

## 10. Tunnels or Casing Pipes.

### a. Requirements.

- 1) When crossing MSHA roadways, any county roadway or railroad in which the jurisdictional agency requires the pipeline to be in a tunnel or casing pipe, the following is required:
  - a) Tunnels or casing pipes are to be filled with grout, see Standard Detail M/17.0.
  - b) Design the sewer pipeline (class of carrier pipe) for the pipe depth, disregarding the tunnel or casing pipe, see Part Two, Section 3 (Selection of Pipe Material - Gravity Sewers).
  - c) Do not use PVC pipe AWWA C900 or C905 in tunnels or casing pipes.
  - d) Provide minimum five (5) feet between end of tunnel and OD of a manhole.
  - e) For the diameter of the tunnel or casing pipe and additional details, see Standard Detail M/17.0.
  - f) For requirements on depth of tunnel or casing pipe and detailed design requirements, see Part Three, Section 25 (Tunnels) and Section 26 (Tunnel Design Criteria).
- 2) For Force Main requirements, see Part One, Section 17 (Tunnels or Casing Pipes).

### b. Size of the Pipeline in the Tunnel or Casing Pipe.

- 1) Consider increasing the size of the sewer carrier pipe to one or more pipe sizes, to allow for a future increase in flows since the pipe will be grouted into the tunnel. Consult with WSSC regarding increasing the pipe size.

