


**TYPICAL SECTION**


TO BE USED WHEN THE BARRIER IS FUNCTIONING AS A RETAINING WALL AT THE BOTTOM OF CUT OR FILL SLOPES.  
 SEE STD. MD 648.45 FOR 34 INCH F SHAPE CONCRETE TRAFFIC BARRIER SINGLE FACE TYPE 1 WITH EARTH BACKING AT TOP OF FILL SLOPES.  
 SEE STD. MD 648.46 FOR 34 INCH F SHAPE CONCRETE TRAFFIC BARRIER SINGLE FACE TYPE 2 FREE STANDING AT TOP OF FILL SLOPES.

**NOTES**

1. CAST THE BARRIER AND FOOTER SEPARATELY USING FIXED FORM OR SLIP FORM CONSTRUCTION WITH CONCRETE MIX NO.6 (4500 PSI).
2. THE BARRIER FOOTER MAY BE CONSTRUCTED AFTER CONSTRUCTION OF THE PAVEMENT. IF FLEXIBLE PAVEMENT IS CONSTRUCTED BEFORE THE FOOTER, SAWCUT THE PAVEMENT TO PROVIDE A CLEAN EDGE. REMOVE FOOTER FORMS IF THE FOOTER IS CONSTRUCTED BEFORE THE PAVEMENT.
3. LAP BARS 2'-10 1/2". TIE BARS TOGETHER.
4. THE FOOTER REAR VERTICAL FACE MAY BE FORMED OR THE CONCRETE PLACED AGAINST THE VERTICAL EARTH SIDE IF APPROVED BY THE ENGINEER. NO ADDITIONAL COMPENSATION FOR ADDITIONAL CONCRETE WILL BE PAID IF CONCRETE IS PLACED AGAINST THE EARTH.
5. LIMITS OF EXCAVATION: WHEN THE BARRIER IS AT THE BOTTOM OF A CUT SLOPE, THE EXCAVATION LIMITS SHALL BE THE LINES INDICATING THE BARRIER FOOTER AND A VERTICAL LINE EXTENDING FROM THE HEEL OF THE FOOTER TO ITS INTERSECTION WITH THE CUT SLOPE. WHEN THE BARRIER IS AT THE TOE OF A FILL SLOPE, THE EXCAVATION LIMITS SHALL BE THE LINES INDICATING THE BARRIER FOOTER.
6. MAXIMUM SPACING OF CONTRACTION JOINTS IS 20 FEET. PLACE EXPANSION JOINTS IN THE BARRIER AND FOOTER AT THE END OF POUR, AT PC AND PT LOCATIONS, STRUCTURES, EXPANSION JOINTS IN ABUTTING CONCRETE AND UNDERLYING CONCRETE, LOCATIONS AS SHOWN ON THE PLANS, AND AS DIRECTED BY THE ENGINEER. AT EXPANSION JOINTS, SPACE BARRIER SECTIONS 3/4" APART AND FILL THE OPENING WITH 3/4" PREFORMED JOINT FILLER. RECESS THE FILLER 1/4" FROM THE FACE OF BARRIER.
7. COST OF THE CONCRETE FOOTER, REINFORCEMENT, DRAINAGE APPURTENANCES, EXCAVATION, GEOTEXTILE, AND BACKFILL IS INCIDENTAL TO THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR 34 INCH F SHAPE CONCRETE TRAFFIC BARRIER SINGLE FACE TYPE 3. FILL MATERIAL OUTSIDE THE LIMITS OF EXCAVATION IS INCLUDED IN THE EMBANKMENT QUANTITY.
8. TOLERANCES IN DIMENSIONS SHOWN ARE WITHIN 1/4".
9. CONDUIT: IF REQUIRED REFER TO STD. MD 648.50 FOR LOCATION AND DETAILS.
10. WHEN BARRIER IS CONSTRUCTED USING THE SLIP FORM METHOD, DIAGONAL NO. 4 BARS ARE REQUIRED. SEE STD. MD 648.49.
11. PVC DRAINS AND BARRIER JOINTS SHOULD ALIGN WHERE POSSIBLE. DO NOT DRAIN WEEP HOLE ONTO PEDESTRIAN WALKING SURFACE.
12. THE CONTRACTOR MAY CONSTRUCT THE VERTICAL NO. 5 BARS AS SHOWN ON THIS STANDARD OR USE THE LAP SPLICE SHOWN ON STD. NO. MD 648.48. NO ADDITIONAL COMPENSATION WILL BE MADE FOR WHICHEVER OPTION IS CONSTRUCTED.

**TL-3**

<b>SPECIFICATION</b> 604	<b>CATEGORY CODE ITEMS</b>
<b>APPROVED</b>  DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	
<b>APPROVAL SHA REVISIONS</b>	<b>APPROVAL FEDERAL HIGHWAY ADMINISTRATION</b>
APPROVAL 3-1-01	APPROVAL 3-28-01
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 MARYLAND DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
**STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES**  
**34 INCH F SHAPE**  
**CONCRETE TRAFFIC BARRIER SINGLE FACE**  
**TYPE 3 (BOTTOM OF CUT OR TOE OF FILL)**  
**STANDARD NO. MD 648.47**