

GENERAL NOTES:

1. THE DESIGN ENGINEER SHALL DESIGN THE SEWER LINE PIPE CASING FOR THE FOLLOWING LOADING CONDITIONS AND APPLICABLE COMBINATIONS THEREOF:
 - A. COOPER'S E-80 RAILWAY LOADING OR AASHTO HS20 LOADING AS APPLICABLE.
 - B. EARTH LOADING WITH THE HEIGHT OF FILL ABOVE THE CASING AS SHOWN ON THE PLANS.
 - C. LOADS APPLIED DURING JACKING, INCLUDING AXIAL LOAD FROM JACKING.
 - D. ALL OTHER APPLICABLE LOADING CONDITIONS, INCLUDING LOADS APPLIED DURING TRANSPORTATION AND HANDLING.
2. MATERIALS
 - A. STEEL CASING PIPE

STEEL CASING PIPE SHALL BE NEW (OR USED IF APPROVED BY THE TOWN ENGINEER) AND SUITABLE FOR THE PURPOSE INTENDED AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 35,000 PSI. CASING SHALL MEET ASTM A-36, ASTM A-570, ASTM A-135, ASTM A-139, OR APPROVED EQUAL. PIPE SHALL BE COATED WITH COAL TAR EPOXY (15 MILS MIN.) IN ACCORDANCE WITH AWWA C-210. PIPE JOINTS SHALL BE WELDED IN ACCORDANCE WITH AWWA C-206. AFTER PIPE IS WELDED, COATING SHALL BE REPAIRED.
 - B. CEMENT MORTAR

CEMENT MORTAR SHALL CONSIST OF ONE (1) PART CEMENT TO TWO (2) PARTS CLEAN SAND WITH SUFFICIENT WATER TO MAKE A THICK, WORKABLE MIX.
 - C. PRESSURE GROUT MIX

GROUT SHALL BE COMPRISED OF 1 CUBIC FOOT OF CEMENT AND 3.5 CUBIC FEET OF CLEAN FINE SAND WITH SUFFICIENT WATER ADDED TO PROVIDE A FREE FLOWING THICK SLURRY. IF DESIRED TO MAINTAIN SOLIDS IN THE MIXTURE IN SUSPENSION, ONE CUBIC FOOT OF COMMERCIAL GRADE BENTONITE MAY BE ADDED TO EACH TWELVE TO FIFTEEN CUBIC FEET OF THE SLURRY.
 - D. CASING INSULATORS

USE CASING INSULATORS FOR ANY TYPE OF CARRIER PIPE. INSULATORS SHALL BE HIGH DENSITY POLYETHYLENE. INSULATORS SHALL FIT SNUG OVER THE CARRIER PIPE AND POSITION THE CARRIER PIPE APPROXIMATELY IN THE CENTER OF THE CASING PIPE TO PROVIDE ADEQUATE CLEARANCE BETWEEN THE CARRIER PIPE BELL AND THE CASING PIPE. INSULATORS SHALL BE MANUFACTURED BY "RECON" AND BE RACCI TYPE OR APPROVED EQUAL.
3. INSTALLATION
 - A. TOLERANCES
 - I) ALL BORES SHALL BE INSTALLED AT A GRADE NO LESS THAT THE MINIMUM INDICATED BY TAC, CHAPTER 317 FOR THE DESIRED PIPE SIZE.
 - II) ALL BORES SHALL MAINTAIN GRADE ENOUGH TO ENSURE DESIRED CLEARANCE DISTANCES BETWEEN EXISTING UTILITIES AND BORE.
 - B. EXCAVATION AND BACKFILL OF ACCESS PITS
 - I) BORE PITS MUST BE A MINIMUM OF FOUR FEET (4') FROM THE BACK OF CURB WHEN LOCATED FOR BORING UNDER ROADWAYS.
 - II) DO NOT ALLOW EXCAVATION OVER THE LIMITS OF THE BORE OR TUNNEL AS SPECIFIED. TRENCH WALLS OF ACCESS PITS ADJACENT TO THE BORE OR TUNNEL FACE SHALL BE TRULY VERTICAL. SHORE THE TRENCH WALLS AS NECESSARY TO PROTECT WORKMEN, THE PUBLIC, STRUCTURES, ROADWAYS, AND OTHER IMPROVEMENTS.
 - III) EXCAVATIONS WITHIN THE RIGHT-OF-WAY AND NOT UNDER SURFACING SHALL BE BACKFILLED AND CONSOLIDATED BY MECHANICAL METHODS AS SPECIFIED IN THESE STANDARDS FOR COMPACTION OF TRENCHES UNDER ROADWAYS. SURPLUS MATERIAL SHALL BE REMOVED FROM THE RIGHT-OF-WAY AND THE EXCAVATION FINISHED TO ORIGINAL GRADES. BACKFILL PITS IMMEDIATELY AFTER THE INSTALLATION OF THE CARRIER PIPE IS COMPLETED. IF CARRIER PIPE IS NOT INSTALLED IMMEDIATELY AFTER CASING PIPE INSTALLATION, THE RIGHT-OF-WAY OWNER MAY REQUIRE THE ACCESS PITS BE TEMPORARILY BACKFILLED UNTIL INSTALLATION OF CARRIER PIPE.

WHERE SEEDING OR SODDING IS DISTURBED BY EXCAVATION OR BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING AS SPECIFIED ELSEWHERE.

