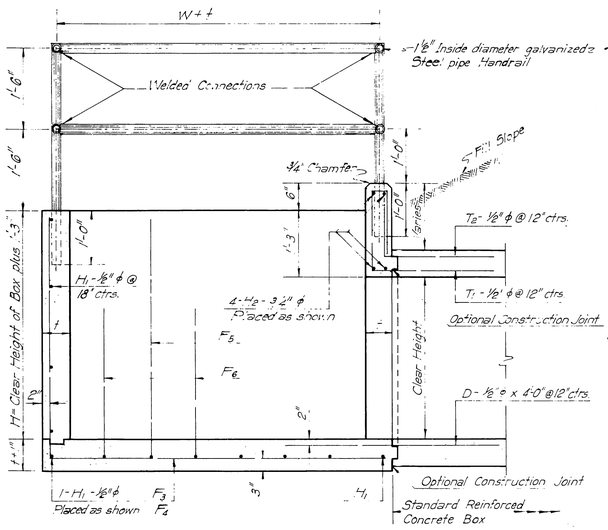
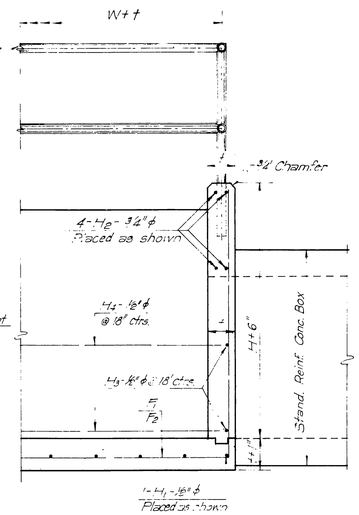
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				

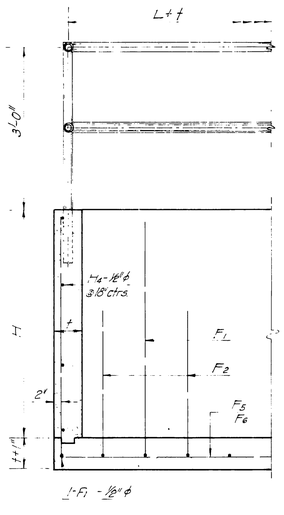
Note: An intermediate post shall be placed midway between end posts when span of Pipe Rail exceeds 6'-0".



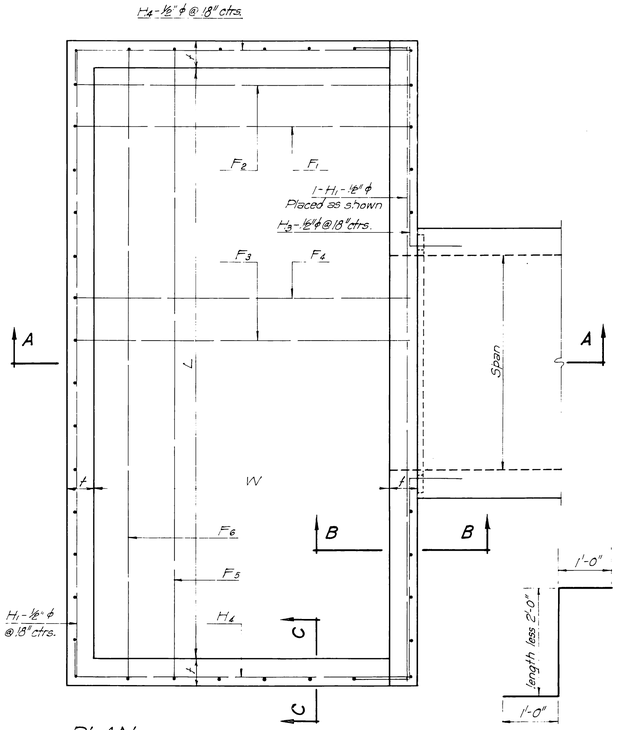
SECTION A-A



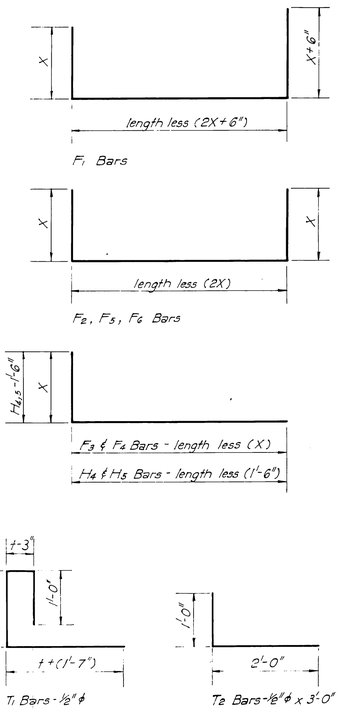
SECTION B-B



SECTION C-C



PLAN



DESIGN NUMBER	SIZE OF CULVERT Span	Clear Height	h*	DROP-INLET SIZES L	W	H	t	REINFORCING STEEL All F Bars Size	Spac.	F1 Bars length	X	No.	F2 Bars length	X	No.	F3 Bars length	X	No.	F4 Bars length	X	No.	F5 Bars length	X	No.	F6 Bars length	X	No.	H1 Bars length	No.	H2 Bars length	No.	H3 Bars length	No.	H4 Bars length	No.	H5 Bars length	No.	T1 Bars length	No.	T2 Bars No.	D Bars No.	QUANTITIES Class A Conc. in Box	Reinf. Steel Lbs.	Pipe Handrail L.F.
1.	2'-0"	2'-0"	9"	4'-0"	2'-0"	3'-3"	6"	1/2" ϕ	1'-0"	10'-0"	3'-5"	4				6'-1"	3'-5"	2				11'-6"	3'-5"	2				4'-8"	5	4'-8"	4	3'-2"	4	4'-2"	4			4'-9"	4	4	4	1.14	145	14.0
2.	2'-0"	2'-0"	1'-8"	2'-0"	2'-0"	3'-3"	5"	1/2" ϕ	1'-0"	10'-0"	3'-5"	2				6'-1"	3'-5"	2				9'-6"	3'-5"	2				2'-8"	5	2'-8"	4					5'-2"	4	4'-9"	4	4	4	0.75	104	10.0
3.	3'-0"	2'-0"	1'-0"	4'-6"	2'-3"	3'-3"	6"	1/2" ϕ	1'-0"	10'-3"	3'-5"	4				6'-4"	3'-5"	4				12'-0"	3'-5"	2				5'-2"	5	5'-2"	4	2'-1"	4	4'-5"	4			4'-9"	5	5	5	1.26	154	15.5
4.	3'-0"	2'-0"	2'-0"	3'-0"	2'-0"	3'-3"	6"	1/2" ϕ	1'-0"	10'-0"	3'-5"	3				6'-1"	3'-5"	2				10'-6"	3'-5"	2				3'-8"	5	3'-8"	4					5'-2"	4	4'-9"	5	5	5	0.91	127	12.0
5.	3'-0"	2'-6"	1'-0"	6'-0"	3'-0"	3'-9"	8"	1/2" ϕ	1'-0"	12'-0"	3'-11"	4				7'-7"	3'-11"	4				4'-8"	3'-11"	3				6'-8"	6	6'-8"	4	3'-8"	4	5'-2"	6			4'-9"	5	5	5	1.92	218	20.0
6.	3'-0"	2'-6"	2'-0"	3'-0"	2'-6"	3'-9"	6"	1/2" ϕ	1'0"	11'-8"	3'-11"	2				7'-1"	3'-11"	2				11'-8"	3'-11"	2				3'-8"	6	3'-8"	4					5'-8"	6	4'-9"	5	5	5	1.10	143	13.0
7.	3'-0"	3'-0"	1'-0"	3'-0"	4'-0"	4'-3"	6"	1/2" ϕ	10"	4'-0"	4'-5"	8				3'-1"	4'-5"	4				17'-6"	4'-5"	4				8'-8"	6	8'-8"	4	4'-8"	4	6'-2"	6			4'-9"	5	5	5	2.94	310	26.0
8.	3'-0"	3'-0"	2'-0"	3'-0"	3'-0"	4'-3"	6"	1/2" ϕ	1'-4"	13'-0"	4'-5"	2	6'-3"	2'-7"	3	2'-0"	4'-5"	2	6'-10"	2'-7"	3	3'-8"	4'-5"	2				3'-8"	6	3'-8"	4					6'-2"	6	4'-9"	5	5	5	1.32	176	14.0
9.	4'-0"	2'-0"	1'-0"	6'-0"	3'-0"	3'-3"	6"	1/2" ϕ	1'-0"	11'-0"	3'-5"	4				7'-1"	3'-5"	4				13'-6"	3'-5"	3				6'-8"	5	6'-8"	4	3'-2"	4	5'-2"	4			4'-9"	6	6	6	1.73	208	20.0
10.	4'-0"	2'-0"	2'-0"	4'-0"	2'-0"	3'-3"	6"	1/2" ϕ	1'-0"	10'-0"	3'-5"	2				6'-1"	3'-5"	2				11'-6"	3'-5"	2				4'-8"	5	4'-8"	4					5'-2"	4	4'-9"	6	6	6	1.26	150	14.0
11.	4'-0"	2'-6"	1'-0"	8'-0"	4'-0"	3'-9"	6"	1/2" ϕ	1'-0"	13'-0"	3'-11"	6				8'-1"	3'-11"	4				16'-6"	3'-11"	4				8'-8"	6	8'-8"	4	4'-2"	4	6'-2"	6			4'-9"	6	6	6	2.38	289	26.0
12.	4'-0"	2'-6"	2'-0"	4'-0"	2'-6"	3'-9"	6"	1/2" ϕ	1'-6"	11'-6"	3'-11"	2	5'-1"	2'-3"	3	2'-6"	3'-11"	2	10'-2"	2'-9"	3	4'-8"	3'-11"	2				4'-8"	6	4'-8"	4					5'-8"	6	4'-9"	6	6	6	1.28	176	15.0
13.	4'-0"	3'-0"	1'-0"	11'-0"	5'-6"	4'-3"	6"	1/2" ϕ	10"	15'-6"	4'-5"	12				0'-7"	4'-5"	4				20'-6"	4'-5"	6				11'-8	6	11'-8	4	5'-8"	4	7'-8"	6			4'-9"	6	6	6	4.33	446	35.0
14.	4'-0"	3'-0"	2'-0"	4'-0"	3'-0"	4'-3"	6"	1/2" ϕ	1'-2"	13'-0"	4'-5"	2				8'-1"	4'-5"	3				13'-6"	4'-5"	2				8'-10"	2'-1	3						6'-2"	6	4'-9"	6	6	6	1.52	204	16.0
15.	4'-0"	4'-0"	1'-6"	8'-0"	4'-0"	5'-3"	6 1/2"	5/8"	1'-2"	16'-2"	5'-5 1/2"	4	10'-8"	2'-11 1/2"	4	10'-8"	5'-5 1/2"	4	7'-8"	2'-11 1/2"	3	19'-8"	5'-5 1/2"	3	14'-8"	2'-11 1/2"	4	8'-9"	7	8'-9"	4	4'-2"	6	6'-3"	8			4'-10"	6	6	6	3.55	498	22.2
16.	4'-0"	4'-0"	2'-0"	4'-0"	4'-0"	5'-3"	6 1/2"	5/8"	1'-2"	16'-2"	5'-5 1/2"	2				0'-3"	5'-5 1/2"	3	7'-8"	2'-11 1/2"	4	15'-8"	5'-5 1/2"	3	10'-8"	2'-11 1/2"	4	4'-9"	7	4'-3"	4					7'-3"	8	4'-10"	6	6	6	2.24	329	18.2
17.	5'-0"	2'-0"	1'-0"	7'-6"	3'-3"	3'-3"	6"	1/2" ϕ	1'-0"	11'-3"	3'-5"	4				7'-0"	3'-5"	6				15'-0"	3'-5"	4				8'-2"	5	8'-2"	4	3'-5"	4	5'-1"	4			4'-9"	7	7	7	2.24	261	24.5
18.	5'-0"	2'-0"	2'-0"	5'-0"	2'-0"	3'-3"	6"	1/2" ϕ	1'-0"	10'-0"	3'-5"	2				6'-1"	3'-5"	2				12'-6"	3'-5"	2				5'-8"	5	5'-8"	4					5'-2"	4	4'-9"	7	7	7	1.32	188	16.0
19.	5'-0"	3'-0"	1'-0"	13'-0"	6'-6"	4'-3"	6"	1/2" ϕ	1'-6"	16'-6"	4'-5"	6	11'-4"	2'-1"	6	1'-7"	4'-5"	4	9'-3"	2'-1"	3	22'-6"	4'-5"	4	17'-10"	2'-1"	5	13'-8"	6	13'-8"	4	6'-2"	4	8'-8"	6			4'-9"	7	7	7	5.35	525	41.0
20.	5'-0"	3'-0"	2'-0"	5'-0"	3'-0"	4'-3"	6"	1/2" ϕ	1'-0"	13'-0"	4'-5"	2				8'-1"	4'-5"	4	6'-0"	2'-4"	5	2'-6"	4'-5"	2	10'-4"	2'-4"	3	5'-8"	6	5'-8"	4					6'-2"	6	4'-9"	7	7	7	1.71	236	18.0
21.	5'-0"	4'-0"	2'-0"	7'-0"	4'-0"	5'-3"	6 1/2"	1/2" ϕ	11"	16'-2"	5'-5 1/2"	4	10'-10"	3'-0 1/2"	2	0'-3"	5'-5 1/2"	6	7'-9"	3'-0 1/2"	5	18'-8"	5'-5 1/2"	4	3'-0"	3'-0 1/2"	5	7'-9"	7	7'-9"	4	3'-3"	6	6'-3"	8			4'-10"	7	7	7	3.19	407	24.2
22.	5'-0"	4'-0"	3'-0"	5'-0"	4'-0"	5'-3"	7 1/2"	5/8"	1'-1"	16'-6"	5'-6 1/2"	2				10'-5"	5'-6 1/2"	4	7'-1"	3'-0 1/2"	5	17'-0"	5'-6 1/2"	4	12'-0"	3'-0 1/2"	5	5'-1"	7	5'-1"	4					7'-5"	8	5'-0"	7	7	7	2.92	407	20.5
23.	5'-0"	5'-0"	2'-0"	10'-0"	5'-0"	6'-3"	8"	3/4"	1'-2"	19'-8"	6'-7"	6	12'-8"	3'-4"	4	2'-7"	6'-7"	4	9'-4"	3'-4"	5	24'-2"	6'-7"	4	7'-8"	3'-4"	5	11'-0"	7	11'-0"	4	4'-10"	8	7'-6"	8			5'-1"	8	8	8	6.55	923	32.7
24.	5'-0"	5'-0"	3'-0"	5'-0"	5'-0"	6'-3"	8 1/2"	3/4"	1'-2"	19'-10"	6'-7 1/2"	2				12'-8"	6'-7 1/2"	4	9'-7"	3'-6 1/2"	5	19'-4"	6'-7 1/2"	4	13'-2"	3'-6 1/2"	5	6'-1"	7	6'-7"	4					5'-7"	8	5'-0"	8	8	8	4.38	601	22.8
25.	6'-0"	2'-0"	1'-0"	8'-0"	4'-3"	3'-3"	6"	1/2" ϕ	1'-0"	12'-3"	3'-5"	4				8'-4"	3'-5"	6				16'-0"	3'-5"	4				9'-2"	5	9'-2"	4	3'-5"	4	6'-5"	4			4'-9"	8	8	8	2.32	284	17.5
26.	6'-0"	2'-0"	2'-0"	6'-0"	2'-0"	3'-3"	6"	1/2" ϕ	1''	10'-0"	3'-5"	2				6'-1"	3'-5"	2				13'-6"	3'-5"	2				6'-8"	5	6'-8"	4					5'-2"	4	4'-9"	8	8	8	1.36	195	18.0
27.	6'-0"	3'-0"	1'-0"	18'-0"	8'-0"	4'-3"	6"	1/2" ϕ	1'-6"	17'-6"	4'-5"	8	13'-8"	2'-6"	6	3'-1"	4'-5"	4	11'-2"	2'-6"	5	25'-8"	4'-5"	5	2'-1"	2'-6"	6	16'-8"	6	16'-8"	4	7'-2"	4	10'-2"	6			4'-9"	8	8	8	7.08	683	30.0
28.	6'-0"	3'-0"	2'-0"	6'-0"	3'-0"	4'-3"	6"	1/2" ϕ	1'-0"	13'-0"	4'-5"	2				8'-1"	4'-5"	6	6'-1"	2'-5"	7	15'-6"	4'-5"	3	6'-1"	2'-5"	7	6'-8"	6	6'-8"	4					6'-2"	6	4'-9"	8	8	8	1.9	277	20.0
29.	6'-0"	4'-0"	2'-0"	9'-0"	4'-6"	5'-3"	7"	5/8"	1'-2"	16'-10"	5'-6"	4	11'-2"	2'-11"	4	10'-10"	5'-6"	6	8'-3"	2'-11"	5	20'-10"	5'-6"	4	15'-8"	2'-11"	5	9'-10"	7	9'-10"	4	3'-9"	6	6'-10"	8			4'-11"	8	8	8	4.34	617	29.3
30.	6'-0"	4'-0"	3'-0"	6'-0"	4'-0"	5'-3"	7 1/2"	5/8"	1'-0"	16'-6"	5'-6 1/2"	2				10'-5"	5'-6 1/2"	6	7'-1"	3'-0 1/2"	7	18'-0"	5'-6 1/2"	4	13'-0"	3'-0 1/2"	5	6'-11"	7	6'-11"	4					7'-5"	8	5'-0"	8	8	8	3.26	479	22.5
31.	6'-0"	5'-0"	2'-0"	12'-0"	6'-0"	6'-3"	8"	5/8"	1'-8"	20'-8"	6'-7"	6	4'-0"	3'-6"	6	13'-7"	6'-7"	6	10'-6"	3'-6"	7	26'-6"	6'-7"	6	20'-0"	3'-6"	7	13'-0"	7	13'-0"	4	5'-4"	8	8'-6"	8			5'-1"	9	9	9	8....	1018	36.7
32.	6'-0"	5'-0"	3'-0"	6'-0"	5'-0"	6'-3"	8 1/2"	3/4"	1'-2"	19'-10"	6'-7 1/2"	2				12'-8"	6'-7 1/2"	6	9'-3"	3'-8 1/2"	5	20'-4"	6'-7 1/2"	4	4'-6"	3'-8 1/2"	5	7'-1"	7	7'-1"	4					8'-7"	8	5'-0"	9	9	9	4.78	672	34.8
33.	6'-0"	6'-0"	2'-0"	18'-0"	8'-0"	7'-3"	9"	5/8"	1'-8"	25'-0"	7'-8"	12	17'-8"	4'-3"	10	16'-10"	7'-8"	6	13'-5"	4'-3"	7	32'-6"	7'-8"	8	25'-8"	4'-3"	9	17'-2"	8	17'-2"	4	7'-5"	8	10'-8"	10			5'-3"	9	9	9	14.65	1593	51.0
34.	6'-0"	6'-0"	3'-0"	6'-0"	6'-0"	7'-3"	10"	3/4"	1'-0"	23'-4"	7'-9"	2				15'-1"	7'-9"	6	11'-6"	4'-2"	7	29'-10"	7'-9"	6	15'-8"	4'-2"	7	7'-4"	8	7'-4"	4					3'-0"	10	5'-5"	9	9	9	7.12	919	47.8

* Minimum head of water above Drop-inlet to give box design discharge.

All exposed concrete edges shall have a 3/4" chamfer.
Pipe Handrail shall be placed on Drop-Inlets only when a quantity for that item is included on the Summary Sheet.
Standard Steel Pipe painted two coats of aluminum paint may be used in place of galvanized iron pipe.
Welded connections shall be used for pipe Handrail. Welded connections shall be thoroughly cleaned of all loose scale, ground smooth and spot painted with two coats of aluminum paint.
Shop details for all pipe handrail shall be submitted to the Bridge Engineer for approval before fabrication.

Unless otherwise specified, all exposed concrete surfaces shall have a finish in accordance with the current standard specifications.

All construction and materials requirements shall be in accordance with the current standard specifications.

REVISIONS NO	DESCRIPTION	BY	DATE
1	Rev. 1987 Spec		

RECORD ITEM	BY	DATE
DESIGN		
DETAIL	AK	8/52
TRACED	AK	8/52
CHECKED	MM	9/14/11
APPR'D		
SQUAD: WITHROW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
OKLAHOMA CITY, OKLA.

STANDARD
REINFORCED CONCRETE DROP-INLETS FOR REINFORCED CONCRETE BOXES
2'-0 X 2'-0" TO 6'-0" X 6'-0"

49

OLD 4-6-89

CBDI-1-14