

FED. NO.	FEDERAL AID PROJECT NO.	SHEET NO.
		1
STATE	STATE DIST. NO.	COUNTY
TEXAS	22	WEBB
CONT.	SECT.	JOB
6455	92	001
		HIGHWAY NO.
		IH 35, ETC.

SHEET NO.	INDEX OF SHEETS DESCRIPTION
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GENERAL

- 1 TITLE SHEET
- 2 LOCATION MAP
- 3-4 GENERAL NOTES
- 5 ESTIMATE AND QUANTITY
- 6 SUMMARY OF TRACTS AND QUANTITIES

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- 9 BC (5) - 21
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- 11 TCP (1-1) - 18
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STATE OF TEXAS

TEXAS DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED HIGHWAY ROUTINE MAINTENANCE CONTRACT

PROJECT NO. RMC 6455-92-001
PROJECT LENGTH : VARIOUS
PROJECT LIMITS : VARIOUS
COUNTY : WEBB
HIGHWAY : IH 35, ETC.
RMC# 6455-92-001
LANDSCAPE MAINTENANCE

FINAL PLANS

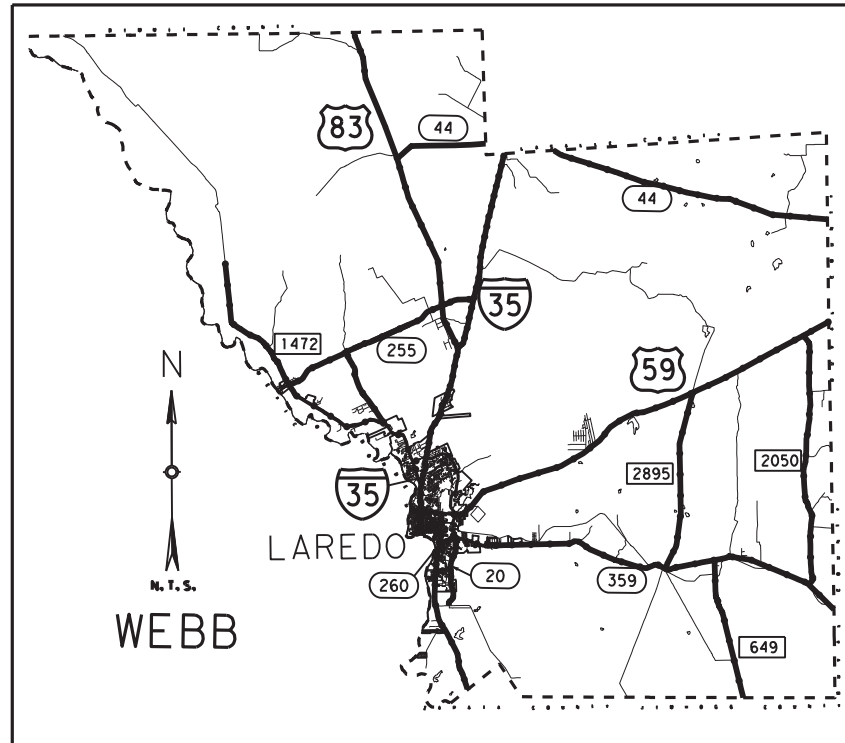
Letting Date : _____

Work Began : _____

Date Accepted : _____

Contractor : _____

Total Cost : _____



SUBMITTED 9/1/2023
FOR LETTING: _____

DocuSigned by:

[Signature]
A54CD9F731724EC...
TRANSPORTATION ENGINEER

APPROVED 9/1/2023
FOR LETTING: _____

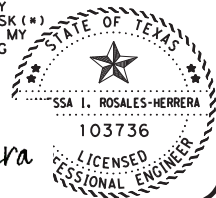
DocuSigned by:

[Signature]
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DIRECTOR OF MAINTENANCE

THE STANDARD SHEETS SPECIFICALLY IDENTIFIED WITH A SINGLE ASTERISK (*) HAVE BEEN ISSUED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

9/1/2023
DocuSigned by:

[Signature]
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SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, JUNE 1, 2014 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT.

Project: RMC 6455-92-001**Sheet 3****County:** Webb**Highway:** IH 35**Control:** 6455-92-001**GENERAL NOTES:**

The contract becomes effective upon receipt of the work authorization letter and covers one (1) year. Provide sufficient staff to concurrently pursue each contract in the event that additional mowing contracts are awarded to the same contractor.

The contract can be extended via change order, not to exceed original contract duration. The time extension shall be at the original contract prices. Provide and maintain an e-mail address for receipt of work order and correspondence throughout the term of this contract.

Plans may be obtained from one of the plan companies listed in the "Special Notice to Contractors", or viewed at Texas Department of Transportation's (TxDOT's) Internet site at <https://www.txdot.gov/business/plans-online-bid-lettings.html>

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

Vanessa Rosales-Herrera, P.E. Vanessa.Rosales@txdot.gov

Contractor questions will be accepted through email by the above individuals.

All contractor questions will be reviewed by the Engineer. Once a response is developed, it will be posted to TxDOT's Public FTP 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 webpage 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.

Confine all operations to daylight hours with no work performed on Sundays or State-observed holidays, unless otherwise authorized by the Engineer.

Visit the site to examine the work areas prior to each month's work schedule and meet with the contract inspector on any areas in question. Carefully examine these specifications and secure from the State any additional information, if necessary, that may be essential for a clear and full understanding of the work.

General Notes

Sheet A

Project: RMC 6455-92-001**Sheet 3****County:** Webb**Highway:** IH 35**Control:** 6455-92-001

Repair any damages incurred to existing fences, signs, sign posts, curbs, or any other appurtenances caused by equipment or personnel to its original condition or as directed by the Engineer.

The approximate quantities determined for this project are for information only and are not to be considered as actual quantities. Contractors are hereby instructed to assure themselves of the actual conditions of the work area before bidding.

Provide a minimum of one (1) English-speaking employee on the job site at all times. Acknowledge the responsibility and liability for the safety, injury, and health of the working personnel while employees are performing maintenance service work.

Liquidated damages will be assessed per work order(s) which exceed the total allocated work days for tracts assigned on work order. In the event that job performance is not to the satisfaction of the Engineer, sub marginal work is subject to special provision "Schedule of Liquidated Damages".

SUPERVISION:

The Maintenance Supervisor listed below will be the Engineer's representative in charge of the inspection of all work in this contract. The Pre-Work Meeting will be held at this location and all requests for payment will be certified by this office.

Webb County
Jose Magana
1817 Bob Bullock Loop
Laredo, Texas 78043
(956) 712-7714
Jose.magana@txdot.gov

Report and deliver all lost and found items to the Engineer.

ITEM 7 LEGAL RELATIONS & RESPONSIBILITIES:

Roadway closures during the following key dates and/or special events are prohibited: January 1, the last Monday in May, July 4, the first Monday in September, the fourth Thursday in November, and December 24 or 25.

General Notes

Sheet B

Project: RMC 6455-92-001

Sheet 4

County: Webb

Highway: IH 35

Control: 6455-92-001

ITEM 502 BARRICADES, SIGNS AND TRAFFIC HANDLING:

Provide traffic control devices that conform to all current "Traffic Control Plan Standards" (TCPS).

The bottom of the sign cannot be less than one (1) foot above the pavement centerline elevation. Each sign will have two safety flags attached to it at all times. It will not be permissible to hang or lean these signs on or against the State's sign posts, guardrails, bridge rail, etc. "Mowers Ahead" sign is intended for use in advance of mowing operations on the progress to keep within 2 miles or less from the work area. All sign stands and safety flags will be provided by the contractor.

ITEM 751 LANDSCAPE MAINTENANCE:

Perform mowing for the number of cycles shown in the Summary of Tracts and Quantities sheet for each tract. Schedule mowing to be Monday through Friday beginning the first full week of each month scheduled. Care is to be taken when mowing around plant materials, trees, and palms located within the contract limits. Remove grass, weeds and undesirable growth from around all obstructions, including riprap, bridge guardrail fence, sidewalks, driveways, under bridges, retaining walls and all hard surfaced areas. The Engineer will mark non-mow areas.

Perform litter pickup before and after each mowing cycle. This work is subsidiary to Item 751-6006.

Sweeping will not be paid for separately, but is subsidiary to Item 751-6008 (Mowing, Trimming, and Edging).

Sweep debris from roadway and sidewalks. Sweep, edge and cultivate plants for all curbs, curb and gutter, sidewalks, riprap and areas with landscape pavers as part of each cycle.

Include trimming existing palms within the limits of the contract for palm trimming. Fronds removed are to be sawed (cut) off at least 2" and not more than 4" from the trunk (peeling is not required). Dispose of all fronds and vegetation material.

Perform both pruning and fertilizer application for one cycle per year.

Perform herbicide application as noted on Summary of Tracts and Quantities Plan Sheet. For riprap, paved medians, raised medians, and retaining walls the type of control desired will be bare ground. A herbicide that can be applied while actively growing year round as long as rain is not forecasted within 48 hours may be used.

Perform plant bed maintenance as shown in the Summary of Tracts and Quantities sheet as shown for each tract.

Project: RMC 6455-92-001

Sheet 4

County: Webb

Highway: IH 35

Control: 6455-92-001

Work is to be preformed from ROW to ROW for all tracts.

ITEM 760 DITCH CLEANING:

Remove all extraneous material from channels (crusted debris, loose aggregate). Dispose of excess material in accordance with applicable federal, state, and local regulations. Maintain ditch drainage during cleaning.

ITEM 6185 TRUCK MOUNTED ATTENUATOR (TMA) AND TRAILER:

Provide 2 Truck Mounted Attenuators for mobile operations and 1 Truck Mounted Attenuator for stationary operations as required by the Engineer. Provide backup and keep operational and available of the jobsite at all times during traffic control operations. The TMA will be made available for utilization for the entire duration of the project.



Estimate & Quantity Sheet

CONTROLLING PROJECT ID 6455-92-001

DISTRICT Laredo
HIGHWAY IH0035

COUNTY Webb

CONTROL SECTION JOB				6455-92-001		TOTAL EST.	TOTAL FINAL
PROJECT ID				A00204010			
COUNTY				Webb			
HIGHWAY				IH0035			
ALT	BID CODE	DESCRIPTION	UNIT	EST.	FINAL		
	751-6006	LITTER PICKUP	CYC	54.000		54.000	
	751-6008	MOWING, TRIMMING, AND EDGING	CYC	42.000		42.000	
	751-6010	PLANT BED MAINTENANCE	CYC	2.000		2.000	
	751-6011	PRUNING	CYC	8.000		8.000	
	751-6019	HERBICIDE APPLICATION (SITE A)	CYC	32.000		32.000	
	751-6020	HERBICIDE APPLICATION (SITE B)	CYC	10.000		10.000	
	752-6007	TREE REMOVAL (18" - 24" DIA)	EA	10.000		10.000	
	752-6015	TREE AND BRUSH REMOVAL	AC	0.500		0.500	
	760-6001	DITCH CLEANING AND RESHAPING (FOOT)	LF	21,680.000		21,680.000	
	6185-6005	TMA (MOBILE OPERATION)	DAY	60.000		60.000	


DISTRICT	COUNTY	CCSJ	SHEET
Laredo	Webb	6455-92-001	5

9/1/2023 JGONZALZ 1: \LRDDST\MT\FY 2024\WMT Contract (FY24)\RMC\Landscape for Webb\Microstation\Summary of Tracts and Quant.dgn

SUMMARY AND QUANTITIES											For Contractor's Information		
TRACT ID	LIMITS	ITEM 751-6019 Herbicide Application (SITE A)	ITEM 751-6020 Herbicide Application (SITE B)	ITEM 751-6010 Plant Bed Maintenance	ITEM 751-6006 Litter Pickup	ITEM 751-6008 Mowing, Trimming, and Edging	ITEM 751-6011 Pruning	ITEM 752-6015 Tree and Brush Removal	ITEM 752-6007 Tree Removal (18"-24" DIA)	ITEM 760-6001 Ditch Cleaning	TMA 6185-6005	Total Area for Litter/Cycle	Total Area for Mowing/Cycle
		CYC	CYC	CYC	CYC	CYC	CYC	AC	EA	LF	DAY	AC	AC
1	IH 35, From: Victoria Street To: Scott Street	4			6	6	1				6	3.32	3.32
2	IH 35, From Scott Street To: Calton Road	**			6	6	***			3200	6	29.16	29.16
3	IH 35/ CALTON RD Intersection (Planters)	**			6	6	***			2140	6	8.14	8.14
4	IH 35, From: Calton Road To: Del Mar Blvd.	**			6	6	***			10560	6	20.72	20.72
5	IH 35/DEL MAR Intersection (Planters)	**			6	6	***				6	2.79	2.79
6	IH 35, From: Del Mar Blvd. To: IH 35/IH 69 Intersection, Excluding Shiloh Intersection and IH 69	**			6	6	***				6	29.46	29.46
7	IH 35/SHILOH Intersection	**			6	6	***				6	4.1	4.1
8	IH 35/IH 69 Intersection	**			2				3320		2	12.46	
9	IH 35/TRES EQUIS Intersection		2		2						2	1.1	
10	IH 35/CARRIER Intersection		2		2						2	1.84	
11	IH 35/UNIROYAL		2		2					1120	2	6.52	
12	IH35/US 83 NORTH		2		2					1340	2	6.3	
13	US 83, From: 200 ft East of San Leonard To: Monterrey Street NB AND SB		2	2	2		***				6	0.15	
14	Non-Tract Specific							0.5			2		
TOTALS		32	10	2	54	42	8	0.5	10	21680	60	126.06	97.69

NOTE:

- ** Herbicide Application - one (1) cycle per quarter and includes all Tracts, except Tracts 9- 14
 - *** Pruning - one (1) cycle per year and includes Tracts 1 thru 7 & 13.
- 1 Remove weeds and debris from Concrete Lined channels, retaining walls, in between bridge abutments on frontage roads at Tracts 9, 11, 12, 13, and/or sloped concrete and brick paver areas at intersections.
 - 2 Tract 14 shall not include Landscape under overpass from Marcella to Maryland streets.
 - 3 Ditch cleaning, tree and brush removal, and tree removal quantities are for estimated purposes, but shall be determined by the Maintenance Supervisor as needed.
- Work is to be performed from ROW to ROW for all tracts.



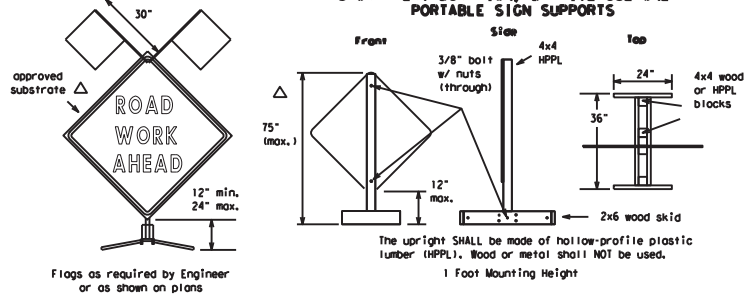
TEXAS DEPARTMENT OF TRANSPORTATION
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SUMMARY OF TRACTS AND QUANTITIES PLAN SHEET

DRN: J. G.	DRN: J. G.	STATE:	SHEET NUMBER		SHEET NO.
CR: V. R.	CR: V. R.	TEXAS			
FED. RD. DIST. NO.	STATE DIST. NO.	COUNTY	CONTR.	SECTION	JOB
22	WEBB	6455	92	001	IH 35

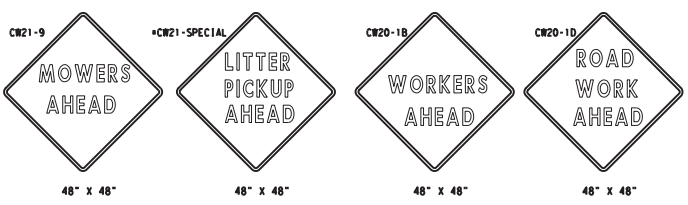
EXAMPLES OF SIGN SUPPORTS

SHORT TERM DURATION, DAYTIME USE ONLY PORTABLE SIGN SUPPORTS



Nails will NOT be allowed.

The upright SHALL be made of hollow-profile plastic lumber (HPPL). Wood or metal shall NOT be used.
1 Foot Mounting Height

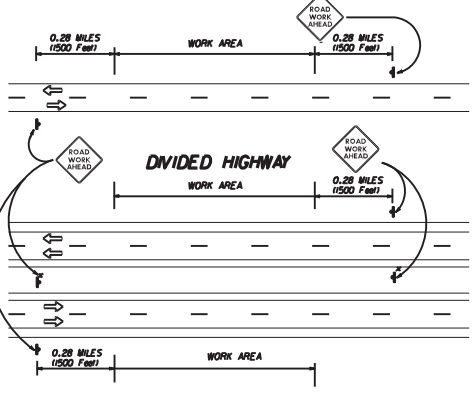


SIGN IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS
MOWERS AHEAD SIGNS ARE USED FOR MOWING OPERATIONS.
LITTER PICKUP AHEAD, ROAD WORK AHEAD AND WORKER AHEAD SIGNS ARE USED AS DIRECTED FOR OTHER MAINTENANCE OPERATIONS WHEN ALL WORK OCCURS OFF OF THE PAVED HIGHWAY SURFACE.

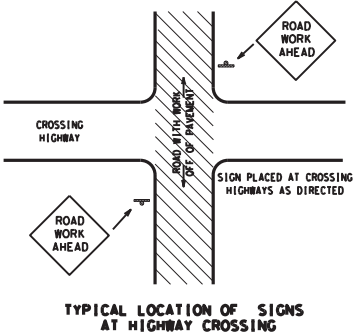
ROLL-UP SIGNS CONFORMING TO DMS-8310 AND THE CW2TCO ALLOWED

*Letter dimensions and spacing for "CW21-SPECIAL" is the same as C20-1D

UNDIVIDED HIGHWAY OR FRONTAGE ROAD



TRAFFIC CONTROL PLAN FOR WORK OFF OF THE PAVED SURFACE.



TYPICAL LOCATION OF SIGNS AT HIGHWAY CROSSING

WORK AREA IS A MAXIMUM OF 2.0 MILES UNLESS OTHERWISE DIRECTED. SIGNS MAY REMAIN IN PLACE ONLY DURING DAYLIGHT HOURS. SIGNS ARE TO BE PLACED 6 TO 12 FEET OF THE PAVED SURFACE UNLESS OTHERWISE DIRECTED. ROAD WORK AHEAD SIGNS SHOWN AS EXAMPLES, ONE OF THE FOUR TYPE SIGNS WILL BE USED AS DIRECTED.

* SIGNS IN THE MEDIAN ARE REQUIRED WHEN WORK OCCURS IN MEDIAN

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.
- Barriocades shall NOT be used as sign supports.
- Flags shall NOT be used to attach signs to any support.
- 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.
- 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 TWCZCD 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 additional signs requested by the Engineer/Inspector shall not be subsidiary.
- The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCO). The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so that the Engineer can verify the correct procedures are being followed.
- The Contractor is responsible for sign installations 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".
- 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 VI

- The Contractor is responsible for ensuring the sign support and substrate meets crashworthiness. For mowing operation all signs and supports are Short-term Duration for daytime work.
- The Contractor shall furnish the sign sizes shown on this sheet or as directed by the Engineer.

SIGN SUBSTRATES

- The Contractor shall ensure that the sign substrate is allowed for the type of sign support that is being used. The CWZTCO 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.
- 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 faces.

REFLECTIVE SHEETING

- ReflectORIZED signs shall be constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 or DMS-8310. The DMS specifications can be accessed from the following web address: http://manuals.dot.state.tx.us/80/dynweb/colmat/#GenerIc_CollectionView.cs?default;#default
- White sheeting, meeting the requirements of DMS-8300 Type C (High Specific Intensity), shall be used for signs with white background and channelizing devices.
- Orange sheeting, meeting the requirements of DMS-8300 Type E (Fluorescent Prismatic), shall be used for signs with orange backgrounds.

SIGN LETTERS

- 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

- Signs should be removed or completely covered when not mowing.
- Duct tape or other adhesive material shall NOT be affixed to a sign face.
- Signs and supports shall be removed by the end of the day.

SIGN SUPPORT HEIGHTS

- Where sign supports 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.
- Rock, concrete, iron, steel or other solid objects will 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 fire inner tubes) shall NOT be used for sandbags.
- Rubber ballasts (such as those used with cones or edgeline channelizers) shall NOT be used as sign support weights.
- 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 supports.
- Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

Any sign, sign support or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced or repaired as soon as possible by the Contractor at the Contractor's expense.

Only pre-qualified products shall be used. A copy of the "Compliant Work Zone Traffic Control Devices List" (CWZTCO) describes pre-qualified products and their sources and may be obtained by contacting:

Signage Engineer
Traffic Operations Division - IE
Texas Department of Transportation
125 East 11th Street
Austin, Texas 78701-2483
Phone (512) 416-3120
Fax (512) 416-3299

Instructions to locate the "CWZTCO" on TxDOT website are:

Start at website - www.dot.state.tx.us
Click on "About TxDOT".
Click on "Organizational Chart".
Click on "Traffic Operations Box".
Click on "Compliant Work Zone Traffic Control Devices".
Click on "View PDF".
This site is printable.



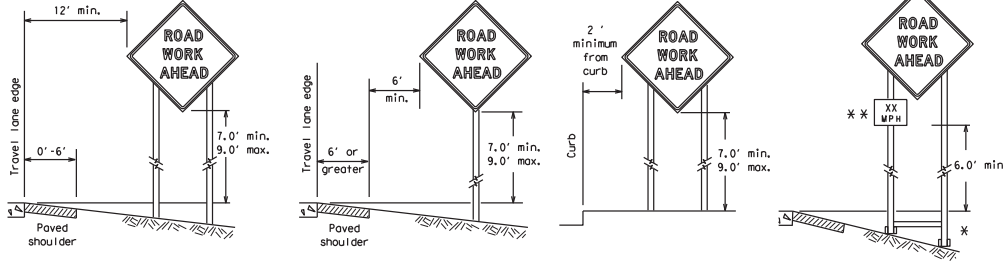
ROADSIDE TRAFFIC CONTROL PLAN

SHEET 1 OF 1		RS-TCP-05		NOT TO SCALE	
FILED	RSTCP05.DGN	DRN	J. G.	CHK	V. R.
DATE	FEBRUARY 2005	STATE REGION	N/A	FEDERAL AID PROJECT	N/A
REVISION	September 17, 2004	NO.	22	SECTION	7
REVISION	FEBRUARY 2, 2005	COUNTY	WEBB	CONTROL SECTION	92 001
REVISION	Sign placement in TCP			JOB	1H35

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

LEVELS DISPLAYED
 1 12 3 4 5 16 17 18 19 10 11 12 13 14 15 16
 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

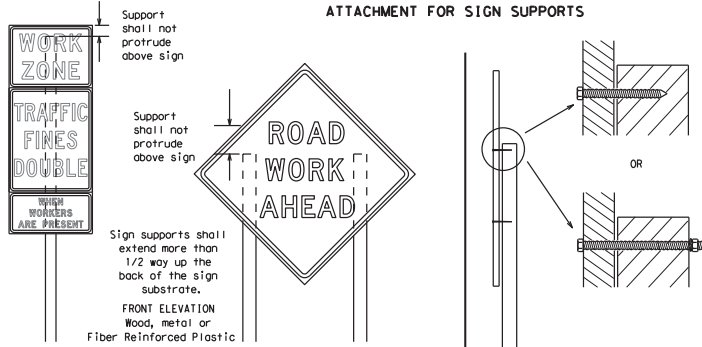
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



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

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

ATTACHMENT FOR SIGN SUPPORTS



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

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

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.
- 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 TMDOT but may have been omitted from the plans. Any deviation 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 regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
- 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.
 - 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.
 - 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 plaques 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.

SIGN SIZES

- 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.
- 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

- 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.
- Orange sheeting, meeting the requirements of DMS-8300 Type B_{FL} or Type C_L, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

- 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

- When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
- 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.
- 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.
- 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

- 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 fire inner tubes) shall NOT be used.
- Rubber ballast for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
- 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.

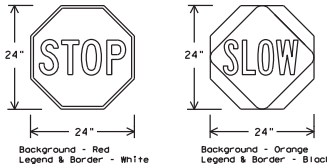
FLAGS ON SIGNS

- 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.

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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 splice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

- STOP/SLOW PADDLES**
- 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 retroreflective when used at night.
 - STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
 - 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 TMDOT.



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

CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

- 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 (L000), 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.
- 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.
- 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.



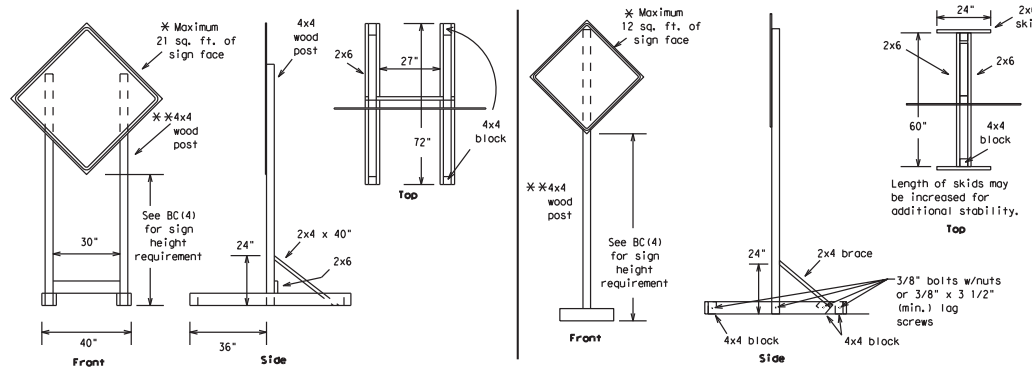
BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC (4) - 21

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REVISIONS:		DATE:			DIST.:		COUNTY:		SHEET NO.:	
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		7-13		5-21			WEBB			8

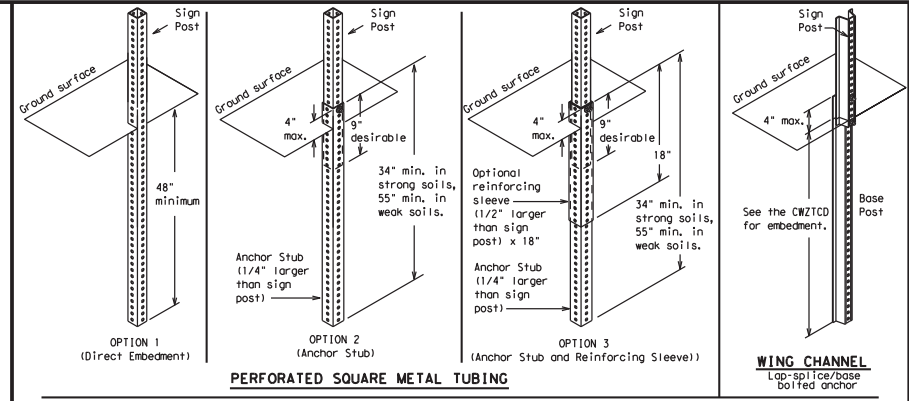
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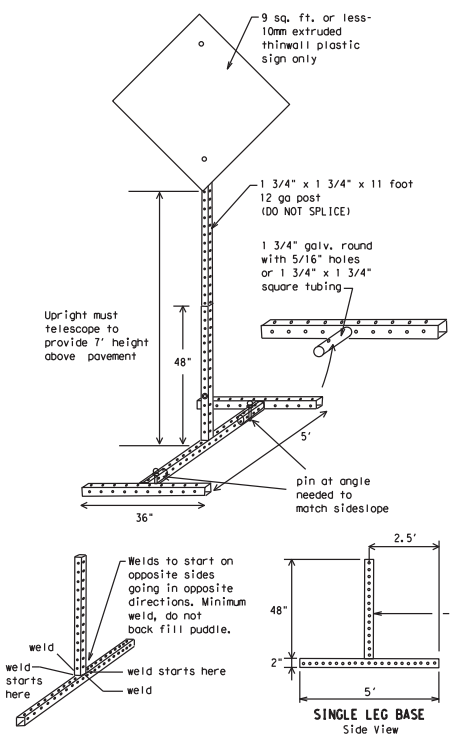
SKID MOUNTED WOOD SIGN SUPPORTS

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



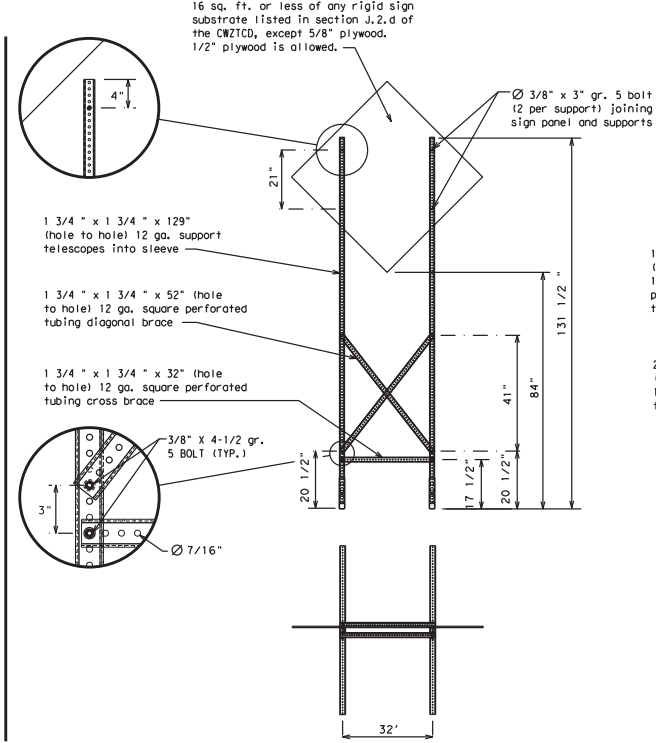
GROUND MOUNTED SIGN SUPPORTS

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



SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS

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



WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC111).

OTHER DESIGNS

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

GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
 2. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
 3. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.
- * See BC(4) for definition of "Work Duration."
 * * Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.
 See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

SHEET 5 OF 12



BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

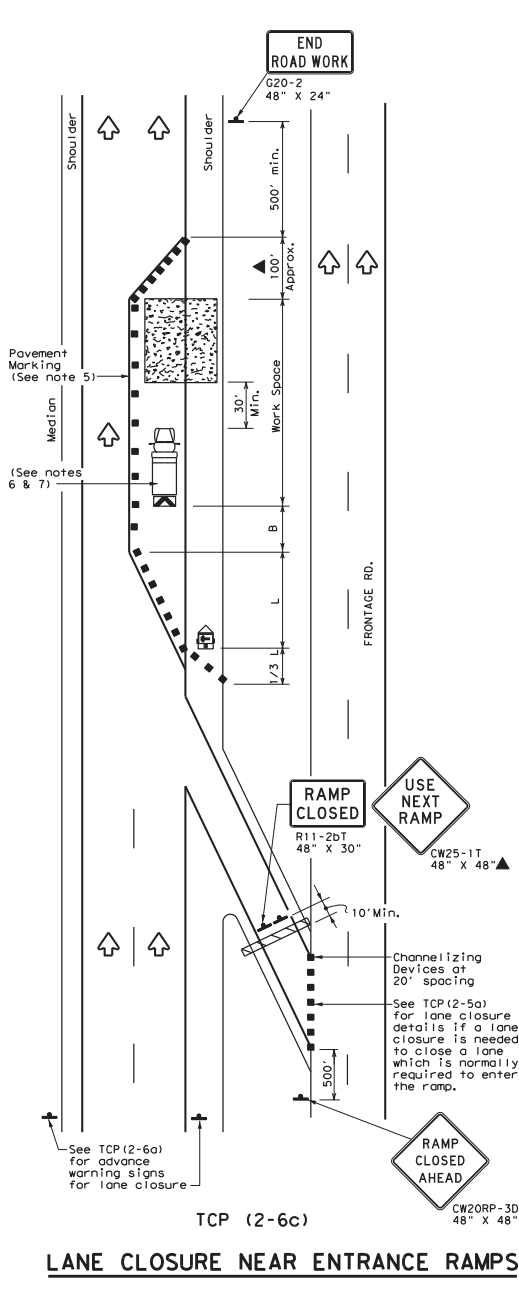
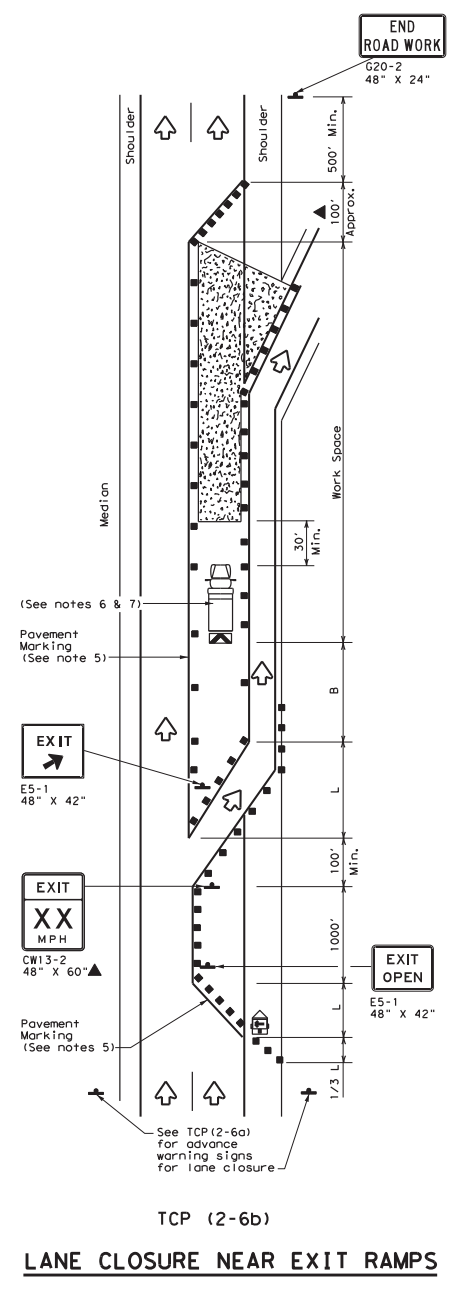
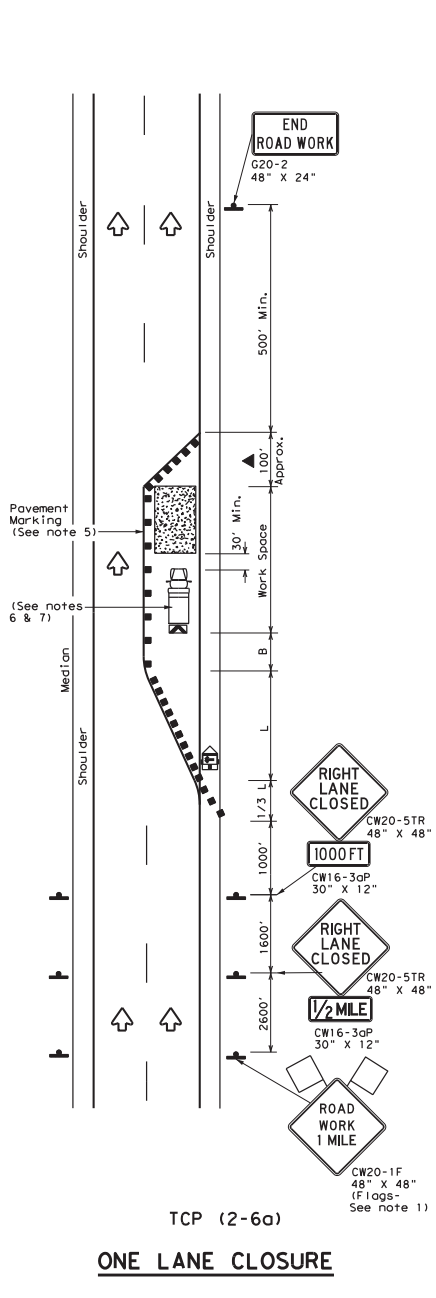
BC(5) - 21

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DATE:	8-14	DIST:	22	COUNTY:		SHEET NO.:			
DATE:	7-13	BY:	WEBB	COUNTY:		SHEET NO.:			

DATE: 8/28/2023 3:09:51 PM
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LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

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

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

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

- GENERAL NOTES**
- Flags attached to signs where shown, are REQUIRED.
 - 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.
 - Channelizing devices used to close lanes may be supplemented with the Chevron Alignment Sign placed on every other channelizing device. Chevrons may be attached to plastic drums as per BC Standards.
 - Channelizing devices used along the work space or along tangent sections may be supplemented with vertical panels (VP) placed on every other channelizing device. If night time conditions make it difficult to see at least two VPs, the VPs may be placed on each channelizing device.
 - The placement of pavement markings may be omitted on intermediate-term stationary work zones with the approval of the Engineer.
 - 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.
 - 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.

Texas Department of Transportation
Traffic Operations Division Standard

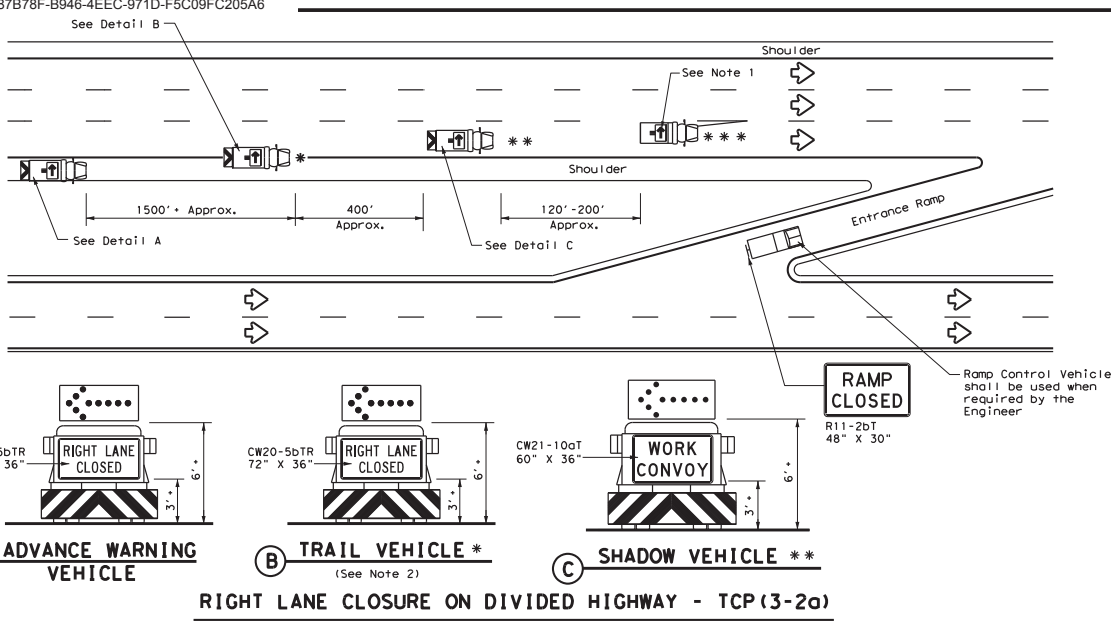
**TRAFFIC CONTROL PLAN
LANE CLOSURES ON
DIVIDED HIGHWAYS**

TCP (2-6) - 18

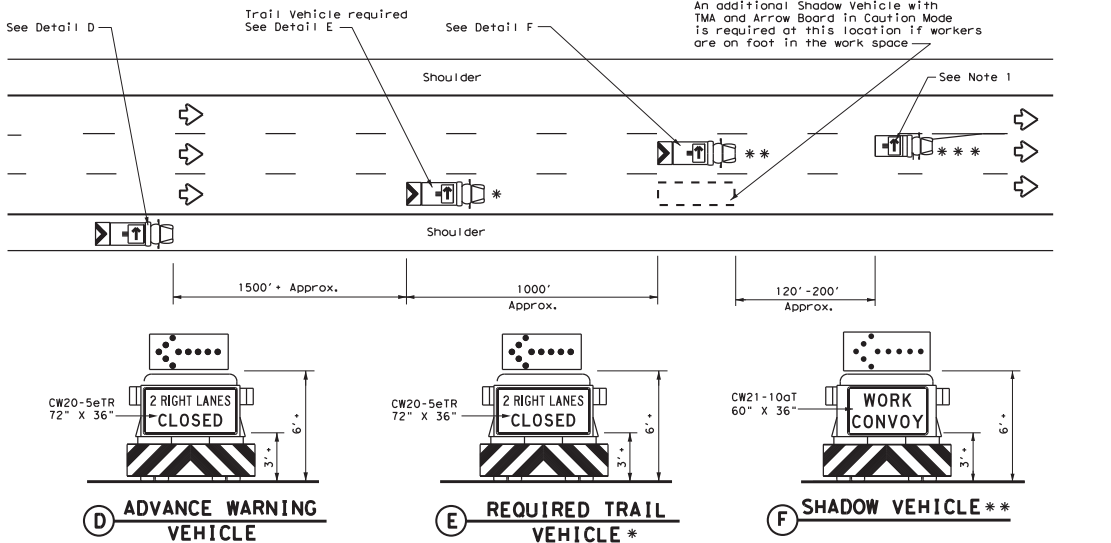
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© TxDOT	December 1985	CONT:	6455	SECT:	92	COUNTY:	22	SHEET NO.:	12		
2-94	4-98	8-95	2-12	1-97	2-18	WEBB					

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RIGHT LANE CLOSURE ON DIVIDED HIGHWAY - TCP(3-2a)



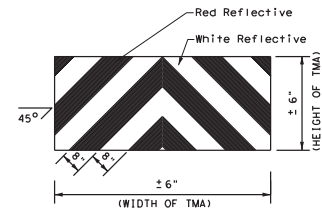
INTERIOR LANE CLOSURE ON MULTI-LANE DIVIDED HIGHWAY - TCP(3-2b)

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

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

GENERAL NOTES

1. ADVANCE WARNING, TRAIL and SHADOW vehicles shall be equipped with Type B or Type C flashing arrow boards as per the Barricade and Construction (BC) standards. Arrow boards on WORK vehicles will be optional based on the type of work being performed. The arrow boards shall be operated from inside the vehicle.
2. For TCP(3-2a) the Engineer will determine if the TRAIL VEHICLE is required based on prevailing roadway conditions, traffic volume, and sight distance restrictions. All other vehicles shown for both TCP(3-2a) and TCP(3-2b) are required.
3. The use of amber high intensity rotating, flashing, oscillating, or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating or strobe lights when mounted on the driver's side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.
4. The use of truck mounted attenuators (TMA) on the ADVANCE WARNING, SHADOW, and TRAIL vehicles are required.
5. Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DMS 8300, Type A.
6. Each vehicle shall have two-way radio communication capability.
7. When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.
8. Vehicle spacing between the TRAIL VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the work convoy should be able to see the TRAIL VEHICLE in time to slow down and/or change lanes as they approach the TRAIL VEHICLE. Vehicle spacing between the WORK VEHICLE and SHADOW VEHICLE may vary according to terrain, work activity and other factors.
9. Standard 48" X 48" diamond shaped warning signs with the same message as those shown may be used where adequate mounting space exists.
10. The signs shown should be used on the Advance Warning Vehicle. As an option, a portable changeable message sign (PCMS) or a truck mounted changeable message sign (TMCMS) with a minimum character height of 12", and displaying the same legend may be substituted for these signs. An appropriate directional arrow display, simulating the size and legibility of the flashing arrow board, must be used in the second phase of the PCMS/TMCMS message. When this is done, the arrow board will not be required on the Advance Warning Vehicle.
11. Standard diamond shape versions of the CW20-5 series signs may be used as an option if the rectangular signs shown are not available.
12. The principles on this sheet may be used to close lanes from the left side of the roadway considering the number of lanes, shoulder width, sight distance, and ramp frequency.
13. Signs and flashing arrow board modes shall be appropriately altered when implementing left lane closures or interior closures which close the left lanes.
14. The Advance Warning Vehicle may straddle the edgeline when shoulder width makes it necessary.



STRIPING FOR TMA

		Traffic Operations Division Standard	
TRAFFIC CONTROL PLAN MOBILE OPERATIONS DIVIDED HIGHWAYS			
TCP(3-2)-13			
FILE: tcp3-2.dgn	DN: TxDOT	CR: TxDOT	DR: TxDOT
© TxDOT December 1985	CONT SECT	JOB	HIGHWAY
2-94 4-91 REVISIONS	6455 92	001	IH 35
8-95 7-13	DIST	COUNTY	SHEET NO.
1-97	22	WEBB	13

