INDEX OF SHEETS

SHEET NO. DESCRIPTION

(SEE SHEET 2 FOR INDEX OF SHEETS)

REGISTERED ACCESSIBILITY SPECIALIST INSPECTION REQUIED - YES TDLR NO. TABS2023012651

FINAL PLANS

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

CONTRACTOR:

LETTING DATE: _

LIST OF APPROVED FIELD CHANGES:

STATE OF TEXAS DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT

-0-

FEDERAL AID PROJECT NO. F 2023(785), ETC.

FOR THE CONSTRUCTION OF CURB RAMPS AND SIDEWALK IMPROVEMENTS

CONSISTING OF CONSTRUCTION OF CURB RAMPS, SIDEWALKS AND MISCELLANEOUS PEDESTRIAN ELEMENTS

SH 111 (CSJ: 0346-07-042)

SL 521 (CSJ: 0089-11-007)

LIMITS: FROM 0.067 MI EAST OF SH 111 TO 0.091 MI EAST OF FM 1822

SL 522 (CSJ: 0089-12-006)

LIMITS: FROM FM 710 TO 5TH ST.

(SOUTH SIDE OF ROAD)

LIMITS: FROM SL 521 TO US 59

FM 710 (CSJ: 0420-09-025)

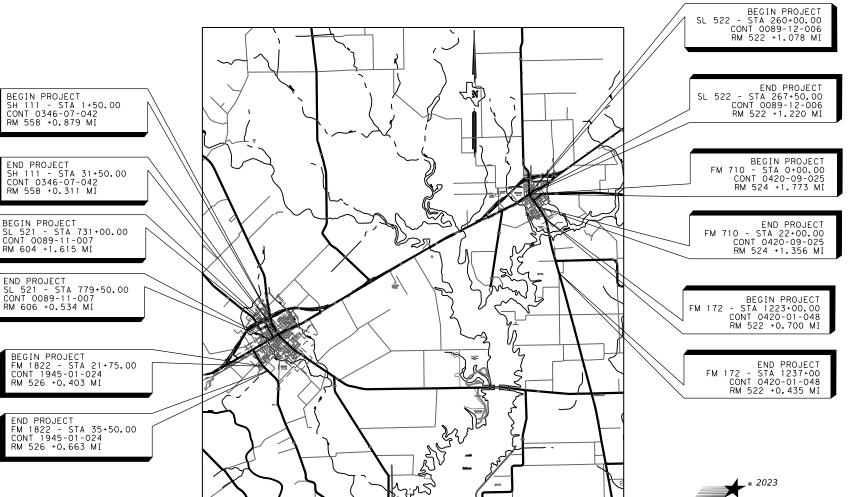
LIMITS: FROM SL 522 TO US 59

FM 1822 (CSJ: 1945-01-024)

LIMITS: DUGGER ST. TO 0.68 MI SOUTH OF SL 521

FM 172 (CSJ: 0420-01-048)

LIMITS: FROM BUECHMAN RD. TO W HEARD ST.



SL 521(CSJ: 0089-11-007) - F2023(785)

TYPE OF WORK: CURB RAMP AND SIDEWALK IMPROVEMENTS HWY FUNCTION: N/A DESIGN SPEED: N/A ADT: N/A

YKM

F 2023 (785), ETC.

JOB 0089 11 007,ETC. SL 521,ETC.

JACKSON

TOTAL LENGTH = PART 1: 0.25 MI PART 2: 0.336 MI (NORTH SIDE OF ROAD ONLY)

SH 111 (CSJ: 0346-07-042) - F 2023(785) TYPE OF WORK: CURB RAMP AND SIDEWALK IMPROVEMENTS HWY FUNCTION: N/A DESIGN SPEED: N/A

TOTAL LENGTH = 0.655 MI

ADT: N/A

FM 1822 (CSJ: 1945-01-024) - F 2023(785)

TYPE OF WORK: CURB RAMP AND SIDEWALK IMPROVEMENTS HWY FUNCTION: N/A DESIGN SPEED: N/A

TOTAL LENGTH = 0.254 MI (EAST SIDE OF ROAD, ONLY)

SL 522 (CSJ: 0089-12-006) - F 2023(786) TYPE OF WORK: CURB RAMP AND SIDEWALK IMPROVEMENTS HWY FUNCTION: N/A

DESIGN SPEED: N/A ADT: N/A

TOTAL LENGTH = 0.130 MI (SOUTH SIDE OF ROAD, ONLY)

FM 710 (CSJ: 0420-09-025) - F 2023(786)

TYPE OF WORK: CURB RAMP AND SIDEWALK IMPROVEMENTS HWY FUNCTION: N/A DESIGN SPEED: N/A ADT: N/A

TOTAL LENGTH = 0.417 MI

FM 172 (CSJ: 0402-01-048) - F2023(786)

TYPE OF WORK: CURB RAMP AND SIDEWALK IMPROVEMENTS HWY FUNCTION: N/A DESIGN SPEED: N/A ADT: N/A

TOTAL LENGTH = 0.264 MI



2/28/2023

Texas Department of Transportation

PROJECT MANAGER

2/28/2023 RECOMMENDED FOR LETTING: Deffery Vinklarek, PE

-C5DISTRICT-DIBECTOR OF TRANSPORTATION
PLANNING AND DEVELOPMENT

SUBMITTED FOR LETTING:

2/28/2023

APPROVED FOR LETTING.

Martin C. Horst, PE

2/28/2023

DISTRICT ENGINEER

THIS IS TO CERTIFY THAT THE CONSTRUCTION WORK WAS PERFORMED IN ACCORDANCE WITH THE PLAN, CONTRACT, AND LISTED FIELD CHANGES.

AREA ENGINEER

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 FOR ALL FEDERAL-AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, JULY 2022)

DATE

YOAKUM DISTRICT

JACKSON COUNTY

EQUATIONS - NONE

EXCEPTIONS - NONE RAILROAD GRADE CROSSINGS - NONE

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DRAINAGE DETAILS

FM 1822 CULVERT PROFILES

TRAFFIC STANDARDS

SMD(SLIP-1)-08 THRU SMD(SLIP-3)-08

ENVIRONMENTAL STANDARDS

SL 521 STORMWATER POLLUTION PREVENTION PLAN (SWP3)

SH 111 STORMWATER POLLUTION PREVENTION PLAN (SWP3) FM 1822 STORMWATER POLLUTION PREVENTION PLAN (SWP3)

SL 522 STORMWATER POLLUTION PREVENTION PLAN (SWP3)

FM 710 STORMWATER POLLUTION PREVENTION PLAN (SWP3)

FM 172 STORMWATER POLLUTION PREVENTION PLAN (SWP3) ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

SETP-CD SETP-CD-A

D&OM(1)-20 D&OM(2)-20

D&OM(3)-20 D&OM(4)-20 PM(4)-22A

SMD(GEN)-08

SMD(TWT)-08

EC(1)-16

EC(9)-16

ENVIRONMENTAL

DRAINAGE STANDARDS

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46 - 60 61 - 73 74 - 80 81 - 84 85 - 94 95 - 101 102 - 101 104 - 101	MISCELLANEOUS DRIVEWAY DETAILS
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107 108 - 109 110 - 113 114 - 116	B PED-18
	RETAINING WALL DETAILS
117 118	RETAINING WALL LAYOUT RETAINING WALL DETAILS
	RETAINING WALL STANDARDS
119	RW(SF)

THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE HAVE BEEN ISSUED BY ME AND ARE APPLICABLE TO THIS PROJECT.

2/28/2023



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TBPE Registration No. F-1046

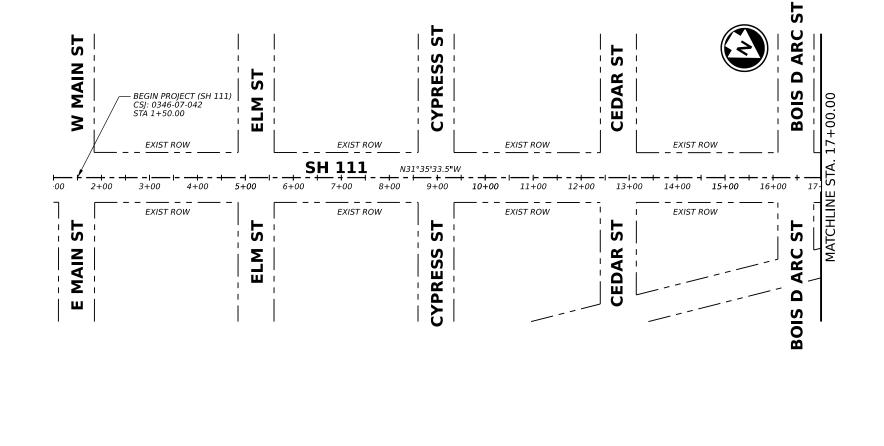
Texas Department of Transportation JACKSON CO SIDEWALKS

INDEX OF SHEETS

SHEET 1 OF 1

CONT	SECT	JOB		HIGHWAY					
0089	11	007,ETC.	S	L 521,ETC.					
DIST		COUNTY		SHEET NO.					
YKM		JACKSON		2					

ST **ALLEN** MENEFEE Z I I END PROJECT PT.1 (SL 521) – CSJ: 0089-11-007 STA 744+25.00 - BEGIN PROJECT (SL 521) CSJ: 0089-11-007 STA 731+00.00 SH Z Z EXIST ROW SL 521 730+00 731+00 732+00 733+00 734+00 735+00 736+00 737+00 738+00 739+00 726+00 727+00 728+00 729+00 729+00 740+00 741+00 742+00 743+00 744+00 745+00 746+00 747 **\(\)** EXIST ROW EXIST ROW EXIST ROW ST ST i N ALLEN Z Z Z SH ED FRANK WHITE ST **PUMPHREY** GUADALUPE Ś TRINITY - BEGIN PROJECT PT.2 (SL 521) CSJ: 0089-11-007 STA 760+00.00 EXIST ROW EXIST ROW EXIST ROW SL 521 558°28'51.7"W 754+00 755+00 756+00 757+00 758+00 759+00 764+00 765+00 766+00 767+00 EXIST ROW 749+00 750+00 751+00 752+00 753+00 768+00 769 5 761+00 762+00 763+00 760+00 ST MATCHLINE EXIST ROW EXIST ROW ST ST FRANK WHITE **GUADALUPE PUMPHREY** TRINITY DR ST APOLLO | COLORADO – END PROJECT (SL 521) CSJ: 0089-11-007 STA 779+50.00 BGE, Inc.
1701 Directors Blvd., Suite 1000, Austin, TX 78744
Tel: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046 EXIST ROW EXIST ROW SL 521 Texas Department of Transportation 776+00 777+00 778+00 779+00 JACKSON CO SIDEWALKS 771+00 772+00 773+00 774+00 775+00 770+00 780+00 781+00 782+00 783+00 784+00 EXIST ROW EXIST ROW ST EXIST ROW COLORADO PROJECT LAYOUT SL 521 CSJ: 0089-11-007 0089 SL 521,ETC. 11 007,ETC.



ASH ST

SH 111 22+00 23+00 24+00 25+00 EXIST ROW

– END PROJECT (SH 111) CSJ: 0346-07-042 STA 31+50.00

26+00

EXIST ROW

EXIST ROW

BLACKJACK ST

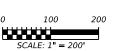
 $\frac{1}{10} - \frac{1}{20+00} - \frac{1}{21+00}$

EXIST ROW

18+00 19+00

EXIST ROW

NEAST ST





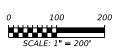
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Texas Department of Transportation JACKSON CO SIDEWALKS

> PROJECT LAYOUT SH 111 CSI: 0346-07-042

CSJ: 0346-07-042									
SHEET 2 OF 6									
CONT	SECT	JOB		HIGHWAY					
0089	11	007,ETC.	S	L 521,ETC.					
DIST		COUNTY		SHEET NO.					
YKM	YKM JACKSON 4								

END PROJECT (FM 1822) – CSJ: 1945-01-024 STA 35+50.00 DUGGER GAYLE – BEGIN PROJECT (FM 1822) CSJ: 1945-01-024 STA 21+75.00 EXIST ROW \S EXIST ROW 57 EXIST ROW 21+00 EXIST ROW 22+00 23+00 33+00 30+00 31+00 32+00 24+00 EXIST ROW 28+00 29+00 27+00 W GAYLE ST EXIST ROW





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Texas Department of Transportation

JACKSON CO SIDEWALKS

PROJECT LAYOUT FM 1822 CSI: 1945-01-024

	CS	j: 1945-01-02	24					
SHEET 3 OF 6								
CONT	SECT	JOB	HIGHWAY					
0089	11	007,ETC.	S	L 521,ETC.				
DIST		COUNTY		SHEET NO.				
YKM		JACKSON		5				

BEGIN PROJECT (SL 522)

CSJ: 0889-12-006

STA 260+00.00

EXIST ROW

END PROJECT (SL 522) — CSJ: 0089-12-006 STA 267+50.00

N 4TH :





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Texas Department of Transportation

JACKSON CO SIDEWALKS

PROJECT LAYOUT SL 522 CSJ: 0089-12-006

	ردی	,. 0005 12 00						
		SHEET	4 (DF 6				
CONT	SECT	JOB		HIGHWAY				
0089	11	007,ETC.	S	L 521,ETC.				
DIST		COUNTY		SHEET NO.				
VKM	IACKSON 6							

MAURITZ AVE ST W BARD AVE MARTIN AVE 20 59 EXIST ROW. ST 277 - END PROJECT (FM 710) CSJ:0420-09-025 STA 22+00.00 EXIST ROW

FM 710

5+00 6+00

EXIST ROW EXIST ROW EXIST ROW EXIST ROW 7+00 8+00 9+00 - EXIST ROW 18+00 19+00 20+00 21+00 EXIST ROW \ 12+00 13+00 EXIST ROW 22+00 1+00 2+00 3+00 4+00 10+00 14+00 15÷00 0+00 − − _{EXĪST ROW} ELVINE AVE MARTIN AVE **BARD AVE** MAURITZ AVE Ś SCALE: 1" = 200' W ELMEN 59 BGE, Inc.
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Tel: 512-879-0400 ◆ www.bgeinc.com
TBPE Registration No. F-1046 Texas Department of Transportation JACKSON CO SIDEWALKS PROJECT LAYOUT FM 710 CSJ: 0420-09-025 0089 007,ETC. SL 521,ETC.

IACKSON

BEGIN PROJECT (FM 172)
CSj: 0420-01-048
STA 1223+00.00 SUTHERLAND ST **BUECHMAN RD** W HEARD ST END PROJECT (FM 172) – CSJ: 0420-01-048 STA 1237+00.00 NIM ___EXIST_ROW Ш EXIST ROW 1222+00 1223+00 1224+00 1225+00 1226+00 1227+00 1228+00 1229+00 1230+00 1231+00 1232+00 1233+00 1233+00 1235+00 1236+00 1237+00 1238+00 EXIST ROW ST EXIST ROW W SUTHERLAND E HEARD

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Texas Department of Transportation JACKSON CO SIDEWALKS

PROJECT LAYOUT FM 172 CSJ: 0420-01-048

		SHEET	6 (DF 6
CONT	SECT	JOB		HIGHWAY
089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
′KM		JACKSON		8

Project Number:

Sheet:

Sheet A

Control: 0089-11-007, etc.

County: Jackson

Highway: SL 521, etc.

Highway: SL 521, etc.

Project Number:

County: Jackson

GENERAL:

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

Clayton Harris <u>Clayton.Harris@txdot.gov</u> James Janak <u>James.Janak@txdot.gov</u>

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

Questions may be submitted via the Letting Pre-Bid Q&A web page. This webpage can be accessed from the Notice to Contractors dashboard located at the following Address: https://tableau.txdot.gov/views/ProjectInformationDashboard/NoticetoContractors

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

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

All questions submitted that generate a response will be posted through this site. The site is organized by District, Project Type (Construction or Maintenance), Letting Date, CCSJ/Project Name

PROTECTION NOTES FOR THE REMOVAL OF EXISTING PAVEMENT, CURB, OR SIDEWALK AND CONSTRUCTION OF NEW PAVEMENT, CURB, OR SIDEWALK ADJACENT TO HISTORIC BUILDINGS, MATERIALS, FENCE AND RETAINING WALLS:

General Notes

In Edna, Texas:

- SL 521 (CSJ:0089-11-007)
- SH 111 (CSJ:0346-07-042)
- FM 1822 (CSJ:1945-01-024)

In Ganado, Texas:

- SL 522 (CSJ:0089-12-006)
- FM 710 (CSJ:0420-09-025)
- FM 172 (CSJ:0420-01-048)

Where proposed work is in proximity to historic buildings or other structures (walls, retaining walls, fences, stone markers), planting beds, and vegetation/groundcover, follow the procedures listed below for demolition and construction.

Sheet:

Control: 0089-11-007, etc.

Contractor shall notify the Chair of the Jackson County Historical Commission < fp.condron@sbcglobal.net> two weeks before beginning work.

Contractor must saw cut existing sidewalk no closer than 12 inches away from the historic buildings at:

- 102 E Main St., Edna, Texas / Station 734
- 106 E. Main St., Edna, Texas / Station 733+50
- 108 E. Main St., Edna, Texas / Station 733
- 208 W. Main St., Edna, Texas / Station 742+25
- 118 W Main St., Edna, Texas / Station 737+60
- 126 W Main St., Edna, Texas / Station 738+50
- Contractor shall construct new sidewalk next to the saw cut edge with installation of
 expansion joint in between. If existing sidewalk is to be removed entirely, the remaining
 8 to 12 inches next to the historic structure must be removed by hand. Expansion joint
 must be placed between historic structure and new sidewalk.
- · Contractor shall prevent splashback of concrete onto historic resource.
- Contractor shall repair or replace in kind, at own expense, any historic materials damaged
 in the course of executing the work. Contractor shall locate replacement source for
 historic materials damaged in the course of the work. TxDOT-Environmental Affairs
 Division shall be informed of proposed repairs to facilitate consultation with Texas
 Historical Commission prior to execution of repair work.
- The ramps at the Edna Theater (201 W. Main St.) and the Jackson County Courthouse (115 W. Main St.) are outside the work area. No work shall be done at these locations without prior consultation with the Texas Historical Commission and TxDOT's Historical Studies Branch.
- These notes will be reviewed with the contractor at the pre-construction meeting.

The Contractor's attention is directed to the fact that several companies have existing underground gas/oil facilities located within or near the project limits. Excavation and/or construction is prohibited without prior notification to these companies.

General Notes Sheet B



GENERAL NOTES

JACKSON CO SIDEWALKS

	1 ()F 5				
CONT	SECT	JOB	HIGHWAY			
0089	11	007,ETC.	S	SL 521,ETC.		
DIST		COUNTY		SHEET NO.		
YKM		IACKSON	9			

DATE: 2/28/2023

Project Number: Sheet:

County: Jackson Control: 0089-11-007, etc. County: Jackson Control: 0089-11-007, etc.

Highway: SL 521, etc.

Remove and replace right-of-way fences at particular work sites, where necessary, at contractor's entire expense except as shown on plans. Replace fences in a condition comparable to that at removal.

In the removal of the surface and base material on the existing pavement, exercise extreme care in providing a smooth and uniform edge adjacent to the existing travelway pavement which is to remain in place.

Individual structures will be extended on one side at a time through completion before construction work is begun on the opposite side unless otherwise directed.

Existing manholes, water valves, water meters, etc., as shown in the plans, are to be removed, adjusted or relocated if necessary by others.

Do not work on the roadway before sunrise or after sunset unless otherwise approved.

Leave all traffic lanes open to traffic during non-working hours unless otherwise approved.

Furnish a certified copy of the legal gross weight of each vehicle hauling materials by weight and certified measurements for all trucks hauling material by volume.

The contractor's attention is directed to the fact that there are certain trees within the right-of-way that are designated for preservation. Protect these trees from abuse, marring or damage during construction operations. Continual parking and/or servicing of equipment under the branches of trees designated for preservation will not be permitted.

All driveway openings will be as directed and will conform with the regulations of the City of Edna and the City of Ganado.

Leave all intersecting roadways, side streets, and entrances open during construction unless otherwise approved. Should there be a request to restrict access for such reasons as parallel culvert replacement, reconstruction, etc., approval will be required 48 hours in advance and the contractor will be required to coordinate satisfactorily with any affected property owners.

Place the sodding/seeding after completion of flex base and prior to beginning next phase unless otherwise directed.

Unless otherwise approved, maintain a minimum safety clearance from the edge of the travelway for material stockpiled in proximity of traffic lanes based on the current average traffic count of the particular highway as follows:

> 0 - 1500 = 16 feet Over 1500 = 30 feet

> > General Notes Sheet C

Project Number: Sheet:

Highway: SL 521, etc.

In the event the above requirements cannot be met, make arrangements to stockpile material off the right of way.

Provide temporary pipe drains or culverts and take such other measures as directed to provide for continued drainage from all abutting property, the right of way and the roadway during construction operations. Labor and materials involved in this work will not be paid for directly, but will be considered subsidiary to the various bid items of the contract.

The Department will provide the cylinder testing machine for this project. Deliver the test specimens to the engineer's curing facilities as directed.

Do not clean out concrete trucks within the right of way.

ITEM 5: CONTROL OF THE WORK

All known utilities are identified in the plans. Use this information and identify potential issues with power poles and power lines prior to bidding. Make necessary arrangements with utility owners regarding temporary protections such as bracing power poles, and de-energizing power lines. The Department will not reimburse the cost of such temporary protections to the Contractor, unless the Engineer determines that inadequate information was available at the time the project was bid.

Verify all utilities in the field. Contact the Texas Excavation Safety System (TESS) of DIG TESS or the area utility companies for exact locations at least 48 hours prior to any work that might affect present utilities.

For TxDOT Utilities, contact the Yoakum District Traffic Shop at 361-293-4300 for location

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 a notarized 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-classificationsheet.html for clarification on material categorization.

> General Notes Sheet D



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GENERAL NOTES

		SHEET	<u> </u>)F 5			
VΤ	SECT	JOB	HIGHWAY				
39	11	007,ETC.	S	L 521,ETC.			
т		COUNTY		SHEET NO.			

008 IACKSON Project Number:

County: Jackson

Sheet:

Control: 0089-11-007, etc.

Project Number:

County: Jackson Control: 0089-11-007, etc.

Sheet:

Highway: SL 521, etc.

Highway: SL 521, etc.

ITEM 7: LEGAL RELATIONS AND RESPONSIBILITIES

The Department has determined that a USACE Nationwide or Individual Permit is not necessary for the project since all work shall be conducted outside the USACE jurisdictional areas. Any impacts to these jurisdictional areas by the Contractor without a USACE permit will be the responsibility of the Contractor. If the Contractor deems it necessary to impact the USACE jurisdictional areas, then it becomes the Contractor's entire responsibility to consult with the USACE pertaining to the need for a Nationwide or Individual Permit. TXDOT will then hold the Contractor responsible for following all conditions of the approved permit.

No significant traffic generator events identified.

If the contractor proposes work beyond the TxDOT obtained permit limitations, the contractor is responsible for additional costs, delays, and obtaining new or revised permits prior to construction.

ITEM 8: PROSECUTION AND PROGRESS

Provide progress schedule as a Bar Chart.

ITEM 100: PREPARING RIGHT-OF-WAY

Dispose of trees from the right-of-way within 24 hours of removal.

Treat cuts on trees designated for preservation in accordance with Item 100, "Preparing Right of

ITEM 132: EMBANKMENT

Furnish Type C embankment consisting of suitable earth material such as loam, clay or other such material that will form a stable embankment and has a plasticity index of at least 15 but not more than 40. Requirements may vary for material excavated under Item 110, "Excavation" as directed.

ITEM 162: SODDING FOR EROSION CONTROL

Use St. Augustine grass for this item.

ITEM 334: HOT MIX COLD LAID ASPHALT CONCRETE PAVEMENT

Use HMCL asphalt concrete pavement for backfill to transition and/or level-up parking areas or roadway. This item will be considered subsidiary to the various bid items of the project.

ITEM 427: SURFACE FINISHES FOR CONCRETE

Provide Surface Area II, railing, and culvert headwalls and wingwalls with a Slurry Coat Finish per 427.4.3.2 for cast-in-place concrete surfaces.

ITEM 432: RIPRAP

Place 1/2 inch expansion joint material between the two concrete areas or structures where riprap is placed against other concrete such as concrete pavement and structures unless otherwise shown on the plans or as directed. This work will not be paid for directly but will be subsidiary to the pertinent items.

Unless otherwise shown on the plans or directed, riprap will be 5" deep and reinforced; reinforced toewalls 6" wide and 12" deep will be placed around the perimeter of each location.

ITEMS 464 & 467: REINFORCED CONCRETE PIPE & SAFETY END TREATMENT

If required, concrete collars, as approved, will be used at pipe joints. Collars will be reinforced as directed. No direct compensation will be made for concrete collars and they will be subsidiary to the pertinent items.

ITEM 467: SAFETY END TREATMENT

Precast safety end treatment sections will not be allowed.

Provide reinforced concrete riprap for all pipe safety end treatments. Round corners on safety end treatment riprap to a minimum 12 inch radius as directed. The riprap will not be paid for directly but will be subsidiary to Item 467.

Provide and use a form along the cut end of the pipe when placing the adjacent reinforced concrete riprap for pipe safety end treatment sections.

Riprap cross slope above the working point may need to be flatter than 6:1 slope to improve driveway tie-in as directed by the engineer.

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

> General Notes Sheet F

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GENERAL NOTES

JACKSON CO SIDEWALKS

0089 007.ETC. SL 521.ETC. 11 IACKSON 9B

General Notes

Sheet E

Project Number: Sheet:

County: Jackson Control: 0089-11-007, etc. County: Jackson

Sheet G

Highway: SL 521, etc.

Engineer may choose to use existing bid items if it does not slow the implementation of enhancement.

Use WZ(RS)-22 in conjunction with TCP(2-2) & TCP(2-4).

Use TCP(2-2b) for one-lane, two-way traffic control.

When using TCP(2-2b), a pilot car is required to lead traffic through the work space with or without channelizing devices on the center line unless otherwise approved.

When using TCP(2-2b), arrow boards, displaying the caution mode, may be used to enhance the flagger stations. If used, place the arrow board in advance of the flagger station a distance of ½X, the sign spacing distance shown on BC(2). Use arrow boards as shown on BC(7).

When using TCP(2-2b), the temporary 24" stop line and the CW16-2P plaques may be omitted.

When using TCP(2-2b), an additional "Road Work Ahead" and "Be Prepared To Stop" signs will be required on each end of the lane closure unless otherwise approved.

Provide suitable warning lights mounted high enough to be visible from all directions on all construction equipment, including pilot vehicles, and operate warning lights when the equipment is within the right of way. Equip other equipment such as trucks, trailers, autos, etc., with emergency flashers and use emergency flashers while within the work area.

All culvert work must be completed prior to performing excavation and embankment within the work area. The contractor will only be allowed to perform culvert work on one side of the roadway at a time, through completion, before starting on the opposite side unless otherwise approved.

The utilization of TCP (2-2b) while work is being performed at cross culvert locations shall be considered subsidiary to Item 502, "Barricades, Signs, and Traffic Handling". Any additional measures desired by the contractor and as approved by the engineer, will be at the contractor's entire expense.

Place plastic drums along the gutter line at curb ramp locations during non-working hours and barricades with "Sidewalks Closed" signs while ramps and/or sidewalks are under construction.

No additional payment will be made for relocating existing sign assemblies to temporary mounts. Place plastic drums along the gutter line at curb ramp locations during non-working hours and barricades with "Sidewalk Closed" signs while ramps and/or sidewalks are under construction.

General Notes

ITEM 506: TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS

1. See SW3P plan sheet for total disturbed acreage.

Project Number:

Highway: SL 521, etc.

- 2. The disturbed area in this project, all project locations in the contract, and contractor project specific locations (PSLs), within one (1) mile of the project limits, for the contract will further establish the authorization requirements for storm water discharges.
- 3. 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
- 4. Obtain any required authorization from the TCEQ for any contractor PSLs for construction activities on or off right-of-way (ROW).
- 5. When the total disturbed area for all projects in the contract and PSLs within one (1) mile of the project limits exceeds five (5) acres, provide a copy of the contractor NOI.
- 6. Provide a signed sketch detailing the location of any contractor's PSLs on ROW or within one (1) mile of the project.

ITEM 529: CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER

Taper the curb or curb and gutter from 5 3/4" to 0" in the last three feet when changing from a curb or curb and gutter section to an open section.

Reinforcement will be required for this item.

ITEM 530: INTERSECTIONS, DRIVEWAYS AND TURNOUTS

Notify property owners a minimum of 1 week in advance of beginning work on their driveway. Provide a list of each notification and contact prior to each closure. Only close driveways for reconstruction if duration and alternate access are approved. Install and maintain material across a work zone as temporary access. Temporary access must not have grade breaks that exceed 8%. This work is subsidiary.

Grade breaks must not exceed 10%. Sidewalk crossing will be 1.5% and 6 ft. wide with width reduction in approval locations.

Removal / Reworking of existing ACP and / or flexible base is included in the excavation and embankment required for Item 530 and is considered subsidiary to the item, "DRIVEWAYS".

> General Notes Sheet H

Sheet:

Control: 0089-11-007, etc.



GENERAL NOTES

JACKSON CO SIDEWALKS

007.ETC. SL 521.ETC. 11

0089 IACKSON

Project Number:

Sheet:

Project Number: Sheet:

Control: 0089-11-007, etc.

County: Jackson Control: 0089-11-007, etc.

Highway: SL 521, etc.

County: Jackson

Highway: SL 521, etc.

ITEM 531: SIDEWALKS

Place ½ inch expansion joint material between the two concrete areas or structures where concrete is placed against other concrete such as concrete pavement and structures unless otherwise shown on the plans or as directed. This work will not be paid for directly but will be subsidiary to the pertinent items.

If roots are encountered, verify with the Engineer prior to accommodating or removing 2 in. diameter or larger roots. Roots may remain in the bedding or base. For improvements within 6 in. of a root, the concrete thickness may be reduced by 1 in. and the bedding increased by 1 in. to minimize inpacts to the roots. Adjust bedding and surface profile to provide a 1 in. bedding cushion around the roots. The surface profile may be adjusted to the extent allowed by ADA. This work is subsidiary.

Reinforce concrete sidewalks with minimum No. 4 reinforcing bars spaced at a maximum of 12 inches transversely and a maximum of 24 inches longitudinally.

Construct sidewalk on opposite side of roadway before removing existing sidewalk. Setup sidewalk detour in accordance with standard WZ(BTS-2)-13.

ITEM 560: MAILBOX ASSEMBLIES

Furnish and place two OM-2Y Object Markers on mailbox supports, one in each direction. These will not be paid for directly but are subsidiary to this item.

Provide 12 inches of clearance from the pavement edge to the mailbox.

ITEM 644: SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES

Use Class B concrete for all small roadside sign assembly concrete footings.

The exact location of the foundations to be placed will be determined in the field by the

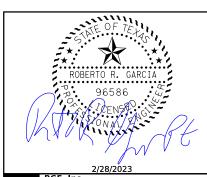
Replace the signs with reference markers to the exact station from which they were removed.

Drill the holes in the signs carefully as to not damage the reflective sheeting of the signs.

ITEM 6185: TRUCK MOUNTED ATTENUATOR (TMA) AND TRAILER ATTENUATOR (TA)

Shadow vehicle(s) with TMA are set up for stationary and/or mobile operations. The contractor will be responsible for determining if operations will be ongoing at the same time to determine the total number of TMAs needed for the project.





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Tel: 512-879-0400 ◆ www.bgeinc.com
TBPE Registration No. F-1046



GENERAL NOTES

SHEET 5 OF 5

COM	SEC.)00		monna
0089	11	007,ETC. SL		L 521,ETC.
DIST		COUNTY		SHEET NO.
YKM		JACKSON		9D



CONTROLLING PROJECT ID 0089-11-007

DISTRICT Yoakum

COUNTY Jackson

		CONTROL SECTION JOB PROJECT ID COUNTY		0089-1	1-007	0089-12	2-006	0346-07	7-042	0420-01	-048	0420-0	9-025	1945-01	L-024
				A0018	2282	A00182	2284	A00182	2281	A00182	289	A0018	2288	A00182	2283
				Jacks	ion	Jacks	on	Jacks	ion	Jacks	on	Jacks	son	Jacks	on
		HIG	HWAY	SL 5	21	SL 52	22	SH 1	11	SH 17	72	FM 7	710	FM 18	322
ALT	BID CODE	DESCRIPTION	UNIT	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	100-6002	PREPARING ROW	STA	32.800		7.500		30.000		14.000		22.000		13.800	
	100-6007	PREP ROW (TREE)(GREATER THAN 24" DIA)	EA									1.000			
	104-6015	REMOVING CONC (SIDEWALKS)	SY	274.000		27.000		208.000		44.000		385.000			
	104-6017	REMOVING CONC (DRIVEWAYS)	SY	368.000		138.000		498.000		210.000		279.000			
	104-6021	REMOVING CONC (CURB)	LF	58.000				91.000		74.000		67.000			
	104-6022	REMOVING CONC (CURB AND GUTTER)	LF	117.000				296.000		47.000		51.000			
	104-6028	REMOVING CONC (MISC)	SY	3.000		20.000				57.000		48.000			
	110-6001	EXCAVATION (ROADWAY)	CY	89.000		15.000		69.000		187.000		107.000		18.000	
	132-6021	EMBANKMENT (VEHICLE)(ORD COMP)(TY C)	CY			15.000		5.000		43.000		10.000			
	162-6002	BLOCK SODDING	SY	554.000		425.000		2,143.000		2,295.000		2,365.000		1,401.000	
	168-6001	VEGETATIVE WATERING	MG	4.700		3.600		18.000		19.300		19.900		13.000	
	423-6005	RETAINING WALL (SPREAD FOOTING)	SF											240.000	
	432-6001	RIPRAP (CONC)(4 IN)	CY											13.000	
	450-6050	RAIL (HANDRAIL)(TY D)	LF	22.000											
	460-6002	CMP (GAL STL 18 IN)	LF											10.000	
	460-6013	CMP AR (GAL STL DES 6)	LF											6.000	
	460-6023	CMP (GAL STL 15 IN)	LF											8.000	
	467-6338	SET (TY II) (15 IN) (RCP) (4: 1) (C)	EA											1.000	
	467-6358	SET (TY II) (18 IN) (RCP) (4: 1) (C)	EA											1.000	
	500-6001	MOBILIZATION	LS	1.000											
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	МО	1.000		2.000		3.000		2.000		3.000		1.000	
	506-6038	TEMP SEDMT CONT FENCE (INSTALL)	LF	200.000		200.000		200.000		200.000		200.000		200.000	
	506-6039	TEMP SEDMT CONT FENCE (REMOVE)	LF	200.000		200.000		200.000		200.000		200.000		200.000	
	506-6040	BIODEG EROSN CONT LOGS (INSTL) (8")	LF	100.000		100.000		100.000		100.000		100.000		100.000	
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	100.000		100.000		100.000		100.000		100.000		100.000	
	529-6002	CONC CURB (TY II)	LF											40.000	
	529-6008	CONC CURB & GUTTER (TY II)	LF	62.000				63.000		46.000					
	530-6004	DRIVEWAYS (CONC)	SY	360.000		137.000		494.000		571.000		588.000		461.000	
	531-6002	CONC SIDEWALKS (5")	SY	1,092.000		193.000		1,869.000		1,186.000		1,284.000		541.000	
	531-6018	CURB RAMPS (TY 1)	SY	30.000		19.000		54.000				35.000			
	531-6024	CURB RAMPS (TY 7)	SY	20.000		14.000		51.000		38.000		108.000		34.000	
	531-6027	CURB RAMPS (TY 10)	SY	47.000				94.000				11.000			
	531-6032	CONC SIDEWALKS (SPECIAL) (TYPE A)	SY	7.000						7.000					
	560-6025	RELOCATE EXISTING MAILBOX	EA	1.000						5.000				8.000	
	644-6068	RELOCATE SM RD SN SUP&AM TY 10BWG	EA	3.000		2.000		2.000		2.000		6.000		2.000	
	644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA					1.000		1.000		1.000			
	644-6071	RELOCATE SM RD SN SUP&AM TY TWT	EA	1.000				3.000		1.000					



DISTRICT	COUNTY	CCSJ	SHEET
Yoakum	Jackson	0089-11-007	10



CONTROLLING PROJECT ID 0089-11-007

DISTRICT Yoakum

COUNTY Jackson

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CONTROL SECTION JOB				0089-1	1-007	0089-12-006		0346-07-042		0420-01-048		0420-0	09-025	1945-01-024	
		PRO	JECT ID	A0018	2282	A0018	2284	A0018	2281	A0018	2289	A00182288		A00182283	
COUNTY		OUNTY	Jackson		Jackson Jack		Jacks	son	on Jackson		Jackson		Jackson		
		ніс	GHWAY	SL 5	21	SL 5	22	SH 1	.11	SH 1	.72	FM	710	FM 1	B22
ALT	BID CODE	DESCRIPTION	UNIT	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	687-6003	RELOCATE PED POLE ASSEMBLY	EA											1.000	
	690-6127	REMOVE LUMINAIRE POLE	EA					1.000							
	6185-6002	TMA (STATIONARY)	DAY	5.000		5.000		5.000		5.000		5.000		5.000	
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000											
		EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)	LS	1.000			·								



DISTRICT	COUNTY	CCSJ	SHEET
Yoakum	Jackson	0089-11-007	11



CONTROLLING PROJECT ID 0089-11-007 DIS

DISTRICT Yoakum

COUNTY Jackson

Report Created On: Feb 28, 2023 1:25:44 PM

		CONTROL SECTION	ом јов		
		PROJ	ECT ID		
		C	OUNTY	TOTAL EST.	TOTAL
		ніс	HWAY		FINAL
ALT	BID CODE	DESCRIPTION	UNIT		
	100-6002	PREPARING ROW	STA	120.100	
-	100-6007	PREP ROW (TREE)(GREATER THAN 24" DIA)	EA	1.000	
•	104-6015	REMOVING CONC (SIDEWALKS)	SY	938.000	
	104-6017	REMOVING CONC (DRIVEWAYS)	SY	1,493.000	
	104-6021	REMOVING CONC (CURB)	LF	290.000	
	104-6022	REMOVING CONC (CURB AND GUTTER)	LF	511.000	
	104-6028	REMOVING CONC (MISC)	SY	128.000	
	110-6001	EXCAVATION (ROADWAY)	CY	485.000	
	132-6021	EMBANKMENT (VEHICLE)(ORD COMP)(TY C)	CY	73.000	
•	162-6002	BLOCK SODDING	SY	9,183.000	
•	168-6001	VEGETATIVE WATERING	MG	78.500	
•	423-6005	RETAINING WALL (SPREAD FOOTING)	SF	240.000	
•	432-6001	RIPRAP (CONC)(4 IN)	CY	13.000	
•	450-6050 RAIL (HANDRAIL)(TY D)		LF	22.000	
•	460-6002	460-6002 CMP (GAL STL 18 IN)		10.000	
•	460-6013	CMP AR (GAL STL DES 6)	LF	6.000	
•	460-6023	CMP (GAL STL 15 IN)	LF	8.000	
•	467-6338	SET (TY II) (15 IN) (RCP) (4: 1) (C)	EA	1.000	
-	467-6358	SET (TY II) (18 IN) (RCP) (4: 1) (C)	EA	1.000	
•	500-6001	MOBILIZATION	LS	1.000	
•	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	МО	12.000	
	506-6038	TEMP SEDMT CONT FENCE (INSTALL)	LF	1,200.000	
•	506-6039	TEMP SEDMT CONT FENCE (REMOVE)	LF	1,200.000	
	506-6040	BIODEG EROSN CONT LOGS (INSTL) (8")	LF	600.000	
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	600.000	
	529-6002	CONC CURB (TY II)	LF	40.000	
	529-6008	CONC CURB & GUTTER (TY II)	LF	171.000	
	530-6004	DRIVEWAYS (CONC)	SY	2,611.000	
İ	531-6002	CONC SIDEWALKS (5")	SY	6,165.000	
İ	531-6018	CURB RAMPS (TY 1)	SY	138.000	
İ	531-6024	CURB RAMPS (TY 7)	SY	265.000	
İ	531-6027	CURB RAMPS (TY 10)	SY	152.000	
İ	531-6032			14.000	
	560-6025	RELOCATE EXISTING MAILBOX	EA	14.000	
İ	644-6068	RELOCATE SM RD SN SUP&AM TY 10BWG	EA	17.000	
İ	644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	3.000	
İ	644-6071	RELOCATE SM RD SN SUP&AM TY TWT	EA	5.000	



DISTRICT	COUNTY	CCSJ	SHEET
Yoakum	Jackson	0089-11-007	12



CONTROLLING PROJECT ID 0089-11-007

DISTRICT Yoakum

COUNTY Jackson

Report Created On: Feb 28, 2023 1:25:44 PM

		CONTROL SECTION	N JOB		
		PROJI	ECT ID		
		CC	YTNUC	TOTAL EST.	TOTAL FINAL
		ніс	HWAY		
ALT	BID CODE	DESCRIPTION	UNIT		
	687-6003	RELOCATE PED POLE ASSEMBLY	EA	1.000	
	690-6127	REMOVE LUMINAIRE POLE	EA	1.000	
	6185-6002	TMA (STATIONARY)	DAY	30.000	
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000	
		EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)	LS	1.000	



DISTRICT	COUNTY	CCSJ	SHEET
Yoakum	Yoakum Jackson		13

SL 521 SIDEWALK SUMMARY	•											
		100	104	104	104	104	104	110	162	166	168	334
LAYOUT SHEET	STATION RANGE	PREPARING ROW	, REMOVING CONC (SIDEWALKS)	C REMOVING CONC (DRIVEWAYS)	REMOVING CONC (CURB)	REMOVING CONC (CURB AND GUTTER)	REMOVING CONC (MISC)	EXCAVATION (ROADWAY)	BLOCK SODDING	FERTILIZER (500 LBS/AC)	VEGETATIVE WATERING (13.58 MG/AC X 3 CYCLES)	+ HMCL ACP TY-C AC-0.6
		STA	SY	SY	LF	LF	SY	CY	SY	TON	MG	TON
SHEET 1 OF 15	BEGIN PT 1- 732+40.00	1.4										
SHEET 2 OF 15	732+40.00 - 734+80.00	2.4	35									
SHEET 3 OF 15	734+80.00 - 737+20.00	2.4	61									
SHEET 4 OF 15	737+20.00 - 739+60.00	2.4	9									
SHEET 5 OF 15	739+60.00 - 742+00.00	2.4	66	170		4	1					
SHEET 6 OF 15	742+00.00 - END PT 1	2.3	34	95		10	2					
SHEET 7 OF 15	BEGIN PT 2 - 761+20.00	1.2				21						
SHEET 8 OF 15	761+20.00 - 763+60.00	2.4		58	31	17						
SHEET 9 OF 15	763+60.00 - 766+00.00	2.4		45	<i>27</i>	18		6				6
SHEET 10 OF 15	766+00.00 - 768+40.00	2.4						<i>25</i>	37	0.002	0.3	23
SHEET 11 OF 15	768+40.00 - 770+80.00	2.4				42		12	170	0.009	1.4	16
SHEET 12 OF 15	770+80.00 - 773+20.00	2.4	35			5		8	14	0.001	0.1	12
SHEET 13 OF 15	773+20.00 - 775+60.00	2.4	34					25	15	0.001	0.1	24
SHEET 14 OF 15	775+60.00 - 778+00.00	2.4						13	127	0.007	1.1	12
SHEET 15 OF 15	778+00.00 - END PT 2	1.5							191	0.010	1.6	
	CSJ: 0089-11-077 TOTALS	32.8	274	368	<i>58</i>	117	3	89	554	0.031	4.7	93

SL 521 SIDEWALK SUMMARY (CONT)

		450	529	530	531	531	531	531	531	560	6185
LAYOUT SHEET	STATION RANGE	RAIL (HANDRAIL)(TY D)	CONC CURB & GUTTER (TY II)	DRIVEWAYS (CONC)	CONC SIDEWALKS (5")	CURB RAMPS (TY 1)	CURB RAMPS (TY 7)	CURB RAMPS (TY 10)	CONC SIDEWALKS (SPECIAL) (TYPE A)	RELOCATE EXISTING MAILBOX	TMA (STATIONARY)
		LF	LF	SY	SY	SY	SY	SY	SY	EA	DAY
SHEET 1 OF 15	BEGIN PT 1- 732+40.00										
SHEET 2 OF 15	732+40.00 - 734+80.00				35						
SHEET 3 OF 15	734+80.00 - 737+20.00				61						
SHEET 4 OF 15	737+20.00 - 739+60.00				9						
SHEET 5 OF 15	739+60.00 - 742+00.00	22	52	170	60	15					
SHEET 6 OF 15	742+00.00 - END PT 1		10	95	30	15					
SHEET 7 OF 15	BEGIN PT 2 - 761+20.00				55			12			
SHEET 8 OF 15	761+20.00 - 763+60.00			50	85			12			
SHEET 9 OF 15	763+60.00 - 766+00.00			45	80			13			
SHEET 10 OF 15	766+00.00 - 768+40.00				117		5	10			
SHEET 11 OF 15	768+40.00 - 770+80.00				132				7		
SHEET 12 OF 15	770+80.00 - 773+20.00				104		15				
SHEET 13 OF 15	773+20.00 - 775+60.00				127					1	
SHEET 14 OF 15	775+60.00 - 778+00.00				133						
SHEET 15 OF 15	778+00.00 - END PT 2				64						
	CSJ: 0089-11-077 TOTALS	22	62	360	1092	30	20	47	7	1	5

* FOR CONTRACTOR'S INFORMATION ONLY.

2/28/2023

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TBPE Registration No. F-1046

Texas Department of Transportation

JACKSON CO SIDEWALKS

SUMMARY OF SIDEWALKS

SL 521 CSJ: 0089-11-007

SHEET 1 OF 7									
CONT	SECT	JOB		HIGHWAY					
0089	11	007,ETC.	S	L 521,ETC.					
DIST		COUNTY		SHEET NO.					
YKM		JACKSON		14					

		644	644
LAYOUT SHEET	STATION RANGE	RELOCATE SM RD SN SUP&AM TY 10BWG	RELOCATE SM RD SN SUP&AM TY TWT
		EA	EA
SHEET 1 OF 15	BEGIN PT 1- 732+40.00		
SHEET 2 OF 15	732+40.00 - 734+80.00		
SHEET 3 OF 15	734+80.00 - 737+20.00		1
SHEET 4 OF 15	737+20.00 - 739+60.00		
SHEET 5 OF 15	739+60.00 - 742+00.00		
SHEET 6 OF 15	742+00.00 - END PT 1		
SHEET 7 OF 15	BEGIN PT 2 - 761+20.00		
SHEET 8 OF 15	761+20.00 - 763+60.00		
SHEET 9 OF 15	763+60.00 - 766+00.00		
SHEET 10 OF 15	766+00.00 - 768+40.00	1	
SHEET 11 OF 15	768+40.00 - 770+80.00		
SHEET 12 OF 15	770+80.00 - 773+20.00	1	
SHEET 13 OF 15	773+20.00 - 775+60.00		
SHEET 14 OF 15	775+60.00 - 778+00.00	1	
SHEET 15 OF 15	778+00.00 - BEGIN PT 2		
	CSJ: 0089-11-077 TOTALS	3	1

2/28/2023

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TBPE Registration No. F-1046

Texas Department of Transportation

JACKSON CO SIDEWALKS

SUMMARY OF SIDEWALKS SL 521 CSJ: 0089-11-007

		2 (OF 7	
ONT	SECT	JOB		HIGHWAY
089	11	007,ETC.	S	L 521,ETC.
IST		COUNTY		SHEET NO.

JACKSON

СH	111	SIDEWAL	K SII	MMMADV
эп	III	SIDEVVAL	Λ .DU	IVIIVIARI

		100	104	104	104	104	110	132	162	166	168	334
LAYOUT SHEET	STATION RANGE	PREPARING ROW	REMOVING CONC (SIDEWALKS)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (CURB)	REMOVING CONC (CURB AND GUTTER)	EXCAVATION (ROADWAY)	EMBANKMENT (VEHICLE)(ORD COMP)(TY C)	BLOCK SODDING	* FERTILIZER (500 LBS/AC)	VEGETATIVE WATERING (13.58 MG/AC X 3 CYCLES)	* HMCL ACP TY-C AC-0.6
		STA	SY	SY	LF	LF	CY	CY	SY	TON	MG	TON
SHEET 1 OF 13	BEGIN - 03+40.00	1.9	20									
SHEET 2 OF 13	03+40.00 - 05+80.00	2.4	108			8	1					1
SHEET 3 OF 13	05+80.00 - 08+20.00	2.4					36					27
SHEET 4 OF 13	08+20.00 - 10+60.00	2.4		31		7		1	46	0.002	0.4	
SHEET 5 OF 13	10+60.00 - 13+00.00	2.4		47		11	8		163	0.008	1.4	4
SHEET 6 OF 13	13+00.00 - 15+40.00	2.4		31		35			390	0.02	3.3	
SHEET 7 OF 13	15+40.00 - 17+80.00	2.4	39	11	18	36		1	146	0.008	1.2	
SHEET 8 OF 13	17+80.00 - 20+20.00	2.4	41	105	16		10	1	146	0.008	1.2	8
SHEET 9 OF 13	20+20.00 - 22+60.00	2.4		24	21	33	6		401	0.021	3.4	6
SHEET 10 OF 13	22+60.00 - 25+00.00	2.4				26	8	1	593	0.031	5.0	7
SHEET 11 OF 13	25+00.00 - 27+40.00	2.4		182		74			14	0.001	0.1	
SHEET 12 OF 13	27+40.00 - 29+80.00	2.4		67	36	43		1	123	0.006	1.0	
SHEET 13 OF 13	29+80.00 - END	1.7				23			121	0.006	1.0	
	CSJ: 0346-07-042 TOTALS	30	208	498	91	296	69	5	2143	0.111	18.0	53

SH 111 SIDEWALK SUMMARY (CONT)

		529	530	531	531	531	531	690	6185
LAYOUT SHEET	STATION RANGE	CONC CURB & GUTTER (TY II)	DRIVEWAYS (CONC)	CONC SIDEWALKS (5")	CURB RAMPS (TY 1)	CURB RAMPS (TY 7)	CURB RAMPS (TY 10)	** REMOVE LUMINAIRE POLE	TMA (STATIONARY)
		LF	SY	SY	SY	SY	SY	EA	DAY
SHEET 1 OF 13	BEGIN - 03+40.00			20					
SHEET 2 OF 13	03+40.00 - 05+80.00	50		100	13				
SHEET 3 OF 13	05+80.00 - 08+20.00	12		197					
SHEET 4 OF 13	08+20.00 - 10+60.00	1	28	106		14	10		
SHEET 5 OF 13	10+60.00 - 13+00.00		42	124			10		
SHEET 6 OF 13	13+00.00 - 15+40.00		25	120			10		
SHEET 7 OF 13	15+40.00 - 17+80.00		9	105		9	32	1	
SHEET 8 OF 13	17+80.00 - 20+20.00		108	186		14			
SHEET 9 OF 13	20+20.00 - 22+60.00		22	142			10		
SHEET 10 OF 13	22+60.00 - 25+00.00			250	16	6			
SHEET 11 OF 13	25+00.00 - 27+40.00		176	175					
SHEET 12 OF 13	27+40.00 - 29+80.00		84	232		8	10		
SHEET 13 OF 13	29+80.00 - END			112	25		12		
	CSJ: 0346-07-042 TOTALS	63	494	1869	54	51	94	1	5

SH 111 SIDEWALK SUMMARY (CONT)

		644	644	644
LAYOUT SHEET	STATION RANGE	RELOCATE SM RD SN SUP&AM TY 10BWG	RELOCATE SM RD SN SUP&AM TY S80	RELOCATE SM RD SN SUP&AM TY TWT
		EA	EA	EA
SHEET 1 OF 13	BEGIN - 03+40.00			
SHEET 2 OF 13	03+40.00 - 05+80.00			
SHEET 3 OF 13	05+80.00 - 08+20.00			
SHEET 4 OF 13	08+20.00 - 10+60.00			
SHEET 5 OF 13	10+60.00 - 13+00.00			
SHEET 6 OF 13	13+00.00 - 15+40.00			1
SHEET 7 OF 13	15+40.00 - 17+80.00			
SHEET 8 OF 13	17+80.00 - 20+20.00		1	1
SHEET 9 OF 13	20+20.00 - 22+60.00			
SHEET 10 OF 13	22+60.00 - 25+00.00			1
SHEET 11 OF 13	25+00.00 - 27+40.00			
SHEET 12 OF 13	27+40.00 - 29+80.00	1		
SHEET 13 OF 13	29+80.00 - END	1		
	CSJ: 0346-07-042 TOTALS	2	1	3

- * FOR CONTRACTOR'S INFORMATION ONLY.
- ** REMOVAL OF POLE FOUNDATION TO 1 FT DEPTH BELOW FINISHED GRADE SHALL BE SUBSIDARY TO THIS ITEM.

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JACKSON CO SIDEWALKS

SUMMARY OF SIDEWALKS SH 111 CSJ: 0346-07-042

		3 C	OF 7	
CONT	SECT	JOB		HIGHWAY
089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
YKM		JACKSON		16

FM 1822 SIDEWALK SUMMARY

		100	110	162	166	168	334	423	432	460	460	460
LAYOUT SHEET	STATION RANGE	PREPARING ROW	EXCAVATION (ROADWAY)	BLOCK SODDING	FERTILIZER (500 LBS/AC)	VEGETATIVE WATERING (13.58 MG/AC X 3 CYCLES)	HMCL ACP TY-C AC-0.6	RETAINING WALL (SPREAD FOOTING)	RIPRAP (CONC) (4 IN)	CMP (GAL STL 18 IN)	CMP AR (GAL STL DES 6)	CMP (GAL STL 15 IN)
		STA	CY	SY	TON	MG	TON	SF	CY	LF	LF	LF
SHEET 1 OF 7	BEGIN - 22+90.00	1.2		64								
SHEET 2 OF 7	22+90.00 - 25+30.00	2.4	6	311	0.016	3.0	6					
SHEET 3 OF 7	25+30.00 - 27+70.00	2.4	2	229	0.012	2.0	2					
SHEET 4 OF 7	27+70.00 - 30+10.00	2.4	10	235	0.012	2.0	10	240	7	10		
SHEET 5 OF 7	30+10.00 - 32+50.00	2.4		229	0.012	2.0						
SHEET 6 OF 7	32+50.00 - 34+90.00	2.4		261	0.013	3.0			6		6	8
SHEET 7 OF 7	34+90.00 - END	0.6		72	0.004	1.0						
	CSJ: 1945-01-024 TOTALS	13.8	18	1401	0.069	13.0	18	240	13	10	6	8

FM 1822 SIDEWALK SUMMARY (CON	T)

		467	467	529	530	531	531	560	6185
LAYOUT SHEET	STATION RANGE	SET (TY II) (15 IN) (CMP) (4: 1) (C)	SET (TY II) (DES 6) (CMP) (4: 1) (C)	CONC CURB (TY II)	DRIVEWAYS (CONC)	CONC SIDEWALKS (5")	CURB RAMPS (TY 7)	RELOCATE EXISTING MAILBOX	TMA (STATIONARY)
		EA	EA	LF	SY	SY	SY	EA	DAY
SHEET 1 OF 7	BEGIN - 22+90.00				57	30		1.0	
SHEET 2 OF 7	22+90.00 - 25+30.00				197	76		3	
SHEET 3 OF 7	25+30.00 - 27+70.00				207	76	8	2	
SHEET 4 OF 7	27+70.00 - 30+10.00			40		90	11	1	
SHEET 5 OF 7	30+10.00 - 32+50.00					133	1	1	
SHEET 6 OF 7	32+50.00 - 34+90.00	1	1			107	14		
SHEET 7 OF 7	34+90.00 - END					29			
	CSJ: 1945-01-024 TOTALS	1	1	40	461	541	34	8	5

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FM 1822 SIDEWALK SIGNAGE SUMMARY

		644	687
LAYOUT SHEET	STATION RANGE	RELOCATE SM RD SN SUP&AM TY 10BWG	RELOCATE PED POLE ASSEMBLY
		EA	EA
SHEET 1 OF 7	BEGIN - 22+90.00		
SHEET 2 OF 7	22+90.00 - 25+30.00		
SHEET 3 OF 7	25+30.00 - 27+70.00		
SHEET 4 OF 7	27+70.00 - 30+10.00	1	1
SHEET 5 OF 7	30+10.00 - 32+50.00		
SHEET 6 OF 7	32+50.00 - 34+90.00	1	
SHEET 7 OF 7	34+90.00 - END		
	CSJ: 1945-01-024 TOTALS	2	1

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JACKSON CO SIDEWALKS

SUMMARY OF SIDEWALKS FM 1822 CSJ: 1945-01-024

	SHEET 4 OF 7						
CONT	SECT	JOB		HIGHWAY			
089	11 007,ETC.			SL 521,ETC.			
DIST		COUNTY		SHEET NO.			
/KM		JACKSON		17			

SL 522 SIDEWALK SUMMARY

		100	104	104	104	110	132	162	166	168	530
LAYOUT SHEET	STATION RANGE	PREPARING ROW	REMOVING CONC (SIDEWALKS)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (MISC)	EXCAVATION (ROADWAY)	EMBANKMENT (VEHIVLE) (ORD COMP) (TY C)	BLOCK SODDING	* FERTILIZER (500 LBS/AC)	VEGETATIVE WATERING (13.58 MG/AC X 3 CYCLES)	DRIVEWAYS (CONC)
		STA	SY	SY	SY	CY	CY	SY	TON	MG	SY
SHEET 1 OF 4	BEGIN - 261+60.00	1.6	18	90			1				90
SHEET 2 OF 4	261+60.00 - 264+00.00	2.4	9				5	192	0.010	1.6	
SHEET 3 OF 4	264+00.00 - 266+40.00	2.4		48	7		8	233	0.012	2.0	47
SHEET 4 OF 4	266+40.00 - END	1.1			13		1				
	CSJ: 0089-12-006 TOTALS	7.5	27	138	20	15	15	425	0.022	3.6	137

SL 522 SIDEWALK SUMMARY (CONT)

		531	531	531	6185
LAYOUT SHEET	STATION RANGE	CONC SIDEWALKS (5")	CURB RAMPS (TY 1)	CURB RAMPS (TY 7)	TMA (STATIONARY)
		SY	SY	SY	DAY
SHEET 1 OF 4	BEGIN - 261+60.00	4	14		
SHEET 2 OF 4	261+60.00 - 264+00.00	69		6	
SHEET 3 OF 4	264+00.00 - 266+40.00	112		8	
SHEET 4 OF 4	266+40.00 - END	8	5		
	CSJ: 0089-12-006 TOTALS	193	19	14	5

SL 522 SIDEWALK SIGNAGE SUMMARY

		644
LAYOUT SHEET	STATION RANGE	RELOCATE SM RD SN SUP&AM TY 10BWG
		EA
SHEET 1 OF 4	BEGIN - 261+60.00	
SHEET 2 OF 4	261+60.00 - 264+00.00	1
SHEET 3 OF 4	264+00.00 - 266+40.00	1
SHEET 4 OF 4	266+40.00 - END	
	CSJ: 0089-12-006 TOTALS	2

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JACKSON CO SIDEWALKS

SUMMARY OF SIDEWALKS SL 522 CSJ: 0089-12-006

		SHEET	<u>5 C</u>	<u>)F 7</u>
ONT	SECT	JOB		HIGHWAY
089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
'ΚΜ		IACKSON		18

FM 710 SIDEWALK SUMMARY

		100	100	104	104	104	104	104	110	132	162	166	168
LAYOUT SHEET	STATION RANGE	PREPARING ROW	PREP ROW (TREE) (GREATER THAN 24" DIA)	REMOVING CONC (SIDEWALKS)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (CURB)	REMOVING CONC (CURB AND GUTTER)	REMOVING CONC (MISC)	EXCAVATION (ROADWAY)	EMBANKMENT (VEHICLE)(ORD COMP)(TY C)	BLOCK SODDING	FERTILIZER (500 LBS/AC)	VEGETATIVE WATERING (13.58 MG/AC X 3 CYCLES)
		STA	EA	SY	SY	LF	LF	SY	CY	CY	SY	TON	MG
SHEET 1 OF 10	BEGIN - 01+20.00	1.2		76					3		161	0.008	1.4
SHEET 2 OF 10	01+20.00 - 03+60.00	2.4		86		21			13	2	409	0.021	3.4
SHEET 3 OF 10	03+60.00 - 06+00.00	2.4		37					14		417	0.022	3.5
SHEET 4 OF 10	06+00.00 - 08+40.00	2.4	1	32	140	13	19	41	11	2	290	0.015	2.4
SHEET 5 OF 10	08+40.00 - 10+80.00	2.4		<i>79</i>			7		12	3	367	0.019	3.1
SHEET 6 OF 10	10+80.00 - 13+20.00	2.4		40					16		220	0.011	1.9
SHEET 7 OF 10	13+20.00 - 15+60.00	2.4		2					14	2	226	0.012	1.9
SHEET 8 OF 10	15+60.00 - 18+00.00	2.4		2					8		181	0.009	1.5
SHEET 9 OF 10	18+00.00 - 20+40.00	2.4		14	10		16		13	1	94	0.005	0.8
SHEET 10 OF 10	20+40.00 - END	1.6		17	129	33	9	7	3				
	CSJ: 0420-09-025 TOTALS	22.0	1.0	385	279	67	51	48	107	10	2365	0.122	19.9

FM 710 SIDEWALK SUMMARY (CONT)

		334	530	531	531	531	531	6185
LAYOUT SHEET	STATION RANGE	HMCL ACP TY-C AC-0.6	DRIVEWAYS (CONC)	CONC SIDEWALKS (5")	CURB RAMPS (TY 1)	CURB RAMPS (TY 7)	CURB RAMPS (TY 10)	TMA (STATIONARY)
		TON	SY	SY	SY	SY	SY	DAY
SHEET 1 OF 10	BEGIN - 01+20.00		63	100	28			
SHEET 2 OF 10	01+20.00 - 03+60.00		42	187		28		
SHEET 3 OF 10	03+60.00 - 06+00.00		40	206				
SHEET 4 OF 10	06+00.00 - 08+40.00		142	162		21	11	
SHEET 5 OF 10	08+40.00 - 10+80.00		66	165		30		
SHEET 6 OF 10	10+80.00 - 13+20.00		50	120				
SHEET 7 OF 10	13+20.00 - 15+60.00			106		15		
SHEET 8 OF 10	15+60.00 - 18+00.00	7	30	123				
SHEET 9 OF 10	18+00.00 - 20+40.00		30	88		14		
SHEET 10 OF 10	20+40.00 - END		125	27	7			
	CSJ: 0420-09-025 TOTALS	7	<i>588</i>	1284	35	108	11	5

FM 710 SIDEWALK SUMMARY (CONT)

FM / 10 SIDEWALK SUMMAKT	(CONT)		
		644	644
LAYOUT SHEET	STATION RANGE	RELOCATE SM RD SN SUP&AM TY 10BWG	RELOCATE SM RD SN SUP&AM TY S80
		EA	EA
SHEET 1 OF 10	BEGIN - 01+20.00	1	
SHEET 2 OF 10	01+20.00 - 03+60.00	2	1
SHEET 3 OF 10	03+60.00 - 06+00.00		
SHEET 4 OF 10	06+00.00 - 08+40.00		
SHEET 5 OF 10	08+40.00 - 10+80.00	1	
SHEET 6 OF 10	10+80.00 - 13+20.00		
SHEET 7 OF 10	13+20.00 - 15+60.00	1	
SHEET 8 OF 10	15+60.00 - 18+00.00		
SHEET 9 OF 10	18+00.00 - 20+40.00	1	
SHEET 10 OF 10	20+40.00 - END		
	CSJ: 0420-09-025 TOTALS	6	1

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JACKSON CO SIDEWALKS

SUMMARY OF SIDEWALKS FM 710 CSJ: 0420-09-025

		SHEET	<u>6 C</u>	OF 7
CONT	SECT	JOB		HIGHWAY
0089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
YKM		JACKSON		19

FM 172 SIDEWALK SUMMARY

		100	104	104	104	104	104	110	132	162	166	168	334
LAYOUT SHEET	STATION RANGE	PREPARING ROW	REMOVING CONC (SIDEWALKS)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (CURB)	REMOVING CONC (CURB AND GUTTER)	REMOVING CONC (MISC)	EXCAVATION (ROADWAY)	EMBANKMENT (VEHICLE)(ORD COMP)(TY C)	BLOCK SODDING	* FERTILIZER (500 LBS/AC)	VEGETATIVE WATERING (13.58 MG/AC X 3 CYCLES)	* HMCL ACP TY-C AC-0.6
		STA	SY	SY	LF	LF	SY	CY	CY	SY	TON	MG	TON
SHEET 1 OF 7	BEGIN - 1224+40.00	1.4						2	2	231	0.012	1.9	
SHEET 2 OF 7	1224+40.00 - 1226+80.00	2.4						4	4	<i>555</i>	0.029	4.7	
SHEET 3 OF 7	1226+80.00 - 1229+20.00	2.4			6	10		51	3	265	0.014	2.2	21
SHEET 4 OF 7	1229+20.00 - 1231+60.00	2.4			6	37		59	12	454	0.023	3.8	5
SHEET 5 OF 7	1231+60.00 - 1234+00.00	2.4	21					42	5	529	0.027	4.5	18
SHEET 6 OF 7	1234+00.00 - 1236+40.00	2.4	23	160	45		13	25	13	261	0.013	2.2	11
SHEET 7 OF 7	1236+40.00 - END	0.6		50	17		44	4	4				
	CSJ: 0402-01-048 TOTALS	14.0	44	210	74	47	57	187	43	2295	0.119	19.3	55

FM 172 SIDEWALK SUMMARY (CONT)

		529	530	531	531	531	560	6185
LAYOUT SHEET	STATION RANGE	CONC CURB & GUTTER (TY II)	DRIVEWAYS (CONC)	CONC SIDEWALKS (5")	CURB RAMPS (TY 7)	CONC SIDEWALKS (SPECIAL) (TYPEA)	RELOCATE EXISTING MAILBOX	TMA (STATIONARY)
		LF	SY	SY	SY	SY	EA	DAY
SHEET 1 OF 7	BEGIN - 1224+40.00		24	77	9			
SHEET 2 OF 7	1224+40.00 - 1226+80.00		44	202	9			
SHEET 3 OF 7	1226+80.00 - 1229+20.00		38	228	10		1	
SHEET 4 OF 7	1229+20.00 - 1231+60.00		164	233				
SHEET 5 OF 7	1231+60.00 - 1234+00.00		70	252				
SHEET 6 OF 7	1234+00.00 - 1236+40.00	20	181	175			4	
SHEET 7 OF 7	1236+40.00 - END	26	50	19	10	7		
	CSJ: 0402-01-048 TOTALS	46	<i>571</i>	1186	38	7	5	5

FM 172 SIDEWALK SIGNAGE SUMMARY

		644	644	644
LAYOUT SHEET	STATION RANGE	RELOCATE SM RD SN SUP&AM TY 10BWG		RELOCATE SM RD SN SUP&AM TY TWT
		EA	EA	EA
SHEET 1 OF 7	BEGIN - 1224+40.00			
SHEET 2 OF 7	1224+40.00 - 1226+80.00		1	
SHEET 3 OF 7	1226+80.00 - 1229+20.00			1
SHEET 4 OF 7	1229+20.00 - 1231+60.00			
SHEET 5 OF 7	1231+60.00 - 1234+00.00			
SHEET 6 OF 7	1234+00.00 - 1236+40.00	1		
SHEET 7 OF 7	1236+40.00 - END	1		
	CSJ: 0402-01-048 TOTALS	2	1	1

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JACKSON CO SIDEWALKS

SUMMARY OF SIDEWALKS FM 172 CSJ: 0420-01-048

		SHEET	<u>/ (</u>)F /
CONT	SECT	JOB		HIGHWAY
0089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
YKM		JACKSON		20

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JACKSON CO SIDEWALKS

SUMMARY OF DRIVEWAYS SL 521

CSJ: 0089-11-007

		SHEET	1 (OF 6
CONT	SECT	JOB		HIGHWAY
0089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
YKM		JACKSON		21

						SL 521 SUN	MARY O	F DRIVEW	AYS									
DDU/FIA/AV	SIDEWALK	CENTEDIANE		550/514/4)/		PROPOSED	WIE	DTH			LEN	IGTH			RAL	DIUS	AREA	
DRIVEWAY NUMBER	LAYOUT SHEET	CENTERLINE STATION	LT/RT	DRIVEWAY TYPE	EXISTING SURFACE	PROPOSED SURFACE	W1	W2	L1	LS	LW	LD	L2	L3	R1	R2	SY	DRIVEWAY CLASS
NOMBLA	NUMBER	STATION		1176		JONIACL	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	- SY	
R1	5	740+74	RT	OFF EOP	CONCRETE	CONCRETE	47	37	10	7	5	0	3	13	6	10	62	COMMERCIAL
R1A	5	741+33	RT	OFF EOP	CONCRETE	CONCRETE	56	50	10	7	5	0	3	13	6	6	82	COMMERCIAL
R2	5	741+95	RT	OFF BOC	CONCRETE	CONCRETE	25	19	10	7	5	0	3	13	5	5	33	COMMERCIAL
R2A	6	742+44	RT	OFF BOC	CONCRETE					NO F	PROPOSE	D WORK						COMMERCIAL
L1	6	743+44	LT	OFF BOC	CONCRETE	CONCRETE	113	113	7	2	5	0	0	7			88	COMMERCIAL
R3	8	761+47	RT	OFF BOC	CONCRETE	CONCRETE	44	36	6	0	6	0	2	8			25	COMMERCIAL
R4	8	762+33	RT	OFF BOC	CONCRETE	CONCRETE	44	36	7	0	6	0	1	8			25	COMMERCIAL
R5	9	764+63	RT	OFF BOC	CONCRETE	CONCRETE	44	34	7	0	6	0	1	8			24	COMMERCIAL
R6	9	765+20	RT	OFF BOC	CONCRETE	CONCRETE	36	30	7	0	6	0	1	8			21	COMMERCIAL
R7	10	766+34	RT	OFF EOP	GRAVEL					CUT	AND RE	STORE						COMMERCIAL
R8	10	768+28	RT	OFF EOP	GRAVEL					CUT	AND RE	STORE						COMMERCIAL
R9	11	769+00	RT	OFF EOP	GRAVEL					CUT	AND RE	STORE						COMMERCIAL
R10	11	770+04	RT	OFF EOP	ASPHALT					CUT	AND RE	STORE						COMMERCIAL
R11	11	770+57	RT	OFF EOP	ASPHALT					CUT	AND RE	STORE						COMMERCIAL
R12	12	772+49	RT	OFF EOP	CONCRETE					CUT	AND RE	STORE						COMMERCIAL
R13	13	773+28	RT	OFF EOP	CONCRETE					CUT	AND RE	STORE						COMMERCIAL
R14	13	774+33	RT	OFF EOP	CONCRETE					CUT	AND RE	STORE						COMMERCIAL
R15	13	774+84	RT	OFF EOP	GRAVEL						AND RE							COMMERCIAL
R16	14	776+48	RT	OFF EOP	GRAVEL					CUT	AND RE	STORE						COMMERCIAL
															TC	TAL	360	

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NUMBER LAYOUT SHEET NUMBER STATE NUMBER R1A 3 R2 3 L1A 3 R3 3 R4 4 R5 4 R6 5 R7 5 R8 6 L2 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	CENTERLINE STATION 6+04 6+79 7+01 7+47 9+63 10+06 11+18 12+14 14+26 14+61 15+37 17+61 17+76 18+25 18+73 19+19	LT/RT RT RT RT RT RT RT RT RT RT RT RT LT LT LT RT LT LT RT LT LT RT LT LT	DRIVEWAY TYPE OFF BOC OFF BOC OFF BOC ADJ BOC ADJ BOC ADJ BOC ADJ BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC OFF BOC ADJ BOC OFF BOC OFF BOC ADJ BOC	ASPHALT ASPHALT/NATURAL GROUND CONCRETE ASPHALT CONCRETE NATURAL GROUND CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE ASPHALT	PROPOSED SURFACE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	WIE W1 FT 43 35 35 50 21 40	OTH W2 FT 41 30 30 35 12	L1 FT 6 6 6 6 6	CUT NO P CUT 2 NO P 2 2 2 2 NO P NO P NO P 2	LENG LW LW FT AND RES ROPOSED 4 ROPOSED 4 ROPOSED 4 ROPOSED 4 ROPOSED 4 ROPOSED	LD FT STORE STORE D WORK STORE 0 D WORK 0 0 0 WORK 0 0 WORK 0 WORK 0 WORK 0 WORK	L2 FT 0 0 0 0 0 0 0	L3 FT 6 6 6 6	RAI FT	DIUS R2 FT	AREA SY 28 21 25 9	DRIVEWAY CLASS COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL RESIDENTIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL
DRIVEWAY NUMBER LAYOUT SHEET NUMBER CENT NUMBER R1A 3 3 R2 3 11A L1A 3 3 R3 3 3 R4 4 4 R5 4 1 R6 5 1 R7 5 1 R8 6 1 L2 6 1 L3 6 1 R9 7 1 L4 7 1 R10 8 1 L5 8 1 L6 8 1 L7 8 1 R11 8 1 L8 9 2 R12 9 2 L9 9 2 L10 10 2 L11 11 2 R13 11 2	STATION 6+04 6+79 7+01 7+47 9+63 10+06 11+18 12+14 14+26 14+61 15+37 17+61 17+76 18+25 18+73	RT RT RT RT RT RT RT RT RT RT RT RT RT LT LT RT LT LT RT LT LT	TYPE OFF BOC OFF BOC OFF BOC ADJ BOC ADJ BOC ADJ BOC ADJ BOC ADJ BOC ADJ BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC OFF BOC OFF BOC OFF BOC	ASPHALT ASPHALT/NATURAL GROUND CONCRETE ASPHALT CONCRETE NATURAL GROUND CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	43 35 35 50 21	41 30 30 35	6 6 6 6	FT CU1 CU1 NO P CU1 2 NO P 2 2 NO P NO P NO P 2	FT F AND RES ROPOSED F AND RES A ROPOSED 4 4 4 4 ROPOSED ROPOSED ROPOSED 4	FT STORE STORE O WORK STORE O WORK O O O O O WORK O WORK O WORK O WORK O WORK O WORK	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 6 6 6			28 21 21 21 25	COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL RESIDENTIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL
R1A 3 R2 3 L1A 3 R3 3 R4 4 R5 4 R6 5 R7 5 R8 6 L2 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	6+79 7+01 7+47 9+63 10+06 11+18 12+14 14+26 14+61 15+37 17+61 17+76 18+25 18+73	RT	OFF BOC OFF EOP OFF BOC ADJ BOC ADJ BOC ADJ BOC ADJ BOC OFF BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC OFF BOC	ASPHALT/NATURAL GROUND CONCRETE ASPHALT CONCRETE NATURAL GROUND CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE CONCRETE CONCRETE	43 35 35 50 21	30 30 35 35	6 6 6 6	CUT CUT NO P CUT 2 NO P 2 2 2 NO P NO P NO P 2	AND RESTAND RE	STORE STORE D WORK STORE 0 D WORK 0 0 WORK 0 WORK 0 WORK 0 WORK 0 WORK	0 0 0 0 0	6 6 6		F1	21 21 25	COMMERCIAL COMMERCIAL COMMERCIAL RESIDENTIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL
R2 3 L1A 3 R3 3 R4 4 R5 4 R5 4 R6 5 R7 5 R8 6 L2 6 L3 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 R11 8 R11 8 R12 9 R12 9 L10 10 22 L11 11 R13 11	6+79 7+01 7+47 9+63 10+06 11+18 12+14 14+26 14+61 15+37 17+61 17+76 18+25 18+73	RT	OFF BOC OFF EOP OFF BOC ADJ BOC ADJ BOC ADJ BOC ADJ BOC OFF BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC OFF BOC	ASPHALT/NATURAL GROUND CONCRETE ASPHALT CONCRETE NATURAL GROUND CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE CONCRETE CONCRETE	35 35 50 21	30 30 35 35	6 6 6	CUT NO P CUT 2 NO P 2 2 2 2 NO P NO P NO P 2	ROPOSED 4 4 4 4 4 4 ROPOSED 4 4 4 7 ROPOSED 4 4 4 7 ROPOSED ROPOSED 4	STORE D WORK STORE 0 D WORK 0 D WORK 0 D WORK 0 D WORK 0 WORK D WORK D WORK 0 WORK	0 0 0	6 6			21 21 25	COMMERCIAL COMMERCIAL COMMERCIAL RESIDENTIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL
L1A 3 R3 3 R4 4 R5 4 R6 5 R7 5 R8 6 L2 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	7+01 7+47 9+63 10+06 11+18 12+14 14+26 14+61 15+37 17+61 17+76 18+25 18+73	LT	OFF EOP OFF BOC ADJ BOC ADJ BOC ADJ BOC ADJ BOC OFF BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC OFF BOC	CONCRETE ASPHALT CONCRETE NATURAL GROUND CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE CONCRETE CONCRETE	35 35 50 21	30 30 35 35	6 6 6	NO P CUT 2 NO P 2 2 NO P NO P NO P 2	ROPOSED AND RES A ROPOSED A A A ROPOSED BROPOSED ROPOSED A	O WORK STORE 0 O WORK 0 0 O WORK 0 O WORK 0 O WORK O WORK O WORK 0	0 0 0	6 6			21 21 25	COMMERCIAL COMMERCIAL COMMERCIAL RESIDENTIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL
R3 3 R4 4 R5 4 R6 5 R7 5 R8 6 L2 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	7+47 9+63 10+06 11+18 12+14 14+26 14+61 15+37 17+61 17+76 18+25 18+73	RT RT RT RT RT RT LT LT LT RT LT LT LT LT LT LT LT LT LT	OFF BOC ADJ BOC ADJ BOC ADJ BOC ADJ BOC OFF BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC ADJ BOC	ASPHALT CONCRETE NATURAL GROUND CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE CONCRETE CONCRETE	35 35 50 21	30 30 35 35	6 6 6	CUT 2 NO P 2 2 2 NO P NO P NO P	ROPOSED 4 4 4 4 ROPOSED 6 ROPOSED 7 ROPOSED 4	STORE 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	6 6			21 21 25	COMMERCIAL COMMERCIAL RESIDENTIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL
R4 4 R5 4 R6 5 R7 5 R8 6 L2 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	9+63 10+06 11+18 12+14 14+26 14+61 15+37 17+61 17+76 18+25 18+73	RT RT RT RT LT LT RT LT RT LT LT RT LT	ADJ BOC OFF BOC ADJ BOC ADJ BOC OFF BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC	CONCRETE NATURAL GROUND CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE CONCRETE CONCRETE	35 35 50 21	30 30 35 35	6 6 6	2 NO P 2 2 2 NO P NO P	A ROPOSED 4 4 4 ROPOSED ROPOSED 4	0 0 WORK 0 0 0 0 WORK 0 WORK 0 WORK	0 0 0	6 6			21 21 25	COMMERCIAL RESIDENTIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL
R5 4 R6 5 R7 5 R8 6 L2 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	10+06 11+18 12+14 14+26 14+61 15+37 17+61 17+76 18+25 18+73	RT RT RT LT LT RT LT RT LT LT LT LT LT	OFF BOC ADJ BOC ADJ BOC OFF BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC	NATURAL GROUND CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE CONCRETE CONCRETE	35 35 50 21	30 30 35 35	6 6 6	NO P 2 2 2 NO P NO P NO P	ROPOSED 4 4 4 ROPOSED ROPOSED 4	O WORK O O O O WORK O WORK O WORK O	0 0 0	6 6			21 21 25	RESIDENTIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL
R6 5 R7 5 R8 6 L2 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	11+18 12+14 14+26 14+61 15+37 17+61 17+76 18+25 18+73	RT RT RT LT LT LT RT LT RT LT	ADJ BOC ADJ BOC OFF BOC OFF BOC ADJ BOC OFF BOC ADJ BOC ADJ BOC OFF BOC	CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE CONCRETE	35 50 21	30 35 12	6	2 2 2 NO P NO P	4 4 4 ROPOSED ROPOSED 4	0 0 0 0 WORK 0 WORK	0 0	6 6			21 25	COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL
R7 5 R8 6 L2 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	12+14 14+26 14+61 15+37 17+61 17+76 18+25 18+73	RT RT LT LT RT LT RT LT	ADJ BOC ADJ BOC OFF BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC OFF BOC	CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE CONCRETE	35 50 21	30 35 12	6	2 2 NO P NO P	4 4 ROPOSED ROPOSED 4	0 0 0 0 WORK 0 WORK	0 0	6 6			21 25	COMMERCIAL COMMERCIAL COMMERCIAL COMMERCIAL
R8 6 L2 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	14+26 14+61 15+37 17+61 17+76 18+25 18+73	RT LT LT RT LT RT LT	ADJ BOC OFF BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC	CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE	50 21	35 12	6	2 NO P NO P	4 ROPOSED ROPOSED 4	0 D WORK D WORK 0	0	6			25	COMMERCIAL COMMERCIAL COMMERCIAL
L2 6 L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	14+61 15+37 17+61 17+76 18+25 18+73	LT LT RT LT RT LT	OFF BOC OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC	CONCRETE CONCRETE CONCRETE CONCRETE CONCRETE	CONCRETE	21	12	6	NO P NO P	ROPOSED ROPOSED 4	D WORK D WORK 0						COMMERCIAL COMMERCIAL
L3 6 R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	15+37 17+61 17+76 18+25 18+73	LT RT LT RT LT	OFF BOC ADJ BOC OFF BOC ADJ BOC OFF BOC	CONCRETE CONCRETE CONCRETE CONCRETE					NO P	ROPOSED 4	0 WORK	0	6			9	COMMERCIAL
R9 7 L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	17+61 17+76 18+25 18+73	RT LT RT LT	ADJ BOC OFF BOC ADJ BOC OFF BOC	CONCRETE CONCRETE CONCRETE					2	4	0	0	6			9	
L4 7 R10 8 L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	17+76 18+25 18+73	LT RT LT	OFF BOC ADJ BOC OFF BOC	CONCRETE CONCRETE					NO P	ROPOSED	•	0	6			9	COMMERCIAL
R10 8 1 L5 8 1 L6 8 1 L7 8 1 R11 8 1 L8 9 2 R12 9 2 L9 9 2 L10 10 2 L11 11 22 R13 11 2	18+25 18+73	RT LT	ADJ BOC OFF BOC	CONCRETE	CONCRETE	40	32		<u>NO P</u>	ROPOSED) WORK				•		
L5 8 L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	18+73	LT	OFF BOC		CONCRETE	40	32								1		COMMERCIAL
L6 8 L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11				ASPHALT			<i>J</i> 2	6	2	4	0	0	6			23	COMMERCIAL
L7 8 R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	19+19									AND RES							COMMERCIAL
R11 8 L8 9 R12 9 L9 9 L10 10 L11 11 R13 11		LT	ADJ BOC	CONCRETE	CONCRETE	34	32	9	4	5	0	0	9			32	COMMERCIAL
L8 9 R12 9 L9 9 L10 10 L11 11 R13 11	19+60	LT	ADJ BOC	CONCRETE	CONCRETE	32	30	9	4	5	0	0	9			30	COMMERCIAL
R12 9 L9 9 L10 10 L11 11 R13 11	19+76	RT	ADJ BOC	CONCRETE	CONCRETE	22	23	9	4	5	0	0	9			23	COMMERCIAL
L9 9 L10 10 L11 11 R13 11	21+75	LT	OFF BOC	CONCRETE					NO P	ROPOSED) WORK						COMMERCIAL
L10 10 L11 11 R13 11	22+34	RT	ADJ BOC	CONCRETE	CONCRETE	44	30	6	2	4	0	0	6			22	COMMERCIAL
L11 11 2 R13 11 2	22+36	LT	OFF BOC	ASPHALT					CUT	AND RES	STORE						COMMERCIAL
R13 11 2	22+98	LT	OFF BOC	ASPHALT					CUT	AND RES	STORE						COMMERCIAL
	25+20	LT	ADJ BOC	CONCRETE	CONCRETE	29	27	6	2	4	0	0	6			16	COMMERCIAL
	25+33	RT	ADJ BOC	CONCRETE	CONCRETE	41	30	6	2	4	0	0	6			22	COMMERCIAL
L12 11 2	25+63	LT	ADJ BOC	CONCRETE	CONCRETE	36	33	6	2	4	0	0	6			23	COMMERCIAL
R14 11 2	25+69	RT	ADJ BOC	CONCRETE	CONCRETE	23	15	6	2	4	0	0	6			11	COMMERCIAL
L13 11 2	26+32	LT	ADJ BOC	CONCRETE	CONCRETE	56	53	6	2	4	0	0	6			36	COMMERCIAL
	26+63	RT	ADJ BOC	CONCRETE	CONCRETE	30	20	6	2	4	0	0	6			15	COMMERCIAL
	27+11	LT	ADI BOC	CONCRETE	CONCRETE	52	49	6	2	4	0	0	6			34	COMMERCIAL
	27+16	RT	ADJ BOC	CONCRETE	CONCRETE	40	26	6	2	4	0	0	6			19	COMMERCIAL
	28+06	RT	ADJ BOC	CONCRETE	CONCRETE	41	25	6	2	4	0	0	6			19	COMMERCIAL
		LT	OFF BOC	CONCRETE	CONCRETE	29	24	8	3	5	0	0	8	15	15	21	COMMERCIAL
	28+57	RT	ADJ BOC	CONCRETE/NATURAL GROUND	CONCRETE	25	21	6	2	4	0	0	6			15	COMMERCIAL
	28+57 29+22	LT	OFF BOC	CONCRETE	CONCRETE	38	32	8	3	5	0	0	8	15	15	29	COMMERCIAL
	28+57 29+22 29+40			1	· · · - · - · - · - · - · -						-	- 1	-		DTAL	494	

2/28/2023

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JACKSON CO SIDEWALKS

SUMMARY OF DRIVEWAYS SH 111 CSJ: 0346-07-042

		SHEET	2 (DF 6
CONT	SECT	JOB		HIGHWAY
0089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
VKM		IACKSON		22

						FM 1822 SUN	MARY OF	DRIVEWA	AYS									
DDIVEWAY	SIDEWALK	CENTEDLINE		DDIVEWAY		DDODOCED	WII	DTH			LEN	IGTH			RAL	DIUS	AREA	
DRIVEWAY NUMBER	LAYOUT SHEET	CENTERLINE STATION	LT/RT	DRIVEWAY TYPE	EXISTING SURFACE	PROPOSED SURFACE	W1	W2	L1	LS	LW	LD	L2	L3	R1	R2	SY	DRIVEWAY CLASS
WONBER	NUMBER	SIATION		1772		SONIACE	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	31	
L1	1	22+03	LT	OFF EOP	ASPHALT	CONCRETE	24	16	30	4	4	22	0	30	50	25	57	RESIDENTIAL
L2	2	22+98	LT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	32	20	30	4	4	22	1	31	25	25	76	RESIDENTIAL
L3	2	23+78	LT	OFF EOP	ASPHALT	CONCRETE	27	16	12	4	4	4	0	12	32	32	28	RESIDENTIAL
L4	2	24+62	LT	OFF EOP	ASPHALT	CONCRETE	46	26	30	4	4	22	0	30	15	15	93	RESIDENTIAL
L5	3	25+41	LT	OFF EOP	ASPHALT	CONCRETE	38	19	30	4	4	22	1	31	20	20	74	RESIDENTIAL
L6	3	26+20	LT	OFF EOP	ASPHALT	CONCRETE	31	18	30	4	4	22	1	31	25	25	67	RESIDENTIAL
L7	3	26+98	LT	OFF EOP	ASPHALT/NATURAL GROUND	CONCRETE	32	18	30	4	4	22	1	31	15	9	66	RESIDENTIAL
L8	4	28+92	LT	OFF EOP	ASPHALT					CU ⁻	T AND RE	STORE						COMMERCIAL
L9	7	35+61	LT	OFF EOP	ASPHALT					NO F	ROPOSEI	D WORK						COMMERCIAL
															TO	TAL	461	

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JACKSON CO SIDEWALKS

SUMMARY OF DRIVEWAYS FM 1822 CSJ: 1945-01-024

		SHEET	3 (OF 6
CONT	SECT	JOB		HIGHWAY
0089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
VKM		INCKSON		2.2

						SL 522 SUI	MMARY O	F DRIVEW	'AYS									
DRIVEWAY	SIDEWALK			DRIVEWAY		PROPOSED	WIL	DTH			LEN	IGTH			RAD	IUS	AREA	
DRIVEWAY NUMBER	LAYOUT SHEET	STATION	LT/RT	TYPE	EXISTING SURFACE	SURFACE	W1	W2	L1	LS	LW	LD	L2	L3	R1	R2	۷۷	DRIVEWAY CLASS
NONBER	NUMBER	317117011				Somme	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	SY	
L1	1	260+86	LT	OFF EOP	CONCRETE	CONCRETE	70	70	12	7	5	0	0	12			90	COMMERCIAL
L2	2	261+81	LT	OFF EOP	CONCRETE					NO F	PROPOSE	D WORK						COMMERCIAL
L3	3	265+14	LT	OFF EOP	CONCRETE	CONCRETE	36	24	12	7	5	0	0	12			47	COMMERCIAL
L4	4	266+84	LT	OFF EOP	CONCRETE					NO F	PROPOSE	D WORK						COMMERCIAL
															TO	TAL	137	

2/28/2023

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Teves**

Texas Department of Transportation

JACKSON CO SIDEWALKS

SUMMARY OF DRIVEWAYS SL 522

CSJ: 0089-12-006

0089 11 DIST 007,ETC. SL 521,ETC.

						FM 710 SU	MMARY O	F DRIVEN	/AYS									
	SIDEWALK	CENTERLINE		DDU/FIA/A)/		DDODOCED	WIL	DTH			LEN	IGTH			RA	DIUS	AREA	
DRIVEWAY NUMBER	LAYOUT SHEET	CENTERLINE STATION	LT/RT	DRIVEWAY TYPE	EXISTING SURFACE	PROPOSED SURFACE	W1	W2	L1	LS	LW	LD	L2	L3	R1	R2	GV	DRIVEWAY CLASS
NOMBLA	NUMBER	STATION				JUNIACL	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	SY	
L1	1	0+74	LT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	30	20	16	3	5	8	0	16			39	COMMERCIAL
L2	1	0+99	LT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	21	11	16	3	5	8	0	16			24	COMMERCIAL
R1	2	1+63	RT	OFF EOP	CONCRETE			•		NO F	ROPOSE	D WORK			•	•	•	RESIDENTIAL
L3	2	2+10	LT	OFF EOP	ASPHALT	CONCRETE	30	24	14	6	5	3	0	14			42	RESIDENTIAL
R2	3	4+34	RT	OFF EOP	CONCRETE					NO F	PROPOSE	D WORK						COMMERCIAL
L4	3	5+01	LT	OFF EOP	GRAVEL	CONCRETE	30	18	15	9	5	1	0	15			40	RESIDENTIAL
L5	3	5+82	LT	OFF BOC	CONCRETE					NO F	PROPOSE	D WORK						RESIDENTIAL
L6	4	7+59	LT	ADJ BOC	CONCRETE	CONCRETE	<i>57</i>	45	13	0	6	7	0	13			64	COMMERCIAL
R3	4	8+06	RT	OFF BOC	CONCRETE	CONCRETE	22	18	15	7	4	4	0	15	15	15	32	RESIDENTIAL
L7	4	8+10	LT	ADJ BOC	CONCRETE	CONCRETE	44	32	13	0	6	7	0	13			46	COMMERCIAL
L8	5	8+68	LT	OFF BOC	CONCRETE					NO F	<u>PROPOSE</u>	<u>D WORK</u>						RESIDENTIAL
R4	5	8+75	RT	OFF BOC	ASPHALT	CONCRETE	18	11	15	6	4	5	0	15	15	15	21	RESIDENTIAL
L9	5	9+54	LT	OFF BOC	ASPHALT	CONCRETE	16	9	15	8	5	2	0	15	15	15	18	RESIDENTIAL
R5	5	9+91	RT	OFF BOC	ASPHALT	CONCRETE	20	15	15	3	5	7	0	15	15	15	27	RESIDENTIAL
R6	6	11+61	RT	OFF BOC	GRAVEL						PROPOSE							RESIDENTIAL
R7	6	12+16	RT	OFF BOC	GRAVEL/ASPHALT						<u>PROPOSE</u>	<u>D WORK</u>						RESIDENTIAL
L10	6	12+65	LT	OFF BOC	GRAVEL	CONCRETE	40	22	15	8	5	2	0	15			50	RESIDENTIAL
R8	7	14+85	RT	OFF BOC	GRAVEL					NO F	<u>PROPOSE</u>	<u>D WORK</u>						RESIDENTIAL
L11	8	16+14	LT	OFF EOP	ASPHALT	CONCRETE	22	16	15	3	5	7	0	15			30	RESIDENTIAL
L12	8	16+95	LT	OFF EOP	GRAVEL						T AND RE							COMMERCIAL
L13	8	17+48	LT	OFF EOP	GRAVEL					CU	<u>Ț AND RE</u>	STORE						COMMERCIAL
L14	9	18+43	LT	OFF EOP	ASPHALT	CONCRETE	16	10	15	3	5		0	15			20	RESIDENTIAL
L15	9	19+09	LT	OFF EOP	CONCRETE						<u>PROPOSE</u>	<u>D WORK</u>	_					COMMERCIAL
L16	10	20+58	LT	OFF BOC	CONCRETE	CONCRETE	50	44	15	3	5	7	0	15	25	5	75	COMMERCIAL
L17	10	21+14	LT	OFF BOC	CONCRETE	CONCRETE	41	35	15	3	5		0	15	5	25	60	COMMERCIAL
															\Box TC	OTAL	588	

2/28/2023

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Texas Department of Transportation

JACKSON CO SIDEWALKS

SUMMARY OF DRIVEWAYS FM 710 CSJ: 0420-09-025

		SHEET	5 C	OF 6
CONT	SECT	JOB		HIGHWAY
0089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
YKM		IACKSON		25

						FM 172 SU	MMARY O	F DRIVEN	/AYS									
D.D.II. (ELAVA)	SIDEWALK	CENTERLINE		D D II / E I A / A) /		BROBOSED.	WIL	DTH			LEI	IGTH			RAL	DIUS	AREA	
DRIVEWAY NUMBER	LAYOUT SHEET	CENTERLINE STATION	LT/RT	DRIVEWAY TYPF	EXISTING SURFACE	PROPOSED SURFACE	W1	W2	L1	LS	LW	LD	L2	L3	R1	R2	6) (DRIVEWAY CLASS
NUMBER	NUMBER	SIATION		ITPE		SURFACE	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	SY	
R1	1	1224+02	RT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	28	16	11	6	5	0	0	11	15	15	24	RESIDENTIAL
R2	2	1224+99	RT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	20	12	11	6	5	0	0	11	15	15	18	RESIDENTIAL
R3	2	1226+28	RT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	26	18	10	5	5	0	0	10	15	15	23	RESIDENTIAL
R4	3	1226+84	RT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	18	14	8	3	5	0	0	8	15	15	13	RESIDENTIAL
R5	3	1227+75	RT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	18	12	8	3	5	0	0	8	15	15	14	RESIDENTIAL
R6	3	1228+34	RT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	20	10	9	4	5	0	0	9	15	15	14	RESIDENTIAL
R7	3	1228+73	RT	OFF EOP	ASPHALT					CU	T AND RE	STORE						COMMERCIAL
L1	3	1228+78	LT	OFF BOC	ASPHALT					CU	T AND RE	STORE						COMMERCIAL
R8	3	1229+11	RT	OFF EOP	ASPHALT					CU	T AND RE	STORE						COMMERCIAL
R9	4	1229+35	RT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	18	10	11	6	5	0	0	11	15	15	15	RESIDENTIAL
L2	4	1229+76	LT	OFF BOC	ASPHALT					CU	T AND RE	STORE						COMMERCIAL
R10	4	1230+34	RT	OFF EOP	ASPHALT	CONCRETE	70	50	18	13	5	0	0	18	25	25	114	RESIDENTIAL
L3	4	1231+06	LT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	32	12	19	14	5	0	0	19	15	15	35	RESIDENTIAL
L4	5	1231+68	LT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	18	12	19	14	5	0	0	19	15	15	28	RESIDENTIAL
R11	5	1231+80	RT	OFF EOP	GRAVEL/ASPHALT					CU	T AND RE	STORE						COMMERCIAL
R12	5	1232+02	RT	OFF EOP	GRAVEL/ASPHALT					CU	T AND RE	STORE						COMMERCIAL
L5	5	1233+02	LT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	22	10	18	13	5	0	0	18	15	15	26	RESIDENTIAL
R13	5	1233+03	RT	OFF EOP	GRAVEL					CU	T AND RE	STORE						COMMERCIAL
R14	5	1233+62	RT	OFF EOP	GRAVEL/ASPHALT					CU	T AND RE	STORE						COMMERCIAL
L6	5	1233+81	LT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	22	12	9	4	5	0	0	9	15	15	16	RESIDENTIAL
R15	6	1234+45	RT	OFF EOP	GRAVEL/ASPHALT					CU	T AND RE	STORE			_			COMMERCIAL
L7	6	1234+83	LT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	16	12	9	5	4	0	0	9	15	15	14	RESIDENTIAL
L8	6	1235+07	LT	OFF EOP	GRAVEL/ASPHALT	CONCRETE	14	10	8	4	4	0	0	8	15	15	10	RESIDENTIAL
R16	6	1235+12	RT	OFF EOP	GRAVEL/ASPHALT					CU	T AND RE	STORE						COMMERCIAL
L9A	6	1235+82	LT	OFF BOC	CONCRETE	CONCRETE	51	45	8	3	5	0	0	8	3	3	42	COMMERCIAL
R17	6	1236+10	RT	OFF EOP	CONCRETE	CONCRETE	97	88	12	7	5	0	0	12			124	COMMERCIAL
L9B	7	1236+42	LT	OFF BOC	CONCRETE	CONCRETE	50	42	9	4	5	0	0	9	3	5	41	COMMERCIAL
															TC	TAL	571	

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Texas Department of Transportation

JACKSON CO SIDEWALKS

SUMMARY OF DRIVEWAYS FM 172 CSJ: 0420-01-048

		SHEET	6 (OF 6
CONT	SECT	JOB		HIGHWAY
0089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
YKM		IACKSON		26

SUMMARY (OF EROSION C	ONTROL ITEMS	;	
		ı	ITEM 506	
LOCATION	TEMP SEDMT	CONT FENCE	BIODEG EI	ROSN CONT LOGS
ESCATION	INSTALL	REMOVE	INSTALL 8"	REMOVE
	(LF)	(LF)	(LF)	(LF)
BEGIN TO END AS APPROVED OR DIRECTED				
SL 521 - CSJ: 0089-11-007 TOTALS	200	200	100	100
BEGIN TO END AS APPROVED OR DIRECTED				
SH 111 - CSJ: 0346-07-042 TOTALS	200	200	100	100
BEGIN TO END AS APPROVED OR DIRECTED				
FM 1822 - CSJ: 1945-01-024 TOTALS	200	200	100	100
BEGIN TO END AS APPROVED OR DIRECTED				
SL 522 - CSJ: 0089-12-006 TOTALS	200	200	100	100
BEGIN TO END AS APPROVED OR DIRECTED				
FM 710 - CSJ: 0420-09-025 TOTALS	200	200	100	100
DECINITO END AC ADDROVED OR DIRECTED				
BEGIN TO END AS APPROVED OR DIRECTED	200	200	100	100
SH 172 - CSJ: 0420-01-048 TOTALS	200	200	100	100
PROIECT TOTALS	1200	1200	600	600
Thojeer romes	1200	1200	000	

- SW3P NOTES: 1. INSTALL BMP'S TO CORRESPOND WITH SEQUENCE OF CONSTRUCTION. ADDITIONAL BMP'S MAY BE ADDED TO CORRESPOND WITH CONSTRUCTION ACTIVITIES AS APPROVED OR AS DIRECTED BY THE ENGINEER.
- 2. ACTUAL BMP LOCATIONS AND LENGTHS MAY VARY TO MEET FIELD CONDITIONS, AS APPROVED OR AS DIRECTED BY THE ENGINEER.

2/28/2023

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Texas Department of Transportation

JACKSON CO SIDEWALKS

SUMMARY OF ENVIRONMENTAL ITEMS

CSJ: 0346-07-042

		1 (OF 1					
CONT	SECT	JOB		HIGHWAY				
0089	11	007,ETC.	SL 521,ETC.					
DIST		COUNTY		SHEET NO.				
YKM		IACKSON		27				

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

- 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



Safety Division Standard

BARRICADE AND CONSTRUCTION
GENERAL NOTES
AND REQUIREMENTS

BC(1)-21

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 $\mbox{$\sharp$}$ May be mounted on back of "ROAD WORK AHEAD"(CW20-1D) sign with approval of Engineer. (See note 2 below)

- 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 $36" \times 36"$ 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.
- 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.
- 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. 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.

BEGIN T-INTERSECTION ★ ★ G20-9TP ZONE ★ ★ R20-5T FINES DOUBL X R20-5aTP WORKERS ARE PRESENT ROAD WORK ← NEXT X MILES FND * * G20-26T WORK ZONE G20-1bTl \bigcirc INTERSECTED 1000'-1500' 1 Block - City - Hwy 1000'-1500' - Hwy 1 Block - City ROADWAY \Rightarrow ROAD WORK G20-1bTR NEXT X MILES => 80' WORK ZONE G20-2bT X X Limit min BEGIN WORK \times \times G20-9TP ZONE TRAFFI G20-6T ★ ★ R20-5T FINES IDOUBLE X R20-5aTP WORKERS ROAD WORK G20-2

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.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING $^{\text{I,5,6}}$

SIZE

Sign onventional|Expressway/ Number Freeway or Series CW20' CW21 48" × 48' CW22 48" x 48" CW23 CW25 CW1, CW2, CW7. CW8. 48" x 48' 36" x 36" CW9, CW11 CW14 CW3, CW4. CW5, CW6, 48" x 48" 48" × 48' CW8-3, CW10, CW12

Posted Speed	Sign∆ Spacing "X"
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500 ²
60	600²
65	700 ²
70	800 ²
75	900 ²
80	1000 ²
*	* 3

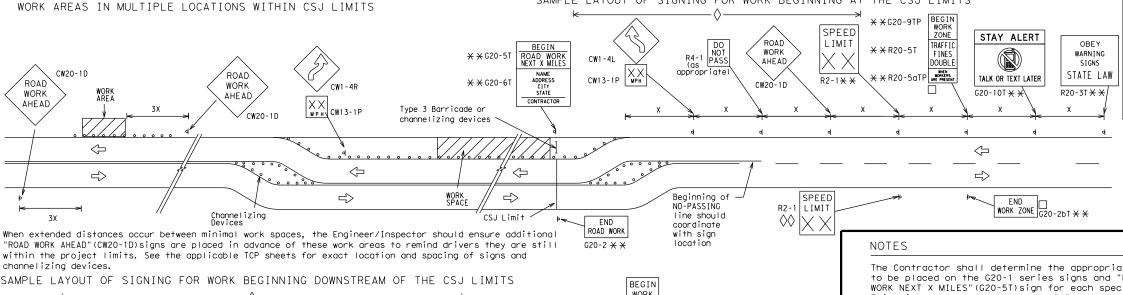
SPACING

* 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.

 \triangle 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. $36" \times 36"$ "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



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

★ ★G20-9TF ZONE STAY ALERT OBEY SPEED TRAFFIC X **X** G20-5T ROAD LIMIT ROAD ROAD NEXT X MILE X XR20-5T FINES SIGNS WORK CLOSED R11-2 WORK DOUBLE STATE LAW ⅓ MILE TALK OR TEXT LATER AHEAD \times \times R20-5aTP * *G20-6T Type 3 R20-3 R2-1 G20-10 CW20-1D Barricade or CW13-1P CW20-1E channelizina devices \triangleleft -CSJ Limi Channelizing Devices \Rightarrow B SPEED R2-1 FND LIMIT END ROAD WORK WORK ZONE G20-26T * G20-2 * *

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

- The "BEGIN WORK ZONE" (G20-9TP) and "END WORK ZONE" (G20-2b1 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.
- imes 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
- Contractor will install a regulatory speed limit sign at the end of the work zone.

	LEGEND
I	Type 3 Barricade
000	Channelizing Devices
•	Sign
X	See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.

SHEET 2 OF 12

Texas Department of Transportation

Traffic Safety

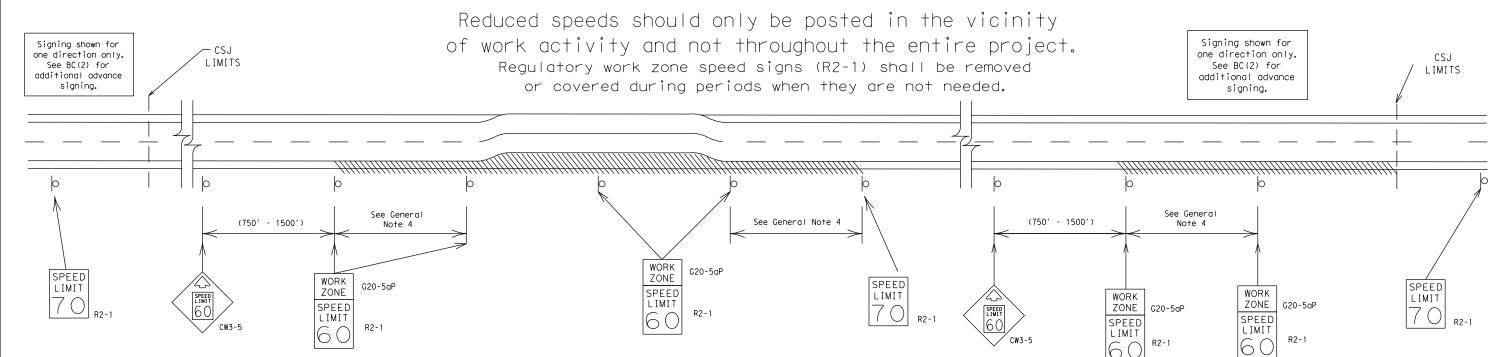
BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-21

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TxDOT	November 2002	CONT	SECT	JOB			YAW		
	REVISIONS 8-14 5-21	0089	11	007, ET	ŗ.	SL	52	1,ETC.	
9-07 7-13		DIST	COUNTY				SHEET NO.		
		YKM	JACKSON				29		

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.



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.

SHEET 3 OF 12



Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

BC(3)-21

E:	bc-21.dgn	DN: TxDOT		CK: TXDOT DW:		TxDOT	ck: TxDOT	
TxDOT	November 2002	CONT	SECT	JOB		H]GHWAY		
9-07 7-13	REVISIONS 8-14 5-21	0089	11	007, ET	с.	SL 521,ETC.		
		DIST		COUNTY		SHEET NO.		
		YKM		JACKS	N		30	

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BACKGR

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LEGEND

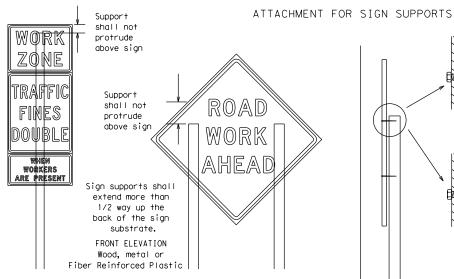
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TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS 12' min. ROAD ROAD ROAD ROAD WORK minimum WORK WORK WORK from AHEAD AHEAD ahead curb AHEAD min. X X MPH 7.0' min. 7.0' min. 9.0' max. 6' or 7.0' min. 9.0' max. 6.0' min. greater 9.0' max. A 1111111111 115/11/2/15-115/12/1 Paved Paved

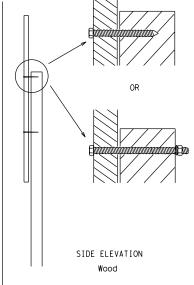
* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

* X 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.



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 Wood 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

shoul de



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

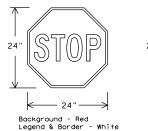
Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

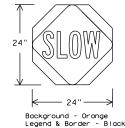
STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24". STOP/SLOW paddles shall be retroreflectorized when used at night.

of at least the same gauge material.

- 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.





HEETING RE	QU I REMENT	TS (WHEN USED AT NIGHT)
USAGE	COLOR	SIGN FACE MATERIAL
ROUND	RED	TYPE B OR C SHEETING
ROUND	ORANGE	TYPE $B_{\rm FL}$ OR $C_{\rm FL}$ SHEETING
& BORDER	WHITE	TYPE B OR C SHEETING
) & 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.
- 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.
- 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.
- 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

- Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
- Wooden sign posts shall be painted white.
- Barricades shall NOT be used as sign supports
- 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.
- 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 reaardina 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.
- 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.
- 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.
- 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)

- 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.
 - 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.
 - Short-term stationary daytime work that occupies a location for more than 1 hour in a single daylight period.
 - 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

- 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 plagues mounted below other signs.
- 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. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
- 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.
- 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

- 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.
- "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).
- 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. Burlap shall NOT be used to cover signs.
- Duct tape or other adhesive material shall NOT be affixed to a sign face.
- 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. The sandbags will be tied shut to keep the sand from spilling and to maintain a
- constant weight.
- Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights. 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. 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 CW7TCD list. 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. 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. SHEET 4 OF 12



BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

Traffic Safety

BC(4)-21

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© TxD0T	November 2002	CONT	SECT	JOB		HIGHWAY		HWAY
	REVISIONS 8-14 5-21	0089	11	007, ETC.		SL	52	1,ETC
9-07		DIST	COUNTY				SHEET NO.	
7-13		YKM	JACKSON					31

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.

WEDGE ANCHORS

Post

See the CWZTCD

WING CHANNEL

for embedment.

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

Post

desirable

34" min. in

strona soils.

55" min. in

weak soils.

- 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
- No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CW7TCD List.
- 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.

SHEET 5 OF 12



Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-21

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ℂTxDOT November 2002		CONT	SECT	JOB		HIGHWAY		
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	8-14 5-21	DIST		COUNTY			SHEET NO.	
7-13		YKM	JACKSON				32	
99								

SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS

-2" x 2"

12 ga. upright

SINGLE LEG BASE

weld, do not

back fill puddle.

weld starts here

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

32′

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

- The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
- 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.
- 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.
- Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
- Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
- 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.
- 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	WORD OR PHRASE	ABBREVIATION
Access Road	ACCS RD	Major	MAJ
Alternate	ALT	Miles	MI
Avenue	AVE	Miles Per Hour	MPH
Best Route	BEST RTE	Minor	MNR
Boulevard	BLVD	Monday	MON
Bridge	BRDG	Normal	NORM
Cannot	CANT	North	N
Center	CTR	Northbound	(route) N
Construction Ahead	CONST AHD	Parking	PKING
	VIIIO	Road	RD
CROSSING	XING	Right Lane	RT LN
Detour Route	DETOUR RTE	Saturday	SAT
Do Not	DONT	Service Road	SERV RD
East	E	Shoulder	SHLDR
Eastbound	(route) E	Slippery	SLIP
Emergency	EMER	South	S
Emergency Vehicle		Southbound	(route) S
Entrance, Enter	ENT	Speed	SPD
Express Lane	EXP LN	Street	ST
Expressway	EXPWY	Sunday	SUN
XXXX Feet	XXXX FT	Telephone	PHONE
Fog Ahead	FOG AHD	Temporary	TEMP
Freeway	FRWY, FWY	Thursday	THURS
Freeway Blocked	FWY BLKD	To Downtown	TO DWNTN
Friday	FRI	Traffic	TRAF
Hazardous Driving		Travelers	TRVLRS
Hazardous Material		Tuesday	TUES
High-Occupancy	HOV	Time Minutes	TIME MIN
Vehicle	HWY	Upper Level	UPR LEVEL
Highway		Vehicles (s)	VEH. VEHS
Hour(s)	HR, HRS	Warning	WARN
Information	INFO	Wednesday	WED
I† Is	ITS	Weight Limit	WT LIMIT
Junction	JCT	West	W
Left	LFT	Westbound	(route) W
Left Lane	LFT LN	Wet Pavement	WET PVMT
Lane Closed	LN CLOSED	Will Not	WONT
Lower Level	LWR LEVEL	L MILLI MOI	1 11/11/1
Maintenance	MAINT		

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

oad/Lane/Ramp	Closure List	Other Cond	dition List
FREEWAY CLOSED X MILE	FRONTAGE ROAD CLOSED	ROADWORK XXX FT	ROAD REPAIRS XXXX FT
ROAD CLOSED AT SH XXX	SHOULDER CLOSED XXX FT	FLAGGER XXXX FT	LANE NARROWS XXXX FT
ROAD CLSD AT FM XXXX	RIGHT LN CLOSED XXX FT	RIGHT LN NARROWS XXXX FT	TWO-WAY TRAFFIC XX MILE
RIGHT X LANES CLOSED	RIGHT X LANES OPEN	MERGING TRAFFIC XXXX FT	CONST TRAFFIC XXX FT
CENTER LANE CLOSED	DAYTIME LANE CLOSURES	LOOSE GRAVEL XXXX FT	UNEVEN LANES XXXX FT
NIGHT LANE CLOSURES	I-XX SOUTH EXIT CLOSED	DETOUR X MILE	ROUGH ROAD XXXX FT
VARIOUS LANES CLOSED	EXIT XXX CLOSED X MILE	ROADWORK PAST SH XXXX	ROADWORK NEXT FRI-SUN
EXIT CLOSED	RIGHT LN TO BE CLOSED	BUMP XXXX FT	US XXX EXIT X MILES
MALL DRIVEWAY CLOSED	X LANES CLOSED TUE - FRI	TRAFFIC SIGNAL XXXX FT	LANES SHIFT
xxxxxxx			

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

Phase 2: Possible Component Lists

А		e/Effect on Travel List	Location List	Warning List	* * Advance Notice List
	MERGE RIGHT	FORM X LINES RIGHT	AT FM XXXX	SPEED LIMIT XX MPH	TUE-FRI XX AM- X PM
	DETOUR NEXT X EXITS	USE XXXXX RD EXIT	BEFORE RAILROAD CROSSING	MAXIMUM SPEED XX MPH	APR XX- XX X PM-X AM
	USE EXIT XXX	USE EXIT I-XX NORTH	NEXT X MILES	MINIMUM SPEED XX MPH	BEGINS MONDAY
	STAY ON US XXX SOUTH	USE I-XX E TO I-XX N	PAST US XXX EXIT	ADVISORY SPEED XX MPH	BEGINS MAY XX
	TRUCKS USE US XXX N	WATCH FOR TRUCKS	XXXXXXX TO XXXXXXX	RIGHT LANE EXIT	MAY X-X XX PM - XX AM
	WATCH FOR TRUCKS	EXPECT DELAYS	US XXX TO FM XXXX	USE CAUTION	NEXT FRI-SUN
	EXPECT DELAYS	PREPARE TO STOP		DRIVE SAFELY	XX AM TO XX PM
	REDUCE SPEED XXX FT	END SHOULDER USE		DRIVE WITH CARE	NEXT TUE AUG XX
*	USE OTHER ROUTES	WATCH FOR WORKERS			TONIGHT XX PM- XX AM
Phase 2.	STAY IN LANE	*	* * S	ee Application Guidelin	es Note 6.

APPLICATION GUIDELINES

- 1. Only 1 or 2 phases are to be used on a PCMS.
- The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
- A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
- A Location Phase is necessary only if a distance or location is not included in the first phase selected.
- 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.
- 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. BFFORF and PAST interchanged as needed.
- 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

BLVD

CLOSED

- 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.

SHEET 6 OF 12

Traffic Safety



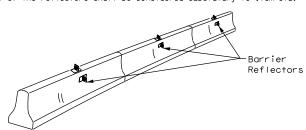
BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

BC(6)-21

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C) TxDOT	November 2002	CONT	SECT	JOB			HIGHWAY	
	REVISIONS	0089	11	007, ET	ŗ.	SL	521,ETC.	
9-07	8-14	DIST		COUNTY			SHEET NO.	
7-13	5-21	YKM		JACKS	NC		33	

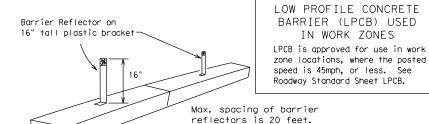
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- Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of pregualified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
- 2. Color of Barrier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



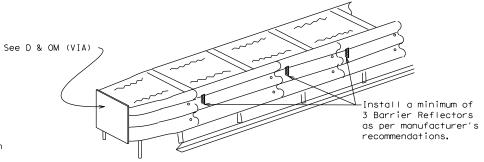
CONCRETE TRAFFIC BARRIER (CTB)

- 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
- 10. Missing or damaged Barrier Reflectors shall be replaced as directed
- 11. Single slope barriers shall be delineated as shown on the above detail.



LOW PROFILE CONCRETE BARRIER (LPCB)

Attach the delineators as per manufacturer's recommendations.

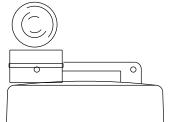


DELINEATION OF END TREATMENTS

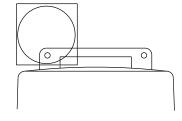
END TREATMENTS FOR CTB'S USED IN WORK ZONES

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.

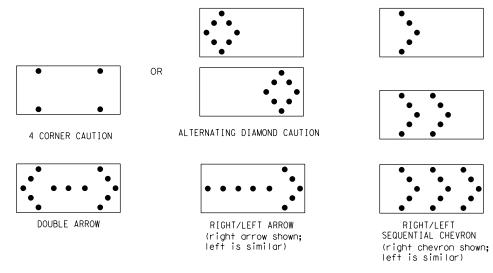
WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

- 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
- 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.
- 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.
- The straight line caution display is NOT ALLOWED.
- 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								
В	30 × 60	13	3/4 mile								
С	48 × 96	15	1 mile								

ATTENTION Flashing Arrow Boards shall be equipped with automatic dimmina 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.

Traffic Safety Division Standard

FLASHING ARROW BOARDS

SHEET 7 OF 12

TRUCK-MOUNTED ATTENUATORS

- Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the Manual for Assessing Safety Hardware (MASH).
- 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 n 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.



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

BC(7)-21

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GENERAL NOTES

- 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" (CMTTCD).
- 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.
- 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:

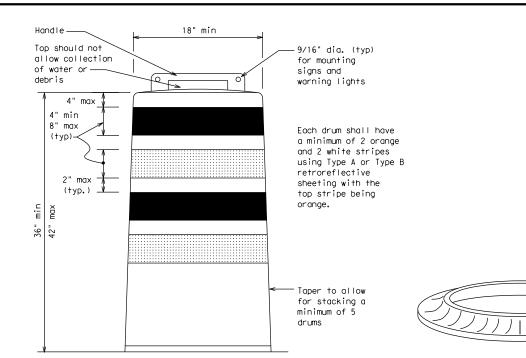
- Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
- 2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
- 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.

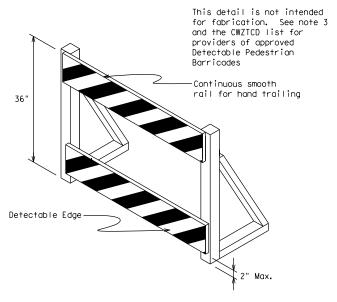
RETROREFLECTIVE SHEETING

- 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.
- 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.
- 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.
- 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.





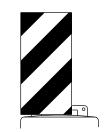
DETECTABLE PEDESTRIAN BARRICADES

- 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.
- 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.
- 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
- Worning lights shall not be attached to detectable pedestrian barricades.
- 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 CWI-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer

See Ballast



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

- 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.
- Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection
- 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.
- 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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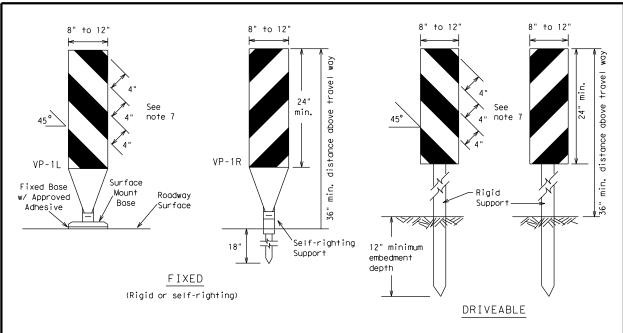


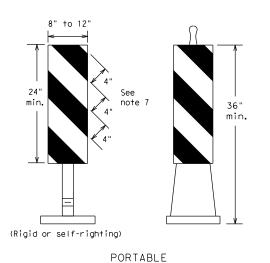
Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

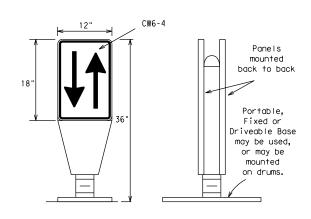
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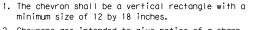
- 1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
- 2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation 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.
- Selfrighting supports are available with portable base.
 See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
- Sheeting for the VP's shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
- Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.

VERTICAL PANELS (VPs)



- 1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
- 2. The OTLD may be used in combination with 42"
- 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.

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)

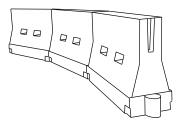


- Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
- 3. Chevrons, when used, shall be erected on the outside of a sharp curve 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.
- 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

- 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).
- 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)

36

Fixed Base w/ Approved Adhesive

(Driveable Base, or Flexible

Support can be used)

- 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.
- $\hbox{4. LCDs should not be used to provide positive protection for obstacles, pedestrians or workers. } \\$
- 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

- 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.
- 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	Desirable Spaci Formula Taper Lengths Channe			Spacir Channe		
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent
30	2	150′	165′	180′	30′	60′
35	$L = \frac{WS^2}{60}$	205′	225′	245′	35′	70′
40	80	265′	295′	320′	40′	80′
45		450′	495′	540′	45 <i>°</i>	90′
50		500′	550′	600′	50`	100′
55	L=WS	550′	6051	660′	55`	110′
60		600′	660′	720′	60 °	120′
65		650′	715′	780′	65 <i>°</i>	130′
70		700′	770′	840′	70′	140′
75		750′	825′	900′	75′	150′
80		800′	880′	960′	80′	160′

XTaper 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



Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-21

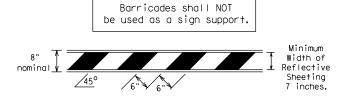
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1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type 3 Barricades and a list of all materials

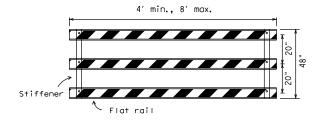
used in the construction of Type 3 Barricades. 2. Type 3 Barricades shall be used at each end of construction projects closed to all traffic.

TYPE 3 BARRICADES

- 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.
- 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.
- 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.
- Sheeting for barricades shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

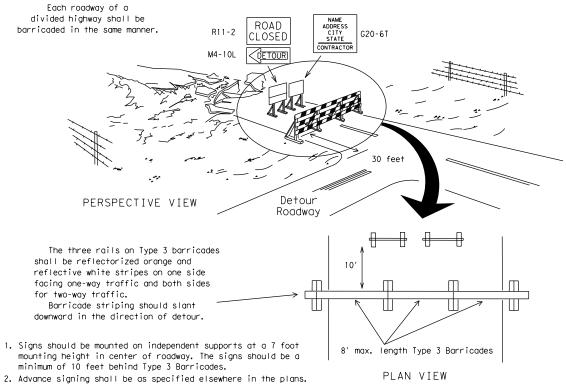


TYPICAL STRIPING DETAIL FOR BARRICADE RAIL

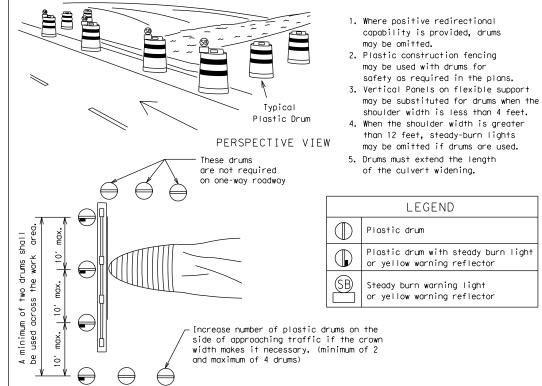


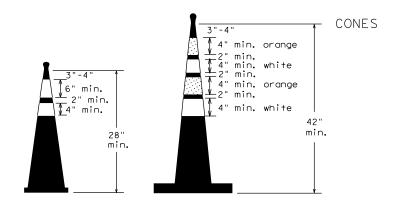
Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

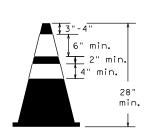


TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



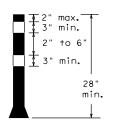


Two-Piece cones



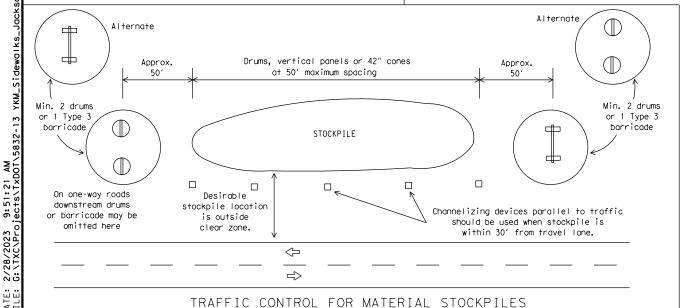
PLAN VIEW

One-Piece cones



CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS

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 Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(10)-21

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WORK ZONE PAVEMENT MARKINGS

GENERAL

- The Contractor shall be responsible for maintaining work zone and existing pavement morkings, 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.
- Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
- Additional supplemental pavement marking details may be found in the plans or specifications.
- Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
- 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 povement 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.
- All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

- Raised pavement markers are to be placed according to the patterns on BC(12).
- 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

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

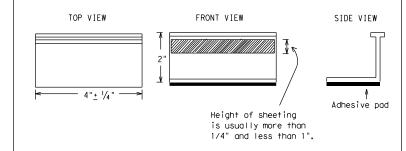
MAINTAINING WORK ZONE PAVEMENT MARKINGS

- The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
- 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

- 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.
- 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".
- 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.
- Removal of raised pavement markers shall be as directed by the Fnaineer.
- 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

- 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 povements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

- Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
- All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
- 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 SPECIFICATIO	NS
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).

SHEET 11 OF 12

Texas Department of Transportation

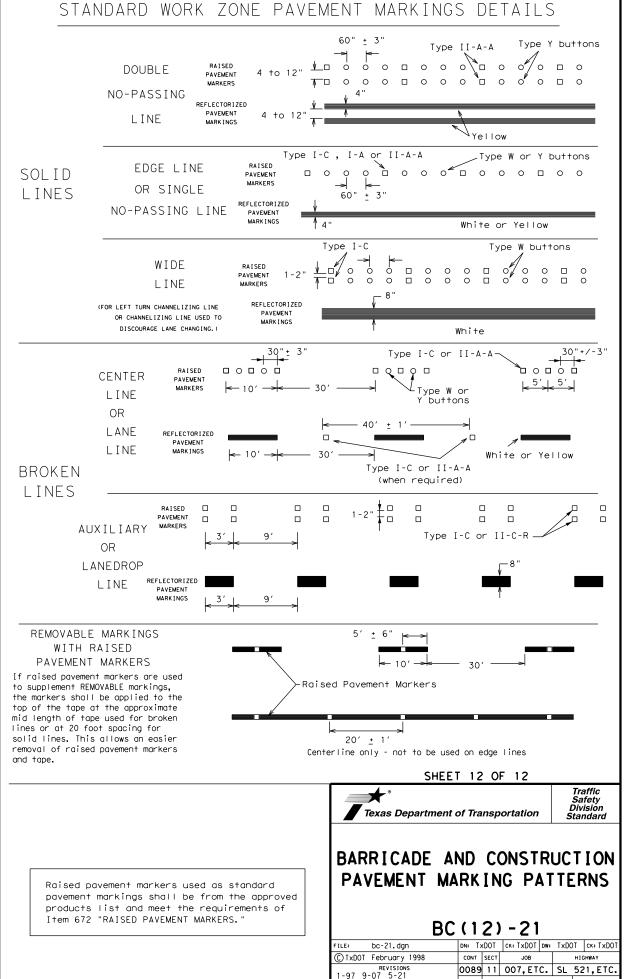
BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

Traffic Safety

BC(11) - 21

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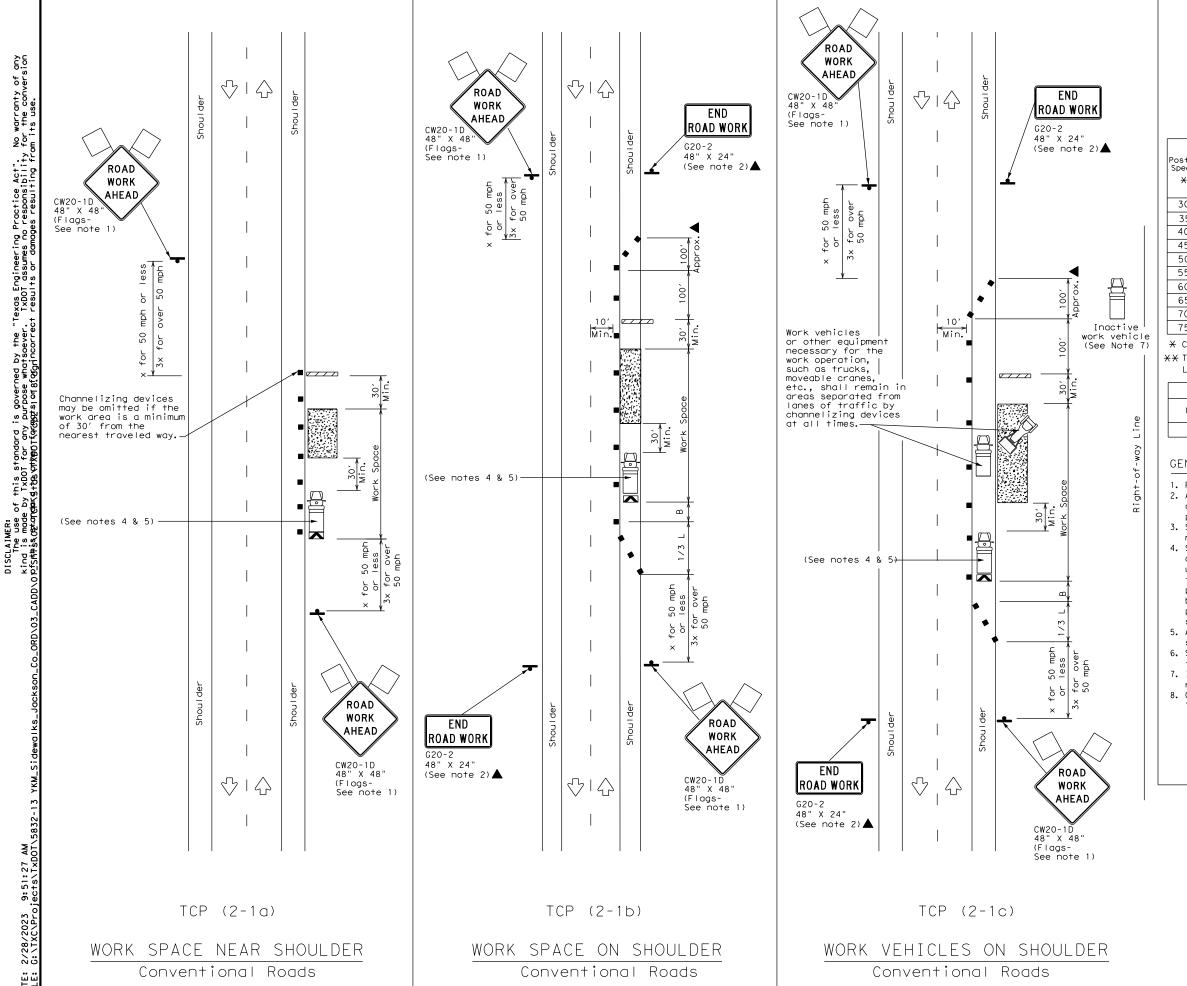
105



2-98 7-13 11-02 **8-14**

YKM

JACKSON



	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	\Diamond	Traffic Flow						
\Diamond	Flag	LO	Flagger						

				_	1 _			1	
Posted Speed	Formula	Minimum Desirable Taper Lengths **X			Spacir Channe		Minimum Sign Spacing "X"	Suggested Longitudinal Buffer Space	
*		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	Distance	"B"	
30	WS ²	150′	165′	180′	30′	60′	120′	90′	
35	L = WS	205′	225′	245′	35′	70′	160′	120′	
40	80	265′	295′	320′	40′	80′	240′	155′	
45		450′	495′	540′	45′	90′	320′	195′	
50		500′	550′	600′	50′	100′	400′	240′	
55	L=WS	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	MOBILE SHORT SHORT TERM INTERMEDIATE LONG TERM DURATION STATIONARY TERM STATIONARY STATIONARY								
	1	1	✓	✓					

GENERAL NOTES

- 1. Flags attached to signs where shown, are REQUIRED.
- 2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated 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.

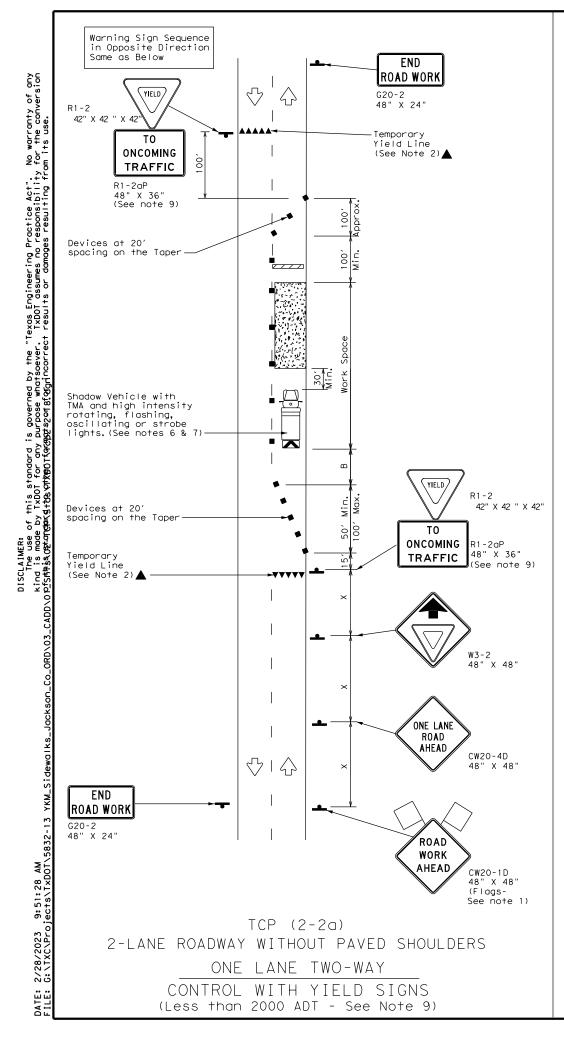
Texas Department of Transportation

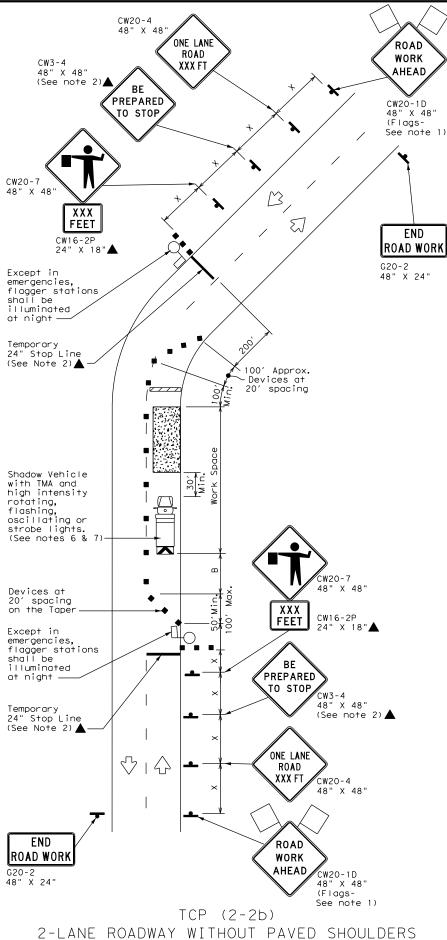
Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(2-1)-18

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-97 2-18	YKM		JACKS	NC			40





ONE LANE TWO-WAY CONTROL WITH FLAGGERS

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

Posted Speed *	Formula	D	Minimur esirab er Leng *X *X	le	Spacir Channe		Minimum Sign Spacing "X"	Suggested Longitudinal Buffer Space	Stopping Sight Distance
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	Distance	"B"	
30	2	150′	165′	180′	30′	60′	120′	90′	200′
35	$L = \frac{WS^2}{60}$	205′	225′	245′	35′	70′	160′	120′	250′
40	80	265′	295′	320′	40′	80′	240′	155′	305′
45		4501	495′	540′	45′	90′	320′	195′	360′
50		500′	550′	600′	50′	100′	400′	240′	425′
55	L=WS	5501	605′	660′	55′	110′	500′	295′	495′
60		600′	660′	720′	60′	120′	600′	350′	570′
65]	650′	715′	780′	65′	130′	700′	410′	645′
70		700′	770′	840′	70′	140′	800′	475′	730′
75		750′	825′	900′	75′	150′	900′	540′	820′

* Conventional Roads Only

** Taper lengths have been rounded off.

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

	TYPICAL USAGE							
MOBILE	MOBILE SHORT SHORT TERM INTERMEDIATE LONG TERM DURATION STATIONARY TERM STATIONARY 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
- 3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4 "ONE LANE ROAD XXX FT" sign, but proper sign spacing shall be maintained.
- 4. Flaggers should use two-way radios or other methods of communication to control traffic.
- 5. Length of work space should be based on the ability of flaggers to communicate.
- 6. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- 7. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.

TCP (2-2a)

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

TCP (2-2b)

- 10. Channelizing devices on the center line may be omitted when a pilot car is leading traffic and approved by the Engineer.
- 11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain stopping sight distance to the flagger and a queue of stopped vehicles.
- $12.\mathsf{Flag}$ gers should use 24" STOP/SLOW paddles to control traffic. Flag s should be limited to emergency situtations.



Traffic Operations Division Standard

TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL

TCP(2-2)-18

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1-97	2-12	DIST		COUNTY			SHEET NO.
4-98	2-18	YKM		JACKS	NC		41

ROAD WORK AHEAD CW20-1D 48" X 48" (Flags-See note 1) END ROAD WORK G20-2 48" X 24" ROAD $\nabla |\nabla$ END WORK ROAD WORK AHEAD LANE CW20-1D 48" X 48" (Flags-See note 1) G20-2 48" X 24" CLOSE CW20-5T XXX FT CW16-3aP 30" X 12" (See note 4) for 50 MPH or less 3x for over 50 MPH CW1-6aT ---Shadow Vehicle with TMA and MIN. (See note 8) high intensity rotating, flashing, oscillating or strobe lights. (See notes 5 & 6) CW13-1P 24" X 24 Shadow Vehicle with— TMA and high intensity rotating, flashing, oscillating or strobe lights.(See notes 5 & 6) CW1-6aT ' X 36' RIGHT LANE CLOSED CW20-5TR 48" X 48' CW1-4L XXX FT 48" X 48" X X MPH CW16-3aP 30" X 12" (See note 4) CW13-1P RIGHT LANE END CLOSED ROAD WORK CW20-5TR END \bigcirc ROAD G20-2 48" X 24" ROAD WORK WORK CW16-3aP 30" X 12" XXX FT G20-2 AHEAD 48" X 24' CW20-1D 48" X 48" (Flags-See note 1 note 4) ROAD TCP (2-4a) TCP (2-4b) WORK AHEAD CW20-1D 48" X 48" (Flags-See note 1) ONE LANE CLOSED TWO LANES CLOSED

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any Kind is made by TxDDI for any purpose whatsoever. TxDDI assumes no responsibility for the conversion pissimpskipstagand+tbs prixmonferests44an mightanincorrect results or damages resulting from its use.

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

Posted Speed	Formula	D Tap	Minimur esirab er Len X X	le gths	Spacir Channe Dev	lizing ices	Minimum Sign Spacing "X"	Suggested Longitudinal Buffer Space
*		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	Distance	"B"
30	ws ²	150′	165′	180′	30′	60′	120′	90′
35	L = WS	2051	225′	245′	35′	70′	160′	120′
40	60	265′	295′	3201	40′	80′	240′	155′
45		450′	495′	540′	45′	90′	320′	195′
50		500′	550′	6001	50′	100′	400′	240′
55	L=WS	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.
- 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.



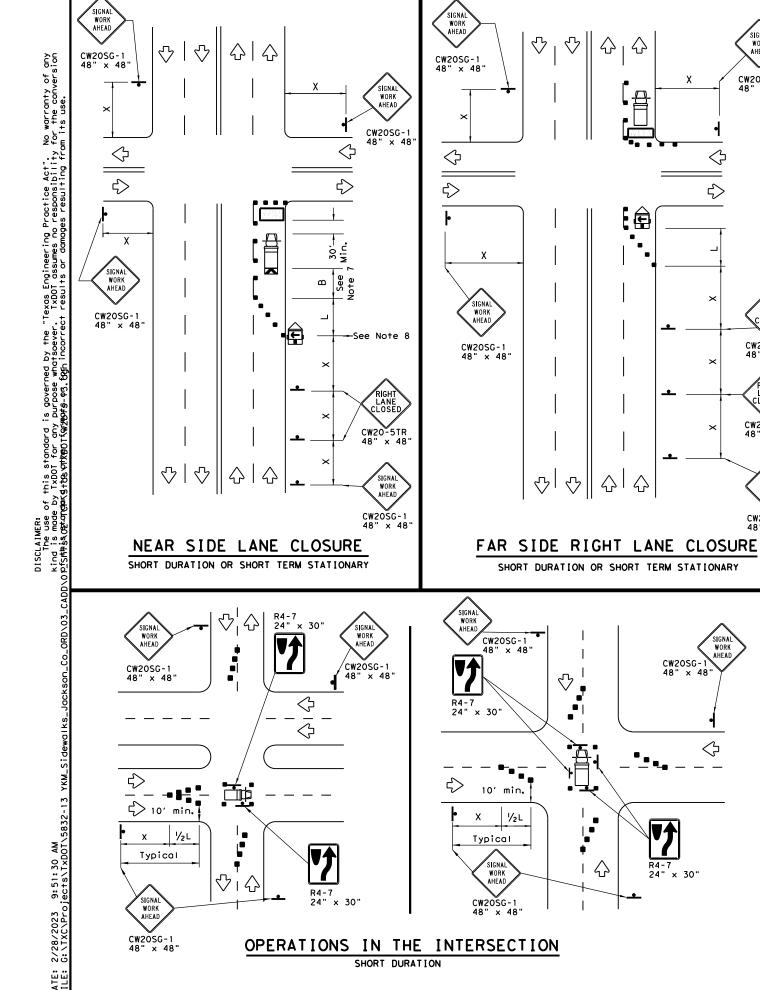
TRAFFIC CONTROL PLAN

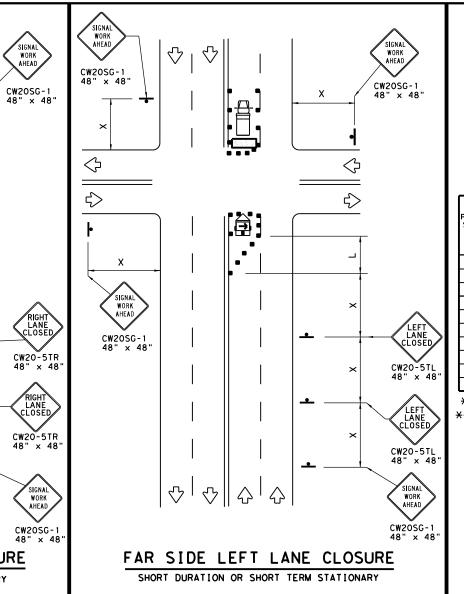
Traffic Operations Division Standard

LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP(2-4)-18

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4-98 2-18	YKM		JACKS	NC		42





	LEGEND							
~~~	Type 3 Barricade		Channelizing Devices					
	Heavy Work Vehicle	K	Truck Mounted Attenuator (TMA)					
Ê	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)					
-	Sign	∜	Traffic Flow					
\Diamond	Flag	ŢО	Flagger					

Posted Speed	Formula	Desirable		Spacin Channe		Minimum Sign Spacing "X"	Suggested Longitudinal Buffer Space	
*		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	Distance	"B"
30	2	150′	1651	180′	30'	60′	120'	90′
35	L = WS ²	2051	225′	245′	35′	70′	160′	120'
40	80	265′	295′	3201	40′	80′	240'	1551
45		450′	4951	540′	45′	90′	320′	1951
50		5001	550'	600'	50′	100′	400'	240'
55	L=WS	550′	605′	660′	55′	110′	500′	295′
60	L-#3	600'	660′	720′	60′	120'	600′	350′
65]	650′	715′	780′	65′	130′	700′	410'
70		700′	770′	840′	70′	140′	8001	475′
75		750′	8251	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)

WORKERS IN BUCKET TRUCKS SHALL NOT WORK ABOVE OPEN LANES OF TRAFFIC.

GENERAL NOTES

SIGNAL WORK AHEAD

 \Diamond

SIGNAL WORK AHEAD

CW2OSG-

24" × 30"

- 1. The minimum size channelizing device is the 28" cone. 42" Two-piece cones, drums, vertical panels or barricades will be required when the device must be left unattended at night.
- 2. Obstructions or hazards at the work area shall be clearly marked and delineated at all times.
- Flaggers and Flagger Symbol (CW20-7) signs may be required according to field conditions.
- 4. Vehicles parked in roadway shall be equipped with at least two high intensity rotating, flashing, oscillating or strobe type lights.
- 5. High level warning devices (flag trees) may be used at corners of the vehicle.
- 6. When work operations are performed on existing signals, the signals may be placed in flashing red mode when approved by the engineer. If existing signals do not have power, All-Way Stop (R1-1 and R1-3P) signs may be implemented when approved by the engineer.
- 7. For Short-Term Stationary work the buffer space "B" from the above table should be used if field conditions permit. For Short Duration (less than 1 hour) any buffer space provided will enhance the safety of the setup.
- 8. The arrow board at this location may be omitted for Short Duration work if the work vehicle has an arrow board in operation. As an option, the arrow board may be placed at the end of the taper in the closed lane if space is not available at the beginning of the taper.
- Signs and devices for the NEAR SIDE LANE CLOSURE may be altered for a left lane closure by using a LEFT LANE CLOSED (CW20-5TL) and adding channelizing devices on the centerline to protect the work space from opposing traffic.

SHEET 1 OF 2



Traffic Operations Division Standard

TRAFFIC SIGNAL WORK TYPICAL DETAILS

WZ(BTS-1)-13

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GENERAL NOTES FOR WORK ZONE SIGNS

Wooden sign posts shall be painted white.

directed by the Engineer.

directed by the Engineer.

DURATION OF WORK

SIGN MOUNTING HEIGHT

REMOVING OR COVERING

Barricades shall NOT be used as sign supports.

Nails shall NOT be used to attach signs to any support.

Signs shall be installed and maintained in a straight and plumb condition.

All signs shall be installed in accordance with the plans or as

Temporary signs that have damaged or cracked substrates and/or damaged or marred reflective sheeting shall be replaced as

Damaged wood posts shall be replaced. Splicing wood posts will not be allowed.

The Contractor shall furnish the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD).

The Contractor shall furnish sign supports and substrates listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD), installed as per the manufacturer's recommendations.

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".

Work zone durations are defined in Part 6, Section 6G.02 of the Texas Manual on Uniform Traffic Control Devices (TMUTCD).

Sign height of Long-term/Intermediate-term warning signs shall be as shown on Figure 6F-1 of the TMUTCD.

Sign height of Short-term/Short Duration warning signs shall be as shown on Figure 6F-2 of the TMUTCD.

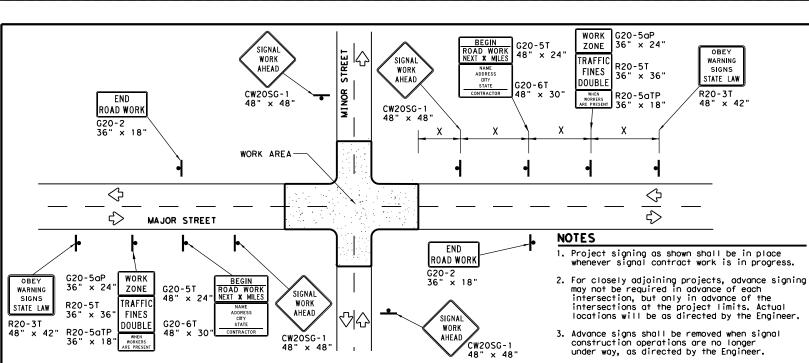
Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

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. Burlap, or heavy materials such as plywood or aluminum shall not be used to cover signs.

Signs and anchor stubs shall be removed and holes back filled upon completion of the work.

Duct tape or other adhesive material shall NOT be affixed to a sign face. $\,$





TYPICAL ADVANCE SIGNAL PROJECT SIGNING

FOR LONG TERM and INTERMEDIATE-TERM STATIONARY WORK OPERATIONS

- to maintain a constant weight.
- 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
- 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
- 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 fastners. Sandbags shall be placed along the length of the skids to weigh down the
- Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

ץ	or is proced on stopes.				
	LEGEND				
	þ	Sign			
		Channelizing Devices			
		Type 3 Barricade			

DEPARTMENTAL MATERIAL	SPECIFICATIONS
SIGN FACE MATERIALS	DMS-8300
FLEXIBLE ROLL-UP REFLECTIVE SIGNS	DMS-8310

1			
	COLOR	USAGE	SHEETING MATERIAL
	ORANGE	BACKGROUND	TYPE B _{FL} OR TYPE C _{FL} SHEETING
	WHITE	BACKGROUND	TYPE A SHEETING
	BLACK	LEGEND & BORDERS	ACRYLIC NON-REFLECTIVE SHEETING

Only pre-qualified products shall be used. A copy of the "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be found at the following web address:

http://www.txdot.gov/txdot_library/publications/construction.htm

REFLECTIVE SHEETING

All signs shall be retroreflective and constructed of sheeting meeting the requirements of the DMS and color usage table shown on this sheet.

warning sign spacing.

4. Warning sign spacing shown is typical for both

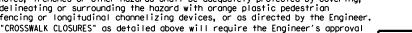
5. See the Table on sheet 1 of 2 for Typical

SIGN SUPPORT WEIGHTS

- Weights used to keep signs from turning over should be sandbags filled with dry, cohesionless material.
- The sandbags will be tied shut to keep the sand from spilling and
- Rock, concrete, iron, steel or other solid objects will not be permitted for use as sign support weights.
- vehicular impact. Rubber, such as tire inner tubes, shall not be used.

LEGEND					
-	Sign				
	Channelizing Devices				
	Type 3 Barricade				

SHEET 2 OF 2



CROSSWALK CLOSURES

Temporary Traffic Barrier

See Note 4 below

SIDEWALK DIVERSION

∟Work Area

SIDEWALK

CLOSED

-Work Area

24" x 12"

SIDEWALK DETOUR

R9-11aR

CW11-2

See Note 6

CW16-7PL 24" x 12"

CROSS HERE

K

10' Min.

SIDEWALK

CLOSED

R9-9 24" x 12"

4′ Min.(See Note 7 below

CROSS HERE

R9-11aL 24" x 12"

♡ | **ひ**

♦∥♦

SIDEWALK CLOSE

CROSS HERE

24" x 12'

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See Note 8-

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R9 - 1 ODBL

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36" × 36"

See Note 6

AHEAD

CW16-9P

24" x 12"

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IDEWALK CLOSE

USE OTHER SIDE

Texas Department of Transportation

TRAFFIC SIGNAL WORK BARRICADES AND SIGNS

CW20SG-1

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R9-11L 24" x 12"

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WORK

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SIGNAL WORK

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WORK

AHEAD

CW20SG-1

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Operation: Division Standard

48" × 48"

CW20SG-1

48" x 48

WZ(BTS-2)-13

			_				
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C TxDOT	April 1992	CONT	SECT	JOB		H]	GHWAY
	REVISIONS	0089	11	007, ET	С.	SL 5	21,ETC.
2-98 10-99 7-13		DIST		COUNTY			SHEET NO.
4-98 3-	03	YKM		JACKS	NC		44

PEDESTRIAN CONTROL

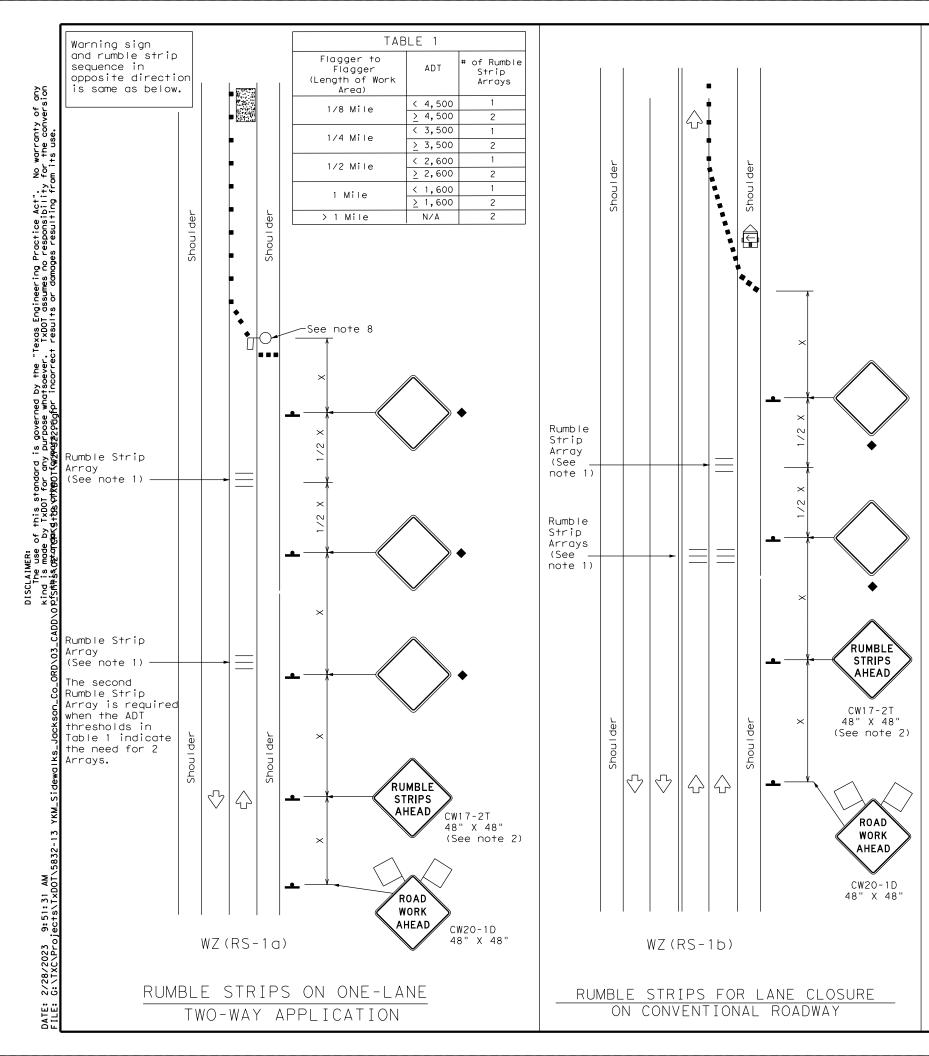
Holes, trenches or other hazards shall be adequately protected by covering, delineating or surrounding the hazard with orange plastic pedestrian fencing or longitudinal channelizing devices, or as directed by the Engineer.

CW2OSG-

SIGNA

AHEAD

- prior to installation, R9 series signs shown may be placed on supports detailed on the BC standards or CWZTCD list, or when fabricated from approved lightweight plastic substrates, they may be mounted on top of a plastic drum at or near the
- location shown. For speeds less than 45 mph longitudinal channelizing devices may be used instead of traffic barriers when approved by the Engineer. Attenuation of blunt ends and installation of water filled devices shall be as per BC(9) and manufacturer's recommendations.
- Location of devices are for general guidance. Actual device spacing and location must be field adjusted to meet actual conditions.
- Where pedestrians with visual disabilities normally use the closed sidewalk Detectable Pedestrian Barricades should be used instead of the Type 3
- The width of existing sidewalk should be maintained if practical.
- Pavement markings for mid-block crosswalks shall be paid for under the appropriate bid items.
- When crosswalks or other pedestrian facilities are closed or relocated. temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian



GENERAL NOTES

- Each Rumble Strip Array should consist of three rumble strips spaced center to center at the spacing shown in Table 2, placed transverse across the lane at locations shown.
- 2. The CW17-2T "RUMBLE STRIPS AHEAD" sign should be located after the CW20-1D "ROAD WORK AHEAD sign and spaced as shown. If traffic is observed to be queuing, or is expected to queue beyond the Rumble Strips, the CW17-2T sign and the first Rumble Strip Array may be located upstream of the CW20-1D sign as necessary to provide needed warning.
- Temporary Rumble Strips will be considered subsidiary to Item 502, and shall be a product listed on the Compliant Work Zone Traffic Control Devices.
- 4. Remove Temporary Rumble Strips before removing the advanced warning signs.
- Temporary Rumble Strips should not be used on horizontal curves, loose gravel, soft or bleeding asphalt, heavily rutted pavements or unpaved surfaces.
- Temporary Rumble Strips shall be installed and maintained as per manufacturer's recommendations.
- 7. This standard sheet shall be used in conjunction with other appropriate TCP standard, TMUTCD typical application or project specific detail for the project.
- The one-lane two-way application may utilize a flagger, an Automated Flagger Assistance Device (AFAD) or a Portable Traffic Signal (PTS).
- 9. Replace defective Temporary Rumble Strips as directed by the Engineer.
- 10. Temporary Rumble Strips may be used on freeways or expressways based on engineering judgment and written direction from the Engineer.

	LEGEND							
	Type 3 Barricade		Channelizing Devices					
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)					
	Trailer Mounted Flashing Arrow Panel		Portable Changeable Message Sign (PCMS)					
-	Sign	\forall \foral	Traffic Flow					
\bigcirc	Flag		Flagger					

Posted Speed *	Formula	D	Minimum Desirable Taper Lengths X X 10' 11' 12' On a On a		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"		
				Offset	Taper	Tangent		
30	WS ²	150′	165′	180′	30′	60′	120′	90′
35	L = WS	205′	225′	245′	35′	70′	160′	120′
40	00	265′	295′	320′	40′	80′	240′	155′
45		450′	495′	540′	45′	90′	320′	195′
50		500′	550′	600′	50 <i>°</i>	100′	400′	240′
55	L=WS	550′	605′	660′	55′	110′	500′	295′
60	L 113	600′	660′	720′	60′	120′	600′	350′
65		650′	715′	780′	65′	130′	700′	410′
70		700′	770′	840′	70′	140′	800′	475′
75		750′	825′	900′	75′	150′	900′	540′

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

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

- Signs are for illustrative purposes only. Signs required may vary depending on the TCP, TMUTCD Typical Application, or project specific details for the project.
- * For posted speeds in excess of 65 MPH, it is recommended that spacing is increased as speed limits increase. Increasing space between rumble strips will improve effectiveness.

TABLE 2					
Speed	Approximate distance between strips in an array				
≤ 40 MPH	10′				
> 40 MPH & ≤ 55 MPH	15′				
= 60 MPH	20′				
<u>></u> 65 MPH	* 35′+				

Traffic Safety

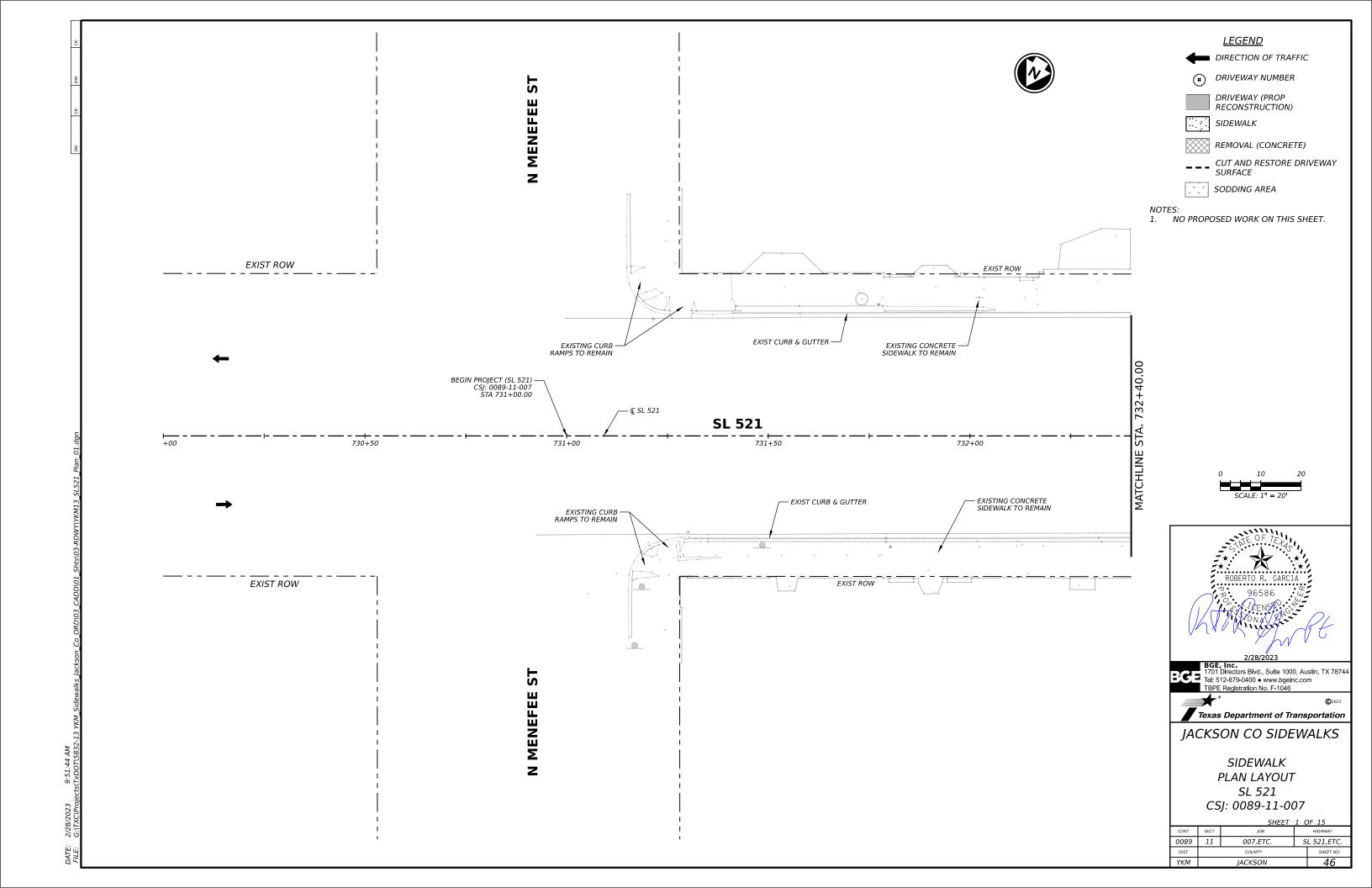
Texas Department of Transportation

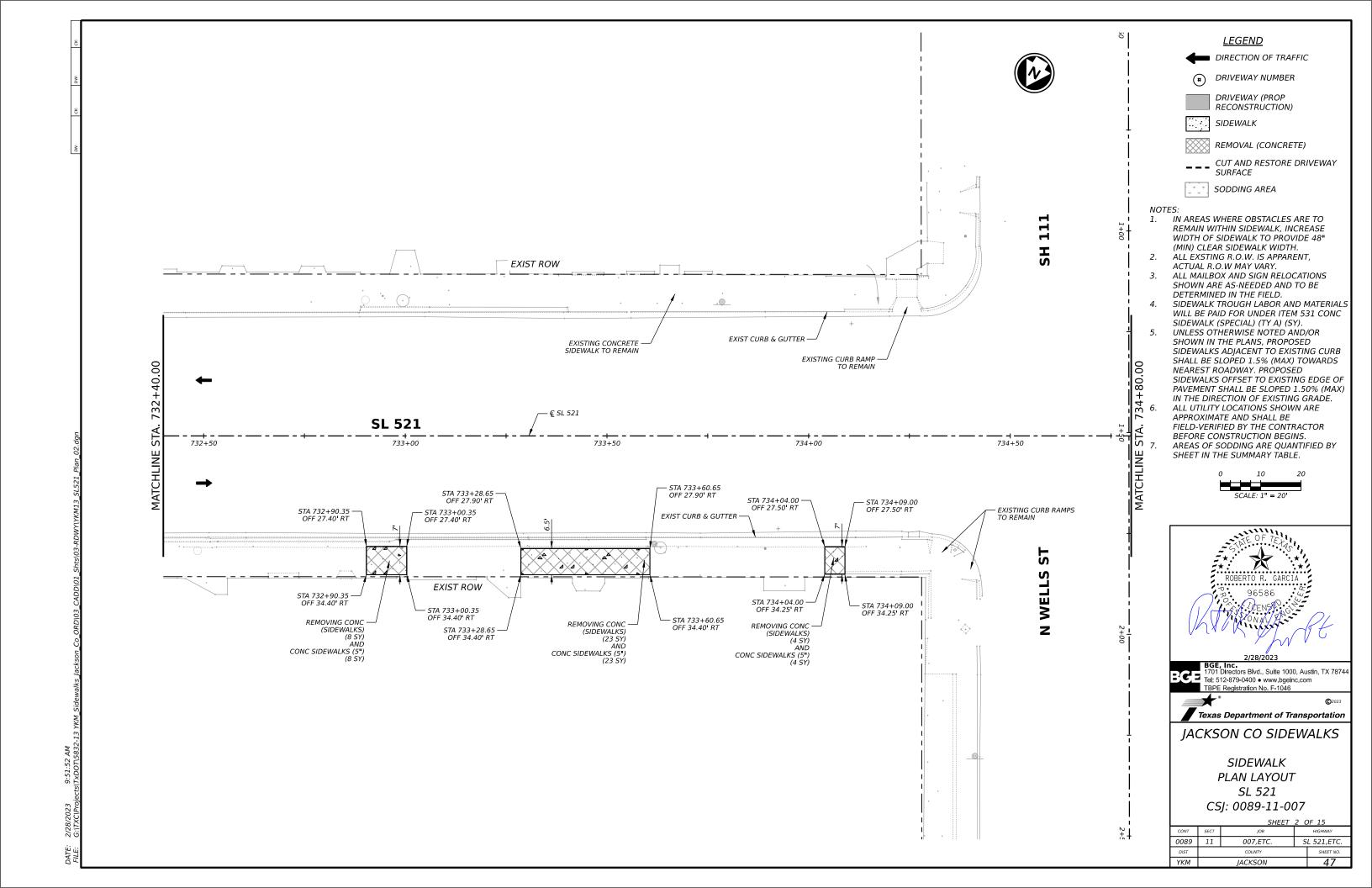
Traffic Safety
Division Standard

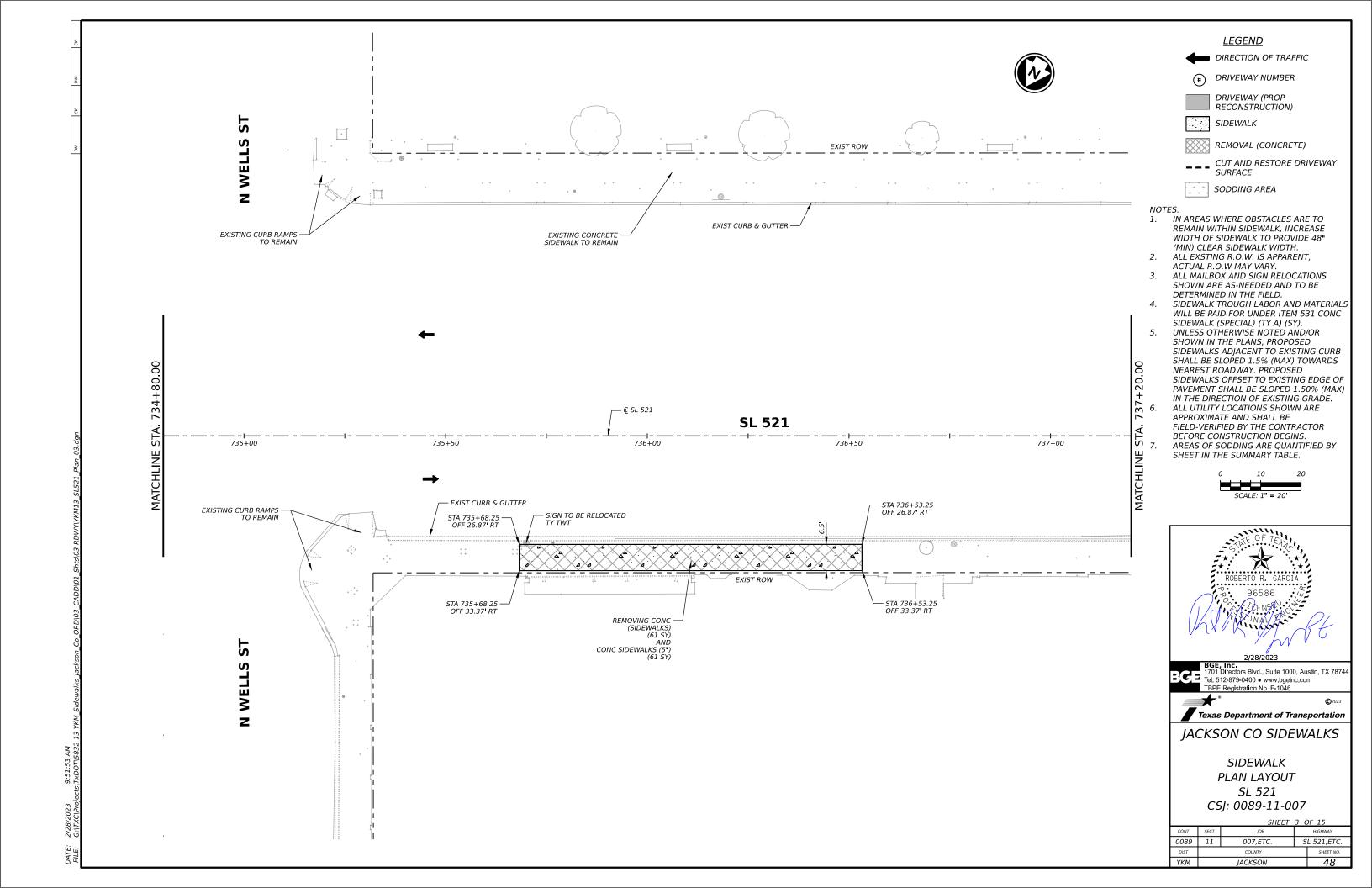
TEMPORARY RUMBLE STRIPS

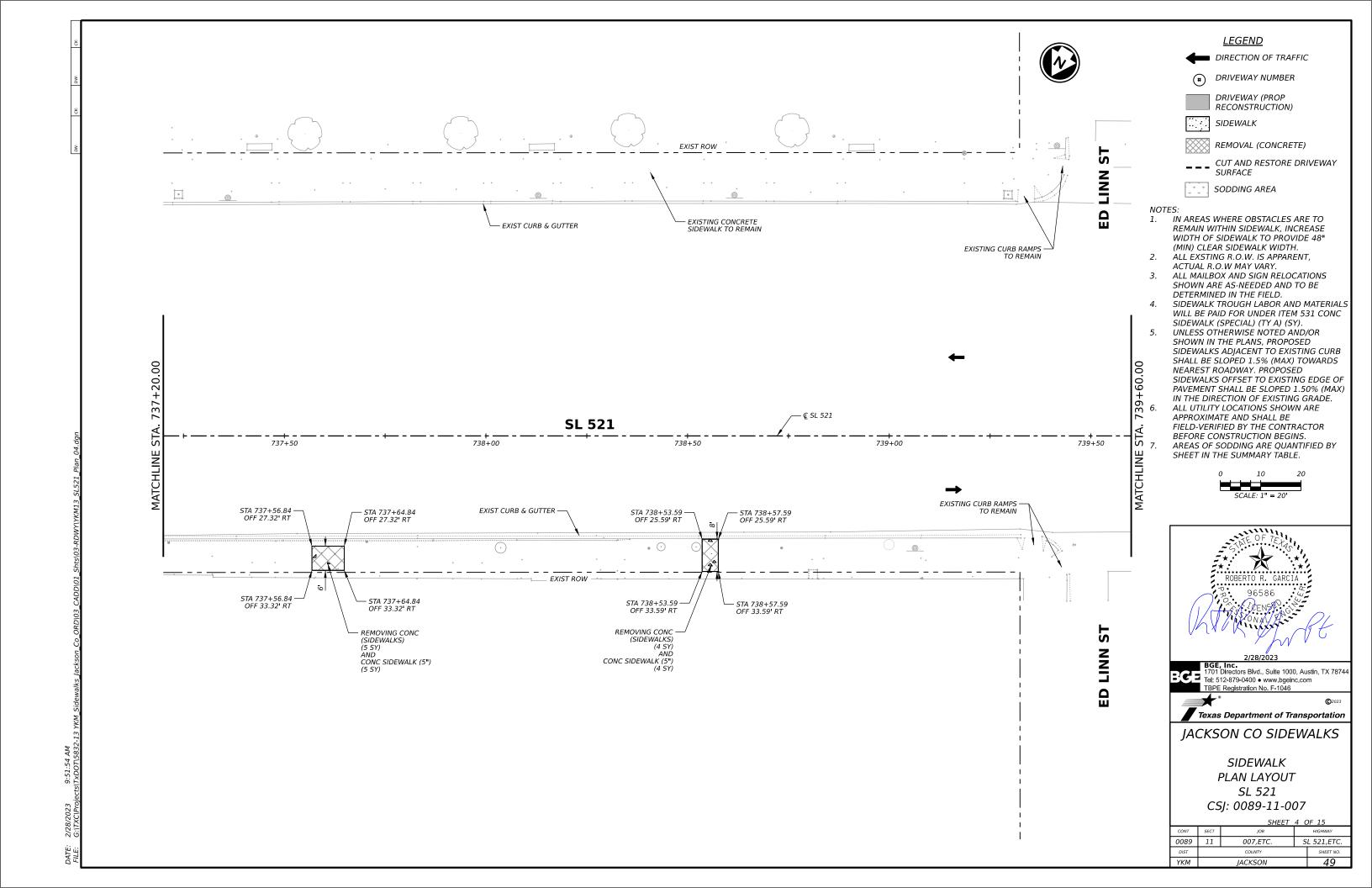
WZ(RS)-22

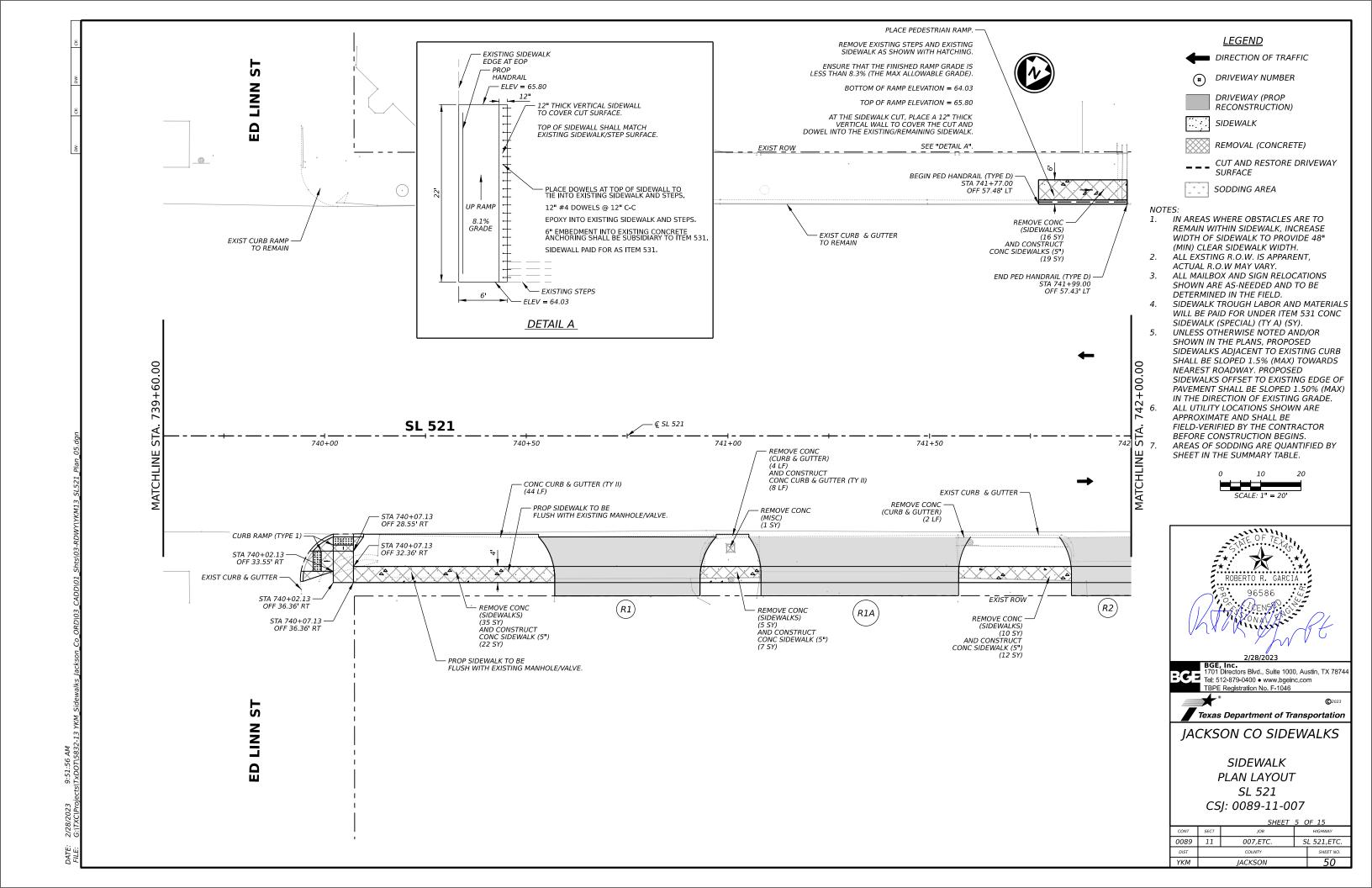
E: wzrs22.dgn	DN: Tx	DOT	ck: TxDOT	D₩≎	TxDOT	ck: TxDOT
TxDOT November 2012	CONT	SECT	JOB		н10	GHWAY
REVISIONS	0089	11	007,ETC. SL		SL 52	1,ETC.
-14 1-22 -16	DIST	COUNTY			SHEET NO.	
-16	YKM	JACKSON				45

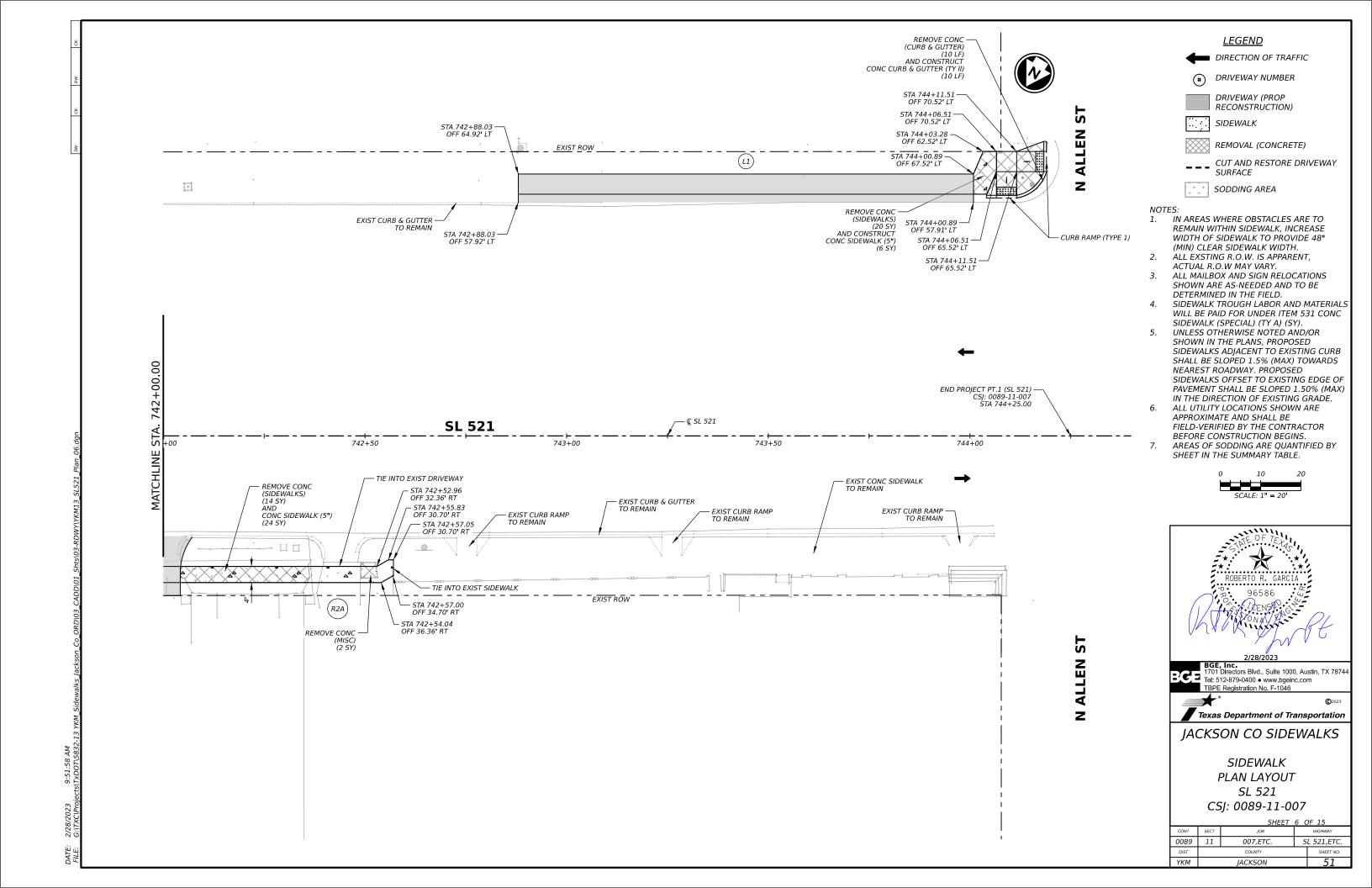


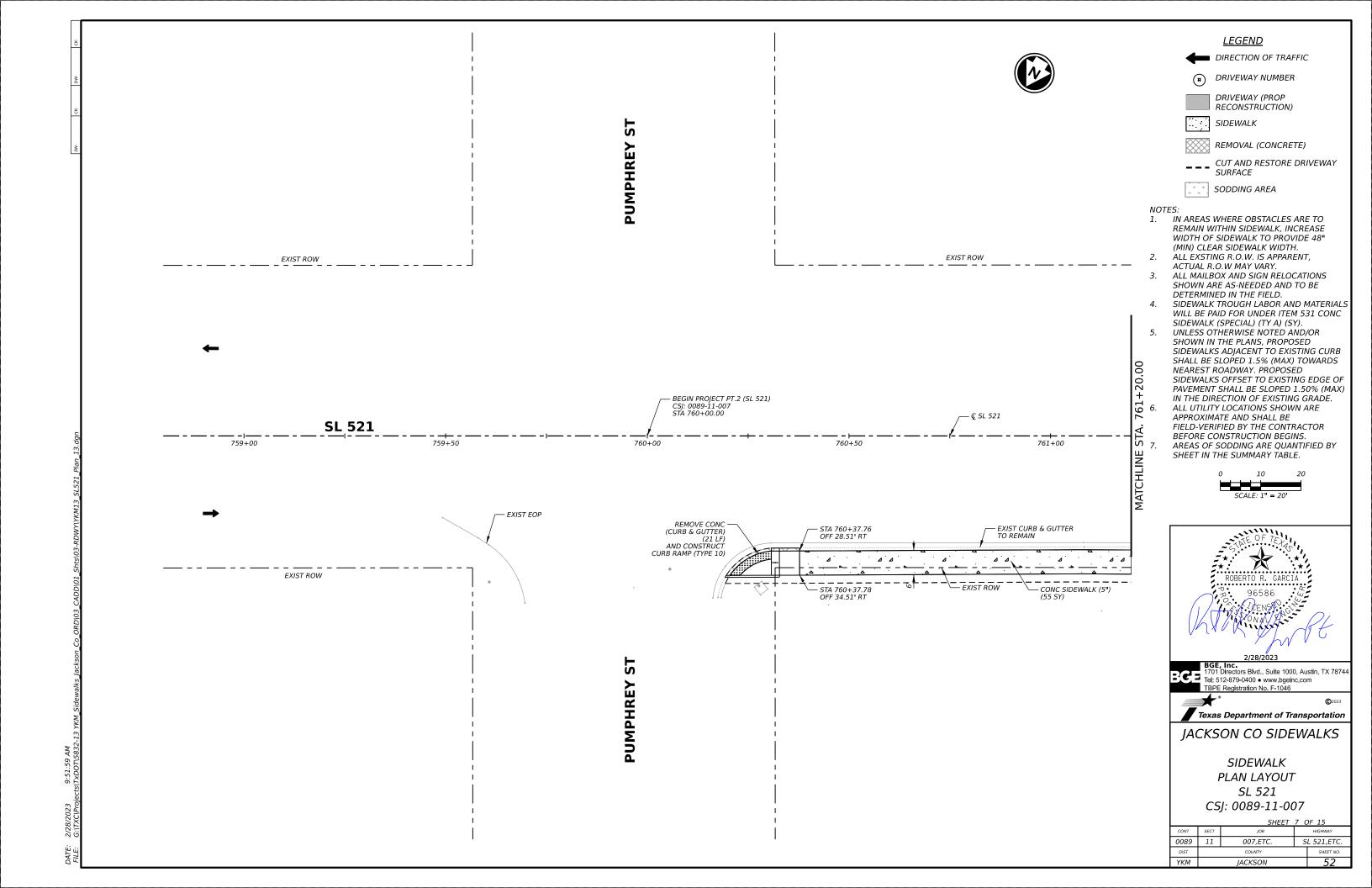


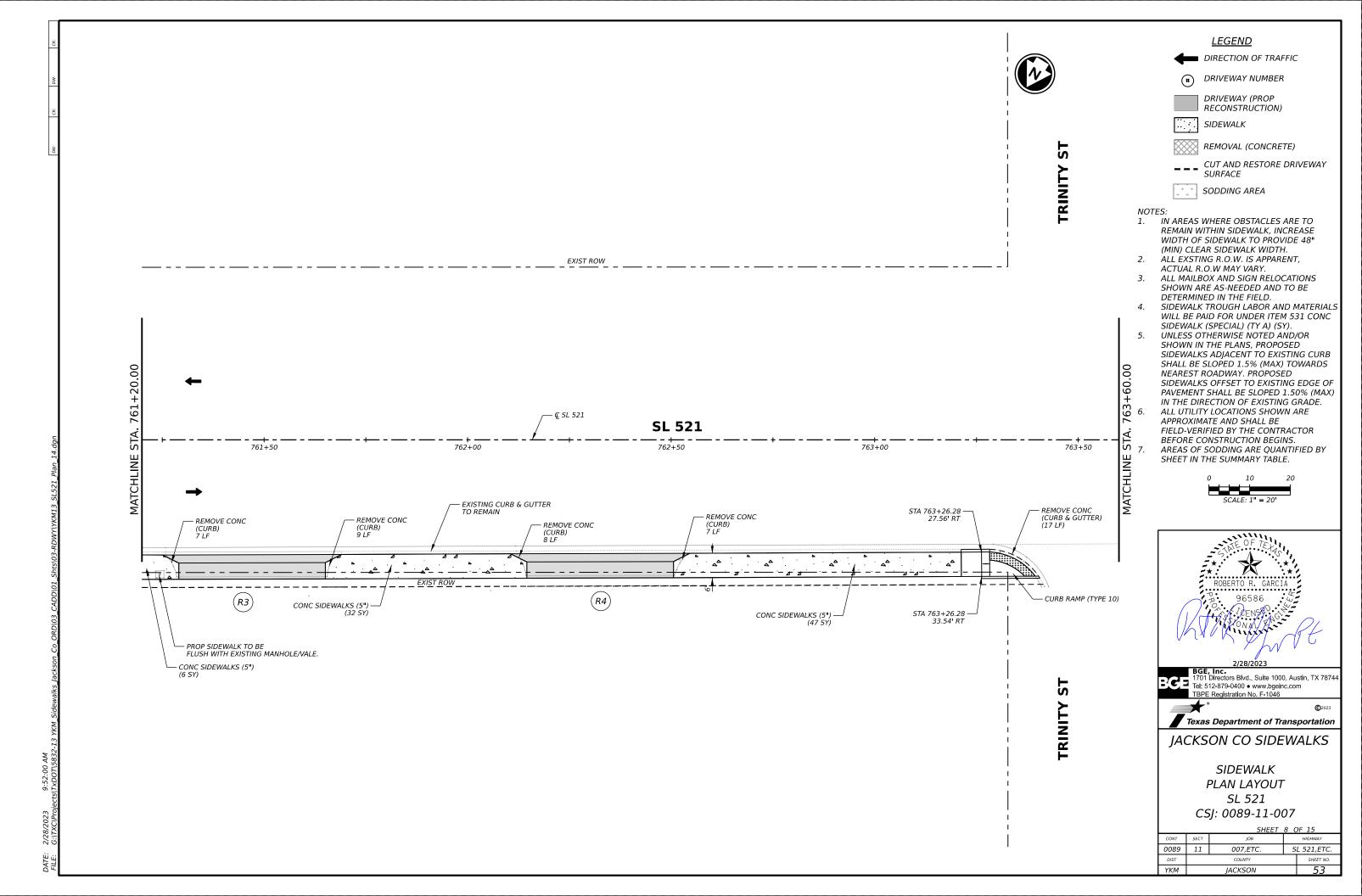


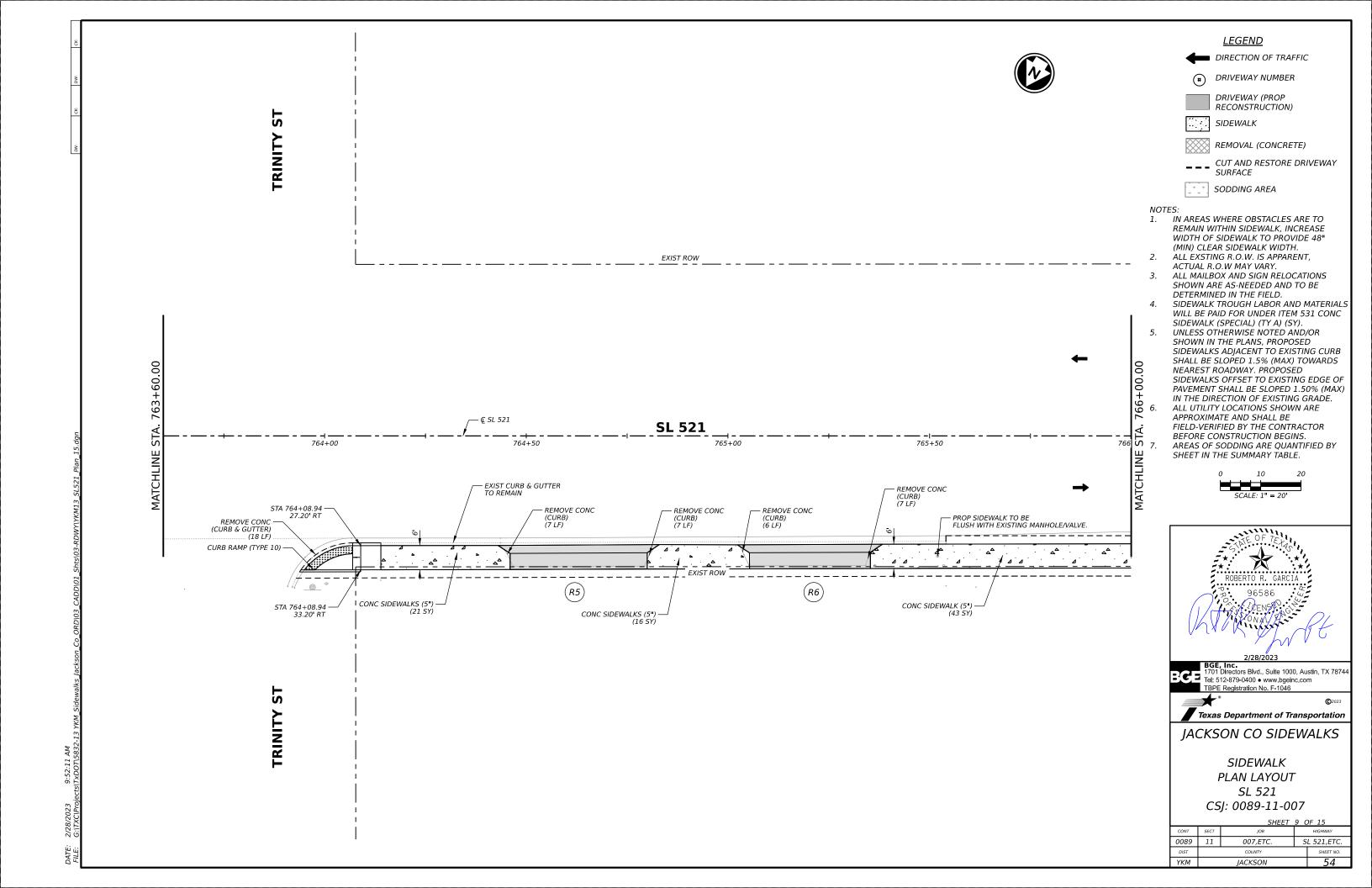


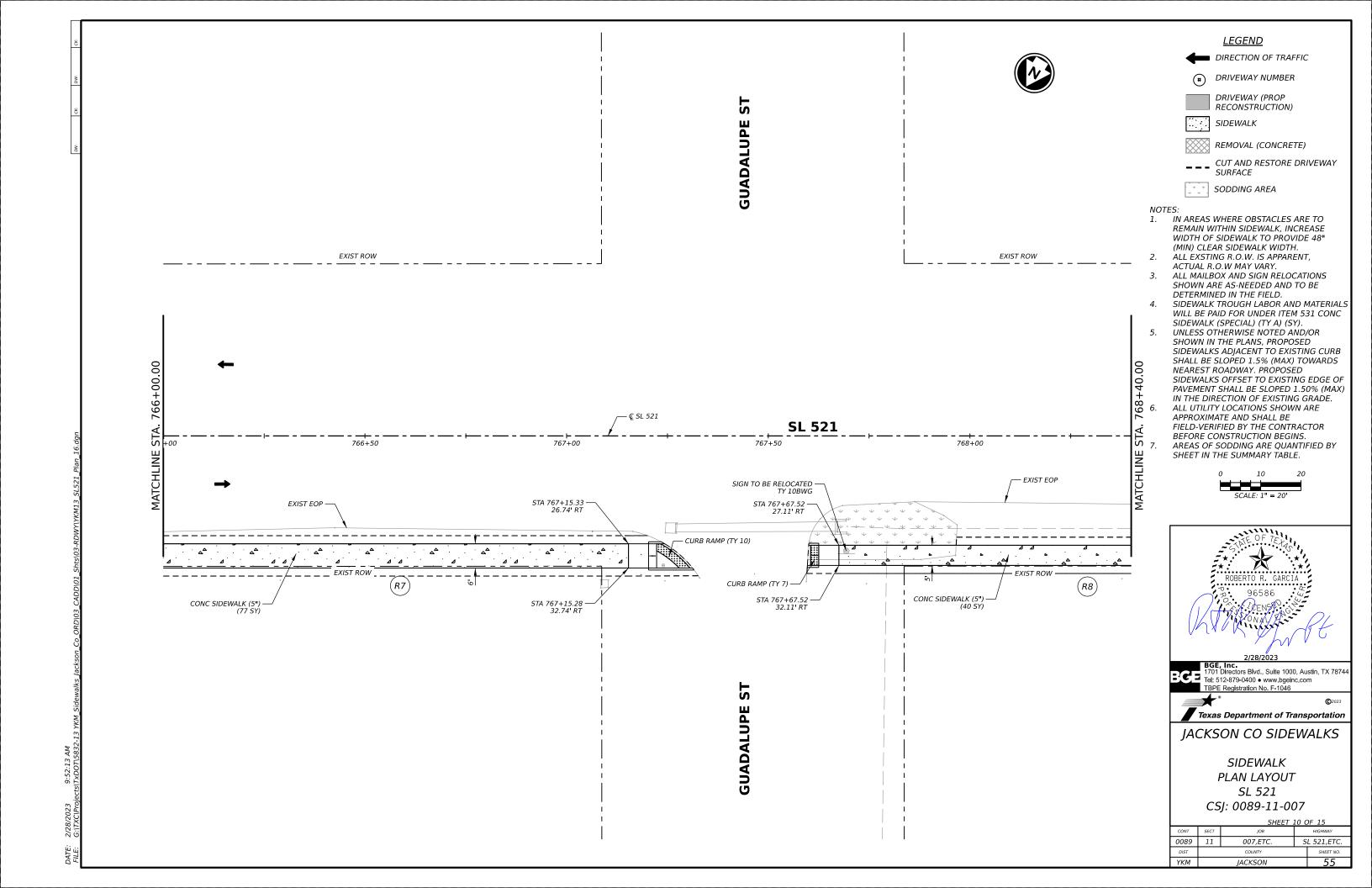








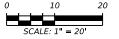




<u>LEGEND</u>

DIRECTION OF TRAFFIC

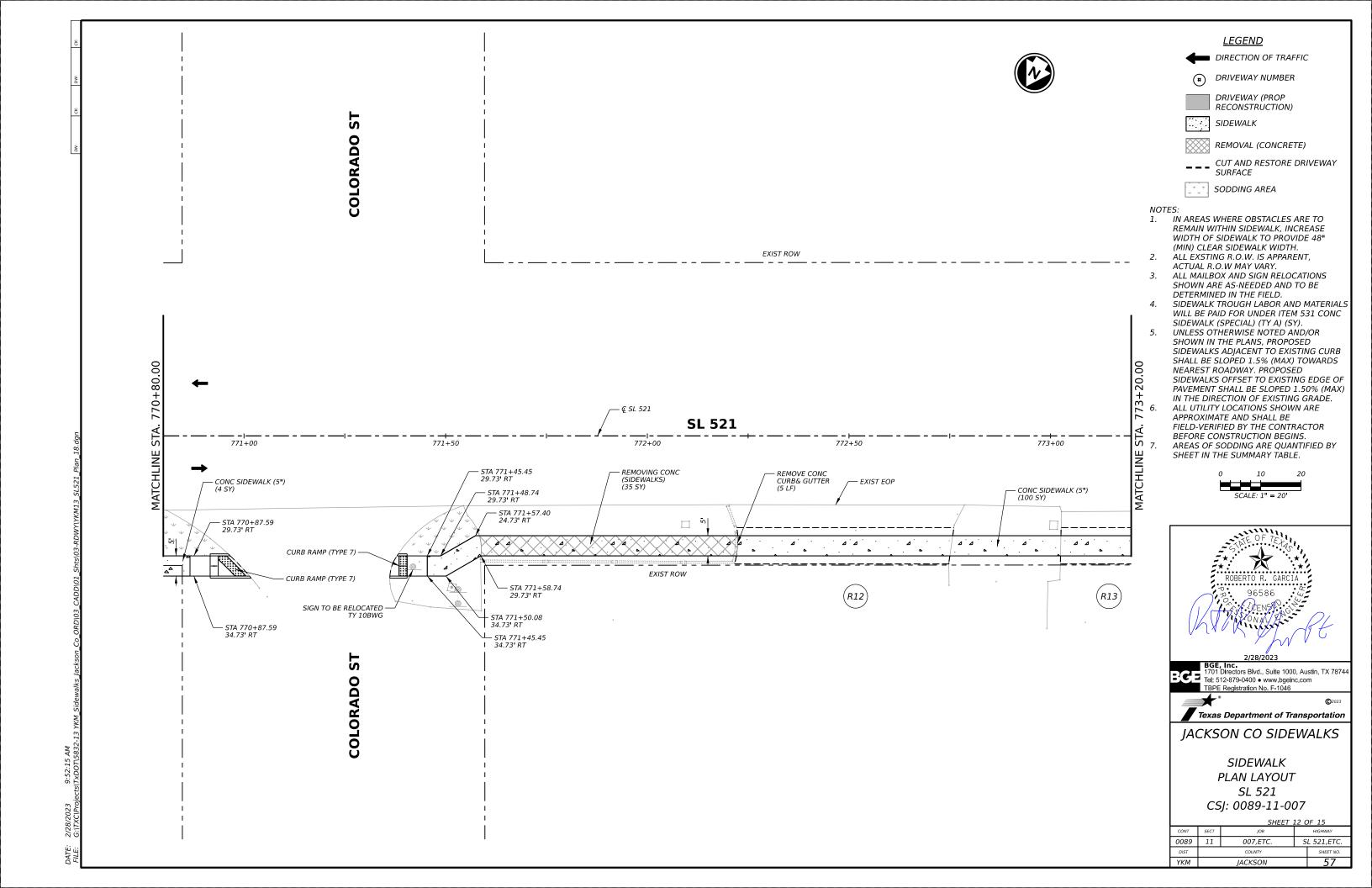
- REMAIN WITHIN SIDEWALK, INCREASE WIDTH OF SIDEWALK TO PROVIDE 48"
- ALL EXSTING R.O.W. IS APPARENT,
- SHOWN ARE AS-NEEDED AND TO BE
- WILL BE PAID FOR UNDER ITEM 531 CONC
- UNLESS OTHERWISE NOTED AND/OR SHOWN IN THE PLANS, PROPOSED SIDEWALKS ADJACENT TO EXISTING CURB SHALL BE SLOPED 1.5% (MAX) TOWARDS SIDEWALKS OFFSET TO EXISTING EDGE OF PAVEMENT SHALL BE SLOPED 1.50% (MAX) IN THE DIRECTION OF EXISTING GRADE. ALL UTILITY LOCATIONS SHOWN ARE
- AREAS OF SODDING ARE QUANTIFIED BY







SHEET 11 OF 15					
CONT	SECT	JOB	HIGHWAY		
0089	11	007,ETC.	S	L 521,ETC.	
DIST	COUNTY			SHEET NO.	
YKM	JACKSON			56	
		•		· ·	



<u>LEGEND</u>

DIRECTION OF TRAFFIC

DRIVEWAY NUMBER

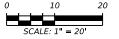
DRIVEWAY (PROP RECONSTRUCTION)

SIDEWALK

REMOVAL (CONCRETE)

- - - CUT AND RESTORE DRIVEWAY SURFACE

- IN AREAS WHERE OBSTACLES ARE TO REMAIN WITHIN SIDEWALK, INCREASE WIDTH OF SIDEWALK TO PROVIDE 48" (MIN) CLEAR SIDEWALK WIDTH.
- ALL EXSTING R.O.W. IS APPARENT, ACTUAL R.O.W MAY VARY.
- ALL MAILBOX AND SIGN RELOCATIONS SHOWN ARE AS-NEEDED AND TO BE DETERMINED IN THE FIELD.
- SIDEWALK TROUGH LABOR AND MATERIALS WILL BE PAID FOR UNDER ITEM 531 CONC SIDEWALK (SPECIAL) (TY A) (SY).
- UNLESS OTHERWISE NOTED AND/OR SHOWN IN THE PLANS, PROPOSED SIDEWALKS ADJACENT TO EXISTING CURB SHALL BE SLOPED 1.5% (MAX) TOWARDS NEAREST ROADWAY. PROPOSED SIDEWALKS OFFSET TO EXISTING EDGE OF PAVEMENT SHALL BE SLOPED 1.50% (MAX) IN THE DIRECTION OF EXISTING GRADE. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE
- BEFORE CONSTRUCTION BEGINS. AREAS OF SODDING ARE QUANTIFIED BY SHEET IN THE SUMMARY TABLE.





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SIDEWALK

PLAN LAYOUT SL 521 CSJ: 0089-11-007

	SHEET 13 OF 15				
CONT	SECT	JOB	HIGHWAY		
0089	11	007,ETC.	SL 521,ETC.		
DIST		COUNTY		SHEET NO.	
YKM	JACKSON			58	

DIRECTION OF TRAFFIC

DRIVEWAY (PROP RECONSTRUCTION)

REMOVAL (CONCRETE)

- - - CUT AND RESTORE DRIVEWAY SURFACE

- IN AREAS WHERE OBSTACLES ARE TO REMAIN WITHIN SIDEWALK, INCREASE WIDTH OF SIDEWALK TO PROVIDE 48" (MIN) CLEAR SIDEWALK WIDTH.
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- FIELD-VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION BEGINS. AREAS OF SODDING ARE QUANTIFIED BY



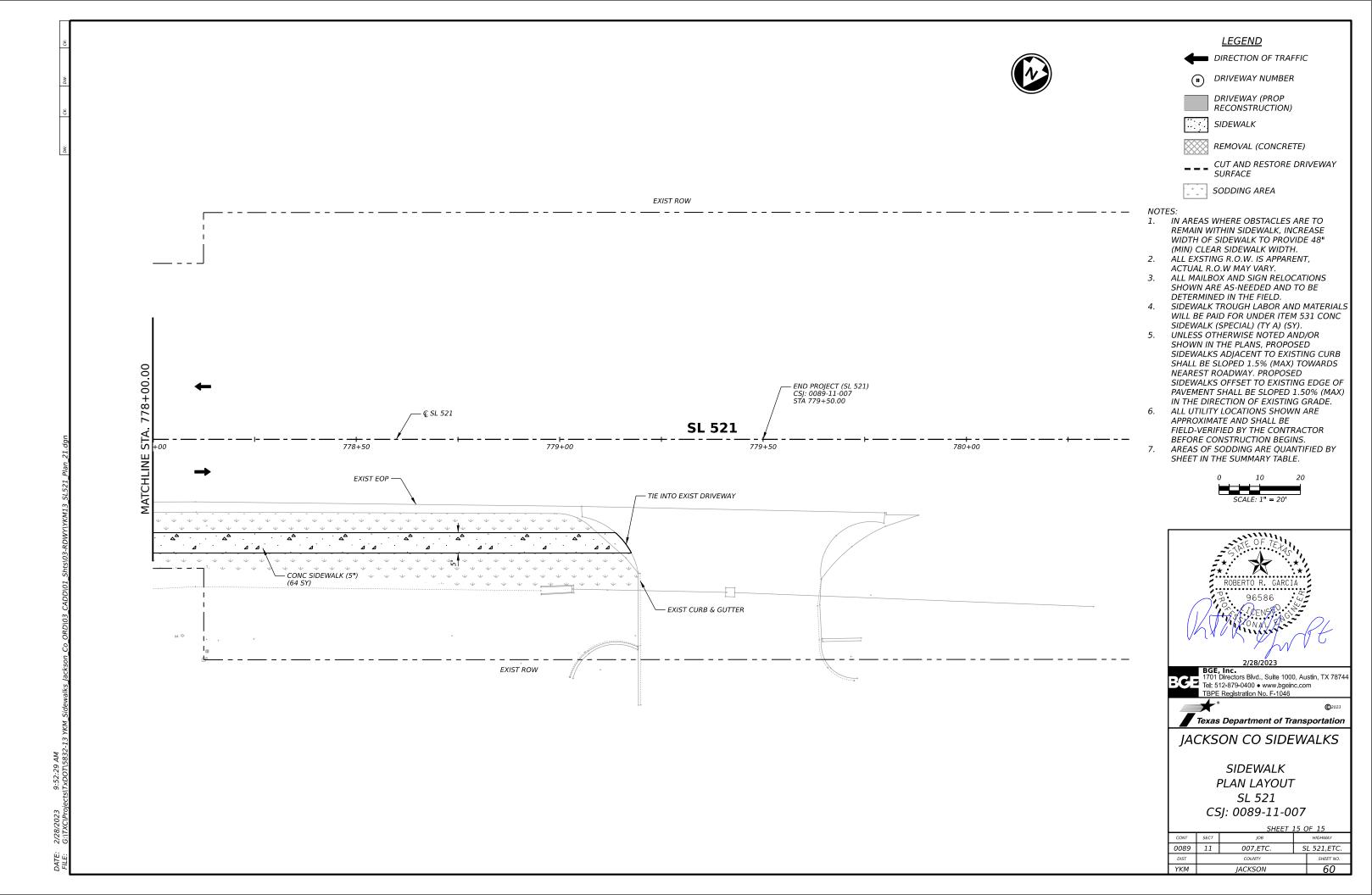


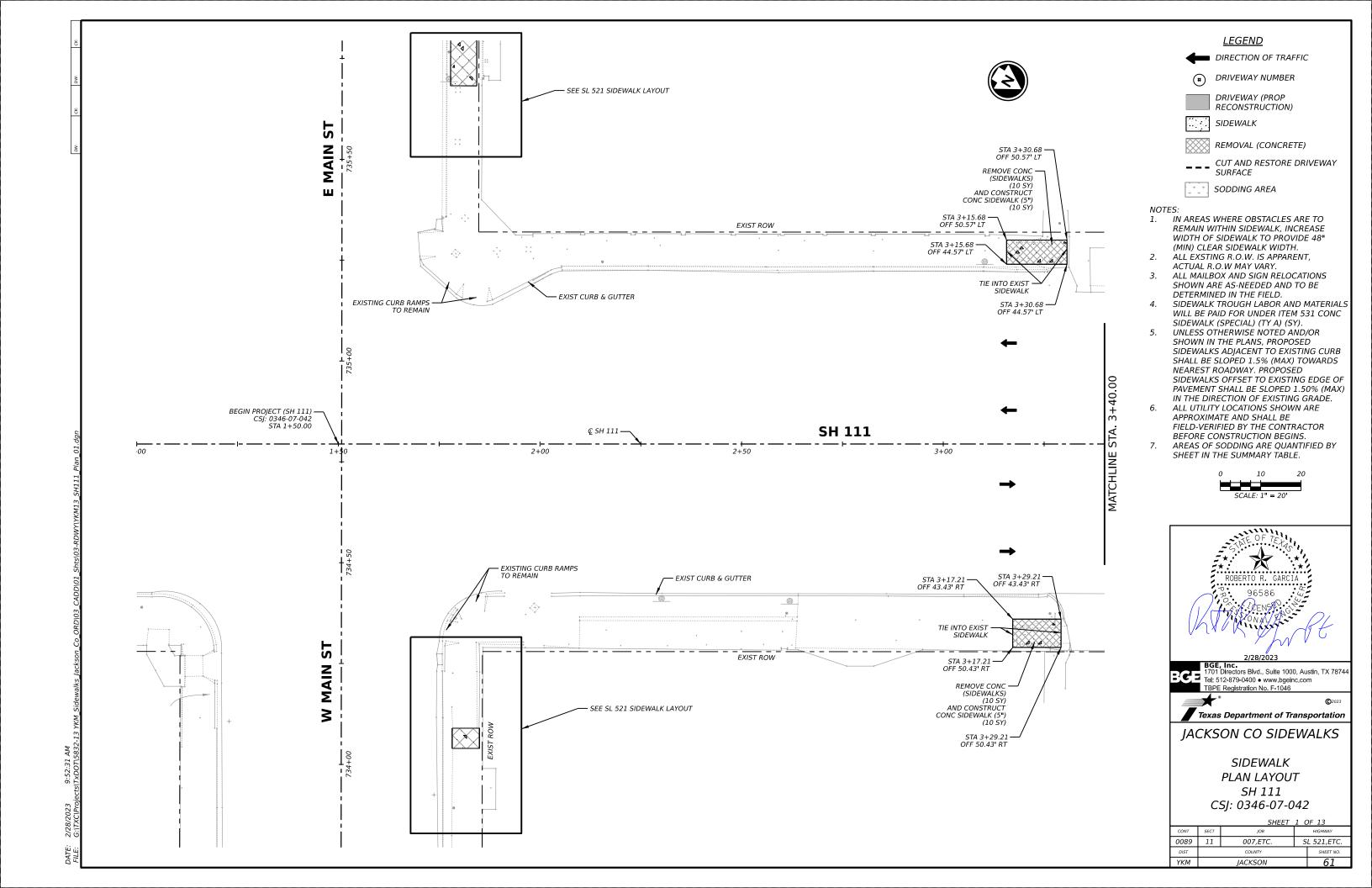
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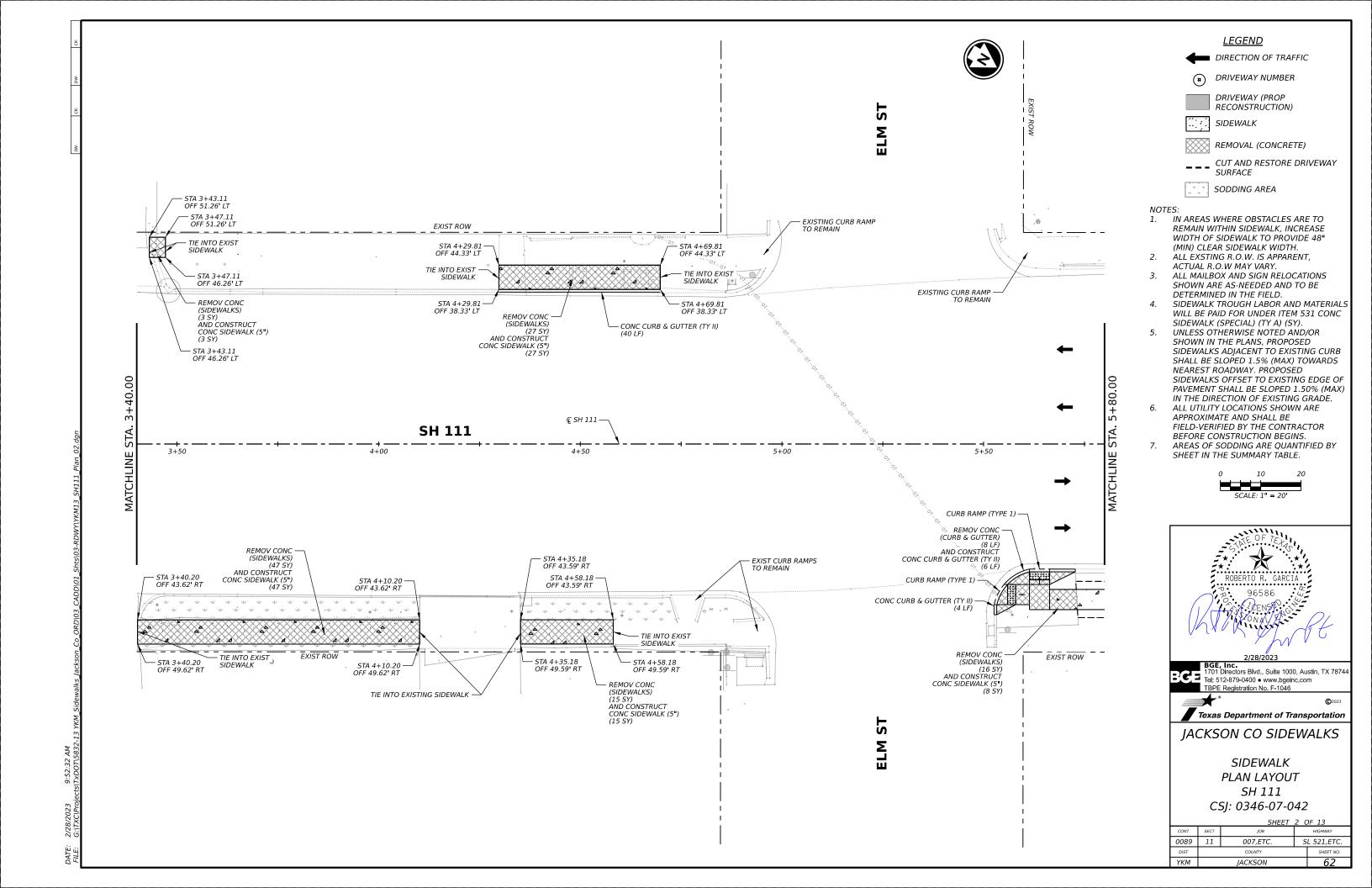


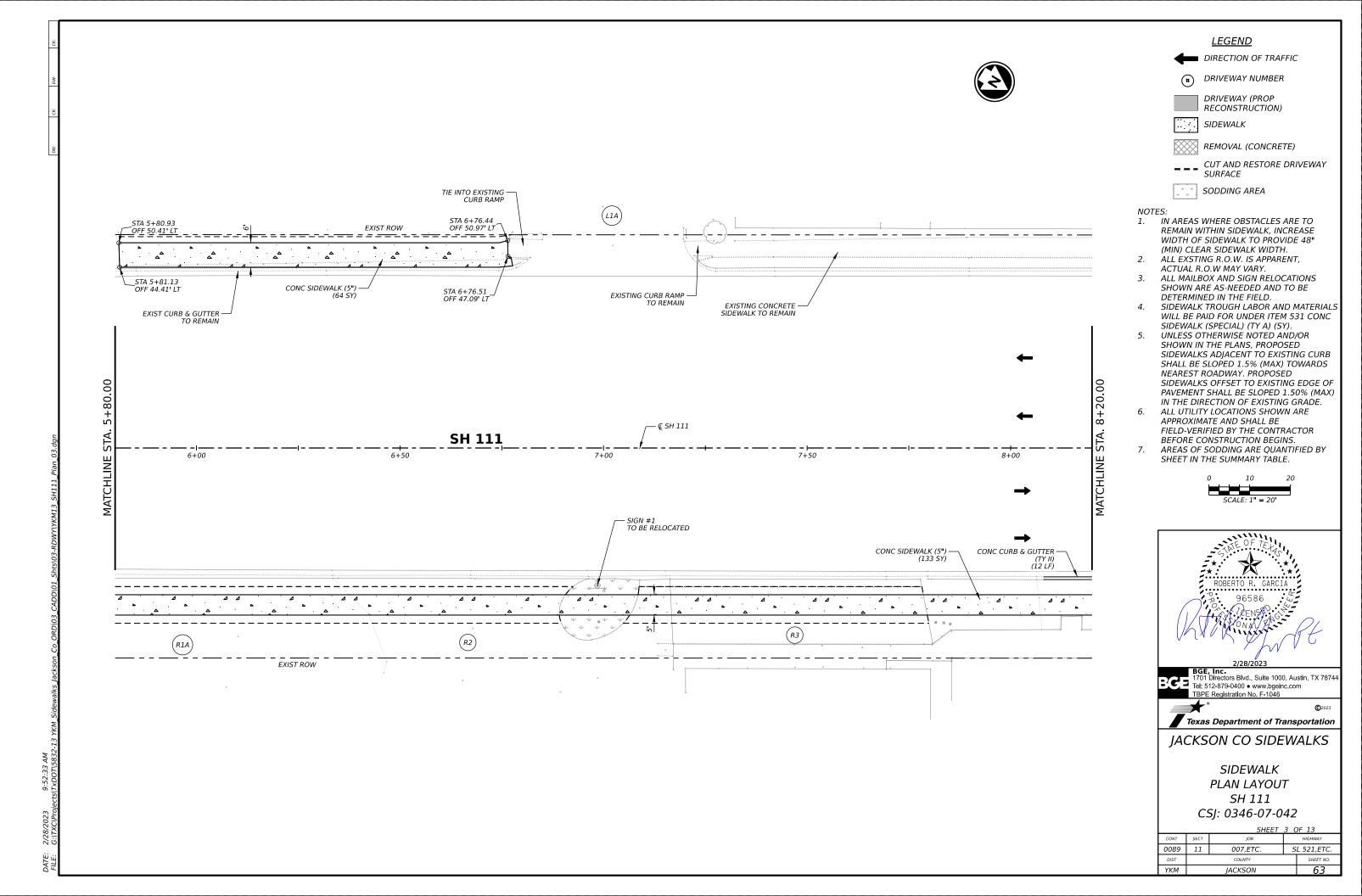
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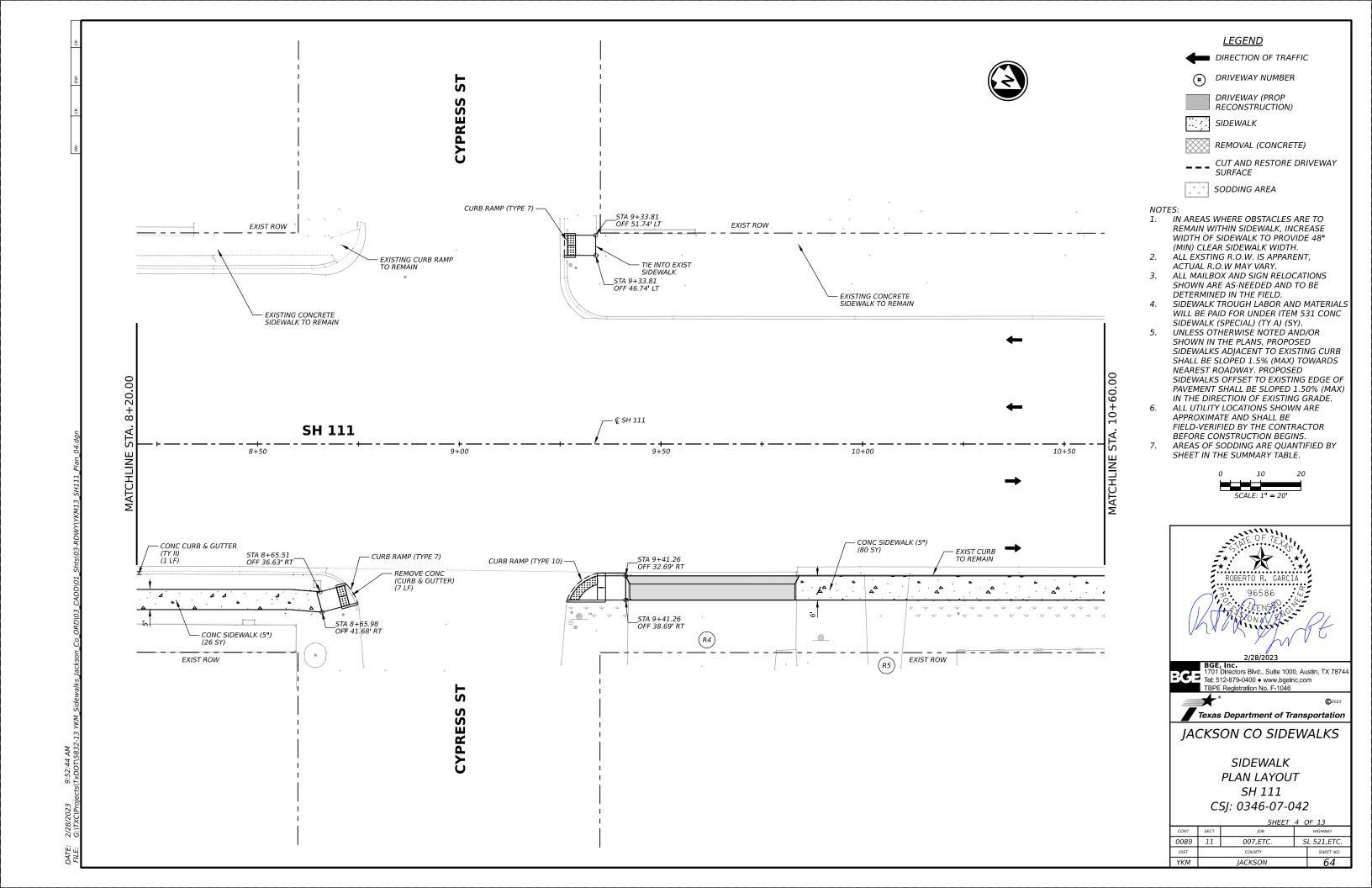
SHEET 14 OF 15					
CONT	SECT	JOB		HIGHWAY	
0089	11	007,ETC.	S	L 521,ETC.	
DIST		COUNTY		SHEET NO.	
YKM	JACKSON			59	

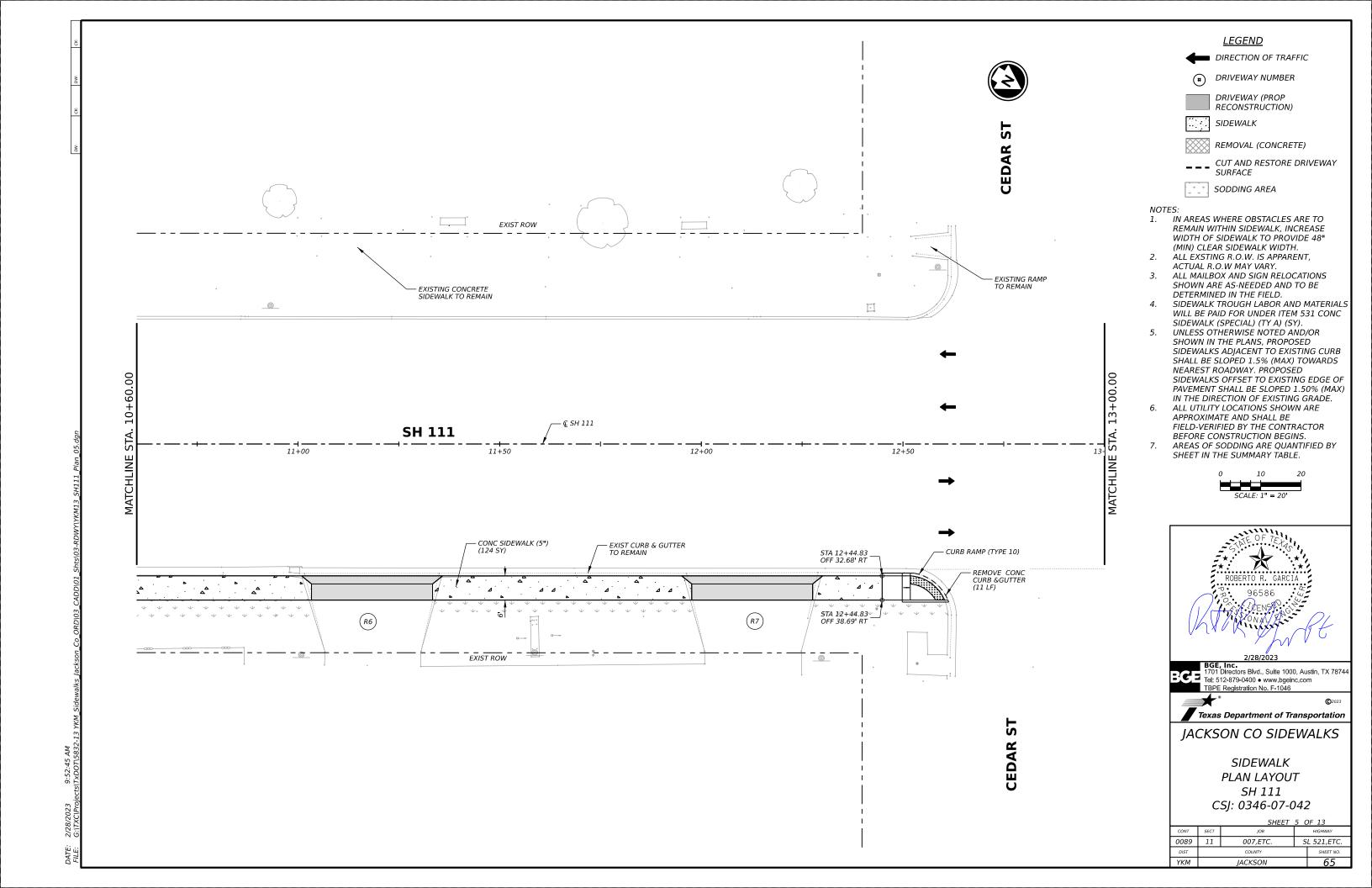


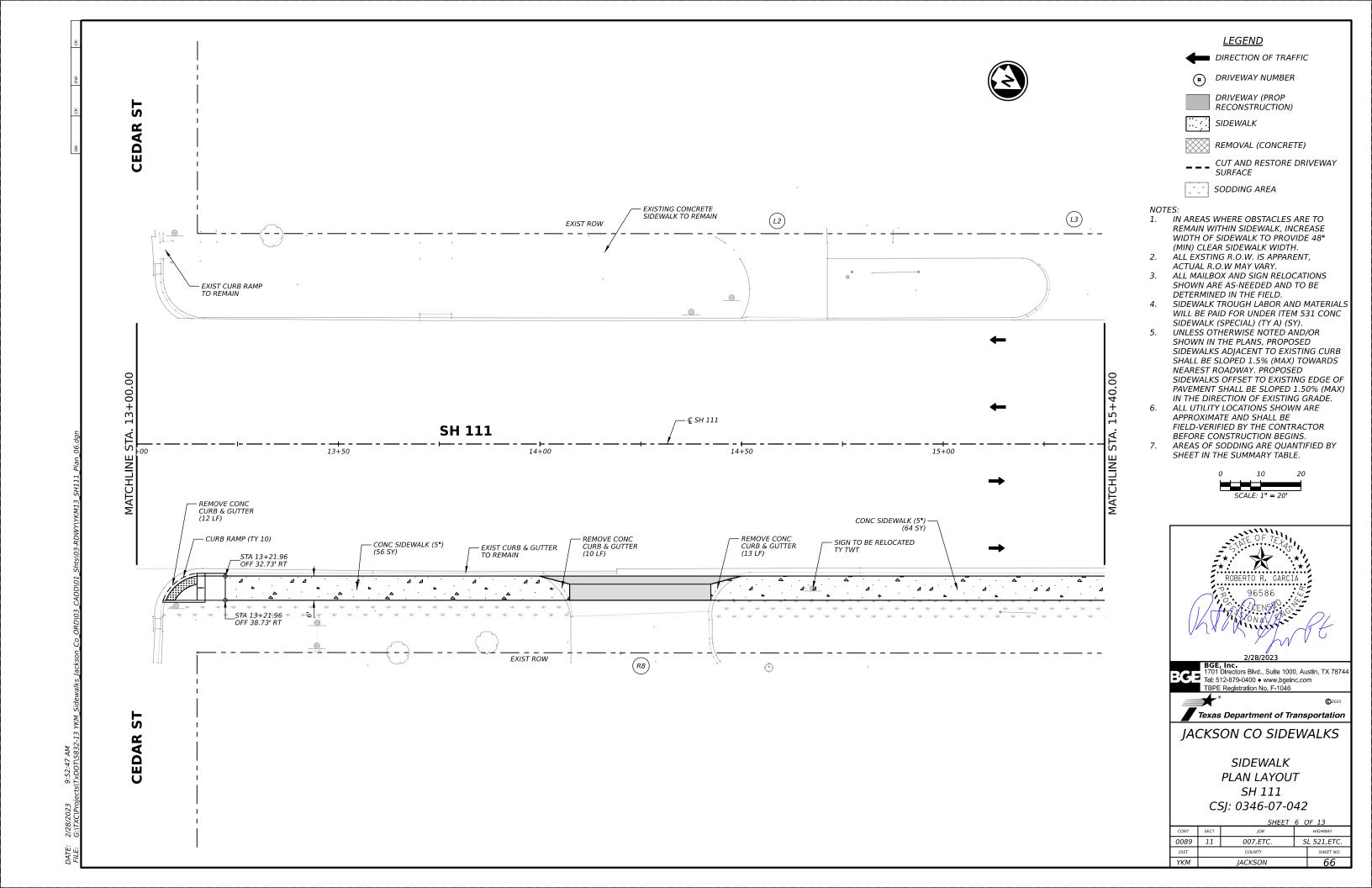


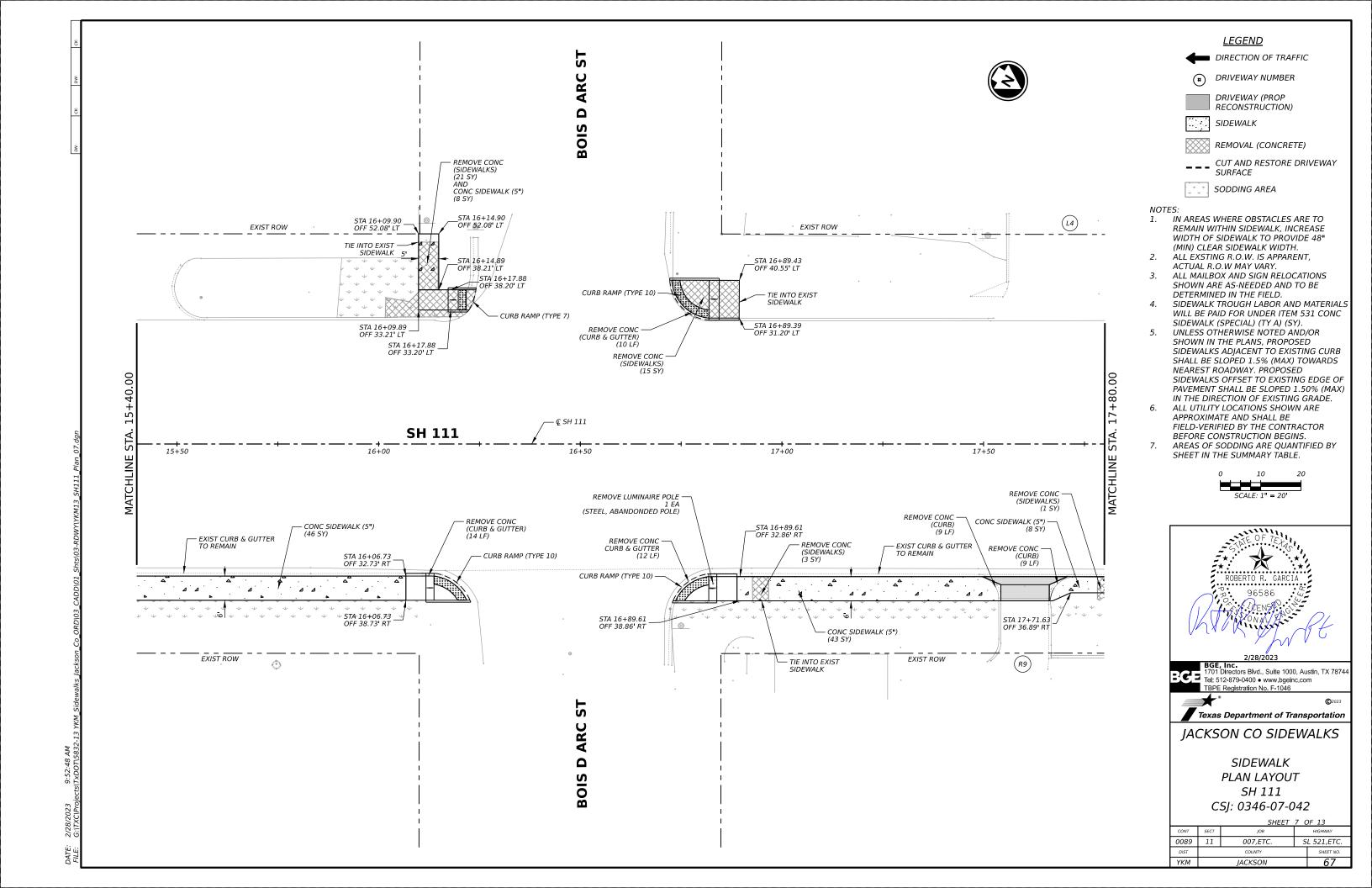


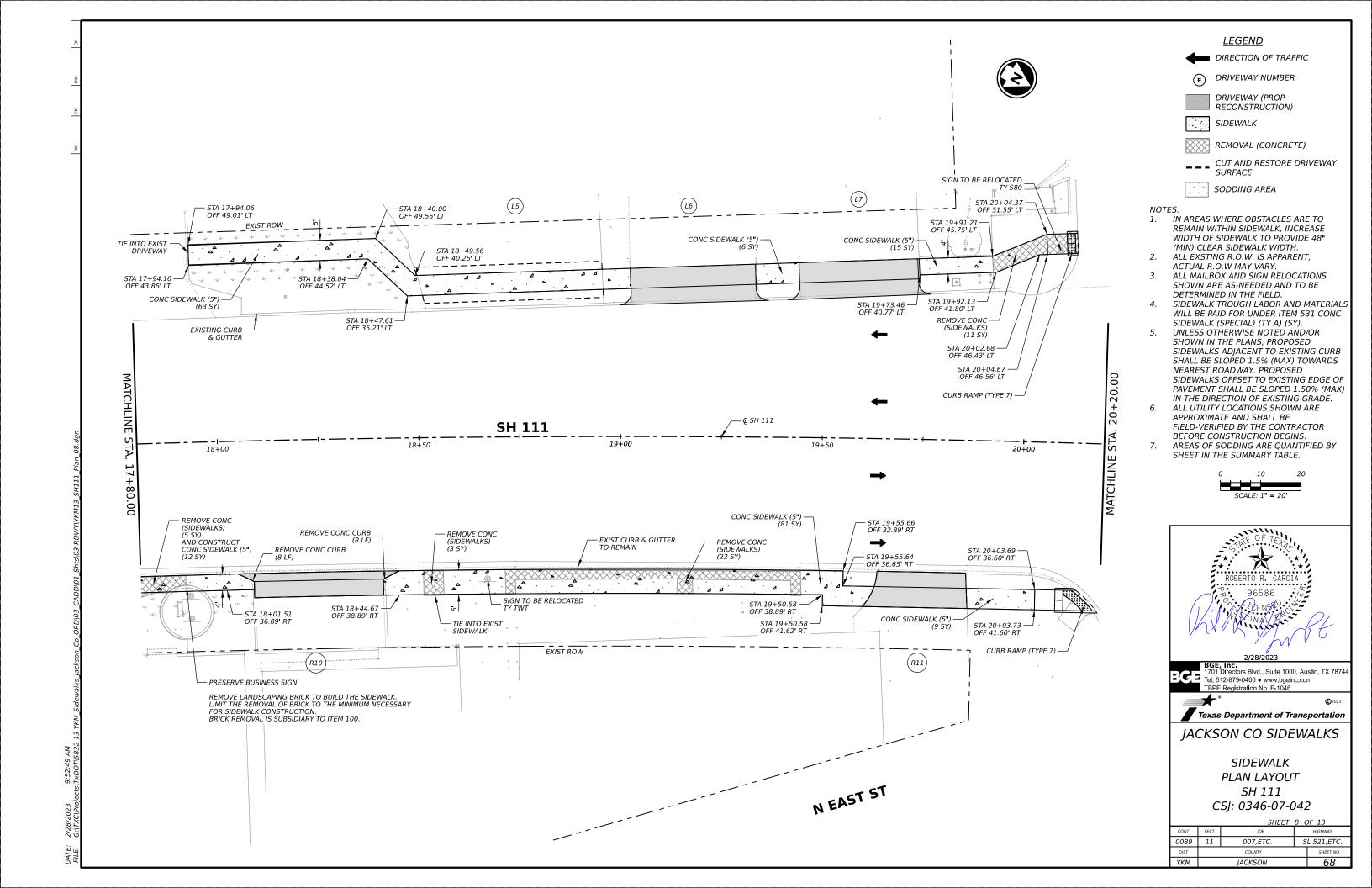


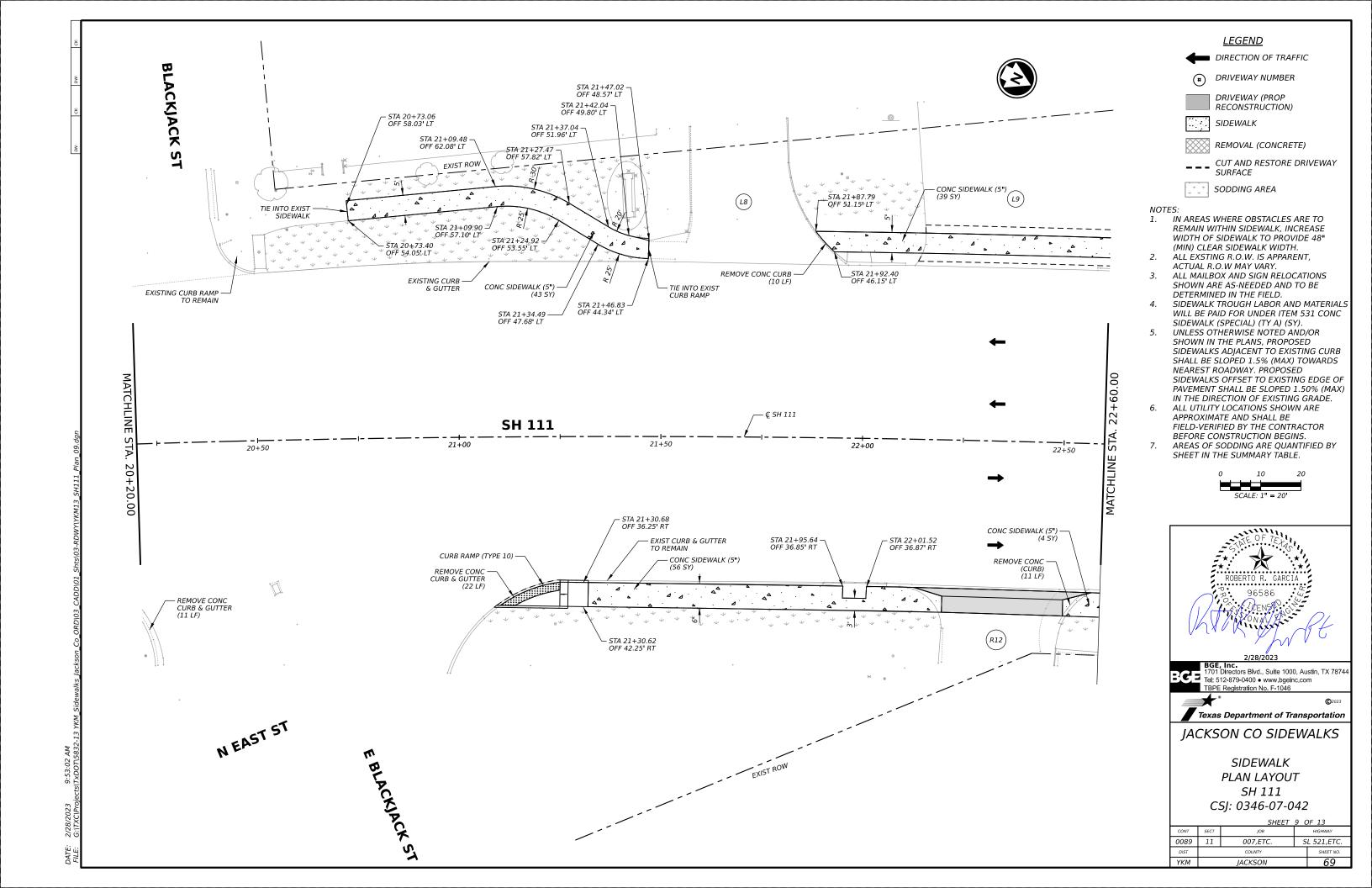


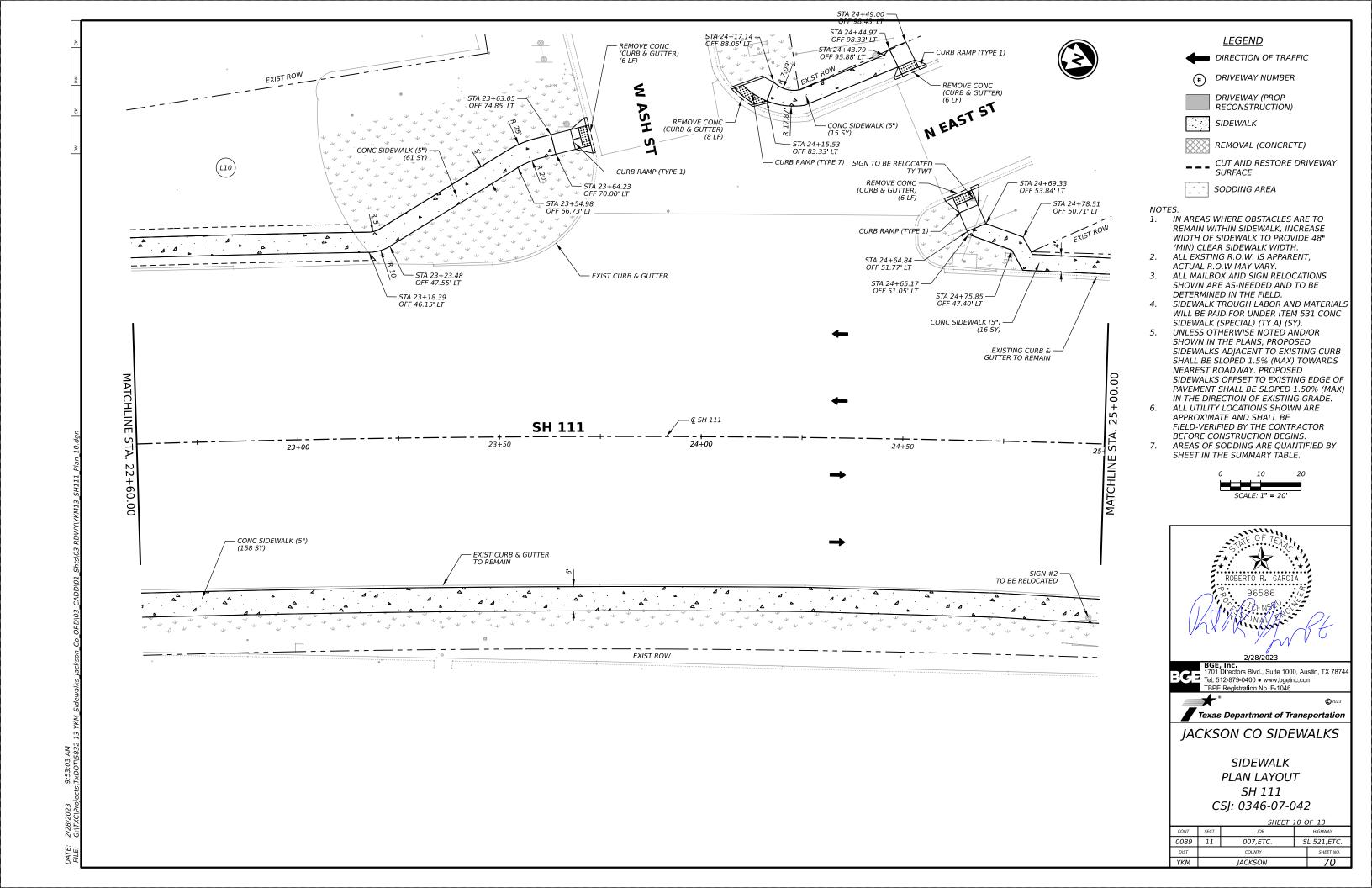


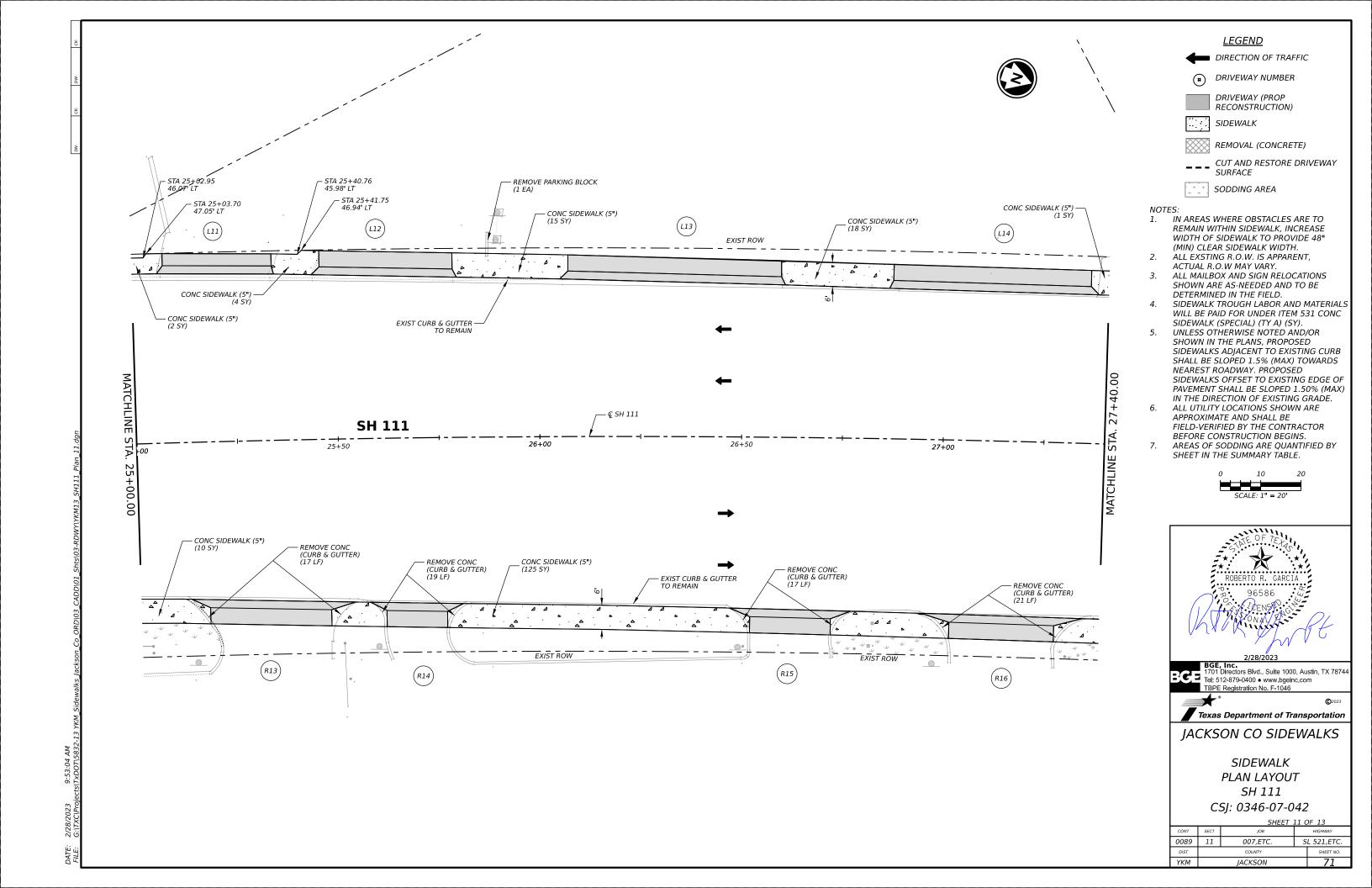


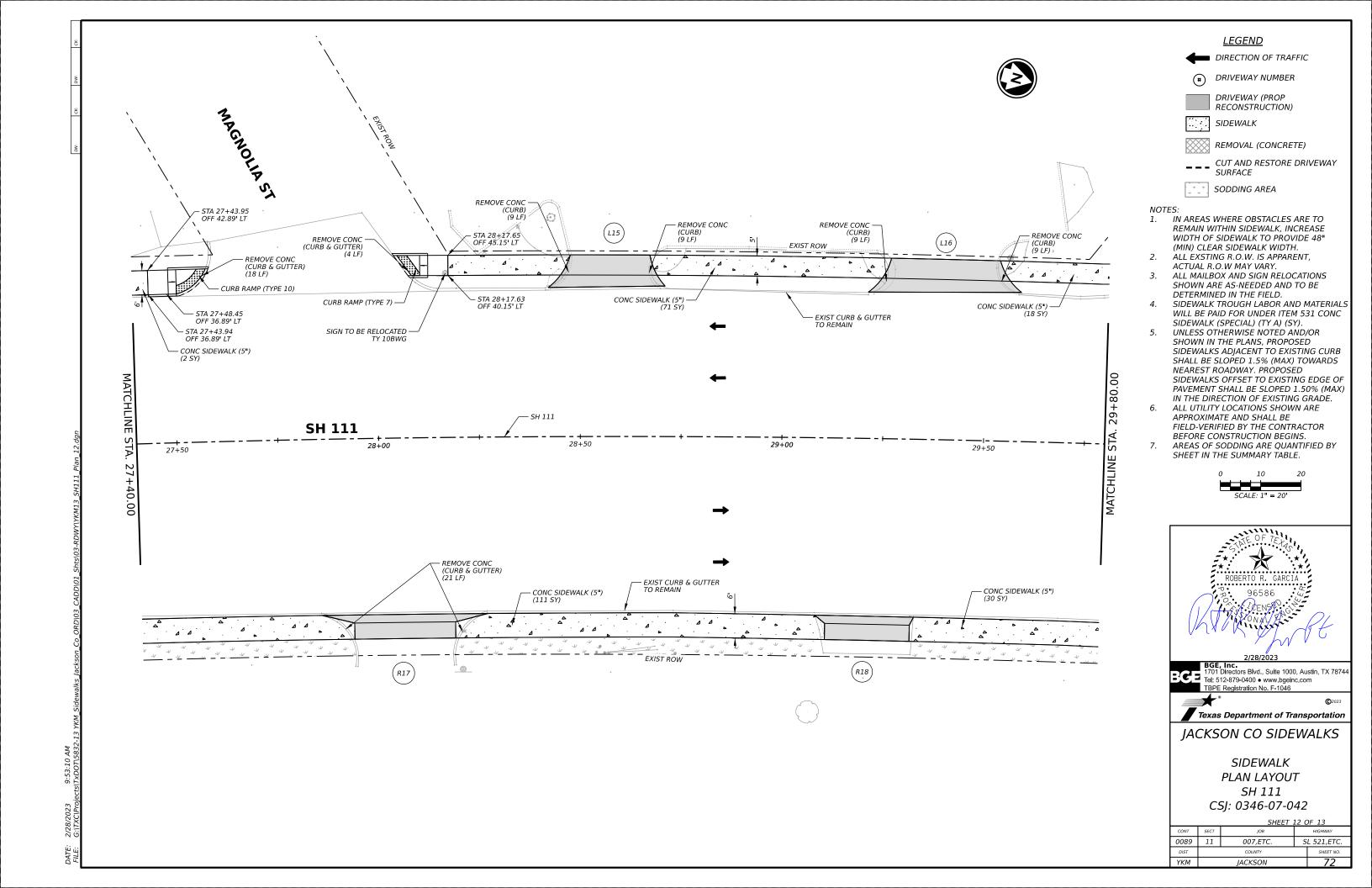


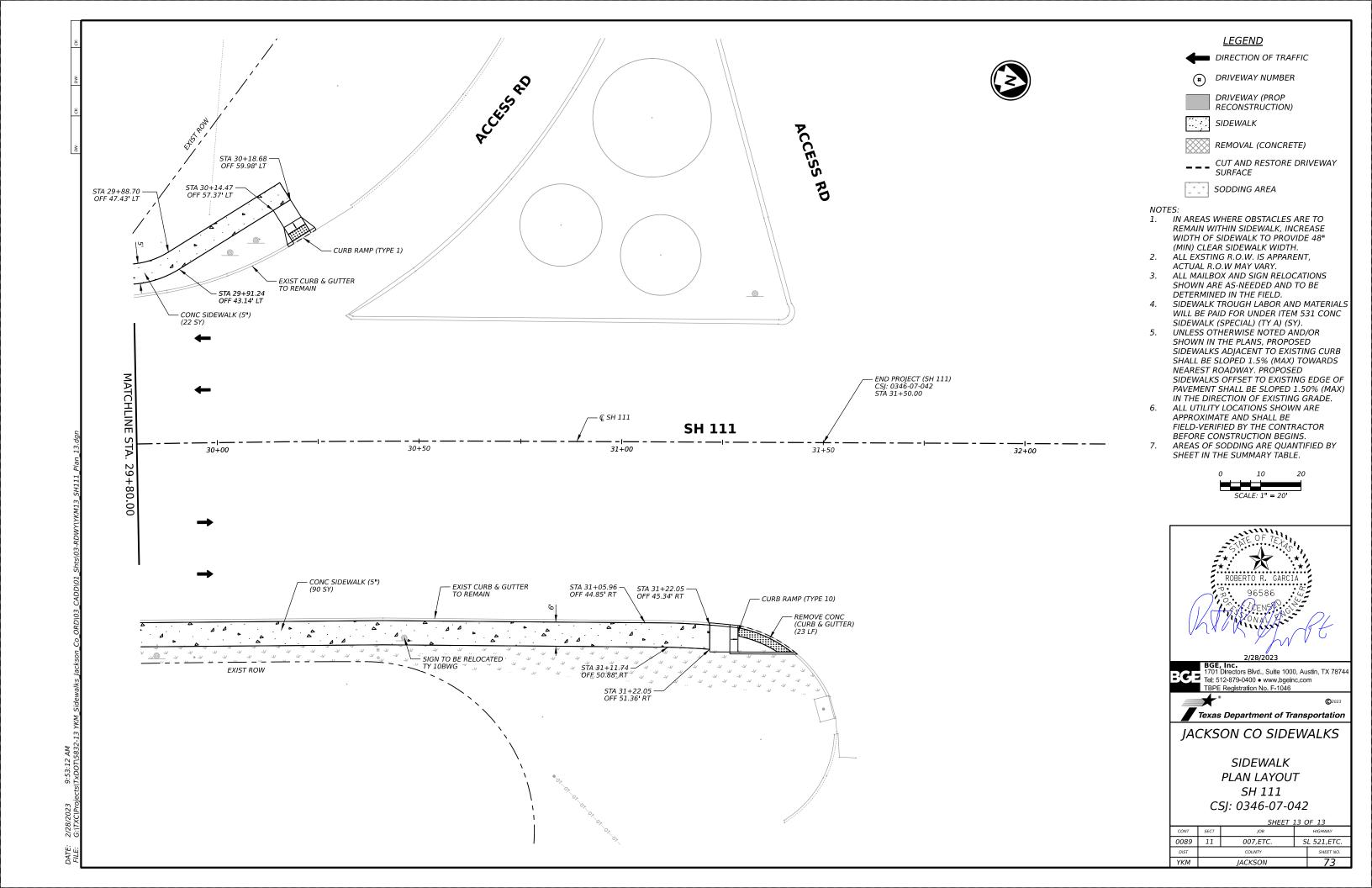


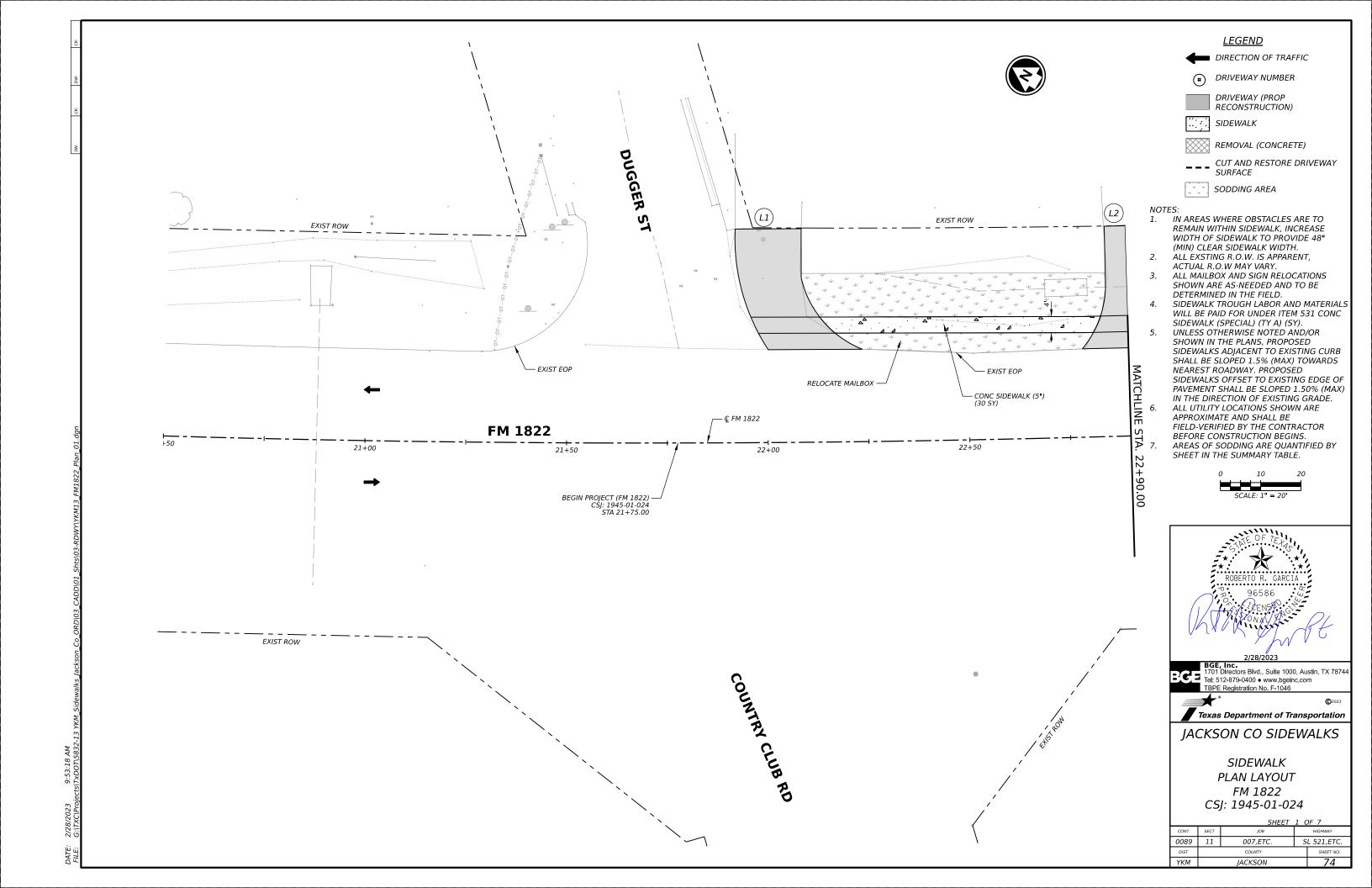


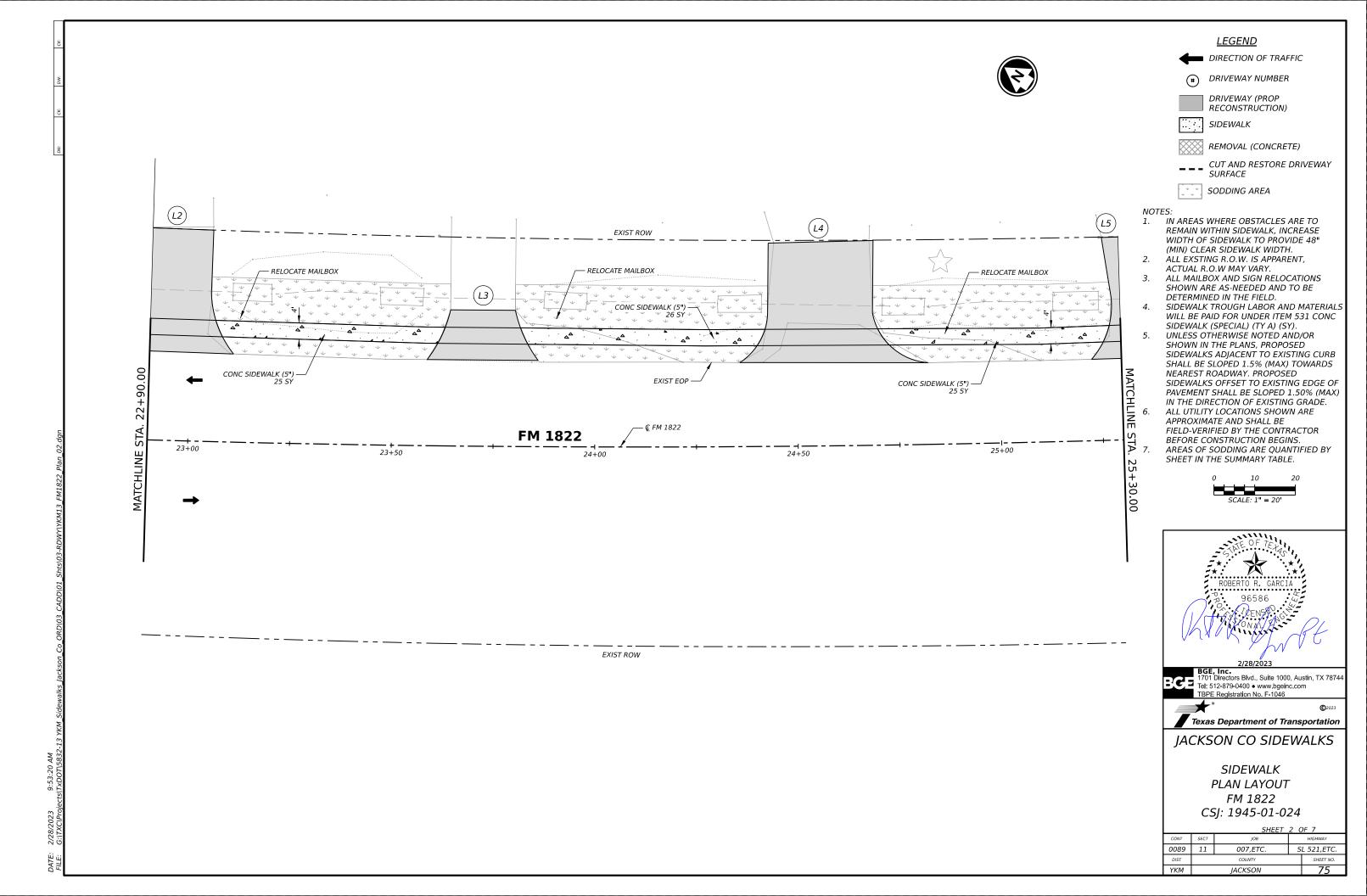


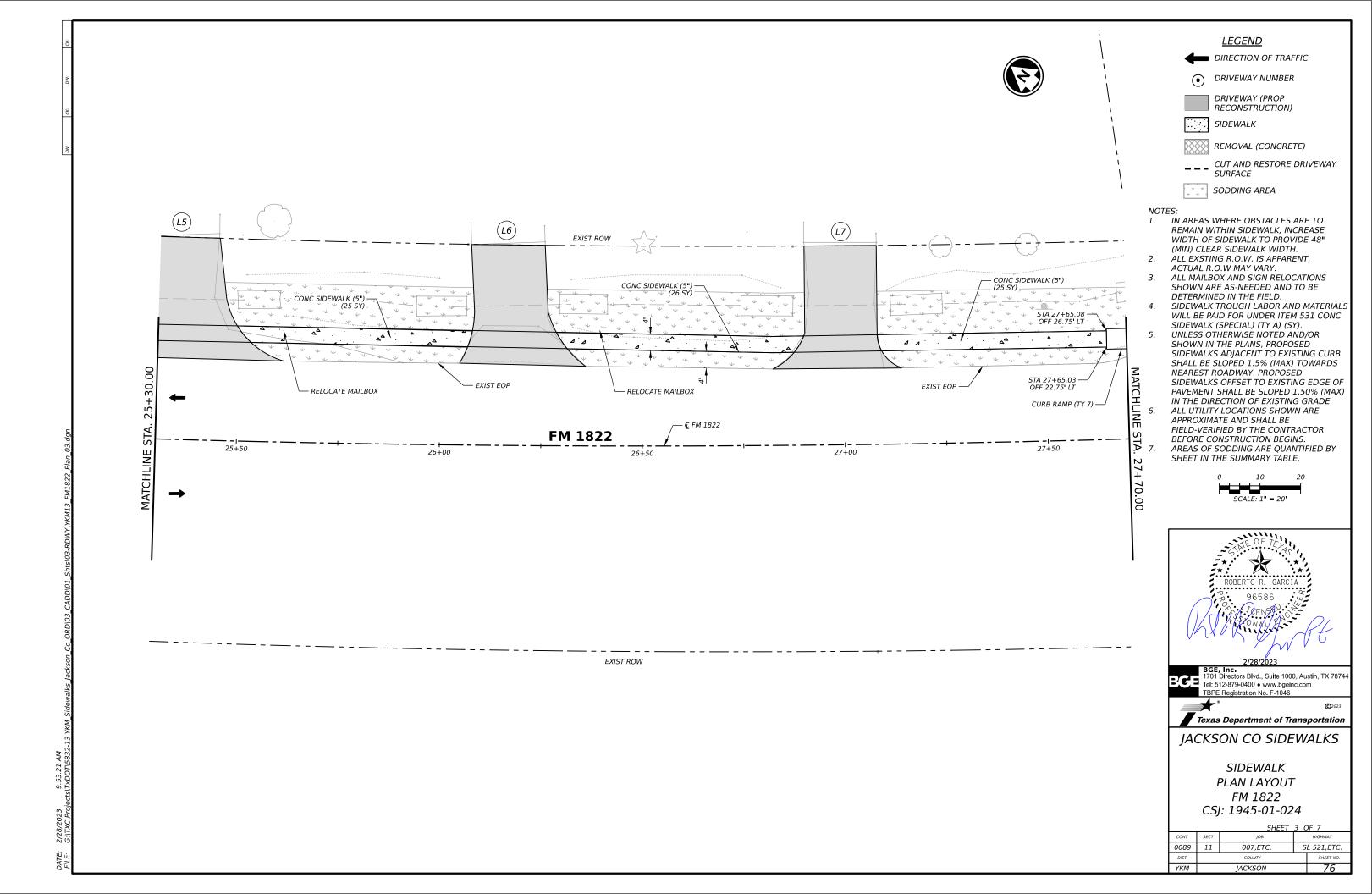


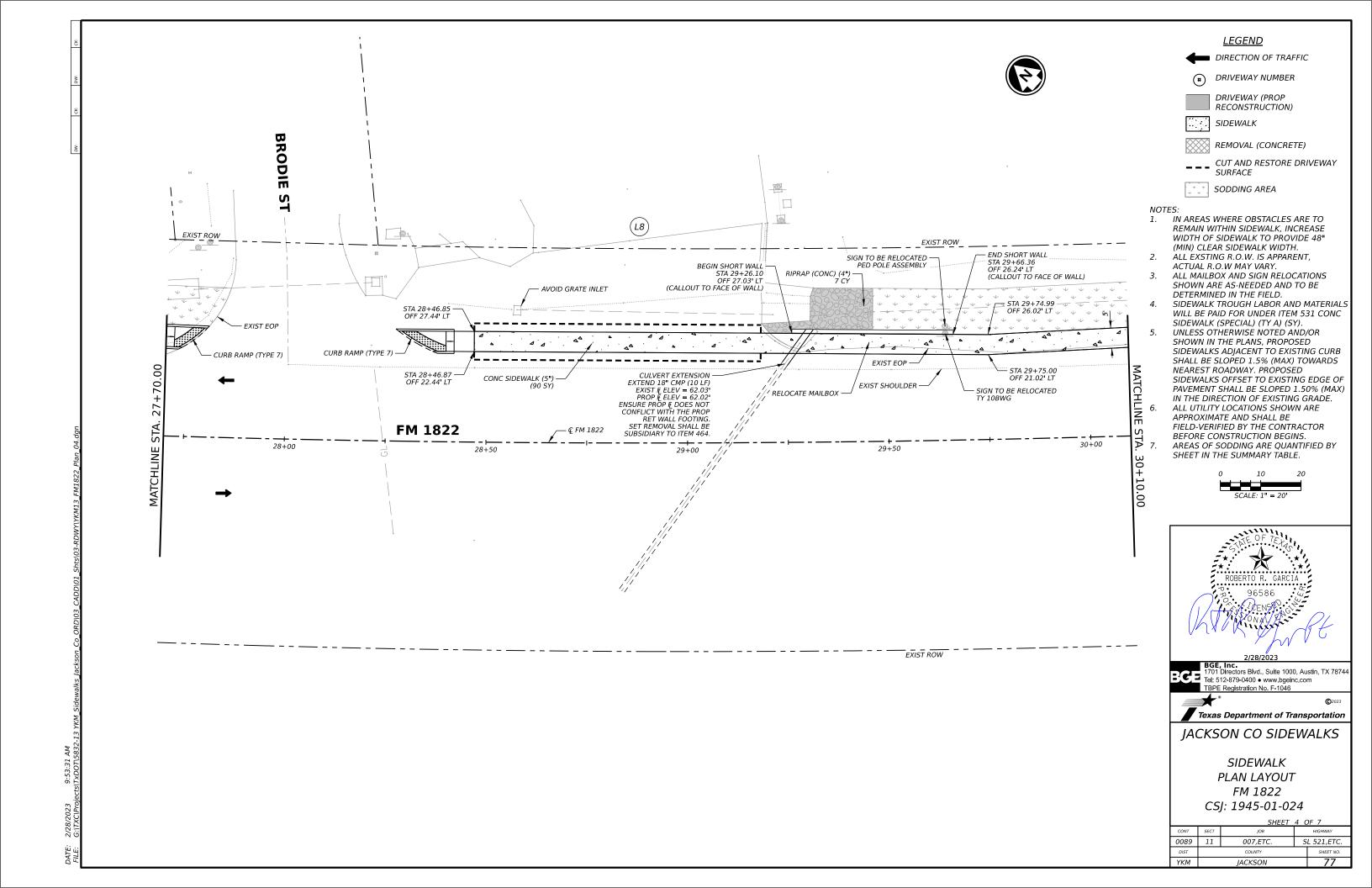




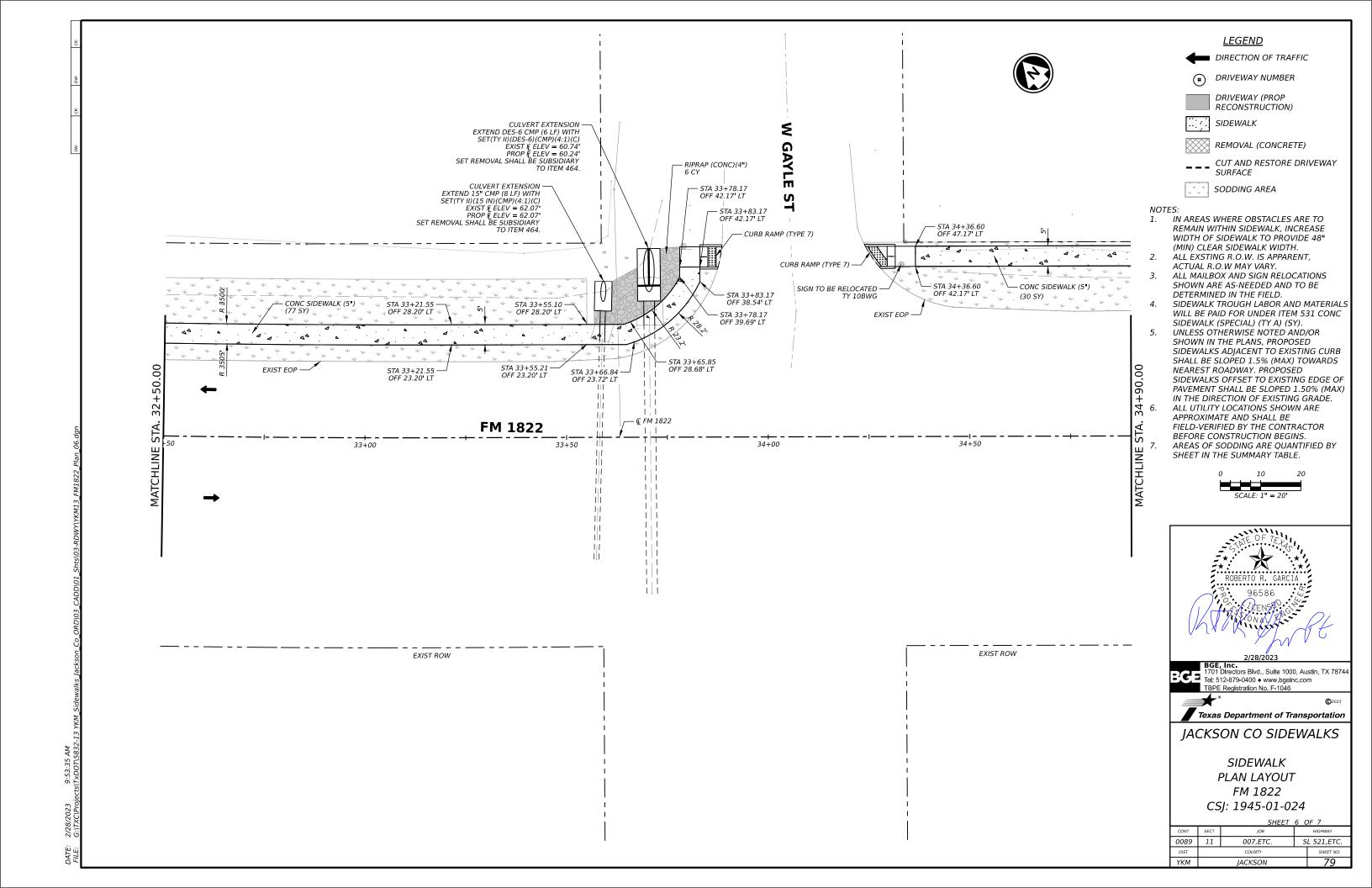








<u>LEGEND</u> DIRECTION OF TRAFFIC # DRIVEWAY NUMBER DRIVEWAY (PROP RECONSTRUCTION) SIDEWALK REMOVAL (CONCRETE) **- - -** CUT AND RESTORE DRIVEWAY SURFACE SODDING AREA NOTES: IN AREAS WHERE OBSTACLES ARE TO REMAIN WITHIN SIDEWALK, INCREASE WIDTH OF SIDEWALK TO PROVIDE 48" (MIN) CLEAR SIDEWALK WIDTH. ALL EXSTING R.O.W. IS APPARENT, ACTUAL R.O.W MAY VARY. ALL MAILBOX AND SIGN RELOCATIONS SHOWN ARE AS-NEEDED AND TO BE DETERMINED IN THE FIELD. SIDEWALK TROUGH LABOR AND MATERIALS − STA 31+00.00 , ✓ OFF 28.00' ↓ CONC SIDEWALK (5") (133 SY) - RELOCATE MAILBOX WILL BE PAID FOR UNDER ITEM 531 CONC SIDEWALK (SPECIAL) (TY A) (SY). UNLESS OTHERWISE NOTED AND/OR SHOWN IN THE PLANS, PROPOSED SIDEWALKS ADJACENT TO EXISTING CURB SHALL BE SLOPED 1.5% (MAX) TOWARDS NEAREST ROADWAY. PROPOSED MATCHLINE STA 31+00.00 · OFF 23.00' LT EXIST SHOULDER EXIST EOP -SIDEWALKS OFFSET TO EXISTING EDGE OF PAVEMENT SHALL BE SLOPED 1.50% (MAX) IN THE DIRECTION OF EXISTING GRADE. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD-VERIFIED BY THE CONTRACTOR — Ç FM 1822 FM 1822 BEFORE CONSTRUCTION BEGINS. AREAS OF SODDING ARE QUANTIFIED BY 30+50 32+00 31+00 31+50 SHEET IN THE SUMMARY TABLE. EXIST ROW BGE, Inc.
1701 Directors Blvd., Suite 1000, Austin, TX 78744
Tel: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046 Texas Department of Transportation JACKSON CO SIDEWALKS SIDEWALK PLAN LAYOUT FM 1822 CSJ: 1945-01-024 SL 521,ETC. 0089 007,ETC. 11 IACKSON



DIRECTION OF TRAFFIC

DRIVEWAY NUMBER

DRIVEWAY (PROP RECONSTRUCTION)

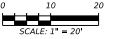
SIDEWALK

REMOVAL (CONCRETE)

- - - CUT AND RESTORE DRIVEWAY SURFACE

SODDING AREA

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- ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD-VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION BEGINS.
- AREAS OF SODDING ARE QUANTIFIED BY SHEET IN THE SUMMARY TABLE.





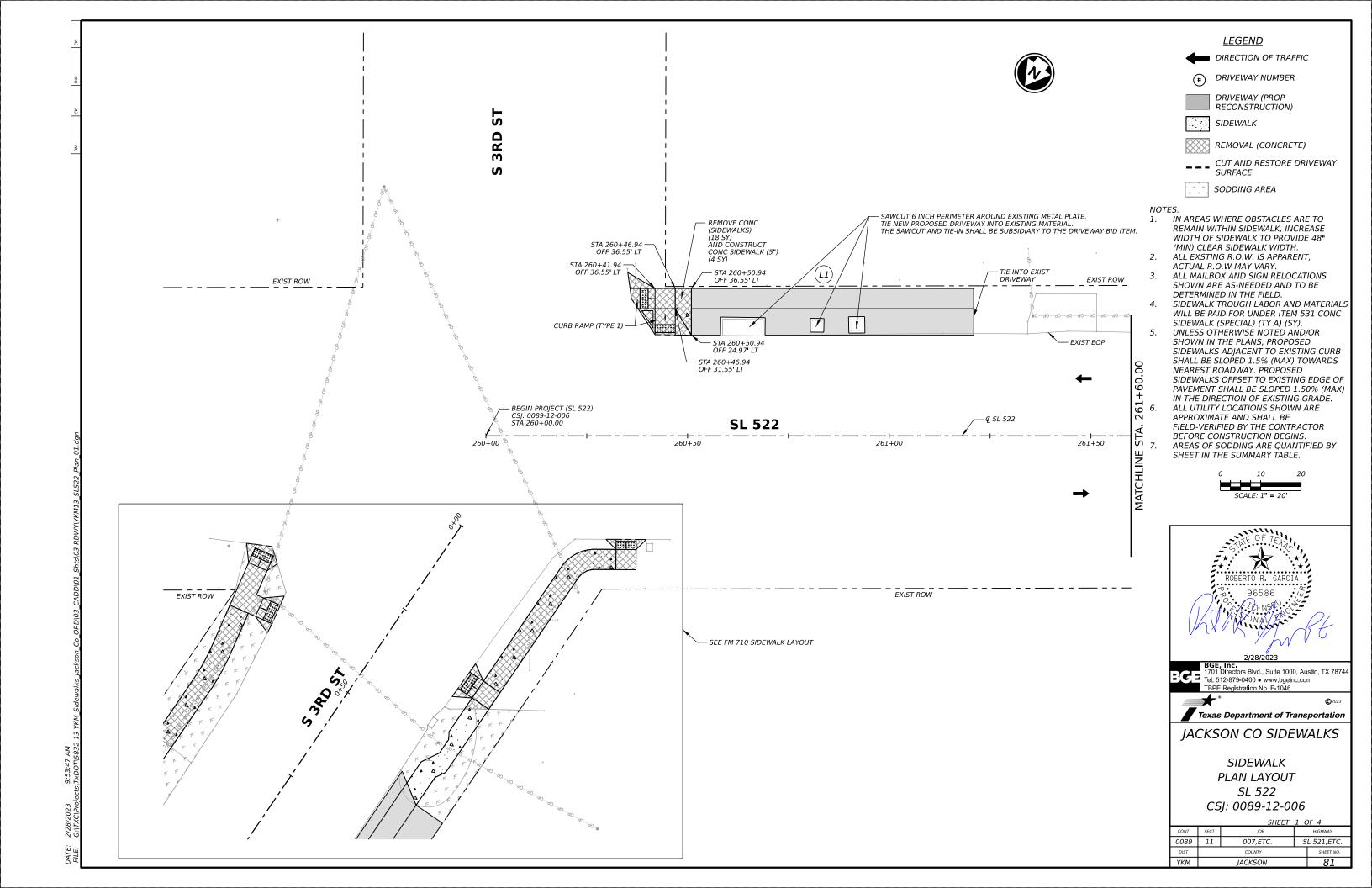
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TBPE Registration No. F-1046

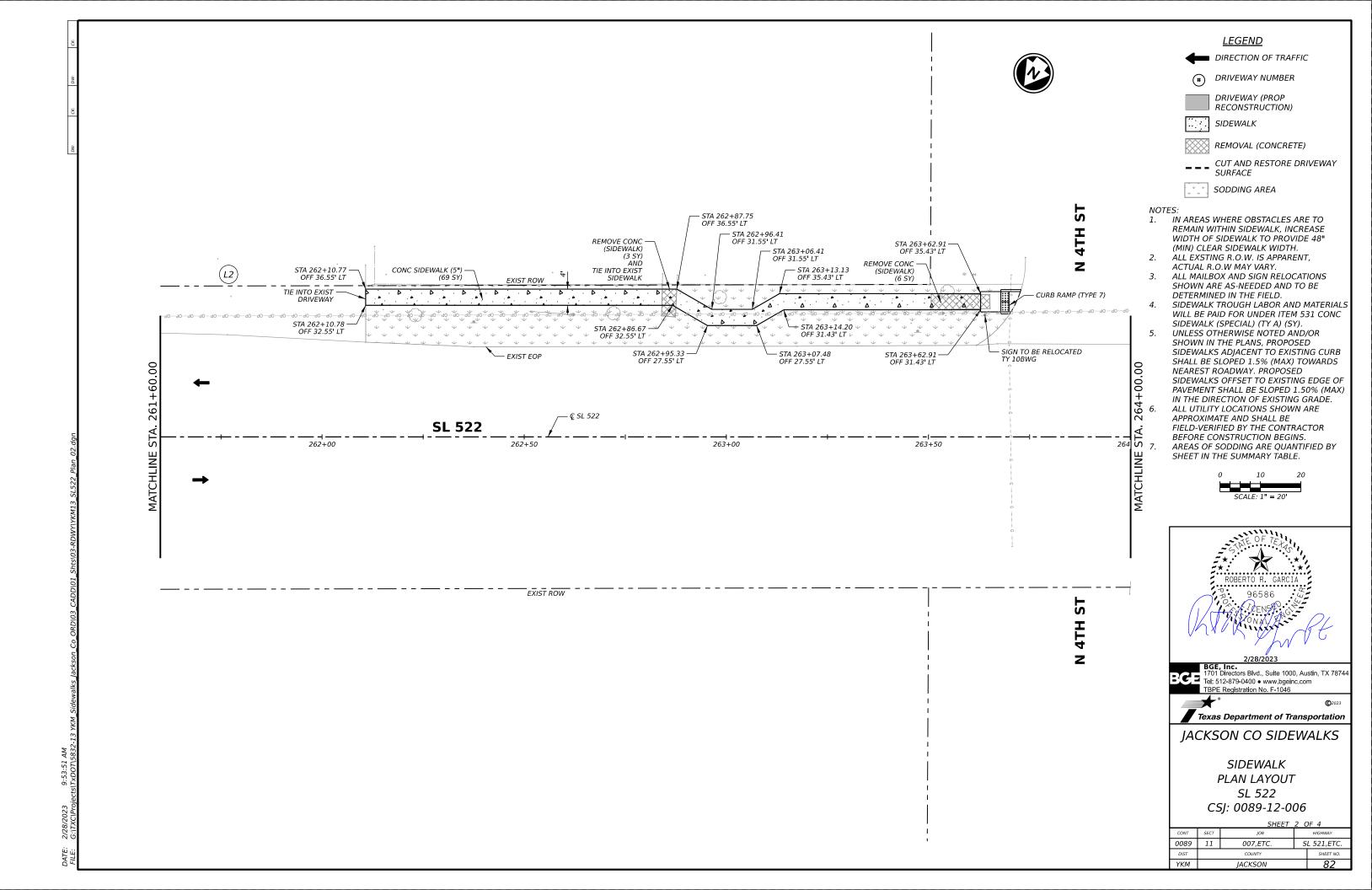


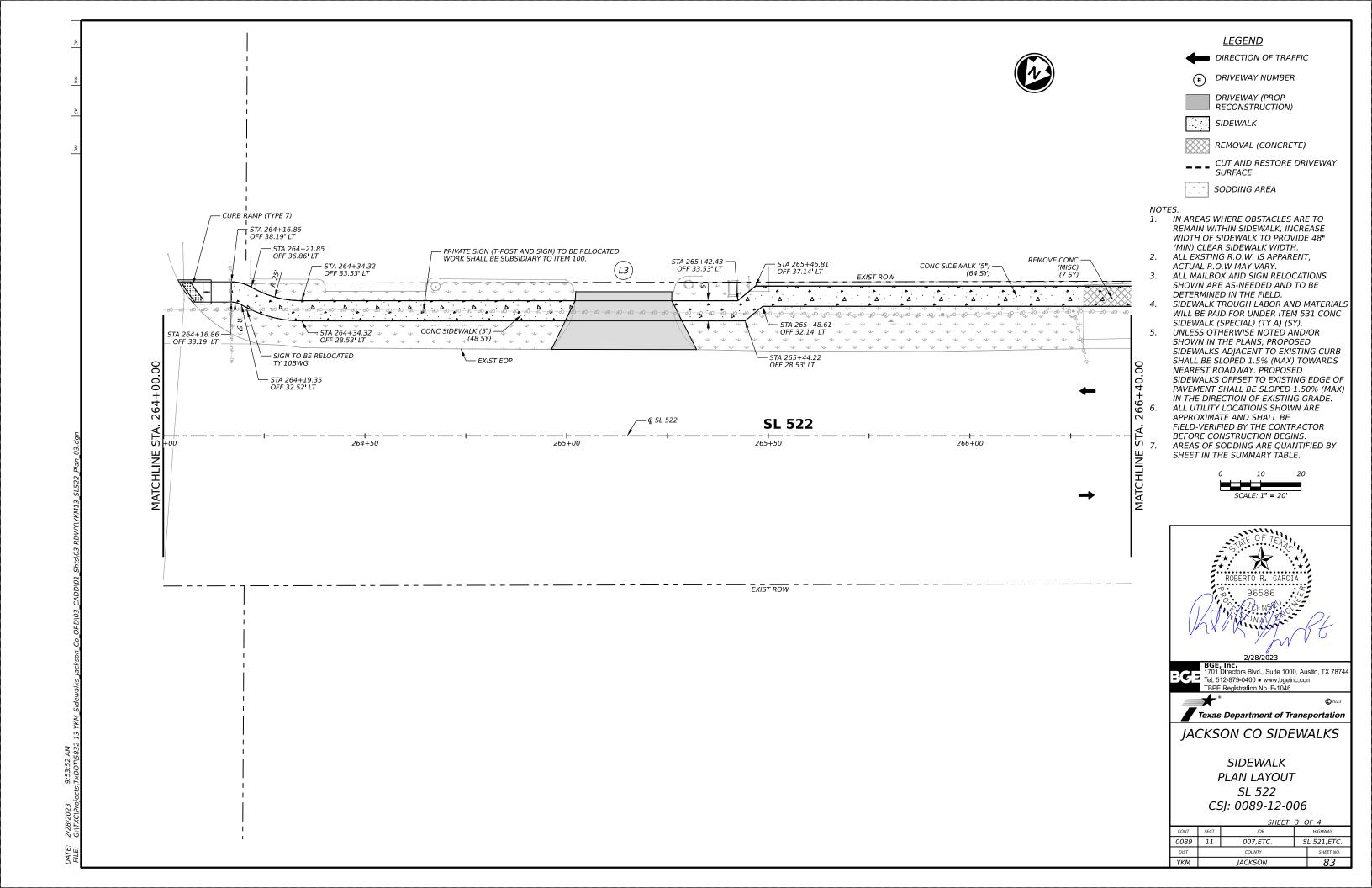
JACKSON CO SIDEWALKS

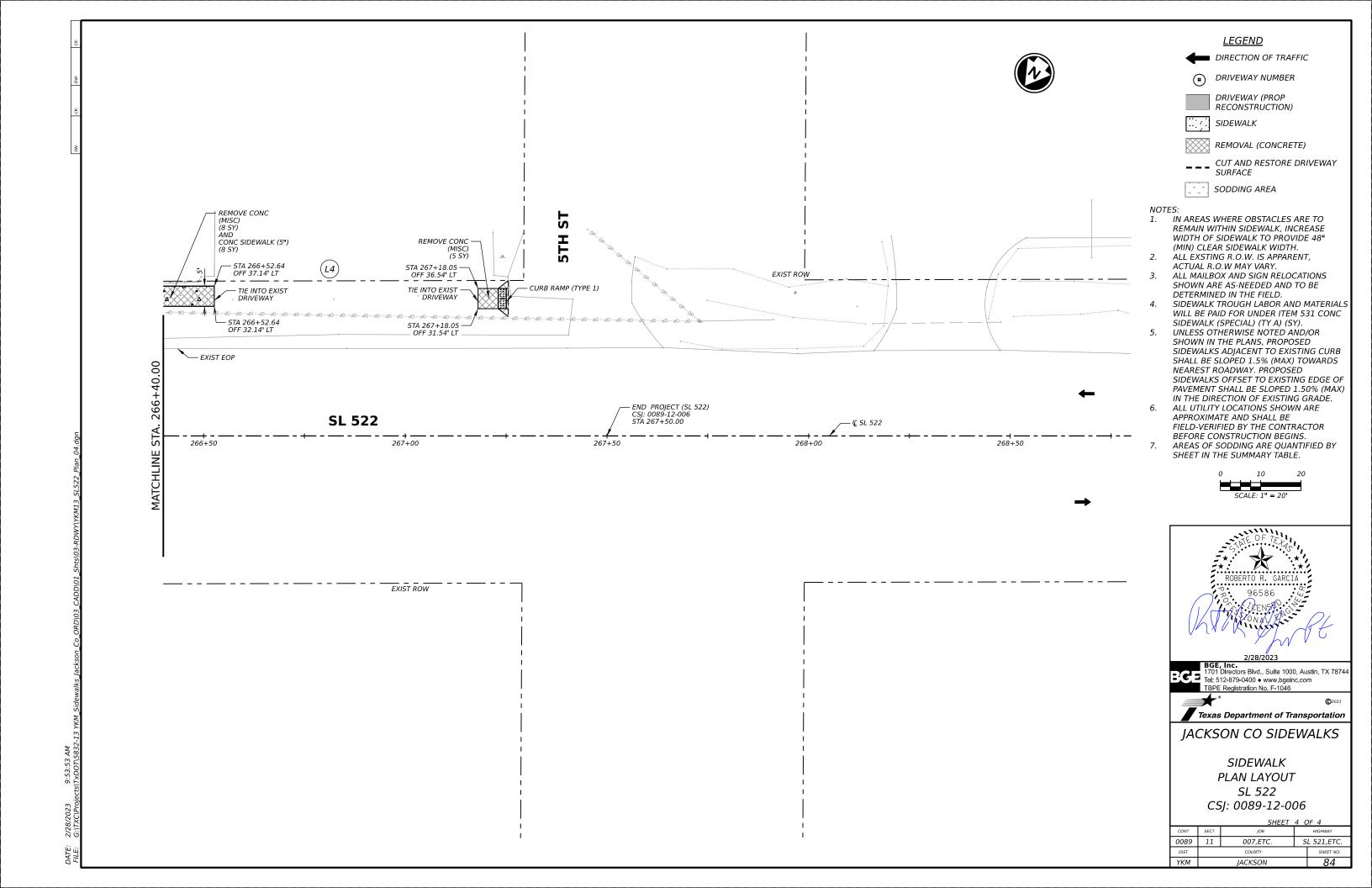
SIDEWALK PLAN LAYOUT FM 1822 CSJ: 1945-01-024

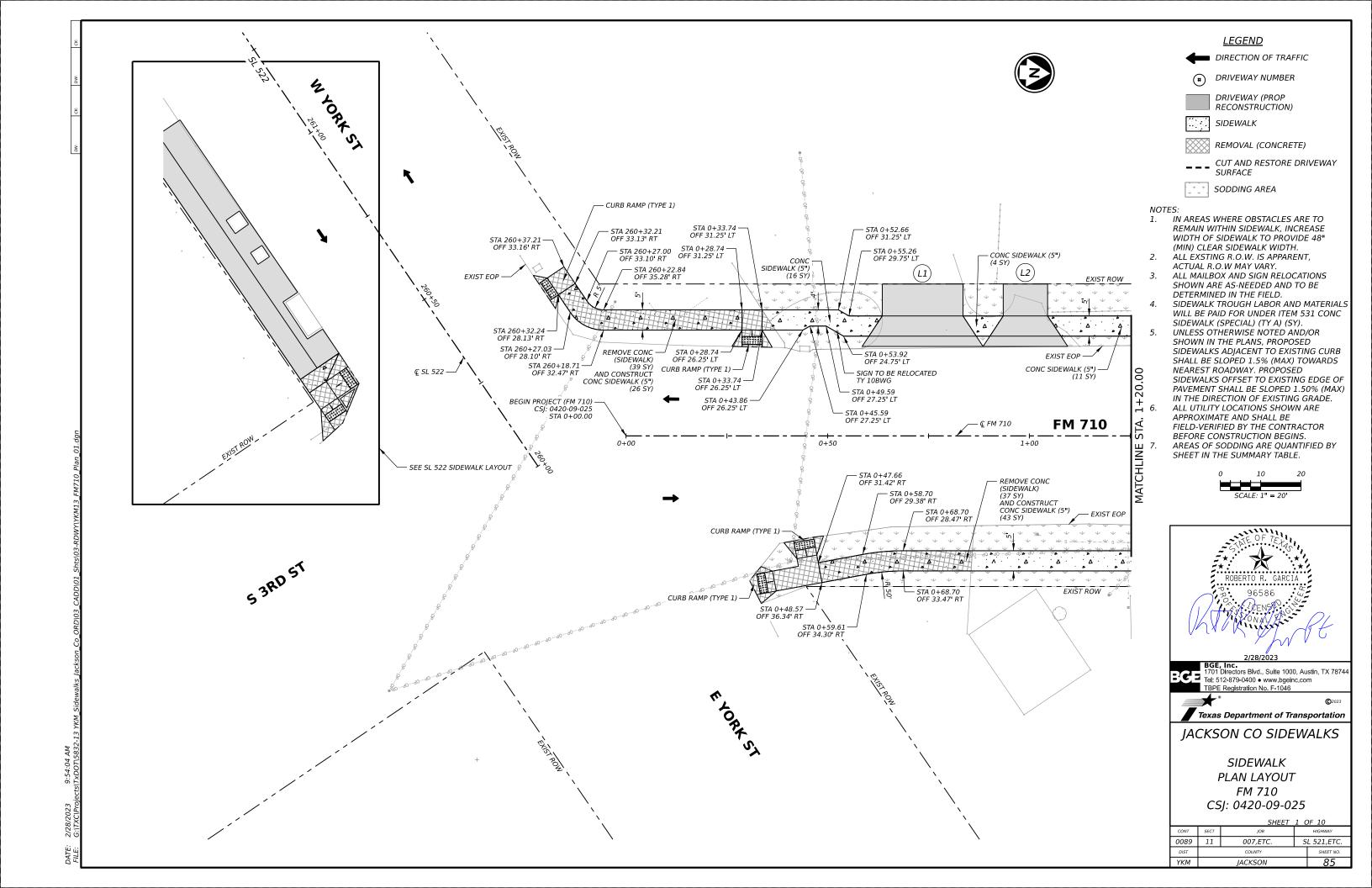
SHEET 7 OF 7					
CONT	SECT	JOB	HIGHWAY		
0089	11	007,ETC.	SL 521,ETC.		
DIST	COUNTY			SHEET NO.	
YKM		JACKSON		80	

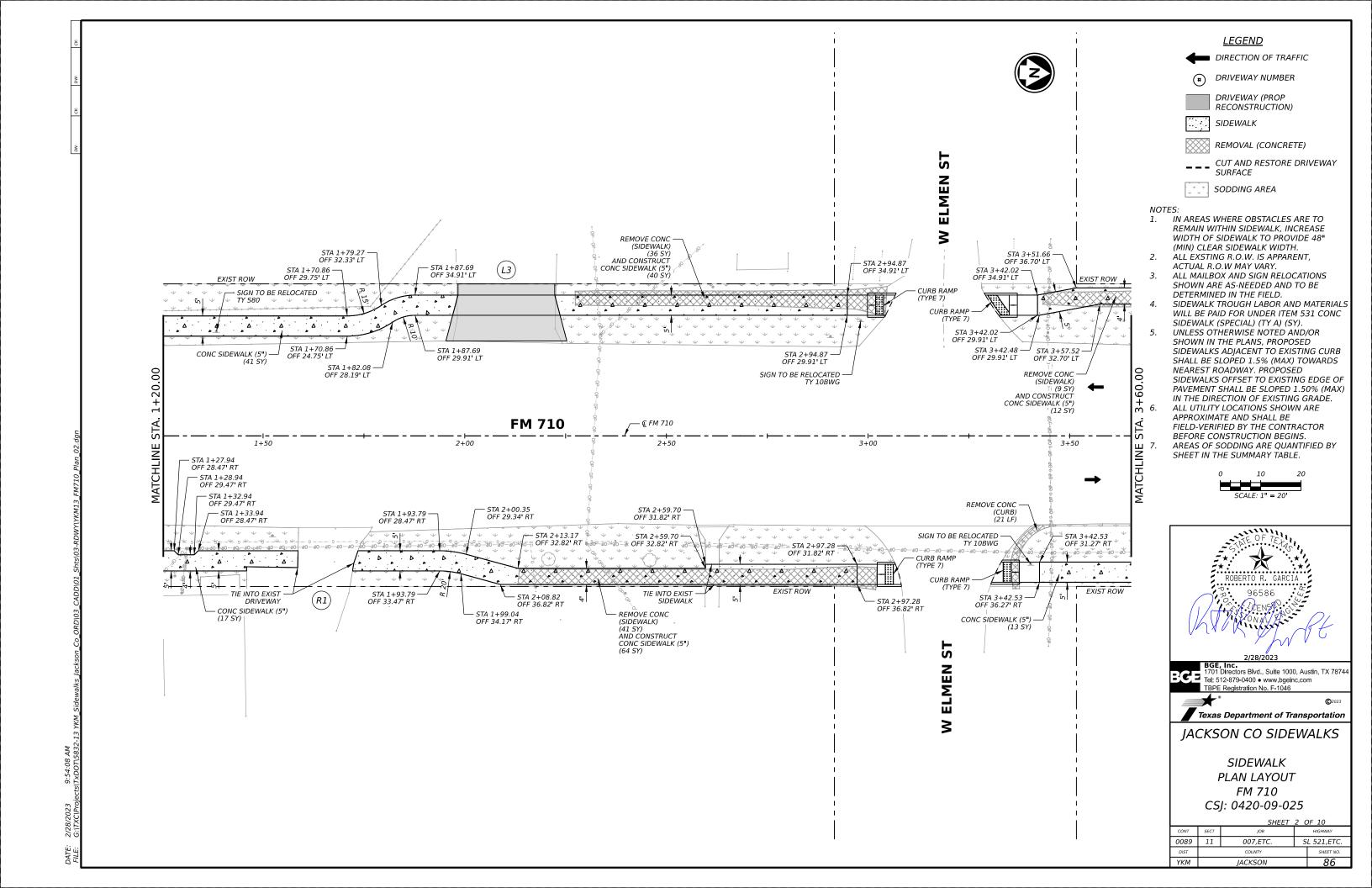












DIRECTION OF TRAFFIC

DRIVEWAY NUMBER

DRIVEWAY (PROP RECONSTRUCTION)

SIDEWALK

REMOVAL (CONCRETE)

- - - CUT AND RESTORE DRIVEWAY SURFACE

SODDING AREA

- IN AREAS WHERE OBSTACLES ARE TO REMAIN WITHIN SIDEWALK, INCREASE WIDTH OF SIDEWALK TO PROVIDE 48" (MIN) CLEAR SIDEWALK WIDTH.
- ALL EXSTING R.O.W. IS APPARENT, ACTUAL R.O.W MAY VARY.
- ALL MAILBOX AND SIGN RELOCATIONS SHOWN ARE AS-NEEDED AND TO BE DETERMINED IN THE FIELD.
- SIDEWALK TROUGH LABOR AND MATERIALS WILL BE PAID FOR UNDER ITEM 531 CONC SIDEWALK (SPECIAL) (TY A) (SY).
- UNLESS OTHERWISE NOTED AND/OR SHOWN IN THE PLANS, PROPOSED SIDEWALKS ADJACENT TO EXISTING CURB SHALL BE SLOPED 1.5% (MAX) TOWARDS NEAREST ROADWAY. PROPOSED SIDEWALKS OFFSET TO EXISTING EDGE OF PAVEMENT SHALL BE SLOPED 1.50% (MAX) IN THE DIRECTION OF EXISTING GRADE. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE
- FIELD-VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION BEGINS. AREAS OF SODDING ARE QUANTIFIED BY





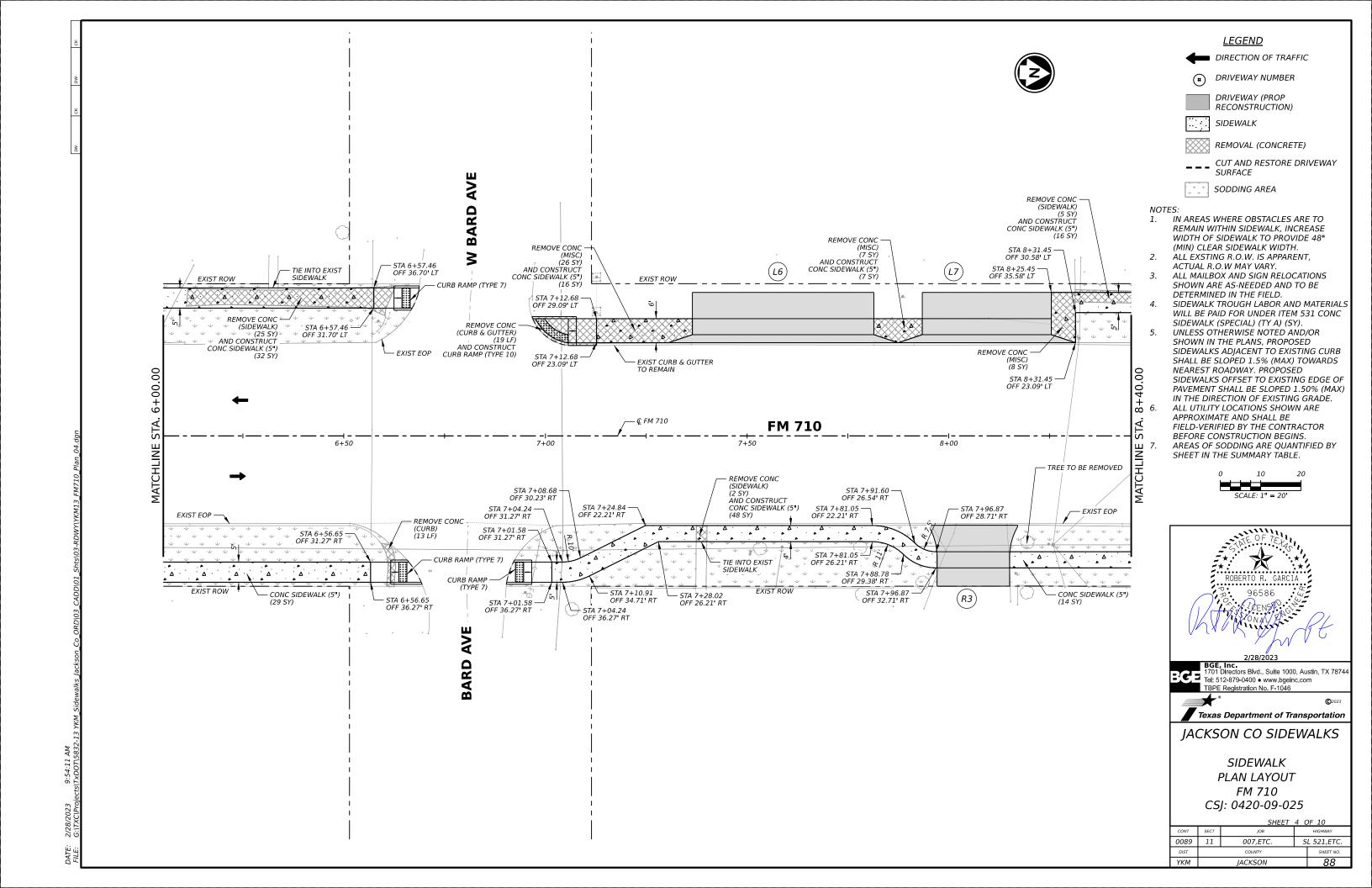
BGE, Inc.
1701 Directors Blvd., Suite 1000, Austin, TX 78744
Tel: 512-879-0400 ● www.bgeinc.com
TBPE Registration No. F-1046

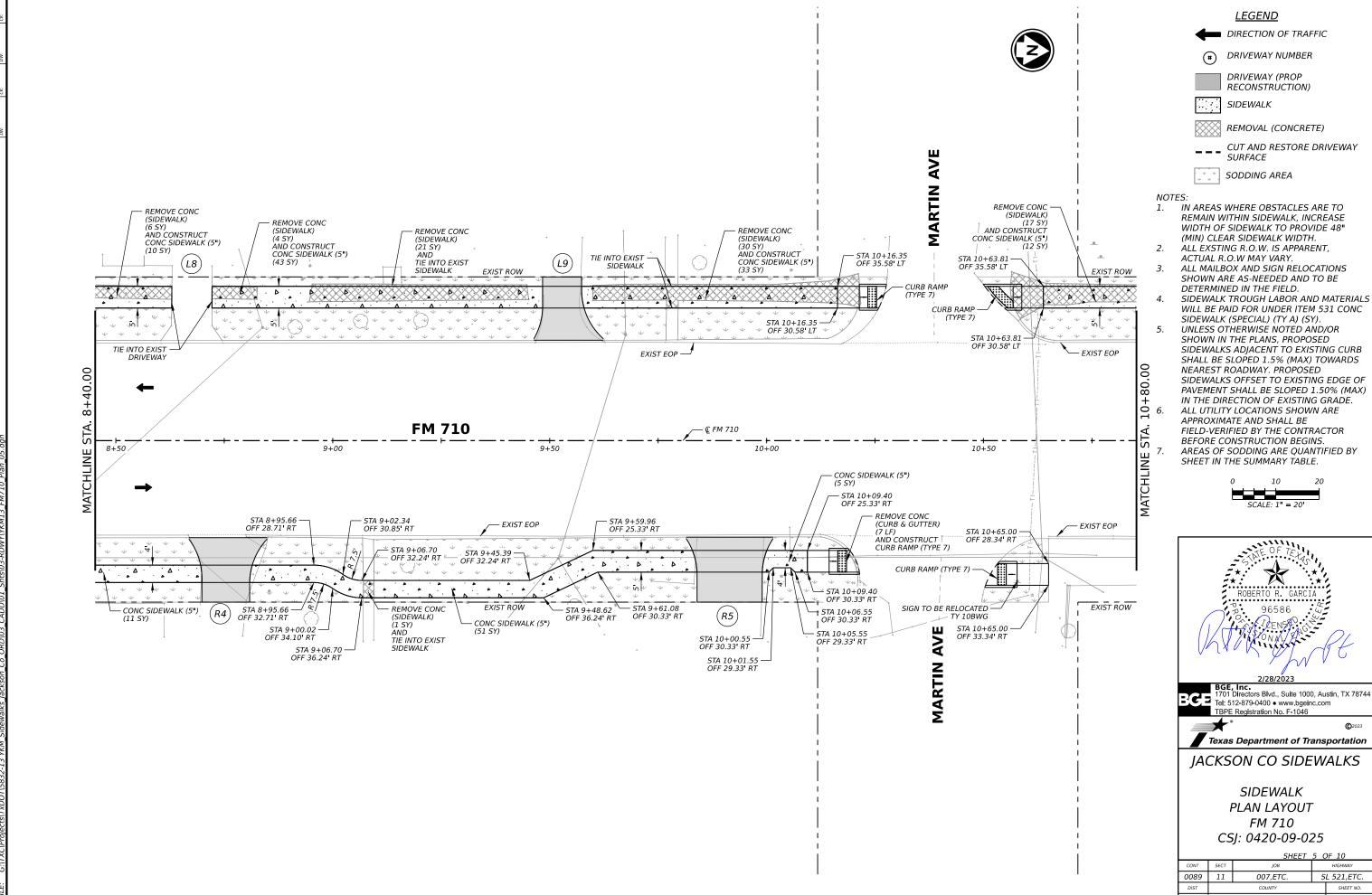


SIDEWALK

PLAN LAYOUT FM 710 CSJ: 0420-09-025

	SHEET 3 OF 10				
CONT	SECT	JOB		HIGHWAY	
0089	11	007,ETC.	SL 521,ETC.		
DIST		COUNTY		SHEET NO.	
YKM		JACKSON		87	





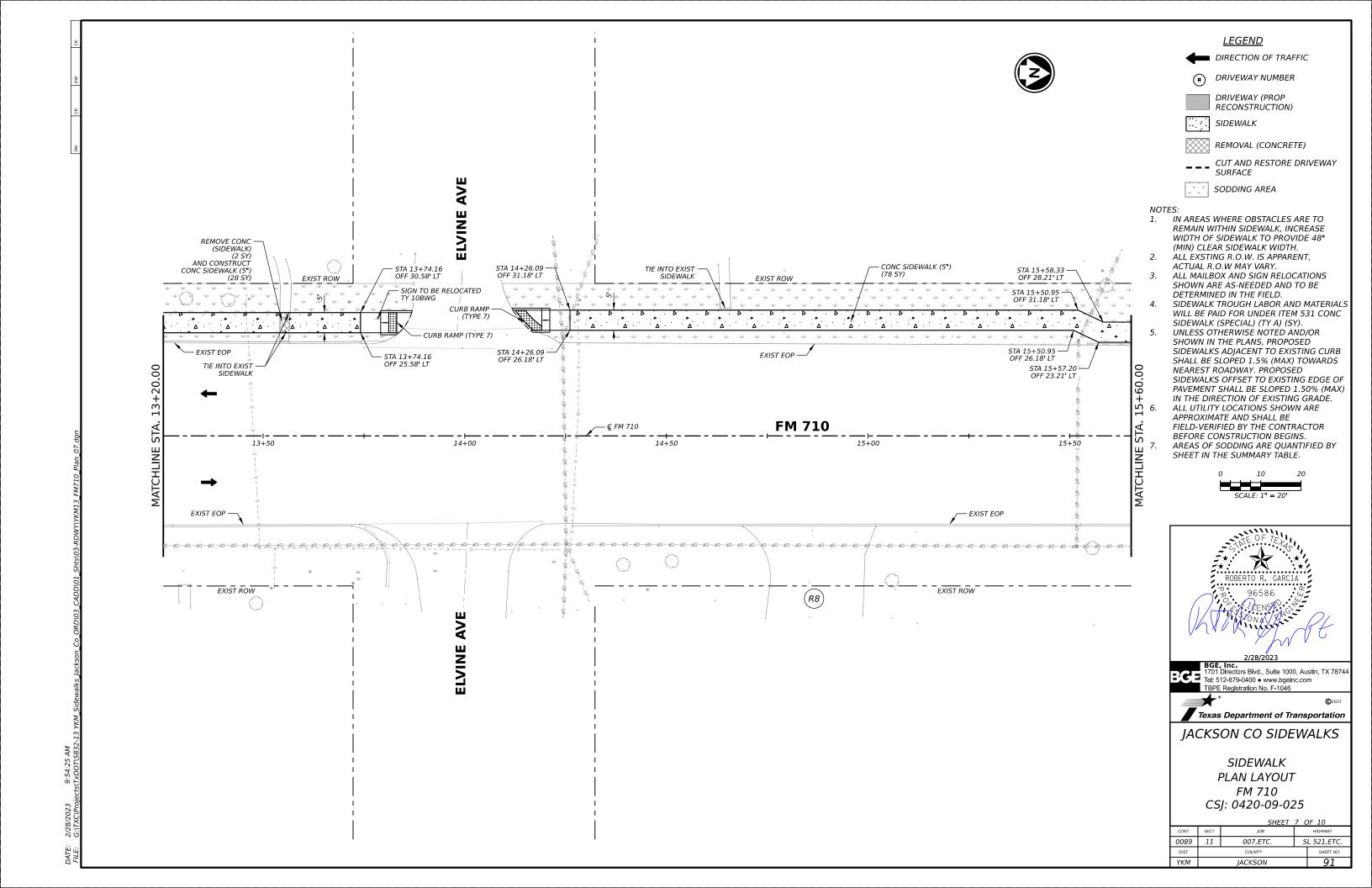
JACKSON

- WILL BE PAID FOR UNDER ITEM 531 CONC
- SHOWN IN THE PLANS, PROPOSED SIDEWALKS ADJACENT TO EXISTING CURB SHALL BE SLOPED 1.5% (MAX) TOWARDS SIDEWALKS OFFSET TO EXISTING EDGE OF PAVEMENT SHALL BE SLOPED 1.50% (MAX) IN THE DIRECTION OF EXISTING GRADE.



Texas Department of Transportation

SHEET 6 OF 10					
CONT	SECT	JOB		HIGHWAY	
089	11	007,ETC.	SL 521,ETC.		
DIST		COUNTY		SHEET NO.	
YKM		IACKSON		90	



■ DIRECTION OF TRAFFIC

DRIVEWAY NUMBER

DRIVEWAY (PROP RECONSTRUCTION)

SIDEWALK

REMOVAL (CONCRETE)

- - - CUT AND RESTORE DRIVEWAY SURFACE

SODDING AREA

- IN AREAS WHERE OBSTACLES ARE TO REMAIN WITHIN SIDEWALK, INCREASE WIDTH OF SIDEWALK TO PROVIDE 48" (MIN) CLEAR SIDEWALK WIDTH.
- ALL EXSTING R.O.W. IS APPARENT, ACTUAL R.O.W MAY VARY.
- ALL MAILBOX AND SIGN RELOCATIONS SHOWN ARE AS-NEEDED AND TO BE DETERMINED IN THE FIELD.
- SIDEWALK TROUGH LABOR AND MATERIALS WILL BE PAID FOR UNDER ITEM 531 CONC SIDEWALK (SPECIAL) (TY A) (SY).
- UNLESS OTHERWISE NOTED AND/OR SHOWN IN THE PLANS, PROPOSED SIDEWALKS ADJACENT TO EXISTING CURB SHALL BE SLOPED 1.5% (MAX) TOWARDS NEAREST ROADWAY. PROPOSED SIDEWALKS OFFSET TO EXISTING EDGE OF PAVEMENT SHALL BE SLOPED 1.50% (MAX) IN THE DIRECTION OF EXISTING GRADE. ALL UTILITY LOCATIONS SHOWN ARE
- APPROXIMATE AND SHALL BE FIELD-VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION BEGINS.
- AREAS OF SODDING ARE QUANTIFIED BY SHEET IN THE SUMMARY TABLE.





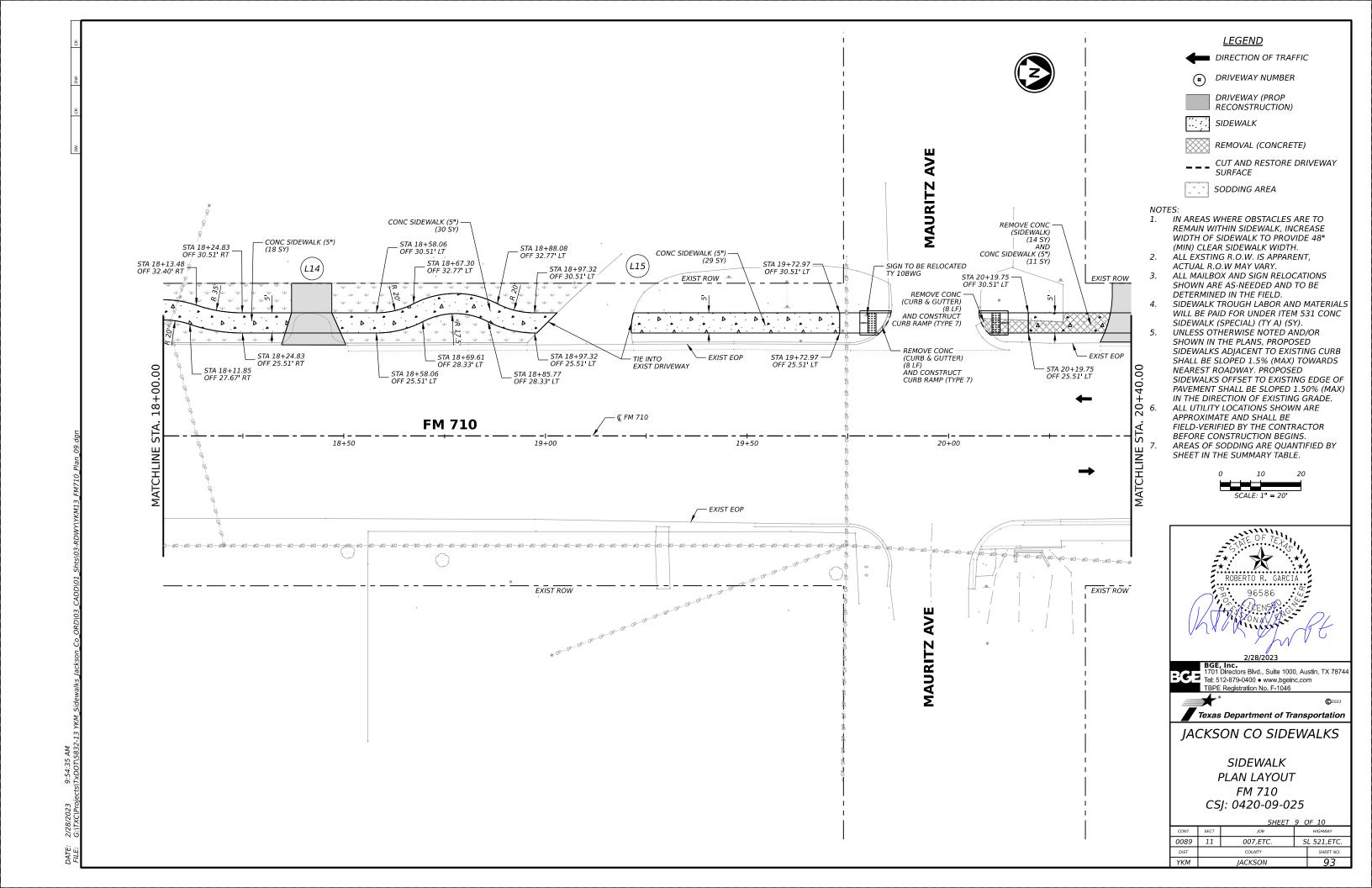
BGE, Inc.
1701 Directors Blvd., Suite 1000, Austin, TX 78744
Tel: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

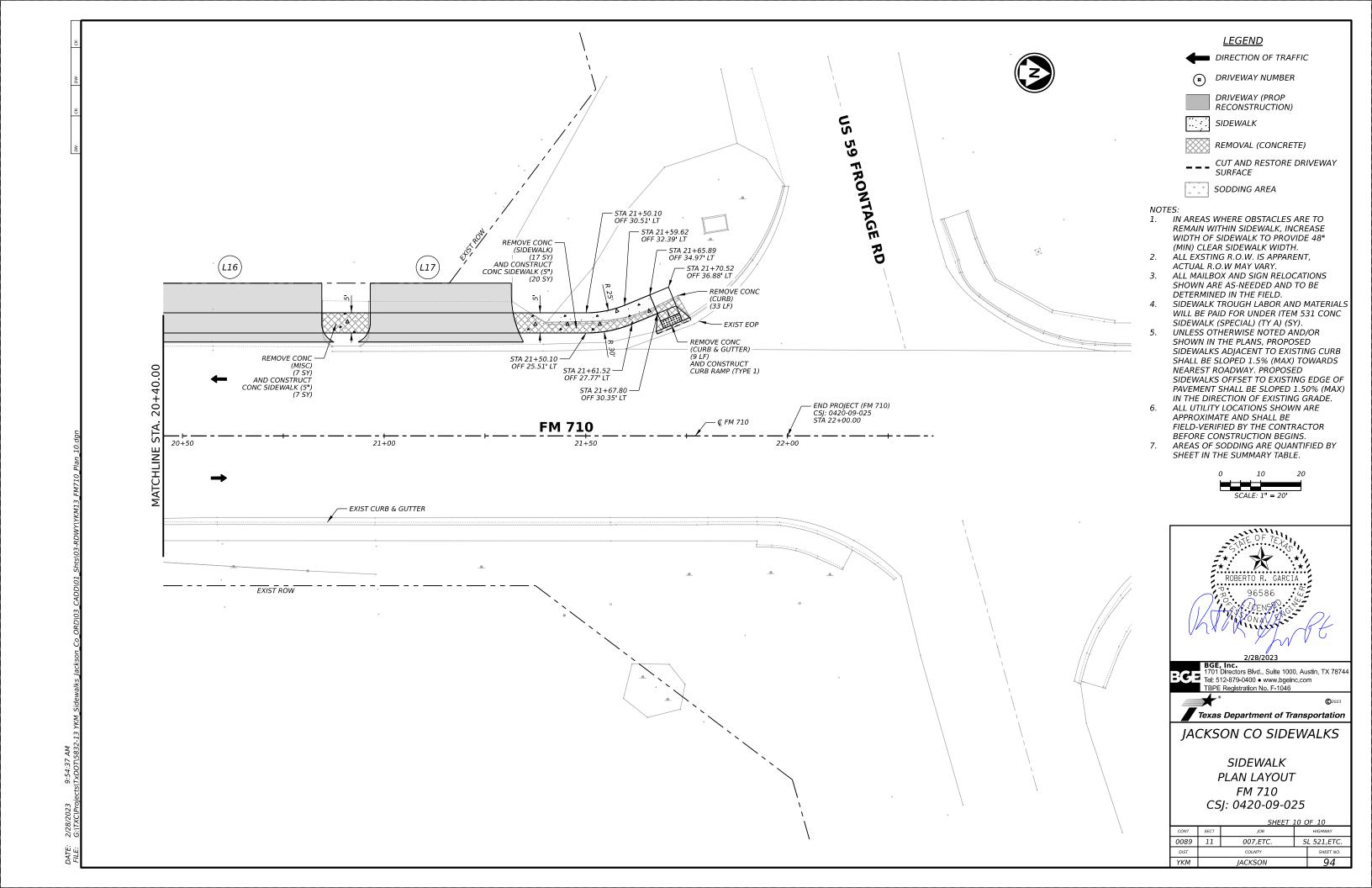
Texas Department of Transportation

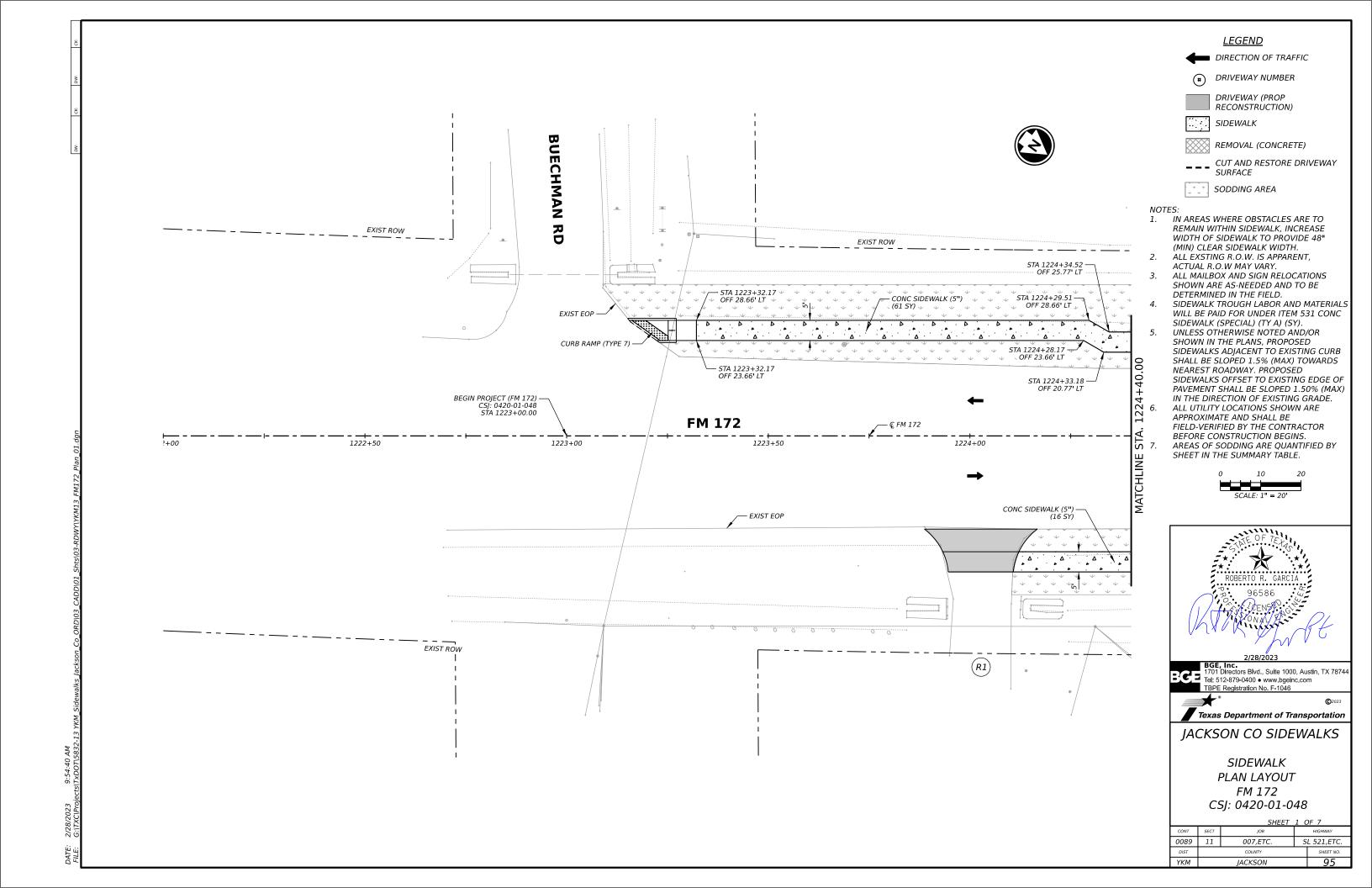
JACKSON CO SIDEWALKS

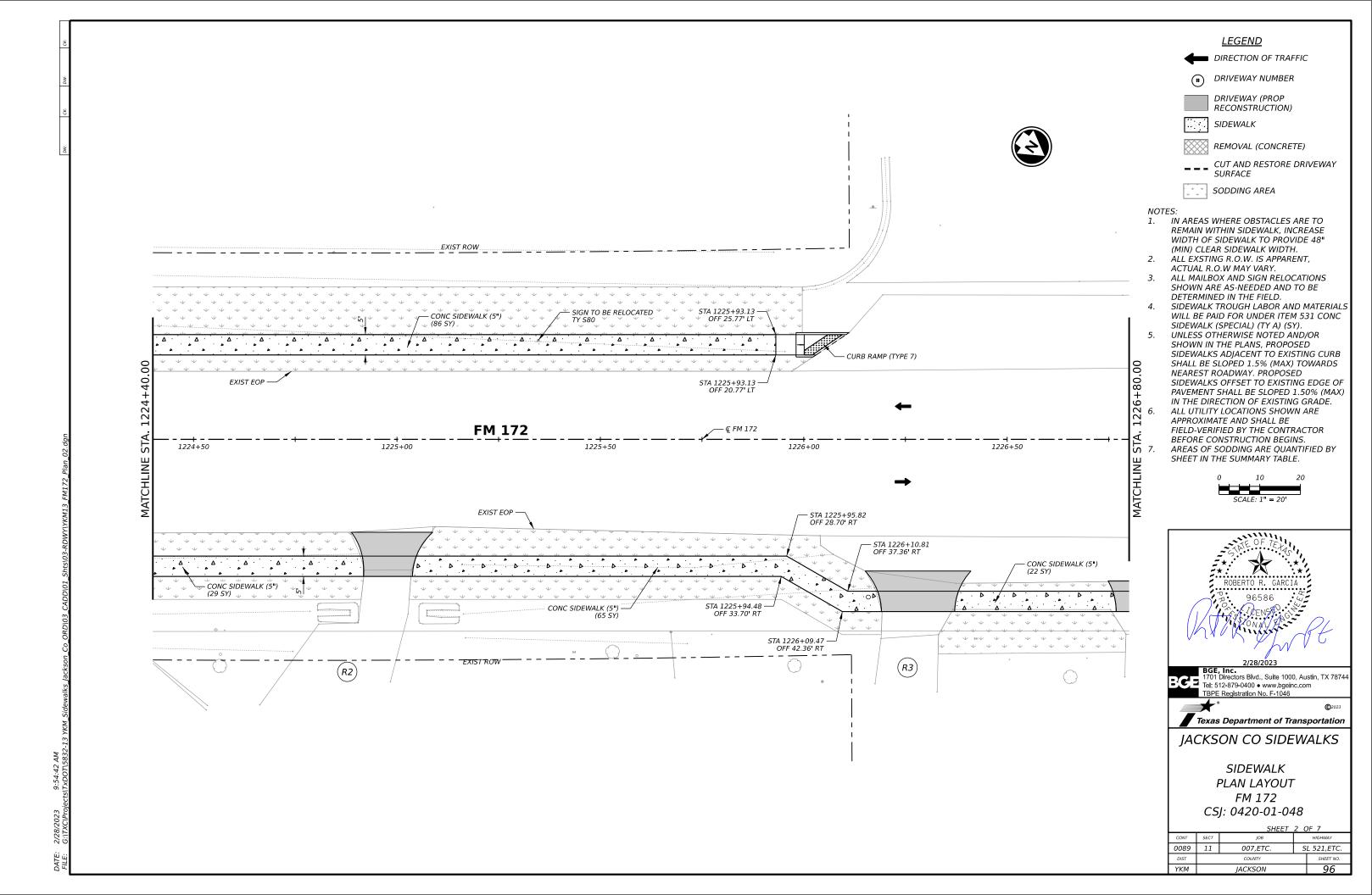
SIDEWALK PLAN LAYOUT FM 710 CSJ: 0420-09-025

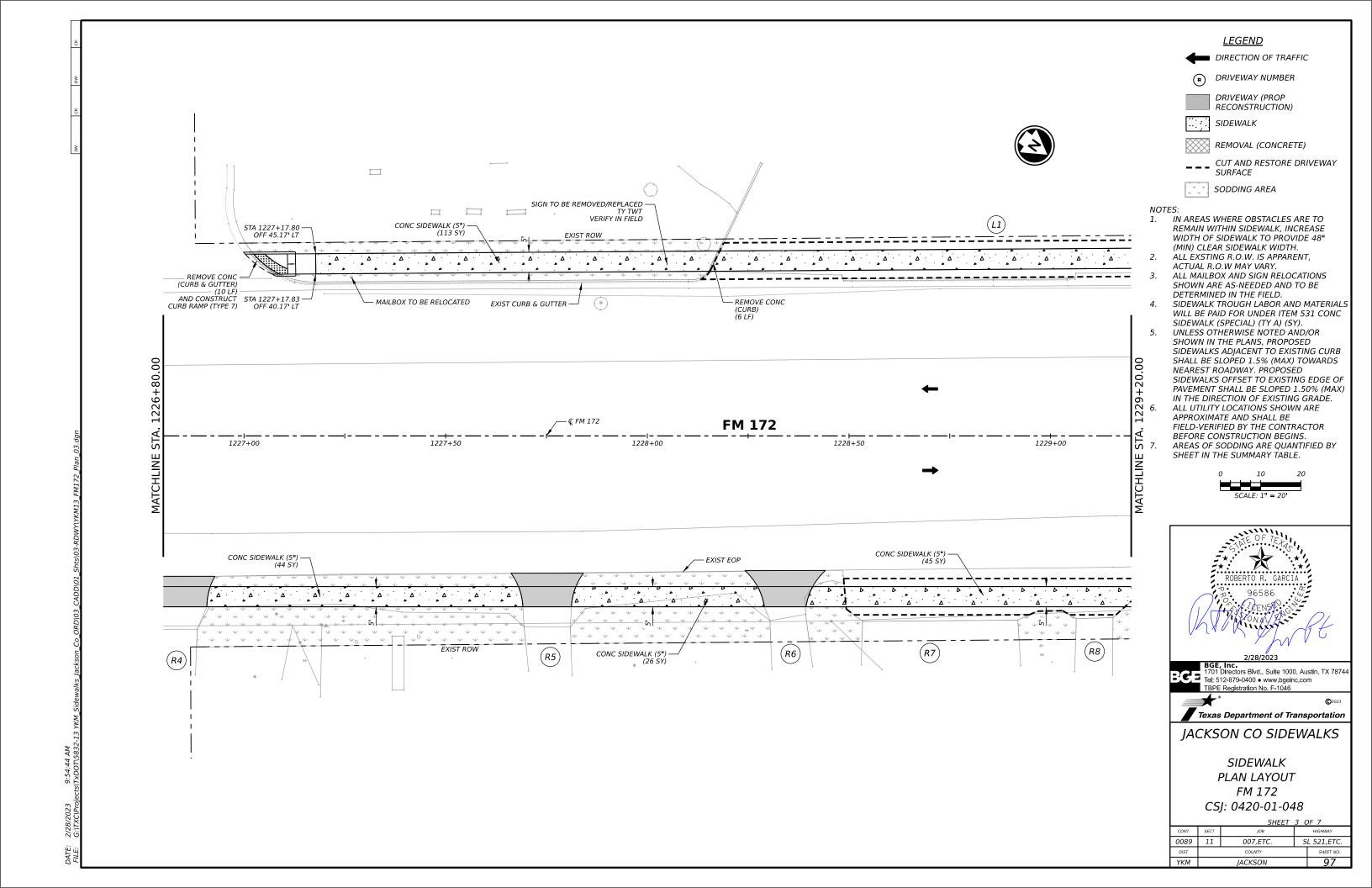
		SHEET	8 (OF 10
CONT	SECT	JOB		HIGHWAY
0089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
YKM		IACKSON		92

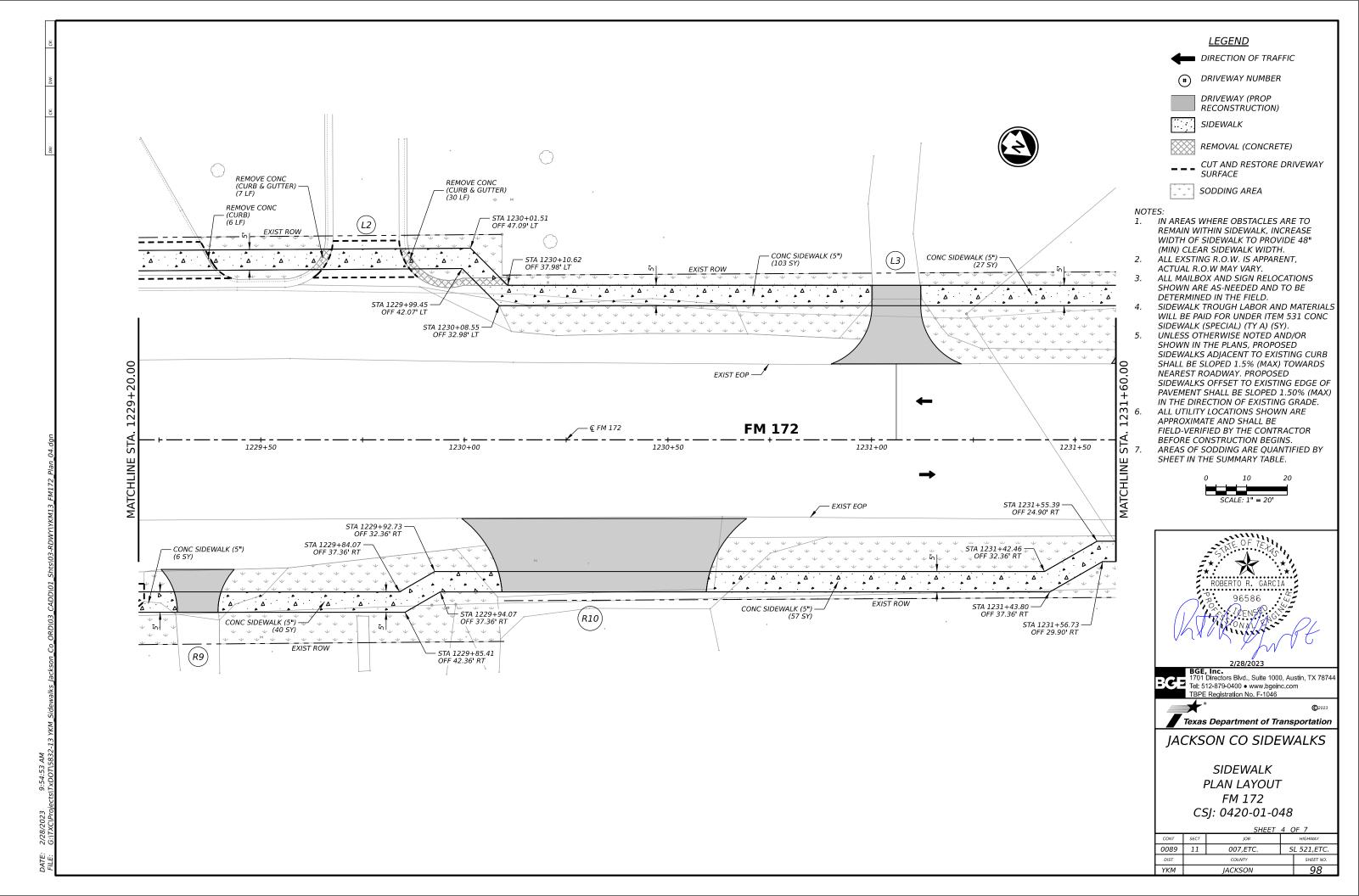


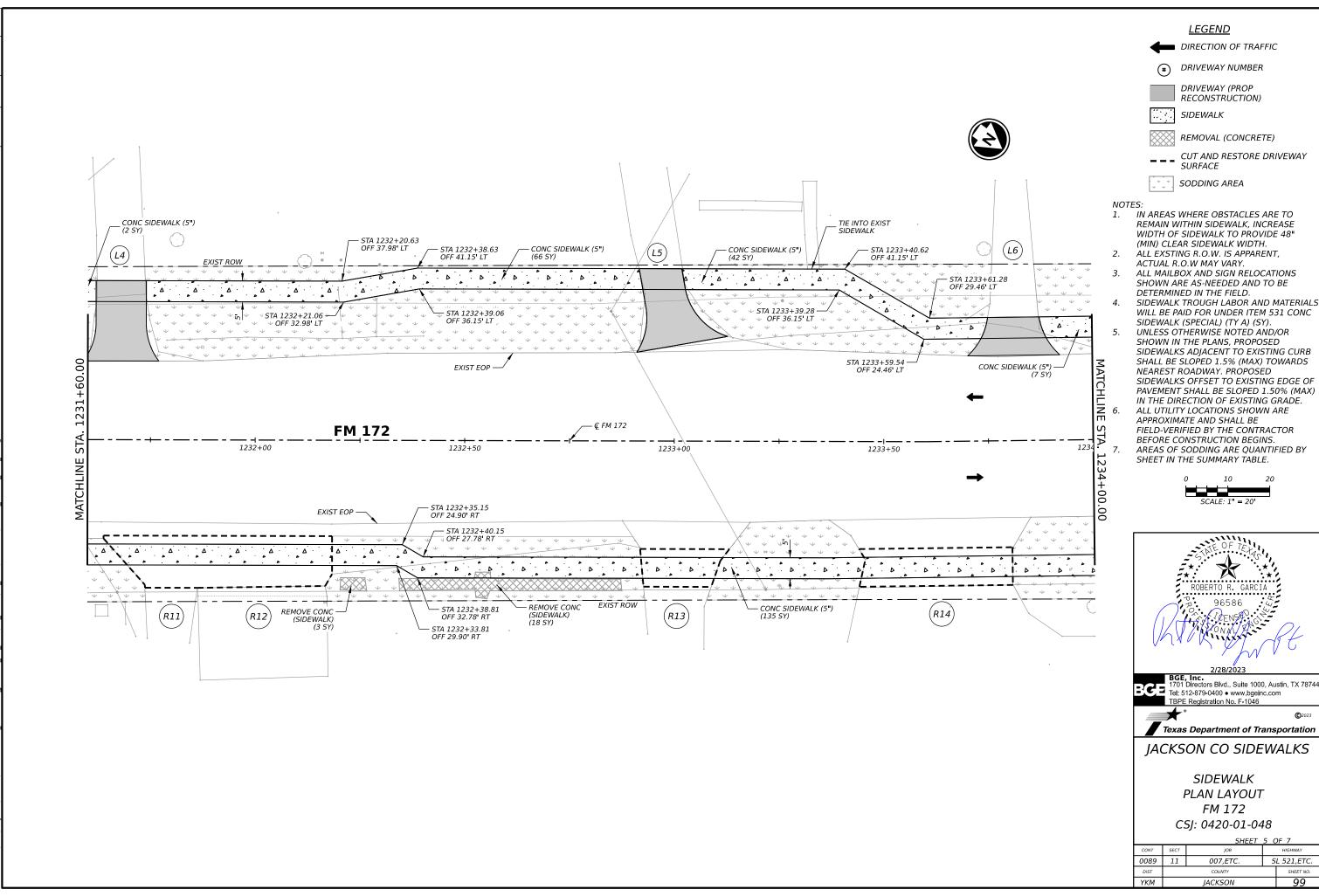


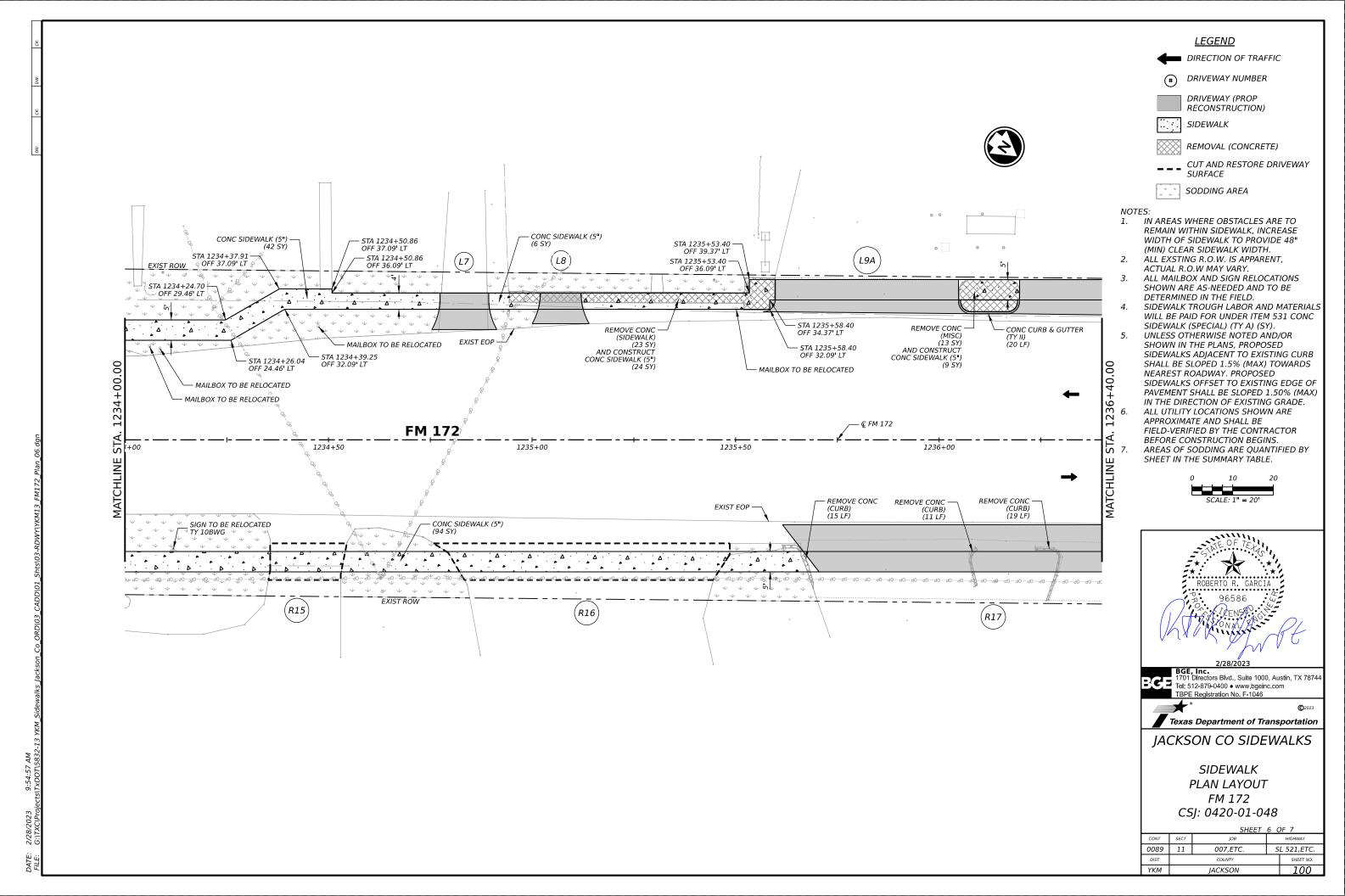


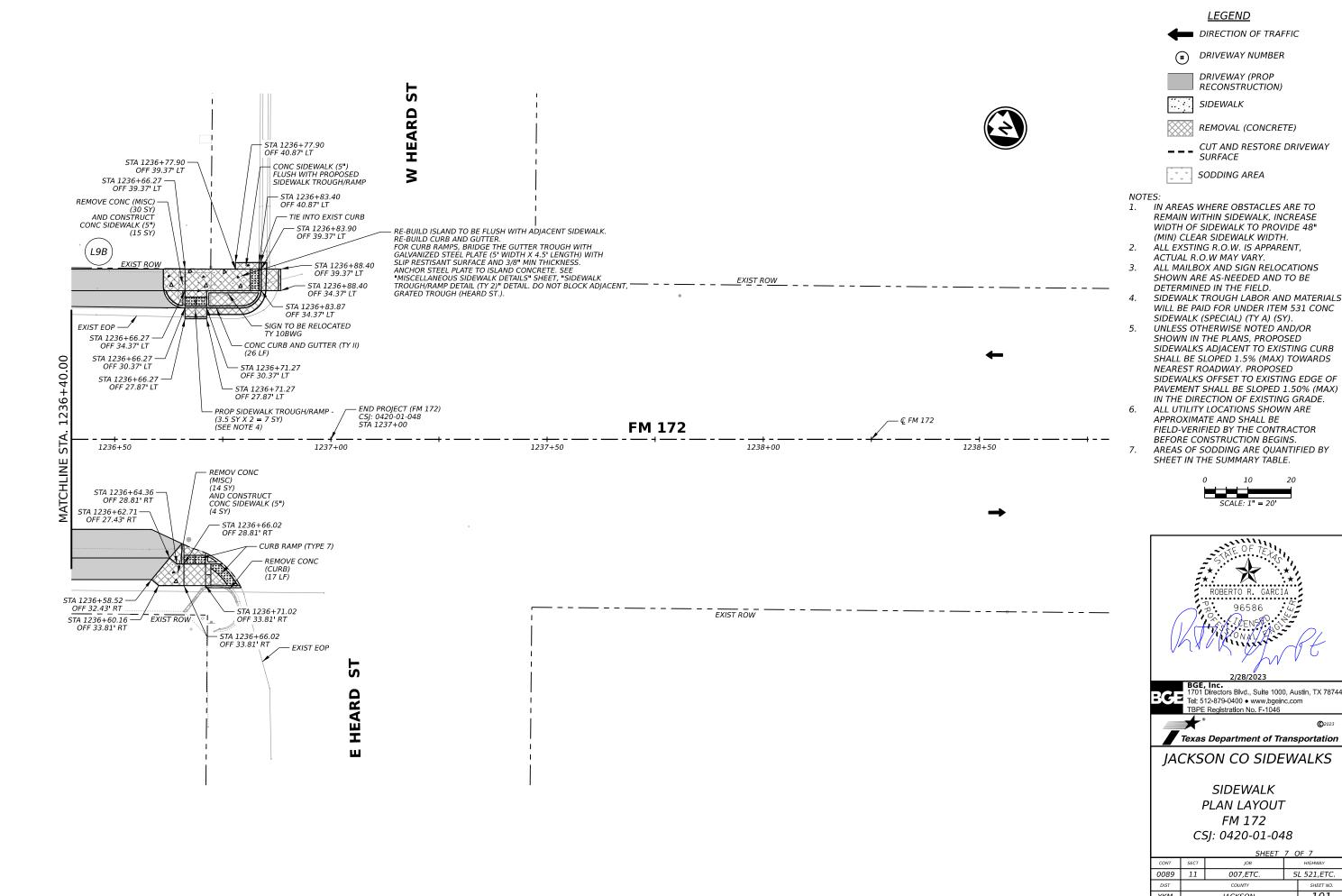










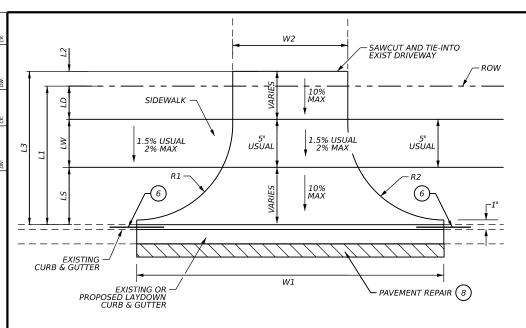


WILL BE PAID FOR UNDER ITEM 531 CONC

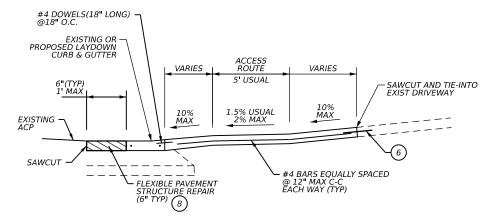


JACKSON CO SIDEWALKS

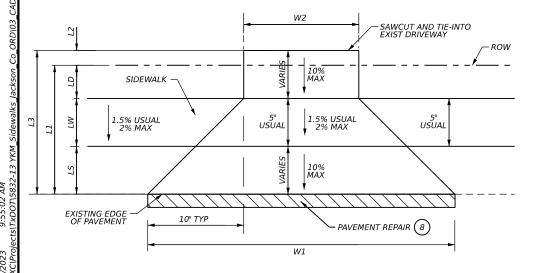
SHEET 7 OF 7					
CONT	SECT	JOB	HIGHWAY		
2089	11	007,ETC.	SL 521,ETC.		
DIST		COUNTY		SHEET NO.	
YKM		JACKSON		101	



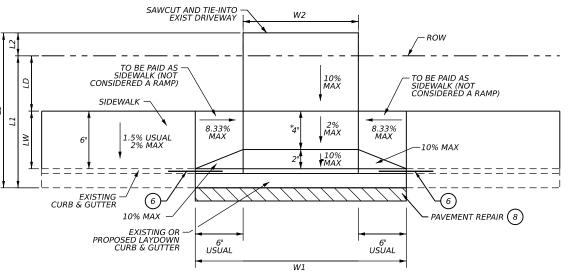
DRIVEWAY DETAIL / SIDEWALK OFFSET FROM CURB PLAN VIEW



DRIVEWAY DETAIL / SIDEWALK OFFSET FROM CURB SECTION VIEW

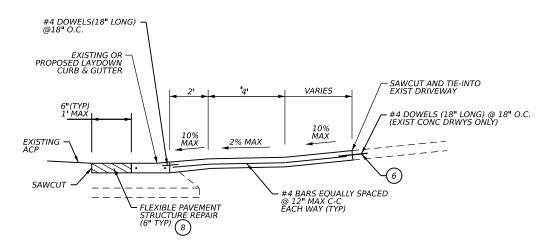


DRIVEWAY DETAIL / SIDEWALK OFFSET FROM EDGE OF PAVEMENT
PLAN VIEW



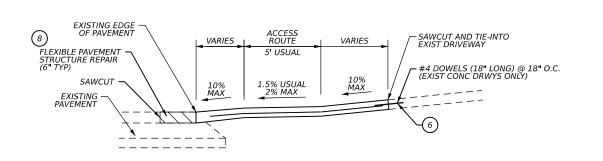
DRIVEWAY DETAIL / SIDEWALK ADJACENT TO CURB PLAN VIEW

NOTE*: ACCESS ROUTE TO BE 3' MIN THRU DRIVEWAY WHEN SIDEWALK IS 5' WIDE AND ADJACENT TO CURB



DRIVEWAY DETAIL / SIDEWALK ADJACENT TO CURB SECTION VIEW

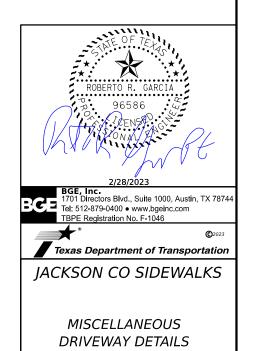
NOTE *: ACCESS ROUTE TO BE 3' MIN THRU DRIVEWAY WHEN SIDEWALK IS 5' WIDE AND ADJACENT TO CURB



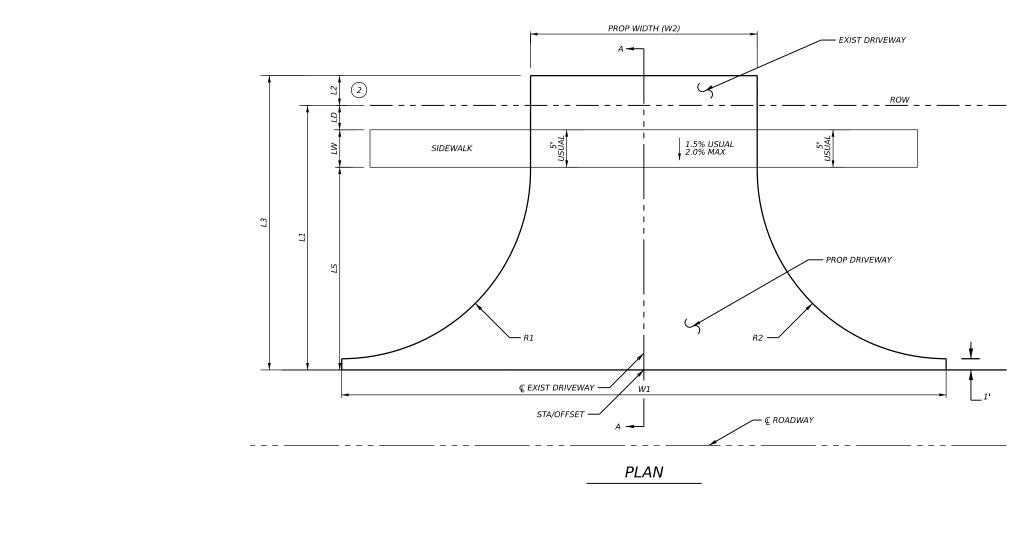
DRIVEWAY DETAIL / SIDEWALK OFFSET FROM EDGE OF PAVEMENT
SECTION VIEW

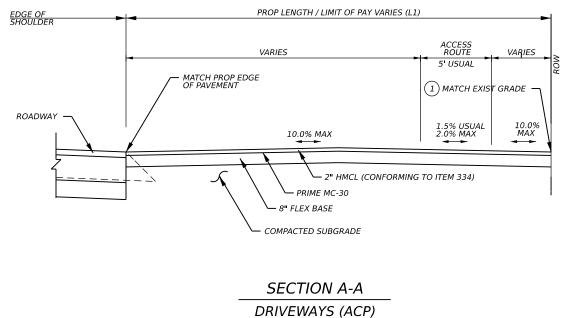
GENERAL NOTES

- PROVIDE 1/2" DEEP TOOLED OR SAW CUT JOINTS EVENLY SPACED AT 5' TYP / 10' MAX SPACING. PROVIDE MEDIUM BROOM FINISH TO CONCRETE SURFACE.
- (2) PROVIDE EXPANSION JOINTS AT 40' MAX SPACING.
- (3) EMBANKMENT, SAND, AND FLEX BASE MATERIAL FOR SIDEWALK FOUNDATION ARE SUBSIDIARY TO ITEM 531.
- DO NOT BLOCK EXISTING DRAINAGE PATHS OR APPURTENANCES WITH PROPOSED SIDEWALK.
- (5) IF CURB & GUTTER AND SIDEWALK ARE NOT PLACED MONOLITHICALLY, PROVIDE 1/2" EXPANSION JOINT MATERIAL AND JOINT SEALING COMPOUND BETWEEN SIDEWALK AND CURB & GUTTER.
- DRILL AND EMBED 1/2" DIA DOWEL BAR INTO EXISTING CONCRETE DRIVWAY OR CURB AS APPROVED BY THE ENGINEER AND TIE TO PROPOSED REINFORCEMENT
- 7 AT EXISTING DRIVEWAYS WITH EXISTING LAYDOWN CURB, REMOVE EXISTING CURB TAPER AND REPLACE THE CURB TAPER AT 10% MAX SLOPE FROM OPEN SECTION TO 6" FULL CURB AND GUTTER SECTION
- 8 FLEXIBLE PAVEMENT STRUCTURE REPAIRS WILL CONSIST OF THE REMOVAL OF EXISTING BASE AND SURFACING AND REPLACEMENT WITH 6" DEPTH OF ASPHALTIC CONCRETE PAVEMENT CONFORMING TO ITEM 334, HOT MIX COLD LAID ASPHALT CONCRETE PAVEMENT. ALL WORK AND MATERIALS REQUIRED TO BRING THE REPAIRED PAVEMENT SECTION TO ITS DESIRED DEPTH WILL BE CONSIDERED SUBSIDIARY TO THE ASSOCIATED BID ITEMS.



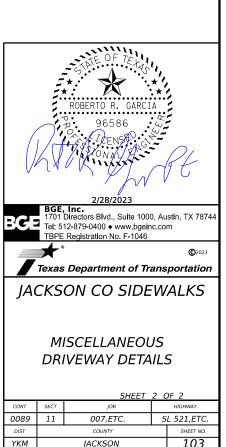
SHEET 1 OF 2				
CONT	SECT	JOB		HIGHWAY
0089	11	007,ETC.	SL 521,ETC.	
DIST	COUNTY			SHEET NO.
YKM		JACKSON		102

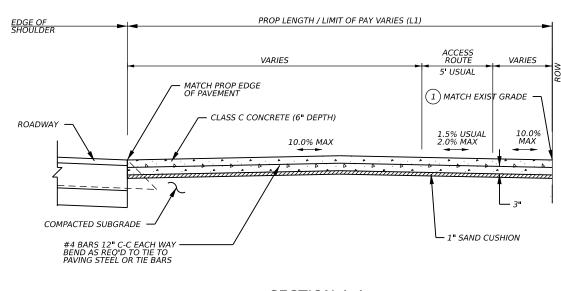






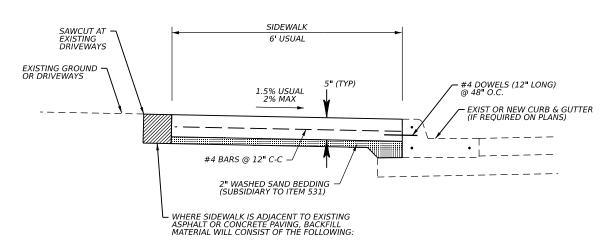
- SAW CUT JOINT AT LIMITS OF PAY LINE ON DRIVEWAYS OR INTERSECTIONS WITH EXISTING SURFACE.
- (2) CONTRACTOR TO CONTACT LANDOWNER ONE WEEK IN ADVANCE TO CONFIRM EASEMENT, WHERE NECCESSARY, PRIOR TO RECONSTRUCTING DRIVEWAY.
- REMOVAL OF EXISTING DRIVEWAY PAVEMENT, OTHER THAN CONC. PAVEMENT, IS CONSIDERED INCIDENTAL EXCAVATION TO ITEM 530





SECTION A-A
DRIVEWAYS (CONC)

DATE: 2/28/2023 9:55:03 AM



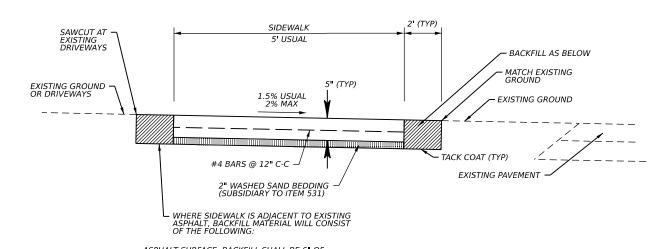
ASPHALT SURFACE, BACKFILL SHALL BE 6" OF ITEM 334 - HOT-MIX COLD LAID ASPHALT CONCRETE PAVEMENT

CONCRETE SURFACE, BACKFILL SHALL BE 6" OF ITEM 360 - CONCRETE PAVEMENT

VEGETATIVE AREAS, BACKFILL WILL CONSIST OF NATIVE MATERIALS AND WILL BE CONSIDERED SUBSIDIARY TO ITEM 531. MATERIAL EXCAVATED FOR SIDEWALK MAY BE USED IF APPROVED BY THE ENGINEER.

THIS WORK, INCLUDING EXCAVATION, EMBANKMENT, AND BACKFILL WILL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.

CUT AND RESTORE DETAIL ADJACENT TO CURB

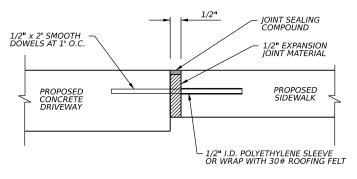


ASPHALT SURFACE, BACKFILL SHALL BE 6° OF ITEM 334 - HOT-MIX COLD LAID ASPHALT CONCRETE PAVEMENT

VEGETATIVE AREAS, BACKFILL WILL CONSIST OF NATIVE MATERIALS AND WILL BE CONSIDERED SUBSIDIARY TO ITEM 531. MATERIAL EXCAVATED FOR SIDEWALK MAY BE USED IF APPROVED BY THE ENGINEER.

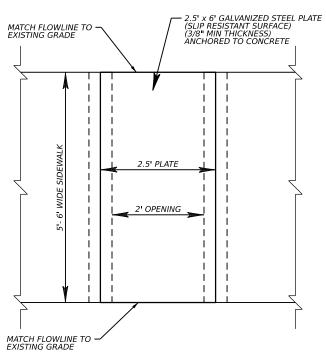
THIS WORK, INCLUDING EXCAVATION, EMBANKMENT, AND BACKFILL WILL BE CONSIDERED SUBSIDIARY TO ITEM 531.

CUT AND RESTORE DETAIL
OFFSET FROM EDGE OF PAVEMENT

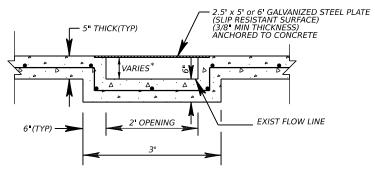


EXPANSION JOINT DETAIL

(ALL WORK & MATERIALS FOR EXPANSION JOINTS SHALL BE CONSIDERED SUBSIDIARY TO ITEM 531)



SIDEWALK TROUGH DETAIL (TY 1) 6
PLAN VIEW



SIDEWALK TROUGH DETAIL (TY 1)

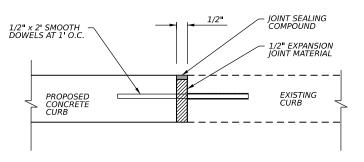
SECTION VIEW

NOTE * DEPTH

NOTE * DEPTH VARIES.(4" MIN) MATCH FLOWLINE TO EXISTING GRADE

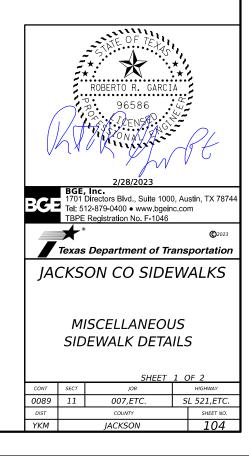
SIDEWALK GENERAL NOTES

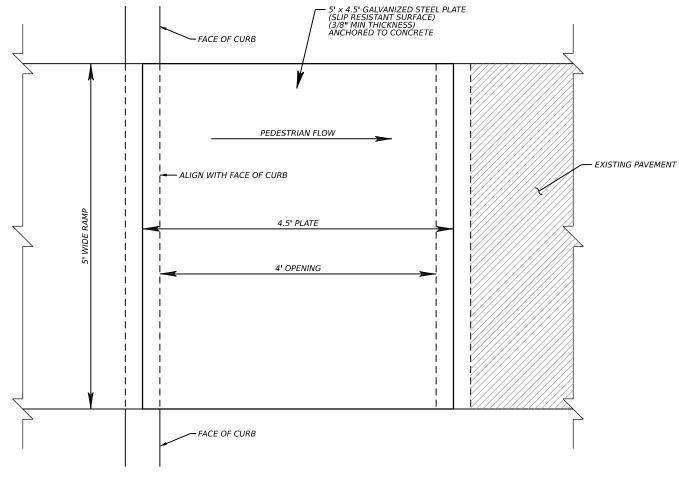
- PROVIDE 1/2" DEEP TOOLED OR SAW CUT JOINTS EVENLY SPACED AT 5' TYP / 10' MAX SPACING. PROVIDE MEDIUM BROOM FINISH TO CONCRETE SURFACE.
- 2 PROVIDE EXPANSION JOINTS AT 40' MAX SPACING.
- 3 EMBANKMENT, SAND, AND FLEX BASE MATERIAL FOR SIDEWALK FOUNDATION ARE SUBSIDIARY TO ITEM 531.
- do not block existing drainage paths or appurtenances with proposed sidewalk.
- (5) IF CURB & GUTTER AND SIDEWALK ARE NOT PLACED MONOLITHICALLY, PROVIDE 1/2" EXPANSION JOINT MATERIAL AND JOINT SEALING COMPOUND BETWEEN SIDEWALK AND CURB & GUTTER.
- 6 SIDEWALK TROUGH LABOR AND MATERIALS WILL BE PAID FOR UNDER ITEM 531 CONCRETE SIDEWALKS (SPECIAL)(TYPE A)(SY).



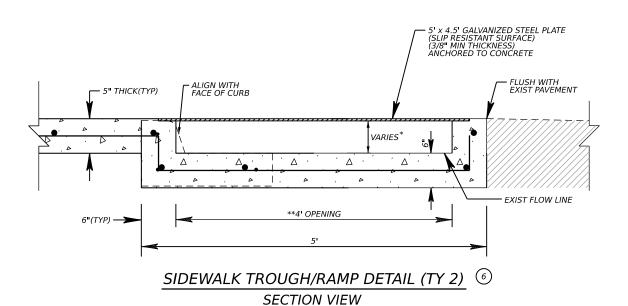
TIE INTO EXISTING CURB DETAIL

(ALL WORK & MATERIALS FOR EXPANSION JOINTS SHALL BE CONSIDERED SUBSIDIARY TO ITEM 529.





SIDEWALK TROUGH/RAMP DETAIL (TY 2) 6 PLAN VIEW



- * DEPTH VARIES.(4" MIN) MATCH FLOWLINE TO EXISTING GRADE
- ** ADJUST LENGTH AS NEEDED TO ENSURE RAMP GRADE DOES NOT EXCEED 8.3%. A GRADE OF 2% OR LESS IS PREFERABLE.

SIDEWALK GENERAL NOTES

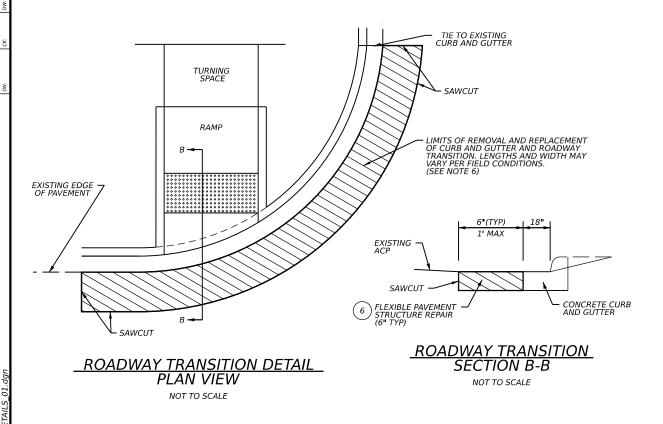
- PROVIDE 1/2" DEEP TOOLED OR SAW CUT JOINTS EVENLY SPACED AT 5' TYP / 10' MAX SPACING. PROVIDE MEDIUM BROOM FINISH TO CONCRETE SURFACE.
- 2 PROVIDE EXPANSION JOINTS AT 40' MAX SPACING.
- EMBANKMENT, SAND, AND FLEX BASE MATERIAL FOR SIDEWALK FOUNDATION ARE SUBSIDIARY TO ITEM 531.
- DO NOT BLOCK EXISTING DRAINAGE PATHS OR APPURTENANCES WITH PROPOSED SIDEWALK.
- IF CURB & GUTTER AND SIDEWALK ARE NOT PLACED MONOLITHICALLY, PROVIDE 1/2" EXPANSION JOINT MATERIAL AND JOINT SEALING COMPOUND BETWEEN SIDEWALK AND CURB & GUTTER.
- SIDEWALK TROUGH LABOR AND MATERIALS WILL BE PAID FOR UNDER ITEM 531 CONCRETE SIDEWALKS (SPECIAL)(TYPE A)(SY).

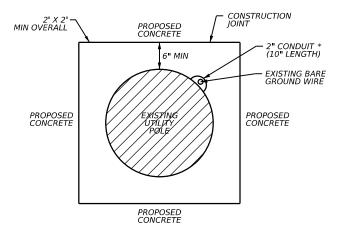


Texas Department of Transportation JACKSON CO SIDEWALKS

> *MISCELLANEOUS* SIDEWALK DETAILS

		SHEET	<u> 2 (</u>)F 2
CONT	SECT	JOB	HIGHWAY	
0089	11	007,ETC.	S	L 521,ETC.
DIST		COUNTY		SHEET NO.
YKM		JACKSON		105





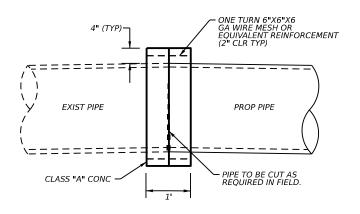
UTILITY POLE DETAIL TO PROTECT BARE GROUND WIRE

(ALL WORK IS CONSIDERED SUBSIDIARY TO ITEM 531. SIDEWALK OR CURB RAMP.) NOT TO SCALE

* CUT CONDUIT IN HALF LENGTHWISE AND PLACE ONE END FLUSH WITH TOP OF SIDEWALK. PREVENT CONCRETE FROM ENTERING CONDUIT. FILL CONDUIT WITH EXPANSION FOAM OR OTHER WATEPROOF SEALANT TO PREVENT WATER COLLECTION.

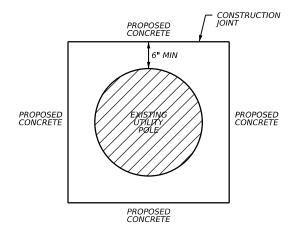
SIDEWALK GENERAL NOTES

- PROVIDE 1/2" DEEP TOOLED OR SAW CUT JOINTS EVENLY SPACED AT 5' TYP / 10' MAX SPACING. PROVIDE MEDIUM BROOM FINISH TO CONCRETE SURFACE.
- (2) PROVIDE EXPANSION JOINTS AT 40' MAX SPACING.
- EMBANKMENT, SAND, AND FLEX BASE MATERIAL FOR SIDEWALK FOUNDATION ARE SUBSIDIARY TO ITEM 531.
- DO NOT BLOCK EXISTING DRAINAGE PATHS OR APPURTENANCES WITH PROPOSED SIDEWALK.
- IF CURB & GUTTER AND SIDEWALK ARE NOT PLACED MONOLITHICALLY, PROVIDE 1/2" EXPANSION JOINT MATERIAL AND JOINT SEALING COMPOUND BETWEEN SIDEWALK AND CURB & GUTTER.
- FLEXIBLE PAVEMENT STRUCTURE REPAIRS WILL CONSIST OF THE REMOVAL OF EXISTING BASE AND SURFACING AND REPLACEMENT WITH 6" DEPTH OF ASPHALTIC CONCRETE PAVEMENT CONFORMING TO ITEM 334, HOT MIX COLD LAID ASPHALT CONCRETE PAVEMENT.
 ALL WORK AND MATERIALS REQUIRED TO BRING THE REPAIRED PAVEMENT SECTION TO ITS DESIRED DEPTH WILL BE CONSIDERED SUBSIDIARY TO THE ASSOCIATED WILL BE CONSIDERED SUBSIDIARY TO THE ASSOCIATED



PIPE COLLAR DETAIL

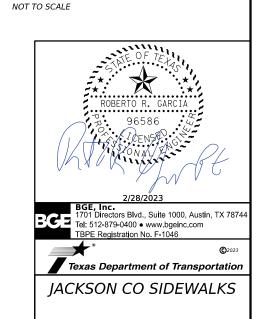
0089



UTILITY DETAIL (DETAIL TO BE USED FOR FIRE HYDRANT, MAILBOXES ETC.)

(ALL WORK IS CONSIDERED SUBSIDIARY TO ITEM 531, SIDEWALK OR CURB RAMP.,

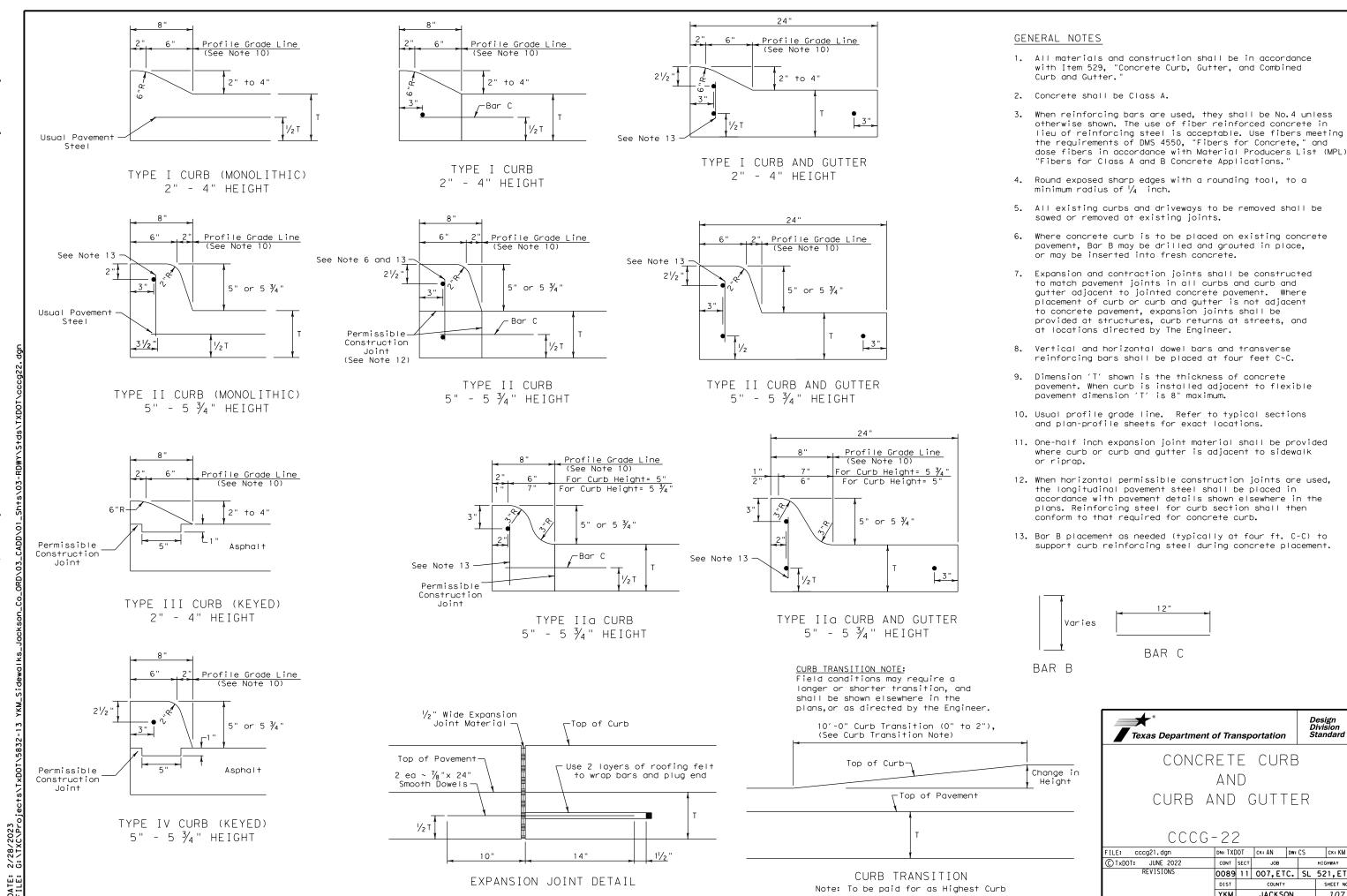
NOT TO SCALE



007,ETC. SL 521,ETC. 11

MISCELLANEOUS ROADWAY DETAILS

IACKSON



AND

CONT SECT

DN: TXDOT CK: AN DW: CS

JOB 0089 11 007, ETC. SL 521, ETC.

JACKSON

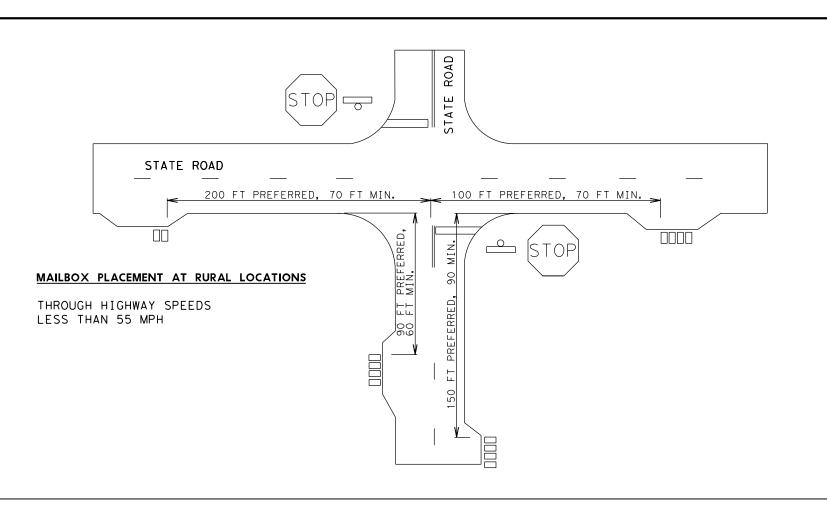
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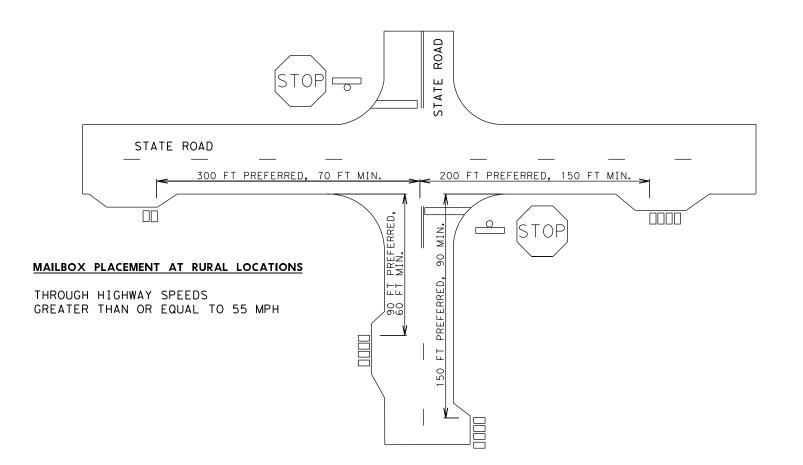
107

CCCG-22

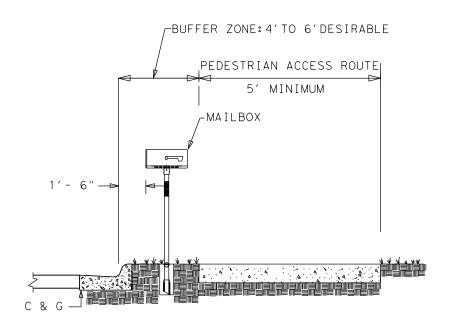
JACKSON

108





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.

SHEET 2 OF 2

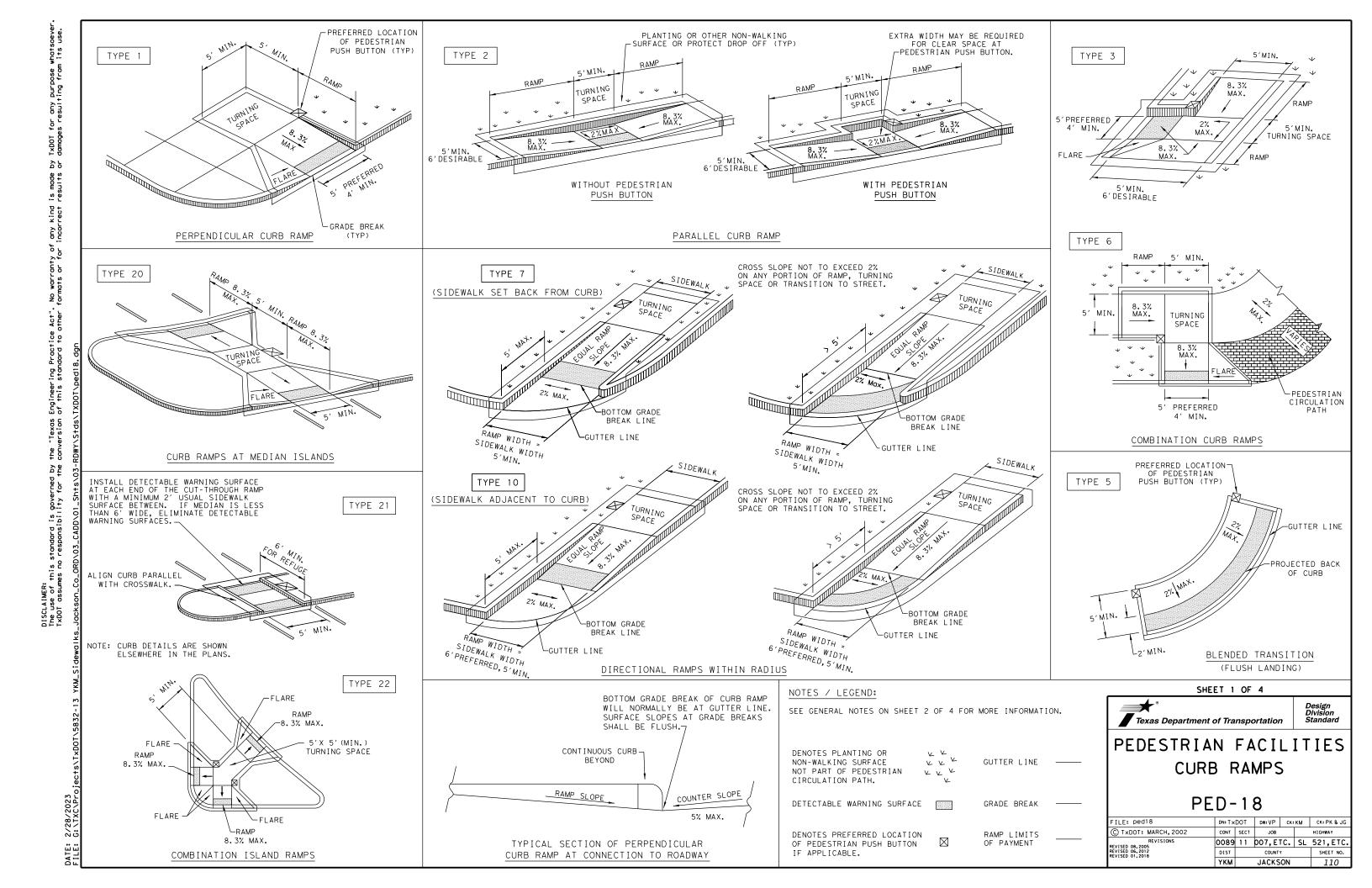


Maintenance Division Standard

MAILBOX PLACEMENT CURBS & INTERSECTIONS

MBP(2)-22

FILE: MBP-22. DGN	DN: VS		CK:	DW: 1	'S		CK:	
© TxDOT OCTOBER 2022	CONT	SECT	JOB			HIGHWAY SL 521.ETC.		
REVISIONS	0089	11	007, ET	c.	SL	52	1,ETC.	
12/2012 5/2014	DIST	COUNTY				SHEET NO.		
	YKM		JACKS	ON			109	



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^\prime 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' imes 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
- 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 applicabble standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

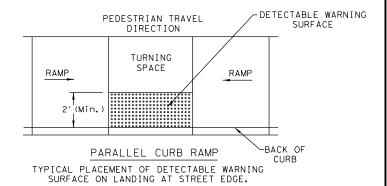
- 19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface 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)

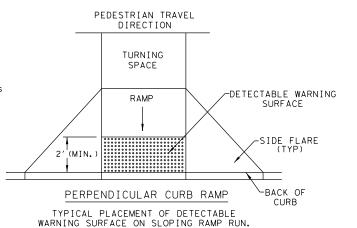
- 25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
- 26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

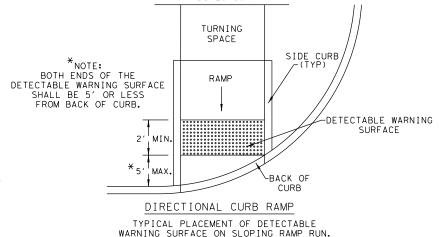
SIDEWALKS

- 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 around 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
- 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.

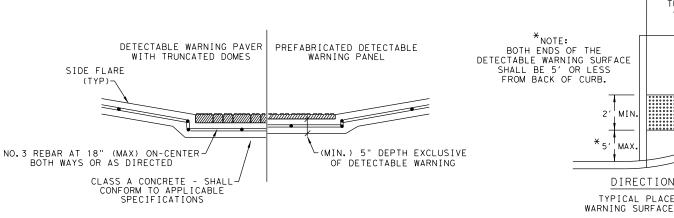


DETECTABLE WARNING SURFACE DETAILS





PEDESTRIAN TRAVEL DIRECTION



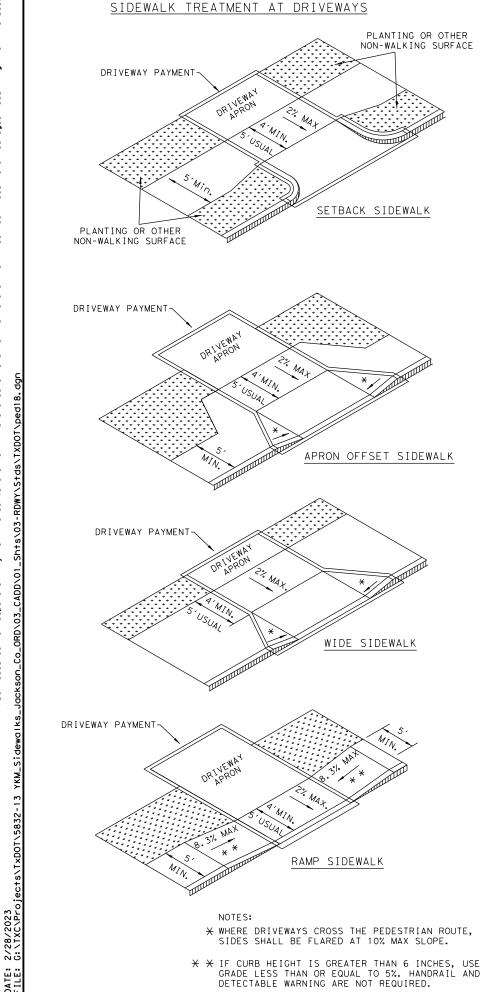
SECTION VIEW DETAIL CURB RAMP AT DETECTIBLE WARNINGS

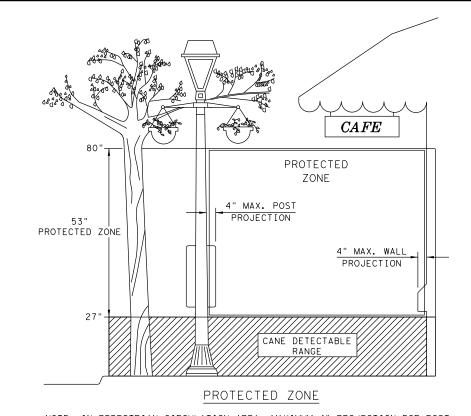




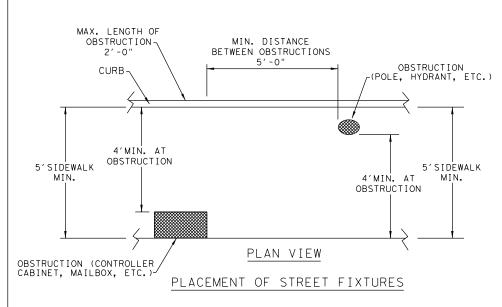
PFD-18

ILE: ped18	DN: T x	DOT	DW: VP	CK:	км	CK: PK & J	O
C) T×DOT: MARCH, 2002	CONT	SECT	JOB			H]GHWAY	
REVISIONS EVISED 08.2005	0089	11	007, E	rc.	SL	521,ET0	.:
EVISED 06,2012 EVISED 01,2018	DIST	COUNTY				SHEET NO.	
	YKM		JACKS	ΩN		111	

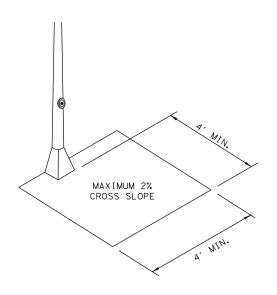




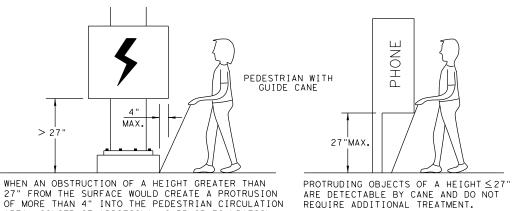
NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



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



CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"





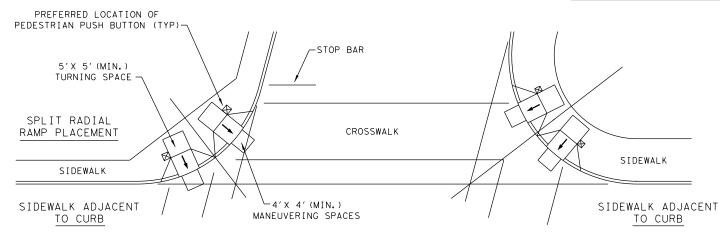
PEDESTRIAN FACILITIES

CURB RAMPS

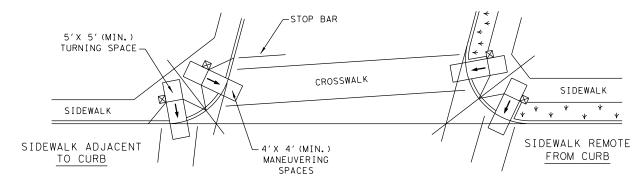
PED-18

FILE: ped18	DN: T x	DOT	DW: VP	DW: VP CK: H		CK: PK & JG
C TxDOT: MARCH, 2002	CONT	SECT	JOB			HIGHWAY
REVISIONS REVISED 08.2005	0089	11	007, E	rc.	SL	521,ETC.
REVISED 06,2012 REVISED 01,2018	DIST		COUNT	Y		SHEET NO.
	YKM	JACKSON				112

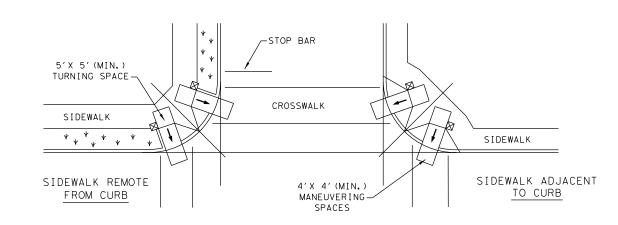
TYPICAL CROSSING LAYOUTS SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



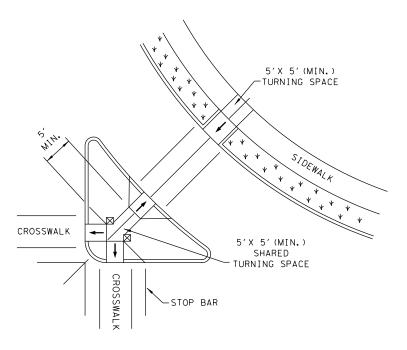
SKEWED INTERSECTION WITH "LARGE" RADIUS



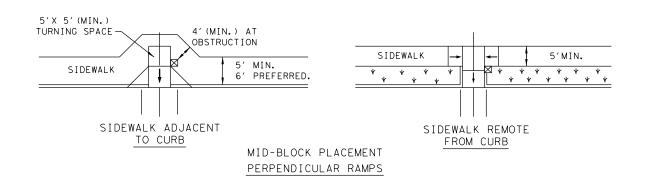
SKEWED INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION W/FREE RIGHT TURN & ISLAND



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.

F I L E V V V

Texas Department of Transportation	Design Division Standard
PEDESTRIAN FACIL	ITIES
CURB RAMPS	

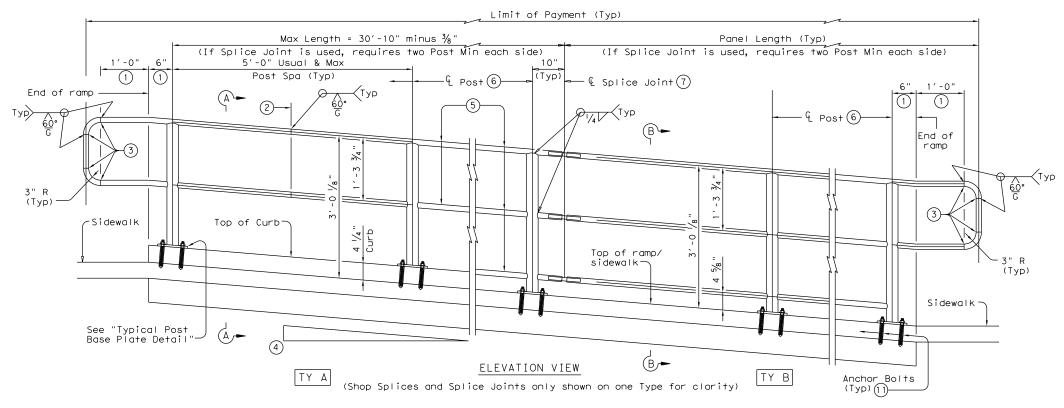
SHEET 4 OF 4

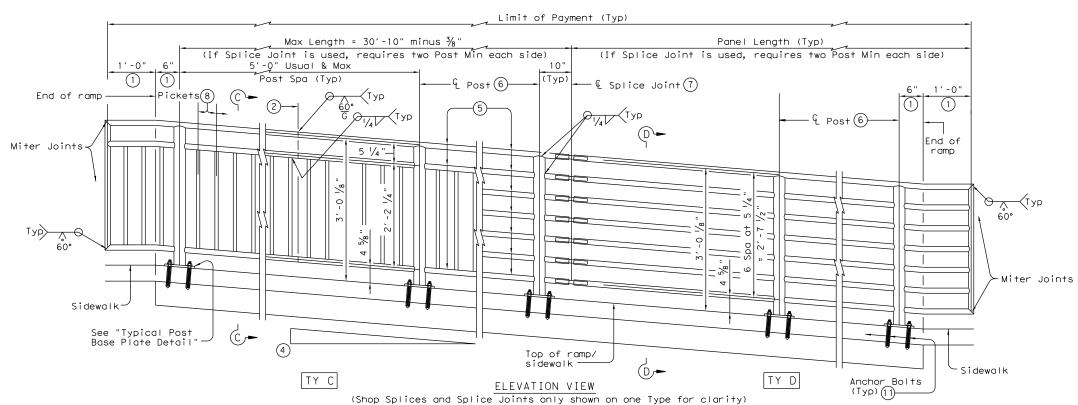
PED-18

E: ped18	DN: T x	DOT	DW: VP	CK:	KM	CK: PK & JG
T×DOT: MARCH, 2002	CONT	SECT	JOB			HIGHWAY
REVISIONS SED 08,2005	0089	11	007, E	TC.	SL	521,ETC.
SED 06,2012 SED 01,2018	DIST		COUNT	SHEET NO.		
	YKM		JACKS	ON		113







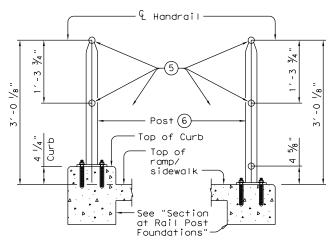


- (1) Parallel to ground.
- 2 One shop splice per panel is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
- (3) Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
- 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 $1/\!\!/_2$ " Dia. Standard Pipe (1.900" O.D., 0.145" wall thickness). Parallel to ramp / sidewalk. Provide holes as needed in 1 $1/\!\!/_2$ " Dia. pipe for galvanizing drainage and venting.

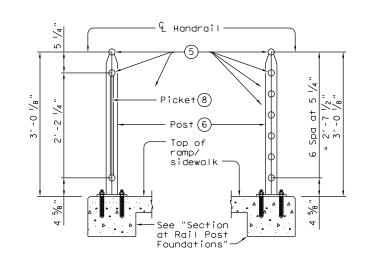
- (6) 2 ½" Dia. Standard Pipe (2.875" O.D., 0.203" wall thickness). See "Post Mount Detail" for crimping and trimming post to fit Dia. of top rail. Provide holes as needed in post for galvanizing drainage and venting. Plumb all posts.
- (7) See "Handrail Fabrication Details" for Splice Joints.
- (8) ℓ %" Dia. Round Bar equal spacing at 4 $\frac{1}{2}$ " 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.
- (1) See "General Notes" for anchor bolt information.

REC	OMMENDED USAGE 90
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)

<u>SECTION B-B</u> (Showing Handrail TY B)



SECTION C-C (Showing Handrail TY C)

 $\frac{\text{SECTION D-D}}{\text{(Showing Handrail TY D)}}$

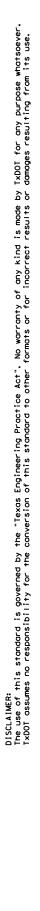
SHEET 1 OF 3

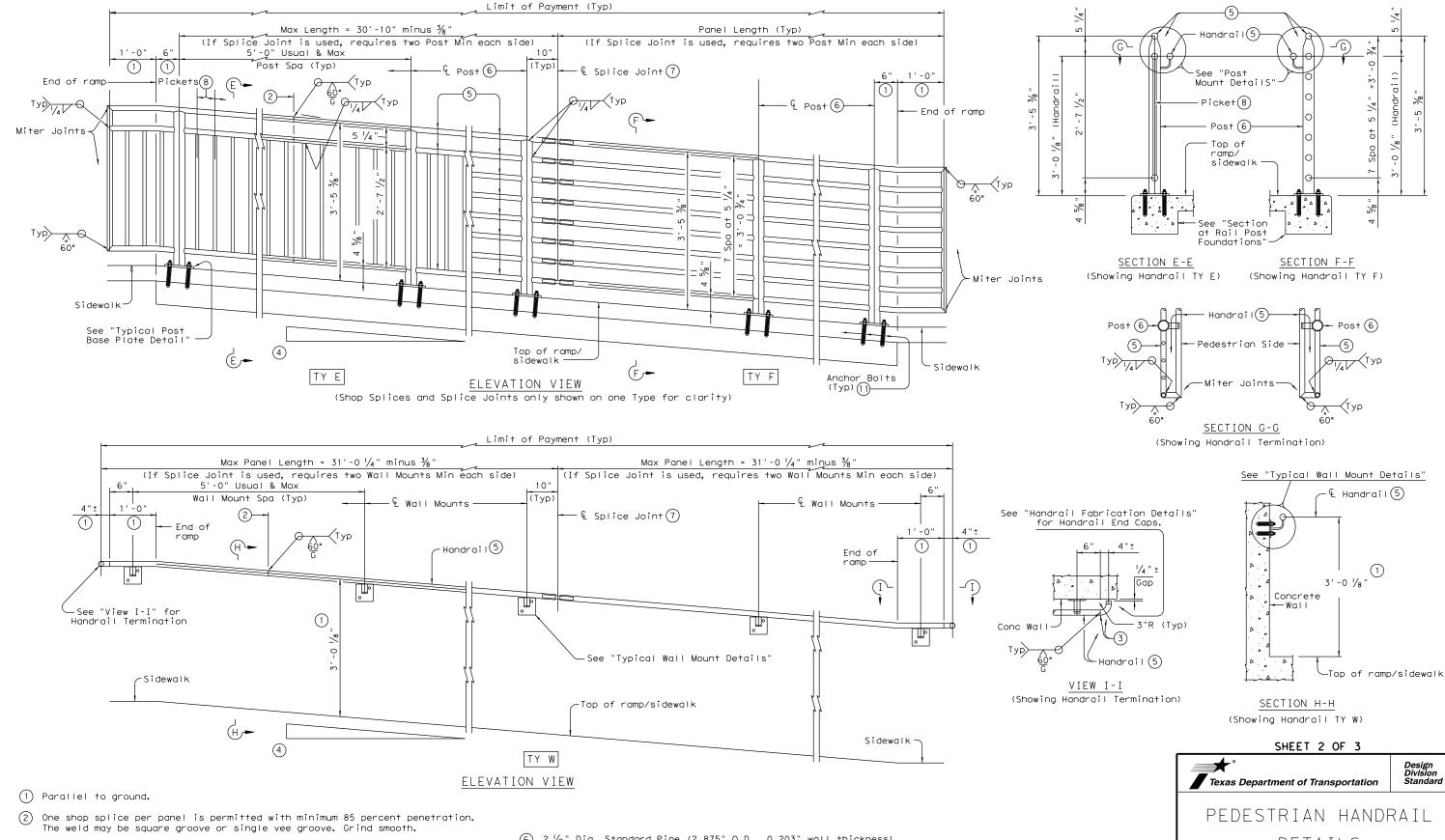


PEDESTRIAN HANDRAIL
DETAILS

PRD-13

FILE: prd13.dgn	DN: Tx[TOO	CK: AM	D₩s	JTR		ck: CGL
ℂTxDOT Decmeber 2006	CONT	SECT	JOB			HIG	HWAY
	0089	11	007, ET	с.	SL	52	1,ETC.
REVISED MAY, 2013 (VP)	DIST	COUNTY			HIGHWAY SL 521, ETC SHEET NO.	SHEET NO.	
	YKM		JACKSO	NC	SL 521, ETC		114





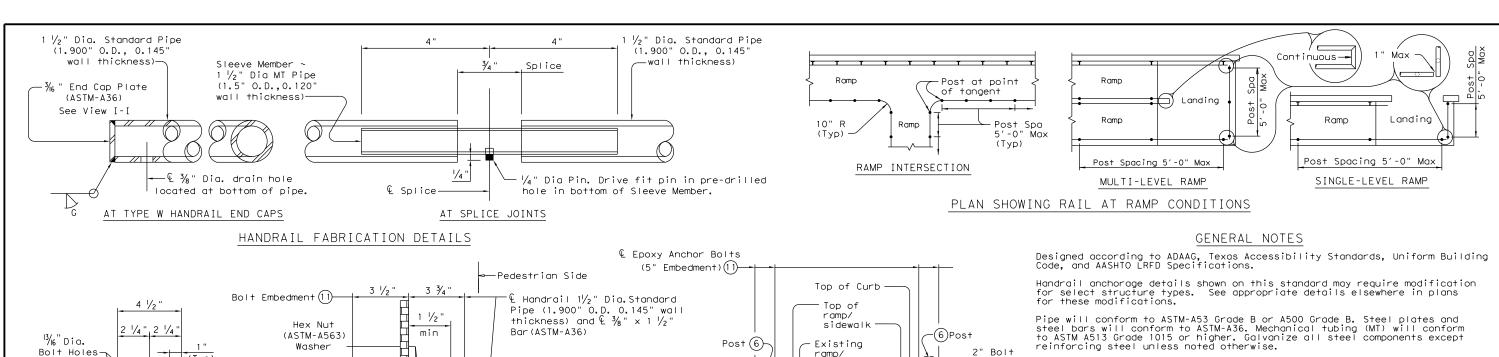
- Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
- See Ramp Details located elsewhere in plans for ramp slope and dimensions. Maximum ramp slope will not exceed 8.3 percent. Level landing required for each 30" rise if grade exceeds 5 percent.
- 1 $\frac{1}{2}$ " Dia. Standard Pipe (1.900" O.D., 0.145" wall thickness). Parallel to ramp / sidewalk. Provide holes as needed in 1 $\frac{1}{2}$ " Dia. pipe for galvanizing drainage and venting.
- 6) 2 $\frac{1}{2}$ " 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) ℓ %" Dia. Round Bar equal spacing at 4 ½" Max. Plumb all pickets.
- (11) See "General Notes" for anchor bolt information.

PEDESTRIAN HANDRAIL DETAILS PRD-13

5 1/4

LE: prd13.dgn	DN: TX[100	CK: AM	DW:	JTR		ck: CGL
TxDOT December 2006	CONT	SECT	JOB			HIG	HWAY
	0089	11	007, ET	SL	521,ETC.		
VISED MAY, 2013 (VP)	DIST		COUNTY			HIGHWAY	HEET NO.
	YKM		JACKSO	N			115

(Typ)



2" Bol+(11)-

Projection '

(Typ)

(Typ)

 $\$ % " 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.

WITHOUT CURB

€ 3%" × 1 ½" Bar

3%" x 1 1/2" Bar

(ASTM-A36)

(ASTM-A36)

TYPICAL WALL MOUNT DETAILS

€ Epoxy Anchor

→ Bar (ASTM-A36)

^{_}%" Base Plate

(ASTM-A36)

11/2 '

SECTION J-J

Bolts (Typ)(11)-

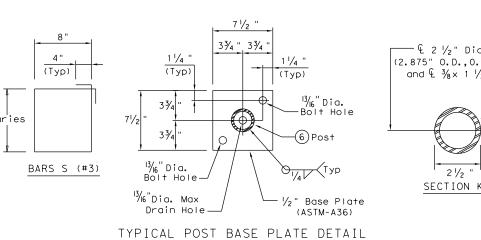
- 1 $\frac{1}{2}$ " Dia. Standard Pipe (1.900" O.D., 0.145" wall thickness). Parallel to ramp/sidewalk. Provide holes as needed in 1 $\frac{1}{2}$ " Dia. pipe for galvanizing drainage and venting.
- 2 $\frac{1}{2}$ " Dia. Standard Pipe (2.875" O.D., 0.203" wall thickness). Plumb all posts. See "Post 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.

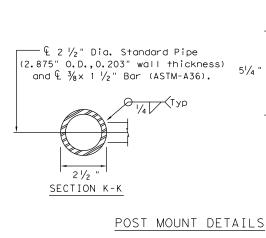
3%" Base Plate,

(ASTM-A36) -

SECTION AT WALL MOUNT

- $\ensuremath{\text{(1)}}$ See "General Notes" for anchor bolt information.
- (2) Bars S(#3) spaced at 12" Max (Spaced 3" from outside edge of overall length of Ramp/Sidewalk).
- (3) Provide 1 $\frac{1}{2}$ " end cover to Bars D(#4) from outside edge of overall length of Ramp/Sidewalk.

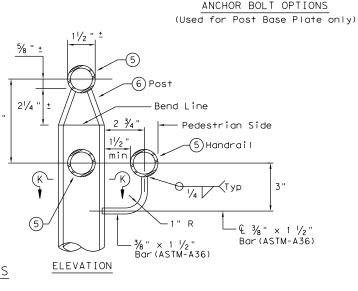




Typ

└1 ¼" Bolt

Projection (Typ)



sidewalk

Bars S(#3)(12)

SECTION AT RAIL POST FOUNDATIONS

Flush or 1/16 " Max

reinforcina

6"Min.

Varies

(Typ)

Curb (Typ)

2"

(Typ)

WITH CURB

Tack

Weld:

CAST-IN-PLACE (1)

2" Min.

-Thread Length

8"Embed

(11) Projection 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 \sim #4 = 1'-5" Epoxy coated \sim #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 $\frac{5}{8}$ " Dia. ASTM A36 threaded rods with one hex nut and one hardened steel washer at each bolt. $\frac{5}{8}$ " Dia. threaded rod embedment depth for wall mounts is 3 $\frac{1}{2}$ " 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 $\frac{5}{8}$ " 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.

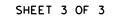
For all handrails, erection drawings will be submitted to the Engineer for approval to ensure proper installation.

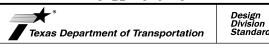
Drawings will show handrail mount locations with bolts setting, spacing, ramp slope, and/or splice joint locations, and handrail lengths with identification showing where each handrail goes on the layout.

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 $\frac{1}{8}$ " by grinding.

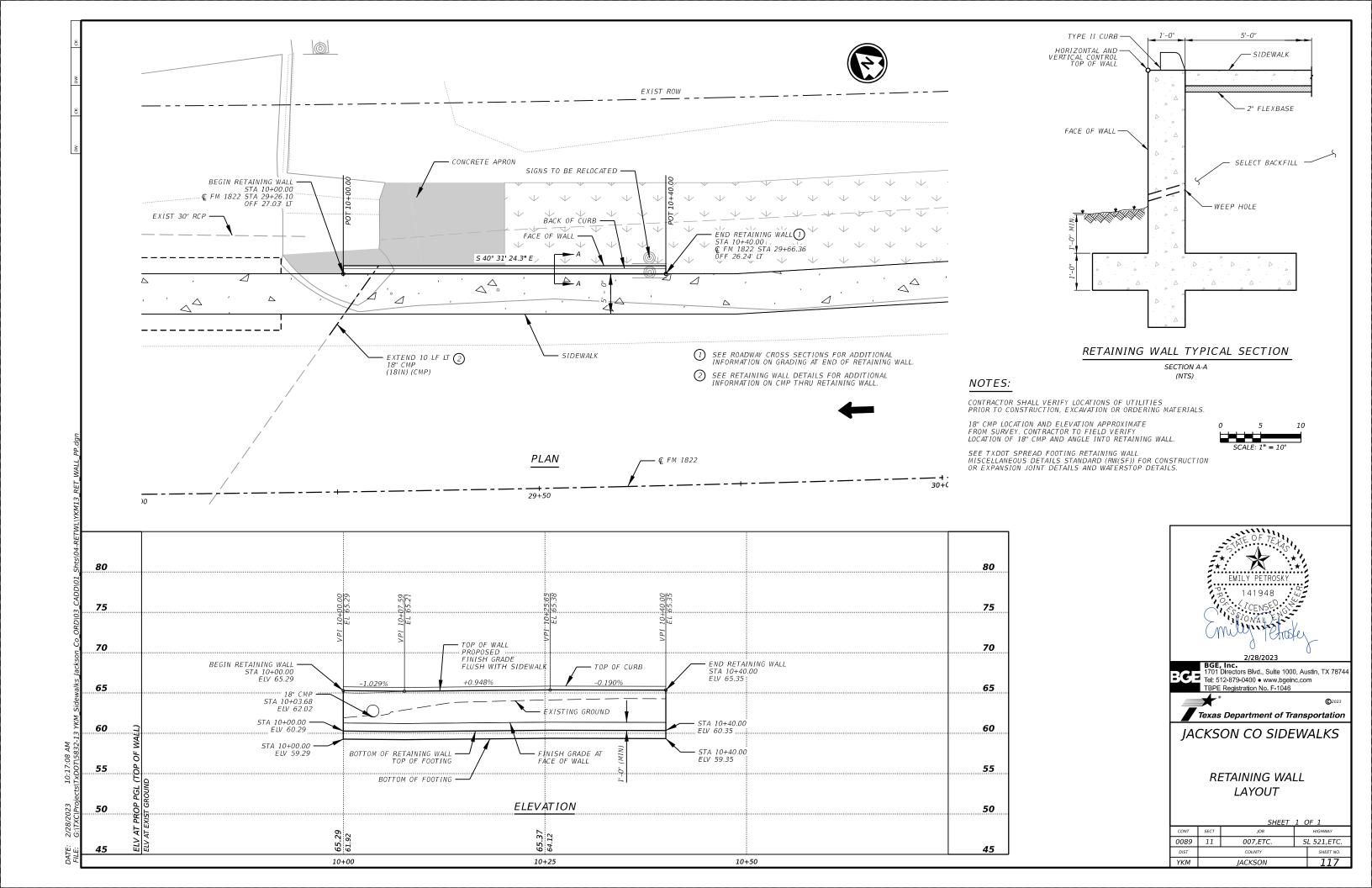




PEDESTRIAN HANDRAIL DETAILS

PRD-13

FILE: prd13.dgn	DN: TxDOT	CK: AM	D₩s	JTR	ck: CGL	
◯TxDOT December 2006	CONT SE	ст јов			H]GHWAY	
REVISIONS	0089 1	1 007,E	TC.	SL	521,ETC.	
REVISED MAY, 2013 (VP)	DIST	COUNTY			SHEET NO.	
	YKM	ΙΔΟΚ	SON		116	



DOWFL F AT

BAR	SPACING (IN)	NO.	SIZE	LENGTH	WEIGHT (LB)
Α	10	49	#4	7' - 8"	251
В	10	49	#4	5' - 11"	194
С	10	49	#4	5' - 0"	164
D	12	12	#5	39' - 6"	494
Ε	10	49	#4	5' - 0"	164
К	10	49	#4	3' - 10"	125
T	12	10	#5	39' - 6"	412
Н	12	6	#5	39' - 6"	247
J	-	4	#4	5' - 6"	15
DOWEL F	12	13*	#8	3' - 0"	104
DOWEL G	24	21	#5	0' - 6"	11
LF	12	41	#5	8' - 10"	360
REINFORC	ING STEEL			LB	2541

CY

460.0

NOTE: QUANTITIES FOR CONTRACTOR INFORMATION ONLY

*PER CONSTRUCTION JOINT

CLASS C CONCRETE (WALL + FOOTING)

1 CUT BARS AT CONSTRUCTION JOINTS TO MAINTAIN A 3" COVER

2 ESTIMATED DIMENSION BASED ON SURVEY DATA PROVIDED. FIELD VERITY PRIOR TO COMMENCING WORK.

GENERAL NOTES:

DESIGNED ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION (2020).

ALL CONCRETE SHALL BE f'c = 3,600 PSI.

ALL REINFORCING STEEL SHALL BE GRADE 60.

WALLS ARE DESIGNED ASSUMING UNIT WEIGHT OF SOIL = 120 PCF AND A FRICTION ANGLE = 30° FOR FOUNDATION AND RETAINED SOIL.

CONTRACTOR SHALL VERIFY LOCATIONS OF UTILITIES PRIOR TO CONSTRUCTION OR EXCAVATION

UNTIL THE SIDEWALK IS COMPLETE, LATERAL SUPPORT FOR THE WALL WILL BE REQUIRED.

SEE SIDEWALK PLAN LAYOUT FOR LOCATIONS OF SIDEWALKS AND RETAINING WALLS.

SEE TXDOT CCCG-22 STANDARD FOR CURB DETAILS.

SEE TXDOT $\mathit{RW}(\mathit{SF})$ STANDARD FOR ADDITIONAL INFORMATION ON RETAINING WALL CONSTRUCTION JOINTS.

SEE MISCELLANEOUS SIDEWALK DETAILS FOR ADDITIONAL INFORMATION ON SIDEWALK REINFORCEMENT, JOINTS AND QUANTITIES.

ALL CONCRETE CAST AGAINST EARTH MUST HAVE A MINIM OF 3" COVER.

ALL CONCRETE EXPOSED TO WEATHER MUST HAVE A MINIMUM OF 2" CLEAR COVER.

NO SPLICES OF REINFORCEMENT SHALL BE PERMITTED EXCEPT AS SHOWN ON PLANS.

ALL EXPOSED CONCRETE EDGES SHALL HAVE 3/4" CHAMFER.

SEE SIDEWALK PLAN LAYOUT FOR LOCATION OF EXISTING 18" RCP.

COVER DIMENSIONS ARE CLEAR DIMENSIONS, UNLESS NOTED OTHERWISE. REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BAR.

CONSTRUCTION OR EXPANSION JOINT SPACING SHALL NOT EXCEED 3 X WALL HEIGHT. WALL HEIGHT IS DEFINED AS THE DIMENSION FROM BOTTOM OF FOOTING TO TOP OF WALL. CURB CONSTRUCTION OR EXPANSION JOINT SPACING SHALL MATCH WALL CONSTRUCTION OR EXPANSION JOINT SPACING.

RETAINING WALL TRANSVERSE SECTION

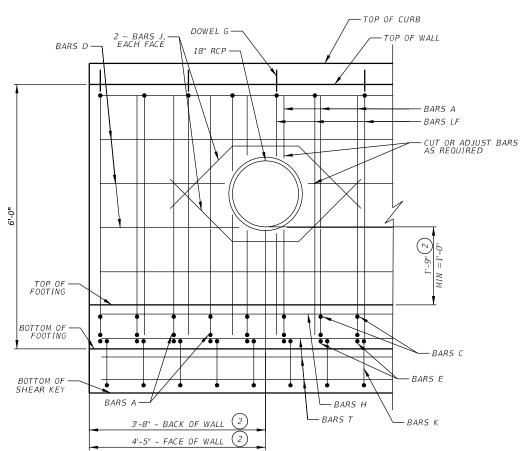
5'-6"

-BARS C

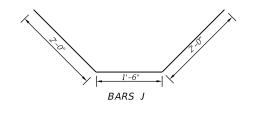
BARS K

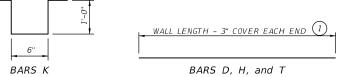
-BARS H

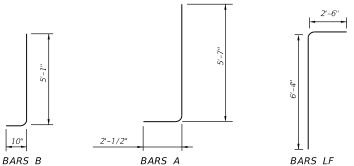
2" FLEX BASE CUSHION

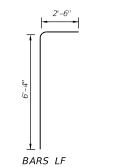


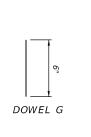
RETAINING WALL ELEVATION - RCP CUTOUT



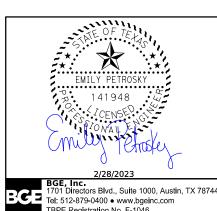








DOWEL F

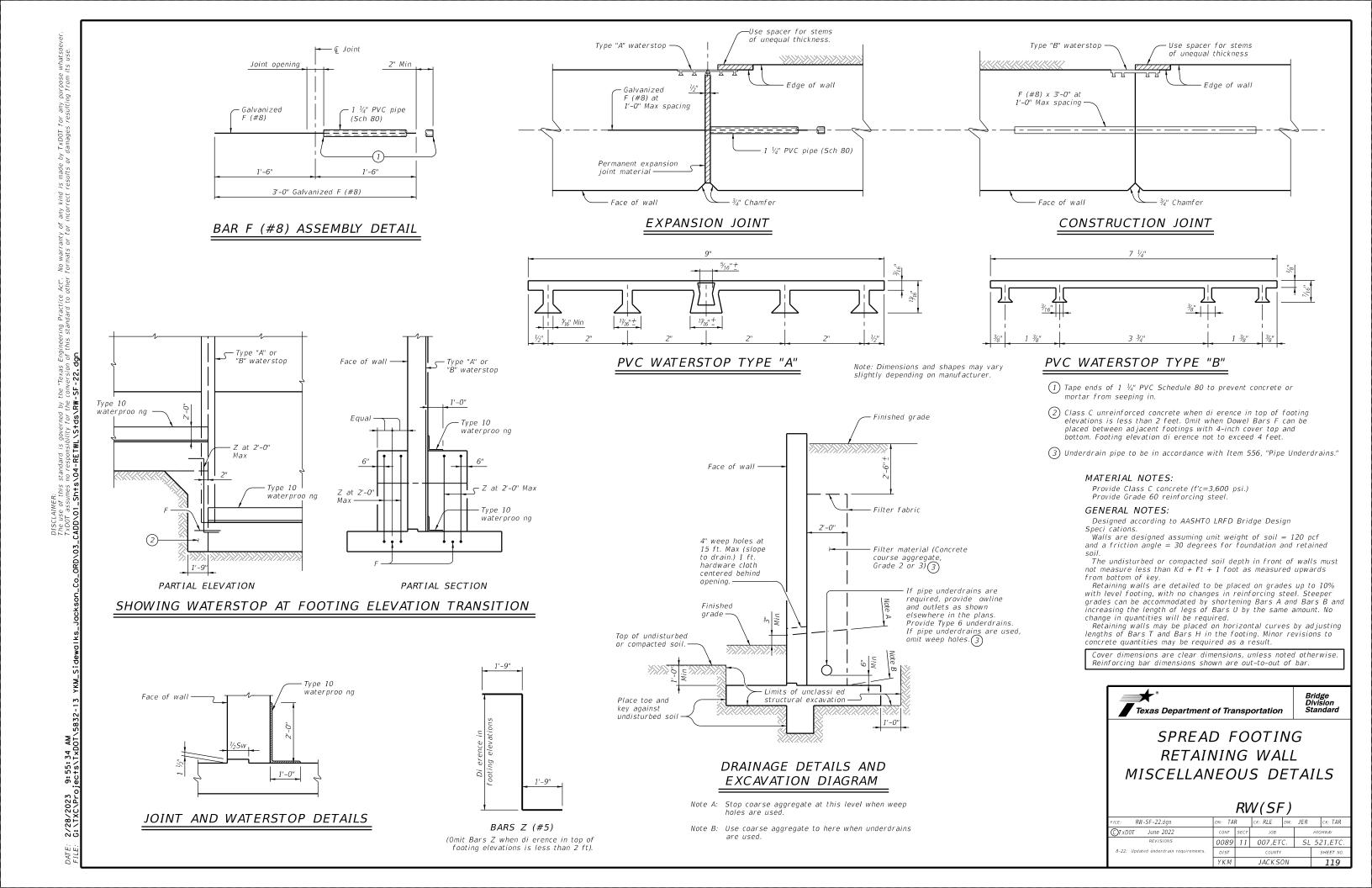


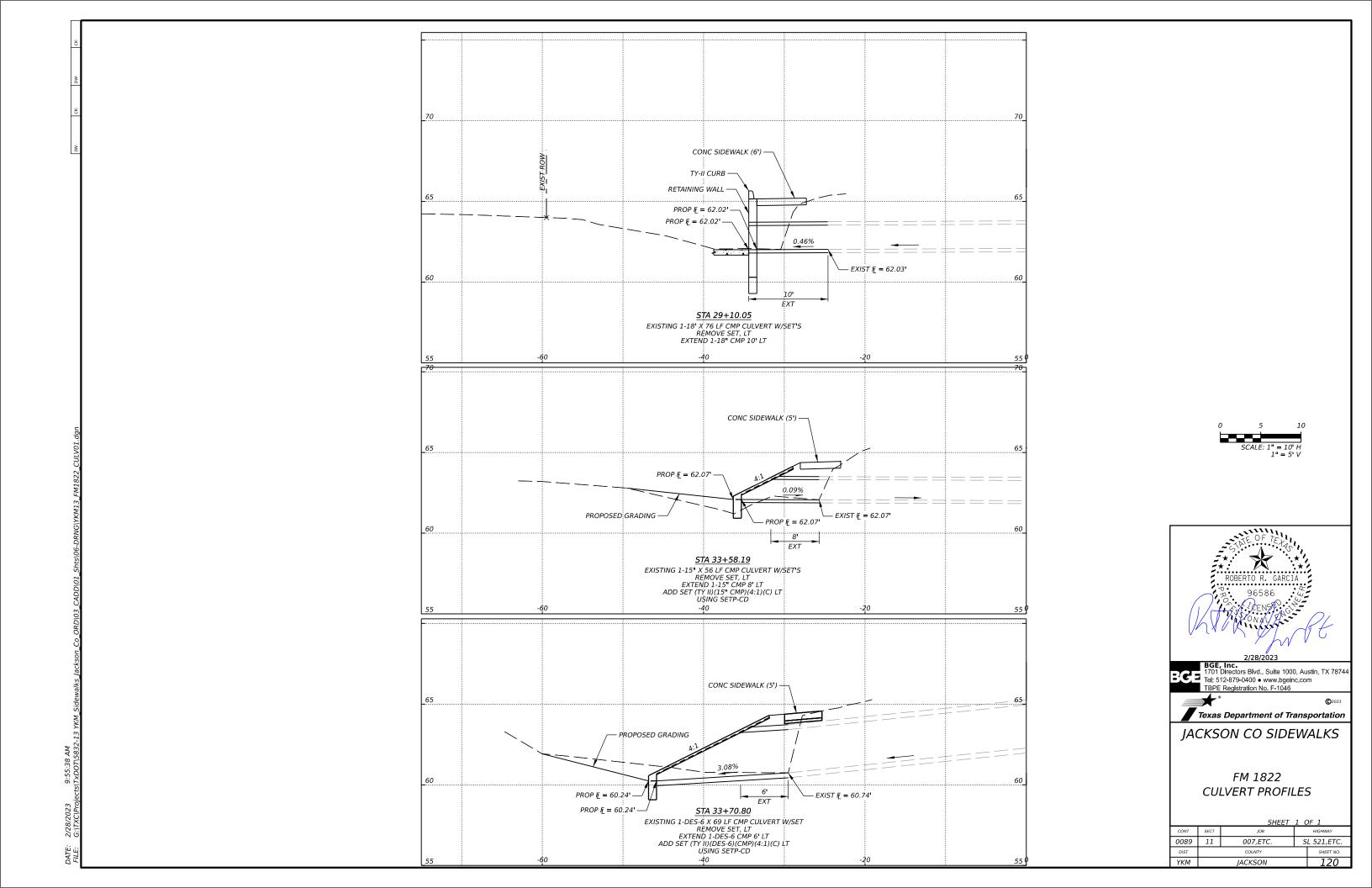
TBPE Registration No. F-1046

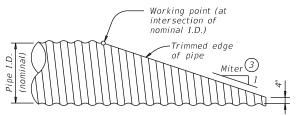
Texas Department of Transportation JACKSON CO SIDEWALKS

> RETAINING WALL **DETAILS**

SHEET 1 OF 1 SL 521,ETC. 0089 007,ETC. 11 JACKSON



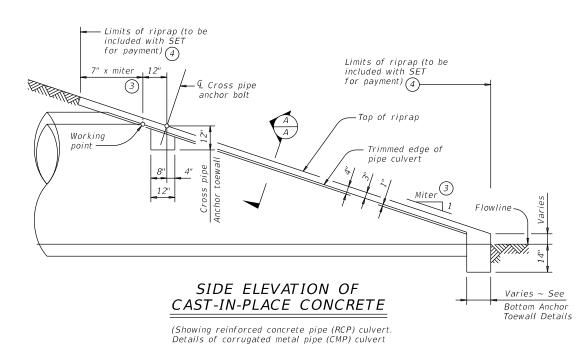




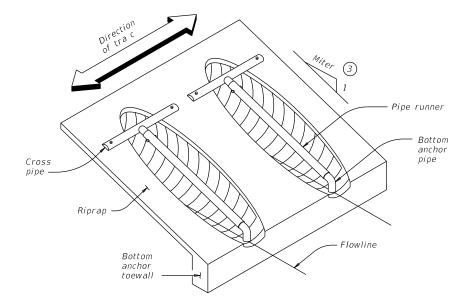
mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

(Showing corrugated metal pipe (CMP) culvert. Details of reinforced concrete pipe (RCP) culvert are similar.)



are similar. Pipe runners not shown for clarity)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

(Showing installation with no skew.)

CROSS PIPE LENGTHS AND PIPE RUNNER LENGTHS 12

			Pipe Runner Length											
Nominal Culvert I.D.	Pipe Culvert Spa ~ G	Cross Pipe Length	3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
carvere 1.D.	3pa 0	Length	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
24"	1' - 7''	3' - 5''	N/A	N/A	N/A	5' - 10''	N/A	N/A	N/A	8' - 1''	N/A	N/A	N/A	12' - 9"
27"	1' - 8"	3' - 8''	N/A	N/A	5' - 5''	6' - 11''	N/A	N/A	7' - 7"	9' - 7''	N/A	N/A	11' - 11"	14' - 11"
30"	1' - 10''	3' - 11''	N/A	N/A	6' - 4''	8' - 0''	N/A	N/A	8' - 9''	11' - 0''	N/A	N/A	13' - 8"	17' - 0"
33"	1' - 11''	4' - 2''	6' - 2"	6' - 5"	7' - 3''	9' - 1''	8' - 6''	8' - 10''	10' - 0''	12' - 5"	13' - 3"	13' - 9"	15' - 5"	19' - 2"
36"	2' - 1"	4' - 5''	6' - 11''	7' - 3"	8' - 2''	10' - 2"	9' - 6''	9' - 11''	11' - 2"	13' - 10''	14' - 9"	15' - 3"	17' - 2"	21' - 3"
42"	2' - 4"	4' - 11''	8' - 6"	8' - 10''	9' - 11''	12' - 4"	11' - 7"	12' - 0''	13' - 6''	16' - 8"	17' - 9"	18' - 5"	20' - 8"	25' - 7"
48''	2' - 7"	5' - 5"	10' - 1''	10' - 5"	11' - 9''	N/A	13' - 7''	14' - 2"	15' - 10''	N/A	20' - 9"	21' - 6"	24' - 2"	N/A
54"	3' - 0"	5' - 11"	11' - 8"	12' - 1"	N/A	N/A	15' - 8''	16' - 3''	N/A	N/A	23' - 10"	24' - 8"	N/A	N/A
60"	3' - 3"	6' - 5"	13' - 3"	N/A	N/A	N/A	17' - 9''	N/A	N/A	N/A	26' - 10"	N/A	N/A	N/A

TYPICAL PIPE CULVERT MITERS

				(3)
Side Slope	0° Skew	15° Skew	30° Skew	45° Skew
3:1	3:1	3.106:1	3.464:1	4.243:1
4:1	4:1	4.141:1	4.619:1	5.657:1
6:1	6:1	6.212:1	6.928:1	8.485:1

CONDITIONS WHERE PIPE RUNNERS ARE NOT REQUIRED (2)

	NOT REQUIR			PIPE RU	. – – – –	
Nominal Culvert I.D.	Single Pipe Culvert	Multiple Pipe Culverts	Pipe Size	Pipe 0.D.	Pipe I.D.	Max Pipe Runner Lengt
12" thru 21"	Skews thru 45°	Skews thru 45°	2" STD	2.375"	2.067"	N/A
24"	Skews thru 45°	Skews thru 30°	3" STD	3.500"	3.068"	10' - 0"
27"	Skews thru 30°	Skews thru 15°	4" STD	4.500"	4.026"	19' - 8''
30"	Skews thru 15°	Skews thru 15°	5" STD	5.563"	5.047"	34' - 2"
<i>33</i> "	Skews thru 15°	Always required				
36"	Normal (no skew)	Always required				
42" thru 60"	Always required	Always required				

ESTIMATED CONCRETE RIPRAP QUANTITIES (CY) (5)

Nominal		3:1 Sid	e Slope			4:1 Sid	e Slope			6:1 Sid	e Slope	
Culvert I.D.	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
12"	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.8
15"	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9
18"	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	1.0
21"	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	1.2
24"	0.6	0.7	0.7	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.1	1.3
27"	0.7	0.7	0.8	0.9	0.8	0.9	0.9	1.1	1.1	1.1	1.2	1.4
30"	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.2	1.2	1.2	1.3	1.6
33"	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.3	1.3	1.4	1.5	1.7
36"	0.9	0.9	0.9	1.1	1.1	1.1	1.2	1.4	1.4	1.5	1.6	1.8
42"	1.0	1.0	1.1	1.3	1.2	1.3	1.3	1.6	1.6	1.7	1.8	2.1
48''	1.1	1.1	1.2	N/A	1.4	1.4	1.5	N/A	1.9	1.9	2.1	N/A
54"	1.3	1.3	N/A	N/A	1.6	1.6	N/A	N/A	2.1	2.1	N/A	N/A
60"	1.4	N/A	N/A	N/A	1.7	N/A	N/A	N/A	2.3	N/A	N/A	N/A

- (1) Provide pipe runner of the size shown in the tables. Provide cross pipe of the same size as the pipe runner. Provide cross pipe stub out and bottom anchor pipe of the next smaller size pipe as shown in the Standard Pipe Sizes and Max Pipe Runner Lengths table.
- 2) This standard allows for the placement of only one pipe runner across each culvert pipe opening. In order to limit the clear opening to be traversed by an errant vehicle, the following conditions must be met:

For 60" culvert pipes, the skew must not exceed 0°. For 54" culvert pipes, the skew must not exceed 15°. For 48" culvert pipes, the skew must not exceed 30°. For all culvert pipe sizes 42" and less, the skew must

If the above conditions cannot be met, the designer should consider using a safety end treatment with ared wings. For further information, refer to the TxDOT Roadway Design Manual.

- Miter = slope of mitered end of pipe culvert.
- (4) Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap".
- (5) Quantities shown are for one end of one reinforced concrete pipe (RCP) culvert. For multiple pipe culverts or for corrugated metal pipe (CMP) culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.

SHEET 1 OF 2

STANDARD PIPE SIZES AND

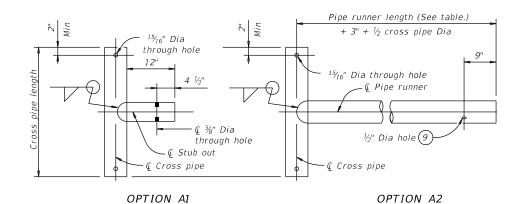


SAFETY END TREATMENT

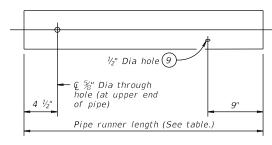
FOR 12" DIA TO 60" DIA PIPE CULVERTS TYPE II ~ CROSS DRAINAGE

SETP-CD

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)T x D O T	February 2020	CONT	SECT		JOB			HIG	HWAY	,
	REVISIONS	0089	11	00	7, ET	С.	SL	52	1,	ETC.
		DIST			COUNTY			Γ.	SHEE	T NO.
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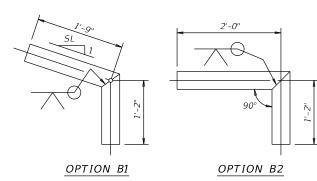


CROSS PIPE AND CONNECTIONS DETAILS

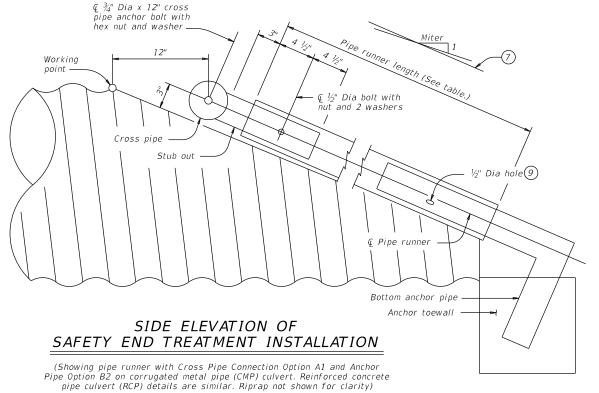


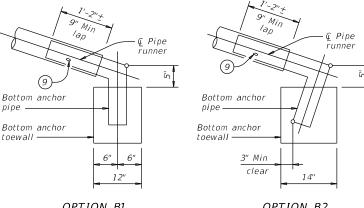
NOTE: The separate pipe runner shown is required

PIPE RUNNER DETAILS



- BOTTOM ANCHOR PIPE DETAILS 10
- (4) Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap".
- 6 Recommended values of side slope are 3:1, 4:1, and 6:1. All quantities, calculations, and dimensions shown herein are based on these recommended values. Slope of 3:1 or atter is required for vehicle safety.
- 7 Note that actual slope of pipe runner may vary slightly from side slope of riprap and trimmed culvert pipe edge.
- 8 Ensure that riprap concrete does not ow into the cross pipe so as to permit disassembly of the bolted connection
- (9) After installation, inspect the $\frac{1}{2}$ " hole to ensure that the lap of the pipe runner with the bottom anchor pipe is adequate.
- (10) At fabricator's option, a heat bend to a smooth 5" radius or a manufactured elbow (of the same material as the runner) may be substituted for the mitered and welded joint in the bottom anchor pipe.





OPTION B1 OPTION B2

BOTTOM ANCHOR TOEWALL DETAILS

(Culvert and riprap not shown for clarity.)

MATERIAL NOTES:

Synthetic bers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Provide pipe runners, cross pipes, and anchor pipes conforming to the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5LX52.

Provide ASTM A307 bolts and nuts.

Galvanize all steel components, except concrete reinforcing, after fabrication.

Repair galvanizing damaged during transport or construction in accordance with the speci cations.

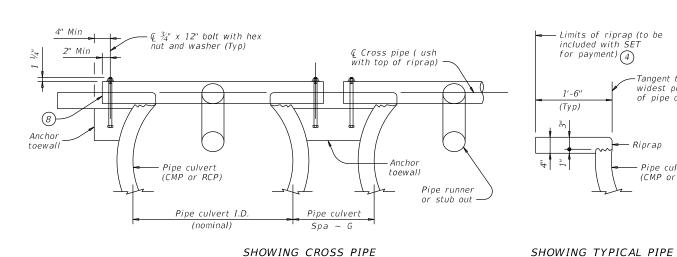
Pipe runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981. Safety end treatments (SET) shown herein are intended for use in those

installations where out of control vehicles are likely to traverse the

openings approximately perpendicular to the pipe runners.

Payment for riprap and toewall is included in the price bid for each safety end treatment.

Construct concrete riprap and all necessary inverts in accordance with the requirements of Item 432, "Riprap".



SHOWING CROSS PIPE AND ANCHOR TOEWALL

SECTION A-A

— 🕻 Roadway riprap

Limits of

PLAN OF SKEWED INSTALLATION



SAFETY END TREATMENT

CULVERT AND RIPRAP

— Limits of riprap (to be included with SET

widest portion

of pipe culvert

Pipe culvert

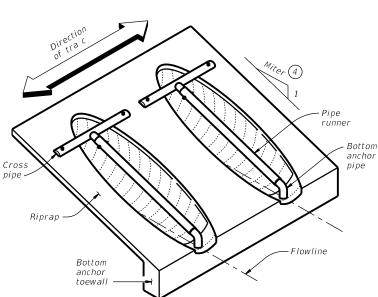
for payment) (4)

(Typ)

FOR 12" DIA TO 60" DIA PIPE CULVERTS TYPE II ~ CROSS DRAINAGE

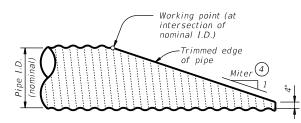
SETP-CD

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TxD0T	February 2020	CONT	SECT	JOB			HIGHWAY
	REVISIONS	0089	11	007, ET	c.	SL	521,ETC.
		DIST		COUNTY			SHEET NO.
		YKM		JACKS	ΩNI		122



ISOMETRIC VIEW OF TYPICAL INSTALLATION

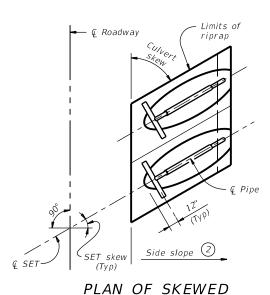
(Showing installation with no skew.)



NOTE: All pipe runners, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented

SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

(Showing corrugated metal pipe (CMP) culvert. Details of reinforced concrete pipe (CMP) culvert are similar.)



INSTALLATION

CROSS PIPE LENGTHS AND PIPE RUNNER LENGTHS ① ③

Corrugated Metal Pipe (CMP) Culverts

	Pipe	Pipe								Pipe Runr	ner Length					
Design	Culvert	Culvert	Pipe Culvert Spa ~ G	Cross Pipe Length		3:1 Sid	e Slope			4:1 Sia	le Slope			6:1 Sid	le Slope	
	Span	Rise		20119411	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
1	17"	13"	1' - 0"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	21"	15"	1' - 2"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	28"	20"	1' - 5"	3' - 9''	N/A	N/A	3' - 5"	4' - 7''	N/A	N/A	4' - 11''	6' - 5''	N/A	N/A	7' - 11"	10' - 2"
4	35"	24"	1' - 8"	4' - 4''	3' - 10''	4' - 0''	4' - 7''	6' - 0''	5' - 5''	5' - 8"	6' - 6''	8' - 4"	8' - 8"	9' - 1"	10' - 3''	12' - 11''
5	42"	29"	1' - 11''	4' - 11''	5' - 1''	5' - 4''	6' - 1''	7' - 10''	7' - 2''	7' - 5"	8' - 6''	10' - 9''	11' - 2"	11' - 8''	13' - 2"	16' - 6''
6	49"	33"	2' - 2"	5' - 6''	6' - 2"	6' - 5''	7' - 4''	N/A	8' - 6''	8' - 10"	10' - 0''	N/A	13' - 3"	13' - 9''	15' - 6"	N/A
7	57"	38"	2' - 5"	6' - 2"	7' - 6"	7' - 9''	N/A	N/A	10' - 2''	10' - 7"	N/A	N/A	15' - 9''	16' - 4''	N/A	N/A
			<u> </u>													

Reinforced Concrete Pipe (RCP) Culverts

	Pipe	Pipe								Pipe Runr	er Length					
Design	Culvert	Culvert	Pipe Culvert Spa ~ G	Cross Pipe Length		3:1 Sid	e Slope			4:1 Sid	e Slope			6:1 Sia	e Slope	
	Span	Rise	5,54 5	Zengen	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
1	22"	13 ½"	1' - 0"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	26"	15 ½"	1' - 2"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	28 ½"	18"	1' - 5"	3' - 9 ½"	N/A	N/A	2' - 10''	3' - 10''	N/A	N/A	4' - 2''	5' - 5"	N/A	N/A	6' - 9''	8' - 9''
4	36 ¼"	22 ½"	1' - 8"	4' - 5 1/4"	3' - 5"	3' - 7"	4' - 2''	5' - 6"	4' - 11''	5' - 1''	5' - 11''	7' - 7"	7' - 11"	8' - 3''	9' - 5''	11' - 11''
5	43 ¾"	26 <i>%</i> "	1' - 11"	4' - 0 ¾''	4' - 6''	4' - 8''	5' - 5''	6' - 11''	6' - 4''	6' - 7''	7' - 6''	9' - 7''	10' - 0''	10' - 5"	11' - 9"	14' - 10''
6	51 ½"	31 ½"	2' - 2"	5' - 8''	5' - 9''	6' - 0''	6' - 10''	N/A	7' - 11''	8' - 3''	9' - 4''	N/A	12' - 4"	12' - 10''	14' - 6''	N/A
7	58 ½"	36"	2' - 5"	6' - 3 ½"	6' - 11''	7' - 3"	N/A	N/A	9' - 6''	9' - 11''	N/A	N/A	14' - 9''	15' - 4"	N/A	N/A

TYPIO	CAL PIP	E CULV	ERT MI	TERS		DARD PI PIPE RU		S AND I		'S WHERE PIF E NOT REQUI	
Side Slope	0° Skew	15° Skew	30° Skew	45° Skew	Pipe Size	Pipe O.D.	Pipe I.D.	Max Pipe Runner Length	Design	Single Pipe Culvert	Multiple Pipe Culverts
3:1	3:1	3.106:1	3.464:1	4.243:1	2" STD	2.375"	2.067"	N/A	1 and 2	Skews thru 45°	Skews thru 45°
4:1	4:1	4.141:1	4.619:1	5.657:1	3" STD	3.500"	3.068"	10' - 0''	3	Skews thru 35°	Skews thru 10°
6:1	6:1	6.212:1	6.928:1	8.485:1	4" STD	4.500"	4.026"	19' - 8''	4	Normal (no skew)	Always required
·					5" STD	5.563"	5.047"	34' - 2"	5 thru 7	Always required	Always required

- 1) Provide pipe runner of the size shown in the tables. Provide cross pipe of the same size as the pipe runner. Provide cross pipe stub out and bottom anchor pipe of the next smaller size pipe as shown in the Standard Pipe Sizes and Max Pipe Runners Lengths table.
- Recommended values of slope are 3:1, 4:1, and 6:1. All quantities, calculations, and dimensions shown herein are based on these recommended values. Slope of 3:1 or atter is required for
- (3) This standard allows for the placement of only one pipe runner across each culvert pipe opening. In order to limit the clear opening to be traversed by an errant vehicle, the following conditions must be met:

For Design 1 through 5 culvert pipe sizes, the skew must not exceed 45°. For Design 6 culvert pipes, the skew must not exceed 30°. For Design 7 culvert pipes, the skew must not exceed 15°.

If the above conditions cannot be met, the designer should consider using a safety end treatment with ared wings. For further information, refer to the TxDOT "Roadway Design Manual".

4 Miter = slope of mitered end of pipe culvert.

MATERIAL NOTES:

Synthetic bers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise. Provide pipe runners, cross pipes, and anchor pipes that meet the requirements of ASTM A53 (Type E or S, Gr B),

ASTM ASOO Gr B, or API 5LX52.

Provide ASTM A307 bolts and nuts.

Galvanize all steel components, except concrete reinforcing, after fabrication. Repair galvanizing damaged during transport or construction in accordance with the

GENERAL NOTES:

Pipe runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.

Safety end treatments (SET) shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Pipe Runners.

Construct concrete riprap and all necessary inverts in accordance with the requirements of Item 432, "Riprap". Payment for riprap and toewall is included in the price bid for each safety end treatment

SHEET 1 OF 3



Bridge Division Standard

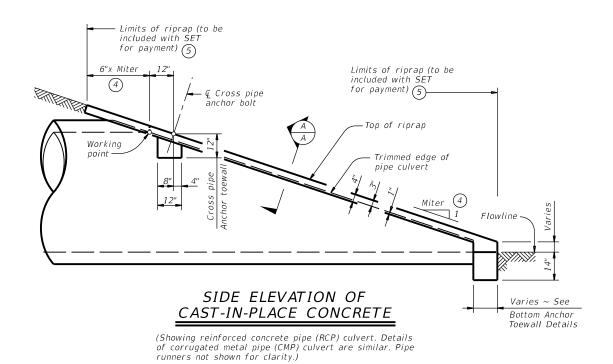
SAFETY END TREATMENT

FOR DESIGN 1 TO 7 ARCH PIPE CULVERTS TYPE II ~ CROSS DRAINAGE

SETP-CD-A

LE:	setpcase-20.dgn		-	CK: CAT	DW:	JRP	CK: GAF
)T x D O T	February 2020	CONT	SECT	JOB			HIGHWAY
	REVISIONS	0089	11	007, E1	rc.	SL	521,ETC.
		DIST		COUNTY			SHEET NO.
		AKM		IVUKS	ΛN		122

Limits of riprap (to be included with SET for payment) (5) Tangent to widest portion of pipe culvert (CMP or RCP) SHOWING TYPICAL PIPE CULVERT AND RIPRAP SECTION A-A



ESTIMATED CONCRETE RIPRAP QUANTITIES (CY) 6 FOR BOTH CORRUGATED METAL PIPE CULVERTS AND CONCRETE PIPE CULVERTS

Design		3:1 Sid	e Slope			4:1 Sid	e Slope			6:1 Sid	e Slope	
Design	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
1	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9
2	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	1.0
3	0.6	0.6	0.7	0.8	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.2
4	0.7	0.7	0.8	0.9	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.4
5	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.2	1.3	1.3	1.4	1.7
6	0.9	1.0	1.0	N/A	1.1	1.1	1.2	N/A	1.4	1.5	1.6	N/A
7	1.0	1.1	N/A	N/A	1.3	1.3	N/A	N/A	1.7	1.7	N/A	N/A

- 4 Miter = slope of mitered end of pipe culvert.
- (5) Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap".
- 6 Quantities shown are for one end of one pipe culvert. For multiple pipe culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.

SHEET 2 OF 3



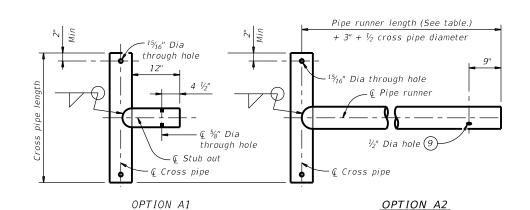
Bridge Division Standard

SAFETY END TREATMENT

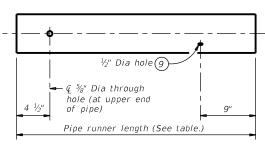
FOR DESIGN 1 TO 7 ARCH PIPE CULVERTS TYPE II ~ CROSS DRAINAGE

SETP-CD-A

E:	setpcase-20.dgn	DN: GAI	=	CK: CAT	DW:	JRP		CK: GAF
TxD0T	February 2020	CONT	SECT	JOB			HIG	HWAY
	REVISIONS	0089	11	007, ET	c.	SL	52	1,ETC.
		DIST		COUNTY				SHEET NO.
		YKM		JACKS	ON			124

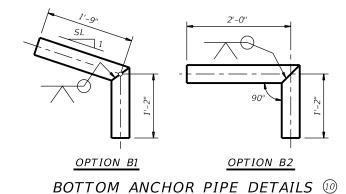


CROSS PIPE AND CONNECTIONS DETAILS

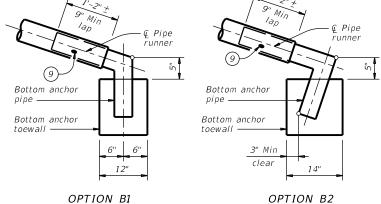


NOTE: The separate pipe runner shown is required when Cross Pipe Connection Option A1 is used.

PIPE RUNNER DETAILS

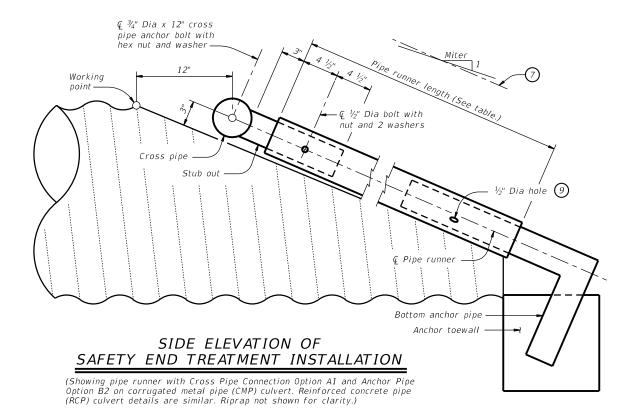


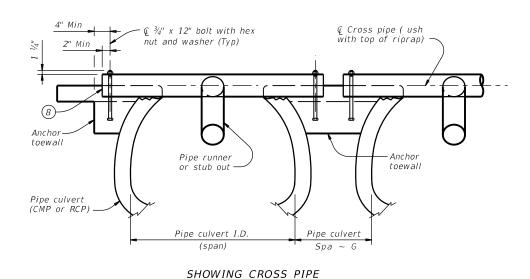
DOTTOM ANCTION FIFE DETAILS



BOTTOM ANCHOR TOEWALL DETAILS

(Culvert and riprap not shown for clarity.)





AND ANCHOR TOEWALL

SECTION A-A

- Note that actual slope of pipe runner may vary slightly from side slope of riprap and trimmed culvert pipe edge.
- 8) Ensure that riprap concrete does not ow into the cross pipe so as to permit disassembly of the bolted connection to allow cleanout access.
- 9 After installation, inspect the 1#2" hole to ensure that the lap of the pipe runner with the bottom anchor pipe is adequate.
- 10) At fabricator's option, a heat bend to a smooth 5" radius or a manufactured elbow (of the same material as the runner) may be substituted for the mitered and welded joint in the bottom anchor pipe.

SHEET 3 OF 3



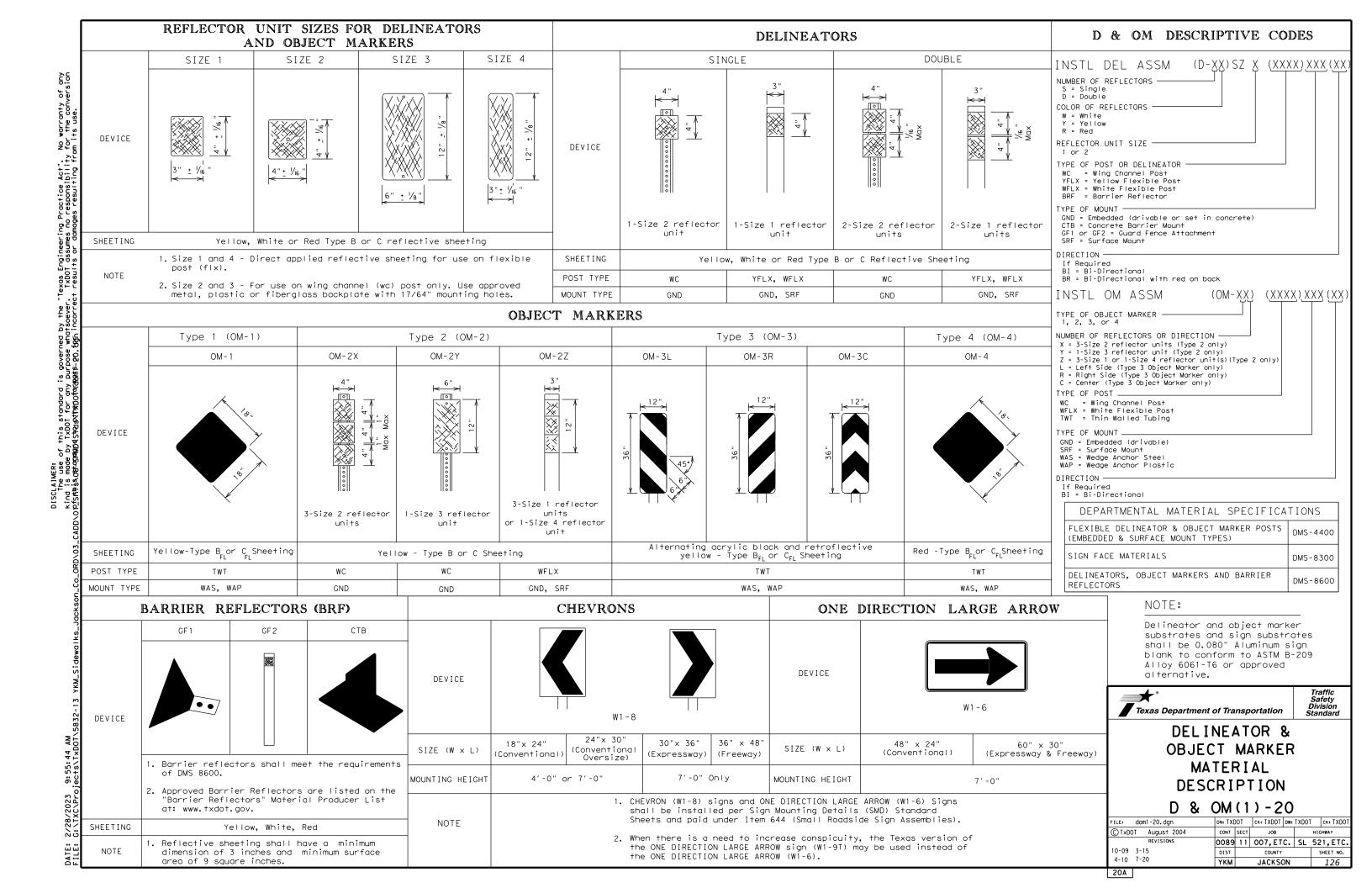
tation Stand

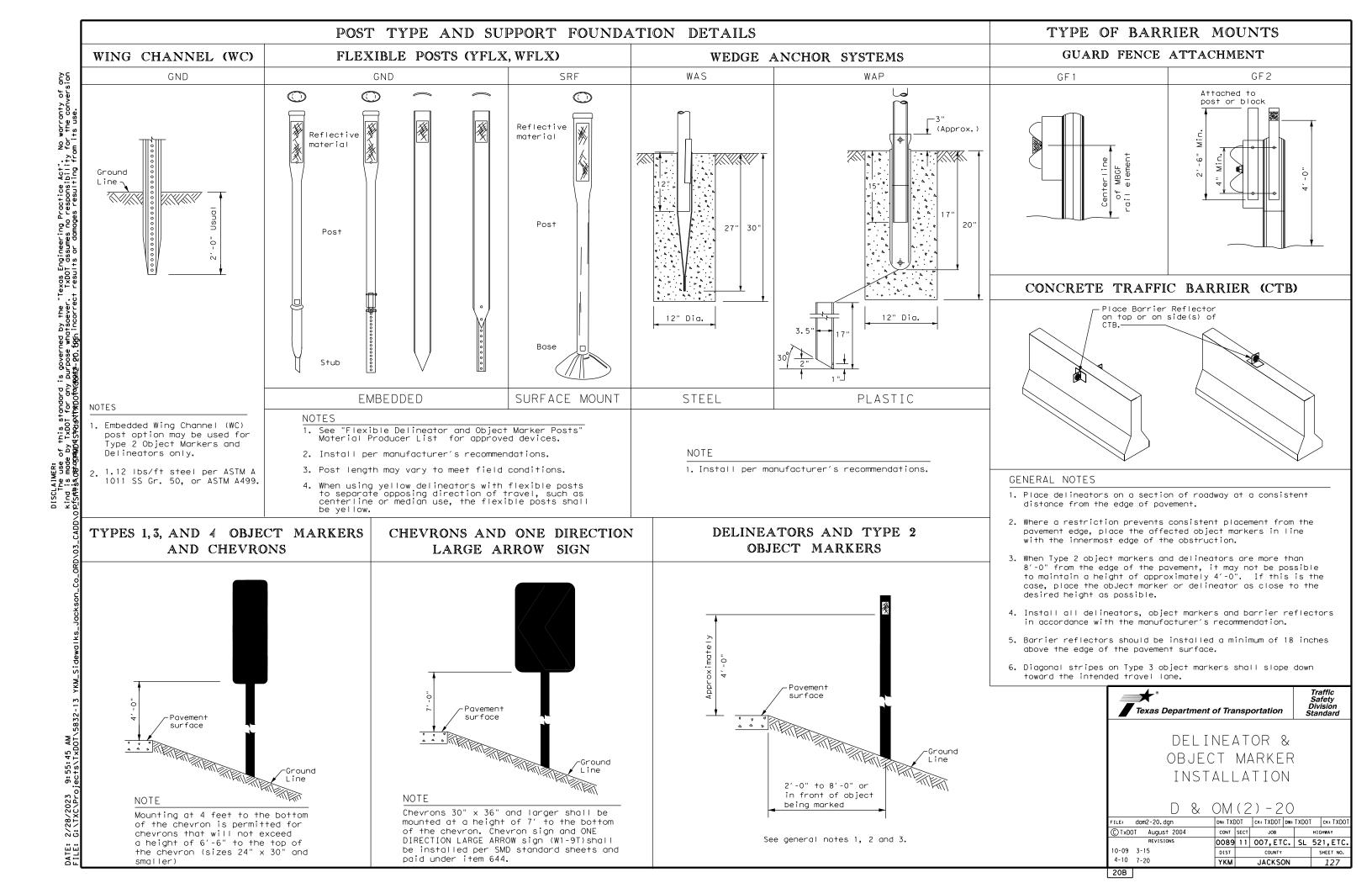
SAFETY END TREATMENT

FOR DESIGN 1 TO 7
ARCH PIPE CULVERTS
TYPE II ~ CROSS DRAINAGE

SETP-CD-A

FILE:	setpcase-20.dgn	DN: GAI	F	CK: CAT	DW:	JRP		CK:	GAF
©TxD0T	February 2020	CONT	SECT	JOB	•		HIG	HWAY	
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		DIST		COUNTY			Ι.	SHEE	T NO.
		YKM		JACKS	ON			12	25



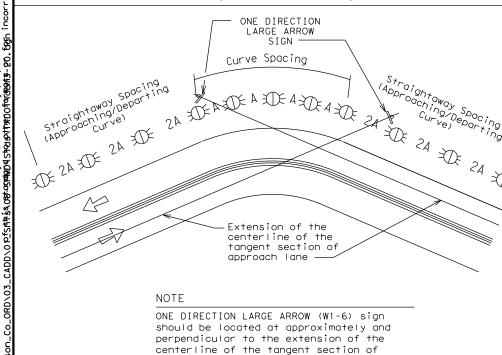


MINIMUM WARNING DEVICES AT CURVES WITH ADVISORY SPEEDS

Amount by which Advisory Speed	Curve Advisory Speed				
is less than Posted Speed	Turn (30 MPH or less)	Curve (35 MPH or more)			
5 MPH & 10 MPH	• RPMs	• RPMs			
15 MPH & 20 MPH	 RPMs and One Direction Large Arrow sign 	 RPMs and Chevrons; or RPMs and One Direction Large Arrow sign where geometric conditions or roadside obstacles prevent the installation of chevrons. 			
25 MPH & more	 RPMs and Chevrons; or RPMs and One Direction Large Arrow sign where geometric conditions or roadside obstacles prevent the installation of 	• RPMs and Chevrons			

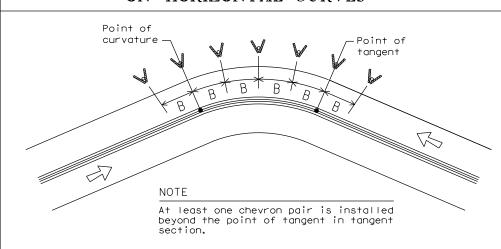
SUGGESTED SPACING FOR DELINEATORS ON HORIZONTAL CURVES

chevrons



SUGGESTED SPACING FOR CHEVRONS ON HORIZONTAL CURVES

approach lane.



DELINEATOR AND CHEVRON SPACING

WHEN DEGREE OF CURVE OR RADIUS IS KNOWN

			FEET	
Degree of Curve	Radius of Curve	Spacing in Curve	Spacing in Straightaway	Chevron Spacing in Curve
		А	2A	В
1	5730	225	450	
2	2865	160	320	
3	1910	130	260	200
4	1433	110	220	160
5	1146	100	200	160
6	955	90	180	160
7	819	85	170	160
8	716	75	150	160
9	637	75	150	120
10	573	70	140	120
1 1	521	65	130	120
12	478	60	120	120
13	441	60	120	120
14	409	55	110	80
15	382	55	110	80
16	358	55	110	80
19	302	50	100	80
23	249	40	80	80
29	198	35	70	40
38	151	30	60	40
57	101	20	40	40

Curve delineator approach and departure spacing should include 3 delineators spaced at 2A. This spacing should be used during design preparation or when the degree of curve is known.

DELINEATOR AND CHEVRON SPACING

WHEN DEGREE OF CURVE OR RADIUS IS NOT KNOWN

Advisory Speed (MPH)	Spacing in Curve	Spacing in Straightaway	Chevron Spacing in Curve
	Α	2×A	В
65	130	260	200
60	110	220	160
55	100	200	160
50	85	170	160
45	75	150	120
40	70	140	120
35	60	120	120
30	55	110	80
25	50	100	80
20	40	80	80
15	35	70	40

If the degree of curve is not known, delineator spacing may be determined based on the Advisory Speed of the curve. Use the delineator curve spacing for each Advisory Speed (MPH).

CONDITION	REQUIRED TREATMENT	MINIMUM SPACING						
Frwy./Exp. Tangent	RPMs	See PM-series and FPM-series standard sheets						
Frwy./Exp. Curve	Single delineators on right side	See delineator spacing table						
Frwy/Exp.Ramp	Single delineators on at least one side of ramp (should be on outside of curves) (see Detail 3 on D&OM(4))	100 feet on ramp tangents Use delineator spacing table for ramp curves ("straightway spacing" does not apply to ramp curves)						
Acceleration/Deceleration Lane	Double delineators (see Detail 3 on D&OM(4))	100 feet (See Detail 3 on D & OM (4))						
Truck Escape Ramp	Single red delineators on both sides	50 feet						
Bridge Rail (steel or concrete)and Metal Beam Guard Fence	Bi-Directional Delineators when undivided with one lane each direction Single Delineators when multiple lanes each direction	Equal spacing (100'max) but not less than 3 delineators						
Concrete Traffic Barrier (CTB) or Steel Traffic Barrier	Barrier reflectors matching the color of the edge line	Equal spacing 100' max						
Cable Barrier	Reflectors matching the color of the edge line	Every 5th cable barrier post (up to 100'max)						
Guard Rail Terminus/Impact Head	Divided highway - Object marker on approach end Undivided 2-lane highways - Object marker on approach and departure end	Requires reflective sheeting provided by manufacturer per D & OM (VIA) or a Type 3 Object Marker (OM-3) in front of the terminal end See D & OM (5) and D & OM (6)						

DELINEATOR AND OBJECT MARKER APPLICATION AND SPACING

NOTES

Bridges with no Approach

Reduced Width Approaches to

Culverts without MBGF

Pavement Narrowing

Freeways/Expressway

(lane merge) on

Bridge Rail

Crossovers

- 1. Unless indicated otherwise, the delineator or barrier reflector color shall conform to the color of the pavement edge line on the side of the road where the delineators or barrier reflectors are placed.
- 2. Barrier reflectors may be used to replace required delineators.

Type 3 Object Marker (OM-3)

at end of rail and 3 single

delineators approaching rail

Markers (OM-3) and 3 single

Single delineators adjacent

to affected lane for full

length of transition

delineators approaching bridge

Double yellow delineators and RPMs

Type 2 and Type 3 Object

Type 2 Object Markers

3. Single red delineators may be mounted on the back side of delineator posts for wrong way driver applications

	LEGEND
$ \overset{\sim}{\mathbb{R}} $	Bi-directional Delineator
	Delineator
-	Sign



See D & OM(5)

terminal end See D & OM (5)

100 feet

Requires reflective sheeting

D & OM (VIA) or a Type 3 Object

Marker (OM-3) in front of the

provided by manufacturer per

See Detail 2 on D & OM(4)

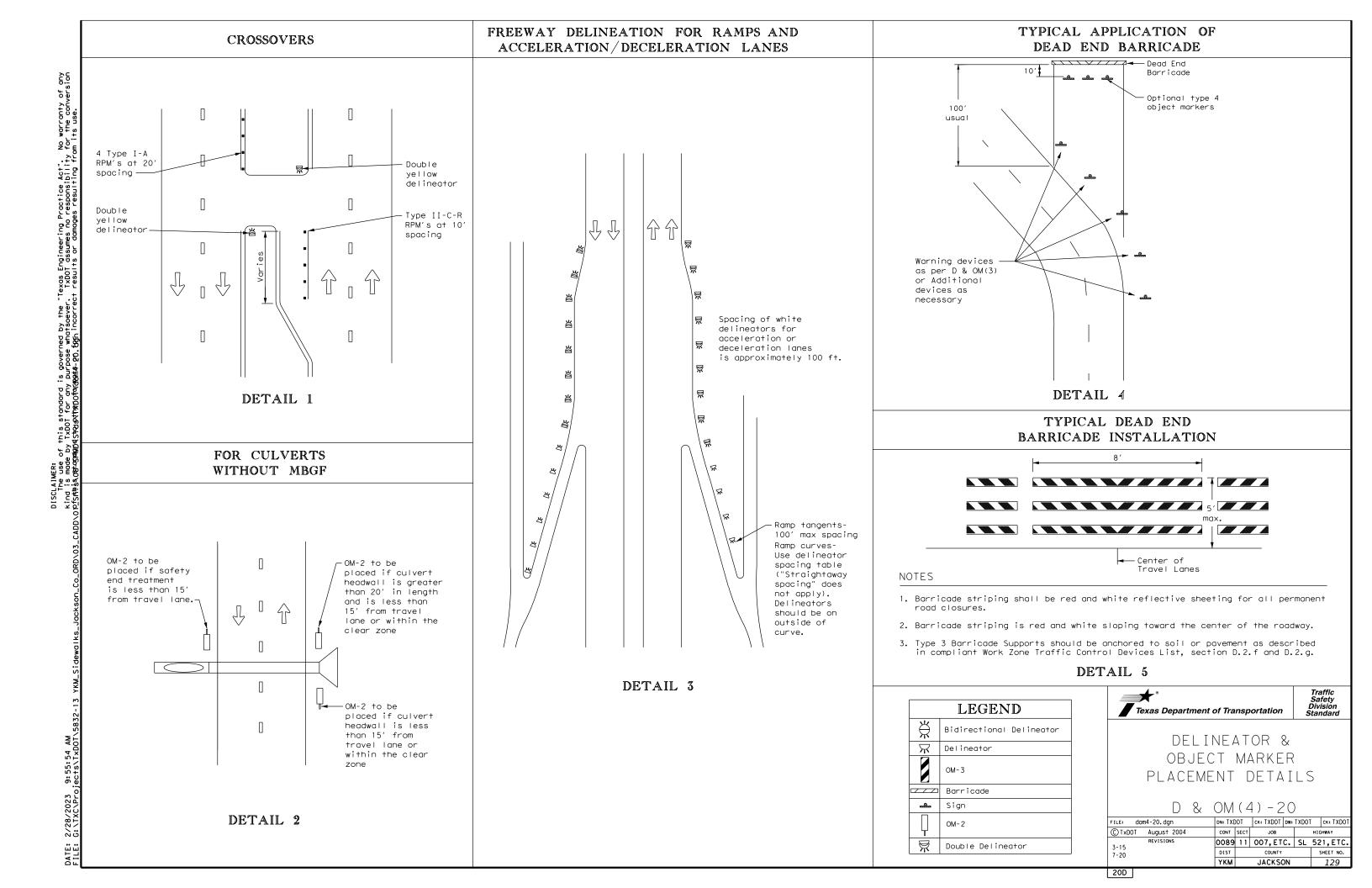
See Detail 1 on D & OM (4)

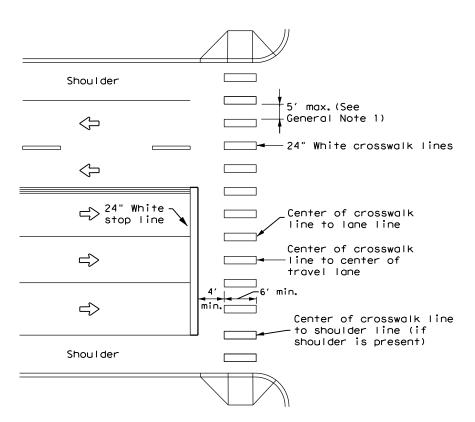
DELINEATOR & OBJECT MARKER PLACEMENT DETAILS

D & OM(3) - 20

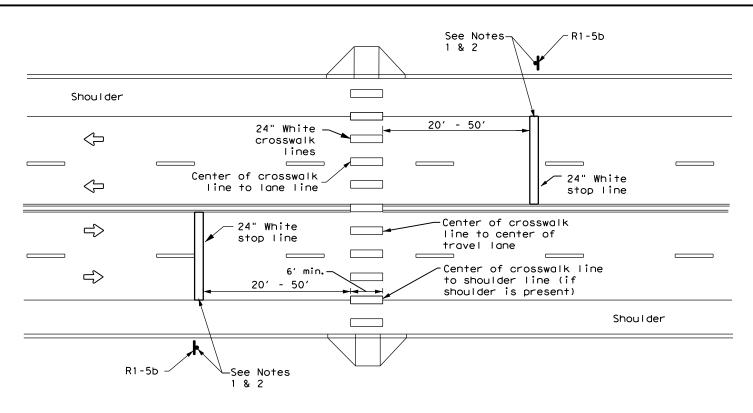
ILE: dom3-20.dgn	DN: TX[DOT CK: TXDOT DW: TXDOT			ck: TXDOT			
TxDOT August 2004	CONT	SECT	JOB		HIGHWAY		YAWH	
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20C









UNSIGNALIZED MIDBLOCK HIGH-VISIBILITY LONGITUDINAL CROSSWALK

GENERAL NOTES

- 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).
- 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.
- 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.
- 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.

NOTES:

- Use stop bars with Stop Here For Pedestrians (R1-5b) signs at unsignalized midblock cross walks.
- 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.

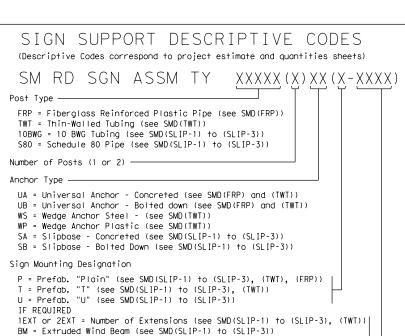


Traffic Safety Division Standard

CROSSWALK PAVEMENT MARKINGS

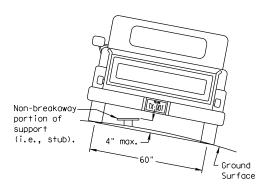
PM(4)-22A

FILE: pm4-22a, dgn	DN:		CK:	DW:		CK:
ℂTxDOT December 2022	CONT	SECT	JOB			HIGHWAY
REVISIONS 6-20	0089	11	007, ET	c.	SL	521,ETC.
6-22	DIST		COUNTY			SHEET NO.
12-22	YKM		JACKS	ON		130



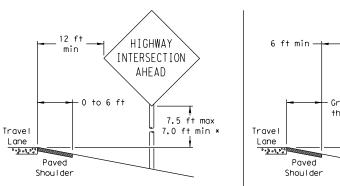
WC = 1.12 #/ft Wing Channel (see SMD(SLIP-1) to (SLIP-3)) EXAL = Extruded Aluminum Sign Panels (see SMD(SLIP-3))

REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



To avoid vehicle undercarriage snagging, any substantial remains of a breakaway support. when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel paths).

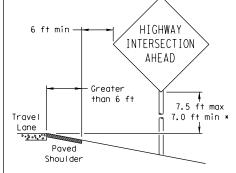
SIGN LOCATION



PAVED SHOULDERS

LESS THAN 6 FT. WIDE

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



GREATER THAN 6 FT. WIDE

When the shoulder is greater than 6 ft in width. the sign must be placed at least 6 ft. from the edge of the shoulder.

RESTRICTED RIGHT-OF-WAY

(When 6 ft min. is not possible.)

7.5 ft max

7.0 ft min *

Right-of-way restrictions may be created

by rocks, water, vegetation, forest,

buildings, a narrow island, or other

HIGHWAY

INTERSECTION

AHEAD

Maximum

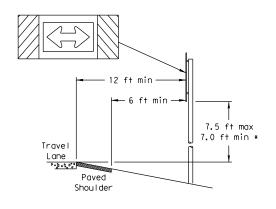
Travel

Lane

0.304.00

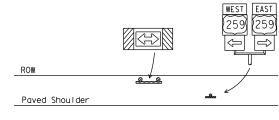
Shoulder

possible

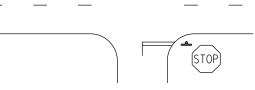


T-INTERSECTION

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.



Edge of Travel Lane



- * 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

See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.

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

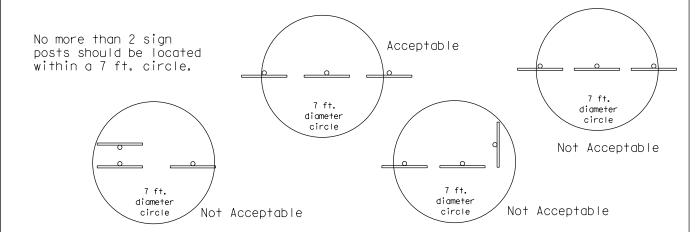


Texas Department of Transportation Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

SMD (GEN) - 08

© TxDOT July 2002		DN: TXDOT		CK: TXDOT DW:		TXDOT	CK: TXDOT	
9-08 REVISIONS		CONT	SECT	JOB			HIGHWAY	
		0089	11	007,ET	c.	SL	521,ETC.	
		DIST	COUNTY		SHEET NO			
		YKM		JACKSO	ON		131	



Clamp

Nylon washer, flat

washer, lock washer,

Pipe Diameter

2 1/2" nominal

3" nominal

· Clamp Bolt

Signs

Sign Pos-

Specific Clamp

3 or 3 1/2"

3 1/2 or 4"

— Sign Panel

∠Sign Panel

Universal Clamp

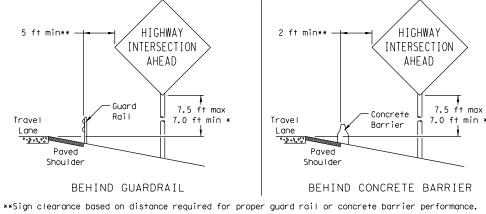
3 or 3 1/2"

3 1/2 or 4"

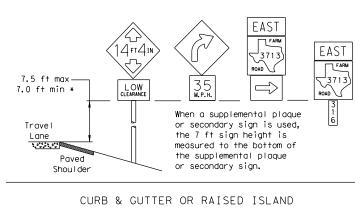
4 1/2"

- Sian Bolt

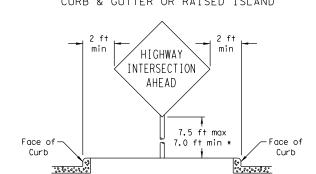
Approximate Bolt Length

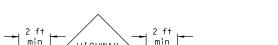


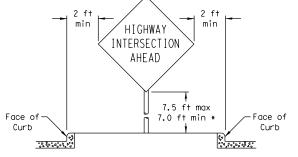
BEHIND BARRIER

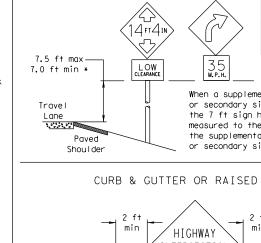


SIGNS WITH PLAQUES





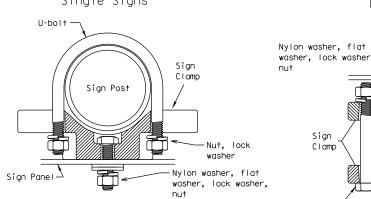




factors. In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

*** Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme

TYPICAL SIGN ATTACHMENT DETAIL Single Signs Back-to-Back

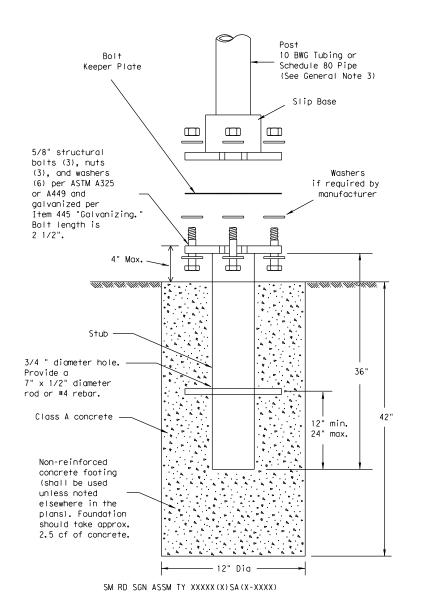


Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

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

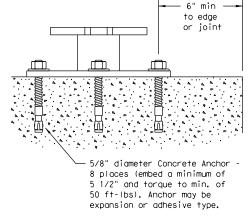
TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



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.

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 normalweight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

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
- 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.

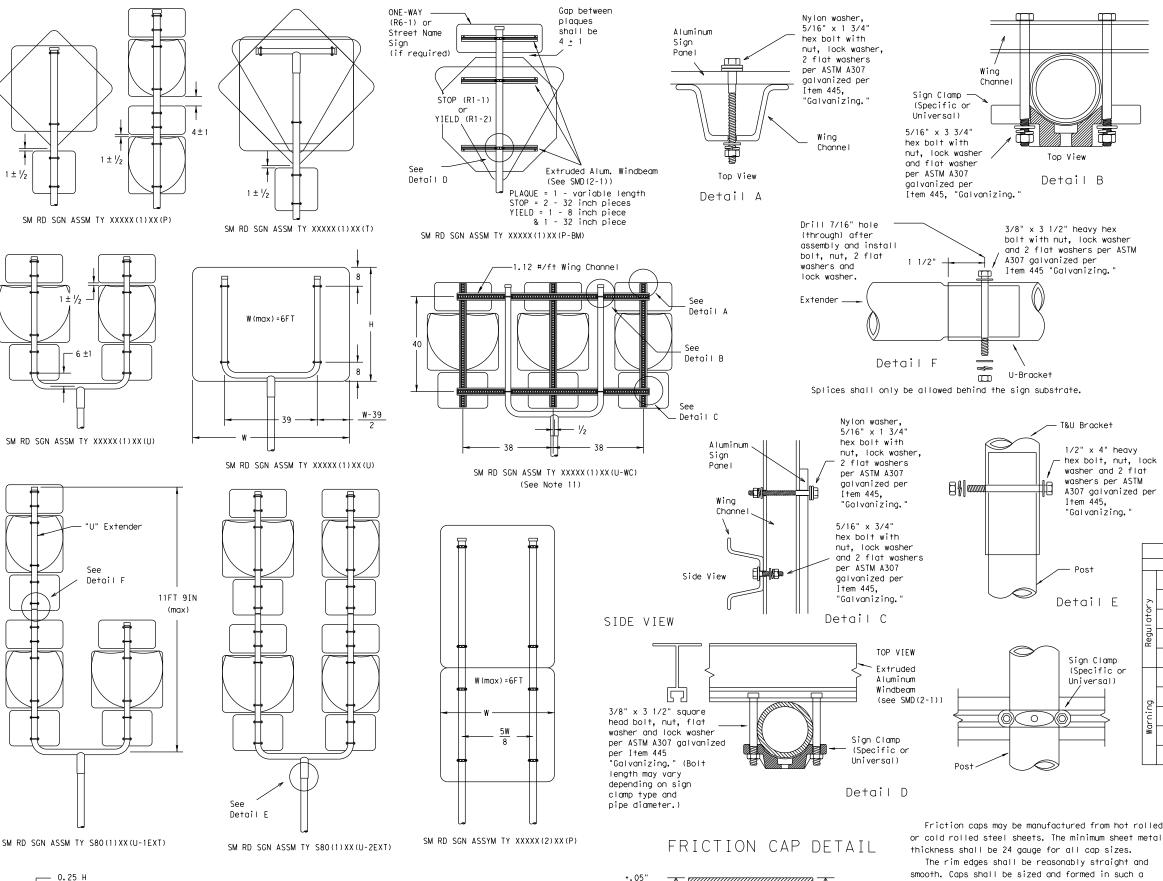


SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08

© TxDOT July 2002		DN: TXE	тоот	CK: TXDOT DW:		TXDOT		CK: 1	TXDOT	
	9-08	REVISIONS	CONT	SECT	JOB			HIG	HWAY	
			0089	11	007, ET	с.	SL	52	1,E	TC.
			DIST		COUNTY			S	HEET	NO.
			YKM		JACKSO	NC			13	2





Skirt

Variation

Depth

Rolled Crimp to

engage pipe O.D.

Pipe O.D.

-.025"<u>+</u>.010"

Pipe O.D.

+.025"±.010"

All dimensions are in english

unless detailed otherwise.

SM RD SGN ASSM TY XXXXX(1)XX(T)

(* - See Note 12)

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 areater 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.

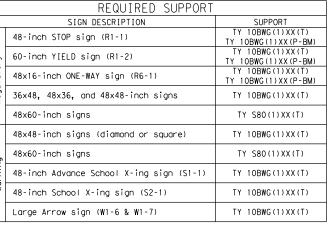
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing.

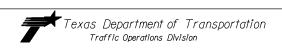
10. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.

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.





SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-2)-08

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		DIST		COUNTY		s	HEET NO.		
		YKM	JACKSON			133			

Friction caps may be manufactured from hot rolled

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.

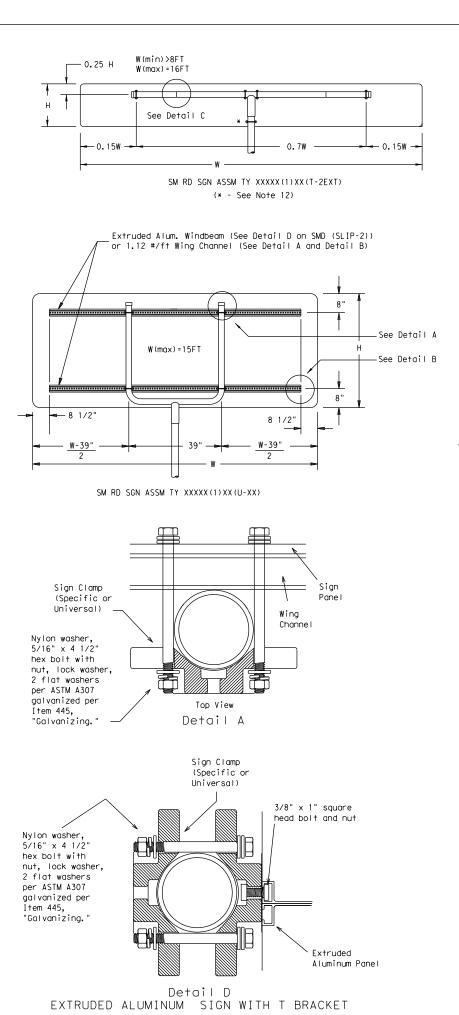
Caps shall have an electrodeposited coating of zinc in accordance with the requirements of ASTM B633 Class FE/ZN 8.

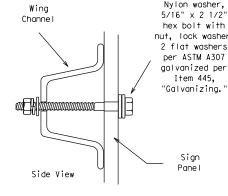
2/28/2023 9:55:57 AM G:\TXC\Projects\TxDOT\ DATE: FILE:

W (max) = 8FT

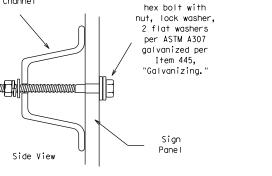
26C

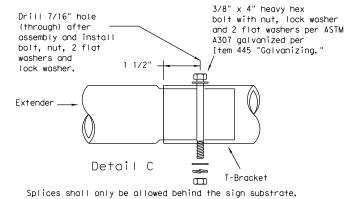






Detail B





Sign

Clamps

(Specific or

Universal)

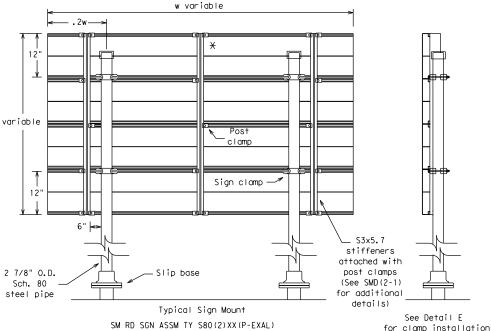
3/8" x 4 1/2"

square head bolt, nut, flat washer and lock washer per ASTM A307 galvanized

per Item 445.

"Galvanizina.

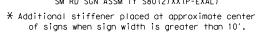
Detail E



Sign Clamp

See Detail D

Bracket



Extruded Aluminum Sign With T Bracket

6" panel should

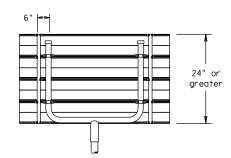
be placed at the top of

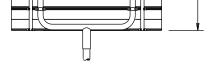
sign for proper mounting.

Extruded Aluminum

Sign

2 7/8" O.D. Sch. 80 or 10BWGsteel pipe





Use Extruded Alum. Windbeam as stiffeners See SMD (2-1) for additional details See Detail E

for clamp installation

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

- 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.
- 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 areater 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.
- Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
 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
	48-inch STOP sign (R1-1) 60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
۲	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
Regulatory	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
Regu	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
ō	48x60-inch signs	TY S80(1)XX(T)
Warning	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)

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

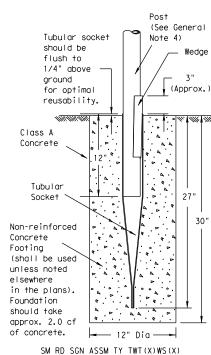
Traffic Operations Division

Texas Department of Transportation

SMD(SLIP-3)-08

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	YKM		JACKS	NC			134

Wedge Anchor Steel System



Wedge Anchor High Density Polyethylene

(HDPE) System

should take

of concrete.

approx. 2.0 cf

Friction Cap

or Plug. See

(Slip-2)

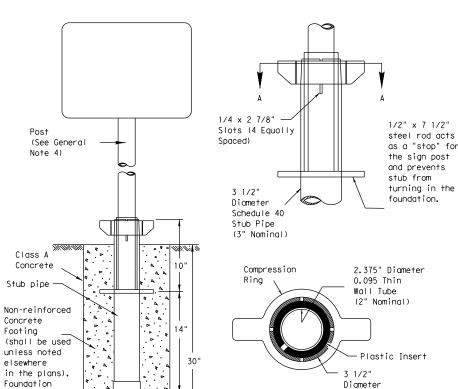
detail on SMD

SM RD SGN ASSM TY TWT(X)UA(P)

(See General (Approx.) Class A Concrete Anchor 30' Non-reinforced Concrete Footina (shall be used unless noted elsewhere in the plans). Foundation should take approx. 2.0 cf of concrete.

SMD RD SGN ASSM TY TWT(X)WP(X)

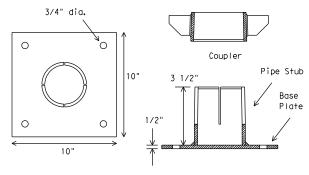
Universal Anchor System with Thin-Walled Tubing Post



5/8" diameter Concrete Anchor - 4 places (embed a min. of 3 3/8" and torque to min. of 50 ft-lbs) Anchor may be expansion or adhesive type.

(See General Note 4) to edge

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. A heavy hex nut per ASTM A563 and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 3 3/8" minimum embedment, shall have a minimum allowable tension and shear of 2450 and 1525 psi, respectively. 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.



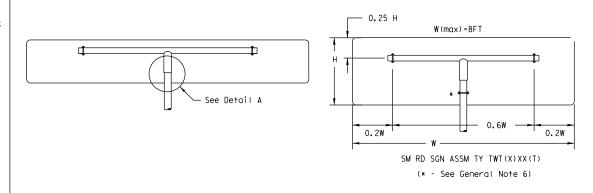
Plastic insert must be used when using the TWT with either the Universal Anchor System or the Bolt Down Universal Anchor System. The insert should be approx. 10" long and cover the tubing from just above the top of the stub pipe to the bottom of the sign post when using the Universal Anchor System. The insert should be cut to approx. 4 1/2" when used with the Bolt Down Universal Anchor System.

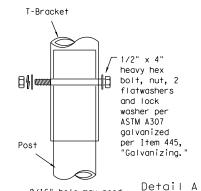
Schedule 40

SM RD SGN ASSM TY TWT(X)UB(P)

Sign Installation Using a Prefabricated T-Bracket for Thin-Wall Tubing Post

View A-A





9/16" hole may need to be drilled through post to accommodate

bolt.

The devices shall be installed per manufacturer's recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

- 1. The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
- 2. The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to the approval of the TxDOT Traffic Standards Engineer.
- 3. Except for posts (13 BWG Tubing), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the Material Producer List web page. The website address is: http://www.txdot.gov/business/producer list.htm
- 4. Material used as post with this system shall conform to the following specifications: 13 BWG Tubing (2.375" outside diameter) (TWT)
 - 0.095" nominal wall thickness

Seamless or electric-resistance welded steel tubing 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

18% minimum elongation in 2"

Wall thickness (uncoated) shall be within the range of .083" to .099" Outside diameter (uncoated) shall be within the range of 2.369" to 2.381" Galvanization per ASTM 123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.

- 5. Sign blanks shall be the sizes and shapes shown on the plans.
- 6. Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
- 7. Sign supports shall not be spliced except where shown. Sign support posts shall
- 8. See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: http://www.txdot.gov/publications/traffic.htm

WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE

- 1. Dig foundation hole. Where solid rock is encountered at ground level. the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
- 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. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
- 3. Insert tubular socket into concrete until top of socket is approximaely 1/4 " above the concrete footing.
- 4. Plumb the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer..
- 5. Attach the sign to the sign post.
- 6. Insert the sign post into socket and align sign face with roadway.
- 7. Drive the wedge into the socket to secure post. This will leave approximately 3 inches of the wedge exposed.

UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE

- 1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below around level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum lenath of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
- 2. Insert base post in hole to depths shown and backfill hole with concrete.
- 3. Level and plumb the base post using a torpedo level and allow concrete adequate time to set. The bottom of the slots provided in the stub pipe shall remain above the top of the concrete foundation.
- 4. Attach the sign to the sign post.
- 5. Install plastic insert around bottom of post.
- 6. Insert sign post into base post. Lower until the post comes to rest on steel rod. 7. Seat compression ring using a hammer. Typically, the top of compression ring
- will be approximately level with top of stub post when optimally installed.
- 8. Check sign post by hand to ensure it is unable to turn. If loose, increase the tightening of the compression ring.



SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS WEDGE & UNIVERSAL ANCHOR WITH THIN WALL TUBING POST

SMD(TWT) - 08

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		DIST		COUNTY			,	SHEET NO.
		YKM		JACKSO	NC			135

This SWP3 has been developed in accordance with TxDOT policy for projects disturbing less than 1 acre of soil, and not part of a larger common plan of development.

For all projects with any soil disturbing activities, TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office. If no field office is available, then this SWP3 shall be kept at the appropriate TxDOT Area Office.

This SWP3 is consistent with requirements specified in applicable stormwater plans, and the project's environmental permits, issues, and commitments (EPICs).

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):

0089-11-007

1.2 PROJECT LIMITS:

From: FM 822 to 0.067 Mi East of SH 111

0.091 Mi East of FM 1822 to Pumphrey St.

1.3 PROJECT COORDINATES:

BEGIN: (Lat)____,(Long)_

END: (Lat)____,(Long)_

1.4 TOTAL PROJECT AREA (Acres): Approx 5.2

1.5 TOTAL AREA TO BE DISTURBED (Acres): Approx 0.7

1.6 NATURE OF CONSTRUCTION ACTIVITY:

1.7 MAJOR SOIL TYPES:

Soil Type	Description

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):

PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below: PSLs determined during preconstruction meeting

PSLs determined during construction

(No	PSLs	planned	for	construction
---	----	-------------	---------	-----	--------------

Туре	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 2.3.)

Mobilization

☑ 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 widenina

Remove existing culverts, safety end treatments (SETs)

Remove existing metal beam guard fence (MBGF), bridge rail

X Install proposed pavement per plans

X 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:

- Sediment laden stormwater from stormwater conveyance over disturbed area
- X Fuels, oils, and lubricants from construction vehicles, equipment,
- X Solvents, paints, adhesives, etc. from various construction €
- Construction debris and waste from various construction activities
- Contaminated water from excavation or dewatering pump-out

- ∠ Long-term stockpiles of material and waste

_ Other:			
Othor			

□ 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
DRY CREEK 1601C	LAVACA RIVER TIDAL 1601C
	NAVIDAD RIVER TIDAL
	LAKE TEXANA
	MATAGORDA BAY

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

X Development of plans and specifications

X Perform SWP3 inspections

X Maintain SWP3 records and update to reflect daily operations

□ Othor:			

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

X Day To Day Operational Control

☐ Other:

X Maintain schedule of major construction activities

X Install, maintain and modify BMPs

☐ Other:			



STORMWATER POLLUTION **PREVENTION PLAN (SWP3)** (Less Than 1 Acre)



Sheet 1 of 2

FED. RD. DIV. NO.	PROJECT NO.			SHEET NO.	
	-			136	
STATE		STATE DIST.	COUNTY		
TEXAS YKM		YKM	JACKSON		
CONT.		SECT.	JOB	HIGHWAY NO.	
ØØ8'	9	1 1	ØØ7,ETC.	SL 521,	ETC.

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				
□ □ Vegetated Buffer Zones				
□ □ Soil Retention Blankets				
□ □ Geotextiles				
□ □ Mulching/ Hydromulching				
□ □ Soil Surface Treatments				
□ □ Temporary Seeding				
□ X Permanent Planting, Sodding or Seeding				
□ □ Rock Filter Dams/ Rock Check Dams				
□ □ Vertical Tracking				
☐ ☐ Interceptor Swale				
□ □ Riprap □ □ Diversion Dike				
☐ Temporary Pipe Slope Drain				
□ □ Paved Flumes				
□ □ Other:				
□ □ Other:				
□ □ Other:				
□ Other:				
2.2 SEDIMENT CONTROL BMPs:				
T/P				
☐ ☐ Dewatering Controls				
□ □ 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

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Typo	Stati	oning
Туре	From	То
Refer to the Environmental Layo	ut Sheets/ SWP3	Layout Sheets

located in Attachment 1.2 of this SWP3

2.4 OFFSITE VEHICLE TRACKING CONTROLS:
⋉ Excess dirt/mud on road removed daily
☐ Haul roads dampened for dust control
□ Stabilized construction exit
□ Other:
□ Other:
□ Other:
□ Other:

2.5 POLLUTION PREVENTION MEASURES:

- X Chemical Management
- X Debris and Trash Management

☐ Other:

X Sanitary Facilities

☐ 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.

Time	Stat	ioning
Туре	From	То

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- ⋉ 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 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.3 of this SWP3

2.9 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 2.3 of this SWP3.



STORMWATER POLLUTION PREVENTION PLAN (SWP3) (Less Than 1 Acre)



Sheet 2 of 2

FED. RD. DIV. NO.	PROJECT NO.			SHEET NO.	
	-			137	
STATE		STATE DIST.	COUNTY		
TEXAS YKM		JACKSON			
CONT.		SECT.	JOB	HIGHWAY NO.	
ØØ89	7	1 1	ØØ7,ETC.	SL 521,	ETC.

This SWP3 has been developed in accordance with TxDOT policy for projects disturbing less than 1 acre of soil, and not part of a larger common plan of development.

For all projects with any soil disturbing activities, TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office. If no field office is available, then this SWP3 shall be kept at the appropriate TxDOT Area Office.

This SWP3 is consistent with requirements specified in applicable stormwater plans, and the project's environmental permits, issues, and commitments (EPICs).

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):

0346-07-042

1.2 PROJECT LIMITS:

From: SL 521

To: US 59

1.3 PROJECT COORDINATES:

BEGIN: (Lat)____,(Long)_

END: (Lat)_____,(Long)___

1.4 TOTAL PROJECT AREA (Acres):

1.5 TOTAL AREA TO BE DISTURBED (Acres):

1.6 NATURE OF CONSTRUCTION ACTIVITY:

1.7 MAJOR SOIL TYPES:

Soil Type	Description

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 preconstruction

PSLS determined during construction

⋈ No PSLs planned for construction

Туре	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 2.3.)

☐ Mobilization

⋈ Blade existing topsoil into windrows, prep ROW, clear and grub

☐ 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 culverts, culvert extensions, SETs

☐ Install mow strip, MBGF, bridge rail

□ Place flex base

⋈ Blade windrowed material back across slopes

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 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
- X Sanitary waste from onsite restroom facilities
- ☐ ☐ Trash from various construction activities/receptacles
- ☐ Long-term stockpiles of material and waste

□ 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
DRY CREEK 160	1C LAVACA RIVER TIDAL 1601C
	NAVIDAD RIVER TIDAL
	LAKE TEXANA
	MATAGORDA BAY
* A d d (*) \$! ! ! !	

^{*} Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

X Development of plans and specifications

X Perform SWP3 inspections

 $\ensuremath{\mathtt{X}}$ Maintain SWP3 records and update to reflect daily operations

Other			

Other:			
•			

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

X Day To Day Operational Control

☐ Other:

X Maintain schedule of major construction activities

X Install, maintain and modify BMPs

Other:			



STORMWATER POLLUTION PREVENTION PLAN (SWP3) (Less Than 1 Acre)



Sheet 1 of 2

FED. RD. DIV. NO.		PROJECT NO.			
	13				
STATE		STATE DIST.	C	COUNTY	
TEXA:	S	YKM	JACKSON		
CONT.		SECT.	JOB	HIGHWAY NO.	
ØØ8'	9	1 1	ØØ7,ETC.	SL 521,	ETC.

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
□ □ Vegetated Buffer Zones
□ □ Soil Retention Blankets
□ □ Geotextiles
□ □ Mulching/ Hydromulching
□ □ Soil Surface Treatments
□ □ Temporary Seeding
□ X Permanent Planting, Sodding or Seeding
⋈ ⋈ Biodegradable Erosion Control Logs
□ □ Rock Filter Dams/ Rock Check Dams
□ □ Vertical Tracking
□ □ Interceptor Swale
□ □ Riprap □ □ Diversion Dike
☐ ☐ Diversion Dike ☐ Temporary Pipe Slope Drain
□ □ Paved Flumes
□ Other:
□ Other:
□ Other:
□ □ Other:
2.2 SEDIMENT CONTROL BMPs:
T/P
⋈ ⋈ Biodegradable Erosion Control Logs
□ □ Dewatering Controls
□ □ Sandbag Berms
□ □ Stabilized Construction Exit
□ □ Floating Turbidity Barrier
□ □ Vegetated Buffer Zones
□ □ Vegetated Filter Strips
□ Other:
□ Other:
□ □ Other:
□ □ Other:
Refer to the Environmental Layout Sheets/ SWP3 Layout She

located in Attachment 1.2 of this SWP3

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Statio	ning
Туре	From	То
Refer to the Environmental La located in Attachment 1.2 of th		Layout Sheets

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

X Excess dirt/mud on road removed daily

Other:

☐ Haul roads dampened for dust control☒ Loaded haul trucks to be covered with tarpaulin☐ Stabilized construction exit
□ Other:
□ Other:
Other:

2.5 POLLUTION PREVENTION MEASURES:

- X Chemical Management
- X Debris and Trash Management

☐ Other:

X Sanitary Facilities

Uther: _			
☐ 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	Statio	oning
Туре	From	То

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 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.3 of this SWP3

2.9 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 2.3 of this SWP3.



STORMWATER POLLUTION PREVENTION PLAN (SWP3) (Less Than 1 Acre)



Sheet 2 of 2

ED. RD. IV. NO.	PROJECT NO. SHEET NO.					
		1				
STATE	STATE STATE COUNTY					
TEXAS YKM		YKM	JA	CKSON		
CONT.		SECT.	JOB	HIGHWAY N	١0.	
0089 11		1 1	ØØ7,ETC.	SL 521,	ETC.	

This SWP3 has been developed in accordance with TxDOT policy for projects disturbing less than 1 acre of soil, and not part of a larger common plan of development.

For all projects with any soil disturbing activities, TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office. If no field office is available, then this SWP3 shall be kept at the appropriate TxDOT Area Office.

This SWP3 is consistent with requirements specified in applicable stormwater plans, and the project's environmental permits, issues, and commitments (EPICs).

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):

1945-01-024

1.2 PROJECT LIMITS:

From: Dugger St.

2 PROJECT LIMITS

To: 0.68 Mi South of SL 521

1.3 PROJECT COORDINATES:

BEGIN: (Lat)_____,(Long)___

END: (Lat)_____,(Long)_

1.4 TOTAL PROJECT AREA (Acres):

1.5 TOTAL AREA TO BE DISTURBED (Acres):

1.6 NATURE OF CONSTRUCTION ACTIVITY:

1.7 MAJOR SOIL TYPES:

Soil Type	Description

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):

PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below:

□ PSLs determined during preconstruction meeting

PSLs determined during construction

⋈ No PSLs planned for construction

Туре	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 2.3.)

☐ Mobilization

☒ 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 culverts, culvert extensions, SETs

☐ Install mow strip, MBGF, bridge rail

□ Place flex base

X 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 Solvents, paints, adhesives, etc. from various construction activities
- X Transported soils from offsite vehicle tracking
- ★ Construction debris and waste from various construction activities
- ☐ Contaminated water from excavation or dewatering pump-out water
- X Sanitary waste from onsite restroom facilities

☐ 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
DRY CREEK 1601C	LAVACA RIVER TIDAL 1601C
	NAVIDAD RIVER TIDAL
	LAKE TEXANA
	MATAGORDA BAY

1.12 ROLES AND RESPONSIBILITIES: TxDOT

▼ Development of plans and specifications

X Perform SWP3 inspections

X Maintain SWP3 records and update to reflect daily operations

Other.		_

1.13 RG	OLES AND	RESPONSIBI	LITIES: CO	NTRACTOR

X Day To Day Operational Control

X Maintain schedule of major construction activities

X Install, maintain and modify BMPs

□ Other:	•	•		
☐ Other:				



STORMWATER POLLUTION PREVENTION PLAN (SWP3) (Less Than 1 Acre)



Sheet 1 of 2

FED. RD. DIV. NO.		PROJECT NO.				
STATE STATE DIST.		COUNTY				
TEXAS		YKM	JA	CKSON		
CONT.		SECT.	JOB	HIGHWAY NO.		
0089 11		1 1	ØØ7,ETC.	SL 521,	ETC.	

^{*} Add (*) for impaired waterbodies with pollutant in ().

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
□ □ Vegetated Buffer Zones
□ □ Soil Retention Blankets
□ □ Geotextiles
□ □ Mulching/ Hydromulching
□ □ Soil Surface Treatments
□ □ Temporary Seeding
□ X Permanent Planting, Sodding or Seeding
□ □ Vertical Tracking
☐ ☐ Interceptor Swale
□ □ Riprap □ □ Diversion Dike
☐ Temporary Pipe Slope Drain
□ □ Paved Flumes
□ □ Other:
□ □ Other:
□ □ Other:
□ Other:
2.2 SEDIMENT CONTROL BMPs:
T/P
□ □ Dewatering Controls
□ □ Sandbag Berms
X □ 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

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Stationing		
Туре	From	То	
Refer to the Environmental Layo		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 ※ Loaded haul trucks to be covered with tarpaulin □ Stabilized construction exit
□ Other:
□ Other:
□ Other:
Oth and

2.5 POLLUTION PREVENTION MEASURES:

- X Chemical Management
- X Debris and Trash Management

□ Other:

X Sanitary Facilities

Uther:			
☐ 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.

Туре	Statio	ning
туре	From	То

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
- 🛚 Water used to wash vehicles or control dust
- X Other allowable non-stormwater discharges as allowed by TPDES GP TXR150000.

2.8 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.3 of this SWP3

2.9 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 2.3 of this SWP3.



STORMWATER POLLUTION PREVENTION PLAN (SWP3) (Less Than 1 Acre)



Sheet 2 of 2

FED. RD. DIV. NO.		PROJECT NO.			SHEET NO.	
STATE		STATE DIST.	C	COUNTY		
TEXAS	5	YKM	JACKSON			
CONT.		SECT.	JOB	HIGHWAY NO.		
ØØ89	7	1 1	ØØ7,ETC.	SL 521,	ETC.	

This SWP3 has been developed in accordance with TxDOT policy for projects disturbing less than 1 acre of soil, and not part of a larger common plan of development.

For all projects with any soil disturbing activities, TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office. If no field office is available, then this SWP3 shall be kept at the appropriate TxDOT Area Office.

This SWP3 is consistent with requirements specified in applicable stormwater plans, and the project's environmental permits, issues, and commitments (EPICs).

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):

0089-12-006

1.2 PROJECT LIMITS:

From: FM 710

To: 5TH ST.

1.3 PROJECT COORDINATES:

BEGIN: (Lat)_____,(Long)_

END: (Lat)____,(Long)_

1.4 TOTAL PROJECT AREA (Acres):

1.5 TOTAL AREA TO BE DISTURBED (Acres):

1.6 NATURE OF CONSTRUCTION ACTIVITY:

1.7 MAJOR SOIL TYPES:

Soil Type	Description

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

	Туре	Sheet #s
- 1		

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 2.3.)

☐ Mobilization

✓ Install sediment and erosion controls

Ⅺ Blade existing topsoil into windrows, prep ROW, clear and grub

☐ Grading operations, excavation, and embankment

□ Excavate and prepare subgrade for proposed pavement widening

Remove existing culverts, safety end treatments (SETs)

 $\hfill \square$ Remove existing metal beam guard fence (MBGF), bridge rail

X Install proposed pavement per plans

 $\ensuremath{\ensuremath{igsep}}$ Install culverts, culvert extensions, SETs

☐ Install mow strip, MBGF, bridge rail

☐ Place flex base

⋉ 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 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
- X Sanitary waste from onsite restroom facilities
- ☐ Long-term stockpiles of material and waste

□ Other:			

□ Other:			

1.11 RECEIVING WATERS:

Other:

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
DRY CREEK 1601C	LAVACA RIVER TIDAL 1601C
	NAVIDAD RIVER TIDAL
EAST MUSTANG CREEK	LAKE TEXANA
	MATAGORDA BAY
+ A /#\ C	

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

X Development of plans and specifications

X Perform SWP3 inspections

X Maintain SWP3 records and update to reflect daily operations

□ Othor:			

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

X Day To Day Operational Control

X Maintain schedule of major construction activities

X Install, maintain and modify BMPs

□ Other:	•		
☐ Other:			



STORMWATER POLLUTION PREVENTION PLAN (SWP3) (Less Than 1 Acre)



Sheet 1 of 2

FED. RD. DIV. NO.	PROJECT NO. SHEET NO.					
STATE		STATE DIST.	COUNTY			
TEXA:	S	YKM	JACKSON			
CONT.		SECT.	JOB	HIGHWAY NO.		
ØØ8'	9	1 1	ØØ7,ETC.	SL 521,ETC		

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
X □ Protection of Existing Vegetation
□ □ Vegetated Buffer Zones
□ □ Soil Retention Blankets
☐ ☐ Geotextiles
□ □ Mulching/ Hydromulching □ □ Soil Surface Treatments
□ □ Soil Surface Treatments □ □ Temporary Seeding
□ X Permanent Planting, Sodding or Seeding
□ □ Rock Filter Dams/ Rock Check Dams
□ □ Vertical Tracking
□ □ Interceptor Swale
□ □ Riprap
□ □ Diversion Dike
X X Embankment for Erosion Control
│
□ □ Other:
Other:
□ □ Other:
2.2 SEDIMENT CONTROL BMPs:
T/P
💢 💢 Biodegradable Erosion Control Logs
□ □ Dewatering Controls
☐ Inlet Protection
⊠ □ Rock Filter Dams/ Rock Check Dams
□ □ Sandbag Berms
Stabilized Construction Exit
□ □ Floating Turbidity Barrier
□ □ Vegetated Buffer Zones
□ □ Vegetated Filter Strips
☐ ☐ Other:
-
□ □ Other:
Other:
Refer to the Environmental Layout Sheets/ SWP3 Layout Shee

located in Attachment 1.2 of this SWP3

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Stationing			
Туре	From	То		
Refer to the Environmental Layo	ut Sheets/ SWP3	B Lavout Sheets		

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

Other:

⋉ Excess dirt/mud on road removed daily
□ Haul roads dampened for dust control
□ Stabilized construction exit
□ Other:
□ Other:
□ Other:

2.5 POLLUTION PREVENTION MEASURES:

- X Debris and Trash Management
- □ Dust Control

☐ Other:

X Sanitary Facilities

Other: _		
- 041		
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	Statio	oning
Туре	From	То

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- ⋉ 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 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.3 of this SWP3.

2.9 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 2.3 of this SWP3.



STORMWATER POLLUTION PREVENTION PLAN (SWP3) (Less Than 1 Acre)



Sheet 2 of 2

FED. RD. DIV. NO.		PROJECT NO.			SHEET NO.	
STATE		STATE DIST.	COUNTY			
TEXAS	5	YKM	JACKSON			
CONT.		SECT.	JOB	HIGHWAY NO.		
ØØ89	7	1 1	ØØ7,ETC.	7, ETC. SL 521, ETC		

This SWP3 has been developed in accordance with TxDOT policy for projects disturbing less than 1 acre of soil, and not part of a larger common plan of development.

For all projects with any soil disturbing activities, TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office. If no field office is available, then this SWP3 shall be kept at the appropriate TxDOT Area Office.

This SWP3 is consistent with requirements specified in applicable stormwater plans, and the project's environmental permits, issues, and commitments (EPICs).

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):

0420-09-025

1.2 PROJECT LIMITS:

From: SL 522

To: US 59

1.3 PROJECT COORDINATES:

BEGIN: (Lat)_____,(Long)____

END: (Lat)_____,(Long)___

1.4 TOTAL PROJECT AREA (Acres):

1.5 TOTAL AREA TO BE DISTURBED (Acres):

1.6 NATURE OF CONSTRUCTION ACTIVITY:

1.7 MAJOR SOIL TYPES:

Soil Type	Description		

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 present detail

⋈ No PSLs planned for construction

Туре	Sheet #s
	,1

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 2.3.)

☐ Mobilization

Ⅺ Blade existing topsoil into windrows, prep ROW, clear and grub

☐ 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 mow strip, MBGF, bridge rail

□ Place flex base

⊠ Blade windrowed material back across slopes

X 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
- $oxed{ imes}$ 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
- X Sanitary waste from onsite restroom facilities
- ☐ ☒ Trash from various construction activities/receptacles
- □ Long-term stockpiles of material and waste

☐ Other:	 	 	
□ Other:		·	

Othor .			

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
DRY CREEK 1601C	LAVACA RIVER TIDAL 1601C
	NAVIDAD RIVER TIDAL
EAST MUSTANG CREEK	LAKE TEXANA
	MATAGORDA BAY
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

X Development of plans and specifications

▼ Perform SWP3 inspections

X Maintain SWP3 records and update to reflect daily operations

_ Cuici		
_		
☐ Other:		
_ 0.1101.		

1.13 ROLES AND	RESPONSIBIL	ITIES: CONTR	RACTOR

X Day To Day Operational Control

X Maintain schedule of major construction activities

X Install, maintain and modify BMPs

☐ Other:

☐ Other:			



STORMWATER POLLUTION PREVENTION PLAN (SWP3) (Less Than 1 Acre)



Sheet 1 of 2

FED. RD. DIV. NO.		PROJECT NO.			SHEET NO.
					144
STATE		STATE DIST.	COUNTY		
TEXAS	S	YKM	JA	ACKSON	
CONT.		SECT.	JOB	HIGHWAY NO.	
ØØ89	9	1 1	ØØ7,ETC.	SL 521,	ETC.

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
□ □ Vegetated Buffer Zones
□ □ Soil Retention Blankets
□ □ Geotextiles
□ □ Mulching/ Hydromulching
□ □ Soil Surface Treatments
☐ ☐ Temporary Seeding
□ X Permanent Planting, Sodding or Seeding
□ Rock Filter Dams/ Rock Check Dams
□ □ Vertical Tracking □ □ Interceptor Swale
□ □ Interceptor Swale □ □ Riprap
□ □ Diversion Dike
⋈ ⋈ Embankment for Erosion Control
□ □ Paved Flumes
□ □ Other:
□ □ Other:
Other:
□ Other:
2.2 SEDIMENT CONTROL BMPs:
T/P
□ □ Dewatering Controls
☐ Rock Filter Dams/ Rock Check Dams
□ □ 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

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Statio	ning	
Туре	From	То	
Refer to the Environmental La	avout Sheets/ SMP3	Lavout Sheets	
ocated in Attachment 1.2 of t		Layout Officets	

2.4 OFFSITE VEHICLE TRACKING CONTROLS:
ズ Excess dirt/mud on road removed daily
□ Haul roads dampened for dust control
☐ Stabilized construction exit
□ Other:
□ Other:
□ Other:
□ Other:

2.5 POLLUTION PREVENTION MEASURES:

- X Chemical Management
- X Debris and Trash Management
- X Sanitary Facilities

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	Statio	oning
Туре	From	То

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- ⋉ 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 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.3 of this SWP3

2.9 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 2.3 of this SWP3.



STORMWATER POLLUTION PREVENTION PLAN (SWP3) (Less Than 1 Acre)



Sheet 2 of 2

FED. RD. DIV. NO.		PROJECT NO.			SHEET NO.
					145
STATE		STATE DIST.	COUNTY		
TEXAS	5	YKM	JACKSON		
CONT.		SECT.	JOB	HIGHWAY NO.	
ØØ89	7	1 1	ØØ7,ETC.	SL 521,	ETC.

This SWP3 has been developed in accordance with TxDOT policy for projects disturbing less than 1 acre of soil, and not part of a larger common plan of development.

For all projects with any soil disturbing activities, TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office. If no field office is available, then this SWP3 shall be kept at the appropriate TxDOT Area Office.

This SWP3 is consistent with requirements specified in applicable stormwater plans, and the project's environmental permits, issues, and commitments (EPICs).

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):

0420-01-048

1.2 PROJECT LIMITS:

From: BUECHMAN RD.

To: W HEARD ST.

1.3 PROJECT COORDINATES:

BEGIN: (Lat)____,(Long)_

END: (Lat)____,(Long)_

1.4 TOTAL PROJECT AREA (Acres): 2.2 ACRES

1.5 TOTAL AREA TO BE DISTURBED (Acres): 0.4 ACRES

1.6 NATURE OF CONSTRUCTION ACTIVITY:

1.7 MAJOR SOIL TYPES:

Soil Type	Description

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):

PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below: PSLs determined during preconstruction meeting

PSLs determined during construction

▼ No PSLs planned for construction

Output

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Туре	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 2.3.)

Mobilization

Install sediment and erosion controls

☒ Blade existing topsoil into windrows, prep ROW, clear and grub

⋉ Remove existing pavement

X Grading operations, excavation, and embankment

Excavate and prepare subgrade for proposed pavement widenina

Remove existing culverts, safety end treatments (SETs)

Remove existing metal beam guard fence (MBGF), bridge rail

X Install proposed pavement per plans

Install mow strip, MBGF, bridge rail

☐ Place flex base

X Rework slopes, grade ditches

X Blade windrowed material back across slopes

⋉ Revegetation of unpaved areas

★ Achieve site stabilization and remove sediment and

The stabilization and remove sediment and

The stabilization and remove sediment and

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The stabilization and remove sediment and

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The stabilization and remove sediment and remove s 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,
- X Solvents, paints, adhesives, etc. from various construction
- X Transported soils from offsite vehicle tracking
- ★ Construction debris and waste from various construction activities
- Contaminated water from excavation or dewatering pump-out
- X Sanitary waste from onsite restroom facilities
- ☆ Trash from various construction activities/receptacles
- □ Long-term stockpiles of material and waste

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
DRY CREEK 1601C	LACACA RIVER TIDAL 1601C
	NAVIDAD RIVER TIDAL
EAST MUSTANG CREEK	LAKE TEXANA
	MATAGORDA BAY

1.12 ROLES AND RESPONSIBILITIES: TxDOT

X Development of plans and specifications

X Perform SWP3 inspections

X Maintain SWP3 records and update to reflect daily operations

∪tner:			

Other:			

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

X Day To Day Operational Control

X Maintain schedule of major construction activities

X Install, maintain and modify BMPs

☐ Other:

Other:			



STORMWATER POLLUTION **PREVENTION PLAN (SWP3)** (Less Than 1 Acre)



Sheet 1 of 2

FED. RD. DIV. NO.				SHEET NO.	
	146				
STATE		STATE DIST.	COUNTY		
TEXAS	S	YKM	JACKSON		
CONT.		SECT.	JOB	JOB HIGHWAY NO.	
0089	9	11	007,ETC.	SL 521,	ETC.

^{*} Add (*) for impaired waterbodies with pollutant in ().

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
□ □ Vegetated Buffer Zones
□ □ Soil Retention Blankets
□ □ Geotextiles
☐ ☐ Mulching/ Hydromulching
□ □ Soil Surface Treatments
□ Temporary Seeding□ X Permanent Planting, Sodding or Seeding
☒ Biodegradable Erosion Control Logs☐ Rock Filter Dams/ Rock Check Dams
□ □ Vertical Tracking □ □ Interceptor Swale
□ Riprap
□ □ Diversion Dike
□ □ Paved Flumes
Other:
Other:
□ Other:
2.2 SEDIMENT CONTROL BMPs:
T/P
X X Biodegradable Erosion Control Logs
□ □ Dewatering Controls
X □ Inlet ProtectionX □ Rock Filter Dams/ Rock Check Dams
□ Sandbag Berms
X □ 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 She located in Attachment 1.2 of this SWP3

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Stationing			
Туре	From	То		
Refer to the Environmental La		B Layout Sheets		

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

X Excess dirt/mud on road removed daily

 □ Haul roads dampened for dust control ※ Loaded haul trucks to be covered with tarpaulin □ Stabilized construction exit
□ Other:
□ Other:
□ Other:

2.5 POLLUTION PREVENTION MEASURES:

- X Chemical Management
- X Debris and Trash Management
- ☑ Dust Control
- X Sanitary Facilities

Uther:		
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.

Туре	Stationing					
туре	From	То				

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 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.3 of this SWP3

2.9 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 2.3 of this SWP3.



STORMWATER POLLUTION PREVENTION PLAN (SWP3) (Less Than 1 Acre)

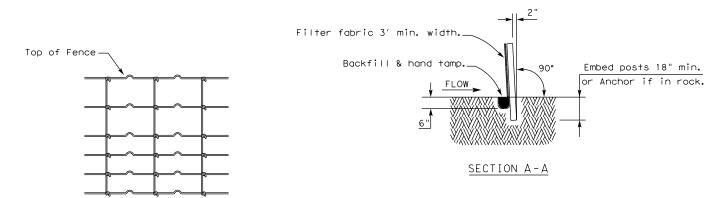


Sheet 2 of 2

FED. RD. DIV. NO.		PROJECT NO.							
STATE		STATE DIST.	c	COUNTY					
TEXAS	5	YKM	JA	ACKSON					
CONT.	NT. SECT.		JOB	HIGHWAY NO.					
0089	9	11	007,ETC.	SL 521, ETC.					

I. STORMWATER POLL	UTION PREVENTION		III. CULTURAL RESOURCES	VI. HAZARDOUS MATERIALS OR CO	ONTAMINATION ISSUES			
acres disturbed soil. Projects sedimentation in accordance	etion General Permit is require with any disturbed soil must with Item 506. If applicable	red for projects with 1 or more	artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the area and contact the Engineer	observed, such as dead or distressed vegeta leaching or seepage of substances, unusual area and contact the Engineer immediately.				
Prevent stormwater pollut Permit TXR 150000.	tion erosion and sedimentation	on in accordance with TPDES	Additional Comments	structutres not including box culverts)? Y	tructure rehabilitation or replacements (bridge class			
Comply with the SW3P at the Engineer.	nd revise when necessary to	control pollution or as required by		No further action required.				
Post Construction Site No accessible to the public ar	otice (CSN) with SW3P informd TCEQ, EPA, or other insp							
When Contractor project or more, sumbit Notice of	specific locations (PSL) incr f Intent (NOI) to TCEQ and l	ease disturbed soil area to 5 acres Engineer.						
MS4 Operator(s):			IV. VEGETATION RESOURCES					
No Additional C	Comments		Preserve native vegetation to the extent practical. Refer to TxDOT Standard Specifications 162, 164, 192, 193, 506, 730, 751, and 752 in order to comply with requirements for invasive species, beneficial landscaping and tree/brush removal.	No Additional Comments				
II. WORK IN OR NEAR ST	TREAMS, WATERBODIE	ES AND WETLANDS	No Additional Comments					
excavating or other work in w Contractor must adhere to all	vater bodies, rivers, creeks, s of the terms and general con	is required for filling, dredging, treams, wetlands or wet areas. The aditions associated with the the plans is required, contact the		VII. GENERAL NOTES				
No USACE Permit Requir	red							
		e Permit without a permit was not issued by USACE,	V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE		ionwide or Individual Permit is not necessary for the utside the USACE jurisdictional areas. Any impacts			
	USACE under a Nationwide tion (PCN). The project spec	e Permit with a cific permit issued by the USACE	SPECIES AND MIGRATORY BIRDS If any of the listed species below are observed, cease work in the area, do not disturb species or habitat and contact the Engineer immediately.	to these jurisdictioanl areas by the contract of the contrator. If the contractor deems it then it becomes the contractor's entire response	or without a USACE permit will be the responsibility necessary to impact the USACE jurisdictional areas, onsibility to consult with the USACE pertaining to			
	USACE under a Individual ICE is included in the plan set	Permit (IP). The project specific t.	The work may not remove active nests (from bridges, structures, or vegetation adjacent to the roadway, etc.) during nesting season (February 15 to October 1). If removal of	the need for a Nationwide or Individual Per responsible for following all conditions of				
Work would be authorized USACE or Nationwide Pe	d by the USACE. The project rmit will be provided to the	t specific permit issued by the contractor.	structures or vegetation is necessary during the nesting season, the Contractor shall conduct a bird survey no more than 3 days in advance of the clearing/demolish start date. All bird surveys shall be conducted by a Field Biologist and adhere to the					
water body determined to be	(including changes to lightin navigable by the United Stat Iarbors Act. If additional wor		guidance document "Avoiding Migratory Birds and Handling Potential Violations"					
No United States Coast G	uard (USCG) Coordination F	Required						
United States Coast Guard	l (USCG) Permit							
United States Coast Guard	l (USCG) Exemption							
-	Best Management Practi	ices			TxDOT Yoakum District			
Erosion	Sedimentation	Post Construction TSS			ENVIRONMENTAL PERMITS,			
Temporary Vegetation	⊠ Silt Fence				ISSUES AND COMMITMENTS			
Vegetation Lined Ditches	Rock Filter Dam	Vegetation Lined Ditches						
Sodding	Sand Bag Berm	Grassy Swales			EPIC			
No Additional C	Comments		Field Biologist, Ornithologist – a field biologist is defined as an individual qualified to perform field investigations, presence/absence surveys and habitat surveys for protected avian species or species of concern. A mandatory bachelor's degree in biology or a related science is required. At a minimum, the Field Biologist, Ornithologist, shall have completed and reported a minimum of three presence/absence and habitat surveys for protected avian species in the past five years. A minimum of three projects must have been conducted in Texas. Surveys shall have been performed for documentation of species in accordance with a protocol approved by USFWS or TPWD, or following generally accepted methodologies.	Version 13.1	FILE: EPIC Sheet.dgn			

VIII. OTHER ENVIRONMENTAL ISSUES	VIII. OTHER ENVIRONMENTAL ISSUES	VIII. OTHER ENVIRONMENTAL ISSUES
III. Cultural Resources Cont.:		
-Contractor shall notify the Chair of the Jackson County Historical Commission <fp.condron@sbcglobal.net> two weeks before beginning work.</fp.condron@sbcglobal.net>		
- Contractor must saw cut existing sidewalk no closer than 12 inches away from the historic buildings at: 102 E. Main St., Edna, Texas / Station 734 106 E. Main St., Edna, Texas / Station 733+50 108 E. Main St., Edna, Texas / Station 733 208 W. Main St., Edna, Texas / Station 742+25 118 W. Main St., Edna, Texas / Station 737+60 126 W. Main St., Edna, Texas / Station 738+50		
-Contractor shall construct new sidewalk next to the saw cut edge with installation of expansion joint in between. If existing sidewalk is to be removed entirely, the remaining 8 to 12 inches next to the historic structure must be removed by hand. Expansion joint must be placed between historic structure and new sidewalk.		
-Contractor shall prevent splashback of concrete onto historic resource.		
-Contractor shall repair or replace in kind, at own expense, any historic materials damaged in the course of executing the work. Contractor shall locate replacement source for historic materials damaged in the course of the work. TxDOT-Environmental Affairs Division shall be informed of proposed repairs to facilitate consultation with Texas Historical Commission prior to execution of repair work.		
-The ramps at the Edna Theater (201 W. Main St.) and the Jackson County Courthouse (115 W. Main St.) are outside the work area. No work shall be done at these locations without prior consultation with the Texas Historical Commission and TxDOT's Historical Studies Branch.		
-These notes will be reviewed with the contractor at the pre-construction meeting.		
		* TxDOT
		Texas Department of Transportation Yoakum District
		ENVIRONMENTAL PERMITS,
		ISSUES AND COMMITMENTS
		EPIC
		FILE: EPIC Sheet.dgn DN: CK: DW: CK:
		© TxDOT: March 2017 сомт вест магсh 2017 лов ніднилу REVISIONS 0089 11 007, etc. SL 521, etc. DIST соилту sheet no. YKM JACKSON CO. 149



HINGE JOINT KNOT WOVEN MESH (OPTION) DETAIL

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made sults

Engineering Practice Act". No warranty of any kind of this standard to other formats or for incorrect

Galvanized hinge joint knot woven mesh (12.5 GA.SWG Min.) requires a minimum of five horizontal wires spaced at a maximum of 12 inches apart and all vertical wires spaced at a maximum of 12 inches apart.

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

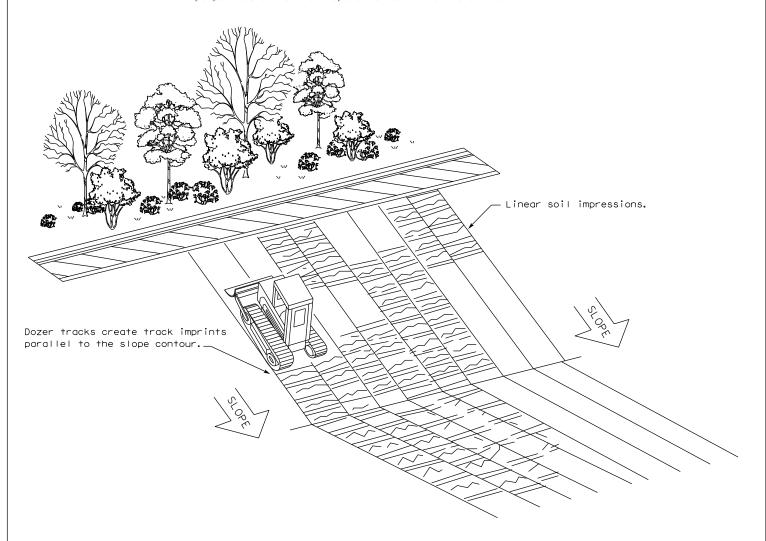
Sediment control fence should be sized to filter a maximum flow through rate of 100 ${\sf GPM/FT}^2$. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

LEGEND

Sediment Control Fence

GENERAL NOTES

- Vertical tracking is required on projects where soil distributing activities have occurred unless otherwise approved.
- 2. Perform vertical tracking on slopes to temporarily stabilize soil.
- 3. Provide equipment with a track undercarriage capable of producing linear soil impressions measuring a minimum of 12" in length by 2" to 4" in width by 1/2" to 2" in depth.
- 4. Do not exceed 12" between track impressions.
- 5. Install continous linear track impressions where the minimum 12" length impressions are perpendicular to the slope or direction of water flow.



VERTICAL TRACKING



Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCE & VERTICAL TRACKING

EC(1)-16

FILE: ec116	DN: TxD	OT	CK: KM	:KM Dw:VP Di		DN/CK: LS				
C TxDOT: JULY 2016	CONT	SECT	JOB		JOB		HIGHWAY		HIGHWAY	
REVISIONS	0089	11	007, ET	ů.	SL	521,ETC.				
	DIST		COUNTY		SHEET NO.					
	YKM	JACKSON .		150						

2/28/2023 G: \TXC\Pro DATE: FILE:

TEMP. EROSION FLOW CONTROL LOG ADDITIONAL UPSTREAM -STAKES FOR HEAVY RUNOFF EVENTS SECURE END OF LOG TO STAKE LOG ON DOWNHILL STAKE AS SIDE AT THE CENTER, DIRECTED AT EACH END, AND AT ADDITIONAL POINTS AS NEEDED TO SECURE LOG (4' MAX. SPACING), OR AS DIRECTED BY THE ENGINEER. PLAN VIEW

STAKE LOG ON DOWNHILL

R.O.W.

SIDE AT THE CENTER.

AT EACH END, AND AT

AS DIRECTED BY THE

ENGINEER.

ADDITIONAL POINTS AS

NEEDED TO SECURE LOG

(4' MAX. SPACING), OR

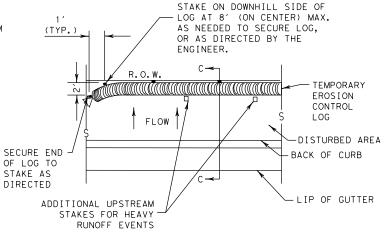
ADDITIONAL UPSTREAM

STAKES FOR HEAVY

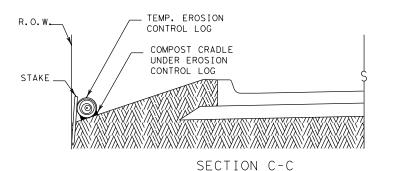
RUNOFF EVENTS

FLOW ADDITIONAL UPSTREAM STAKES FOR HEAVY RUNOFF EVENTS SECURE END OF LOG TO STAKE AS DISTURBED AREA DIRECTED BACK OF CURB - LIP OF GUTTER STAKE ON DOWNHILL SIDE OF TEMP. EROSION LOG AT 8' (ON CENTER) MAX. CONTROL LOG AS NEEDED TO SECURE LOG, OR AS DIRECTED BY THE ENGINEER.

PLAN VIEW



PLAN VIEW





CL-ROV

SECTION B-B EROSION CONTROL LOG AT BACK OF CURB

TEMP. EROSION

COMPOST CRADIT

UNDER EROSION

CONTROL LOG

CONTROL LOG

SECTION A-A EROSION CONTROL LOG DAM

MIN



LEGEND

CL-D - EROSION CONTROL LOG DAM

TEMP. EROSION-

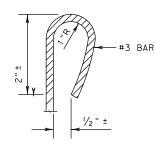
CONTROL LOG

(TYP.)

COMPOST CRADLE UNDER EROSION

CONTROL LOG

- -(cl-boc)— EROSION CONTROL LOG AT BACK OF CURB
- -EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY (CL-ROW)
- EROSION CONTROL LOGS ON SLOPES STAKE AND TRENCHING ANCHORING (CL-SST
- EROSION CONTROL LOGS ON SLOPES STAKE AND LASHING ANCHORING -(CL-SSL
- (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



CL-BOC

REBAR STAKE DETAIL

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.

The drainage area for a sediment trap should not exceed Log Traps: 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:

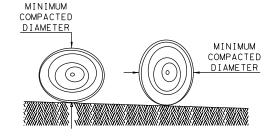
- 1. Within drainage ditches spaced as needed or min. 500' on center
- 2. Immediately preceding ditch inlets or drain inlets
- 3. Just before the drainage enters a water course
- 4. Just before the drainage leaves the right of way
- 5. Just before the drainage leaves the construction limits where drainage 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.

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.
- FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
- 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.
- SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
- TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE
- 10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

SHEET 1 OF 3

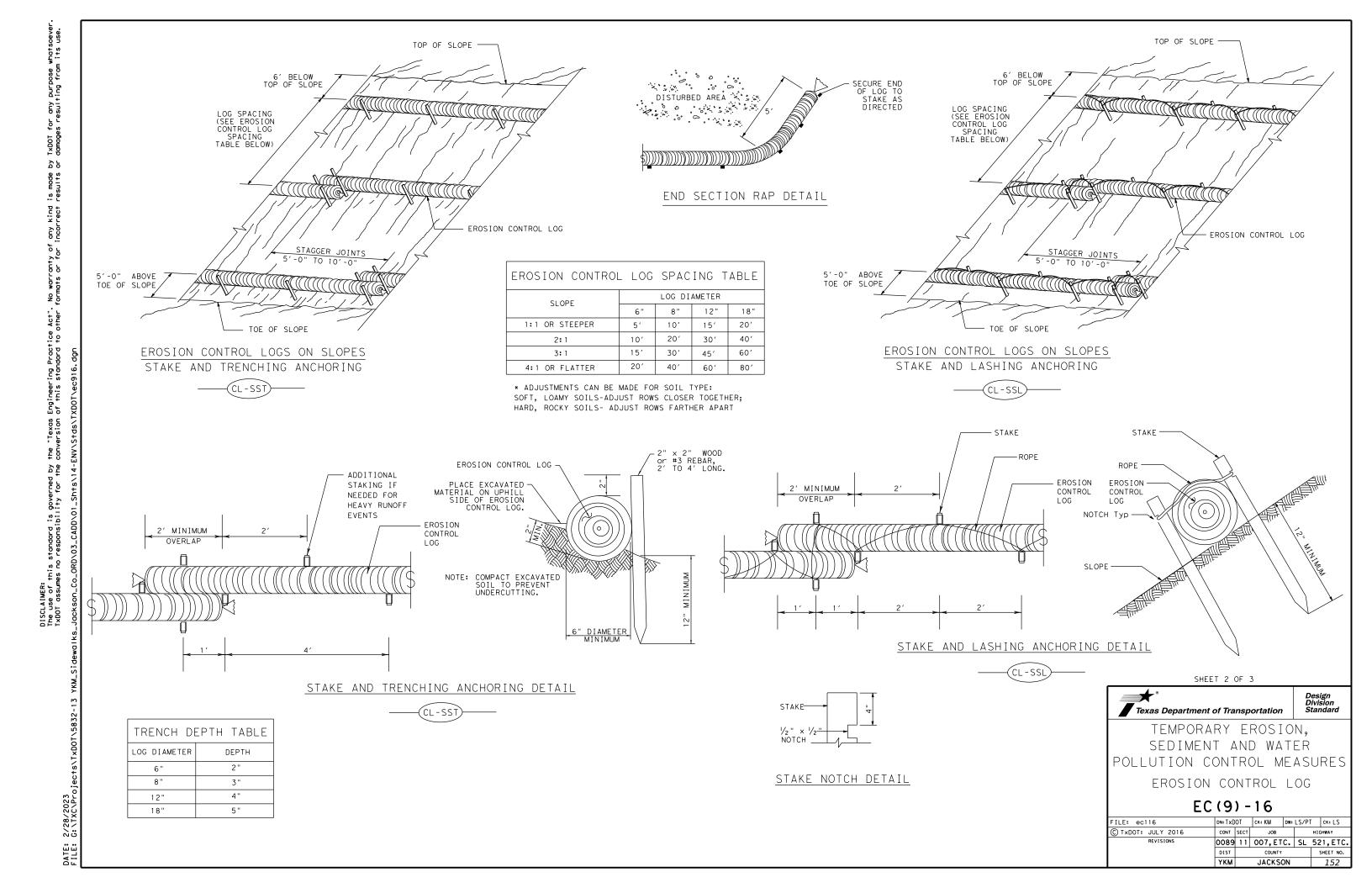


TEMPORARY EROSION. SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9) - 16

FILE: ec916	DN: TxD	OT	CK: KM	DW: LS/PT			ck: LS
C TxDOT: JULY 2016	CONT	SECT	JOB		H]GHWAY		YAW
REVISIONS	0089	11	007,ETC.		SL !	52	1,ETC.
	DIST	ST COUNTY			SHEET NO.		
	YKM		JACKSO	NC			151



by TxDOT for any purpose whatsoever or damages resulting from its use.

DATE: 2/28/2023 FILE: G:\TXC\Projects\TxDOT\5832-13

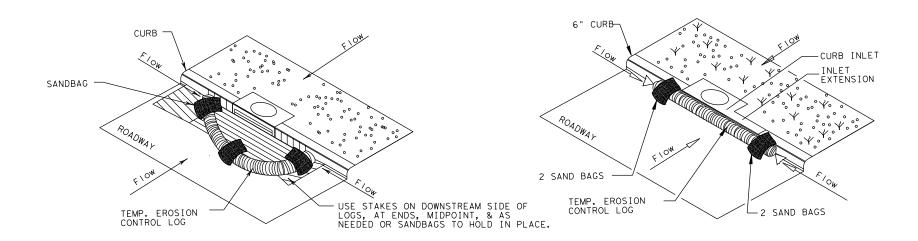
SECURE END
OF LOG TO
STAKE AS
DIRECTED

TEMP. EROSION
CONTROL LOG

FLOW

FLOW

STAKE OR USE SANDBAGS
ON DOWNHILL SIDE OF
LOG AS NEEDED TO HOLD
IN PLACE (TYPICAL)



EROSION CONTROL LOG AT DROP INLET



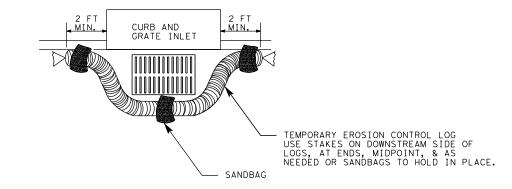
EROSION CONTROL LOG AT CURB INLET



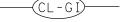
EROSION CONTROL LOG AT CURB INLET

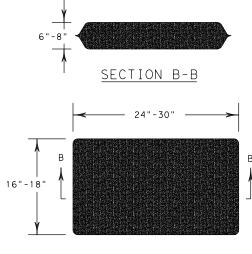


NOTE: EROSION CONTROL LOGS USED AT CURB INLETS SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.



EROSION CONTROL LOG AT CURB & GRADE INLET





SANDBAG DETAIL

*
Texas D
TE
TE SE

Texas Department of Transportation

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

SHEET 3 OF 3

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxD	OT	CK: KM	:k: KM Dw: LS/PT			ck: LS
C TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY		HWAY	
REVISIONS	0089	11	007,ETC.		SL	52	1,ETC.
	DIST	COUNTY			s	HEET NO.	
	AKM		INCKE	JNI			152