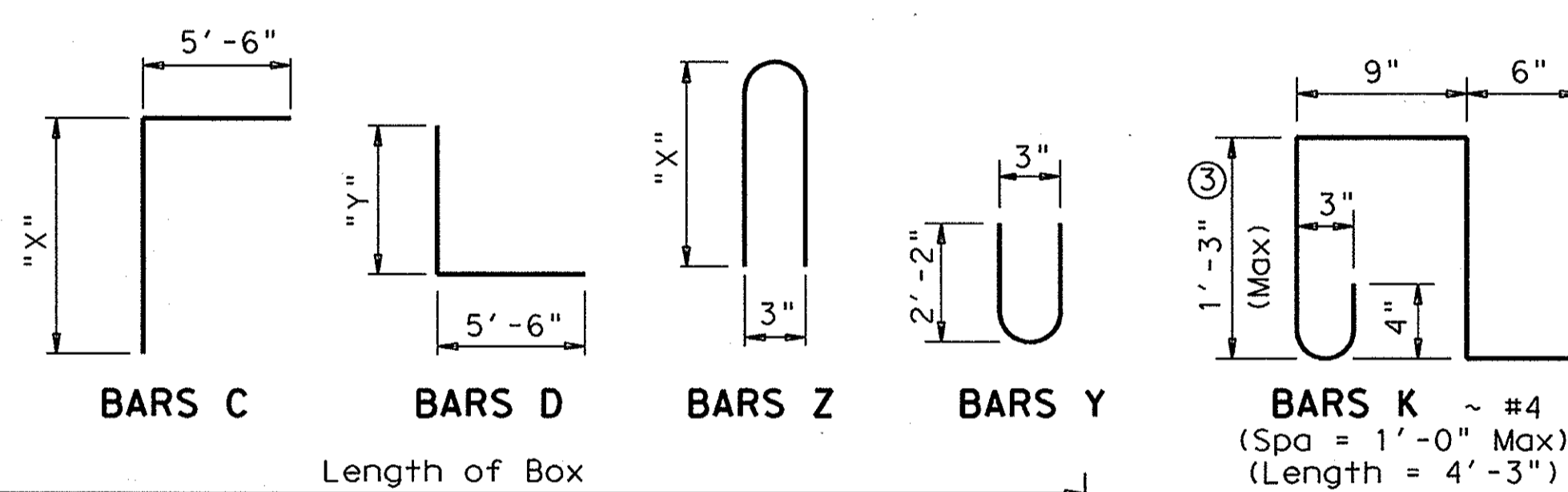
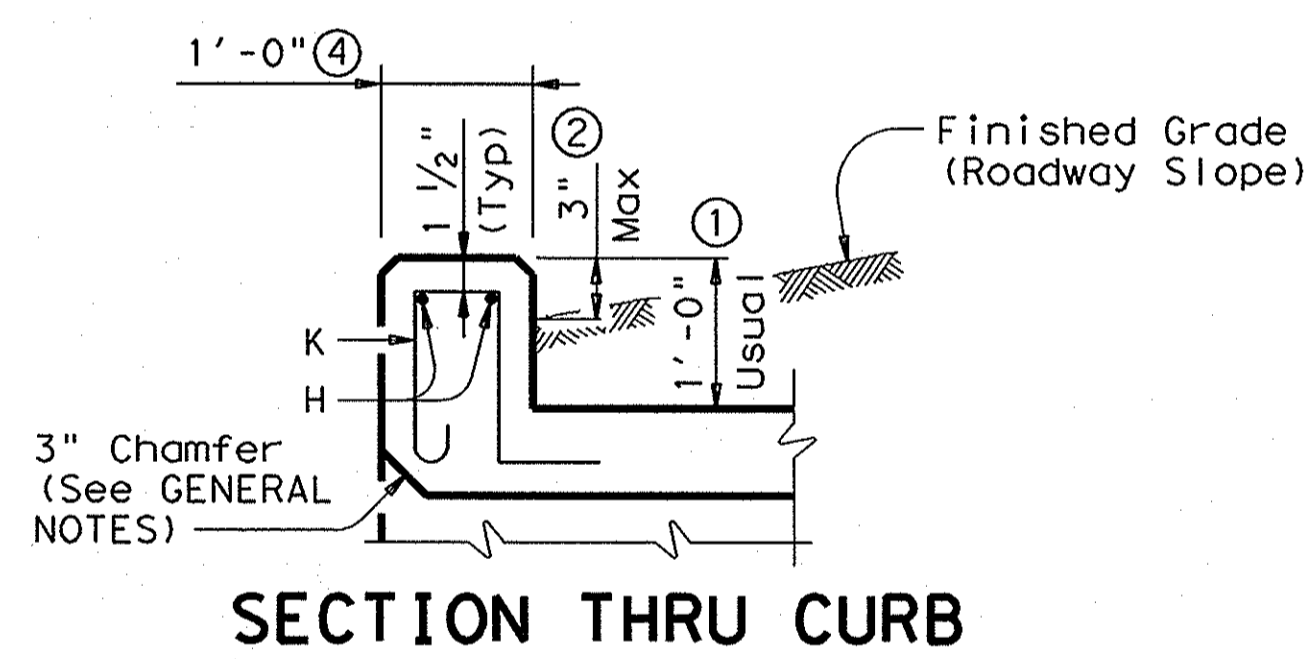


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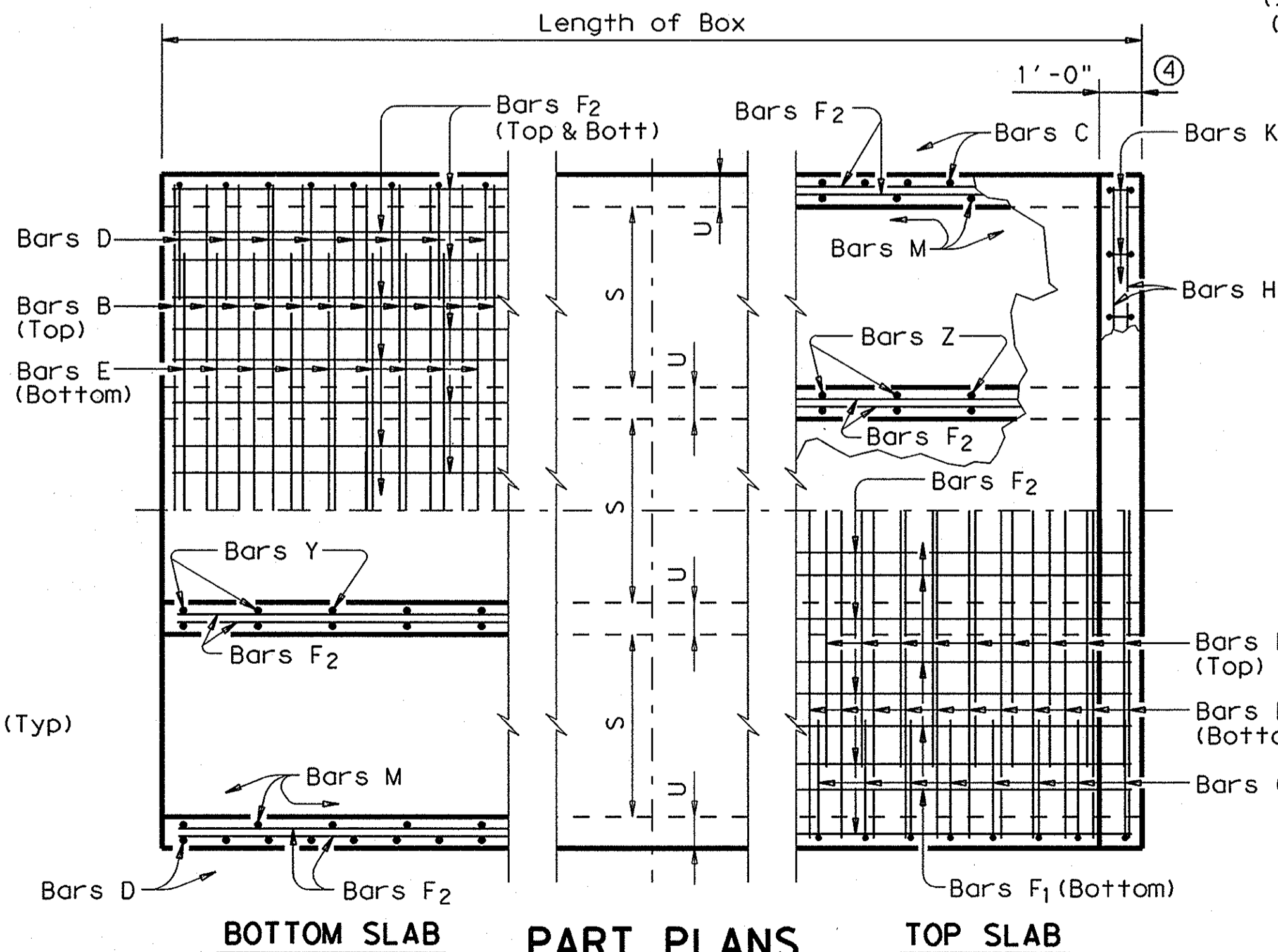
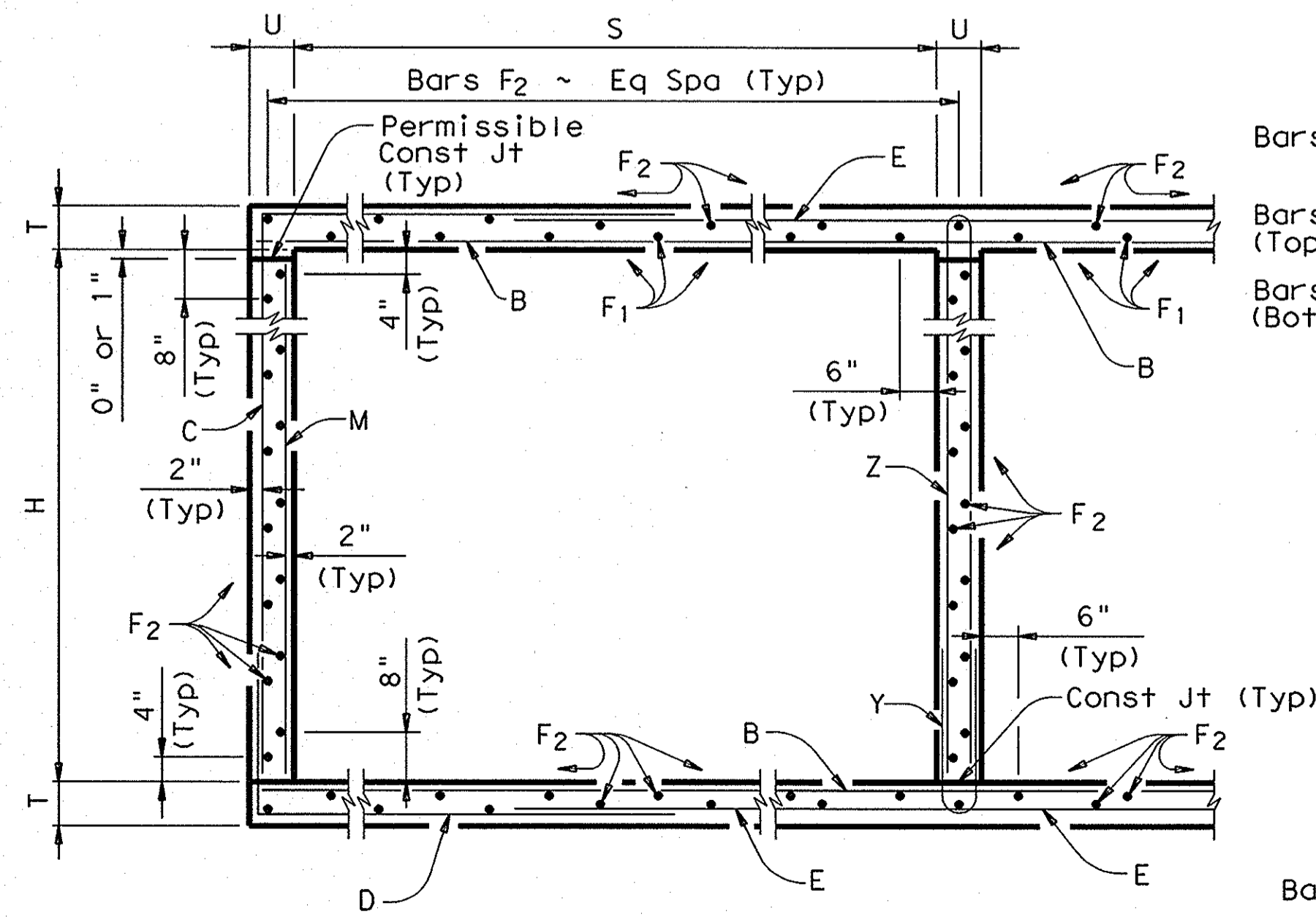
NUMBER OF SPANS	SECTION DIMENSIONS		BILLS OF REINFORCING STEEL (For Box Length = 40 feet)																												QUANTITIES															
			Bars B				Bars C & D				Bars E				Bars F ₁ ~ #4				Bars F ₂ ~ #4 at 1'-6" Max				Bars M ~ #4 at 1'-6" Max				Bars Y & Z ~ #4 at 1'-0" Max				Bars H 4 ~ #4		Bars K		Per foot of Barrel		Curb		Total							
			S	H	T	U	No.	Size	Spa	Length	Wt	No.	Size	Spa	Bar C		Bar D		No.	Size	Spa	Length	Wt	No.	Spa	Length	Wt	No.	Length	Wt	No.	Length	Wt	No.	Bar Y Length	Bar Y Wt	Bar Z Length	Bar Z Wt	Length	Weight	No.	Weight	Conc (CY)	Reinf (Lb)	Conc (CY)	Reinf (Lb)
2	6'-0"	3'-0"	7"	7"	162	#5	6"	13'-6"	2,281	162	#4	6"	8'-11"	965	7'-8"	830	194	#5	5"	6'-0"	1,214	16	9"	39'-9"	425	50	39'-9"	1,328	56	3'-0"	112	41	4'-6"	123	7'-0"	192	13'-6"	36	30	85	0.789	186.8	1.0	121	32.6	7,591
3	6'-0"	3'-0"	7"	7"	162	#5	6"	20'-1"	3,393	162	#4	6"	8'-11"	965	7'-8"	830	194	#5	5"	12'-7"	2,546	24	9"	39'-9"	637	71	39'-9"	1,885	56	3'-0"	112	82	4'-6"	246	7'-0"	383	20'-1"	54	42	119	1.138	274.9	1.5	173	47.0	11,170
4	6'-0"	3'-0"	7"	7"	162	#5	6"	26'-8"	4,506	162	#4	6"	8'-11"	965	7'-8"	830	194	#5	5"	19'-2"	3,878	32	9"	39'-9"	850	92	39'-9"	2,443	56	3'-0"	112	123	4'-6"	370	7'-0"	575	26'-8"	71	56	159	1.487	363.2	2.0	230	61.5	14,759
5	6'-0"	3'-0"	7"	7"	162	#5	6"	33'-3"	5,618	162	#4	6"	8'-11"	965	7'-8"	830	194	#5	5"	25'-9"	5,210	40	9"	39'-9"	1,062	113	39'-9"	3,000	56	3'-0"	112	164	4'-6"	493	7'-0"	767	33'-3"	89	70	199	1.836	451.4	2.5	288	75.9	18,345
6	6'-0"	3'-0"	7"	7"	162	#5	6"	39'-10"	6,730	162	#4	6"	8'-11"	965	7'-8"	830	194	#5	5"	32'-4"	6,542	48	9"	39'-9"	1,275	134	39'-9"	3,558	56	3'-0"	112	205	4'-6"	616	7'-0"	959	39'-10"	106	82	233	2.186	539.7	3.0	339	90.4	21,926
2	6'-0"	4'-0"	7"	7"	162	#5	6"	13'-6"	2,281	162	#4	6"	9'-11"	1,073	7'-8"	830	194	#5	5"	6'-0"	1,214	16	9"	39'-9"	425	50	39'-9"	1,328	56	4'-0"	150	41	4'-6"	123	9'-0"	246	13'-6"	36	30	85	0.853	191.8	1.0	121	35.1	7,791
3	6'-0"	4'-0"	7"	7"	162	#5	6"	20'-1"	3,393	162	#4	6"	9'-11"	1,073	7'-8"	830	194	#5	5"	12'-7"	2,546	24	9"	39'-9"	637	71	39'-9"	1,885	56	4'-0"	150	82	4'-6"	246	9'-0"	493	20'-1"	54	42	119	1.224	281.3	1.5	173	50.5	11,426
4	6'-0"	4'-0"	7"	7"	162	#5	6"	26'-8"	4,506	162	#4	6"	9'-11"	1,073	7'-8"	830	194	#5	5"	19'-2"	3,878	32	9"	39'-9"	850	92	39'-9"	2,443	56	4'-0"	150	123	4'-6"	370	9'-0"	739	26'-8"	71	56	159	1.595	371.0	2.0	230	65.8	15,069
5	6'-0"	4'-0"	7"	7"	162	#5	6"	33'-3"	5,618	162	#4	6"	9'-11"	1,073	7'-8"	830	194	#5	5"	25'-9"	5,210	40	9"	39'-9"	1,062	113	39'-9"	3,000	56	4'-0"	150	164	4'-6"	493	9'-0"	986	33'-3"	89	70	199	1.966	460.6	2.5	288	81.1	18,710
6	6'-0"	4'-0"	7"	7"	162	#5	6"	39'-10"	6,730	162	#4	6"	9'-11"	1,073	7'-8"	830	194	#5	5"	32'-4"	6,542	48	9"	39'-9"	1,275	134	39'-9"	3,558	56	4'-0"	150	205	4'-6"	616	9'-0"	1,232	39'-10"	106	82	233	2.337	550.2	3.0	339	96.5	22,345
2	6'-0"	5'-0"	7"	7"	162	#5	6"	13'-6"	2,281	162	#4	6"	10'-11"	1,181	7'-8"	830	194	#5	5"	6'-0"	1,214	16	9"	39'-9"	425	56	39'-9"	1,487	56	5'-0"	187	41	4'-6"	123	11'-0"	301	13'-6"	36	30	85	0.918	200.7	1.0	121	37.7	8,150
3	6'-0"	5'-0"	7"	7"	162	#5	6"	20'-1"	3,393	162	#4	6"	10'-11"	1,181	7'-8"	830	194	#5	5"	12'-7"	2,546	24	9"	39'-9"	637	79	39'-9"	2,098	56	5'-0"	187	82	4'-6"	246	11'-0"	603	20'-1"	54	42	119	1.311	293.0	1.5	173	53.9	11,894
4	6'-0"	5'-0"	7"	7"	162	#5	6"	26'-8"	4,506	162	#4	6"	10'-11"	1,181	7'-8"	830	194	#5	5"	19'-2"	3,878	32	9"	39'-9"	850	102	39'-9"	2,708	56	5'-0"	187	123	4'-6"	370	11'-0"	904	26'-8"	71	56	159	1.703	385.4	2.0	230	70.1	15,644
5	6'-0"	5'-0"	7"	7"	162	#5	6"	33'-3"	5,618	162	#4	6"	10'-11"	1,181	7'-8"	830	194	#5	5"	25'-9"	5,210	40	9"	39'-9"	1,062	125	39'-9"	3,319	56	5'-0"	187	164	4'-6"	493	11'-0"	1,205	33'-3"	89	70	199	2.096	477.6	2.5	288	86.3	19,393
6	6'-0"	5'-0"	7"	7"	162	#5	6"	39'-10"	6,730	162	#4	6"	10'-11"	1,181	7'-8"	830	194	#5	5"	32'-4"	6,542	48	9"	39'-9"	1,275	148	39'-9"	3,930	56	5'-0"	187	205	4'-6"	616	11'-0"	1,506	39'-10"	106	82	233	2.488	569.9	3.0	339	102.5	23,136
2	6'-0"	6'-0"	7"	7"	162	#5	6"	13'-6"	2,281	194	#4	5"	11'-11"	1,544	7'-8"	994	194	#5	5"	6'-0"	1,214	16	9"	39'-9"	425	62	39'-9"	1,646	56	6'-0"	224	41	4'-6"	123	13'-0"	356	13'-6"	36	30	85	0.983	220.2	1.0	121	40.3	8,928
3	6'-0"	6'-0"	7"	7"	162	#5	6"	20'-1"	3,393	194	#4	5"	11'-11"	1,544	7'-8"	994	194	#5	5"	12'-7"	2,546	24	9"	39'-9"	637	87	39'-9"	2,310	56	6'-0"	224	82	4'-6"	246	13'-0"	712	20'-1"	54	42	119	1.397	315.2	1.5	173	57.4	12,779
4	6'-0"	6'-0"	7"	7"	162	#5	6"	26'-8"	4,506	194	#4	5"	11'-11"	1,544	7'-8"	994	194	#5	5"	19'-2"	3,878	32	9"	39'-9"	850	112	39'-9"	2,974	56	6'-0"	224	123	4'-6"	370	13'-0"	1,068	26'-8"	71	56	159	1.811	410.2	2.0	230	74.4	16,638
5	6'-0"	6'-0"	7"	7"	162	#5	6"	33'-3"	5,618	194	#4	5"	11'-11"	1,544	7'-8"	994	194	#5	5"	25'-9"	5,210	40	9"	39'-9"	1,062	137	39'-9"	3,638	56	6'-0"	224	164	4'-6"	493	13'-0"	1,424	33'-3"	89	70	199	2.225	505.2	2.5	288	91.5	20,495
6	6'-0"	6'-0"	7"	7"	162	#5	6"	39'-10"	6,730	194	#4	5"	11'-11"	1,544	7'-8"	994	194	#5	5"	32'-4"	6,542	48	9"	39'-9"	1,275	162	39'-9"	4,302	56	6'-0"	224	205	4'-6"	616	13'-0"	1,780	39'-10"	106	82	233	2.639	600.2	3.0	339	108.6	24,346

H	Bar Dimensions	
	"X"	"Y"
3'-0"	3'-5"	2'-2"
4'-0"	4'-5"	2'-2"
5'-0"	5'-5"	2'-2"
6'-0"	6'-5"	2'-2"



GENERAL NOTES:

Designed according to current AASHTO Standard and Interim Specifications. Designed to the maximum fill height shown. All reinforcing steel shall be Grade 60. All concrete shall be Class "C" with these exceptions: use Class "S" for top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface. Class "C" concrete shall have a minimum compressive strength of 3,600 psi. Class "S" concrete shall have a minimum compressive strength of 4,000 psi. The use of permanent forms is not allowed. The bottom edge of the top slab shall be chamfered 3" at the entrance. Reinforcing bars shall be adjusted to provide a minimum of 1/4" clear cover. Construction joints shown at the flow line may be raised a maximum of 6" at the Contractor's option. If this option is used, Bars M may be cut off or raised, Bars C and D may be reversed, and Bars Y and Z may be reversed. See standard MC-MD for skewed ends, angle sections and lengthening details.



- 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures without railing and curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with bridge rail, other than T6, refer to RAC standard.
- For vehicle safety, the following requirements must be met:
 - For structures without bridge rail, curbs shall project no more than 3" above finished grade.
 - For structures with bridge rail, curbs shall be flush with finished grade. Curb heights shall be reduced, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- 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.
- 1'-0" typical, 2'-0" when RAC standard is referred to elsewhere in the plans.

RECORD DRAWINGS (SEPTEMBER 2010)

INFORMATION PROVIDED BY: Rogers-O'Brien Construction Company

HS20 LOADING

Texas Department of Transportation
Bridge Division
**MULTIPLE BOX CULVERTS
CAST-IN-PLACE
6'-0" SPAN
0' TO 16' FILL**

MC-6-16

FILE: mc616ste.dgn	DW: GAF	CK: LMW	DW: BWH/TXDOT	CK: GAF
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