GRAPHICS FILE	MAINTENANCE PROJECT NO.		SHEET NO.
Title-MNT.dgn	RMC 6457-13-001		1
CHECKED	STATE	STATE DIST.	COUNTY
	TEXAS	08	MITCHELL
CHECKED	CONT.	SECT.	JOB / HIGHWAY NO.
	6457	13	001 / IH20, ETC.

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
HIGHWAY ROUTINE MAINTENANCE CONTRACT

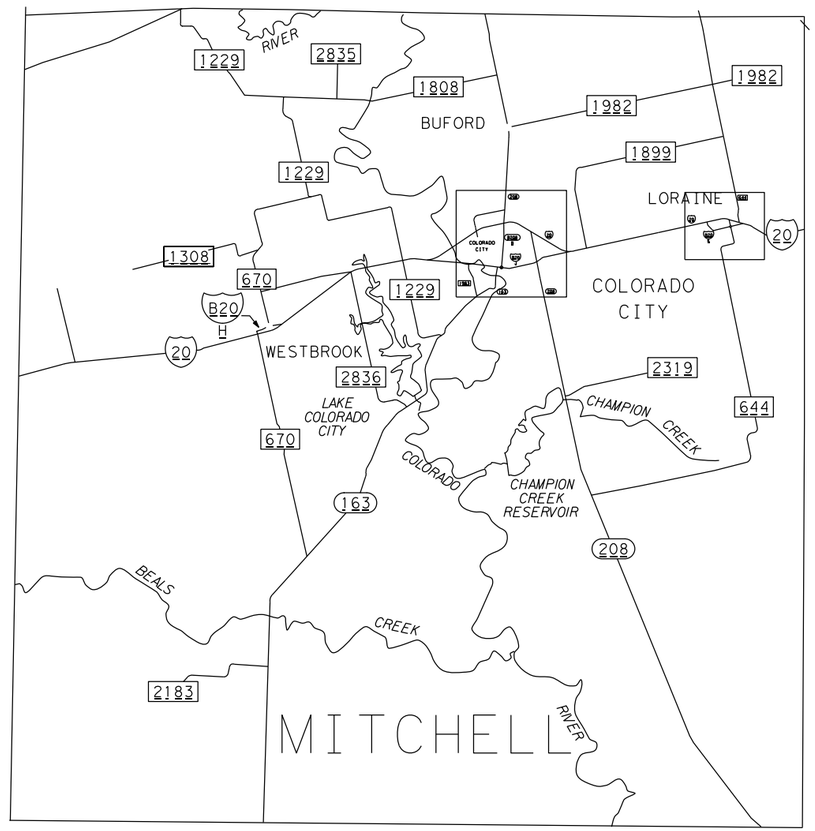
TYPE OF WORK:

MOWING HIGHWAY RIGHT OF WAY

PROJECT NO. : RMC 6357-13-001

HIGHWAY : IH 20, ETC.

LIMITS OF WORK : Various Locations in Mitchell County



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	Title Sheet
2 - 3	General Notes
4	Estimate & Quantity
5	#RS-TCP-05
6	#TCP-AblCableBarrier

#TxDOT Standards

The standard sheets specifically identified on this sheet with a # have been selected by me or under my responsible supervision as being applicable to this project.

DocuSigned by:
Cal Hays, P.E.
A2B0DD676470482...
Cal W. Hays, P.E. — 1/23/2024 Date

STATE OF TEXAS
Cal W. Hays
102106
REGISTERED
PROFESSIONAL ENGINEER

LEVELS DISPLAYED
1 2 3 4

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION NOVEMBER 1, 2014 AND SPECIAL SPECIFICATION ITEMS INCLUDED IN THE CONTRACT SHALL GOVERN ON THIS PROJECT.

FINAL PLANS:

Date Contractor Began Work: _____

Date Work was Completed: _____

Date Work Accepted: _____

Final Contract Cost: $ _____

CERTIFICATION FOR FINAL PLANS:

Project was built according to the plans and specifications. These final plans reflect the work done and the quantities shown thereon and on the final estimate are final quantities.

_____
Area Engineer

TEXAS DEPARTMENT OF TRANSPORTATION

Submitted For Letting:

DocuSigned by:
Cal Hays, P.E. 1/23/2024
A2B0DD676470482...
Cal W. Hays, P.E.
Maintenance Engineer

Recommended For Letting:

DocuSigned by:
Paul N Norman, P.E. 1/24/2024
25E04E8F4AB6444...
Paul Norman, P.E.
Director of Maintenance

Approved For Letting:

DocuSigned by:
Thomas G. Allbritton, P.E. 1/24/2024
0F8F7E74C37D430...
Thomas G. Allbritton, P.E.
District Engineer

GENERAL NOTES

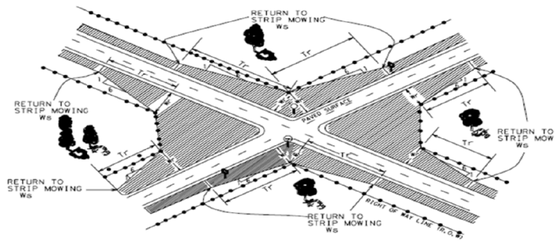
Always mow the entire width of medians and outer separations (areas between main lanes, ramps, and frontage road), before moving to another tract.

Perform hand trimming in areas where mowers are unable to access and hand trim 5 ft. behind guardrail or as directed by the Engineer.

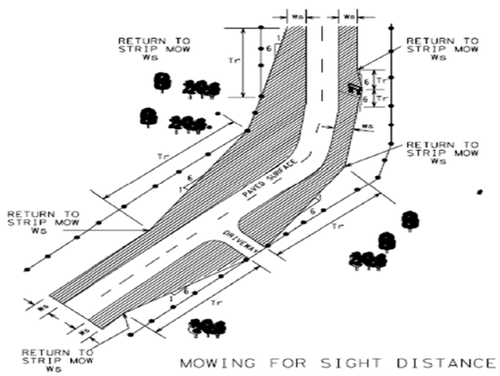
Definitions:

Full Width Mow – Mow entire width of right of way.
Strip Mow – Mow 15 feet from edge of pavement or unpaved shoulder.

Strip mow as shown below at intersections and curves for sight distance. Transition Length (Tr) will be no less than 200'.



MOWING FOR SIGHT DISTANCE
WITH TRANSITION FROM INTERSECTION BACK TO STRIP MOWING



MOWING FOR SIGHT DISTANCE
TRANSITIONS AT DRIVEWAYS, SIGNS, AND CURVES

Project Number: RMC 6457-13-001
County: Mitchell
Highway: IH 20, etc.
Control: 6457-13-001

GENERAL NOTES

Item 734 Litter Removal

Litter removal will be performed no more than 2 working days prior to the mowing cycle.

Pick up any litter remaining after mowing operation.

Only one cycle of litter removal will be paid per mowing cycle.

It is the intent of this item that TxDOT's right-of-way be mowed and litter-free after the contractor's mowing operation.

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

BASIS OF ESTIMATE FOR MOBILE TMAs				
		TMA (Mobile)		
LOCATION	Standard	Required	Additional	TOTAL
Inside lanes of IH 20	TCP-AblCableBarrier	2		2

CONT	SECT	JOB	HIGHWAY
6457	13	001	IH20, etc.
DIST	COUNTY		SHEET NO.
ABL	Mitchell		3

GENERAL NOTES

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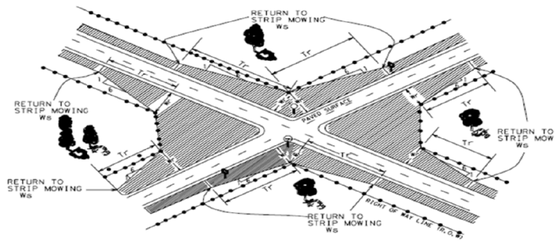
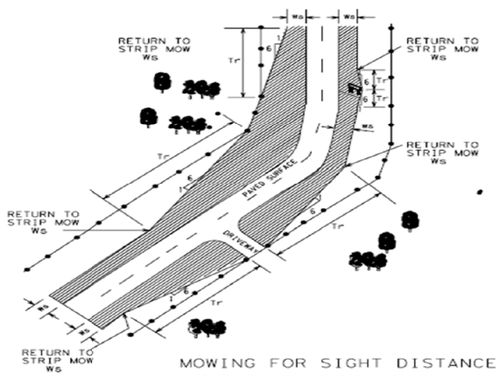


MOWING FOR SIGHT DISTANCE
WITH TRANSITION FROM INTERSECTION BACK TO STRIP MOWING



MOWING FOR SIGHT DISTANCE
TRANSITIONS AT DRIVEWAYS, SIGNS, AND CURVES

Project Number: RMC 6457-13-001
County: Mitchell
Highway: IH 20, etc.
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CONT	SECT	JOB	HIGHWAY
6457	13	001	IH20, etc.
DIST	COUNTY		SHEET NO.
ABL	Mitchell		3

GENERAL NOTES

ESTIMATE/QUANTITY SHEET
COUNTY: MITCHELL
CSJ NO. 6457-13-001

			STRIP MOWING			FULL-WIDTH MOWING			LITTER REMOVAL		
TRACT	HIGHWAY	LIMITS	Cycles	Strip Mow Acres	Strip Mowing TOTAL Acres	Cycles	Full-Width Acres	Full-Width TOTAL Acres	Cycles	Acres	Total Acres
1	IH 20	FROM: HOWARD COUNTY LINE TO: NOLAN COUNTY LINE				3	771	2313	3	715	2145
2	BI 20 H	FROM: IH 20 EAST TO: IH 20 WEST				3	7	21			
3	BI 20 K	FROM: IH 20 EAST TO: IH 20 WEST				3	12	36			
4	BI 20 J	FROM: IH 20 EAST TO: IH 20 WEST				3	33	99	3	28	84
5	FM 3525	FROM: SH 208 TO: 2.5 MILES SOUTH OF IH 20	1	9	9	2	18	36			
6	FM 670	FROM: SH 163 TO: IH 20	1	31	31	2	59	118			
7	FM 2183	FROM: SH 163 TO: HOWARD COUNTY LINE	1	41	41	2	93	186			
8	FM 2319	FROM: NOLAN COUNTY LINE TO: SH 208	1	34	34	2	90	180			
9	FM 670	FROM: IH 20 TO: FM 1229	1	23	23	2	52	104			
10	FM 1308	FROM: FM 670 TO: 1.2 miles WEST	1	19	19	2	44	88			
11	FM 644	FROM: IH 20 TO: SH 208	1	58	58	2	131	262			
12	FM 1982	FROM: SH 208 TO: NOLAN COUNTY LINE	1	43	43	2	114	228			
13	FM 1899	FROM: IH 20 TO: FM 644	1	32	32	2	80	160			
14	FM 1298	FROM: SH 350 TO: SCURRY COUNTY LINE	1	10	10	2	15	30			
15	FM 1808	FROM: SH 208 TO: FM 1229	1	31	31	2	77	154			
16	FM 1229	FROM: SH 350 TO: SH 163	1	71	71	2	115	230			
17	FM 2835	FROM: FM 1808 TO: SCURRY COUNTY LINE	1	12	12	2	32	64			
18	FM 644	FROM: IH 20 TO: SCURRY COUNTY LINE	1	29	29	2	54	108			
19	SH 350	FROM: HOWARD COUNTY LINE TO: SCURRY COUNTY LINE	1	24	24	2	44	88			
20	FM 2836	FROM: SH 163 TO: IH 20	1	23	23	2	59	118			
21	SH 163	FROM: BI 20 J TO: STERLING COUNTY LINE	1	88	88	2	202	404			
22	FM 1983	FROM: SH 163 TO: BI 20 J	1	5	5	2	12	24			
23	SH 208 Litter Removal Area	FROM: IH 20 TO: COKE COUNTY LINE FROM: IH 0020 South to FM 2319	1	89	89	2	162	324	3	42	126
24	SH 208 Litter Removal Area	FROM: IH 20 TO: SCURRY COUNTY LINE FROM: IH0020 North to FM 1982	1	29	29	2	53	106	3	27	81
TOTAL ACRES					**701**		2329	**5481**		812	**2436**

FHWA DIVISION	PROJECT NO.		SHEET NO.
6	RMC 6457-13-001		4
STATE	DISTRICT	COUNTY	
TEXAS	ABL	Mitchell	
CONTROL	SECTION	JOB	HIGHWAY NO.
6457	13	001	IH20, etc.

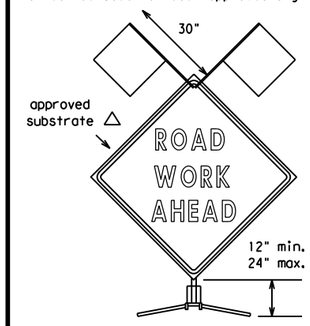
LEVELS DISPLAYED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63		

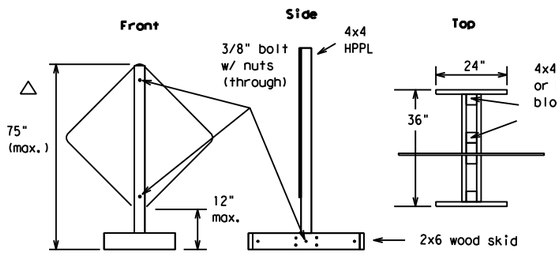
△ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

EXAMPLES OF SIGN SUPPORTS

SHORT TERM DURATION, DAYTIME USE ONLY PORTABLE SIGN SUPPORTS



Flags as required by Engineer or as shown on plans

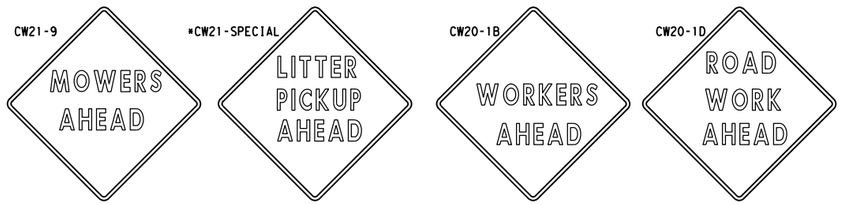


The upright SHALL be made of hollow-profile plastic lumber (HPPL). Wood or metal shall NOT be used.

1 Foot Mounting Height

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 will NOT be allowed.



48" X 48" | 48" X 48" | 48" X 48" | 48" X 48"

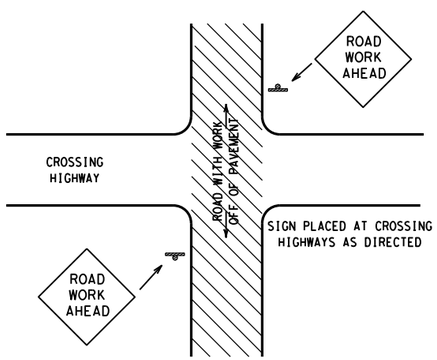
SIGN IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS

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 CWZTCD ALLOWED

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



TYPICAL LOCATION OF SIGNS AT HIGHWAY CROSSING

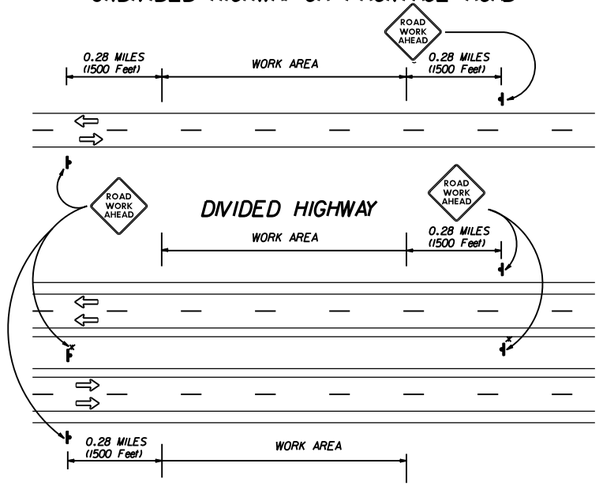
WORK AREA IS A MAXIMUM OF 2.0 MILES UNLESS OTHERWISE DIRECTED. SIGNS MAY REMAIN IN PLACE ONLY DURING DAYLIGHT HOURS.

SIGNS ARE TO BE PLACED 6' TO 12' OFF 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

UNDIVIDED HIGHWAY OR FRONTAGE ROAD



TRAFFIC CONTROL PLAN FOR WORK OFF OF THE PAVED SURFACE.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. Nails shall NOT be used to attach signs to any support.
5. 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.
6. 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 additional signs requested by the Engineer/Inspector shall not be subsidiary.
7. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD). The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so that the Engineer can verify the correct procedures are being followed.
8. 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.
9. 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".
10. 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)

1. 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.
2. The Contractor shall furnish the sign sizes shown on this sheet or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure that the sign substrate is allowed for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate.
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 faces.

REFLECTIVE SHEETING

1. 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/dynaweb/colmates/@Generic__CollectionView;cs=default;ts=default
2. White sheeting, meeting the requirements of DMS-8300 Type C (High Specific Intensity), shall be used for signs with white background and channelizing devices.
3. Orange sheeting, meeting the requirements of DMS-8300 Type E (Fluorescent Prismatic), shall be used for 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. Signs should be removed or completely covered when not mowing.
2. Duct tape or other adhesive material shall NOT be affixed to a sign face.
3. Signs and supports shall be removed by the end of the day.

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 is recommended.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects will not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact.
6. Rubber (such as tire inner tubes) shall NOT be used for sandbags.
7. Rubber ballasts (such as those used with cones or edgeline channelizers) shall NOT be used as sign support weights.
8. 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.
9. 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" (CWZTCD) describes pre-qualified products and their sources and may be obtained by contacting:

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

Instructions to locate the "CWZTCD" 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.

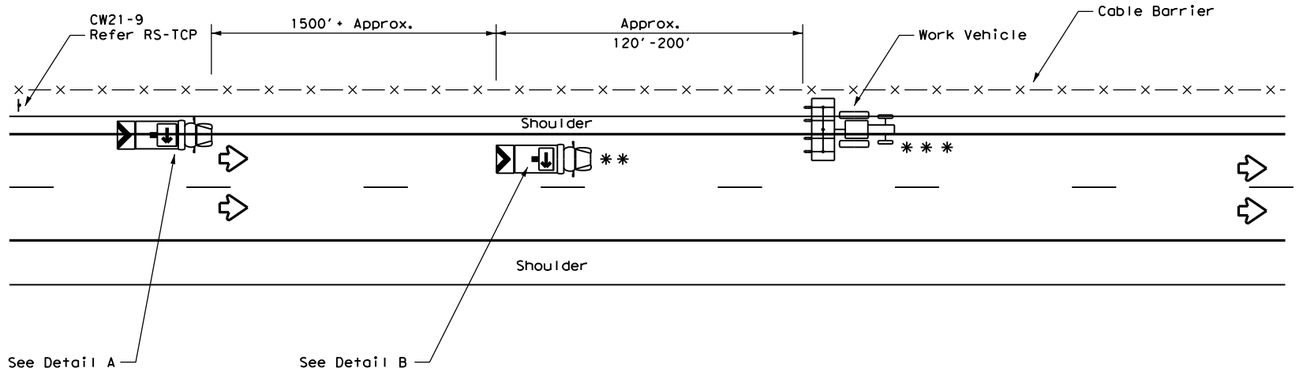
Texas Department of Transportation
Maintenance Division
Standard Plans

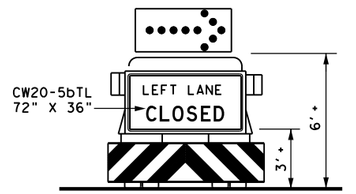
ROADSIDE TRAFFIC CONTROL PLAN

SHEET 1 OF 1 — RS-TCP-05 — NOT TO SCALE

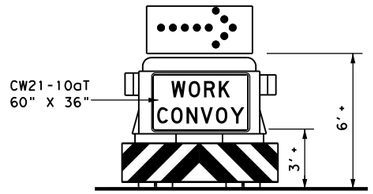
FILE: RSTCP05.DGN	DN: LJB	CK: JG	DW: -	CK: -	MEG NO.:	
©TxDOT FEBRUARY 2005	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT			SHEET
REVISED: September 17, 2004	08	N/A	N/A			5
REVISED: FEBRUARY 2, 2005 Sign placement in TCP	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
REVISED:	Mitchell		6457	13	001	IH20,etc.

DATE:
FILE:





(A) ADVANCE WARNING VEHICLE



(B) SHADOW VEHICLE**

LEFT LANE CLOSURE ADJACENT TO CABLE BARRIER

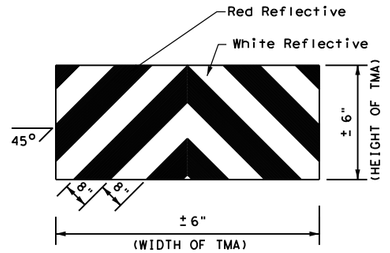
Note: An engineer's seal is not required in accordance with 137.33.m of the Texas Engineering Act and Board Rules.

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 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. A TRAIL VEHICLE is not 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 and SHADOW 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 ADVANCE WARNING VEHICLE should change lanes first to shadow the other convoy vehicles.
8. Vehicle spacing between the ADVANCED WARNING VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the work convoy should be able to see the ADVANCE WARNING VEHICLE in time to slow down and/or change lanes as they approach the ADVANCED WARNING 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 Advance Warning Vehicle may straddle the edgeline when shoulder width makes it necessary.



STRIPING FOR TMA

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN MOBILE OPERATIONS ADJACENT TO CABLE BARRIER

TCP-AblCableBarrier

FILE: TCP-AblCableBarrier.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 2017	CONT	SECT	JOB	HWY
REVISIONS	6457	13	001	IH20, etc.
	DIST	COUNTY		SHEET NO.
	08	Mitchell		6