGNALS

(Mast arms are not used with vertical signals)

Pole Type	ROUND POLES D_B in.	D_T in.	④thk in.	H ft.	POLYGONAL POLES D_B in.	D_T in.	④thk in.	H 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.

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 II Arm with the following hardware attached: ① 1 Bracket Assembly, 3 CGB Connectors and 1 clamp with bolts and washers		Type III Arm (3 Signals): Ship each Type III Arm with the following hardware attached: ① 2 Bracket Assemblies, 4 CGB Connectors and 1 clamp with bolts and washers	
ft.	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20I-100					
24	24I-100		24 II -100			
28	28I-100		28 II -100			
32			32 II -100		32 III -100	
36			36 II -100		36 III -100	

Anchor Bolt Assemblies (1 per pole)

Anchor Bolt Diameter	Anchor Bolt Length	Templates may be removed for shipment. Quantity
1 3/4"	3′-10"	
2"	4′-3"	4

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".

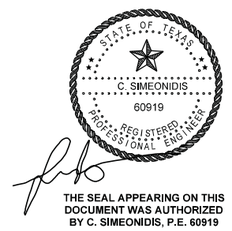
Luminaire Arms

Nominal Arm Length	Quantity
10′ Arm	2

① See Sheet "DMA-100"

NOTE: THIS SHEET WAS MODIFIED TO SHOW QUANTITIES

SHEET 1 OF 2



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SIMEONIDIS, P.E. 60919

11/16/2022

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES STRAIN POLE ASSEMBLIES

(100 MPH WIND ZONE)

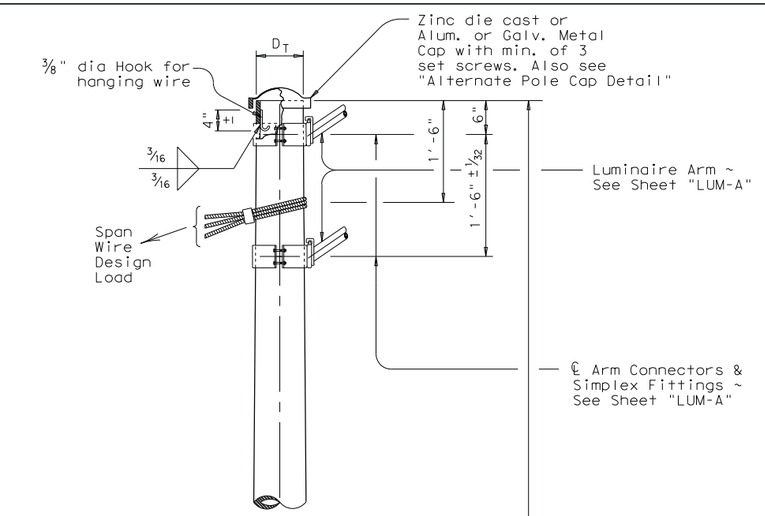
SP-100(1)-12

REVISIONS
6-96
1-12

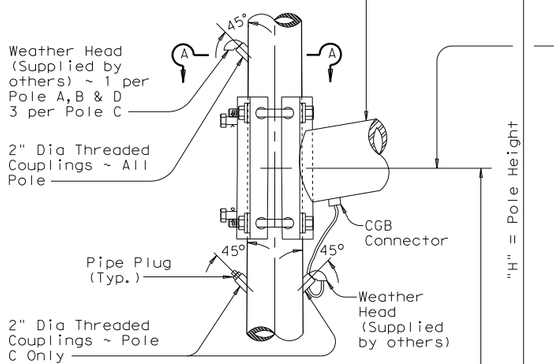
DN: MS	CK: JSY	DW: BR	CK: JSY
CONT	SECT	JOB	HIGHWAY
1803	02	035	FM 1925
DIST	COUNTY		SHEET NO.
PHR	HIDALGO		203

121A

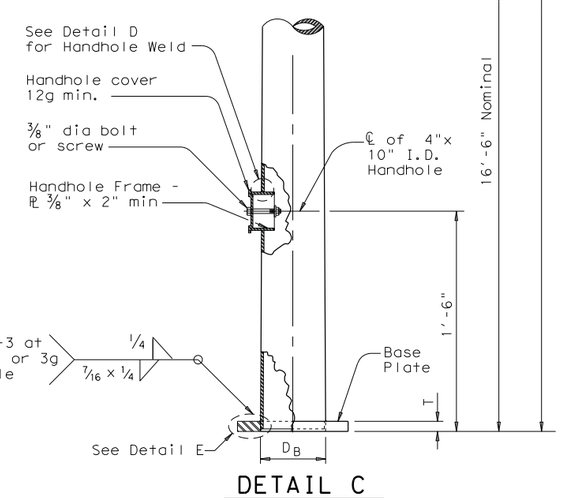
DATE:
FILE:



DETAIL A

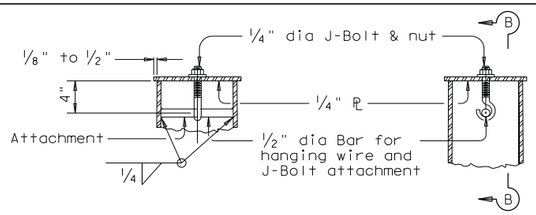


DETAIL B



DETAIL C

POLE ELEVATION



SECTION B-B

ALTERNATE POLE CAP DETAIL

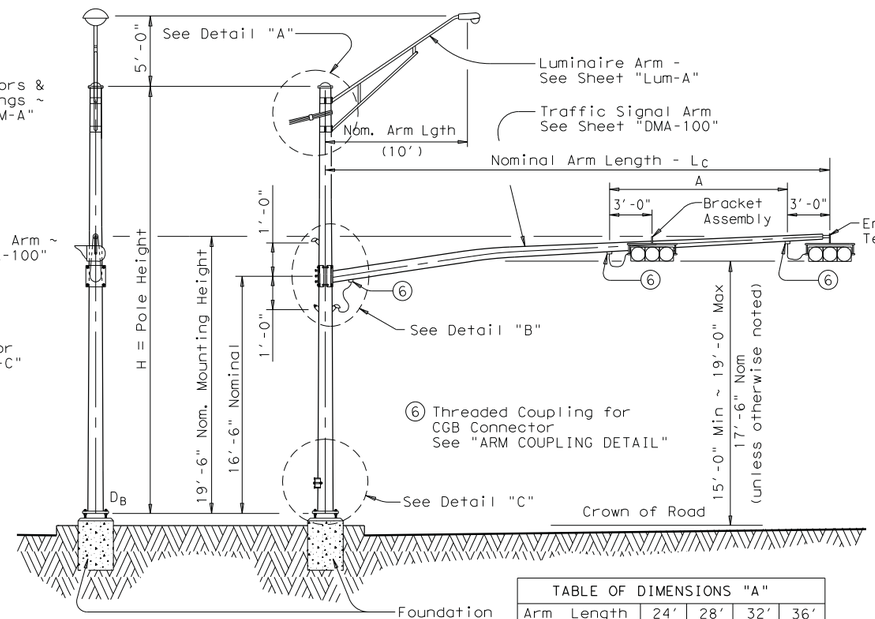
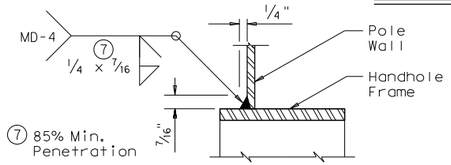
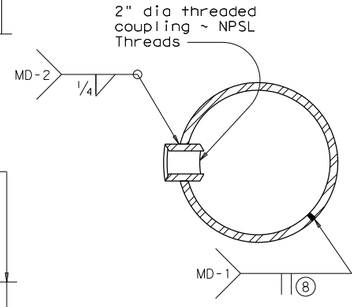


TABLE OF DIMENSIONS "A"				
Arm Length	24'	28'	32'	36'
Arm Type II	10'	11'	12'	13'
Arm Type III			10'	11'

STRUCTURE ASSEMBLY

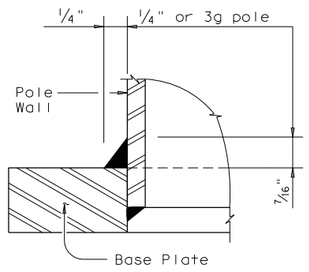


DETAIL D



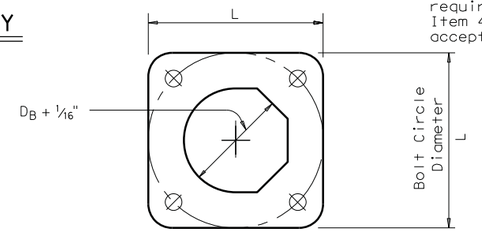
SECTION A-A

(Pole Coupling and Seam Weld Details)

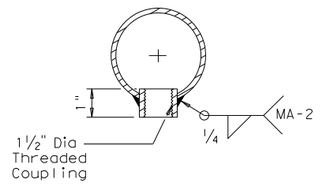


DETAIL E

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"

NOTE: THIS SHEET WAS MODIFIED TO SHOW QUANTITIES & 10' LUMINAIRE ARM

STATE OF TEXAS · C. SIMEONIDIS · 60919 · REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SIMEONIDIS, P.E. 60919
11/16/2022

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES STRAIN POLE ASSEMBLIES

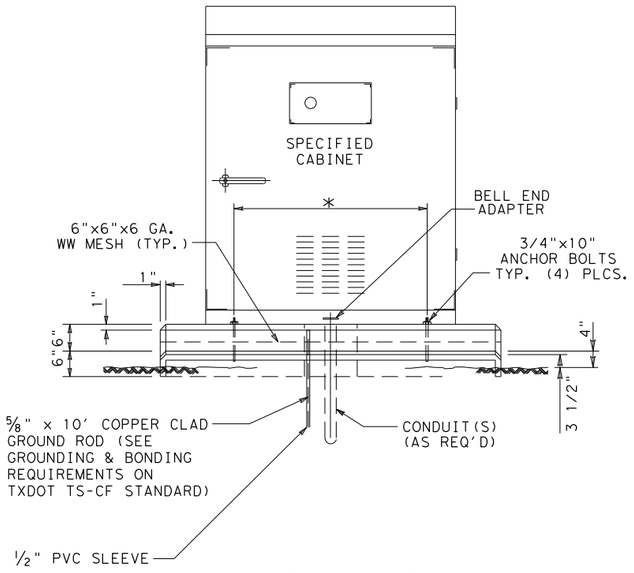
(100 MPH WIND ZONE)

SP-100(2)-12

REVISIONS	DN: MS	CK: JSY	DW: BR	CK: JSY
6-96	CONT	SECT	JOB	HIGHWAY
1-12	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		204

121B

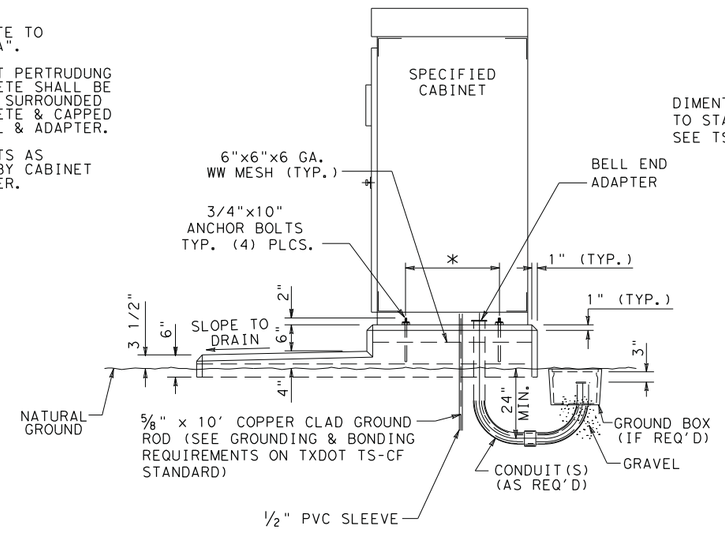
DATE:
FILE:



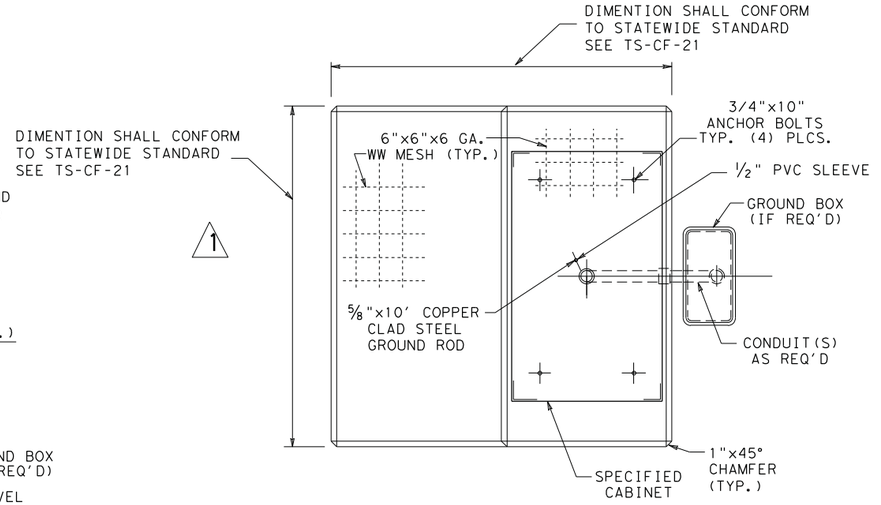
FRONT VIEW

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.

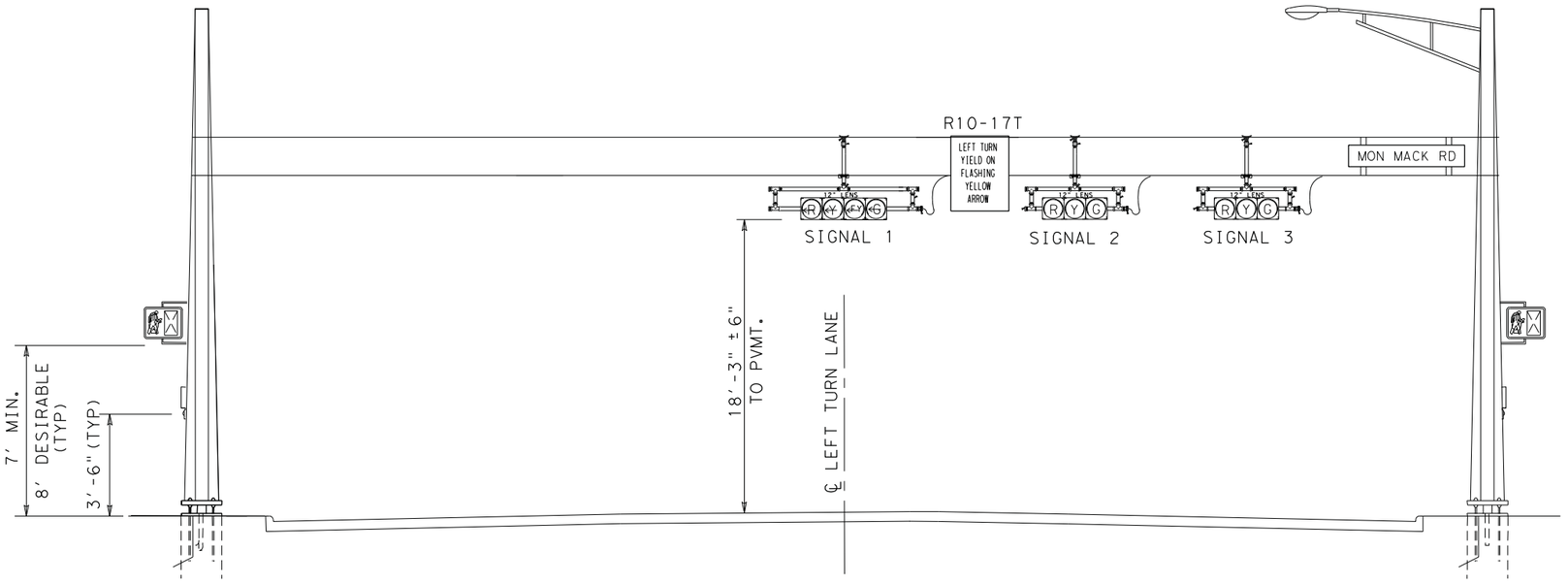


SIDE VIEW



TOP VIEW

DETAIL OF BASE MOUNT CABINET FOUNDATION



ELEVATION VIEW

1 CHANGED DIMENSION

STATE OF TEXAS
C. SIMEONIDIS
60919
REGISTERED PROFESSIONAL ENGINEER

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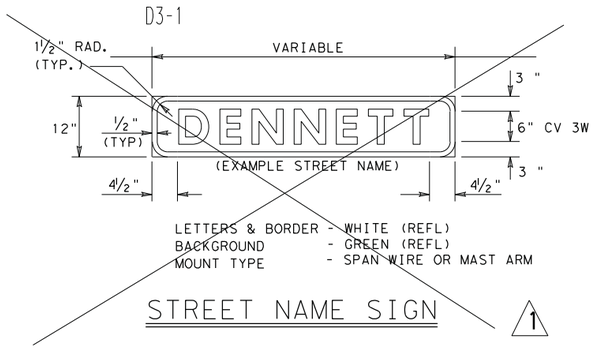
11/16/2022

DISTRICT STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
PHARR DISTRICT STANDARD

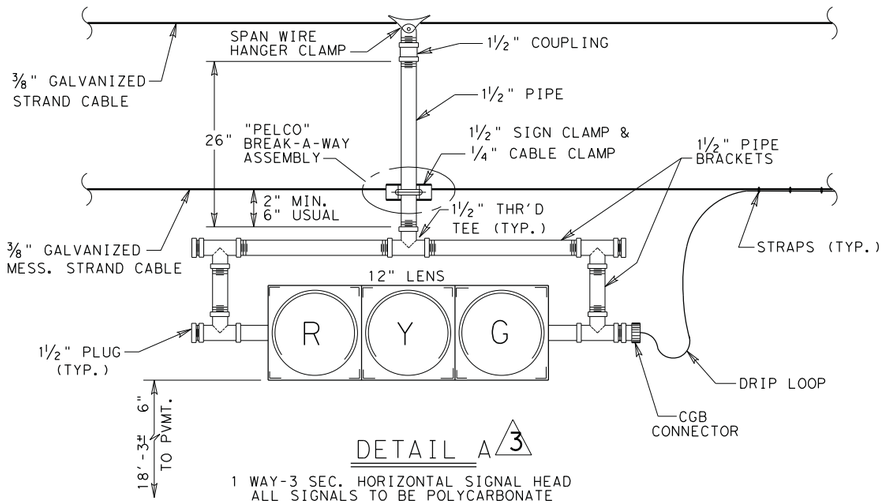
TRAFFIC SIGNAL CONSTRUCTION DETAILS

CONTROLLER FOUNDATON & LOOP DETECTOR INSTALLATION (MOD)

DN: OG	DRAWING	DATE	FED.RD. DIV.NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: JSL	ORIGINAL	APR. 2010	6	TEXAS					205
DW: OG	REV. JUL. 2015 AUG 2016		STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JSL			PHARR	HIDALGO	1803	02	035	FM 1925	

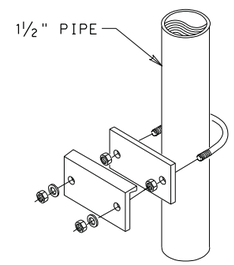


STREET NAME SIGN 1

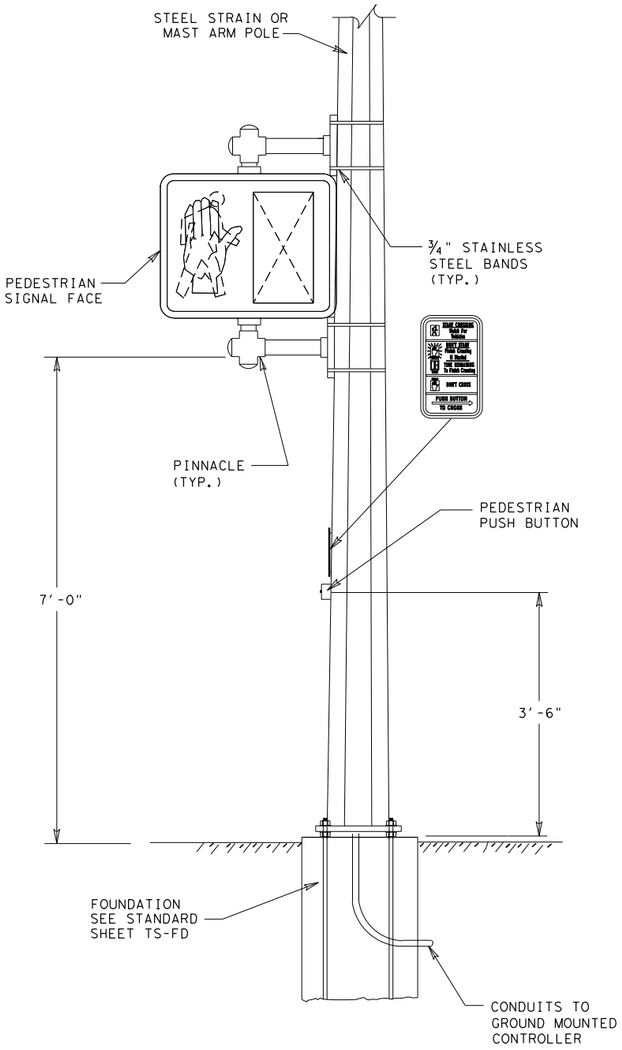


DETAIL A 3

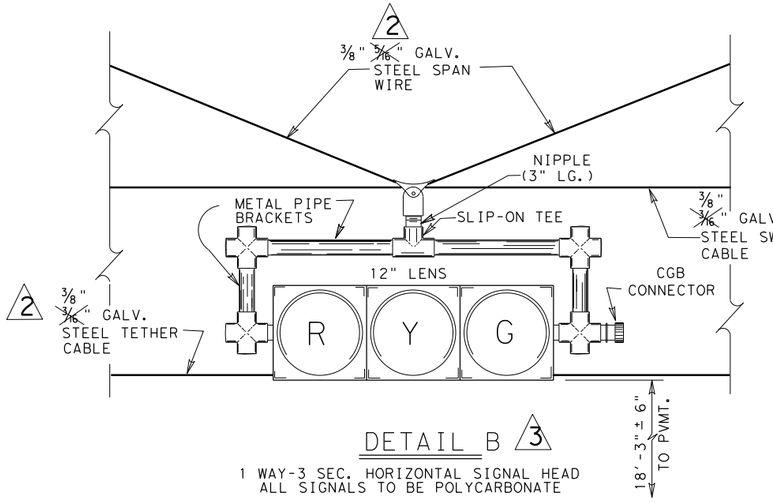
1 WAY-3 SEC. HORIZONTAL SIGNAL HEAD
ALL SIGNALS TO BE POLYCARBONATE
(TO BE USED ON SKEWED INTERSECTIONS OR WHEN SIGNAL POLES ARE NOT SQUARED TO EACH OTHER)



DETAIL-"PELCO" BREAK-A-WAY ASSEMBLY

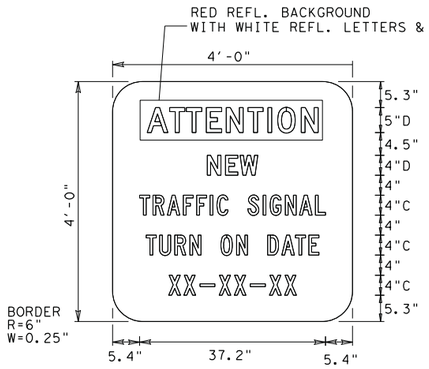


DETAIL-PEDESTRIAN SIGNALS

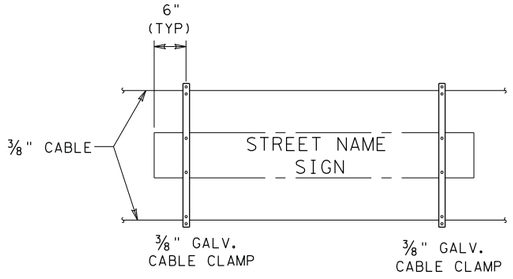


DETAIL B 3

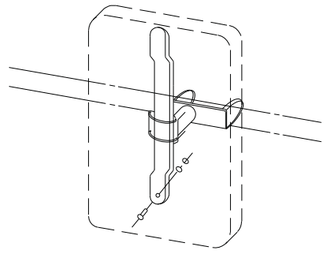
1 WAY-3 SEC. HORIZONTAL SIGNAL HEAD
ALL SIGNALS TO BE POLYCARBONATE



SPECIAL SIGN DETAIL



STREET NAME SIGN MOUNTING DETAIL



SIGN BRACKET

NOTE: THESE BRACKETS, USED IN PAIRS FOR LONGER SIGN, OR IN SINGLE UNITS FOR SMALLER SIGNS.

1 REMOVED DETAIL

2 CHANGED SPAN WIRE SIZE

3 CHANGED DETAIL LABEL

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SIMEONIDIS, P.E. 60919
11/16/2022

DISTRICT STANDARD PLANS

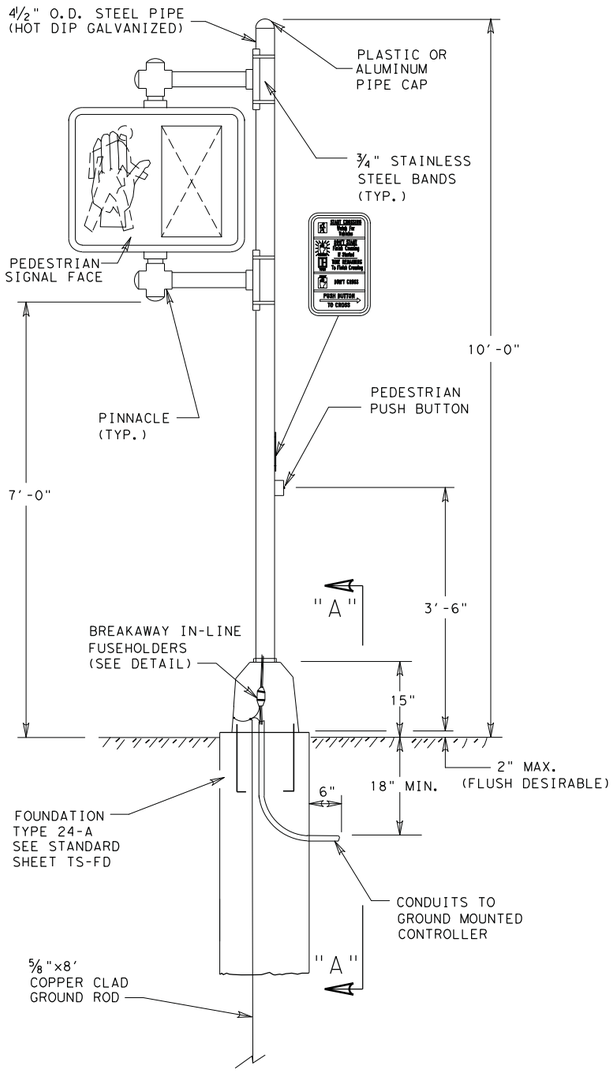
TEXAS DEPARTMENT OF TRANSPORTATION

PHARR DISTRICT STANDARD

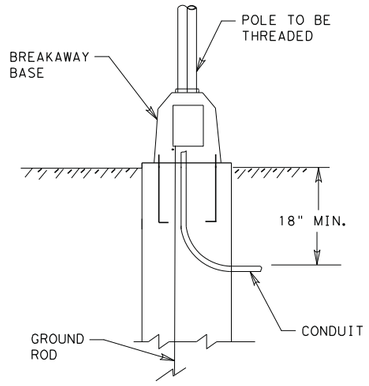
TRAFFIC SIGNAL CONSTRUCTION DETAILS

MISCELLANEOUS DETAILS (MOD)

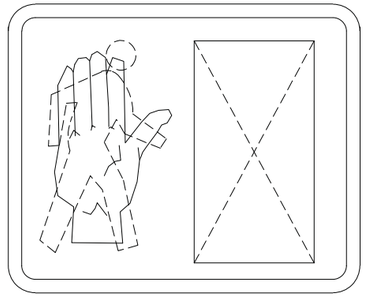
DN: OG	DRAWING	DATE	FED.RD. DIV.NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: JSL	ORIGINAL	APR. 2010	6	TEXAS					206
DW: OG	REV. MAY 2016 AUG 2016		STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JSL			PHARR	HIDALGO	1803	02	035	FM 1925	



PEDESTAL POLE DETAIL



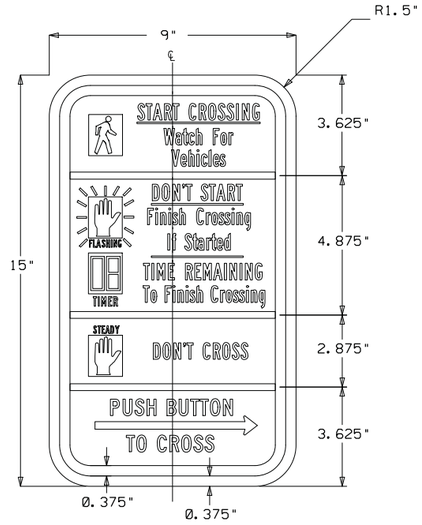
SECTION "A A"

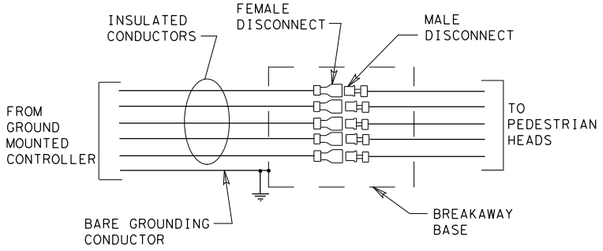


18"x16" LED PEDESTRIAN SIGNAL HEAD w/COUNTDOWN

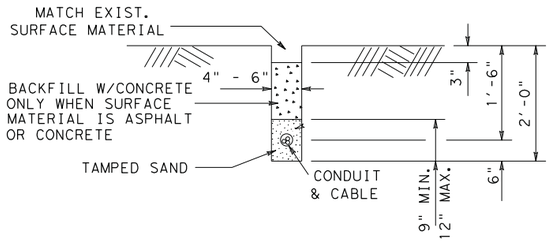
- LEGEND:
  BLACK
- BACKGROUND:
  WHITE (RETROREFLECTIVE)
- 08, HAND SYMBOL:
  ORANGE (RETROREFLECTIVE)
  ON BLACK
- PEDESTRIAN SYMBOL:
  WHITE (RETROREFLECTIVE)
  ON BLACK

NOTE:
REFER TO THE STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD) FOR MORE DETAILS AND DIMENSIONS REGARDING SIGN R10-3e



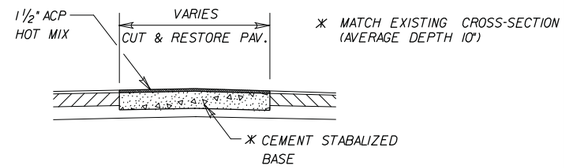


BREAKAWAY IN-LINE FUSEHOLDERS



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.

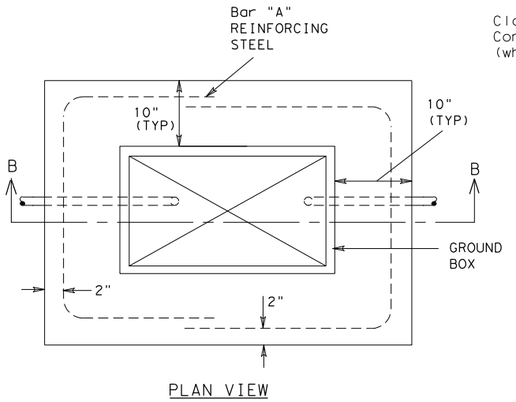
DETAIL - TRENCH LAY CONDUIT

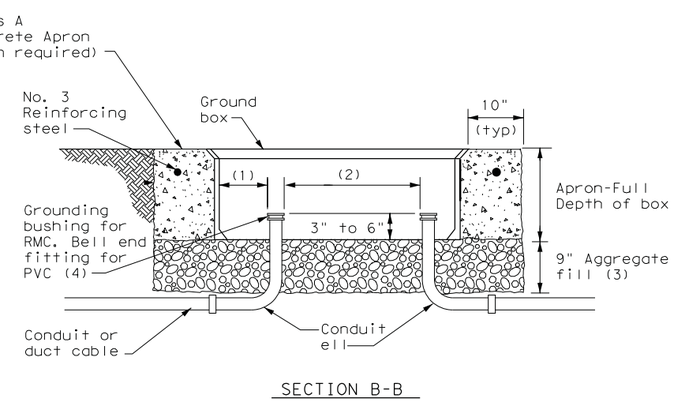


DETAIL - CUT AND RESTORE PAVEMENT

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 STEEL PIPE, ASTM A-53 GRADE A OR B, OR SCHEDULE 40 UL APPROVED RIGID STEEL ELECTRICAL CONDUIT. SHAFT MATERIAL SHALL BE HOT-DIPPED GALVANIZED INSIDE AND OUT IN ACCORDANCE WITH ASTM A-123.





APRON FOR GROUND BOXES

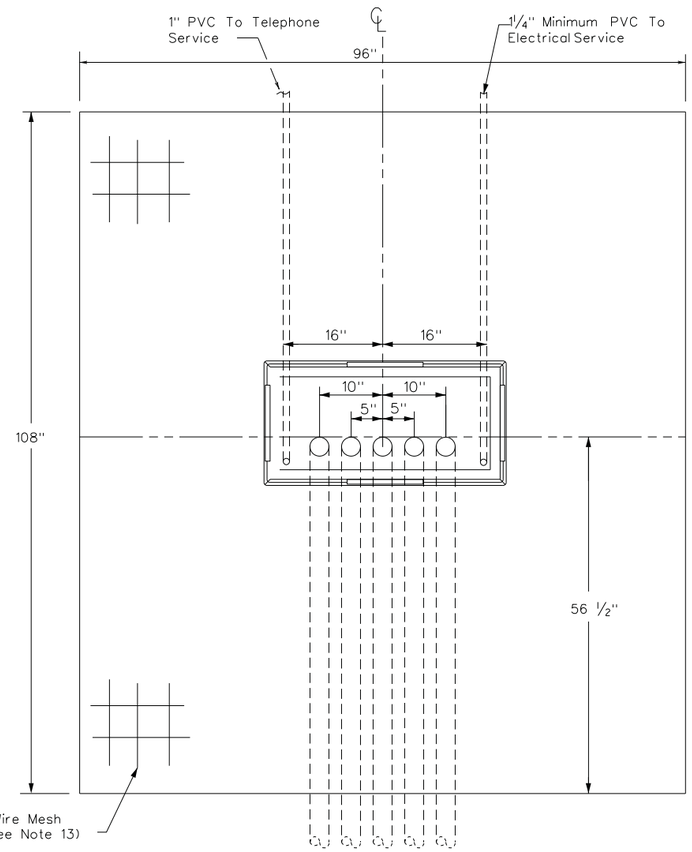
(Where required)

DISTRICT STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
PHARR DISTRICT STANDARD

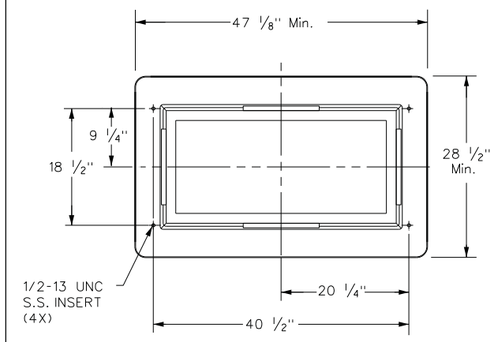
TRAFFIC SIGNAL CONSTRUCTION DETAILS

MISCELLANEOUS DETAILS

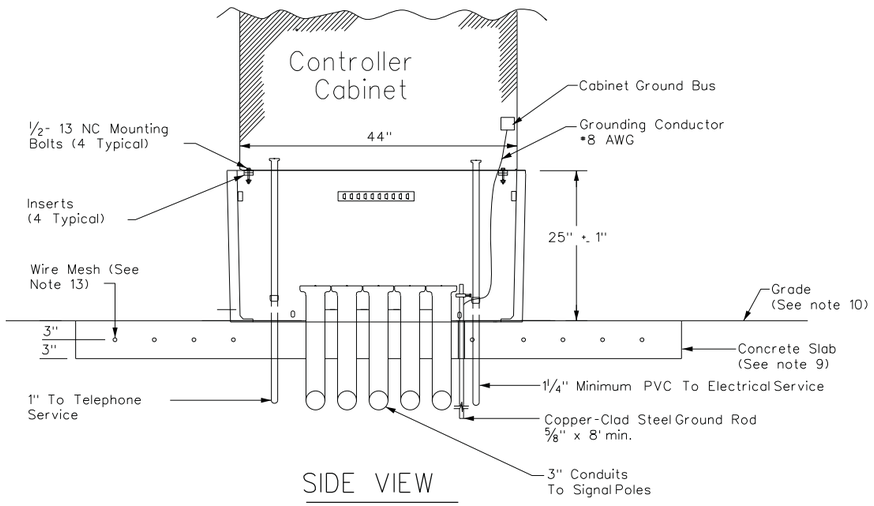
DN: OG	DRAWING	DATE	FED.RD. DIV.NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: JSL	ORIGINAL	APR. 2010	6	TEXAS					207
DW: OG	REV. JUL. 2015 MAY 2016 AUG 2016		STATE DIST.NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JSL			PHARR	HIDALGO	1803	02	035	FM 1925	



TOP VIEW



CABINET BASE



SIDE VIEW

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 Safety 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 1#2"-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#16x 3#16inch 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 1#2"-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. Grade earthwork such that it is flush with the concrete pad on all four sides, unless otherwise shown on the plans. Subsidiary to ITEM 680, four inch rip rap may be used in lieu of earthwork. Slopes shall gradually contour to match plans.

11. 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.

12. Install a PVC sleeve to prevent the ground rod from direct embedment in the slab.

13. 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.

14. Provide Class B concrete minimum for the slab in accordance with Item 421. Construct the slab in accordance with Item 531.

CONDUITS:

15. 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.

16. 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.

17. 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.

18. 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:

19. Anchor the controller cabinet to the base using four stainless steel 1/2-13 NC bolts.

20. The silicone caulk bead specified in Item 680.3.B must be RTV 133.

PAYMENT:

21. Bid TS-CF as subsidiary to Item 680.

Texas Department of Transportation

Traffic Safety Division Standard

TRAFFIC SIGNAL CONTROLLER CABINET BASE AND PAD

TS-CF-21

FILE: ts-cf-21.dgn	DN:	CK:	DW:	CK:
©TxDOT October 2000	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
12-04	DIST	COUNTY		SHEET NO.
2-21	PHR	HIDALGO		208

132

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 conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

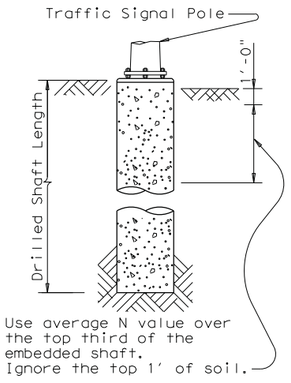
FOUNDATION DESIGN TABLE

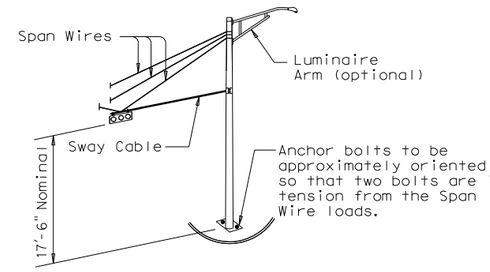
FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		EMBEDDED DRILLED SHAFT LENGTH-ft ④, ⑤, ⑥			ANCHOR BOLT DESIGN ①				FOUNDATION DESIGN LOAD ②		TYPICAL APPLICATION
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N blows/ft 10	15	40	ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft	SHEAR Kips	
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)

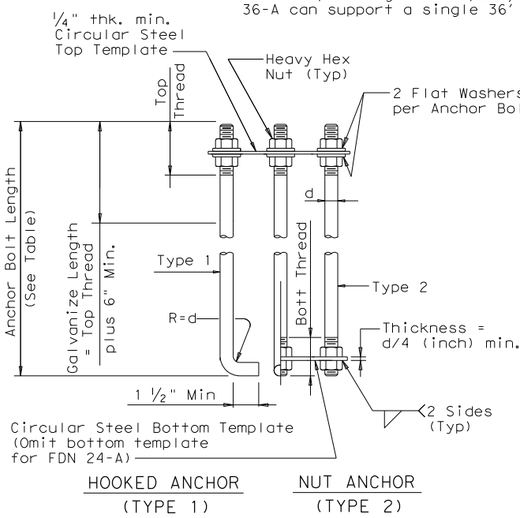
		FDN 30-A	FDN 36-A	FDN 36-B	FDN 42-A
80 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH	32'	48'		
	MAXIMUM DOUBLE ARM LENGTH COMBINATIONS	24' X 24'			
		28' X 28'			
		32' X 28'	32' X 32'		
			36' X 36'		
			40' X 36'		
			44' X 28'	44' X 36'	
100 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH		36'	44'	
	MAXIMUM 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.

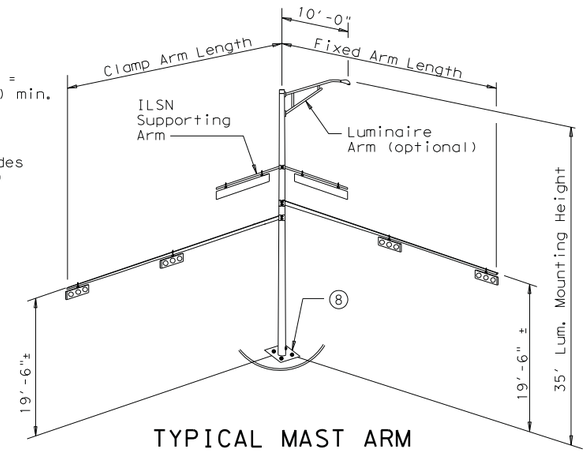




TYPICAL STRAIN POLE ASSEMBLY



ANCHOR BOLT 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.

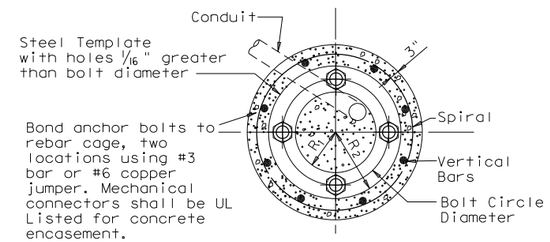
⑤ If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.

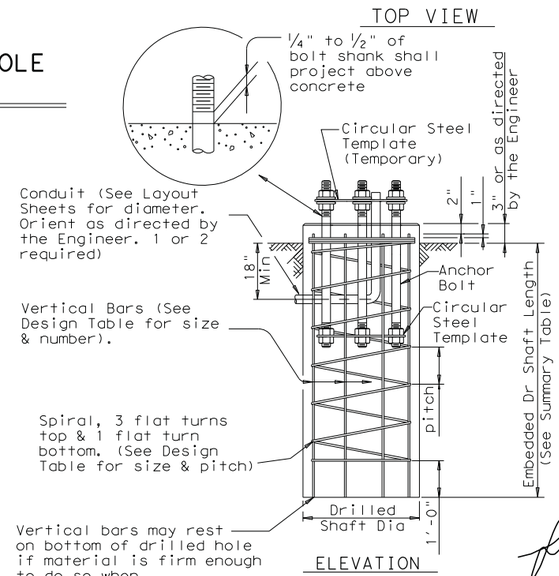
⑥ Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

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
① FM 1925 AT BRUSHLINE RD	10	24-A	1	5.7*				
		36-B	4				60.8	
TOTAL DRILLED SHAFT LENGTHS				5.7*			60.8	

* INCIDENTAL TO ITEM 687

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".

*THIS SHEET HAS BEEN MODIFIED TO SHOW QUANTITIES

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SIMEONIDIS, P.E. 60919
11/16/2022

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL POLE FOUNDATION

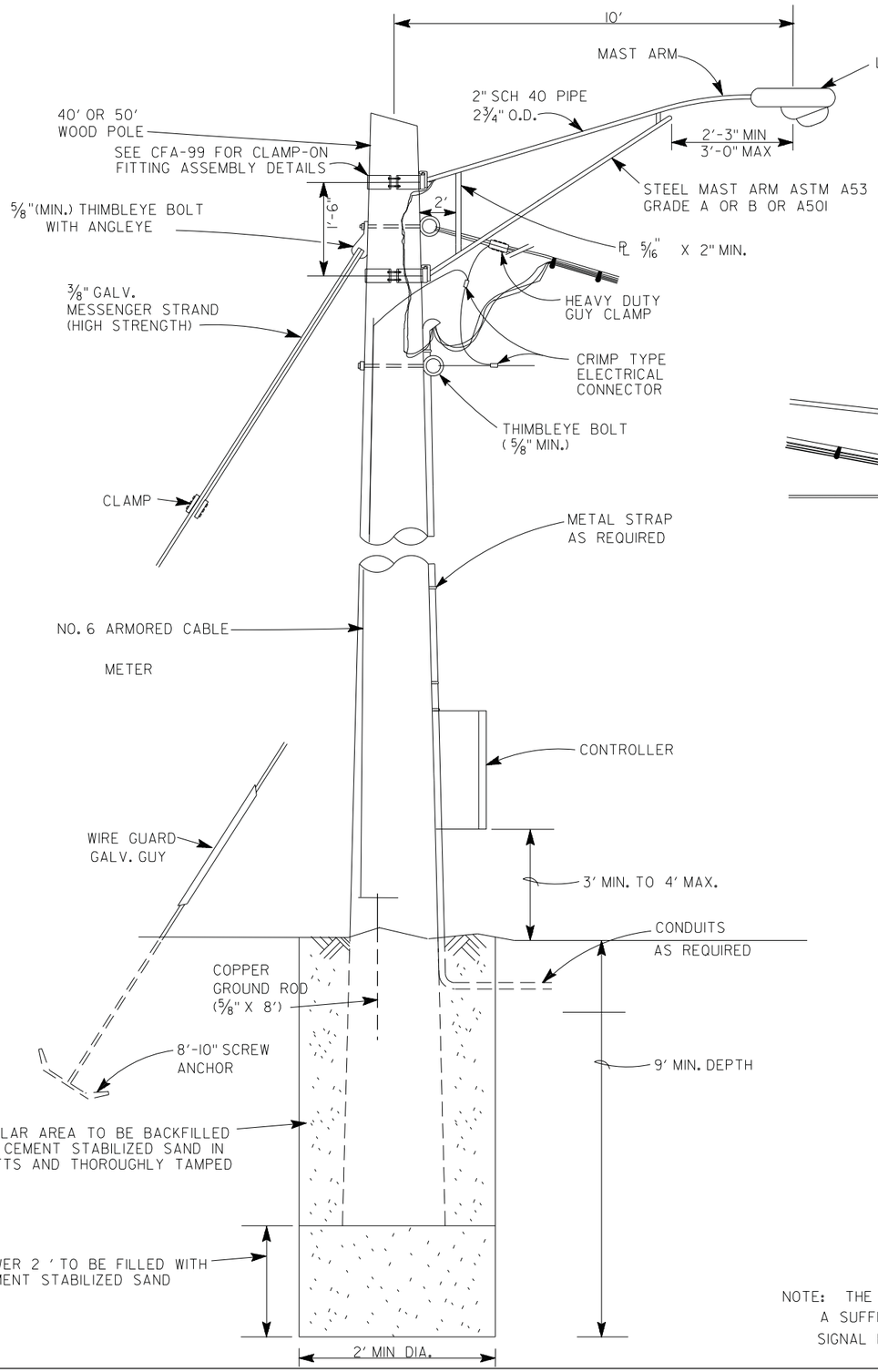
TS-FD-12

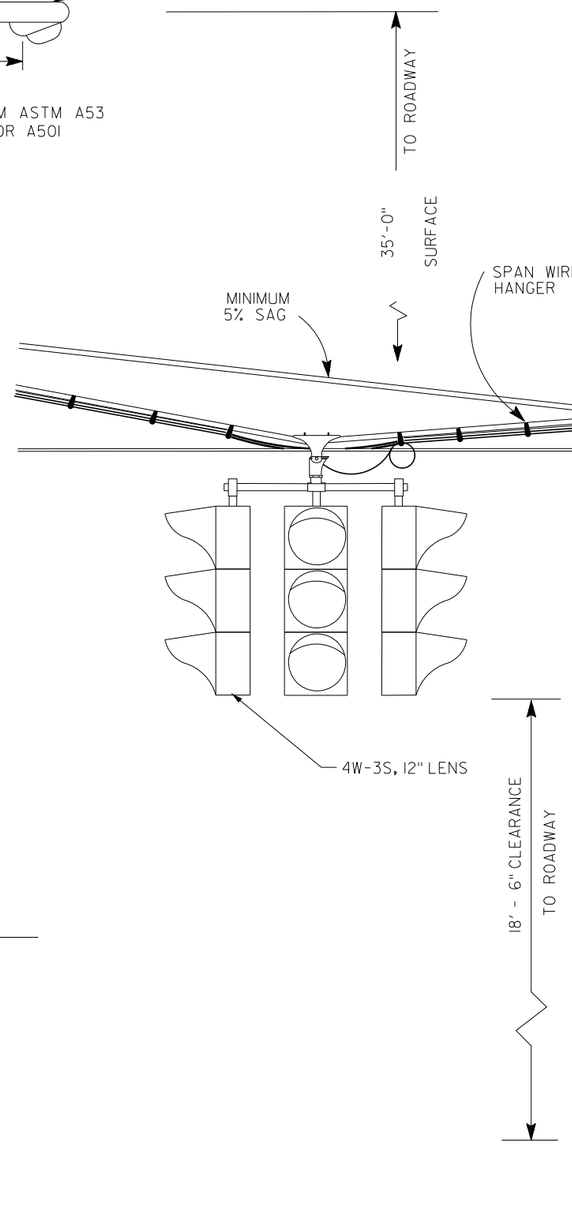
DN: MS	CK: JSY	DW: MAO/MMF	CK: JSY/TEB

REVISIONS
5-96
11-99
1-12

CONT	SECT	JOB	HIGHWAY
1803	02	035	FM 1925
DIST	COUNTY		SHEET NO.
PHR	HIDALGO		209

128





NOTES:

1. SIGNAL HEADS SHALL BE WRAPPED WITH DARK PLASTIC OR SUITABLE MATERIAL SO THAT SIGNAL FACES CANNOT BE SEEN FROM THE TIME OF INSTALLATION UNTIL PLACED IN OPERATION.
2. THE ENDS OF UNDERGROUND RIGID METAL CONDUITS SHALL HAVE GROUNDING BUSHINGS INSTALLED. ALL CONDUITS, POLES AND CONTROLLERS SHALL BE GROUNDED AND BONDED TO THE NEAREST GROUND ROD USING SOFT BARE NO. 8 COPPER WIRE.
3. ALL GALVANIZED WIRE SHALL BE HIGH STRENGTH.
4. THE CONTRACTOR SHALL FURNISH TWO (2) SIGNAL HEADS PER APPROACH.
5. AN ADDITIONAL LEFT TURN SIGNAL HEAD IS REQUIRED WHEN LEFT TURN INDICATIONS ARE NECESSARY.
6. A SEPARATE POWER SOURCE MAY BE REQUIRED TO OPERATE THE TEMPORARY SIGNAL INSTALLATION.
7. LUMINAIRES MAY BE NECESSARY AT TEMPORARY SIGNAL INSTALLATIONS.
8. STEEL UPSWEEP MAST ARM FOR WOOD POLE MOUNTING TO BE MADE OF 2" PIPE AND SLIPFITTER MOUNTING OF THE LUMINAIRE.

(1) LEAD - IN CABLE FROM CONTROLLER TO SIGNAL HEAD NO. 1

(2) JUMPER TO SIGNAL HEAD NO. 2

NOTE: BACKPLATES OMITTED FOR CLARITY (IF REQUIRED)

NOTE: THE CONTRACTOR SHALL COIL ON THE SPAN WIRE A SUFFICIENT LENGTH OF SIGNAL CABLE FOR ADJUSTING SIGNAL HEADS DURING THE VARIOUS PHASES OF CONSTRUCTION.

STATE OF TEXAS
C. SIMEONIDIS
60919
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY C. SIMEONIDIS, P.E. 60919
5/11/2022

Texas Department of Transportation
Houston District

SIGNAL DETAILS/STANDARDS CONSTRUCTION DETAILS FOR TRAFFIC SIGNALS (WOOD POLE)

CD/TS/WP

FILE:	DN:	CK:	DW:	CK:	
© TxDOT 2004	DIST	FED REG	PROJECT NO.		SHEET
REVISIONS	PHR	6			210
	COUNTY		CONTROL	SECT	JOB	HIGHWAY
	HIDALGO		1803	02	035	FM 1925

STD-M10

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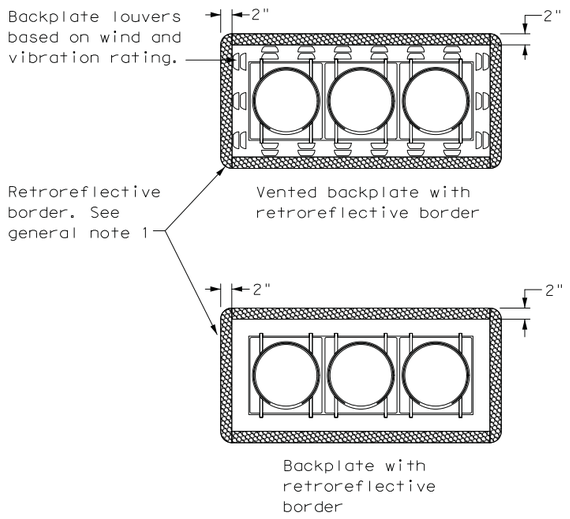
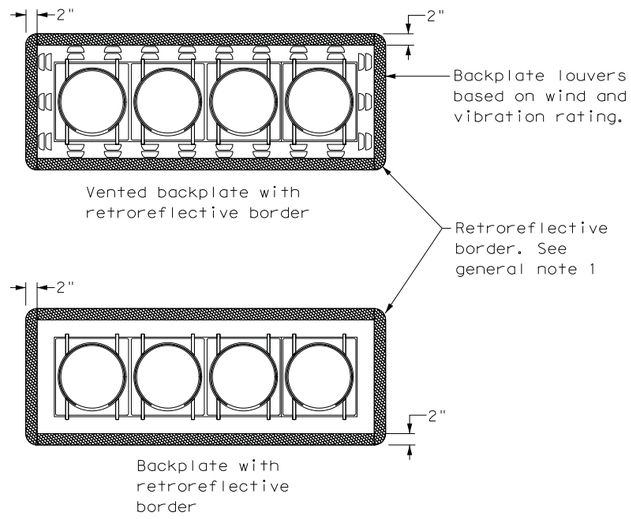
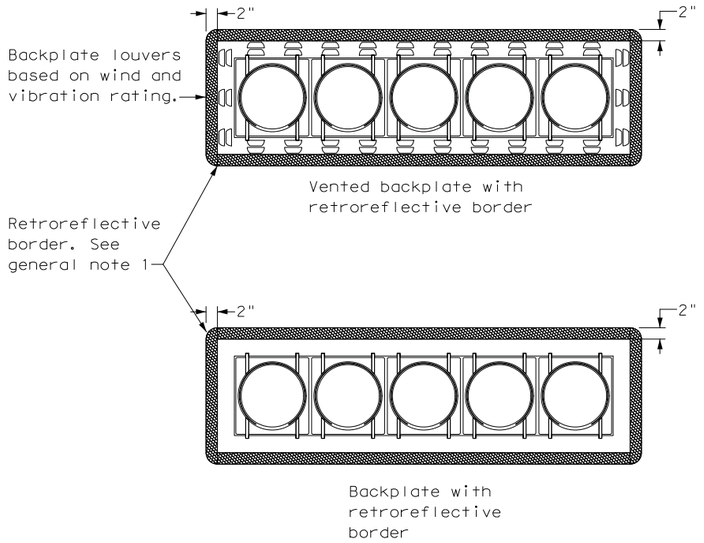
DATE:
FILE:



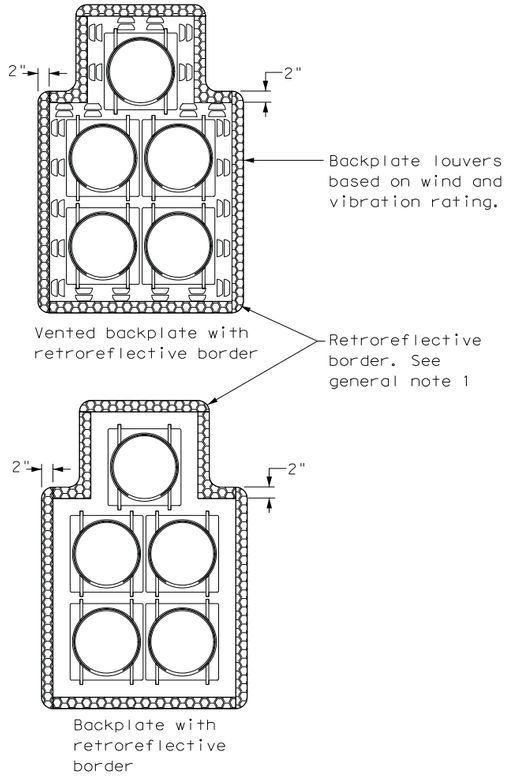
THREE-SECTION HEAD
HORIZONTAL OR VERTICAL



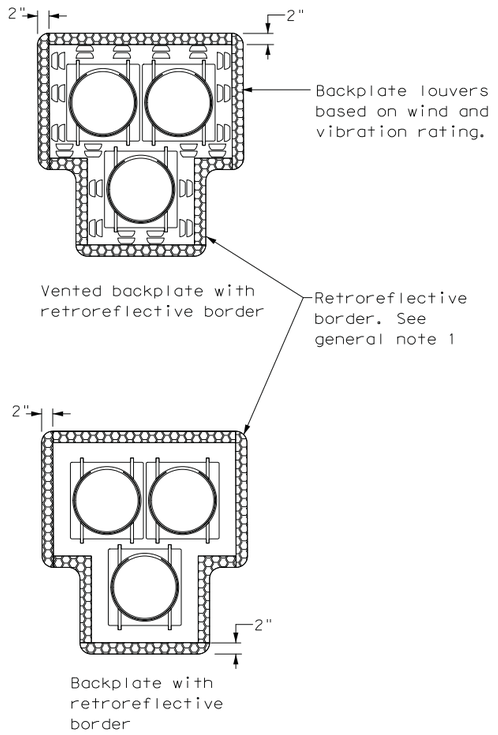
FOUR-SECTION HEAD
HORIZONTAL OR VERTICAL



FIVE-SECTION HEAD
HORIZONTAL OR VERTICAL



FIVE-SECTION HEAD
CLUSTER



PEDESTRIAN HYBRID
BEACON

GENERAL NOTES:

1. Backplates are optional for traffic signals and pedestrian hybrid beacons. When backplates are used, a 2-inch wide fluorescent yellow AASHTO Type B_{FL} or C_{FL} retroreflective border conforming to TxDOT DMS-8300 is required. Place on all approaches when used.
2. Signal head and backplate compatability must be verified by the contractor prior to installation.
3. When using backplates on signal heads, venting is preferred to reduce cyclic vibration stress.
4. When a vented backplate is used, the retroreflective border must not be placed over the louvers.
5. This standard sheet applies to all signal heads with backplates, including but not limited to:
   - Pole mounted
   - Overhead mounted
   - Span wire mounted
   - Mast arm mounted
   - Vertical signal heads
   - Horizontal signal heads
   - Clustered signal heads
   - Pedestrian hybrid beacons

Texas Department of Transportation

Traffic Safety Division Standard

TRAFFIC SIGNAL HEAD WITH BACKPLATE

TS-BP-20

FILE: ts-bp-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM 1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		211

DATE:
FILE:

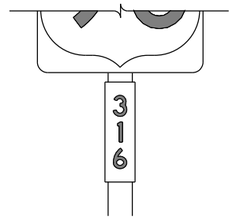
REQUIREMENTS FOR INDEPENDENT MOUNTED ROUTE SIGNS

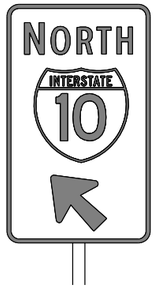
SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	ALL OTHERS	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE A SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND & BORDERS	ALL OTHERS	TYPE B or C SHEETING

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

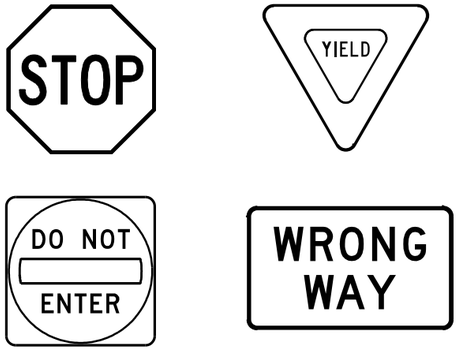
TSR(3)-13

FILE: tsr3-13.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	PHR	HIDALGO		212

DATE:
FILE:

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

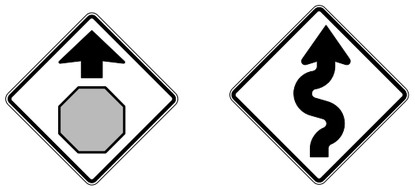
REQUIREMENTS FOR WHITE BACKGROUND REGULATORY SIGNS

(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

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

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/

Texas Department of Transportation

Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

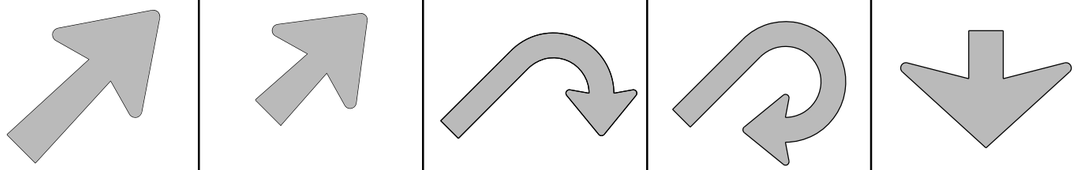
TSR(4)-13

FILE: tsr4-13.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
© TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	PHR	HIDALGO		213

DATE:
FILE:

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

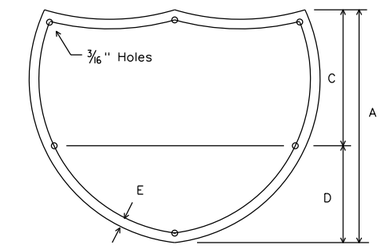
NOTE

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.

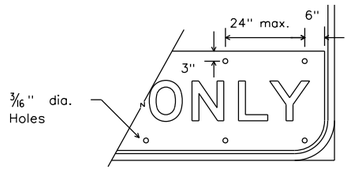
http://www.txdot.gov/

SIGN BLANK PUNCHING DETAILS FOR ATTACHMENTS WHEN SPECIFIED TO BE TYPE A ALUMINUM SIGNS (FOR MOUNTING TO GUIDE SIGN FACE)

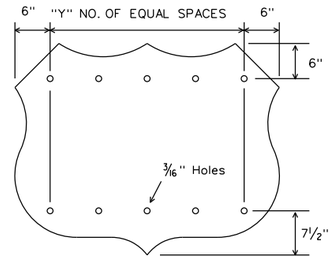


INTERSTATE ROUTE MARKERS

A	C	D	E
36	21	15	1 1/2
48	28	20	1 3/4

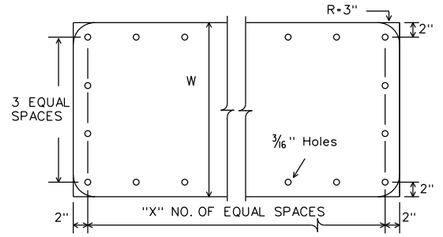


EXIT ONLY PANEL



U.S. ROUTE MARKERS

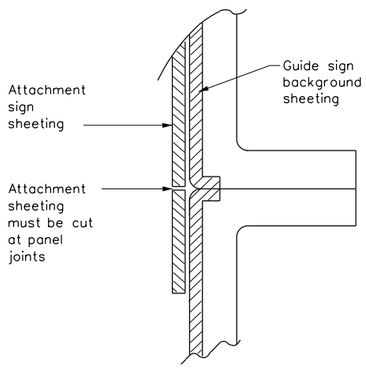
Sign Size	"Y"
24x24	2
30x24	3
36x36	3
45x36	4
48x48	4
60x48	5



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

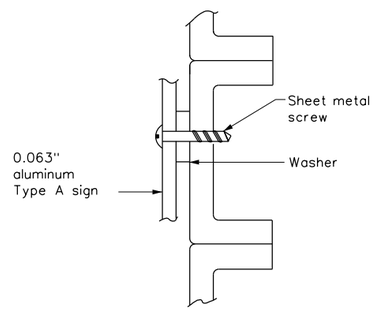
MOUNTING DETAILS OF ATTACHMENTS TO GUIDE SIGN FACE ("EXIT ONLY" AND "LEFT EXIT" PANELS, ROUTE MARKERS AND OTHER ATTACHMENTS)



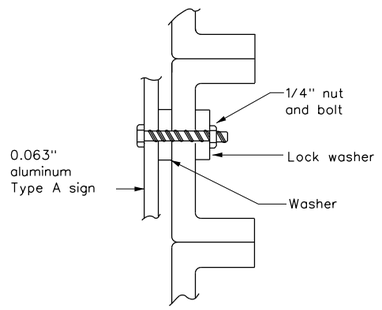
DIRECT APPLIED ATTACHMENT

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



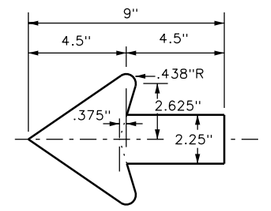
NUT/BOLT ATTACHMENT

NOTE:

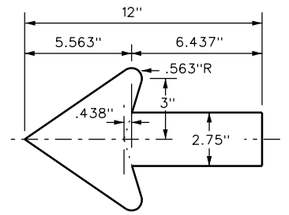
Furnish Type A aluminum sign attachments only when specified in the plans. These signs will be paid for under "Aluminum Signs".

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
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	PHR	HIDALGO		214

5

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)

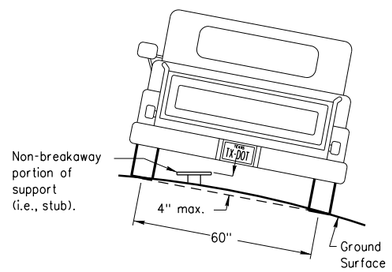
Anchor Type

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))

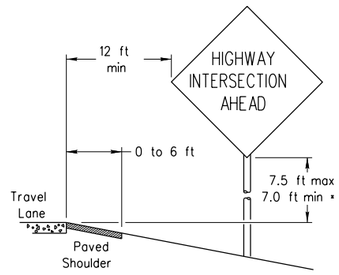
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



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).

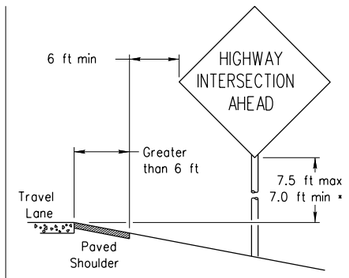
SIGN LOCATION

PAVED SHOULDERS



LESS THAN 6 FT. WIDE

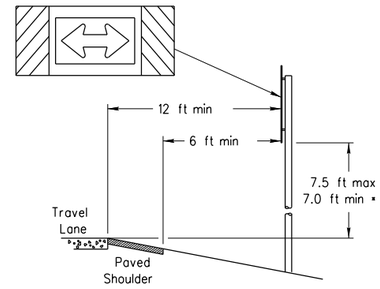
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



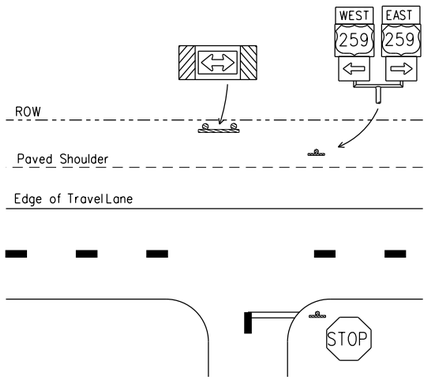
GREATER THAN 6 FT. WIDE

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.

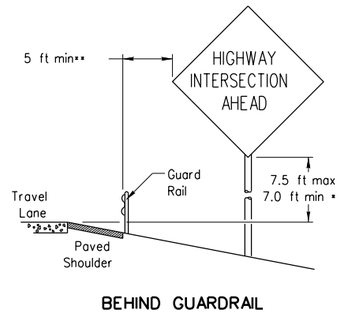
T-INTERSECTION



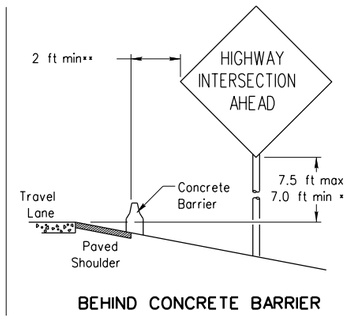
When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



BEHIND BARRIER



BEHIND GUARDRAIL



BEHIND CONCRETE BARRIER

**Sign clearance based on distance required for proper guard rail or concrete barrier performance.

* 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

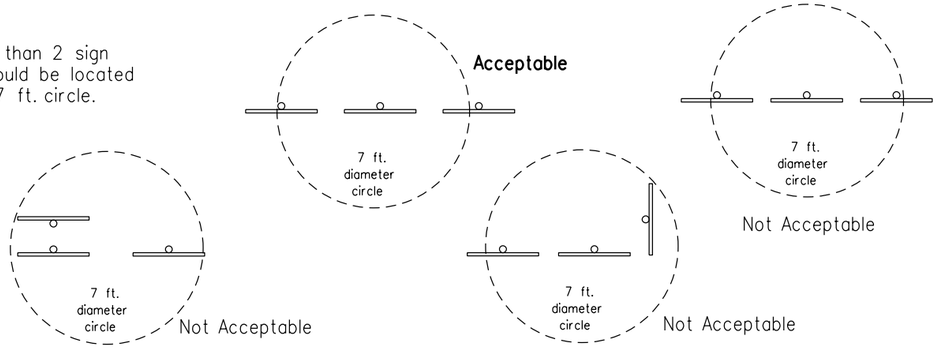
(2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

The maximum values may be increased when directed by the Engineer.

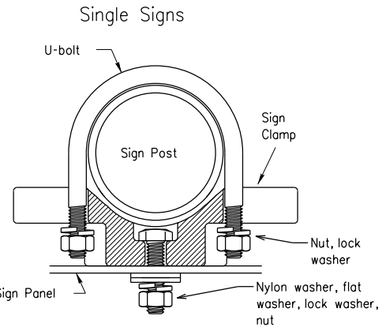
See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.

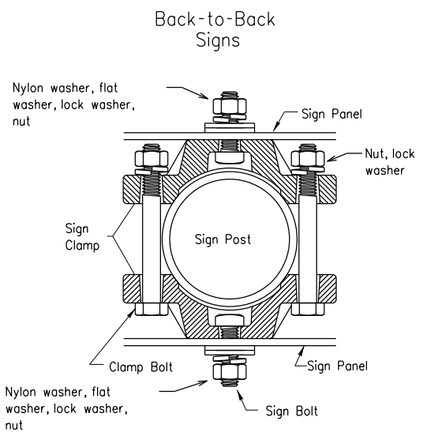
The website address is:
http://www.txdot.gov/publications/traffic.htm

No more than 2 sign posts should be located within a 7 ft. circle.



TYPICAL SIGN ATTACHMENT DETAIL





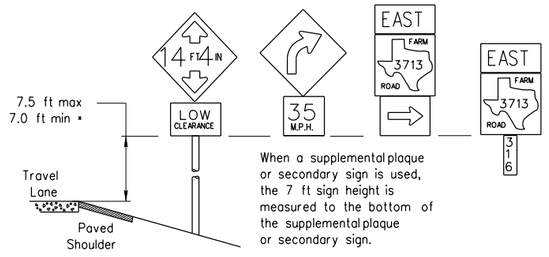
Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

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.

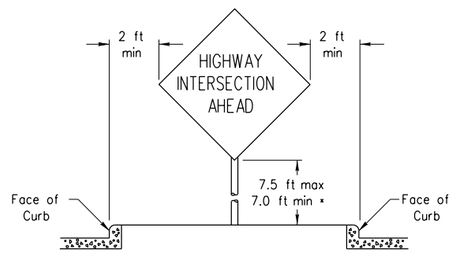
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



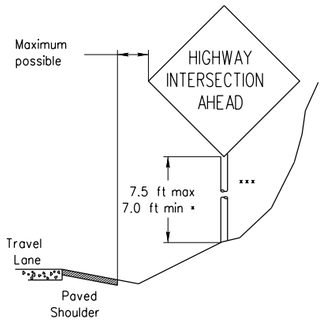
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

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.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

SMD(GEN)-08

REVISIONS
9-08

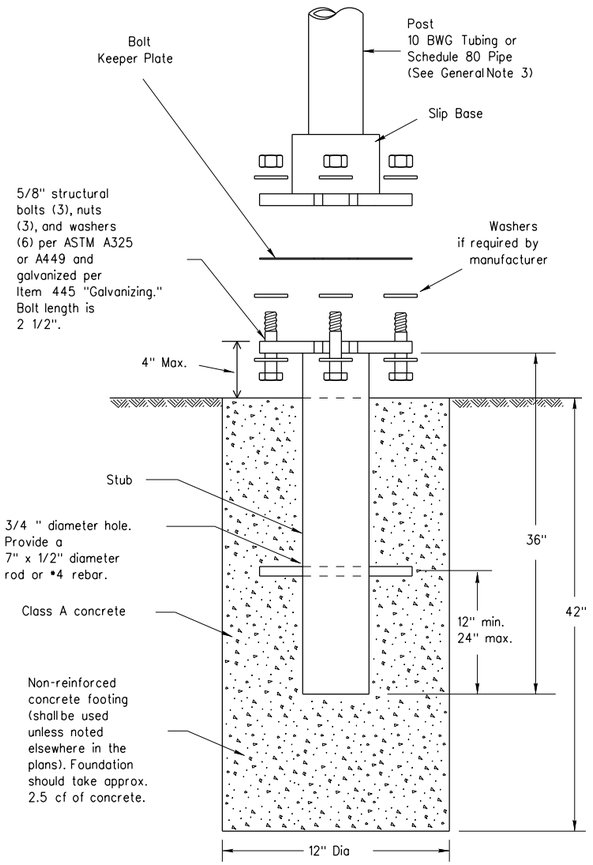
DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

CONT	SECT	JOB	HIGHWAY
1803	02	035	FM1925

DIST	COUNTY	SHEET NO.
PHR	HIDALGO	215

DATE:
FILE:

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

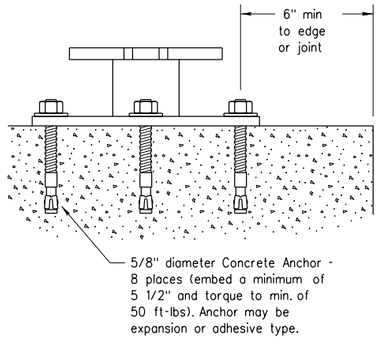
Foundation

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

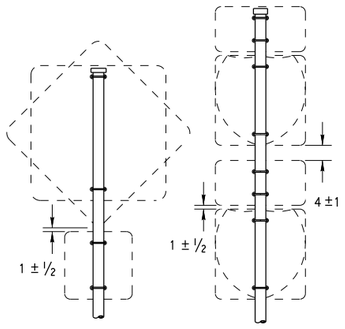
SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08

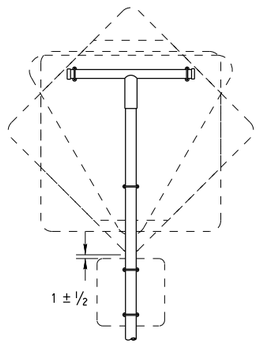
DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
REVISIONS			
9-08			

CONT	SECT	JOB	HIGHWAY
1803	02	035	FM1925
DIST	COUNTY		SHEET NO.
PHR	HIDALGO		216

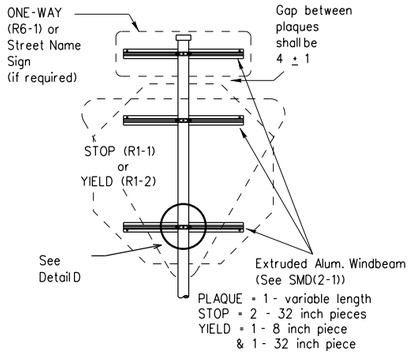
DATE:
FILE:



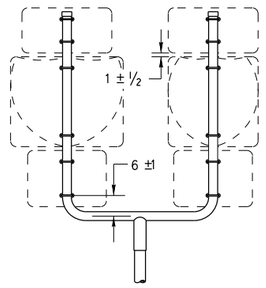
SM RD SGN ASSM TY XXXXX(1)XX(P)



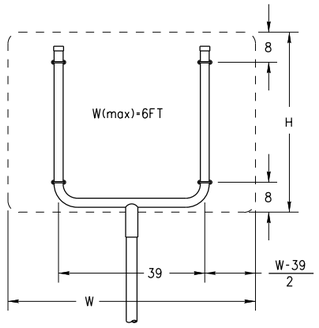
SM RD SGN ASSM TY XXXXX(1)XX(T)



SM RD SGN ASSM TY XXXXX(1)XX(P-BM)



SM RD SGN ASSM TY XXXXX(1)XX(U)



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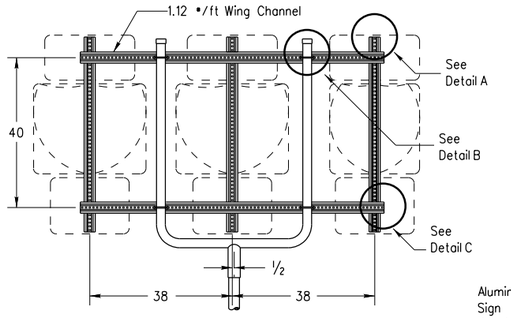
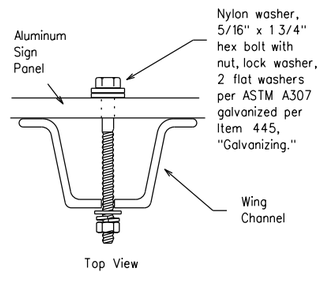
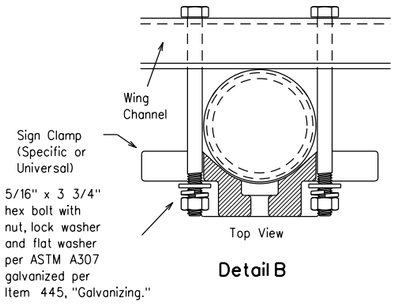


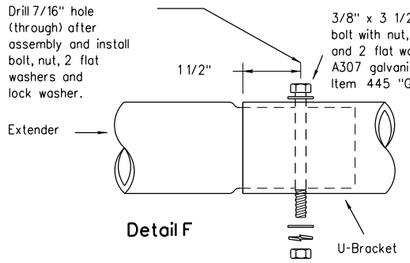
SM RD SGN ASSM TY XXXXX(1)XX(U-WC)
(See Note 11)



Detail A

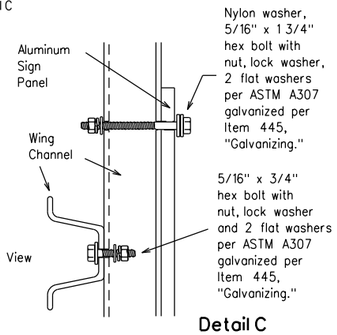


Detail B

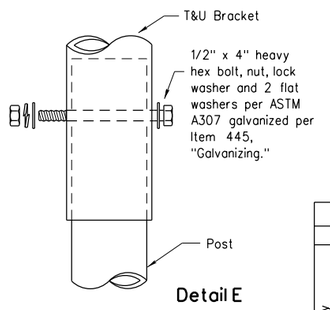


Detail F

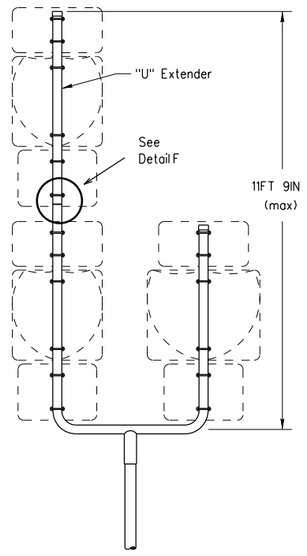
Splices shall only be allowed behind the sign substrate.



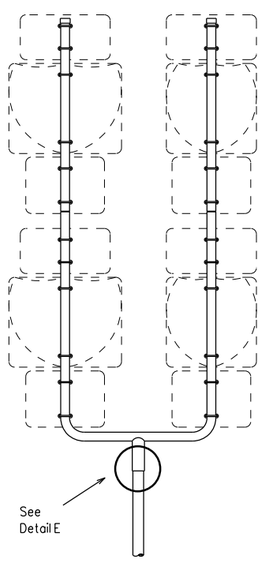
Detail C



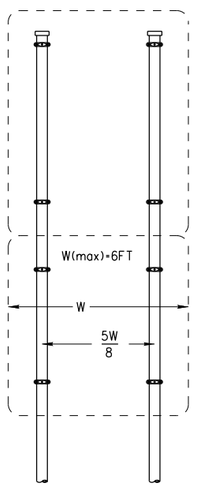
Detail E



SM RD SGN ASSM TY S80(1)XX(U-1EXT)

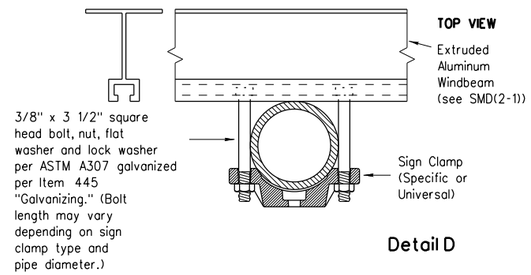


SM RD SGN ASSM TY S80(1)XX(U-2EXT)

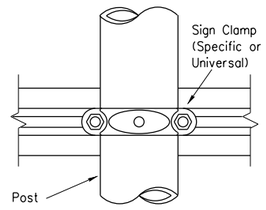


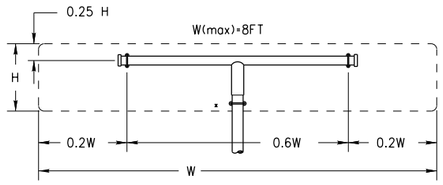
SM RD SGN ASSYM TY XXXXX(2)XX(P)

SIDE VIEW



Detail D

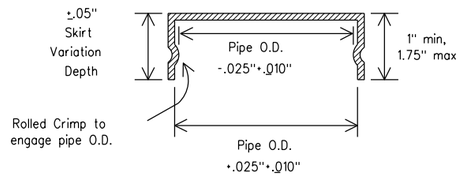




All dimensions are in english unless detailed otherwise.

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.

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.

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

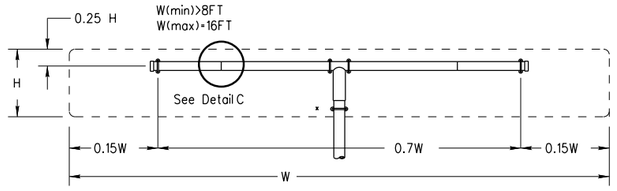
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-2)-08

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

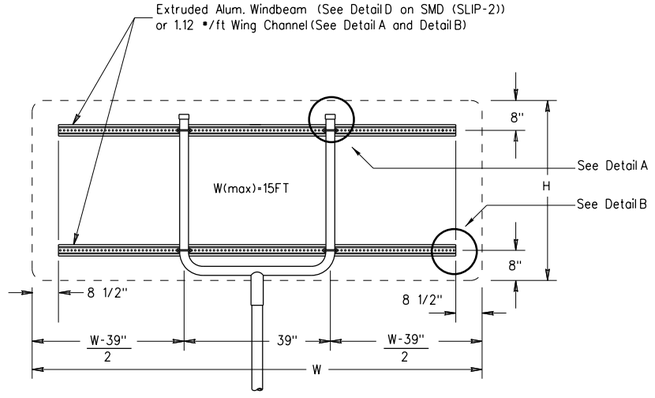
REVISIONS	CONT	SECT	JOB	HIGHWAY
9-08	1803	02	035	FM1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		217

DATE:
FILE:

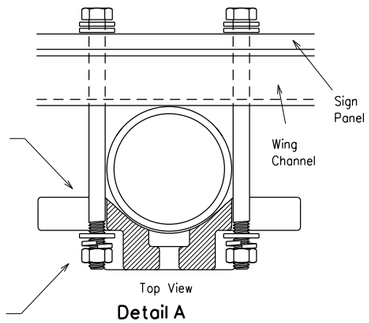


SM RD SGN ASSM TY XXXXX(1)XX(T-2EXT)

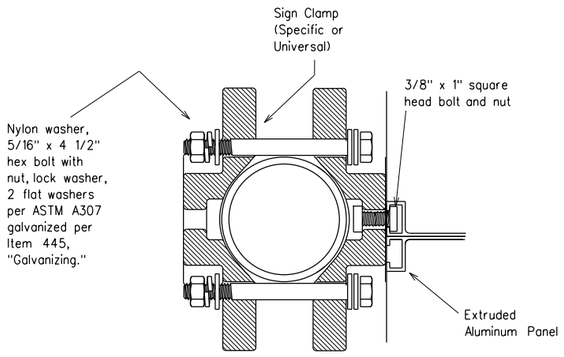
(* - See Note 12)



SM RD SGN ASSM TY XXXXX(1)XX(U-XX)

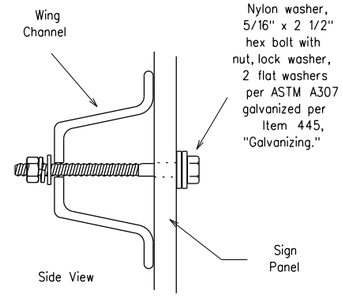


Detail A

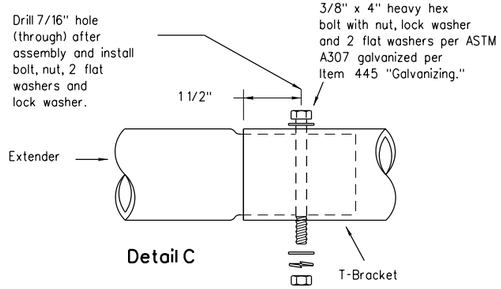


Detail D

EXTRUDED ALUMINUM SIGN WITH T BRACKET

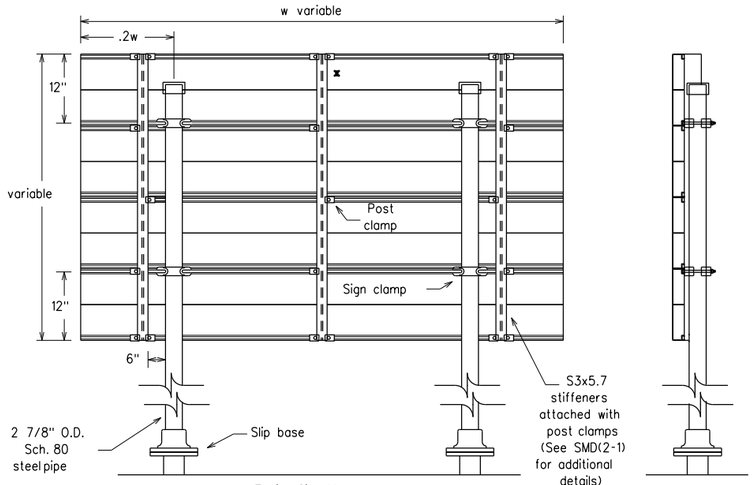


Detail B



Detail C

Splices shall only be allowed behind the sign substrate.

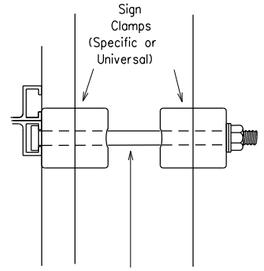


Typical Sign Mount

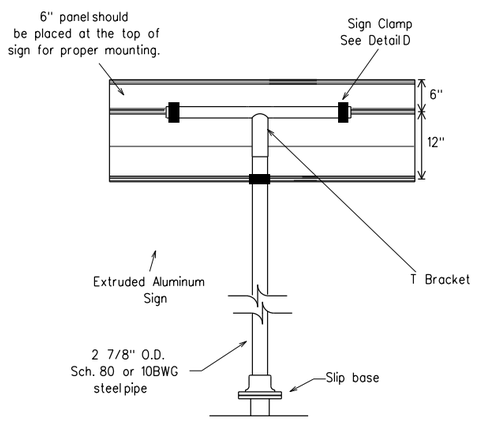
SM RD SGN ASSM TY S80(2)XX(P-EXAL)

* Additional stiffener placed at approximate center of signs when sign width is greater than 10'.

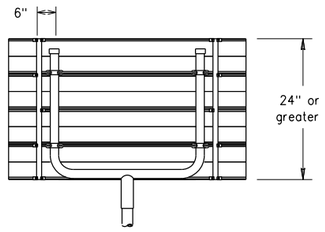
See Detail E
for clamp installation



Detail E



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

1. 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.
2. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
3. 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.
4. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
5. 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.
6. 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.
7. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
8. 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."
9. Sign blanks shall be the sizes and shapes shown on the plans.
10. 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.
11. 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

REVISIONS
9-08

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

CONT	SECT	JOB	HIGHWAY
1803	02	035	FM1925
DIST	COUNTY		SHEET NO.
PHR	HIDALGO		218

DATE:
FILE:

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

This SWP3 has been developed in accordance with the TPDES Construction General Permit TXR150000 (CGP). The Texas Department of Transportation (TxDOT) ensures that project specifications include adequate best management practices (BMPs) for this project.

For all projects with soil disturbing activity and for projects that have Environmental, Permits, Issues, and Commitments (EPICs) dependent on stormwater controls and water quality measures TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office, Area Office, or electronically.

This SWP3 is consistent with requirements specified in applicable stormwater plans and the projects environmental permits, issues, and commitments (EPICs). A copy of the CGP is included in Attachment 2.12 of the SWP3 binder.

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):
1803-02-035

1.2 PROJECT LIMITS:

From: *0.28 MI. E. OF FM 907 (ALAMO RD.)*

To: *0.28 MI. E. OF SHARP RD.*

1.3 PROJECT COORDINATES:

BEGIN: (Lat) *26.328524* ,(Long) *-98.095869*

END: (Lat) *26.324958* ,(Long) *-98.070956*

1.4 TOTAL PROJECT AREA (Acres): *28.02*

1.5 TOTAL AREA TO BE DISTURBED (Acres): *28.02*

1.6 NATURE OF CONSTRUCTION ACTIVITY:

For the reconstruction and widening of a non-freeway facility. Consist of grading lime treated subgrade, cement treated flexible base, asphaltic concrete, curb & gutter, storm sewer, signing, delineation, and pavement markings.

1.7 MAJOR SOIL TYPES:

Soil Type	Description
Comitas Loamy Fine Sand, 0 to 3% slopes	*73.2% sand, 11.9% clay, well drained, low runoff potential, and moderate water erosion potential.*
Hebbronville Sandy Loam, 0 to 1% slopes	*65.5% sand, 13.8% clay, well drained, low runoff potential, and slight water erosion potential.*
Hidalgo Sandy Clay Loam, 0 to 1% slopes	*40.1% sand, 27% clay, well drained, moderate runoff rate, and slight water erosion potential.*
Hidalgo Fine Sandy Loam, 0 to 1% slopes	*38.4% sand, 29% clay, well drained, moderate runoff rate, and slight water erosion potential.*

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):

PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below:

☐ PSLs determined during preconstruction meeting
☒ PSLs determined during construction
☐ No PSLs planned for construction

Type	Sheet #s

All off-ROW PSLs required by the Contractor are the Contractor's responsibility. The Contractor shall secure all permits required by local, state, federal laws for off-ROW PSLs. The contractor shall provide diagrams, areas of disturbance, acreage, and BMPs for all off-ROW PSLs within one mile of the project.

1.9 CONSTRUCTION ACTIVITIES:

(Use the following list as a starting point when developing the Construction Activity Schedule and Ceasing Record in Attachment 2.5.)

☒ Mobilization
☒ Install sediment and erosion controls
☒ Blade existing topsoil into windrows, prep ROW, clear and grub
☒ Remove existing pavement
☒ Grading operations, excavation, and embankment
☒ Excavate and prepare subgrade for proposed pavement widening
☒ Remove existing culverts, safety end treatments (SETs)
☐ Remove existing metal beam guard fence (MBGF), bridge rail
☒ Install proposed pavement per plans
☒ Install culverts, culvert extensions, SETs
☐ Install mow strip, MBGF, bridge rail
☒ Place flex base
☒ Rework slopes, grade ditches
☐ Blade windrowed material back across slopes
☐ Revegetation of unpaved areas
☒ Achieve site stabilization and remove sediment and erosion control measures
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.10 POTENTIAL POLLUTANTS AND SOURCES:

☒ Sediment laden stormwater from stormwater conveyance over disturbed area
☒ Fuels, oils, and lubricants from construction vehicles, equipment, and storage
☒ Solvents, paints, adhesives, etc. from various construction activities
☒ Transported soils from offsite vehicle tracking
☒ Construction debris and waste from various construction activities
☒ Contaminated water from excavation or dewatering pump-out water
☒ Sanitary waste from onsite restroom facilities
☒ Trash from various construction activities/receptacles
☒ Long-term stockpiles of material and waste
☒
☒ Other: *Significant material storage*
☐ Other: _____
☐ Other: _____

1.11 RECEIVING WATERS:

Receiving waters must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. Include Segment # for receiving waters.

Tributaries	Classified Waterbody
Main Floodwater Channel	*The Laguna Madre (2491); Impared for bacteria and depressed dissolved oxygen*
NO TMDLs or I-PLANS WERE IDENTIFIED	

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

☒ Development of plans and specifications
☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
☒ Post Construction Site Notice
☒ Submit NOI/CSN to local MS4
☒ Perform SWP3 inspections
☒ Maintain SWP3 records and update to reflect daily operations
☒ Complete and submit Notice of Termination to TCEQ
☒ Maintain SWP3 records for 3 years
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

☒ Day To Day Operational Control
☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
☒ Post Construction Site Notice
☒ Submit NOI/CSN to local MS4
☒ Maintain schedule of major construction activities
☒ Install, maintain and modify BMPs
☒ Complete and submit Notice of Termination to TCEQ
☒ Maintain SWP3 records for 3 years
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.14 LOCAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OPERATOR COORDINATION:

MS4 Entity
Hidalgo County Drainage District No. 1

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

July 2023 Sheet 1 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			219
STATE	STATE DIST.	COUNTY	
TEXAS	PHARR	HIDALGO	
CONT.	SECT.	JOB	HIGHWAY NO.
1803	02	035	FM1925

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

2.0 BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS, INSPECTION, AND MAINTENANCE

The Contractor shall be the responsible party for implementing the BMPs described herein and for complying with the SWP3 for control of erosion and sedimentation during day-to-day operations. The Contractor shall implement changes to this SWP3 approved by TxDOT within the times specified in this SWP3 or the CGP.

2.1 EROSION CONTROL AND SOIL STABILIZATION BMPs:

T / P

- ☐ ☐ Protection of Existing Vegetation
- ☐ ☐ Vegetated Buffer Zones
- ☐ ☐ Soil Retention Blankets
- ☐ ☐ Geotextiles
- ☐ ☐ Mulching/ Hydromulching
- ☐ ☐ Soil Surface Treatments
- ☐ X Temporary Seeding
- ☐ X Permanent Planting, Sodding or Seeding
- ☐ ☐ Biodegradable Erosion Control Logs
- ☐ ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Vertical Tracking
- ☐ ☐ Interceptor Swale
- ☐ X Riprap
- ☐ ☐ Diversion Dike
- ☐ ☐ Temporary Pipe Slope Drain
- ☐ ☐ Embankment for Erosion Control
- ☐ ☐ Paved Flumes
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

2.2 SEDIMENT CONTROL BMPs:

T / P

- X ☐ Biodegradable Erosion Control Logs
- ☐ ☐ Dewatering Controls
- X ☐ Inlet Protection
- X ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Sandbag Berms
- X ☐ Sediment Control Fence
- X ☐ Stabilized Construction Exit
- ☐ ☐ Floating Turbidity Barrier
- ☐ ☐ Vegetated Buffer Zones
- ☐ ☐ Vegetated Filter Strips
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

Sediment control BMPs requiring design capacity calculations (See SWP3 Attachment 1.3.):

T / P

- ☐ ☐ Sediment Trap
  - ☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
  - ☐ 3,600 cubic feet of storage per acre drained
- ☐ ☐ Sedimentation Basin
  - ☐ Not required (<10 acres disturbed)
  - ☐ Required (>10 acres) and implemented.
    - ☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
    - ☐ 3,600 cubic feet of storage per acre drained
  - ☐ Required (>10 acres), but not feasible due to:
    - ☐ Available area/Site geometry
    - ☐ Site slope/Drainage patterns
    - ☐ Site soils/Geotechnical factors
    - ☐ Public safety
    - ☐ Other: _____

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Stationing	
	From	To
No permanent controls are planned		

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

- X Excess dirt/mud on road removed daily
- X Haul roads dampened for dust control
- X Loaded haul trucks to be covered with tarpaulin
- X Stabilized construction exit
- X Daily street sweeping
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

2.5 POLLUTION PREVENTION MEASURES:

- X Chemical Management
- X Concrete and Materials Waste Management
- X Debris and Trash Management
- X Dust Control
- X Sanitary Facilities
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

2.6 VEGETATED BUFFER ZONES:

Natural vegetated buffers shall be maintained as feasible to protect adjacent surface waters. If vegetated natural buffer zones are not feasible due to site geometry, the appropriate additional sediment control measures have been incorporated into this SWP3.

Type	Stationing	
	From	To
No surface waters present, vegetated buffer zones are not planned		

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- X Fire hydrant flushings
- X Irrigation drainage
- X Pavement washwater (where spills or leaks have not occurred, and detergents are not used)
- X Potable water sources
- X Springs
- X Uncontaminated groundwater
- X Water used to wash vehicles or control dust
- X Other allowable non-stormwater discharges as allowed by TPDES GP TXR150000.

2.8 DEWATERING:

Dewatering discharges of accumulated stormwater, groundwater, and surface water including discharges from dewatering of trenches, excavations, foundations, vaults, and other points of accumulation are prohibited unless managed by appropriate controls to prevent and minimize the offsite discharge of sediment and other pollutants.

2.9 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

When dewatering activities are present, a daily inspection will be conducted once per day during those activities and documented in accordance with CGP and TxDOT requirements.

2.10 MAINTENANCE:

Control measures shall be properly installed according to specifications. If it is determined that a BMP or control measure is not operating effectively, maintenance must be accomplished as soon as possible and before the next anticipated rain event, but in no case later than 7 calendar days after being able to access the site. Maintenance shall be performed by the Contractor as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

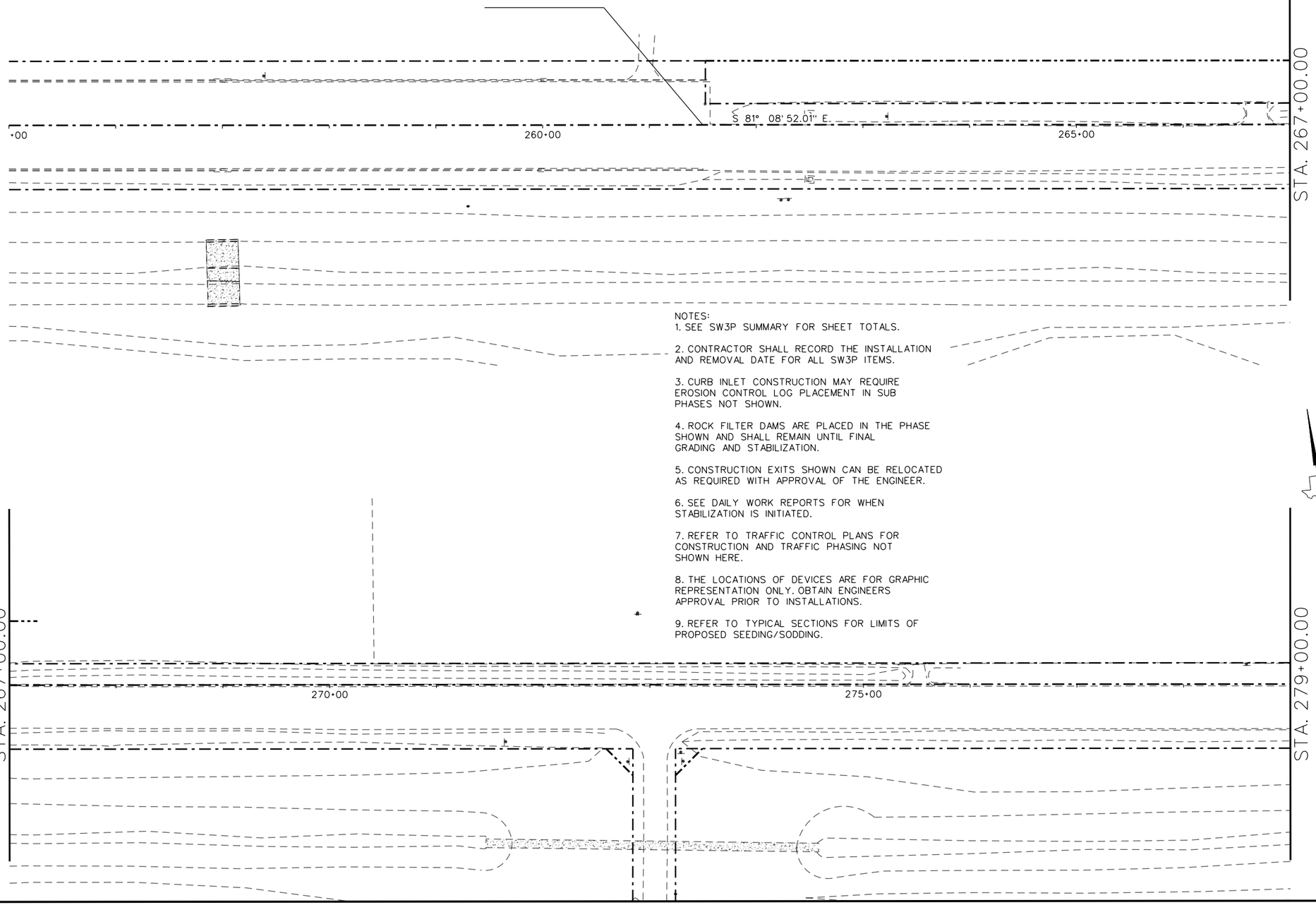
July 2023 Sheet 2 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			220
STATE	STATE DIST.	COUNTY	
TEXAS	PHARR		
CONT.	SECT.	JOB	HIGHWAY NO.
1803	02	035	FM1925

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	-
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	-
506	CONSTRUCTION EXITS (REMOVE)	SY	-
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	-
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-



NOTES:
1. SEE SW3P SUMMARY FOR SHEET TOTALS.

2. CONTRACTOR SHALL RECORD THE INSTALLATION AND REMOVAL DATE FOR ALL SW3P ITEMS.

3. CURB INLET CONSTRUCTION MAY REQUIRE EROSION CONTROL LOG PLACEMENT IN SUB PHASES NOT SHOWN.

4. ROCK FILTER DAMS ARE PLACED IN THE PHASE SHOWN AND SHALL REMAIN UNTIL FINAL GRADING AND STABILIZATION.

5. CONSTRUCTION EXITS SHOWN CAN BE RELOCATED AS REQUIRED WITH APPROVAL OF THE ENGINEER.

6. SEE DAILY WORK REPORTS FOR WHEN STABILIZATION IS INITIATED.

7. REFER TO TRAFFIC CONTROL PLANS FOR CONSTRUCTION AND TRAFFIC PHASING NOT SHOWN HERE.

8. THE LOCATIONS OF DEVICES ARE FOR GRAPHIC REPRESENTATION ONLY. OBTAIN ENGINEERS APPROVAL PRIOR TO INSTALLATIONS.

9. REFER TO TYPICAL SECTIONS FOR LIMITS OF PROPOSED SEEDING/SODDING.

LEGEND

- PROP. SEEDING AREA
- TEMPORARY CONST. DETOUR
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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 (LF)
- BMP (RFD1) XX' — PROP. ROCK FILTER DAM (TYPE 1) (LF)
- BMP (SCF) XX' — PROP. SEDIMENT CONTROL FENCE (LF)

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
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Fax : (956) 585-1927

FM 1925
SW3P LAYOUT
PHASE I
STA. 255+00 TO STA. 279+00

SHEET 1 OF 4

DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: RP		6	TEXAS					221
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925	
TR:								
CK TR:								

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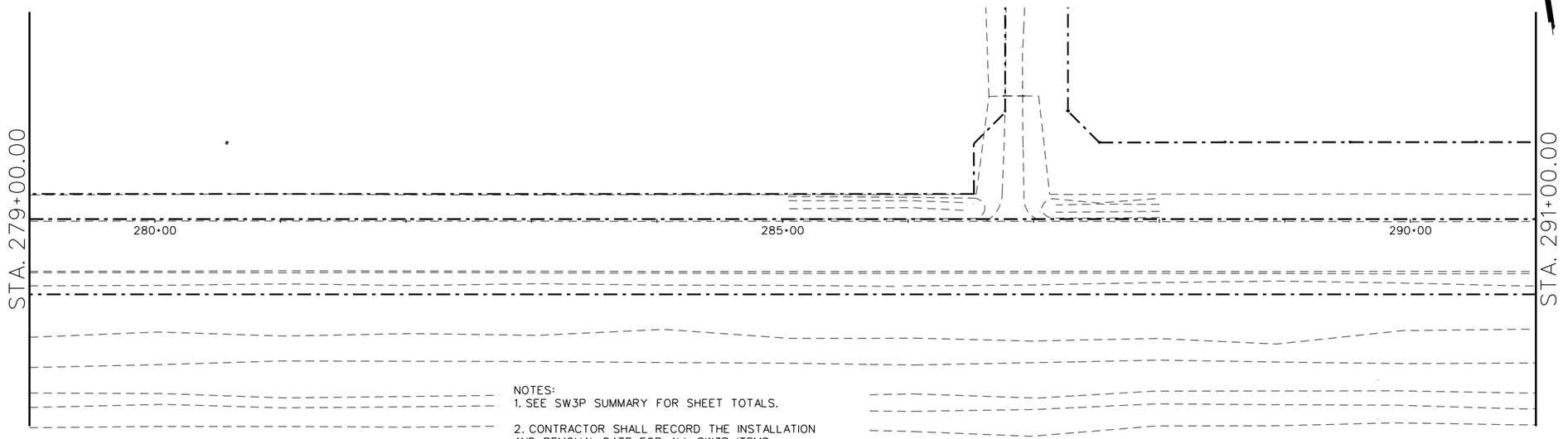
SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	0.09
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	78
506	CONSTRUCTION EXITS (REMOVE)	SY	78
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	-
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-



NOTES:
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BMP ID	DATE INSTALL	DATE REMOVE
BMP 1		

LEGEND

- PROP. SEEDING AREA
- TEMPORARY CONST. DETOUR
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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)
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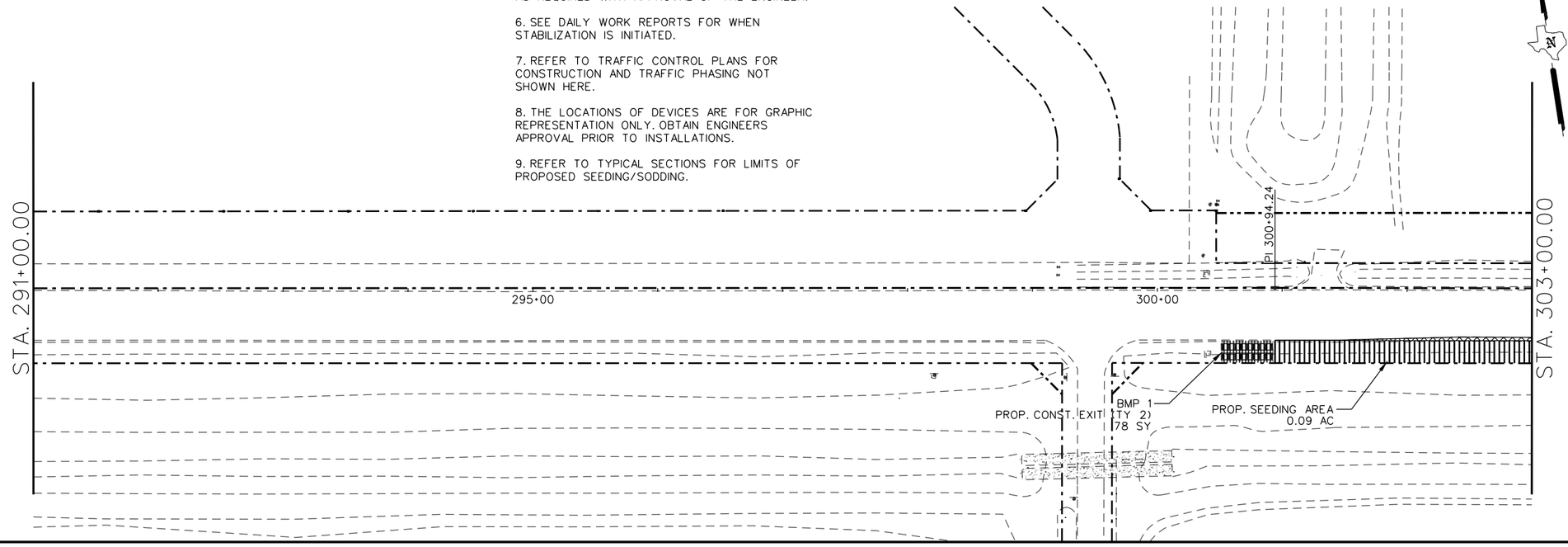

STATE OF TEXAS
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11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925
SW3P LAYOUT
PHASE I
STA. 279+00 TO STA. 303+00

DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
CK DN: RP		6	TEXAS				222
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925
TR:	
CK TR:	

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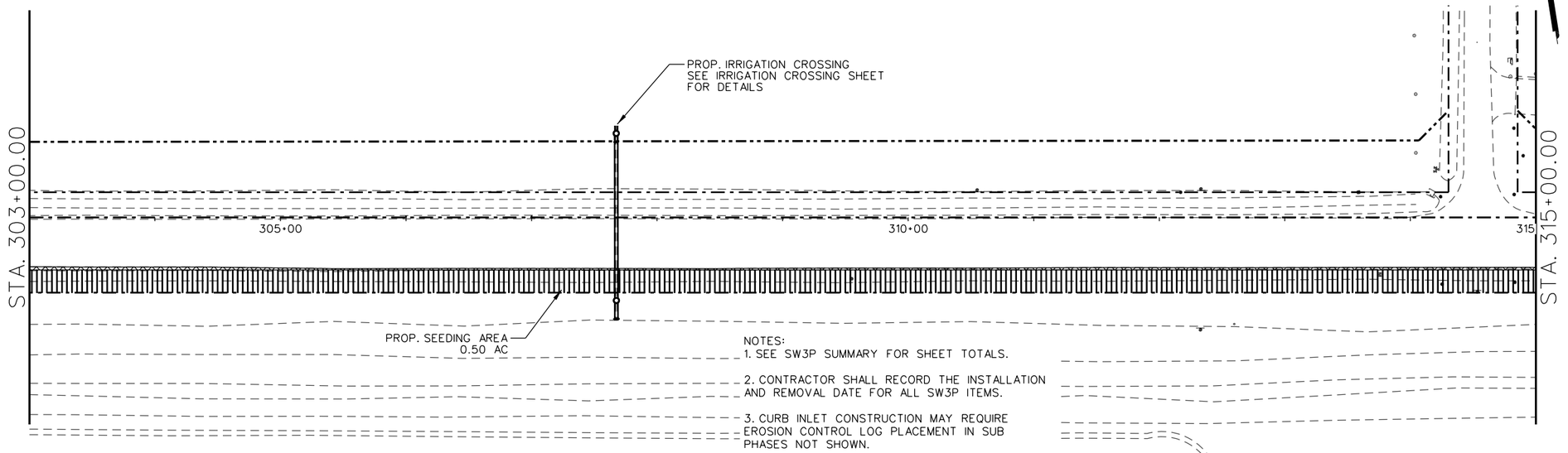
SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	0.98
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	-
506	CONSTRUCTION EXITS (REMOVE)	SY	-
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	-
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-



NOTES:

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3. CURB INLET CONSTRUCTION MAY REQUIRE EROSION CONTROL LOG PLACEMENT IN SUB PHASES NOT SHOWN.
4. ROCK FILTER DAMS ARE PLACED IN THE PHASE SHOWN AND SHALL REMAIN UNTIL FINAL GRADING AND STABILIZATION.
5. CONSTRUCTION EXITS SHOWN CAN BE RELOCATED AS REQUIRED WITH APPROVAL OF THE ENGINEER.
6. SEE DAILY WORK REPORTS FOR WHEN STABILIZATION IS INITIATED.
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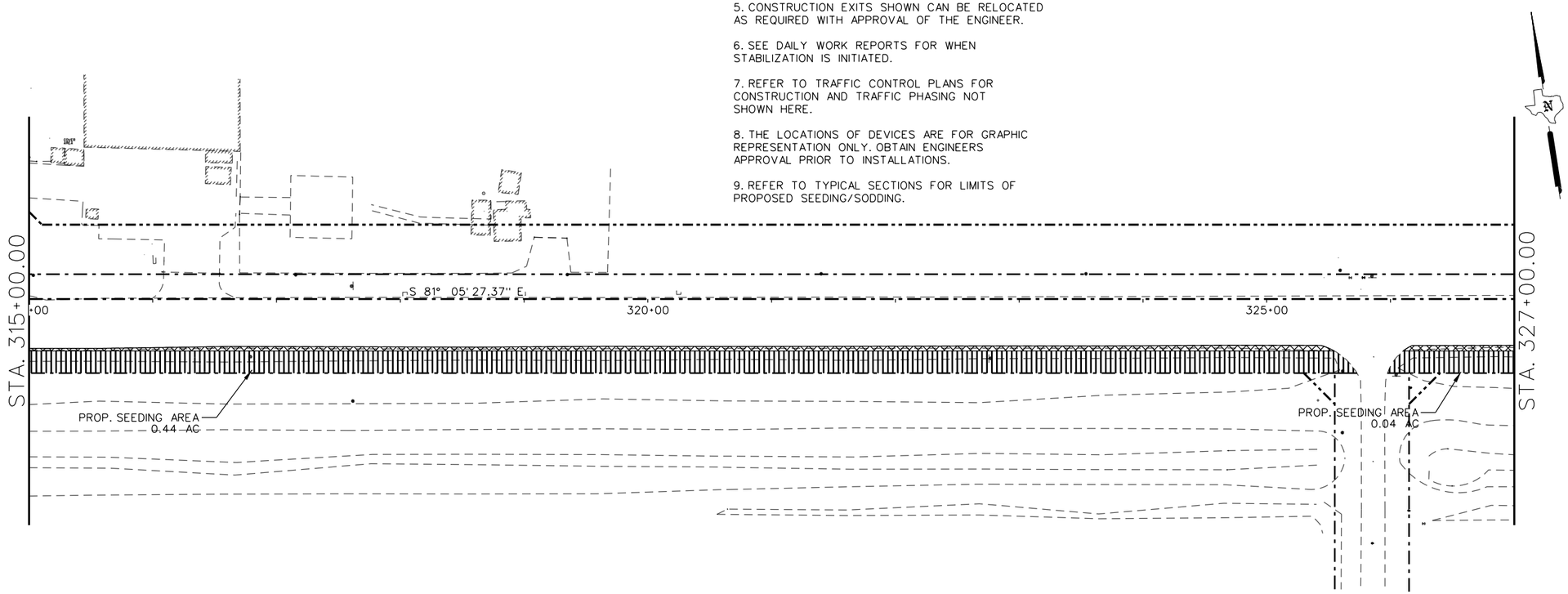

LEGEND

- PROP. SEEDING AREA
- TEMPORARY CONST. DETOUR
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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)
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- BMP (RFD1) XX' — PROP. ROCK FILTER DAM (TYPE 1) (LF)
- BMP (SCF) XX' — PROP. SEDIMENT CONTROL FENCE (LF)

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11/01/2023

THE COUNTY OF HIDALGO
TEXAS

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SW3P LAYOUT
PHASE I
STA. 303+00 TO STA. 327+00

SHEET 3 OF 4

DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: RP		6	TEXAS					223
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925	
TR:								
CK TR:								

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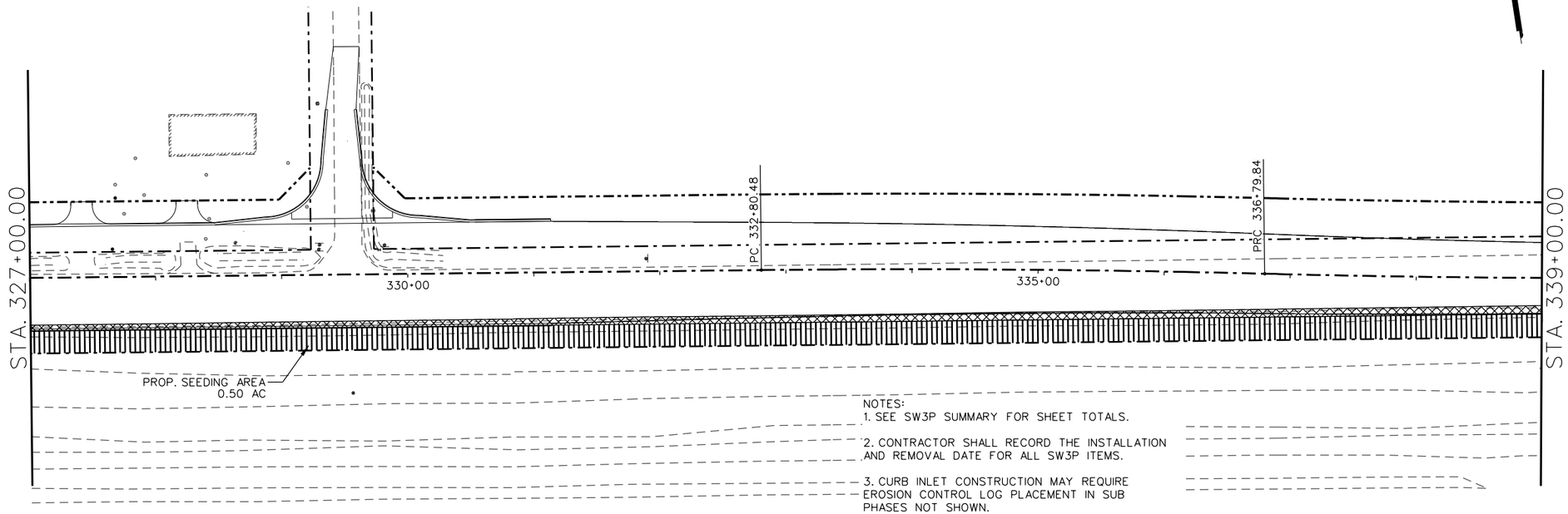
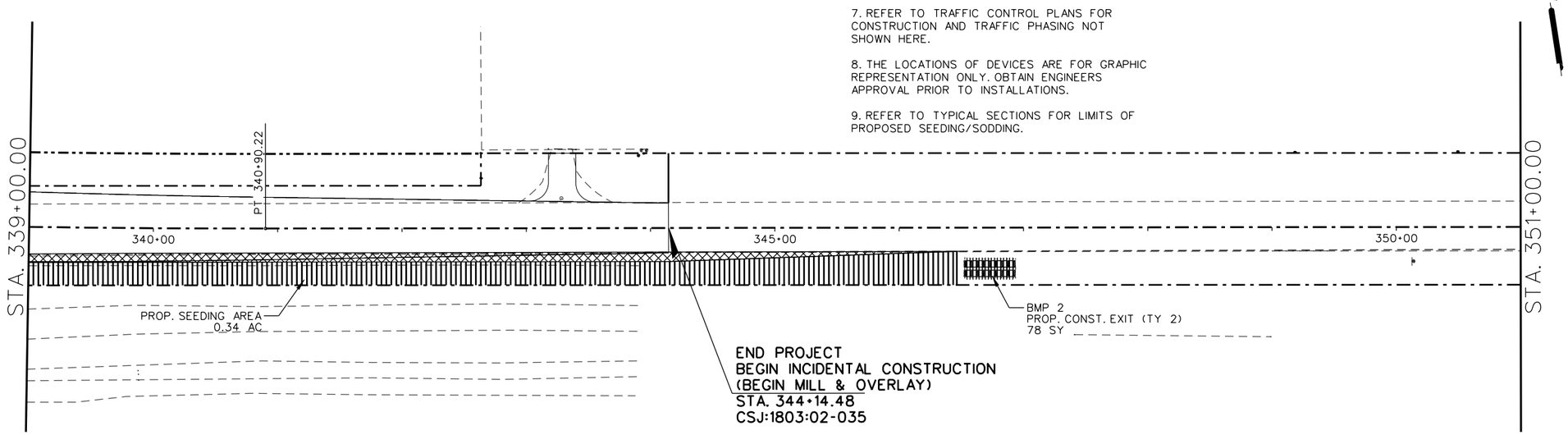
SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	0.84
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	78
506	CONSTRUCTION EXITS (REMOVE)	SY	78
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	-
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-



NOTES:
1. SEE SW3P SUMMARY FOR SHEET TOTALS.
2. CONTRACTOR SHALL RECORD THE INSTALLATION AND REMOVAL DATE FOR ALL SW3P ITEMS.
3. CURB INLET CONSTRUCTION MAY REQUIRE EROSION CONTROL LOG PLACEMENT IN SUB PHASES NOT SHOWN.
4. ROCK FILTER DAMS ARE PLACED IN THE PHASE SHOWN AND SHALL REMAIN UNTIL FINAL GRADING AND STABILIZATION.
5. CONSTRUCTION EXITS SHOWN CAN BE RELOCATED AS REQUIRED WITH APPROVAL OF THE ENGINEER.
6. SEE DAILY WORK REPORTS FOR WHEN STABILIZATION IS INITIATED.
7. REFER TO TRAFFIC CONTROL PLANS FOR CONSTRUCTION AND TRAFFIC PHASING NOT SHOWN HERE.
8. THE LOCATIONS OF DEVICES ARE FOR GRAPHIC REPRESENTATION ONLY. OBTAIN ENGINEERS APPROVAL PRIOR TO INSTALLATIONS.
9. REFER TO TYPICAL SECTIONS FOR LIMITS OF PROPOSED SEEDING/SODDING.

BMP ID	DATE INSTALL	DATE REMOVE
BMP 2		



LEGEND

- PROP. SEEDING AREA
- TEMPORARY CONST. DETOUR
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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 (LF)
- BMP (RFD1) XX' — PROP. ROCK FILTER DAM (TYPE 1) (LF)
- BMP (SCF) XX' — PROP. SEDIMENT CONTROL FENCE (LF)

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

L&G Engineering
Highway / Civil
Structural / Bridge
Environmental
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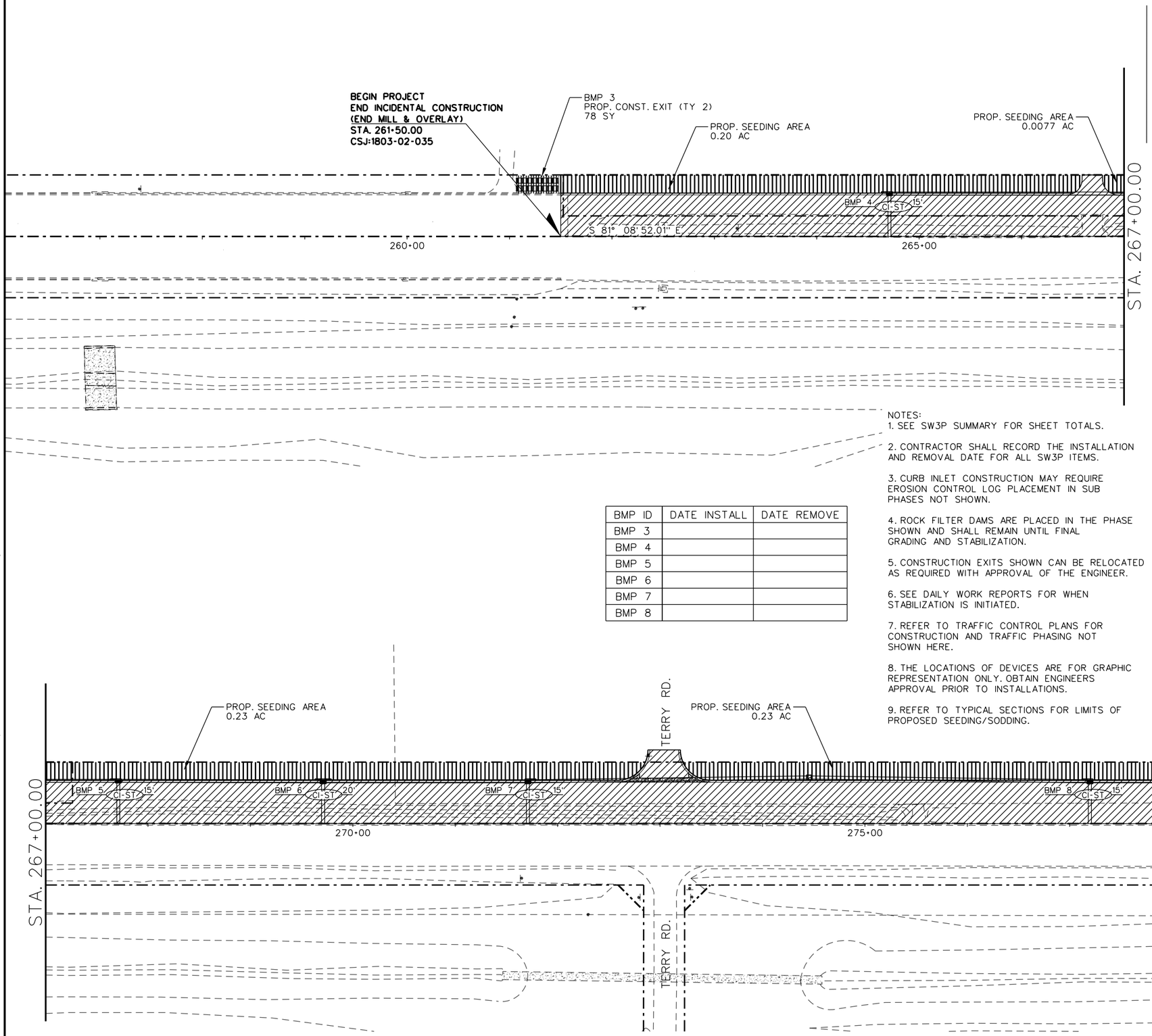
FM 1925
SW3P LAYOUT
PHASE I
STA. 327+00 TO STA. 351+00

DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: RP		6	TEXAS					224
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925	
TR:								
CK TR:								

10/31/2023 Counties\HID\FM 1925 PHI(907 to Uresti)\08 ENVIRONMENTAL\03 SW3P Layouts\SW3P PHASE I LAYOUT\SW3P PHASE 1_4.dgn



BMP ID	DATE INSTALL	DATE REMOVE
BMP 3		
BMP 4		
BMP 5		
BMP 6		
BMP 7		
BMP 8		

NOTES:
1. SEE SW3P SUMMARY FOR SHEET TOTALS.

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5. CONSTRUCTION EXITS SHOWN CAN BE RELOCATED AS REQUIRED WITH APPROVAL OF THE ENGINEER.

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7. REFER TO TRAFFIC CONTROL PLANS FOR CONSTRUCTION AND TRAFFIC PHASING NOT SHOWN HERE.

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SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (PERM)(URBAN)(CLAY)	AC	0.67
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	0.67
166	FERTILIZER ***NON-PAY***	TON	0.17
168	VEGETATIVE WATERING	MG	102
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	78
506	CONSTRUCTION EXITS (REMOVE)	SY	78
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	80
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	80
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-

LEGEND

- PROP. SEEDING AREA
- CONSTRUCTION PHASE
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

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 (LF)

BMP (RFD1) XX' — PROP. ROCK FILTER DAM (TYPE 1) (LF)

BMP (SCF) XX' — PROP. SEDIMENT CONTROL FENCE (LF)

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FM 1925
SW3P LAYOUT
PHASE II
STA. 255+00 TO STA. 279+00

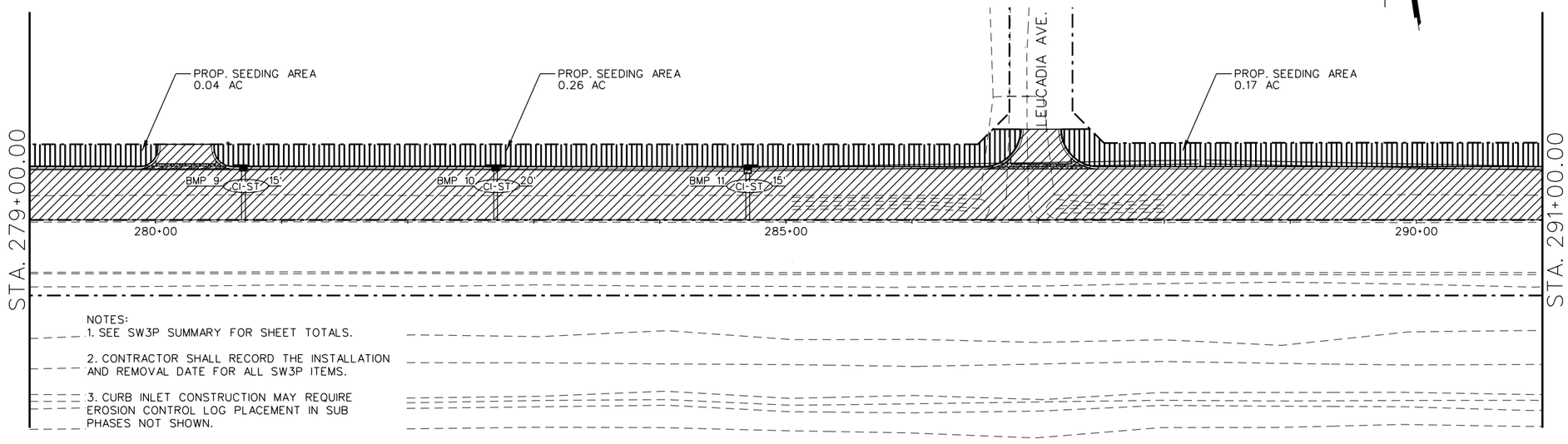
SCALE: 1"=100' SHEET 1 OF 4

DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: RP		6	TEXAS					225
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925	
TR:								
CK TR:								

10/31/2023 J:\Counties\HID\FM 1925 PHII(907 to Uresti)\08 ENVIRONMENTAL\03 SW3P Layouts\SW3P PHASE II\LAYOUT\SW3P PHASE 2_1.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (PERM)(URBAN)(CLAY)	AC	0.95
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	0.95
166	FERTILIZER ***NON-PAY***	TON	0.24
168	VEGETATIVE WATERING	MG	145
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	35
506	ROCK FILTER DAMS (REMOVE)	LF	35
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	78
506	CONSTRUCTION EXITS (REMOVE)	SY	78
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	130
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	130
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	345
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	345



NOTES:

1. SEE SW3P SUMMARY FOR SHEET TOTALS.
2. CONTRACTOR SHALL RECORD THE INSTALLATION AND REMOVAL DATE FOR ALL SW3P ITEMS.
3. CURB INLET CONSTRUCTION MAY REQUIRE EROSION CONTROL LOG PLACEMENT IN SUB PHASES NOT SHOWN.
4. ROCK FILTER DAMS ARE PLACED IN THE PHASE SHOWN AND SHALL REMAIN UNTIL FINAL GRADING AND STABILIZATION.
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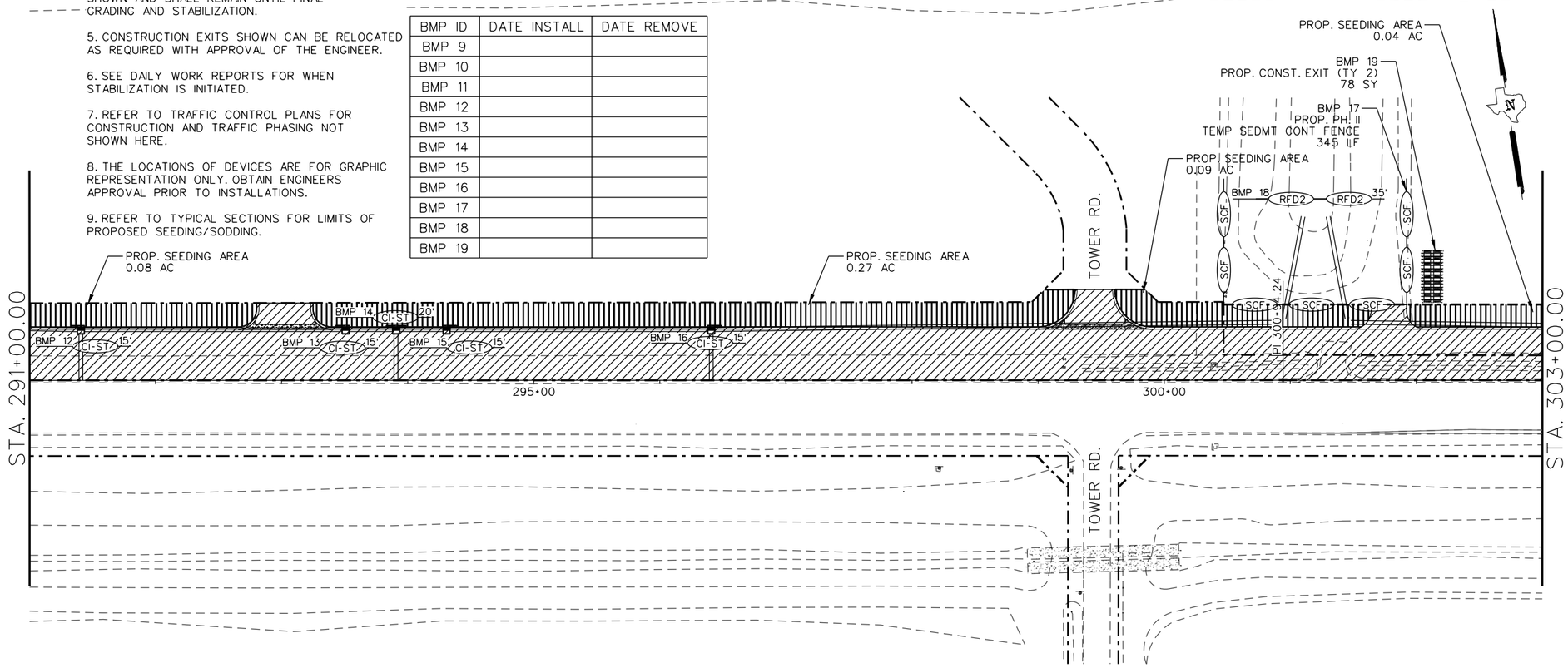
BMP ID	DATE INSTALL	DATE REMOVE
BMP 9		
BMP 10		
BMP 11		
BMP 12		
BMP 13		
BMP 14		
BMP 15		
BMP 16		
BMP 17		
BMP 18		
BMP 19		



LEGEND

- PROP. SEEDING AREA
- CONSTRUCTION PHASE
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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 (LF)
- BMP RFD1 XX' — PROP. ROCK FILTER DAM (TYPE 1) (LF)
- BMP SCF XX' — PROP. SEDIMENT CONTROL FENCE (LF)

STATE OF TEXAS
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127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925
SW3P LAYOUT
PHASE II
STA. 279+00 TO STA. 303+00

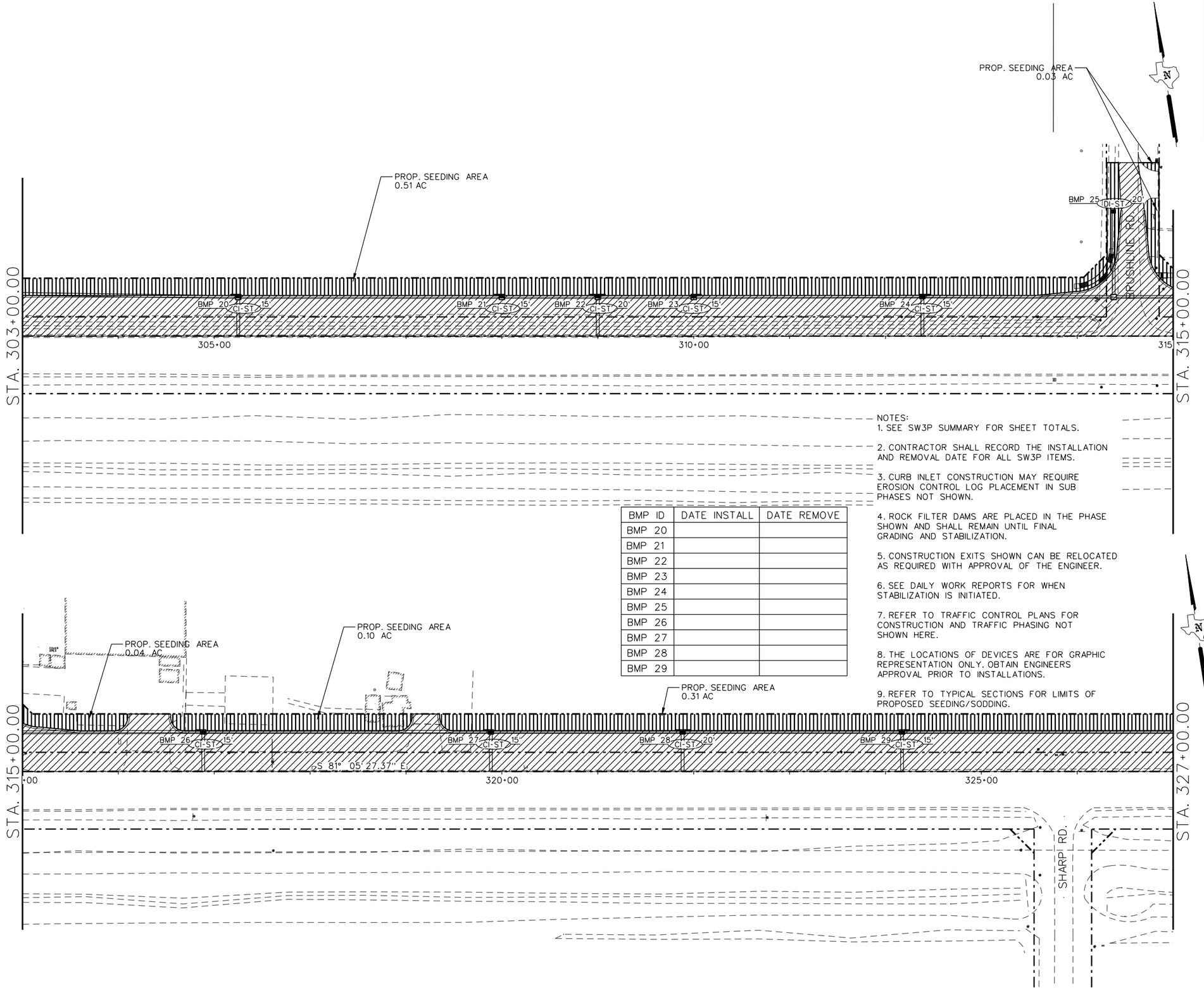
SCALE: 1"=100' SHEET 2 OF 4

DN: RP						
CK DN: RP	FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
DW: JBS	6	TEXAS				226
CK DW: JBS	STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
TR:	PHR	HIDALGO	1803	02	035	FM 1925
CK TR:						

10/31/2023 J:\projects\HID\FM 1925 PH II(907 to Urest)\08 ENVIRONMENTAL\03 SW3P Layouts\SW3P PHASE II\LAYOUT\SW3P PHASE 2_2.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (PERM)(URBAN)(CLAY)	AC	0.99
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	0.99
166	FERTILIZER ***NON-PAY***	TON	0.25
168	VEGETATIVE WATERING	MG	151
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	-
506	CONSTRUCTION EXITS (REMOVE)	SY	-
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	145
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	20
506	BIOGRD EROSN CONT LOGS REMOVE	LF	165
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-



BMP ID	DATE INSTALL	DATE REMOVE
BMP 20		
BMP 21		
BMP 22		
BMP 23		
BMP 24		
BMP 25		
BMP 26		
BMP 27		
BMP 28		
BMP 29		

NOTES:

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2. CONTRACTOR SHALL RECORD THE INSTALLATION AND REMOVAL DATE FOR ALL SW3P ITEMS.
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LEGEND

- PROP. SEEDING AREA
- CONSTRUCTION PHASE
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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 (LF)
- BMP RFD1 XX' — PROP. ROCK FILTER DAM (TYPE 1) (LF)
- BMP SCF XX' — PROP. SEDIMENT CONTROL FENCE (LF)

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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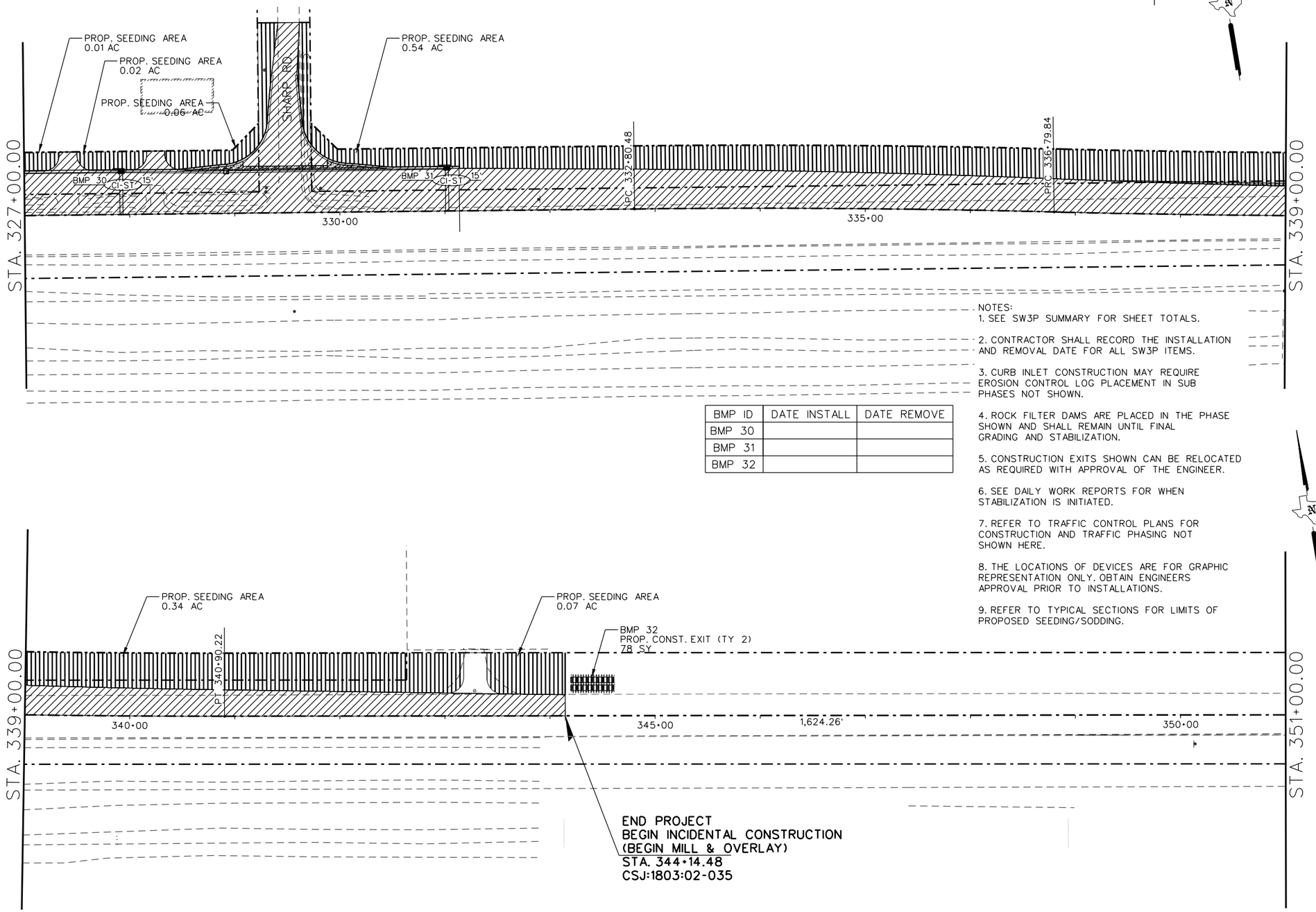
FM 1925
SW3P LAYOUT
PHASE II
STA. 303+00 TO STA. 327+00

SCALE: 1"=100' SHEET 3 OF 4

DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
6	TEXAS				227
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
PHR	HIDALGO	1803	02	035	FM 1925

10/31/2023 J:\Counties\HID\FM 1925 PHII (907 to Ureste)\08 ENVIRONMENTAL\03 SW3P Layouts\SW3P PHASE II\LAYOUT\SW3P PHASE 2_3.dgn



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (PERM)(URBAN)(CLAY)	AC	1.04
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	1.04
166	FERTILIZER ***NON-PAY***	TON	0.26
168	VEGETATIVE WATERING	MG	159
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	78
506	CONSTRUCTION EXITS (REMOVE)	SY	78
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	30
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	30
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-

LEGEND

- PROP. SEEDING AREA
- CONSTRUCTION PHASE
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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 (LF)
- BMP (RFD1) XX' — PROP. ROCK FILTER DAM (TYPE 1) (LF)
- BMP (SCF) XX' — PROP. SEDIMENT CONTROL FENCE (LF)

NOTES:
1. SEE SW3P SUMMARY FOR SHEET TOTALS.
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BMP ID	DATE INSTALL	DATE REMOVE
BMP 30		
BMP 31		
BMP 32		

STATE OF TEXAS
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11/01/2023

THE COUNTY OF HIDALGO TEXAS

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FM 1925
SW3P LAYOUT
PHASE II
STA. 327+00 TO STA. 351+00

SCALE: 1"=100' SHEET 4 OF 4

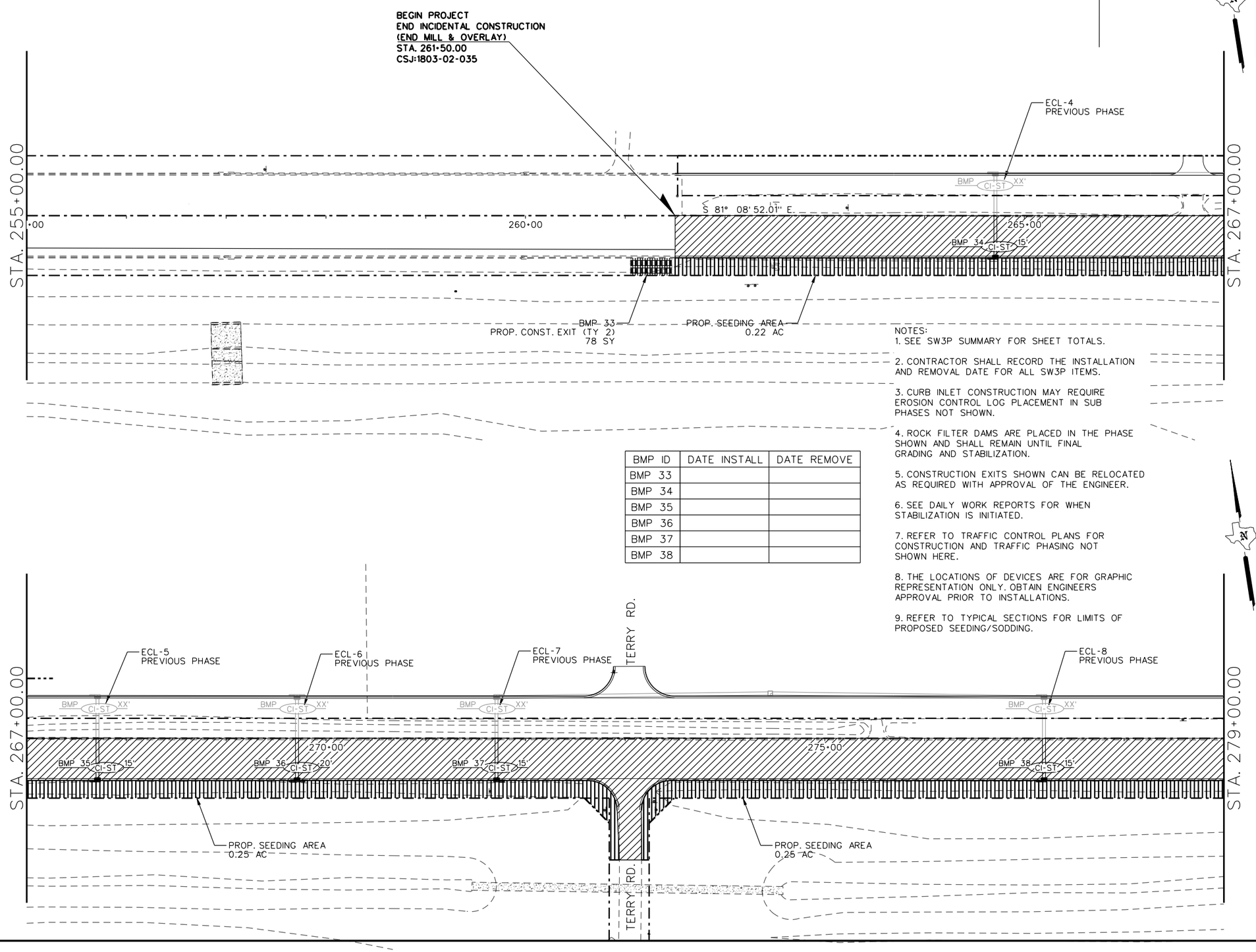
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
6	TEXAS					228
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
PHR	HIDALGO	1803	02	035	FM 1925	

10/31/2023&unites\HID\FM 1925 PH II (907 to Uresti)\08 ENVIRONMENTAL\03 SW3P Layouts\SW3P PHASE II LAYOUT\SW3P PHASE 2_4.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (PERM)(URBAN)(CLAY)	AC	0.72
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	0.72
166	FERTILIZER ***NON-PAY***	TON	0.18
168	VEGETATIVE WATERING	MG	110
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	78
506	CONSTRUCTION EXITS (REMOVE)	SY	78
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	80
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	80
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-



BMP ID	DATE INSTALL	DATE REMOVE
BMP 33		
BMP 34		
BMP 35		
BMP 36		
BMP 37		
BMP 38		

NOTES:
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LEGEND

- PROP. SEEDING AREA
- CONSTRUCTION PHASE
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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 (LF)
- BMP RFD1 XX' — PROP. ROCK FILTER DAM (TYPE 1) (LF)
- BMP SCF XX' — PROP. SEDIMENT CONTROL FENCE (LF)

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11/01/2023

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FM 1925
SW3P LAYOUT
PHASE III
STA. 255+00 TO STA. 279+00

SCALE: 1"=100' SHEET 1 OF 4

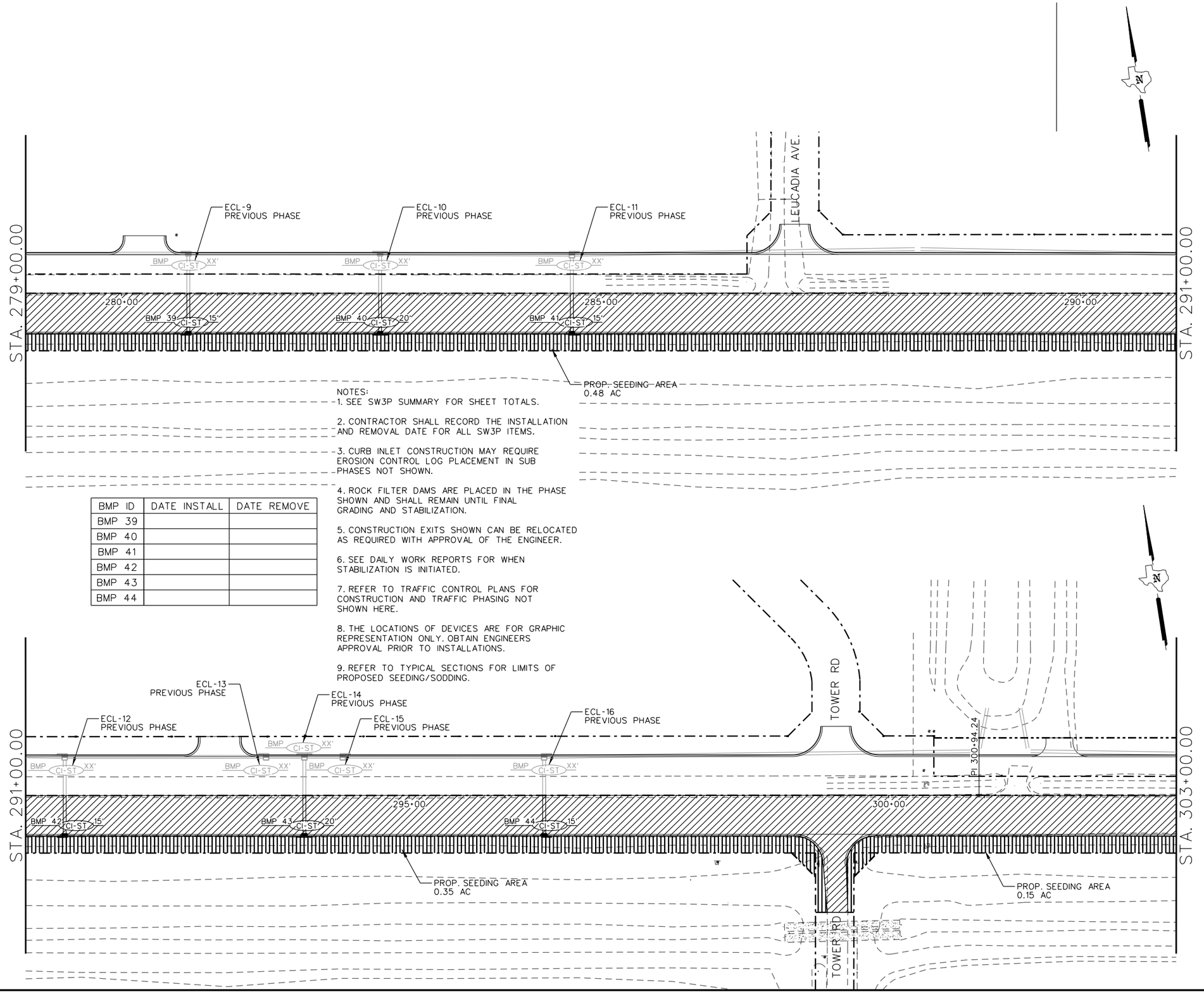
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

FED. RD. DIV. NO.	STATE	PROJECT NO.			SHEET NO.
6	TEXAS				229
STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
PHR	HIDALGO	1803	02	035	FM 1925

10/31/2023 c:\counties\HIDALGO\FM 1925 PHII(907 to Uresti)\08 ENVIRONMENTAL\03 SW3P Layouts\SW3P PHASE III\LAYOUT\SW3P PHASE 3_1.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (PERM)(URBAN)(CLAY)	AC	0.98
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	0.98
166	FERTILIZER ***NON-PAY***	TON	0.25
168	VEGETATIVE WATERING	MG	150
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	-
506	CONSTRUCTION EXITS (REMOVE)	SY	-
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	100
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	100
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-



BMP ID	DATE INSTALL	DATE REMOVE
BMP 39		
BMP 40		
BMP 41		
BMP 42		
BMP 43		
BMP 44		

LEGEND

- PROP. SEEDING AREA
- CONSTRUCTION PHASE
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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 (LF)
- BMP RFD1 XX' — PROP. ROCK FILTER DAM (TYPE 1) (LF)
- BMP SCF XX' — PROP. SEDIMENT CONTROL FENCE (LF)

STATE OF TEXAS
JORDAN B. SINCLAIR
127491
LICENSED PROFESSIONAL ENGINEER
11/01/2023

THE COUNTY OF HIDALGO TEXAS

Texas Department of Transportation

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

FM 1925
SW3P LAYOUT
PHASE III
STA. 279+00 TO STA. 303+00

SCALE: 1"=100' SHEET 2 OF 4

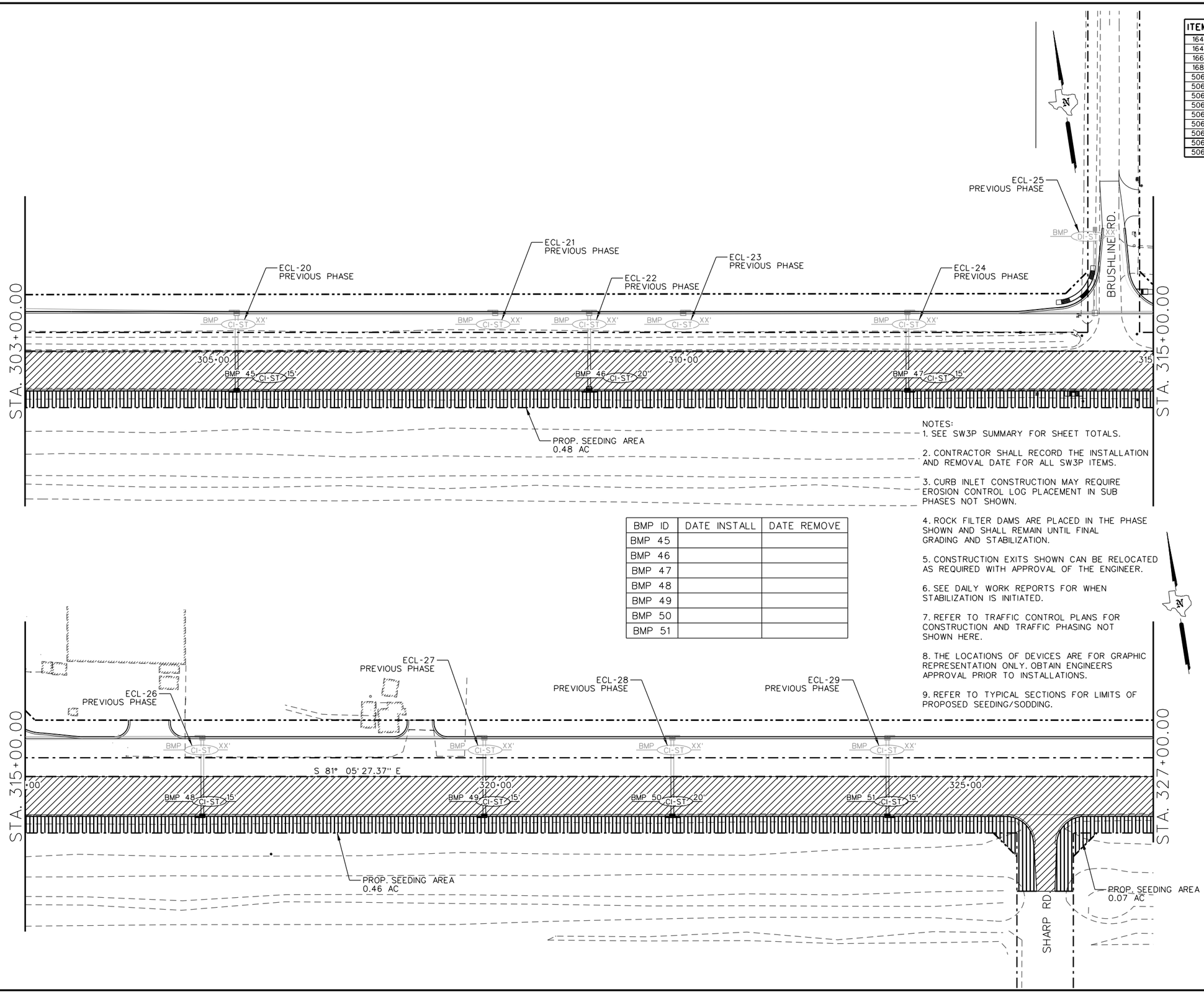
DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

FED. RD. DIV. NO.	STATE	PROJECT NO.	SHEET NO.
6	TEXAS		230

STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
PHR	HIDALGO	1803	02	035	FM 1925

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (PERM)(URBAN)(CLAY)	AC	1.01
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	1.01
166	FERTILIZER ***NON-PAY***	TON	0.25
168	VEGETATIVE WATERING	MG	154
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	-
506	CONSTRUCTION EXITS (REMOVE)	SY	-
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	115
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	115
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-



BMP ID	DATE INSTALL	DATE REMOVE
BMP 45		
BMP 46		
BMP 47		
BMP 48		
BMP 49		
BMP 50		
BMP 51		

NOTES:
1. SEE SW3P SUMMARY FOR SHEET TOTALS.
2. CONTRACTOR SHALL RECORD THE INSTALLATION AND REMOVAL DATE FOR ALL SW3P ITEMS.
3. CURB INLET CONSTRUCTION MAY REQUIRE EROSION CONTROL LOG PLACEMENT IN SUB PHASES NOT SHOWN.
4. ROCK FILTER DAMS ARE PLACED IN THE PHASE SHOWN AND SHALL REMAIN UNTIL FINAL GRADING AND STABILIZATION.
5. CONSTRUCTION EXITS SHOWN CAN BE RELOCATED AS REQUIRED WITH APPROVAL OF THE ENGINEER.
6. SEE DAILY WORK REPORTS FOR WHEN STABILIZATION IS INITIATED.
7. REFER TO TRAFFIC CONTROL PLANS FOR CONSTRUCTION AND TRAFFIC PHASING NOT SHOWN HERE.
8. THE LOCATIONS OF DEVICES ARE FOR GRAPHIC REPRESENTATION ONLY. OBTAIN ENGINEERS APPROVAL PRIOR TO INSTALLATIONS.
9. REFER TO TYPICAL SECTIONS FOR LIMITS OF PROPOSED SEEDING/SODDING.

LEGEND

- PROP. SEEDING AREA
- CONSTRUCTION PHASE
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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 (LF)
- BMP RFD1 XX' — PROP. ROCK FILTER DAM (TYPE 1) (LF)
- BMP SCF XX' — PROP. SEDIMENT CONTROL FENCE (LF)

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FM 1925
SW3P LAYOUT
PHASE III
STA. 303+00 TO STA. 327+00

SCALE: 1"=100' SHEET 3 OF 4

DN: RP	CK DN: RP	DW: JBS	CK DW: JBS	TR:	CK TR:

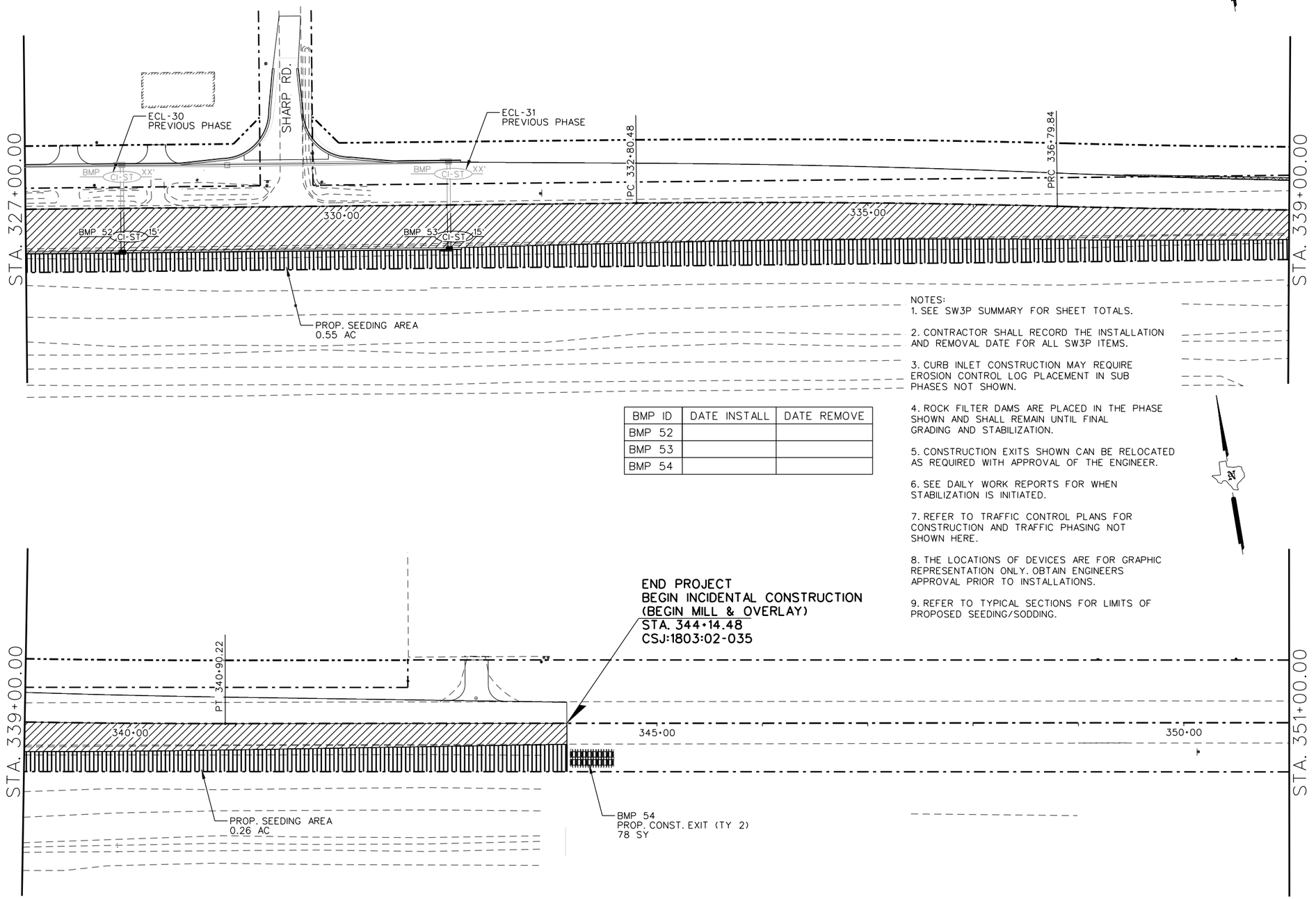
FED. RD. DIV. NO.	STATE	PROJECT NO.	SHEET NO.
6	TEXAS		231

STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
PHR	HIDALGO	1803	02	035	FM 1925

10/31/2023 & unties\HID\FM 1925 PHII(907 to Urest)\08 ENVIRONMENTAL\03 SW3P Layouts\SW3P PHASE III\LAYOUT\SW3P PHASE 3_3.dgn

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
164	CELL FBR MLCH SEED (PERM)(URBAN)(CLAY)	AC	0.81
164	CELL FBR MLCH SEED (TEMP)(WARM)	AC	0.81
166	FERTILIZER ***NON-PAY***	TON	0.20
168	VEGETATIVE WATERING	MG	124
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	-
506	ROCK FILTER DAMS (REMOVE)	LF	-
506	CONSTRUCTION EXITS (INSTALL)(TY 2)	SY	78
506	CONSTRUCTION EXITS (REMOVE)	SY	78
506	BIOGRD EROSN CONT LOGS (6" DIA) INSTALL	LF	30
506	BIOGRD EROSN CONT LOGS (12" DIA) INSTALL	LF	-
506	BIOGRD EROSN CONT LOGS REMOVE	LF	30
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	-
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	-



BMP ID	DATE INSTALL	DATE REMOVE
BMP 52		
BMP 53		
BMP 54		

NOTES:
1. SEE SW3P SUMMARY FOR SHEET TOTALS.
2. CONTRACTOR SHALL RECORD THE INSTALLATION AND REMOVAL DATE FOR ALL SW3P ITEMS.
3. CURB INLET CONSTRUCTION MAY REQUIRE EROSION CONTROL LOG PLACEMENT IN SUB PHASES NOT SHOWN.
4. ROCK FILTER DAMS ARE PLACED IN THE PHASE SHOWN AND SHALL REMAIN UNTIL FINAL GRADING AND STABILIZATION.
5. CONSTRUCTION EXITS SHOWN CAN BE RELOCATED AS REQUIRED WITH APPROVAL OF THE ENGINEER.
6. SEE DAILY WORK REPORTS FOR WHEN STABILIZATION IS INITIATED.
7. REFER TO TRAFFIC CONTROL PLANS FOR CONSTRUCTION AND TRAFFIC PHASING NOT SHOWN HERE.
8. THE LOCATIONS OF DEVICES ARE FOR GRAPHIC REPRESENTATION ONLY. OBTAIN ENGINEERS APPROVAL PRIOR TO INSTALLATIONS.
9. REFER TO TYPICAL SECTIONS FOR LIMITS OF PROPOSED SEEDING/SODDING.

LEGEND

- PROP. SEEDING AREA
- CONSTRUCTION PHASE
- PREVIOUSLY CONSTRUCTED
- PROP. CONSTRUCTION EXIT (TY 2)

- 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)
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FM 1925
SW3P LAYOUT
PHASE III
STA. 327+00 TO STA. 351+00

SCALE: 1"=100' SHEET 4 OF 4

DN: RP		FED. RD. DIV. NO.	STATE	PROJECT NO.				SHEET NO.
CK DN: RP		6	TEXAS					232
DW: JBS		STATE DIST. NO	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.	
CK DW: JBS		PHR	HIDALGO	1803	02	035	FM 1925	
TR:								
CK TR:								

10/31/2023 & unties\HID\FM 1925 PHI(907 to Uresti)\08 ENVIRONMENTAL\03 SW3P Layouts\SW3P PHASE III\LAYOUT\SW3P PHASE 3_4.dgn

TPWD BMPs

Under Section 12.0011 of the Texas Parks and Wildlife Code, Texas Parks and Wildlife Department (TPWD) is charged with "providing recommendations that will protect fish and wildlife resources to local, state, and federal agencies that approve, permit, license, or construct developmental projects" and "providing information on fish and wildlife resources to any local, state, and federal agencies or private organizations that make decisions affecting those resources."

The purpose of this section is to provide beneficial management practices (BMP) that should be implemented during construction, and maintenance activities statewide for transportation projects with the goal of avoidance and minimization of impacts to natural resources. Statewide Standard BMP pertain to all fish and wildlife species, including state-listed species and other Species of Greatest Conservation Need (SGCN). Implementing the recommendations as outlined below will improve conservation of species and their habitat.

☒ General Design/Construction BMPs

- ☒ Prior to start of construction, information will be provided to personnel of the potential for all state-listed threatened species or other SGCN to occur within the project area and should be advised of relevant rules and regulations to protect plants, fish, and wildlife.
- ☒ Contractor should avoid harming all wildlife species if encountered and allow them to safely leave the project site. Due diligence should be used to avoid killing or harming any wildlife species in the implementation of transportation projects.
- ☐ Contractors should install wildlife exclusion fencing and should examine the inside of the exclusion area daily to determine if any wildlife species have been trapped inside the area of impact and provide safe egress opportunities prior to initiation of construction activities.
- ☒ Apply hydromulching and/or hydroseeding in areas for soil stabilization and/or revegetation of disturbed areas around wetlands and in riparian areas.
- ☐ Contractor should use woven natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic netting should be avoided.
- ☐ Project staging areas, stockpiles, temporary construction easements, and other project related sites should be situated in previously disturbed areas to avoid or minimize impacts to sensitive or unique habitats including intact native vegetation, floodplains, riparian corridors, wetlands, playa lakes, and habitat for wildlife species.
- ☐ When lighting is added, consider wildlife impacts from light pollution and incorporating dark-sky practices into design strategies. Minimize sky glow by focusing light downward, with full cutoff luminaries to avoid light emitting above the horizontal. The minimum amount of night-time lighting needed for safety and security should be used.

☒ Vegetation BMPs

- ☒ Minimize the amount of vegetation cleared. Removal of native vegetation, particularly mature native trees and shrubs should be avoided. Impacted vegetation should be replaced with in-kind on- site replacement /restoration of native vegetation.
- ☒ It is strongly recommended that trees greater than 12 inches in diameter at breast height (DBH) that are removed be replaced. TPWD 5/32 s experience indicates that for ecologically effective replacement, a ratio of three trees for every one (3:1) lost should be provided to either on-site or off-site. Trees less than 12 inches DBH should be replaced at a 1:1 ratio.
- ☒ 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 regional ecotype native species is recommended

☐ Invasive Species BMPs

- ☐ For all work in water bodies designated as 3/32 infested 5/32 or 3/32 positive 5/32 for invasive zebra (Dreissena polymorpha) OR quagga mussels (Dreissena bugensis) as well as waters downstream of these lakes, all machinery, equipment, vessels, or vehicles coming in contact with such waters should be cleaned prior to leaving the site to remove any mud, plants, organisms, or debris, water drained (if applicable), and dried completely before use in another water body to prevent the potential spread of invasive mussels.
- ☐ Care should be taken to prevent the spread of aquatic and terrestrial invasive plants during construction activities.
- ☐ Care should be taken to avoid the spread of aquatic invasive plants such as giant Salvinia (Salvinia molesta), common salvinia (Salvinia minima), hydrilla (Hydrilla verticillata), water hyacinth (Eichhornia spp.), Eurasian watermilfoil (Myriophyllum spicatum), water lettuce (Pistia stratiotes), and alligatorweed (Alternanthera philoxeroides) from infested water bodies into areas not currently infested. All machinery, equipment, vessels, boat trailers, or vehicles coming in contact with waters containing aquatic invasive plant species should be cleaned prior to leaving the site to remove all aquatic plant material and dried completely before use on another water body to prevent the potential spread of invasive plants. Removed plants should be transported for disposal in a secure manner to prevent dispersal.
- ☐ Only native or non-invasive plants should be planted. Care should be taken to avoid mowing invasive giant reed (Arundo donax), which spreads by fragmentation, and to clean equipment if inadvertently mowed to prevent spread. 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.

☐ Stream Crossings BMPs

- ☐ Riparian buffer zones should remain undisturbed.

☐ Dewatering BMPs

- ☐ Impact avoidance measures for aquatic organisms, including all native fish and freshwater mussel species, regardless of state-listing status, should be considered during project planning and construction activities.

☐ Wildlife Crossing BMPs

- ☐ Incorporate wildlife crossings with fencing, particularly in areas that bisect wildlife travel corridors or seasonal movement routes to avoid further habitat fragmentation and minimize wildlife-vehicle interactions.

☐ Rare Plant BMPs

- ☐ Avoid impacts and minimize unavoidable impacts. Plant locations should be protected with temporary barrier fencing and contractors should be instructed to avoid protected areas. Conducting construction outside of the growing season or after a plant has produced mature fruit is the preferred way to avoid/minimize impacts to SGCN plant populations. Staging areas, stockpiles, and other project related sites on TxDOT ROW should not impact SGCN plant populations. After construction begins, minimize herbicide use near SGCN plant populations (if possible, use hand-held spot sprayers, several meters from rare plants, on still or days with little wind).

Pharr District Contact No. 956-702-6100

☐ Rare Plants BMPs (Continued)

- ☐ If there are unintended impacts to SGCN populations, these impacts should be reported to TPWD Transportation Staff.
- ☐ During project period, conduct work during times of the year when plants are dormant and/or conditions minimize disturbance of the habitat.

☒ Bird BMPs

- ☒ Avoid vegetation clearing activities during the general bird nesting season, February 15th to October 1st to minimize adverse impacts to birds.
- ☒ Do not collect, capture, relocate, or transport birds, eggs, young, or active nests without a permit.
- ☐ Minimize extended human presence near nesting birds during construction and maintenance activities. Protect sensitive habitat areas with temporary barriers or fencing to limit human foot- traffic and off-road vehicle use to alert and discourage contractors from causing any unintentional impacts.
- ☐ Minimize construction noise above ambient levels during general bird nesting season to minimize adverse impacts on birds.
- ☐ Minimize construction lighting during the general bird nesting season by scheduling work activities between dawn and dusk.

☐ Rookeries BMPs

- ☐ 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) (Ardea herodis) 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.
- ☐ If rookeries are encountered, avoid and minimize disturbance during nesting to protect rookery species and their habitat.
- ☐ Vegetation clearing in a primary buffer area of 300 meters (984 feet) from a rookery or 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 1000 meters (3281 feet) from the heronry periphery should be avoided during the breeding season (courting and nesting).

Revised 02/24/2022

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

Texas Department of Transportation
2017
PHARR DISTRICT

EPIC SHEET SUPPLEMENTALS

TPWD BMPs

SHEET 1 OF 3

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
6			FM 1925
STATE	DISTRICT	COUNTY	
TEXAS	PHR	HIDALGO	SHEET NO.
CONTROL	SECTION	JOB	
1803	02	035	233

Date Printed: X-X-XX

☐ Fish BMPs

- ☐ The following Fish BMP apply to projects for all fish species in waters of the state to minimize impacts to water quality and aquatic passage from transportation projects.
- ☐ For projects in waters of the state and work is adjacent to water: follow Water Quality and Stream Crossing BMPs.
- ☐ For projects in waters of the state and work is in the water: follow Water Quality, Stream Crossing, and Dewatering BMP.

☐ Aquatic Invertebrate BMPs

- ☐ For projects within the range of a SGCN or state-listed species and work is adjacent to water: Water Quality and Stream Crossing BMP
- ☐ For projects within the range of a SGCN or state-listed species and work is in the water: Water Quality, Stream Crossing, and Dewatering BMP.
- ☐ For spring-seep associated caddisflies (Cheumatopsyche morsei, Chimarra holzenthali, and Hydroptila ouachita): Avoid or minimize impacts to the natural riparian buffer along stream channel including native shrubs and trees.

☐ Crayfish BMP

- ☐ For projects within the range of a SGCN or state-listed species and work is adjacent to water: Water Quality and Stream Crossing BMP.
- ☐ For projects within the range of a SGCN or state-listed species and work is in the water: Water Quality, Stream Crossing, and Dewatering BMP.
- ☐ Avoid or minimize impacts to the natural riparian buffer that provides terrestrial and aquatic plant matter for the diet of most crayfish species.

☐ Freshwater Mussel BMP

- ☐ In addition to Water Quality and Stream Crossing BMP, follow the most recent, 7/32 TPWD 9/32 TxDOT Annual Work Plan for Pre-Construction Surveys, Aquatic Resources Relocations, and Other Best Management Practices to Avoid, Minimize, and Mitigate Impacts to Freshwater Resources. 3/32
- ☐ When work is adjacent to the water: Water Quality BMP implemented as part of the Texas Commission on Environmental Quality (TCEQ) Stormwater Pollution Prevention Plan (SWPPP) for a construction general permit or any conditions of the 401 Water Quality Certification for the project will be implemented.

☐ Insect Pollinator BMP

- ☐ Deep soil disturbances, such as, tilling or deep disking in areas that host aggregations of ground- nesting bees should be avoided. Tilling and disking also may promote the invasion or germination of non-native plants. Different species of native ground-nesting bees prefer different soil conditions, although research suggests that many ground nesting bees prefer sandy, loamy sand or sandy loam soils. In areas with these soil types consider leaving open patches of soil.
- ☐ Allow dead trees to stand (so long as they do not pose a risk to property or people) and protect shrubs and herbaceous plants with pithy or hollow stems (e.g., cane fruits, sumac, elderberry), as these provide nesting habitat for tunnel-nesting native bees.
  Retain dead or dying branches whenever it is safe and practical at the edges of the ROW. Wood- boring beetle larvae often fill dead trees and branches with narrow tunnels into which tunnel- nesting bees will establish nests. Additionally, bumble bees may choose to nest in wood piles.
- ☐ Retain rotting logs at edges of the ROW where some bee species may burrow tunnels in which to nest.

☐ Insect Pollinator BMP (Continued)

- ☐ Protect sloped or well-drained ground sites where plants are sparse and direct access to soil is available. These are the areas where ground-nesting bees may dig nests. Turning the soil destroys all ground nests that are present at that depth and hinders the emergence of bees that are nesting deeper in the ground.
- ☐ Protect grassy thickets, or other areas of dense, low cover from mowing or other disturbance. These are the sites where bumble bees might find the nest cavities they need, as well as annual and perennial wildflowers that can provide important food resources.
- ☐ Where available and economical, native plants and seed should be procured from local eco-type providers. Seed mixes should be diverse and include as many ecoregion natives as possible ensuring full season floral resources. Species by Texas ecoregion can be found in the Texas Management Recommendations for Native Insect Pollinators in Texas document: https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_1813.pdf
- ☐ Planting at least three different native flowering plants within each of three blooming periods are recommended (spring, summer, early fall) in high rainfall regions of Texas. In drier regions of the state, a target of three native flowering plants within each of two blooming periods can be used.

☐ Small Mammal BMP

For Coues' rice rat (Oryzomys couesi aquaticus):

- ☐ Minimize impacts to wetland, resaca, oxbow Conversion of property containing cave or cliff features to transportation purposes should be avoided.lake, and marsh habitats
- ☐ Water Quality BMP

☐ Fossorial Mammal BMP

- ☐ 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.

☒ Bat BMP

- ☒ 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.

Pharr District Contact No. 956-702-6100

☒ Bat BMP (Continued)

- ☒ 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.
- ☒ 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 1 through October 31. If removal of dead fronds is necessary at other times of the year, limit frond removal to extended warms 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.
- ☒ In all instances, avoid harm or death to bats. Bats should only be handled as a last resort and after communication with TPWD.

☒ Aquatic Amphibian and Reptile BMP

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:

- ☒ Minimize impacts to wetlands, temporary and permanent open water features, including depressions, and riverine habitats.
- ☒ Maintain the existing hydrologic regime and any connections between wetlands and other aquatic features.
- ☒ 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.
- ☒ Apply hydromulching and/or hydroseeding in areas for soil stabilization and/or revegetation of disturbed areas around wetlands and in riparian areas. If erosion control blankets or mats will be used, the product should not contain netting, but should only contain loosely woven natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic netting should be avoided.
- ☒ Project specific locations (PSLs) proposed within state-owned ROW should be located in uplands away from aquatic features.
- ☒ When work is directly adjacent to the water, minimize impacts to shoreline basking sites (e.g., downed trees, sand bars, exposed bedrock) and refugia/overwinter sites (e.g., brush and debris piles, crayfish burrows, aquatic logjams, and leaf packs).

Revised 02/24/2022

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MSAT: Mobile Source Air Toxic
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Texas Department of Transportation
2017
PHARR DISTRICT

EPIC SHEET SUPPLEMENTALS

TPWD BMPs

SHEET 2 OF 3

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
6			FM 1925
STATE	DISTRICT	COUNTY	
TEXAS	PHR	HIDALGO	SHEET NO.
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☒ Aquatic Amphibian and Reptile BMP (Continued)

- ☒ If gutters and curbs are part of the roadway design, 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 BMP for projects within existing ROW above plus those below:

- ☒ 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.
- ☒ For culvert extensions and culvert replacement/installation, incorporate measures to funnel animals toward culverts such as concrete wingwalls and barrier walls with overhangs.
- ☒ 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. Biotechnical streambank stabilization methods using live native vegetation, or a combination of vegetative and structural materials should be used.

☒ Terrestrial Amphibian and Reptile BMP

- ☒ 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
- ☒ Avoid or minimize disturbing or removing cover objects, such as downed trees, rotting stumps, brush piles, and leaf litter. If avoidance or minimization is not practicable, consider removing cover objects prior to the start of the project and replace them at project completion.
- ☐ Examine heavy equipment stored on site before use, particularly after rain events when reptile and amphibian movements occur more often, to ensure use will not harm individuals that might be seeking temporary refuge.
- ☒ Due to increased activity (mating) of reptiles and amphibian during the spring, construction activities like clearing or grading should attempt to be scheduled outside of the spring (March-May) season.
  Also, timing ground disturbing activities before October when reptiles and amphibians become less active and may be using burrows in the project area is also encouraged.
- ☐ If Texas tortoises (Gopherus berlandieri) or box turtles (Terrepene spp.) are present in a project area, they should be removed from the area and relocated between 100 and 200 meters from the project area. After removal of the individuals, the area that will be disturbed during active construction and project specific locations should be fenced off to exclude reentry by turtles, tortoises, and other reptiles. The exclusion fence should be constructed and maintained as follows:

  - The exclusion fence should be constructed with metal flashing or drift fence material.
  - Rolled erosion control mesh material should not be used.
  - The exclusion fence should be buried at least 6 inches deep and be at least 24 inches high.
  - 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.

☐ Terrestrial Amphibian and Reptile BMP (Continued)

- ☐ After project is complete, revegetate disturbed areas with an appropriate locally sourced native seed mix. If erosion control blankets or mats will be used, the product should not contain nylon netting, but should only contain loosely woven natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic netting should be avoided.

☒ Black-spotted newt/Mexican Burrowing toad/ Mexican treefrog/ Strecker's chorus frog/White-lipped frog/Woodhouse's toad

- ☒ Aquatic Amphibian and Reptile BMP
- ☒ Terrestrial Amphibian and Reptile BMP
- ☒ Water Quality BMP
- ☒ Vegetation BMP

☒ Sheep Frog

- ☒ Minimize disturbance to burrows or downed woody debris
- ☒ Aquatic Amphibian and Reptile BMP
- ☒ Terrestrial Amphibian and Reptile BMP
- ☒ Water Quality BMP
- ☒ Vegetation BMP

☒ South Texas Siren (Large Form)

- ☒ Minimize impacts to warm, shallow waters with vegetative cover such as ponds and ditches
- ☒ Aquatic Amphibian and Reptile BMP
- ☒ Water Quality BMP

Black-striped snake/ Eastern box turtle/Northern cat-eyed snake/Plateau spot-tailed earless lizard/ Reticulate collared lizard/ Slender glass lizard/ Speckler racer/Tamaulipan spot-tailed earless lizard/ Texas Indigo snake/ Western box turtle/Western hognose snake/Western massasauga

- ☐ Terrestrial Amphibian and Reptile BMP
- ☐ Vegetation BMP

☐ Rio Grande River Cooter

- ☐ Aquatic Amphibian and Reptile BMP
- ☐ Water Quality BMP

☐ Texas Horned Lizard

- ☐ Avoid harvester ant mounds in the selection of Project Specific Locations (PSLs).
- ☐ Terrestrial Amphibian and Reptile BMP
- ☐ Vegetation BMP

☐ Texas Tortoise

- ☐ Utility trenches should be covered overnight or visually inspected before filling to avoid burial of the species
- ☐ Terrestrial Amphibian and Reptile BMP
- ☐ Vegetation BMP

OTHER PERTINENT INFORMATION

☐ Trifold Available

- ☐ Ocelot information
- ☐ Pelican information
- ☐ Ashy dogweed

☐ Stockcards Available

- ☐ Mitigatory Bird Treaty Act
- ☐ Texas Tortoise
- ☐ Harvester Ants and Horn Lizards

Pharr District Contact No. 956-702-6100

Revised 02/24/2022

List of Abbreviations

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Texas Department of Transportation
2017
PHARR DISTRICT

EPIC SHEET SUPPLEMENTALS

TPWD BMPs

SHEET 3 OF 3

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
6			FM 1925
STATE	DISTRICT	COUNTY	
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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:
   1. Must comply with all the requirements of Special Specification Item 1122-001.
   2.

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:
   1.
   2.

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:
   1.
   2.

Pharr District Contact No. 956-702-6100 Revised 01/30/2017

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Texas Department of Transportation
2016
PHARR DISTRICT

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

SHEET 1 OF 2

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
6			FM1925
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. State Rare, Threatened, or Endangered Species or Species of Greatest Conservation need that have the potential of occurring within the project area: Black Spotted Newt (Notophthalmus meridionalis), Mexican Burrowing Toad (Rhinophrynus dorsalis), Mexican Treefrog (Smilisca baudinii), Sheep Frog (Hypopachus variolosus), South Texas Siren (Siren sp.), White Lipped Frog (Leptodactlus fragilis), Woodhouse's Toad (Anaxyrus woodhousii), Western Burrowing Owl (Athene cunicularia hypugaea), Neojuvenile Tiger Beetle (Cicindela obsoleta neojuvenilis), Subtropical Black Sky Tiger Beetle (Cindela nigrocoerlea subtropica), Eastern Spotted Skunk (Spilogale putorious), Southern Yellow Bat (Lasiurus ega), Texas Indigo Snake (Drymarchon melanurus erebennus), Western Box Turtle (Terrapene ornata), & Stinking Rushpea (Pomaria austrotexana).

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

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Texas Department of Transportation
2016
PHARR DISTRICT

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

SHEET 2 OF 2

FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
6			FM1925
STATE	DISTRICT	COUNTY	
TEXAS	PHR	HIDALGO	SHEET NO.
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1803	02	035	237

Date Printed: X-X-XX

DATE
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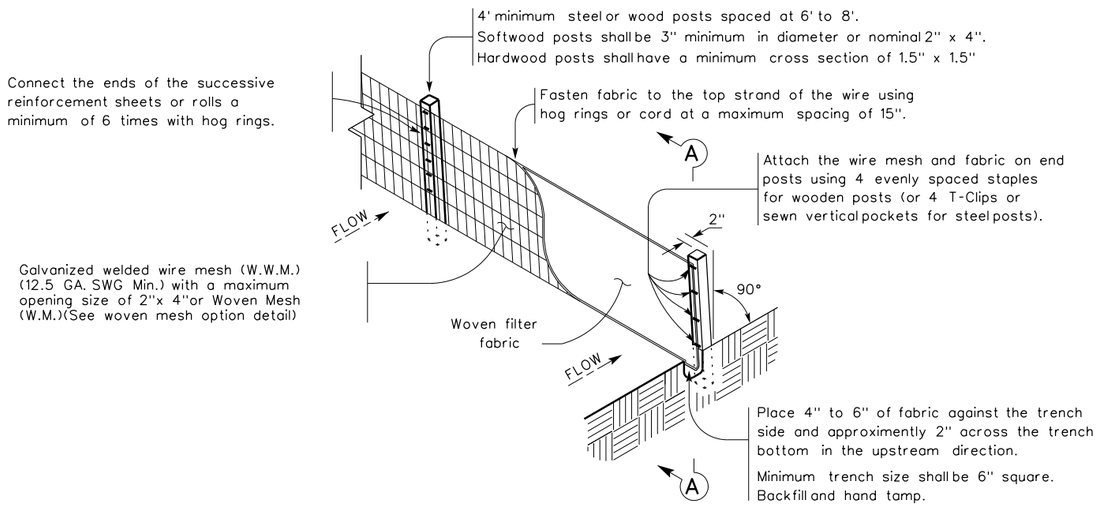
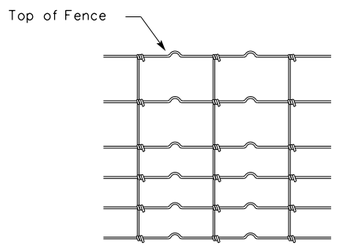
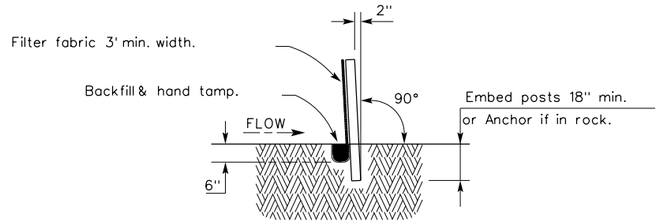


TEMPORARY SEDIMENT CONTROL FENCE

SCF





SECTION A-A

HINGE JOINT KNOT WOVEN MESH (OPTION) DETAIL

Galvanized hinge joint knot woven mesh (12.5 GA.SWG Min.) requires a minimum of five horizontal wires spaced at a maximum of 12 inches apart and all vertical wires spaced at a maximum of 12 inches apart.

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

Sediment control fence should be sized to filter a maximum flow through rate of 100 GPM/FT ^{2}. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

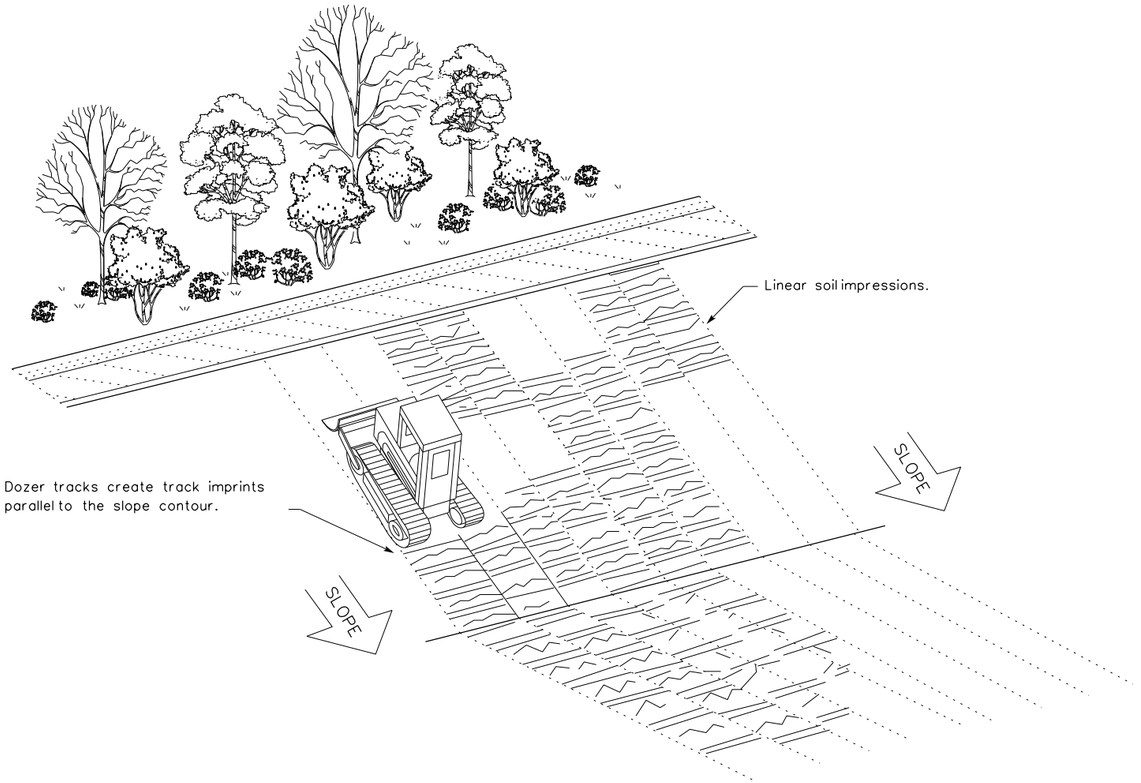
LEGEND

Sediment Control Fence

SCF

GENERAL NOTES

1. Vertical tracking is required on projects where soil distributing activities have occurred unless otherwise approved.
2. Perform vertical tracking on slopes to temporarily stabilize soil.
3. Provide equipment with a track undercarriage capable of producing linear soil impressions measuring a minimum of 12" in length by 2" to 4" in width by 1/2" to 2" in depth.
4. Do not exceed 12" between track impressions.
5. Install continous linear track impressions where the minimum 12" length impressions are perpendicular to the slope or direction of water flow.



VERTICAL TRACKING

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCE & VERTICAL TRACKING

EC(1)-16

FILE: ec116	DN: TxDOT		CK: KM	DW: VP		DN/CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY	
REVISIONS	1803	02	035		FM1925	
	DIST	COUNTY				SHEET NO.
	PHR	HIDALGO				238

DATE:
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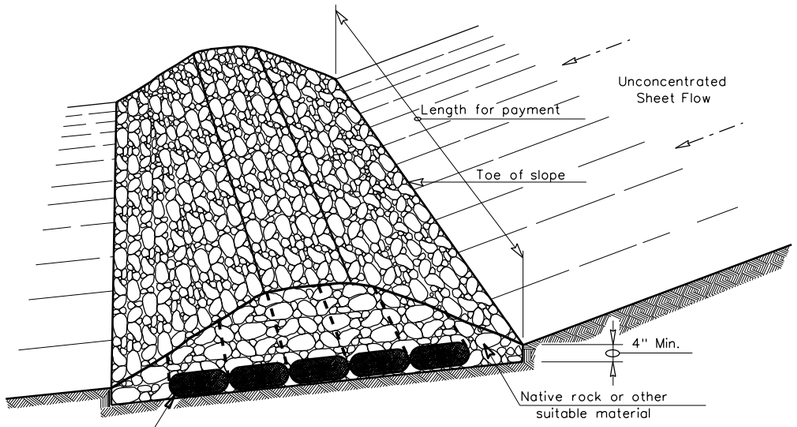
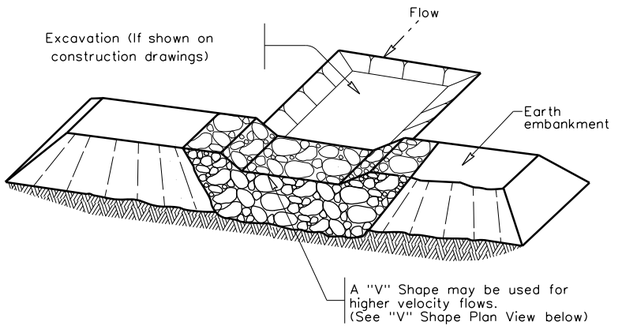


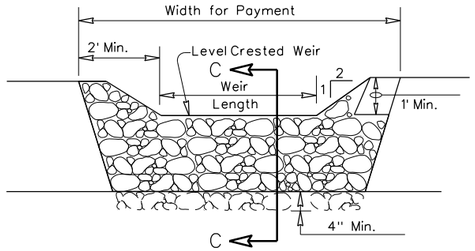
FILTER DAM AT TOE OF SLOPE

RFD1

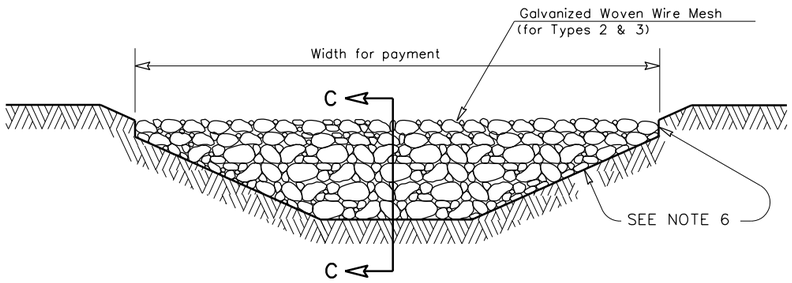


FILTER DAM AT SEDIMENT TRAP

RFD1 OR RFD2

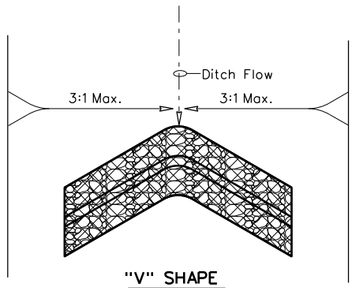


PROFILE

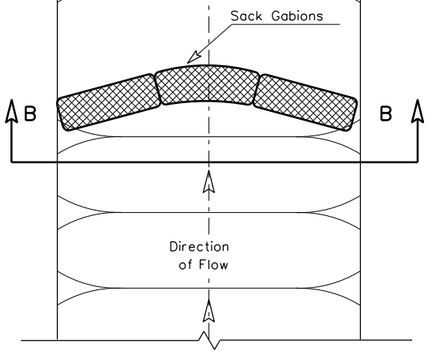


FILTER DAM AT CHANNEL SECTIONS

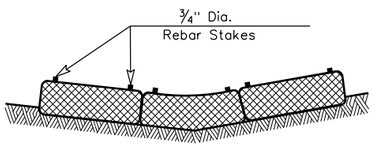
RFD1 OR RFD2 OR RFD3



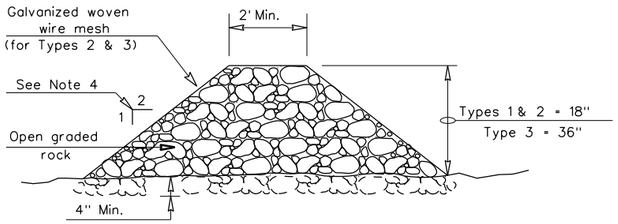
"V" SHAPE
PLAN VIEW



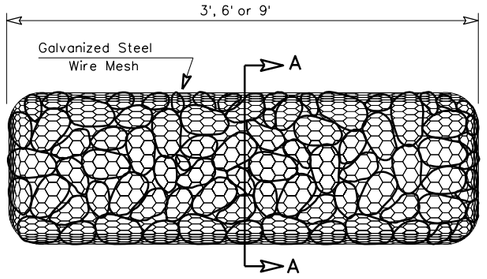
PLAN VIEW



SECTION B-B

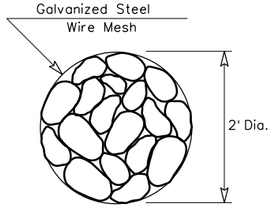


SECTION C-C



TYPE 4 (SACK GABIONS)

RFD4



SECTION A-A

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.

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 3/4" dia. rebar stakes, and have a double-twisted hexagonal weave with a nominal mesh opening of 2 1/2" x 3 1/4"
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

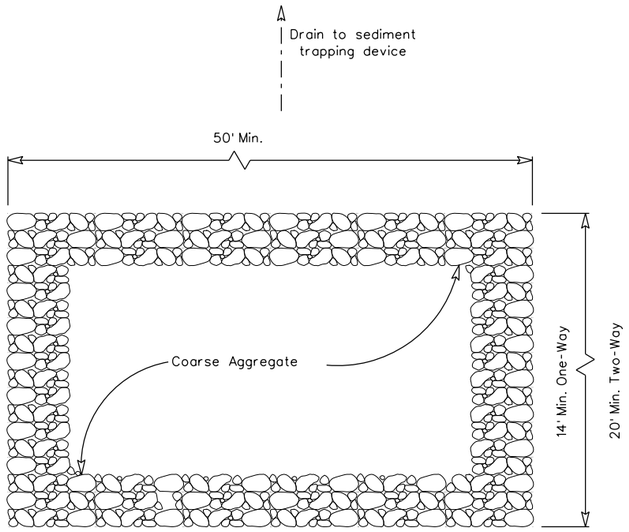
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

ROCK FILTER DAMS

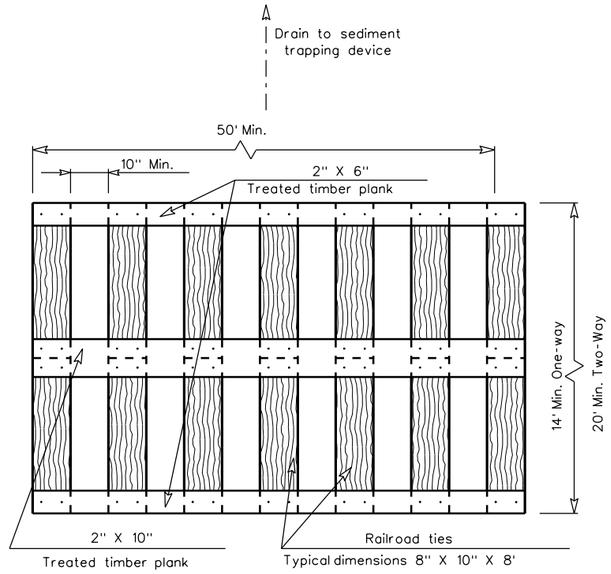
EC(2)-16

FILE: ec216		DN: TxDOT		CK: KM	DW: VP		DN/CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY		
REVISIONS	1803	02	035		FM1925		
	DIST	COUNTY					SHEET NO.
	PHR	HIDALGO					239

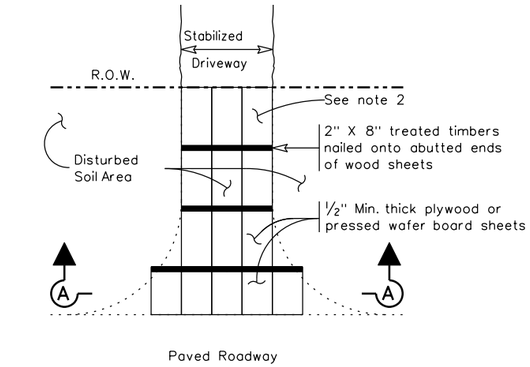
DATE:
FILE:



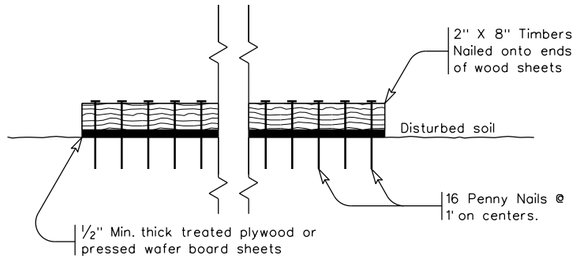
PLAN VIEW



PLAN VIEW



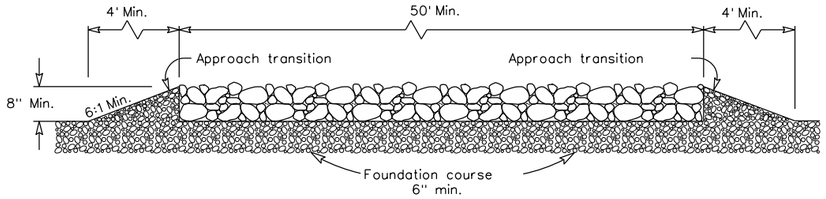
PLAN VIEW



SECTION A-A

CONSTRUCTION EXIT (TYPE 3)

SHORT TERM



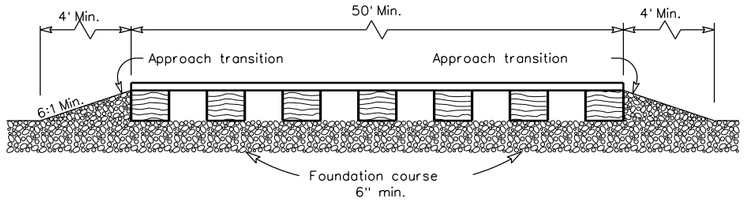
ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 1)

ROCK CONSTRUCTION (LONG TERM)

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.



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 2)

TIMBER CONSTRUCTION (LONG TERM)

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: ec316	DN: TxDOT	CK: KM	DW: VP	DN/CK: LS
	CONT	SECT	JOB	HIGHWAY
REVISIONS	1803	02	035	FM1925
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		240