

**SECTION 02607**  
**UTILITY LINE BORES**

**PART 1 - GENERAL**

**1.01 WORK INCLUDED**

- A. Provide encasement pipe jacked through bored tunnel for crossing of utility pipe lines under roadways where necessary.
- B. Pulling or jacking carrier pipe through encasement pipe.
- C. Providing brick closures at ends of encasement pipe.

**1.02 RELATED WORK**

- A. Section 02220 – Excavating, Backfilling, and Compacting For Sanitary Sewer Pipelines
- B. Section 02730 - Sanitary Sewer Pipelines

**1.03 REFERENCES**

- A. ASTM A139 Specification for Electric-Fusion (Arc) - Welded Steel Pipe (sizes 4” and over).
- B. ASTM A211 Specifications for Spiral-welded Steel or Iron Pipe.
- C. AWS D1.1 Structural Welding Code.
- D. AWWA C 202 (Grade B)
- E. Little Rock Wastewater Detail Drawings

## **PART 2 - PRODUCTS**

### **2.01 MATERIALS**

- A. Encasement pipe: Smooth wall steel pipe conforming to ASTM A139 (Grade B), ASTM A211, or AWWA C202 (Grade B), with ends prepared for welded joints.
- B. Welding materials: Type required for materials being welded and conforming to applicable AWS Specifications.
- C. Sand: Clean, industrial sand, concrete sand, masonry sand, or other type approved by Engineer.
- D. Skids chocks: Pressure treated wood shaped to fit outer circumference of carrier pipe and inner circumference of encasement pipe. Spacers: HDPE Model CSP by CCI Pipeline Systems or approved equal.
- E. Furnish stainless steel bands to secure skids or chocks to carrier pipe.
- F. Brick: New or used dry brick or concrete brick.
- G. Mortar: Type "M".

### **2.01 MINIMUM THICKNESS**

- A. Minimum thickness for encasement shall be as follows:

<u>Diameter of Casing Pipe</u>	<u>Minimum Thickness</u>
12" OR LESS	.2500"
OVER 12" – 18"	.3125"
OVER 18" – 22"	.3750"
OVER 22" – 28"	.4375"
OVER 28" – 34"	.5000"
OVER 34" – 42"	.5625"
OVER 42" – 48"	.6250"

## **PART 3 - EXECUTION**

### **3.01 EXCAVATION**

- A. Highway Bore: Do not set up equipment or begin excavating pit on state highway without permission of Arkansas Highway and Transportation Department District Engineer or his authorized representative.
- B. Railroad Bore: Do not set up equipment or begin excavating pit on or near railroad property without permission of the respective railroad company.
- C. Railroad permits will be obtained by the Engineer of Record. Engineer of Record shall coordinate with Little Rock Wastewater on obtaining Right-of-way permit from Arkansas Highway and Transportation Department and shall conform to all requirements there in.

### **3.02 INSTALLATION, ENCASEMENT PIPE**

- A. General: Install encasement pipe at grade and alignment shown on Drawing. Allow for height of skids or chocks when establishing grade for gravity line encasement pipe. Refer to Standard Detail Sheet.
- B. Bores:
  - 1. Excavate pits and trenches required at each side of crossing to minimum width and length necessary for boring and jacking operation and carrier pipe installation.
  - 2. Carefully set timber or steel guide rails in pit to attain specified grade and alignment.
  - 3. Keep pit pumped free of standing water. Maintain pit bottom to provide stable base for rails and equipment and firm footing for workmen.
  - 4. Provide temporary sheeting and bracing as necessary to prevent earth slides.

5. Bore tunnel and simultaneously jack encasement pipe forward one section at a time. Connect sections by full penetration butt welding performed in accordance with AWS D1.1.
6. Remove excavated soil from boring operation as it enters pit and dispose of it offsite.

### **3.03 INSTALLATION, CARRIER PIPE**

- A. General: Joint pipe as specified in Section 02730 Sanitary Sewer Pipelines. Pull or jack carrier pipe through encasement pipe. Do not allow cables or jacks to be in direct contact with carrier pipe while pulling or jacking pipe. Use timber or padded steel member.

### **3.04 BACKFILL**

- A. Prior to backfill, seal ends of encasement pipe with brick and mortar and install vent as shown in Standard Detail Sheet.
- B. Use material excavated from pit.
- C. Backfill against ends of encasement pipe.
- D. Backfill pit and carrier pipe in same manner as specified in Section 02730 Sanitary Sewer Pipelines.

### **3.05 CLEANUP**

- A. Clean up ground surface around work area in same manner as specified for line work in Section 02220 - Excavation, Backfilling and Compacting.

**END OF SECTION 02607**