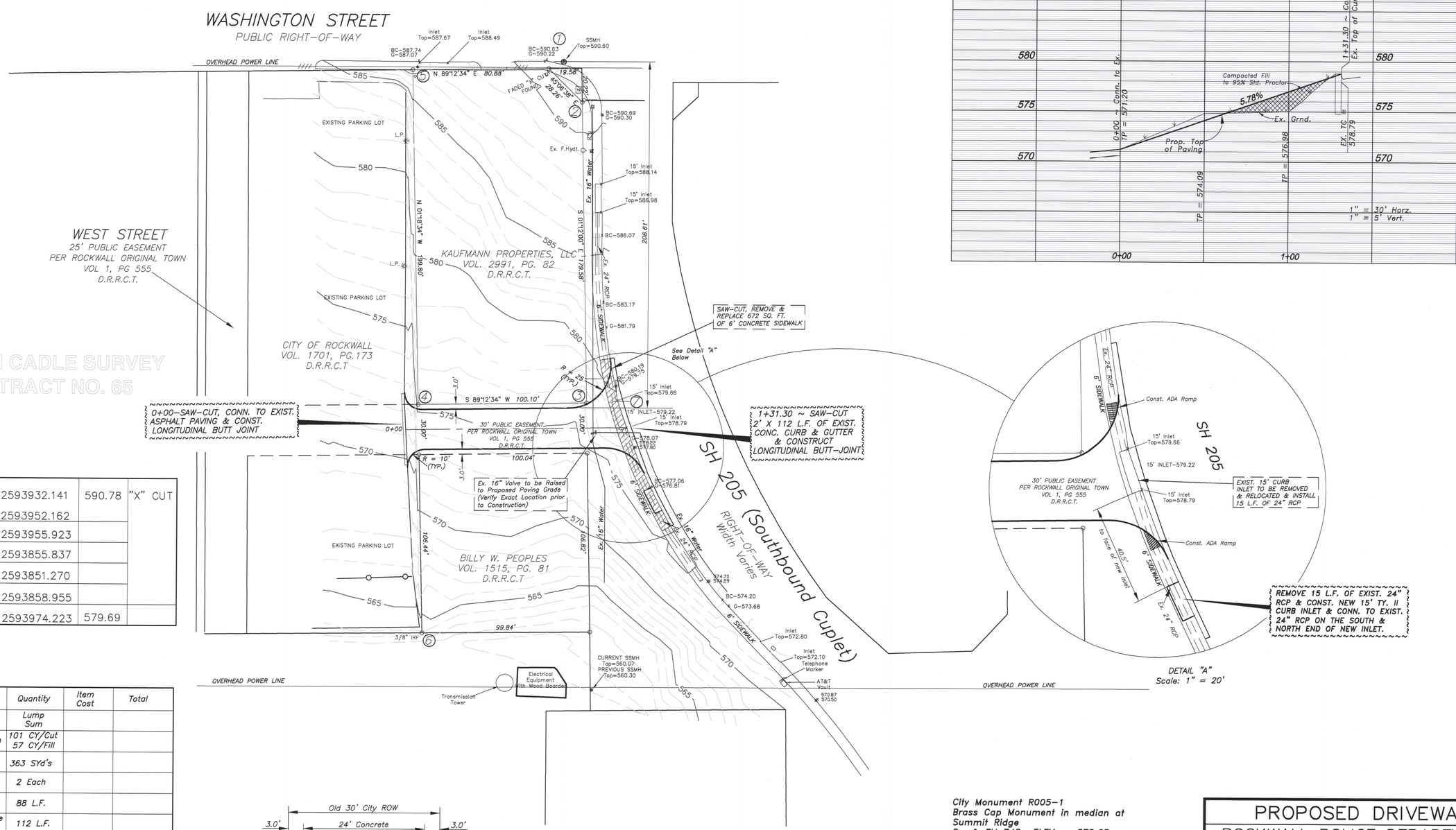
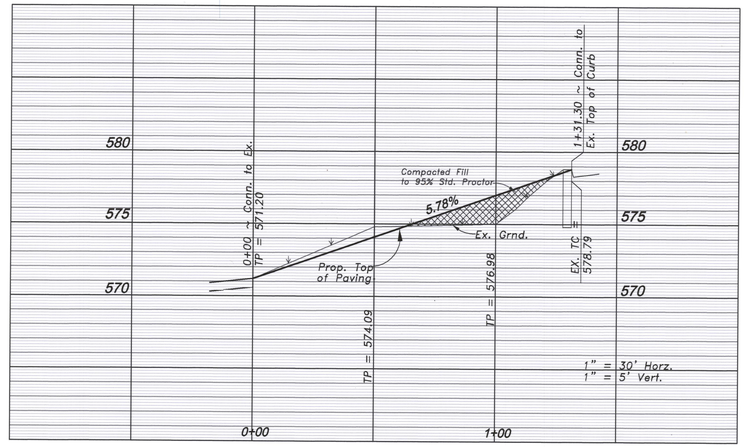
1" = 30 FEET

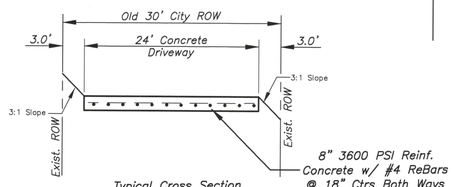




DETAIL "A"
Scale: 1" = 20'

1	N: 7027448.882	E: 2593932.141	590.78	"X" CUT
2	N: 7027428.938	E: 2593952.162		
3	N: 7027249.394	E: 2593955.923		
4	N: 7027248.014	E: 2593855.837		
5	N: 7027447.766	E: 2593851.270		
6	N: 7027111.603	E: 2593858.955		
7	N: 7027250.946	E: 2593974.223	579.69	

Item No.	Description	Quantity	Item Cost	Total
1	Clearing & Grubbing	Lump Sum		
2	Unclassified Street Excavation	101 CY/Cut 57 CY/Fill		
3	8" 3600 PSI Reinforced Concrete Paving	363 SYd's		
4	Construct ADA Ramp	2 Each		
5	Longitudinal Butt Joint	88 L.F.		
6	Saw-Cut, Remove & Replace 6" Concrete Curb & Gutter	112 L.F.		
7	Remove & Relocate Existing 15' Curb & Inlet	Lump Sum		
8	Install 24" RCP & Connect to Existing 24" RCP	15 L.F.		
9	Complete Erosion Control Measures & Protection	Lump Sum		
10	Resod of Parkways	67 SYd's		
11	Saw-Cut, Remove & Replace 6' Concrete Sidewalk	672 Sq. Ft.		
12	Ex. 16" Water Valve to be Raised to Proposed Paving Grade	1 Each		



Typical Cross Section
Scale: 1"=10'

City Monument R005-1
Brass Cap Monument in median at Summit Ridge
Dr. & FM 740 ELEV. = 578.63
N 7,023,593.7580
E 2,594,175.5826

REVISION NO.	REMARKS	DATE

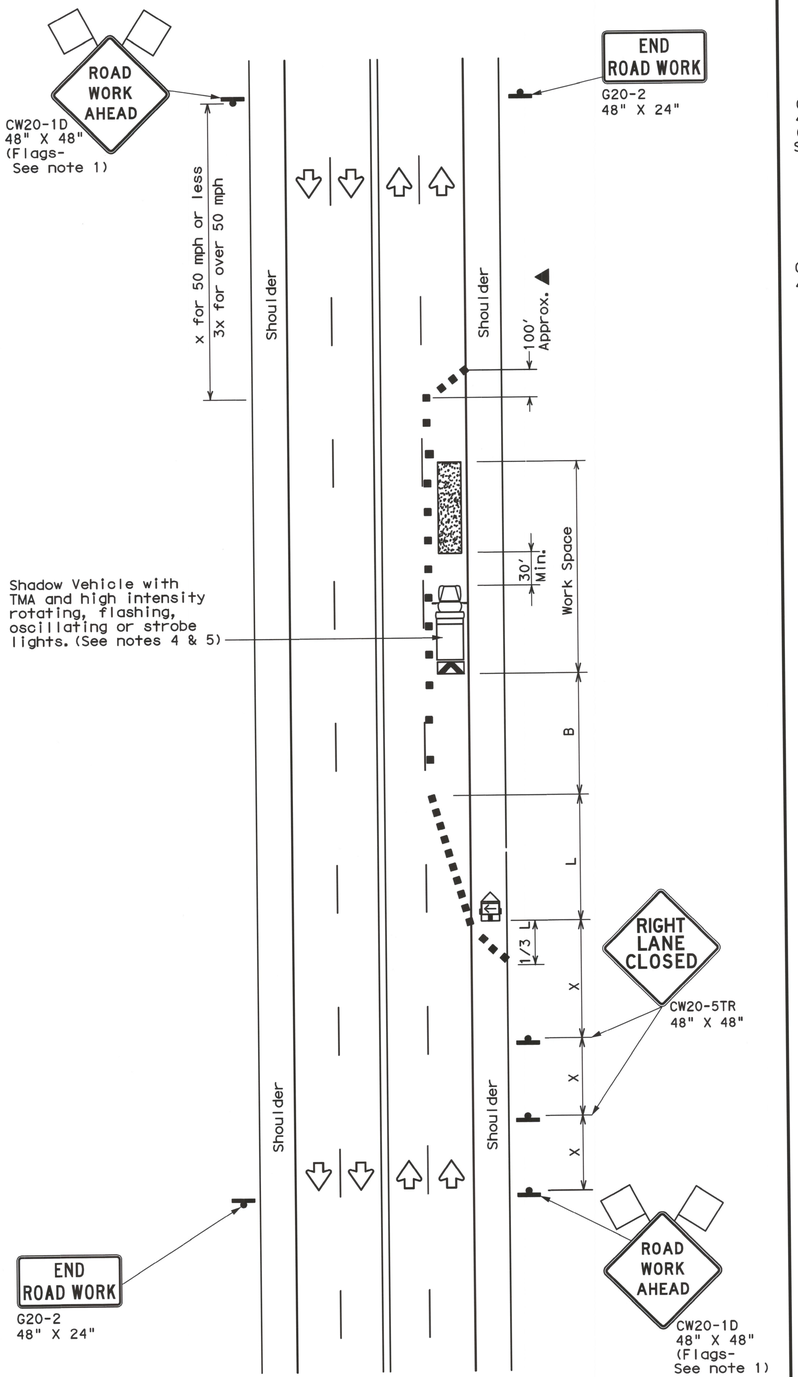
PROPOSED DRIVEWAY
ROCKWALL POLICE DEPARTMENT
ROCKWALL, TEXAS
CITY OF ROCKWALL
"THE NEW HORIZON"

DESIGNED: TMT			
DRAWN: ACAD			
JOB NO.	DATE: 07/01/15	SHEET NO. 1 OF 1	

STATE OF TEXAS
TIMOTHY M. TUMULTY
50895
LICENSED PROFESSIONAL ENGINEER

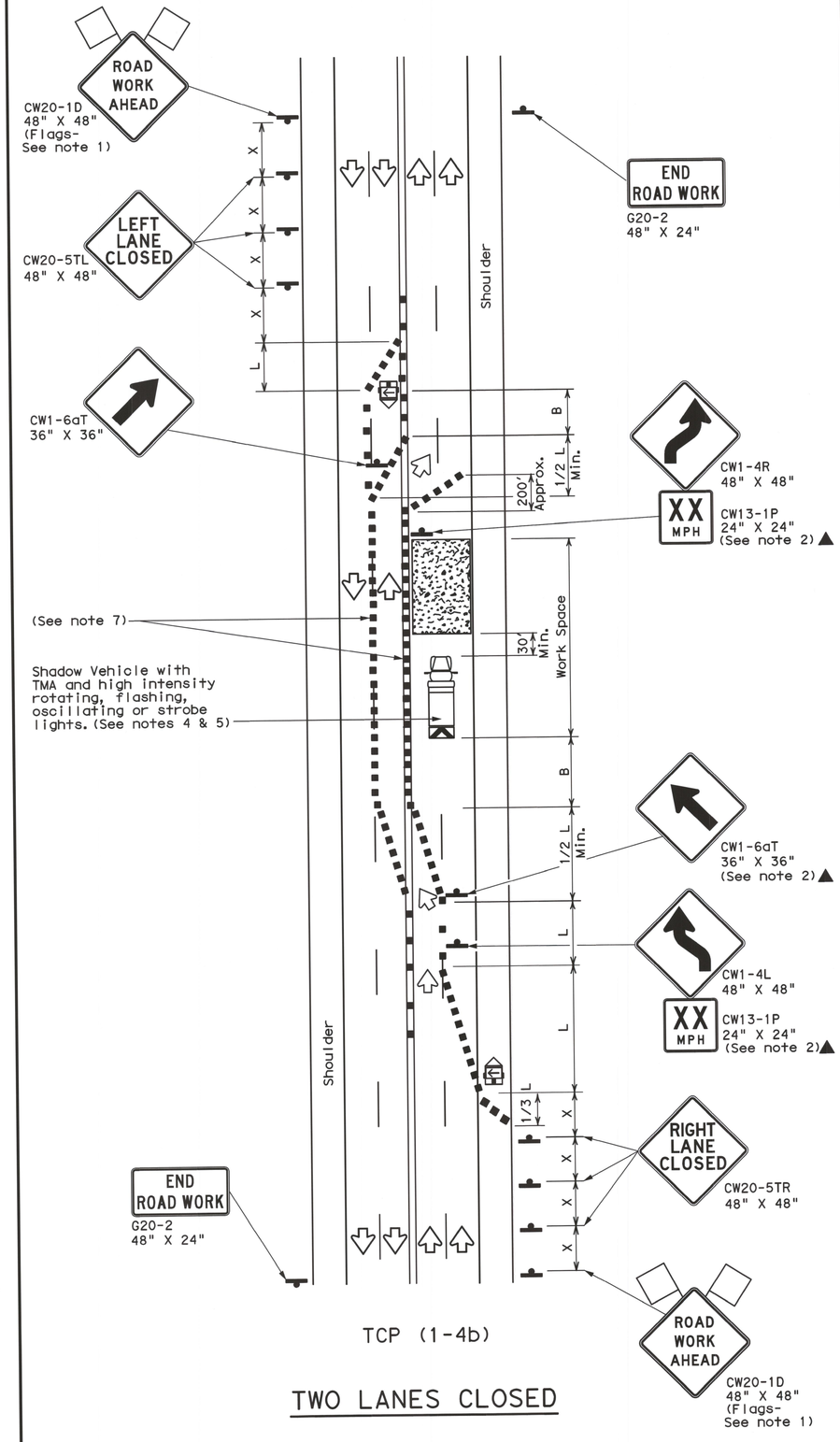
07/01/2015

DATE:
FILE:



TCP (1-4a)

ONE LANE CLOSED



TCP (1-4b)

TWO LANES CLOSED

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

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

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

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

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-4a)

6. If this TCP is used for a left lane closure , CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.

TCP (1-4b)

7. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20′ or 15′ if posted speeds are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

Texas Department of Transportation
Traffic Operations Division

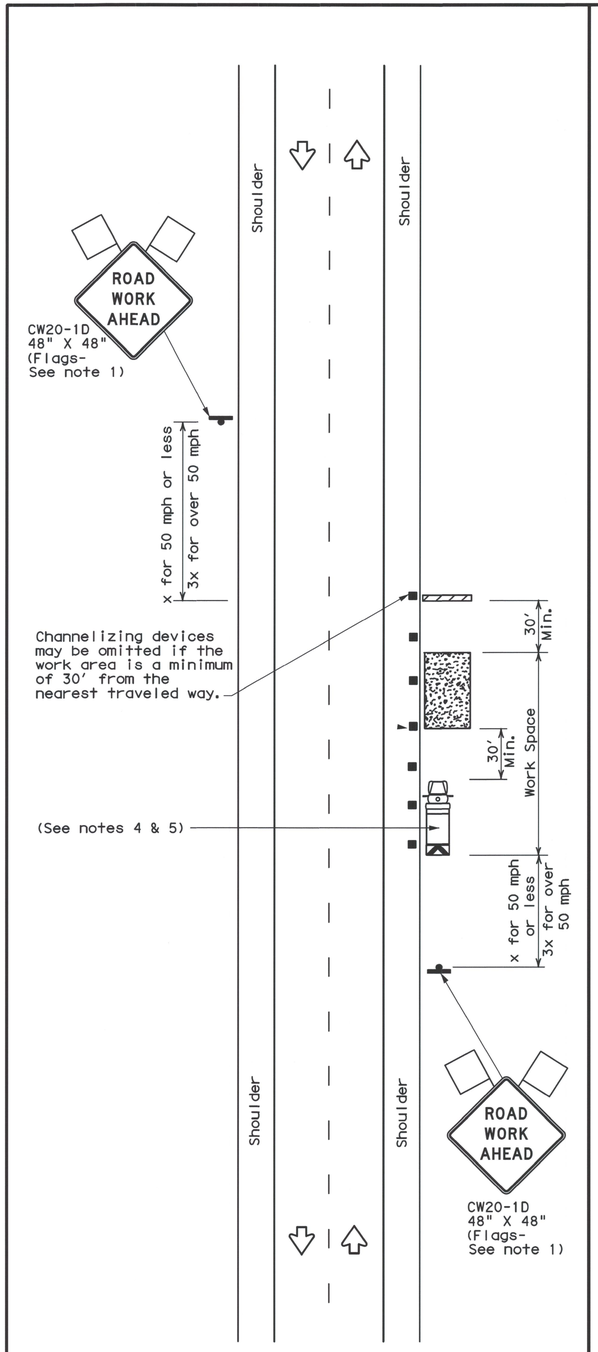
TRAFFIC CONTROL PLAN
LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP(1-4)-12

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

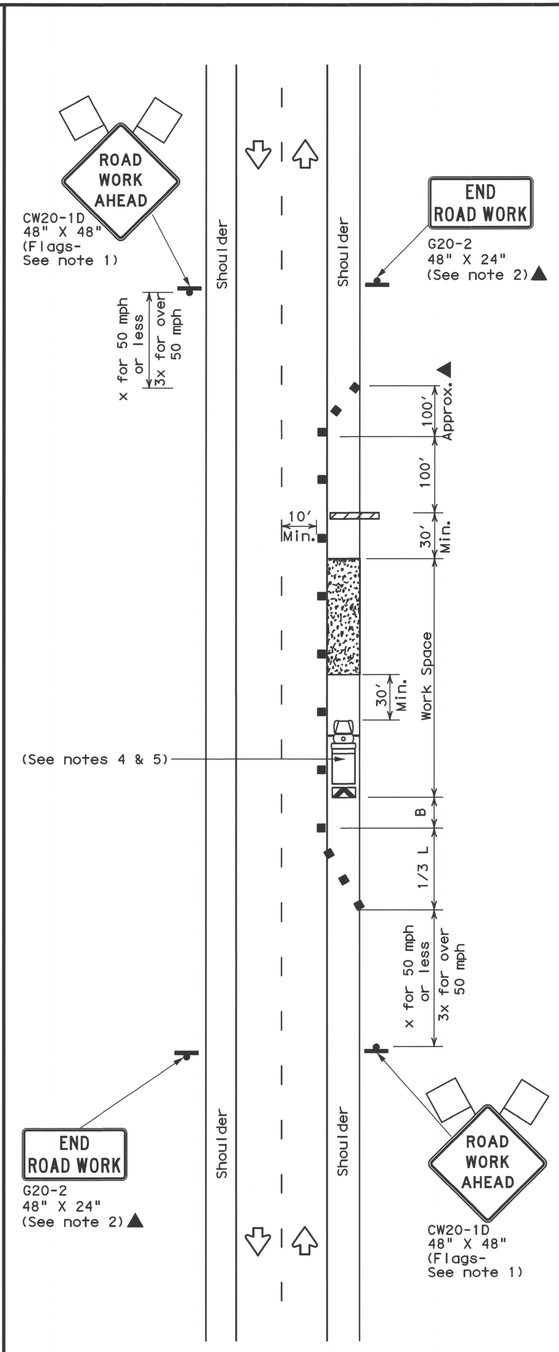
REVISIONS	CONT	SECT	JOB	HIGHWAY
2-94 2-12				
8-95				
1-97				
4-98	DIST	COUNTY		SHEET NO.

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.



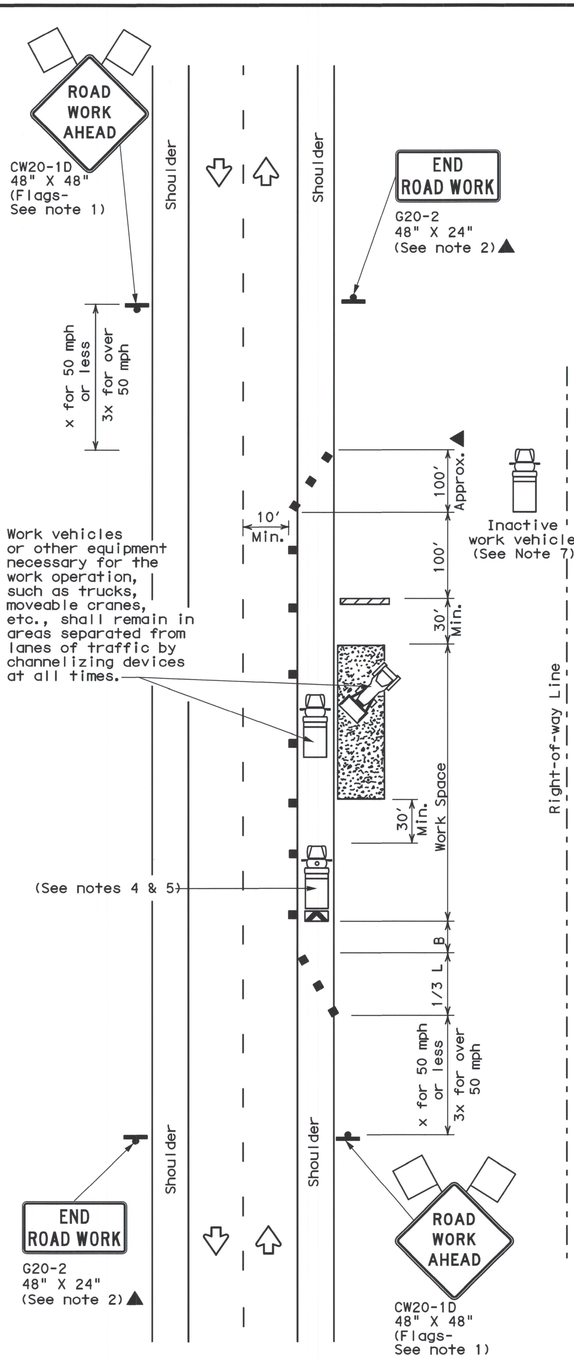
TCP (2-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (2-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (2-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

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

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

* Conventional Roads Only

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

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

GENERAL NOTES

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

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

Texas Department of Transportation
Traffic Operations Division

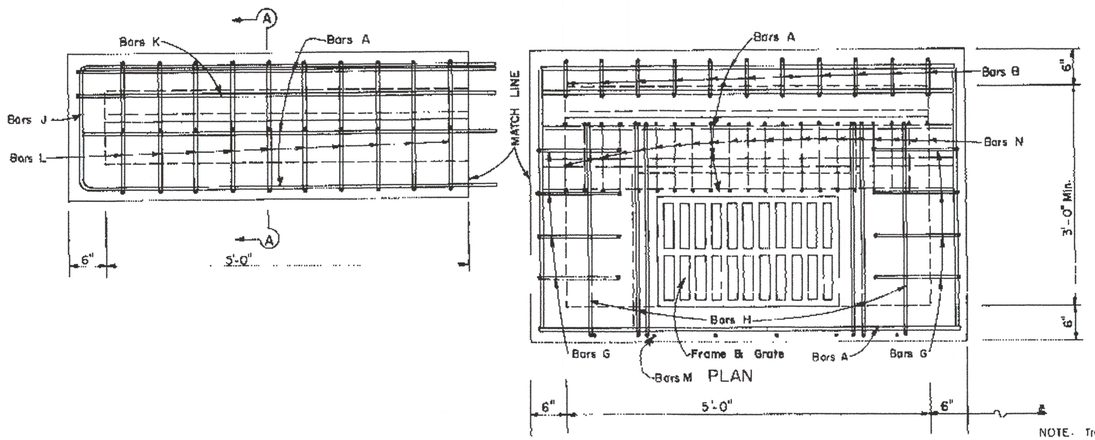
TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(2-1)-12

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

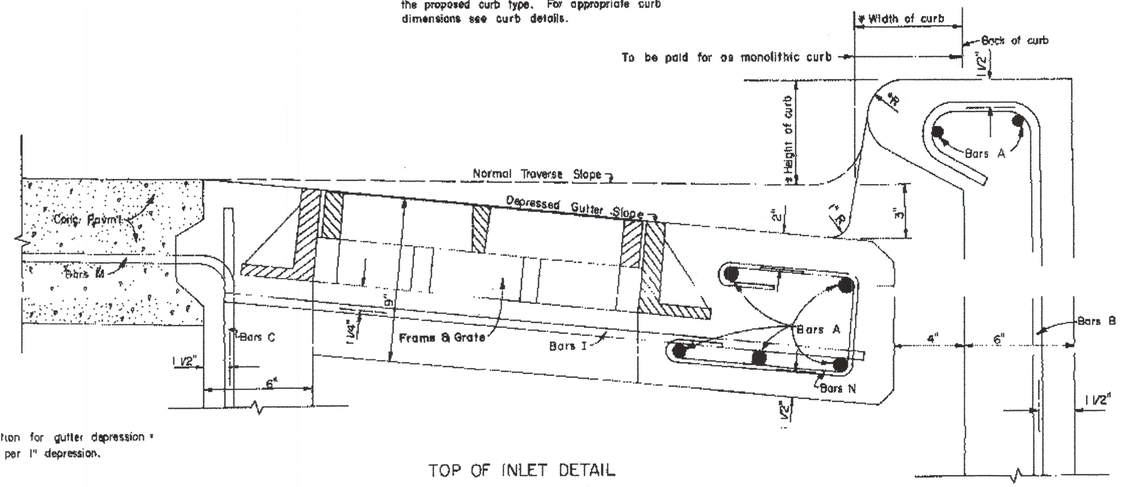
REVISIONS	CONT	SECT	JOB	HIGHWAY
2-94 2-12				
8-95				
1-97	DIST	COUNTY		SHEET NO.
4-98				

DATE:
FILE:

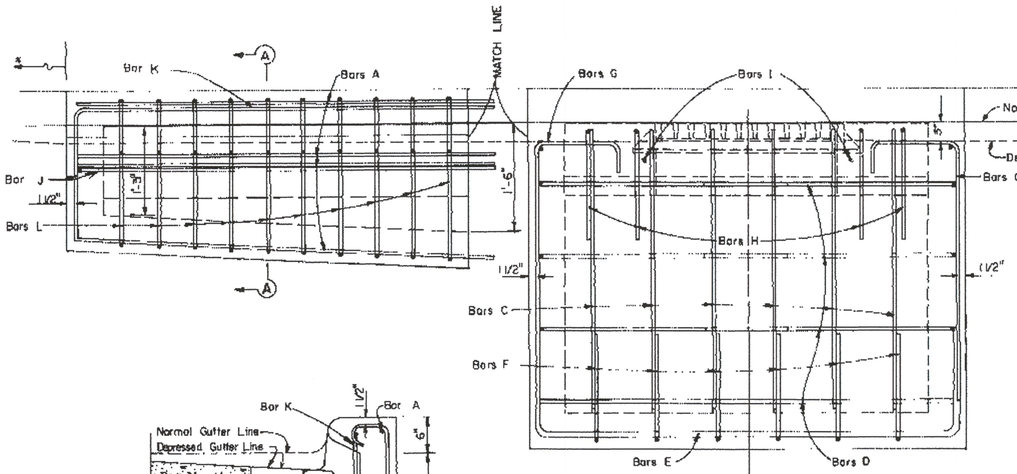


NOTE. Transition for gutter depression = 3'-0" per 1" depression.

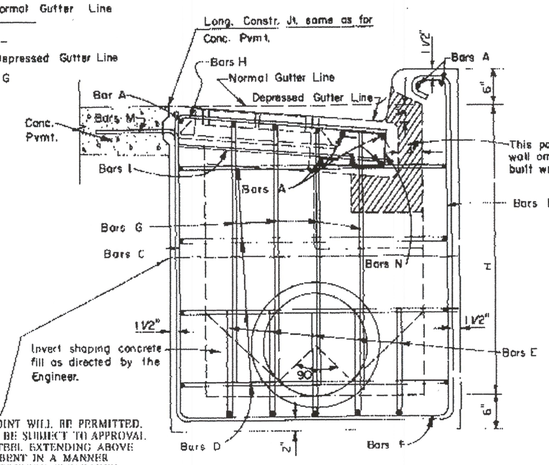
* Dimensions for curb sections vary according to the proposed curb type. For appropriate curb dimensions see curb details.



TOP OF INLET DETAIL
Scale: 3" = 1'-0"

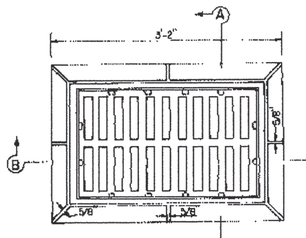


ELEVATION

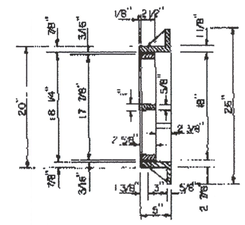


SIDE VIEW

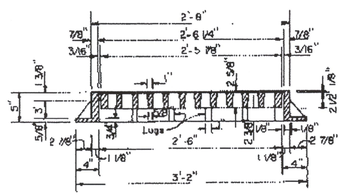
ONE HORIZONTAL CONSTRUCTION JOINT WILL BE PERMITTED. THE LOCATION OF THIS JOINT WILL BE SUBJECT TO APPROVAL BY THE ENGINEER. REINFORCING STEEL EXTENDING ABOVE THE CONSTRUCTION JOINT MAY BE BENT IN A MANNER ACCEPTABLE TO THE ENGINEER TO PROVIDE CLEARANCE FOR PAVING OPERATIONS. IN LIEU OF BENDING THE STEEL, THE CONTRACTOR MAY PROVIDE A MINIMUM 1'-0" LAP SPLICE TO THE LOWER STEEL.



PLAN



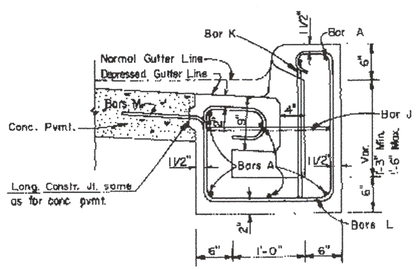
SECTION A-A



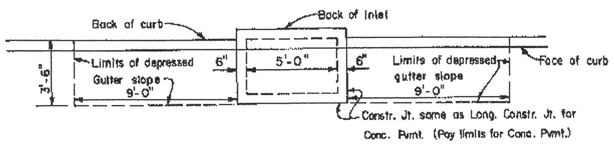
SECTION B-B

NOTE.
Frame and grate to be of gray cast iron conforming to A.S.T.M. Spec. A-48 for Class No. 30 Cast Iron.

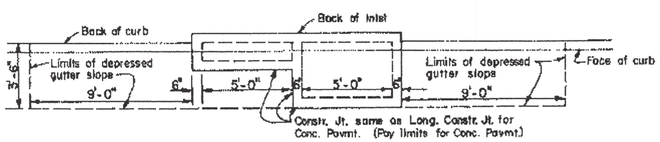
FRAME & GRATE TYPE A



SECTION A-A

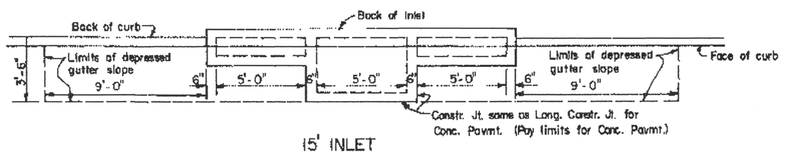


5' INLET



10' INLET

PLAN OF INLET AND EXTENSIONS



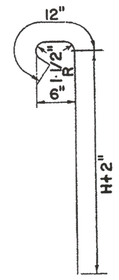
15' INLET

CURB & GRATE INLET TYPE II DETAILS

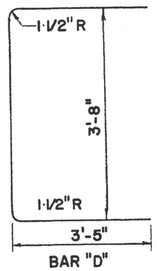
TxDOT
DISTRICT 18 STANDARD

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		SHEET NO.
6	(SEE TITLE SHEET)		473A
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH205

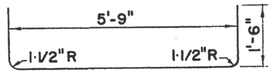
SHEET 1 OF 2



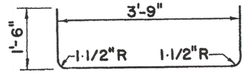
BAR "B"



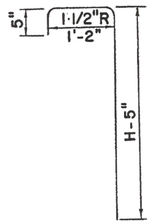
BAR "D"



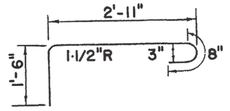
BAR "E"



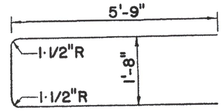
BAR "F"



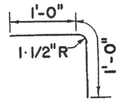
BAR "G"



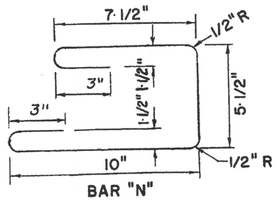
BAR "H"



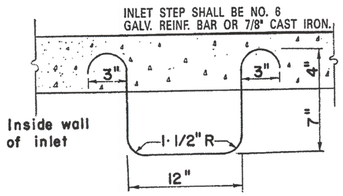
BAR "J"



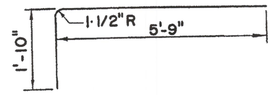
BAR "M"



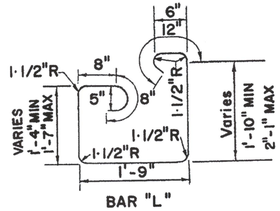
BAR "N"



DETAIL OF INLET STEP



BAR "K"



BAR "L"

REINFORCING STEEL AND CONCRETE FOR 5' INLET

INLET SIZE		STEEL																																						TOTALS	
		BAR "A"						BAR "B"						BAR "C"				BAR "D"						BAR "E"						BAR "F"						BAR "G"					
Height Ft.	Width Ft.	No.	Size	Ty.	Spacing	Length	Wt.	No.	Size	Ty.	Spacing	Length	Wt.	No.	Size	Ty.	Spacing	Length	Wt.	No.	Size	Ty.	Spacing	Length	Wt.	No.	Size	Ty.	Spacing	Length	Wt.	No.	Size	Ty.	Spacing	Length	Wt.	No.	Size	Ty.	Spacing	Length	Wt.
2.5	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	3'-8"	27	6	4	St.	10"c.c.	2'-4"	9	4	4	Bt.	12"c.c.	10'-6"	28	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	3'-8"	20
3.0	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	4'-2"	31	6	4	St.	10"c.c.	2'-10"	11	6	4	Bt.	12"c.c.	10'-6"	42	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	4'-8"	25
3.5	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	4'-8"	34	6	4	St.	10"c.c.	3'-4"	13	6	4	Bt.	12"c.c.	10'-6"	42	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	4'-8"	25
4.0	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	5'-2"	38	6	4	St.	10"c.c.	3'-10"	15	8	4	Bt.	12"c.c.	10'-6"	56	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	5'-2"	28
4.5	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	5'-8"	42	6	4	St.	10"c.c.	4'-4"	17	8	4	Bt.	12"c.c.	10'-6"	56	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	5'-8"	30
5.0	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	6'-2"	45	6	4	St.	10"c.c.	4'-10"	19	10	4	Bt.	12"c.c.	10'-6"	70	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	6'-2"	33
5.5	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	6'-8"	49	6	4	St.	10"c.c.	5'-4"	21	10	4	Bt.	12"c.c.	10'-6"	70	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	6'-8"	36
6.0	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	7'-2"	53	6	4	St.	10"c.c.	5'-10"	23	12	4	Bt.	12"c.c.	10'-6"	84	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	7'-2"	38
7.0	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	8'-2"	60	6	4	St.	10"c.c.	6'-10"	27	14	4	Bt.	12"c.c.	10'-6"	98	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	8'-2"	44
8.0	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	9'-2"	67	6	4	St.	10"c.c.	7'-10"	31	16	4	Bt.	12"c.c.	10'-6"	112	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	9'-2"	49
9.0	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	10'-2"	75	6	4	St.	10"c.c.	8'-10"	35	18	4	Bt.	12"c.c.	10'-6"	126	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	10'-2"	54
10.0	3.0	8	6	St.	As Shown	5'-9"	69	11	4	Bt.	6"c.c.	11'-2"	82	6	4	St.	10"c.c.	9'-10"	39	20	4	Bt.	12"c.c.	10'-6"	140	5	4	Bt.	7"c.c.	8'-9"	29	6	4	Bt.	10"c.c.	6'-9"	27	8	4	Bt.	7"c.c.	11'-2"	60

INLET SIZE		STEEL																																						TOTALS	
		BAR "G"						BAR "H"						BAR "I"						BAR "M"						BAR "N"														Steel Lbs.	Conc. C.Y.
Height Ft.	Width Ft.	No.	Size	Ty.	Spacing	Length	Wt.	No.	Size	Ty.	Spacing	Length	Wt.	No.	Size	Ty.	Spacing	Length	Wt.	No.	Size	Ty.	Spacing	Length	Wt.	No.	Size	Ty.	Spacing	Length	Wt.											
2.5	3.0	8	4	Bt.	7"c.c.	3'-8"	20	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										271	1.63
3.0	3.0	8	4	Bt.	7"c.c.	4'-8"	25	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										293	1.80
3.5	3.0	8	4	Bt.	7"c.c.	5'-2"	28	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										301	1.96
4.0	3.0	8	4	Bt.	7"c.c.	5'-8"	30	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										324	2.13
4.5	3.0	8	4	Bt.	7"c.c.	6'-2"	33	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										332	2.30
5.0	3.0	8	4	Bt.	7"c.c.	6'-8"	36	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										354	2.47
5.5	3.0	8	4	Bt.	7"c.c.	7'-2"	38	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										363	2.63
6.0	3.0	8	4	Bt.	7"c.c.	8'-2"	44	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										385	2.80
7.0	3.0	8	4	Bt.	7"c.c.	9'-2"	49	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										416	3.13
8.0	3.0	8	4	Bt.	7"c.c.	10'-2"	54	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										446	3.47
9.0	3.0	8	4	Bt.	7"c.c.	11'-2"	60	4	4	Bt	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										477	3.80
10.0	3.0	8	4	Bt.	7"c.c.	12'-2"	66	4	4	Bt.	As Shown	5'-0"	13	2	4	St.	As Shown	2'-11"	4	7	4	Bt.	24"c.c.	2'-0"	9	21	4	Bt.	3"c.c.	2'-7"	36										508	4.14

REINFORCING STEEL AND CONCRETE FOR ONE 5' EXT.

Bar	No.	Size	Ty.	Spacing	Length	Weight
A	6	6	St.	As Shown	5'-9"	23
J	1	4	Bt.	As Shown	13'-2"	9
K	1	4	Bt.	As Shown	7'-7"	5
L	10	4	Bt.	6"c.c.	7'-3" to 7'-9"	50
M	4	4	Bt.	24"c.c.	2'-0"	5
Total Reinforcing Steel (Lbs.)						92
Total Concrete (C.Y.)						0.62

CONCRETE TO BE DEDUCTED FOR PIPES (ONE PIPE)

Pipe ϕ "	Conc. C.Y.
15"	0.04
18"	0.05
21"	0.07
24"	0.09
27"	0.11
30"	0.14
36"	0.20

GENERAL NOTES:

1. All concrete shall be Class "A".
2. All exposed corners shall be chamfered ¾".
3. Inlet steps spaced 14" c.c. and located as directed by the Engineer, Shall be provided and installed in all inlets where the depth exceeds 5'-0".
4. Dimensions relating to reinforcing steel are to the center of the bars.
5. Total quantities shown for concrete and reinforcing steel are approximate and are placed heron for informational purposes only.
6. Bar details shall be adjusted as necessary to accomodate a horizontal construction joint if used. Reinforcing steel quantities shown do not include lap steel required for construction joints.
7. Payment of Curb & Grate Inlets and Extensions thereto as shown on the plans will be made at the unit price bid for "Inlet (Complete) (TypeII)", Inlet Extension (Type II)", and "Frame and Grate (Type B)".

CURB & GRATE INLET TYPE II DETAILS

TxDOT
DISTRICT 18 STANDARD

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.			SHEET NO.
6	(SEE TITLE SHEET)			473B
STATE	STATE DIST.NO.	COUNTY		
TEXAS	18	ROCKWALL		
CONT.	SECT.	JOB	HIGHWAY NO.	
0451	01	032	SH205	

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