FED.RD. DIV.NO.	FEDERAL PROJECT NO.		SHEET NO.
6	F 2B24(155), ETC		1
STATE	STATE DIST.	COUNTY	
TEXAS	AMA	DEAF SMITH	
CONT.	SECT.	JOB	HIGHWAY NO.
0226	05	072, ETC	US 385

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT
FEDERAL PROJECT: F2B24(155), ETC
HIGHWAY - US 385
DEAF SMITH COUNTY
CONTROL: 0226-05-072, ETC

DESIGN SPEED = N/A
2024 ADT = 11,352
2044 ADT = 15,903
MINOR ARTERIAL

FOR THE CONSTRUCTION OF PEDESTRIAN SIDEWALKS & CURB RAMPS. CONSISTING OF SIDEWALKS, CROSSWALKS, AND DRIVEWAYS.

PROJECT LIMITS FROM: 16TH ST
TO: SOUTH OF US 60
ROADWAY LENGTH = 11,057.16 FT. = 2.094 MILES
TOTAL LENGTH = 11,057.16 FT. = 2.094 MILES

INDEX OF SHEETS

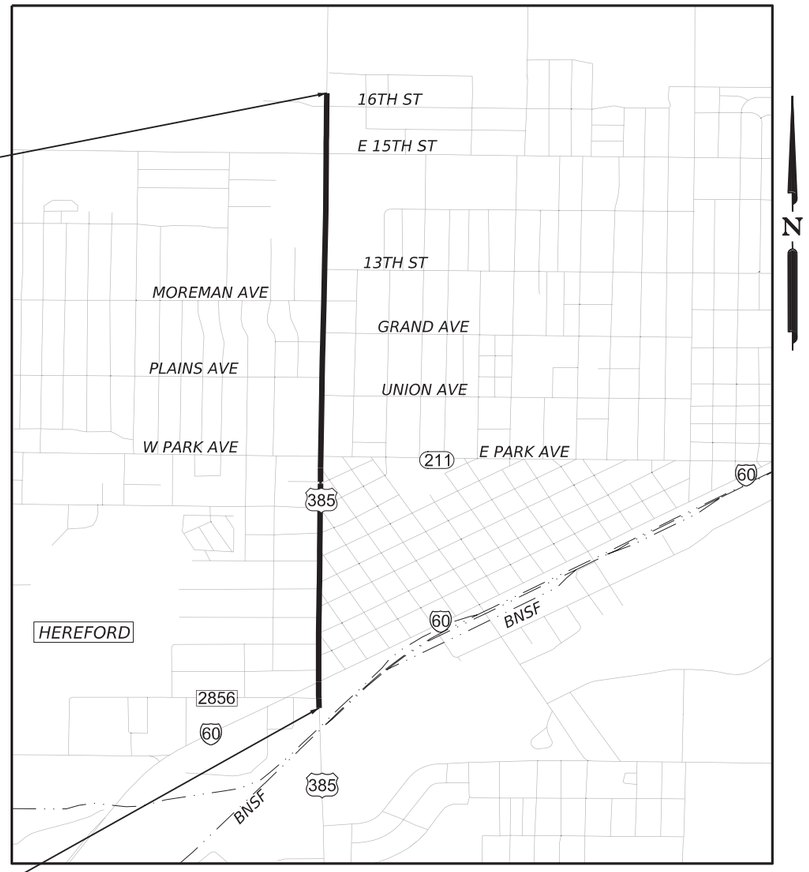
CSJ: 0226-05-072 (US 385)

LIMITS FROM : 16TH ST
TO: SOUTH OF US 60
ROADWAY LENGTH: 11,051.20 LF = 2.093 MILES
PROJECT DESCRIPTION: CONSTRUCTION OF PEDESTRIAN SIDEWALKS & CURB RAMPS

CSJ: 0226-05-073 (US 385)

LIMITS FROM : 16TH ST
TO: SOUTH OF US60
ROADWAY LENGTH: 11,051.20 LF = 2.093 MILES
PROJECT DESCRIPTION: PAVEMENT PROFILE GRINDING AND PAVEMENT MARKINGS

TDLR REVIEW AND INSPECTION REQUIRED
TDLR INSPECTION NUMBER: TABS2024012519



END PROJECT
END CSJ: 0226-05-072,ETC
STA 122+21.12
RM: 126+0.560

BEGIN PROJECT
BEGIN CSJ: 0226-05-072,ETC
STA 11+63.96
RM: 128 +0.4009

EXCEPTIONS:
NONE

RAILROADS:
NONE

EQUATIONS:
NONE

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, NOVEMBER 1, 2014 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT:
REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, OCTOBER 2023)

FINAL PLANS

LETTING DATE: _____
DATE CONTRACTOR BEGAN WORK: _____
DATE WORK WAS COMPLETED & ACCEPTED: _____
FINAL CONTRACT COST: $ _____
CONTRACTOR : _____

_____ ,PE _____
AREA ENGINEER *DATE*

PLANS PREPARED BY:

AECOM
AECOM Technical Services, Inc.- F-3580

2024 ★ **Texas Department of Transportation**

RECOMMENDED FOR LETTING: *DATE:* 4/1/2024

DocuSigned by: Joe Cunpell 2A500C249D094BA...
AREA ENGINEER

DATE: 4/3/2024

DocuSigned by: Kit Black 9B5A6EA6AE8B46E...
DISTRICT DIRECTOR OF TRANSPORTATION PLANNING AND DEVELOPMENT

APPROVED FOR LETTING: *DATE:* 4/5/2024

DocuSigned by: Blair Johnson 8B80E3AEB2BC43A...
DISTRICT ENGINEER

DATE: 3/5/2024
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	2	INDEX OF SHEETS
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	7-9	GENERAL NOTES
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	12-13	PROJECT SUMMARY
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		DRAINAGE STANDARDS
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		SIGNING & PAVEMENT MARKING DETAILS
	88-104	SIGNING & PAVEMENT MARKING LAYOUT
	105-118	SUMMARY OF SMALL SIGNS
	119	SMALL SIGN DETAILS
		TRAFFIC STANDARDS
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#	123	PM(4)-22A
#	124	CPM(1)-14
#	125-127	TSR(3)-13 THRU TSR(5)-13
#	128	BLPM(1)-10
#	129	SMD(GEN)-08
#	130-132	SMD(SLIP-1)-08 THRU SMD(SLIP-3)-08
#	133-136	MB(1)-21 THRU MB(4)-21
#	137-138	MBP(1)-22 THRU MBP(2)-22
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	140-141	STORMWATER POLLUTION PREVENTION PLAN (SWP3)
	142-145	SW3P PLAN
	146	SW3P SIDEWALK GENERAL LAYOUT
		ENVIRONMENTAL STANDARDS
#	147-149	EC(9)-16

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
3/6/2024

THE STANDARD SHEETS SPECIFICALLY IDENTIFIED HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

STATE OF TEXAS
JOHN J. TIETZ
144928
LICENSED
PROFESSIONAL ENGINEER
3/6/2024

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

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

INDEX OF SHEETS

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		2

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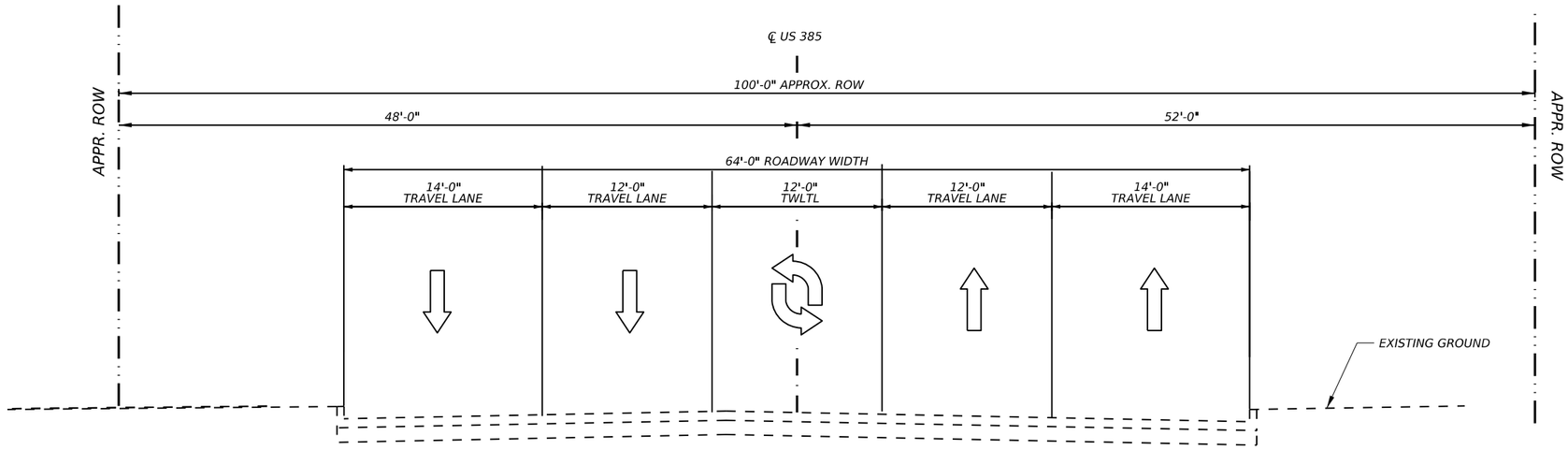

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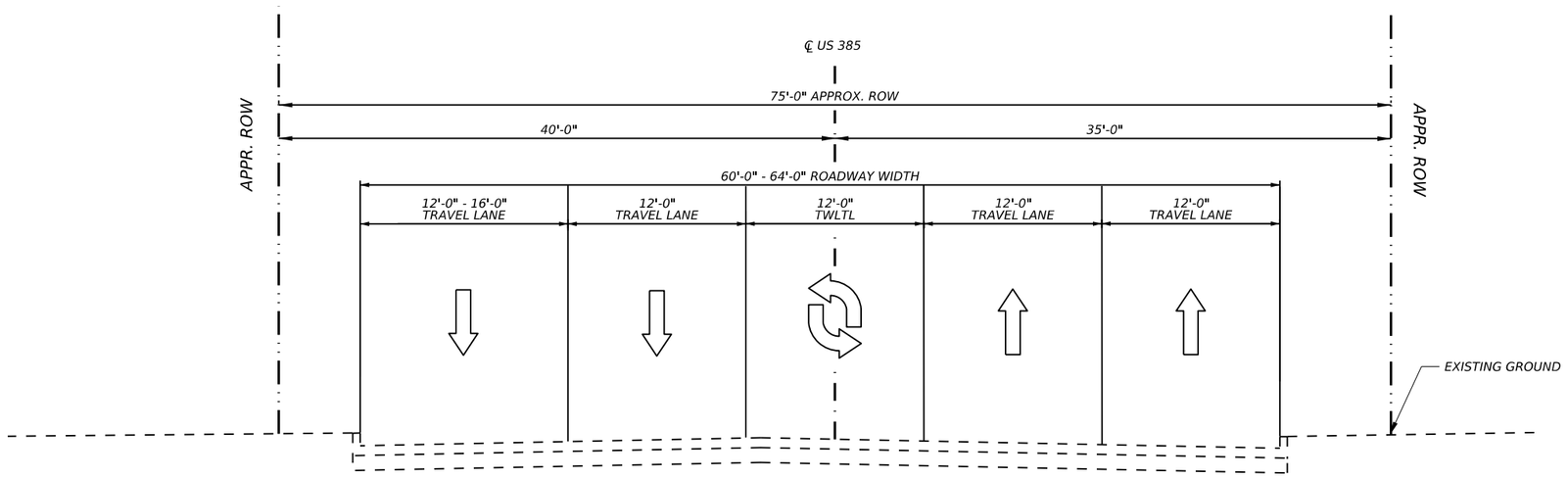
US 385

STA 10+00 TO STA 15+00



EXISTING TYPICAL SECTION-B
US 385

STA 15+00 TO STA 54+42

3/1/2024

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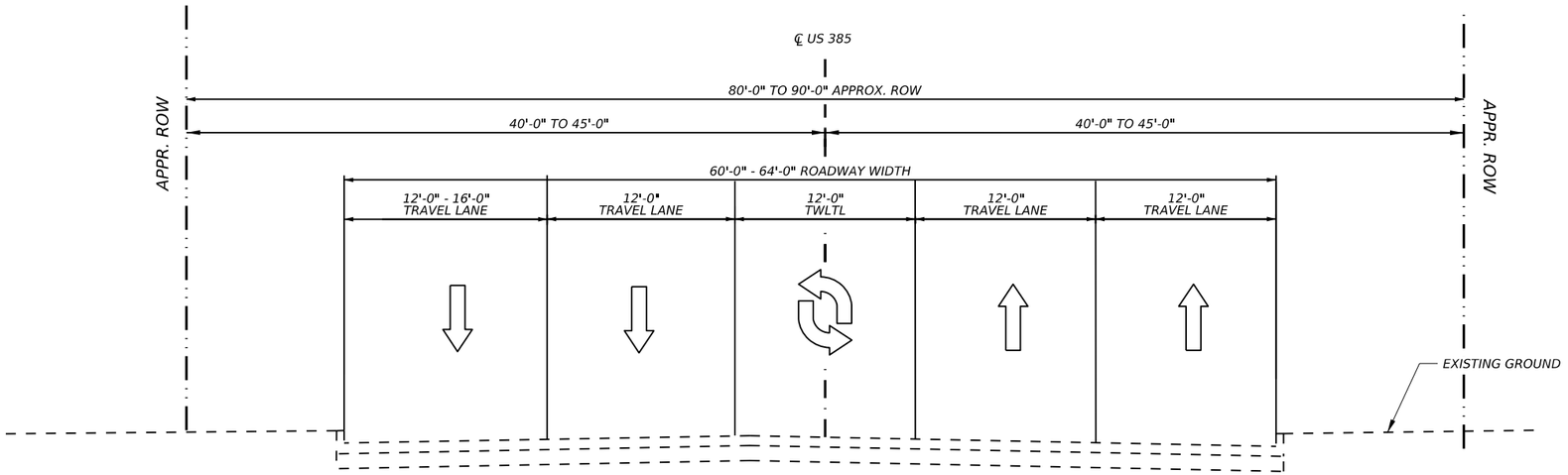
Texas Department of Transportation

US 385
TYPICAL SECTIONS
EXISTING

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		3



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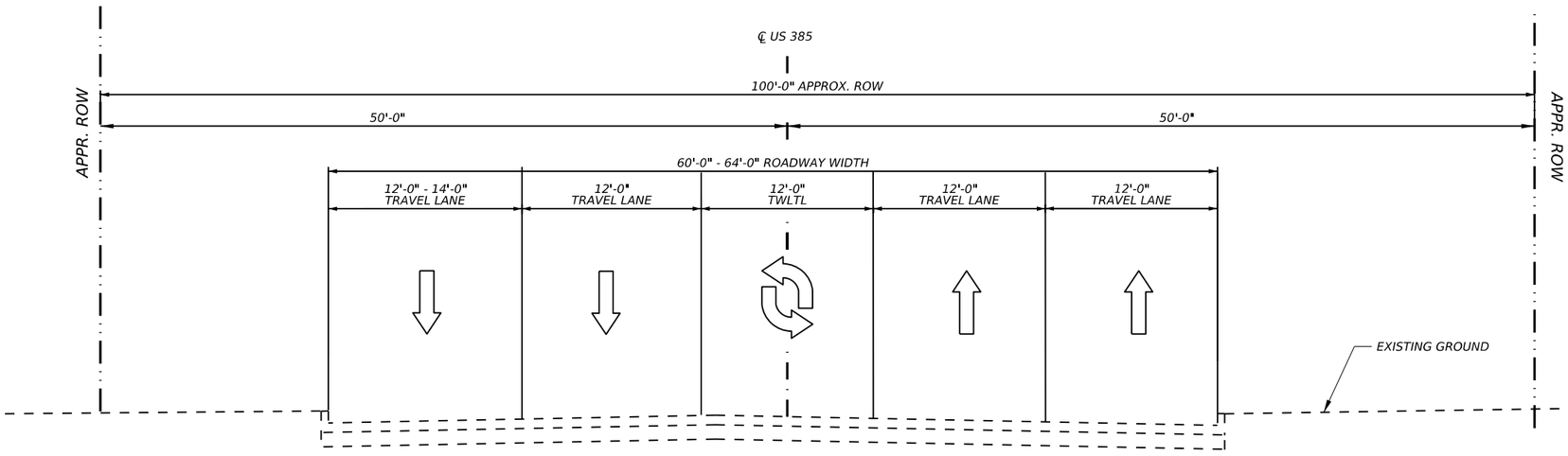
US 385

STA 54+42 TO 76+15



EXISTING TYPICAL SECTION-D

US 385

STA 76+15 TO END

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/1/2024

Salcido Ramirez, P.E.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

TYPICAL SECTIONS

EXISTING

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		4

DATE: 3/1/2024 19:11:42
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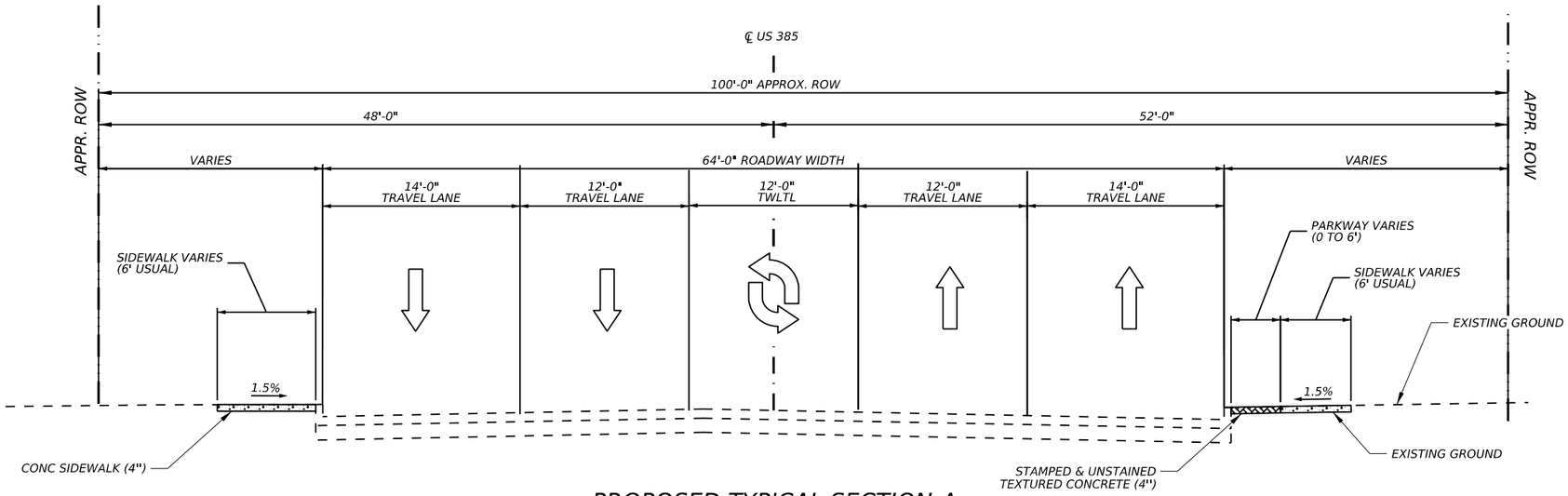
cx | ow | cx | cx



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US 385

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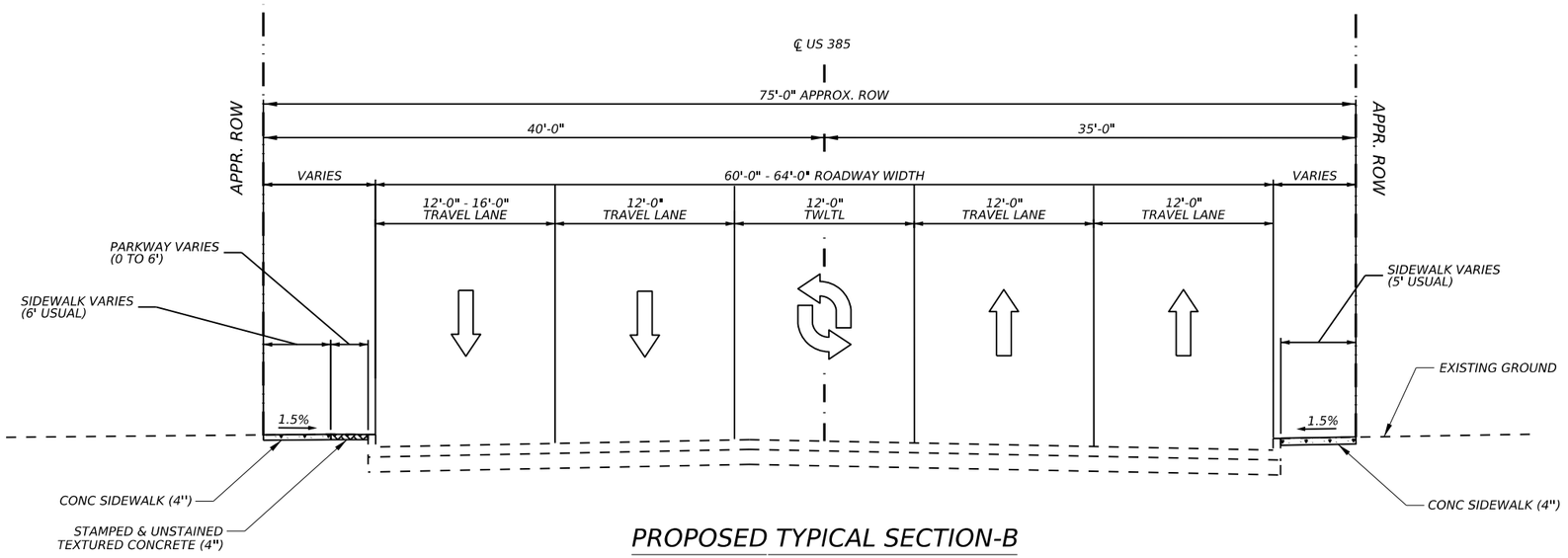

PROPOSED TYPICAL SECTION-B

US 385

STA 15+00 TO STA 54+42

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/1/2024

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Texas Department of Transportation

US 385
TYPICAL SECTIONS
PROPOSED

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		5

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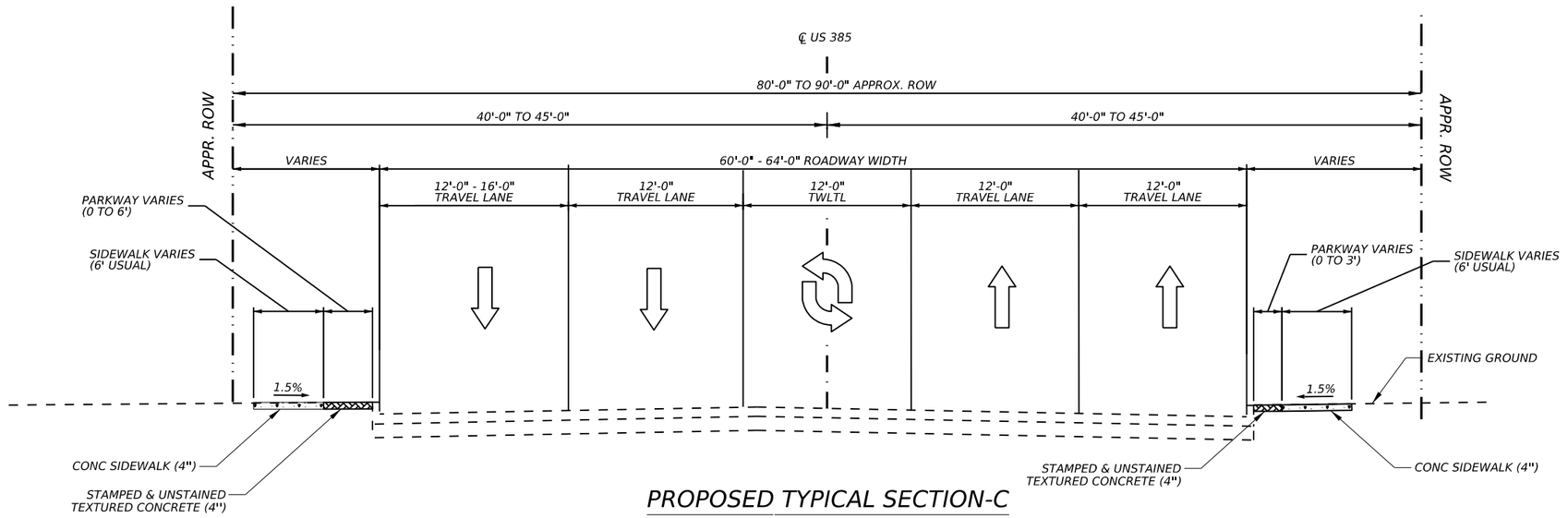
ck | dw | ck



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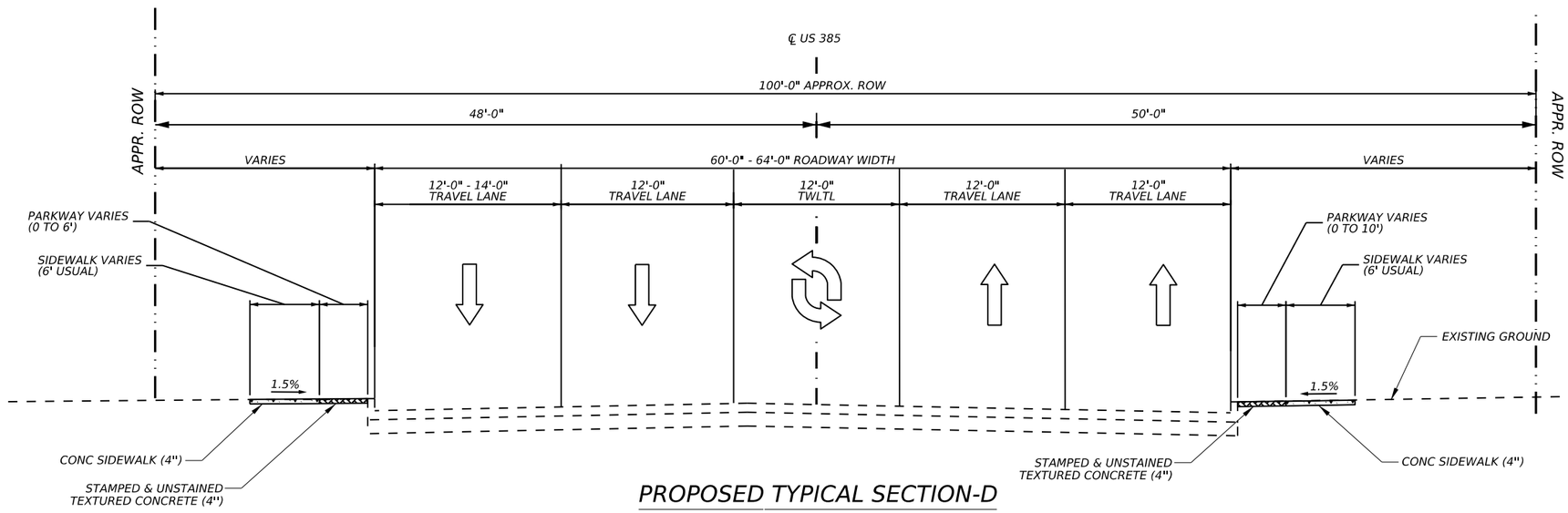
US 385

STA 54+42 TO 76+15



PROPOSED TYPICAL SECTION-D

US 385

STA 76+15 TO END

STATE OF TEXAS
ERNESTO SALCIDO
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PROFESSIONAL ENGINEER

3/1/2024

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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

TYPICAL SECTIONS

PROPOSED

SHEET 4 OF 4

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		6

DATE: 3/1/2024 19:11:49
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ck | dw | ck

GENERAL NOTES

General

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

TO:	Amarillo Area Engineer	Joe.Chappell@txdot.gov
CC:	Assistant Area Engineer	CC.Sysombath@txdot.gov
	Director of Construction	Kit.Black@txdot.gov (interim)
	Construction Manager	Darrell.Caldwell@txdot.gov

Contractor questions will be accepted through email, phone, or in person by the above individuals.

For Q&A's on Proposals navigate to:

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

Use 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 of the project you want to view the Q&A for and click on the link in the window that pops up.

All relevant project documentation including CTD and cross sections (if applicable) will be posted to TxDOT District's FTP website.

https://ftp.dot.state.tx.us/pub/txdot-info/Pre-Letting%20Responses/

Verify all survey control prior to beginning construction. Notify Engineer of any discrepancies in control prior to beginning construction.

There are approximately *2* "reference markers" within the project limits. If a marker needs to be moved for any reason during construction operations, the Contractor is to remove it, install it in a temporary location and then reinstall it in its correct permanent location. Both the temporary and permanent locations are to be on a line that is perpendicular to the original "station" along the roadway. The temporary location is to be at or near the right-of-way. The permanent location is to be directed by the Engineer.

If Contractor damages any sprinkler heads, risers or water lines that are not to be relocated, he or she is required to replace or repair all damage at his or her own expense and to the Engineer's satisfaction.

If portions of the right-of-way is used to store materials, equipment, and other uses with the approval of the Engineer, materials, equipment, etc., must either be located outside the *16* feet traffic safety clearance zone or be adequately protected.

Contractor facilities, such as asphalt plants, concrete plants, rock crushers, etc. are not allowed to be located within Department right of way.
The slopes indicated on the typical sections may be varied when fixed features required slopes are re-established as directed by the Engineer.

Dust caused by construction operations is to be controlled by applying water in conformance with the requirements of Item 204, "Sprinkling". Sprinkling for dust control will not be paid for directly, but will be considered as subsidiary work to the various bid items.

Any work necessary to provide temporary ingress and egress during construction (such as building gravel ramps, etc.) Will not be paid for directly, but will be considered as subsidiary work to the various bid items.

Verify all existing grades, elevations, and cross slopes that will connect to any proposed grades and elevations. If adjustments are warranted, the Contractor is to submit proposed changes to the Engineer for verification.

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.

The total area disturbed for this project is approximately *6.23* acres. The disturbed area in this project, all project locations in the Contract, and the Contractor Project Specific Locations (PSLs), within 1 mile of the project limits, for the Contract will further establish the authorization requirements for storm water discharges. The Department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. The Contractor is to obtain required authorization from the TCEQ for Contractor PSLs for construction support activities on or off the ROW. When the total area disturbed in the Contract and PSLs within 1 mile of the project limits exceeds 5 acres, provide a copy of the Contractor NOI for PSLs on the ROW to the Engineer and to the local government that operates a separate storm sewer system.

Item 8 Prosecution and Progress

Create, maintain, and submit for acceptance, a Critical Path Method (CPM) project schedule and a Project Schedule Summary Report (PSSR) using computer software that is fully compatible with the latest version of Primavera Systems, Inc. or Primavera P6.

Item 104 Removing Concrete

Remove existing precast concrete wheel stops without damaging them. Existing precast concrete wheel stops that are to be removed and not reset will remain the property of the adjacent property owner and will be delivered to them as directed.

Payment for removal of precast concrete wheel stops will be subsidiary to Item 104.

Item 162 Sodding for Erosion Control

Furnish and place sod of similar type to existing sod.

Item 168 Vegetative Watering

Vegetative watering is estimated at 0.25" per week placed over the soded area to keep the soil in a moist state that promotes germination and growth. Begin application of the watering following a rain that presoaks the soil and continue for approximately 3 months, or as directed by the Engineer. If rains occur that keep the soil moist, delay the watering. Provide the appropriate type and amount of equipment to necessary watering.

Item 421 Hydraulic Cement Concrete

The sand equivalent value of fine aggregate is not to be less than 85 when subjected to test method tex-203-F.

100% virgin polypropylene fibrillated fibers (macro fibers typical length 1 ½" or greater) are to be added to all (HPC) concrete at a rate of 1.5 lbs/cy
The Engineer will perform all job control testing for acceptance.

The Engineer will provide strength-testing equipment when required in accordance with the Contract-controlling tests.

Furnish and maintain the following testing equipment:

- ♦ Test Molds

All cast-in-place concrete except for drilled shafts are to be air-entrained. Pre-cast and drilled shaft concrete may be air-entrained at the Contractor's option.

Item 432 Riprap

24" tie bars (#3 bars at 18" c-c) are to be used across all construction joints. Tie bars should be 12'' into each side of the construction joint. When tying new riprap into existing riprap drill and epoxy grout 8" minimum into existing concrete. This is to be considered subsidiary to the payment for riprap.

Use of #3 rebar for reinforcing is required.

Provide Class B Concrete for riprap.

Item 502 Barricades, Signs, and Traffic Handling

The Contractor Force Account "Safety Contingency" that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor's Responsible Person based on weekly or more frequent traffic management reviews on the project. The Engineer may choose to use existing bid items if it does not slow the implementation of enhancement.
The Contractor is to have the option of using either plastic drums, vertical panels, grabber cones or a combination where drums are shown as channelizing devices, as approved by the Engineer. Plastic drums are to be used in all transition areas in accordance with BC(8)-21.

Lane closures for curb, ramp & sidewalk work are to be limited to 1,000 FT sections.

Notify the Engineer 24 hours prior to any lane closure.

Item 506 Temporary Erosion, Sedimentation, and Environmental Controls

Erosion control devices are to be installed as needed in coordination with the work progress, or as directed by the Engineer.

Use wooden stake to secure erosion control logs. Do no use rebar stakes.

Item 644 Small Roadside Sign Supports and Assemblies

ALUMINUM SIGN BLANKS THICKNESS	Square Feet	Minimum Thickness
	Less than 7.5	0.100
	7.5 or Greater	0.125

All slip base signs will have a triangular slip base with a 2-bolt clamp to prevent rotation of signpost. Set screw type slip base will not be allowed.

A 7" x 1/2" diameter galvanized rod or #4 rebar is to be installed in the sign stub as shown on SMD(SLIP-1)-08 to prevent rotation of the sign stub in the concrete footing.

The exact locations of the large and small roadside signs are to be as designated by the Engineer.

The existing riprap aprons are to be removed and disposed of as approved by the Engineer. This work is not to be paid for directly, but will be considered subsidiary to the removal of foundations under this item.

Probe before drilling for foundations to determine the location of all utilities and structures. This work will not be paid for directly, but will be considered subsidiary to bid items involved.

Details for standard signs not shown on the signing standards of the signing detail plan sheets are to be in conformance with the department's "Standard Highway Sign Designs for Texas" Manual, Latest Edition.

Install a wrap of retroreflective sheeting conforming to DMS-8300 on all posts for small road sign assemblies. Sign post wraps will not be paid for directly, but are considered subsidiary to Item 644.

Install red sheeting on the posts containing the following signs:
Stop, Yield, Wrong Way & Do Not Enter

Install yellow sheeting on all other small sign posts.

Install all retroreflective wraps at a height of 4 ft. from bottom of the wrap to the edge of the travel lane surface. All retroreflective wraps will cover the full circumference of the sign post for a vertical width of 12 inches.

Item 666 Reflectorized Pavement Markings

Retroreflectivity Requirements:

All Type I markings must meet the minimum retroreflectivity values for edgeline markings, centerline or no passing barrier-line, and lane lines when measured any time after 3 days, but not later than 10 days after application:

- White markings: 250 millicandelas per square meter per lux (mcd/m^2/lx)
- Yellow markings: 175 mcd/m^2/lx

Retroreflectivity Measurements: Mobile or portable retroreflectometers may be used at the Contractor's discretion.

All Type I markings must meet the minimum retroreflectivity values for edgeline markings, centerline or no passing barrier-line, and lane lines when measured any time after 3 days, but not later than 10 days after application.

Item 677 Eliminating Existing Pavement Markings and Markers

Do not remove any existing pavement markings in any area in which the contractor is not able to place work zone pavement markings at the proper location within the same day.

Item 3004 Diamond Grinding and Grooving Pavement

Diamond grinding is to be performed to the driving lanes to improve ride quality. Use a 30' grade beam/ski attached to the grinding equipment to provide grade control. Do not perform any diamond grinding to the center two-way left turn lane.

Highway: US 385 **Control:** 0226-05-072, ETC

Item 6001 Portable Changeable Message Sign

Supply 2 Portable Changeable Message Signs (Type II – Lamp Matrix) for this project.
No payment will be made for removing and replacing damaged PCMS.

If the Contractor chooses to have more than one lane closure set-up at a time, provide additional PCMS in accordance with TCP at no additional charge to the department.

Item 6185 Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)

In addition to the shadow vehicles with truck mounted attenuator (TMA) that are specified as being required on the traffic control plan for this project, provide 0 additional shadow vehicle(s) with TMA for TCP (1-4)-18, (2-1)-18, and (2-4)-18 as detailed on the General Notes of this standard sheets.

Therefore, 2 total shadow vehicles with TMA will be required for this type of work. The Contractor will be responsible for determining if one or more of these operations will be ongoing at the same time to determine the total number of TMAs needed for the project.

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0226-05-072 **DISTRICT** Amarillo **COUNTY** Deaf Smith
HIGHWAY US 385

			CONTROL SECTION JOB	**0226-05-072**		**0226-05-073**		TOTAL EST.	TOTAL FINAL
			PROJECT ID	**A00195381**		**A00200712**			
			COUNTY	**Deaf Smith**		**Deaf Smith**			
			HIGHWAY	**US 385**		**US 385**			
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL		
	104-6009	REMOVING CONC (RIPRAP)	SY	13.000				13.000	
	104-6017	REMOVING CONC (DRIVEWAYS)	SY	6,381.000				6,381.000	
	104-6028	REMOVING CONC (MISC)	SY	1,148.000				1,148.000	
	104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	8,646.000				8,646.000	
	104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	188.000				188.000	
	105-6043	REMOVING STAB BASE & ASPH PAV (0-6")	SY	7,760.000				7,760.000	
	160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	15.000				15.000	
	162-6002	BLOCK SODDING	SY	15.000				15.000	
	168-6001	VEGETATIVE WATERING	MG	0.300				0.300	
	432-6001	RIPRAP (CONC)(4 IN)	CY	7.800				7.800	
	450-6049	RAIL (HANDRAIL)(TY C)	LF	57.000				57.000	
	465-6013	INLET (COMPL)(PCO)(3FT)(NONE)	EA	1.000				1.000	
	465-6014	INLET (COMPL)(PCO)(3FT)(LEFT)	EA	4.000				4.000	
	465-6015	INLET (COMPL)(PCO)(3FT)(RIGHT)	EA	2.000				2.000	
	465-6016	INLET (COMPL)(PCO)(3FT)(BOTH)	EA	2.000				2.000	
	479-6001	ADJUSTING MANHOLES	EA	3.000				3.000	
	479-6003	ADJUSTING MANHOLES & INLETS	EA	4.000				4.000	
	479-6005	ADJUSTING MANHOLES (WATER VALVE BOX)	EA	11.000				11.000	
	479-6008	ADJUSTING MANHOLES (WATER METER)	EA	41.000				41.000	
	496-6002	REMOV STR (INLET)	EA	5.000				5.000	
	496-6030	REMOVE STR (BOLLARD)	EA	2.000				2.000	
	496-6043	REMOV STR (SMALL FENCE)	LF	10.000				10.000	
	500-6001	MOBILIZATION	LS	1.000				1.000	
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	9.000				9.000	
	506-6035	SANDBAGS FOR EROSION CONTROL	EA	130.000				130.000	
	506-6040	BIODEG EROSN CONT LOGS (INSTL) (8")	LF	613.000				613.000	
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	613.000				613.000	
	528-6001	COLORED TEXTURED CONC (4")	SY	7,339.000				7,339.000	
	529-6002	CONC CURB (TY II)	LF	1,000.000				1,000.000	
	529-6008	CONC CURB & GUTTER (TY II)	LF	1,346.000				1,346.000	
	530-6004	DRIVEWAYS (CONC)	SY	10,205.000				10,205.000	
	531-6001	CONC SIDEWALKS (4")	SY	7,932.000				7,932.000	
	531-6018	CURB RAMPS (TY 1)	SY	139.000				139.000	
	531-6019	CURB RAMPS (TY 2)	SY	14.000				14.000	
	531-6020	CURB RAMPS (TY 3)	SY	98.000				98.000	
	531-6023	CURB RAMPS (TY 6)	SY	69.000				69.000	
	531-6024	CURB RAMPS (TY 7)	SY	142.000				142.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0226-05-072 **DISTRICT** Amarillo **COUNTY** Deaf Smith
HIGHWAY US 385

			CONTROL SECTION JOB		**0226-05-072**		**0226-05-073**		TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00195381**		**A00200712**			
			COUNTY		**Deaf Smith**		**Deaf Smith**			
			HIGHWAY		**US 385**		**US 385**			
ALT	**BID CODE**	**DESCRIPTION**		**UNIT**	EST.	FINAL	EST.	FINAL		
	531-6032	CONC SIDEWALKS (SPECIAL) (TYPE A)		SY	83.000				83.000	
	531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)		SY	40.000				40.000	
	560-6025	RELOCATE EXISTING MAILBOX		EA	7.000				7.000	
	636-6007	REPLACE EXISTING ALUMINUM SIGNS(TY A)		SF	22.000				22.000	
	644-6001	IN SM RD SN SUP&AM TY10BWG(1)SA(P)		EA	17.000				17.000	
	644-6002	IN SM RD SN SUP&AM TY10BWG(1)SA(P-BM)		EA	35.000				35.000	
	644-6004	IN SM RD SN SUP&AM TY10BWG(1)SA(T)		EA	17.000				17.000	
	644-6007	IN SM RD SN SUP&AM TY10BWG(1)SA(U)		EA	2.000				2.000	
	644-6030	IN SM RD SN SUP&AM TYS80(1)SA(T)		EA	2.000				2.000	
	644-6033	IN SM RD SN SUP&AM TYS80(1)SA(U)		EA	1.000				1.000	
	644-6034	IN SM RD SN SUP&AM TYS80(1)SA(U-1EXT)		EA	3.000				3.000	
	644-6035	IN SM RD SN SUP&AM TYS80(1)SA(U-2EXT)		EA	4.000				4.000	
	644-6075	RELOCATE SM RD SN SUP&AM(SIGN ONLY)		EA	1.000				1.000	
	644-6076	REMOVE SM RD SN SUP&AM		EA	88.000				88.000	
	644-6113	REMOVE SM RD SN (FOUNDATION ONLY)		EA	12.000				12.000	
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)		LF			1,912.000		1,912.000	
	666-6042	REFL PAV MRK TY I (W)12"(SLD)(100MIL)		LF			4,910.000		4,910.000	
	666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)		LF			1,244.000		1,244.000	
	666-6054	REFL PAV MRK TY I (W)(ARROW)(100MIL)		EA			18.000		18.000	
	666-6078	REFL PAV MRK TY I (W)(WORD)(100MIL)		EA			10.000		10.000	
	666-6306	RE PM W/RET REQ TY I (W)6"(BRK)(100MIL)		LF			4,996.000		4,996.000	
	666-6318	RE PM W/RET REQ TY I (Y)6"(BRK)(100MIL)		LF			2,920.000		2,920.000	
	666-6321	RE PM W/RET REQ TY I (Y)6"(SLD)(100MIL)		LF			17,620.000		17,620.000	
	672-6007	REFL PAV MRKR TY I-C		EA			98.000		98.000	
	672-6009	REFL PAV MRKR TY II-A-A		EA			561.000		561.000	
	672-6010	REFL PAV MRKR TY II-C-R		EA			248.000		248.000	
	677-6002	ELIM EXT PAV MRK & MRKS (6")		LF			21,172.000		21,172.000	
	677-6003	ELIM EXT PAV MRK & MRKS (8")		LF			1,296.000		1,296.000	
	677-6005	ELIM EXT PAV MRK & MRKS (12")		LF			2,739.000		2,739.000	
	677-6007	ELIM EXT PAV MRK & MRKS (24")		LF			735.000		735.000	
	677-6008	ELIM EXT PAV MRK & MRKS (ARROW)		EA			35.000		35.000	
	677-6012	ELIM EXT PAV MRK & MRKS (WORD)		EA			4.000		4.000	
	678-6002	PAV SURF PREP FOR MRK (6")		LF			25,536.000		25,536.000	
	678-6004	PAV SURF PREP FOR MRK (8")		LF			1,912.000		1,912.000	
	678-6006	PAV SURF PREP FOR MRK (12")		LF			4,910.000		4,910.000	
	678-6008	PAV SURF PREP FOR MRK (24")		LF			1,244.000		1,244.000	
	678-6009	PAV SURF PREP FOR MRK (ARROW)		EA			18.000		18.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0226-05-072 **DISTRICT** Amarillo **COUNTY** Deaf Smith
HIGHWAY US 385

			CONTROL SECTION JOB	**0226-05-072**		**0226-05-073**		TOTAL EST.	TOTAL FINAL
			PROJECT ID	**A00195381**		**A00200712**			
			COUNTY	**Deaf Smith**		**Deaf Smith**			
			HIGHWAY	**US 385**		**US 385**			
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL		
	678-6016	PAV SURF PREP FOR MRK (WORD)	EA			10.000		10.000	
	3004-6001	CONTINUOUS DIAMOND GRINDING CONC PVMT	SY			53,481.000		53,481.000	
	5035-6001	REMOVE AND REPLACE WOOD FENCE	LF	92.000				92.000	
	6001-6002	PORTABLE CHANGEABLE MESSAGE SIGN	EA	2.000				2.000	
	6019-6007	PREFB PV MK W/WNTY TY B(W)6"(BRK)CNTST	LF			4,996.000		4,996.000	
	6185-6002	TMA (STATIONARY)	DAY	118.000				118.000	
	6185-6003	TMA (MOBILE OPERATION)	HR	16.000				16.000	
	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	

SUMMARY OF ROADWAY ITEMS																
LOCATION	104 6009	104 6015	104 6017	104 6028	104 6029	104 6036	105 6043	160 6003	162 6002	168 6001	432 6001	450 6049	479 6001	479 6005	479 6008	496 6030
	REMOVING CONC (RIPRAP)	REMOVING CONC (SIDEWALKS) *	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (MISC)	REMOVING CONC (CURB OR CURB & GUTTER)	REMOVING CONC (SIDEWALK OR RAMP)	REMOVING STAB BASE & ASPH PAV (0-6")	FURNISHING AND PLACING TOPSOIL (4")	BLOCK SODDING	VEGETATIVE WATERING	RIPRAP (CONC)(4 IN)	RAIL (HANDRAIL) (TY C)	ADJUSTING MANHOLES	ADJUSTING MANHOLES (WATER VALVE BOX)	ADJUSTING MANHOLES (WATER METER)	REMOVE STR (BOLLARD)
	SY	SY	SY	SY	LF	SY	SY	SY	SY	MG	CY	LF	EA	EA	EA	EA
CSJ: 0226-05-072																
SIDEWALK PLAN SHEET 1 OF 17		67	341	6	340		236									
SIDEWALK PLAN SHEET 2 OF 17		44	318	191	483	3	264								2	
SIDEWALK PLAN SHEET 3 OF 17		59	273	54	507	23	351				0.2				3	
SIDEWALK PLAN SHEET 4 OF 17		367	231	20	203	7	2								6	
SIDEWALK PLAN SHEET 5 OF 17		74	304	53	329	5	80	15	15	0.3	0.6				2	
SIDEWALK PLAN SHEET 6 OF 17		110	241	20	299	14	181				0.3		1		1	
SIDEWALK PLAN SHEET 7 OF 17		145	362	39	549		357								3	1
SIDEWALK PLAN SHEET 8 OF 17		234	352	7	372	57	154								2	
SIDEWALK PLAN SHEET 9 OF 17		167	446	75	490	18	175								1	
SIDEWALK PLAN SHEET 10 OF 17		40	146	21	137	6	175								1	
SIDEWALK PLAN SHEET 11 OF 17		96	425	118	755		470							3	7	1
SIDEWALK PLAN SHEET 12 OF 17		50	1027	218	1320		940				3.8				7	
SIDEWALK PLAN SHEET 13 OF 17		237	633	45	825	29	883				0.8			1	6	
SIDEWALK PLAN SHEET 14 OF 17	13	20	194	9	797		1979				1.4	11				
SIDEWALK PLAN SHEET 15 OF 17			490	10	464		355					46		7		
SIDEWALK PLAN SHEET 16 OF 17			340	253	574	12	904				0.7		1			
SIDEWALK PLAN SHEET 17 OF 17			258	9	202	14	254						1			
PROJECT TOTALS:	13	1710	6381	1148	8646	188	7760	15	15	0.3	7.8	57	3	11	41	2

* FOR CONTRACTOR'S REFERENCE ONLY. PAYMENT SHALL BE SUBSIDIARY TO PERTINENT ITEM.

SUMMARY OF ROADWAY ITEMS (CONTINUED)																
LOCATION	496 6043	528 6001	529 6002	529 6008	530 6004	531 6001	531 6018	531 6019	531 6020	531 6023	531 6024	531 6032	531 6033	5035 6001	5072 6001	
	REMOV STR (SMALL FENCE)	COLORED TEXTURED CONC (4")	CONC CURB (TY II)	CONC CURB & GUTTER (TY II)	DRIVEWAYS (CONC)	CONC SIDEWALKS (4")	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)	CURB RAMPS (TY 6)	CURB RAMPS (TY 7)	CONC SIDEWALKS (SPECIAL) (TYPE A)	CONC SIDEWALKS (SPECIAL) (TYPE B)	REMOVE AND REPLACE WOOD FENCE	REMOVE PRECAST CONCRETE WHEEL STOPS	
	LF	SY	LF	LF	SY	SY	SY	SY	SY	SY	SY	SY	SY	LF	EA	
CSJ: 0226-05-072																
SIDEWALK PLAN SHEET 1 OF 17		19		41	569	102										
SIDEWALK PLAN SHEET 2 OF 17		95	43	164	414	210			32	37						
SIDEWALK PLAN SHEET 3 OF 17		73		52	463	235					24					
SIDEWALK PLAN SHEET 4 OF 17		30	132		255	377			10							
SIDEWALK PLAN SHEET 5 OF 17		47		25	381	215					22		40	92		
SIDEWALK PLAN SHEET 6 OF 17		97		110	327	258		14		13	23					
SIDEWALK PLAN SHEET 7 OF 17		25	85	148	587	292	19								1	
SIDEWALK PLAN SHEET 8 OF 17	10	123	97	79	444	362	50		13						1	
SIDEWALK PLAN SHEET 9 OF 17		76	182	133	519	402	49					2				
SIDEWALK PLAN SHEET 10 OF 17		51	44	23	228	143			16							
SIDEWALK PLAN SHEET 11 OF 17		211		263	779	710										
SIDEWALK PLAN SHEET 12 OF 17		298	5	221	1417	566					37					
SIDEWALK PLAN SHEET 13 OF 17		894	135	34	1026	678	21		16						2	
SIDEWALK PLAN SHEET 14 OF 17		1155	143		1197	820						7			2	
SIDEWALK PLAN SHEET 15 OF 17		1391			696	739						68				
SIDEWALK PLAN SHEET 16 OF 17		1157	134	53	567	949				19	18					
SIDEWALK PLAN SHEET 17 OF 17		1597			336	874			11		18	6				
PROJECT TOTALS:	10	7339	1000	1346	10205	7932	139	14	98	69	142	83	40	92	6	

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Texas Department of Transportation

US 385

PROJECT SUMMARY

SHEET 1 OF 2

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		12

MARKUP FOR 100 MILL ITEMS AN DESEND TO PM

SUMMARY OF PAVEMENT MARKING ITEMS

LOCATION	666 6035	666 6041	666 6047	666 6053	666 6077	666 6305	666 6317	666 6320	672 6007	672 6009	672 6010	677 6002	677 6003	677 6005	677 6007	677 6008	677 6012	678 6002	678 6004	678 6006	678 6008
	REFL PAV MRK TY I (W)8"(SLD) (090MIL)	REFL PAV MRK TY I (W)12"(SLD) (090MIL)	REFL PAV MRK TY I (W)24"(SLD) (090MIL)	REFL PAV MRK TY I (W)(ARROW) (090MIL)	REFL PAV MRK TY I (W)(WORD) (090MIL)	RE PM W/RET REQ TY I (W)6"(BRK) (090MIL)	RE PM W/RET REQ TY I (Y)6"(BRK) (090MIL)	RE PM W/RET REQ TY I (Y)6"(SLD)(090 MIL)	REFL PAV MRKR TY I-C	REFL PAV MRKR TY II-A-A	REFL PAV MRKR TY II-C-R	ELIM EXT PAV MRK & MRKS (6")	ELIM EXT PAV MRK & MRKS (8")	ELIM EXT PAV MRK & MRKS (12")	ELIM EXT PAV MRK & MRKS (24")	ELIM EXT PAV MRK & MRKS (ARROW)	ELIM EXT PAV MRK & MRKS (WORD)	PAV SURF PREP FOR MRK (6")	PAV SURF PREP FOR MRK (8")	PAV SURF PREP FOR MRK (12")	PAV SURF PREP FOR MRK (24")
	LF	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF
CSJ: 0226-05-073																					
SPM SHEET 1 OF 17	142				1	100		420	8	22	5	420	200					520	142		
SPM SHEET 2 OF 17	280	825	216	2	1	185		683	13	34	8	738	140	758	200			868	280	825	216
SPM SHEET 3 OF 17		289	58	2		240	90	622		18	12	872				2		952		289	58
SPM SHEET 4 OF 17		185	30			240	160	631		16	12	835				2		1031		185	30
SPM SHEET 5 OF 17		326	66			240	150	538		17	12	807				3		928		326	66
SPM SHEET 6 OF 17		125	73			240	180	748		18	12	928				4		1168		125	73
SPM SHEET 7 OF 17		105	24			240	180	785		20	12	1010				2		1205		105	24
SPM SHEET 8 OF 17		204	48			240	200	732		18	12	983				3		1172		204	48
SPM SHEET 9 OF 17	46	198	62			240	120	869	3	28	12	1069				2		1229	46	198	62
SPM SHEET 10 OF 17	359	599	154	2	2	187		721	18	36	10	702	210	599	154	2		908	359	599	154
SPM SHEET 11 OF 17	19	55	14			478	400	1779	1	50	22	2228				1		2657	19	55	14
SPM SHEET 12 OF 17		153	32			462	436	1621		40	24	1998				2		2519		153	32
SPM SHEET 13 OF 17	406	496	140	4	2	426	104	1541	21	70	22	1741	192	418	122	3		2071	406	496	140
SPM SHEET 14 OF 17		84	20	2		478	440	1739		42	24	2176				3		2657		84	20
SPM SHEET 15 OF 17				2		460	460	1876		50	24	2340						2796			
SPM SHEET 16 OF 17	475	547	142	3	3	440		1947	25	64	21	1957	370	412	122	4	2	2387	475	547	142
SPM SHEET 17 OF 17	185	719	165	1	1	100		368	9	18	4	368	184	552	137	2	2	468	185	719	165
PROJECT TOTALS:	1912	4910	1244	18	10	4996	2920	17620	98	561	248	21172	1296	2739	735	35	4	25536	1912	4910	1244

SUMMARY OF PAVEMENT MARKING ITEMS (CONTINUED)

LOCATION	678 6009	678 6016	3004 6001	6019 6007
	PAV SURF PREP FOR MRK (ARROW)	PAV SURF PREP FOR MRK (WORD)	CONTINUOUS DIAMOND GRINDING CONC PVMT	PREFB PV MK W/WNTY TY B(W)6"(BRK) CNTST
	EA	EA	SY	LF
CSJ: 0226-05-073				
SPM SHEET 1 OF 17		1	2135	100
SPM SHEET 2 OF 17	2	1	2530	185
SPM SHEET 3 OF 17	2		2370	240
SPM SHEET 4 OF 17			2371	240
SPM SHEET 5 OF 17			2357	240
SPM SHEET 6 OF 17			2361	240
SPM SHEET 7 OF 17			2304	240
SPM SHEET 8 OF 17			2308	240
SPM SHEET 9 OF 17			2431	240
SPM SHEET 10 OF 17	2	2	2554	187
SPM SHEET 11 OF 17			4547	478
SPM SHEET 12 OF 17			4495	462
SPM SHEET 13 OF 17	4	2	4688	426
SPM SHEET 14 OF 17	2		5007	478
SPM SHEET 15 OF 17	2		5022	460
SPM SHEET 16 OF 17	3	3	5010	440
SPM SHEET 17 OF 17	1	1	991	100
PROJECT TOTALS:	18	10	53481	4996

SUMMARY OF SIGNING ITEMS

LOCATION	560 6025	636 6007	644 6001	644 6002	644 6004	644 6007	644 6030	644 6033	644 6034	644 6035	644 6075	644 6076	644 6113
	RELOCATE EXISTING MAILBOX	REPLACE EXISTING ALUMINUM SIGNS(TY A)	IN SM RD SN SUP&AM TY10BWG(1) SA(P)	IN SM RD SN SUP&AM TY10BWG(1) SA(P-BM)	IN SM RD SN SUP&AM TY10BWG(1)SA (T)	IN SM RD SN SUP&AM TY10BWG(1) SA(U)	IN SM RD SN SUP&AM TYS80(1)SA (T)	IN SM RD SN SUP&AM TYS80(1)SA(U)	IN SM RD SN SUP&AM TYS80(1)SA (U-1EXT)	IN SM RD SN SUP&AM TYS80(1)SA (U-2EXT)	RELOCATE SM RD SN SUP&AM(SIGN ONLY)	REMOVE SM RD SN SUP&AM	REMOVE SM RD SN (FOUNDATION ONLY)
	EA	SF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CSJ: 0226-05-072													
SPM SHEET 1 OF 17			2									2	
SPM SHEET 2 OF 17				1			1		1	2		5	2
SPM SHEET 3 OF 17			3	3	2						1	8	
SPM SHEET 4 OF 17				2								2	1
SPM SHEET 5 OF 17			2	5								7	
SPM SHEET 6 OF 17				5	2							7	1
SPM SHEET 7 OF 17				2								2	1
SPM SHEET 8 OF 17	1		1	3								4	1
SPM SHEET 9 OF 17	1		3	5	1	1						9	
SPM SHEET 10 OF 17			1						2	2		8	1
SPM SHEET 11 OF 17			1	1	1	1						4	
SPM SHEET 12 OF 17	3			3								3	2
SPM SHEET 13 OF 17		11		1	3		1					6	1
SPM SHEET 14 OF 17		11		2								4	1
SPM SHEET 15 OF 17			2									2	
SPM SHEET 16 OF 17	1			1	5							6	
SPM SHEET 17 OF 17	1		2	1	3			1				9	1
PROJECT TOTALS:	7	22	17	35	17	2	2	1	3	4	1	88	12

SUMMARY OF DRAINAGE ITEMS

LOCATION	465 6013	465 6014	465 6015	465 6016	479 6003	496 6002
	INLET (COMPL)(PCO) (3FT)(NONE)	INLET (COMPL)(PCO) (3FT)(LEFT)	INLET (COMPL)(PCO) (3FT)(RIGHT)	INLET (COMPL)(PCO) (3FT)(BOTH)	ADJUSTING MANHOLES & INLETS	REMOV STR (INLET)
	EA	EA	EA	EA	EA	EA
CSJ: 0226-05-072						
DRAINAGE AREA MAP SHEET 1 OF 4					3	
DRAINAGE AREA MAP SHEET 2 OF 4		3	1		1	2
DRAINAGE AREA MAP SHEET 3 OF 4	1	1	1	1		2
DRAINAGE AREA MAP SHEET 4 OF 4				1		1
PROJECT TOTALS:	1	4	2	2	4	5

SUMMARY OF EROSION CONTROL ITEMS

LOCATION	506 6035	506 6040	506 6043
	SANDBAGS FOR EROSION CONTROL	BIODEG EROSN CONT LOGS (INSTL) (8")	BIODEG EROSN CONT LOGS (REMOVE)
	EA	LF	LF
CSJ: 0226-05-072			
SWP3 SHEET 1 OF 4	11	41	41
SWP3 SHEET 2 OF 4	16	55	55
SWP3 SHEET 3 OF 4	58	286	286
SWP3 SHEET 4 OF 4	45	231	231
PROJECT TOTALS:	130	613	613

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Texas Department of Transportation

US 385

PROJECT SUMMARY

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		13

DATE: 3/5/2024 12:38:14 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/US385/US385/General/US385_AEC_RD_SUM_002.dgn

cx dw cx cx

DRIVEWAY SUMMARY ITEM NO: 0530 - 6004											
		MEASUREMENTS									
LOCATION	DW ID	"W1" (FT)	"W2" (FT)	"D1" (FT)	SLOPE D1 (%)	"D2" (FT)	SLOPE D2 (%)	"D3" (FT)	SLOPE D3 (%)	RADIUS	DRIVEWAY CONC (SY)
12+06.88	SB-01	48.0	38.0	3.3	10.0	4.0	1.5	6.0	9.1	-	71
12+08.29	NB-01	55.0	45.0	-	-	6.0	1.5	10.3	10.0	-	106
12+61.44	NB-02	40.0	30.0	-	-	6.1	1.5	10.3	6.8	-	77
12+81.71	SB-02	48.0	38.0	3.4	10.0	4.0	1.5	17.0	9.8	-	129
13+12.35	NB-03	29.0	19.0	5.5	6.0	6.0	1.5	5.0	2.4	5.0	42
13+56.91	SB-03	40.0	30.0	3.3	10.0	4.0	1.5	3.0	7.1	-	51
13+67.41	NB-04	47.7	38.0	6.4	3.0	6.0	1.5	5.0	1.4	5.0	83
14+38.29	NB-05	50.0	30.0	6.0	8.0	6.0	1.5	5.0	2.2	10.0	71
15+78.31	SB-04	33.8	24.0	3.9	8.0	6.0	1.5	2.0	1.5	5.0	39
16+24.46	SB-05	43.1	33.0	4.3	6.2	6.0	1.5	-	-	5.0	57
16+60.24	NB-06	42.3	32.0	-	-	5.2	1.5	2.0	9.0	-	42
17+40.54	SB-06	61.0	51.0	4.1	10.0	6.0	1.5	4.0	6.5	5.0	95
17+47.95	NB-07	41.0	31.0	-	-	5.2	1.5	2.0	10.0	-	41
18+60.13	NB-08	41.0	31.0	-	-	5.2	1.5	2.0	4.3	-	40
18+62.22	SB-07	110.0	100.0	-	-	5.0	1.5	2.0	1.4	-	121
19+63.64	SB-08	21.0	11.0	4.3	8.0	6.0	1.5	2.0	4.0	5.0	21
20+59.18	SB-09	109.8	100.0	4.3	8.0	6.0	1.5	2.0	3.5	5.0	159
21+03.47	NB-09	41.0	31.0	-	-	5.0	1.5	4.0	10.0	-	49
21+78.15	NB-10	33.0	23.0	-	-	5.0	1.5	2.0	4.4	-	33
22+25.65	SB-10	36.0	26.0	4.7	6.2	6.0	1.5	-	-	5.0	38
22+88.26	SB-11	39.0	29.0	4.6	8.0	6.0	1.5	2.0	3.5	5.0	49
23+52.77	SB-12	90.0	80.0	4.5	8.0	6.0	1.5	2.0	2.0	5.0	128
24+35.12	SB-13	67.0	57.0	4.4	5.5	6.0	1.5	-	-	5.0	80
25+38.96	SB-14	19.0	12.0	2.4	-	5.0	1.5	7.0	9.3	-	28
25+56.46	SB-15	24.0	17.0	-	-	5.0	1.5	11.0	9.9	-	42
27+37.21	SB-16	20.0	10.0	2.2	8.3	6.0	1.5	-	-	5.0	15
28+33.78	SB-17	45.0	33.0	2.1	10.0	6.0	1.5	4.0	9.7	5.0	55
28+96.98	SB-18	37.0	27.0	2.1	4.0	6.0	1.5	2.0	4.5	5.0	40
30+02.62	SB-19	33.9	20.0	6.2	10.0	6.0	1.5	4.0	10.0	10.0, 4.0	53
30+41.62	SB-20	54.0	42.0	6.2	10.0	6.0	1.5	4.0	5.0	4.0, 8.0	92
31+80.41	SB-21	29.0	19.0	3.2	6.0	6.0	1.5	2.0	4.0	5	33
32+27.07	SB-22	43.0	33.0	3.1	10.0	6.0	1.5	3.0	9.5	5.0	58
32+74.80	SB-23	32.0	22.0	3.1	8.0	6.0	1.5	2.5	3.2	5.0	40
32+99.67	NB-11	50.0	40.0	7.5	*	5.0	*	6.0	*	5.0	93
33+23.30	SB-24	31.0	21.0	3.1	10.0	6.0	1.5	3.0	0.7	5.0	38
34+53.19	SB-25	47.0	37.0	2.0	10.0	4.0	1.5	2.0	9.2	-	54
35+32.91	SB-26	51.0	41.0	1.9	9.0	4.0	1.5	2.0	1.2	-	59
37+12.95	SB-27	41.0	31.0	2.0	10.0	4.0	1.5	6.5	3.9	-	64
37+64.20	SB-28	25.0	15.0	-	-	6.0	1.5	5.5	7.5	-	36
38+42.49	SB-29	28.0	18.0	2.0	10.0	4.0	1.5	7.5	2.8	-	45
38+86.21	NB-12	55.0	45.0	-	-	5.0	1.5	2.0	2.4	-	56
39+50.74	SB-30	22.0	12.0	-	-	6.0	1.5	5.5	5.9	-	31
39+82.01	NB-13	117.0	107.0	-	-	5.0	1.5	2.0	8.3	-	122
40+92.08	NB-14	20.1	10.0	2.0	0.9	4.0	1.5	-	-	-	14
41+63.33	SB-31	125.0	115.0	5.7	10.0	5.0	1.5	5.5	10.0	5.0	233
41+74.45	NB-15	43.0	33.0	-	-	5.0	1.5	-	-	-	36
42+62.32	SB-32	57.0	47.0	5.5	10.0	5.0	1.5	6.0	8.9	5.0	68
42+72.23	NB-16	35.0	25.0	-	-	4.5	1.5	2.0	0.8	-	33
43+50.04	SB-33	60.0	40.0	4.5	10.0	6.0	1.5	2.0	9.0	10.0	73
44+49.78	SB-34	29.0	19.0	-	-	5.0	1.5	8.0	9.9	-	43
44+49.78	SB-35	42.0	43.8	-	-	5.0	1.5	10.5	9.8	-	116
46+14.46	NB-17	18.0	8.0	13.2	*	5.0	*	-	-	5.0	22
46+49.46	SB-36	27.0	17.0	2.0	10.0	4.0	1.5	9.0	7.5	-	44
46+85.70	SB-37	20.0	10.0	-	-	6.0	1.5	6.0	6.7	-	29
47+32.34	SB-38	46.0	36.0	2.0	10.0	4.0	1.5	5.5	9.5	-	71
48+03.76	SB-39	35.1	15.0	5.7	10.0	5.0	1.5	2.0	10.0	10.0	34
48+46.16	NB-18	29.0	30.0	13.0	*	5.0	*	-	-	2.0, 5.0	62
48+82.25	NB-19	20.0	10.0	13.0	*	5.0	*	-	-	5.0	27
48+84.64	SB-40	41.7	22.0	5.7	10.0	5.0	1.5	2.0	0.3	10.0	44
49+50.09	NB-20	32.5	26.0	13.0	*	5.0	*	-	-	5.0, 2.0	61
49+51.50	SB-41	40.0	30.0	-	-	6.5	1.5	6.0	4.3	-	58
50+76.86	SB-42	38.0	28.0	-	-	6.0	1.5	8.5	9.8	-	69
51+06.91	NB-21	45.0	35.0	5.5	*	5.0	*	-	-	5.0	52
51+56.08	NB-22	30.0	20.0	5.5	*	5.0	*	-	-	5.0	31
51+77.55	SB-43	50.7	29.1	2.1	10.0	2.9	1.5	12.0	8.9	5.0, 13.0	66
52+00.34	NB-23	22.7	12.0	5.5	*	5.0	*	-	-	5.0	21
53+00.40	NB-24	99.0	90.0	-	-	5.0	1.5	3.0	9.6	-	117
55+93.00	NB-25	41.1	31.0	3.1	7.5	6.0	1.5	-	-	5.0	41
56+39.21	NB-26	43.0	33.0	3.2	8.5	6.0	1.5	-	-	5.0	43
56+88.30	NB-27	29.7	20.0	5.1	10.0	4.0	1.5	-	-	5.0	28
57+55.00	SB-44	46.0	36.0	-	-	5.0	1.5	10.0	7.8	-	83
58+66.60	SB-45	31.0	21.0	2.0	10.0	4.0	1.5	8.0	8.3	-	54
59+48.20	SB-46	39.0	29.0	-	-	6.0	1.5	3.5	7.5	-	51
60+28.95	NB-28	68.9	49.0	3.2	8.5	6.0	1.5	-	-	10.0	69
60+98.74	NB-29	65.7	46.0	3.2	5.3	6.0	1.5	-	-	10.0	65
62+04.23	NB-30	53.9	34.0	5.0	2.5	6.0	1.5	-	-	10.0	51
62+54.44	SB-47	51.0	41.0	-	-	6.0	1.5	9.0	7.6	-	95
62+71.18	NB-31	40.0	20.0	3.2	4.8	6.0	1.5	-	-	10.0	34
64+03.91	SB-48	46.0	36.0	2.3	10	4.0	1.5	12.0	6.9	-	91
64+17.50	NB-32	49.3	30.0	3.3	3.5	6.0	1.5	-	-	10.0	47
64+64.13	SB-49	20.0	13.0	6.1	10.0	6.0	1.5	-	-	5.0, 2.0	23
65+73.13	NB-33	60.9	41.0	3.8	5.6	5.6	1.5	-	-	10.0	60
65+83.06	SB-50	28.0	18.0	6.1	10.0	6.0	1.5	2.0	9.5	5.0	55

DRIVEWAY SUMMARY ITEM NO: 0530 - 6004											
		MEASUREMENTS									
LOCATION	DW ID	"W1" (FT)	"W2" (FT)	"D1" (FT)	SLOPE D1 (%)	"D2" (FT)	SLOPE D2 (%)	"D3" (FT)	SLOPE D3 (%)	RADIUS	DRIVEWAY CONC (SY)
66+95.80	NB-34	44.1	34.0	-	-	5.5	1.5	6.0	3.3	-	65
67+28.54	SB-51	101.9	90.0	6.0	7.7	6.0	1.5	-	-	6.0	144
67+43.87	NB-35	52.0	42.0	-	-	5.5	1.5	6.0	4.7	-	77
68+23.93	NB-36	95.0	85.0	-	-	5.5	1.5	6.0	2.7	-	140
68+88.77	SB-52	27.0	17.0	3.3	10.0	5.0	1.5	5.0	1.2	-	45
68+96.76	NB-37	47.0	37.0	-	-	5.5	1.5	6.0	5.5	-	70
69+36.11	NB-38	28.2	18.0	-	-	5.5	1.5	6.0	7.3	-	41
69+53.51	SB-53	47.0	37.0	4.5	10.0	4.0	1.5	3.0	7.0	-	72
69+85.29	NB-39	49.0	29.0	3.3	3.5	6.0	1.5	-	-	10.0	46
70+07.51	SB-54	35.0	25.0	4.5	10.0	4.0	1.5	3.0	0.4	-	54
70+61.53	NB-40	54.9	35.0	5.3	10.0	4.0	1.5	2.0	1.2	10.0	61
70+61.87	SB-55	37.0	27.0	2.4	8.0	6.0	1.5	2.0	2.5	-	52
71+27.08	SB-56	33.0	23.0	3.4	6.3	5.0	1.5	-	-	-	40
71+35.48	NB-41	41.0	21.0	5.2	10.0	4.0	1.5	4.0	10.0	10.0	45
72+26.32	SB-57	29.0	19.0	3.4	8.0	5.0	1.5	2.0	2.9	-	40
72+49.39	NB-42	54.5	44.0	5.2	10.0	4.0	1.5	-	-	5.0	59
72+68.05	SB-58	50.0	40.0	3.8	7.0	5.0	1.5	2.0	1.4	-	71
73+15.32	SB-59	26.0	16.0	4.6	10.0	4.0	1.5	2.0	1.2	-	37
73+45.57	SB-60	34.5	24.5	4.6	10.0	4.0	1.5	2.0	2.2	-	49
73+73.82	SB-61	22.0	12.0	4.6	10.0	4.0	1.5	2.0	3.7	-	31
73+85.03	NB-43	70.0	50.0	3.2	4.2	6.0	1.5	-	-	10.0	72
74+05.82	SB-62	20.0	10.0	4.6	10.0	4.0	1.5	2.0	6.7	-	27
75+12.45	SB-63	47.0	32.0	12.0	10.0	6.0	1.5	-	-	5.0, 10.0	78
75+82.76	SB-64	52.0	32.0	11.8	10.0	6.0	1.5	-	-	10.0	82
76+76.81	SB-65	39.7	20.4	7.2	4.0	6.0	1.5	-	-	10.0	46
77+49.33	SB-66	43.2	23.0	7.8	7.2	6.0	1.5	-	-	10.0	49
77+78.12	SB-67	17.5	10.0	3.6	10.0	5.0	1.5	4.0	2.4	2.0, 5.0	19
78+06.12	NB-44	49.0	29.0	13.2	10.0	6.0	1.5	-	-	10.0	79
78+86.35	NB-45	46.0	26.0	13.1	4.0	6.0	1.5	-	-	10.0	72
79+31.04	SB-68	40.0	20.0	14.1	10.0	6.0	1.5	-	-	10.0	59
79+72.21	NB-46	46.0	26.0	13.3	6.8	6.0	1.5	-	-	10.0	72
79+95.16	SB-69	59.9	40.0	14.1	10.0	6.0	1.5	-	-	10.0	106
80+51.27	NB-47	60.0	40.0	13.2	7.8	6.0	1.5	-	-	10.0	104
80+64.83	SB-70	51.0	36.0	10.1	6.3	6.0	1.5	4.0	2.0	5.0, 10.0	75
82+46.62	NB-48	55.0	45.0	1.9	10.0	4.0	1.5	2.0	7.5	-	60
83+00.62	NB-49	53.0	43.0	2.0	10.0	4.0	1.5	2.0	6.4	-	58
83+68.03	NB-50	54.0	44.0	2.0	6.5	4.0	1.5	-	-	-	48
84+18.86	NB-51	37.0	27.0	2.0	2.0	4.0	1.5	4.0	2.4	-	47
84+40.28	SB-71	47.0	37.0	-	-	5.0	1.5	3.0	6.3	-	50
85+10.57	SB-72	34.0	24.0	3.9	5.7	6.0	1.5	-	-	-	45
85+65.94	NB-52	50.0	40.0	11.0	5.9	6.0	1.5	-	-	-	86
85+74.93	SB-73	34	24.0	4.6	10.0	6.0	1.5	3.0	2.3	5.0	43
86+04.35	SB-74	25	15.0	4.5	8.0	6.0	1.5	3.0	2.7	5.0	66
86+10.91	NB-53	40	30.0	11.0	6.5	6.0	1.5	-	-	5.0	28
86+49.78	SB-75	33	21.0	4.6	7.8	6.0	1.5	2.0	2.0	5.0	36
86+56.91	NB-54	52	42.0	9.7	2.4	6.3	1.5	-	-	5.0	90
86+84.36	SB-76	32	22.0	4.7	6.5	6.0	1.5	-	-	5.0	33
87+20.36	SB-77	40	20.0	4.7	2.8	6.0	1.5	-	-	10.0	36
87+82.39	NB-55	38	28.0	11.1	9.1	6.0	1.5	-	-	5.0	62
88+38.63	SB-78	40	20.0	4.9	2.0	6.0	1.5	-	-	10.0	36
89+24.20	NB-56	76	56.0	11.2	0.5	6.0	1.5	-	-	10.0	128
90+07.16	SB-79	49	29.0	4.9	4.7	6.0	1.5	-	-	10.0	48
90+74.06	SB-80	49	29.0	5.3	8.2	6.0	1.5	-	-	10.0	48
91+10.77	SB-81	20	10.0	-	-	6.1	0.5	-	-	-	18
91+77.09	SB-82	55	35.0	14.3	10.0	6.0	1.5	-	-	10.0	94
92+57.63	SB-83	53	33.0	14.2	10.0	6.0	1.5	-	-	10.0	88
93+61.48	SB-84	65	45.0	14.0	10.0	6.0	1.5	-	-	10.0	116
94+03.01	NB-57	65	45	11.1	6.7	6.0	1.5	-	-	10.0	105
94+76.10	SB-85	29	19	14.1	9.8	6.0	1.5	-	-	5.0	49
95+69.01	NB-58	39	19	11.0	1.0	6.0	1.5	-	-	10.0	50
96+04.65	SB-86	51	31	14.1	9.7	6.0	1.5	-	-	10.0	83
96+55.44	NB-59	24	15	11.0	1.2	6.0	1.5	-		5.0	36
97+56.86	SB-87	51	31	14.0	7.2	6.0	1.5	-	-	10.0	84
97+91.90	NB-60	26	16	11.0	2.3	6.0	1.5	-		5.0	38
98+27.56	SB-88	55	35	14.2	10.0	6.0	1.5	-	-	10.0	93
100+87.58	SB-89	49.3	35	14.3	8.3	6.0	1.5	-	-	7.0	90
102+80.36	SB-90	53.0	43	2.0	6.0	4.0	1.5	2.0	1.7	-	59
103+10.18	NB-61	56.0	36	11.1	5.3	6.0	1.5	-	-	10	86
103+88.27	SB-91	38	28	2.0	10.0	4.0	1.5	-	-	-	35
104+36.86	NB-62	51	31	11.1	8.3	6.0	1.5	-	-	10	90
105+61.17	NB-63	47	28	11.1	7.7	6.0	1.5	-	-	10	59
106+17.66	SB-92	53	33	5.1	4.8	6.0	1.5	-	-	10	86
108+60.92	NB-64	64	44	9.1	10	6.0	1.5	3.0	4.3	10	107
110+35.36	NB-65	50	30	13.3	2.3	6.0	1.5	-	-	10	90
111+25.75	NB-66	64	24	13.7	0.8	6.0	1.5	-	-	20	59
112+05.95	NB-67	64	24	14.2	*	6.0	*	-	-	20	86
118+92.03	NB-68	60	50	8.8	0.3	6.0	1.5	-	-	5	94
120+47.78	NB-69	118	108	9.9	2.4	6.0	1.5	-	-	5	210
121+39.25	NB-70	24	14	10.4	1.3	6.0	1.5	-	-	5	32

* TBD, SURVEY NOT AVAILABLE

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

DRIVEWAY SUMMARY

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		14

DATE: 3/5/2024 2:44:26 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/US385/Roadway/US385_AEC_DS_001.dgn

CK: DW: CK: DW:

SUGGESTED SEQUENCE OF CONSTRUCTION

PERFORM WORK IN SEQUENTIAL SEGMENTS ALONG THE CORRIDOR:

1. INSTALL BARRICADES, SIGNS, AND TRAFFIC CONTROL DEVICES PRIOR TO BEGINNING OF CONSTRUCTION, AS SHOWN IN STANDARDS.
2. ALL TRAFFIC TO REMAIN IN EXISTING LANES. CLOSE OUTSID LANES, IF NECESSARY, ACCORDING TO TCP (2-4).
3. DEMOLISH EXISTING SIDEWALK AND RAMPS IDENTIFIED FOR REMOVAL ON PLANS, PER SEGMENT OF WORK.
4. CONSTRUCT SIDEWALK, RAMPS, CURBS, AND DRIVEWAYS ALONG THE SEGMENTS. ACCESS TO PROPERTIES MUST BE MAINTAINED AT ALL TIMES.
5. RELOCATE/REPLACE SIGNS AND RELOCATE PEDESTRIAN PEDESTALS, AS REQUIRED.
6. REMOVE AND RESET BARRICADES, SIGNS, AND TRAFFIC CONTROL DEVICES FOR THE NEXT SEGMENT OF SIDEWALK TO BE CONSTRUCTED.
7. DIAMOND GRINDING ON FULL WIDTH DRIVING LANES FOR THE ENTIRE PROJECT LIMITS.
8. PERMANENT PAVEMENT MARKINGS TO BE INSTALLED ONCE ALL SIDEWALK WORK SEGEMENTS HAVE BEEN COMPLETELY CONSTRUCTED.
9. PERFORM FINAL CLEAN-UP.
10. REMOVE PROJECT SIGNS.

GENERAL NOTES

1. NOTIFY PROPER CITY, COUNTY, EMS, FIRE DEPARTMENT, POLICE DEPARTMENT, TEXAS DEPARTMENT OF PUBLIC SAFETY, AND/OR TEXAS DEPARTMENT OF TRANSPORTATION OFFICIALS WHEN IMPLEMENTING LANE AND CROSS STREET CLOSURES. NOTIFICATIONS SHALL BE MADE AT LEAST ONE WEEK PRIOR TO BEGINNING WORK.
2. TWO (2) PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) WILL BE PLACED TO DIRECT TRAFFIC AT THE DISCRETION OF THE ENGINEER.
3. EQUIP TRUCKS, TRAILERS, AUTOS, ETC. WITH EMERGENCY FLASHERS AND USE EMERGENCY FLASHERS WITHIN THE WORKING AREA. PROVIDE SUITABLE WARNING LIGHTS, VISIBLE FROM ALL DIRECTIONS, ON ALL EQUIPMENT.
4. DO NOT STORE ANY CONSTRUCTION MATERIAL OR EQUIPMENT AT ANY LOCATION THAT WILL CONSTITUTE A HAZARD AND WILL ENDANGER TRAFFIC. DO NOT STORE EQUIPMENT OUTSIDE DESIGNATED RIGHT-OF-WAY WITHOUT THE WRITTEN PERMISSION GRANTED FIRST BY THE PROPERTY OWNER.
5. PRIOR TO BEGINNING WORK IN ANY PHASE OF THE PROJECT, INSTALL TEMPORARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
6. INSTALL TREE PROTECTION AND EROSION CONTROL / SW3P MEASURES PRIOR TO, BUT NO MORE THAN TWO WEEKS IN ADVANCE OF SOIL DISTURBANCE OR POLLUTANT-GENERATING ACTIVITIES. REMOVE TEMPORARY CONTROL MEASURES IN EACH AREA AS DIRECTED BY THE ENGINEER.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION. TEMPORARY DRAINAGE STRUCTURES MAY BE INSTALLED, AS APPROVED BY THE ENGINEER.
8. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PROPERTY AND BUSINESS OWNERS ADJACENT TO THE PROJECT AREA DURING CONSTRUCTION.
9. FLAGGERS TO BE USED DURING WORKING HOURS TO DIRECT TRAFFIC.
10. PLACE CONSTRUCTION EXITS AS NEEDED OR DIRECTED BY THE ENGINEER.
11. CONTRACTOR SHALL NOT OPEN ANY PORTION OF THE SIDEWALK UNTIL THAT SECTION IS COMPLETELY CONSTRUCTED, INSPECTED, AND APPROVED BY THE ENGINEER.
12. ALL SIDEWALKS AND RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ADA STANDARDS.
13. REPLACE SIDEWALK WITHIN 7 CALENDAR DAYS OF DEMOLITION, UNLESS APPROVED BY THE ENGINEER.
14. WORK SEGMENTS SHALL BE LIMITED TO MAXIMUM TWO (2) BLOCKS AT A TIME. SECTION MUST BE COMPLETED AND ACCEPTED BY OWNER BEFORE MOVING ON TO SUBSEQUENT SECTION.
15. EXISTING ROADWAY SIGNS REMOVED DURING ANY PHASE SHALL BE RELOCATED ON TEMPORARY MOUNTS AS APPLICABLE, AT NO ADDITIONAL COST.
16. IF IRRIGATION SYSTEMS ARE ENCOUNTERED, CUT AND PLUG. CONTACT ENGINEER. PAY WITH FORCE ACCOUNT.
17. EXISTING MANHOLES, WATER VALVES, ETC. WILL NEED TO BE ADJUSTED DURING CONSTRUCTION. CONTRACTOR TO COORDINATE WITH UTILITY OWNER HAVING JURISDICTION.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/1/2024

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Texas Department of Transportation

US 385

TCP NARRATIVE

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		15

DATE: 3/1/2024 19:12:13
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/US385/General/US385_AEC_TC_NAR.dgn

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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

SHEET 1 OF 12

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	0226	05	072, ETC.	US 385
4-03 7-13	DIST	COUNTY		SHEET NO.
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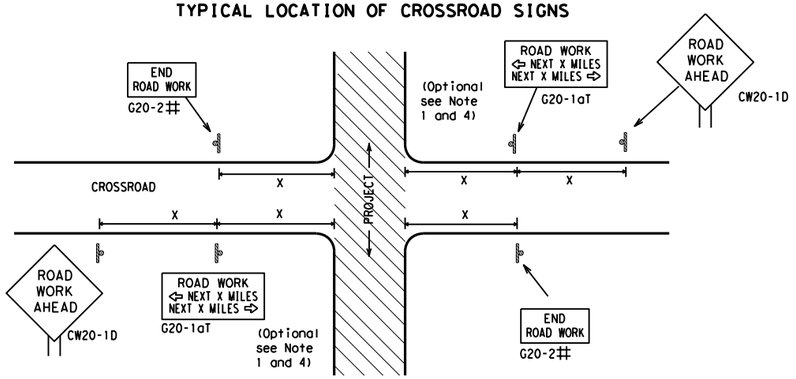
5-10 5-21				

DATE: 3/1/2024 19:12:17
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2_TDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Traffic Control/bc-21

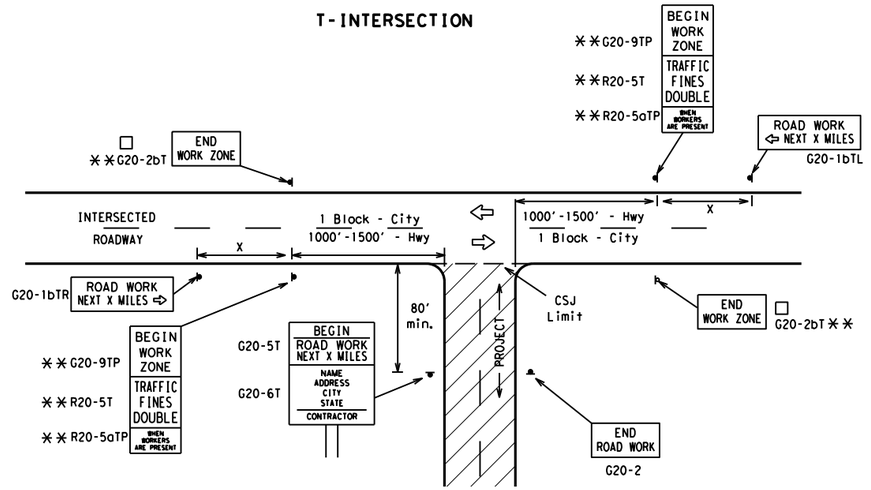
TYPICAL LOCATION OF CROSSROAD SIGNS



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]

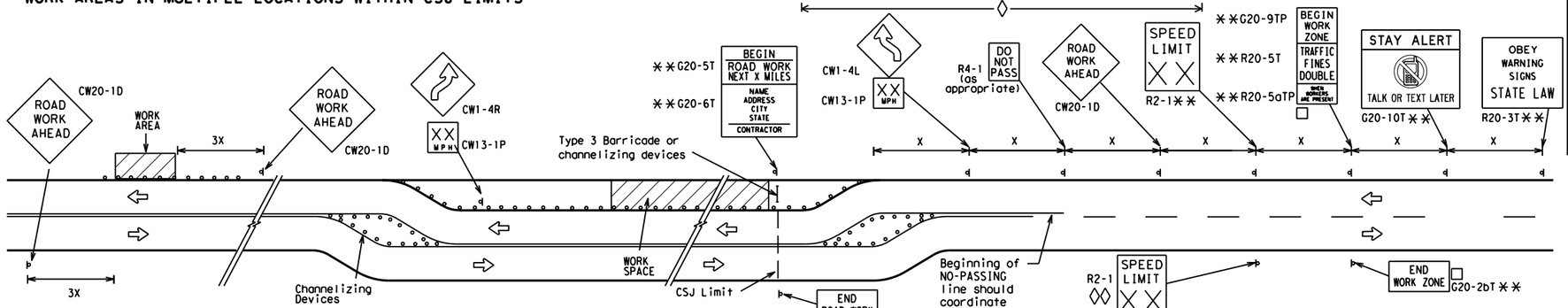
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ 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.

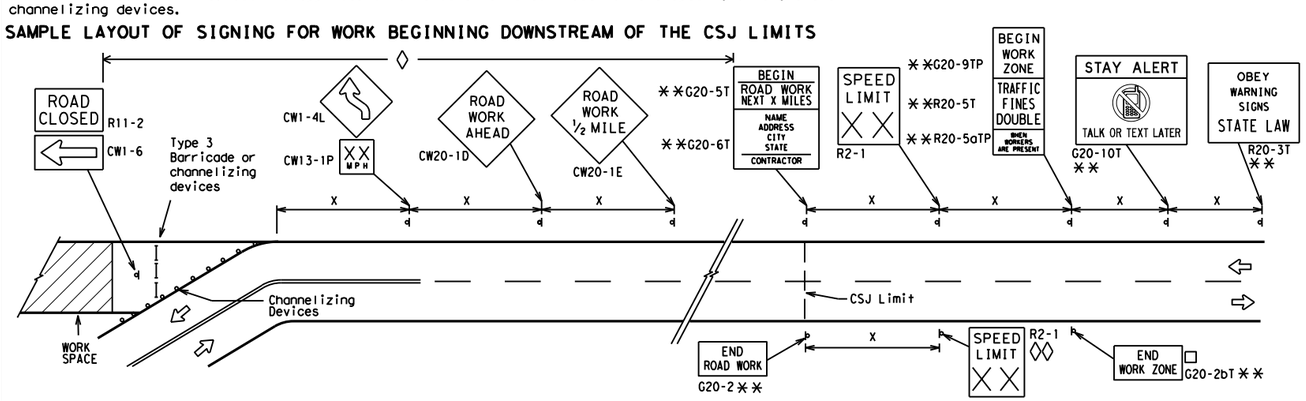
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



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

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS	0226	05	072, ETC.	US 385
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	AMA	DEAF SMITH		17

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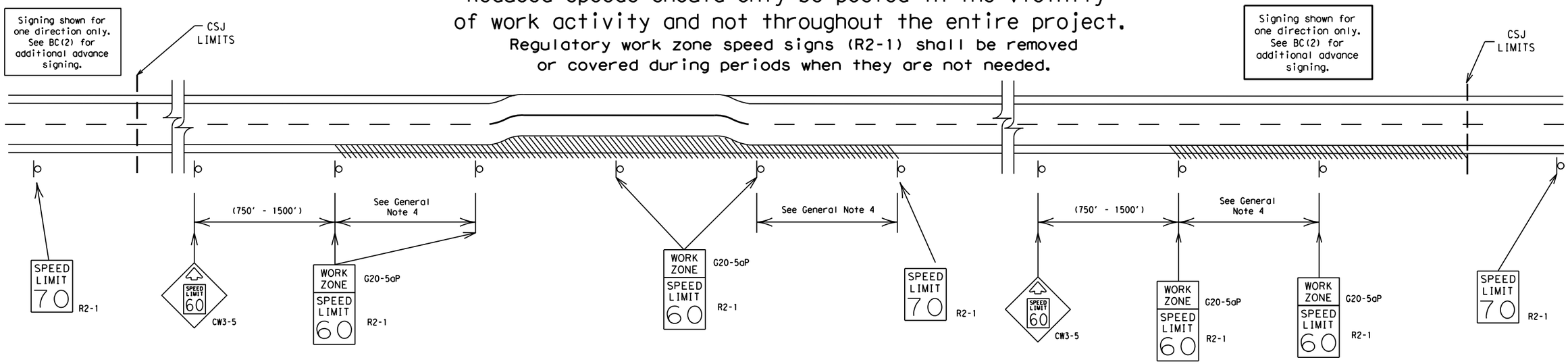
TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

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

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project.

Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

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

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

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

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

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 10 feet of the traveled way or actually in the 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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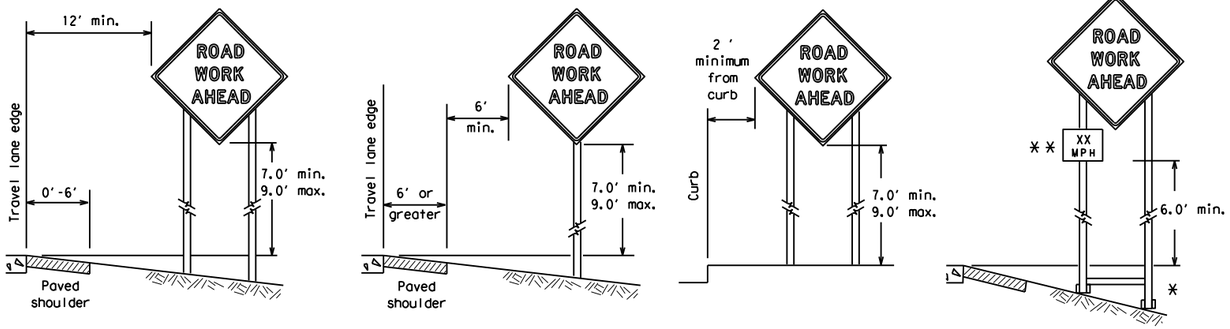
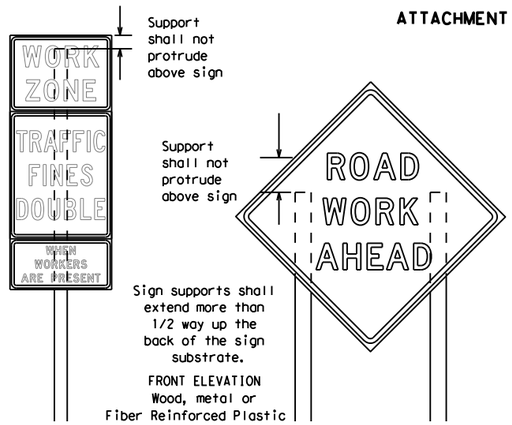
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS

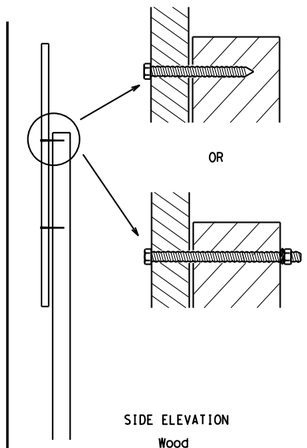


* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** 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





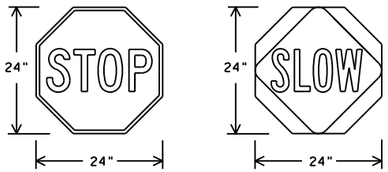
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

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_{FL} 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

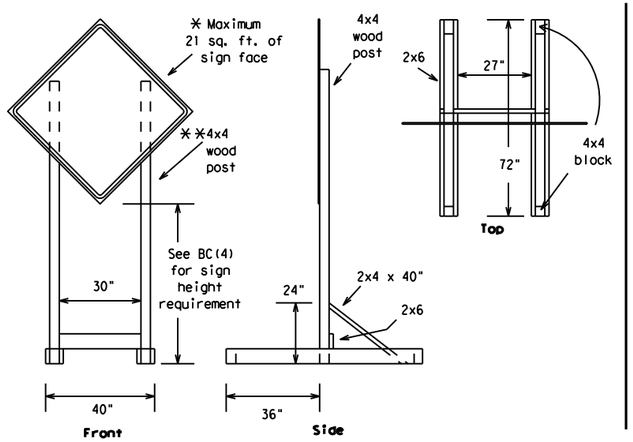
1. Flags may be used to draw attention to warning signs. When used, the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

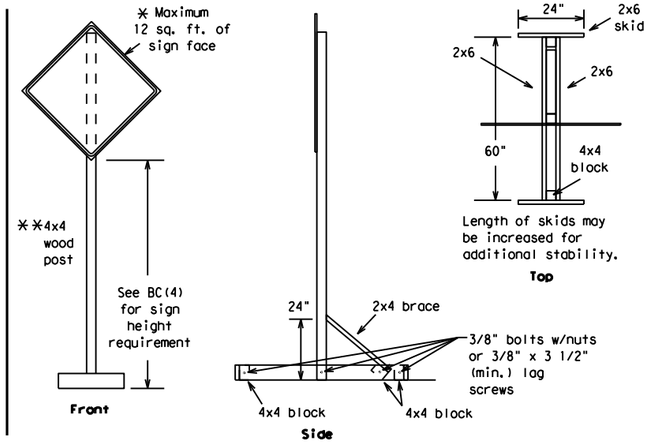
Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-21

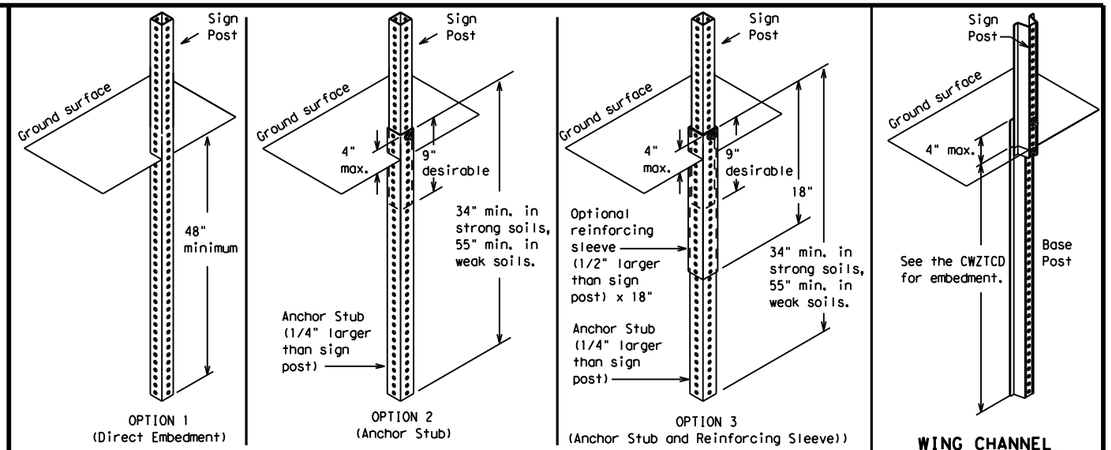
FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	AMA	DEAF SMITH		19





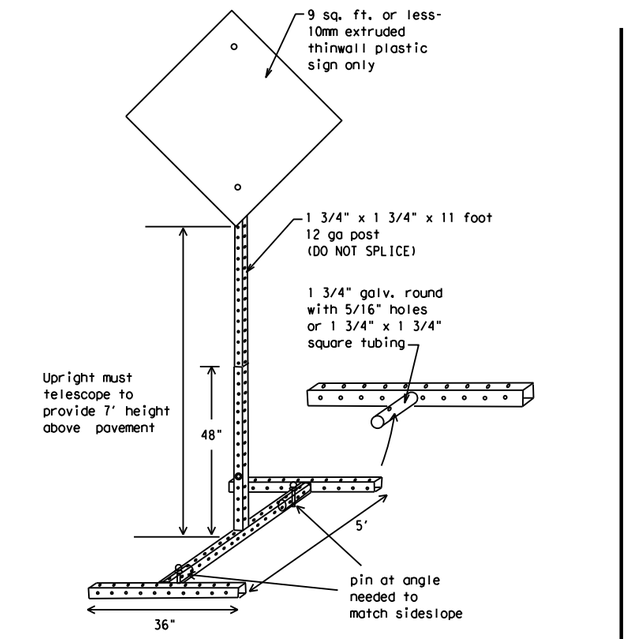
SKID MOUNTED WOOD SIGN SUPPORTS

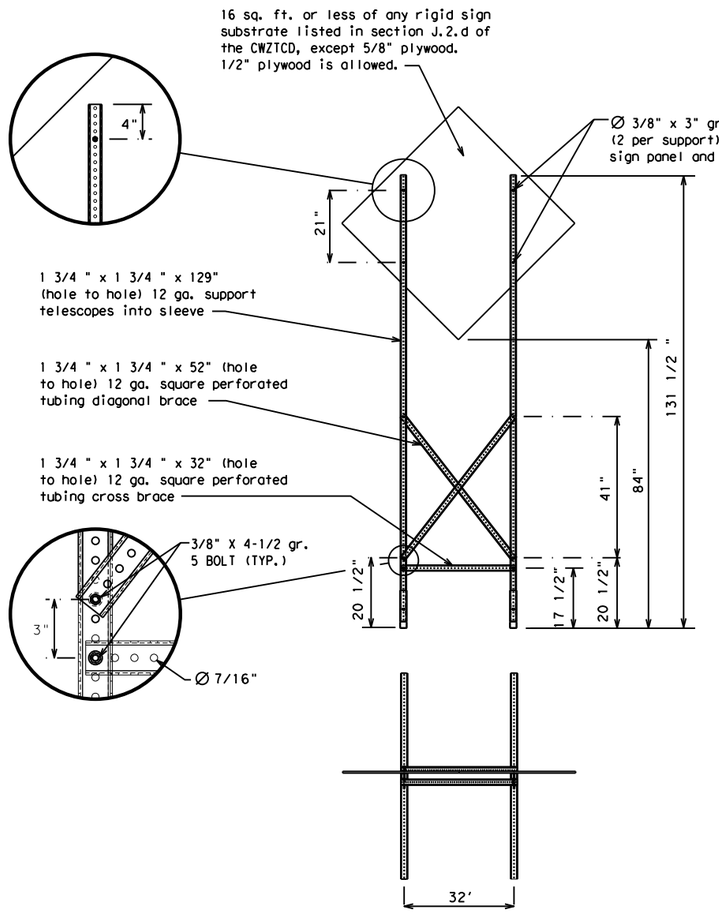
* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

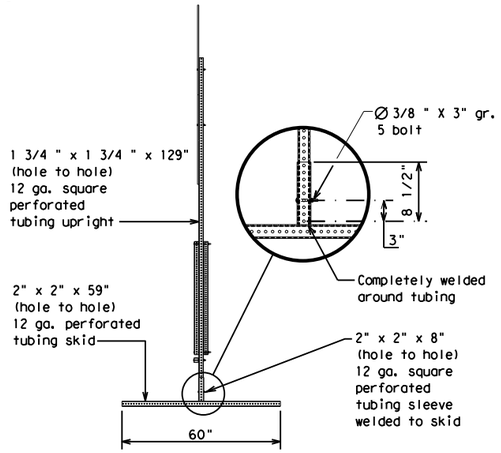


GROUND MOUNTED SIGN SUPPORTS

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

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	AMA	DEAF SMITH		20

DATE: 3/1/2024 19:12:18
FILE: pw://aecom-no-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP501_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Traffic Control/bc-21

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

* 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	0226	05	072, ETC.	US 385
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	AMA	DEAF SMITH		21

DATE: 3/1/2024 19:12:18
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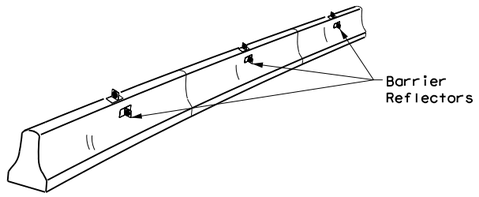
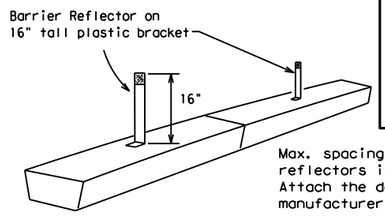
1. Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.



CONCRETE TRAFFIC BARRIER (CTB)

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

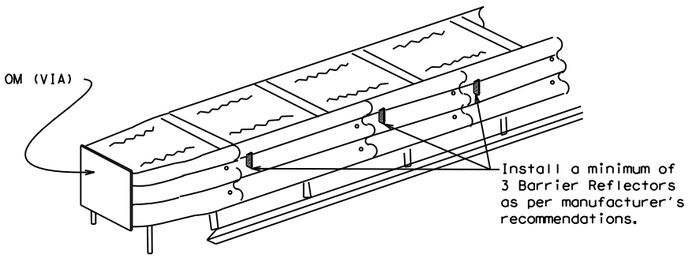


Max. spacing of barrier reflectors is 20 feet. Attach the delineators as per manufacturer's recommendations.

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.

LOW PROFILE CONCRETE BARRIER (LPCB)

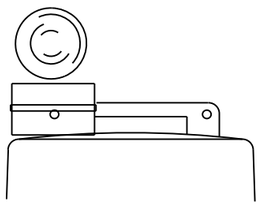


DELINEATION OF END TREATMENTS

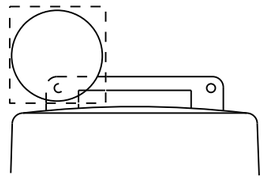
END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet 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_{FL} or C_{FL} Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
4. Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
7. When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
8. The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

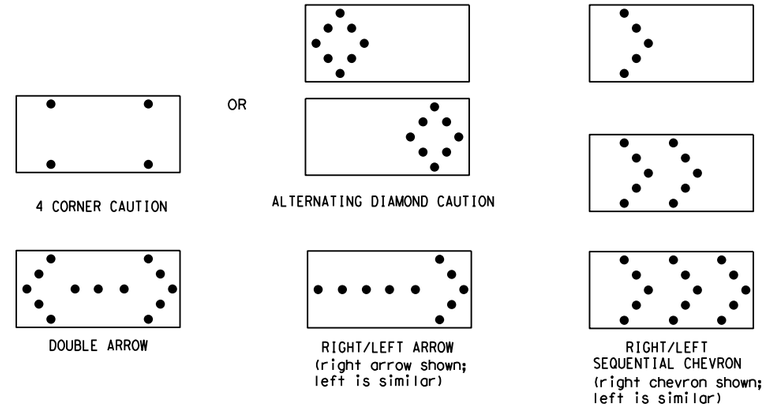
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing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

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

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

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

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



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

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

ATTENTION

Flashing Arrow Boards shall be equipped with automatic dimming devices.

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

FLASHING ARROW BOARDS

TRUCK-MOUNTED ATTENUATORS

1. Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the 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	0226	05	072, ETC.	US 385
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	AMA	DEAF SMITH		22

TOT

DATE: 3/1/2024 19:12:18
FILE: pw://aecom-ng-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Traffic Control/bc-21

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:

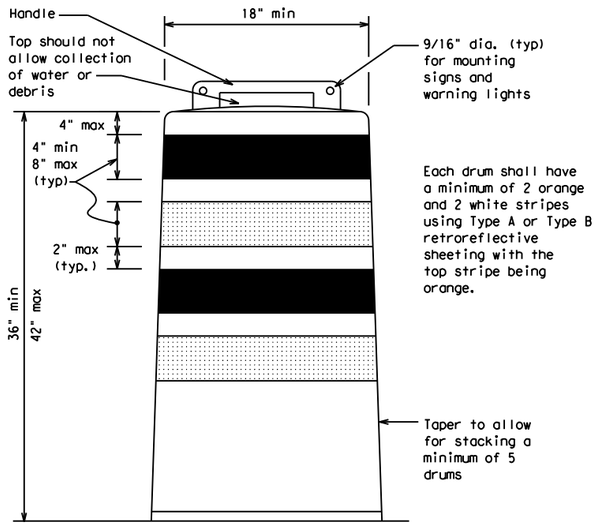
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents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

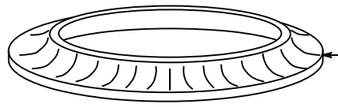
RETROREFLECTIVE SHEETING

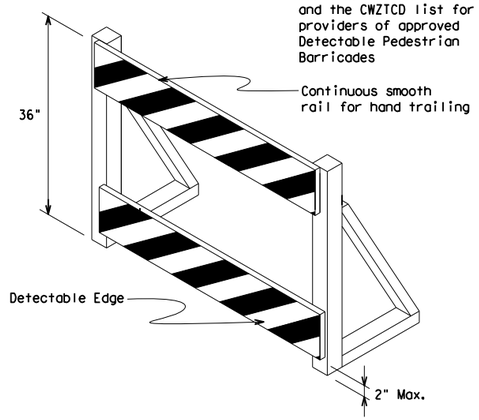
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials," Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall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

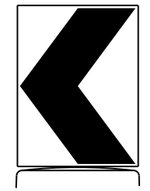




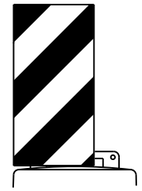


DETECTABLE PEDESTRIAN BARRICADES

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_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A 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.

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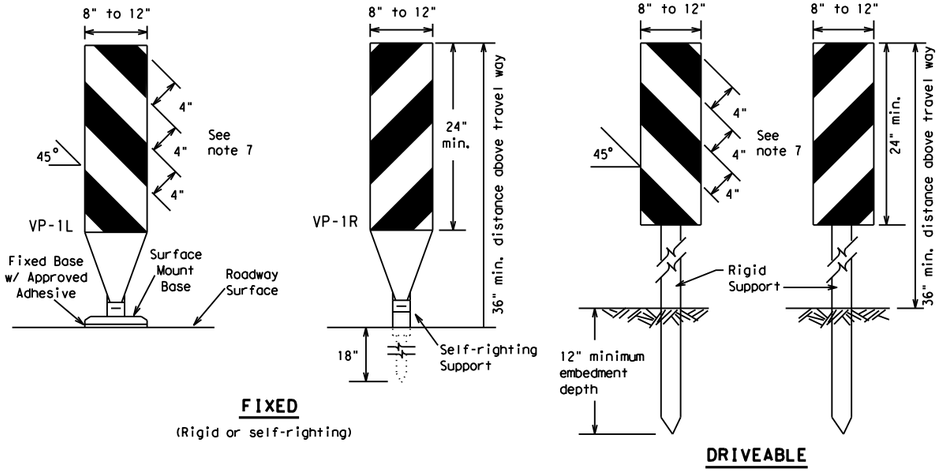
BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21	AMA	DEAF SMITH		23
7-13				

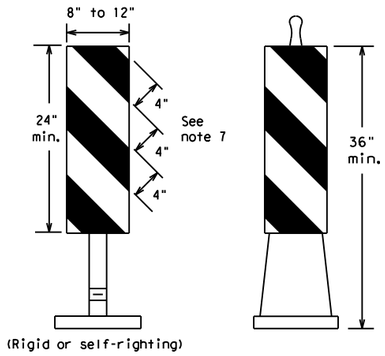
102

DATE: 3/1/2024 19:12:19
FILE: pw://decom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Traffic Control/bc-21



FIXED
(Rigid or self-righting)

DRIVEABLE

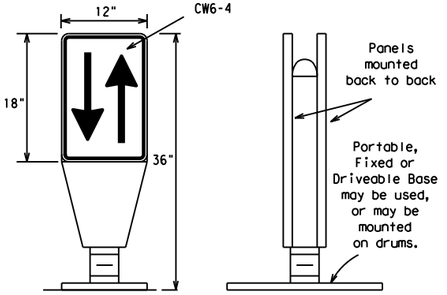


(Rigid or self-righting)

PORTABLE

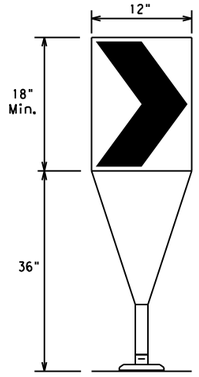
VERTICAL PANELS (VPs)

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.



OPPOSING TRAFFIC LANE DIVIDERS (OTLD)

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_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.



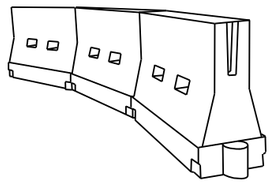
Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

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_{FL} or Type C_{FL} 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

SHEET 9 OF 12

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BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-21

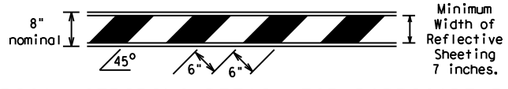
FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	AMA	DEAF SMITH		24

DATE: 3/1/2024 19:12:19
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Traffic Control/bc-21

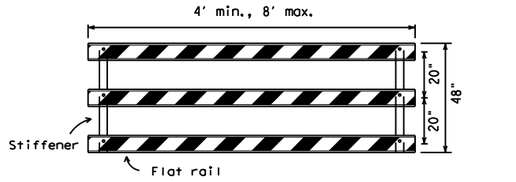
TYPE 3 BARRICADES

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.



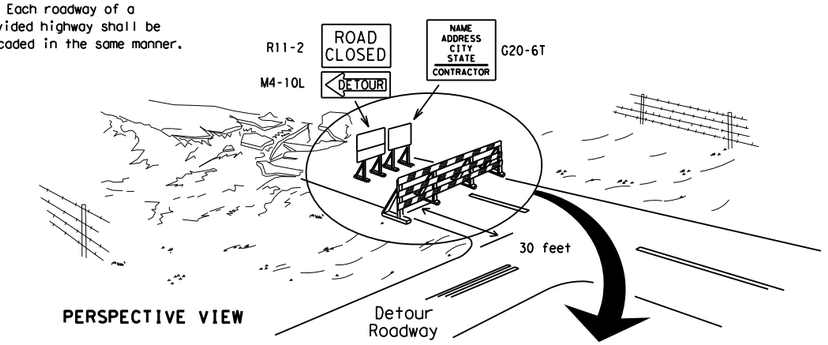
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



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

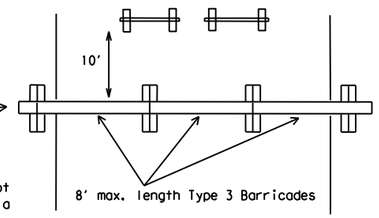
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

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



PERSPECTIVE VIEW

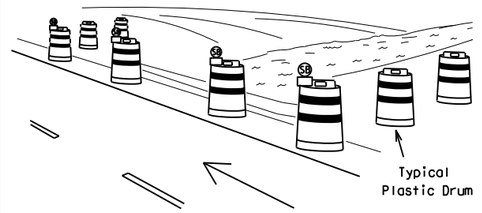
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

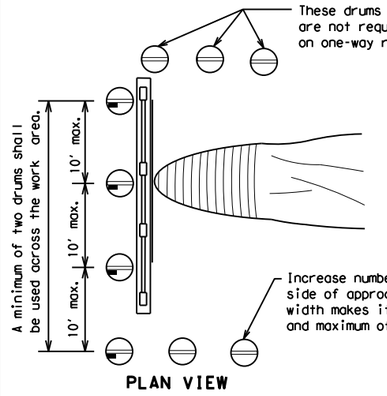
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

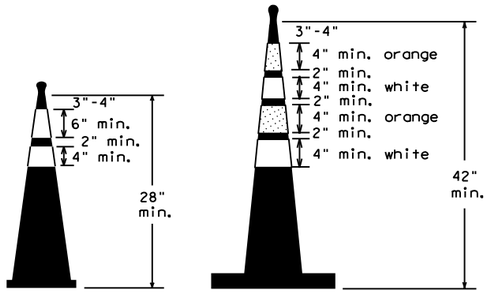
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder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



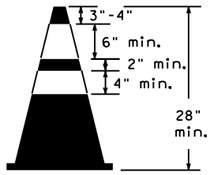
LEGEND	
	Plastic drum
	Plastic drum with steady burn light or yellow warning reflector
SB	Steady burn warning light or yellow warning reflector

PLAN VIEW

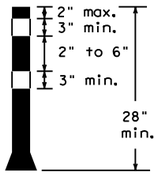
CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



Two-Piece cones



One-Piece cones

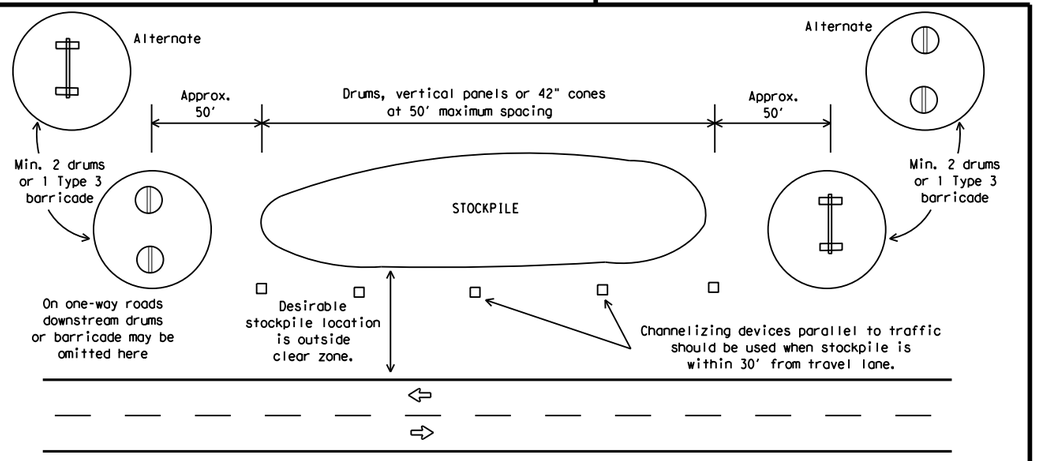


Tubular Marker

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

Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(10)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	AMA	DEAF SMITH		25

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.

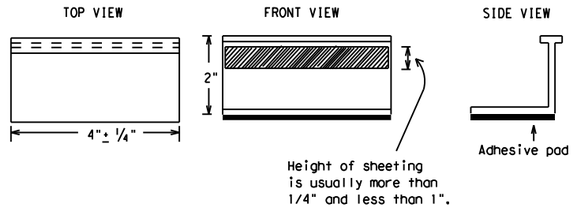
MAINTAINING WORK ZONE PAVEMENT MARKINGS

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).

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

BC(11)-21

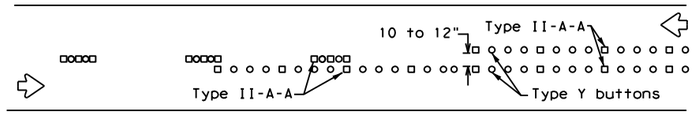
FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-98 9-07 5-21 1-02 7-13 11-02 8-14	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		26

105

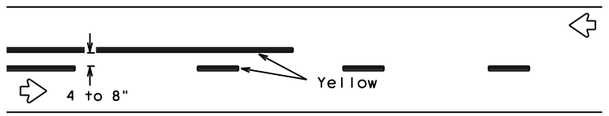
DATE: 3/1/2024 19:12:19
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Traffic Control/bc-21

PAVEMENT MARKING PATTERNS

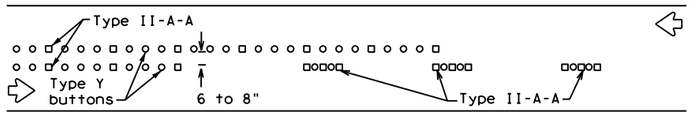
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



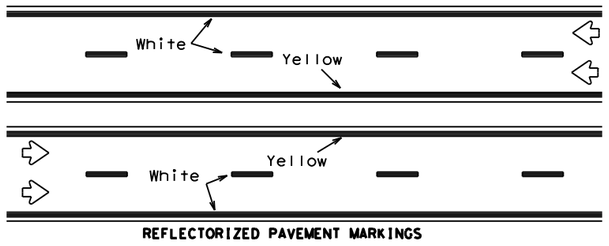
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



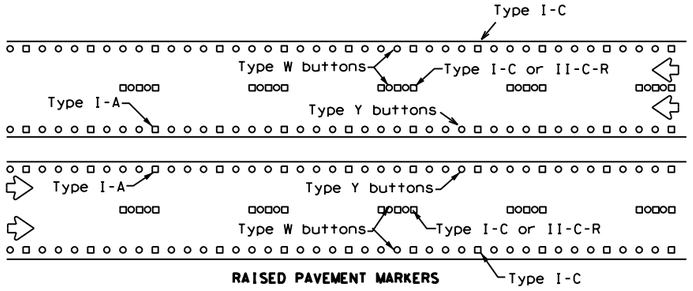
RAISED PAVEMENT MARKERS - PATTERN B

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



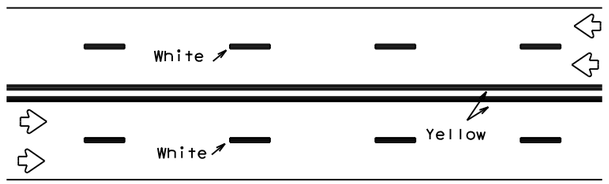
REFLECTORIZED PAVEMENT MARKINGS



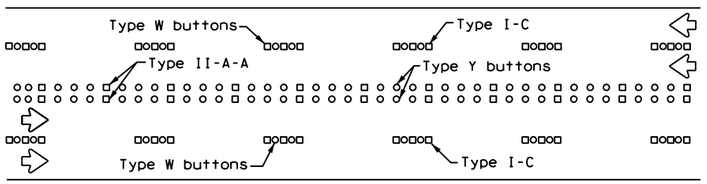
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



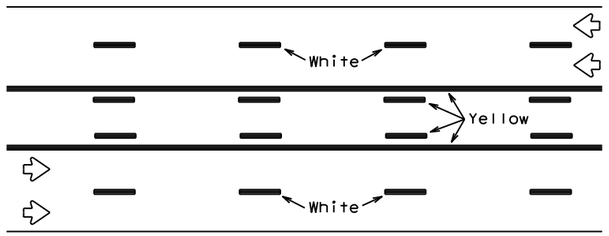
REFLECTORIZED PAVEMENT MARKINGS



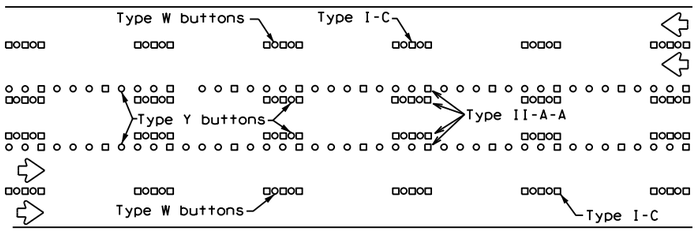
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



RAISED PAVEMENT MARKERS

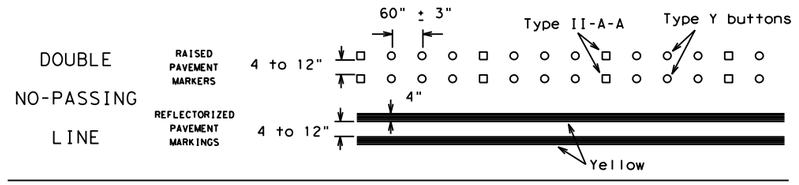
Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

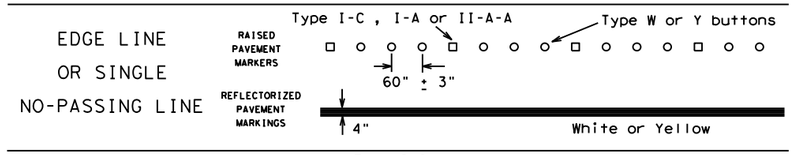
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

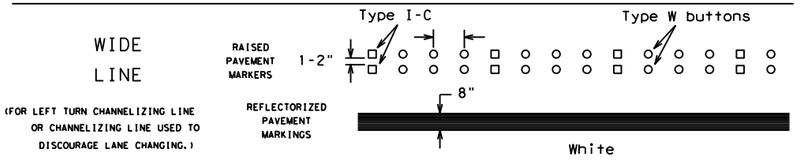


EDGE LINE OR SINGLE NO-PASSING LINE



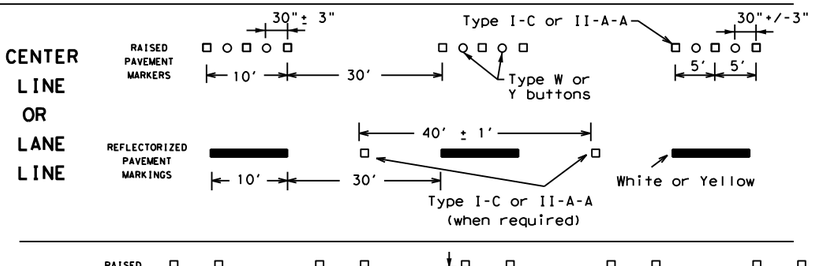
WIDE LINE

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

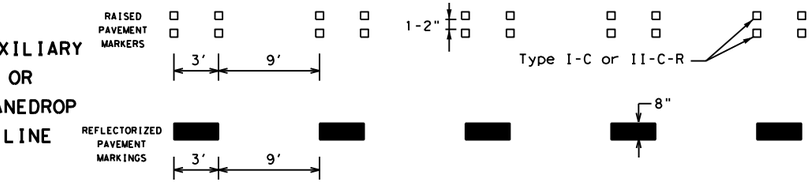


BROKEN LINES

CENTER LINE OR LANE LINE

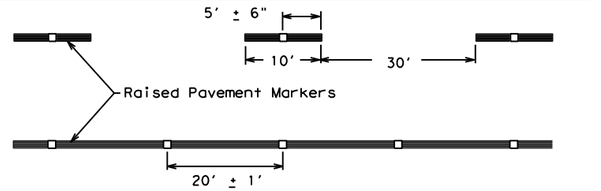


AUXILIARY OR LANEDROP LINE



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	0226	05	072, ETC.	US 385
2-98 7-13	DIST	COUNTY		SHEET NO.
11-02 8-14	AMA	DEAF SMITH		27

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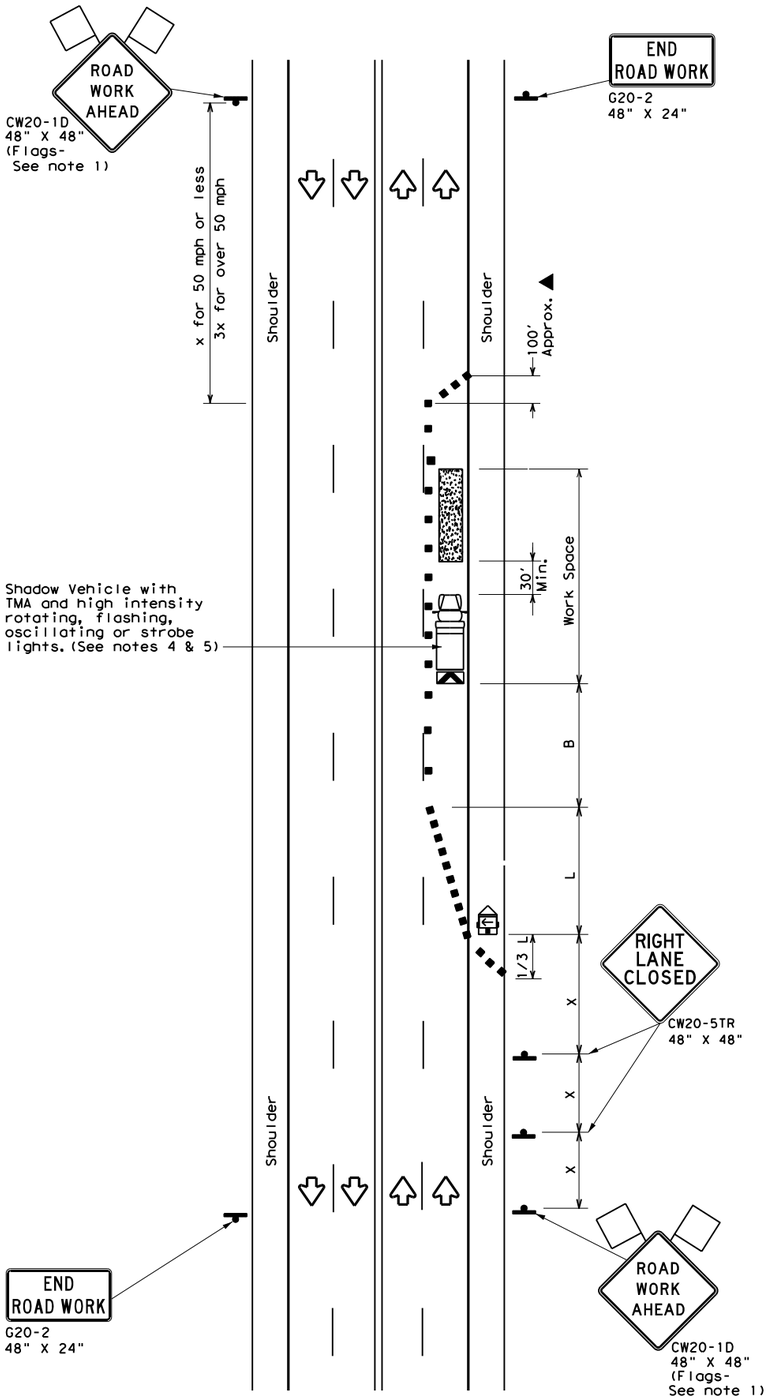
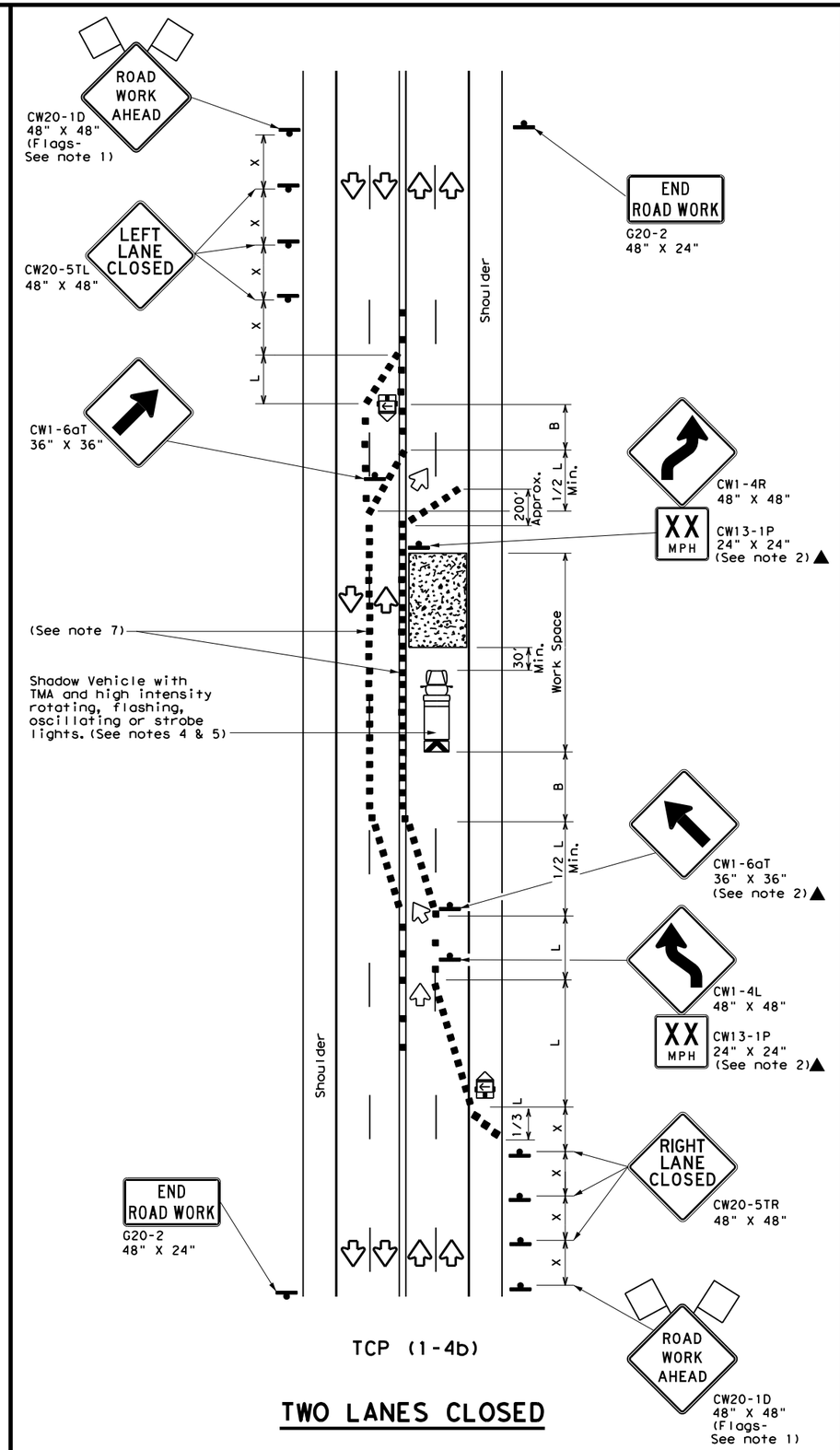


TCP (1-4a)

ONE LANE CLOSED



TCP (1-4b)

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. The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.
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.

TCP (1-4a)

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 where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.

TCP (1-4b)

7. 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 1/2S where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

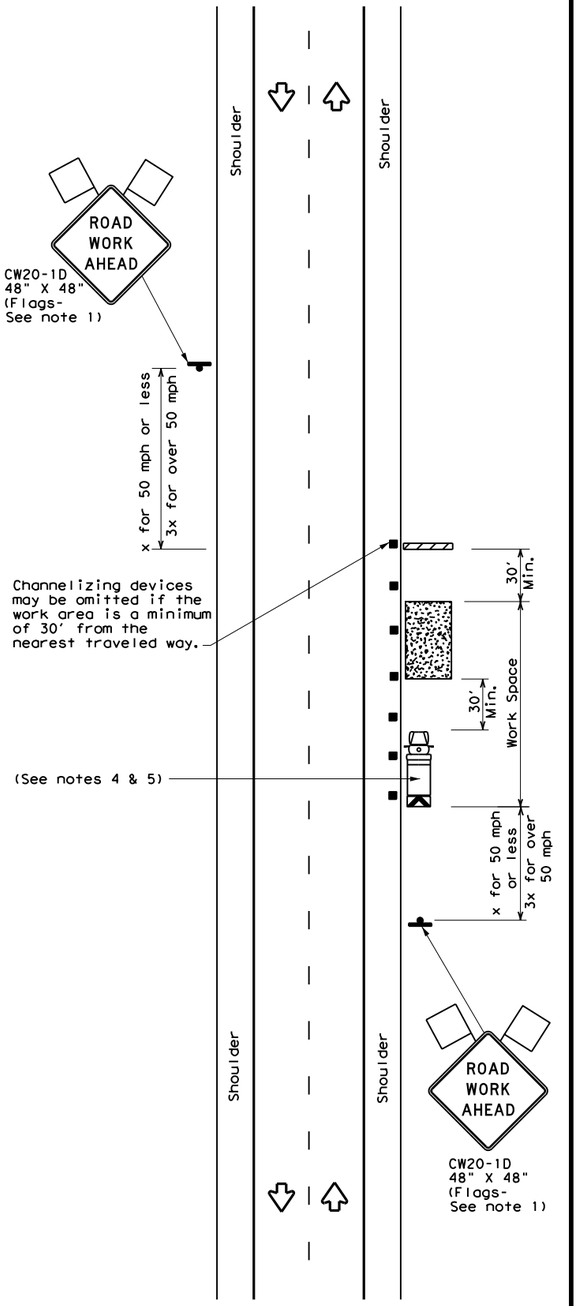
Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

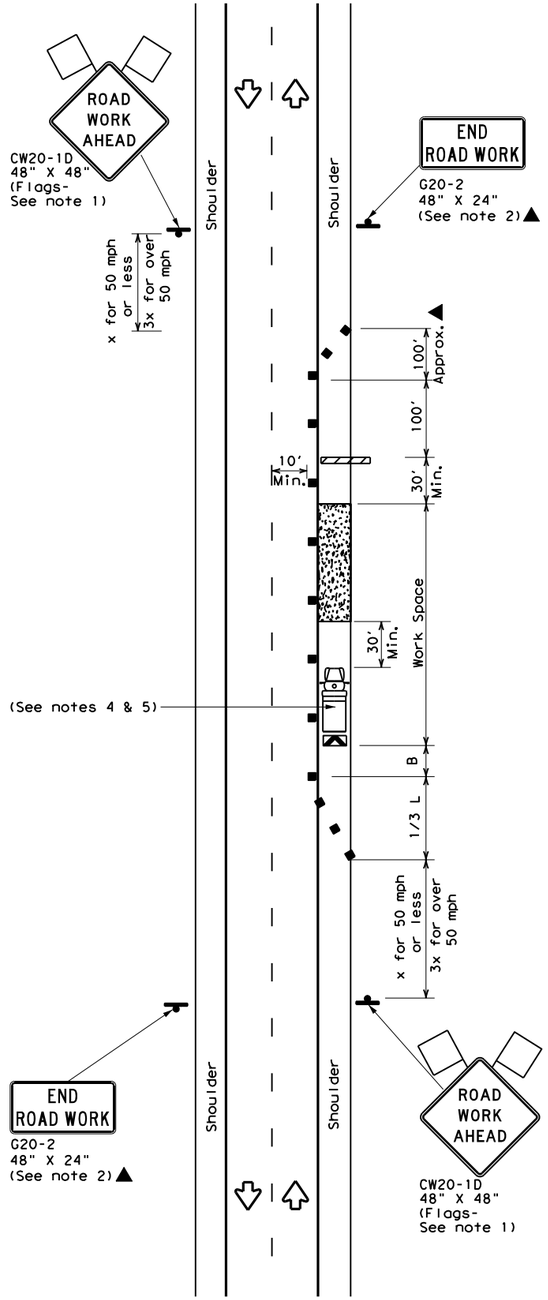
TCP(1-4)-18

FILE: tcp1-4-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 2-12	AMA	DEAF SMITH		28
1-97 2-18				



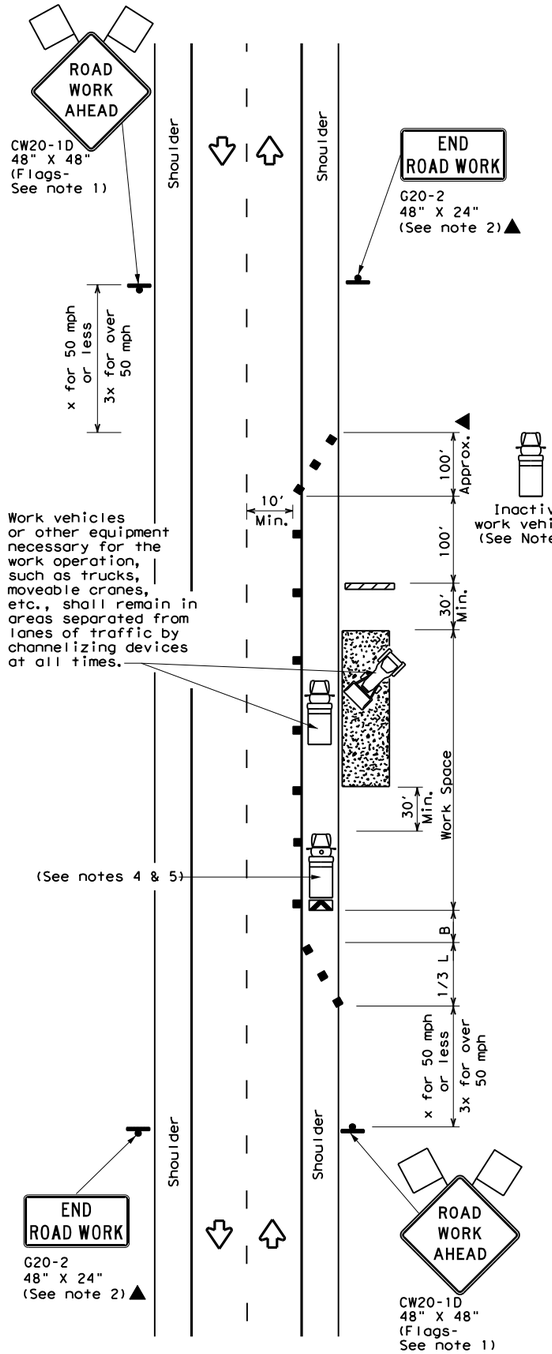
TCP (2-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (2-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (2-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

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

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

* Conventional Roads Only

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

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

GENERAL NOTES

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

Texas Department of Transportation

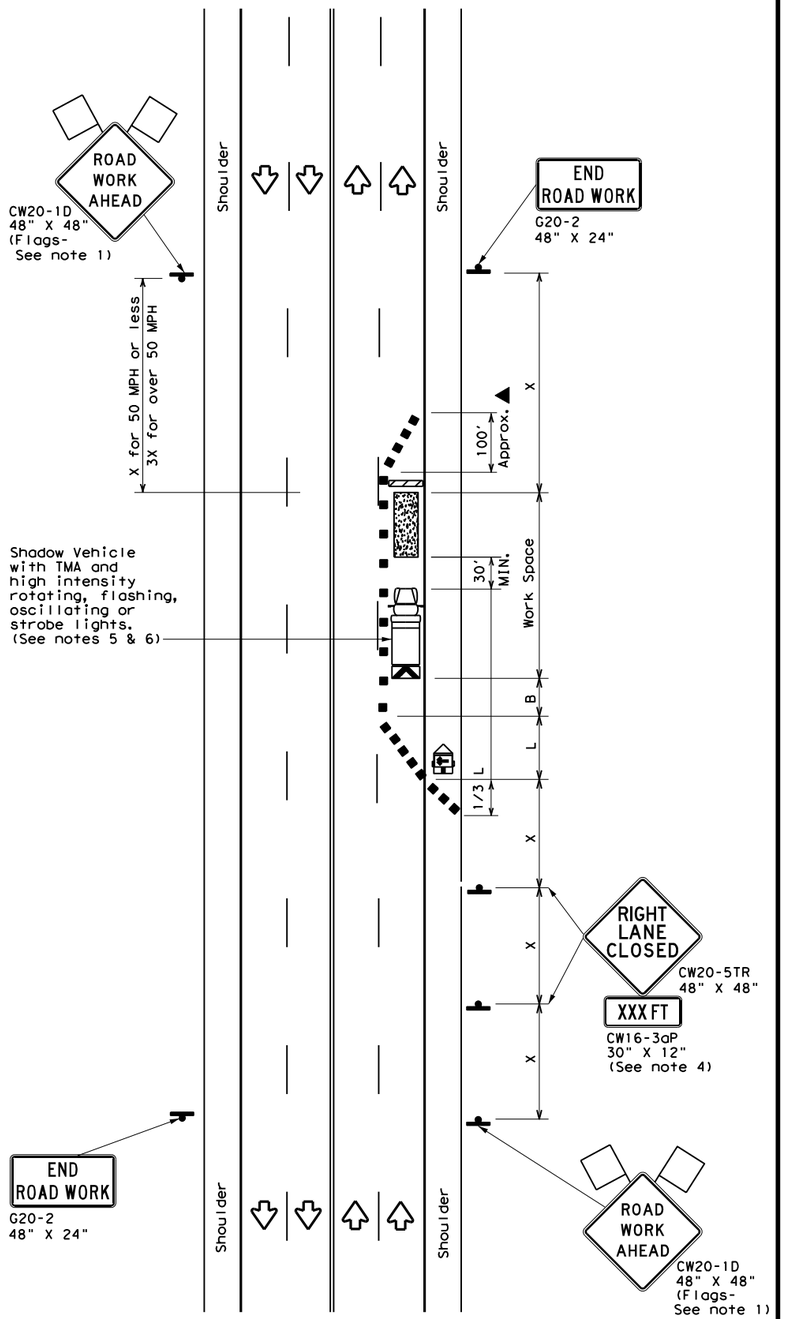
Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(2-1)-18

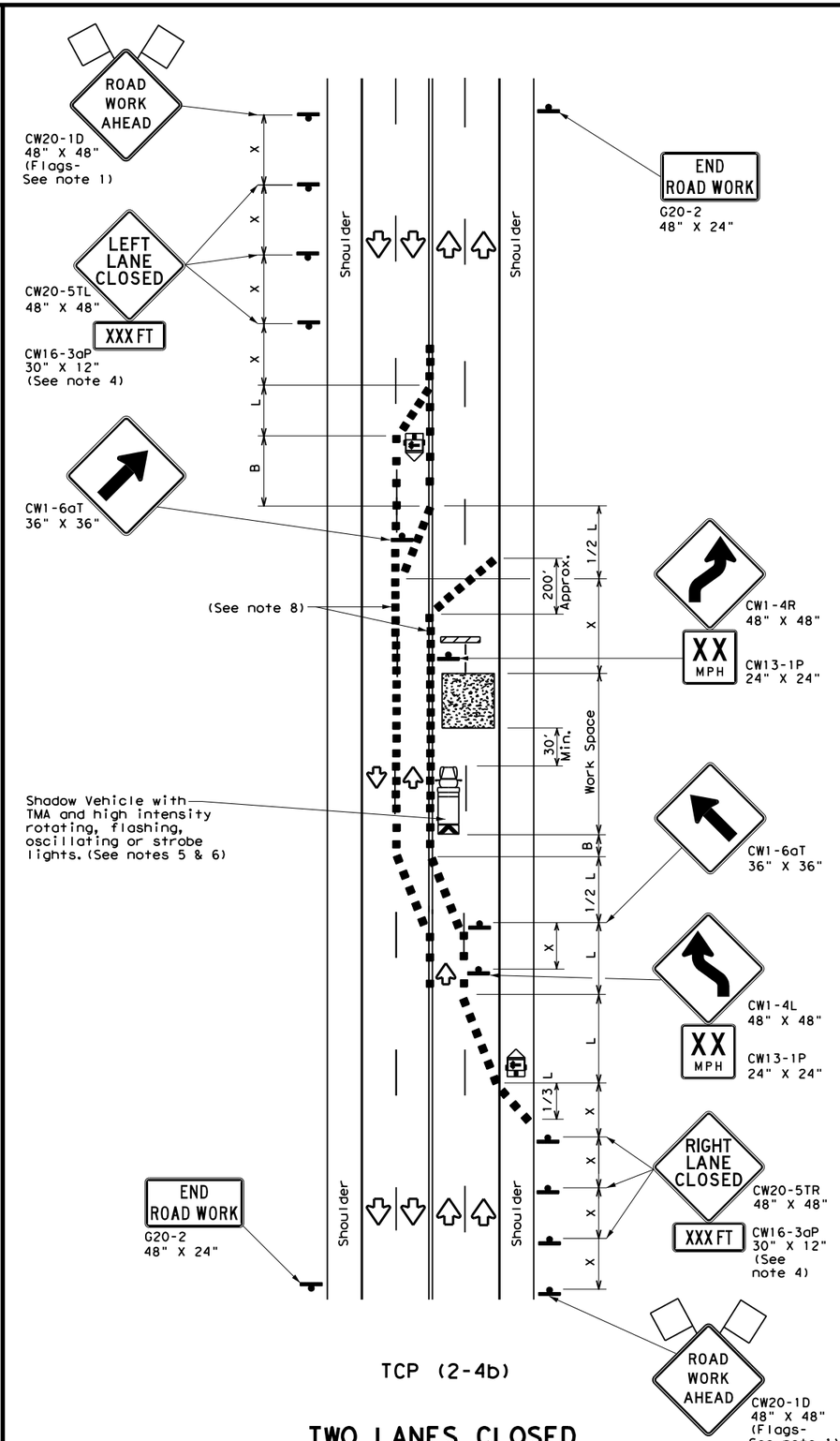
FILE: tcp2-1-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 2-12	AMA	DEAF SMITH		29
1-97 2-18				

DATE: 3/1/2024 19:12:29
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2-TCP-501a_Standards/Traffic Control/tcp2-4-18.dgn



TCP (2-4a)

ONE LANE CLOSED



TCP (2-4b)

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. The downstream taper is optional. When used, it should be 100 feet minimum length per lane.
4. For short term applications, when post mounted signs are not used, the distance legend may be shown on the sign face rather than on a CW16-3aP supplemental plaque.
5. 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.
6. 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.

TCP (2-4a)

7. 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 (2-4b)

8. 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 devices spacing is intended for the area of conflicting markings, not the entire work zone.

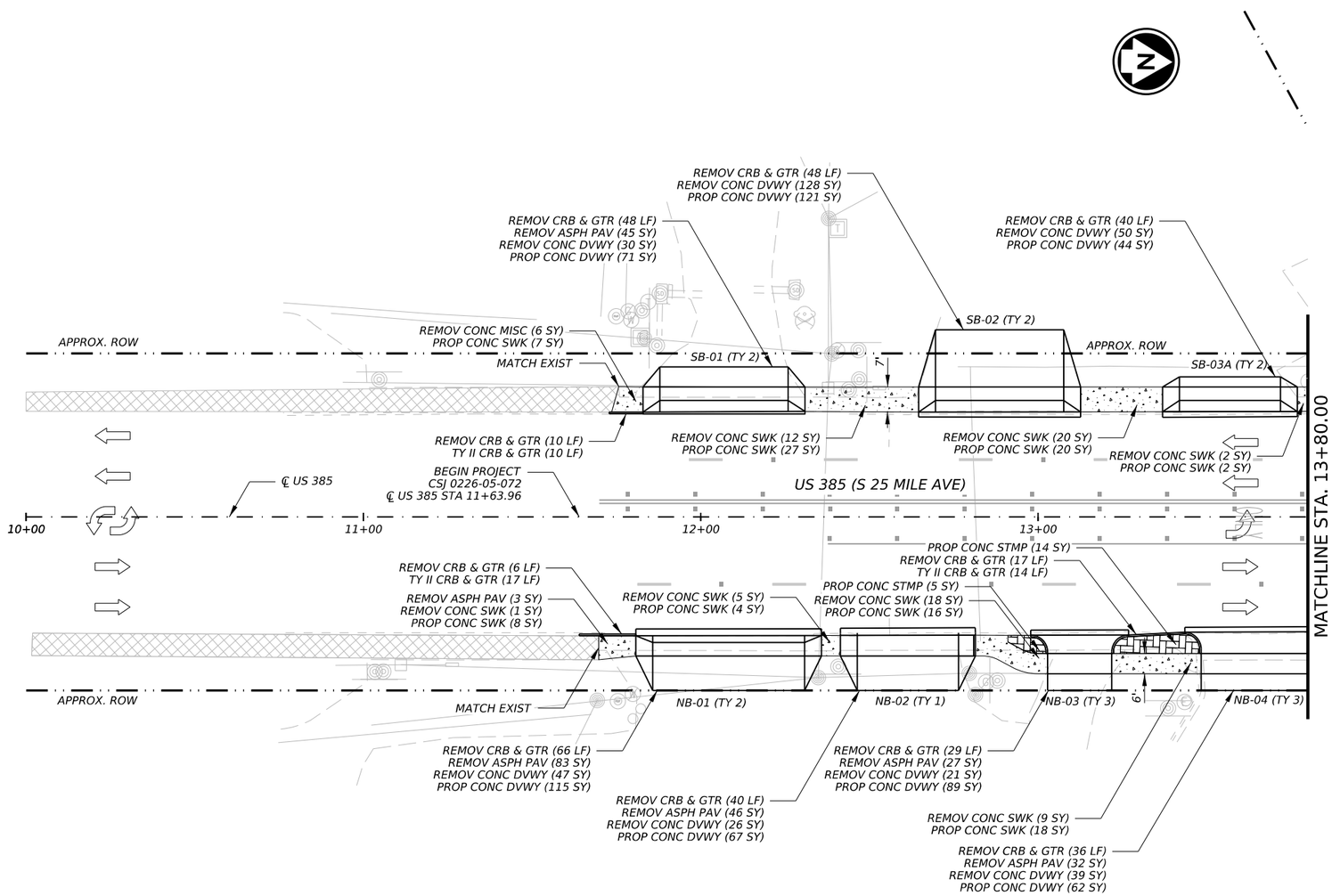
Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP(2-4)-18

FILE: tcp2-4-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 8-95 3-03	0226	05	072, ETC.	US 385
1-97 2-12	DIST	COUNTY		SHEET NO.
4-98 2-18	AMA	DEAF SMITH		30



LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE

	LIGHT POLE		FIRE HYDRANT
	POWER POLE		FENCE
	SIGNAL POLE		FAUCET
G	GAS METER		MAILBOX
E	ELECTRIC METER		
W	WATER METER		
	WATER/GAS VALVE		
T	TELEPHONE PEDESTAL		
T	TELEPHONE MANHOLE		
SD	STORM SEWER MANHOLE		
W	WASTEWATER MANHOLE		
RM	ROW MONUMENT FOUND		
J	GENERIC JUNCTION BOX		
T	TELEPHONE JUNCTION BOX		
E	ELECTRIC JUNCTION BOX		

NOTES:

1. ALL PROPOSED CURB AND STEMWALLS WITHIN LIMITS OF RAMPS SHALL BE SUBSIDIARY TO ITEM 0531.
2. A 48" MINIMUM CLEARANCE IS REQUIRED FROM OBSTRUCTIONS (I.E. POLES, PEDESTALS, HYDRANTS).

* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

Ernesto Salcido, P.E. 3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIDEWALK PLAN

BEGIN TO STA 13+80

SHEET 1 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		31

DATE: 3/5/2024 12:39:58 AM
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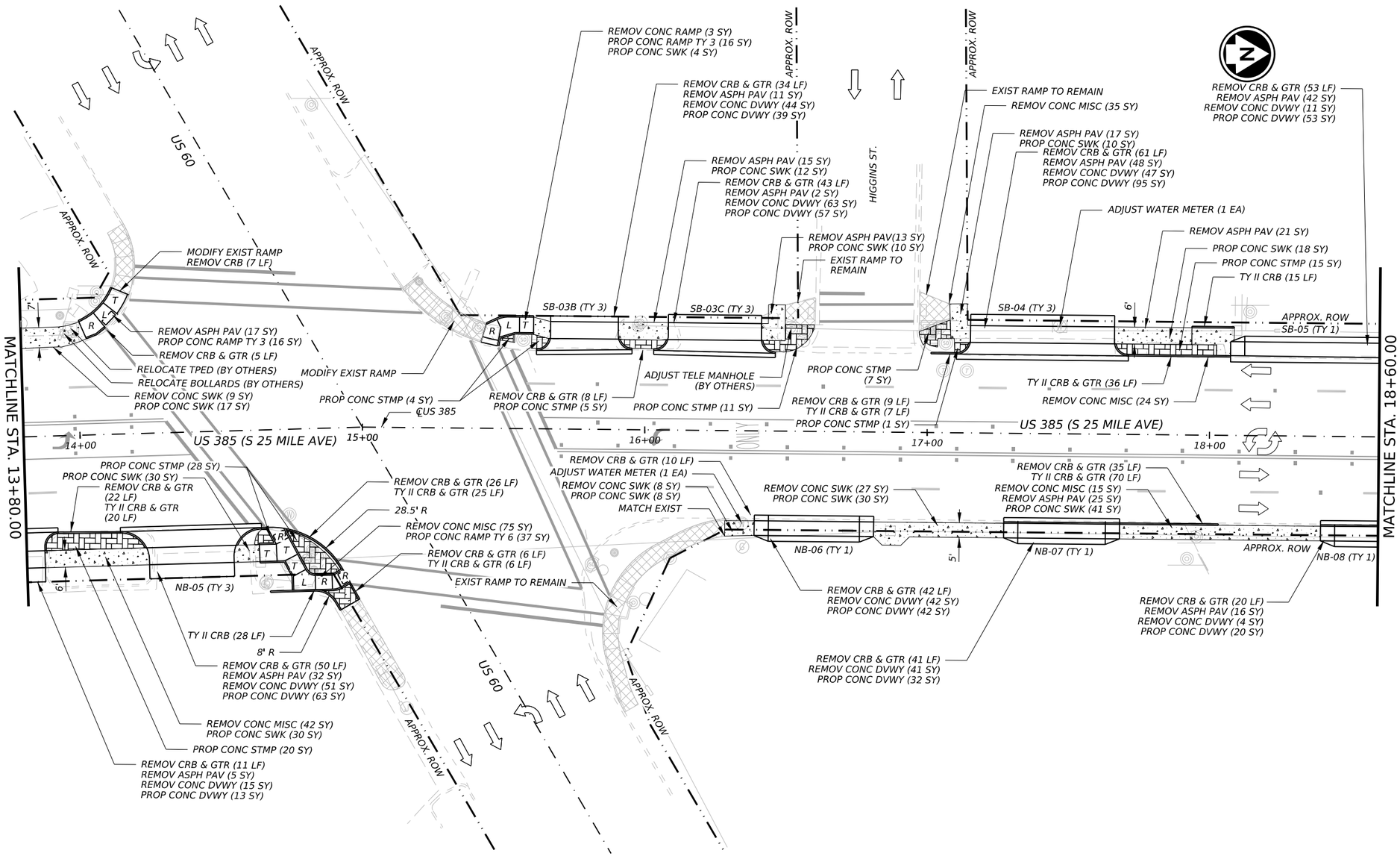

LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
	POWER POLE
	SIGNAL POLE
	GAS METER
	ELECTRIC METER
	WATER METER
	WATER/GAS VALVE
	TELEPHONE PEDESTAL
	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
	TELEPHONE JUNCTION BOX
	ELECTRIC JUNCTION BOX
	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

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* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

Ernesto Salcido, P.E. 3/5/2024

0 20 40
SCALE IN FEET

AECOM
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Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIDEWALK PLAN

STA 13+80 TO STA 18+60

SHEET 2 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		32

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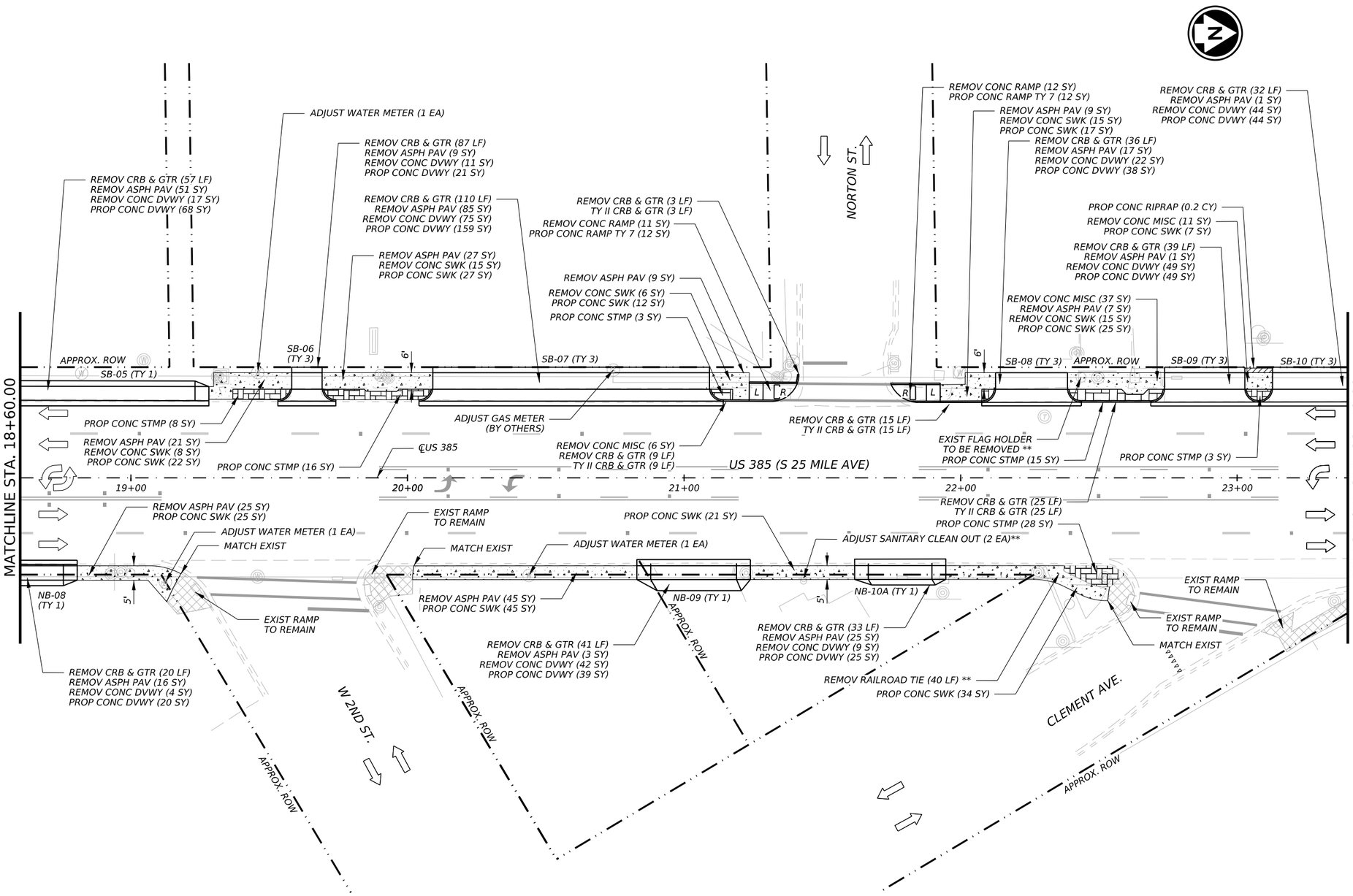

LEGEND

R RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE

L LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS

F FLARE: 10% MAX RUNNING SLOPE

T TRANSITION: 5'MIN

⇨ TRAFFIC FLOW

▨ EXIST SIDEWALK/DRIVEWAY TO REMAIN

▨ SODDING

▨ STAMPED CONCRETE

▨ CONCRETE SIDEWALK

▨ CONCRETE RIPRAP

▬ CUT & RESTORE

○ LIGHT POLE

◎ POWER POLE

◎ SIGNAL POLE

Ⓖ GAS METER

Ⓔ ELECTRIC METER

Ⓦ WATER METER

⊗ WATER/GAS VALVE

Ⓣ TELEPHONE PEDESTAL

Ⓣ TELEPHONE MANHOLE

Ⓢ STORM SEWER MANHOLE

Ⓦ WASTEWATER MANHOLE

○ ROW MONUMENT FOUND

Ⓙ GENERIC JUNCTION BOX

Ⓣ TELEPHONE JUNCTION BOX

Ⓔ ELECTRIC JUNCTION BOX

FIRE HYDRANT

—×— FENCE

FAUCET

MAILBOX

NOTES:

1. ALL PROPOSED CURB AND STEMWALLS WITHIN LIMITS OF RAMPS SHALL BE SUBSIDIARY TO ITEM 0531.
2. A 48" MINIMUM CLEARANCE IS REQUIRED FROM OBSTRUCTIONS (I.E. POLES, PEDESTALS, HYDRANTS).

* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER

Salcido, P.E.
3/5/2024

0 20 40
SCALE IN FEET

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AECOM Technical Services, Inc.- F-3580

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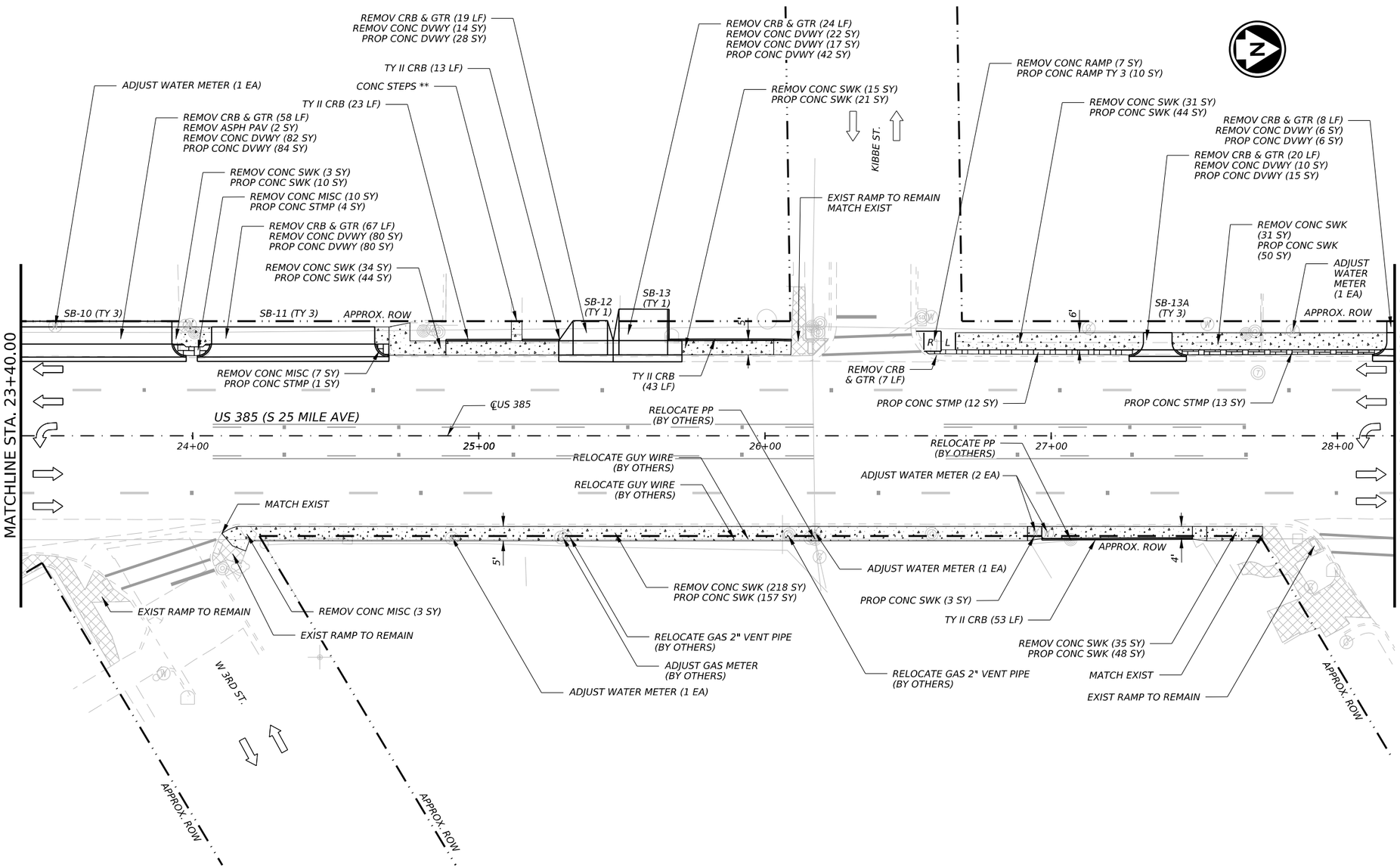
Texas Department of Transportation

US 385

SIDEWALK PLAN
STA 18+60 TO STA 23+40

©TxDOT SHEET 3 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST		COUNTY	SHEET NO.
AMA		DEAF SMITH	33



LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
	POWER POLE
	SIGNAL POLE
	GAS METER
	ELECTRIC METER
	WATER METER
	WATER/GAS VALVE
	TELEPHONE PEDESTAL
	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
	TELEPHONE JUNCTION BOX
	ELECTRIC JUNCTION BOX
	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

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2. A 48" MINIMUM CLEARANCE IS REQUIRED FROM OBSTRUCTIONS (I.E. POLES, PEDESTALS, HYDRANTS).

* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIDEWALK PLAN

STA 23+40 TO STA 28+20

SHEET 4 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		34

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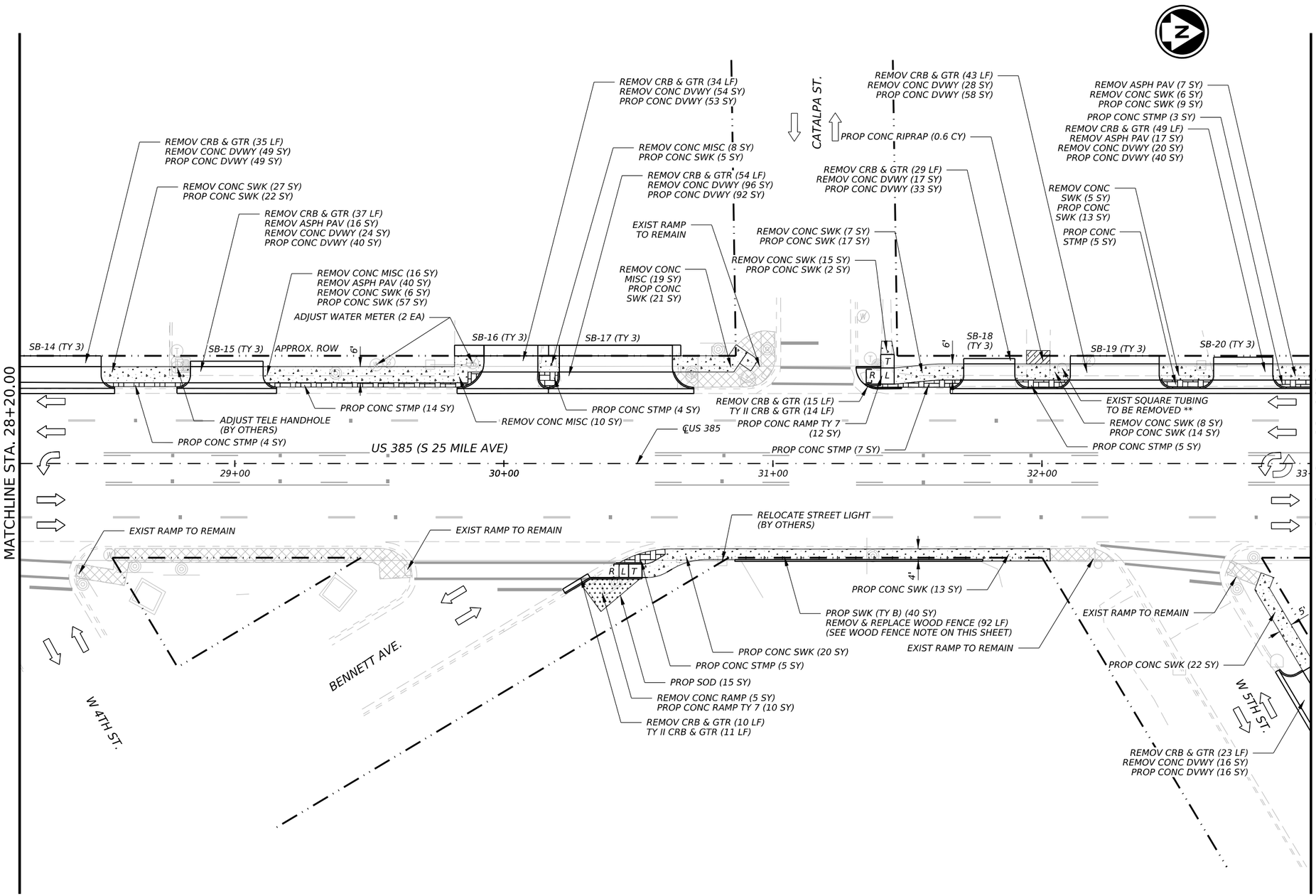

LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
	POWER POLE
	SIGNAL POLE
	GAS METER
	ELECTRIC METER
	WATER METER
	WATER/GAS VALVE
	TELEPHONE PEDESTAL
	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
	TELEPHONE JUNCTION BOX
	ELECTRIC JUNCTION BOX
	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

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2. A 48" MINIMUM CLEARANCE IS REQUIRED FROM OBSTRUCTIONS (I.E. POLES, PEDESTALS, HYDRANTS).

* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

WOOD FENCE NOTE:

EXISTING FENCE TO BE COMPLETE REMOVED. EXISTING MATERIALS SHALL BE SALVAGED IN AS MUCH AS POSSIBLE AND OFFERED TO THE PROPERTY OWNER. CONTRACTOR TO PROPERLY DISPOSE OF MATERIALS SHOULD PROPERTY OWNER REJECT THEM.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIDEWALK PLAN

STA 28+20 TO STA 33+00

SHEET 5 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		35

DATE: 3/5/2024 12:40:04 AM
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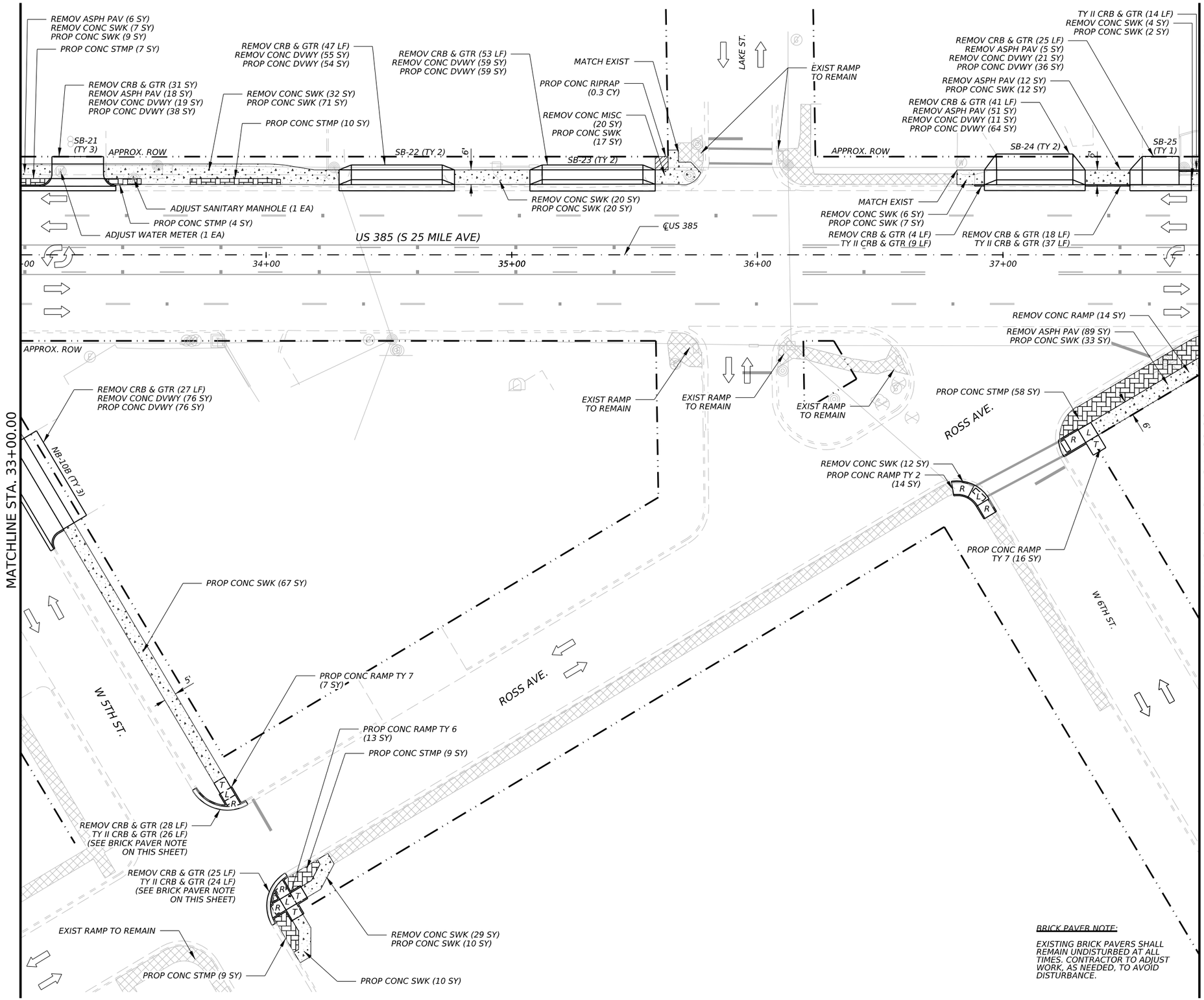


LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
	POWER POLE
	SIGNAL POLE
	GAS METER
	ELECTRIC METER
	WATER METER
	WATER/GAS VALVE
	TELEPHONE PEDESTAL
	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
	TELEPHONE JUNCTION BOX
	ELECTRIC JUNCTION BOX
	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

1. ALL PROPOSED CURB AND STEMWALLS WITHIN LIMITS OF RAMPS SHALL BE SUBSIDIARY TO ITEM 0531.
2. A 48" MINIMUM CLEARANCE IS REQUIRED FROM OBSTRUCTIONS (I.E. POLES, PEDESTALS, HYDRANTS).

* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

BRICK PAVER NOTE:

EXISTING BRICK PAVERS SHALL REMAIN UNDISTURBED AT ALL TIMES. CONTRACTOR TO ADJUST WORK, AS NEEDED, TO AVOID DISTURBANCE.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIDEWALK PLAN

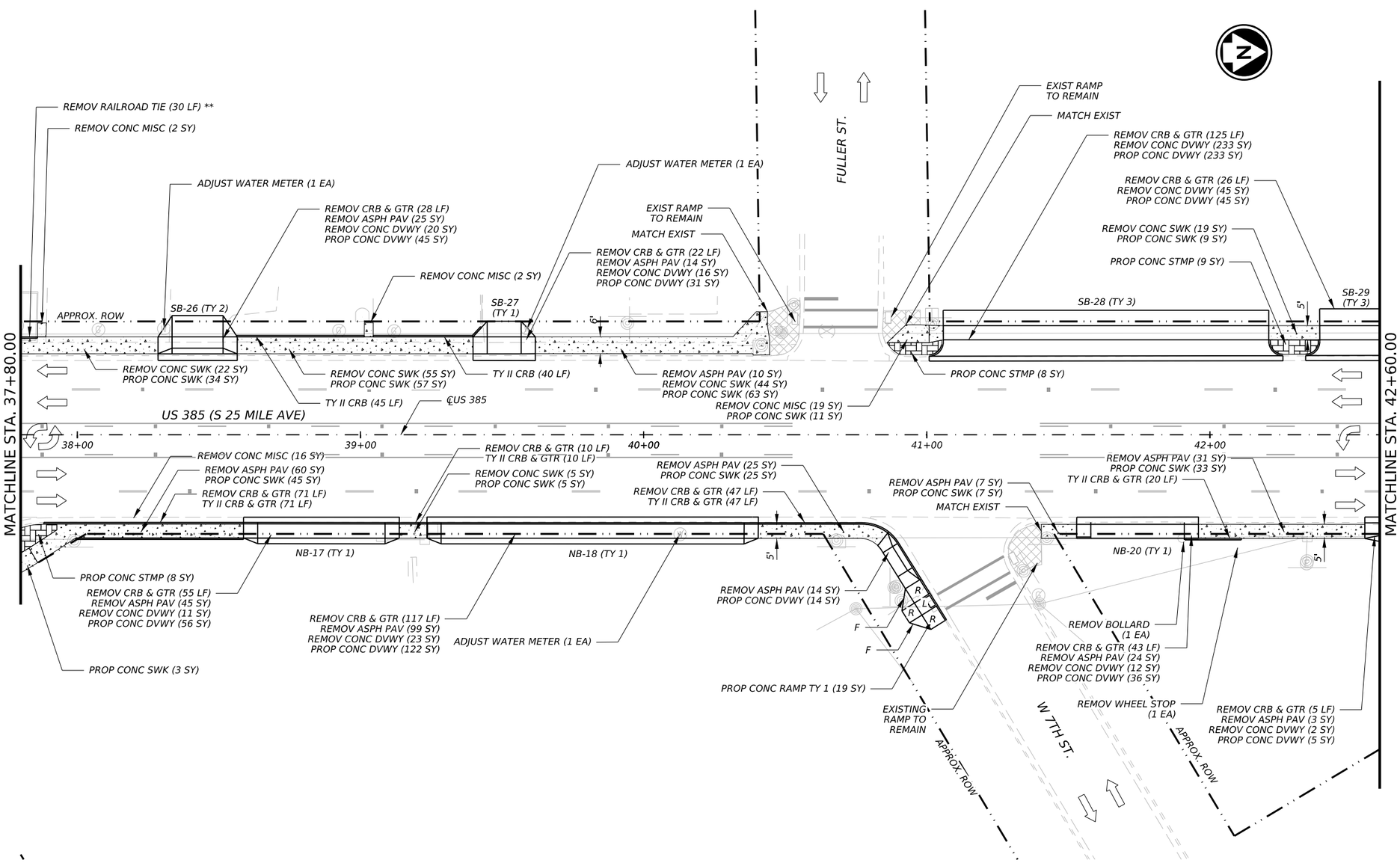
STA 33+00 TO STA 37+80

SHEET 6 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		36

DATE: 3/5/2024 12:40:05 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20_SHEETS/US385/Roadway/US385_AEC_SWK_PLN_001.dgn

CK	DW	CK



LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
	POWER POLE
	SIGNAL POLE
	GAS METER
	ELECTRIC METER
	WATER METER
	WATER/GAS VALVE
	TELEPHONE PEDESTAL
	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
	TELEPHONE JUNCTION BOX
	ELECTRIC JUNCTION BOX
	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

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* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER

Ernesto Salcido, P.E. 3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIDEWALK PLAN

STA 37+80 TO STA 42+60

SHEET 7 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		37

DATE: 3/5/2024 12:40:07 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Roadway/US385 AEC SWK PLN 001.dgn
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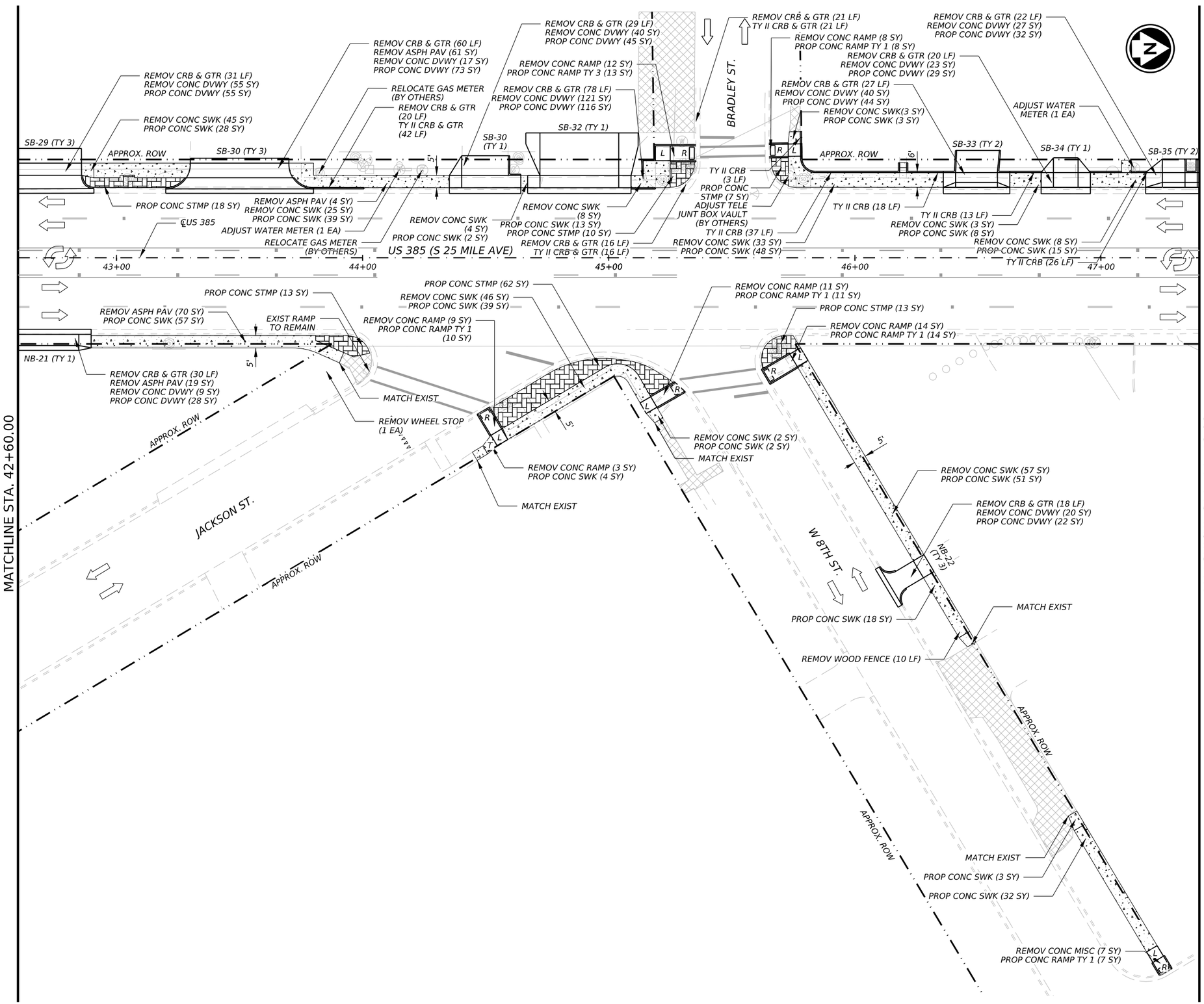

LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
	POWER POLE
	SIGNAL POLE
	GAS METER
	ELECTRIC METER
	WATER METER
	WATER/GAS VALVE
	TELEPHONE PEDESTAL
	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
	TELEPHONE JUNCTION BOX
	ELECTRIC JUNCTION BOX
	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

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* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER

Salcido Ramos, P.E. 3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

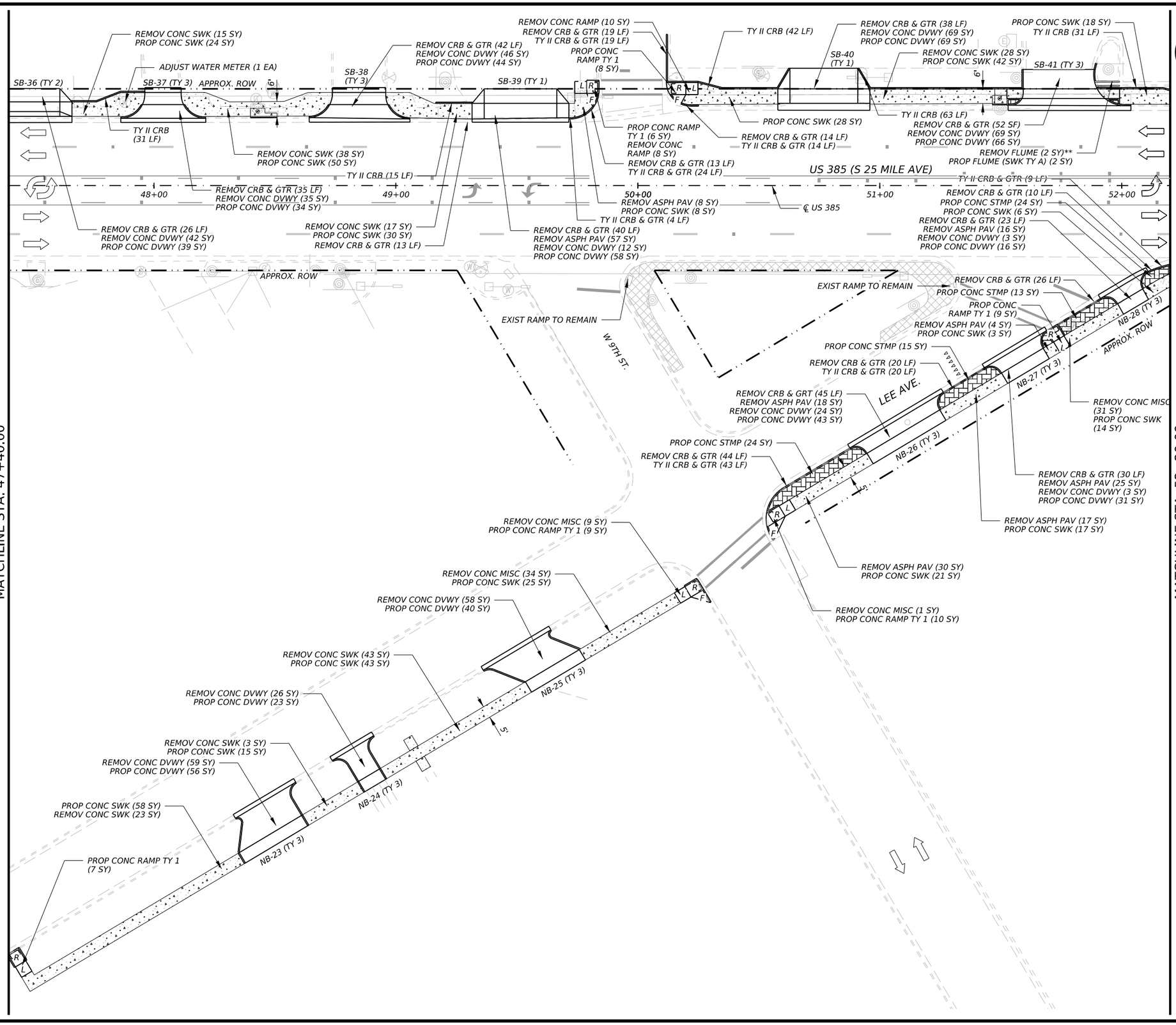
US 385

SIDEWALK PLAN
STA 42+60 TO STA 47+40

 SHEET 8 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		38

DATE: 3/5/2024 12:40:08 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20_SHEETS/US385/Roadway/US385_AEC_SWK_PLN_001.dgn
cx | pw | cx



LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN

- TRAFFIC FLOW
- EXIST SIDEWALK/DRIVEWAY TO REMAIN
- SODDING
- STAMPED CONCRETE
- CONCRETE SIDEWALK
- CONCRETE RIPRAP
- CUT & RESTORE
- LIGHT POLE
- POWER POLE
- SIGNAL POLE
- GAS METER
- ELECTRIC METER
- WATER METER
- WATER/GAS VALVE
- TELEPHONE PEDESTAL
- TELEPHONE MANHOLE
- STORM SEWER MANHOLE
- WASTEWATER MANHOLE
- ROW MONUMENT FOUND
- GENERIC JUNCTION BOX
- TELEPHONE JUNCTION BOX
- ELECTRIC JUNCTION BOX
- FIRE HYDRANT
- FENCE
- FAUCET
- MAILBOX

NOTES:

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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

Ernesto Salcido, P.E. 3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

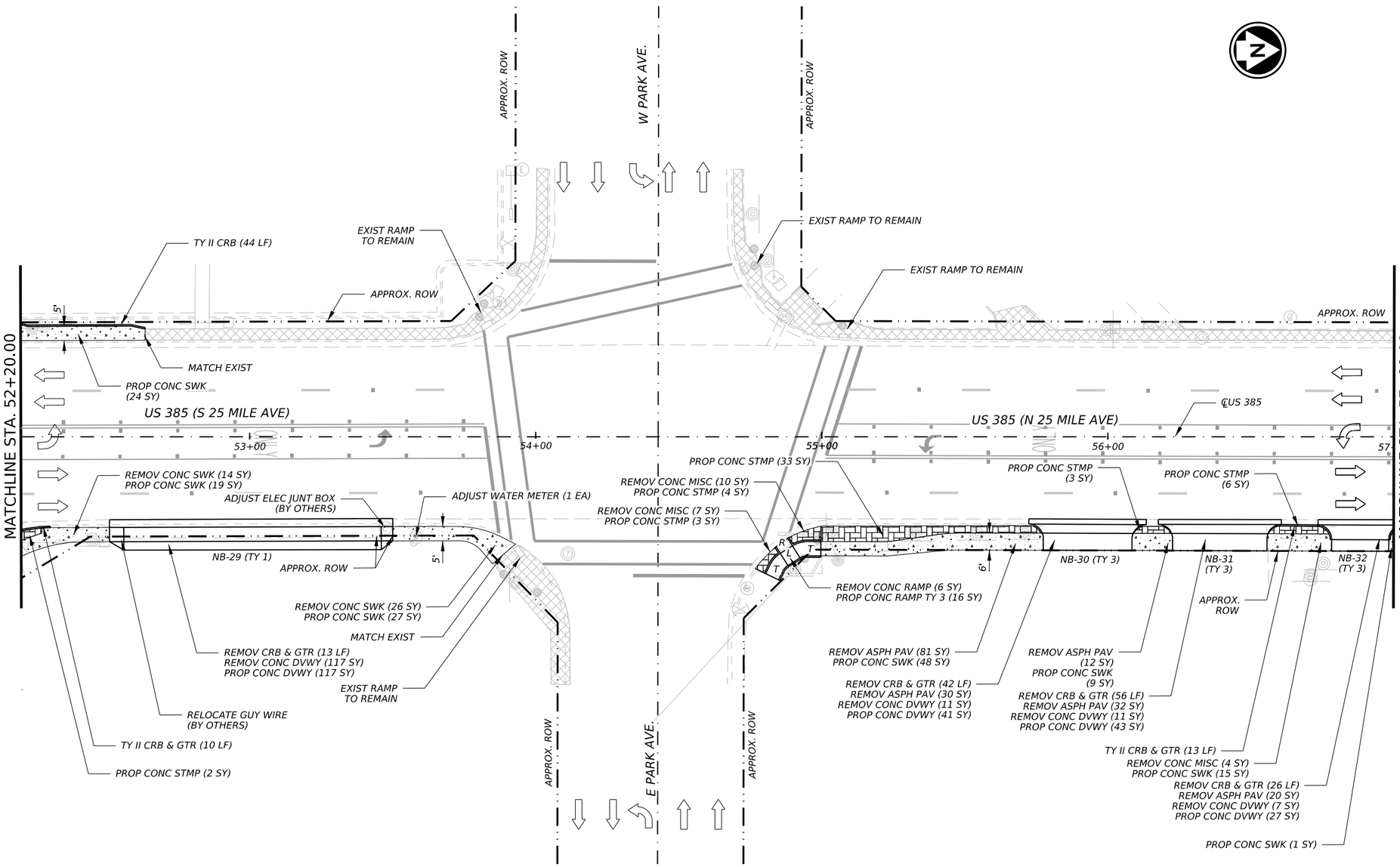
SIDEWALK PLAN

STA 47+40 TO STA 52+20

SHEET 9 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		39

DATE: 3/5/2024 12:40:10 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20_SHEETS/US385/Roadway/US385_AEC_SWK_PLN_001.dgn



LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
	POWER POLE
	SIGNAL POLE
	GAS METER
	ELECTRIC METER
	WATER METER
	WATER/GAS VALVE
	TELEPHONE PEDESTAL
	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
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	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIDEWALK PLAN

STA 52+20 TO STA 57+00

SHEET 10 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		40

DATE: 3/5/2024 12:40:12 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20_SHEETS/US385/Roadway/US385_AEC_SWK_PLN_001.dgn

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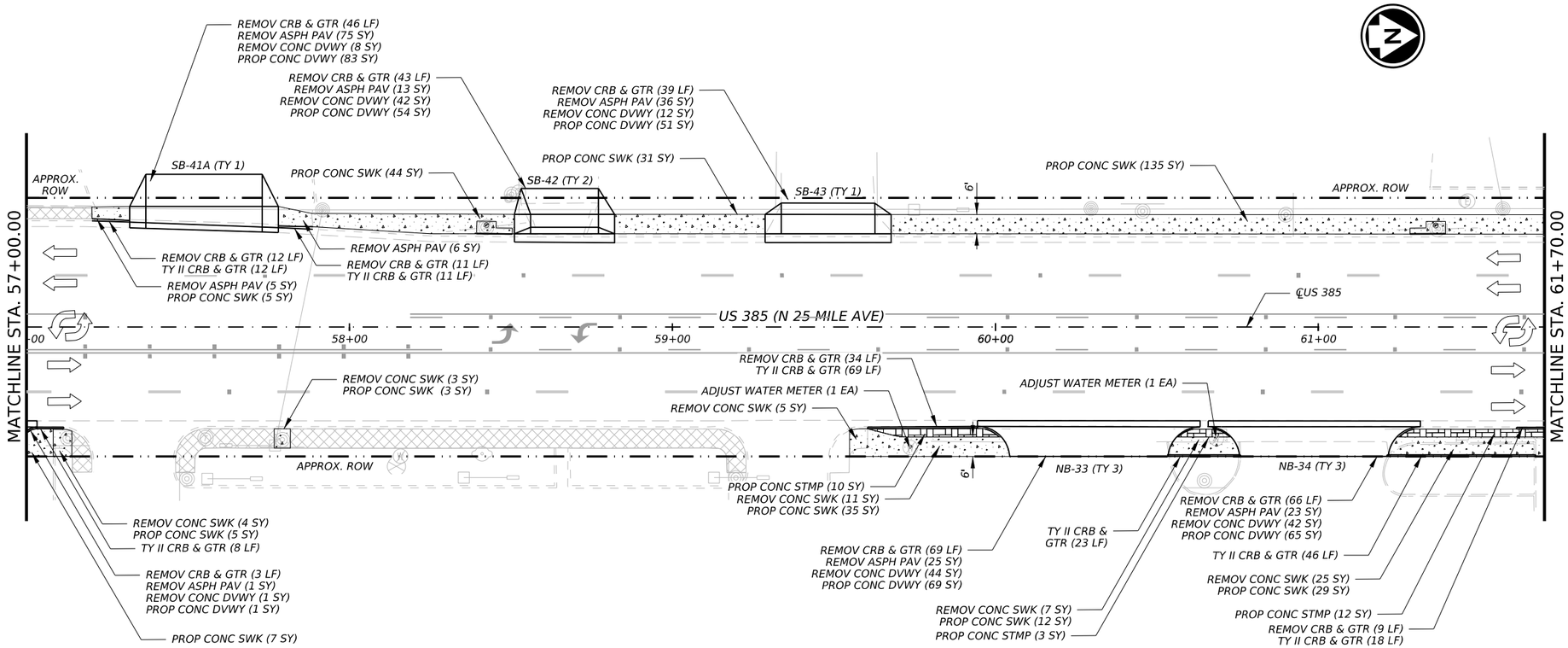

LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN

- TRAFFIC FLOW
- EXIST SIDEWALK/DRIVEWAY TO REMAIN
- SODDING
- STAMPED CONCRETE
- CONCRETE SIDEWALK
- CONCRETE RIPRAP
- CUT & RESTORE
- LIGHT POLE
- POWER POLE
- SIGNAL POLE
- GAS METER
- ELECTRIC METER
- WATER METER
- WATER/GAS VALVE
- TELEPHONE PEDESTAL
- TELEPHONE MANHOLE
- STORM SEWER MANHOLE
- WASTEWATER MANHOLE
- ROW MONUMENT FOUND
- GENERIC JUNCTION BOX
- TELEPHONE JUNCTION BOX
- ELECTRIC JUNCTION BOX
- FIRE HYDRANT
- FENCE
- FAUCET
- MAILBOX

NOTES:

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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER
3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIDEWALK PLAN

STA 57+00 TO STA 66+40

SHEET 11 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		41

DATE: 3/5/2024 12:40:14 AM
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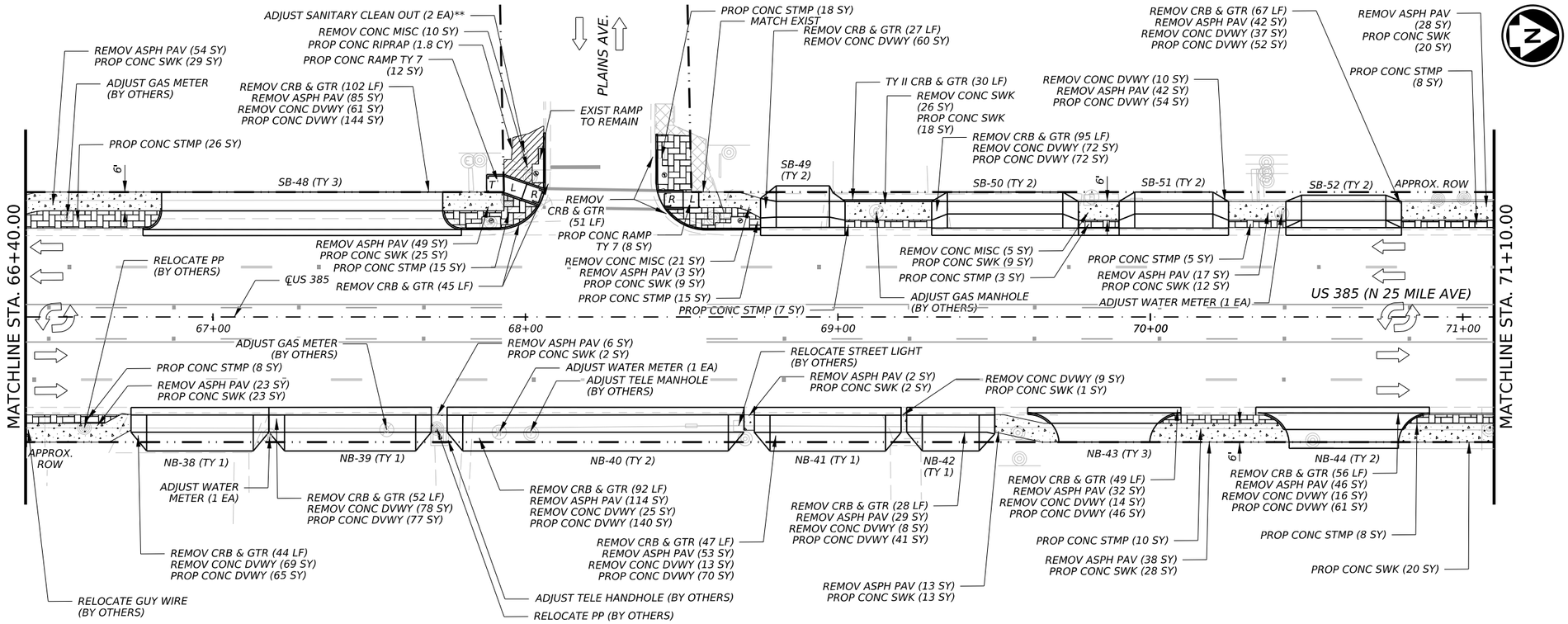

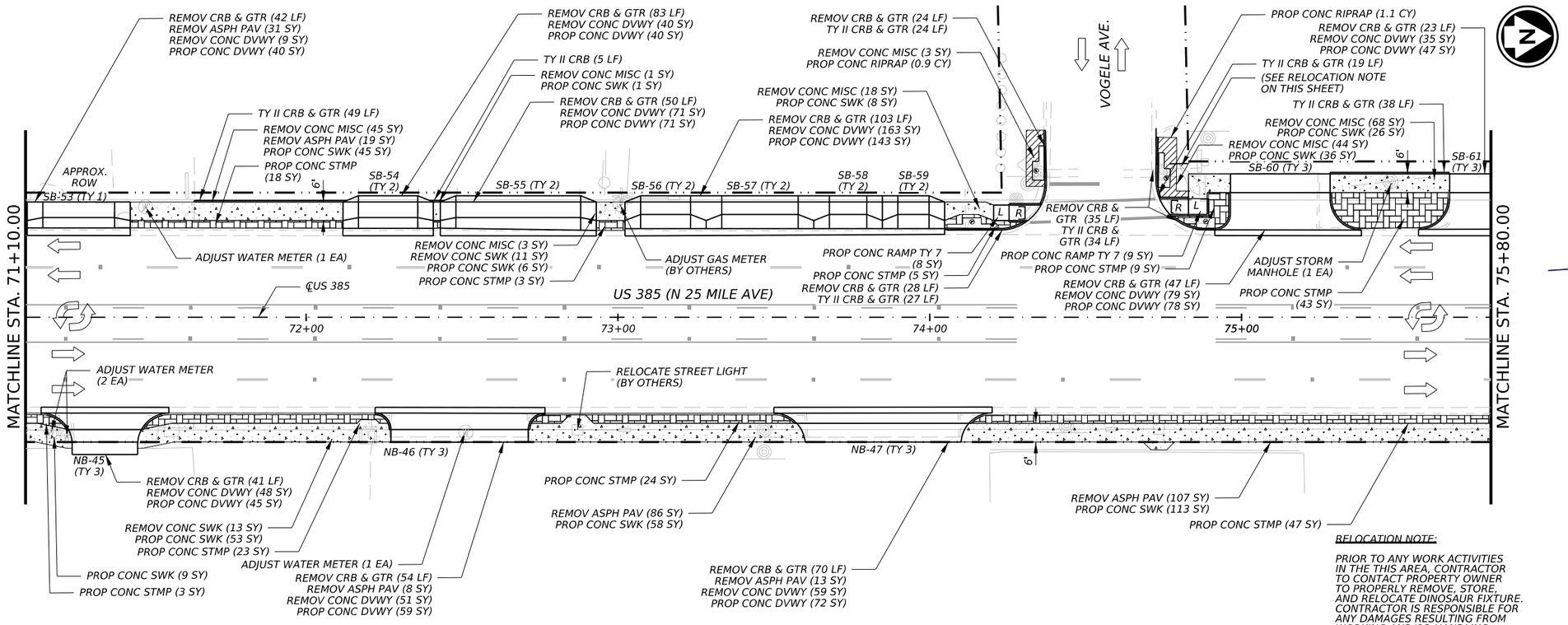

LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
	POWER POLE
	SIGNAL POLE
	GAS METER
	ELECTRIC METER
	WATER METER
	WATER/GAS VALVE
	TELEPHONE PEDESTAL
	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
	TELEPHONE JUNCTION BOX
	ELECTRIC JUNCTION BOX
	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

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2. A 48" MINIMUM CLEARANCE IS REQUIRED FROM OBSTRUCTIONS (I.E. POLES, PEDESTALS, HYDRANTS).

* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

RELOCATION NOTE:

PRIOR TO ANY WORK ACTIVITIES IN THE THIS AREA, CONTRACTOR TO CONTACT PROPERTY OWNER TO PROPERLY REMOVE, STORE, AND RELOCATE DINOSAUR FIXTURE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES RESULTING FROM WORKING AND/OR HANDLING.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

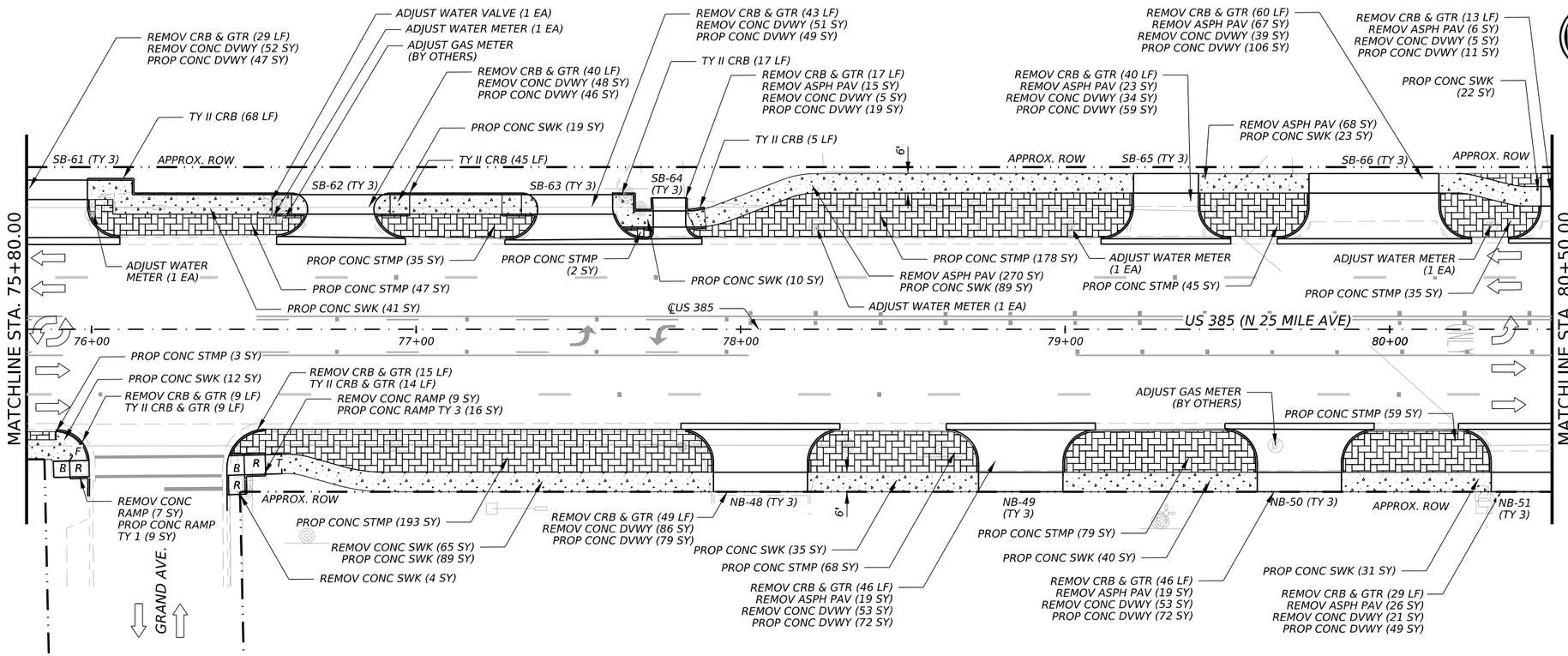
SIDEWALK PLAN

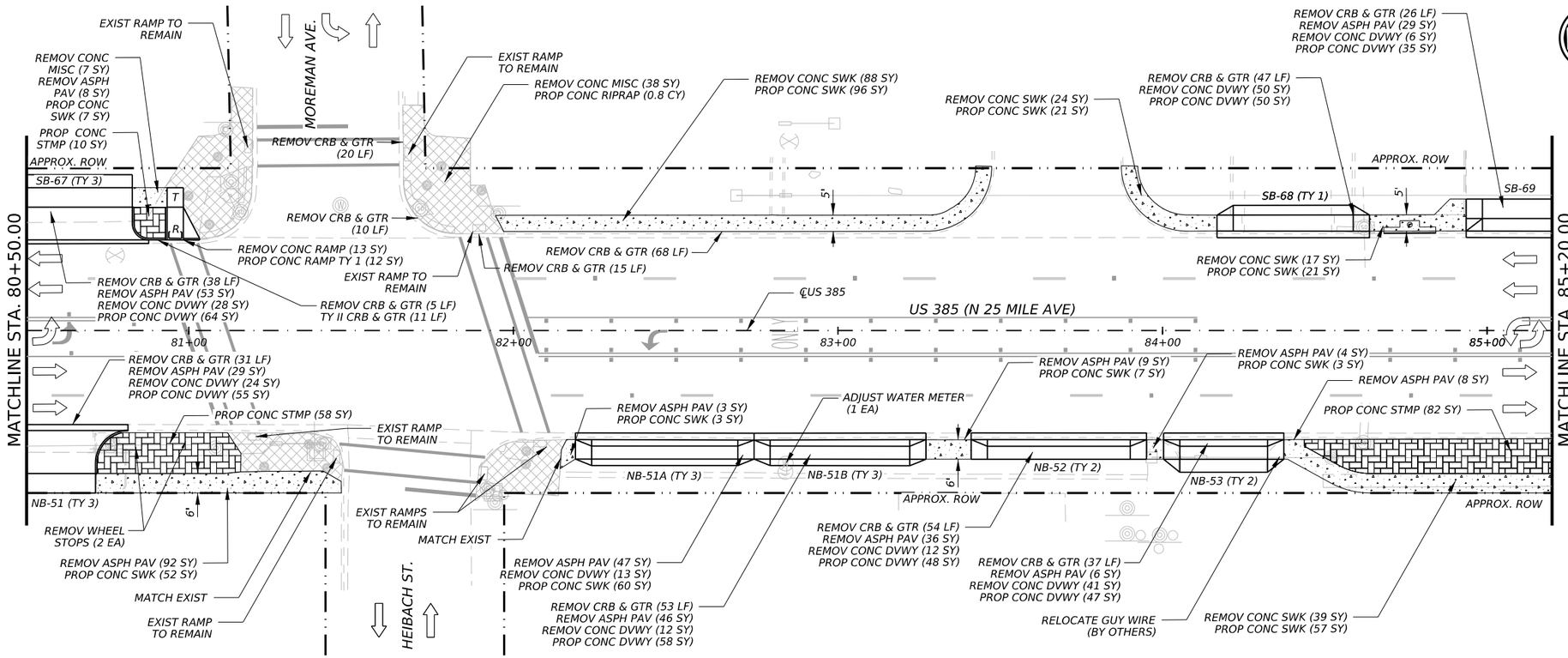
STA 66+40 TO STA 75+80

SHEET 12 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		42

DATE: 3/5/2024 12:40:15 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20_SHEETS/US385/Roadway/US385_AEC_SWK_PLN_001.dgn
ck dw ck





LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
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	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
	TELEPHONE JUNCTION BOX
	ELECTRIC JUNCTION BOX
	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER
3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

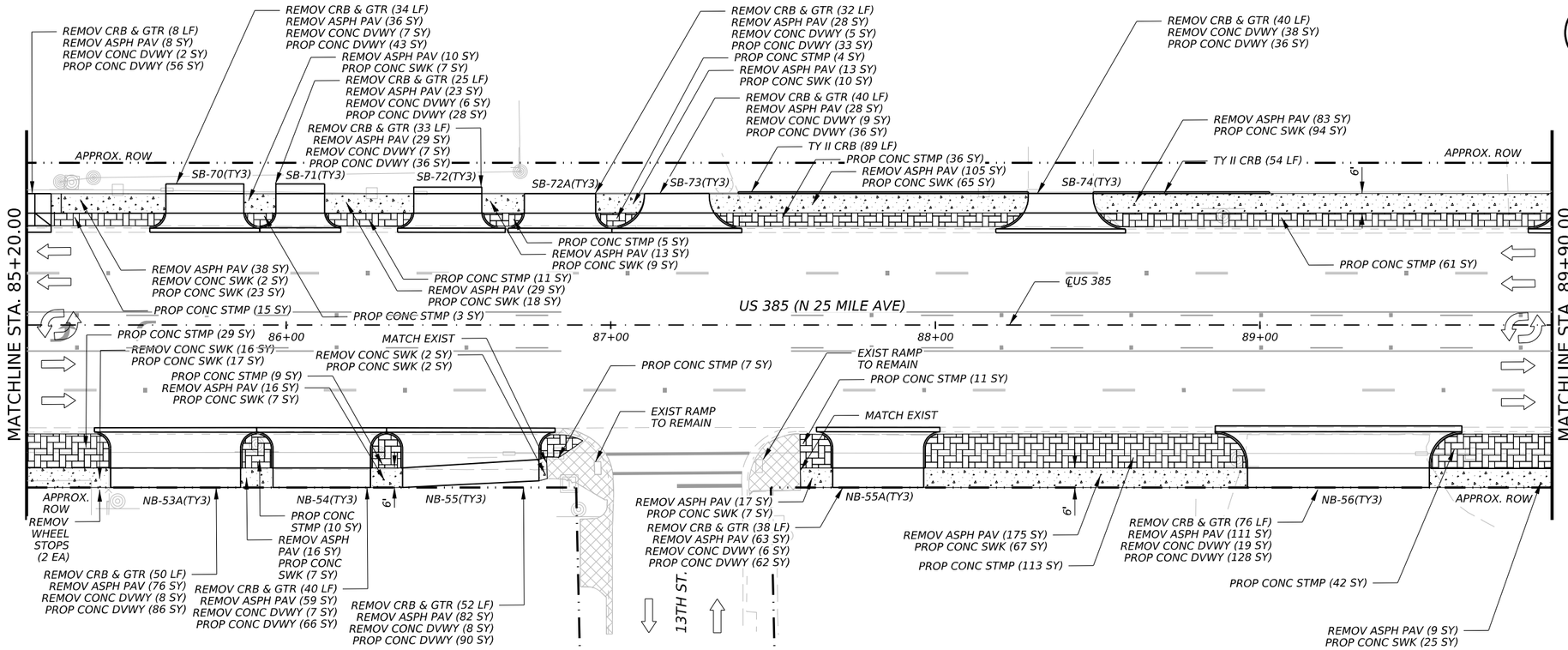
SIDEWALK PLAN

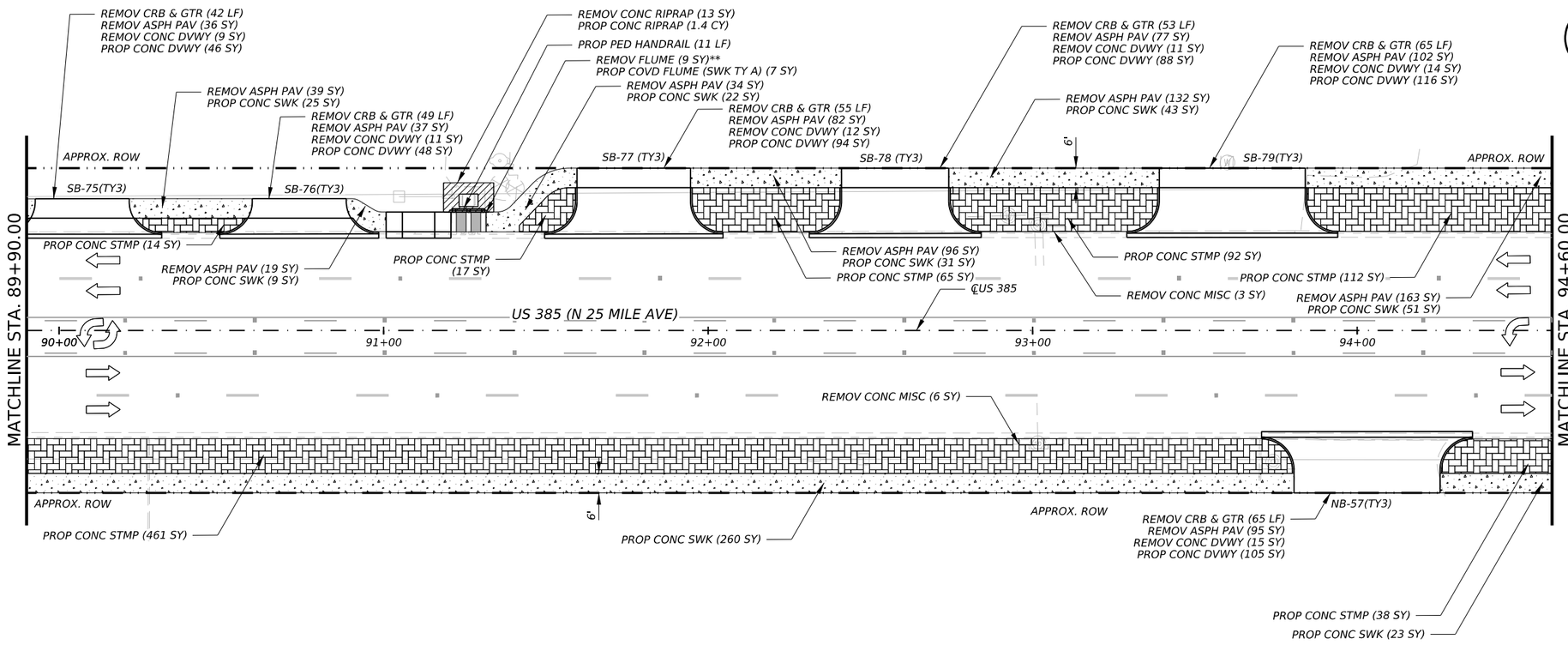
STA 75+80 TO STA 85+20

SHEET 13 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		43

DATE: 3/5/2024 12:40:17 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/US385/Roadway/US385_AEC_SWK_PLN_001.dgn
CK DW CK CK





LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
	POWER POLE
	SIGNAL POLE
	GAS METER
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	WATER/GAS VALVE
	TELEPHONE PEDESTAL
	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
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	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

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* TO BE COORDINATED WITH PROPERTY OWNER.

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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

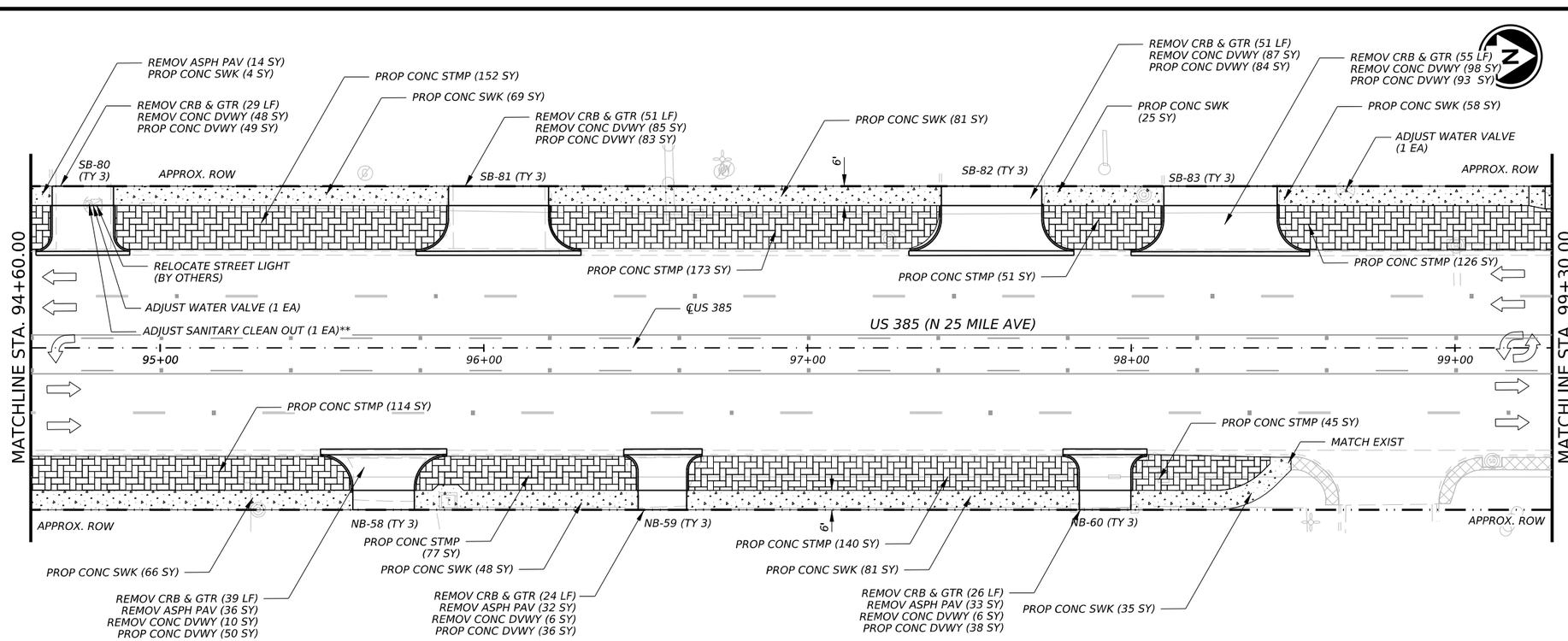
SIDEWALK PLAN

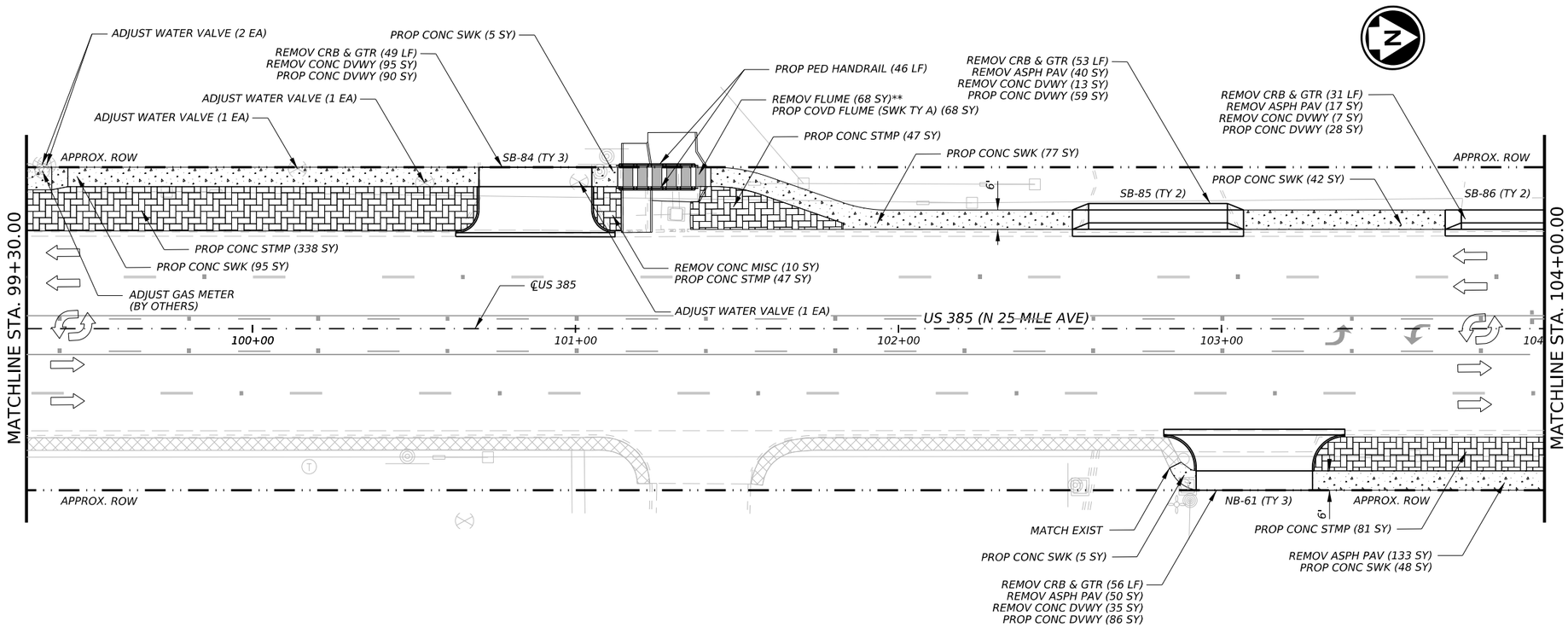
STA 85+20 TO STA 94+60

SHEET 14 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		44

DATE: 3/5/2024 12:40:19 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20_SHEETS/US385/Roadway/US385_AEC_SWK_PLN_001.dgn
CK DW CK





LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
	POWER POLE
	SIGNAL POLE
	GAS METER
	ELECTRIC METER
	WATER METER
	WATER/GAS VALVE
	TELEPHONE PEDESTAL
	TELEPHONE MANHOLE
	STORM SEWER MANHOLE
	WASTEWATER MANHOLE
	ROW MONUMENT FOUND
	GENERIC JUNCTION BOX
	TELEPHONE JUNCTION BOX
	ELECTRIC JUNCTION BOX
	FIRE HYDRANT
	FENCE
	FAUCET
	MAILBOX

NOTES:

1. ALL PROPOSED CURB AND STEMWALLS WITHIN LIMITS OF RAMPS SHALL BE SUBSIDIARY TO ITEM 0531.
2. A 48" MINIMUM CLEARANCE IS REQUIRED FROM OBSTRUCTIONS (I.E. POLES, PEDESTALS, HYDRANTS).

* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

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Dallas, Texas 72540
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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIDEWALK PLAN

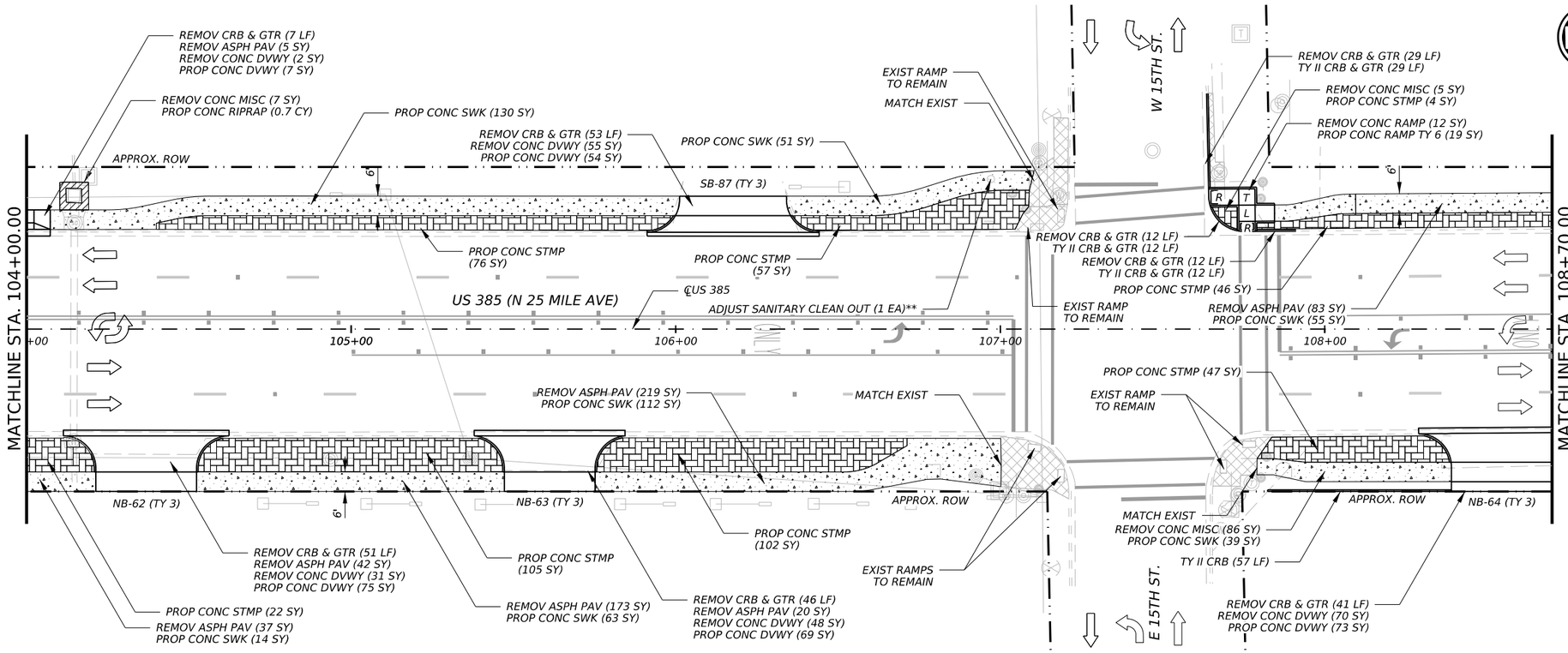
STA 94+60 TO STA 104+00

SHEET 15 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		45

DATE: 3/5/2024 12:40:21 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20_SHEETS/US385/Roadway/US385_AEC_SWK_PLN_001.dgn

ck dw ck



LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN
	TRAFFIC FLOW
	EXIST SIDEWALK/DRIVEWAY TO REMAIN
	SODDING
	STAMPED CONCRETE
	CONCRETE SIDEWALK
	CONCRETE RIPRAP
	CUT & RESTORE
	LIGHT POLE
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	TELEPHONE PEDESTAL
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	STORM SEWER MANHOLE
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	FAUCET
	MAILBOX

NOTES:

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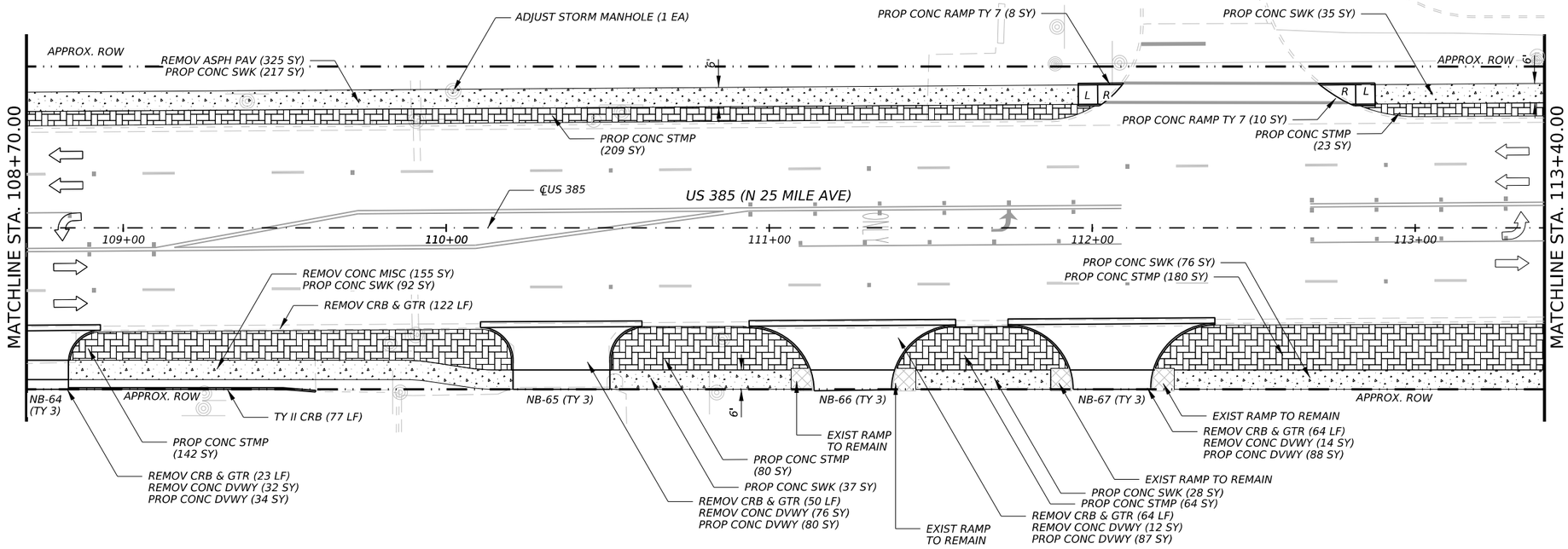

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIDEWALK PLAN

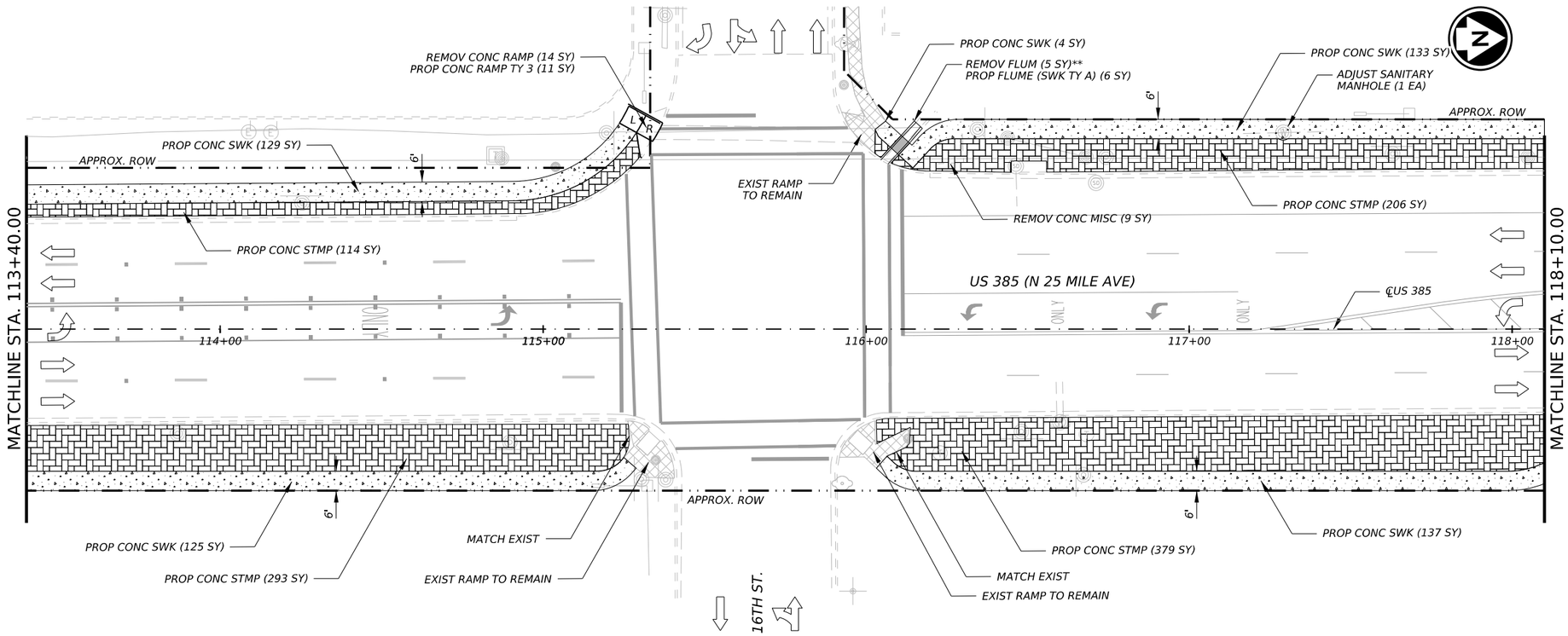
STA 104+00 TO STA 113+40

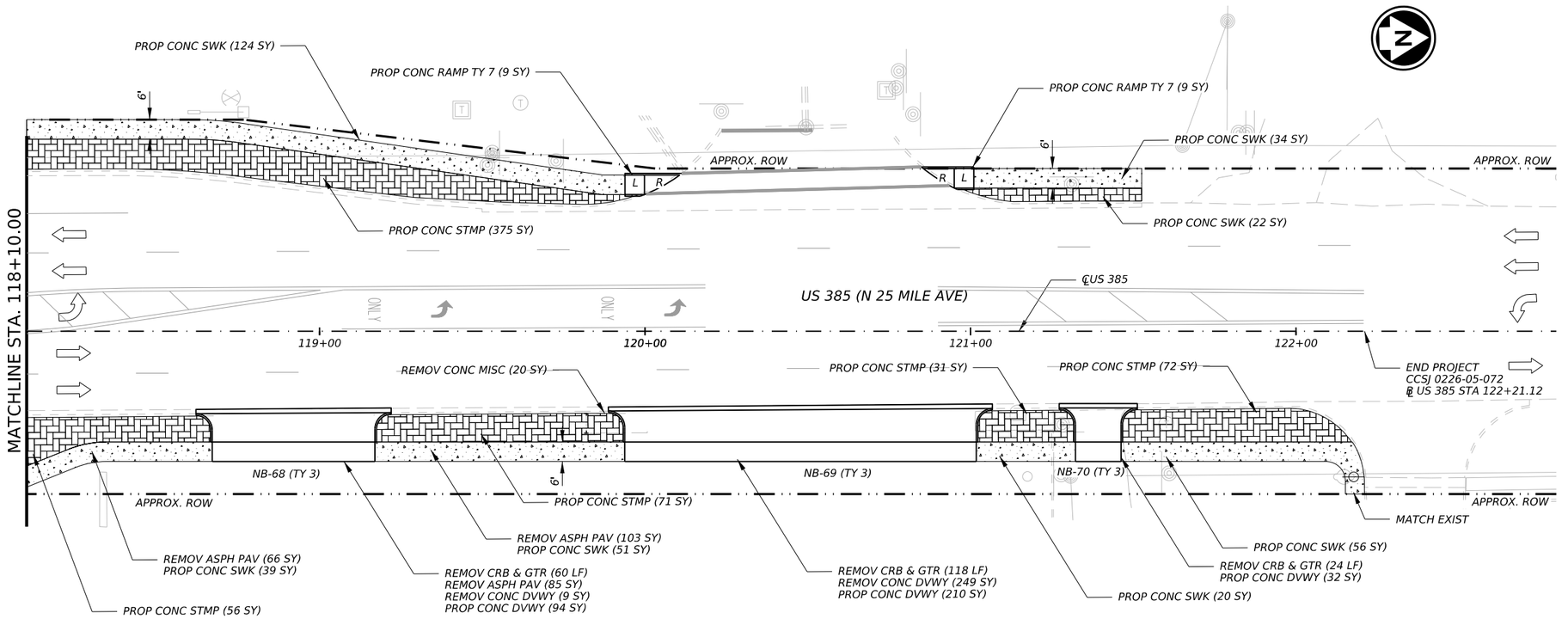
SHEET 16 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		46

DATE: 3/5/2024 12:40:22 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20_SHEETS/US385/Roadway/US385_AEC_SWK_PLN_001.dgn

ck | dw | ck





LEGEND

R	RAMP: 5' WIDE MIN; 12:1 MAX RUNNING SLOPE; 2% MAX CROSS-SLOPE; 5'X5' LANDING AT EACH SIDE
L	LANDING: 5'X5' LANDING; 2% MAX CROSS-SLOPE, ALL DIRECTIONS
F	FLARE: 10% MAX RUNNING SLOPE
T	TRANSITION: 5'MIN

- TRAFFIC FLOW
- EXIST SIDEWALK/DRIVEWAY TO REMAIN
- SODDING
- STAMPED CONCRETE
- CONCRETE SIDEWALK
- CONCRETE RIPRAP
- CUT & RESTORE
- LIGHT POLE
- POWER POLE
- SIGNAL POLE
- GAS METER
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- ELECTRIC JUNCTION BOX
- FIRE HYDRANT
- FENCE
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- MAILBOX

NOTES:

1. ALL PROPOSED CURB AND STEMWALLS WITHIN LIMITS OF RAMPS SHALL BE SUBSIDIARY TO ITEM 0531.
2. A 48" MINIMUM CLEARANCE IS REQUIRED FROM OBSTRUCTIONS (I.E. POLES, PEDESTALS, HYDRANTS).

* TO BE COORDINATED WITH PROPERTY OWNER.

** PAYMENT SHALL BE SUBSIDIARY TO ITEM 0531.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

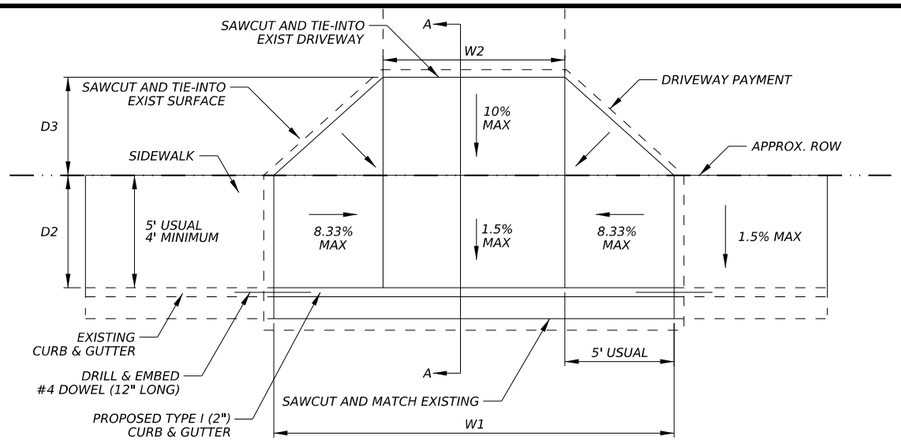
US 385

SIDEWALK PLAN
STA 113+40 TO END

SHEET 17 OF 17

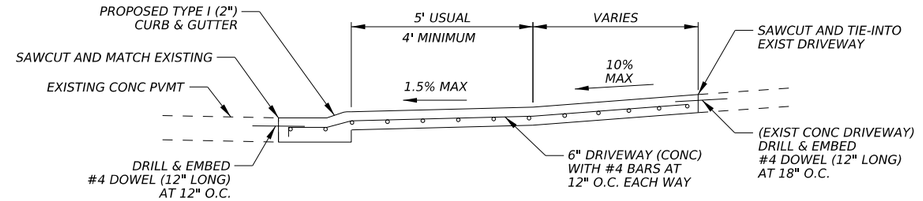
CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		47

DATE: 3/5/2024 12:40:24 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20_SHEETS/US385/Roadway/US385_AEC_SWK_PLN_001.dgn
ck dw ck



DRIVEWAY-TYPE 1 DETAIL (SIDEWALK ADJACENT TO CURB)

PLAN VIEW

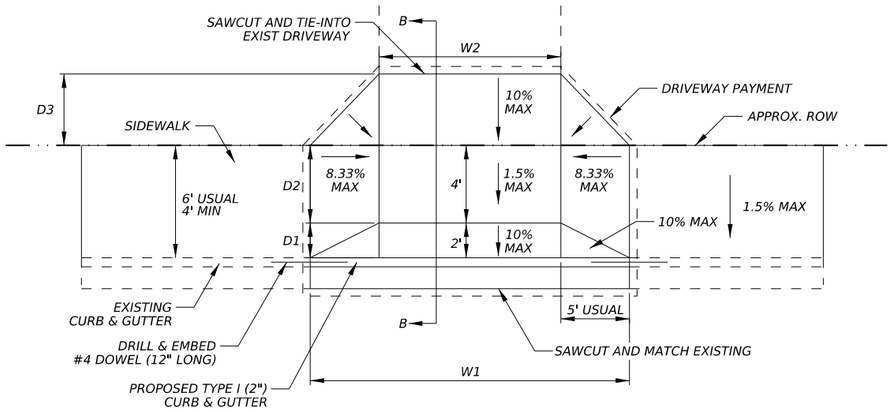


DRIVEWAY-TYPE 1 DETAIL (SIDEWALK ADJACENT TO CURB)

SECTION A-A VIEW

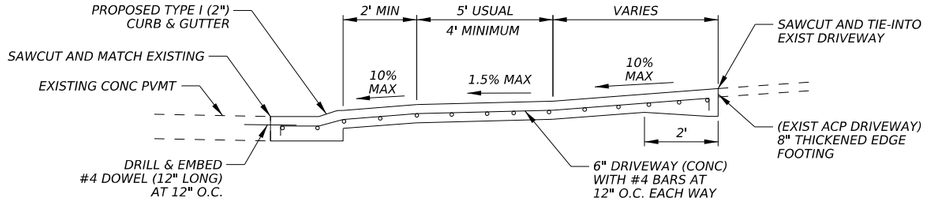
GENERAL NOTES

1. PROVIDE A MEDIUM BROOM FINISHED CONCRETE SURFACE.
2. PROVIDE CONTRACTION (DUMMY) JOINTS 1/8" WIDE AT GRADE BRAKES AND SPACED AT 5' O.C. MAX SPACING. LENGTH TO WIDTH RATION NOT TO EXCEED 1.5.
3. CONTRACTION JOINTS TO BE CARRIED THROUGH SIDEWALK PORTION OF DRIVEWAYS.
4. PROVIDE EXPANSION JOINT AND FILLER AT 40' MAX SPACING.
5. EXPANSION JOINT CONSIST OF 1/2" PREMOLDED BITUMINOUS FIBERBOARD MATERIAL. TRIM MATERIAL 1/4" LESS THAN FLUSH AND SEAL WITH ENGINEER APPROVED JOINT SEALANT.
6. EMBANKMENT, SAND, AND COMPACTED MATERIAL FOR SIDEWALK FOUNDATION ARE SUBSIDIARY TO ITEM 531.
7. DO NOT BLOCK EXISTING DRAINAGE PATHS OR APPURTENANCES WITH PROPOSED SIDEWALK.
8. CURB & GUTTER / LAYDOWN CURB TO BE PLACED MONOLITHIC WITH DRIVEWAY.
9. INCIDENTAL WORK REQUIRED TO TIE TO EXISTING DRIVEWAY AND/OR ROADWAY SHALL BE SUBSIDIARY TO ITEM 530.



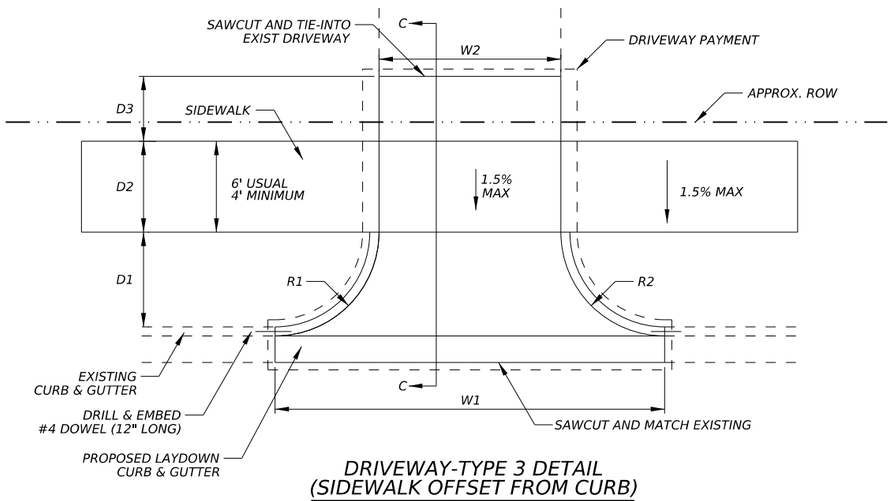
DRIVEWAY-TYPE 2 DETAIL (SIDEWALK ADJACENT TO CURB)

PLAN VIEW



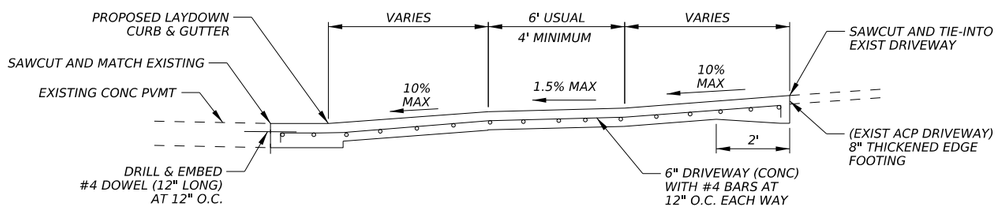
DRIVEWAY-TYPE 2 DETAIL (SIDEWALK ADJACENT TO CURB)

SECTION B-B VIEW



DRIVEWAY-TYPE 3 DETAIL (SIDEWALK OFFSET FROM CURB)

PLAN VIEW



DRIVEWAY-TYPE 3 DETAIL (SIDEWALK ADJACENT TO CURB)

SECTION C-C VIEW

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

Ernesto Salcido, P.E.

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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

MISCELLANEOUS DETAILS

SHEET 1 OF 4

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		48

DATE: 3/5/2024 12:47:49 AM
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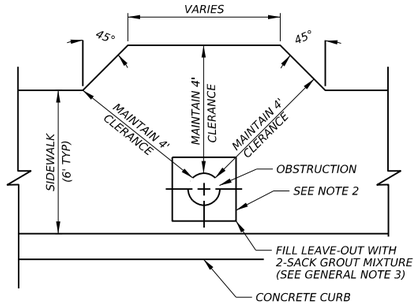
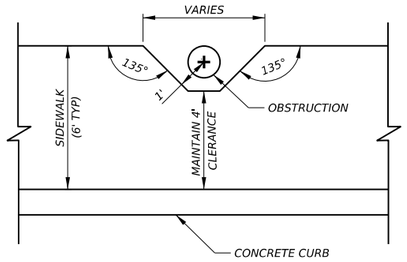


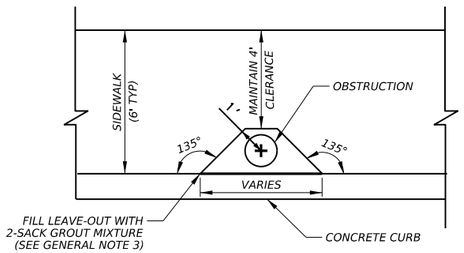
OBSTRUCTION IN SIDEWALK

* UNLESS OTHERWISE SPECIFIED



OBSTRUCTION IN SIDEWALK

* UNLESS OTHERWISE SPECIFIC



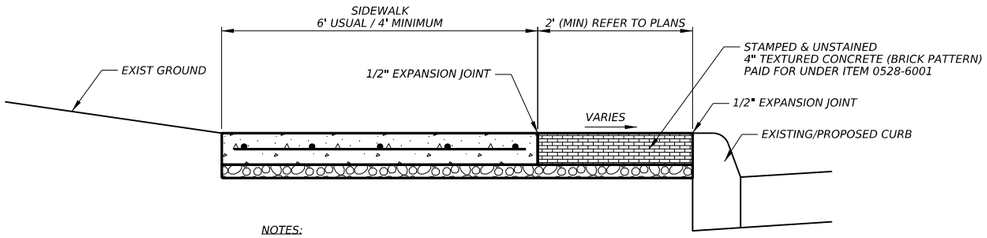
OBSTRUCTION IN SIDEWALK

* UNLESS OTHERWISE SPECIFIC

NOTES:

1. UTILIZE DETAIL AT OBSTRUCTION ENCROACHMENTS INTO THE PEDESTRIAN ACCESS ROUTE. A MINIMUM UNOBSTRUCTED CLEARANCE OF 4', UNLESS OTHERWISE SPECIFIED, SHOULD BE MAINTAINED AROUND THE OBSTRUCTION MEASURED FROM THE MOST RESTRICTIVE LOCATION OR AS APPROVED BY THE ENGINEER.
2. IF OBSTRUCTION IS LOCATED WITHIN THE SIDEWALK, CONSTRUCT 2' SQUARE CONSTRUCTION JOINT CENTERED ON OBSTRUCTION TO FACILITATE FUTURE MAINTENANCE WITHOUT FULL SIDEWALK PANEL REMOVAL/REPLACEMENT.
3. THE LEAVE-OUTS SHALL BE FILLED WITH NO MORE THAN A 2-SACK GROUT MIXTURE AND PLACED IN ACCORDANCE WITH SECTION 421.2.F, "MORTAR AND GROUT." PAYMENT FOR FURNISHING AND PLACING THE GROUT MIXTURE WILL BE SUBSIDIARY TO THE PAY ITEM OF CONCRETE SIDEWALKS.

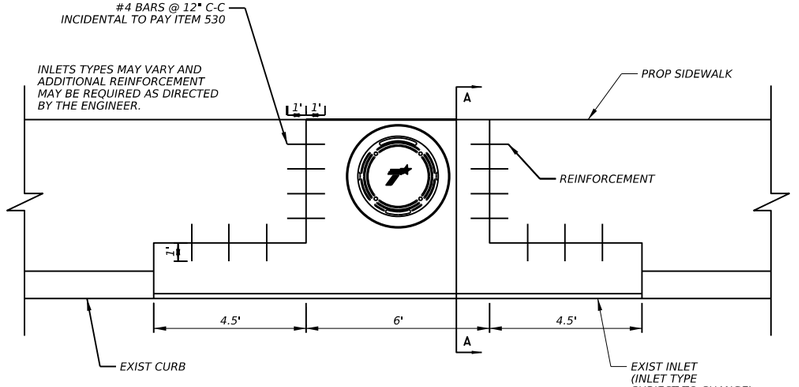
OBSTRUCTION CONFLICT

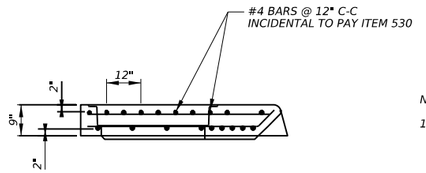


NOTES:

1. SIDEWALK LONGITUDINAL SLOPES SHALL NOT EXCEED 5%. IF EXISTING ROADWAY SLOPES EXCEED 5% , THEN SIDEWALK SLOPE MAY MATCH THAT OF THE ROADWAY.
2. PLACE GROOVED JOINTS AT A MAX SPACING OF 10' PLACE 3/4" EXPASION JOINTS AT A MAX OF SPACING OF 40' TO COINCIDE WITH THE CURB EXPANSION JOINTS.
3. ON SIDEWALK SEGMENTS LESS THAN 5' WIDE, PROVIDE A 5' X 5' PASSING AREA AT INTERVALS NOT EXCEEDING 200'.
4. CROSS SLOPE ON STAMPED CONCRETE AREA IS NOT A PEDESTRIAN ACCESSIBLE AREA AND MAY EXCEED 5% SLOPES, AS NEEDED.
5. CONTRACTOR TO USE NO. 4 REBARS AS SPECIFIED IN ITEM 432. CONTRACTOR MAY USE HIGHER STRENGTH CLASS A CONCRETE IN LIEU OF CLASS B.
6. INCIDENTAL WORK REQUIRED TO TRANSITION TO EXISTING SURFACES BEYOND THE PROPOSED SIDEWALK LIMITS SHALL BE SUBSIDIARY TO ITEM 531.

SIDEWALK / STAMPED CONCRETE DETAIL





SECTION A-A

NOTES:

1. CONTRACTOR RESPONSIBLE TO REPAIR AND/OR REPLACE ANY DAMAGE TO EXISTING INLET AS REQUIRED BY THE ENGINEER

INLET DOWELING DETAIL

N.T.S.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

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Texas Department of Transportation

US 385

MISCELLANEOUS DETAILS

SHEET 2 OF 4

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		49

DATE: 3/5/2024 12:48:15 AM
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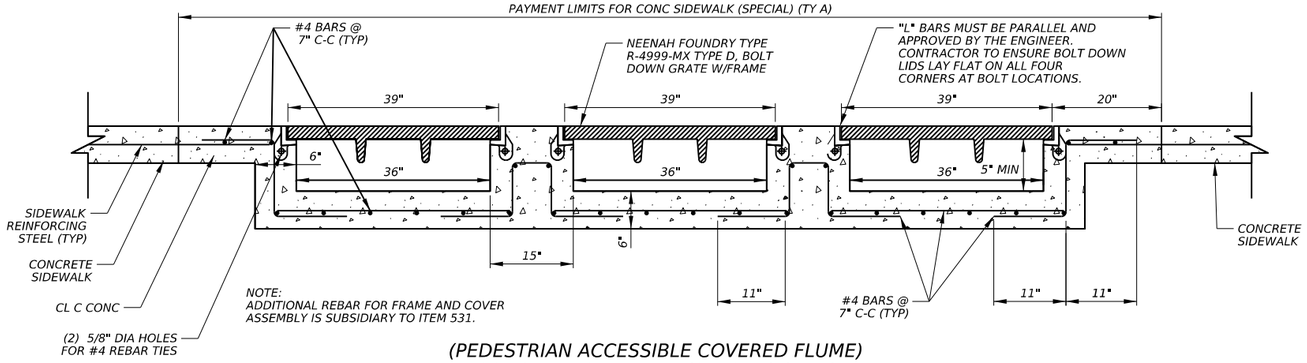
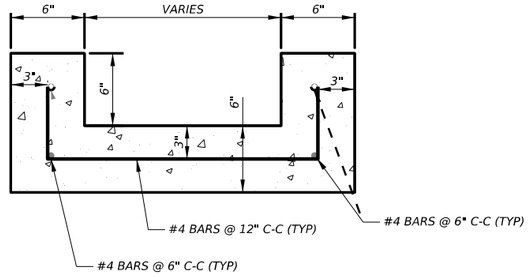


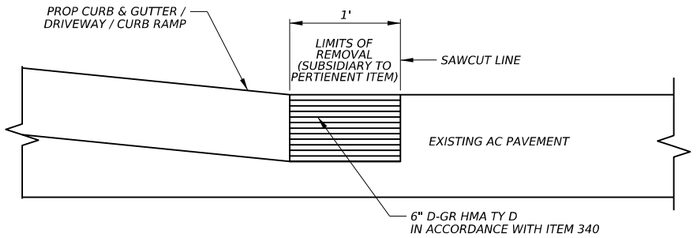
(PEDESTRIAN ACCESSIBLE COVERED FLUME)
CONCRETE SIDEWALK (SPECIAL) (TY A)
ITEM 531-6032



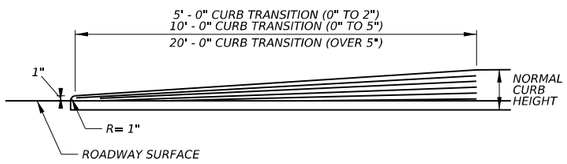
FLUME NOTES:

1. *REMOVAL AND PROPER DISPOSAL OF EXISTING FLUME STRUCTURES SHALL BE SUBSIDIDARY TO ITEM 531.*
2. *INCIDENTAL WORK REQUIRED TO TRANSITION TO EXISTING SURFACES BEYOND THE PROPOSED FLUME LIMITS SHALL BE SUBSIDIARY TO ITEM 531.*

(CONCRETE FLUME)
CONCRETE SIDEWALK (SPECIAL) (TY A)
ITEM 531-6032



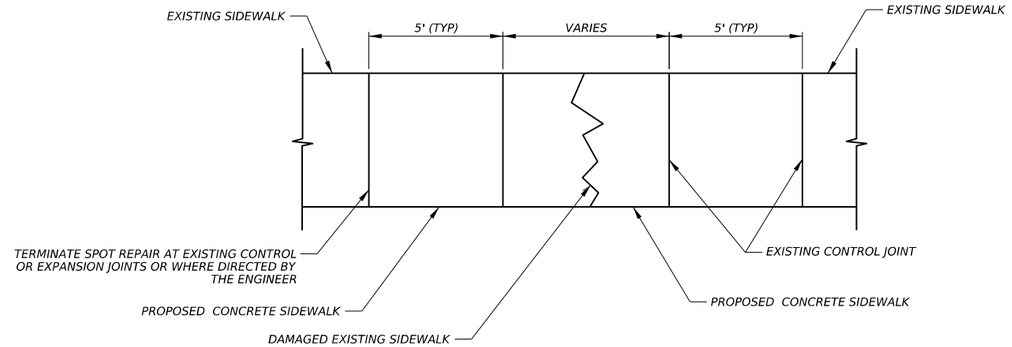
PAVEMENT CUT & RESTORE DETAIL



NOTE:

TRANSITIONS FOR CONCRETE CURBS ENDS WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO ITEM 529.

TYPICAL TRANSITION
FOR CONCRETE CURB ENDS



NOTE:

PAYMENT FOR SPOT REPAIR QUANTITIES ARE INCLUDED UNDER ITEM 0531 6001. SEE LOCATIONS ON PLAN SHEETS.

SPOT REPAIR DETAIL

STATE OF TEXAS
ERNESTO SALCIDO
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3/5/2024

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Texas Department of Transportation

US 385

MISCELLANEOUS DETAILS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		50

DATE: 3/5/2024 12:48:16 AM
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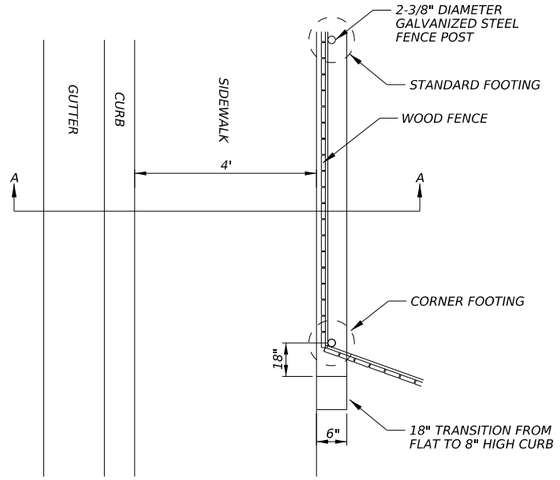
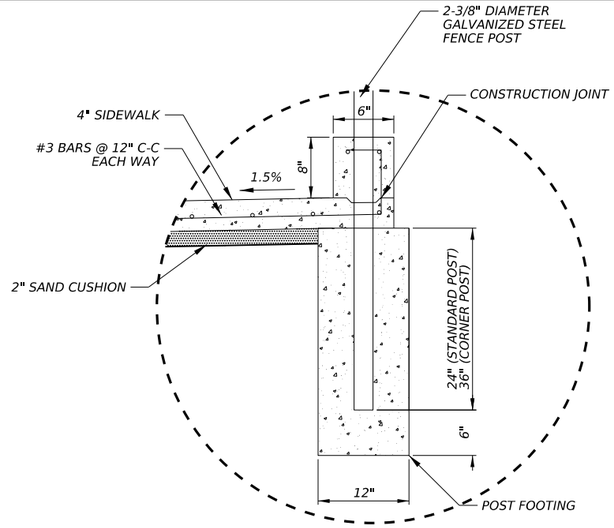


WOODEN FENCE ON STEEL POSTS WITH MONOLITHIC SIDEWALK CURB

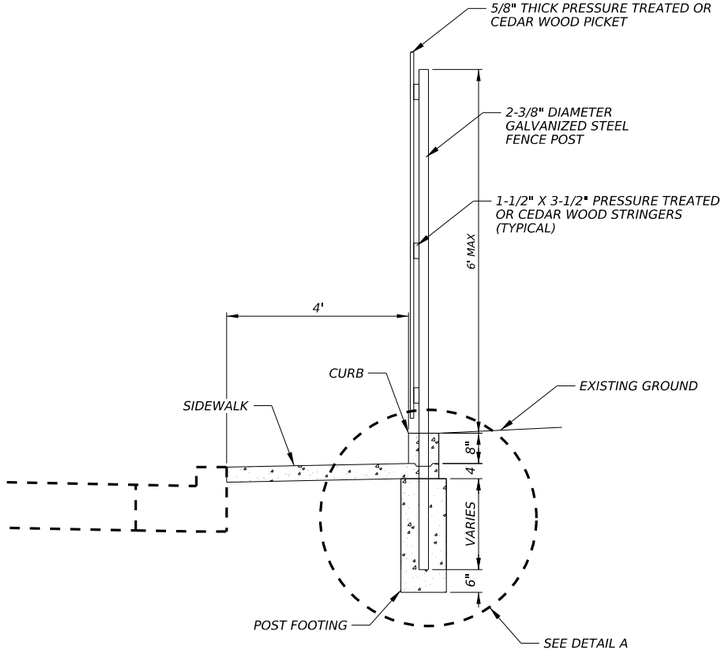
PLAN VIEW



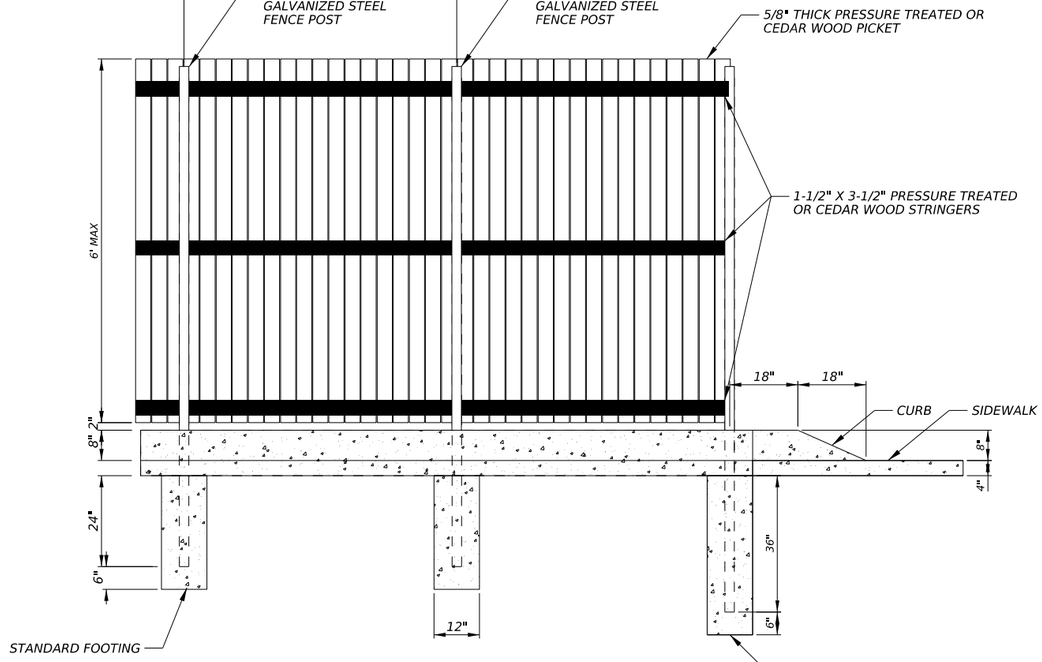
DETAIL "A"

SIDEWALK WITH WOODEN FENCE NOTES

1. GALVANIZED STEEL FENCE POSTS SHALL BE LOCATED AT THE CENTER OF CURB.
2. CORNER POSTS ARE REQUIRED AT ALL END POINTS AND ANGLE POINTS.
3. CONCRETE FOR POST FOOTINGS SHALL BE IN ACCORDANCE WITH ITEM 300, CLASS A CONCRETE; PAYMENT IS SUBSIDIARY TO ITEM 531.
4. VERTICAL SLATS SHALL BE NAILED OR SCREWED TO HORIZONTAL BRACING STRINGERS RUNNING FROM VERTICAL POST TO POST. VERTICAL POSTS AND STRINGERS SHALL BE INSTALLED INSIDE OF THE FENCE, NOT EXPOSED TO PUBLIC RIGHT-OF-WAY OR ADJACENT PROPERTIES.
5. INCIDENTAL WORK REQUIRED TO TRANSITION TO EXISTING SURFACES BEYOND THE PROPOSE LIMITS ON THESE DETAILS SHALL BE SUBSIDIARY TO ITEM 531.



SECTION A-A



(WOODEN FENCE ON STEEL POSTS WITH MONOLITHIC SIDEWALK CURB) CONCRETE SIDEWALK (SPECIAL) (TY B)

ITEM 531-6033

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER
3/5/2024

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

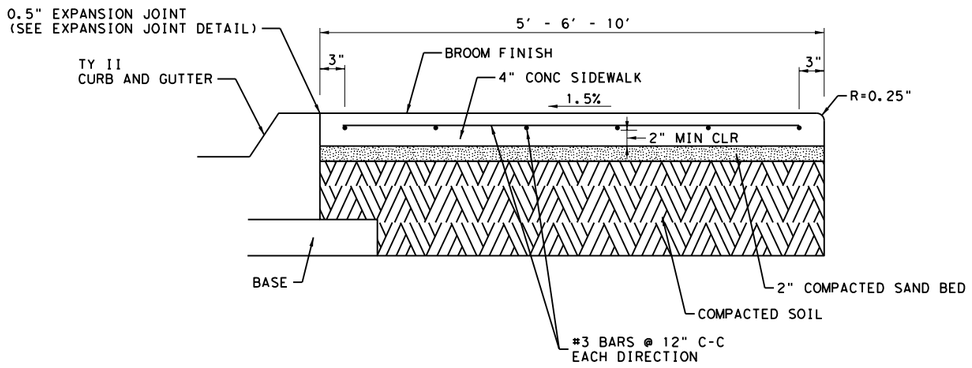
Texas Department of Transportation

US 385

MISCELLANEOUS DETAILS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		51

DATE: 3/5/2024 12:48:42 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/US385/Roadway/US385_AEC_MD_004.dgn

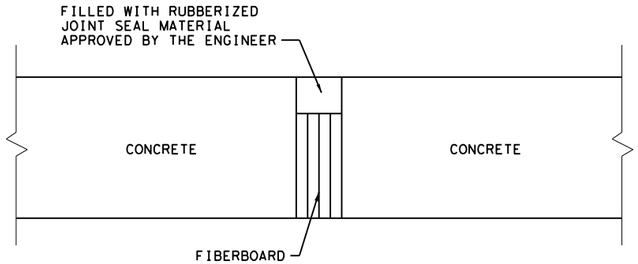


TYPICAL SIDEWALK DETAIL

NTS

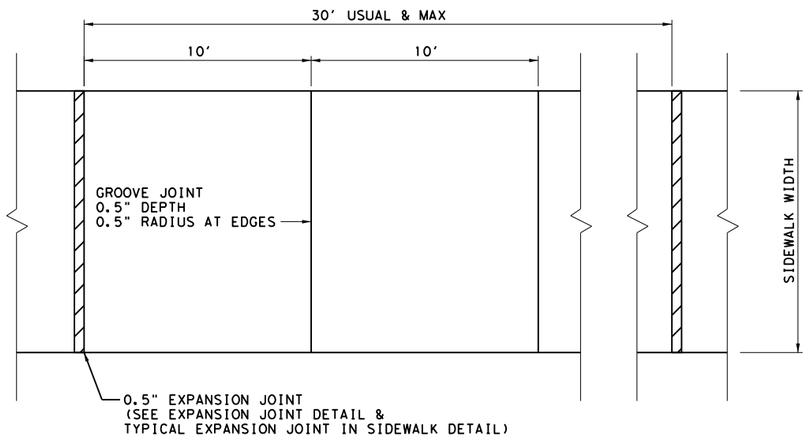
NOTE:

1. 2" SAND BED IS SUBSIDIARY TO CONCRETE SIDEWALK
2. EXPANSION JOINT IS SUBSIDIARY TO CONCRETE SIDEWALK



EXPANSION JOINT DETAIL

NTS

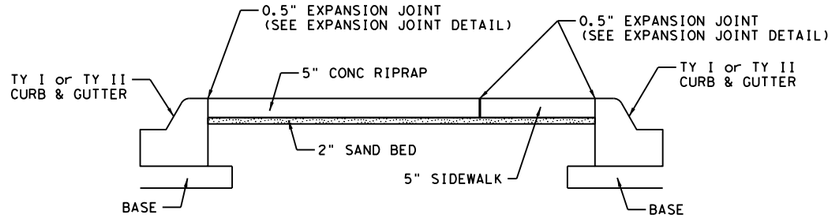


TYPICAL SIDEWALK PLAN

NTS

NOTE:

EXPANSION JOINT IS SUBSIDIARY TO CONCRETE SIDEWALK

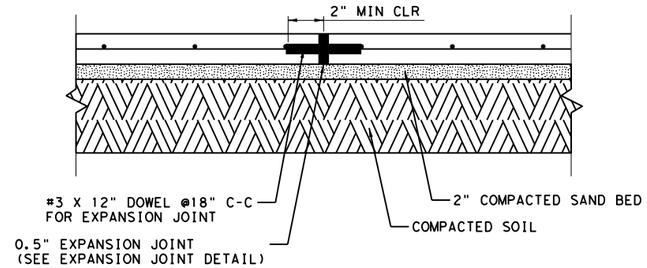


CONCRETE MEDIAN DETAIL
CONCRETE RIPRAP DETAIL

NTS

NOTE:

1. 2" SAND BED IS SUBSIDIARY TO CONCRETE MEDIAN OR CONCRETE RIPRAP
2. EXPANSION JOINT IS SUBSIDIARY TO CONCRETE MEDIAN OR CONCRETE RIPRAP

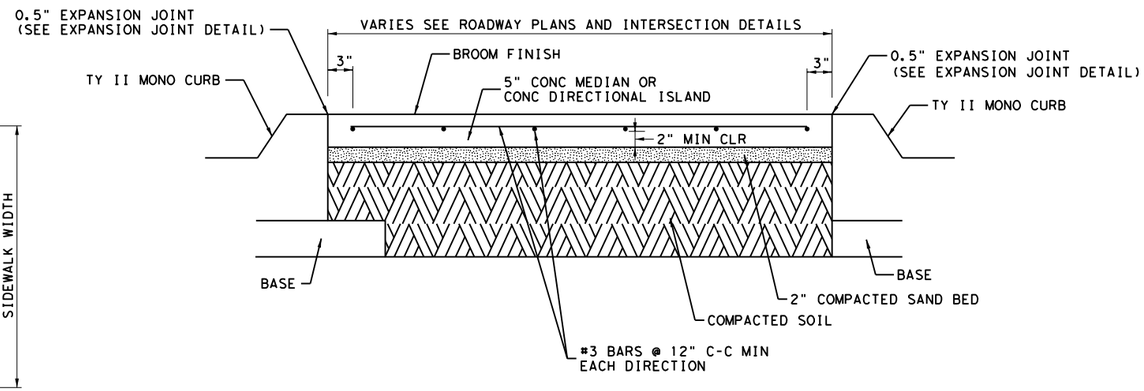


TYPICAL EXPANSION JOINT IN SIDEWALK

NTS

NOTE:

1. 2" SAND BED IS SUBSIDIARY TO CONCRETE SIDEWALK
2. EXPANSION JOINT IS SUBSIDIARY TO CONCRETE SIDEWALK



TYPICAL CONCRETE MEDIAN DETAIL
TYPICAL DIRECTIONAL ISLAND DETAIL

NTS

NOTE:

1. 2" SAND BED IS SUBSIDIARY TO CONCRETE MEDIAN
   OR CONCRETE DIRECTIONAL ISLAND
2. EXPANSION JOINT IS SUBSIDIARY TO CONCRETE MEDIAN
   OR CONCRETE DIRECTIONAL ISLAND

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
3/5/2024
Ernesto Salcido, P.E.

US 385

SIDE WALK JOINT DETAIL

SCALE: N.T.S.

2024 Texas Department of Transportation

SHEET 1 OF 1

DSN	CK	CONT	SECT	JOB	HIGHWAY
EF	ES	0226	05	072, ETC.	US 385
DRWN	CK	DIST	COUNTY		SHEET NO.
EF	ES	AMA	DEAF SMITH		52

DATE: 3/5/2024 1:24:36 AM
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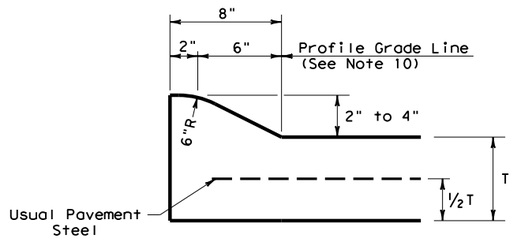
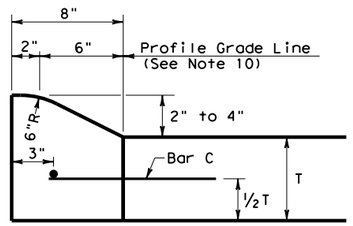
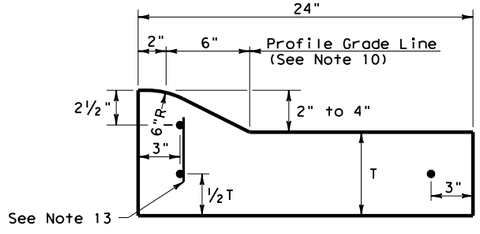
DATE: 3/1/2024
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/cccg22.dgn



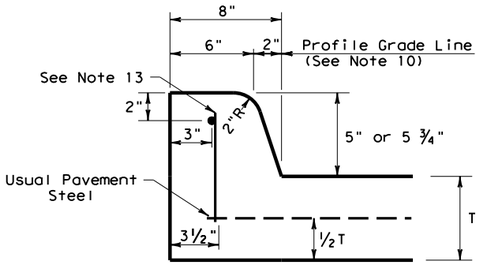
TYPE I CURB (MONOLITHIC)
2" - 4" HEIGHT



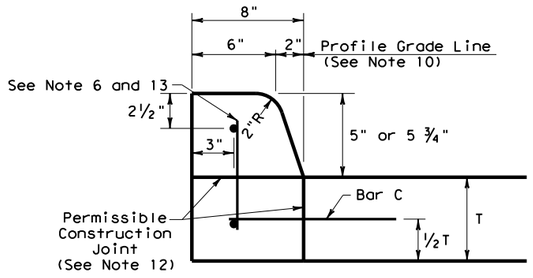
TYPE I CURB
2" - 4" HEIGHT



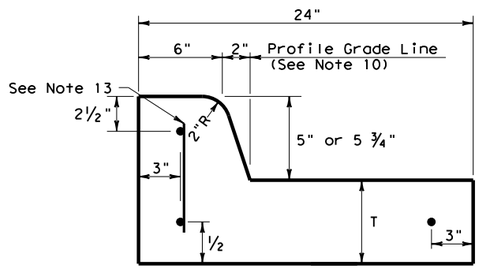
TYPE I CURB AND GUTTER
2" - 4" HEIGHT



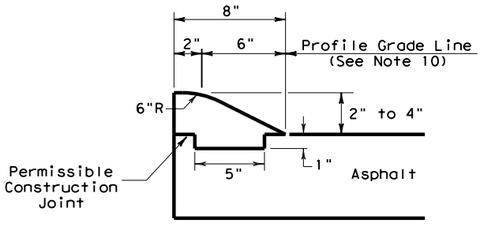
TYPE II CURB (MONOLITHIC)
5" - 5 ¾" HEIGHT



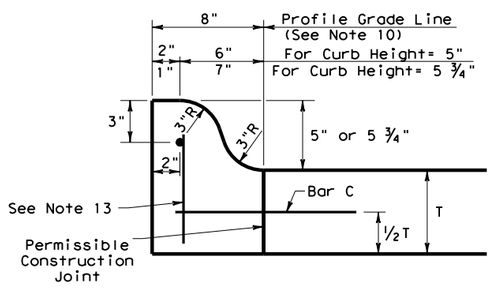
TYPE II CURB
5" - 5 ¾" HEIGHT



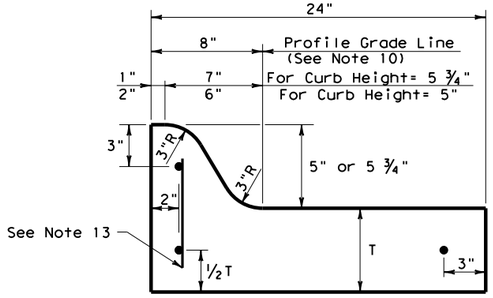
TYPE II CURB AND GUTTER
5" - 5 ¾" HEIGHT



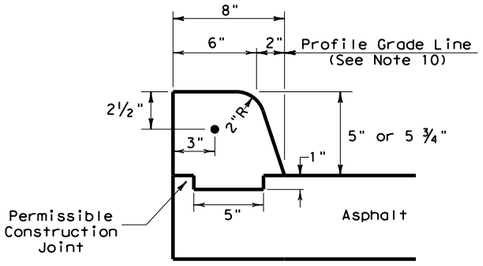
TYPE III CURB (KEYED)
2" - 4" HEIGHT



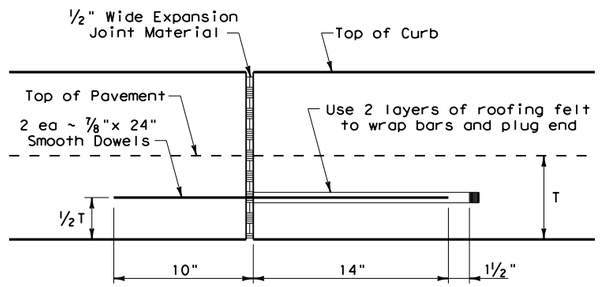
TYPE IIa CURB
5" - 5 ¾" HEIGHT



TYPE IIa CURB AND GUTTER
5" - 5 ¾" HEIGHT

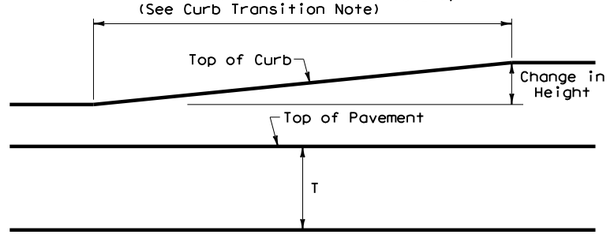


TYPE IV CURB (KEYED)
5" - 5 ¾" HEIGHT



EXPANSION JOINT DETAIL

CURB TRANSITION NOTE:
Field conditions may require a longer or shorter transition, and shall be shown elsewhere in the plans, or as directed by the Engineer.

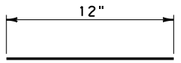


CURB TRANSITION
Note: To be paid for as Highest Curb

GENERAL NOTES

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of fiber reinforced concrete in lieu of reinforcing steel is acceptable. Use fibers meeting the requirements of DMS 4550, "Fibers for Concrete," and dose fibers in accordance with Material Producers List (MPL) "Fibers for Class A and B Concrete Applications."
4. Round exposed sharp edges with a rounding tool, to a minimum radius of ¼ inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is to be placed on existing concrete pavement, Bar B may be drilled and grouted in place, or may be inserted into fresh concrete.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C~C.
9. Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When horizontal permissible construction joints are used, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans. Reinforcing steel for curb section shall then conform to that required for concrete curb.
13. Bar B placement as needed (typically at four ft. C-C) to support curb reinforcing steel during concrete placement.

BAR B



BAR C

Texas Department of Transportation

Design Division Standard

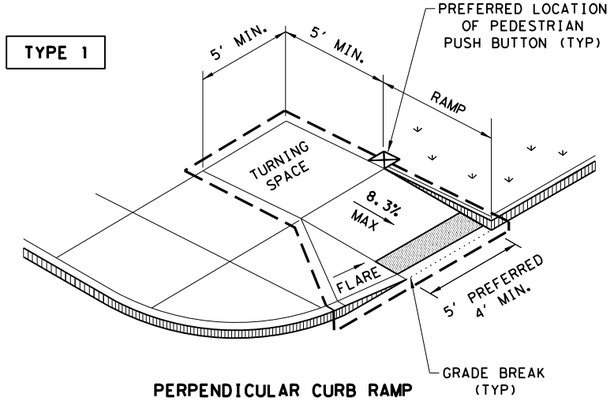
CONCRETE CURB AND CURB AND GUTTER

CCCG-22

FILE: cccg21.dgn	DN: TXDOT	CK: AN	DW: CS	CK: KM
© TxDOT: JUNE 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		53

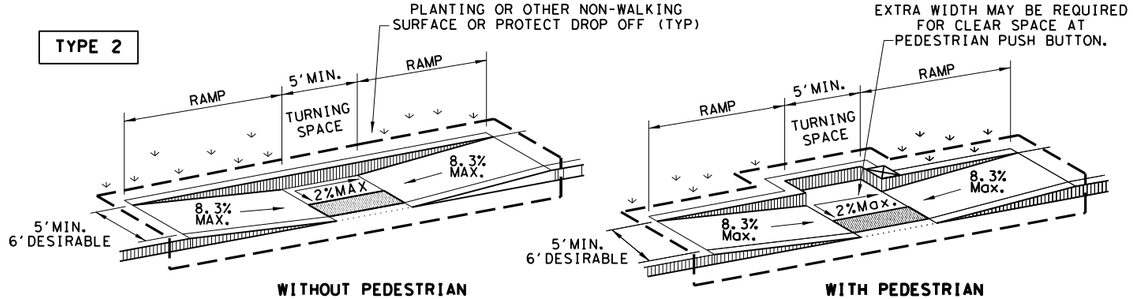
DATE: 3/1/2024
FILE: pw://aecom-no-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/ped18.dgn

TYPE 1



PERPENDICULAR CURB RAMP

TYPE 2

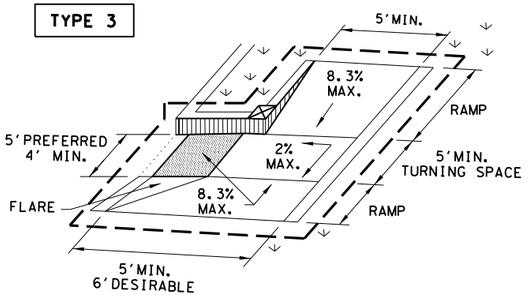


WITHOUT PEDESTRIAN PUSH BUTTON

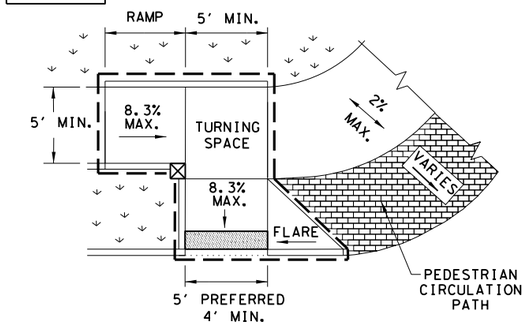
WITH PEDESTRIAN PUSH BUTTON

PARALLEL CURB RAMP

TYPE 3

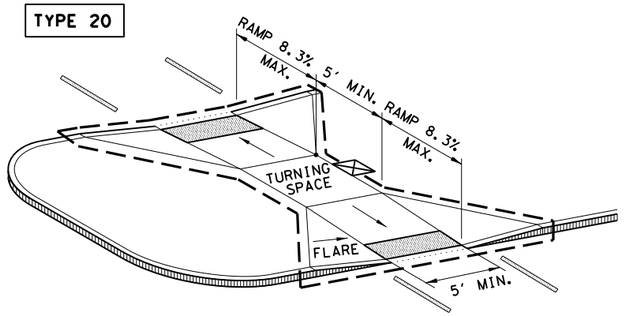


TYPE 6



COMBINATION CURB RAMPS

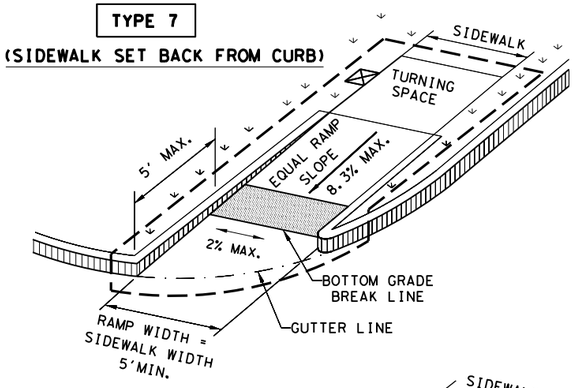
TYPE 20



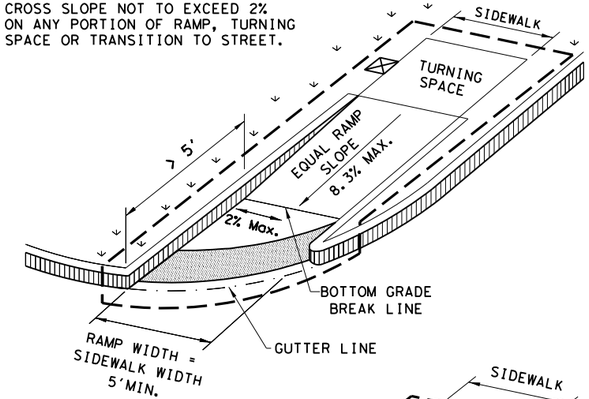
CURB RAMPS AT MEDIAN ISLANDS

TYPE 7

(SIDEWALK SET BACK FROM CURB)

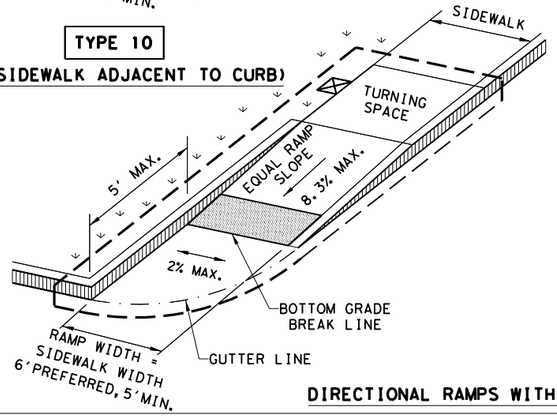


CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.

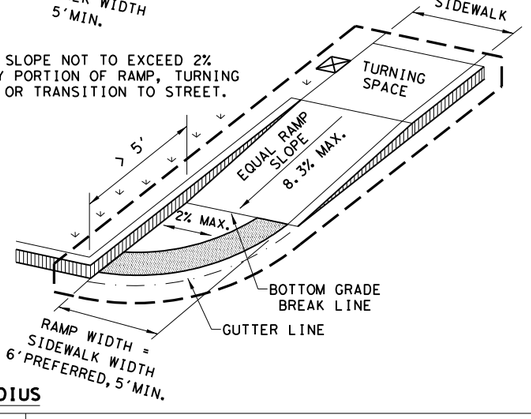


TYPE 10

(SIDEWALK ADJACENT TO CURB)

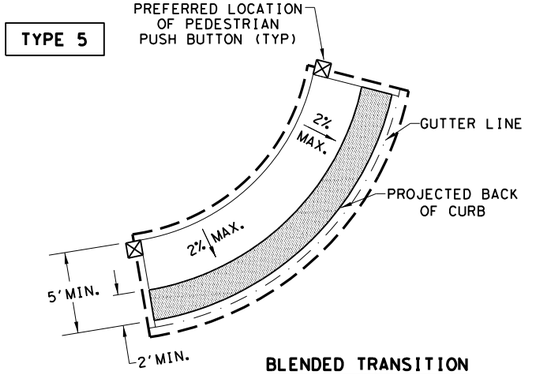


CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.



DIRECTIONAL RAMPS WITHIN RADIUS

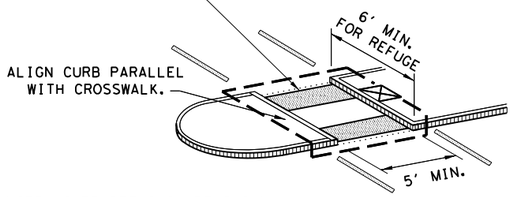
TYPE 5



BLENDED TRANSITION
(FLUSH LANDING)

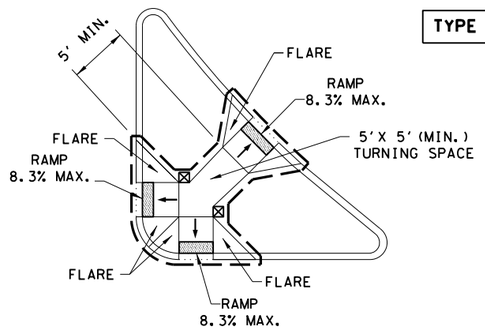
TYPE 21

INSTALL DETECTABLE WARNING SURFACE AT EACH END OF THE CUT-THROUGH RAMP WITH A MINIMUM 2' USUAL SIDEWALK SURFACE BETWEEN. IF MEDIAN IS LESS THAN 6' WIDE, ELIMINATE DETECTABLE WARNING SURFACES.



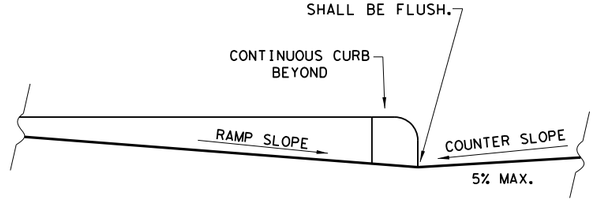
NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 22



COMBINATION ISLAND RAMPS

BOTTOM GRADE BREAK OF CURB RAMP WILL NORMALLY BE AT GUTTER LINE. SURFACE SLOPES AT GRADE BREAKS SHALL BE FLUSH.



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

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	0226	05	072, ETC.	US 385
REVISED 08, 2005 REVISED 06, 2012 REVISED 01, 2018	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		54

DATE: 3/1/2024
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/ped18.dgn

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.

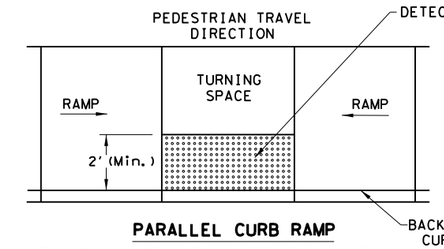
DETECTABLE WARNING PAVERS (IF USED)

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

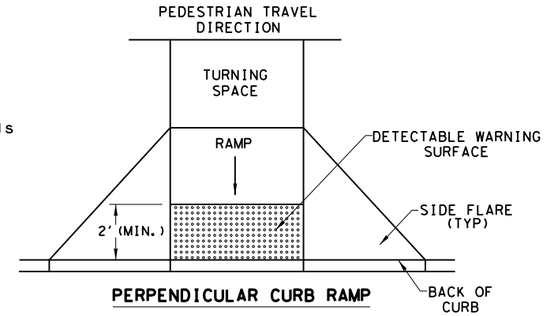
27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items 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.

DETECTABLE WARNING SURFACE DETAILS



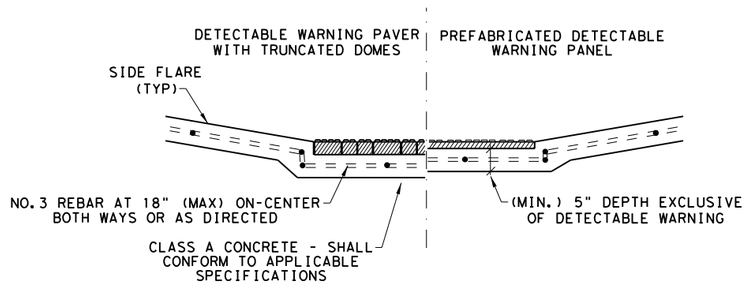
PARALLEL CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.

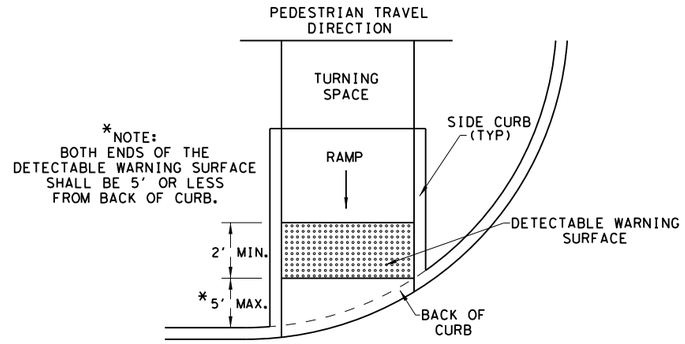


PERPENDICULAR CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS



DIRECTIONAL CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

SHEET 2 OF 4

Texas Department of Transportation — Design Division Standard

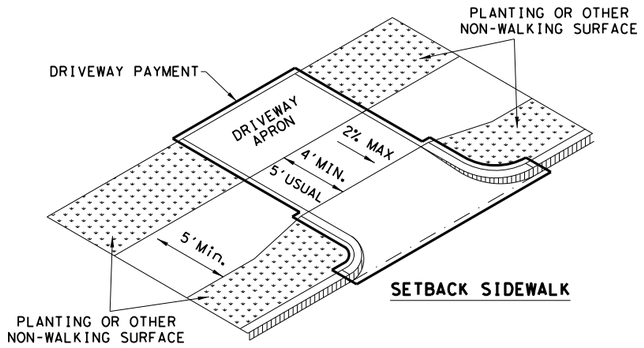
PEDESTRIAN FACILITIES CURB RAMPS

PED-18

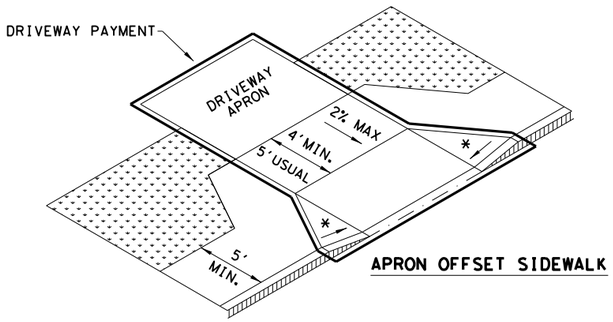
FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
REVISED 08, 2005 REVISED 06, 2012 REVISED 01, 2018	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		55

DATE: 3/1/2024
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/ped18.dgn

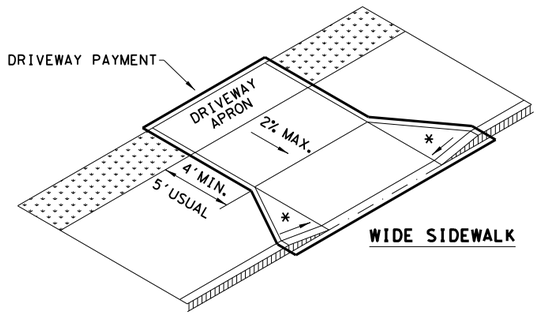
SIDEWALK TREATMENT AT DRIVEWAYS



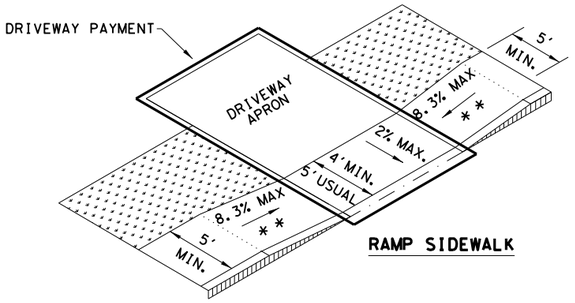
SETBACK SIDEWALK



APRON OFFSET SIDEWALK



WIDE SIDEWALK

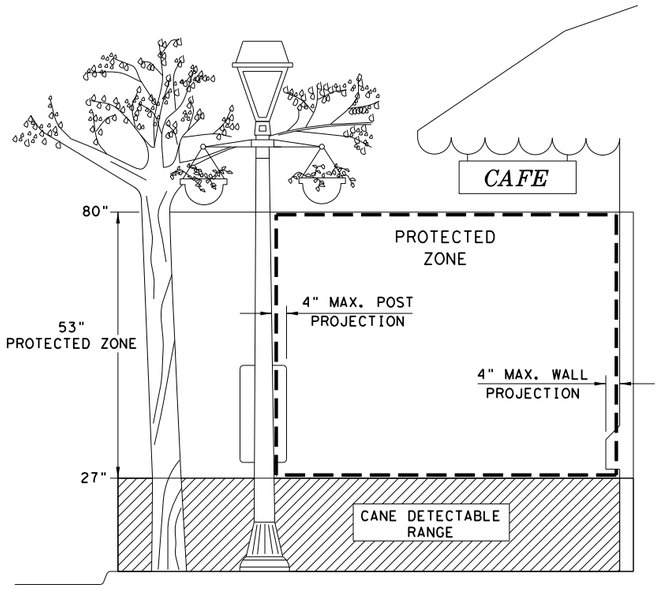


RAMP SIDEWALK

NOTES:

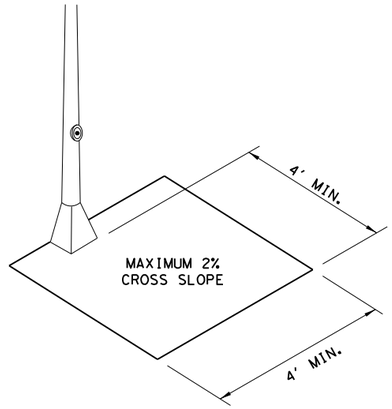
* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.

* * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.

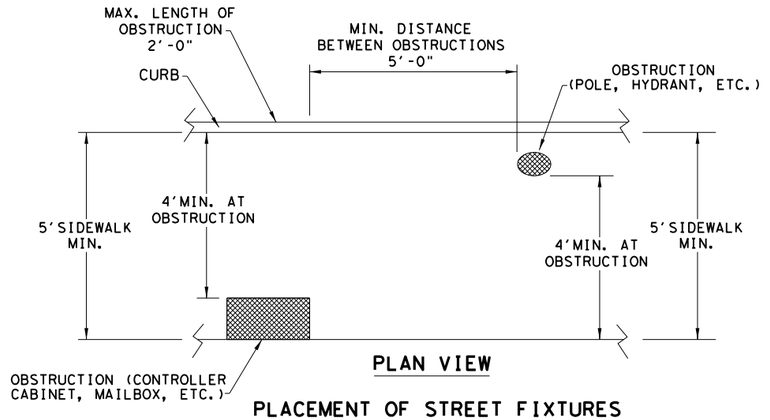


PROTECTED ZONE

NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



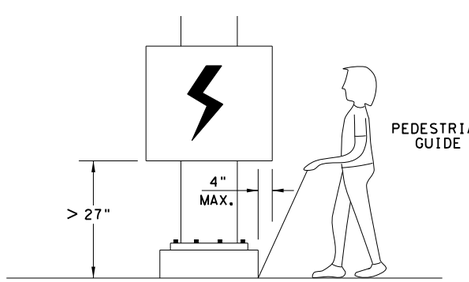
CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



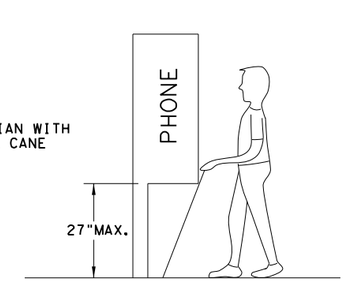
PLAN VIEW

PLACEMENT OF STREET FIXTURES

NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



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

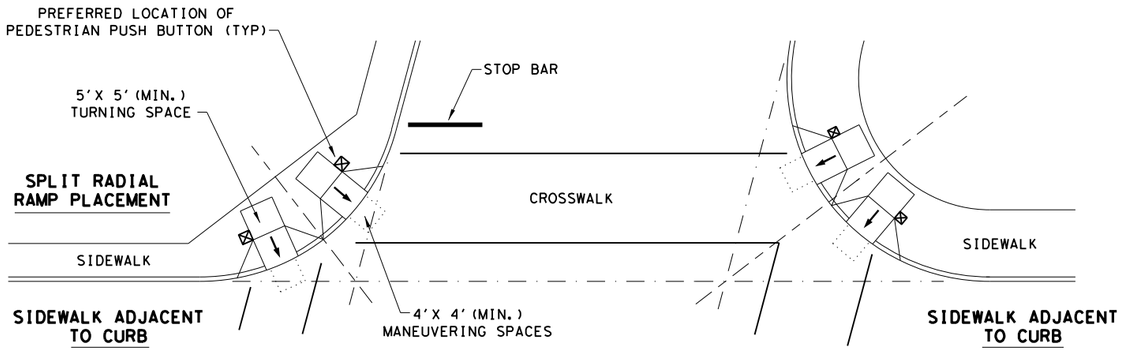
PED-18

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
REVISED 08, 2005 REVISED 06, 2012 REVISED 01, 2018	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		56

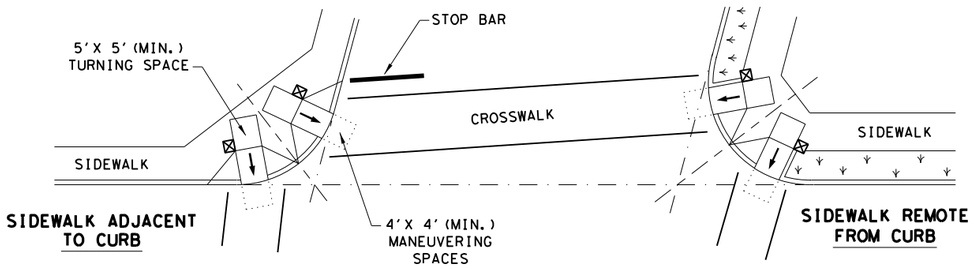
DATE: 3/1/2024
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/ped18.dgn

TYPICAL CROSSING LAYOUTS

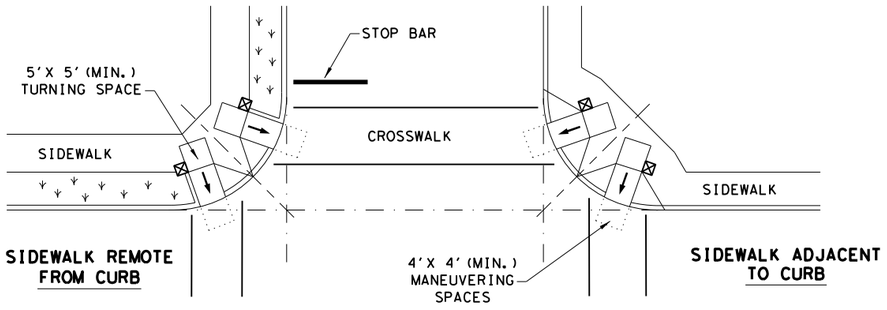
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



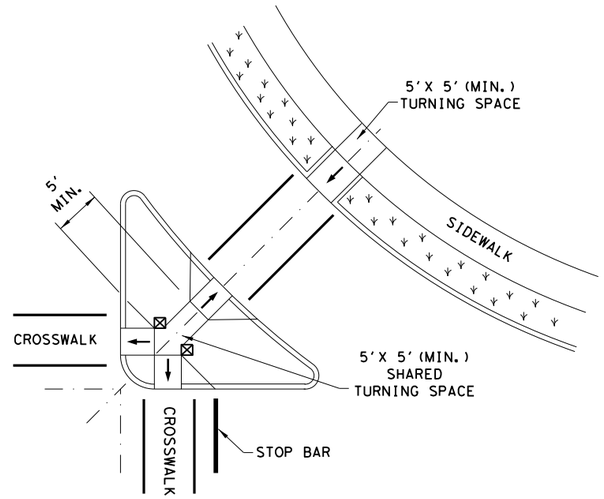
SKEWED INTERSECTION WITH "LARGE" RADIUS



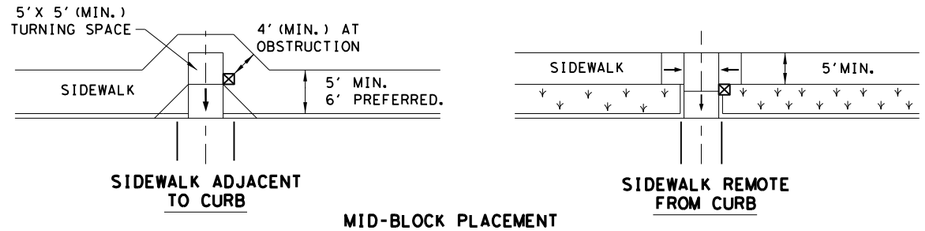
SKEWED INTERSECTION WITH "SMALL" RADIUS



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.

SHEET 4 OF 4

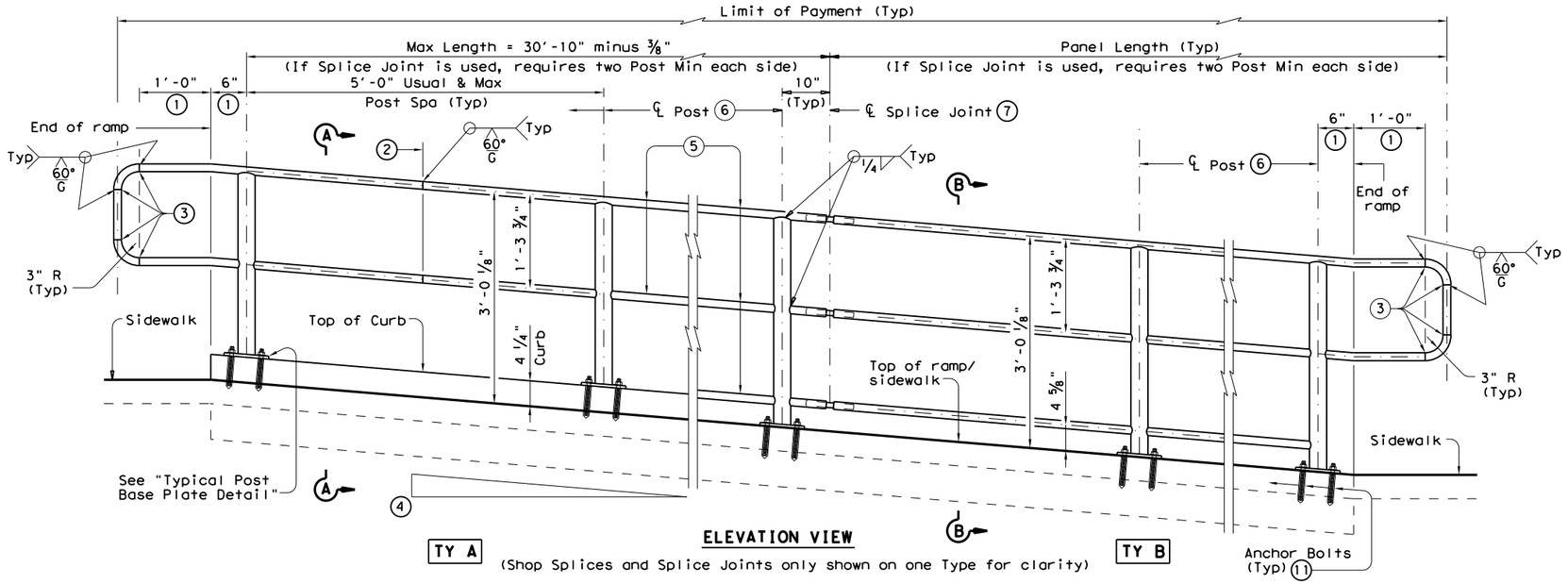
Texas Department of Transportation — Design Division Standard

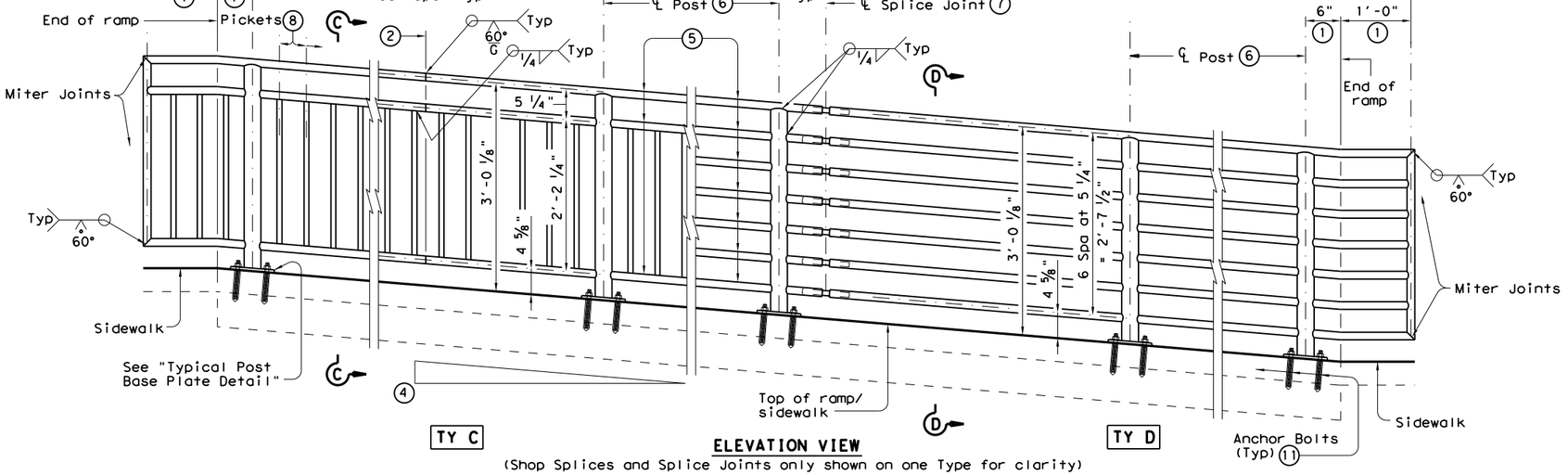
PEDESTRIAN FACILITIES CURB RAMPS

PED-18

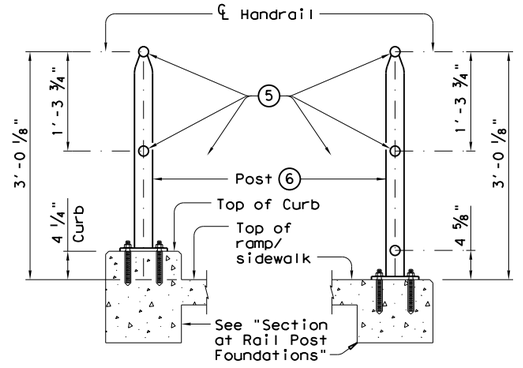
FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
REVISED 08, 2005 REVISED 06, 2012 REVISED 01, 2018	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		57

DATE: 3/1/2024
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/prd13.dgn



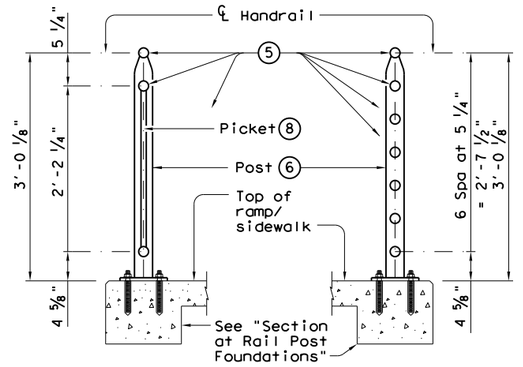


RECOMMENDED USAGE (9) (10)	
Dropoff Height/ Condition	Recommended Rail Options
< 30" dropoff	TY A, TY B, TY C, or TY D
≥ 30" dropoff, or along Bike Path	TY E or TY F



SECTION A-A
(Showing Handrail **TY A**)

SECTION B-B
(Showing Handrail **TY B**)



SECTION C-C
(Showing Handrail **TY C**)

SECTION D-D
(Showing Handrail **TY D**)

(1) Parallel to ground.

(2) One shop splice per panel is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.

(3) Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.

(4) See Ramp Details located elsewhere in plans for ramp slope and dimensions. Maximum ramp slope will not exceed 8.3 percent. Level landing required for each 30" rise if grade exceeds 5 percent.

(5) 1 ½" Dia. Standard Pipe (1.900" O.D., 0.145" wall thickness). Parallel to ramp / sidewalk. Provide holes as needed in 1 ½" Dia. pipe for galvanizing drainage and venting.

(6) 2 ½" Dia. Standard Pipe (2.875" O.D., 0.203" wall thickness). See "Post Mount Detail" for crimping and trimming post to fit Dia. of top rail. Provide holes as needed in post for galvanizing drainage and venting. Plumb all posts.

(7) See "Handrail Fabrication Details" for Splice Joints.

(8) ℄ ⅝" Dia. Round Bar equal spacing at 4 ½" Max. Plumb all pickets.

(9) When needed for accessibility (grade > 5 percent) or as needed for pedestrian safety.

(10) Not to be used on bridges.

(11) See "General Notes" for anchor bolt information.

SHEET 1 OF 3

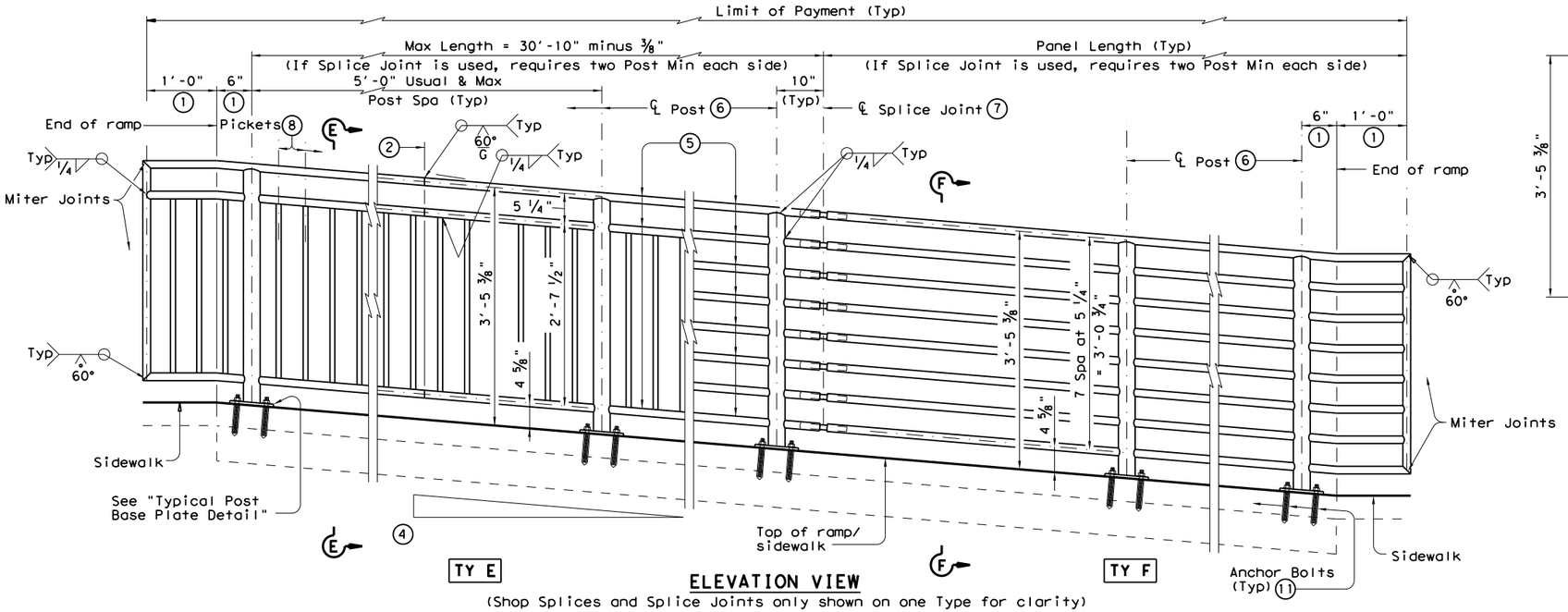
Texas Department of Transportation | Design Division Standard

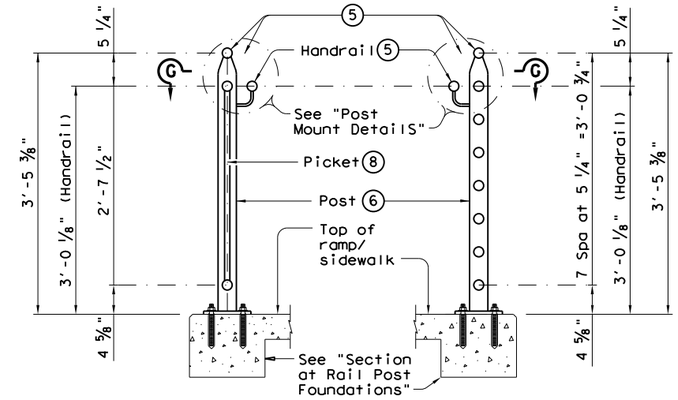
PEDESTRIAN HANDRAIL DETAILS

PRD-13

FILE: prd13.dgn	DN: TxDOT	CK: AM	DW: JTR	CK: CGL
©TxDOT Decmeber 2006	CONT	SECT	JOB	HIGHWAY
REVISIONS REVISED MAY, 2013 (VP)	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		58

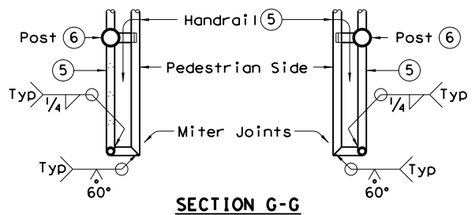
DATE: 3/1/2024
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/prd13.dgn



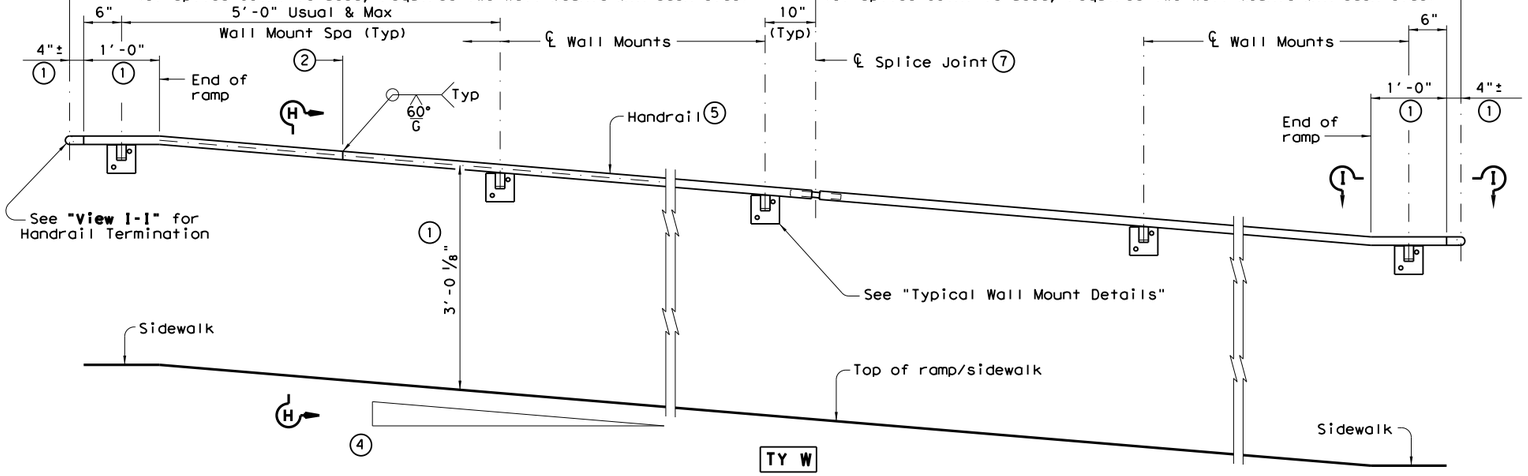


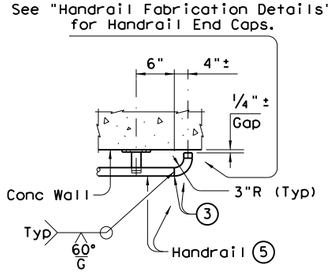
SECTION E-E
(Showing Handrail **TY E**)

SECTION F-F
(Showing Handrail **TY F**)

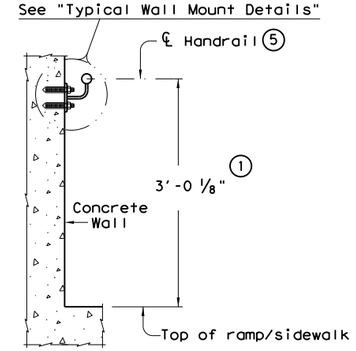


SECTION G-G
(Showing Handrail Termination)





VIEW I-I
(Showing Handrail Termination)



SECTION H-H
(Showing Handrail **TY W**)

1. Parallel to ground.
2. One shop splice per panel is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
3. Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
4. See Ramp Details located elsewhere in plans for ramp slope and dimensions. Maximum ramp slope will not exceed 8.3 percent. Level landing required for each 30" rise if grade exceeds 5 percent.
5. 1 ½" Dia. Standard Pipe (1.900" O.D., 0.145" wall thickness). Parallel to ramp / sidewalk. Provide holes as needed in 1 ½" Dia. pipe for galvanizing drainage and venting.
6. 2 ½" Dia. Standard Pipe (2.875" O.D., 0.203" wall thickness). See "Post Mount Detail" for crimping and trimming post to fit Dia. of top rail. Provide holes as needed in post for galvanizing drainage and venting. Plumb all posts.
7. See "Handrail Fabrication Details" for Splice Joints.
8. ℄ ⅝" Dia. Round Bar equal spacing at 4 ½" Max. Plumb all pickets.
11. See "General Notes" for anchor bolt information.

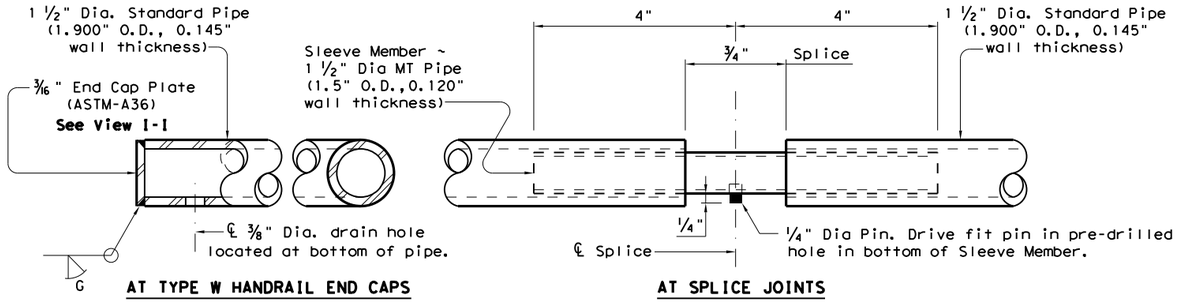
Texas Department of Transportation | Design Division Standard

PEDESTRIAN HANDRAIL DETAILS

PRD-13

FILE: prd13.dgn	DN: TxDOT	CK: AM	DW: JTR	CK: CGL
©TxDOT December 2006	CONT	SECT	JOB	HIGHWAY
REVISIONS REVISED MAY, 2013 (VP)	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		59

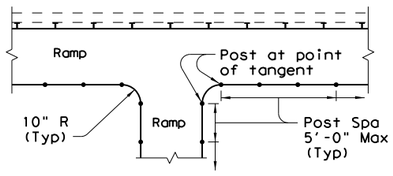
DATE: 3/1/2024
FILE: pw://gecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/prd13.dgn



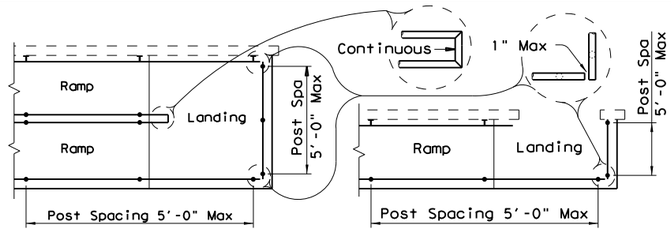
AT TYPE W HANDRAIL END CAPS

AT SPLICE JOINTS

HANDRAIL FABRICATION DETAILS



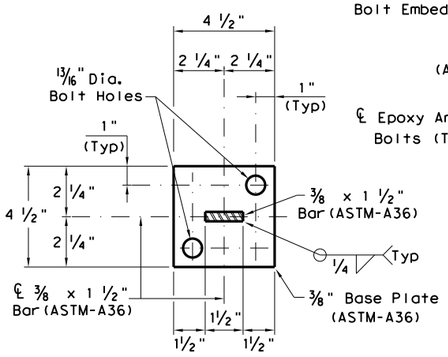
RAMP INTERSECTION



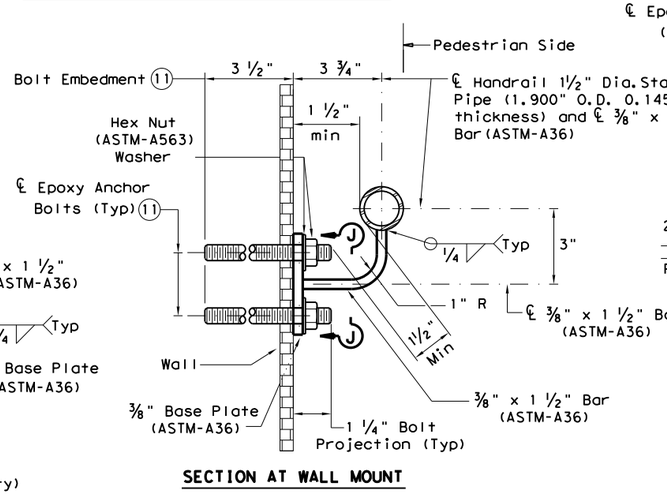
MULTI-LEVEL RAMP

SINGLE-LEVEL RAMP

PLAN SHOWING RAIL AT RAMP CONDITIONS

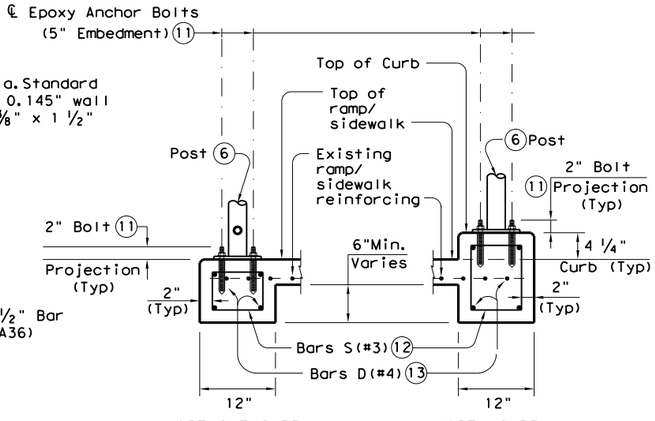


SECTION J-J
(Anchor Bolts not shown for clarity)



SECTION AT WALL MOUNT

TYPICAL WALL MOUNT DETAILS



WITHOUT CURB

WITH CURB

SECTION AT RAIL POST FOUNDATIONS

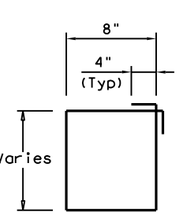
(5) 1 ½" Dia. Standard Pipe (1.900" O.D., 0.145" wall thickness). Parallel to ramp/sidewalk. Provide holes as needed in 1 ½" Dia. pipe for galvanizing drainage and venting.

(6) 2 ½" Dia. Standard Pipe (2.875" O.D., 0.203" wall thickness). Plumb all posts. See "Post Mount Detail" for crimping and trimming post to fit the diamenter of top rail. Provide holes as needed in post for galvanizing drainage and venting.

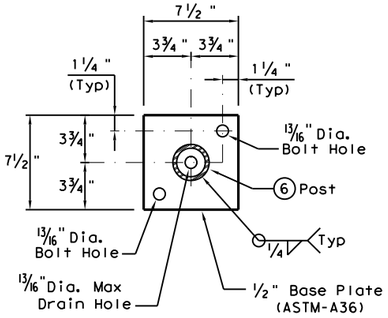
(11) See "General Notes" for anchor bolt information.

(12) Bars S(#3) spaced at 12" Max (Spaced 3" from outside edge of overall length of Ramp/Sidewalk).

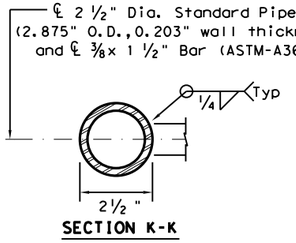
(13) Provide 1 ½" end cover to Bars D(#4) from outside edge of overall length of Ramp/Sidewalk.



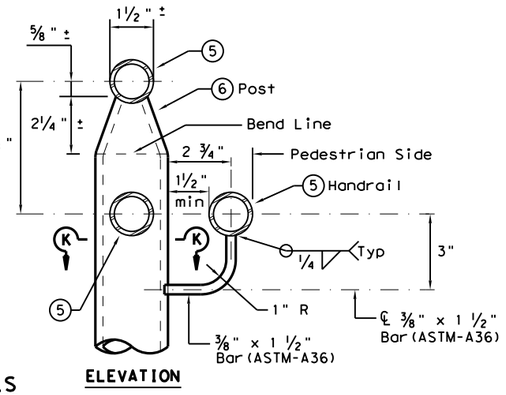
BARS S (#3)



TYPICAL POST BASE PLATE DETAIL



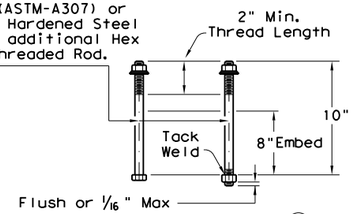
SECTION K-K



ELEVATION

POST MOUNT DETAILS

℄ 5/8" Dia. Hex Head Anchor Bolt (ASTM-A307) or Threaded Rod (ASTM-A36) with one Hardened Steel Washer placed under Hex Nut. One additional Hex Nut will be furnished for each Threaded Rod.



CAST-IN-PLACE ANCHOR BOLT OPTIONS (11)
(Used for Post Base Plate only)

GENERAL NOTES

Designed according to ADAAG, Texas Accessibility Standards, Uniform Building Code, and AASHTO LRFD Specifications.

Handrail anchorage details shown on this standard may require modification for select structure types. See appropriate details elsewhere in plans for these modifications.

Pipe will conform to ASTM-A53 Grade B or A500 Grade B. Steel plates and steel bars will conform to ASTM-A36. Mechanical tubing (MT) will conform to ASTM A513 Grade 1015 or higher. Galvanize all steel components except reinforcing steel unless noted otherwise.

Concrete for foundations will be in accordance with Item 531 "Sidewalks". All reinforcing steel must be Grade 60. Bar laps, where required, will be as follows: Uncoated ~ #4 = 1'-5" Epoxy coated ~ #4 = 2'-1"

When the plans require painted steel, follow the requirements for painting galvanized steel in Item 446, "Cleaning and Painting Steel". Sleeve Members will receive galvanization and only get field painted after installation unless directed otherwise by Engineer.

Epoxy Anchor bolts for wall mount and post base plate will be ⅝" Dia. ASTM A36 threaded rods with one hex nut and one hardened steel washer at each bolt. ⅝" Dia. threaded rod embedment depth for wall mounts is 3 ½" and embedment depth for post base plate is 5".

Embed threaded rods into concrete with a Type III (Class C) epoxy meeting the requirements of DMS-6100, "Epoxies and Adhesives". Mix and dispense adhesive with the manufacturer's static mixing nozzle/dual cartridge system. Core drill holes (percussion drilling not permitted).

At the contractor's option the post base plate anchor bolts may be cast with the Ramp/Sidewalk (See Cast-in-Place Anchor Bolt Options).

Optional cast-in-place anchor bolts will be ⅝" Dia ASTM A307 Grade A bolts (or A36 threaded rods with one tack welded hex nut each) with one hex nut and one hardened steel washer at each bolt. Embedment depth of cast-in-place bolt will be 8" for post base plate.

Handrails and any wall or other surface adjacent to them will be free of any sharp or abrasive elements.

Submit shop drawings to the Engineer unless otherwise noted. For curved handrail applications, fabricate the handrail to the curve if radius is less than 600 ft. Shop drawings are required when rail is fabricated to the curve.

For all handrails, erection drawings will be submitted to the Engineer for approval to ensure proper installation.

Drawings will show handrail mount locations with bolts setting, spacing, ramp slope, and/or splice joint locations, and handrail lengths with identification showing where each handrail goes on the layout.

Payment for concrete sidewalks or curb ramps will be paid for in accordance with Item 531 "Sidewalks".

Payment for all items shown is to be included in unit price bid in accordance with Item 450 "Railing" of the type specified.

All exposed edges will be rounded or chamfered to approximately ⅛" by grinding.

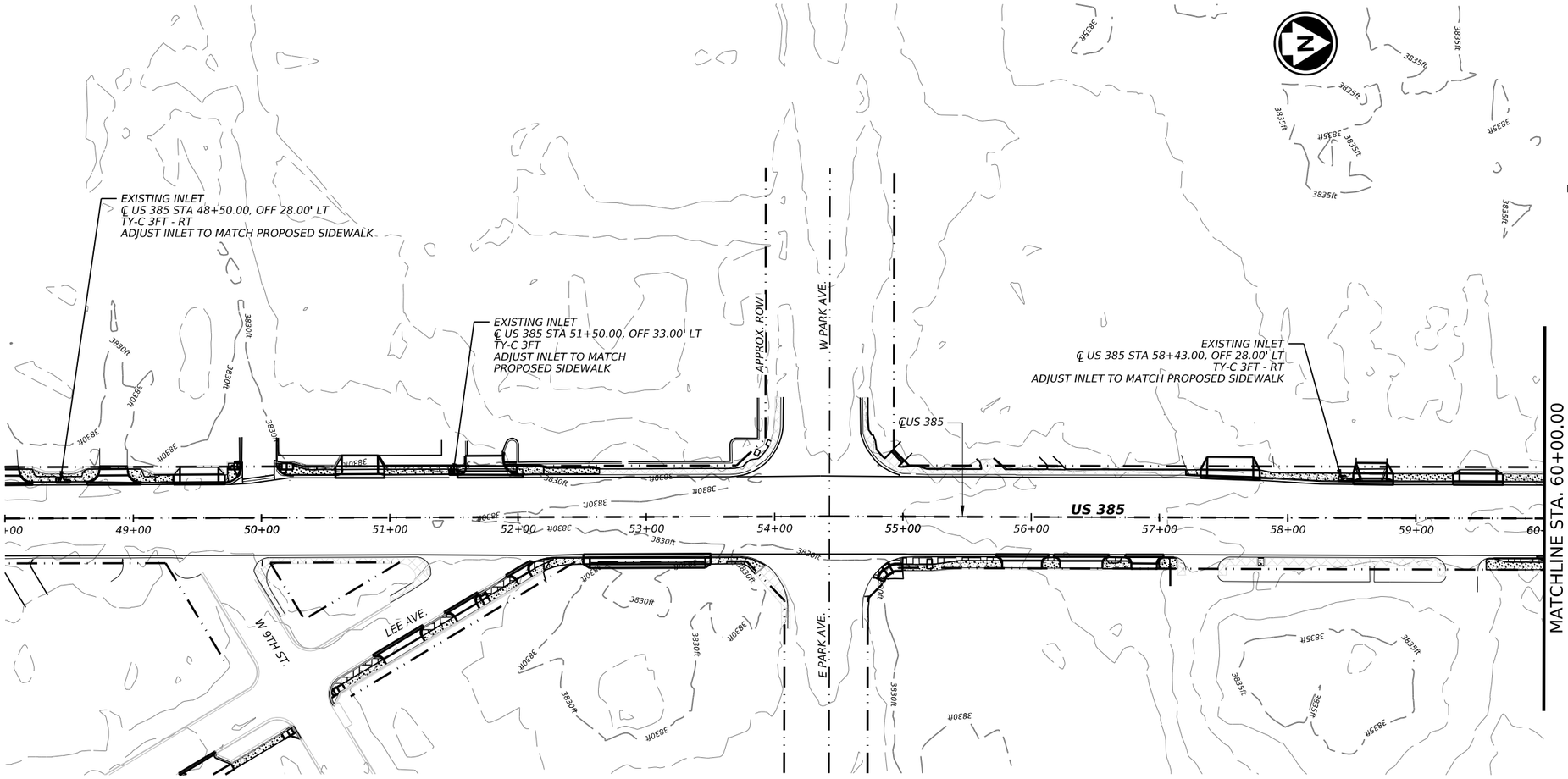
Texas Department of Transportation

Design Division Standard

PEDESTRIAN HANDRAIL DETAILS

PRD-13

FILE: prd13.dgn	DN: TxDOT	CK: AM	DW: JTR	CK: CGL
©TxDOT December 2006	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
REVISED MAY, 2013 (VP)	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		60



0' 25' 50' 100'

SCALE: 1"=100'

LEGEND

- X — DRAINAGE AREA ID
- EXISTING ROW
- PROPOSED ROW
- DRAINAGE AREA BOUNDARY
- FLOW DIRECTION ARROW

NOTES:

1. SEE HYDROLOGY DATA SHEET FOR DRAINAGE AREA CALCULATIONS.
2. 1 FT CONTOUR LINES DISPLAYED FROM 2018 PANHANDLE 70CM LIDAR.
3. DRAINAGE AREA NAMES "A" AND "B" DENOTE THE SEPARATION OF THE "EXISTING" AREAS DESCRIBED IN THE HYDROLOGY DATA SHEET.

STATE OF TEXAS
JOHN J. TIETZ
144928
PROFESSIONAL ENGINEER
3/6/2024

LJA ENGINEERING, INC
FRN - F-1386

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Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

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US 385
INTERNAL DRAINAGE AREA MAP

SHEET 1 OF 4

CONT	SECT	JOB	HIGHWAY
0226	05	072	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		61

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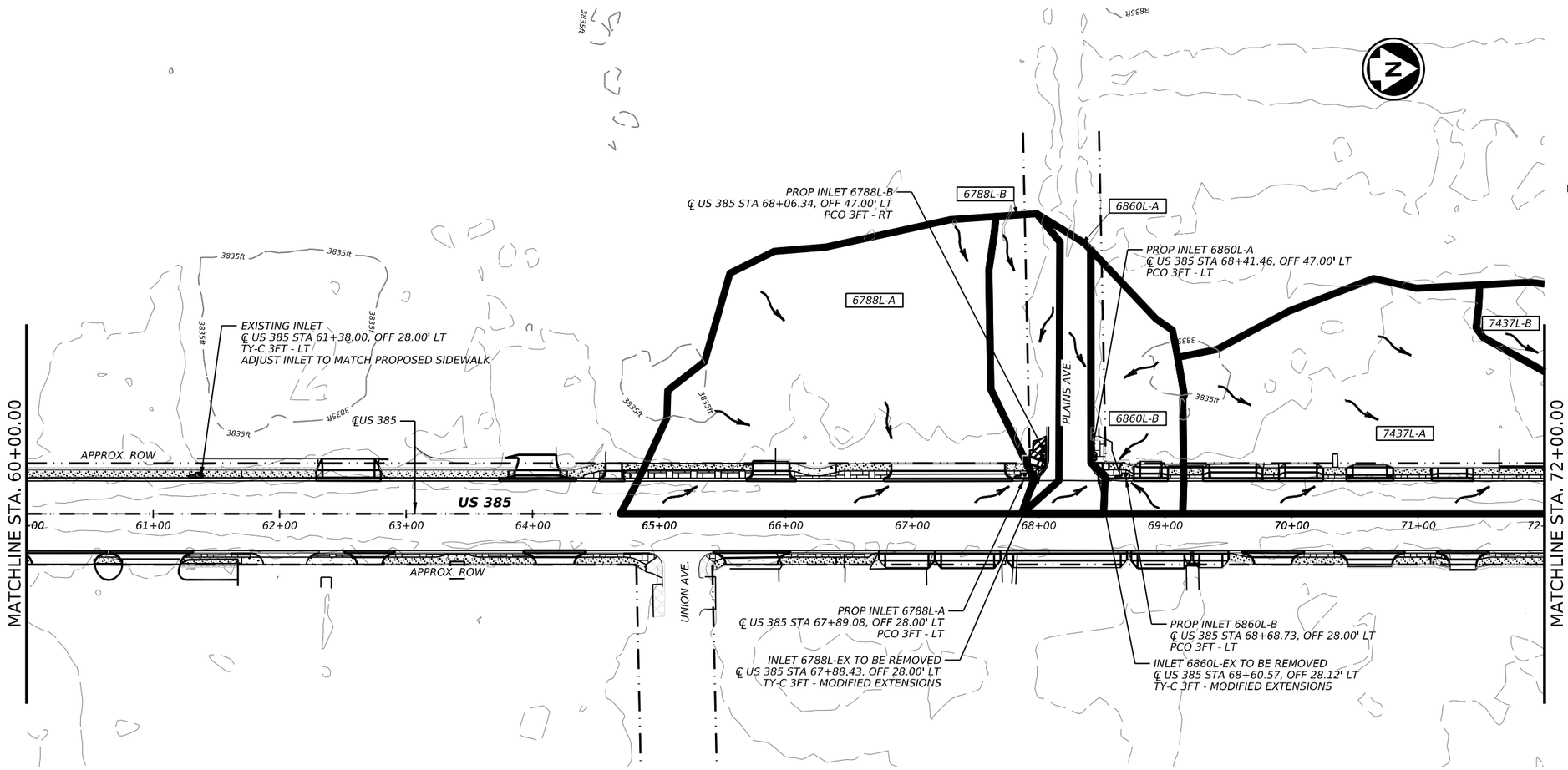

NOTES:

1. SEE HYDROLOGY DATA SHEET FOR DRAINAGE AREA CALCULATIONS.
2. 1 FT CONTOUR LINES DISPLAYED FROM 2018 PANHANDLE 70CM LIDAR.
3. DRAINAGE AREA NAMES "A" AND "B" DENOTE THE SEPARATION OF THE "EXISTING" AREAS DESCRIBED IN THE HYDROLOGY DATA SHEET.

STATE OF TEXAS
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Texas Department of Transportation

US 385 INTERNAL DRAINAGE AREA MAP

CONT	SECT	JOB	HIGHWAY
0226	05	072	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		62

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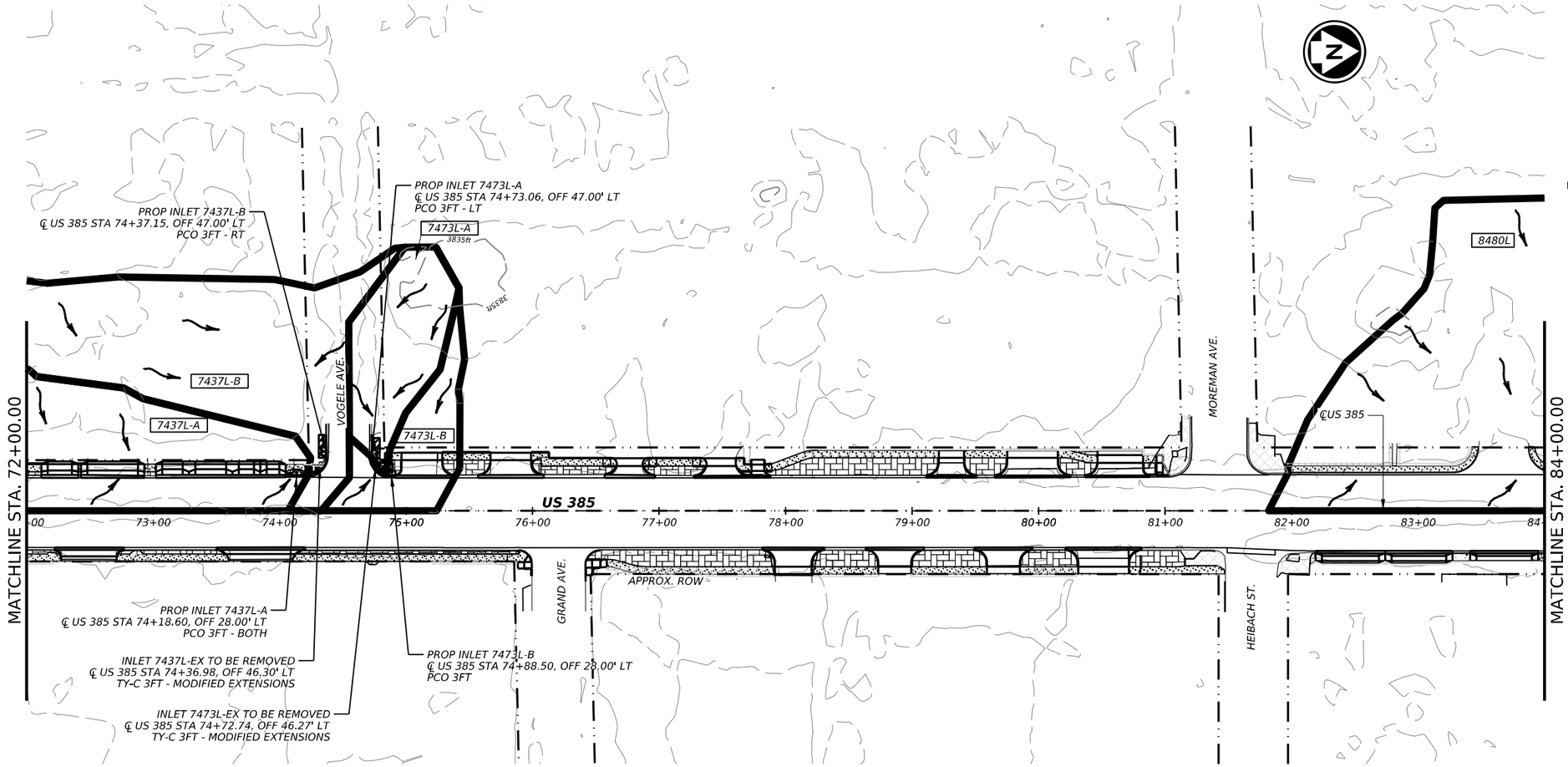
0' 25' 50' 100'

SCALE: 1"=100'



LEGEND

- X — DRAINAGE AREA ID
- EXISTING ROW
- PROPOSED ROW
- DRAINAGE AREA BOUNDARY
- FLOW DIRECTION ARROW

NOTES:

1. SEE HYDROLOGY DATA SHEET FOR DRAINAGE AREA CALCULATIONS.
2. 1 FT CONTOUR LINES DISPLAYED FROM 2018 PANHANDLE 70CM LIDAR.
3. DRAINAGE AREA NAMES "A" AND "B" DENOTE THE SEPARATION OF THE "EXISTING" AREAS DESCRIBED IN THE HYDROLOGY DATA SHEET.

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US 385
INTERNAL DRAINAGE AREA MAP

CONT	SECT	JOB	HIGHWAY
0226	05	072	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		63

DATE: 3/6/2024 9:35:18 AM
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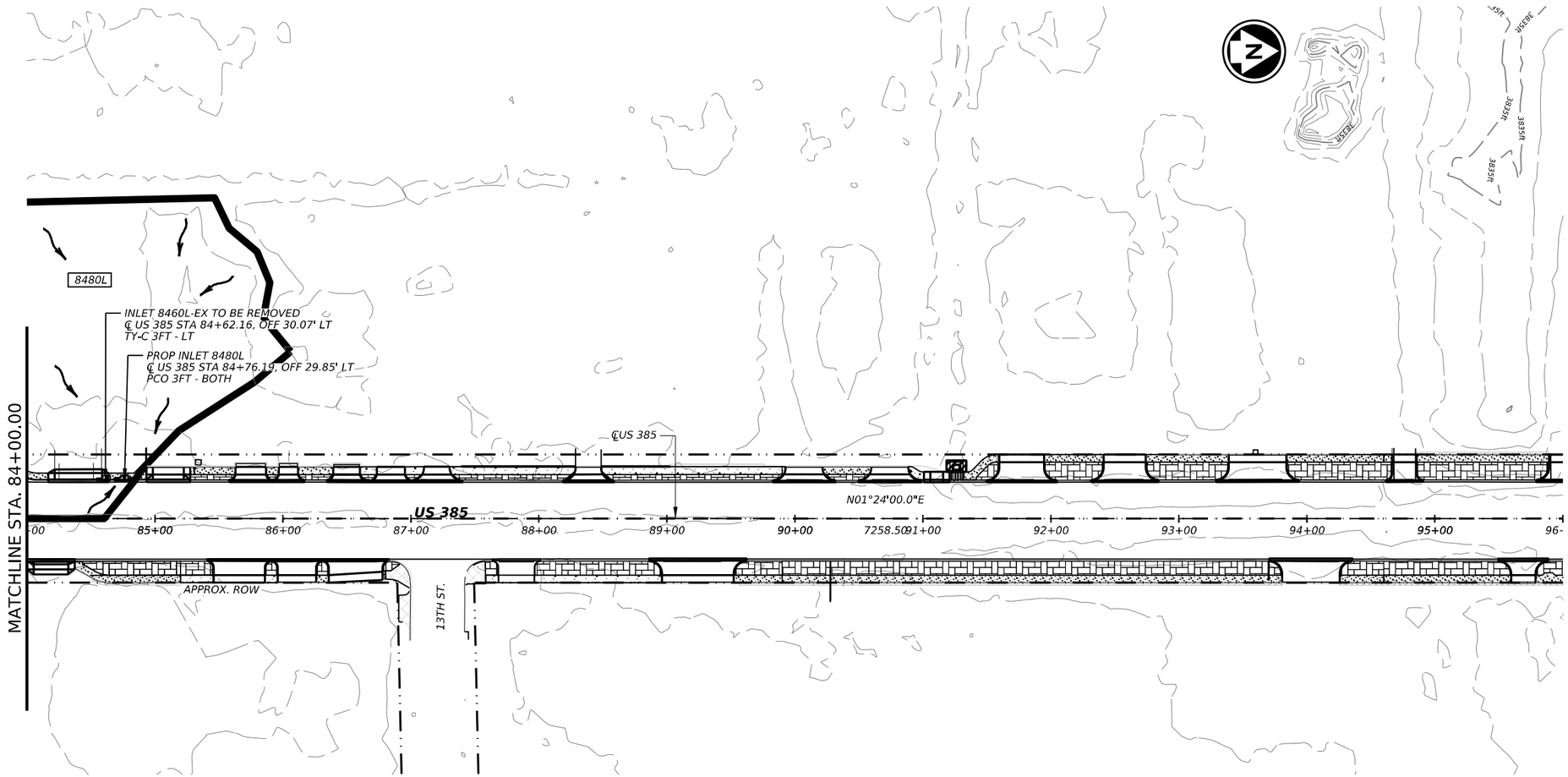

0' 25' 50' 100'

SCALE: 1"=100'

LEGEND

- X — DRAINAGE AREA ID
- EXISTING ROW
- PROPOSED ROW
- DRAINAGE AREA BOUNDARY
- FLOW DIRECTION ARROW

NOTES:

1. SEE HYDROLOGY DATA SHEET FOR DRAINAGE AREA CALCULATIONS.
2. 1 FT CONTOUR LINES DISPLAYED FROM 2018 PANHANDLE 70CM LIDAR.
3. DRAINAGE AREA NAMES "A" AND "B" DENOTE THE SEPARATION OF THE "EXISTING" AREAS DESCRIBED IN THE HYDROLOGY DATA SHEET.

STATE OF TEXAS
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Texas Department of Transportation

US 385
INTERNAL DRAINAGE AREA MAP

SHEET 4 OF 4

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		64

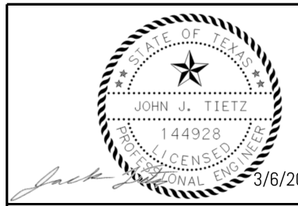
DATE: 3/6/2024 9:35:21 AM
FILE: ...\US385_LJA_INT_DAM_01.dgn

AREA CALCULATIONS - EXISTING								
AREA ID	AREA (ac)	AREA TIME OF CONCENTRATION (min)	AREA TIME OF CONCENTRATION USED (min)	AREA C-VALUE	AREA 10-Yr INTENSITY (in/hr)	AREA 10-Yr DISCHARGE (cfs)	AREA 100-Yr INTENSITY (in/hr)	AREA 100-Yr DISCHARGE (cfs)
6788L-EX	1.49	3.50	10.00	0.75	5.694	6.38	9.025	10.12
6860L-EX	0.42	1.50	10.00	0.90	5.694	2.16	9.025	3.43
7437L-EX	2.23	3.25	10.00	0.74	5.694	9.45	9.025	14.67
7473L-EX	0.34	0.75	10.00	0.90	5.694	1.73	9.025	3.14
8460L-EX	1.69	2.34	10.00	0.85	5.694	8.22	9.025	13.03

AREA CALCULATIONS - PROPOSED								
AREA ID	AREA (ac)	AREA TIME OF CONCENTRATION (min)	AREA TIME OF CONCENTRATION USED (min)	AREA C-VALUE	AREA 10-Yr INTENSITY (in/hr)	AREA 10-Yr DISCHARGE (cfs)	AREA 100-Yr INTENSITY (in/hr)	AREA 100-Yr DISCHARGE (cfs)
6788L-A	1.25	3.50	10.00	0.63	5.694	4.53	9.025	7.18
6788L-B	0.23	1.00	10.00	0.82	5.694	1.10	9.025	1.75
6860L-A	0.14	0.50	10.00	0.90	5.694	0.75	9.025	1.19
6860L-B	0.27	1.00	10.00	0.86	5.694	1.35	9.025	2.15
7437L-A	1.46	2.50	10.00	0.74	5.694	6.19	9.025	9.81
7437L-B	0.72	2.00	10.00	0.78	5.694	3.23	9.025	5.12
7473L-A	0.22	0.50	10.00	0.90	5.694	1.14	9.025	1.81
7473L-B	0.16	0.75	10.00	0.90	5.694	0.84	9.025	1.33
8480L	1.69	2.34	10.00	0.85	5.694	8.22	9.025	13.03

NOTES:

1. AREA HYDROLOGY WAS CALCULATED IN OPENROADS DESIGNER CE, 2021 RELEASE 1, USING THE RATIONAL METHOD.
2. RAINFALL INTENSITY-DURATION-FREQUENCY COEFFICIENTS FOR TEXAS BASED ON THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) HISTORIC RAINFALL STUDY "ATLAS 14."
3. INLET ANALYSIS WAS PERFORMED USING OPENROADS DESIGNER CE, 2021 RELEASE 1, WHICH PERFORMS HYDRAULIC COMPUTATIONS IN ACCORDANCE WITH FHWA (HEC-22 GUIDELINES).



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US 385

HYDROLOGY DATA SHEET

CONT	SECT	JOB	HIGHWAY
0226	05	072	US385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		65

DATE: 3/6/2024 9:50:21 AM
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INLET CALCULATIONS - 10 YEAR																			
INLET ID	INLET CHAIN	INLET STATION	INLET OFFSET	LT/RT	TOP ELEVATION	INLET TYPE	INLET PROFILE TYPE	TOTAL DISCHARGE (cfs)	INLET DISCHARGE (cfs)	BYPASS NODE ID	BYPASS DISCHARGE (cfs)	INLET LONGITUDINAL SLOPE (%)	CROSS SLOPE (%)	SPREAD MANNING'S N	LENGTH (ft)	REQUIRED LENGTH (ft)	COMPUTED INLET POND DEPTH (ft)	INLET MAX PONDDEPTH (ft)	COMPUTED INLET POND WIDTH (ft)	INLET MAX PONDWIDTH (ft)
EXISTING																				
6788L-EX	BL CL-US385	67+88.43	28.00	LT	3833.72	TY-C 3' RT	ONGRADE	6.38	6.38	6860L-EX	0.00	1.30	2.00	0.013	25.00	12.63	0.45	0.42	11.45	12.00
6860L-EX	BL CL-US385	68+60.57	28.12	LT	3833.76	TY-C 3' LT	IN SAG	2.16	2.16	N/A	0.00	1.30	2.00	0.013	25.00	8.01	0.35	0.42	6.33	12.00
7437L-EX	BL CL-US385	74+36.98	46.30	LT	3833.17	TY-C 3' BOTH	ONGRADE	9.45	9.45	7473L-EX	0.00	1.30	2.00	0.013	35.00	14.89	0.47	0.42	13.79	12.00
7473L-EX	BL CL-US385	74+72.74	46.27	LT	3833.21	TY-C 3' RT	ONGRADE	1.73	1.73	N/A	0.00	1.30	2.00	0.013	30.00	7.30	0.33	0.42	5.45	12.00
8460L-EX	BL CL-US385	84+62.16	30.07	LT	3831.46	TY-C 3' LT	ONGRADE	8.22	7.22	N/A	1.43	0.50	2.00	0.013	9.50	10.55	0.55	0.42	15.82	12.00
PROPOSED																				
6788L-A	BL CL-US385	67+89.08	28.00	LT	3833.72	PCO 3' LT	ONGRADE	4.53	4.22	6788L-B	0.31	1.30	2.00	0.013	9.50	10.94	0.41	0.42	9.70	12.00
6788L-B	BL CL-US385	68+06.34	47.00	LT	3833.75	PCO 3' RT	ONGRADE	1.41	1.41	6860L-A	0.00	1.00	2.00	0.013	9.50	6.19	0.32	0.42	5.06	12.00
6860L-A	BL CL-US385	68+41.46	47.00	LT	3833.79	PCO 3' LT	ONGRADE	0.75	0.75	6860L-B	0.00	1.00	2.00	0.013	9.50	4.75	0.27	0.42	2.24	12.00
6860L-B	BL CL-US385	68+68.73	28.00	LT	3833.76	PCO 3' LT	IN SAG	1.35	1.35	N/A	0.00	1.30	2.00	0.013	9.50	6.58	0.31	0.42	4.32	12.00
7437L-A	BL CL-US385	74+18.60	28.00	LT	3833.18	PCO 3' BOTH	ONGRADE	6.19	6.13	7437L-B	0.06	1.30	2.00	0.013	14.00	12.47	0.45	0.42	11.29	12.00
7437L-B	BL CL-US385	74+37.15	47.00	LT	3833.17	PCO 3' RT	ONGRADE	3.29	3.29	7473L-A	0.00	1.00	2.00	0.013	9.50	8.84	0.30	0.42	4.14	12.00
7473L-A	BL CL-US385	74+73.06	44.50	LT	3833.21	PCO 3' LT	ONGRADE	1.14	1.14	7473L-B	0.00	1.00	2.00	0.013	9.50	5.66	0.30	0.42	4.14	12.00
7473L-B	BL CL-US385	74+88.50	28.00	LT	3833.18	PCO 3'	ONGRADE	0.84	0.84	N/A	0.00	1.30	2.00	0.013	5.00	5.39	0.26	0.42	2.16	12.00
8480L	BL CL-US385	84+76.19	29.85	LT	3831.47	PCO 3' BOTH	ONGRADE	8.22	7.80	N/A	0.42	1.00	2.00	0.013	14.00	12.98	0.49	0.42	13.63	12.00

INLET CALCULATIONS - 100 YEAR																			
INLET ID	INLET CHAIN	INLET STATION	INLET OFFSET	LT/RT	TOP ELEVATION	INLET TYPE	INLET PROFILE TYPE	TOTAL DISCHARGE (cfs)	INLET DISCHARGE (cfs)	BYPASS NODE ID	BYPASS DISCHARGE (cfs)	INLET LONGITUDINAL SLOPE (%)	CROSS SLOPE (%)	SPREAD MANNING'S N	LENGTH (ft)	REQUIRED LENGTH (ft)	COMPUTED INLET POND DEPTH (ft)	INLET MAX PONDDEPTH (ft)	COMPUTED INLET POND WIDTH (ft)	INLET MAX PONDWIDTH (ft)
EXISTING																				
6788L-EX	BL CL-US385	67+88.43	28.00	LT	3833.72	TY-C 3' RT	ONGRADE	10.12	10.12	6860L-EX	0.00	1.30	2.00	0.013	25.00	15.33	0.50	0.42	14.09	12.00
6860L-EX	BL CL-US385	68+60.57	28.12	LT	3833.76	TY-C 3' LT	IN SAG	3.43	3.40	N/A	0.03	1.30	2.00	0.013	25.00	9.73	0.39	0.42	8.38	12.00
7437L-EX	BL CL-US385	74+36.98	46.30	LT	3833.17	TY-C 3' BOTH	ONGRADE	14.67	14.67	7473L-EX	0.00	1.30	2.00	0.013	35.00	17.92	0.55	0.42	16.65	12.00
7473L-EX	BL CL-US385	74+72.74	46.27	LT	3833.21	TY-C 3' RT	ONGRADE	3.14	3.14	N/A	0.00	1.30	2.00	0.013	30.00	9.38	0.38	0.42	8.06	12.00
8460L-EX	BL CL-US385	84+62.16	30.07	LT	3831.46	TY-C 3' LT	ONGRADE	13.03	8.77	N/A	4.26	0.50	2.00	0.013	9.50	12.80	0.60	0.42	19.14	12.00
PROPOSED																				
6788L-A	BL CL-US385	67+89.08	28.00	LT	3833.72	PCO 3' LT	ONGRADE	7.18	5.61	6788L-B	1.57	1.30	2.00	0.013	9.50	13.27	0.46	0.42	12.09	12.00
6788L-B	BL CL-US385	68+06.34	47.00	LT	3833.75	PCO 3' RT	ONGRADE	3.32	3.32	6860L-A	0.00	1.00	2.00	0.013	9.50	8.87	0.40	0.42	8.82	12.00
6860L-A	BL CL-US385	68+41.46	47.00	LT	3833.79	PCO 3' LT	ONGRADE	1.19	1.19	6860L-B	0.00	1.00	2.00	0.013	9.50	5.77	0.31	0.42	4.31	12.00
6860L-B	BL CL-US385	68+68.73	28.00	LT	3833.76	PCO 3' LT	IN SAG	2.15	2.15	N/A	0.00	1.30	2.00	0.013	9.50	8.00	0.35	0.42	6.29	12.00
7437L-A	BL CL-US385	74+18.60	28.00	LT	3833.18	PCO 3' BOTH	ONGRADE	9.81	8.58	7437L-B	1.23	1.30	2.00	0.013	14.00	15.13	0.50	0.42	13.90	12.00
7437L-B	BL CL-US385	74+37.15	47.00	LT	3833.17	PCO 3' RT	ONGRADE	6.35	5.38	7473L-A	0.97	1.00	2.00	0.013	9.50	11.65	0.46	0.42	12.14	12.00
7473L-A	BL CL-US385	74+73.06	44.50	LT	3833.21	PCO 3' LT	ONGRADE	2.78	2.78	7473L-B	0.00	1.00	2.00	0.013	9.50	8.24	0.38	0.42	8.00	12.00
7473L-B	BL CL-US385	74+88.50	28.00	LT	3833.18	PCO 3'	ONGRADE	1.33	1.30	N/A	0.03	1.30	2.00	0.013	5.00	6.54	0.31	0.42	4.24	12.00
8480L	BL CL-US385	84+76.19	29.85	LT	3831.47	PCO 3' BOTH	ONGRADE	13.03	10.50	N/A	2.53	1.00	2.00	0.013	14.00	15.76	0.55	0.42	16.60	12.00

NOTES:

1. AREA HYDROLOGY WAS CALCULATED IN OPENROADS DESIGNER CE, 2021 RELEASE 1, USING THE RATIONAL METHOD.
2. RAINFALL INTENSITY-DURATION-FREQUENCY COEFFICIENTS FOR TEXAS BASED ON THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) HISTORIC RAINFALL STUDY "ATLAS 14."
3. INLET ANALYSIS WAS PERFORMED USING OPENROADS DESIGNER CE, 2021 RELEASE 1, WHICH PERFORMS HYDRAULIC COMPUTATIONS IN ACCORDANCE WITH FHWA (HEC-22 GUIDELINES).
4. PROPOSED INLET ELEVATIONS ARE APPROXIMATE BASED ON 2018 PANHANDLE LIDAR.

STATE OF TEXAS
JOHN J. TIETZ
144928
LICENSED
PROFESSIONAL ENGINEER
3/6/2024

LJA ENGINEERING, INC
FRN - F-1386

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

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Texas Department of Transportation

US 385

HYDRAULIC DATA SHEET

CONT	SECT	JOB	HIGHWAY
0226	05	072	US385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		66

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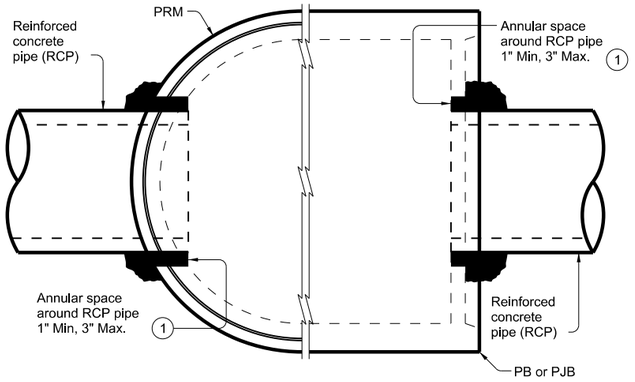
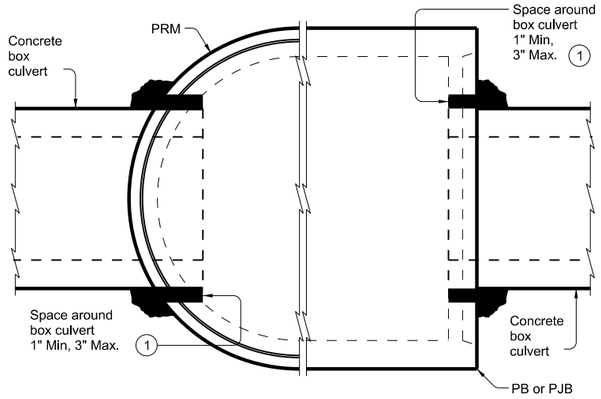


PRECAST ROUND MANHOLE (PRM) WITH THROUGH-HOLE

PRECAST BASE (PB) OR PRECAST JUNCTION BOX (PJB) WITH THIN-WALL KNOCK-OUT

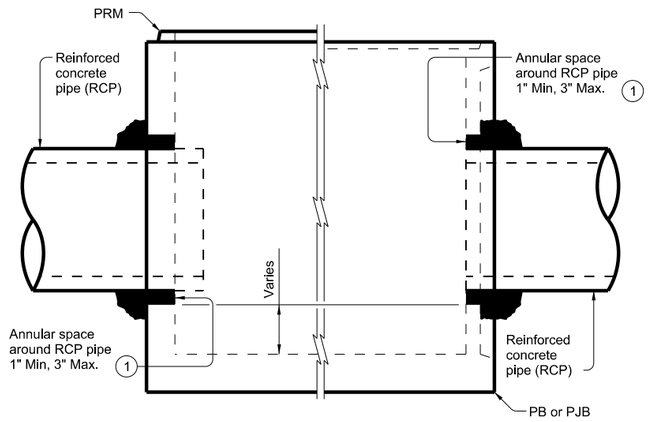
TYPICAL HALF PLAN



PRECAST ROUND MANHOLE (PRM) WITH THROUGH-HOLE

PRECAST BASE (PB) OR PRECAST JUNCTION BOX (PJB) WITH THIN-WALL KNOCK-OUT

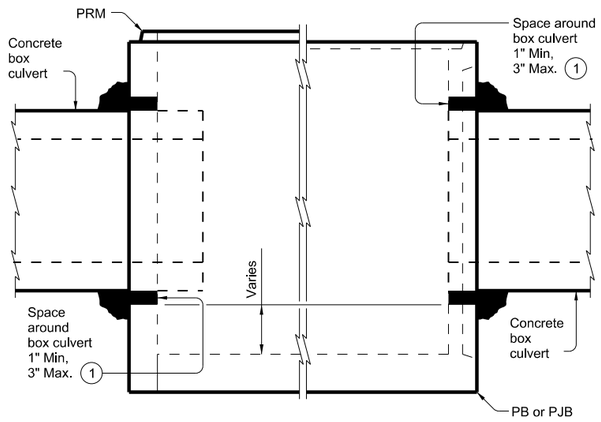
TYPICAL HALF PLAN



PRECAST ROUND MANHOLE (PRM) WITH THROUGH-HOLE

PRECAST BASE (PB) OR PRECAST JUNCTION BOX (PJB) WITH THIN-WALL KNOCK-OUT

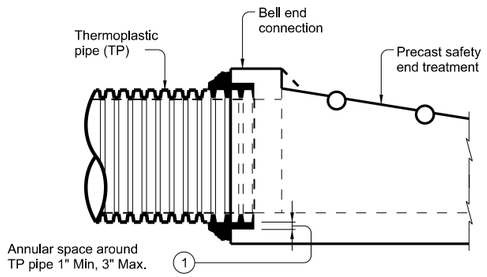
TYPICAL HALF ELEVATION



PRECAST ROUND MANHOLE (PRM) WITH THROUGH-HOLE

PRECAST BASE (PB) OR PRECAST JUNCTION BOX (PJB) WITH THIN-WALL KNOCK-OUT

TYPICAL HALF ELEVATION



TYPICAL PARTIAL ELEVATION OF PRECAST SAFETY END TREATMENTS

Showing square PSET for parallel drainage, cross drainage shown similar.

(1) Completely fill the void between the precast structure and the connecting pipe or box with cementitious grouts and mortars in accordance with DMS-4675 "Cementitious Grouts and Mortars for Miscellaneous Application."

CONSTRUCTION NOTES:

Do not grout rubber gasket joints without Manufacturer's recommendations.

Do not use bricks, masonry blocks, native stone, or similar materials in conjunction with grouted connections when filling void spaces around pipes or box culverts.

MATERIAL NOTES:

Provide grouted connections in accordance with DMS-4675 "Cementitious Grouts and Mortars for Miscellaneous Application."

GENERAL NOTES:

See applicable standards for notes and details not shown:
- Precast Base (PB)
- Precast Junction Box (PJB)
- Precast Round Manhole (PRM)
- Precast Safety End Treatments C/D Square (PSET-SC)
- Precast Safety End Treatments P/D Square (PSET-SP)

Provide Concrete Box Culverts in accordance with Item 462 "Concrete Box Culverts and Drains."

Provide Reinforced Concrete Pipe (RCP) in accordance with Item 464 "Reinforced Concrete Pipe."

Provide Thermoplastic Pipe (TP) in accordance with Special Specification Thermoplastic Pipe.

Payment for grouted connections is considered subsidiary to other bid items.

Texas Department of Transportation

Bridge Division Standard

PIPE AND BOX GROUTED CONNECTIONS FOR PRECAST STRUCTURES

PBGC

FILE: CD-PBGC-20.dgn	DN: TxDOT	CK: TAR	DW: JTR	CK: TAR
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		67

DATE: 3/1/2024 19:13:48
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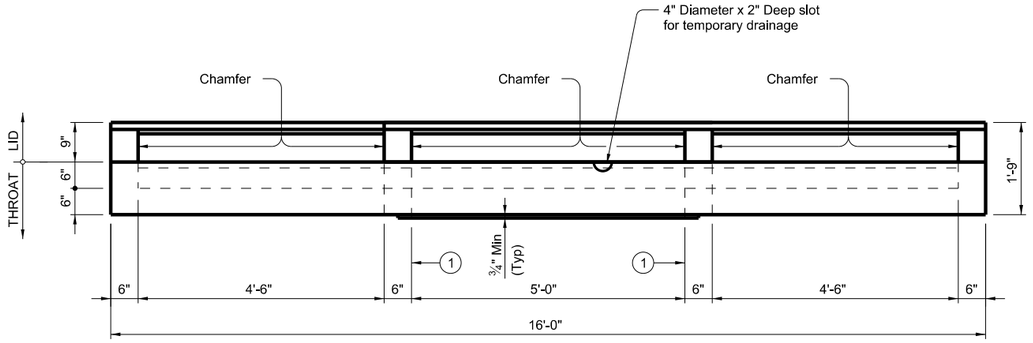
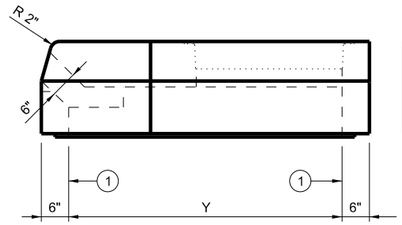
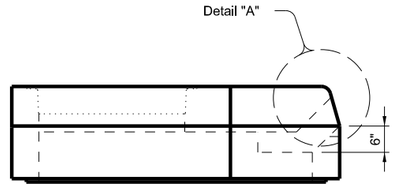


FRONT VIEW
(Showning left and right extensions)

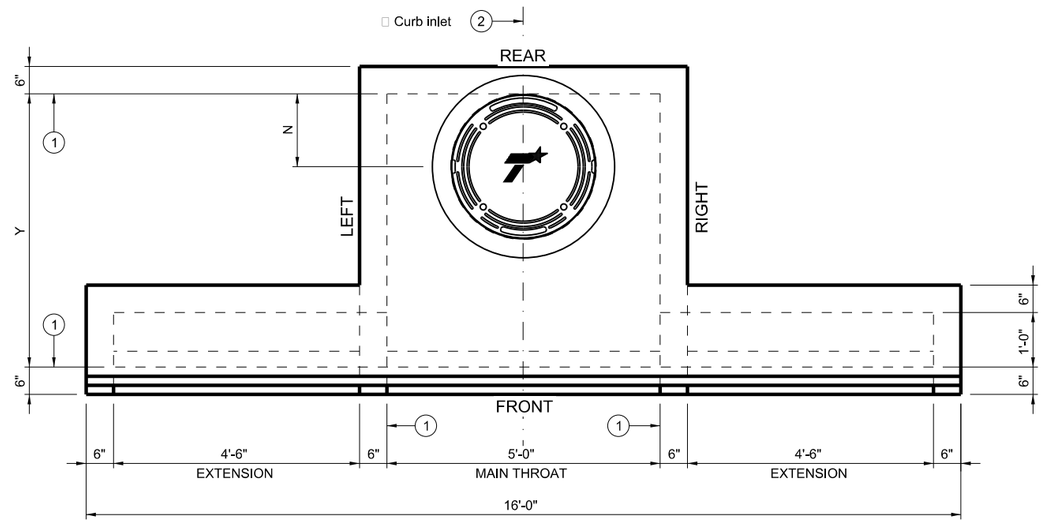


RIGHT VIEW

REAR VIEW
(Extensions not shown)

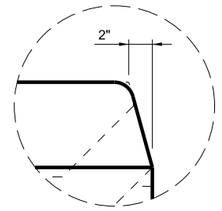


LEFT VIEW



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"

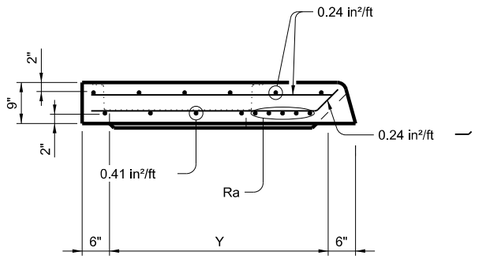
HS20 LOADING SHEET 1 OF 2

Texas Department of Transportation — Bridge Division Standard

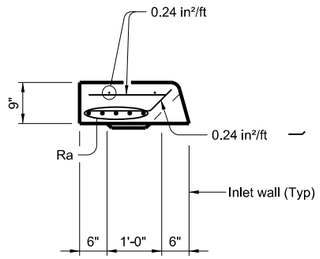
PRECAST CURB INLET OUTSIDE ROADWAY

PCO

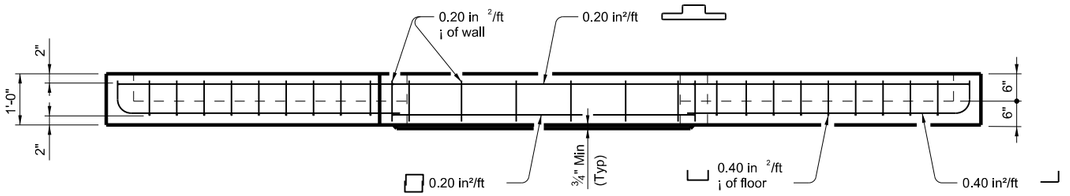
FILE: CD-PCO-23.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
06-2023: Added reference point.	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		68



LID SECTION A-A

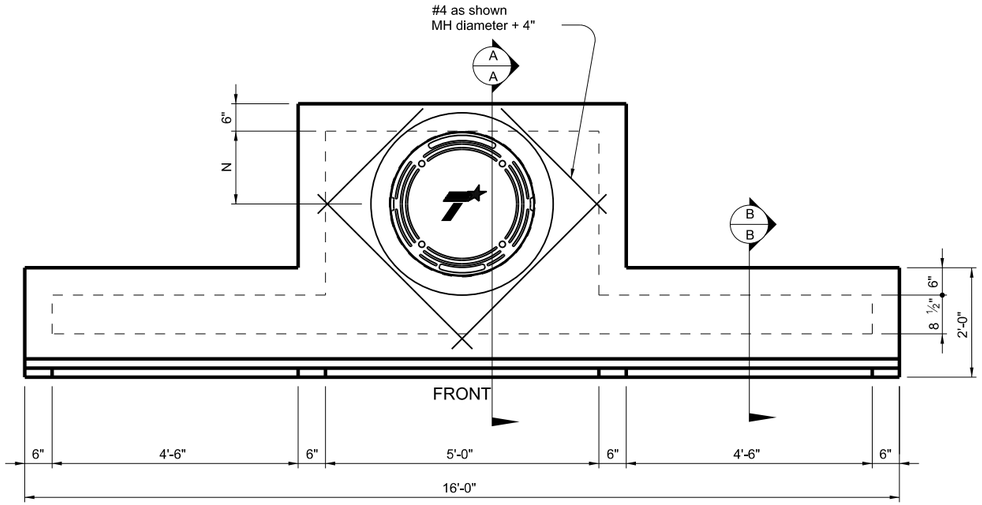


LID SECTION B-B



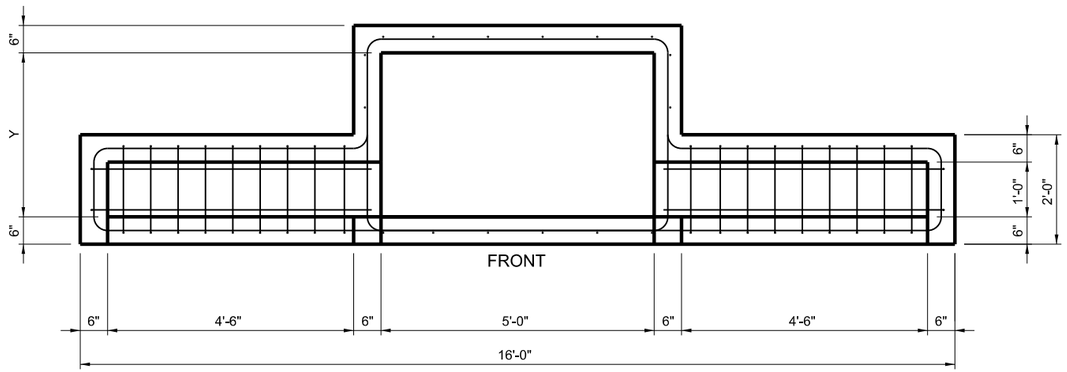
THROAT ELEVATION VIEW

(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	0226	05	072, ETC.	US 385
06-2023: Added reference point.	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		69

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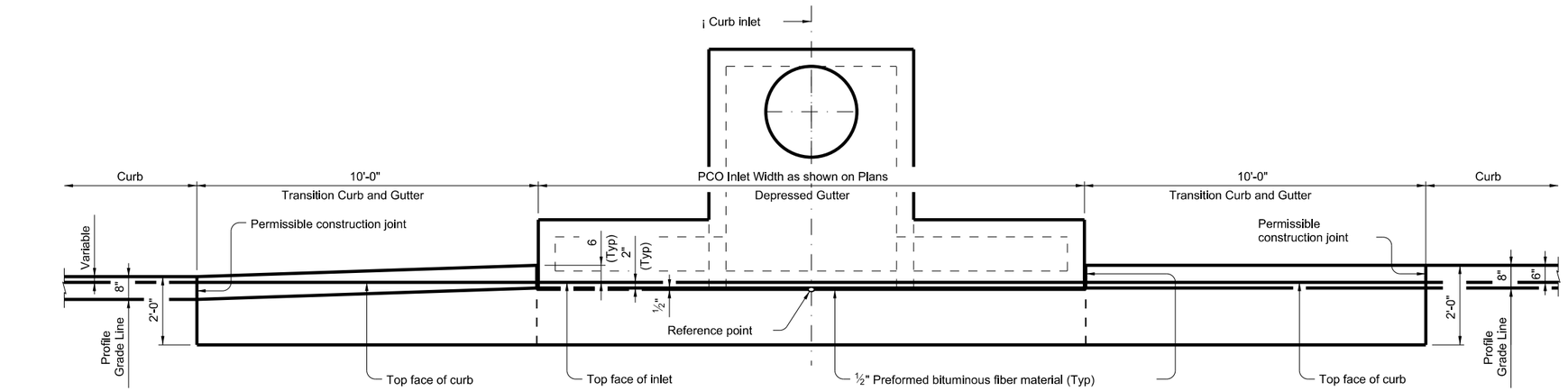
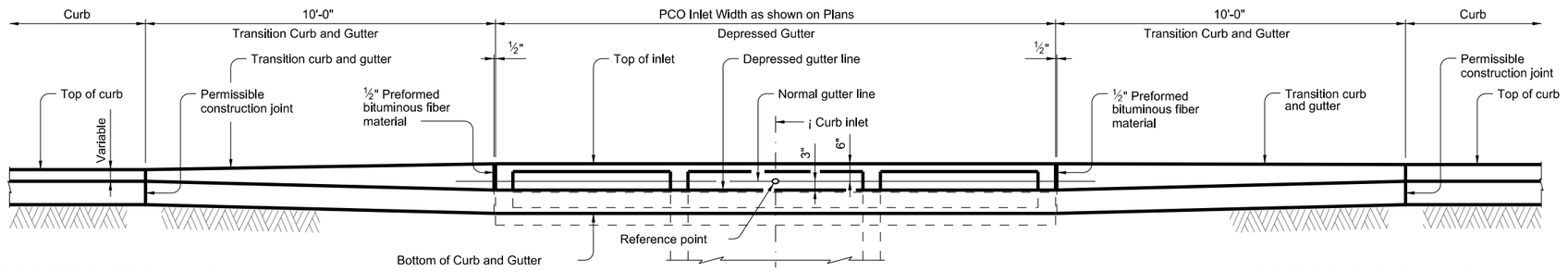


SHOWING TYPE I, IIa & III Curb and Gutter

SHOWING TYPE II & IV Curb and Gutter

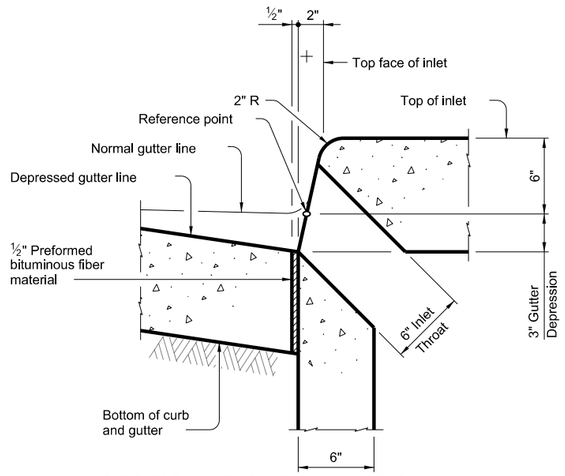
PLAN



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
REVISIONS	0226	05	072, ETC.	US 385
06-2023: Added reference point.	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		70

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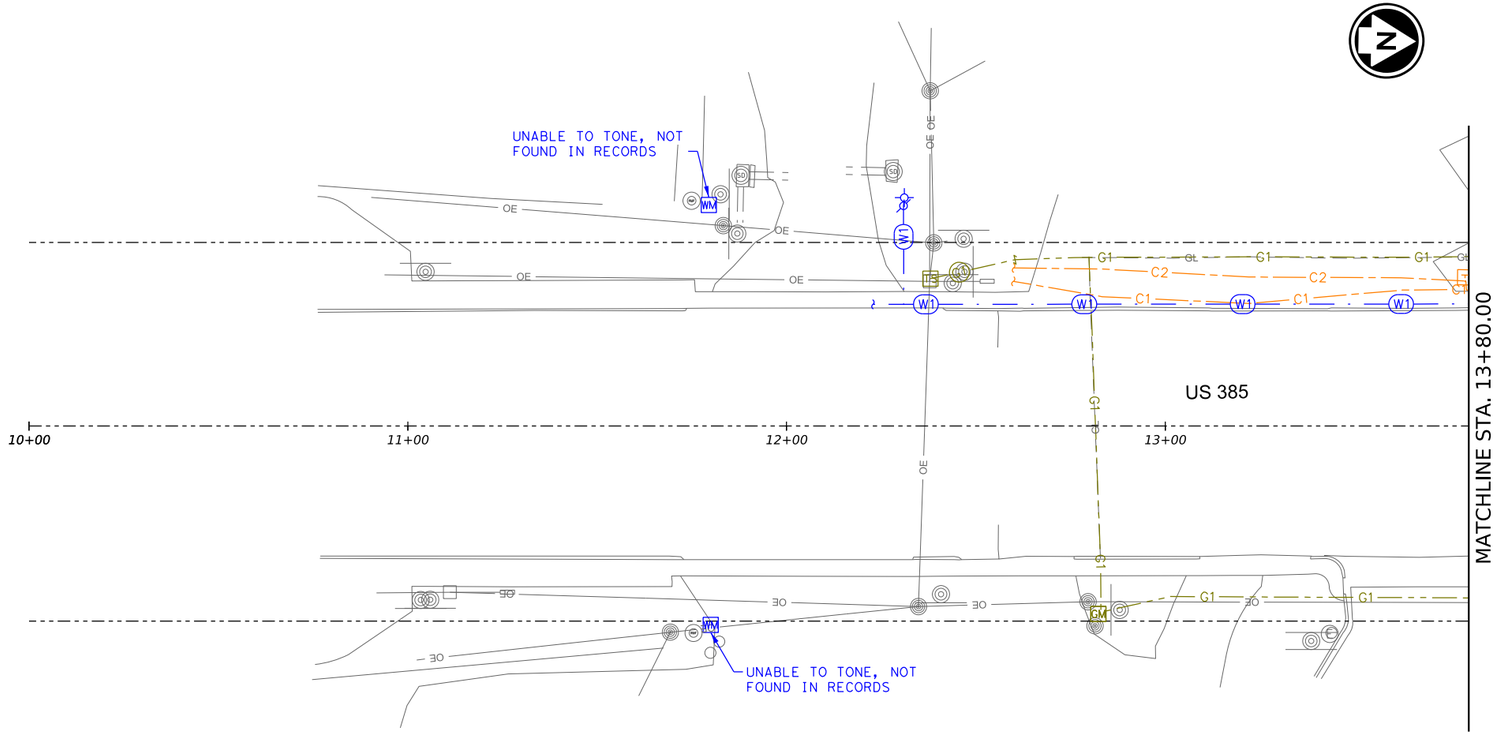


LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

QL "B"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

QL "C"/QL "D"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

GAS / PETROLEUM

ATMOS QL "B" G1
ATMOS QL "C"/QL "D" G1

SANITARY SEWER

CITY OF HEREFORD QL "B" WW1
CITY OF HEREFORD QL "C"/QL "D" WW1

POTABLE WATER

CITY OF HEREFORD QL "B" W1
CITY OF HEREFORD QL "C"/QL "D" W1

TRAFFIC SIGNALS

TXDOT QL "B" TS1
TXDOT QL "C"/QL "D" TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
SUBSURFACE UTILITY ENGINEERING
UTILITY COORDINATION
7400 Sand Street
Fort Worth TX. 76118
817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

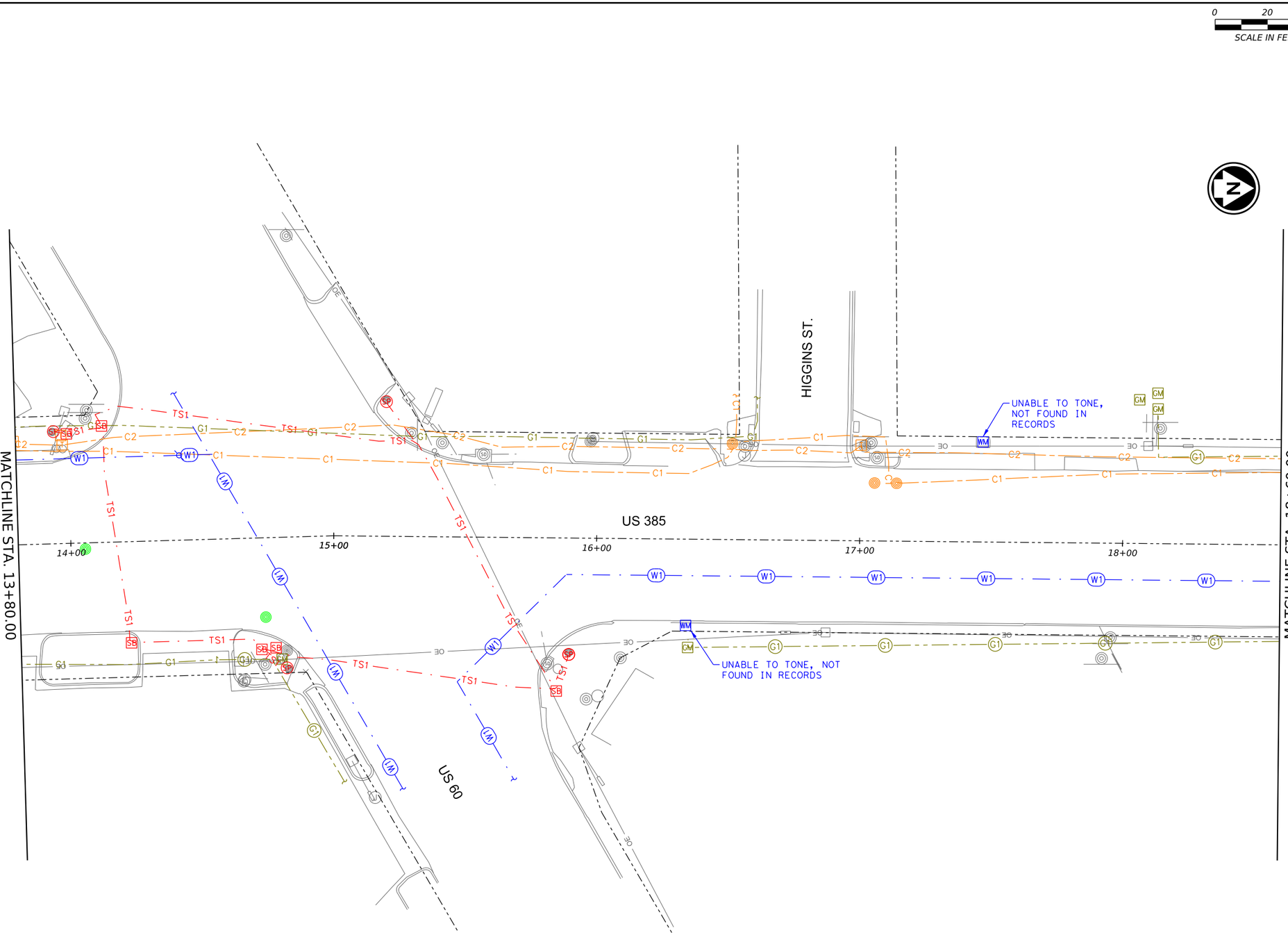
BEGIN TO STA 13+80

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER
03-01-2024

SHEET 1 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		71



LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

	QL "B"	QL "C"/QL "D"
AT&T (FO/DUCT)	C1	C1
AT&T (TELE)	C2	C2
FIBERLIGHT (CABLE)	C3	C3
WEST TEXAS SERV. (FO/DUCT)	C4	C4

GAS / PETROLEUM

	QL "B"	QL "C"/QL "D"
ATMOS	G1	G1

SANITARY SEWER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	WW1	WW1

POTABLE WATER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	W1	W1

TRAFFIC SIGNALS

	QL "B"	QL "C"/QL "D"
TXDOT	TS1	TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
SUBSURFACE UTILITY ENGINEERING
UTILITY COORDINATION
7400 Sand Street
Fort Worth TX, 76118
817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 13+80 TO STA 18+60

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER
03-01-2024

SHEET 2 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385

DIST	COUNTY	SHEET NO.
AMA	DEAF SMITH	72

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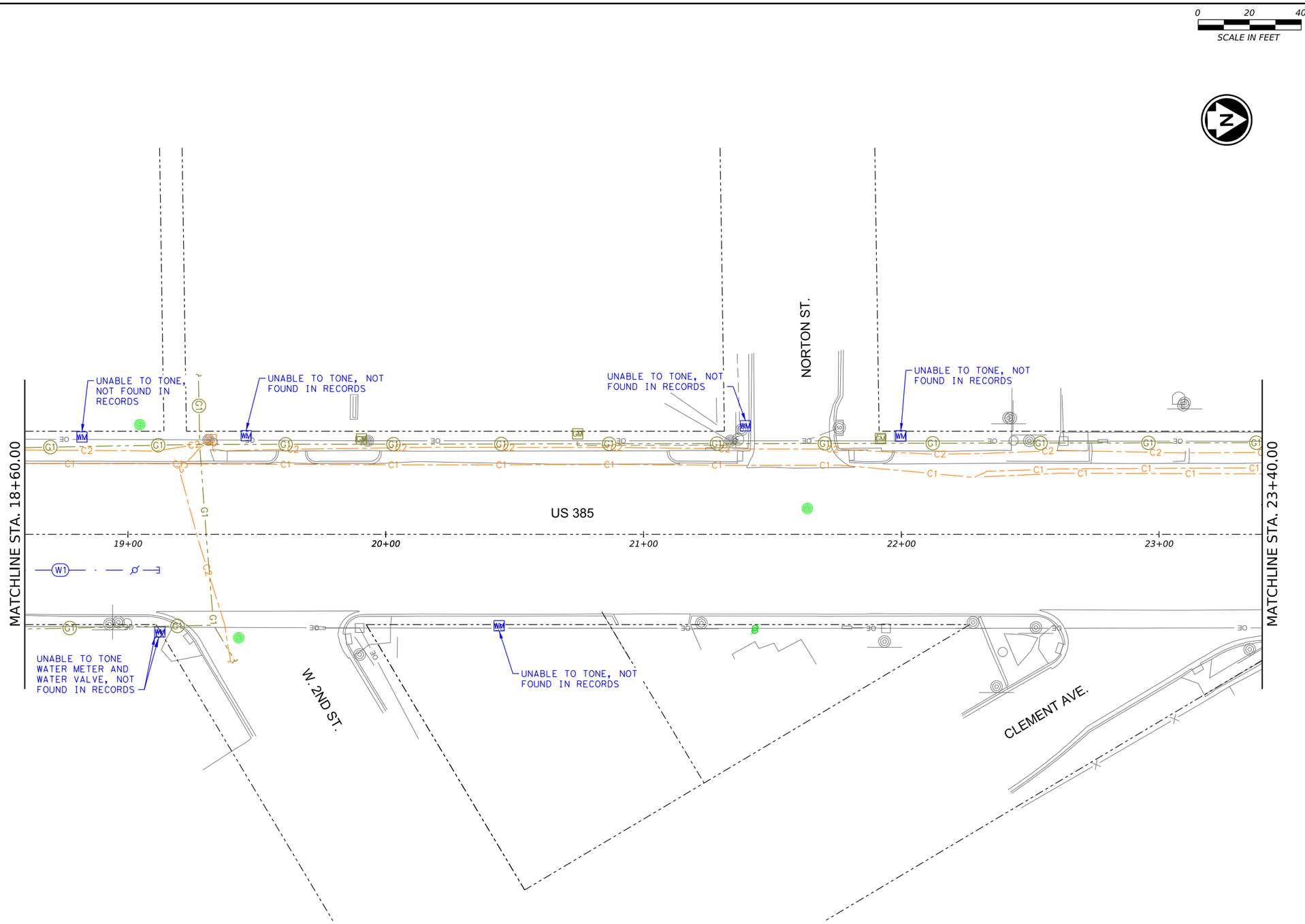

LEGEND OF UTILITY TYPES

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PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

QL "B"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

QL "C"/QL "D"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

GAS / PETROLEUM

QL "B"
ATMOS G1

QL "C"/QL "D"
ATMOS G1

SANITARY SEWER

QL "B"
CITY OF HEREFORD WW1

QL "C"/QL "D"
CITY OF HEREFORD WW1

POTABLE WATER

QL "B"
CITY OF HEREFORD W1

QL "C"/QL "D"
CITY OF HEREFORD W1

TRAFFIC SIGNALS

QL "B"
TXDOT TS1

QL "C"/QL "D"
TXDOT TS1

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QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

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CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

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817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 18+60 TO STA 23+40

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER
03-01-2024

SHEET 3 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		73

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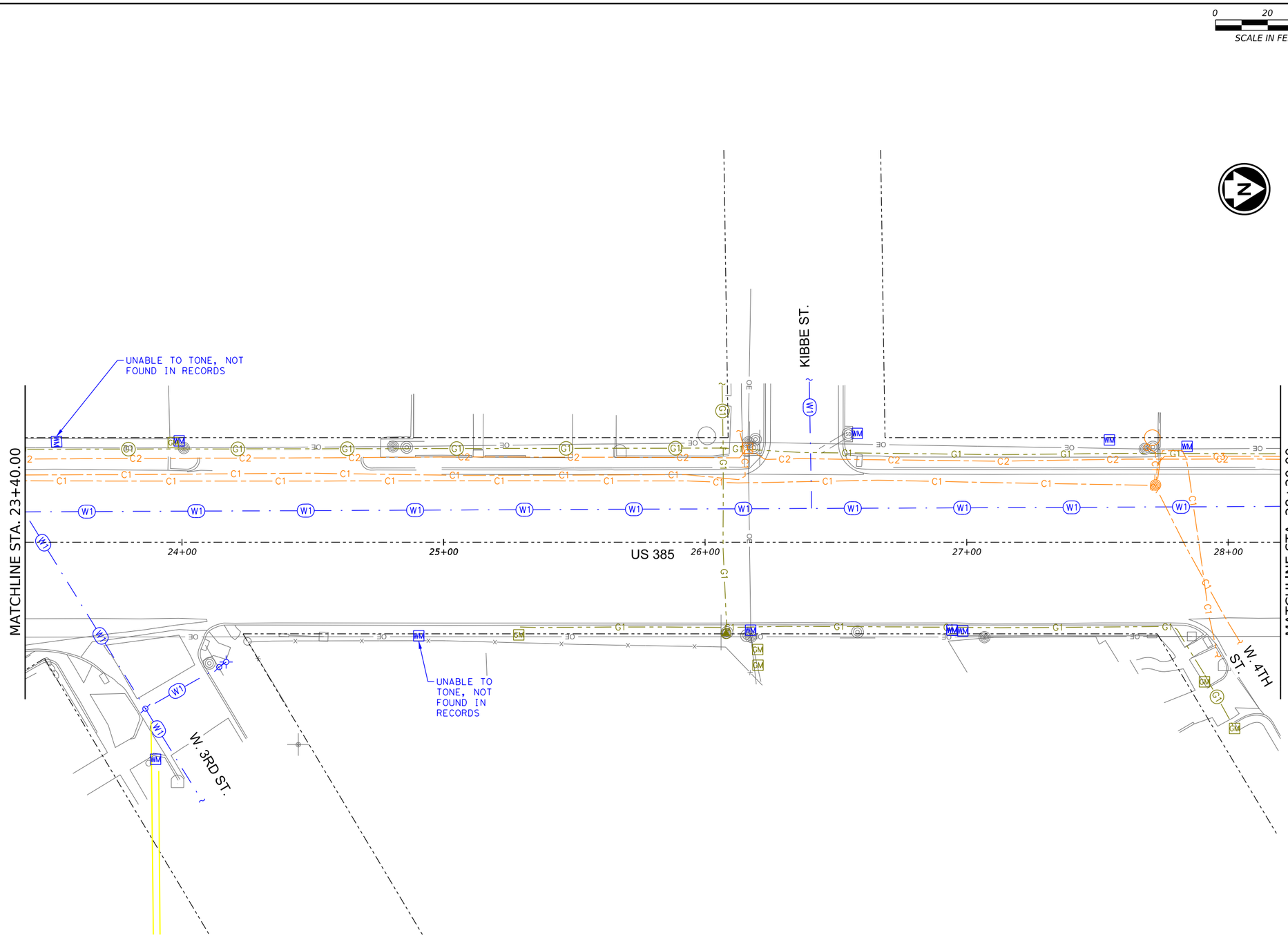

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

QL "B"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

QL "C"/QL "D"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

GAS / PETROLEUM

QL "B"
ATMOS G1

QL "C"/QL "D"
ATMOS G1

SANITARY SEWER

QL "B"
CITY OF HEREFORD WW1

QL "C"/QL "D"
CITY OF HEREFORD WW1

POTABLE WATER

QL "B"
CITY OF HEREFORD W1

QL "C"/QL "D"
CITY OF HEREFORD W1

TRAFFIC SIGNALS

QL "B"
TXDOT TS1

QL "C"/QL "D"
TXDOT TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
SUBSURFACE UTILITY ENGINEERING
UTILITY COORDINATION
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Fort Worth TX. 76118
817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 23+40 TO STA 28+20

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER
03-01-2024

SHEET 4 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		74

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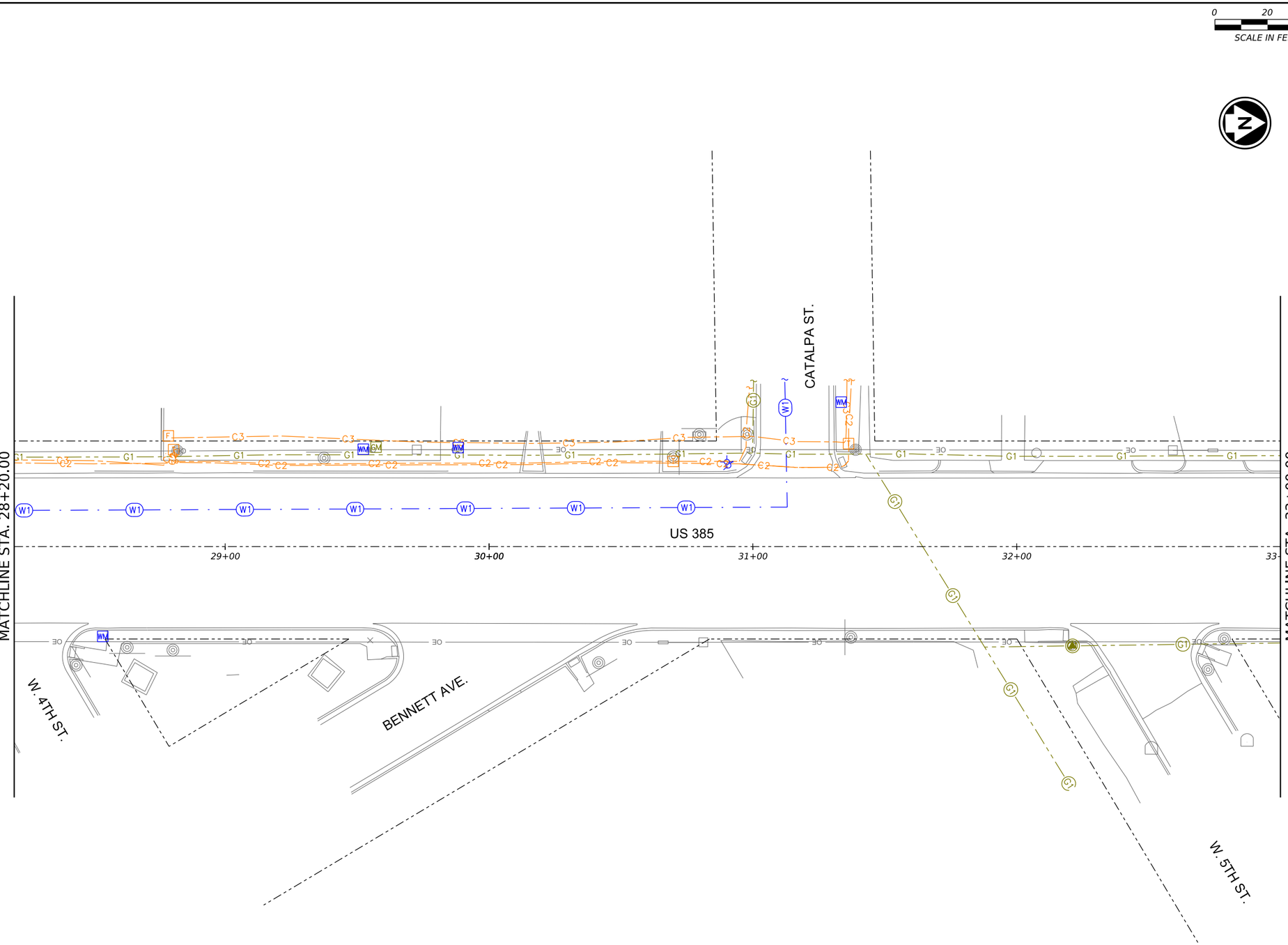

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

	QL "B"	QL "C"/QL "D"
AT&T (FO/DUCT)	C1	C1
AT&T (TELE)	C2	C2
FIBERLIGHT (CABLE)	C3	C3
WEST TEXAS SERV. (FO/DUCT)	C4	C4

GAS / PETROLEUM

	QL "B"	QL "C"/QL "D"
ATMOS	G1	G1

SANITARY SEWER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	WW1	WW1

POTABLE WATER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	W1	W1

TRAFFIC SIGNALS

	QL "B"	QL "C"/QL "D"
TXDOT	TS1	TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
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UTILITY COORDINATION
7400 Sand Street
Fort Worth TX. 76118
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Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 28+20 TO STA 33+00

SHEET 5 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		75

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER

03-01-2024

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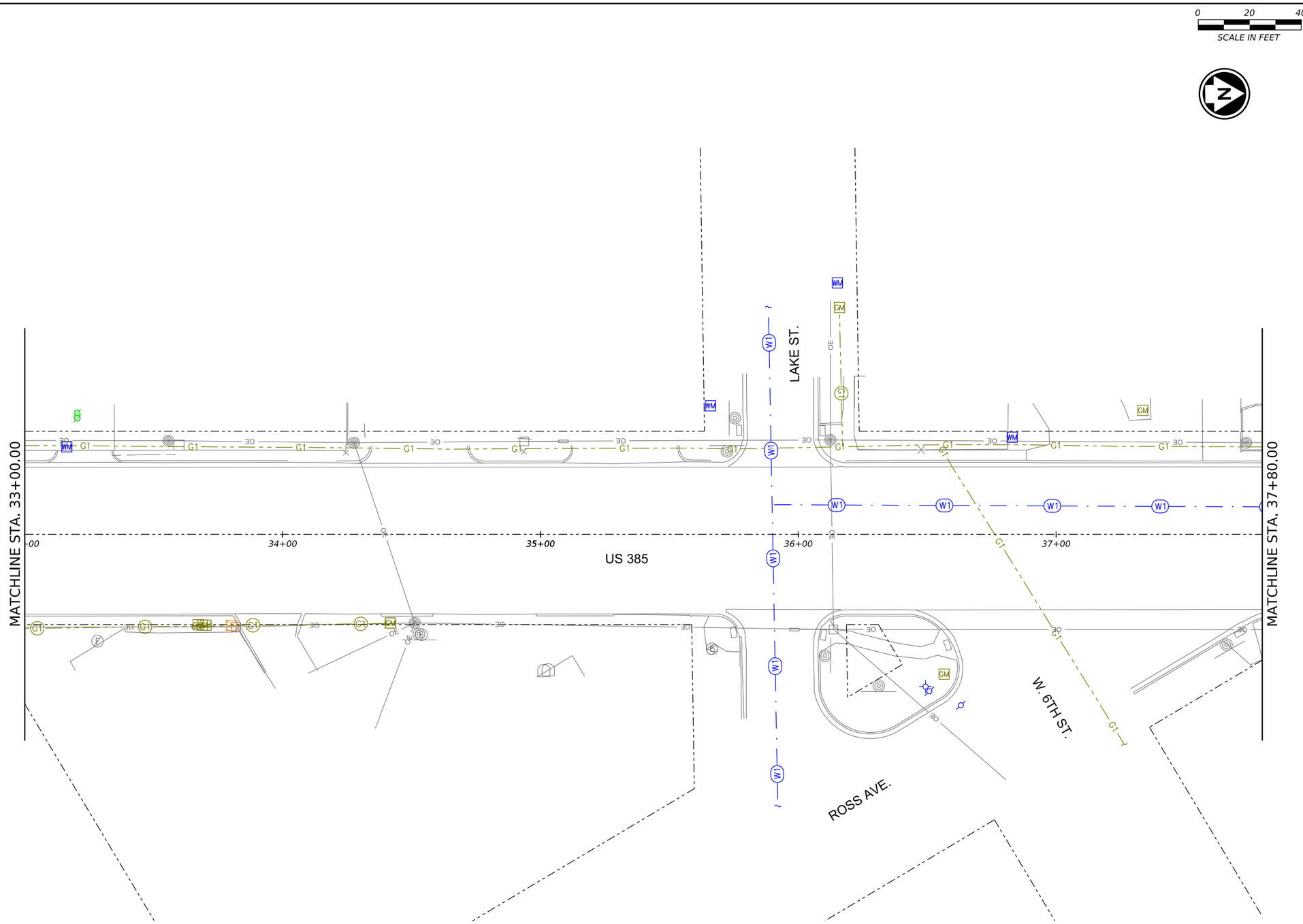

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

QL "B"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

QL "C"/QL "D"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

GAS / PETROLEUM

QL "B"
ATMOS G1

QL "C"/QL "D"
ATMOS G1

SANITARY SEWER

QL "B"
CITY OF HEREFORD WW1

QL "C"/QL "D"
CITY OF HEREFORD WW1

POTABLE WATER

QL "B"
CITY OF HEREFORD W1

QL "C"/QL "D"
CITY OF HEREFORD W1

TRAFFIC SIGNALS

QL "B"
TXDOT TS1

QL "C"/QL "D"
TXDOT TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
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Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 33+00 TO STA 37+80

The Rios Group, Inc.
TBPE Firm # F-14595
STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER
03-01-2024

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		76

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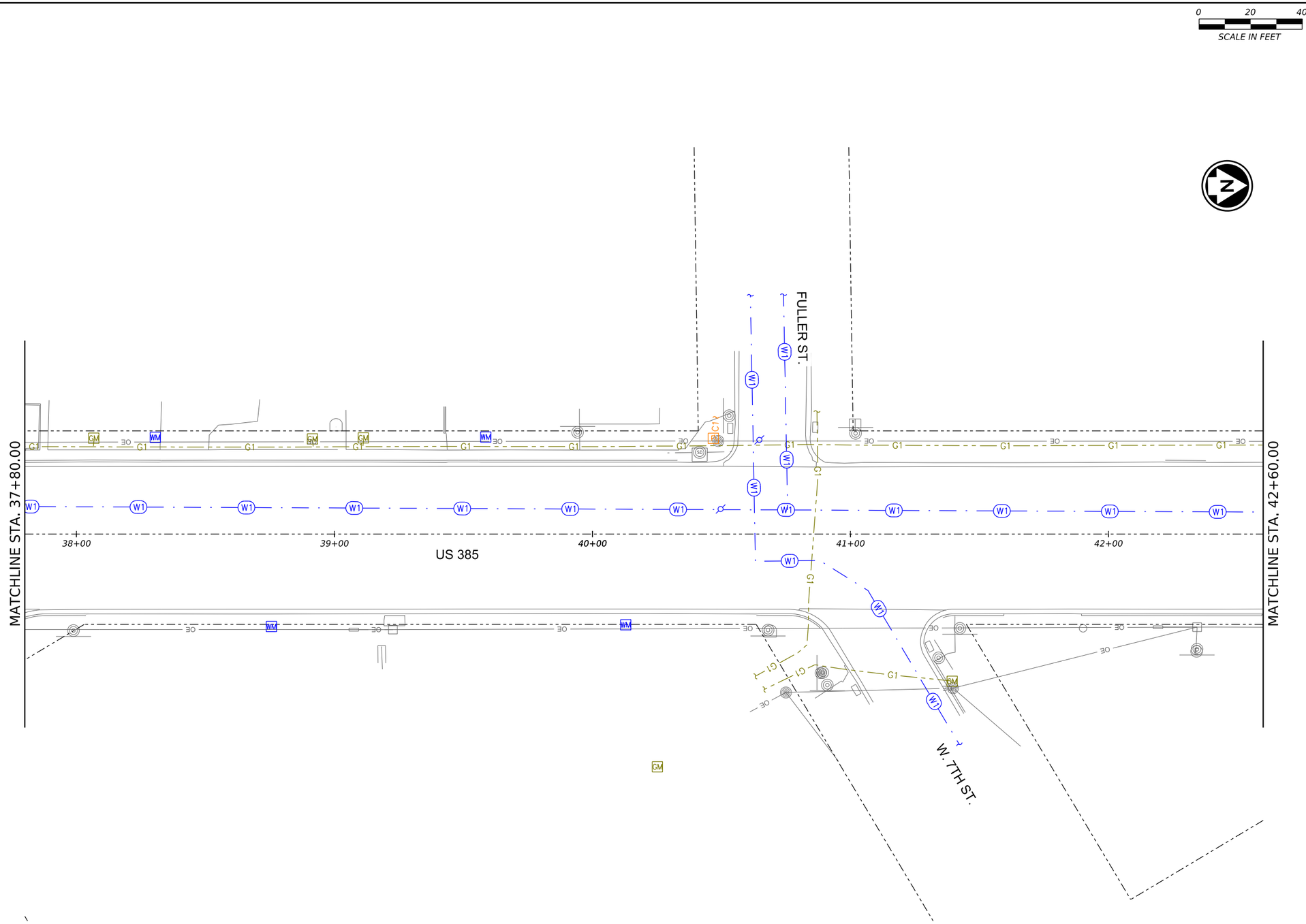

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

QL "B"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

QL "C"/QL "D"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

GAS / PETROLEUM

QL "B"
ATMOS G1

QL "C"/QL "D"
ATMOS G1

SANITARY SEWER

QL "B"
CITY OF HEREFORD WW1

QL "C"/QL "D"
CITY OF HEREFORD WW1

POTABLE WATER

QL "B"
CITY OF HEREFORD W1

QL "C"/QL "D"
CITY OF HEREFORD W1

TRAFFIC SIGNALS

QL "B"
TXDOT TS1

QL "C"/QL "D"
TXDOT TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
SUBSURFACE UTILITY ENGINEERING
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7400 Sand Street
Fort Worth TX, 76118
817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 37+80 TO STA 42+60

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER
03-01-2024

SHEET 7 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		77

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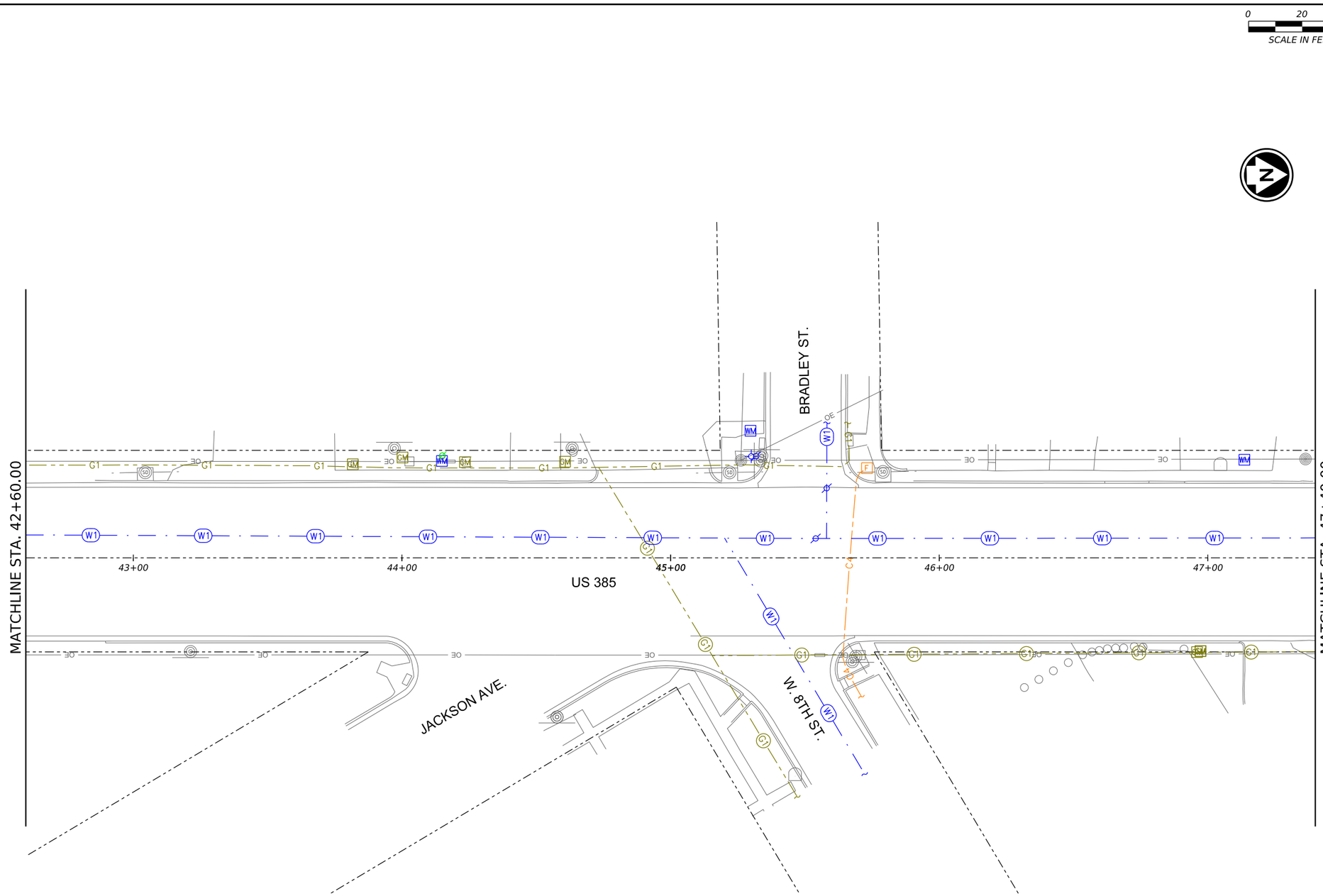

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

	QL "B"	QL "C"/QL "D"
AT&T (FO/DUCT)	C1	C1
AT&T (TELE)	C2	C2
FIBERLIGHT (CABLE)	C3	C3
WEST TEXAS SERV. (FO/DUCT)	C4	C4

GAS / PETROLEUM

	QL "B"	QL "C"/QL "D"
ATMOS	G1	G1

SANITARY SEWER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	WW1	WW1

POTABLE WATER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	W1	W1

TRAFFIC SIGNALS

	QL "B"	QL "C"/QL "D"
TXDOT	TS1	TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
SUBSURFACE UTILITY ENGINEERING
UTILITY COORDINATION
7400 Sand Street
Fort Worth TX. 76118
817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 42+60 TO STA 47+40

SHEET 8 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		78

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER

03-01-2024

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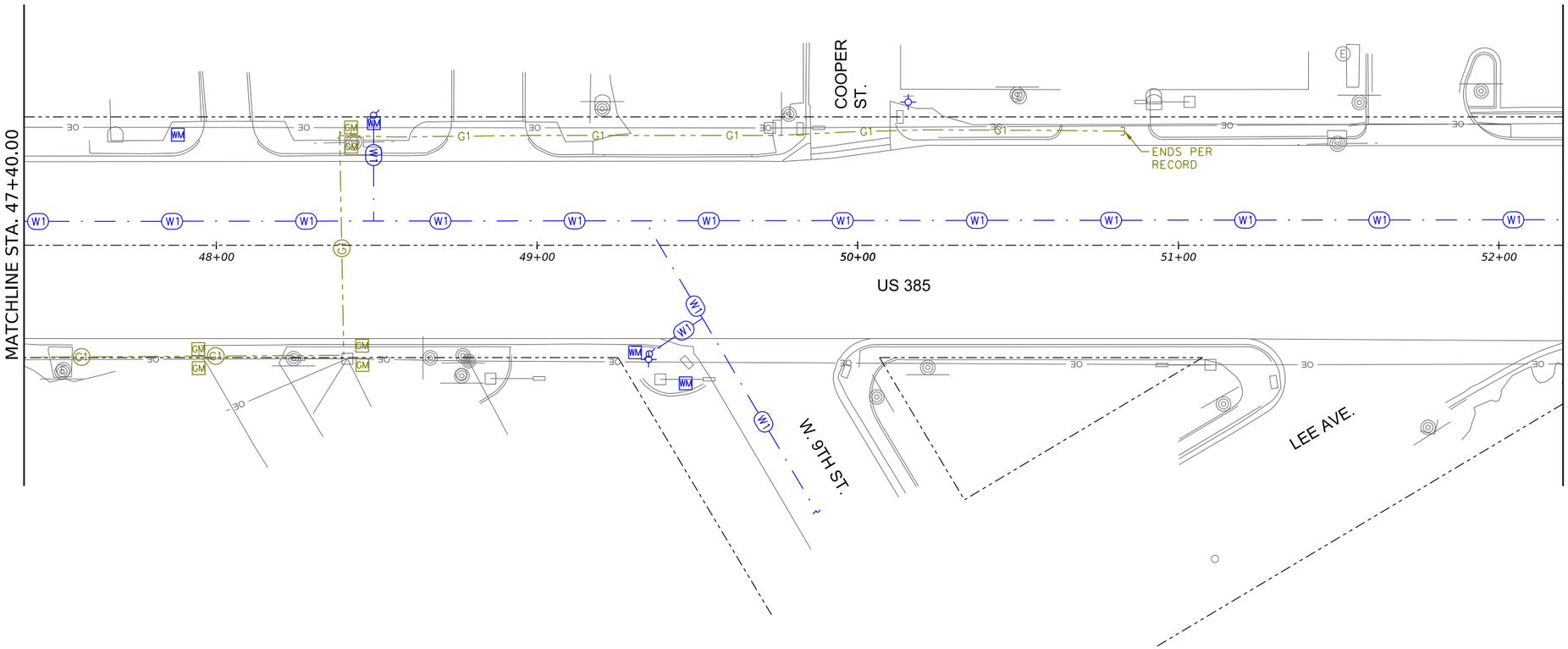

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

QL "B"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

QL "C"/QL "D"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

GAS / PETROLEUM

QL "B"
ATMOS G1

QL "C"/QL "D"
ATMOS G1

SANITARY SEWER

QL "B"
CITY OF HEREFORD WW1

QL "C"/QL "D"
CITY OF HEREFORD WW1

POTABLE WATER

QL "B"
CITY OF HEREFORD W1

QL "C"/QL "D"
CITY OF HEREFORD W1

TRAFFIC SIGNALS

QL "B"
TXDOT TS1

QL "C"/QL "D"
TXDOT TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
SUBSURFACE UTILITY ENGINEERING
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7400 Sand Street
Fort Worth TX. 76118
817.345.7500

Texas Department of Transportation

US 385

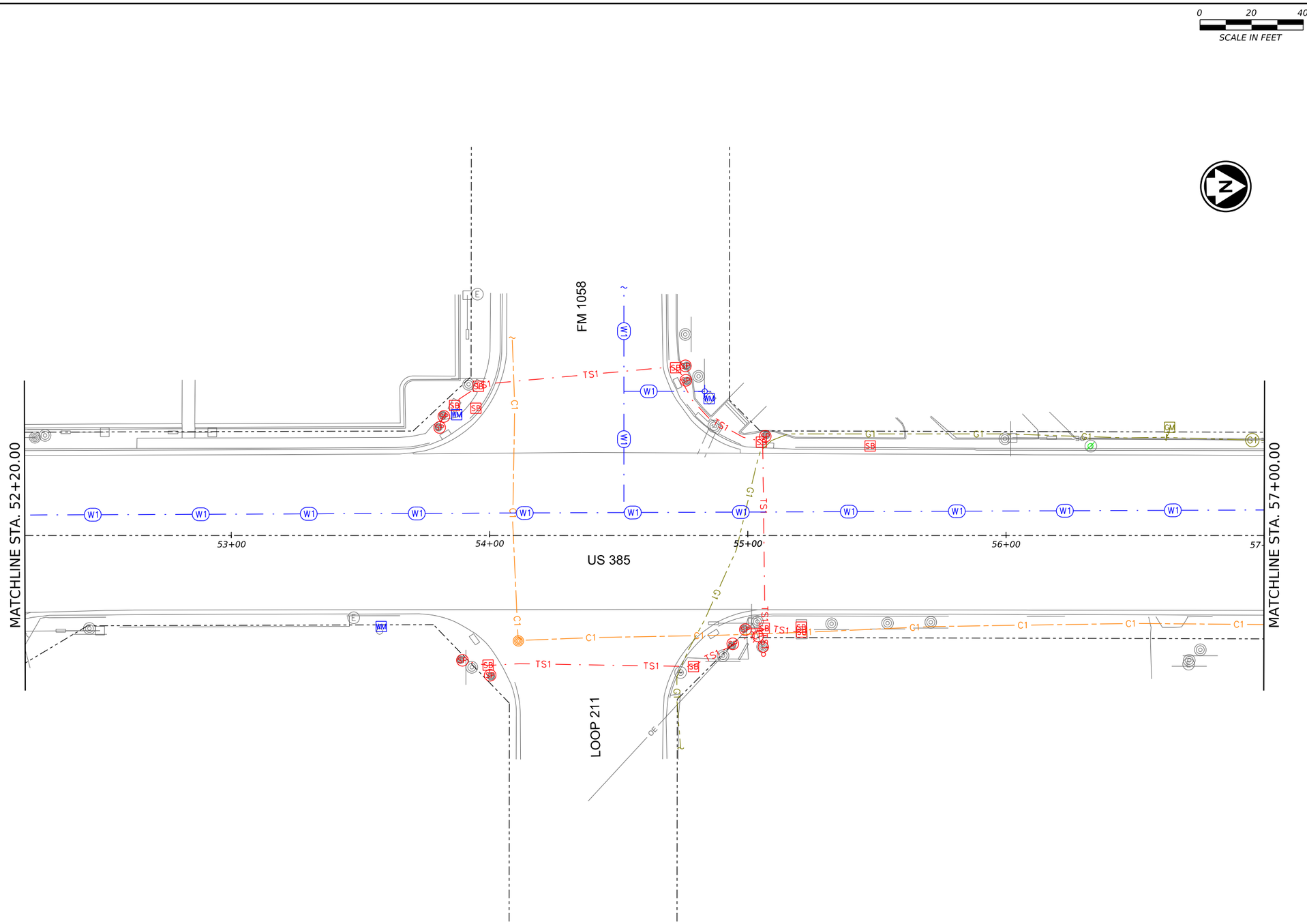
S.U.E. LAYOUT

STA 47+40 TO STA 52+20

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER
03-01-2024

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		79



LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

QL "B"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

QL "C"/QL "D"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

GAS / PETROLEUM

QL "B"
ATMOS G1

QL "C"/QL "D"
ATMOS G1

SANITARY SEWER

QL "B"
CITY OF HEREFORD WW1

QL "C"/QL "D"
CITY OF HEREFORD WW1

POTABLE WATER

QL "B"
CITY OF HEREFORD W1

QL "C"/QL "D"
CITY OF HEREFORD W1

TRAFFIC SIGNALS

QL "B"
TXDOT TS1

QL "C"/QL "D"
TXDOT TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

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SUBSURFACE UTILITY ENGINEERING
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7400 Sand Street
Fort Worth TX. 76118
817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 52+20 TO STA 57+00

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER
03-01-2024

SHEET 10 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		80

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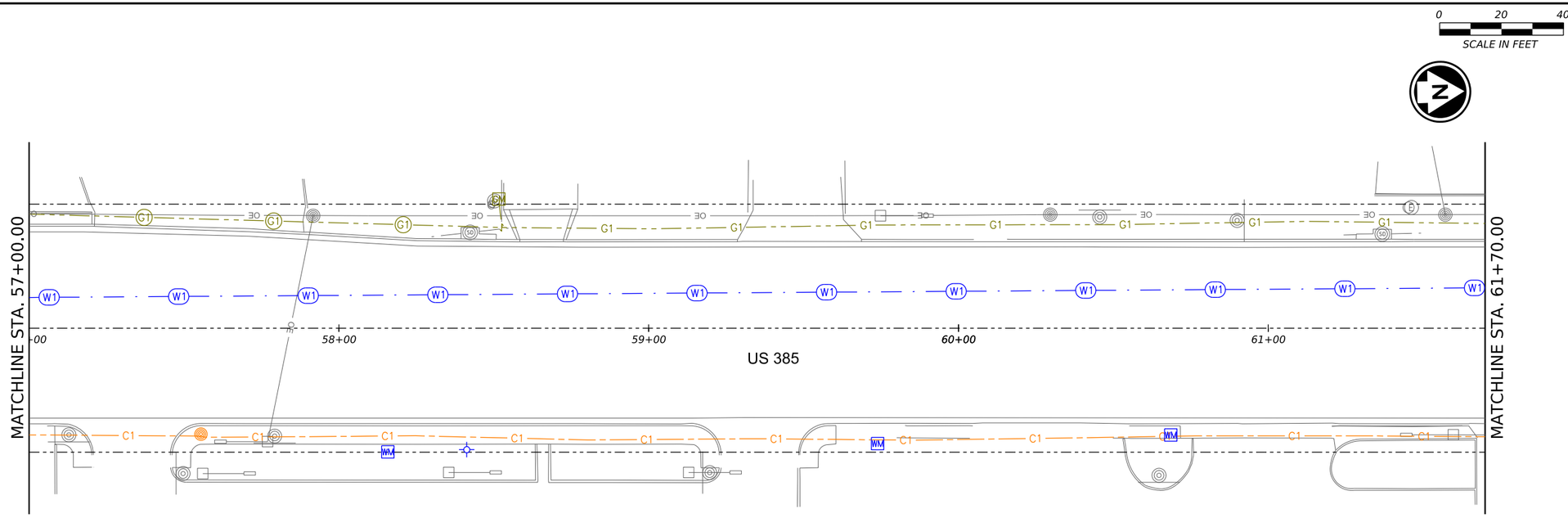
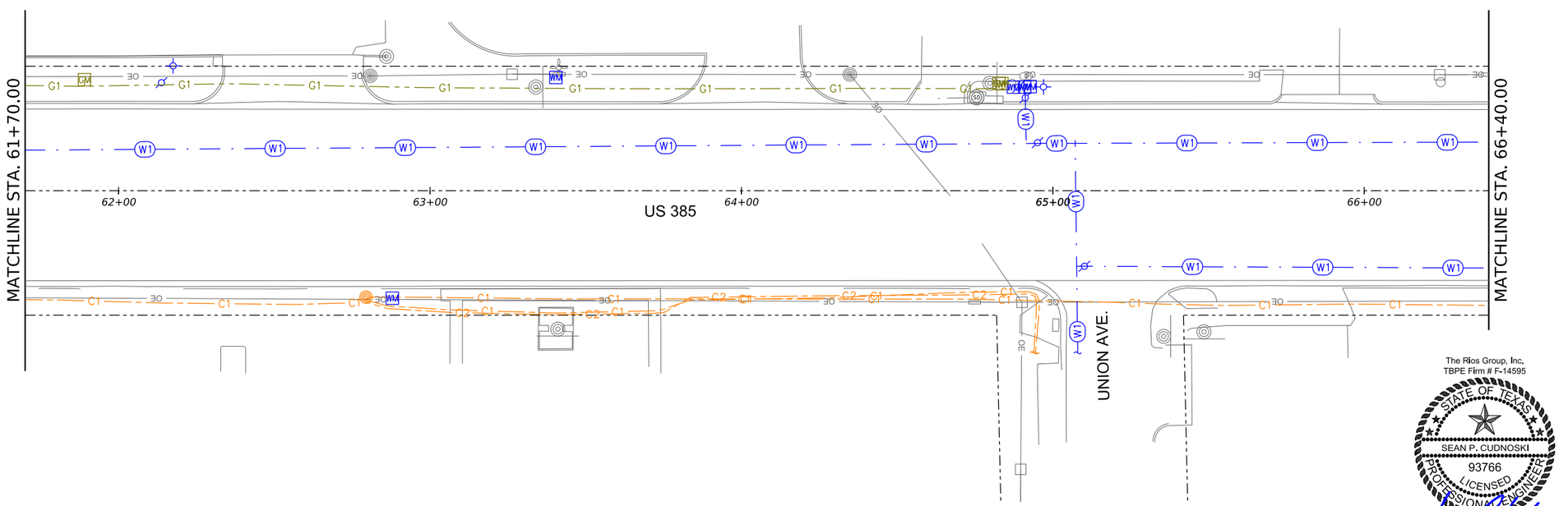




LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

	QL "B"	QL "C"/QL "D"
AT&T (FO/DUCT)	C1	C1
AT&T (TELE)	C2	C2
FIBERLIGHT (CABLE)	C3	C3
WEST TEXAS SERV. (FO/DUCT)	C4	C4

GAS / PETROLEUM

	QL "B"	QL "C"/QL "D"
ATMOS	G1	G1

SANITARY SEWER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	WW1	WW1

POTABLE WATER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	W1	W1

TRAFFIC SIGNALS

	QL "B"	QL "C"/QL "D"
TXDOT	TS1	TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
SUBSURFACE UTILITY ENGINEERING
UTILITY COORDINATION
7400 Sand Street
Fort Worth TX. 76118
817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

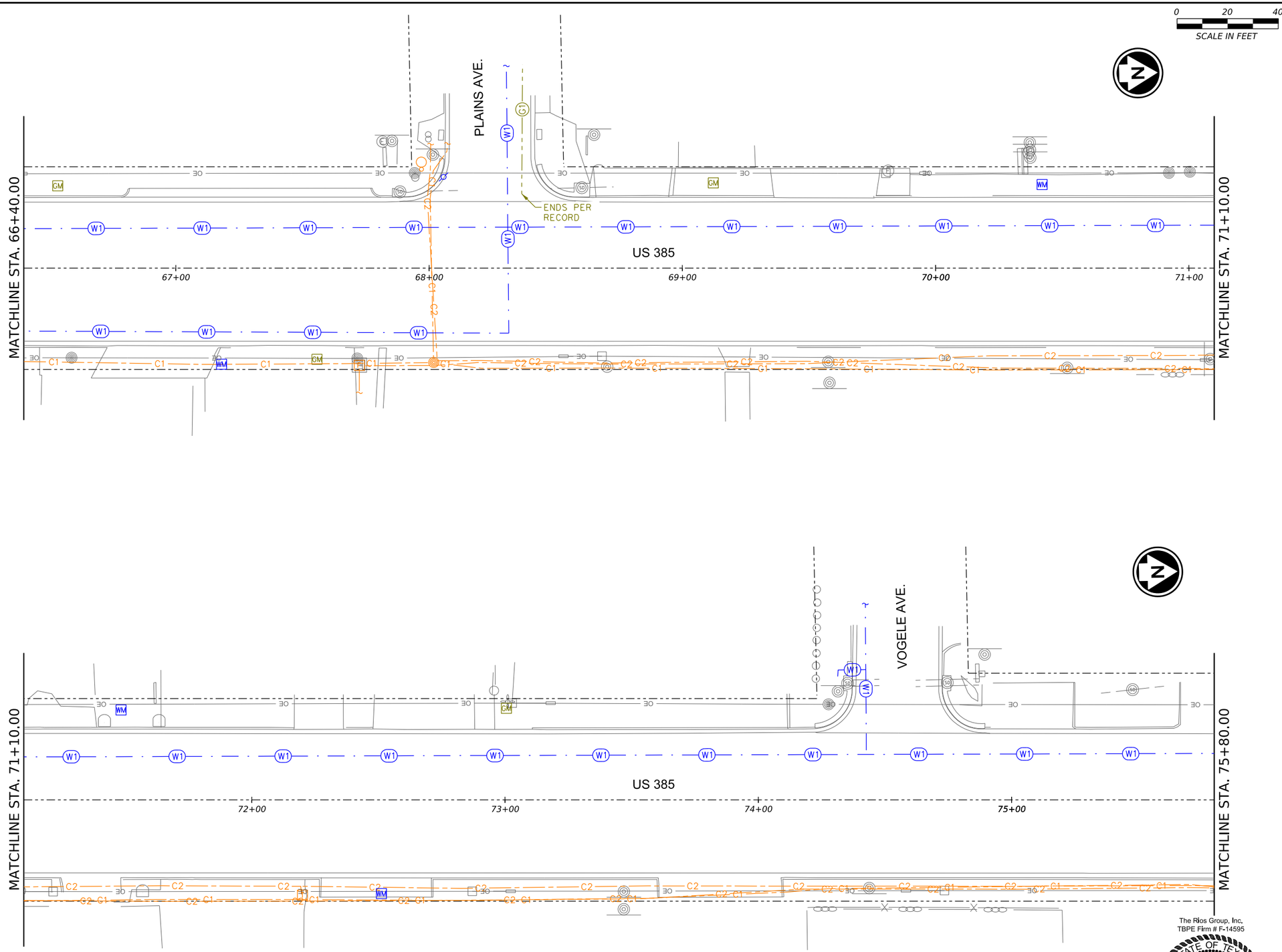
STA 57+00 TO STA 66+40

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER
03-01-2024

SHEET 11 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		81



LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

	QL "B"	QL "C"/QL "D"
AT&T (FO/DUCT)	C1	C1
AT&T (TELE)	C2	C2
FIBERLIGHT (CABLE)	C3	C3
WEST TEXAS SERV. (FO/DUCT)	C4	C4

GAS / PETROLEUM

	QL "B"	QL "C"/QL "D"
ATMOS	G1	G1

SANITARY SEWER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	WW1	WW1

POTABLE WATER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	W1	W1

TRAFFIC SIGNALS

	QL "B"	QL "C"/QL "D"
TXDOT	TS1	TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
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UTILITY COORDINATION
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817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 66+40 TO STA 75+80

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER
03-01-2024

SHEET 12 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		82

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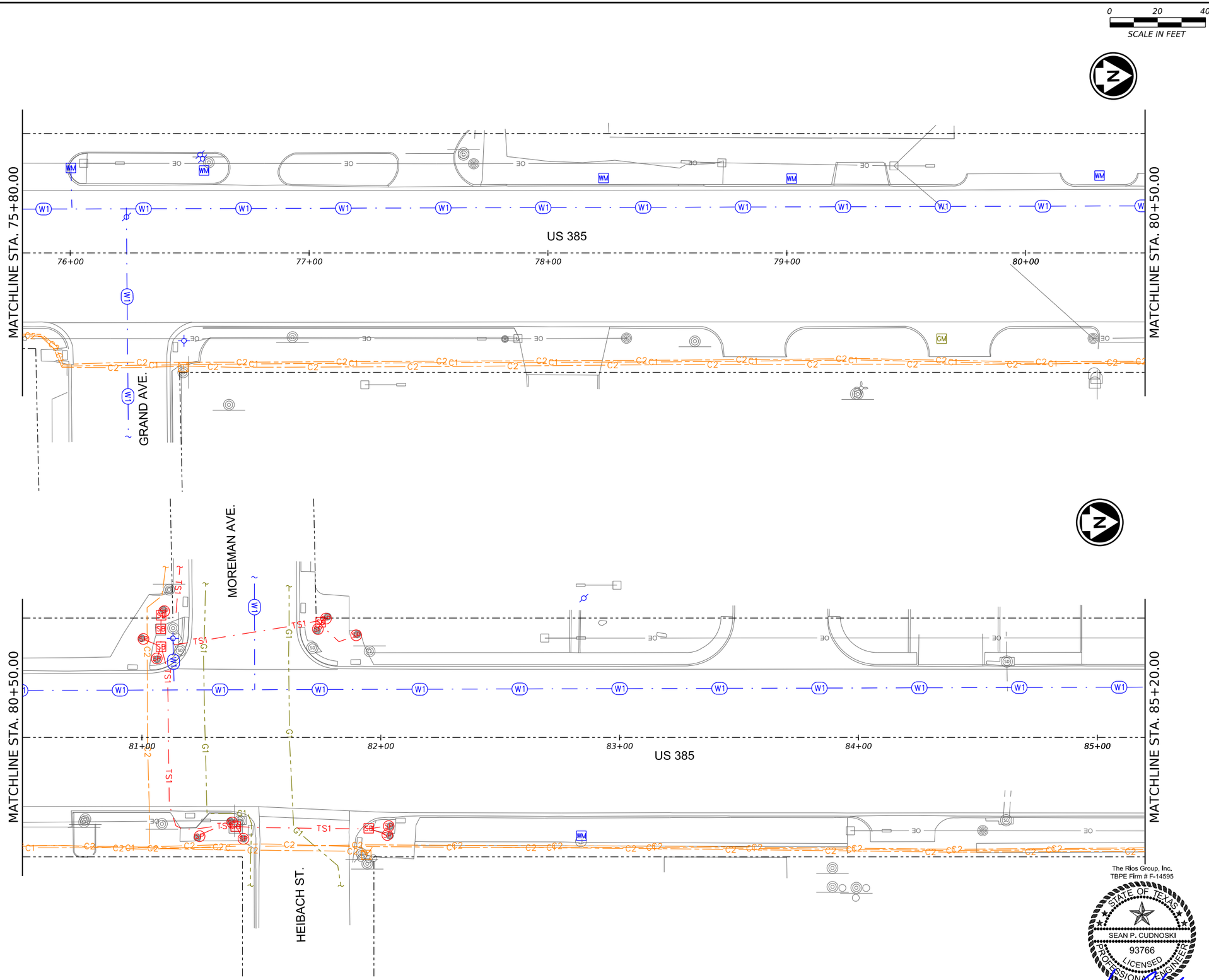

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

	QL "B"	QL "C"/QL "D"
AT&T (FO/DUCT)	C1	C1
AT&T (TELE)	C2	C2
FIBERLIGHT (CABLE)	C3	C3
WEST TEXAS SERV. (FO/DUCT)	C4	C4

GAS / PETROLEUM

	QL "B"	QL "C"/QL "D"
ATMOS	G1	G1

SANITARY SEWER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	WW1	WW1

POTABLE WATER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	W1	W1

TRAFFIC SIGNALS

	QL "B"	QL "C"/QL "D"
TXDOT	TS1	TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

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SUBSURFACE UTILITY ENGINEERING
UTILITY COORDINATION
7400 Sand Street
Fort Worth TX. 76118
817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 75+80 TO STA 85+20

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER

03-01-2024

SHEET 13 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		83

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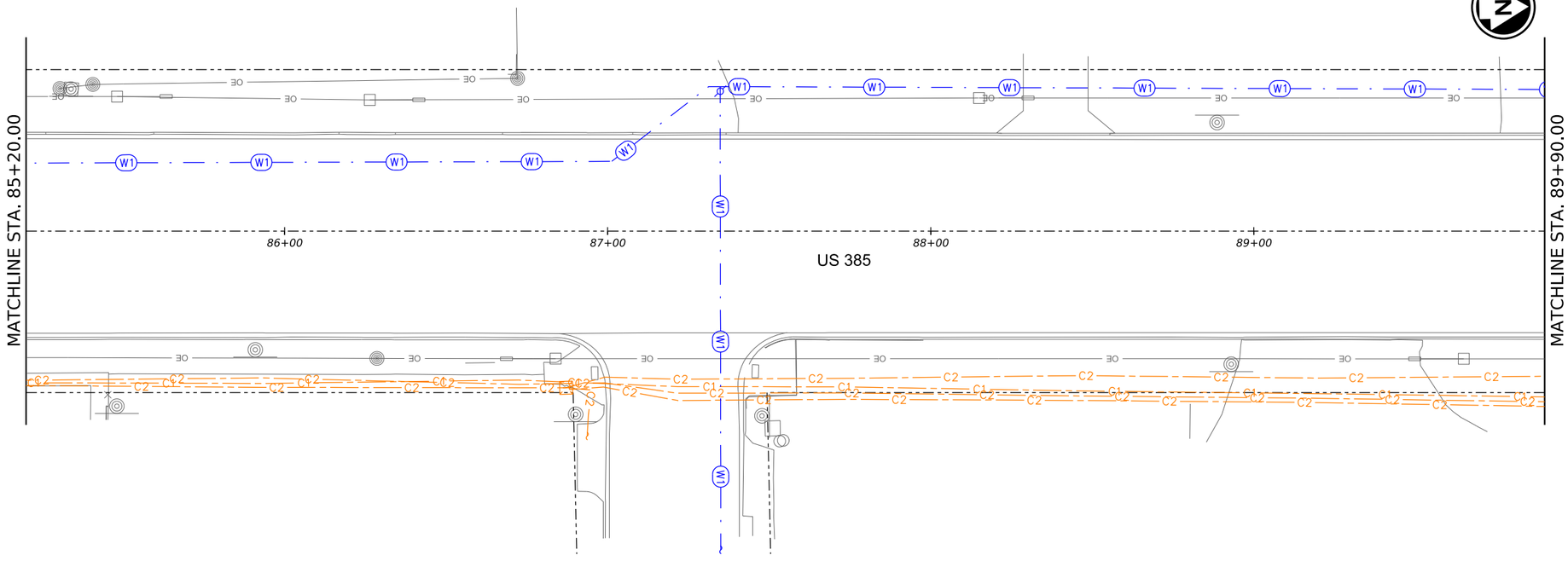

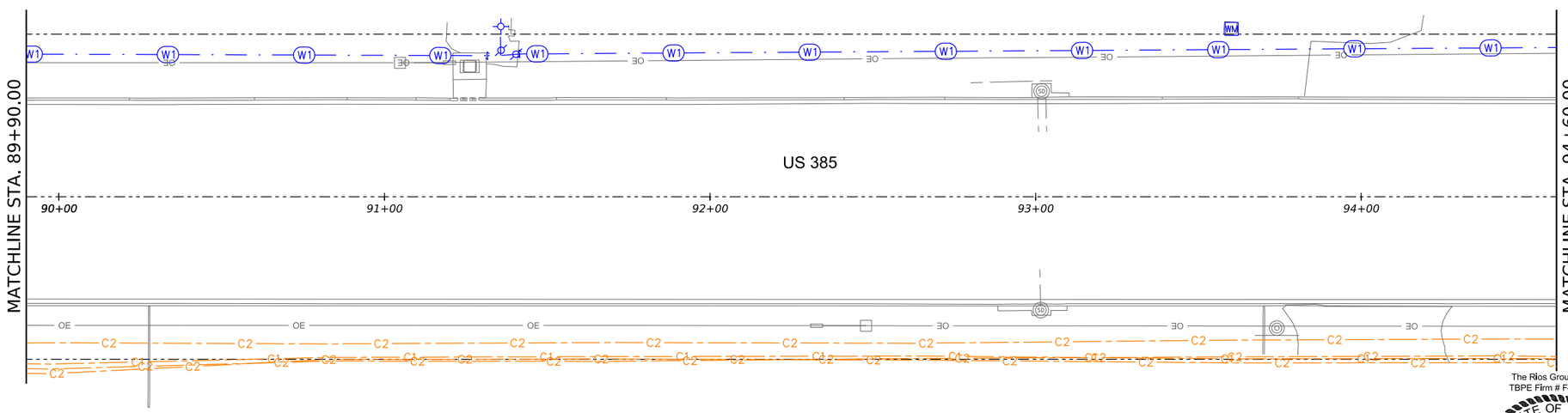

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

QL "B"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

QL "C"/QL "D"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

GAS / PETROLEUM

QL "B"
ATMOS G1

QL "C"/QL "D"
ATMOS G1

SANITARY SEWER

QL "B"
CITY OF HEREFORD WW1

QL "C"/QL "D"
CITY OF HEREFORD WW1

POTABLE WATER

QL "B"
CITY OF HEREFORD W1

QL "C"/QL "D"
CITY OF HEREFORD W1

TRAFFIC SIGNALS

QL "B"
TXDOT TS1

QL "C"/QL "D"
TXDOT TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
SUBSURFACE UTILITY ENGINEERING
UTILITY COORDINATION
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Fort Worth TX. 76118
817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 85+20 TO STA 94+60

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER

03-01-2024

SHEET 14 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		84

DATE: 3/1/2024 3:29:21 PM
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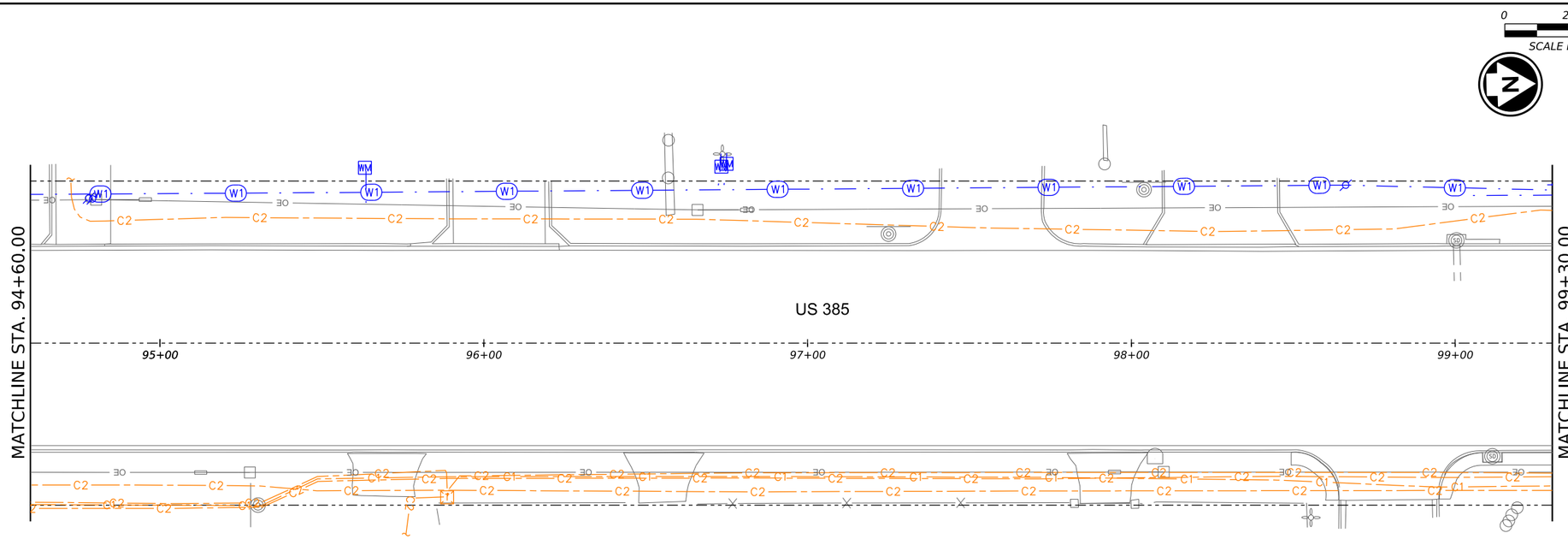

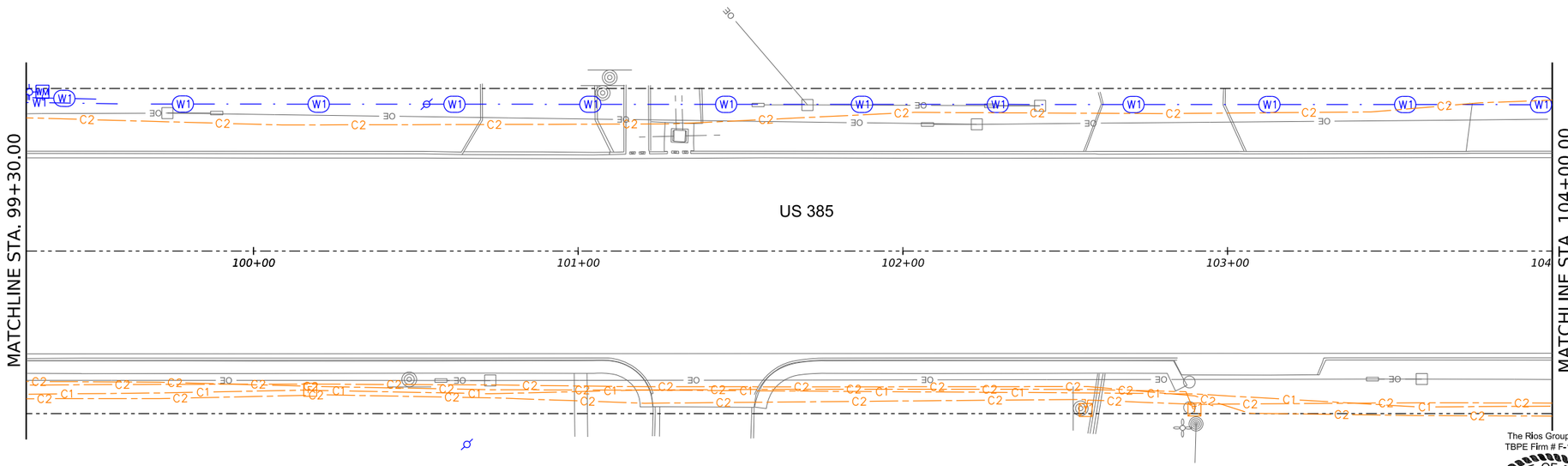

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

	QL "B"	QL "C"/QL "D"
AT&T (FO/DUCT)	C1	C1
AT&T (TELE)	C2	C2
FIBERLIGHT (CABLE)	C3	C3
WEST TEXAS SERV. (FO/DUCT)	C4	C4

GAS / PETROLEUM

	QL "B"	QL "C"/QL "D"
ATMOS	G1	G1

SANITARY SEWER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	WW1	WW1

POTABLE WATER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	W1	W1

TRAFFIC SIGNALS

	QL "B"	QL "C"/QL "D"
TXDOT	TS1	TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

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817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

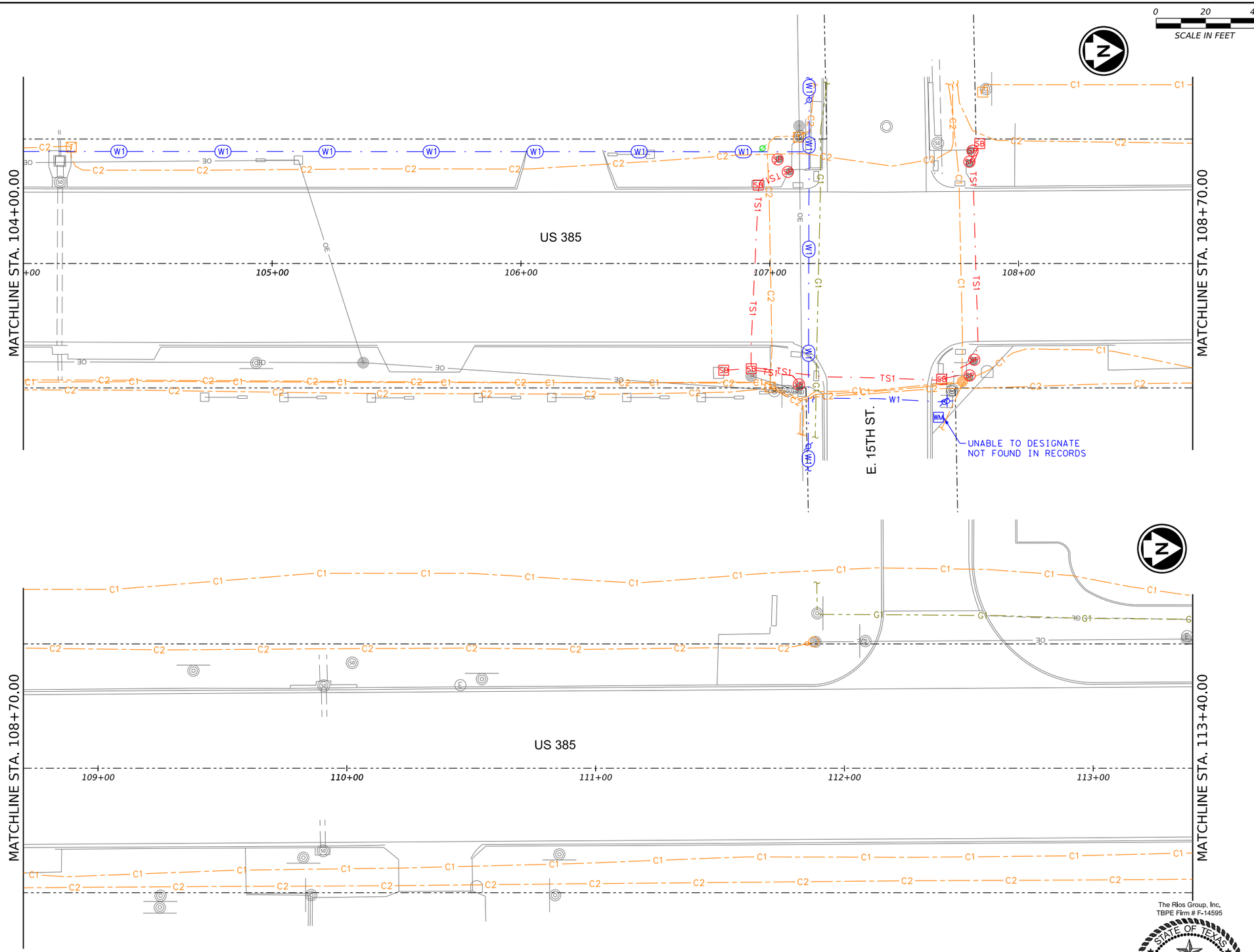
STA 94+60 TO STA 104+00

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER

03-01-2024

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		85



LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

	QL "B"	QL "C"/QL "D"
AT&T (FO/DUCT)	C1	C1
AT&T (TELE)	C2	C2
FIBERLIGHT (CABLE)	C3	C3
WEST TEXAS SERV. (FO/DUCT)	C4	C4

GAS / PETROLEUM

	QL "B"	QL "C"/QL "D"
ATMOS	G1	G1

SANITARY SEWER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	WW1	WW1

POTABLE WATER

	QL "B"	QL "C"/QL "D"
CITY OF HEREFORD	W1	W1

TRAFFIC SIGNALS

	QL "B"	QL "C"/QL "D"
TXDOT	TS1	TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
TRANSMISSION POLE

GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

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817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 104+00 TO STA 113+40

SHEET 16 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		86

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
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PROFESSIONAL ENGINEER

03-01-2024

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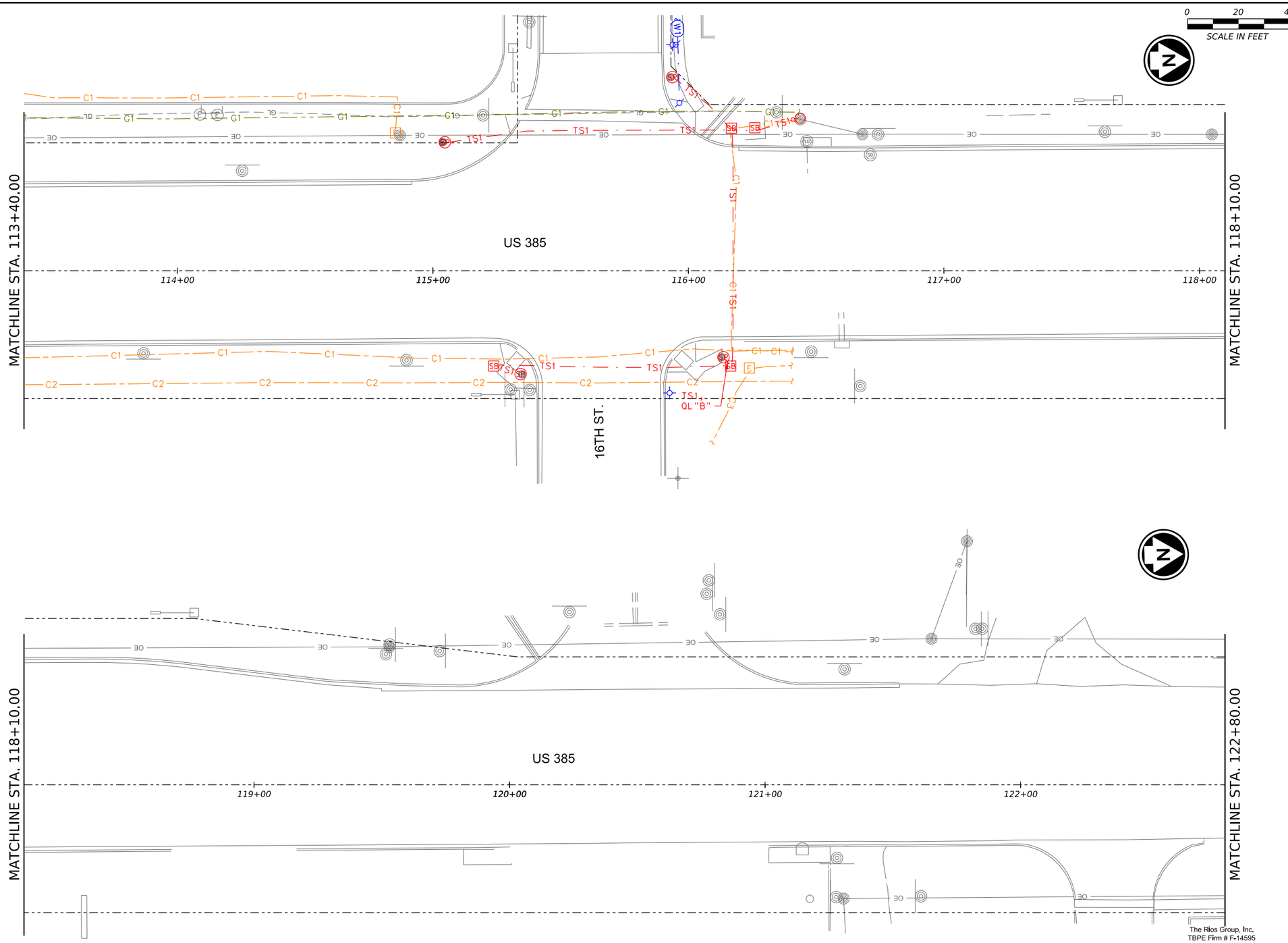

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN UTILITY

COMMUNICATIONS

QL "B"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

QL "C"/QL "D"
AT&T (FO/DUCT) C1
AT&T (TELE) C2
FIBERLIGHT (CABLE) C3
WEST TEXAS SERV. (FO/DUCT) C4

GAS / PETROLEUM

QL "B"
ATMOS G1

QL "C"/QL "D"
ATMOS G1

SANITARY SEWER

QL "B"
CITY OF HEREFORD WW1

QL "C"/QL "D"
CITY OF HEREFORD WW1

POTABLE WATER

QL "B"
CITY OF HEREFORD W1

QL "C"/QL "D"
CITY OF HEREFORD W1

TRAFFIC SIGNALS

QL "B"
TXDOT TS1

QL "C"/QL "D"
TXDOT TS1

LEGEND OF UTILITY SYMBOLS

END CAP
QUALITY LEVEL CHANGE
TEST HOLE
UTILITY CONTINUATION

CATV CABINET
CATV HANDHOLE
CATV PEDESTAL

FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE HANDHOLE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER

ELECTRIC HANDHOLE
ELECTRIC JUNCTION BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (POWER)
ELECTRIC POLE W/RISER
LIGHT POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
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GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)

STORM INLET
STORM OUTFALL
STORM MANHOLE
WASTE WATER CLEANOUT
WASTE WATER MANHOLE

FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
SUBSURFACE UTILITY ENGINEERING
UTILITY COORDINATION
7400 Sand Street
Fort Worth TX. 76118
817.345.7500

Texas Department of Transportation

US 385

S.U.E. LAYOUT

STA 113+40 TO STA PROJECT END

SHEET 17 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385

DIST	COUNTY	SHEET NO.
AMA	DEAF SMITH	87

The Rios Group, Inc.
TBPE Firm # F-14595

STATE OF TEXAS
SEAN P. CUDNOSKI
93766
LICENSED
PROFESSIONAL ENGINEER

03-01-2024

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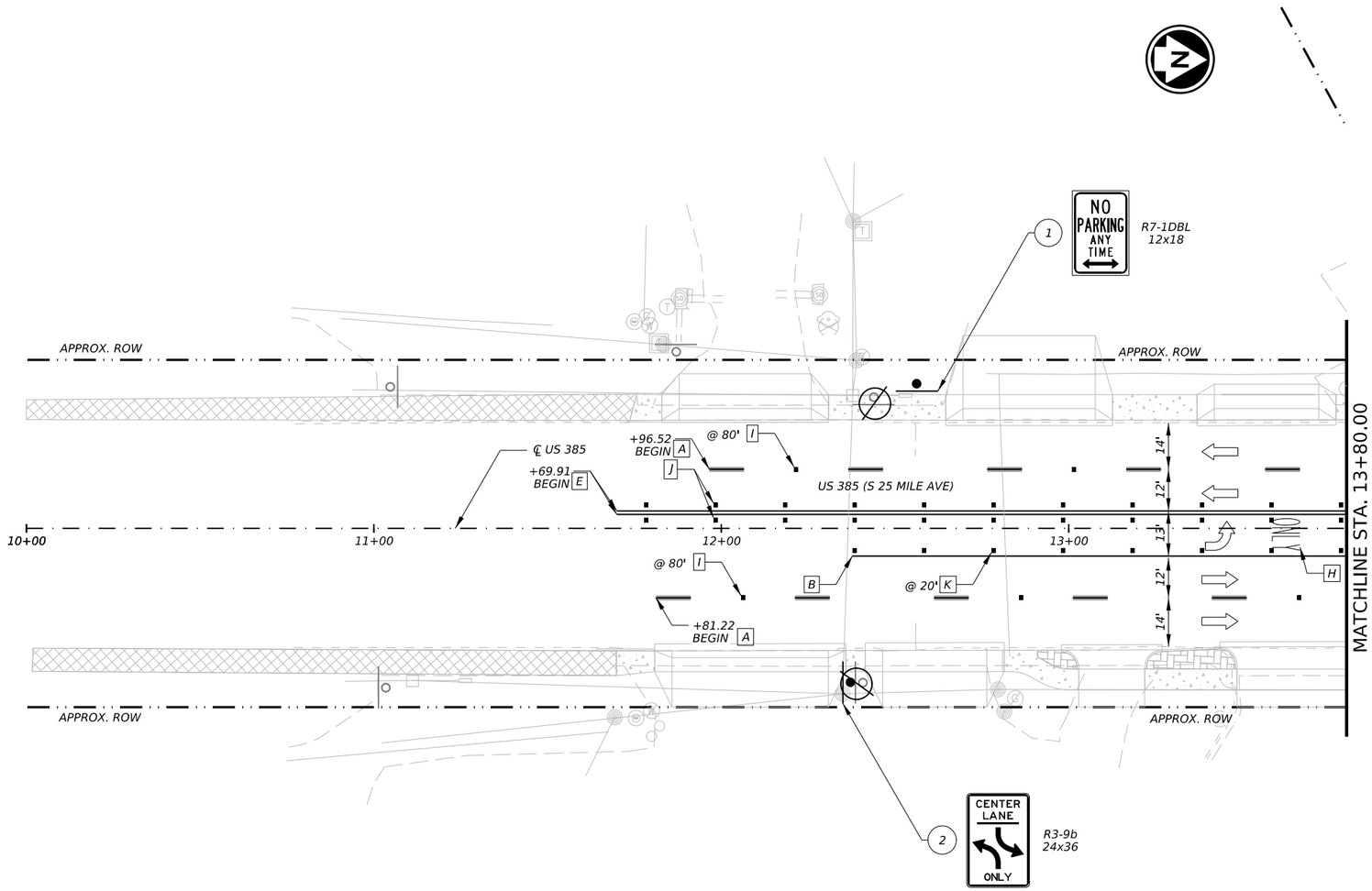

LEGEND

- A — REFL PAV MRK TY B (W) 6" (BRK)
- B — REFL PAV MRK TY I (W) 8" (SLD)
- C — REFL PAV MRK TY I (W) 12" (SLD)
- D — REFL PAV MRK TY I (W) 24" (SLD)
- E — REFL PAV MRK TY I (Y) 6" (SLD)
- F — REFL PAV MRK TY I (Y) 6" (BRK)
- G — REFL PAV MRK TY I (W) (ARROW)
- H — REFL PAV MRK TY I (W) (WORD)
- I — REFL PAV MRK TY II-C-R
- J — REFL PAV MRK TY II-A-A
- K — REFL PAV MRK TY I-C
- L — REFL PAV MRK (W) 18" (YIELD TRIANGLES)
- EXIST SMALL SIGN TO REMAIN
- EXIST SMALL SIGN TO BE REMOVED
- PROP SMALL SIGN
- PROP SMALL SIGN (BACK-TO-BACK)
- # — EXISTING SIGN ASSEMBLY TO BE REMOVED
- R# — EXISTING SIGN ASSEMBLY TO BE RELOCATED
- # — PROPOSED SMALL SIGN ASSEMBLY
- EXISTING / PROPOSED MAILBOX
- DIRECTION OF TRAFFIC (EXIST)

NOTES:

1. DURING CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO RELOCATE ALL EXISTING STREET NAME SIGNS AND REATTACH THEM TO THE TOP OF THE STOP SIGNS ON MINOR SIDE STREETS. IF NECESSARY, NEW POST-TOP SIGN BRACKETS MAY BE NEEDED TO MATCH THE EXISTING POST DIAMETER.THESE BRACKETS AND ANY OTHER RELATED COMPONENTS SHOULD BE CONSIDERED SUBSIDIARY TO ITEM 644.
2. THE SIGN POLE LENGTH MUST BE OF ADEQUATE LENGTH TO ACCOMMODATE THE EXISTING STREET NAME SIGNS, STOP SIGN, AND MEET HEIGHT CLEARANCE.
3. PROVIDE CONTINUOUS DIAMOND GRINDING ALONG ALL CONCRETE PAVEMENT SECTIONS AND THROUGH LANES FOR THE ENTIRE LENGTH OF THE PROJECT, WITH THE EXCEPTION OF THE TWLTL.
4. DURING INSTALLATION, SIGNS MAY BE SHIFTED IN THE FIELD TO A MORE DESIRABLE LOCATION TO AVOID UTILITIES AND OTHER CONFLICTS. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ADJUSTMENTS WITH THE ENGINEER.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

Salcido Jauin, P.E. 3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

BEGIN TO STA 13+80

 SHEET 1 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		88

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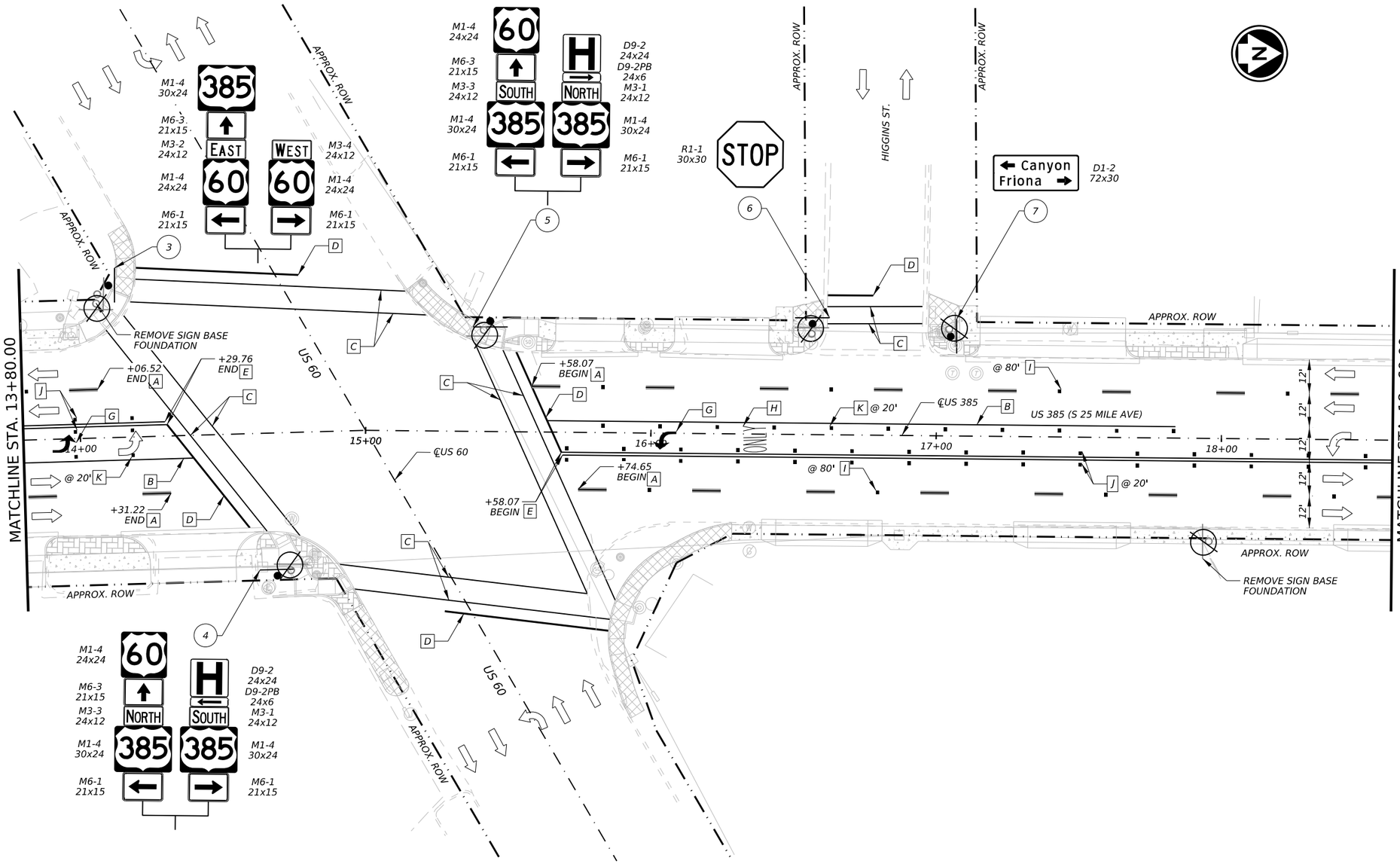

LEGEND

- A — REFL PAV MRK TY B (W) 6" (BRK)
- B — REFL PAV MRK TY I (W) 8" (SLD)
- C — REFL PAV MRK TY I (W) 12" (SLD)
- D — REFL PAV MRK TY I (W) 24" (SLD)
- E — REFL PAV MRK TY I (Y) 6" (SLD)
- F — REFL PAV MRK TY I (Y) 6" (BRK)
- G — REFL PAV MRK TY I (W) (ARROW)
- H — REFL PAV MRK TY I (W) (WORD)
- I — REFL PAV MRK TY II-C-R
- J — REFL PAV MRK TY II-A-A
- K — REFL PAV MRK TY I-C
- L — REFL PAV MRK (W) 18" (YIELD TRIANGLES)
- EXIST SMALL SIGN TO REMAIN
- EXIST SMALL SIGN TO BE REMOVED
- PROP SMALL SIGN
- PROP SMALL SIGN (BACK-TO-BACK)
- # — EXISTING SIGN ASSEMBLY TO BE REMOVED
- R# — EXISTING SIGN ASSEMBLY TO BE RELOCATED
- # — PROPOSED SMALL SIGN ASSEMBLY
- EXISTING / PROPOSED MAILBOX
- DIRECTION OF TRAFFIC (EXIST)

NOTES:

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3. PROVIDE CONTINUOUS DIAMOND GRINDING ALONG ALL CONCRETE PAVEMENT SECTIONS AND THROUGH LANES FOR THE ENTIRE LENGTH OF THE PROJECT, WITH THE EXCEPTION OF THE TWLTL.
4. DURING INSTALLATION, SIGNS MAY BE SHIFTED IN THE FIELD TO A MORE DESIRABLE LOCATION TO AVOID UTILITIES AND OTHER CONFLICTS. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ADJUSTMENTS WITH THE ENGINEER.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

Salcido Fauvin, P.E. 3/5/2024

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AECOM
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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 13+80 TO STA 18+60

SHEET 2 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		89

DATE: 3/5/2024 12:50:14 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/US385/Traffic/US385 AEC SPM PLN 001.dgn

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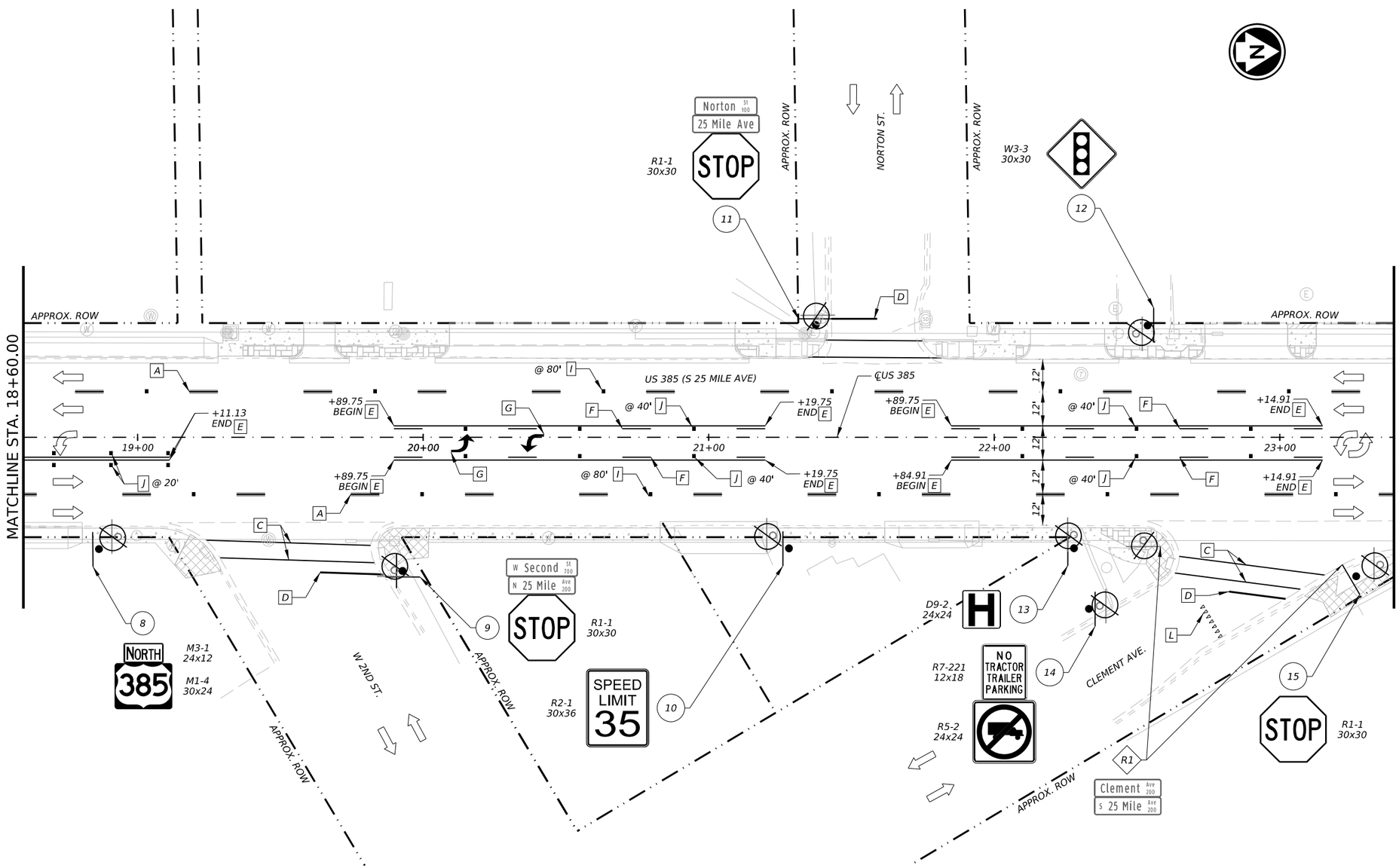

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- L — REFL PAV MRK (W) 18" (YIELD TRIANGLES)
- EXIST SMALL SIGN TO REMAIN
- EXIST SMALL SIGN TO BE REMOVED
- PROP SMALL SIGN
- PROP SMALL SIGN (BACK-TO-BACK)
- # — EXISTING SIGN ASSEMBLY TO BE REMOVED
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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
3/5/2024

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Dallas, Texas 72540
(214) 741-7777
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Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 18+60 TO STA 23+40

SHEET 3 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		90

DATE: 3/5/2024 12:50:15 AM
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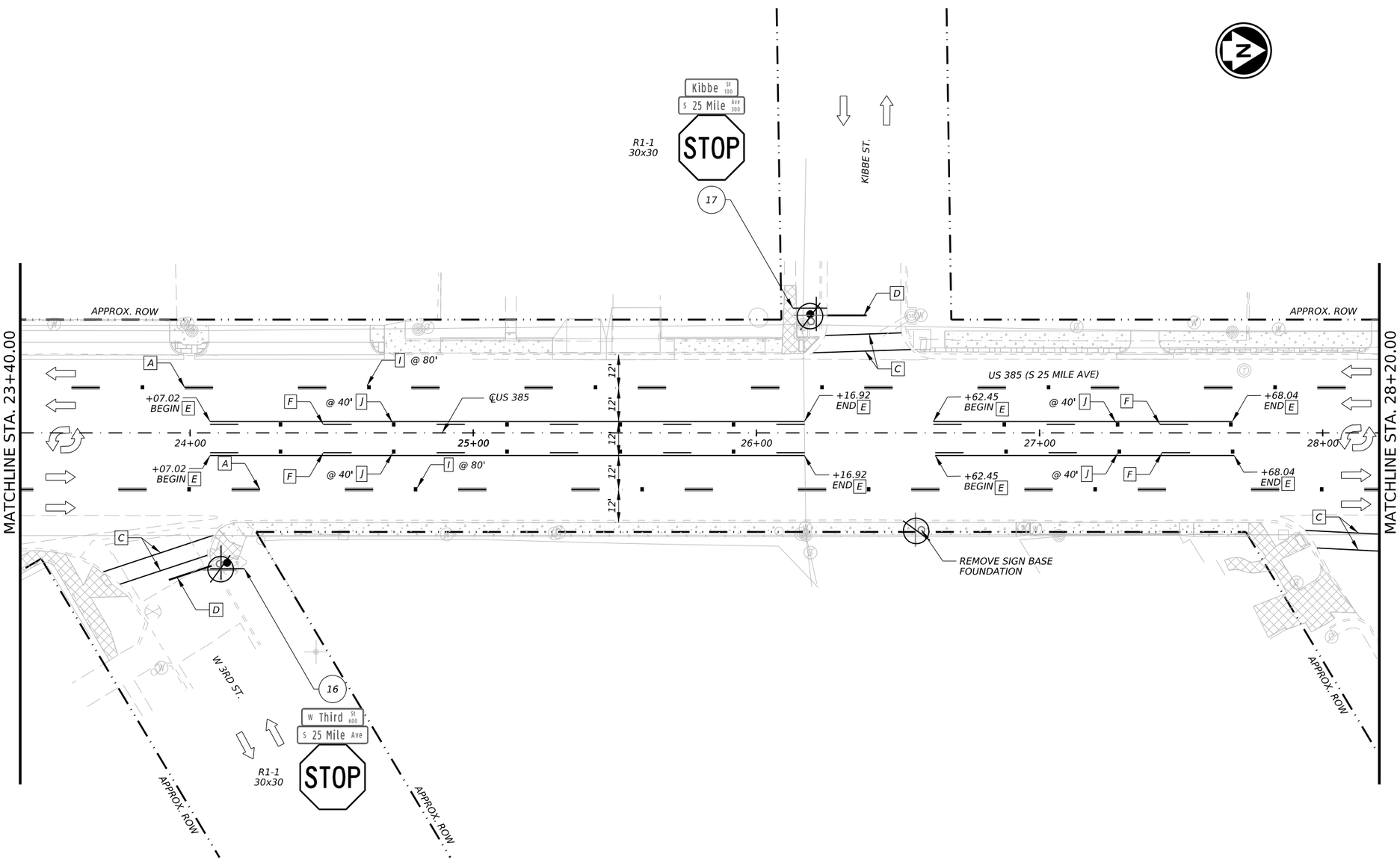

LEGEND

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- B — REFL PAV MRK TY I (W) 8" (SLD)
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- D — REFL PAV MRK TY I (W) 24" (SLD)
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- J — REFL PAV MRK TY II-A-A
- K — REFL PAV MRK TY I-C
- L — REFL PAV MRK (W) 18" (YIELD TRIANGLES)

EXIST SMALL SIGN TO REMAIN

EXIST SMALL SIGN TO BE REMOVED

PROP SMALL SIGN

PROP SMALL SIGN (BACK-TO-BACK)

[#] EXISTING SIGN ASSEMBLY TO BE REMOVED

<R#> EXISTING SIGN ASSEMBLY TO BE RELOCATED

(#) PROPOSED SMALL SIGN ASSEMBLY

EXISTING / PROPOSED MAILBOX

DIRECTION OF TRAFFIC (EXIST)

NOTES:

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STATE OF TEXAS
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100177
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PROFESSIONAL ENGINEER

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US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 23+40 TO STA 28+20

SHEET 4 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		91

DATE: 3/5/2024 12:50:15 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Traffic/US385 AEC SPM PLN 001.dgn
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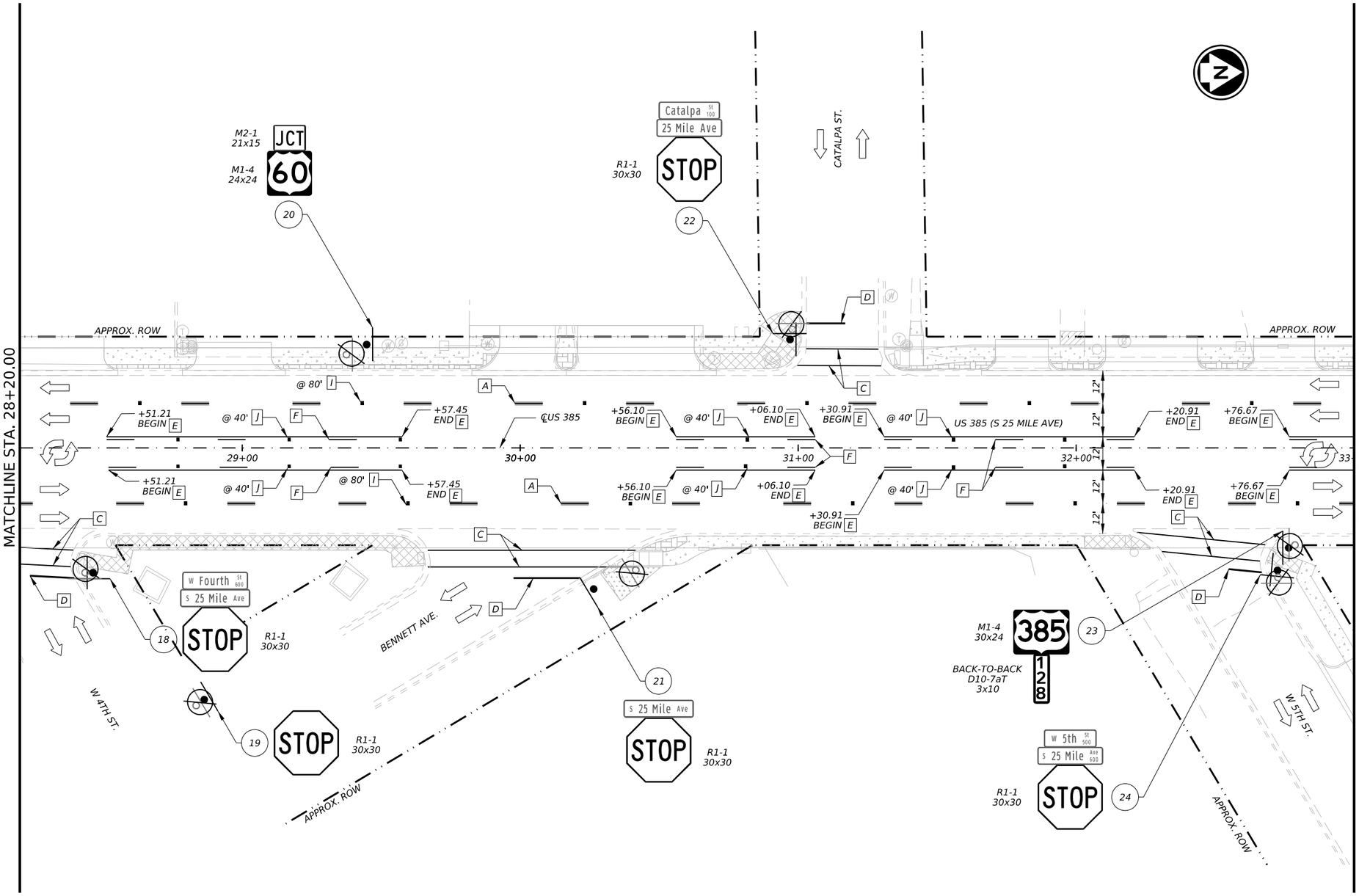

LEGEND

A	REFL PAV MRK TY B (W) 6" (BRK)
B	REFL PAV MRK TY I (W) 8" (SLD)
C	REFL PAV MRK TY I (W) 12" (SLD)
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J	REFL PAV MRK TY II-A-A
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L	REFL PAV MRK (W) 18" (YIELD TRIANGLES)
	EXIST SMALL SIGN TO REMAIN
	EXIST SMALL SIGN TO BE REMOVED
	PROP SMALL SIGN
	PROP SMALL SIGN (BACK-TO-BACK)
#	EXISTING SIGN ASSEMBLY TO BE REMOVED
R#	EXISTING SIGN ASSEMBLY TO BE RELOCATED
#	PROPOSED SMALL SIGN ASSEMBLY
	EXISTING / PROPOSED MAILBOX
	DIRECTION OF TRAFFIC (EXIST)

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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

Ernesto Salcido, P.E. 3/5/2024

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SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
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(214) 741-7777
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Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 28+20 TO STA 33+00

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		92

DATE: 3/5/2024 12:50:16 AM
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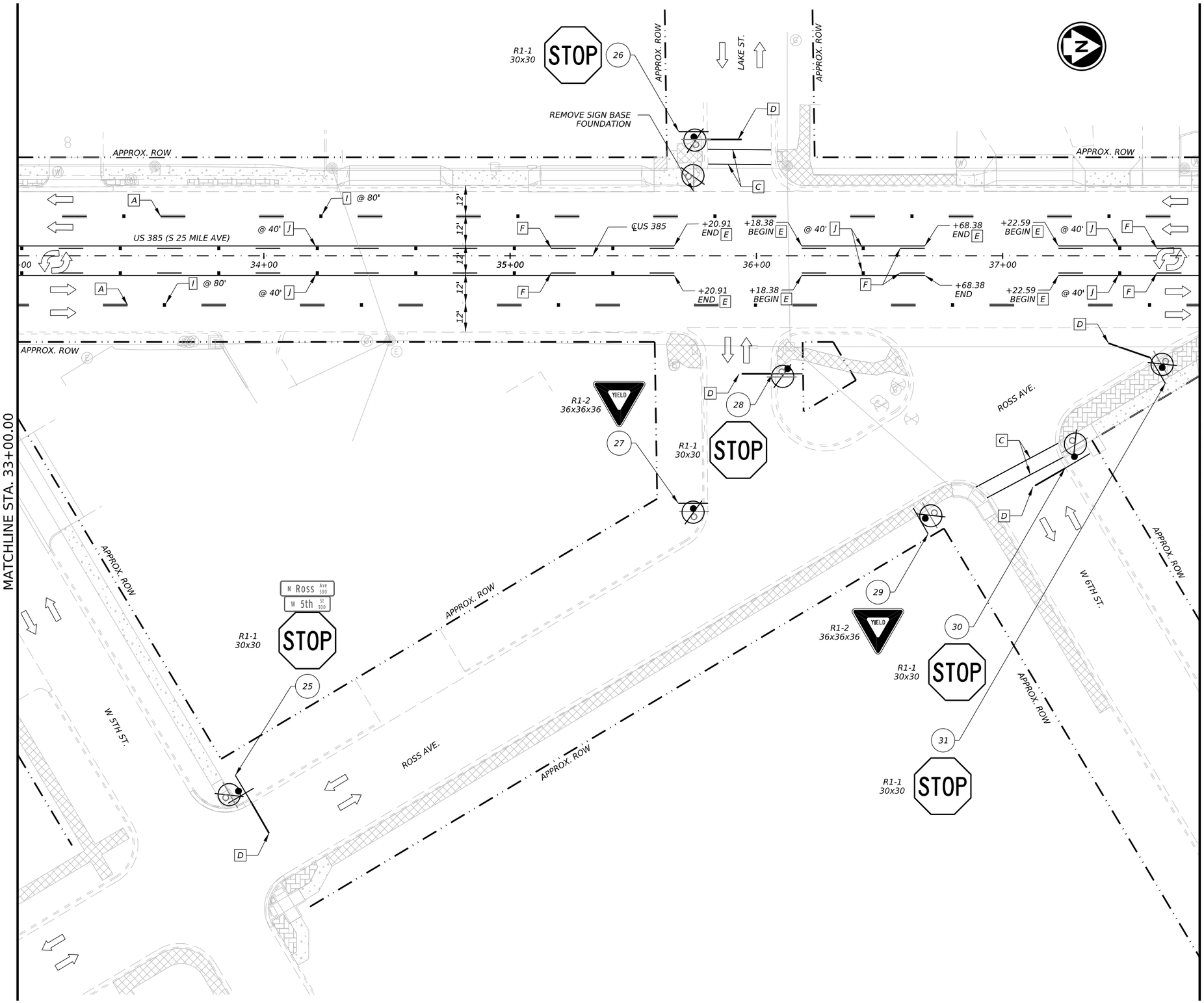

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- B — REFL PAV MRK TY I (W) 8" (SLD)
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- J — REFL PAV MRK TY II-A-A
- K — REFL PAV MRK TY I-C
- L — REFL PAV MRK (W) 18" (YIELD TRIANGLES)

- EXIST SMALL SIGN TO REMAIN
- EXIST SMALL SIGN TO BE REMOVED
- PROP SMALL SIGN
- PROP SMALL SIGN (BACK-TO-BACK)
- # — EXISTING SIGN ASSEMBLY TO BE REMOVED
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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

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SCALE IN FEET

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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 33+00 TO STA 37+80

SHEET 6 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		93

DATE: 3/5/2024 12:50:17 AM
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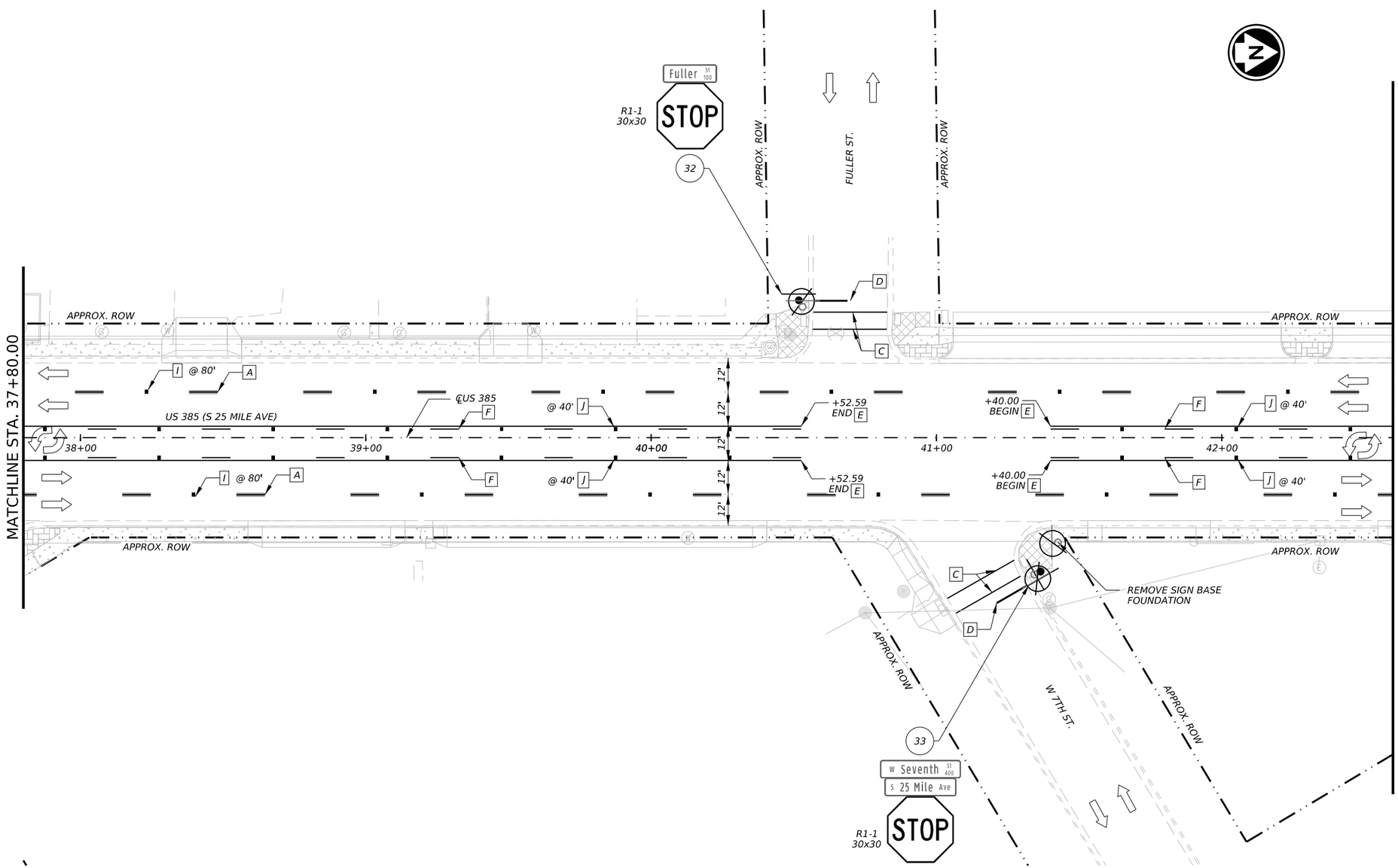
DW:
CK:



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PROFESSIONAL ENGINEER

Ernesto Salcido, P.E. 3/5/2024

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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

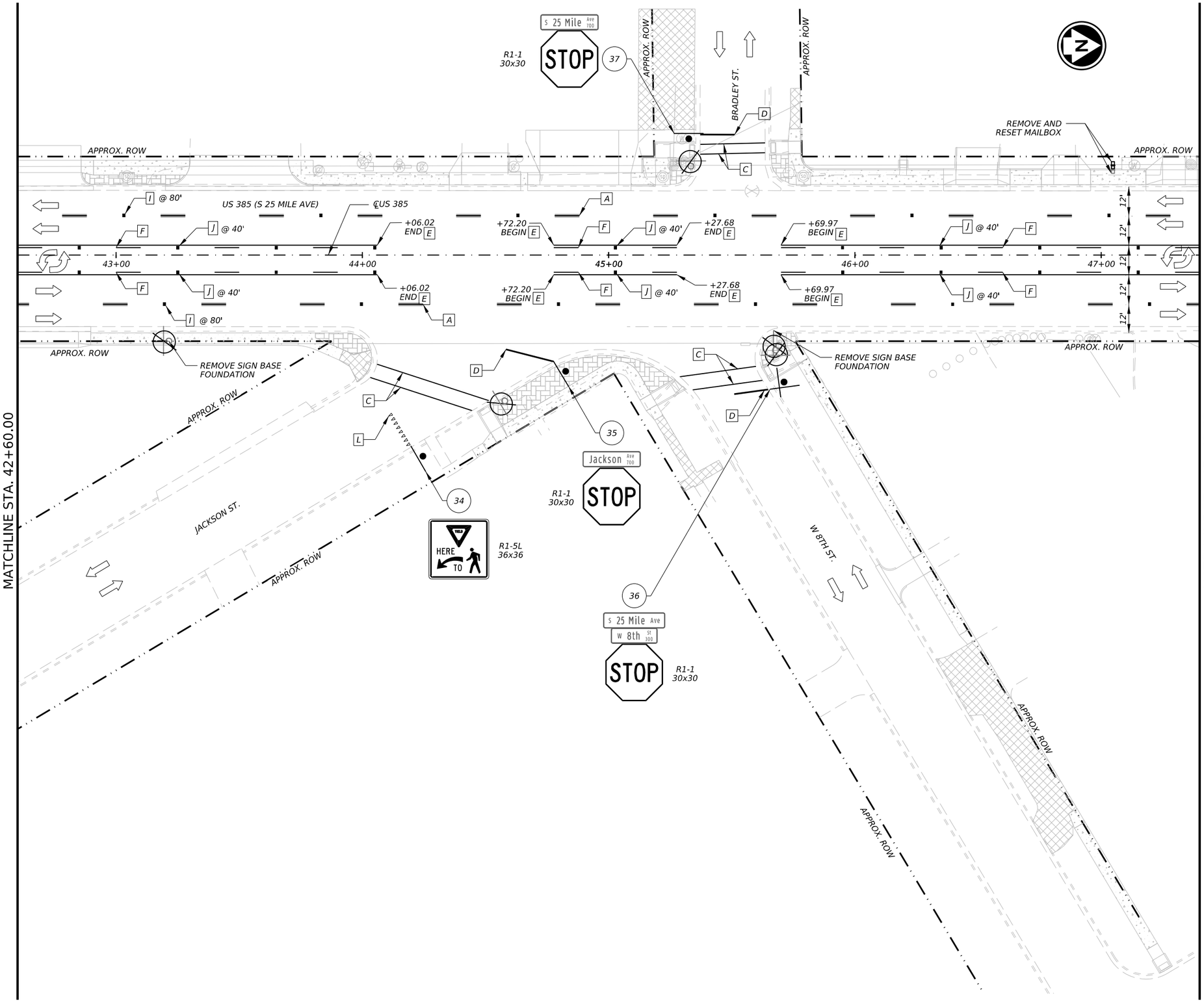
SIGNING AND PAVEMENT MARKING LAYOUT

STA 37+80 TO STA 42+60

SHEET 7 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		94

DATE: 3/5/2024 12:50:18 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Traffic/US385 AEC SPM PLN 001.dgn



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J	REFL PAV MRK TY II-A-A
K	REFL PAV MRK TY I-C
L	REFL PAV MRK (W) 18" (YIELD TRIANGLES)

EXIST SMALL SIGN TO REMAIN

EXIST SMALL SIGN TO BE REMOVED

PROP SMALL SIGN

PROP SMALL SIGN (BACK-TO-BACK)

EXISTING SIGN ASSEMBLY TO BE REMOVED

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PROPOSED SMALL SIGN ASSEMBLY

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ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

Salcido Pauwi, P.E. 3/5/2024

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SCALE IN FEET

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(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 42+60 TO STA 47+40

SHEET 8 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		95

DATE: 3/5/2024 12:50:19 AM
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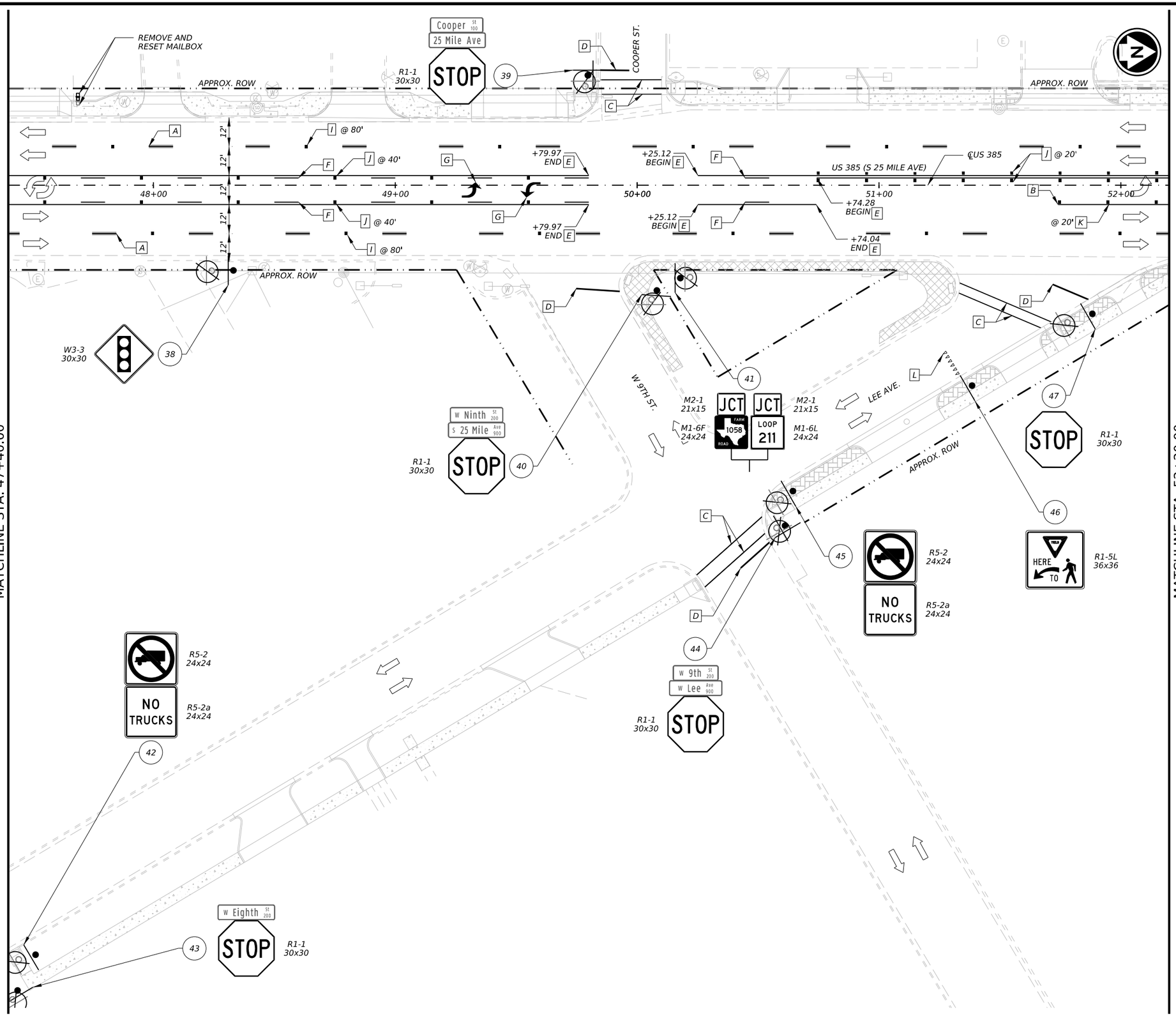
MATCHLINE STA. 47+40.00



MATCHLINE STA. 52+20.00

LEGEND

- A — REFL PAV MRK TY B (W) 6" (BRK)
- B — REFL PAV MRK TY I (W) 8" (SLD)
- C — REFL PAV MRK TY I (W) 12" (SLD)
- D — REFL PAV MRK TY I (W) 24" (SLD)
- E — REFL PAV MRK TY I (Y) 6" (SLD)
- F — REFL PAV MRK TY I (Y) 6" (BRK)
- G — REFL PAV MRK TY I (W) (ARROW)
- H — REFL PAV MRK TY I (W) (WORD)
- I — REFL PAV MRK TY II-C-R
- J — REFL PAV MRK TY II-A-A
- K — REFL PAV MRK TY I-C
- L — REFL PAV MRK (W) 18" (YIELD TRIANGLES)
- EXIST SMALL SIGN TO REMAIN
- EXIST SMALL SIGN TO BE REMOVED
- PROP SMALL SIGN
- PROP SMALL SIGN (BACK-TO-BACK)
- # — EXISTING SIGN ASSEMBLY TO BE REMOVED
- R# — EXISTING SIGN ASSEMBLY TO BE RELOCATED
- # — PROPOSED SMALL SIGN ASSEMBLY
- EXISTING / PROPOSED MAILBOX
- DIRECTION OF TRAFFIC (EXIST)

NOTES:

1. DURING CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO RELOCATE ALL EXISTING STREET NAME SIGNS AND REATTACH THEM TO THE TOP OF THE STOP SIGNS ON MINOR SIDE STREETS. IF NECESSARY, NEW POST-TOP SIGN BRACKETS MAY BE NEEDED TO MATCH THE EXISTING POST DIAMETER.THESE BRACKETS AND ANY OTHER RELATED COMPONENTS SHOULD BE CONSIDERED SUBSIDIARY TO ITEM 644.
2. THE SIGN POLE LENGTH MUST BE OF ADEQUATE LENGTH TO ACCOMMODATE THE EXISTING STREET NAME SIGNS, STOP SIGN, AND MEET HEIGHT CLEARANCE.
3. PROVIDE CONTINUOUS DIAMOND GRINDING ALONG ALL CONCRETE PAVEMENT SECTIONS AND THROUGH LANES FOR THE ENTIRE LENGTH OF THE PROJECT, WITH THE EXCEPTION OF THE TWLTL.
4. DURING INSTALLATION, SIGNS MAY BE SHIFTED IN THE FIELD TO A MORE DESIRABLE LOCATION TO AVOID UTILITIES AND OTHER CONFLICTS. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ADJUSTMENTS WITH THE ENGINEER.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER
Salcido Ramos, P.E. 3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 47+40 TO STA 52+20

SHEET 9 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		96

DATE: 3/5/2024 12:50:19 AM
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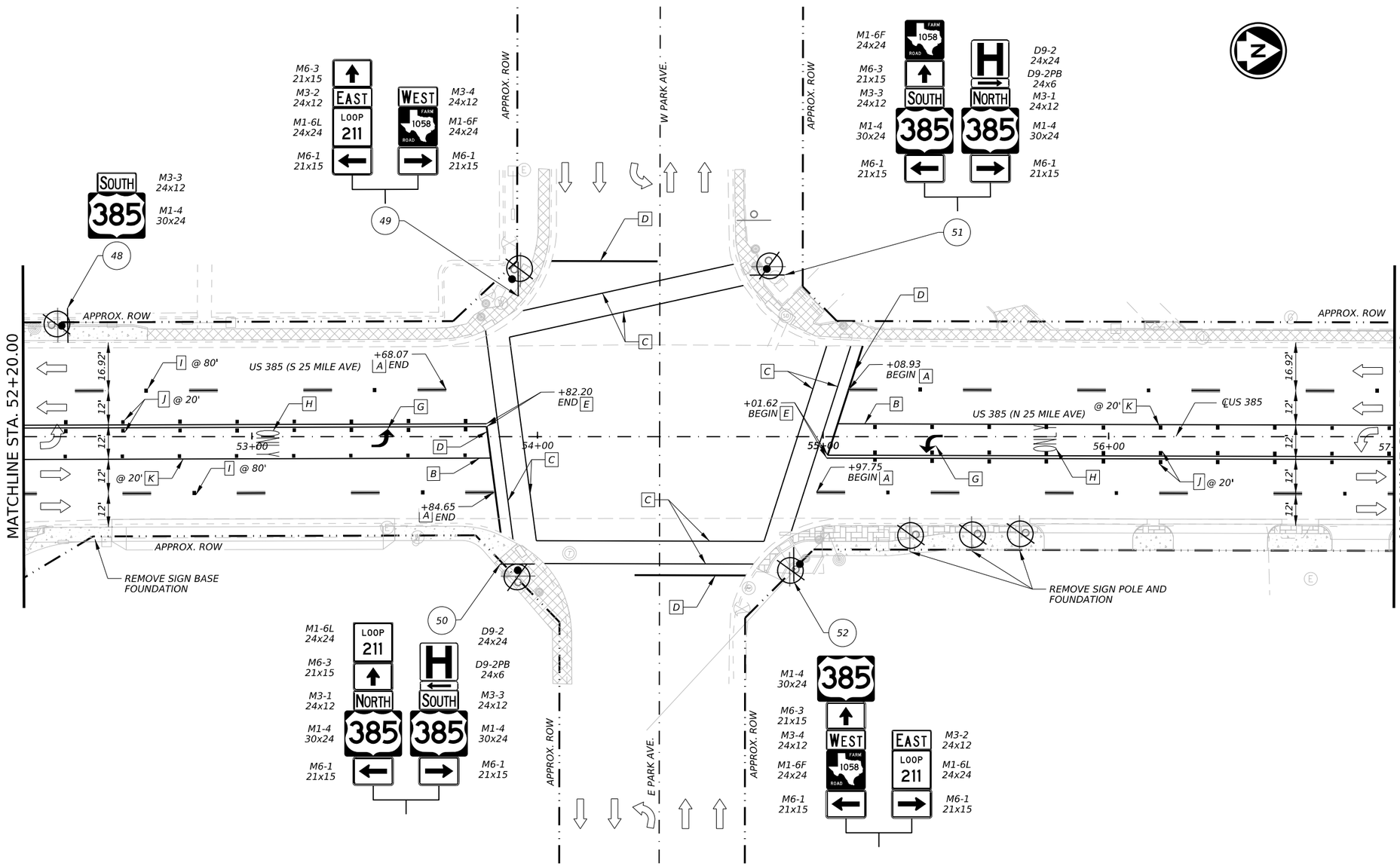

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C	REFL PAV MRK TY I (W) 12" (SLD)
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J	REFL PAV MRK TY II-A-A
K	REFL PAV MRK TY I-C
L	REFL PAV MRK (W) 18" (YIELD TRIANGLES)

EXIST SMALL SIGN TO REMAIN

EXIST SMALL SIGN TO BE REMOVED

PROP SMALL SIGN

PROP SMALL SIGN (BACK-TO-BACK)

EXISTING SIGN ASSEMBLY TO BE REMOVED

R# EXISTING SIGN ASSEMBLY TO BE RELOCATED

PROPOSED SMALL SIGN ASSEMBLY

EXISTING / PROPOSED MAILBOX

DIRECTION OF TRAFFIC (EXIST)

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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

Salcido Fauvin, P.E. 3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 52+20 TO STA 57+00

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		97

DATE: 3/5/2024 12:50:20 AM
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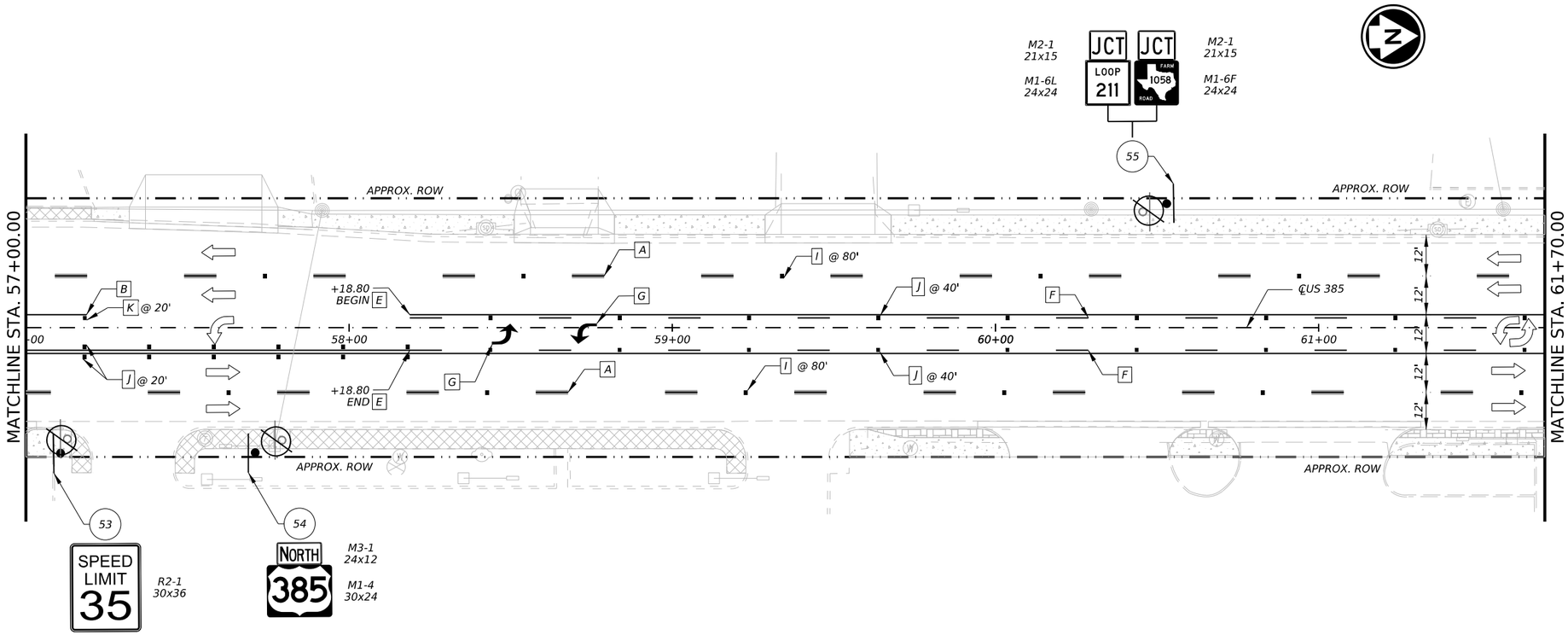

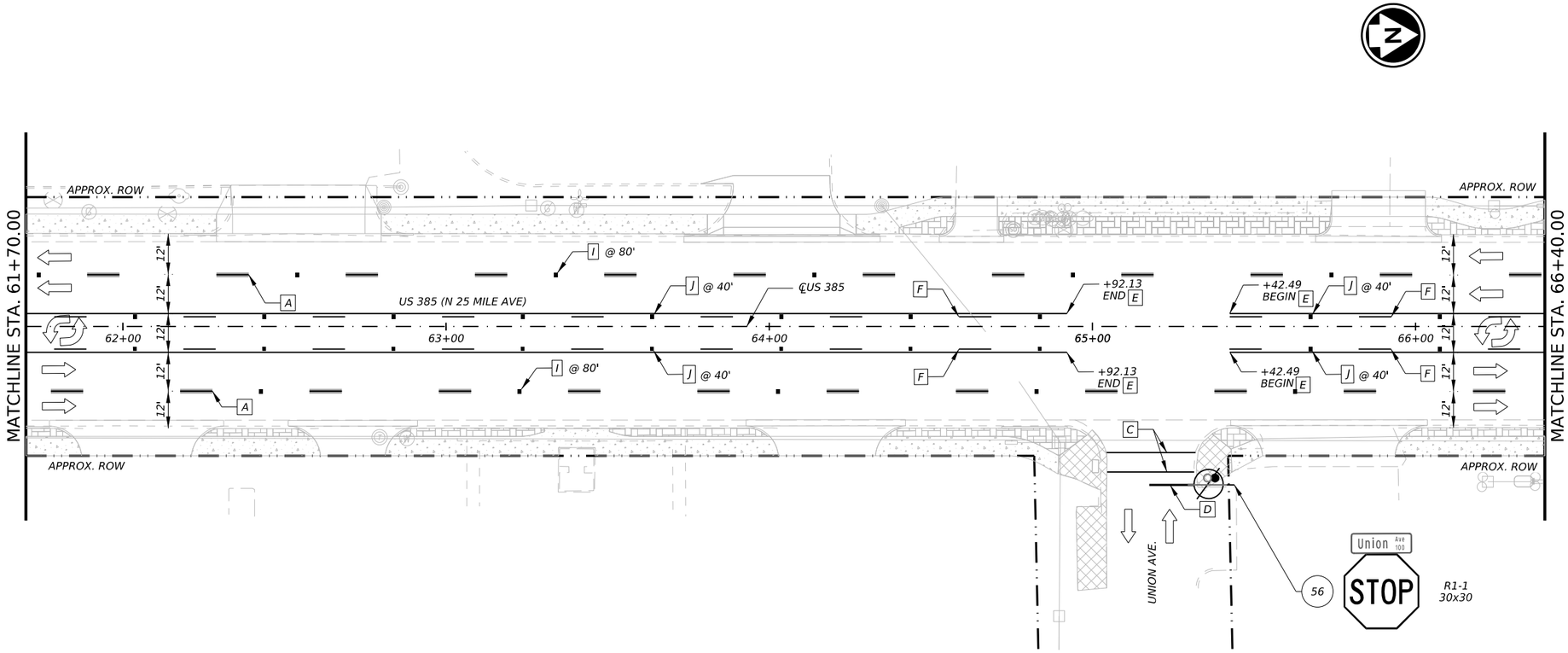

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- L — REFL PAV MRK (W) 18" (YIELD TRIANGLES)

EXIST SMALL SIGN TO REMAIN

EXIST SMALL SIGN TO BE REMOVED

PROP SMALL SIGN

PROP SMALL SIGN (BACK-TO-BACK)

— EXISTING SIGN ASSEMBLY TO BE REMOVED

R# — EXISTING SIGN ASSEMBLY TO BE RELOCATED

— PROPOSED SMALL SIGN ASSEMBLY

EXISTING / PROPOSED MAILBOX

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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

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SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 57+00 TO STA 66+40

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		98

DATE: 3/5/2024 12:50:21 AM
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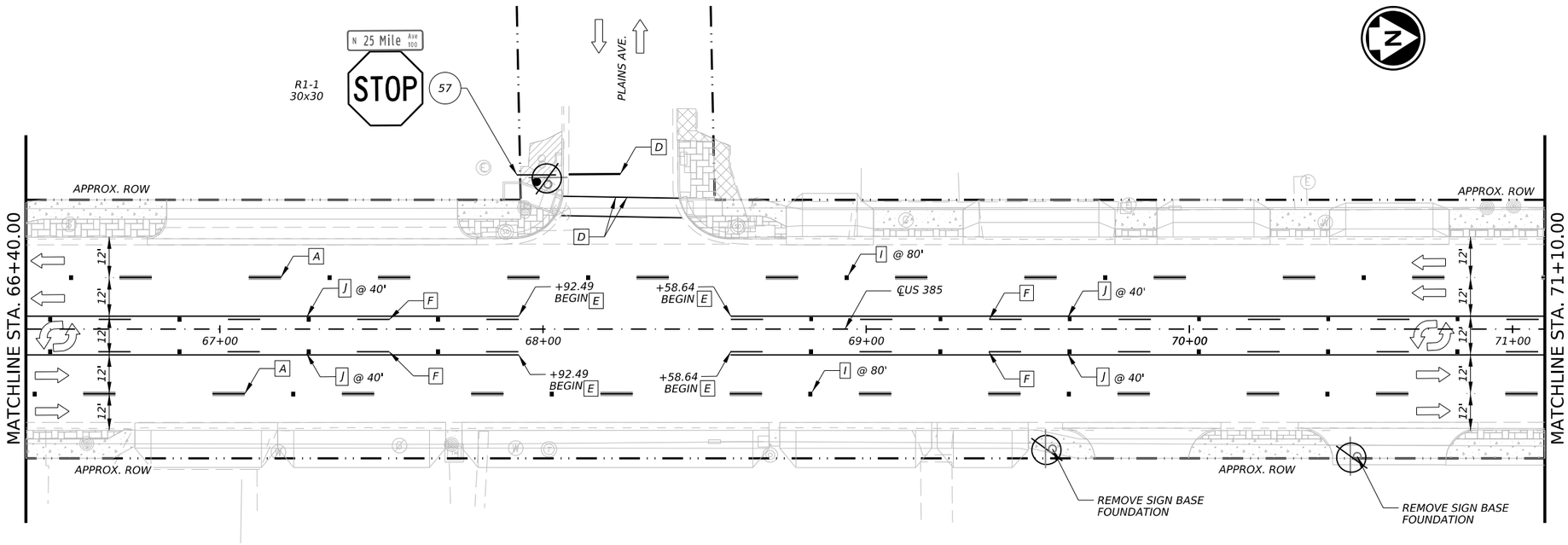

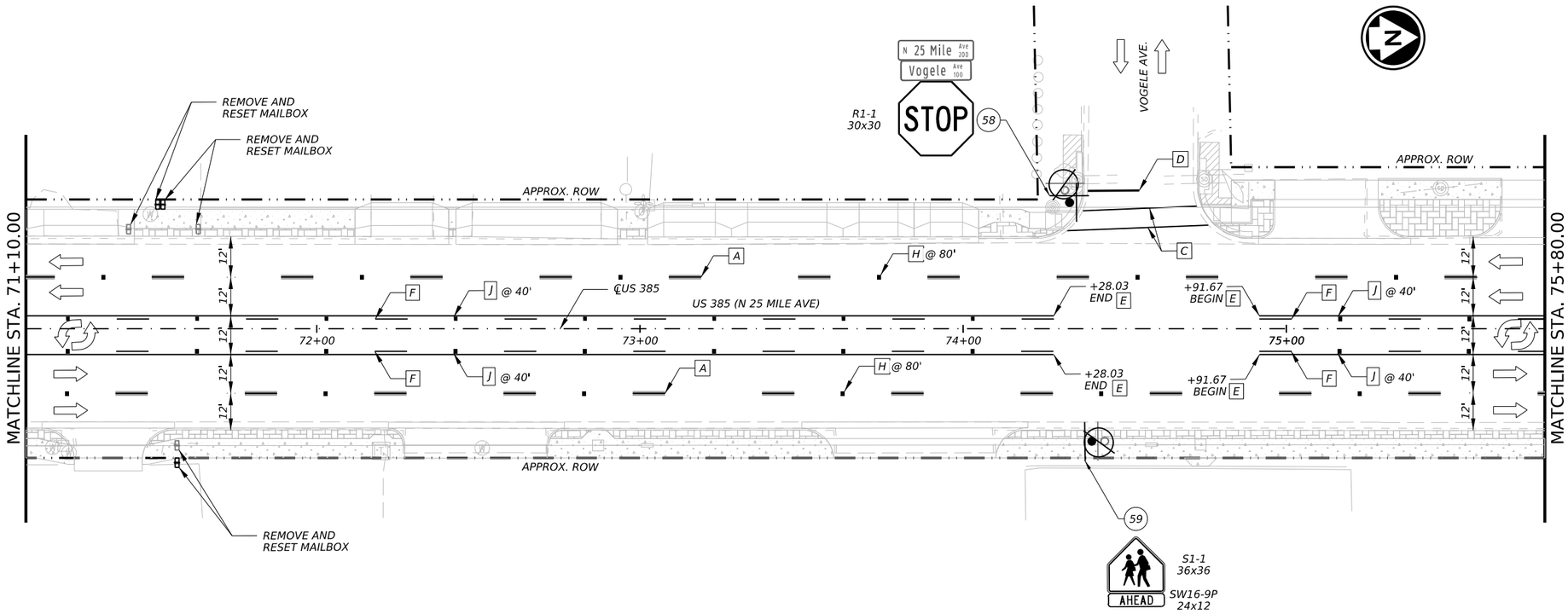

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- J — REFL PAV MRK TY II-A-A
- K — REFL PAV MRK TY I-C
- L — REFL PAV MRK (W) 18" (YIELD TRIANGLES)

- EXIST SMALL SIGN TO REMAIN
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- PROP SMALL SIGN
- PROP SMALL SIGN (BACK-TO-BACK)
- # — EXISTING SIGN ASSEMBLY TO BE REMOVED
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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 66+40 TO STA 75+80

SHEET 12 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		99

DATE: 3/5/2024 12:50:22 AM
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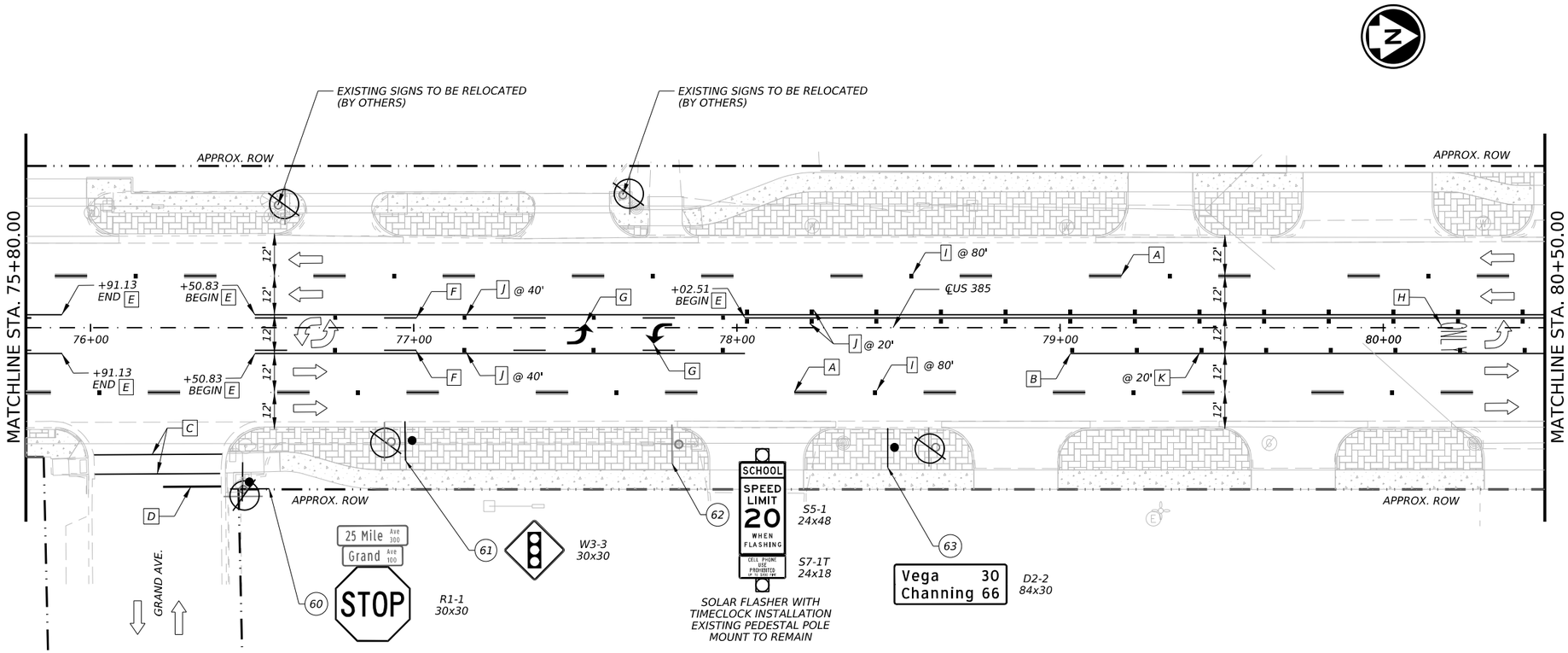

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- J REFL PAV MRK TY II-A-A
- K REFL PAV MRK TY I-C
- L REFL PAV MRK (W) 18" (YIELD TRIANGLES)

- EXIST SMALL SIGN TO REMAIN
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- PROP SMALL SIGN
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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER
3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 75+80 TO STA 85+20

SHEET 13 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		100

DATE: 3/5/2024 12:50:23 AM
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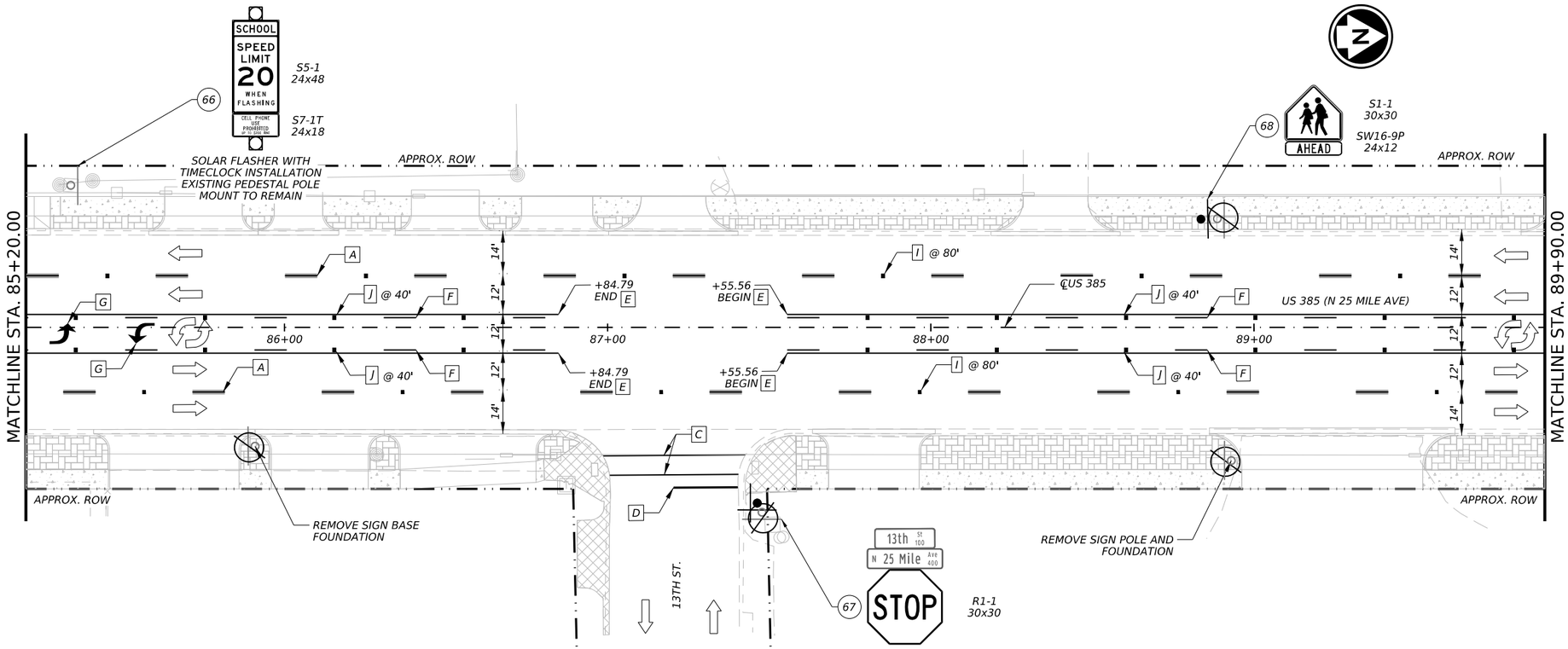

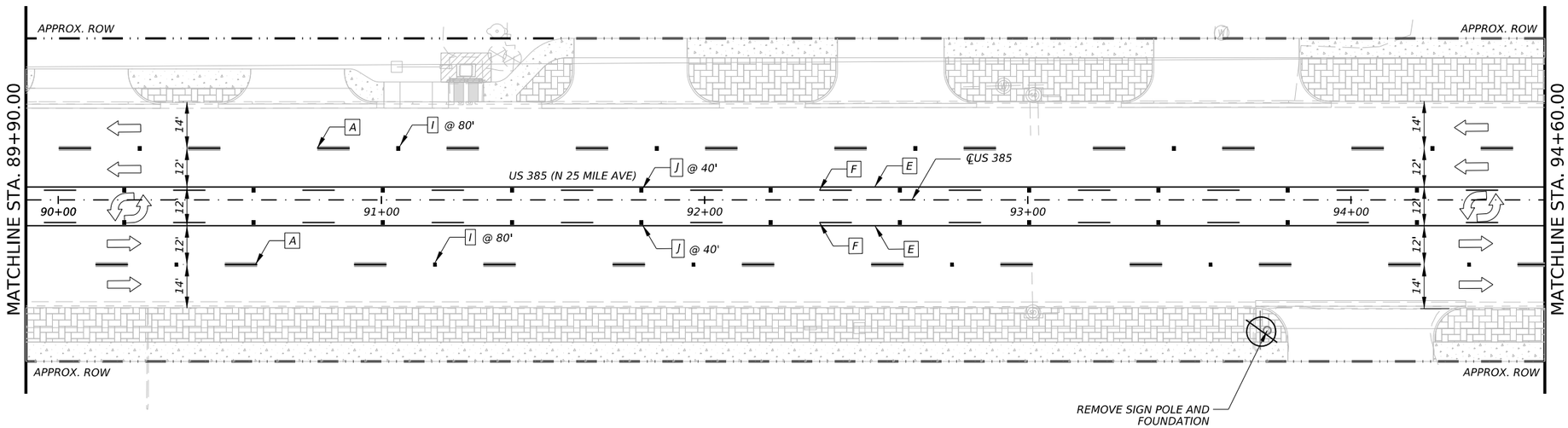

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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER
3/5/2024

0 20 40
SCALE IN FEET

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

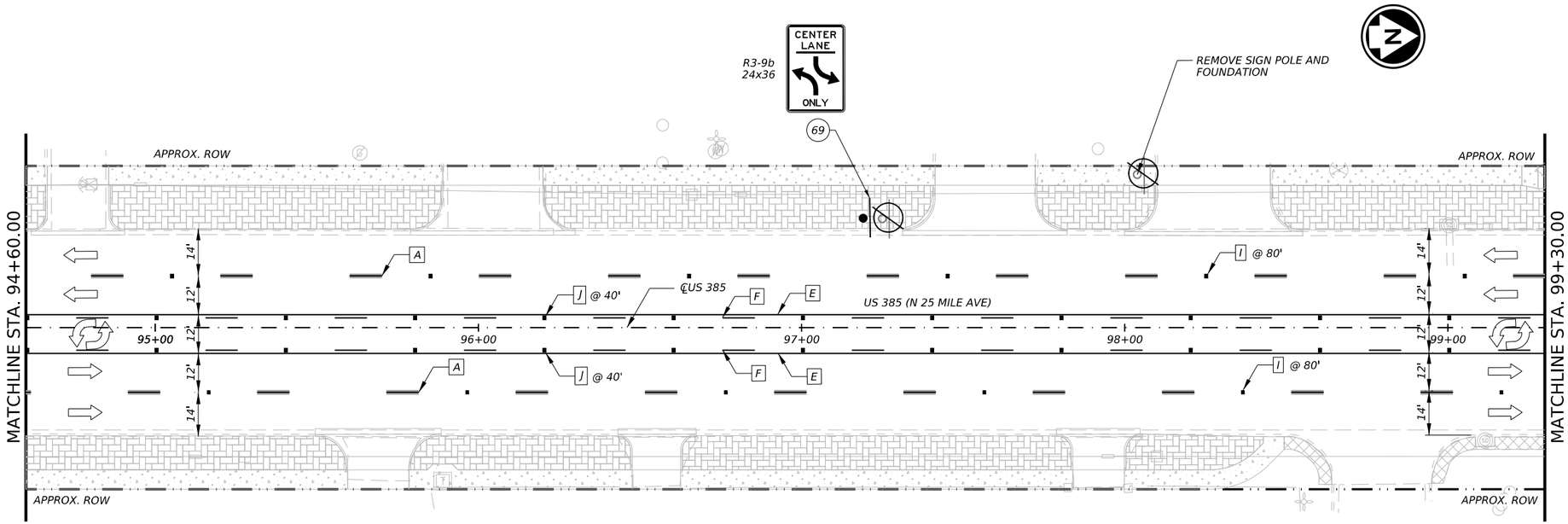
SIGNING AND PAVEMENT MARKING LAYOUT

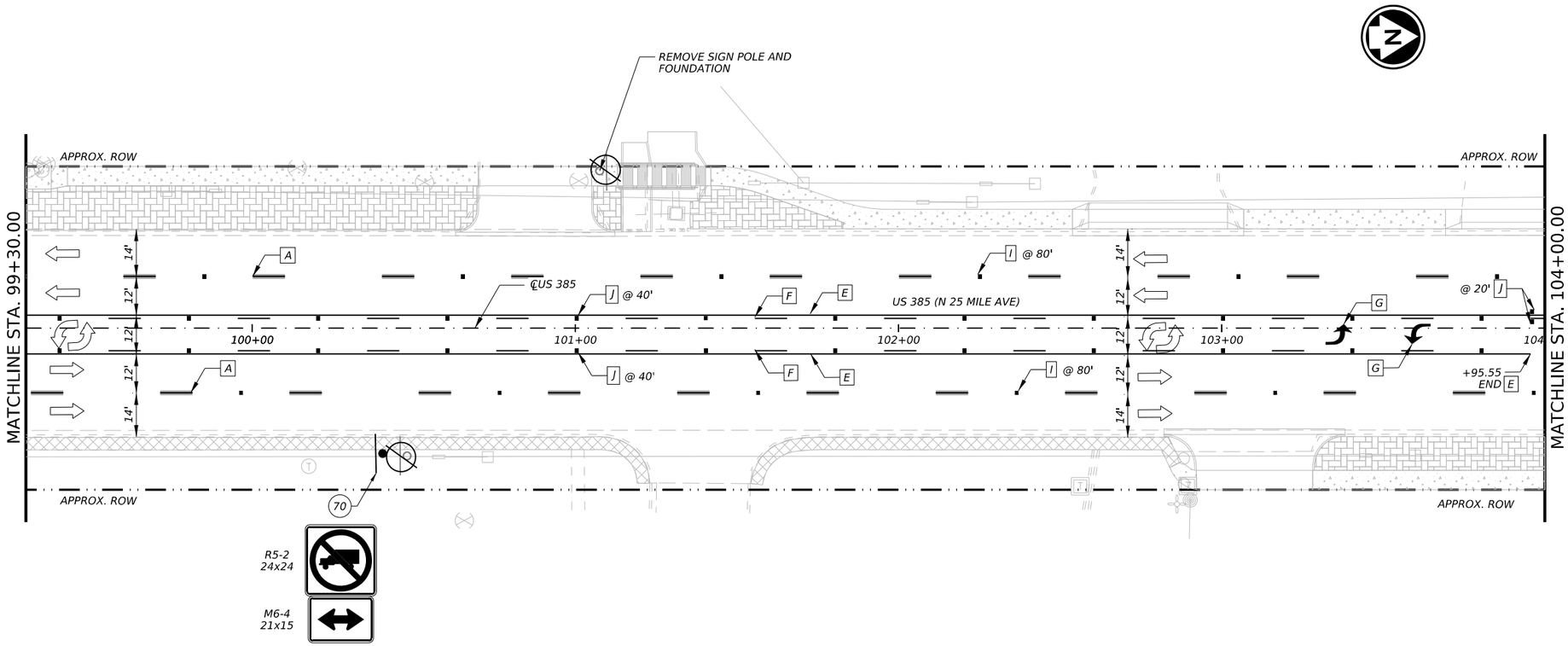
STA 85+20 TO STA 94+60

SHEET 14 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		101

DATE: 3/5/2024 12:50:24 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/US385/Traffic/US385_AEC_SPM_PLN_001.dgn





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100177
LICENSED
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3/5/2024

0 20 40
SCALE IN FEET

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(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

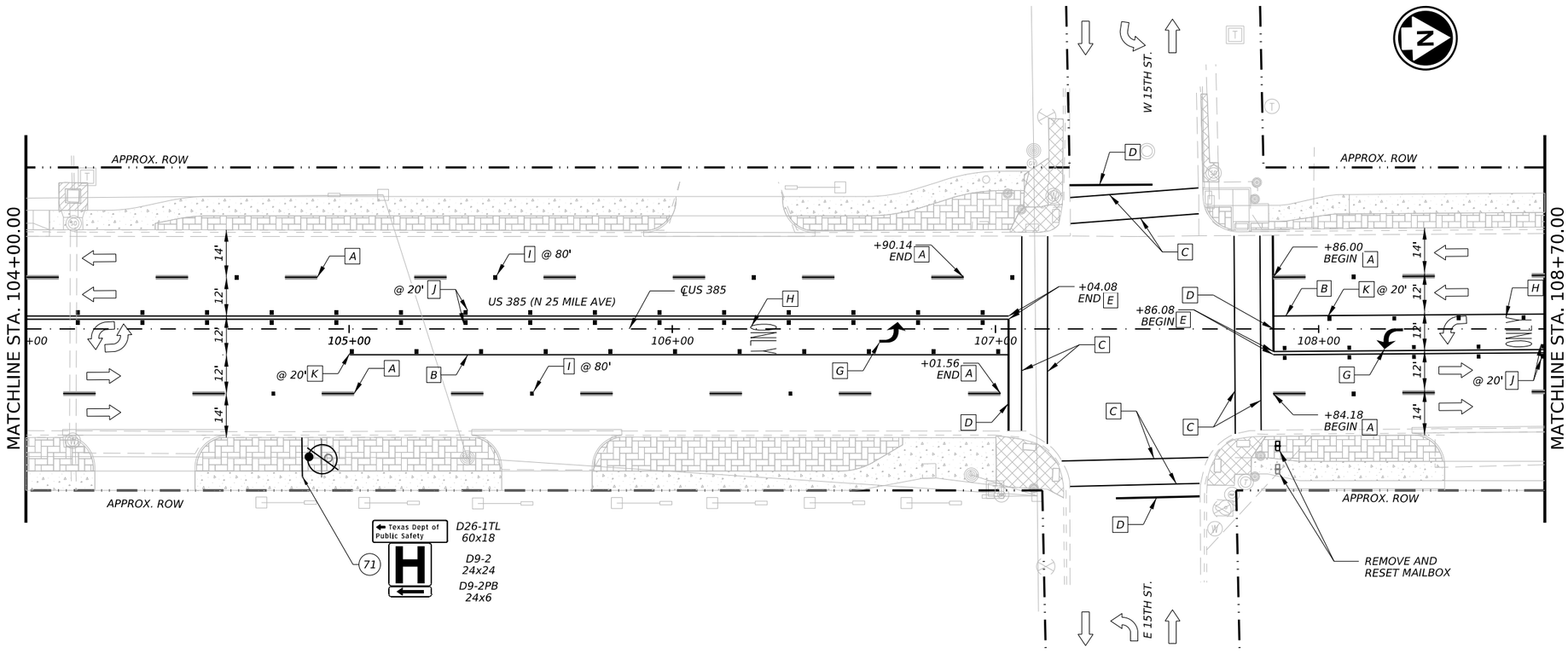
SIGNING AND PAVEMENT MARKING LAYOUT

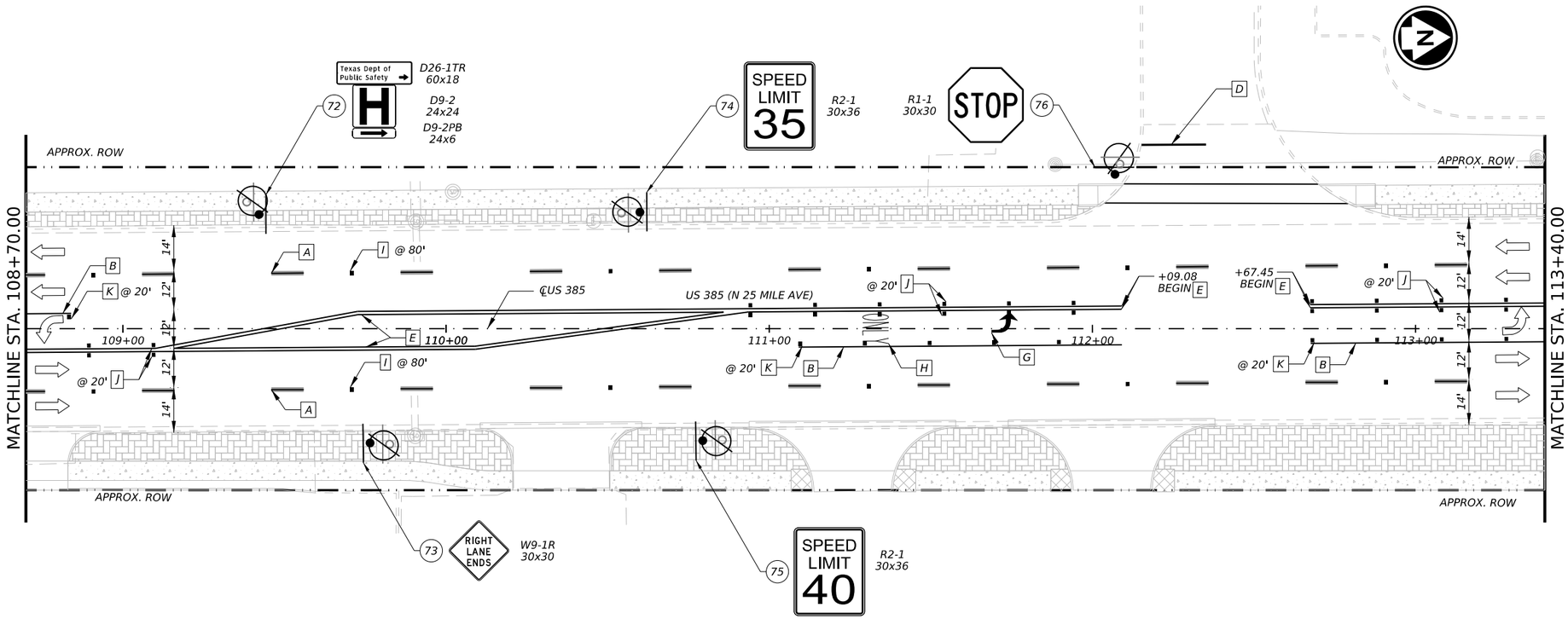
STA 94+60 TO STA 104+00

SHEET 15 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		102

DATE: 3/5/2024 12:50:25 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/US385/Traffic/US385_AEC_SPM_PLN_0015.dgn
CK DW CK





LEGEND

A	REFL PAV MRK TY B (W) 6" (BRK)
B	REFL PAV MRK TY I (W) 8" (SLD)
C	REFL PAV MRK TY I (W) 12" (SLD)
D	REFL PAV MRK TY I (W) 24" (SLD)
E	REFL PAV MRK TY I (Y) 6" (SLD)
F	REFL PAV MRK TY I (Y) 6" (BRK)
G	REFL PAV MRK TY I (W) (ARROW)
H	REFL PAV MRK TY I (W) (WORD)
I	REFL PAV MRK TY II-C-R
J	REFL PAV MRK TY II-A-A
K	REFL PAV MRK TY I-C
L	REFL PAV MRK (W) 18" (YIELD TRIANGLES)

EXIST SMALL SIGN TO REMAIN

EXIST SMALL SIGN TO BE REMOVED

PROP SMALL SIGN

PROP SMALL SIGN (BACK-TO-BACK)

EXISTING SIGN ASSEMBLY TO BE REMOVED

R# EXISTING SIGN ASSEMBLY TO BE RELOCATED

PROPOSED SMALL SIGN ASSEMBLY

EXISTING / PROPOSED MAILBOX

DIRECTION OF TRAFFIC (EXIST)

NOTES:

1. DURING CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO RELOCATE ALL EXISTING STREET NAME SIGNS AND REATTACH THEM TO THE TOP OF THE STOP SIGNS ON MINOR SIDE STREETS. IF NECESSARY, NEW POST-TOP SIGN BRACKETS MAY BE NEEDED TO MATCH THE EXISTING POST DIAMETER.THESE BRACKETS AND ANY OTHER RELATED COMPONENTS SHOULD BE CONSIDERED SUBSIDIARY TO ITEM 644.
2. THE SIGN POLE LENGTH MUST BE OF ADEQUATE LENGTH TO ACCOMMODATE THE EXISTING STREET NAME SIGNS, STOP SIGN, AND MEET HEIGHT CLEARANCE.
3. PROVIDE CONTINUOUS DIAMOND GRINDING ALONG ALL CONCRETE PAVEMENT SECTIONS AND THROUGH LANES FOR THE ENTIRE LENGTH OF THE PROJECT, WITH THE EXCEPTION OF THE TWLTL.
4. DURING INSTALLATION, SIGNS MAY BE SHIFTED IN THE FIELD TO A MORE DESIRABLE LOCATION TO AVOID UTILITIES AND OTHER CONFLICTS. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ADJUSTMENTS WITH THE ENGINEER.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER

3/5/2024

0 20 40
SCALE IN FEET

AECOM
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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

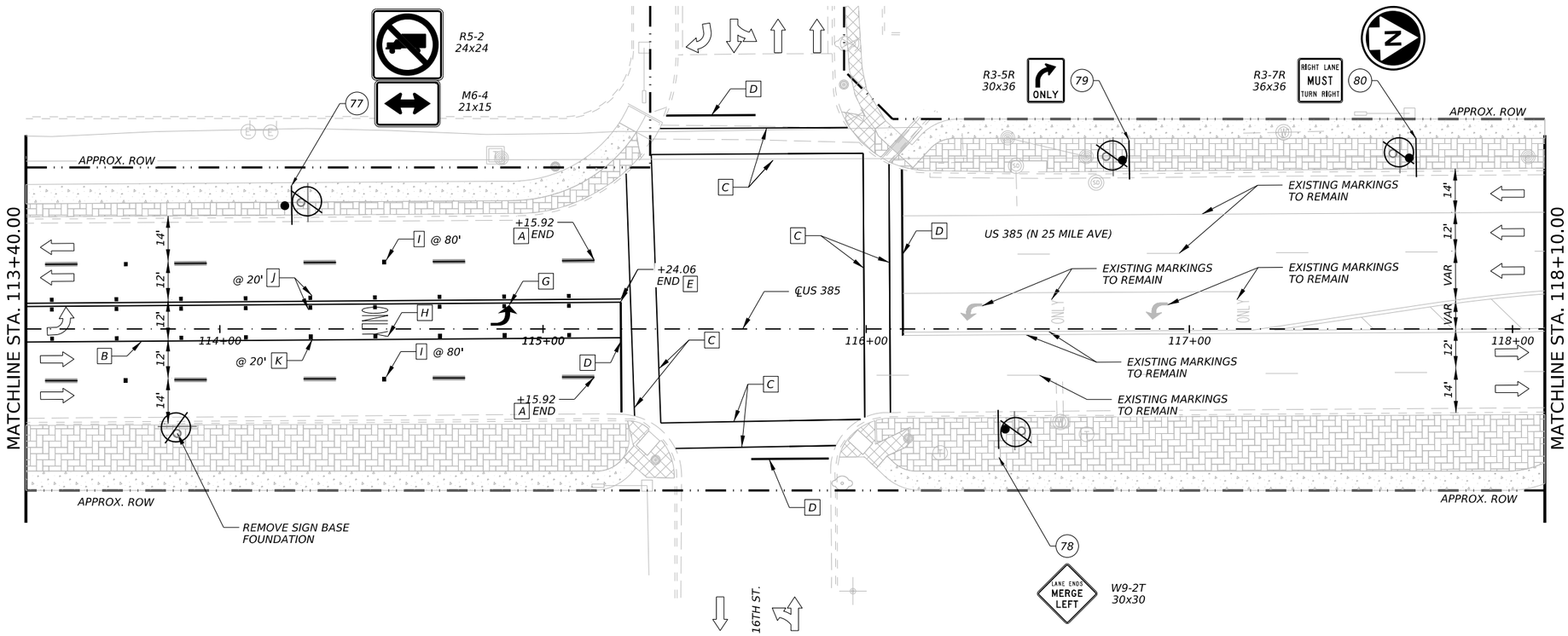
SIGNING AND PAVEMENT MARKING LAYOUT

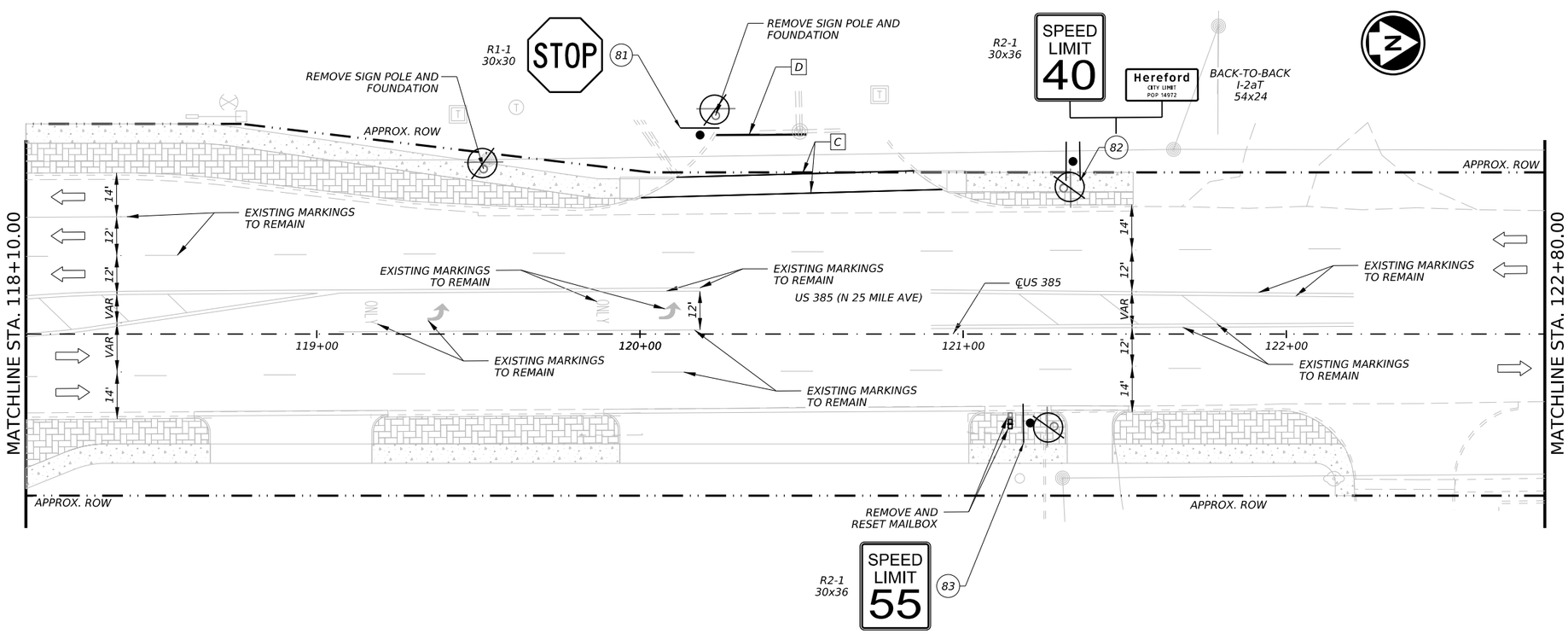
STA 104+00 TO STA 113+40

SHEET 16 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		103

DATE: 3/5/2024 12:50:26 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/US385/Traffic/US385_AEC_SPM_PLN_0016.dgn
CK DW CK





LEGEND

- A — REFL PAV MRK TY B (W) 6" (BRK)
- B — REFL PAV MRK TY I (W) 8" (SLD)
- C — REFL PAV MRK TY I (W) 12" (SLD)
- D — REFL PAV MRK TY I (W) 24" (SLD)
- E — REFL PAV MRK TY I (Y) 6" (SLD)
- F — REFL PAV MRK TY I (Y) 6" (BRK)
- G — REFL PAV MRK TY I (W) (ARROW)
- H — REFL PAV MRK TY I (W) (WORD)
- I — REFL PAV MRK TY II-C-R
- J — REFL PAV MRK TY II-A-A
- K — REFL PAV MRK TY I-C
- L — REFL PAV MRK (W) 18" (YIELD TRIANGLES)

- EXIST SMALL SIGN TO REMAIN
- EXIST SMALL SIGN TO BE REMOVED
- PROP SMALL SIGN
- PROP SMALL SIGN (BACK-TO-BACK)
- # — EXISTING SIGN ASSEMBLY TO BE REMOVED
- R# — EXISTING SIGN ASSEMBLY TO BE RELOCATED
- # — PROPOSED SMALL SIGN ASSEMBLY
- EXISTING / PROPOSED MAILBOX
- DIRECTION OF TRAFFIC (EXIST)

NOTES:

1. DURING CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO RELOCATE ALL EXISTING STREET NAME SIGNS AND REATTACH THEM TO THE TOP OF THE STOP SIGNS ON MINOR SIDE STREETS. IF NECESSARY, NEW POST-TOP SIGN BRACKETS MAY BE NEEDED TO MATCH THE EXISTING POST DIAMETER.THESE BRACKETS AND ANY OTHER RELATED COMPONENTS SHOULD BE CONSIDERED SUBSIDIARY TO ITEM 644.
2. THE SIGN POLE LENGTH MUST BE OF ADEQUATE LENGTH TO ACCOMMODATE THE EXISTING STREET NAME SIGNS, STOP SIGN, AND MEET HEIGHT CLEARANCE.
3. PROVIDE CONTINUOUS DIAMOND GRINDING ALONG ALL CONCRETE PAVEMENT SECTIONS AND THROUGH LANES FOR THE ENTIRE LENGTH OF THE PROJECT, WITH THE EXCEPTION OF THE TWLTL.
4. DURING INSTALLATION, SIGNS MAY BE SHIFTED IN THE FIELD TO A MORE DESIRABLE LOCATION TO AVOID UTILITIES AND OTHER CONFLICTS. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ADJUSTMENTS WITH THE ENGINEER.

3/5/2024

0 20 40

SCALE IN FEET

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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SIGNING AND PAVEMENT MARKING LAYOUT

STA 113+40 TO STA 122+80

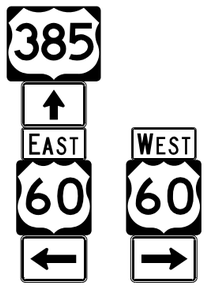
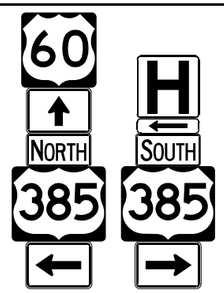
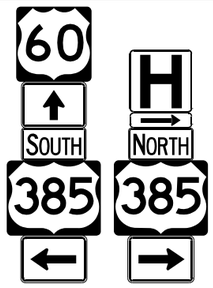
SHEET 17 OF 17

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		104

DATE: 3/5/2024 12:50:27 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/US385/Traffic/US385_AEC_SPM_PLN_001.dgn
CK DW 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"	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 17	1	R7-1DBL		12x18	X		10BWG	1	SA	P		
1 OF 17	2	R3-9b		24x36	X		10BWG	1	SA	P		
2 OF 17	3	(3)M1-4 M6-3 M3-2 M3-4 (2)M6-1		30x24 (2)24x12 (2)24x24 (3)21x15	X X X X		SCH80	1	SA	U	1EXT	
2 OF 17	4	(3)M1-4 M6-3 M3-3 (2)M6-1 D9-2 D9-2PB M3-1		(2)30x24 (2)24x12 (2)24x24 (3)21x15 24x6	X X X X X		SCH80	1	SA	U	2EXT	
2 OF 17	5	(3)M1-4 M6-3 M3-1 (2)M6-1 D9-2 D9-2PB M3-3		(2)30x24 (2)24x12 (2)24x24 (3)21x15 24x6	X X X X X		SCH80	1	SA	U	2EXT	
2 OF 17	6	R1-1		30x30	X		10BWG	1	SA	P	BM	

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.100"
7.5 or Greater	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).

3/5/2024

Salcido Ramos, P.E.

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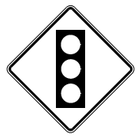
Texas Department of Transportation

US 385

SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		105

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 PREFABRICATED	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
							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"		TY N TY S
2 OF 17	7	D1-2		72X30	X		S80	1	SA	T		
3 OF 17	8	M3-1		24x12	X		10BWG	1	SA	P		
		M1-4		30x24	X							
3 OF 17	9	N/A		EXISTING	X							
		N/A		SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
3 OF 17	10	R2-1		30x36	X		10BWG	1	SA	T		
3 OF 17	11	N/A		EXISTING	X							
		N/A		SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
3 OF 17	12	W3-3		30x36	X		10BWG	1	SA	T		

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.100"
7.5 or Greater	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).

3/5/2024

Salcido Pavon, P.E.

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Texas Department of Transportation

US 385

SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		106

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"	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
3 OF 17	13	D9-2		24x24	X		10BWG	1	SA	P		
3 OF 17	14	R7-221		12X18	X		10BWG	1	SA	P		
		R5-2		24X24	X							
3 OF 17	15	N/A		RELOCATED	X		10BWG	1	SA	P	BM	
		N/A		EXISTING SIGNS	X							
		R1-1		30x30	X							
4 OF 17	16	N/A		EXISTING	X		10BWG	1	SA	P	BM	
		N/A		SIGNS	X							
		R1-1		30x30	X							
4 OF 17	17	N/A		EXISTING	X		10BWG	1	SA	P	BM	
		N/A		SIGNS	X							
		R1-1		30x30	X							

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.100"
7.5 or Greater	0.125"

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

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NOTE:

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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).

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

Salcido Fauvin, P.E.

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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		107

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"	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
5 OF 17	18	N/A		EXISTING	X		10BWG	1	SA	P	BM	
		N/A		SIGNS	X							
		R1-1		30x30	X							
5 OF 17	19	R1-1		30x30	X		10BWG	1	SA	P	BM	
5 OF 17	20	M2-1		24x12	X		10BWG	1	SA	P		
		M1-4		30x24	X							
5 OF 17	21	N/A		EXISTING SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
5 OF 17	22	N/A		EXISTING	X		10BWG	1	SA	P	BM	
		N/A		SIGNS	X							
		R1-1		30x30	X							
5 OF 17	23	M1-4		30x24	X		10BWG	1	SA	P		
		D10-7aT		3X10	X							
				3X10	X							

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.100"
7.5 or Greater	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.
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STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

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Texas Department of Transportation

US 385

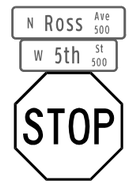
SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		108

DATE: 3/5/2024 12:52:35 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Traffic/US385 AEC SN SOSS 001.dgn

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"	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
5 OF 17	24	N/A		EXISTING	X							
		N/A		SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
6 OF 17	25	N/A		EXISTING	X							
		N/A		SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
6 OF 17	26	R1-1		30x30	X		10BWG	1	SA	P	BM	
6 OF 17	27	R1-2		36X36x36	X		10BWG	1	SA	T		
6 OF 17	28	R1-1		30x30	X		10BWG	1	SA	P	BM	
6 OF 17	29	R1-2		36X36x36	X		10BWG	1	SA	T		

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.100"
7.5 or Greater	0.125"

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NOTE:

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3. For Sign Support Descriptive Codes, see Sign Mounting Details Small Roadside Signs General Notes & Details SMD(GEN).

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

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Texas Department of Transportation

US 385

SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		109

DATE: 3/5/2024 12:52:35 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Traffic/US385 AEC SN SOSS 001.dgn

CK: DW: CK:

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 PREFABRICATED	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
							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"		TY N TY S
6 OF 17	30	R1-1		30x30	X		10BWG	1	SA	P	BM	
6 OF 17	31	R1-1		30x30	X		10BWG	1	SA	P	BM	
7 OF 17	32	N/A R1-1		EXISTING SIGNS 30x30	X X		10BWG	1	SA	P	BM	
7 OF 17	33	N/A N/A R1-1		EXISTING SIGNS 30x30	X X		10BWG	1	SA	P	BM	
8 OF 17	34	R1-5L		36x36	X		10BWG	1	SA	P		
8 OF 17	35	N/A R1-1		EXISTING SIGNS 30x30	X X		10BWG	1	SA	P	BM	

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.100"
7.5 or Greater	0.125"

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3/5/2024

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Texas Department of Transportation

US 385

SUMMARY OF SMALL SIGNS

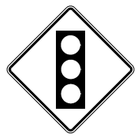
SHEET 6 OF 14

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		110

DATE: 3/5/2024 12:52:36 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Traffic/US385 AEC SN SOSS 001.dgn
CK: DW: 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	POSTS	ANCHOR TYPE	MOUNTING DESIGNATION: PREFABRICATED	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
							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"		TY N TY S
8 OF 17	36	N/A		EXISTING	X							
		N/A		SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
8 OF 17	37	N/A										
		R1-1		EXISTING SIGNS	X		10BWG	1	SA	P	BM	
				30x30	X							
9 OF 17	38	W3-3		30x30	X		10BWG	1	SA	T		
9 OF 17	39	N/A		EXISTING	X							
		N/A		SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
9 OF 17	40	N/A		EXISTING	X							
		N/A		SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							

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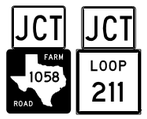
US 385

SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		111

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 PREFABRICATED	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
							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"		TY N TY S
9 OF 17	41	(2)M2-1		(2)21x15	X		10BWG	1	SA	U		
		M1-6F		(2)24x24	X							
		M1-6L										
9 OF 17	42	R5-2		(2)24x24	X		10BWG	1	SA	P		
		R5-2a										
9 OF 17	43	N/A										
		R1-1		EXISTING SIGNS 30x30	X X		10BWG	1	SA	P	BM	
9 OF 17	44	N/A										
		N/A		EXISTING	X							
		R1-1		SIGNS 30x30	X		10BWG	1	SA	P	BM	
9 OF 17	45	R5-2		(2)24x24	X		10BWG	1	SA	P		
		R5-2a										
9 OF 17	46	R1-5L		36x36	X		10BWG	1	SA	P		

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Square Feet	Minimum Thickness
Less than 7.5	0.100"
7.5 or Greater	0.125"

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Texas Department of Transportation

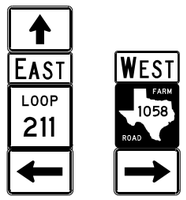
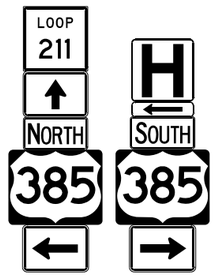
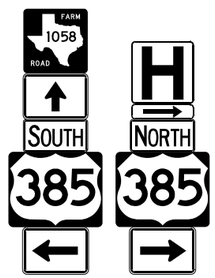
US 385

SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		112

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	POSTS	ANCHOR TYPE	MOUNTING DESIGNATION: PREFABRICATED	MOUNTING DESIGNATION: 1EXT or 2EXT = # of Ext	BRIDGE MOUNT CLEARANCE SIGNS (See Note 2)
							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"	BM = Extruded Wind Beam WC = 1.12 #/ft Wing Channel EXAL= Extruded Alum Sign Panels	TY = TYPE TY N TY S
9 OF 17	47	R1-1		30x30	X		10BWG	1	SA	P	BM	
10 OF 17	48	M3-3		24x12	X		10BWG	1	SA	P		
		M1-4		30x24	X							
10 OF 17	49	M6-3		(2)24x12	X		SCH80	1	SA	U	1EXT	
		M3-2		(2)24x24	X							
		M1-6L		(3)21x15	X							
		(2)M6-1										
		M3-4										
		M1-6F										
10 OF 17	50	M1-6L		(2)30X24		X	SCH80	1	SA	U	2EXT	
		M6-3		24X6		X						
		M3-1		(2)24X12		X						
		(2)M1-4		(2)24X24		X						
		(2)M6-1		(3)21X15		X						
		D9-2										
		D9-2PB										
		M3-3										
10 OF 17	51	M1-6F		(2)30X24		X	SCH80	1	SA	U	2EXT	
		M6-3		24X6		X						
		M3-3		(2)24X12		X						
		(2)M1-4		(2)24X24		X						
		(2)M6-1		(3)21X15		X						
		D9-2										
		D9-2PB										
		M3-1										

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
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Texas Department of Transportation

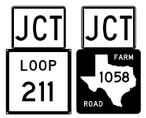
US 385

SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		113

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"	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
10 OF 17	52	M1-4		30X24		X	SCH80	1	SA	U	1EXT	
		M6-3		(2)24X12		X						
		M3-4		(2)24X24		X						
		M1-6F		(3)21X15		X						
		(2)M6-1										
		M3-2										
		M1-6L										
11 OF 17	53	R2-1		30x36	X		10BWG	1	SA	T		
11 OF 17	54	M3-1		24x12	X		10BWG	1	SA	P		
		M1-4		30x24	X							
11 OF 17	55	(2)M2-1		(2)21x15	X		10BWG	1	SA	U		
		M1-6L		24x24	X							
		M1-6F		24x24	X							
11 OF 17	56	N/A		EXISTING SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
12 OF 17	57	N/A		EXISTING SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							

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US 385

SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		114

DATE: 3/5/2024 12:52:38 AM
FILE: pw://aecom-ra-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Traffic/US385 AEC SN SOSS 001.dgn
CK: DW: 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"	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
12 OF 17	58	N/A	N 25 Mile Ave 200 Vogele Ave 100 STOP	EXISTING	X							
		N/A		SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
12 OF 17	59	S1-1	AHEAD	36x36	X		10BWG	1	SA	P	BM	
		SW16-9P		24X12	X							
13 OF 17	60	N/A	25 Mile Ave 300 Grand Ave 100 STOP	EXISTING	X							
		N/A		SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
13 OF 17	61	W3-3		36x36	X		10BWG	1	SA	T		
13 OF 17	62	S5-1	SCHOOL SPEED LIMIT 20 WHEN FLASHING CELL PHONE USE PROHIBITED UP TO $200 FINE	24x48	X		MOUNT TO EXISTING SIGN POST					
		S7-1T		24X18	X							
13 OF 17	63	D2-2	Vega 30 Channing 66	84x30	X		S80	1	SA	T		

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Texas Department of Transportation

US 385

SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		115

DATE: 3/5/2024 12:52:39 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Traffic/US385 AEC SN SOSS 001.dgn
CK: DW: CK:

SUMMARY OF SMALL SIGNS

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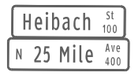
13 OF 17	64	S1-1		36x36	X		10BWG	1	SA	T		
		SW16-7P		24X12	X							
13 OF 17	65	S1-1		36x36	X		10BWG	1	SA	T		
		SW16-7P		24X12	X							
13 OF 17	1	N/A		EXISTING SIGN								
		N/A		TO BE REMOVED								
14 OF 17	66	S5-1		24x48	X		MOUNT TO					
		S7-1T		24X18	X		EXISTING SIGN POST					
14 OF 17	67	N/A		EXISTING	X							
		N/A		SIGNS	X		10BWG	1	SA	P	BM	
		R1-1		30x30	X							
14 OF 17	68	S1-1		36x36	X		10BWG	1	SA	P	BM	
		SW16-7P		24X12	X							

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Texas Department of Transportation

US 385

SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		116

DATE: 3/5/2024 12:52:39 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Traffic/US385 AEC SN SOSS 001.dgn
CK: DW: 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"	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
15 OF 17	69	R3-9b		24x36	X		10BWG	1	SA	P		
15 OF 17	70	R5-2		24X24	X		10BWG	1	SA	P		
		M6-4		21X15								
16 OF 17	71	D26-1TL		60X18	X		10BWG	1	SA	T		
		D9-2		24x24	X							
		D9-2PB		24x6	X							
16 OF 17	72	D26-1TR		60X18	X		10BWG	1	SA	T		
		D9-2		24x24	X							
		D9-2PB		24x6	X							
16 OF 17	73	W9-1R		30x36	X		10BWG	1	SA	T		
16 OF 17	74	R2-1		30x36	X		10BWG	1	SA	T		
16 OF 17	75	R2-1		30x36	X		10BWG	1	SA	T		
16 OF 17	76	R1-1		30x30	X		10BWG	1	SA	P	BM	

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.100"
7.5 or Greater	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).

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
3/5/2024

Salcido Fauvin, P.E.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

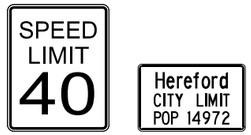
SUMMARY OF SMALL SIGNS

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		117

DATE: 3/5/2024 12:52:40 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Traffic/US385 AEC SN SOSS 001.dgn
CK: DW: 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"	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
17 OF 17	77	R5-2		24x24	X		10BWG	1	SA	P		
		M6-4		21x15	X							
17 OF 17	78	W9-2T		36x36	X		10BWG	1	SA	T		
17 OF 17	79	R3-5R		30x36	X		10BWG	1	SA	P		
17 OF 17	80	R3-7R		36x36	X		10BWG	1	SA	T		
17 OF 17	81	R1-1		30x30	X		10BWG	1	SA	P	BM	
17 OF 17	82	R2-1	 (BACK-TO-BACK)	30x36	X		SCH80	1	SA	U		
		I-2aT		54X24	X							
				54X24	X							
17 OF 17	83	R2-1		30x36	X		10BWG	1	SA	T		

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.100"
7.5 or Greater	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).

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/5/2024

Salcido Pavon, P.E.

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(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

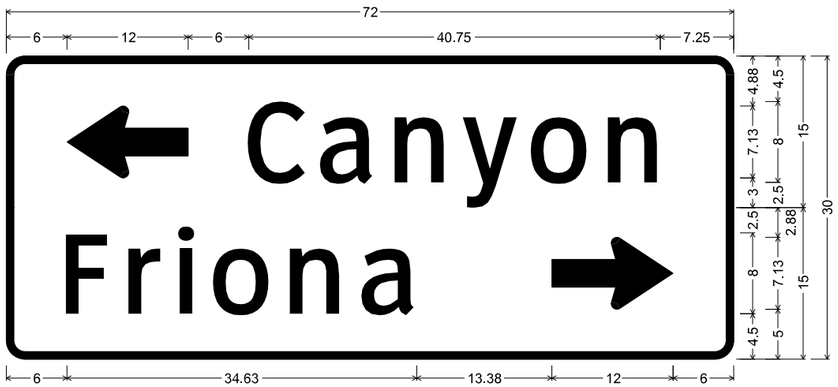
US 385

SUMMARY OF SMALL SIGNS

SHEET 14 OF 14

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		118

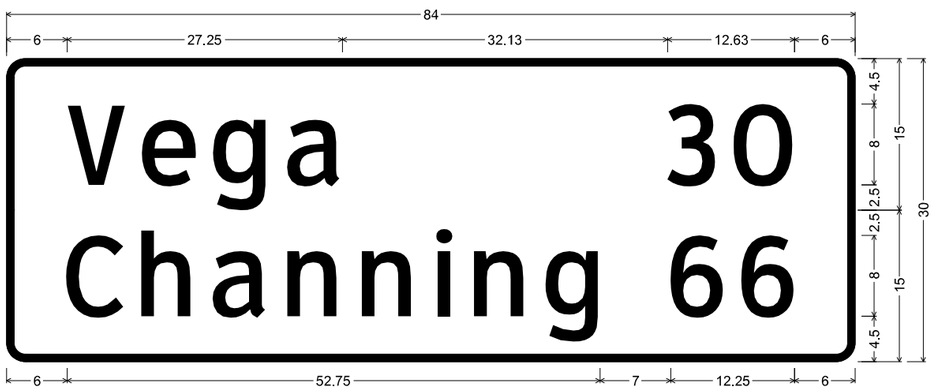
DATE: 3/5/2024 12:52:40 AM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20 SHEETS/US385/Traffic/US385 AEC SN SOSS 001.dgn



D1-2_72x30;

1.88" Radius, 0.75" Border, White on Green;
Standard Arrow Custom 12.00" X 7.13" 180°; "Canyon", ClearviewHwy-3-W;
"Friona", ClearviewHwy-3-W; Standard Arrow Custom 12.00" X 7.13" 0°;

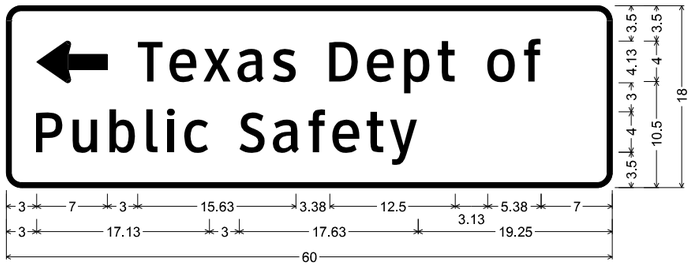
SIGNING AND PAVEMENT MARKING LAYOUT
SHEET 2 OF 18, SIGN 7



D2-2_84x30;

1.88" Radius, 0.75" Border, White on Green;
"Vega", ClearviewHwy-3-W; "30", ClearviewHwy-3-W;
"Channing", ClearviewHwy-3-W; "66", ClearviewHwy-3-W;

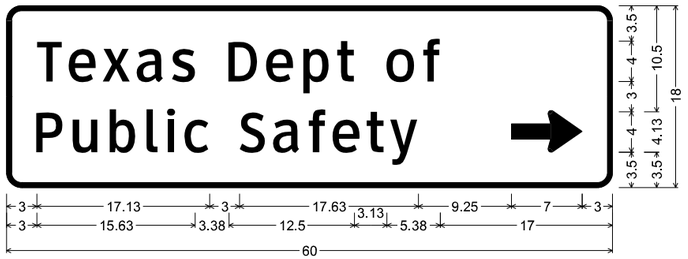
SIGNING AND PAVEMENT MARKING LAYOUT
SHEET 13 OF 18, SIGN 60



D26-1TL_60x18;

1.50" Radius, 0.50" Border, White on Green;
Standard Arrow Custom 7.00" X 4.13" 180°; "Texas Dept of", ClearviewHwy-3-W;
"Public Safety", ClearviewHwy-3-W;

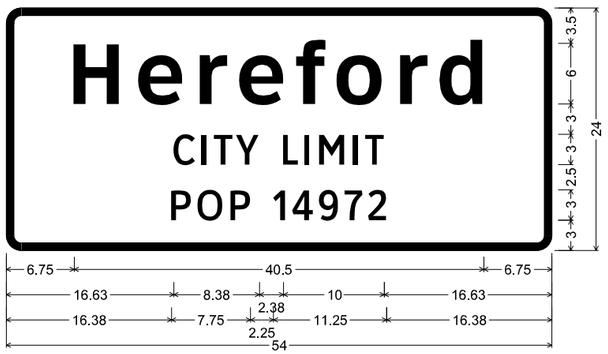
SIGNING AND PAVEMENT MARKING LAYOUT
SHEET 16 OF 18, SIGN 68



D26-1TR_60X18;

1.50" Radius, 0.50" Border, White on Green;
"Texas Dept of", ClearviewHwy-3-W;
"Public Safety", ClearviewHwy-3-W; Standard Arrow Custom 7.00" X 4.13" 0°;

SIGNING AND PAVEMENT MARKING LAYOUT
SHEET 16 OF 18, SIGN 69



I-2aT 6in;
1.50" Radius, 0.75" Border, White on Green;
"Hereford", ClearviewHwy-5-W-R; "CITY LIMIT", ClearviewHwy-3-W;
"POP 14972", ClearviewHwy-3-W;

SIGNING AND PAVEMENT MARKING LAYOUT
SHEET 17 OF 18, SIGN 79

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/1/2024

Salcido Ramos, P.E.

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Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SMALL SIGN DETAILS

 SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		119

DATE: 3/1/2024 8:56:04 PM
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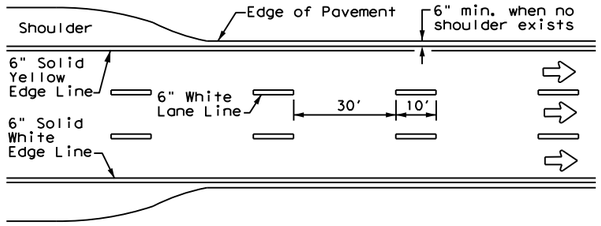
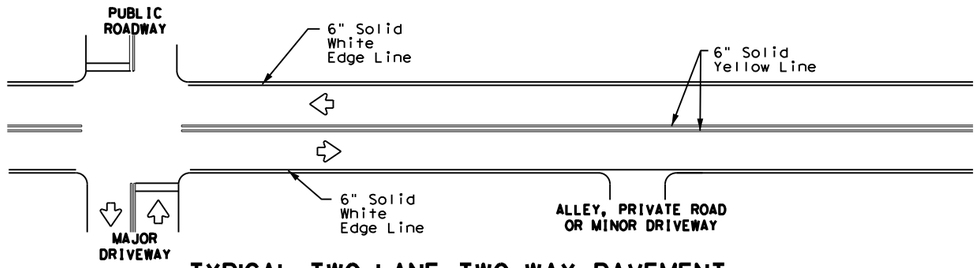
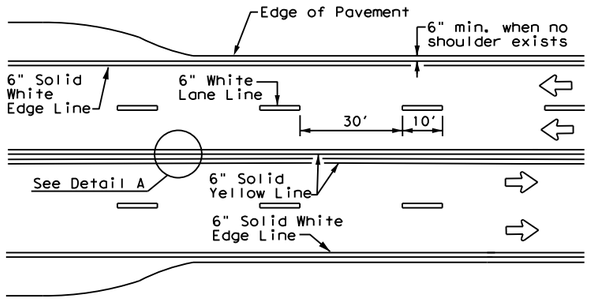
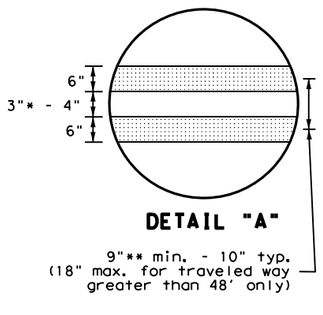


EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS





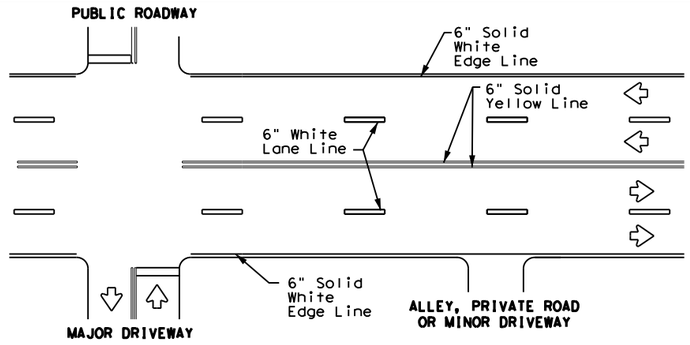
DETAIL "A"

9"** min. - 10" typ.
(18" max. for traveled way greater than 48' only)

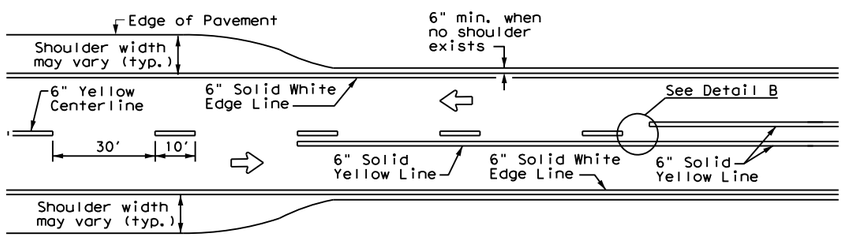
CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

* 2" minimum for restripe projects when approved by the Engineer.

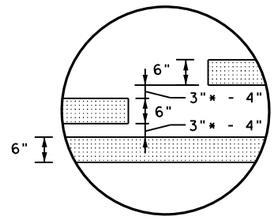
** 8" minimum for restripe projects when approved by the Engineer.



TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS



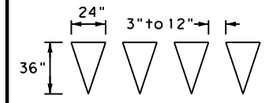
TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



18" min. - 20" max.
(16" minimum for restripe projects when approved by the Engineer.)

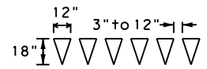
DETAIL "B"

* 2" minimum for restripe projects when approved by the Engineer.

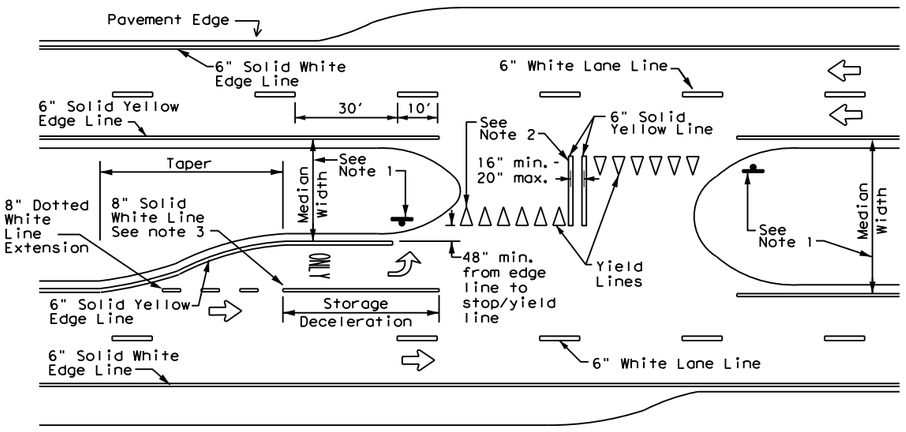


For posted speed on road being marked equal to or greater than 45 MPH.

YIELD LINES



For posted speed on road being marked equal to or less than 40 MPH.



FOUR LANE DIVIDED ROADWAY CROSSOVERS

NOTES

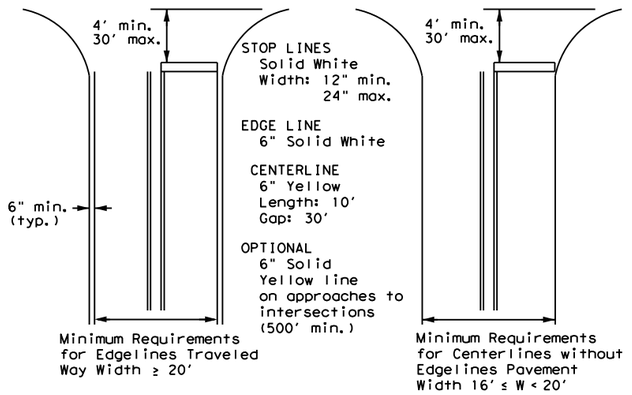
1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling 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

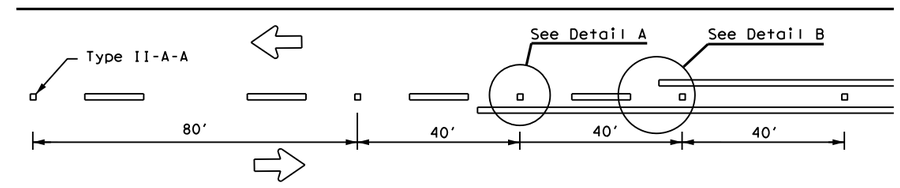
TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-22

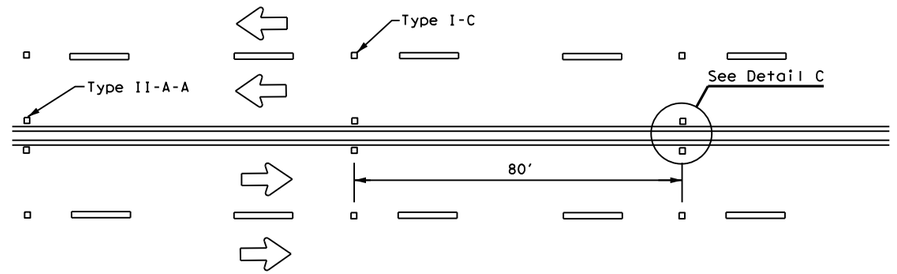
FILE: pm1-22.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
11-78 8-00 6-20	DIST	COUNTY		SHEET NO.
8-95 3-03 12-22	AMA	DEAF SMITH		120
5-00 2-12				

22A

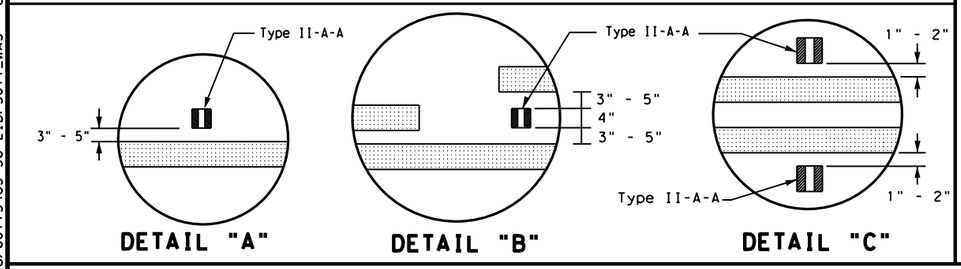
REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE



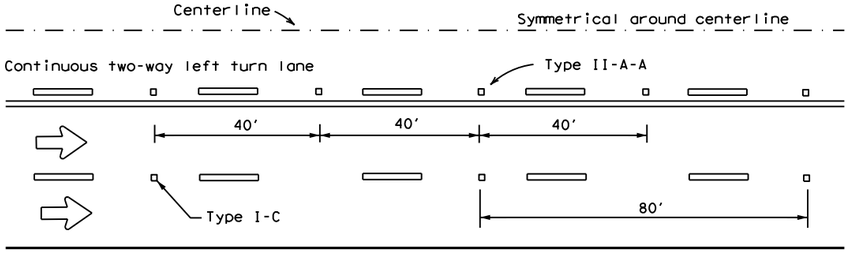
CENTERLINE FOR ALL TWO LANE TWO-WAY ROADWAYS



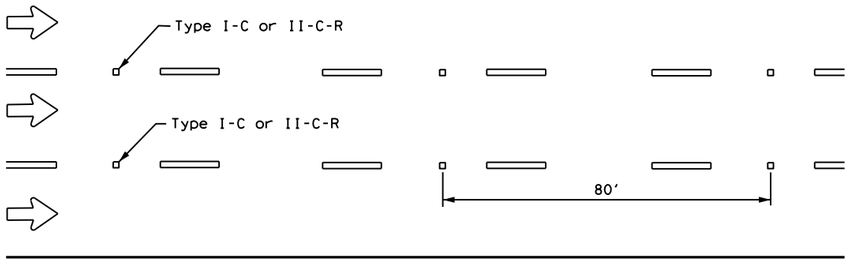
CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY ROADWAYS



DETAIL "A" **DETAIL "B"** **DETAIL "C"**



CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



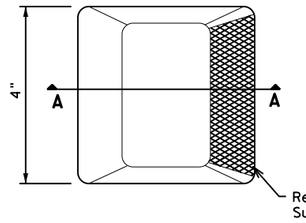
LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.

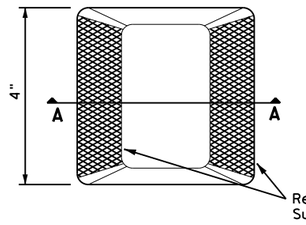
See Note 3.

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

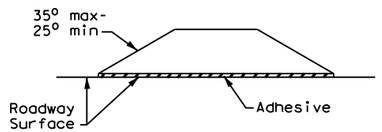
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)

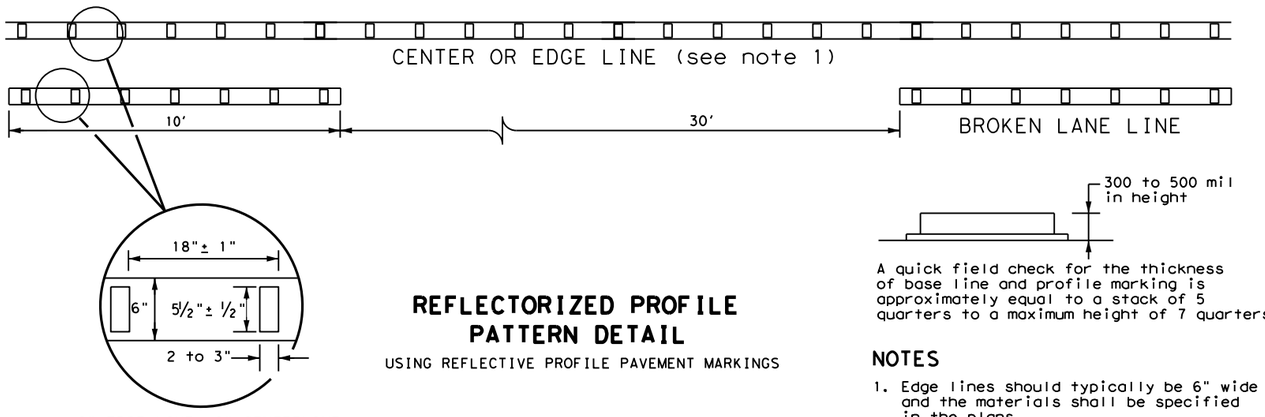


Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS



6" EDGE LINE, 6" CENTERLINE OR 6" LANE LINE

REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

A quick field check for the thickness of base line and profile marking is approximately equal to a stack of 5 quarters to a maximum height of 7 quarters.

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 REFLECTORIZED 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	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		121

22B

DATE: 3/1/2024 8:56:21 PM
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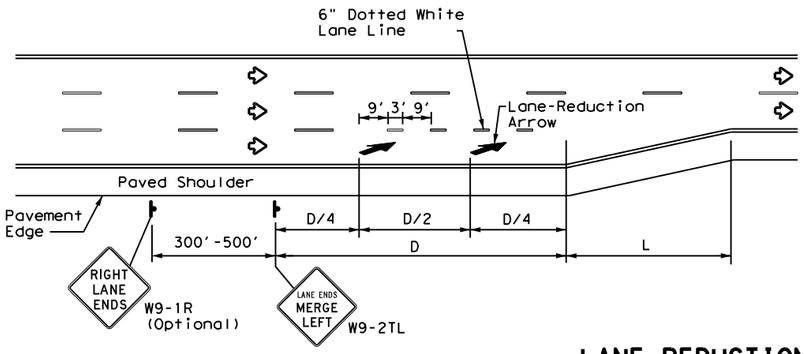
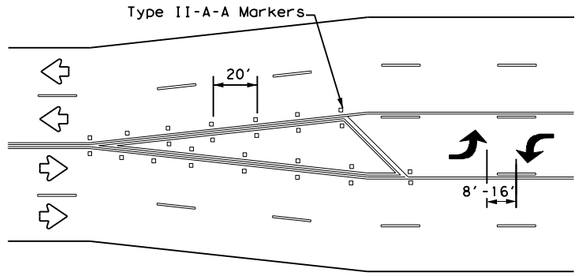


LANE REDUCTION

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	



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.

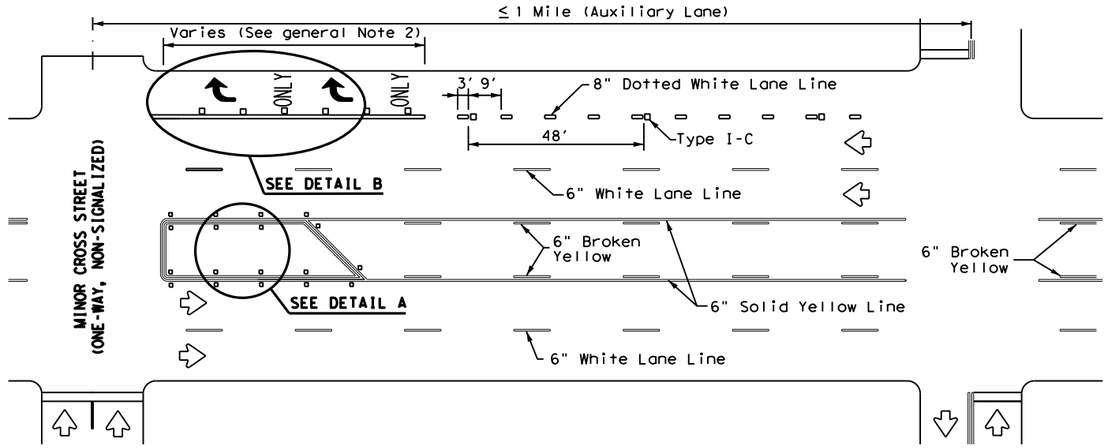
TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

GENERAL NOTES

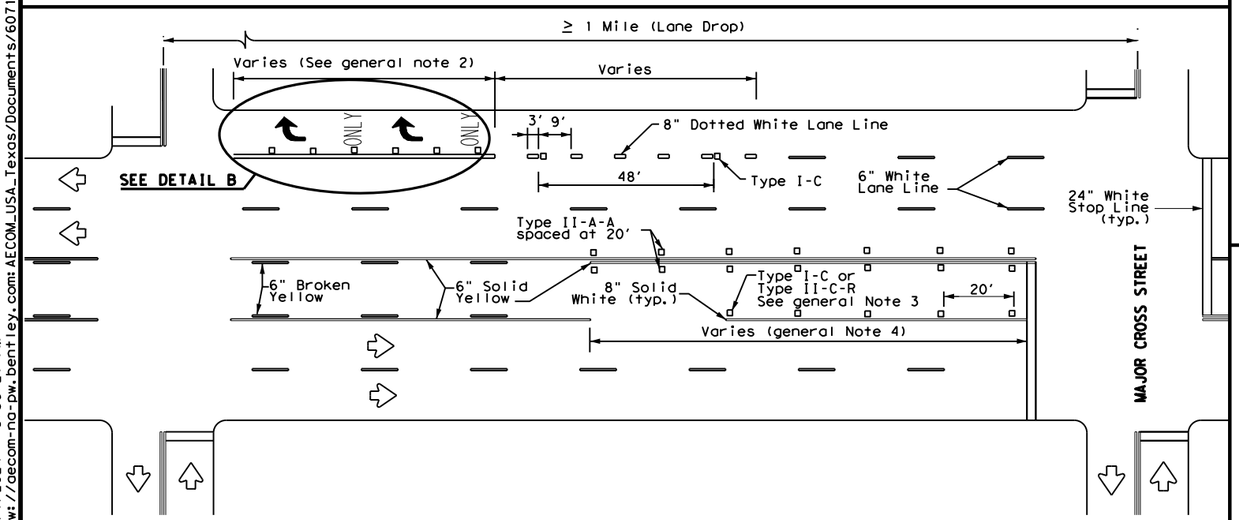
1. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn 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.

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

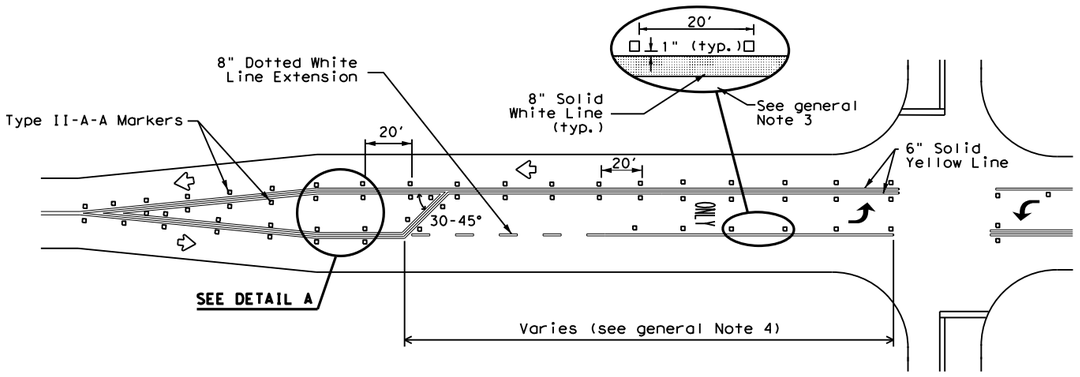
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



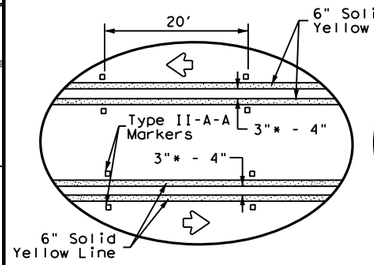
TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



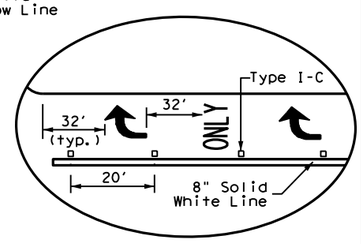
TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP



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

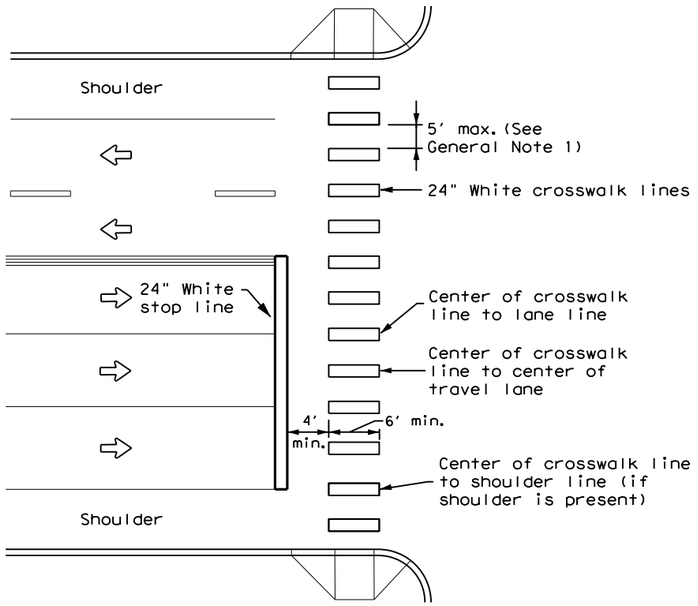
Traffic Safety Division Standard

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 4-98 3-03 6-20 5-00 2-10 12-22 8-00 2-12	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		122

22C

DATE: 3/1/2024 8:56:27 PM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2-TOP-501_Wagoner_GST/16.01 ROADWAY DESIGN/Traffic/pm4-22a.dgn



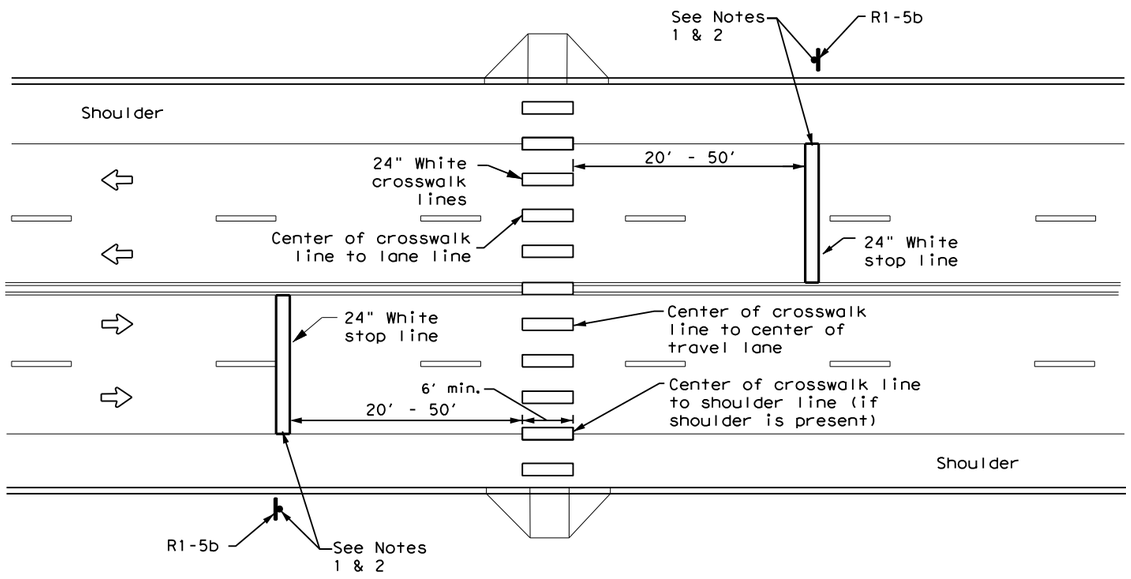
HIGH-VISIBILITY LONGITUDINAL CROSSWALK AT CONTROLLED APPROACH

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	0226	05	072, ETC.	US 385
6-20	DIST	COUNTY		SHEET NO.
6-22	AMA	DEAF SMITH		123
12-22				

22D

DATE: 3/1/2024 8:56:31 PM
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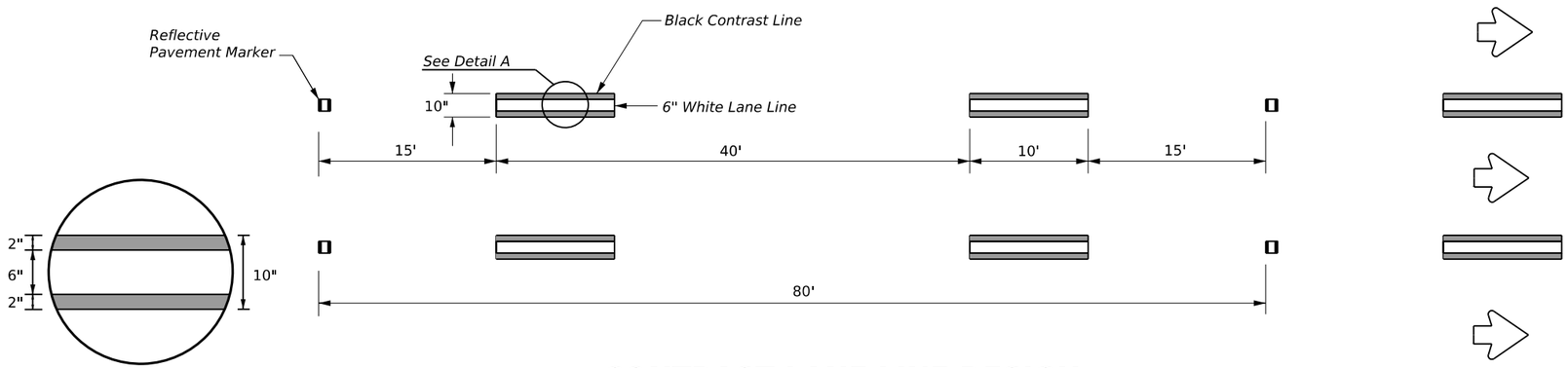
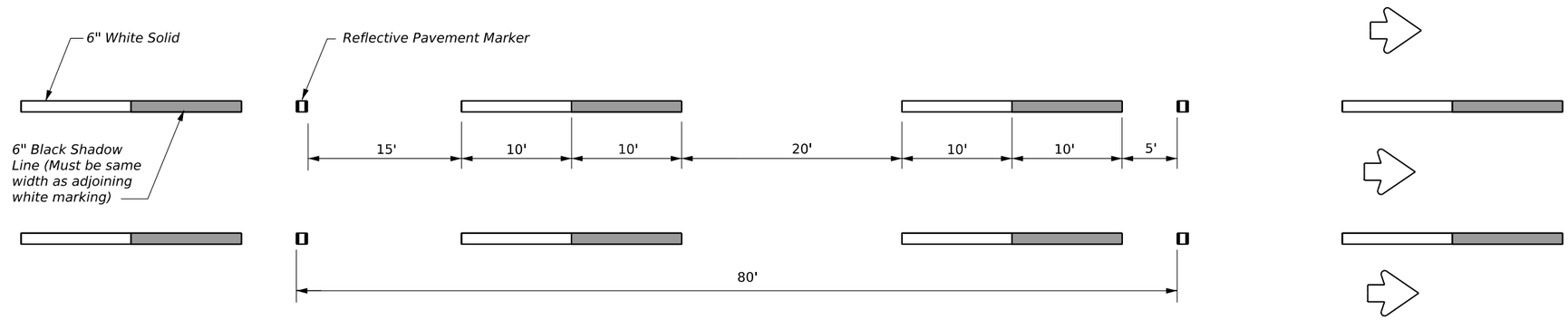
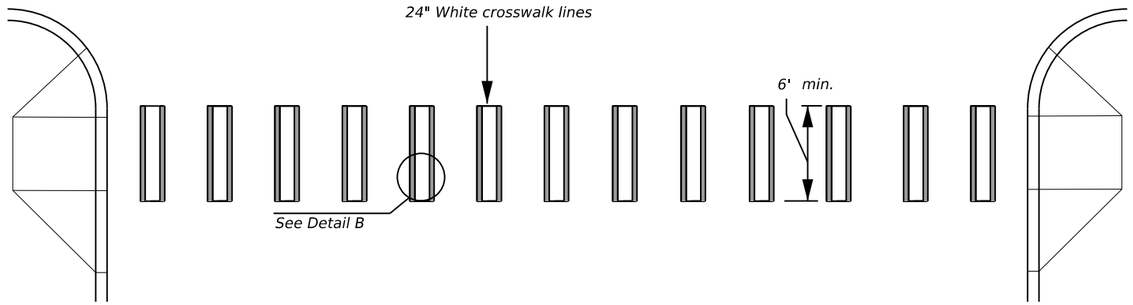


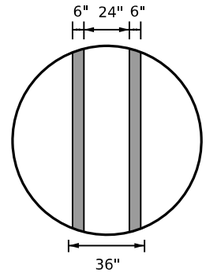
DETAIL "A"

CONTRAST LANE LINE DESIGN



SHADOW LANE LINE DESIGN





DETAIL "B"

(See PM(4) for crosswalk line placement details)

CONTRAST CROSSWALK DESIGN

GENERAL NOTES

1. Contrast and Shadow markings may only be used on concrete pavements.
2. Contrast and Shadow markings shall not be used on edge lines.
3. Contrast lane lines shall be permanent prefabricated pavement markings meeting DMS 8240.
4. Shadow lane line designs shall be a liquid markings system approved by TxDOT.
5. All raised reflective pavement markers placed in broken lines shall be placed in line with and midway between the white stripes.
6. See PM(2) for raised reflective pavement markings installation details.

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.

Texas Department of Transportation

Traffic Safety Division Standard

CONTRAST AND SHADOW PAVEMENT MARKINGS

CPM(1)-23

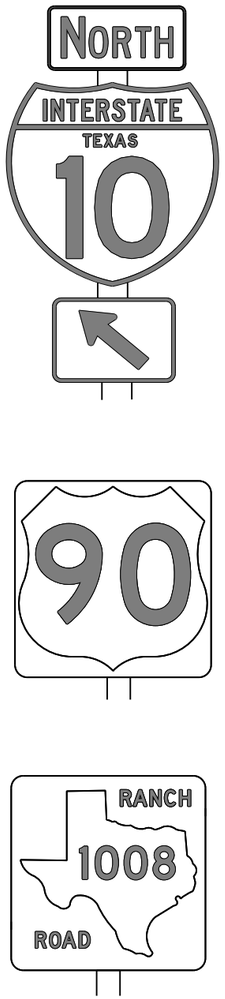
FILE: CPM(1)-23.dgn	DN:	CK:	DW:	CK:
© TxDOT February 2023	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
5-14 2-23	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		124

22N

DATE: 3/1/2024 8:56:36 PM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/607115485-36-2 FDP-3013_SWASDARDS%60TSR3-13.dgn

REQUIREMENTS FOR INDEPENDENT MOUNTED ROUTE SIGNS

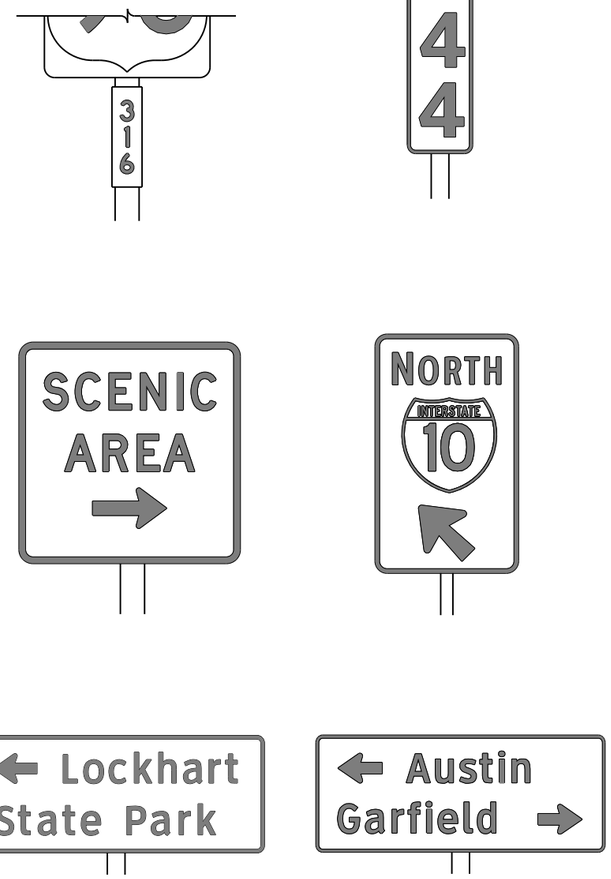
SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	ALL OTHERS	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE A SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND & BORDERS	ALL OTHERS	TYPE B or C SHEETING



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	0226	05	072, ETC.	US 385
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	AMA	DEAF SMITH		125

DATE: 3/1/2024 8:56:43 PM
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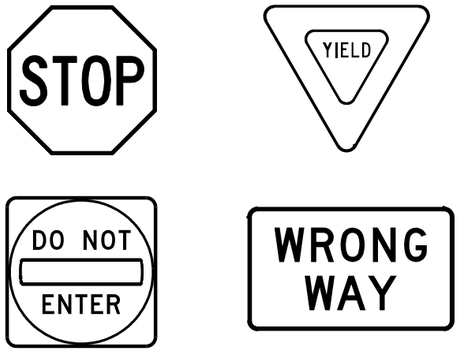
REQUIREMENTS FOR RED BACKGROUND REGULATORY SIGNS

(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

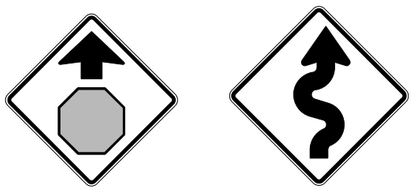
REQUIREMENTS FOR WHITE BACKGROUND REGULATORY SIGNS

(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

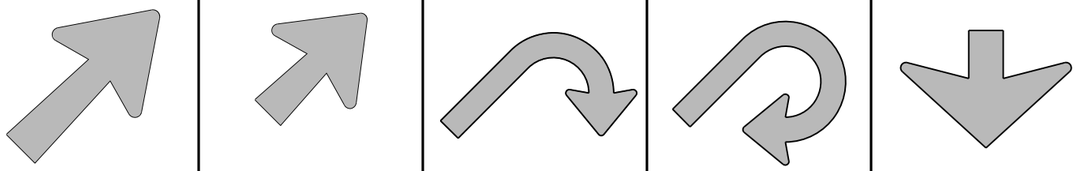
FILE: tsr4-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS 12-03 7-13 9-08	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		126

4

DATE: 3/1/2024 8:56:48 PM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-2DP-3019 #AGSTAFF#

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

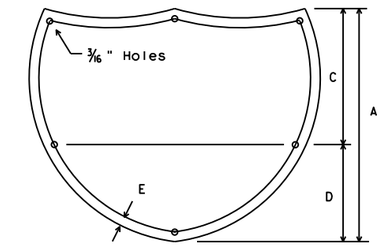
NOTE

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.

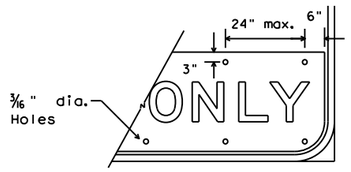
http://www.txdot.gov/

SIGN BLANK PUNCHING DETAILS FOR ATTACHMENTS WHEN SPECIFIED TO BE TYPE A ALUMINUM SIGNS (FOR MOUNTING TO GUIDE SIGN FACE)

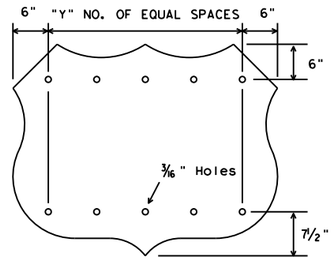


INTERSTATE ROUTE MARKERS

A	C	D	E
36	21	15	1 1/2
48	28	20	1 3/4

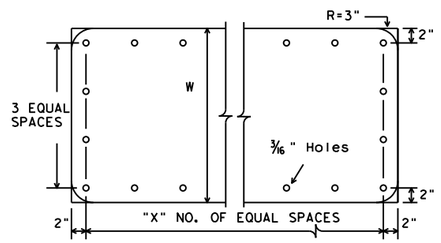


EXIT ONLY PANEL



U.S. ROUTE MARKERS

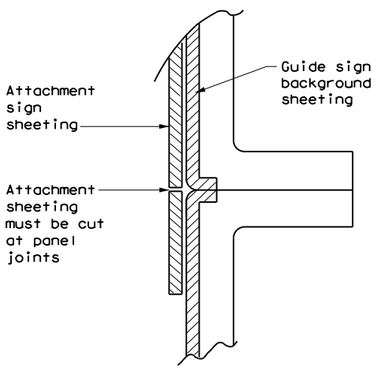
Sign Size	"Y"
24x24	2
30x24	3
36x36	3
45x36	4
48x48	4
60x48	5



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

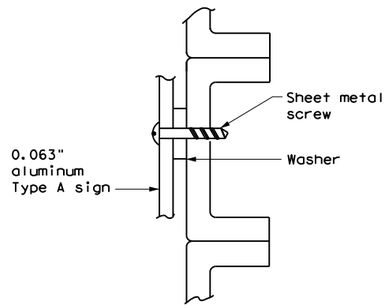
MOUNTING DETAILS OF ATTACHMENTS TO GUIDE SIGN FACE ("EXIT ONLY" AND "LEFT EXIT" PANELS, ROUTE MARKERS AND OTHER ATTACHMENTS)



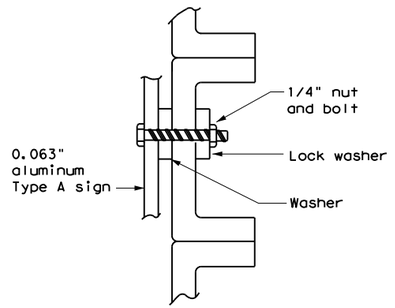
DIRECT APPLIED ATTACHMENT

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



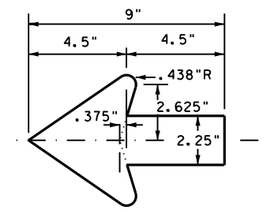
NUT/BOLT ATTACHMENT

NOTE:

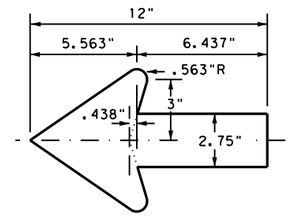
Furnish Type A aluminum sign attachments only when specified in the plans. These signs will be paid for under "Aluminum Signs".

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

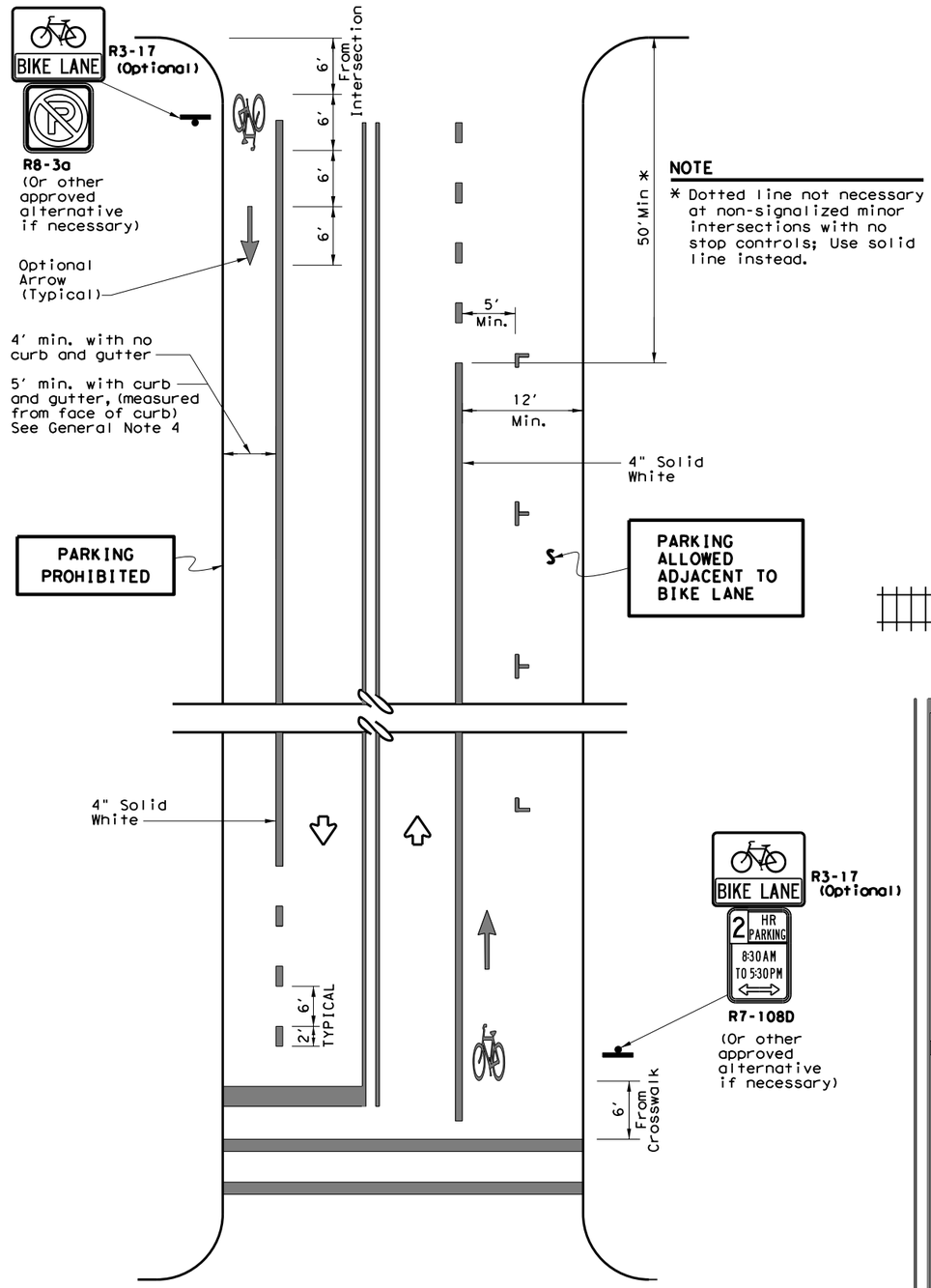
TYPICAL SIGN REQUIREMENTS

TSR(5)-13

FILE: tsr5-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	AMA	DEAF SMITH		127

5

DATE: 3/1/2024 8:56:53 PM
FILE: pw://aecom-na-pw.bentley.com:AECOM*USA*Texas/Documents/60715485-36-21DP5017*WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910*CAD/20*SHEETS/Standards/Traffic/blpm-10.dgn



NOTES

1. Bicycle lane pavement markings typically repeated after each intersection or signalized driveway.
2. On uninterrupted sections of roadway, bicycle lane pavement markings typically repeated as follows:

   -1200' for 45 MPH or less roads
   -2500' for 50 MPH and greater roads.

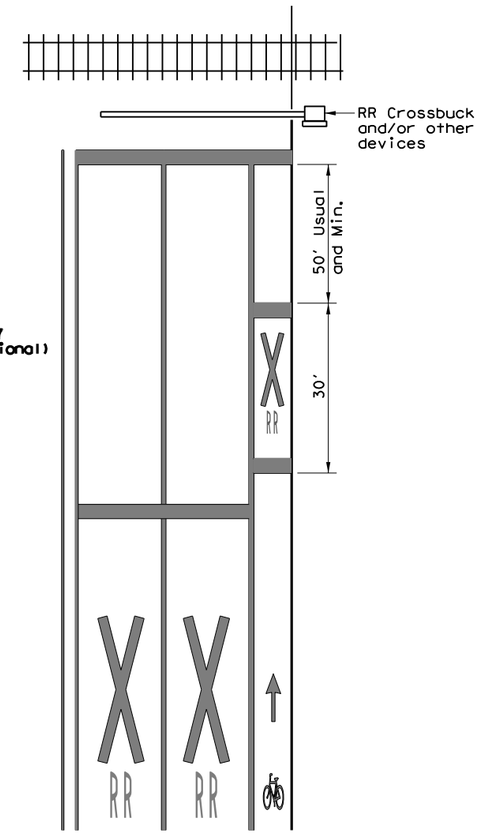
TWO-WAY STREET

NOTE

* Dotted line not necessary at non-signalized minor intersections with no stop controls; Use solid line instead.

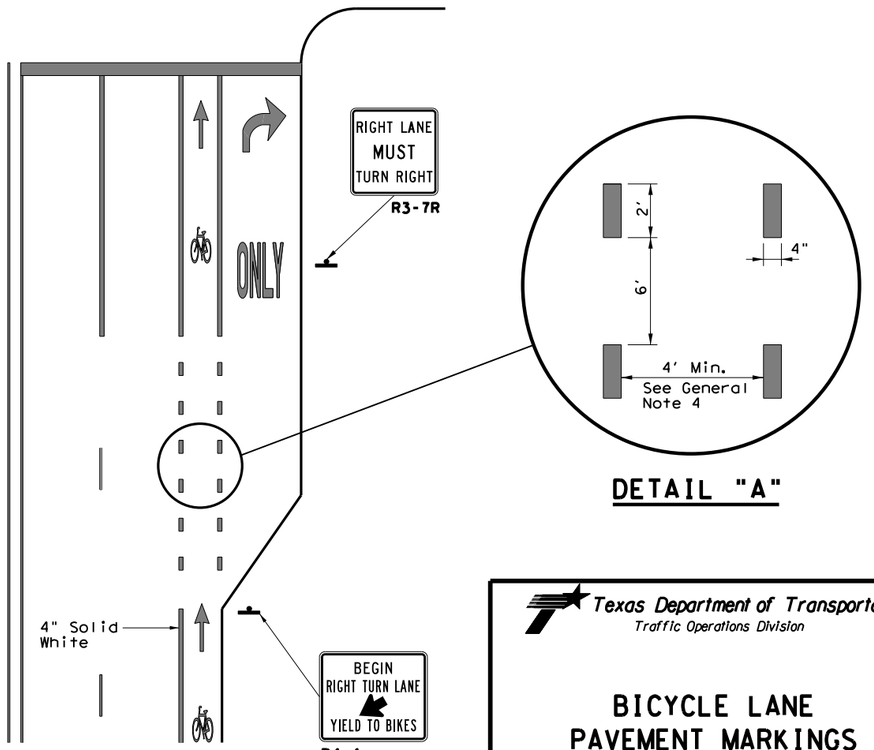
GENERAL NOTES

1. All bicycle lane pavement markings shall be white unless otherwise noted.
2. All pavement marking materials shall meet the required Department Material Specifications as specified by the plans.
3. Exact sign placement and details are shown elsewhere in the plans.
4. The current edition of AASHTO'S Guide for the Development of Bicycle Facilities should be referenced for variations in design, other geometric conditions, and lane width options.
5. Other bicycle lane symbol or word markings as shown in the Texas Manual on Uniform Traffic Control Devices may be used. Details for words, arrows and symbols as shown in the Standard Highway Sign Designs for Texas.
6. The "BIKE LANE" (R3-17) sign with the "AHEAD" (R3-17a) sign mounted directly below should be installed in advance of the beginning of a marked bike lane.
7. The "BIKE LANE" (R3-17) sign with the "END" (R3-17b) sign mounted directly below should be installed at the end of marked bicycle lane.



(See RCPM Standard for travel lane details)

RAILROAD CROSSING APPROACH



RIGHT TURN ONLY LANE

DETAIL "A"

LEGEND	
	Sign
	Traffic Flow

SPECIFICATION REFERENCE TABLE	
Traffic Paint	DMS-8200
Hot Applied Thermoplastic	DMS-8220
Permanent Prefabricated Pavement Markings	DMS-8240
Glass Traffic Beads	DMS-8290

Texas Department of Transportation
Traffic Operations Division

BICYCLE LANE PAVEMENT MARKINGS

BLPM-10

REVISIONS

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385

DIST	COUNTY	SHEET NO.
AMA	DEAF SMITH	128

DATE: 3/1/2024 8:56:59 PM
FILE: pw://aecom-na-pw.bentley.com:AECOM*USA*Texos/Documents/60715485-36-21DP5017*WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910*CAD/20*SHEETS/Traffic/smdgen.dgn

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)

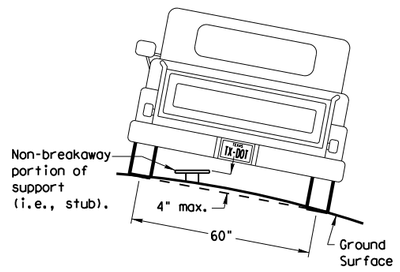
Anchor Type

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-1))

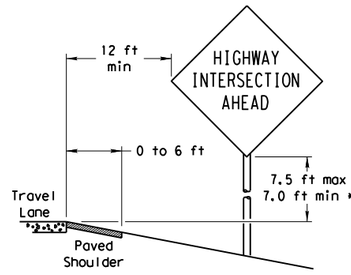
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



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).

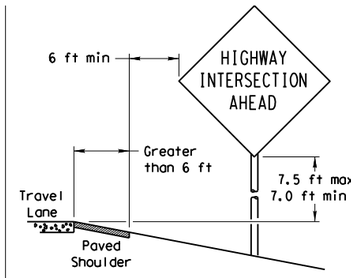
SIGN LOCATION

PAVED SHOULDERS



LESS THAN 6 FT. WIDE

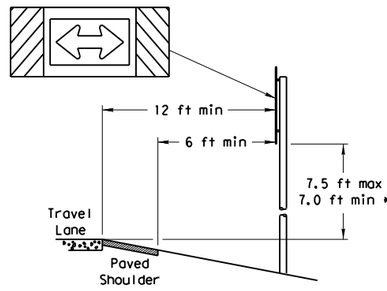
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



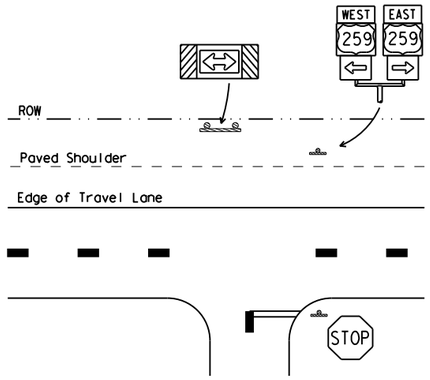
GREATER THAN 6 FT. WIDE

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.

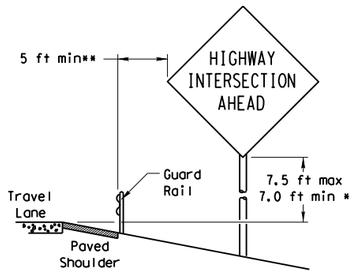
T-INTERSECTION



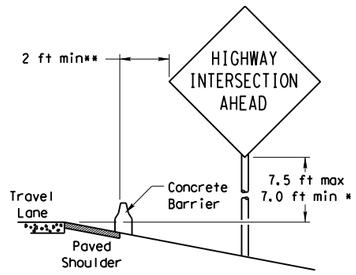
When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



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

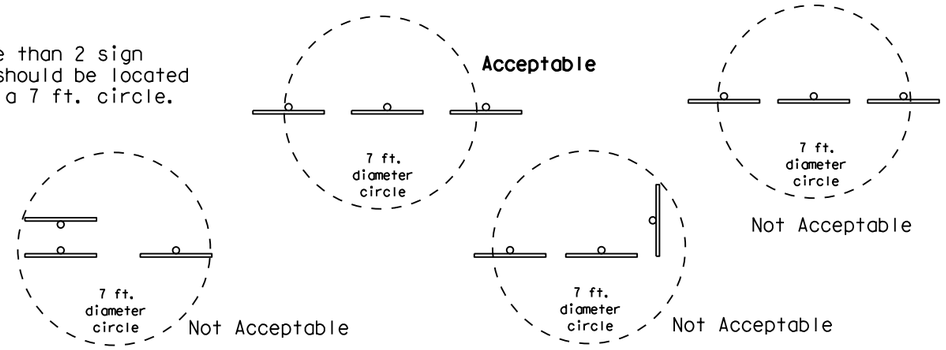
(2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

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.

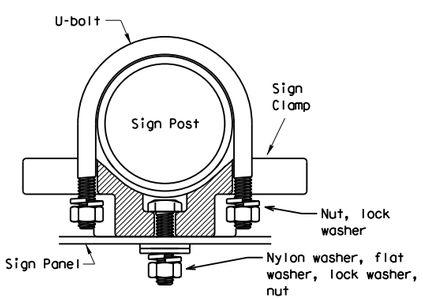
The website address is:
http://www.txdot.gov/publications/traffic.htm

No more than 2 sign posts should be located within a 7 ft. circle.



TYPICAL SIGN ATTACHMENT DETAIL

Single Signs

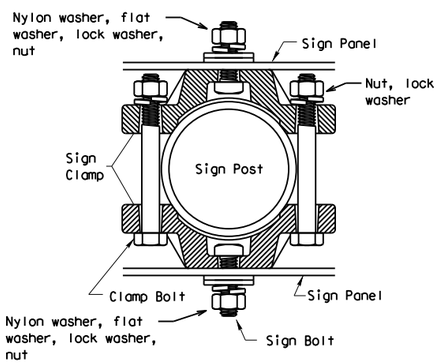


Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

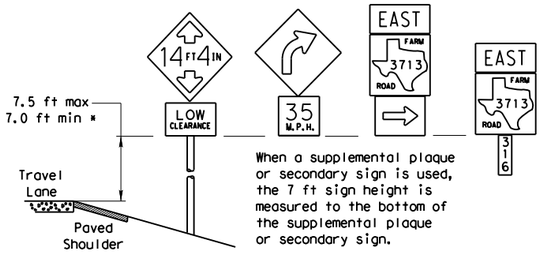
Sign clamps may be either the specific size clamp or the universal clamp.

Back-to-Back Signs



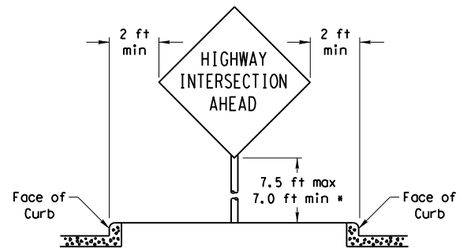
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



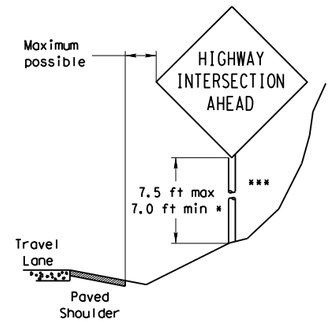
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

CURB & GUTTER OR RAISED ISLAND



RESTRICTED RIGHT-OF-WAY

(When 6 ft min. is not possible.)



Right-of-way restrictions may be created by rocks, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

*** Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme slope.

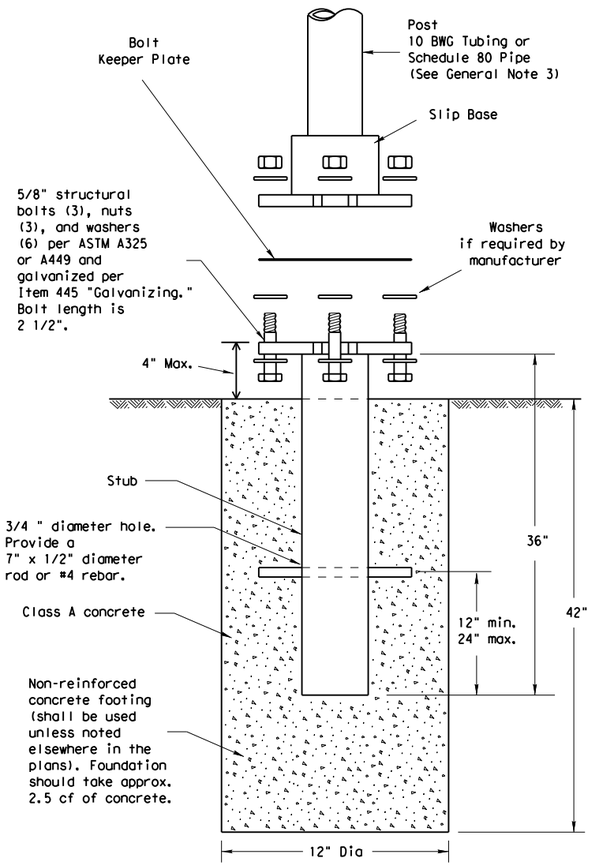
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

SMD(GEN)-08

REVISIONS	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
9-08	CONT	SECT	JOB	HIGHWAY
	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		129

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.

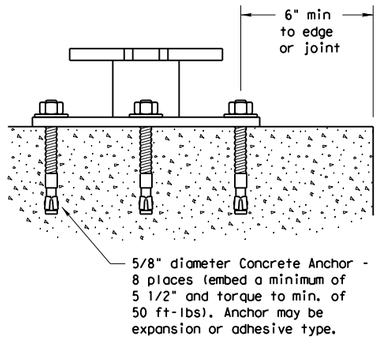
   Schedule 80 Pipe (2.875" outside diameter)
   - 0.276" nominal wall thickness
   - Steel tubing per ASTM A500 Gr C
   - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
     - 46,000 PSI minimum 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

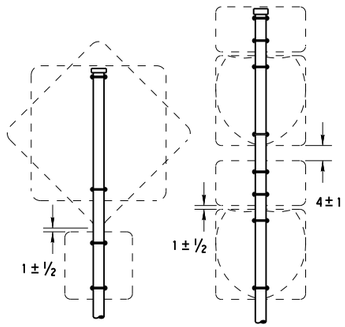
REVISIONS
9-08

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385

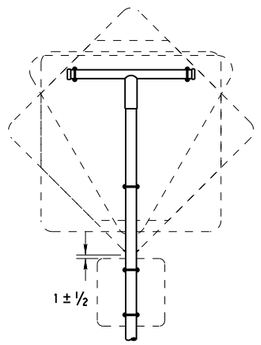
DIST	COUNTY	SHEET NO.
AMA	DEAF SMITH	130

DATE:
FILE:

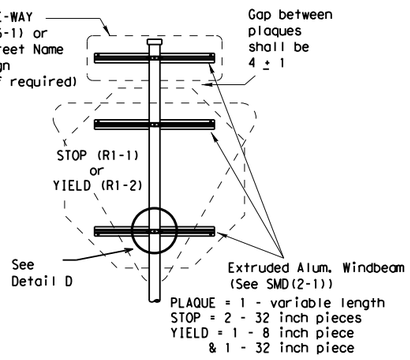
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



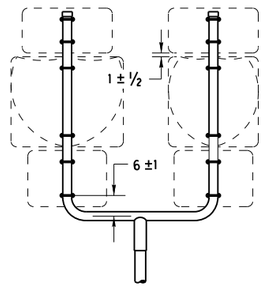
SM RD SGN ASSM TY XXXXX(1)XX(P)



SM RD SGN ASSM TY XXXXX(1)XX(T)



SM RD SGN ASSM TY XXXXX(1)XX(P-BM)



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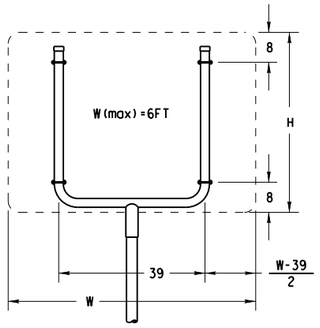

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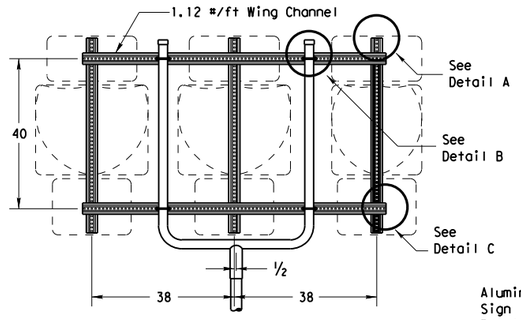
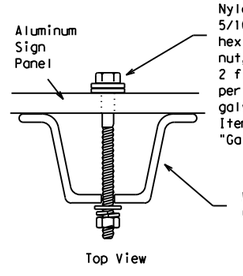
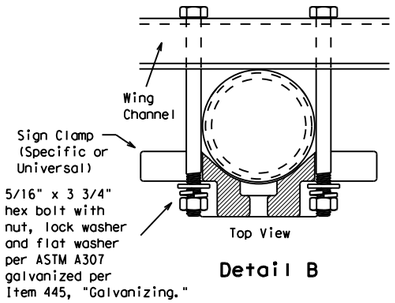


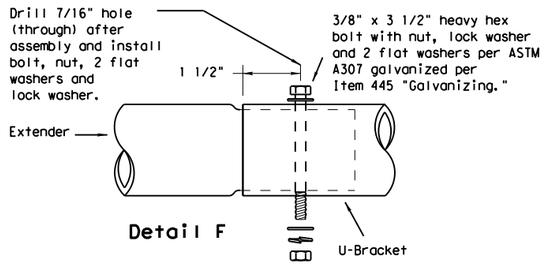
SM RD SGN ASSM TY XXXXX(1)XX(U-WC)
(See Note 11)



Detail A

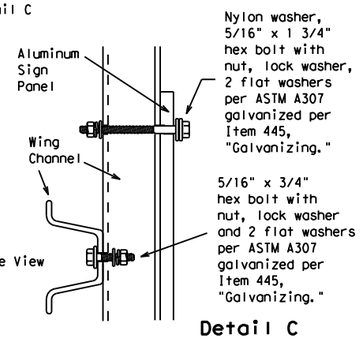


Detail B

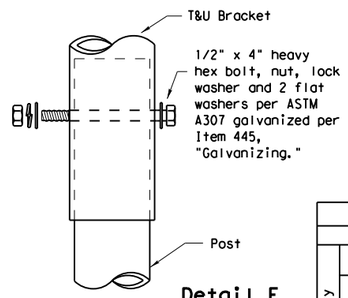


Detail F

Splices shall only be allowed behind the sign substrate.



Detail C



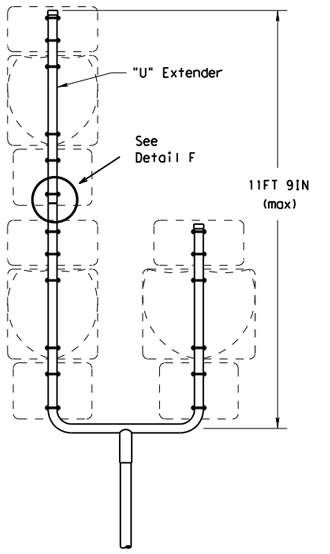
Detail E

GENERAL NOTES:

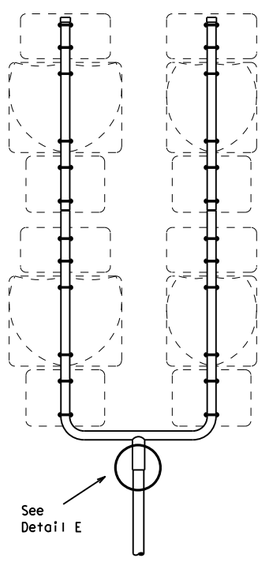
1.

SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF

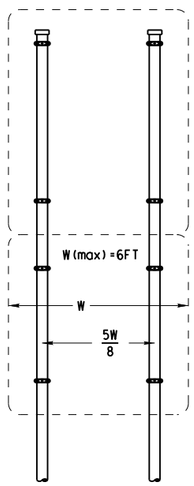
2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
11. Additional sign clamp required on the "T-bracket" post for 24 inch height signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.
13. Sign blanks shall be the sizes and shapes shown on the plans.



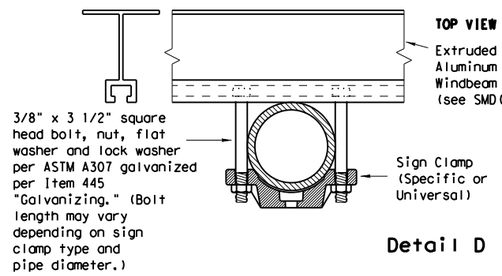
SM RD SGN ASSM TY S80(1)XX(U-1EXT)



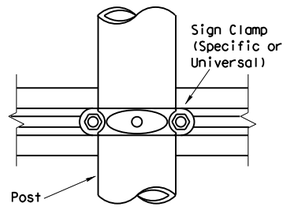
SM RD SGN ASSM TY S80(1)XX(U-2EXT)



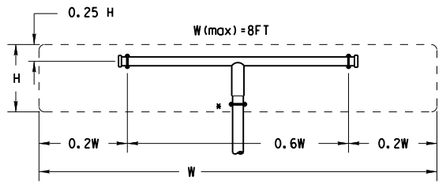
SM RD SGN ASSYM TY XXXXX(2)XX(P)



Detail D



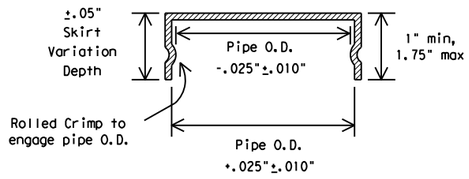
REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)



All dimensions are in english unless detailed otherwise.

SM RD SGN ASSM TY XXXXX(1)XX(T)
(* - See Note 12)

FRICTION CAP DETAIL



Friction caps may be manufactured from hot rolled or cold rolled steel sheets. The minimum sheet metal thickness shall be 24 gauge for all cap sizes.

The rim edges shall be reasonably straight and smooth. Caps shall be sized and formed in such a manner as to produce a drive-on friction fit and have no tendency to rock when seated on the pipe. The depth shall be sufficient to give positive protection against entrance of rainwater. They shall be free of sharp creases or indentations and show no evidence of metal fracture.

Caps shall have an electrodeposited coating of zinc in accordance with the requirements of ASTM B633 Class FE/ZN 8.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-2)-08

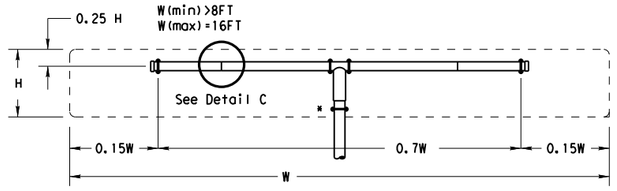
DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385

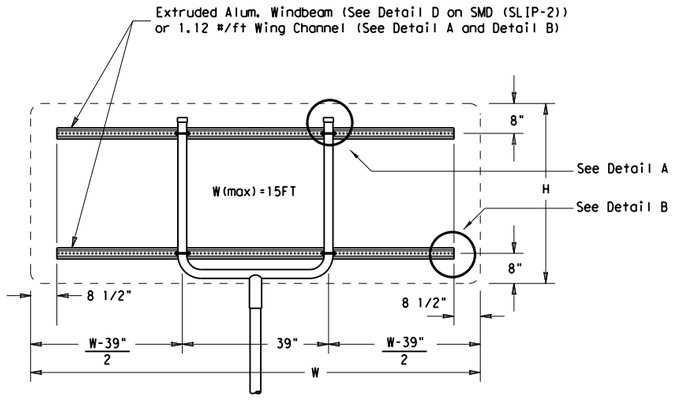
DIST	COUNTY	SHEET NO.
AMA	DEAF SMITH	131

9-08 REVISIONS

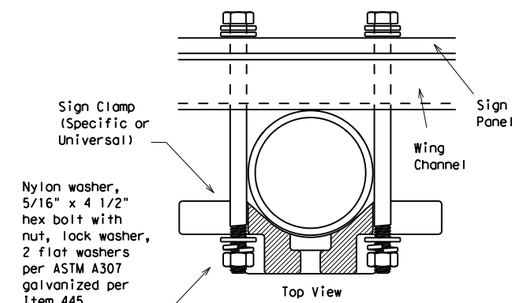
DATE:
FILE:



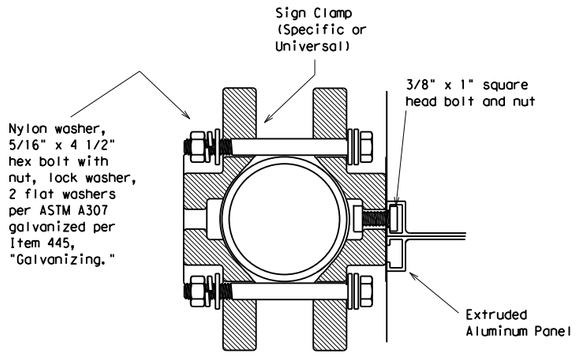
SM RD SGN ASSM TY XXXXX(1)XX(T-2EXT)
(* - See Note 12)



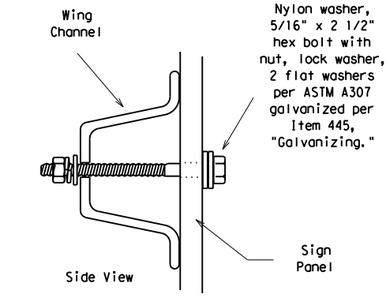
SM RD SGN ASSM TY XXXXX(1)XX(U-XX)



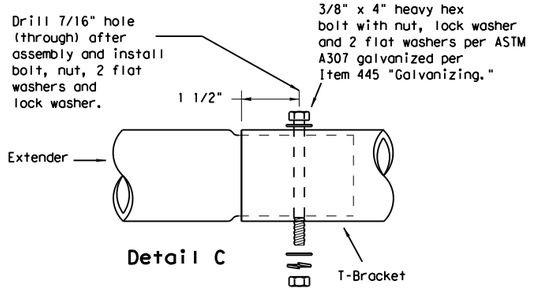
Detail A



Detail D
EXTRUDED ALUMINUM SIGN WITH T BRACKET

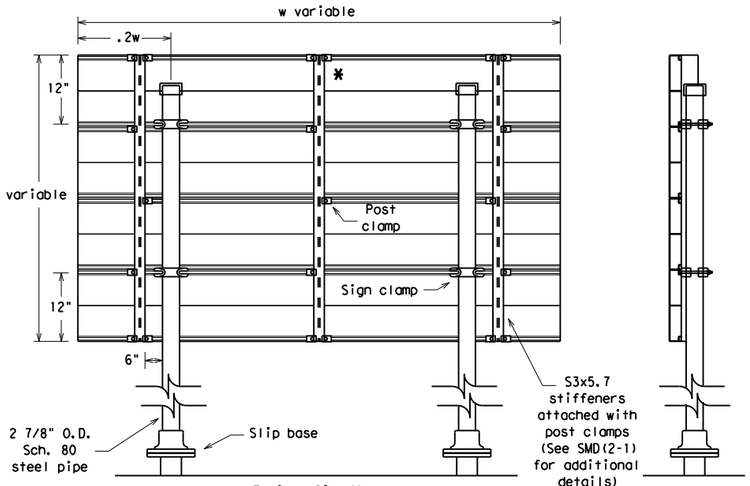


Detail B



Detail C

Splices shall only be allowed behind the sign substrate.

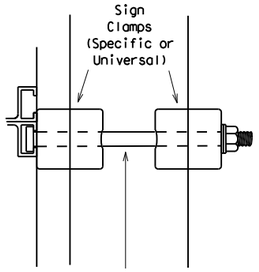


Typical Sign Mount

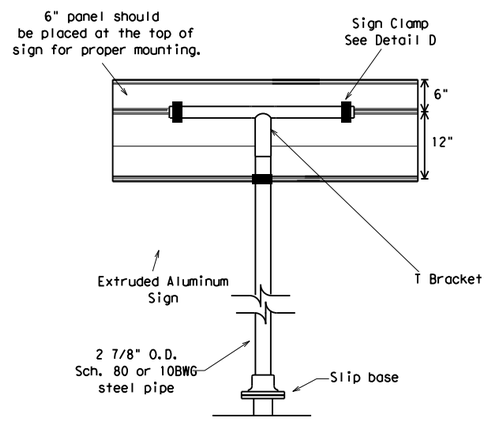
SM RD SGN ASSM TY S80(2)XX(P-EXAL)

* Additional stiffener placed at approximate center of signs when sign width is greater than 10'.

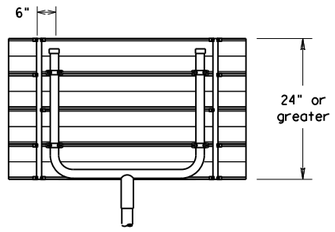
See Detail E
for clamp installation



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.
2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Sign blanks shall be the sizes and shapes shown on the plans.
11. Additional sign clamp required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.

REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-3)-08

REVISIONS
9-08

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

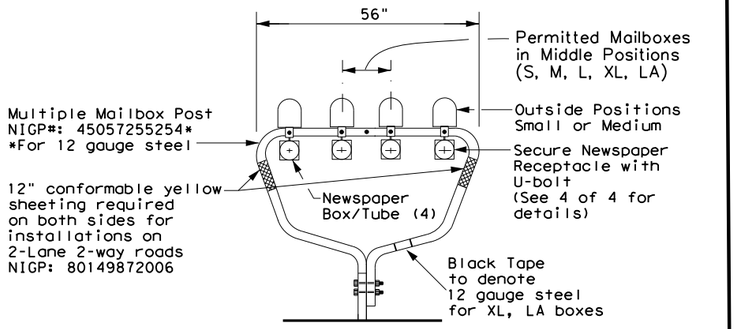
CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385

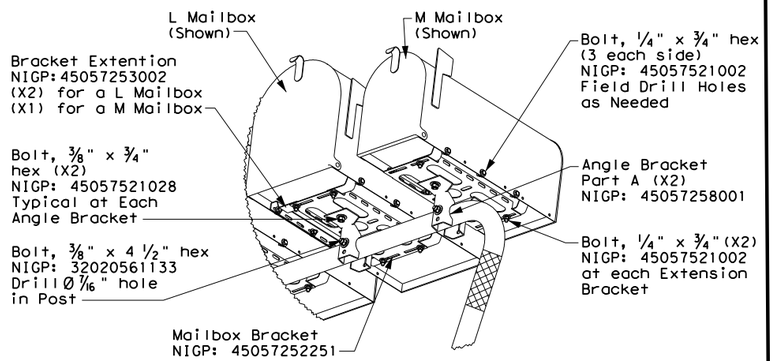
DIST	COUNTY	SHEET NO.
AMA	DEAF SMITH	132

DATE:
FILE:

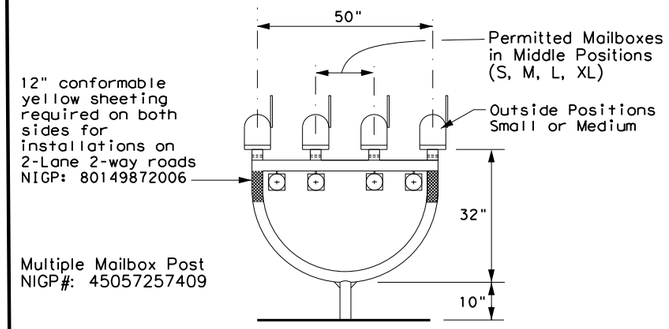
DATE: 3/1/2024 8:57:22 PM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/607115485-36-2IDP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/mb-21(1).dgn

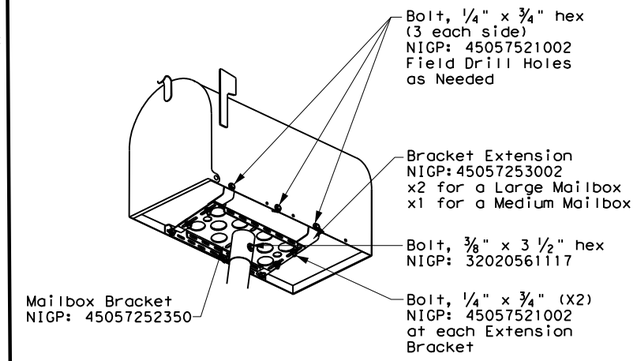
TYPE 1 - MULTIPLE





TYPE 4 - MULTIPLE





MAILBOX SIZES

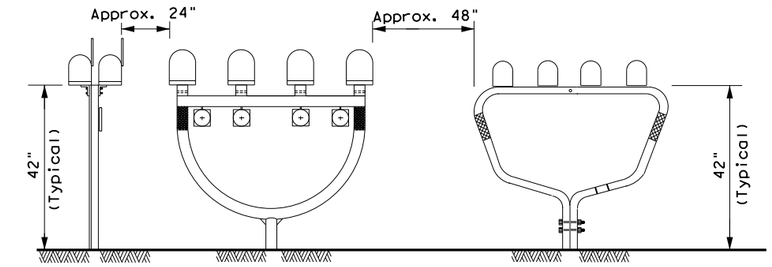
MAILBOX SIZE	TYPICAL DIMENSIONS			MAX ** WEIGHT
	LENGTH	WIDTH	HEIGHT	
SMALL	19 1/2"	6"	7"	6 LBS
MEDIUM	22 1/2" *	8" *	11 1/2" *	8 LBS
LARGE	23 1/2"	11 1/2"	13 1/2"	11 LBS
EXTRA LARGE	18"	14"	12"	13 LBS
LOCKABLE	18"	11 1/2"	15"	23 LBS

* 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.

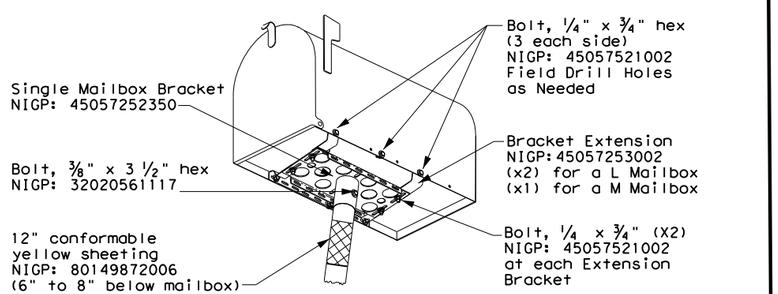
TYPICAL INSTALLATION MEASUREMENTS

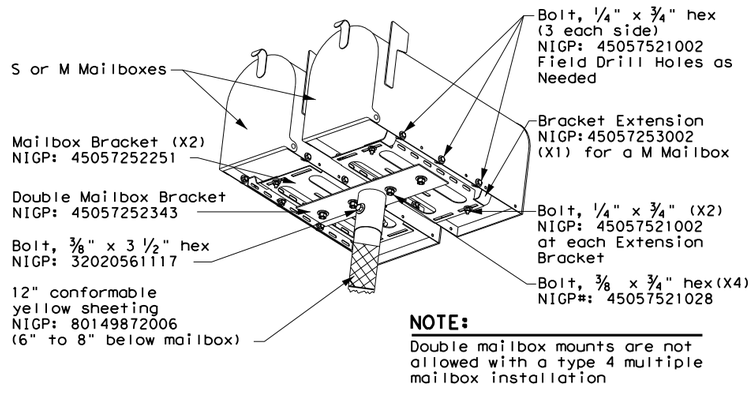


NOTE:

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

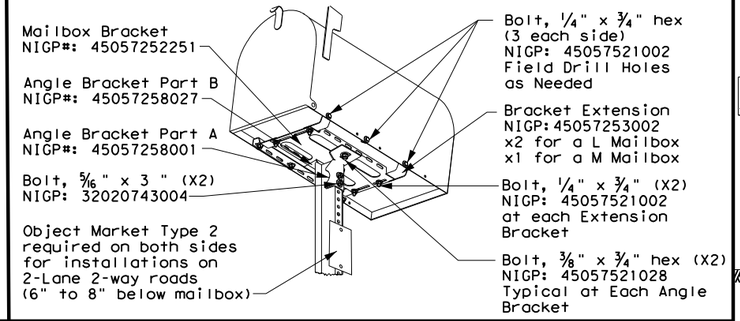


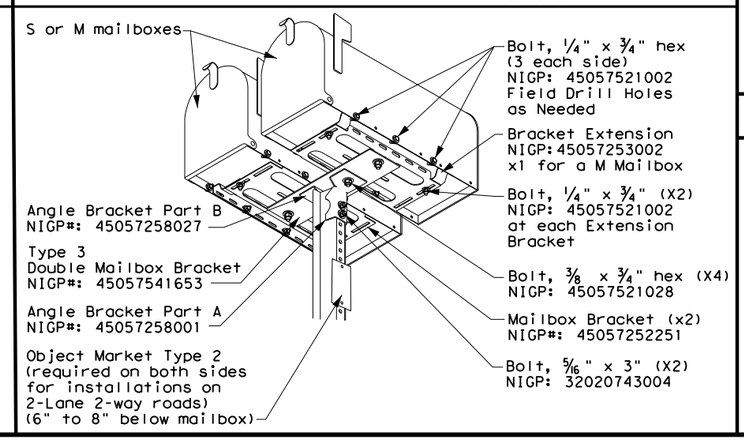


NOTE:

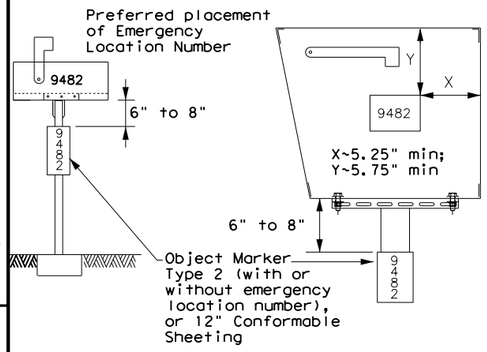
Double mailbox mounts are not allowed with a type 4 multiple mailbox installation

TYPE 3 - SINGLE/DOUBLE





PLACEMENT OF EMERGENCY LOCATION NUMBER

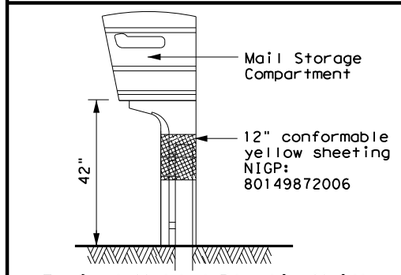


NOTES:

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

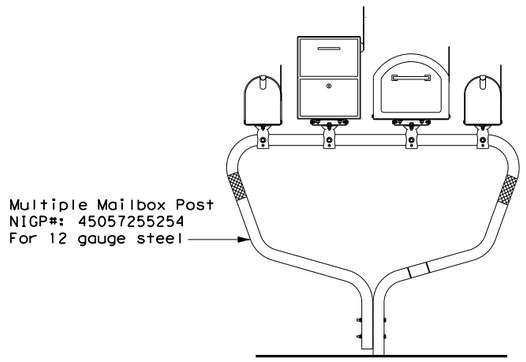
MAILBOX MOUNTING AND ASSEMBLY

MB(1)-21

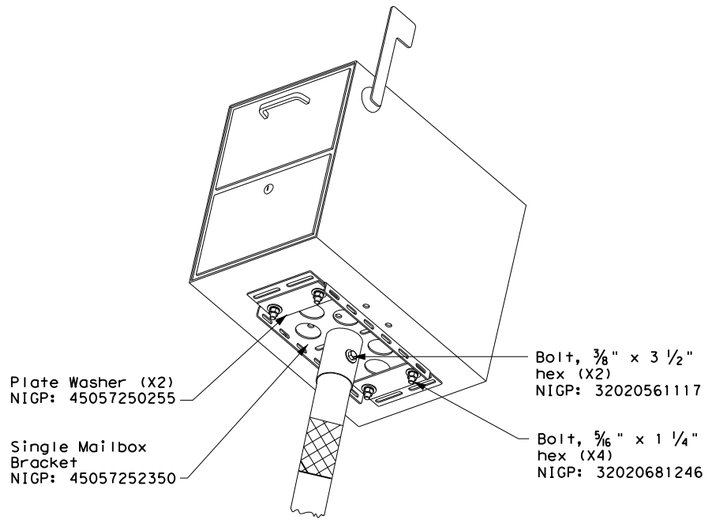
FILE: MB-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT March 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS 2/2005 11/2009 4/2015 6/2005 1/2011 11/2006 7/2014	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		133

DATE: 3/1/2024 8:57:22 PM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/mb-21(1).dgn

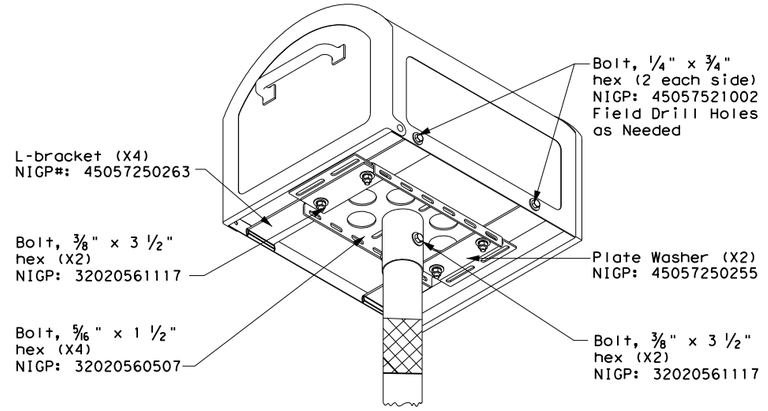
TYPE 1- MULTI LOCKABLE AND XL MAILBOX



TYPE 2/4 - SINGLE LOCKABLE MAILBOX

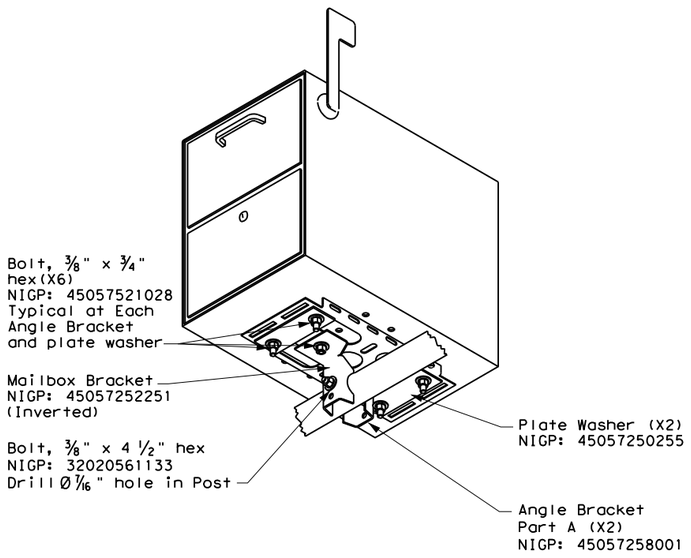


TYPE 2/4 - SINGLE XL MAILBOX

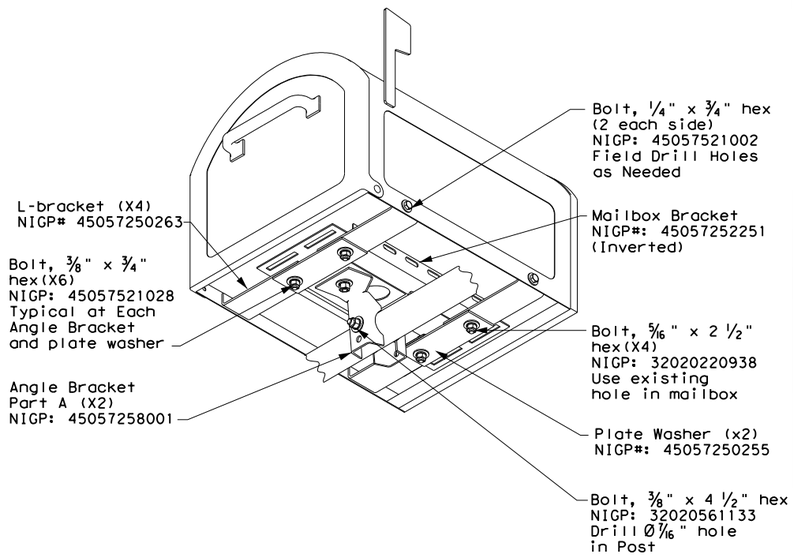


NOTE:
Follow same configuration when mounting an XL mailbox on a Type 4 multi post.

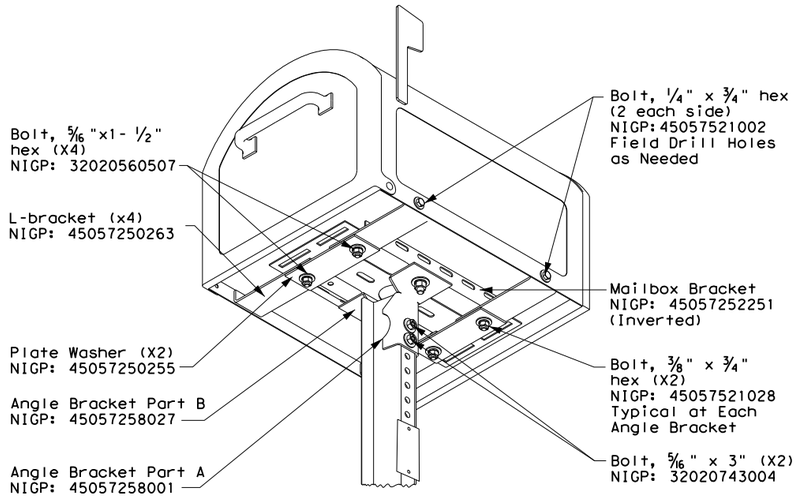
TYPE 1 MULTI – LOCKABLE ARCHITECTURAL (LA)



TYPE 1 MULTI – XL MAILBOX



TYPE 3 - XL MAILBOX MOUNTING



Texas Department of Transportation | Maintenance Division Standard

XL AND LOCKABLE ARCHITECTURAL MAILBOX ASSEMBLY

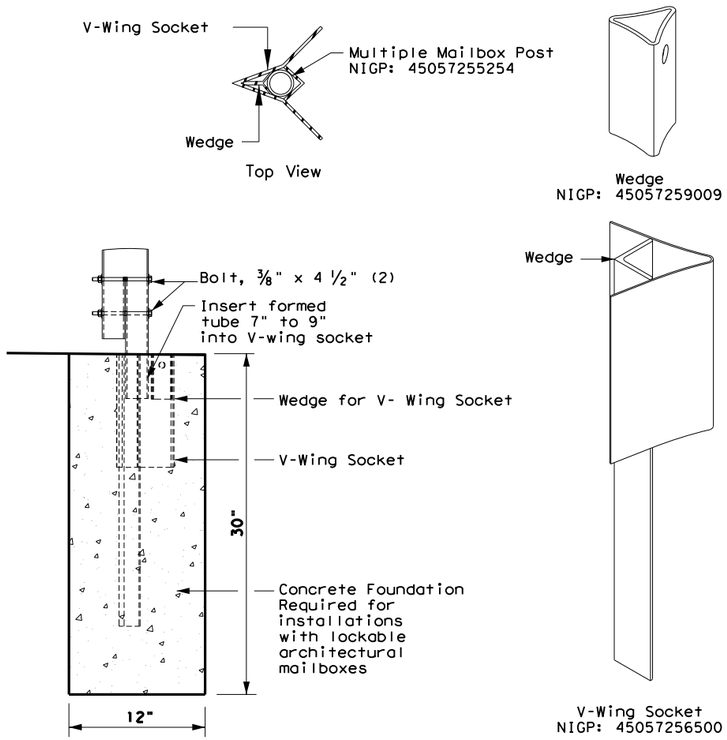
MB(2)-21

FILE: MB-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT March 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS 2/2005 11/2009 4/2015 6/2005 1/2011 11/2006 7/2014	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		134

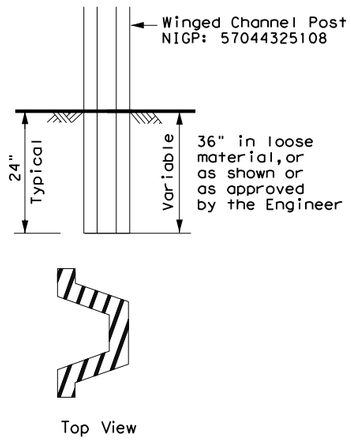
DATE: 3/1/2024 8:57:22 PM
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Roadway/mb-21(1).dgn

TYPE 1 - SUPPORT/FOUNDATION

Thin Wall Tube w/ V-LOC Anchorage



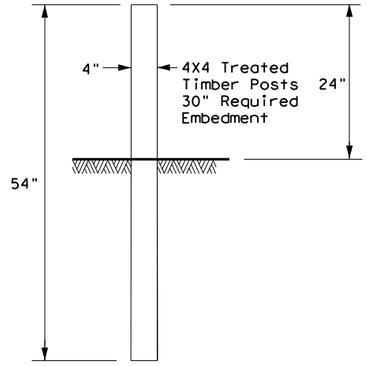
TYPE 3 - SUPPORT/FOUNDATION



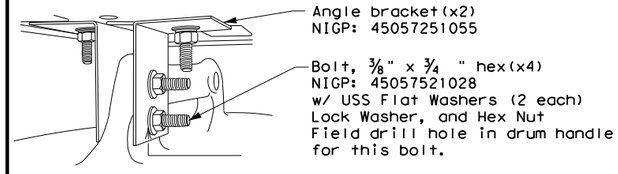
NOTES:

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



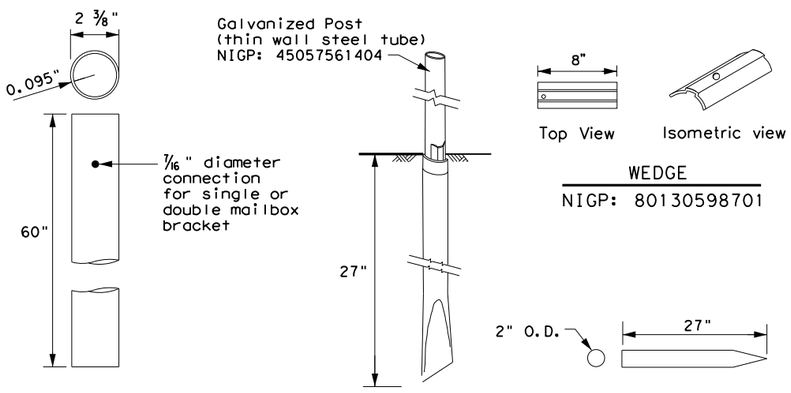
Plastic Drum NIGP: 55093383655
Rubber Collar NIGP: 55093387102

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.

TYPE 2 - SUPPORT/FOUNDATION

Thin Wall Steel Tube w/Wedge Anchor System

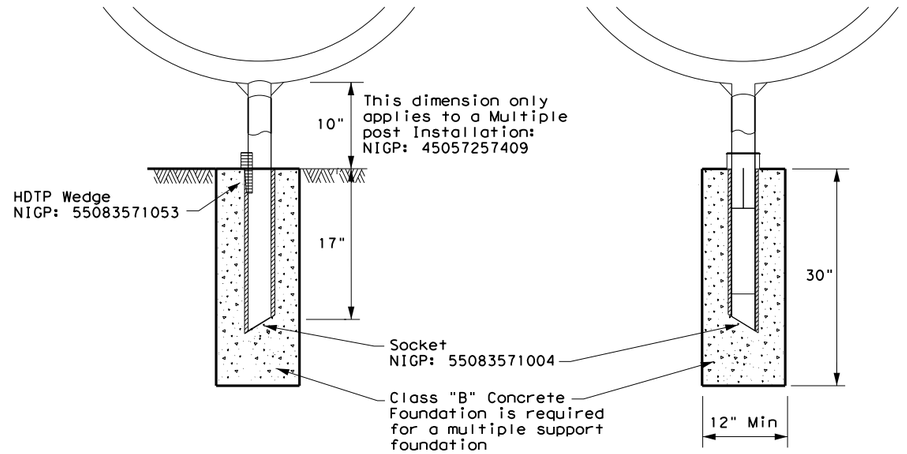


MAILBOX POST

WEDGE ANCHOR
NIGP: 80130238407

TYPE 4 - SUPPORT/FOUNDATION

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



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

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MAILBOX SUPPORT AND FOUNDATION

MB(3)-21

FILE: MB-21.dgn	DN:	CK:	DW:	CK:
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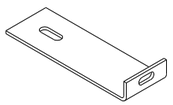
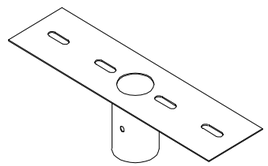
REVISIONS 2/2005 11/2009 4/2015 6/2005 1/2011 11/2006 7/2014	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		135

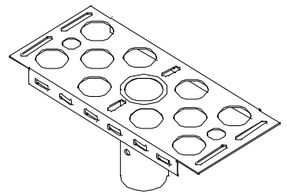
TYPE	TYPE 1	TYPE 2	TYPE 3	TYPE 4			TYPE 5	TYPE 6
Configuration	Multiple	Single or Double	Single or Double	Single	Double	Multiple	Single	Single
Mailbox Size NIGP #	Outside Position: S or M Inside Position: S, M, L, XL, or LA	Single: S, M, L, XL, or LA Double: SS, SM, MM	Single: S, M, L, or XL Double: 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



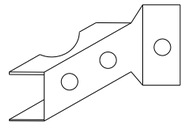
NIGP: 45057250263
L-Bracket x4 for
XL sized mailboxes



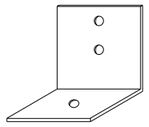
NIGP: 45057252343
Double Mailbox Bracket
For Type 2 and Type 4
double mount



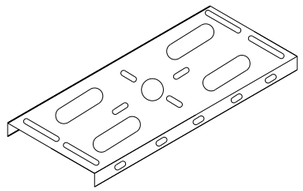
NIGP: 45057252350
Single Mailbox Bracket
For Type 2 single and for
Type 4 single and multi mount



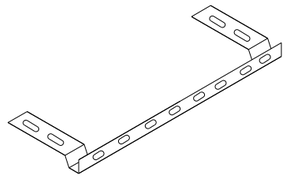
NIGP: 45057258001
Part "A" Angle Bracket
For Type 1 multi (2 per mailbox)
and Type 3 single and double



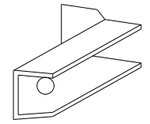
NIGP: 45057251055
Type 6 Angle Bracket
(2 per mailbox)



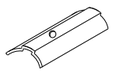
NIGP: 45057252251
Mailbox Bracket
For Type 1 multi and
any double mount (use 2)



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



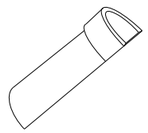
NIGP: 45057258027
Part "B" Angle Bracket
For Type 3 single
and double



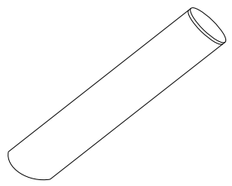
NIGP: 80130598701
Wedge for Type 2

NIGP: 45057250255
Plate Washer for Architecural
and XL Mailboxes

NIGP: 45057541653
Type 3 double mailbox bracket

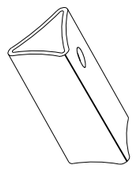


NIGP: 55083571053
Type 4 Mailbox Wedge

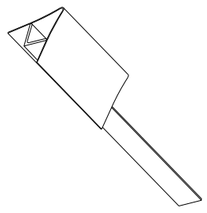


NIGP: 55083571004
Type 4 Mailbox Socket

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

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NIGP PARTS LIST AND COMPATIBILITY

MB(4)-21

FILE: MB-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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	AMA	DEAF SMITH		136

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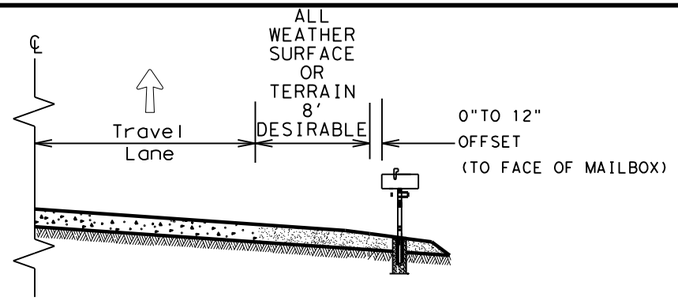
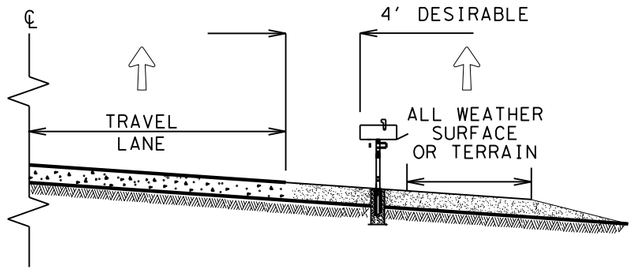
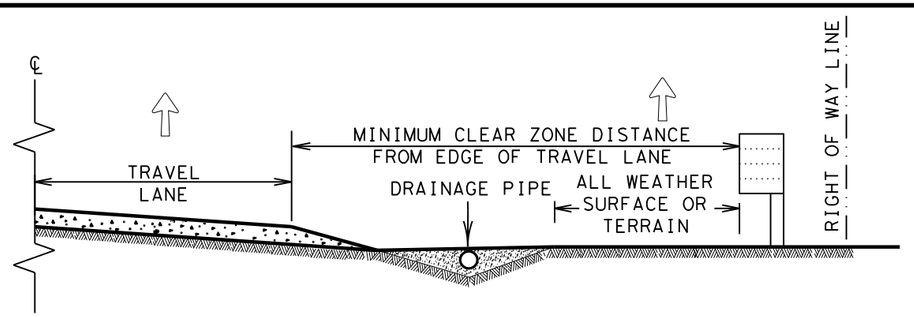


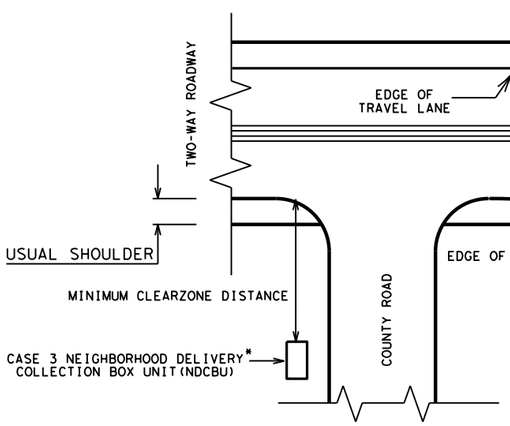
CASE 1. OFF TRAVEL WAY DELIVERY

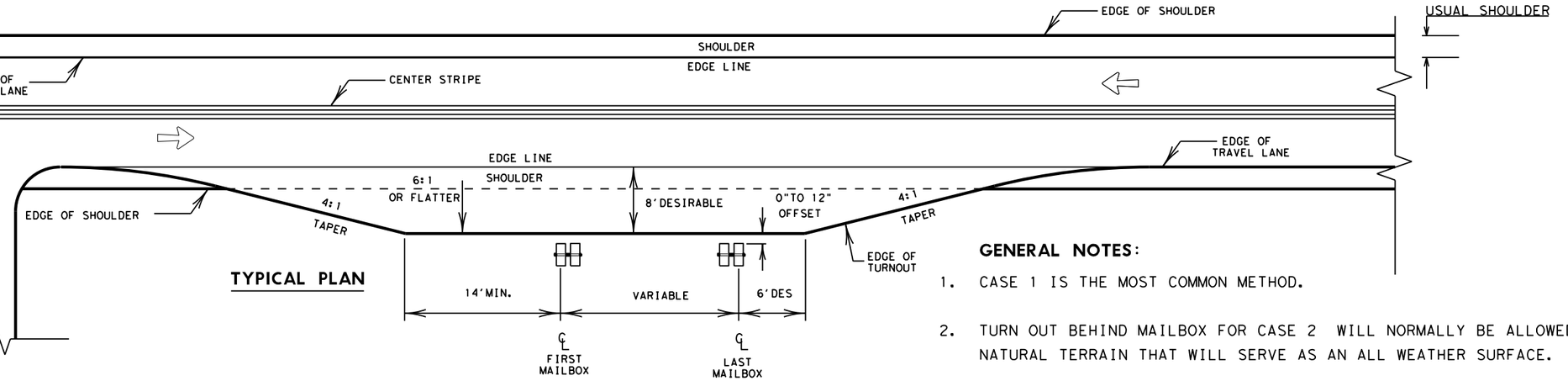


CASE 2. BACK SIDE DELIVERY

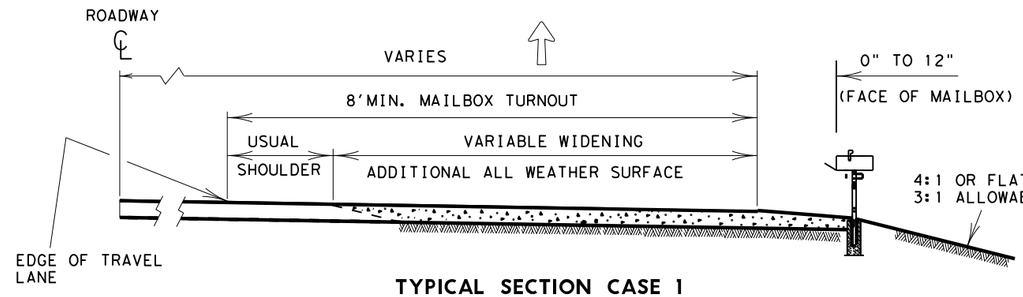


CASE 3. DELIVERY NEAR RIGHT OF WAY LINE





TYPICAL PLAN



TYPICAL SECTION CASE 1

GENERAL NOTES:

1. CASE 1 IS THE MOST COMMON METHOD.
2. TURN OUT BEHIND MAILBOX FOR CASE 2 WILL NORMALLY BE ALLOWED FOR NATURAL TERRAIN THAT WILL SERVE AS AN ALL WEATHER SURFACE.
3. ALL WEATHER DRIVEWAYS FOR CASE 3 MAILBOXES LOCATED AT THE RIGHT OF WAY LINE SHOULD NORMALLY BE PLACED IN CONJUNCTION WITH COUNTY ROADS OR OTHER CONNECTING COMMUNITY ROADS OR STREETS. WHEN 3 OR MORE MULTI-RACKS ARE ANTICIPATED, THE USE OF AN NDCBU IS RECOMMENDED. ONLY RURAL PATRONS LOCATED ON STATE MAINTAINED HIGHWAYS MAY HAVE A MAILBOX OR NDCBU SLOT ON TXDOT RIGHT OF WAY.

* NDCBU MAY BE INSTALLED ON COUNTY ROAD ROW WITH APPROVAL OF COUNTY.

MAIL DELIVERY VEHICLE TRAVEL DIRECTION

DATE:
FILE:

Texas Department of Transportation

Maintenance Division Standard

Guideline

MAILBOX SIDE ROAD PLACEMENT AND TURNOUTS

MBP(1)-22

FILE: MBP-22.DGN	DN: VS	CK:	DW: VS	CK:
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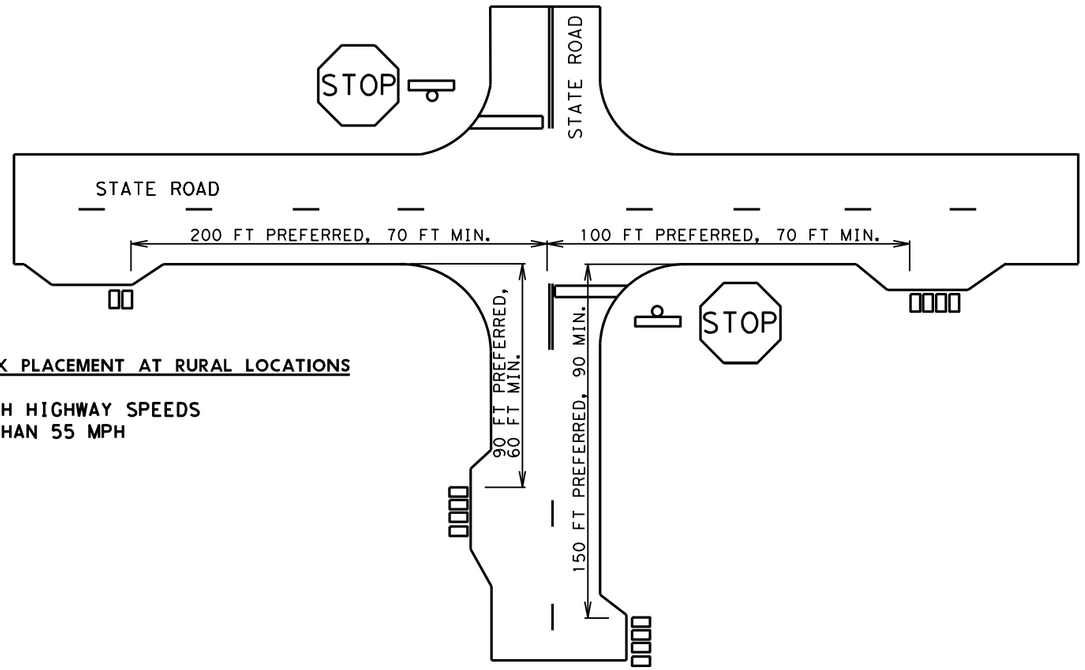
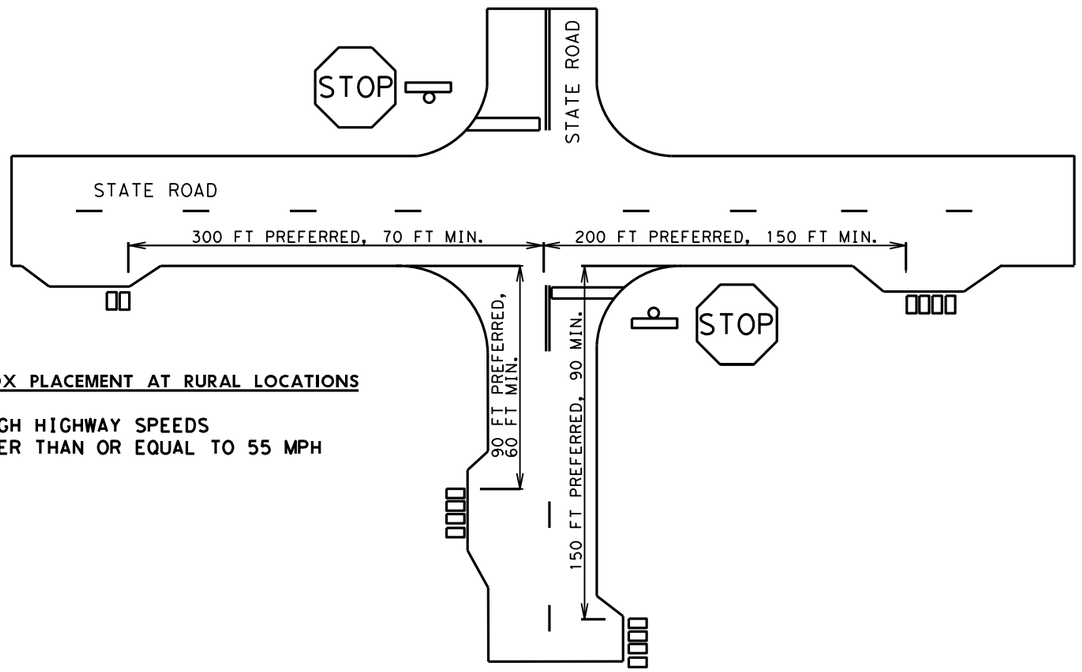
REVISIONS 12/2012 5/2014	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		137

DATE:
FILE:



MAILBOX PLACEMENT AT RURAL LOCATIONS

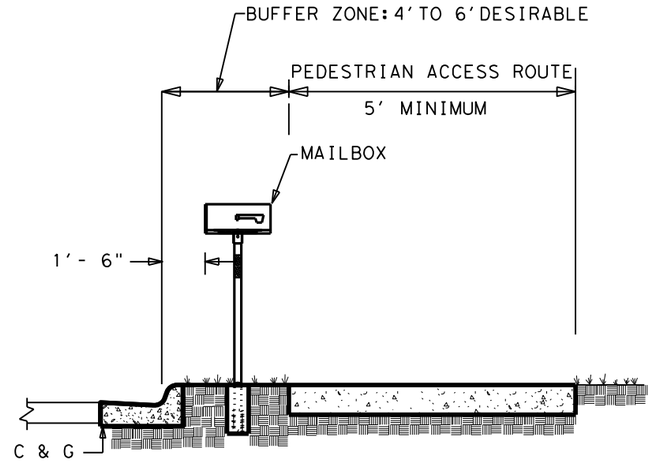
THROUGH HIGHWAY SPEEDS
LESS THAN 55 MPH



MAILBOX PLACEMENT AT RURAL LOCATIONS

THROUGH HIGHWAY SPEEDS
GREATER THAN OR EQUAL TO 55 MPH

CURB AND GUTTER MAILBOX INSTALLATION



NOTES:
1. A NON-TRAVERSABLE SURFACE MUST BE INSTALLED NEAR THE MAILBOX (NATURAL VEGETATION OR OTHER) IN THE BUFFER ZONE. ALTERNATIVELY, A BASE WITH A MINIMUM HEIGHT OF 2.5 INCHES MAY BE INSTALLED SO THAT THE EDGE OF THE MAILBOX DOES NOT EXTEND OUT MORE THAN 4 INCHES HORIZONTALLY BEYOND THE BASE.

2. THE SIDEWALK WIDTH MAY BE REDUCED TO 4 FOOT FOR SHORT DISTANCES AROUND THE MAILBOX IF NEEDED.

3. MAINTAIN A MINIMUM OF 5 FEET BETWEEN OBSTRUCTIONS IN THE PEDESTRIAN ACCESS ROUTE.

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MAILBOX PLACEMENT CURBS & INTERSECTIONS

MBP(2)-22

FILE: MBP-22.DGN	DN: VS	CK:	DW: VS	CK:			
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REVISIONS 12/2012 5/2014	0226	05	072, ETC.		US 385		
	DIST	COUNTY			SHEET NO.		
	AMA	DEAF SMITH			138		

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I. STORMWATER POLLUTION PREVENTION PLAN-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Perrmit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 506.
List adjacent MS 4 Operator(s) that receive discharges from this project. They need to be notified prior to construction activities.
(Note: Leave blank only if no adjacent MS 4 Operator(s) are affected.)

1.

2.

☐ No Action Required ☒ Required Action

Action Number:

Action 1: The project disturbs five or more acres of surface area: TxDOT must file a NOI and coordinate with TCEQ for CGP. The contractor is responsible for the PSL as defined in the Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges (2004 Edition, Section 7.19.F, Page 55.) The total disturbed acreage is the combined acreage to be disturbed on the project and the contractors PSL. This includes, as required, posting a site notice and NOI for the PSL. Identify all MS4 Permit holders that may be impacted by the project.

Commitment 1: Comply with TPDES CGP. The project requires that a NOI and a Large Site Notice be posted. TxDOT must file an NOI with TCEQ and send a copy to any non-TxDOT MS4 operator that receives discharge from the project. Implement and maintain the SW3P. Refer to the SW3P Plan Sheet, BMPs, and Detail.

Action 2: TxDOT must file a NOT for the project when final stabilization has been achieved.

Commitment 2: The contractor must stabilize the project site as stated in the SW3P.

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

USACE Permit required for filling, dredging, excavating or other work in any water bodies, rivers, creeks, streams, wetlands or wet areas. No equipment is allowed in any sream channel below the ordinary High Water Mark except on approved temporary stream crossings or drill pads.

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 (1/10 to <1/2 acre, 1/3 in tidal waters)
☐ Individual 404 Permit Required
☐ Other Nationwide Permit Required: NWP# _____

Required Actions: List Waters of the US Permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

1.

2.

The elevation of the ordinary high water marks of any areas requiring work to be performed in the waters of the US requiring the use of a nationwide permit can be found on the Bridge Layouts.

Best Management Practices for applicable 401 General Conditions:
(Note: If CORP Permit not required, do not check boxes.)

Erosion	Sedimentation	Post-Construction TSS
☐ Temporary Vegetation	☐ Silt Fence	☐ Vegetative Filter Strips
☐ Blankets/Matting	☐ Rock Berm	☐ Retention/Irrigation Systems
☐ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☐ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☐ Mulch Filter Berm and Socks	☐ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
☐ Compost Filter Berm and Socks	☐ Compost Filter Berm and Socks	☐ Vegetation Lined Ditches
	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ Sediment Basins	☐ Grassy Swales

III. CULTURAL RESOURCES

Refer to TxDOT Standard Specifications 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.

☐ No Action Required ☒ Required Action

Action Number:

1. If unanticipated archeological deposits are encountered during construction, work in the immediate area will cease and TxDOT archeological staff will be contacted to initiate post-review discovery procedures.

2.

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical.
Contractor must adhere to Construction Specification Requirements Specs 162, 164, 192, 193, 506, 730, 751 & 752 in order to comply with requirements for invasive species, beneficial landscaping and tree/brush removal commitments.

☐ No Action Required ☒ Required Action

Action Number:

1. Comply with Executive Order 13112 on Invasive Species and the intent of the Executive Order Memorandum on Beneficial Landscapes for re-vegetating the project area. The proposed seed mixture would be in accordance with Item 164, Seeding for Erosion Control in TxDOT's Standard Specifications for the construction of Highways, Streets, and Bridges.

2.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS TREATY ACT.

☐ No Action Required ☒ Required Action

Action Number:

1. If any species on the Potter County Threatened & Endangered List is sighted in the project area during construction, stop construction and notify the Area Engineer.
2. Swift Fox: Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered, and to avoid unnecessary impacts to dens.
3. Woodhouse's Toad, Texas Horned Lizard, Western Box Turtle, Western Hognose Snake, Western Mossosougo, Prairie Rattlesnake: Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered. This should include avoiding harvester ant beds in the selection of Project Specific Locations PSL's.
4. Bird BMP's: a) Do not disturb, destroy, or remove active nests, including ground nesting birds, during the nesting season; b) avoid the removal of unoccupied, inactive nests, as practicable; c) do not collect, capture, relocate, or transport birds, eggs, young, or active nests without a permit.
5. The Migratory Bird Treaty Act of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, egg in port or in whole, without a Federal permit issued in accordance within the Act's policies and regulations. In the event that migratory birds are encountered on-site during project construction, adverse impacts on protected birds, active nests, eggs, and/or young would be avoided.

   If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If coves or sinkholes are discovered, cease work in the immediate area, and contact the Engineer immediately.

LIST OF ABBREVIATIONS

BMP:	Best Management Practice	SPCC:	Spill Prevention Control and Countermeasure
CGP:	Construction General Permit	SW3P:	Storm Water Pollution Prevention Plan
DSHS:	Texas Department of State Health Services	PCN:	Pre-Construction Notification
FHWA:	Federal Highway Administration	PSL:	Project Specific Location
MOA:	Memorandum of Agreement	TCEQ:	Texas Commission on Environmental Quality
MOU:	Memorandum of Understanding	TPDES:	Texas Pollutant Discharge Elimination System
MS4:	Municipal Separate Stormwater Sewer System	TPWD:	Texas Parks and Wildlife Department
MBTA:	Migratory Bird Treaty Act	TxDOT:	Texas Department of Transportation
NOT:	Notice of Termination	T&E:	Threatened and Endangered Species
NWP:	Nationwide Permit	USACE:	U.S. Army Corp of Engineers
NOI:	Notice of Intent	USFWS:	U.S. Fish and Wildlife Service

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):
Comply with the Hazard Communication Act (the Act) 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 Safety Data Sheets (SDS) 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 Act. Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the 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 (not identified as normal)
* Trash piles, drums, canisters, barrels, etc.
* Undesirable smells or odors
* Evidence of leaching or seepage of substances

Does the project involve any bridge class structure rehabilitation(s) or replacement(s) (bridge class structures not including box culverts)?

☐ Yes ☒ No

If "No", then no further action is required.
If "Yes", then TxDOT is responsible for completing asbestos assessment/inspection.

Are the results of the asbestos inspection positive (is asbestos present)?

☐ Yes ☐ No

If "Yes", then TxDOT must retain a 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 demolition.

If "No", then TxDOT is still required to notifiy DSHS 15 working days prior to any scheduled demolition.

In either case, the Contractor is responsible for providing the date(s) for abatement activities and/or demolition with careful coordination between the Engineer and asbestos consultant in order to minimize construction delays and subsequent claims.

Any other evidence indicating possible hazardous materials or contamination discovered on site. Hazardous Materials or Contamination Issues Specific to this Project:

☒ No Action Required ☐ Required Action

Action Number:

1.

2.

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

☐ No Action Required ☒ Required Action

Action Number:

1. Avoid direct impacts to playa lakes adjacent to the right-of-way during construction. Ensure sediment and erosion controls near the playa lakes to prevent additional sedimentation into these water features.

2.

GENERAL NOTE:

Any change orders and/or deviations from the final design must be reported to the Engineer prior to commencement of construction activities, as additional environmental clearance may be required.

 Texas Department of Transportation
Amarillo District

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		US 385
STATE	DISTRICT	COUNTY	
TEXAS	AMA	DEAF SMITH	
CONTROL	SECTION	JOB	SHEET NO.
0226	05	072, ETC.	139

LAST REVISION: 1/15/15

Notes To Designer:
1. *Do not alter Sheet Design or Font style, size or weight - match text attributes.*
2. *If additional space is needed for a numbered section, fence and adjust sections up or down as needed for proportioning and readability but do not relocate from its relative position.*
3. *All areas should be addressed thoroughly and verify the necessary pay items are set up to support actions needed.*

Filled Out: 01/05/2024
Prepared by: Name/Section

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.

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):
0226-05-072, ETC

1.2 PROJECT LIMITS:
From: 16TH ST.

To: SOUTH OF US 60

1.3 PROJECT COORDINATES:
BEGIN: (Lat) 34.84075 ,(Long) -102.405367

END: (Lat) 34.810125 ,(Long) -102.405758

1.4 TOTAL PROJECT AREA (Acres): 33.07

1.5 TOTAL AREA TO BE DISTURBED (Acres): 6.23

1.6 NATURE OF CONSTRUCTION ACTIVITY:
Pedestrian sidewalk, curb ramps, crosswalks and driveways.

1.7 MAJOR SOIL TYPES:

Soil Type	Description
Pullman Clay Loam, 0 to 1 percent slopes	Well drained Medium amount of runoff
Pep Clay Loam, 1 to 3 percent slopes	Well drained Low runoff
Estacado Clay Loam, 0 to 1 percent slopes	Well-drained Negligible runoff
Berda Potter Complex, 3 to 12 percent slopes	Well-drained. Medium amount of runoff

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
- X 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
- X 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
- X Achieve site stabilization and remove sediment and erosion control measures
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.10 POTENTIAL POLLUTANTS AND SOURCES:

- X Sediment laden stormwater from stormwater conveyance over disturbed area
- X Fuels, oils, and lubricants from construction vehicles, equipment, and storage
- X Solvents, paints, adhesives, etc. from various construction activities
- X Transported soils from offsite vehicle tracking
- X Construction debris and waste from various construction activities
- ☐ Contaminated water from excavation or dewatering pump-out water
- ☐ Sanitary waste from onsite restroom facilities
- X Trash from various construction activities/receptacles
- ☐ Long-term stockpiles of material and waste
- X
- ☐ Other: _____
- ☐ 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

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

- X Development of plans and specifications
- X Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
- X Post Construction Site Notice
- X Submit NOI/CSN to local MS4
- X Perform SWP3 inspections
- X Maintain SWP3 records and update to reflect daily operations
- X Complete and submit Notice of Termination to TCEQ
- X Maintain SWP3 records for 3 years
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

- X Day To Day Operational Control
- X Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
- X Post Construction Site Notice
- X Submit NOI/CSN to local MS4
- X Maintain schedule of major construction activities
- X Install, maintain and modify BMPs
- X Complete and submit Notice of Termination to TCEQ
- X Maintain SWP3 records for 3 years
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.14 LOCAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OPERATOR COORDINATION:

MS4 Entity

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ERNESTO SALCIDO
100177
LICENSED PROFESSIONAL ENGINEER
3/1/2024
Salcido Ramirez, P.E.

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Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

July 2023 Sheet 1 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(SEE TITLE SHEET)		140
STATE	STATE DIST.	COUNTY	
TEXAS	AMA	DEAF SMITH	
CONT.	SECT.	JOB	HIGHWAY NO.
0226	05	072,ETC.	US 385

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
- ☐ ☐ Temporary Seeding
- ☐ X Permanent Planting, Sodding or Seeding
- X ☐ Biodegradable Erosion Control Logs
- ☐ ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Vertical Tracking
- ☐ ☐ Interceptor Swale
- ☐ ☐ 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
- ☐ ☐ Rock Filter Dams/ Rock Check Dams
- X ☐ Sandbag Berms
- ☐ ☐ Sediment Control Fence
- ☐ ☐ 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
N/A		

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
- ☐ 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:

- ☐ Chemical Management
- X Concrete and Materials Waste Management
- X Debris and Trash Management
- ☐ Dust Control
- X Sanitary Facilities
- ☐ Other: _____
- ☐ 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
N/A		

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:

2.9 INSPECTIONS:

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.

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3/1/2024
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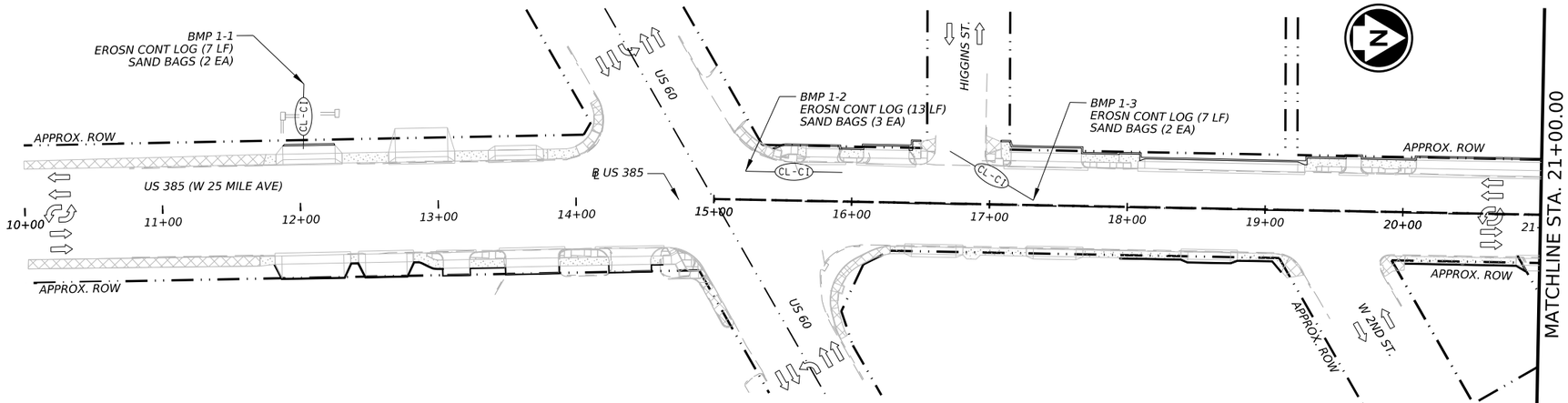
STORMWATER POLLUTION PREVENTION PLAN (SWP3)

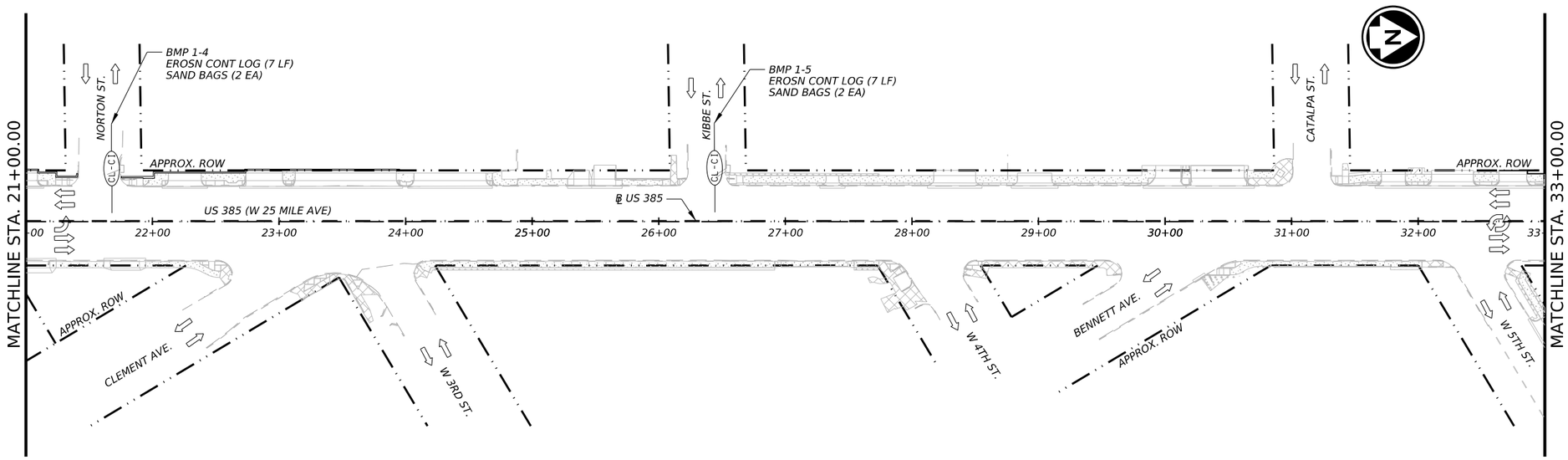
July 2023 Sheet 2 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(SEE TITLE SHEET)		141
STATE	STATE DIST.	COUNTY	
TEXAS	AMA	DEAF SMITH	
CONT.	SECT.	JOB	HIGHWAY NO.
0226	05	072,ETC.	US 385

BMP'S RECORD LOG		
ID	INSTALL DATE	REMOVAL DATE
BMP 1-1		
BMP 1-2		
BMP 1-3		
BMP 1-4		
BMP 1-5		





0 50 100

SCALE IN FEET

LEGEND

- CL-DI — EROSION CONTROL LOG AT DROP INLET
- CL-CI — EROSION CONTROL LOG AT CURB INLET
- TRAFFIC FLOW ARROW

NOTES:

1. BMPS SHALL BE INSTALLED NO SOONER THAN TWO WEEKS PRIOR TO SOIL DISTURBANCE OR POTENTIAL POLLUTANT GENERATING ACTIVITIES IN THEIR CONTROL AREA.
2. LOCATIONS OF EROSION CONTROL DEVICES ARE APPROXIMATIONS. ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY IN THEIR CONTROL AREA, AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
4. ALL INLETS AND JUNCTION BOXES WITHIN THE PROJECT LIMITS AFFECTED BY CONSTRUCTION DEBRIS SHALL BE PROTECTED.
5. EROSION CONTROL DEVICE INSTALLATION, MAINTENANCE, AND REMOVAL SHALL BE IN ACCORDANCE WITH TXDOT STANDARDS FOR EROSION CONTROL.

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Texas Department of Transportation

US 385

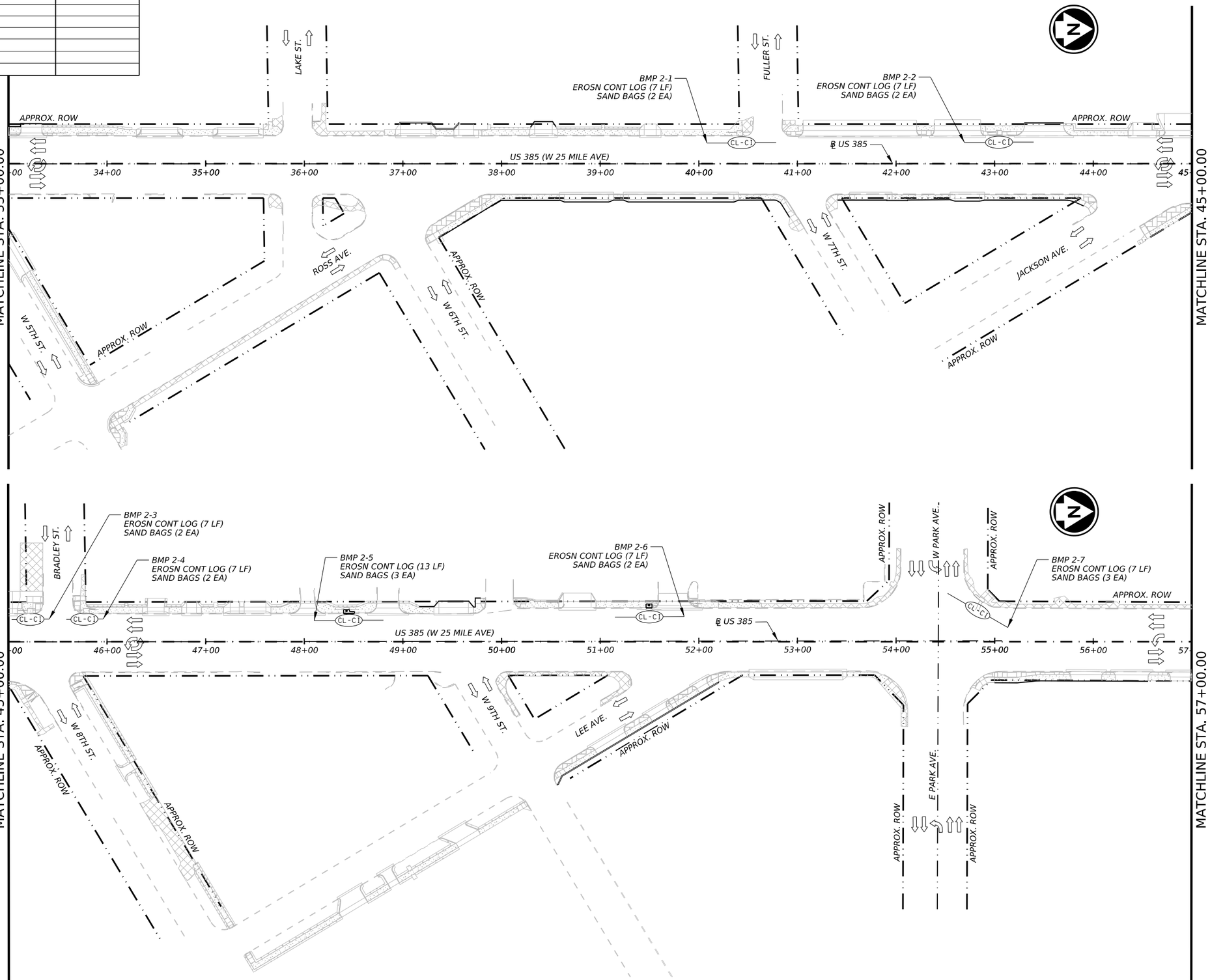
SWP3 PLAN

BEGIN TO STA 33+00

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		142

DATE: 3/1/2024 9:28:23 PM
FILE: pw://aecom-na-pw.bentley.com:AECOM USA Texas/Documents/60715485-36-2IDP5017 WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910 CAD/20_SHEETS/US385/Erosion/US385_AEC_SW3P_001.dgn

BMP'S RECORD LOG		
ID	INSTALL DATE	REMOVAL DATE
BMP 2-1		
BMP 2-2		
BMP 2-3		
BMP 2-4		
BMP 2-5		
BMP 2-6		
BMP 2-7		



0 50 100
SCALE IN FEET

LEGEND

- CL-DI — EROSION CONTROL LOG AT DROP INLET
- CL-CI — EROSION CONTROL LOG AT CURB INLET
- TRAFFIC FLOW ARROW

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Texas Department of Transportation

US 385

SWP3 PLAN

STA 33+00 TO STA 57+00

SHEET 2 OF 4

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		143

DATE: 3/1/2024 9:28:24 PM
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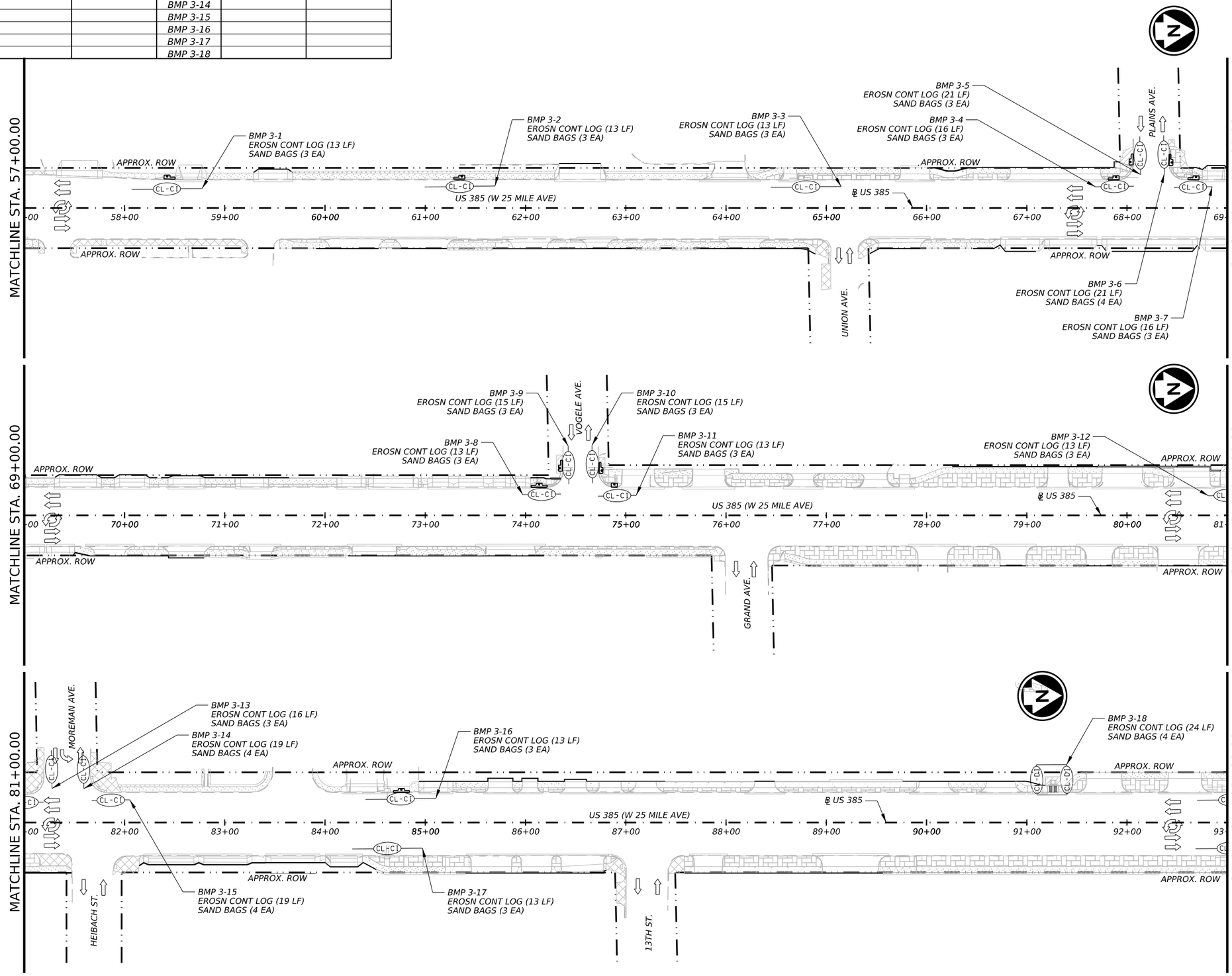
BMP'S RECORD LOG			BMP'S RECORD LOG		
ID	INSTALL DATE	REMOVAL DATE	ID	INSTALL DATE	REMOVAL DATE
BMP 3-1			BMP 3-10		
BMP 3-2			BMP 3-11		
BMP 3-3			BMP 3-12		
BMP 3-4			BMP 3-13		
BMP 3-5			BMP 3-14		
BMP 3-6			BMP 3-15		
BMP 3-7			BMP 3-16		
BMP 3-8			BMP 3-17		
BMP 3-9			BMP 3-18		



0 50 100

SCALE IN FEET

LEGEND

CL-DI — EROSION CONTROL LOG AT DROP INLET

CL-CI — EROSION CONTROL LOG AT CURB INLET

TRAFFIC FLOW ARROW

NOTES:

1. BMPS SHALL BE INSTALLED NO SOONER THAN TWO WEEKS PRIOR TO SOIL DISTURBANCE OR POTENTIAL POLLUTANT GENERATING ACTIVITIES IN THEIR CONTROL AREA.
2. LOCATIONS OF EROSION CONTROL DEVICES ARE APPROXIMATIONS. ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY IN THEIR CONTROL AREA, AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
4. ALL INLETS AND JUNCTION BOXES WITHIN THE PROJECT LIMITS AFFECTED BY CONSTRUCTION DEBRIS SHALL BE PROTECTED.
5. EROSION CONTROL DEVICE INSTALLATION, MAINTENANCE, AND REMOVAL SHALL BE IN ACCORDANCE WITH TXDOT STANDARDS FOR EROSION CONTROL.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

3/1/2024

Salcido Pavia, P.E.

AECOM
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AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 385

SWP3 PLAN

STA 57+00 TO STA 93+00

SHEET 3 OF 4

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		144

DATE: 3/1/2024 9:28:25 PM
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ck | dw | ck

BMP'S RECORD LOG		
ID	INSTALL DATE	REMOVAL DATE
BMP 4-1		
BMP 4-2		
BMP 4-3		
BMP 4-4		
BMP 4-5		
BMP 4-6		
BMP 4-7		
BMP 4-8		

BMP'S RECORD LOG		
ID	INSTALL DATE	REMOVAL DATE
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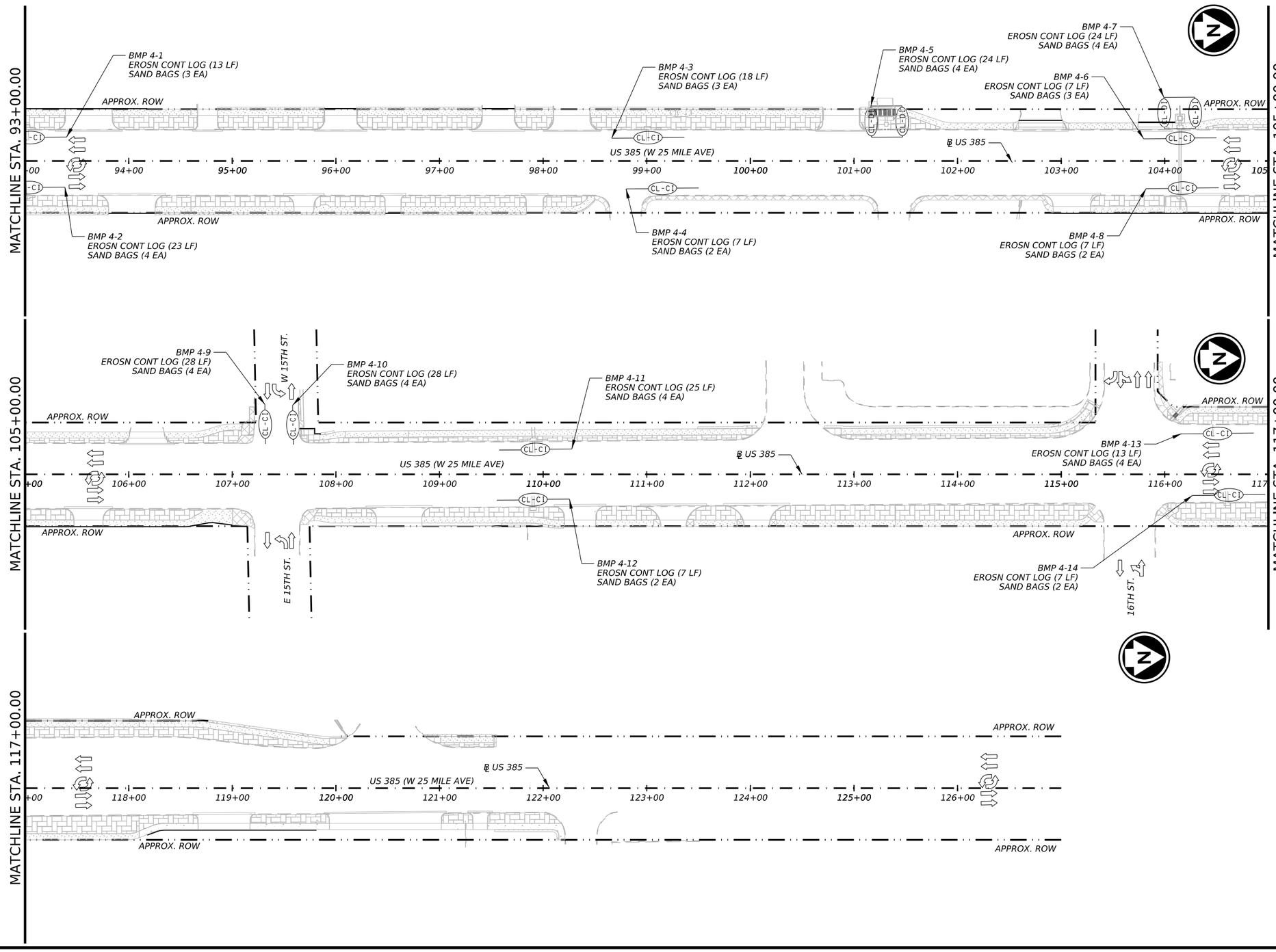
BMP 4-10		
BMP 4-11		
BMP 4-12		
BMP 4-13		
BMP 4-14		



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SCALE IN FEET

LEGEND

CL-DI EROSION CONTROL LOG AT DROP INLET

CL-CI EROSION CONTROL LOG AT CURB INLET

TRAFFIC FLOW ARROW

NOTES:

1. BMPS SHALL BE INSTALLED NO SOONER THAN TWO WEEKS PRIOR TO SOIL DISTURBANCE OR POTENTIAL POLLUTANT GENERATING ACTIVITIES IN THEIR CONTROL AREA.
2. LOCATIONS OF EROSION CONTROL DEVICES ARE APPROXIMATIONS. ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY IN THEIR CONTROL AREA, AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
4. ALL INLETS AND JUNCTION BOXES WITHIN THE PROJECT LIMITS AFFECTED BY CONSTRUCTION DEBRIS SHALL BE PROTECTED.
5. EROSION CONTROL DEVICE INSTALLATION, MAINTENANCE, AND REMOVAL SHALL BE IN ACCORDANCE WITH TXDOT STANDARDS FOR EROSION CONTROL.

STATE OF TEXAS
ERNESTO SALCIDO
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Ernesto Salcido, P.E. 3/1/2024

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US 385

SWP3 PLAN

STA 93+00 TO END

SHEET 4 OF 4

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		145

DATE: 3/1/2024 9:28:26 PM
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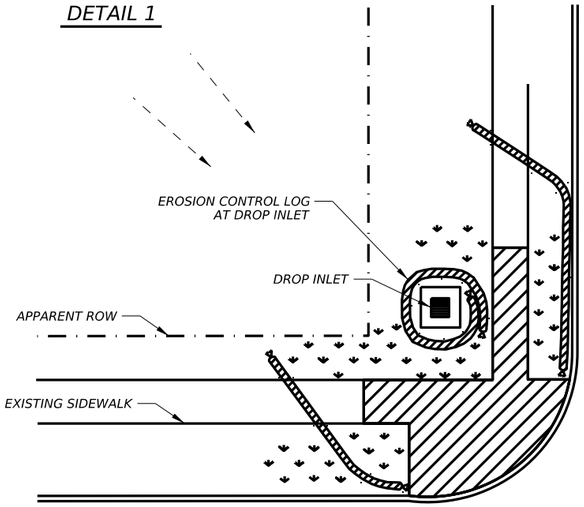
CK DW CK

DETAIL 1



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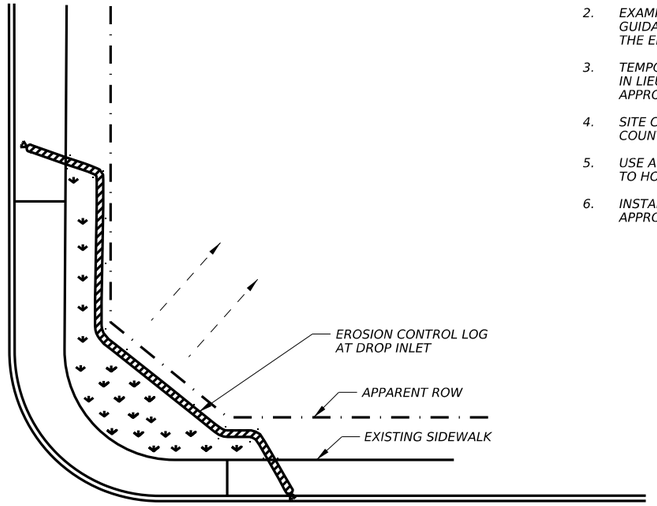
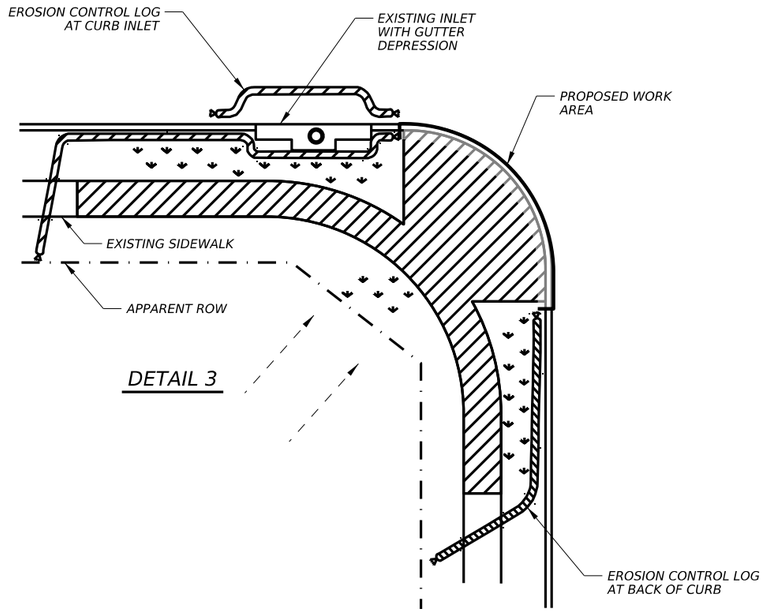


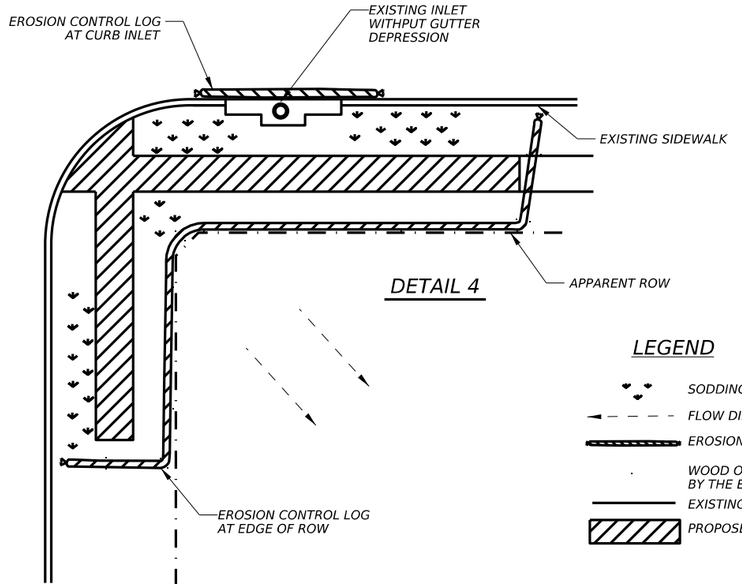
NOTES:

1. REFERENCE ENVIRONMENTAL PERMITS, ISSUES, AND COMMITMENTS (EPIC) AND STORM WATER POLLUTION PREVENTION PLAN (SW3P) STANDARDS FOR SPECIFIC CONSTRUCTION CONSIDERATIONS OR REQUIREMENTS.
2. EXAMPLES SHOWN ON THE SHEET ARE FOR GENERAL GUIDANCE AND MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.
3. TEMPORARY SEDIMENT CONTROL FENCE MAY BE USED IN LIEU OF EROSION CONTROL LOGS WHERE APPROVED BY THE ENGINEER.
4. SITE CONDITIONS MAY DICTATE ADDITIONAL COUNTERMEASURES AS DIRECTED BY THE ENGINEER.
5. USE ADDITIONAL STAKES AS NEEDED TO HOLD IN PLACE (NSPI).
6. INSTALLATION OF COUNTERMEASURES MUST BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

DETAIL 3



DETAIL 4



LEGEND

- SODDING
- FLOW DIRECTION
- EROSION CONTROL LOG
- WOOD OR METAL SATAKES (AS APPROVED BY THE ENGIENEER)
- EXISTING FEATURES
- PROPOSED WORK AREA

STATE OF TEXAS
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Texas Department of Transportation

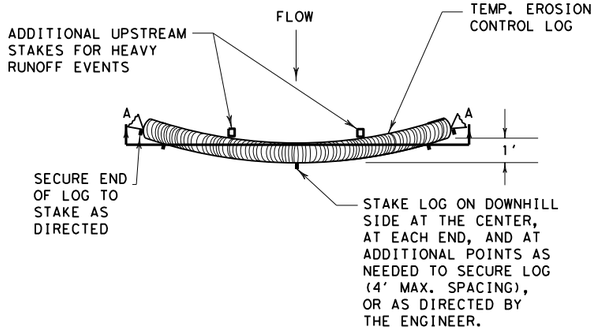
US 385

SW3P SIDEWALK GENERAL LAYOUT

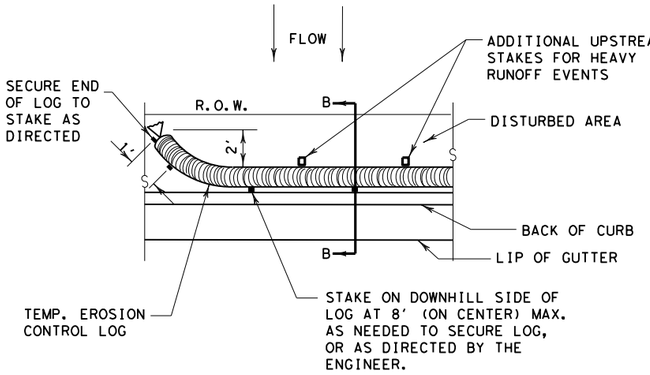
SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0226	05	072, ETC.	US 385
DIST	COUNTY		SHEET NO.
AMA	DEAF SMITH		146

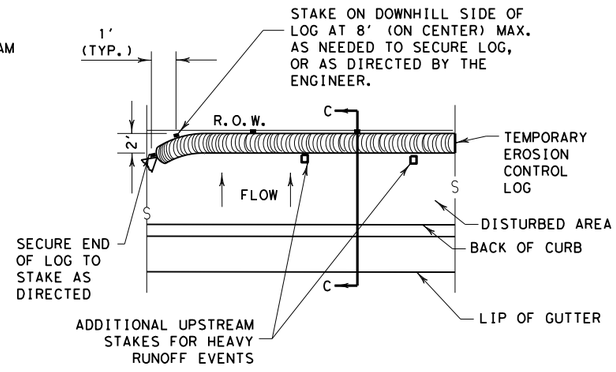
DATE: 3/1/2024
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Environmental/ec916.dgn



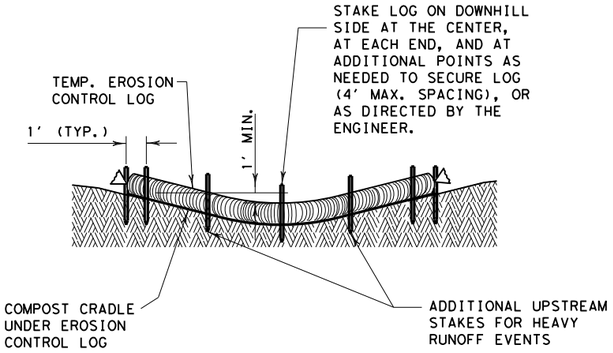
PLAN VIEW



PLAN VIEW



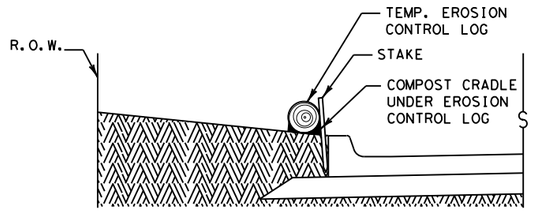
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

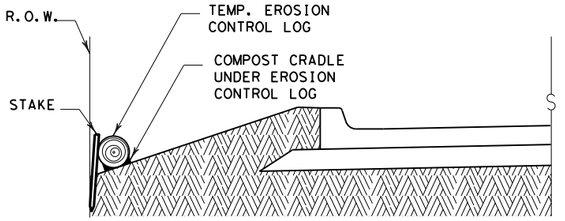
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

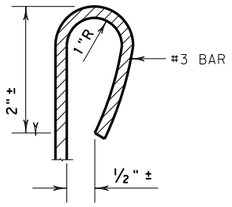
CL-BOC



SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW



REBAR STAKE DETAIL

LEGEND

- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY
- CL-SST — EROSION CONTROL LOGS ON SLOPES STAKE AND TRENCHING ANCHORING
- CL-SSL — EROSION CONTROL LOGS ON SLOPES STAKE AND LASHING ANCHORING
- CL-DI — EROSION CONTROL LOG AT DROP INLET
- CL-CI — EROSION CONTROL LOG AT CURB INLET
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

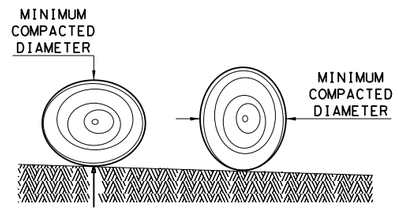
Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

Texas Department of Transportation

Design Division Standard

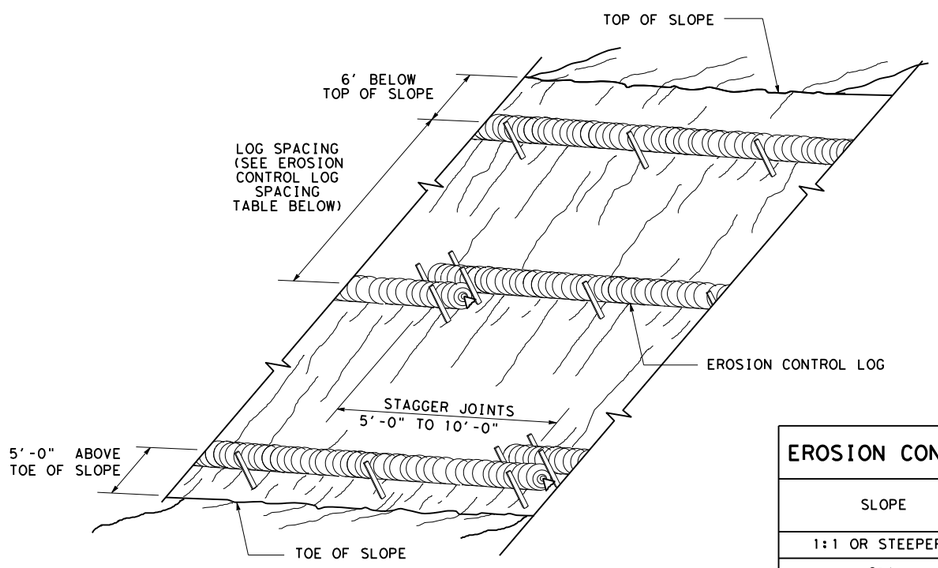
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

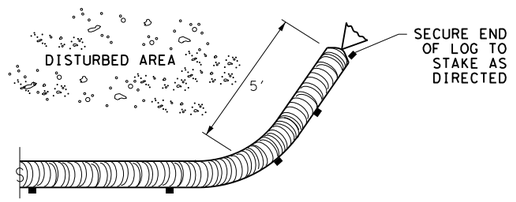
FILE: ec916	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		147

DATE: 3/1/2024
FILE: pw://decom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Environmental/ec916.dgn



EROSION CONTROL LOGS ON SLOPES
STAKE AND TRENCHING ANCHORING

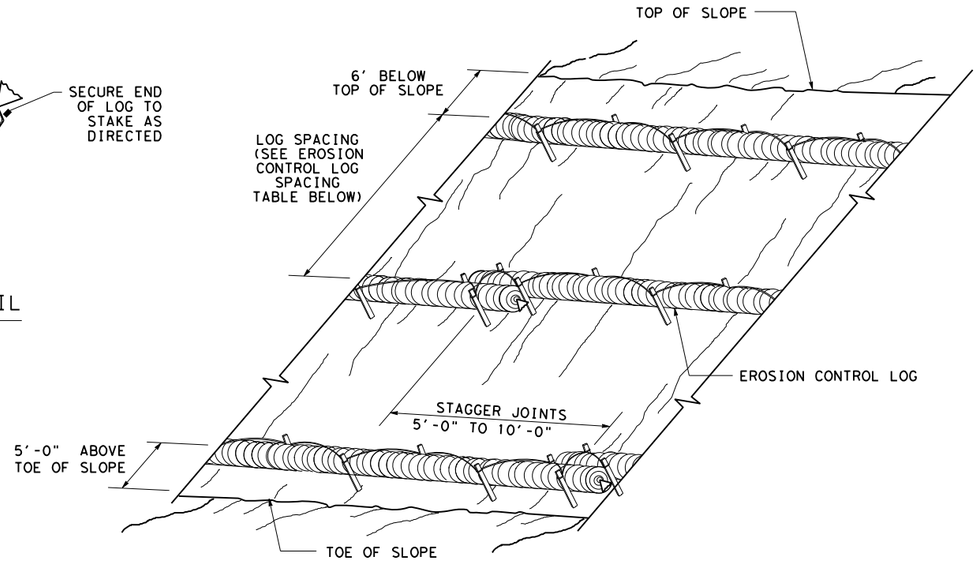
CL-SST



END SECTION RAP DETAIL

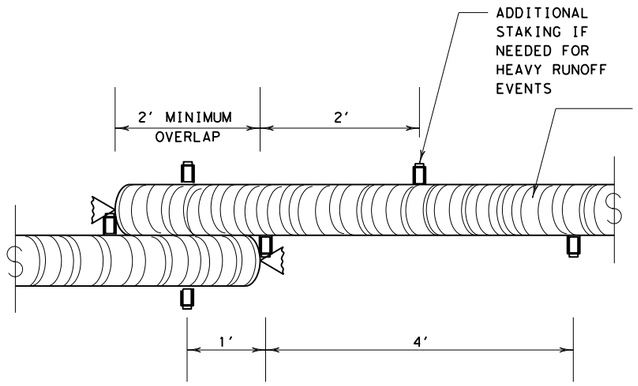
EROSION CONTROL LOG SPACING TABLE				
SLOPE	LOG DIAMETER			
	6"	8"	12"	18"
1:1 OR STEEPER	5'	10'	15'	20'
2:1	10'	20'	30'	40'
3:1	15'	30'	45'	60'
4:1 OR FLATTER	20'	40'	60'	80'

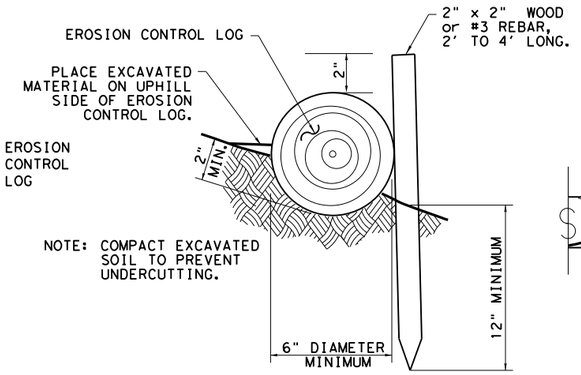
* ADJUSTMENTS CAN BE MADE FOR SOIL TYPE:
SOFT, LOAMY SOILS-ADJUST ROWS CLOSER TOGETHER;
HARD, ROCKY SOILS- ADJUST ROWS FARTHER APART



EROSION CONTROL LOGS ON SLOPES
STAKE AND LASHING ANCHORING

CL-SSL

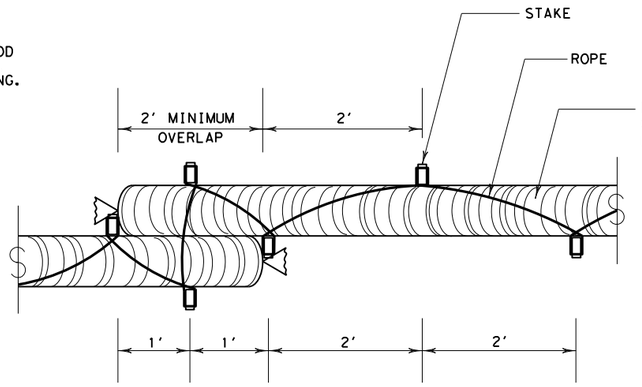


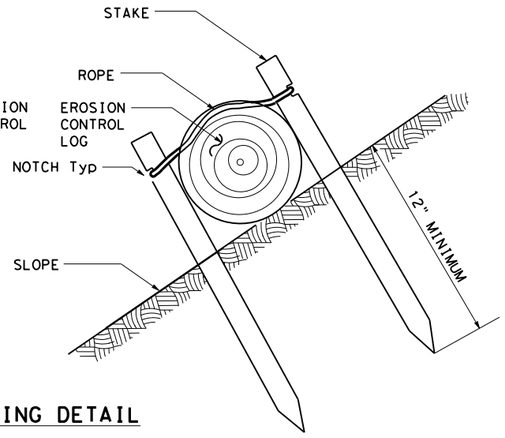


STAKE AND TRENCHING ANCHORING DETAIL

CL-SST

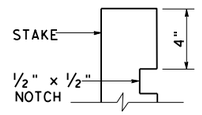
TRENCH DEPTH TABLE	
LOG DIAMETER	DEPTH
6"	2"
8"	3"
12"	4"
18"	5"





STAKE AND LASHING ANCHORING DETAIL

CL-SSL



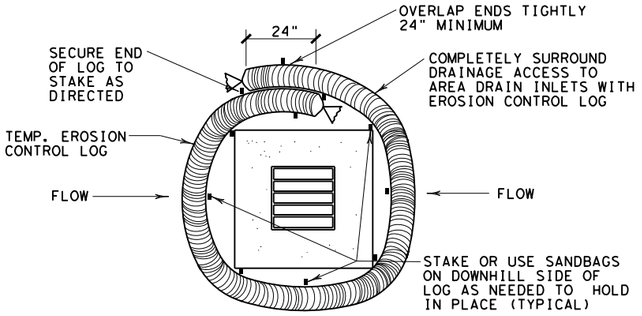
STAKE NOTCH DETAIL

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
EROSION CONTROL LOG
EC(9)-16

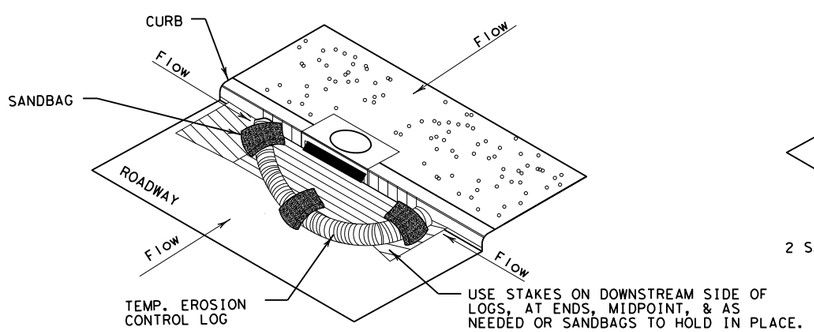
FILE: ec116	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS	
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0226	05	072, ETC.	US 385	
	DIST	COUNTY		SHEET NO.	
	AMA	DEAF SMITH		148	

DATE: 3/1/2024
FILE: pw://aecom-na-pw.bentley.com:AECOM_USA_Texas/Documents/60715485-36-21DP5017_WA3 - US 60 and US 385 ADA Sidewalks/900-CAD GIS/910_CAD/20_SHEETS/Standards/Environmental/ec916.dgn



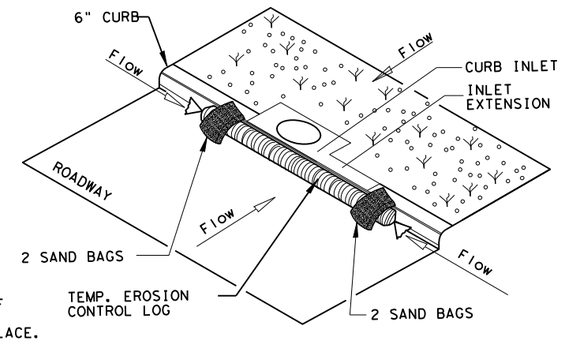
EROSION CONTROL LOG AT DROP INLET

CL-DI



EROSION CONTROL LOG AT CURB INLET

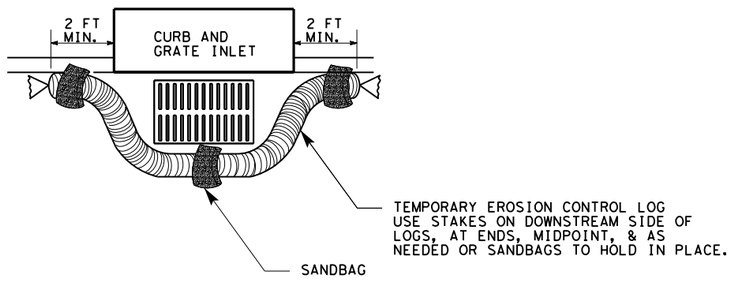
CL-CI



EROSION CONTROL LOG AT CURB INLET

CL-CI

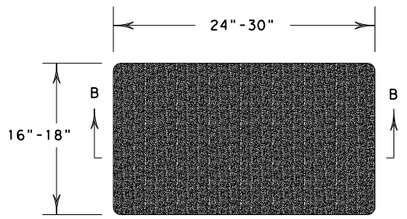
NOTE:
EROSION CONTROL LOGS USED AT CURB INLETS SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.



EROSION CONTROL LOG AT CURB & GRADE INLET

CL-GI

SECTION B-B



SANDBAG DETAIL

SHEET 3 OF 3

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0226	05	072, ETC.	US 385
	DIST	COUNTY		SHEET NO.
	AMA	DEAF SMITH		149