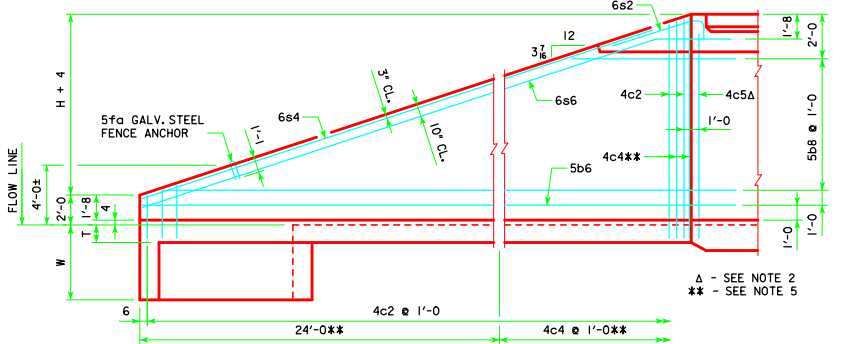
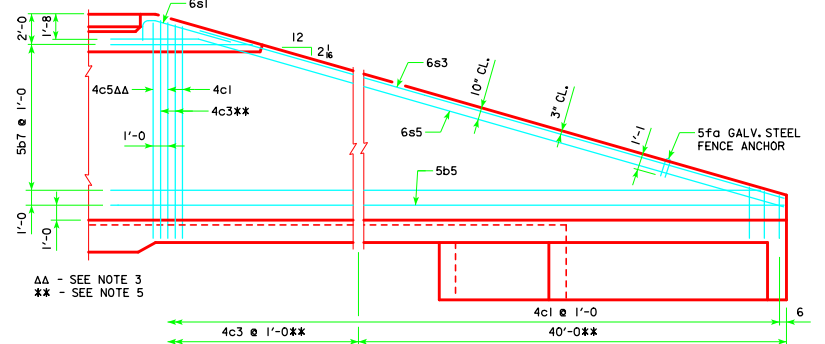


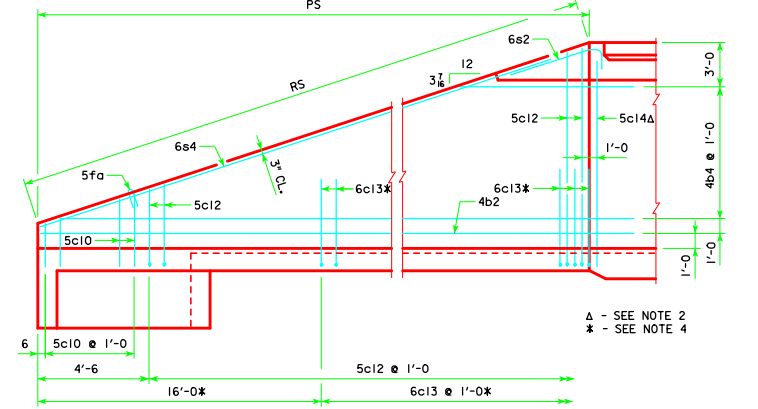
REVISED 05-13 - CHANGED DIMENSIONS WHEN TO BEGIN PLACING BARS 4c3, 4c4, 5c11, 5c12, & 6c13 IN WINGWALLS. FROM FLOOR THICKNESS TO 1/2" BELOW TOP OF CURB. SEE TRH 45-2-12. THIS SHEET ASSIGNED 04-12.



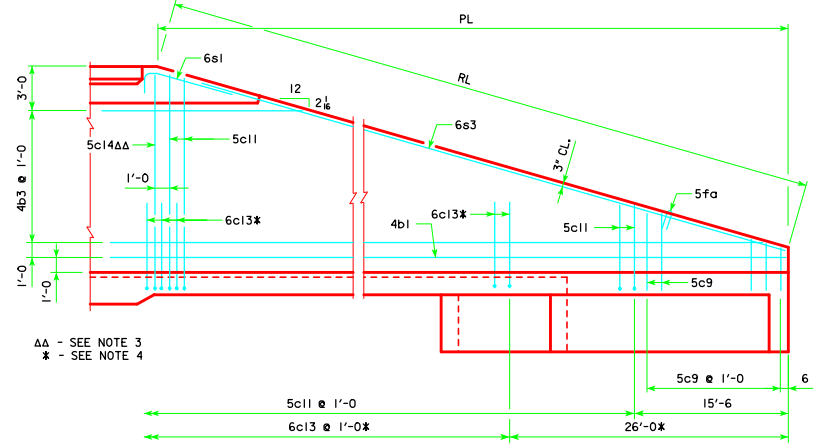
**TYPICAL VIEW - FRONT FACE REINFORCING SHORT WINGWALL**



**TYPICAL VIEW - FRONT FACE REINFORCING LONG WINGWALL**

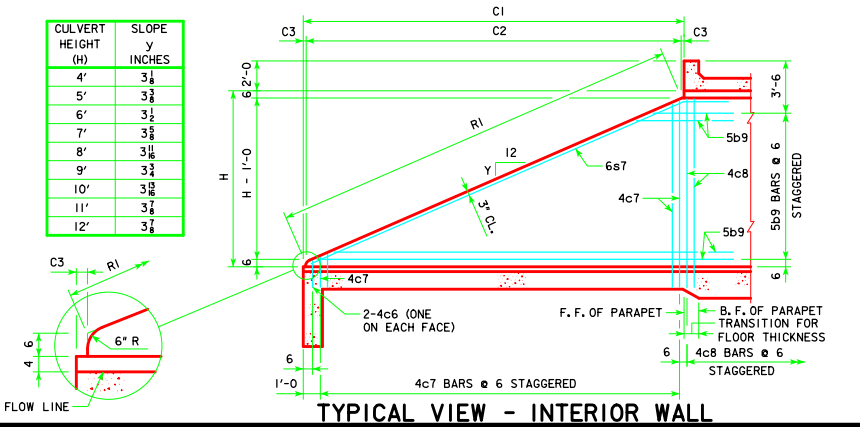


**TYPICAL VIEW - BACK FACE REINFORCING SHORT WINGWALL**



**TYPICAL VIEW - BACK FACE REINFORCING LONG WINGWALL**

CULVERT HEIGHT (H)	SLOPE y INCHES
4'	3 1/8"
5'	3 1/4"
6'	3 1/2"
7'	3 3/8"
8'	3 5/8"
9'	3 3/4"
10'	3 7/8"
11'	3 5/4"
12'	3 7/8"



**TYPICAL VIEW - INTERIOR WALL**

**NOTES:**

1. BAR SPACINGS AND POSITIONS SHOWN ARE SIMILAR FOR ALL SIZES OF HEADWALLS IN THIS STANDARD.
2. TWO 4c5 & TWO 5c14 BARS FOR 4', 6', 8', 10' & 12' HEIGHT HEADWALLS. ONE 4c5 & ONE 5c14 BAR FOR 5', 7', 9' & 11' HEIGHT HEADWALLS.
3. TWO 4c5 & TWO 5c14 BARS FOR 4', 5', 9', 10' & 11' HEIGHT HEADWALLS. ONE 4c5 & ONE 5c14 BAR FOR 6', 7', 8' & 12' HEIGHT HEADWALLS.
4. NOT APPLICABLE FOR 4' & 5' HEADWALLS.
5. NOT APPLICABLE FOR 4' THRU 8' HEIGHT HEADWALLS.
6. FOR DIMENSION TABLE SEE SHEET TRH 45-2-12.

LATEST REVISION DATE 05-13	 APPROVED BY BRIDGE ENGINEER	 <b>Iowa Department of Transportation</b> Highway Division
		STANDARD DESIGN <b>TRIPLE REINFORCED CONCRETE BOX CULVERTS</b> APRIL, 2012
		<b>FLARED WING HEADWALLS</b> 45° SKEW <b>TRH 45-6-12</b>