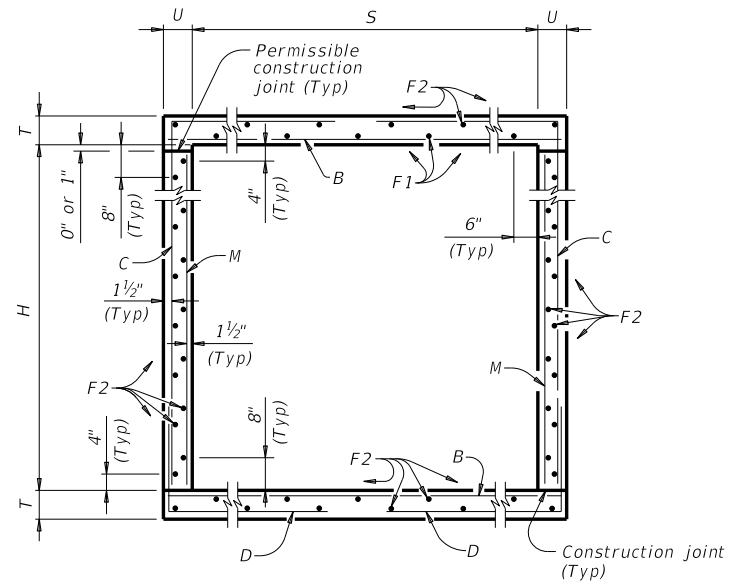
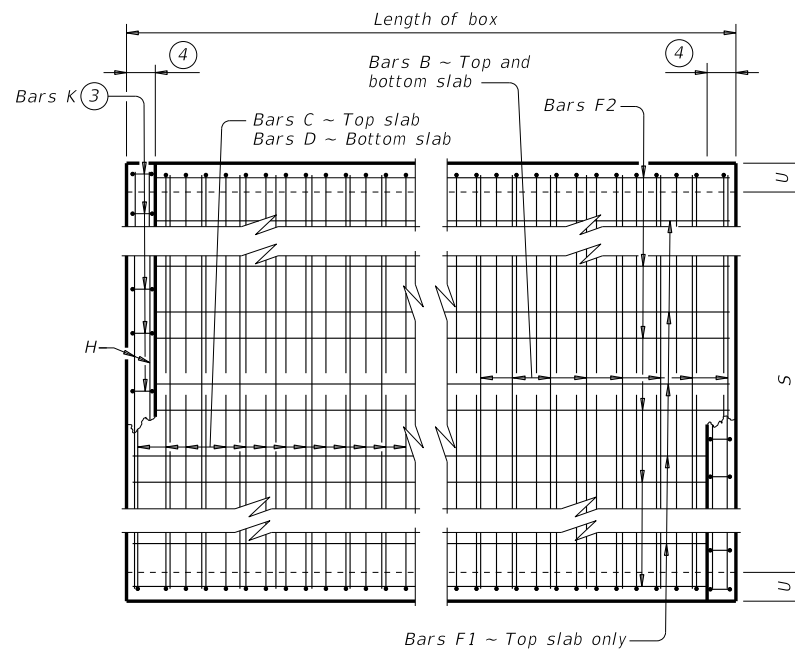


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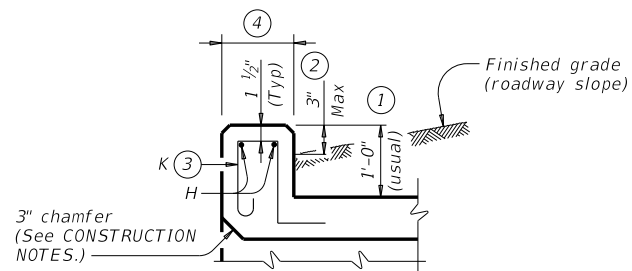
DATE: FILE:



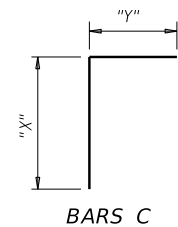
TYPICAL SECTION



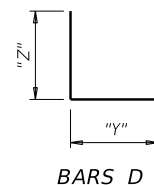
PLAN OF REINF STEEL



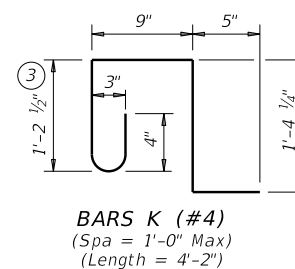
SECTION THRU CURB



BARS C



BARS D



BARS K (#4)
(Spa = 1'-0" Max)
(Length = 4'-2")

- ① 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'-0", refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM) standard sheet. Refer to the Rail Anchorage Curb (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.
- ② For vehicle safety, the following requirements must be met:
 - For structures without bridge rail, construct curbs no more than 3" above finished grade.
 - For structures with bridge rail, construct curbs flush with finished grade. Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- ③ For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, Bars K may be omitted.
- ④ 1'-0" typical. 2'-3" when the Rail Anchorage Curb (RAC) standard sheet is referred to elsewhere in the plans.

The Contractor may replace Bars B, C, D, E, F1, F2, M, Y, and/or Z with deformed welded wire reinforcement (WWR) meeting the requirements of ASTM A1064. The area of required reinforcement may be reduced by the ratio of 60 ksi / 70 ksi. Spacing of WWR is limited to 4" Min and 18" Max. When required, provide lap splices in the WWR of the same length required for the equivalent bar size, rounded up for wire sizes between conventional bar sizes. The lap length required for WWR is never less than the lap length required for uncoated #4 bars.

Example conversion: Replacing No. 6 Gr 60 at 6" Spacing with WWR.
 Required WWR = (0.44 sq. in. per 0.5 ft.) x (60 ksi / 70 ksi) = 0.755 sq. in. per ft.
 If D30.6 wire is used to meet the 0.755 sq. in. per ft. requirement in this example, the required spacing = (0.306 sq. in.) / (0.755 sq. in. per ft.) x (12 in. per ft.) = 4.86" Max spacing. Required lap length for the provided D30.6 wire is 2'-1" (the same minimum lap length required for uncoated #5 bars, as listed under MATERIAL NOTES).

CONSTRUCTION NOTES:

Do not use permanent forms.
 Chamfer the bottom edge of the top slab 3" at the entrance.
 Optionally, raise construction joints shown at the flow line by a maximum of 6". If this option is taken, Bars M may be cut off or raised, Bars C and D may be reversed.

MATERIAL NOTES:

- Provide Grade 60 reinforcing steel.
- Provide galvanized reinforcing steel if required elsewhere in the plans.
- Provide Class C concrete (f'c = 3,600 psi) for culvert barrel and curb, with the following exceptions: provide Class S concrete (f'c = 4,000 psi) for top slabs of:
 - culverts with overlay,
 - culverts with 1-to-2 course surface treatment, or
 - culverts with the top slab as the final riding surface.
- Provide bar laps, where required, as follows:
 - Uncoated or galvanized ~ #4 = 1'-8" Min
 - Uncoated or galvanized ~ #5 = 2'-1" Min
 - Uncoated or galvanized ~ #6 = 2'-6" Min

GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications for the range of fill heights shown.
 See the Single Box Culverts Cast-In-Place Miscellaneous Detail (SCC-MD) standard sheet for details pertaining to skewed ends, angle sections, and lengthening.

Cover dimensions are clear dimensions, unless noted otherwise.
 Reinforcing bar dimensions shown are out-to-out of bar.



**SINGLE BOX CULVERTS
CAST-IN-PLACE
0' TO 30' FILL**

SCC-5 & 6

FILE: CD-SCC56-21.dgn	DN: TBE	CK: BMP	DW: TxDOT	CK: TxDOT
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REVISIONS				
04/2021 Updated X values.	DIST	COUNTY	SHEET NO.	

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DATE: FILE:

SECTION DIMENSIONS				FILL HEIGHT ⁵	BILLS OF REINFORCING STEEL (For Box Length = 40 feet)																								QUANTITIES														
					Bars B					Bars C					Bars D					Bars M ~ #4				Bars F1 ~ #4 at 18" Spa			Bars F2 ~ #4 at 18" Spa			Bars H 4 ~ #4		Bars K		Per Foot of Barrel		Curb		Total					
					S	H	T	U	No.	Size	Spa	Length	Weight	No.	Size	Spa	Length	Weight	" X "	" Y "	No.	Size	Spa	Length	Weight	" Y "	" Z "	No.	Spa	Length	Weight	No.	Length	Wt	No.	Length	Weight	Length	Wt	No.	Wt	Conc (CY)	Reinf (Lb)
5'-0"	2'-0"	8"	7"	26'	108	#6	9"	5'-11"	960	108	#5	9"	6'-3"	704	2'-6"	3'-9"	108	#5	9"	6'-5"	723	3'-9"	2'-8"	108	9"	2'-0"	144	4	39'-9"	106	22	39'-9"	584	5'-11"	16	14	39	0.391	80.5	0.5	55	16.1	3,276
5'-0"	2'-0"	9"	7"	30'	108	#6	9"	5'-11"	960	108	#5	9"	6'-4"	713	2'-7"	3'-9"	108	#5	9"	6'-6"	732	3'-9"	2'-9"	108	9"	2'-0"	144	4	39'-9"	106	22	39'-9"	584	5'-11"	16	14	39	0.429	81.0	0.5	55	17.6	3,294
5'-0"	3'-0"	8"	7"	26'	108	#6	9"	5'-11"	960	108	#5	9"	7'-3"	817	3'-6"	3'-9"	108	#5	9"	6'-5"	723	3'-9"	2'-8"	108	9"	3'-0"	216	4	39'-9"	106	26	39'-9"	690	5'-11"	16	14	39	0.434	87.8	0.5	55	17.8	3,567
5'-0"	3'-0"	9"	7"	30'	108	#6	9"	5'-11"	960	108	#5	9"	7'-4"	826	3'-7"	3'-9"	108	#5	9"	6'-6"	732	3'-9"	2'-9"	108	9"	3'-0"	216	4	39'-9"	106	26	39'-9"	690	5'-11"	16	14	39	0.472	88.3	0.5	55	19.3	3,585
5'-0"	4'-0"	8"	7"	26'	108	#6	9"	5'-11"	960	108	#5	9"	8'-3"	929	4'-6"	3'-9"	108	#5	9"	6'-5"	723	3'-9"	2'-8"	108	9"	4'-0"	289	4	39'-9"	106	26	39'-9"	690	5'-11"	16	14	39	0.477	92.4	0.5	55	19.5	3,752
5'-0"	4'-0"	9"	7"	30'	108	#6	9"	5'-11"	960	108	#5	9"	8'-4"	939	4'-7"	3'-9"	108	#5	9"	6'-6"	732	3'-9"	2'-9"	108	9"	4'-0"	289	4	39'-9"	106	26	39'-9"	690	5'-11"	16	14	39	0.515	92.9	0.5	55	21.1	3,771
5'-0"	5'-0"	8"	7"	26'	108	#6	9"	5'-11"	960	108	#5	9"	9'-3"	1,042	5'-6"	3'-9"	108	#5	9"	6'-5"	723	3'-9"	2'-8"	108	9"	5'-0"	361	4	39'-9"	106	30	39'-9"	797	5'-11"	16	14	39	0.521	99.7	0.5	55	21.3	4,044
5'-0"	5'-0"	9"	7"	30'	108	#6	9"	5'-11"	960	108	#5	9"	9'-4"	1,051	5'-7"	3'-9"	108	#5	9"	6'-6"	732	3'-9"	2'-9"	108	9"	5'-0"	361	4	39'-9"	106	30	39'-9"	797	5'-11"	16	14	39	0.559	100.2	0.5	55	22.8	4,062
6'-0"	2'-0"	8"	7"	20'	108	#6	9"	6'-11"	1,122	108	#5	9"	6'-7"	742	2'-6"	4'-1"	108	#5	9"	6'-9"	760	4'-1"	2'-8"	108	9"	2'-0"	144	5	39'-9"	133	25	39'-9"	664	6'-11"	18	16	45	0.440	89.1	0.5	63	18.1	3,628
6'-0"	2'-0"	9"	7"	26'	108	#6	9"	6'-11"	1,122	162	#5	6"	6'-8"	1,126	2'-7"	4'-1"	162	#5	6"	6'-10"	1,155	4'-1"	2'-9"	108	9"	2'-0"	144	5	39'-9"	133	25	39'-9"	664	6'-11"	18	16	45	0.485	108.6	0.5	63	19.9	4,407
6'-0"	2'-0"	10"	8"	30'	108	#6	9"	7'-1"	1,149	162	#5	6"	6'-10"	1,155	2'-8"	4'-2"	162	#5	6"	7'-0"	1,183	4'-2"	2'-10"	82	12"	2'-0"	110	5	39'-9"	133	25	39'-9"	664	7'-1"	19	18	50	0.551	109.9	0.5	69	22.6	4,463
6'-0"	3'-0"	8"	7"	20'	108	#6	9"	6'-11"	1,122	108	#5	9"	7'-7"	854	3'-6"	4'-1"	108	#5	9"	6'-9"	760	4'-1"	2'-8"	108	9"	3'-0"	216	5	39'-9"	133	29	39'-9"	770	6'-11"	18	16	45	0.484	96.4	0.5	63	19.9	3,918
6'-0"	3'-0"	9"	7"	26'	108	#6	9"	6'-11"	1,122	162	#5	6"	7'-8"	1,295	3'-7"	4'-1"	162	#5	6"	6'-10"	1,155	4'-1"	2'-9"	108	9"	3'-0"	216	5	39'-9"	133	29	39'-9"	770	6'-11"	18	16	45	0.528	117.3	0.5	63	21.6	4,754
6'-0"	3'-0"	10"	8"	30'	108	#6	9"	7'-1"	1,149	162	#5	6"	7'-10"	1,324	3'-8"	4'-2"	162	#5	6"	7'-0"	1,183	4'-2"	2'-10"	82	12"	3'-0"	164	5	39'-9"	133	29	39'-9"	770	7'-1"	19	18	50	0.601	118.1	0.5	69	24.6	4,792
6'-0"	4'-0"	8"	7"	20'	108	#6	9"	6'-11"	1,122	108	#5	9"	8'-7"	967	4'-6"	4'-1"	108	#5	9"	6'-9"	760	4'-1"	2'-8"	108	9"	4'-0"	289	5	39'-9"	133	29	39'-9"	770	6'-11"	18	16	45	0.527	101.0	0.5	63	21.6	4,104
6'-0"	4'-0"	9"	7"	26'	108	#6	9"	6'-11"	1,122	162	#5	6"	8'-8"	1,464	4'-7"	4'-1"	162	#5	6"	6'-10"	1,155	4'-1"	2'-9"	108	9"	4'-0"	289	5	39'-9"	133	29	39'-9"	770	6'-11"	18	16	45	0.571	123.3	0.5	63	23.4	4,996
6'-0"	4'-0"	10"	8"	30'	108	#6	9"	7'-1"	1,149	162	#5	6"	8'-10"	1,493	4'-8"	4'-2"	162	#5	6"	7'-0"	1,183	4'-2"	2'-10"	82	12"	4'-0"	219	5	39'-9"	133	29	39'-9"	770	7'-1"	19	18	50	0.650	123.7	0.5	69	26.5	5,016
6'-0"	5'-0"	8"	7"	20'	108	#6	9"	6'-11"	1,122	108	#5	9"	9'-7"	1,080	5'-6"	4'-1"	108	#5	9"	6'-9"	760	4'-1"	2'-8"	108	9"	5'-0"	361	5	39'-9"	133	33	39'-9"	876	6'-11"	18	16	45	0.570	108.3	0.5	63	23.3	4,395
6'-0"	5'-0"	9"	7"	26'	108	#6	9"	6'-11"	1,122	162	#5	6"	9'-8"	1,633	5'-7"	4'-1"	162	#5	6"	6'-10"	1,155	4'-1"	2'-9"	108	9"	5'-0"	361	5	39'-9"	133	33	39'-9"	876	6'-11"	18	16	45	0.614	132.0	0.5	63	25.1	5,343
6'-0"	5'-0"	10"	8"	30'	108	#6	9"	7'-1"	1,149	162	#5	6"	9'-10"	1,661	5'-8"	4'-2"	162	#5	6"	7'-0"	1,183	4'-2"	2'-10"	82	12"	5'-0"	274	5	39'-9"	133	33	39'-9"	876	7'-1"	19	18	50	0.700	131.9	0.5	69	28.5	5,345
6'-0"	6'-0"	8"	7"	20'	108	#6	9"	6'-11"	1,122	108	#5	9"	10'-7"	1,192	6'-6"	4'-1"	108	#5	9"	6'-9"	760	4'-1"	2'-8"	108	9"	6'-0"	433	5	39'-9"	133	37	39'-9"	982	6'-11"	18	16	45	0.613	115.6	0.5	63	25.0	4,685
6'-0"	6'-0"	9"	7"	26'	108	#6	9"	6'-11"	1,122	162	#5	6"	10'-8"	1,802	6'-7"	4'-1"	162	#5	6"	6'-10"	1,155	4'-1"	2'-9"	108	9"	6'-0"	433	5	39'-9"	133	37	39'-9"	982	6'-11"	18	16	45	0.657	140.7	0.5	63	26.8	5,690
6'-0"	6'-0"	10"	8"	30'	108	#6	9"	7'-1"	1,149	162	#5	6"	10'-10"	1,830	6'-8"	4'-2"	162	#5	6"	7'-0"	1,183	4'-2"	2'-10"	82	12"	6'-0"	329	5	39'-9"	133	37	39'-9"	982	7'-1"	19	18	50	0.749	140.2	0.5	69	30.5	5,675

⁵ For direct tra c culverts (ll height ≤ 2 ft.), identify the required box size and select the option with the minimum ll height.



**SINGLE BOX CULVERTS
CAST-IN-PLACE
0' TO 30' FILL**

SCC-5 & 6

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REVISIONS				
04/2021 Updated X values.	DIST	COUNTY	SHEET NO.	