INSTALLATION DETAIL FOR SAFETY PIPE RUNNERS

PLAN

(Showing bolt and connections.)

LONGITUDINAL ELEVATION

(Showing bolt and connections.)

END DETAILS FOR INSTALLATION OF SAFETY PIPE RUNNERS

1. **Dimension "D"** is based on reinforced concrete pipe (RCP) meeting the requirements of ASTM C-662, Class I/II, RCP Wall "B" Thickness. Adjust "D" for any other wall thickness used. For thermoplastic pipe (TP) take into account the similar space requirements for grouted connections.

2. Slope as shown elsewhere in the plans. Slope of 8:1 or flatter is required for vehicle safety.

3. Toewall to be used only when dimension is shown elsewhere in the plans.

4. Fill the top 4" of void between precast and treatments with concrete riprap. Concrete riprap is considered subsidiary to the Item 467, "Safety End Treatment".

5. Adjust clear distance between pipes to provide for the minimum distance between safety end treatments.

6. Provide cement stabilized bedding and backfill in accordance with the Item 400, "Excavation and Backfill for Reinforced Concrete Pipe". Connect TP by parallel-drainage structures, Texas Transportation Institute, March 1981.

7. Thermoplastic pipe wall thickness may vary. Adjust accordingly. Thermoplastic pipe requires the safety and treatments to have a bell end for grouted connections.

GENERAL NOTES:

Precast safety end treatments for reinforced concrete pipe (RCP) and thermoplastic pipe (TP) may be used for TYPE II end treatment as shown.

1. Precast safety end treatment is used as a Contractor's alternate to mixing TP riprap not be required unless noted otherwise on the plans.

2. Synthetic fibers listed in the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

3. Pipe runners are designed for a traversing load of 10,000 Lbs at yield cast is that of the required size of pipe.

4. Reinforcing to a load 1" Min. (1")

5. Concrete stabilized bedding and backfill is specified around the safety end treatment, backfill as directed by Engineer.

6. Provide cement stabilized bedding and backfill in accordance with the Item 467, "Safety End Treatment".

7. When concrete riprap is specified around the safety and treatment, backfill as directed by Engineer.

8. Precast safety end treatment may be furnished; as long as the "D" dimension is required size of pipe.

9. At the option and expense of the Contractor the next larger size of pipe runners are designed for a traversing load of 10,000 Lbs at yield cast is that of the required size of pipe.


11. Provide pipe runners meeting the requirements of ASTM A53 (Type E or S, Grade B), ASTM A650 (Grade B) or API 5LX52.

12. Provide pipe runners meeting the requirements of ASTM A53 (Type E or S, Grade B), ASTM A650 (Grade B) or API 5LX52. Galvanize all steel components except reinforcing steel after fabrication. Thermoplastic pipe wall thickness may vary. Adjust accordingly. Thermoplastic pipe requires the safety and treatments to have a bell end for grouted connections.


14. Technical report (MRL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

15. Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.


17. Pipe runners are designed for a traversing load of 10,000 Lbs at yield as recommended by Research Report 260-27, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

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