

# WWW Notes

## GENERAL WASTEWATER REQUIREMENTS:

1. ALL SANITARY SEWER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE KUB'S STANDARD SEWER SYSTEM SPECIFICATIONS AND DETAILS.
2. LOCATION OF ALL EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION.
3. ALL PIPE SHALL BE INSTALLED IN THE PRESENCE OF THE OWNER.
4. UTILITIES SHALL BE INSTALLED AFTER GRADING HAS BEEN COMPLETED AND APPROVED BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING, CONCRETE DRIVEWAYS, ETC.
5. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
6. REQUIREMENTS FOR PROPER TRENCH AND BACKFILL OPERATIONS MUST MEET OR EXCEED CITY OF KNOXVILLE, KNOX COUNTY, AND TDOT STANDARDS.
7. AFTER COMPLETING EACH SECTION OF THE SEWER, ALL DEBRIS AND CONSTRUCTION MATERIALS SHALL BE REMOVED FROM THE WORK SITE AS WELL AS SMOOTHLY GRADING THE DISTURBED GROUND SURFACE ON THE PROJECT SITE.
8. THE CONTRACTOR SHALL OBTAIN PLASTIC WARNING TAPE FOR WASTEWATER MAINS AND BURY IT ONE FOOT ABOVE THE ENTIRE LENGTH OF EACH LATERAL. A  $\frac{3}{8}$  INCH DIAMETER STEEL REBAR SHALL BE DRIVEN INTO THE GROUND AT THE END OF EACH LATERAL AND PAINTED GREEN. THE BURIED END OF THE REBAR SHALL BE BENT TO FORM A HOOK.
9. SANITARY SEWER FLOW CONTROL (SECTION 02542 OF KUB STANDARDS AND SPECIFICATIONS) REQUIREMENTS ARE FULLY UNDERSTOOD AND IMPLEMENTED IN THE WASTEWATER PROJECT.
10. ANY FIELD CHANGES TO APPROVED PLANS MUST BE APPROVED BY THE APPROPRIATE KUB REPRESENTATIVE BEFORE CONSTRUCTION.
11. A COPY OF THE LATEST APPROVED SET OF UTILITY PLANS DESIGNATED BY THE KUB RED STAMP MUST BE PRESENT DURING ALL TIMES OF CONSTRUCTION OF THE APPROPRIATE UTILITIES.
12. SEWER SERVICE LATERALS SHALL BE CONNECTED TO CLEANOUT AS DEPICTED IN FIGURE 2-02532-B, SECTION 02542 OF KUB STANDARDS AND SPECIFICATIONS. SEWER SERVICE LATERALS SHALL NOT BE CONNECTED TO SERVICE RISERS OR LATERAL COMPONENTS OF CLEANOUT.

## KUB WASTEWATER CONSTRUCTION NOTES:

1. ROAD RIGHT-OF-WAYS SHALL BE GRADED AND SLOPED TO REQUIRED SPECIFICATIONS OR AS APPROVED BY KUB PRIOR TO STAKING AND INSTALLING WASTEWATER MAINS.
2. THE DEVELOPER'S AUTHORIZED REPRESENTATIVE SHALL STAKE THE PROPOSED WASTEWATER MAIN LAYOUTS, PROPERTY CORNERS, AND EASEMENT LOCATIONS, ETC., PRIOR TO CONSTRUCTION TO ALLOW AMPLE TIME FOR KUB'S INSPECTORS TO INSPECT THE LAYOUTS PRIOR TO CONSTRUCTION. KUB WILL DETERMINE IF STAKING MAY BE REQUIRED PRIOR TO APPROVAL OF PLANS.
3. CONSTRUCTION MATERIALS MUST MEET KUB SPECIFICATIONS. KUB REPRESENTATIVES MUST APPROVE MATERIALS SUBMITTALS PRIOR TO CONSTRUCTION.
4. WASTEWATER MAIN INSTALLATION MUST BE INSPECTED BY KUB. CONTACT KUB FIELD SERVICES AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION AT 558-2786. TRENCHES SHALL BE LEFT OPEN AND NOT BACKFILLED UNTIL INSPECTED BY KUB.
5. CONTACT KUB FIELD SERVICES AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION AT 558-2786 TO INSPECT FROM CLEANOUT TO STRUCTURE WHEN PROJECT IS LOCATED OUTSIDE OF CITY OF KNOXVILLE LIMITS.
6. CONTRACTOR MUST HAVE A VALID STATE OF TENNESSEE MUNICIPAL UTILITY LICENSE FOR CONSTRUCTION OF WASTEWATER MAINS.
7. AN A-LOCK OR Z-LOCK GASKET SHALL BE PROVIDED FOR EACH WASTEWATER MAIN OR LATERAL CONNECTING TO A NEW MANHOLE. EACH TAP TO AN EXISTING MANHOLE MUST BE MECHANICALLY CORED AND PROPERLY BOOTED.
8. THE CONTRACTOR MUST INSTALL LATERALS INSTALLED ACROSS STREETS BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING, CONCRETE DRIVEWAYS, ETC.
9. WATER STOPS SHALL BE INSTALLED IN SEWER LINE TRENCHES NO MORE THAN 500 FEET APART TO PREVENT WATER FROM DRAINING THROUGH THE GRAVEL BEDDING. THE STOPS SHALL CONSIST OF COMPACTED CLAY AT LEAST THREE (3) FEET THICK FROM THE BOTTOM OF THE TRENCH TO THE TOP OF THE TRENCH. THE STOPS SHALL BE CUT A MINIMUM DEPTH OF TWO (2) FEET INTO BOTH WALLS OF THE TRENCH. THE PREFERRED LOCATION OF A WATER STOP IS UPSTREAM OF EACH MANHOLE. ALL STREAM CROSSINGS SHALL INCLUDE WATER STOPS ON BOTH SIDES OF CROSSING.

## GRAVITY WASTEWATER REQUIREMENTS:

1. LASERS SHALL BE USED TO INSTALL ALL WASTEWATER LINES.
2. ALL REQUIREMENTS FOR INSTALLATION OF GRAVITY SEWER (PART 3 IN SECTION 02532 OF KUB STANDARDS AND SPECIFICATIONS) ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.
3. ALL REQUIREMENTS FOR SEWER LATERALS (PART 3 IN SECTION 02532 OF KUB STANDARDS AND SPECIFICATIONS) ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.
4. ALL REQUIREMENTS FOR TESTING OF GRAVITY SEWERS (PART 3 IN SECTION 02532 OF KUB STANDARDS AND SPECIFICATIONS) ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.
5. THE MINIMUM WASTEWATER LATERAL HAS A 6-INCH DIAMETER PVC (SDR 26) FROM THE MAIN TO THE PROPERTY LINE OR EDGE OF EASEMENT.
6. ALL SEWER LATERALS SHALL INCLUDE 6-INCH TEES OF THE SAME MATERIAL AS THE SEWER MAINS.
7. TWO WAY DIRECTIONAL CLEANOUT TEES WILL BE REQUIRED ON ALL LATERALS. CLEANOUTS SHOULD BE LOCATED AT THE PROPERTY LINE OR EASEMENT LINE IN MOST CASES AND SHALL BE SDR 35 MANUFACTURED BY PLASTIC TRENDS, INC.
8. ALL LATERALS AND CLEANOUTS SHALL HAVE CAPS WITH SCREWED PLUGS INSTALLED.
9. ALL SEWER APPURTENANCES ARE REQUIRED TO HAVE WATERTIGHT FITTINGS.
10. ALL REQUIREMENTS WITH FLEXIBLE COUPLINGS AND SADDLE TEES (PARTS 2.02 AND 2.03 IN SECTION 02532 OF KUB STANDARDS AND SPECIFICATIONS) ARE TO BE FULLY UNDERSTOOD AND IMPLEMENTED.

## SANITARY SEWER FLOW CONTROL (SECTION 02542 OF KUB STANDARDS AND SPECIFICATIONS)

**\*\*NOTE: ONLY INCLUDE NOTE THE FOLLOWING WHERE APPLICABLE**

**Manhole and Main Line Abandonment Procedures:**

- A. Cut all pipes on the outside of the manhole, and plug with brick and mortar.
- B. Brick and mortar all pipe openings inside the manhole including drop connections and laterals
- C. Remove the manhole ring, lid, and grade rings. Disposal of all manhole materials shall be at the discretion of the OWNER. Precast cones and risers shall also be removed if they are exposed.
- D. Manholes shall be fill with backfill material as specified in Section 02321, Unclassified Excavation and Backfilling for Utilities.
- E. Lines to be abandoned that enter an existing manhole to remain shall be cut on the outside of the manhole and the inlets shall be plugged with brick and mortar to ensure a watertight structure.
- F. Abandoned pipe 12 inches and larger shall be filled with flowable fill if not completely removed from the ground.
- G. Abandoned pipe underneath existing/proposed buildings shall be filled with flowable fill if not completely removed from the ground.