CONSTRUCTION PLANS
FOR
QUIET ZONE IMPROVEMENT PROJECT (MAGNOLIA AND MUSTANG)

CITY OF CROWLEY, TARRANT COUNTY, TEXAS

OCTOBER 2022

SHEET INDEX

OWNER

CROWLEY Texas

PREPARED BY

Pacheco Koch

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FORT WORTH, TX 76109
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008001

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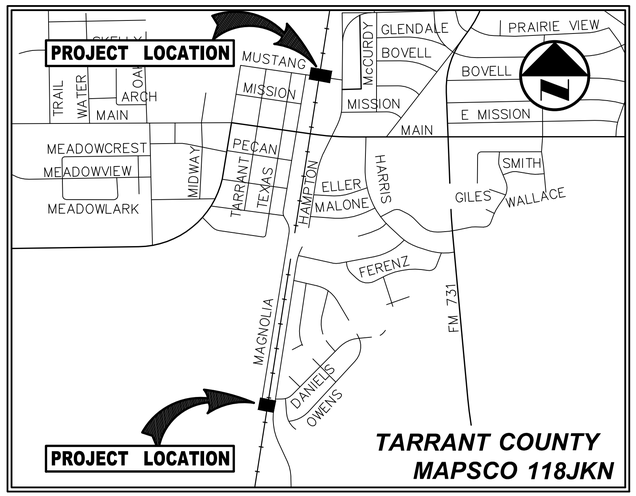

VICINITY MAP
(NOT TO SCALE)

* THE STANDARD SHEETS, SPECIFICALLY IDENTIFIED IN THIS DRAWING SHEET INDEX, HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS/HER PROJECT.

BRIAN D. O'NEILL, P.E.

STATE OF TEXAS
BRIAN D. O'NEILL
83980
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRIAN D. O'NEILL, P.E. 83980 ON 10/19/2022. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

CITY OF CROWLEY QUIET ZONE

GENERAL NOTES

GENERAL REQUIREMENTS

GENERAL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE CITY AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION OR DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION AND FOR THE SAFETY AND PROTECTION THEREOF AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY ITEM OF WORK, THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE BID IN THE PROPOSAL FOR VARIOUS BID ITEMS. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED OWNERS (UTILITY COMPANIES) OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
   a. NOTIFY TEXAS 811 (1-800-DIG-TESS OR WWW.TEXAS811.ORG) TO LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION.
   b. CAUTION! BURIED ELECTRIC LINES MAY EXIST ALONG THIS PROJECT. CONTACT ELECTRICAL PROVIDERS 48 HOURS PRIOR TO EXCAVATION :
      - ONCOR GAS & ELECTRIC 817-215-6214
      - ATMOS ENERGY 817-215-4366
      - TXU ENERGY 1-800-233-2133
   c. CAUTION! BURIED GAS LINES EXIST ALONG THIS PROJECT. CONTACT ONCOR 48 HOURS PRIOR TO EXCAVATION, AND WITHIN TWO (2) HOURS OF ENCOUNTERING A GAS LINE (817-215-6214)
   d. CAUTION! BURIED COMMUNICATION CABLES MAY EXIST ALONG THIS PROJECT. CONTACT COMMUNICATION COMPANIES 48 HOURS PRIOR TO EXCAVATION:
      - AT&T 1-800-878-8711
      - SBC TELEPHONE 817-338-6819
      - CHARTER COMM. 817-509-6272 EXT. 3363
   e. CAUTION! WHEN DOING WORK WITHIN 200 FEET OF ANY SIGNALIZED INTERSECTION, THE CONTRACTOR SHALL NOTIFY TRAFFIC MANAGEMENT DIVISION OF THE CITY 72 HOURS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL PROTECT EXISTING SIGNAL HARDWARE, GROUND BOXES, DETECTION LOOPS, AND UNDERGROUND CONDUIT AT SIGNALIZED INTERSECTIONS. ANY DAMAGES AT SIGNALIZED INTERSECTIONS SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT THE CITY TO PERFORM CONDUIT LINE LOCATES AT SIGNALIZED INTERSECTIONS 72 HOURS PRIOR TO COMMENCING WORK AT THE INTERSECTION.
2. CONTRACTOR'S PERSONNEL SHALL HAVE IDENTIFYING CLOTHING, HATS OR BADGES AT ALL TIMES WHICH IDENTIFY THE CONTRACTOR'S NAME, LOGO OR COMPANY.
3. PROTECT CONCRETE CURB AND GUTTER, DRIVEWAYS, AND SIDEWALKS THAT ARE NOT DESIGNATED FOR REMOVAL. REMOVAL AND REPLACEMENT OF THESE ITEMS SHALL BE AS DESIGNATED IN THE DRAWINGS.
4. THE CONTRACTOR SHALL RESTORE THE CONSTRUCTION AREA TO ORIGINAL CONDITION PRIOR TO FINAL INSPECTION.
5. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE BEGINNING CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SECURITY TO PROTECT THE PROJECT SITE, CONTRACTOR PROPERTY, EQUIPMENT, AND WORK.
7. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING STREETS OF CONSTRUCTION DIRT AND DEBRIS AT CLOSE OF EACH WORK DAY.
8. THE CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF THE JOB SHALL BE AS GOOD AS OR BETTER THAN PRIOR TO STARTING WORK.
9. THE CONTRACTOR SHALL NOTIFY ALL PROPERTY OWNERS A MINIMUM OF 24 HOURS PRIOR TO BLOCKING DRIVEWAYS OR ENTERING UTILITY EASEMENTS.
10. CONSTRUCTION STAKING WILL BE PROVIDED BY THE CONTRACTOR. TWO COPIES OF STAKING NOTES TO BE PROVIDED TO THE ENGINEER PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR SHALL PROVIDE A BENCHMARK OR TEMPORARY BENCHMARK AND SURVEY CONTROLS AS NEEDED.
12. THE CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE MOST RECENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE APPROVED TRAFFIC CONTROL PLAN.

UTILITIES

GENERAL:

1. EXISTING VERTICAL DEFLECTIONS AND PIPE SLOPES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND HAVE NOT BEEN FIELD VERIFIED, UNLESS OTHERWISE NOTED. RIM ELEVATIONS, FLOW LINES, AND HORIZONTAL LOCATIONS OF EXISTING MANHOLES WERE DETERMINED FROM FIELD SURVEY. IF FIELD CONDITIONS VARY FROM THOSE SHOWN ON DRAWINGS CONTRACTOR SHALL NOTIFY CITY.
2. MAINTAIN ALL EXISTING WATER AND SEWER CONNECTIONS TO CUSTOMERS IN WORKING ORDER AT ALL TIMES, EXCEPT FOR BRIEF INTERRUPTIONS IN SERVICE FOR WATER AND SEWER SERVICES TO BE REINSTATED. IN NO CASE SHALL SERVICES BE ALLOWED TO REMAIN OUT OF SERVICE OVERNIGHT.
3. ESTABLISH AND MAINTAIN A TRENCH SAFETY SYSTEM IN ACCORDANCE WITH THE EXCAVATION SAFETY PLAN AND FEDERAL, STATE OR LOCAL SAFETY REQUIREMENTS.
4. PROVIDE AND FOLLOW APPROVED CONFINED SPACE ENTRY PROGRAM IN ACCORDANCE WITH OSHA REQUIREMENTS. CONFINED SPACES SHALL INCLUDE MANHOLES AND ALL OTHER CONFINED SPACES IN ACCORDANCE WITH OSHA'S PERMIT REQUIRED FOR CONFINED SPACES.

STORM DRAIN:

1. MAINTAIN THE EXISTING STORM DRAINAGE SYSTEM UNTIL THE PROPOSED SYSTEM IS IN SERVICE. IN NO CASE SHOULD THE CONTRACTOR LEAVE THE EXISTING STORM DRAIN OUT OF SERVICE WHEREBY RUNOFF WOULD CAUSE DAMAGE TO ADJACENT PROPERTY.
2. CONSTRUCT ALL DRAINAGE IMPROVEMENTS FROM THE DOWNSTREAM END TO THE UPSTREAM END TO ALLOW CONTINUED STORM DRAIN SERVICE. IF THE CONTRACTOR PROPOSES TO CONSTRUCT THE SYSTEM OTHERWISE, THE CONTRACTOR SHALL SUBMIT A SEQUENCING PLAN TO THE CITY FOR APPROVAL.
3. TAKE APPROPRIATE MEASURES TO PRESERVE WILDLIFE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL GUIDELINES.

TRANSPORTATION

TRAFFIC CONTROL:

1. ROADS AND STREETS SHALL BE KEPT OPEN TO TRAFFIC AT ALL TIMES. CONTRACTOR SHALL ARRANGE CONSTRUCTION SO AS TO CLOSE ONLY ONE LANE OF A ROADWAY AT A TIME.
2. ALL CONSTRUCTION OPERATIONS SHALL BE CONDUCTED TO PROVIDE MINIMAL INTERFERENCE TO TRAFFIC.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SIGNAGE NECESSARY DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE MOST RECENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE APPROVED TRAFFIC CONTROL PLAN.

RAILWAY

GENERAL:

1. RAILWAY OWNED BY BNSF RAILWAY COMPANY.
   1.1. CONTACT INFORMATION:

•RAILWAY WEBSITE:	WWW.BNSFCONTRACTOR.COM	
•BNSF ROADMASTER:	PAUL.CLAYBORN@BNSF.COM	(817)-247-5028
•BNSF SIGNAL SUPERVISOR	RYAN JOHNSON	(507)-217-0718
•MANAGER PUBLIC PROJECTS:	TIM.HUYA@BNSF.COM	(817)-352-2902
•RAILWAY PROTECTIVE LIABILITY INSURANCE:	ROSA MARTINEZ AT MARSH, USA	(214)-303-8519
•RAILWAY'S RESOURCE OPERATIONS CENTER:		1(800)-832-5452
•ACCIDENT/INCIDENT REPORTING CENTER:	ACCIDENT-REPORTING.CENTER@BNSF.COM	1(800)-687-6736

2. THE CONTRACTOR MUST TAKE PROTECTIVE MEASURES AS ARE NECESSARY TO KEEP RAILWAY FACILITIES, INCLUDING TRACK BALLAST, FREE OF SAND, DEBRIS, AND OTHER FOREIGN OBJECTS AND MATERIALS RESULTING FROM HIS OPERATIONS.
3. CONTRACTOR MUST IMMEDIATELY NOTIFY THE RAILWAY'S RESOURCE OPERATIONS CENTER OF ANY DISCHARGE, RELEASE OR SPILLS IN EXCESS OF A REPORTABLE QUANTITY.
4. UPON COMPLETION OF THE WORK COVERED BY THIS CONTRACT, CONTRACTOR MUST PROMPTLY REMOVE FROM THE RAILWAY'S PROPERTY ALL OF CONTRACTOR'S TOOLS, EQUIPMENT, IMPLEMENTS AND OTHER MATERIALS.
5. ALL WORK PREFORMED BY CONTRACTORS WITHIN 25 FEET OF ANY TRACK MUST BE IN COMPLIANCE WITH FRA ROADWAY WORKER PROTECTION REGULATIONS.
6. THE CONTRACTOR MUST NOT PILE OR STORE ANY MATERIALS, MACHINERY OR EQUIPMENT CLOSER THAN 25'-0" TO THE CENTER LINE OF THE NEAREST RAILWAY TRACK.
7. ALL POWER LINE WIRES MUST BE CONSIDERED DANGEROUS AND OF HIGH VOLTAGE UNLESS INFORMED TO THE CONTRARY BY PROPER AUTHORITY.

PRIOR TO BEGINNING WORK:

1. CONTRACTORS MUST NOTIFY AT LEAST 30 CALENDAR DAYS BEFORE COMMENCING ANY WORK ON RAILWAY PROPERTY:
   - CITY OF CROWLEY: (817) 297-2201
   - RAILWAY'S MANAGER PUBLIC PROJECTS
2. NO EMPLOYEE OF THE CONTRACTOR, ITS SUBCONTRACTORS, AGENTS OR INVITEES MAY ENTER RAILWAY PROPERTY WITHOUT FIRST HAVING COMPLETED RAILWAY'S ENGINEERING CONTRACTOR SAFETY ORIENTATION, FOUND ON RAILWAY'S WEBSITE.
   2.a. ADDITIONALLY, PRIOR TO ENTERING RAILWAY PROPERTY, THE CONTRACTOR MUST ENSURE THAT EACH AND EVERY ONE OF ITS EMPLOYEES, SUBCONTRACTORS, AGENTS OR INVITEES POSSESSES A CARD CERTIFYING COMPLETION OF THE RAILWAY CONTRACTOR SAFETY ORIENTATION.
   2.b. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF THE RAILWAY CONTRACTOR SAFETY ORIENTATION.
3. CONTRACTOR MUST OBTAIN A "TEMPORARY CONSTRUCTION CROSSING AGREEMENT" FROM THE RAILWAY PRIOR TO MOVING HIS EQUIPMENT OR MATERIALS ACROSS THE RAILWAYS TRACKS.
4. EACH CONTRACTOR MUST DEVELOP AND IMPLEMENT THE SAFETY ACTION PLAN PROVIDED ON RAILWAY WEBSITE, WHICH WILL BE MADE AVAILABLE TO RAILWAY PRIOR TO COMMENCEMENT OF ANY WORK ON RAILWAY PROPERTY.
5. BEFORE BEGINNING ANY TASK ON RAILWAY PROPERTY, A THOROUGH JOB SAFETY BRIEFING MUST BE CONDUCTED WITH ALL PERSONNEL INVOLVED WITH THE TASK AND REPEATED WHEN THE PERSONNEL OR TASK CHANGES.
6. PRIOR TO BEGINNING WORK THE CONTRACTOR MUST ESTABLISH A STORAGE AREA WITH CONCURRENCE OF THE RAILWAY'S REPRESENTATIVE.

EXCAVATION:

1. BEFORE EXCAVATING:
   1.a. CONTRACTOR MUST CONTACT BNSF'S ROADMASTER AND BNSF'S SIGNAL SUPERVISOR.
   1.b. CONTRACTOR MUST DETERMINE WHETHER ANY UNDERGROUND PIPE LINES, ELECTRIC WIRES, OR CABLES, INCLUDING FIBER OPTIC CABLE SYSTEMS ARE PRESENT AND LOCATED WITHIN THE PROJECT WORK AREA. THE CONTRACTOR MUST DETERMINE WHETHER EXCAVATION ON RAILWAYS PROPERTY COULD CAUSE DAMAGE TO BURIED CABLES RESULTING IN DELAY TO RAILWAY TRAFFIC AND DISRUPTION OF SERVICE TO USERS.
   1.c. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY ANY OTHER COMPANIES THAT HAVE UNDERGROUND UTILITIES IN THE AREA AND ARRANGE FOR THE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE EXCAVATING.
2. ALL UNDERGROUND AND OVERHEAD WIRES WILL BE CONSIDERED HIGH VOLTAGE AND DANGEROUS UNTIL VERIFIED WITH THE COMPANY HAVING OWNERSHIP OF THE LINE.
3. CONTRACTOR MUST CEASE ALL WORK AND NOTIFY THE RAILWAY IMMEDIATELY BEFORE CONTINUING EXCAVATION IN THE AREA IF OBSTRUCTIONS ARE ENCOUNTERED WHICH DO NOT APPEAR ON DRAWINGS.
4. ANY EXCAVATIONS, HOLES OR TRENCHES ON THE RAILWAY'S PROPERTY MUST BE COVERED, GUARDED AND/OR PROTECTED WHEN NOT BEING WORKED ON.
5. ALL EXCAVATIONS MUST BE BACK FILLED AS SOON AS POSSIBLE.

STATE OF TEXAS
BRIAN D. O'NEILL
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PROFESSIONAL ENGINEER

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4060 BRYANT IRVIN ROAD
FORT WORTH, TX 76109 817.412.7155
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008001

GENERAL NOTES

QUIET ZONE IMPROVEMENT PROJECT
(MAGNOLIA AND MUSTANG)
CITY OF CROWLEY, TARRANT COUNTY, TX

DESIGN	DRAWN	DATE	JOB NO.	SHEET NO.
CKT/ECW	CKT/ECW	OCTOBER 2022	3696-16.289	2 OF 49

CITY OF CROWLEY QUIET ZONE

10:25 AM

CK TURNER
10/19/2022 - 4:29PM
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GENERAL IMPROVEMENT ITEMS					
BID ITEM #	BID ITEM DESCRIPTION	SPEC REFERENCE	UNIT	SHEET ALL SHEETS	TOTAL
1	Mobilization	TXDOT 500	LS	1	**1**
2	Traffic Control (Barriers and Warning and Detour Signs)	NCTCOG 801.1	LS	1	**1**
3	Temporary Erosion, Sedimentation And Water Pollution Prevention (SWPPP)	NCTCOG 202	LS	1	**1**
4	General Site Preparation	NCTCOG 203.1	LS	1	**1**
5	Project Signs	NCTCOG 107.21	EA	4	**4**
6	Railroad Flagger Fee	NCTCOG 107.23	DOL	1	1
MAGNOLIA ST. IMPROVEMENT ITEMS					
BID ITEM #	BID ITEM DESCRIPTION	SPEC REFERENCE	UNIT	SHEET 26-27	TOTAL
7	Obliterate Abandoned Road	TXDOT 106	SY	447	**447**
8	Remove Asphalt Pavement	TXDOT 105	SY	433	**433**
9	Remove Sign	TxDOT 644	EA	7	**7**
10	6" Lime Stabilized Base	TxDOT 260	SY	580	**580**
11	Lime for Stabilized Base (40 LBS/SY)	TxDOT 260	TON	11.6	**11.6**
12	Prime Coat (0.30 GAL/SY)	TxDOT 310	GAL	168	**168**
13	2" HMAC Type D	TxDOT 340	SY	539	**539**
14	4" HMAC Type B	TxDOT 340	SY	559	**559**
15	Unclassified Excavation	NCTCOG 203.2	CY	150	**150**
16	Seeding	TxDOT 164	SY	670	**670**
17	4" Topsoil	TXDOT 160	SY	670	**670**
18	Install Concrete Curb and Gutter	TxDOT 529	LF	80	**80**
19	Remove Concrete Curb and Gutter	TxDOT 496	LF	80	**80**
20	Silt Fence	TxDOT 506	LF	150	**150**
21	Inlet Protection	TxDOT 506	EA	2	**2**
MUSTANG ST. IMPROVEMENT ITEMS					
BID ITEM #	BID ITEM DESCRIPTION	SPEC REFERENCE	UNIT	SHEET 29-30	TOTAL
22	Relocate Bush/Shrub	TxDOT 100	EA	2	**2**
23	Remove Concrete Driveway	TxDOT 104	SY	120	**120**
24	Remove Concrete Curb	TxDOT 104	LF	25	**25**
25	Sawcut	TxDOT 104	LF	50	**50**
26	Unclassified Excavation	NCTCOG 203.2	CY	105	**105**
27	Select Backfill	TxDOT 134	CY	35	**35**
28	Block Sod	TxDOT 162	SY	200	**200**
29	6" Lime Stabilized Base	TxDOT 260	SY	910	**910**
30	Lime for Stabilized Base (40 LBS/SY)	TxDOT 260	TON	18.2	**18.2**
31	Prime Coat (0.30 GAL/SY)	TxDOT 310	GAL	252	**252**
32	2" HMAC Type D	TxDOT 340	SY	840	**840**
33	4" HMAC Type B	TxDOT 340	SY	840	**840**
34	18" Reinforced Concrete Pipe	TxDOT 464	LF	32	**32**
35	18" Safety End Treatment	TxDOT 467	EA	2	**2**
36	Remove CMP	TxDOT 496	LF	40	**40**
37	Silt Fence	TxDOT 506	LF	120	**120**
38	Rock Filter Dam (Type 2)	TxDOT 506	LF	40	**40**
39	6" Concrete Driveway	TxDOT 530	SY	96	**96**
40	6" Concrete Curb (Dowelled)	TxDOT 530	LF	30	**30**
41	7" Tall, 12" Wide Concrete Median (Dowelled)	TxDOT 530	LF	199	**199**
42	Remove and Dispose of Asphalt Surface and Base	TxDOT 540	SY	580	**580**
43	Relocate Existing Sign and Pole	TxDOT 644	EA	1	**1**
44	"DO NOT STOP ON TRACKS" Sign and Support	TxDOT 644	EA	2	**2**
45	"RR CROSSING" with "NO TRAIN HORN" Plaque Sign and Support	TxDOT 644	EA	2	**2**
46	4" Yellow Thermoplastic	TxDOT 666	LF	375	**375**
47	24" White Thermoplastic	TxDOT 666	LF	80	**80**
48	Paint Curb Yellow	TxDOT 666	LF	210	**210**
49	White RR Crossing Thermoplastic	TxDOT 666	EA	2	**2**
50	4" White Paint	TxDOT 666	LF	480	**480**
51	Handicap Parking Symbol	TxDOT 666	EA	1	**1**
52	Remove 4" Pavement Marking	TxDOT 677	LF	200	**200**
MAGNOLIA ST. CONCRETE BID ALTERNATIVE					
DEDUCT 12	Prime Coat (0.30 GAL/SY)	TxDOT 310	GAL	168	**168**
DEDUCT 13	2" HMAC Type D	TxDOT 340	SY	539	**539**
DEDUCT 14	4" HMAC Type B	TxDOT 340	SY	559	**559**
ALT-1	6" Concrete Pavement	TxDOT 360	SY	559	**559**

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QUANTITY SUMMARY

QUIET ZONE IMPROVEMENT PROJECT
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CITY OF CROWLEY, TARRANT COUNTY, TX

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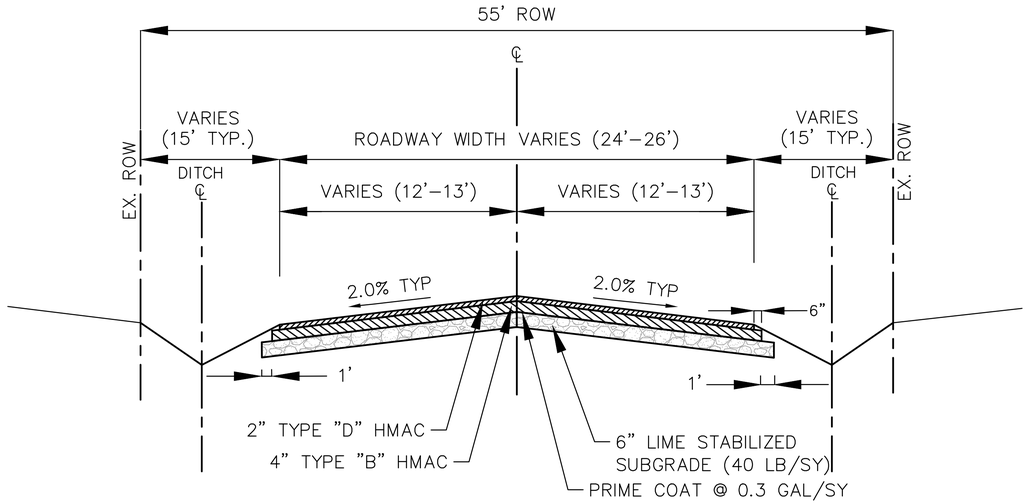
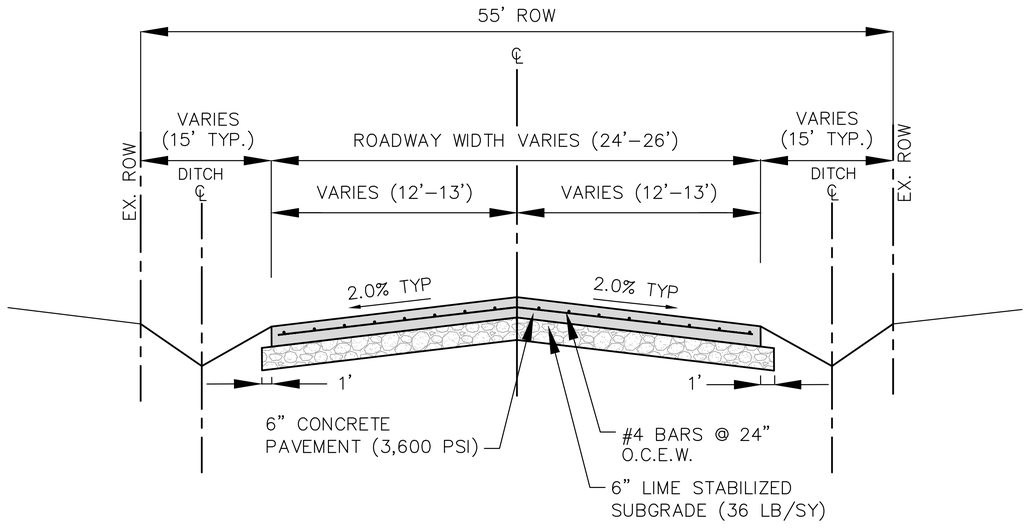
CKT/ECW	CKT/ECW	OCTOBER 2022	3696-16.289	3 OF 49



1 **MAGNOLIA PROPOSED TYPICAL SECTION - ASPHALT**



2 **MAGNOLIA ALTERNATIVE TYPICAL SECTION - CONCRETE**

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S MAGNOLIA PAVING
TYPICAL SECTIONS

QUIET ZONE IMPROVEMENT PROJECT
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HORIZONTAL SCALE IN FEET

LEGEND

- CHANNELIZING DEVICE
- OPEN LANE
- REQUIRED FLAG
- TEMPORARY CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW PANEL
- TYPE III BARRICADE
- WORK ZONE

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TRAFFIC CONTROL PLAN
S MAGNOLIA STREET
QUIET ZONE IMPROVEMENT PROJECT
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CITY OF CROWLEY, TARRANT COUNTY, TX

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CITY OF CROWLEY QUIET ZONE

10:25 AM

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10/19/2022 - 4:35PM
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HORIZONTAL SCALE IN FEET

LEGEND

- CHANNELIZING DEVICE
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TRAFFIC CONTROL PLAN
MUSTANG STREET

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CITY OF CROWLEY QUIET ZONE

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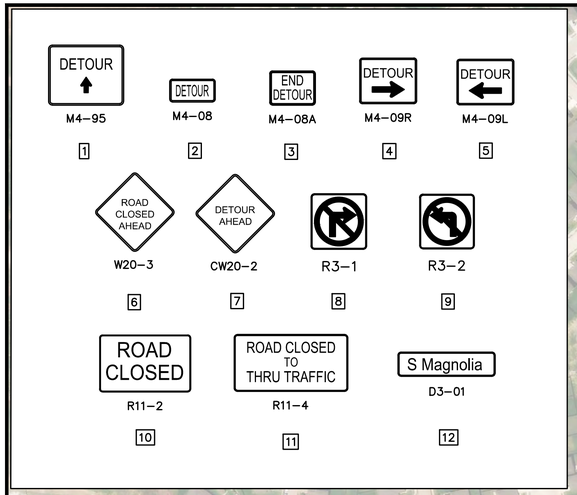

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HORIZONTAL SCALE IN FEET

LEGEND

- CHANNELIZING DEVICE
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Pacheco Koch
4060 BRYANT IRVIN ROAD
FORT WORTH, TX 76109 817.412.7155
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008001

TRAFFIC CONTROL DETOUR
S MAGNOLIA STREET

QUIET ZONE IMPROVEMENT PROJECT
(MAGNOLIA AND MUSTANG)
CITY OF CROWLEY, TARRANT COUNTY, TX

DESIGN	DRAWN	DATE	JOB NO.	SHEET NO.
CKT/ECW	CKT/ECW	OCTOBER 2022	3696-16.289	7 OF 49

CITY OF CROWLEY QUIET ZONE

10:25 AM

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10/19/2022 - 4:35PM
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0 50 100 200 300

HORIZONTAL SCALE IN FEET

LEGEND

- CHANNELIZING DEVICE
- OPEN LANE
- REQUIRED FLAG
- TEMPORARY CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW PANEL
- TYPE III BARRICADE
- WORK ZONE

STATE OF TEXAS
BRIAN D. O'NEILL
83980
LICENSED PROFESSIONAL ENGINEER

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DATE:
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BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).

2. The development and design of the Traffic Control Plan (TCP)is the responsibility of the Engineer.

3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.

4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.

5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.

6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.

7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.

8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.

9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.

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

11. Traffic control devices should be in place only while work is actually in progress or a definite need exists.

12. The Engineer has the final decision on the location of all traffic control devices.

13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY NOTES:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.

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

COMPLIANT WORKZONE TRAFFIC CONTROL DEVICES

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

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

THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT http://www.txdot.gov
COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD)
DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS)
MATERIAL PRODUCER LIST (MPL)
ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)"
STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD)
TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)
TRAFFIC ENGINEERING STANDARD SHEETS

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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4-03 7-13	DIST	COUNTY		SHEET NO.
9-07 8-14				9 OF 49
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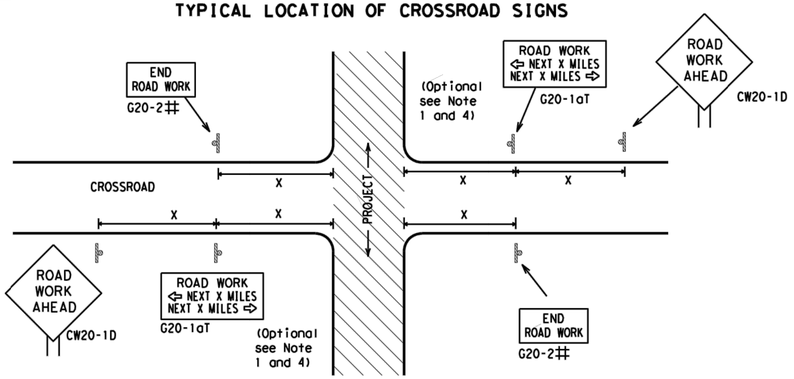
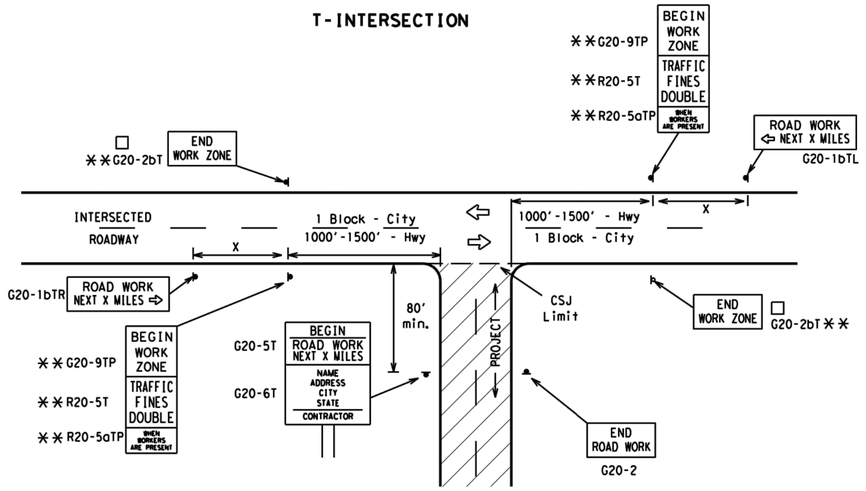
TYPICAL LOCATION OF CROSSROAD SIGNS



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

1. The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D)sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK"(G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume as per TMUTCD Part 5. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The "ROAD WORK NEXT X MILES"(G20-1aT)sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection, the Contractor shall place the "CONTRACTOR NAME"(G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow(G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR)" signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING[1,5,6]

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20[4] CW21 CW22 CW23 CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

Posted Speed	Sign △ Spacing "X"
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500[2]
60	600[2]
65	700[2]
70	800[2]
75	900[2]
80	1000[2]
*	*[3]

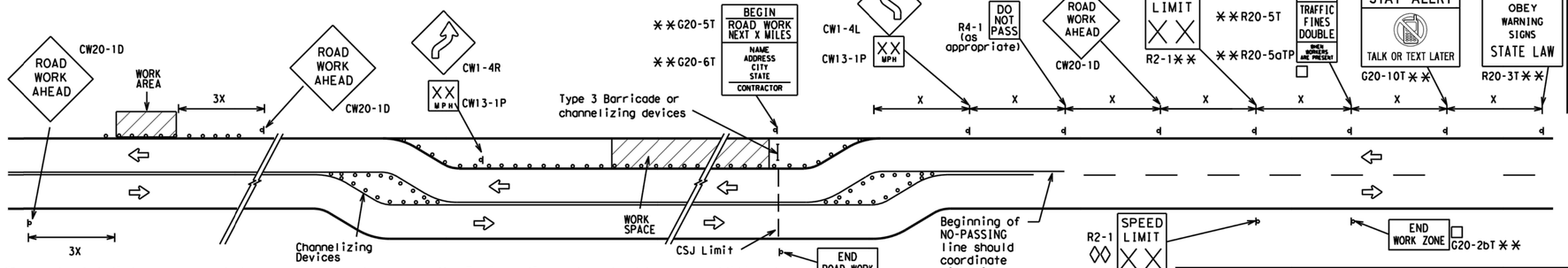
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

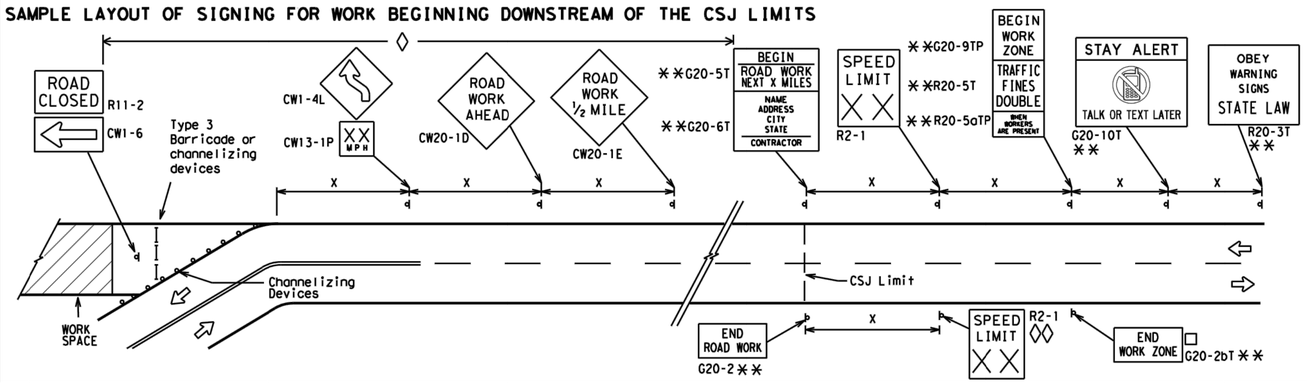
1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D)signs may be used on low volume crossroads at the discretion of the Engineer as per TMUTCD Part 5. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD"(CW20-1D)signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

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



NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES"(G20-5T)sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

□ The "BEGIN WORK ZONE"(G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.

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

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

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

LEGEND

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

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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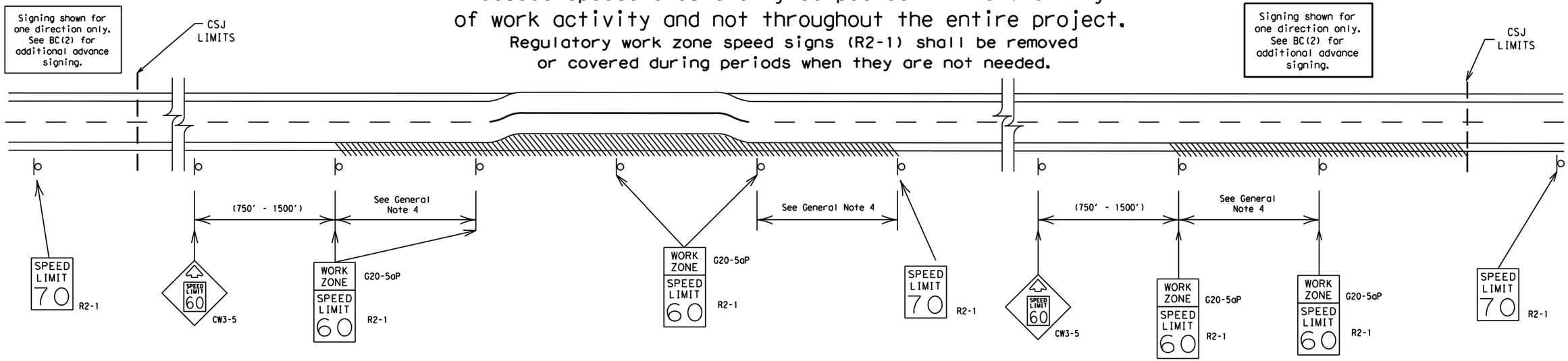
TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

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

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

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



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

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

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

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

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

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 10 feet of the traveled way or actually in the traveled way.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered.
(See Removing or Covering on BC(4)).

GENERAL NOTES

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. Frequency of work zone speed limit signs should be:
   40 mph and greater 0.2 to 2 miles
   35 mph and less 0.2 to 1 mile
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. Fabrication, erection and maintenance of the"ADVANCE SPEED LIMIT"(CW3-5)sign, "WORK ZONE"(G20-5aP) plaque and the "SPEED LIMIT"(R2-1)signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
7. Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
8. Techniques that may help reduce traffic speeds include but are not limited to:
   A. Law enforcement.
   B. Flagger stationed next to sign.
   C. Portable changeable message sign (PCMS).
   D. Low-power (drone) radar transmitter.
   E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.
10. For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT form #1204 in the TxDOT e-form system.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

BC(3)-21

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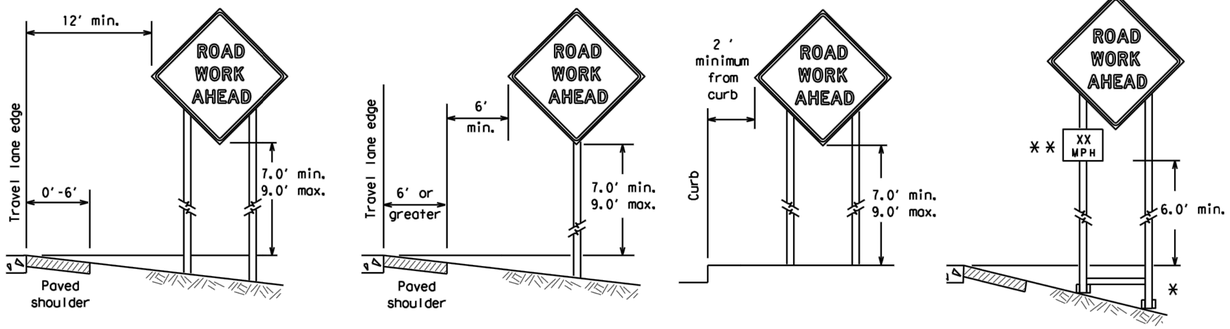
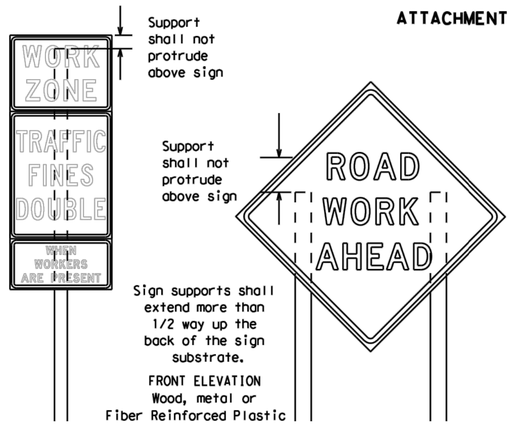
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS

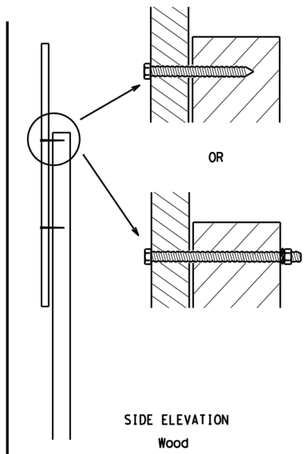


* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

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

ATTACHMENT FOR SIGN SUPPORTS





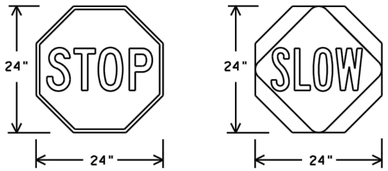
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

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

Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the spice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24".
2. STOP/SLOW paddles shall be retroreflectorized when used at night.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



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

CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, specific service (LOGO), or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition. For details for covering large guide signs see the TS-CD standard.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC standard sheets, TLRS standard sheets or the CWZTCD list. The signs shall meet the required mounting heights shown on the BC, or the SMD standard sheets during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
5. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
6. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD) for small roadside signs. Supports for temporary large roadside signs shall meet the requirements detailed on the Temporary Large Roadside Signs (TLRS) standard sheets. The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
7. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
8. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
9. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
   a. Long-term stationary - work that occupies a location more than 3 days.
   b. Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
   c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration - work that occupies a location up to 1 hour.
   e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

1. The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type B_{FL} or Type C_{FL}, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

FLAGS ON SIGNS

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

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-21

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