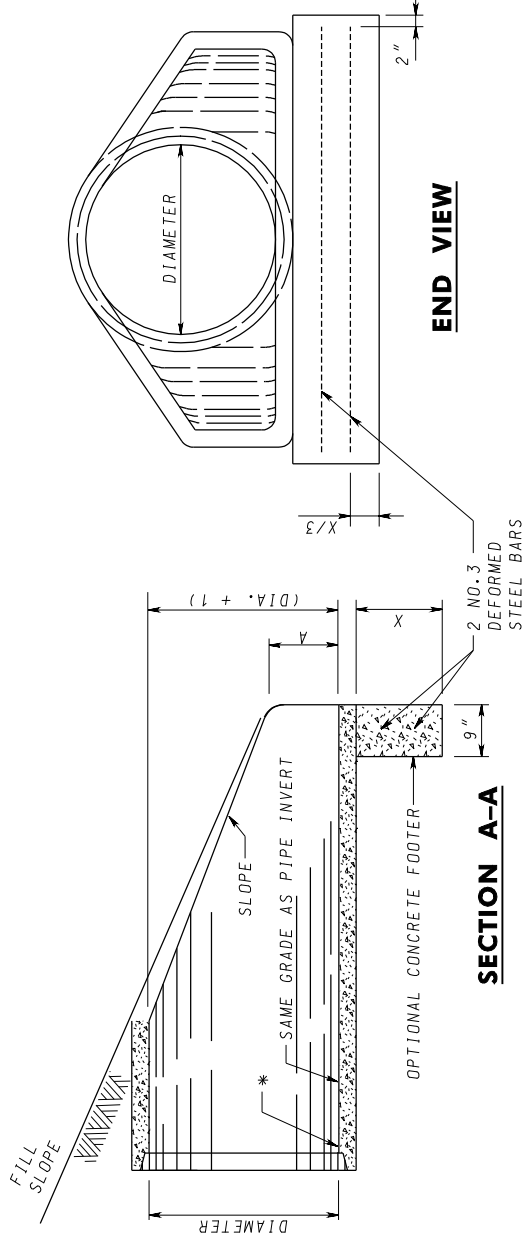
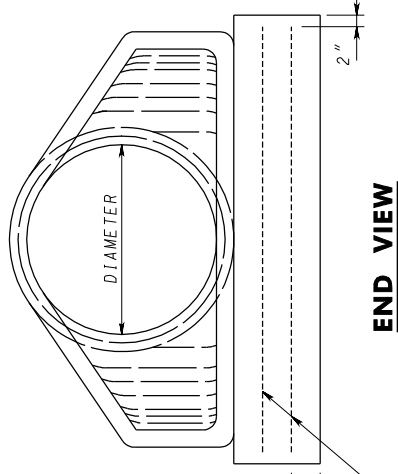


**PLAN**

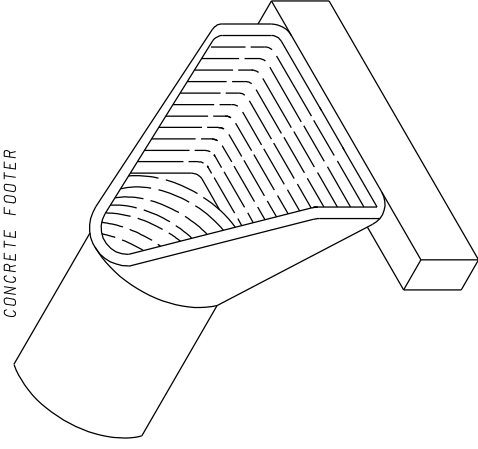


**SECTION A-A**



**END VIEW**

SEE NOTE 3 ABOVE FOR CONCRETE FOOTER



**ISOMETRIC VIEW**

**NOTES**

1. CONTRACTOR HAS OPTION OF FURNISHING END SECTIONS CONFORMING TO DETAILS ON THIS SHEET OR END SECTIONS CONFORMING TO DETAILS ON STANDARD NO. MD 368.01.
  2. END SECTIONS MUST BE REINFORCED TO CONFORM TO ASTM - CLASS IV REINFORCED CONCRETE PIPE.
  3. CONCRETE FOOTER SHALL BE USED WHEN SPECIFIED ON THE PLANS. COST OF CONCRETE FOOTER TO BE INCLUDED IN PRICE OF END SECTION. CONCRETE TO BE MIX. NO.2 REINFORCEMENT TO BE NO.3 BARS.
- \* INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION, ELEVATION TO BE NOTED ON THE CONSTRUCTION PLANS.

QUANTITIES FOR ESTIMATING PURPOSES ONLY

| DIA. SLOPE | DIMENSIONS                       |                                    |                                     |                                    |       |       | QUANTITIES  |            |      |
|------------|----------------------------------|------------------------------------|-------------------------------------|------------------------------------|-------|-------|-------------|------------|------|
|            | CONCRETE END SECTION             |                                    |                                     | CONCRETE FOOTER                    |       |       | CONC. STEEL | FOOTER     |      |
|            | A                                | B                                  | C                                   | D                                  | E     | W     | X           | C. Y. LBS. |      |
| 12" 3:1    | 4"                               | 2'-0"                              | 4'-0 <sup>7</sup> / <sub>8</sub> "  | 6'-0 <sup>7</sup> / <sub>8</sub> " | 2'-0" | 3'-0" | 12"         | 0.08       | 2.01 |
| 15" 3:1    | 6"                               | 2'-3"                              | 3'-10"                              | 6'-1"                              | 2'-6" | 3'-6" | 12"         | 0.10       | 2.38 |
| 18" 3:1    | 9"                               | 2'-3"                              | 3'-10"                              | 6'-1"                              | 3'-0" | 4'-0" | 12"         | 0.11       | 2.76 |
| 21" 3:1    | 9"                               | 3'-0"                              | 3'-1 <sup>1</sup> / <sub>2</sub> "  | 6'-1 <sup>1</sup> / <sub>2</sub> " | 3'-6" | 4'-6" | 12"         | 0.13       | 3.13 |
| 24" 3:1    | 9 <sup>1</sup> / <sub>2</sub> "  | 3'-7 <sup>1</sup> / <sub>2</sub> " | 2'-6"                               | 6'-1 <sup>1</sup> / <sub>2</sub> " | 4'-0" | 5'-0" | 15"         | 0.17       | 3.51 |
| 27" 3:1    | 10 <sup>1</sup> / <sub>2</sub> " | 4'-1 <sup>1</sup> / <sub>2</sub> " | 2'-0"                               | 6'-1 <sup>1</sup> / <sub>2</sub> " | 4'-6" | 5'-6" | 15"         | 0.19       | 3.89 |
| 30" 3:1    | 1'-0"                            | 4'-6"                              | 1'-7 <sup>3</sup> / <sub>4</sub> "  | 6'-1 <sup>3</sup> / <sub>4</sub> " | 5'-0" | 6'-0" | 15"         | 0.21       | 4.26 |
| 33" 3:1    | 1'-2"                            | 4'-7"                              | 2'-2"                               | 6'-9"                              | 5'-6" | 6'-6" | 15"         | 0.23       | 4.64 |
| 36" 3:1    | 1'-3"                            | 5'-3"                              | 2'-10 <sup>3</sup> / <sub>4</sub> " | 8'-1 <sup>3</sup> / <sub>4</sub> " | 6'-0" | 7'-3" | 15"         | 0.25       | 5.20 |

SPECIFICATION  
**305**

CATEGORY CODE ITEMS

APPROVED

*Kat G. McCall*  
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT



APPROVAL • SHA  
REVISIONS HIGHWAY ADMINISTRATION

|                  |                   |
|------------------|-------------------|
| APPROVAL 8-28-86 | APPROVAL 12-12-86 |
| REVISED 3-15-06  | REVISED 4-5-06    |
| REVISED 7-1-09   | REVISED 7-27-09   |
| REVISED          | REVISED           |

**Maryland Department of Transportation**  
**STATE HIGHWAY ADMINISTRATION**  
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

**STANDARD CONCRETE END SECTION**  
**ROUND CONCRETE PIPE**

STANDARD NO.

MD 368.02