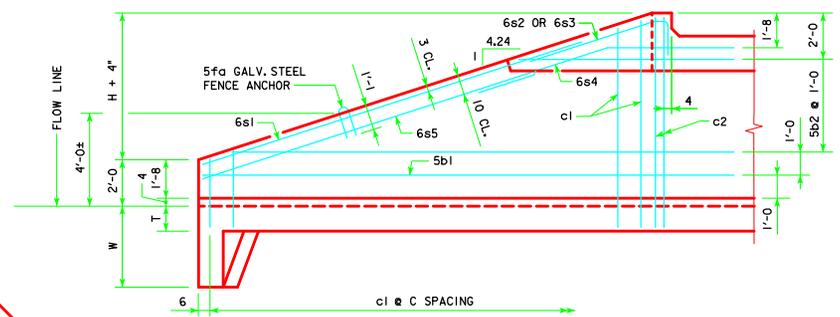
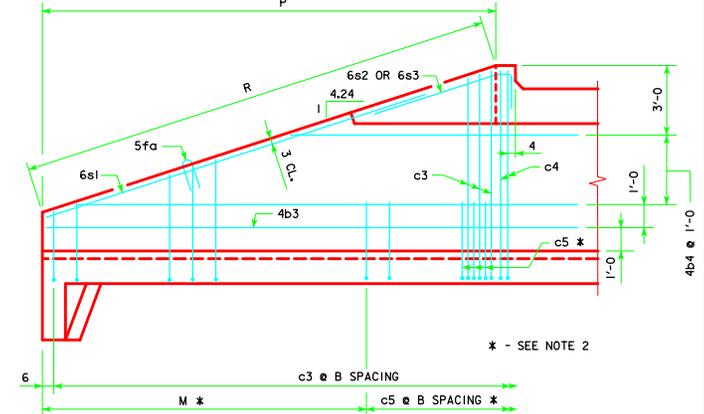


PLAN VIEW - BOTTOM APRON REINFORCING



TYPICAL VIEW - FRONT FACE WINGWALL REINFORCING



TYPICAL VIEW - BACK FACE WINGWALL REINFORCING

- NOTES :**
1. BAR SPACINGS AND POSITIONS SHOWN ARE SIMILAR FOR ALL SIZES OF HEADWALLS IN THIS STANDARD.
 2. NOT APPLICABLE FOR THE FOLLOWING HEADWALL SIZES: 8x4, 6x6, 6x5, 6x4, 6x3, 5x6, 5x5, 5x4, AND 5x3.
 3. FOR HEADWALL DIMENSIONS AND BAR SPACING SEE DRAWING PWH 45-1-12.
 4. WINGWALL BARS CONSISTENTLY REFERENCED FROM END OF WING FOR ALL WINGWALLS.
 5. APRON m3 BARS ARE TO BE CENTERED ON CULVERT.
 6. B.F.V. (c4) AND F.F.V. (c2) BARS ARE APPROXIMATELY 4" FROM THE BACK OF PARAPET FOR ALL HEADWALLS.

LATEST REVISION DATE	 APPROVED BY BRIDGE ENGINEER	 Iowa Department of Transportation Highway Division	STANDARD DESIGN - SINGLE REINFORCED CONCRETE BOX CULVERTS	
			PARALLEL WING HEADWALLS	
			APRIL, 2012	
WINGWALL ELEVATIONS & BOTTOM APRON REINFORCING 45° SKEW		PWH 45-3-12		