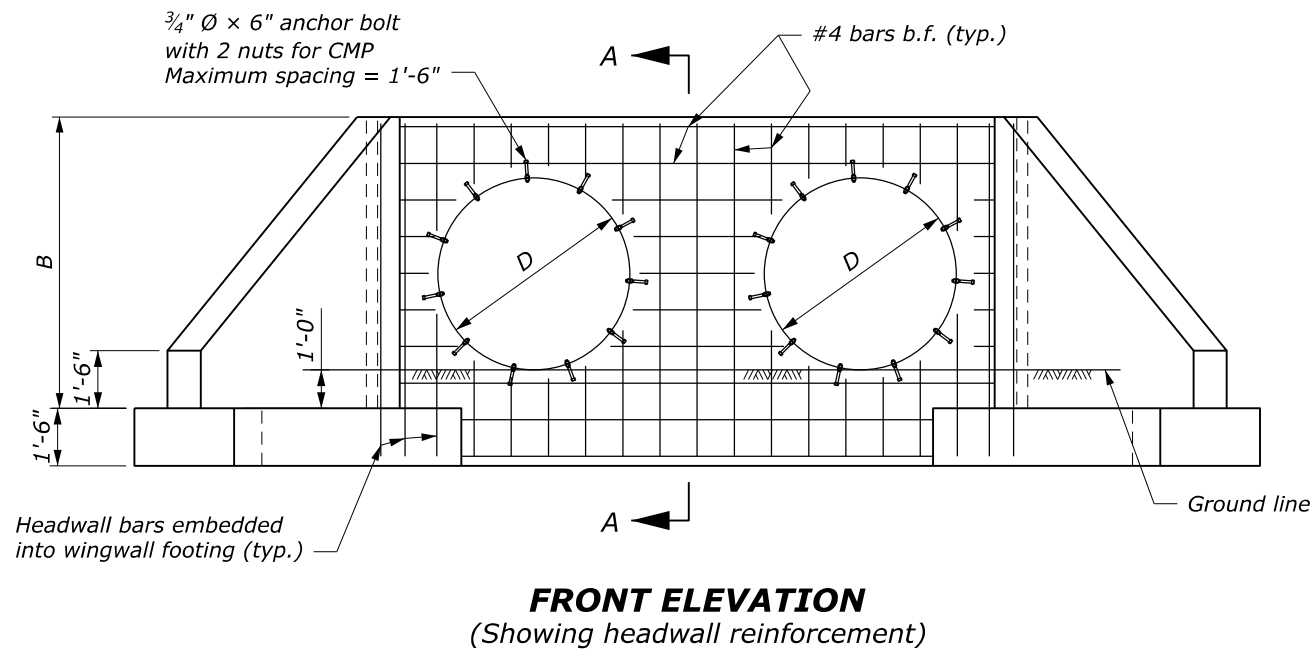


**NOTE:**

1. This drawing applies for normal crossings and skews up to 15°.
2. Prepare foundation according to Section 209. Place headwall/wingwalls on 6 inches of foundation fill.
3. Quantities shown in table are for one headwall and two wingwalls and are based on CMP. Concrete and steel quantities shown will be used as basis for final payment for headwall/wingwalls constructed according to this drawing.
4. For dimensions and reinforcing details not shown, see Standard 601-5.

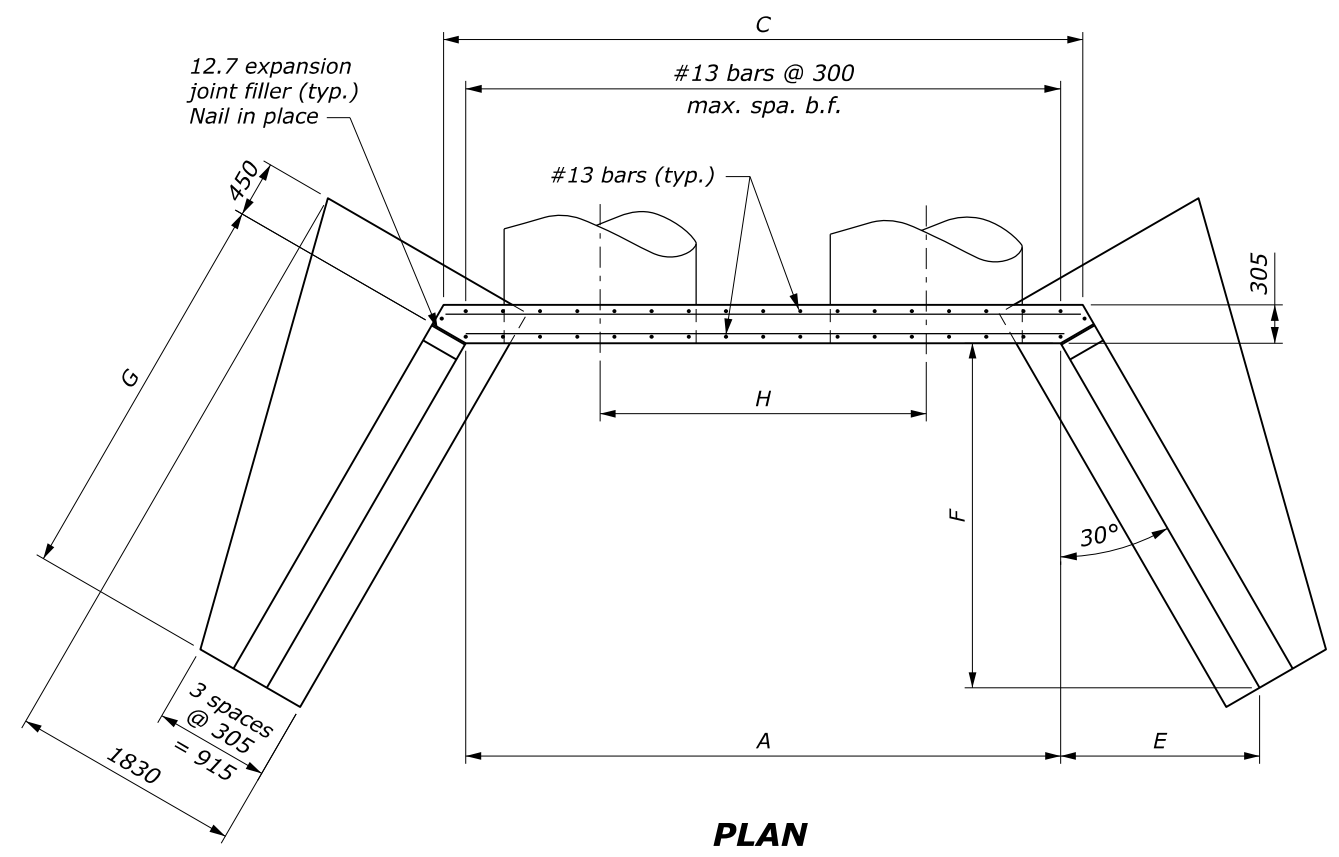


**DIMENSIONS AND QUANTITIES**

		Diameter of Pipe Culvert (D)							
		42"	48"	54"	60"	66"	72"	78"	84"
A		11'-6"	12'-10 <sup>1</sup> / <sub>4</sub> "	14'-2"	15'-6"	16'-10"	18'-2"	19'-5 <sup>3</sup> / <sub>4</sub> "	20'-10"
C		12'-7 <sup>3</sup> / <sub>4</sub> "	14'-0"	15'-3 <sup>3</sup> / <sub>4</sub> "	16'-7 <sup>3</sup> / <sub>4</sub> "	17'-11 <sup>3</sup> / <sub>4</sub> "	19'-4"	20'-7 <sup>3</sup> / <sub>4</sub> "	21'-11 <sup>3</sup> / <sub>4</sub> "
H		6'-0"	6'-10"	7'-8"	8'-6"	9'-4"	10'-2"	11'-0"	11'-10"
1V:1.5H fill slope	Conc. (CUYD)	9.3	10.6	11.9	13.2	14.6	16.1	17.6	19.2
	Steel (LB)	752	850	961	1020	1166	1228	1380	1488
1V:2H fill slope	Conc. (CUYD)	11.3	12.9	14.4	16.1	17.8	19.6	21.4	23.3
	Steel (LB)	900	1023	1144	1247	1395	1503	1644	1793
Add. Conc. per pipe (CUYD)		1.3	1.6	1.8	2.1	2.4	2.7	3.0	3.4
Add. Steel per pipe (LB)		120	122	154	165	202	213	254	267

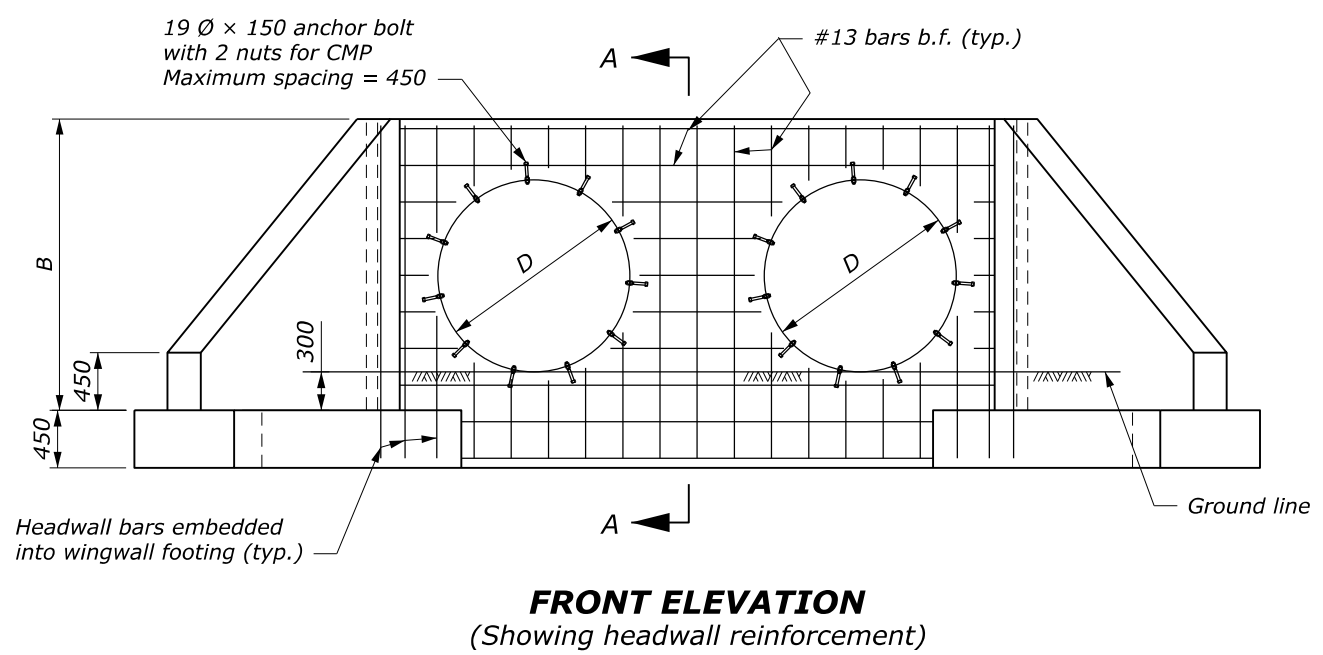
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY	FLH STANDARD 601-7
<b>CONCRETE HEADWALL/WINGWALL FOR MULTIPLE NORMAL 42" TO 84" PIPE CULVERT</b>	SPECIFICATION FP-24, FP-14 APPROVED FOR USE 2/2024



**NOTE:**

1. This drawing applies for normal crossings and skews up to 15°.
2. Prepare foundation according to Section 209. Place headwall/wingwalls on 150 mm of foundation fill.
3. Quantities shown in table are for one headwall and two wingwalls and are based on CMP. Concrete and steel quantities shown will be used as basis for final payment for headwall/wingwalls constructed according to this drawing.
4. For dimensions and reinforcing details not shown, see Standard M601-5.



		<b>DIMENSIONS AND QUANTITIES</b>							
		Diameter of Pipe Culvert (D)							
		1050	1200	1350	1500	1650	1800	1950	2100
A		3505	3915	4315	4725	5130	5540	5940	6350
C		3855	4265	4665	5075	5480	5890	6290	6700
H		1830	2085	2335	2590	2845	3100	3350	3605
1V:1.5H fill slope	Conc. (m <sup>3</sup> )	7.1	8.1	9.1	10.1	11.2	12.3	13.4	14.6
	Steel (kg)	341	385	436	462	529	557	625	675
1V:2H fill slope	Conc. (m <sup>3</sup> )	8.6	9.8	11.0	12.3	13.6	15.0	16.3	17.8
	Steel (kg)	408	464	518	565	633	681	746	813
Add. Conc. per pipe (m <sup>3</sup> )		1.0	1.2	1.4	1.6	1.8	2.1	2.3	2.6
Add. Steel per pipe (kg)		55	55	70	75	91	97	115	121

This drawing contains **Metric** units of measure. Dimensions without units are millimeters.

U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY	FLH STANDARD M601-7
<b>CONCRETE HEADWALL/WINGWALL FOR MULTIPLE NORMAL 1050 TO 2100 PIPE CULVERT</b>	SPECIFICATION FP-24, FP-14
	APPROVED FOR USE 2/2024

NO SCALE