



**GENERAL NOTES**

- (A) DRAWING TO BE USED FOR ALL CAST-IN-PLACE AND ALL PRECAST 48" CONCRETE ENDWALLS (TYPE "U") FOR CROSS DRAINS ONLY. "U" ENDWALL TO BE PLACED AT 90° SKEW TO CENTERLINE. SEE STD. DWG. D-PE-99 FOR SKEWED CONNECTION DETAIL WHEN CROSS DRAIN IS NOT PERPENDICULAR TO CENTERLINE. CAST-IN-PLACE CONCRETE ENDWALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 611 AND/OR SPECIAL PROVISIONS.
- (B) SEE STD. DWG. D-PE-48B FOR BILL OF STEEL & PRECAST NOTES.
- (C) "-" IN BAR DESIGNATION REPRESENTS 3, 4 OR 6 FOR 3:1, 4:1 OR 6:1 SLOPES, RESPECTIVELY.
- (D) SPLICING OF REINFORCEMENT IS ACCEPTABLE PROVIDED THAT A MINIMUM 21" SPLICE LENGTH IS USED.
- (E) TOEWALL BACK SLOPE MAY BE CONSTRUCTED VARIABLE FROM VERTICAL UP TO 15°.
- (F) PAYMENT WILL BE MADE UNDER:
- |           |                                |      |
|-----------|--------------------------------|------|
| 611-07.69 | 48IN ENDWALL (CROSS DRAIN) 3:1 | EACH |
| 611-07.70 | 48IN ENDWALL (CROSS DRAIN) 4:1 | EACH |
| 611-07.71 | 48IN ENDWALL (CROSS DRAIN) 6:1 | EACH |
- (G) THE CONTRACTOR MAY ELECT TO SUBSTITUTE AN APPROVED ALTERNATIVE DESIGN
- (H) DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 5-3.

| DIMENSIONS AND QUANTITIES FOR ONE ENDWALL 48" PIPE |                             |                |                |                |                |          |                                  |              |                         |                      |                      |
|--|-----------------------------|----------------|----------------|----------------|----------------|----------|----------------------------------|--------------|-------------------------|----------------------|----------------------|
| SLOPE  | CONCRETE ENDWALL DIMENSIONS |                |                |                |                |          | STRUCTURAL STEEL PIPE DIMENSIONS |              | ESTIMATED QUANTITIES    |                      |                      |
|  | H                           | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | W        | LG                               | WG           | CLASS "A" CONC. CU. YD. | STEEL BAR REINF. LB. | STRUCTURAL STEEL LB. |
|  |                             |                |                |                |                |          |                                  |              |                         |                      |                      |
| 3:1  | 6' - 1"                     | 15' - 5"       | 16' - 3"       | 7' - 4 7⁄8"    | -              | 5' - 10" | 16' - 1 7⁄8"                     | 1 @ 5' - 10" | 3.79                    | 333                  | 167                  |
| 4:1  |                             | 20' - 4"       | 20' - 11 1⁄2"  | 10' - 3 1⁄4"   | -              |          | 20' - 10 5⁄8"                    | 1 @ 5' - 10" | 4.83                    | 420                  | 203                  |
| 6:1  |                             | 30' - 2"       | 30' - 7"       | 10' - 0 3⁄4"   | 10' - 0 1⁄8"   |          | 30' - 6 3⁄8"                     | 2 @ 5' - 10" | 6.92                    | 597                  | 320                  |

NOTE: SEE STD. DWG. D-PE-99 FOR STRUCTURAL STEEL PIPE DIMENSIONS LG & WG.

MINOR REVISION -- FHWA  
APPROVAL NOT REQUIRED.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

**48" CONCRETE ENDWALL  
CROSS DRAIN WITH  
STEEL PIPE GRATE**  
(FOR 3:1, 4:1 & 6:1 SLOPES)

NOT TO SCALE

3-01-12

D-PE-48A