

GENERAL NOTES - SEWER

1. AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING WILL BE HELD AT THE DISTRICT OFFICE AND ATTENDED BY THE CONTRACTOR AND REPRESENTATIVES OF OTHER APPROVING AGENCIES. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE DISTRICT.
2. ALL MATERIALS, CONSTRUCTION, AND TESTS SHALL BE IN ACCORDANCE WITH THE DISTRICT REGULATIONS AND SPECIFICATIONS.
3. ALL WORK SHALL BE INSPECTED AND APPROVED BY PERSONNEL OF THE DISTRICT. THE CONTRACTOR SHALL NOTIFY THE DISTRICT'S ENGINEER (303-751-0741) AND THE DISTRICT'S INSPECTOR (303-986-3442) AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ALL WORK SHALL BE INSPECTED AND APPROVED BY DISTRICT PERSONNEL AND/OR DISTRICT REPRESENTATIVES.
4. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE DISTRICT.
5. SANITARY SEWER MAINS SHALL BE POLYVINYL CHLORIDE (PVC) MANUFACTURED IN ACCORDANCE WITH ASTM D-3034, SDR 35, AS MANUFACTURED BY CERTAINTEED, J-M MANUFACTURING, VINYL-TECH, ETI, INC, OR DISTRICT APPROVED EQUAL.
6. SEWER LINES SHALL BE INSTALLED TEN FEET WEST OF THE CENTERLINE OF THE STREET UNLESS OTHERWISE DESIGNATED ON THE PLANS. SEWER LINES SHALL BE TEN FEET FROM WATER MAINS EXCEPT WHEN CROSSING EACH OTHER. SEWER LINES WHICH CROSS LESS THAN 1.5 FEET VERTICALLY BELOW THE WATER LINE SHALL BE DUCTILE IRON PIPE AND EXTEND TEN (10) FEET ON EITHER SIDE OF THE WATER MAIN. THE JOINTS OF THE PIPE SHALL BE ENCASED IN SIX (6) INCHES OF CONCRETE.
7. ALL PIPES ARE MEASURED HORIZONTALLY FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
8. AT ALL POINTS OF CONNECTION OF SANITARY SEWER MAINS TO EXISTING MAINS, THE CONTRACTOR WILL BE RESPONSIBLE FOR EXCAVATING AND VERIFYING LOCATION OF THE EXISTING LINES PRIOR TO THE INSTALLATION OF ANY NEW CONSTRUCTION. IF IT IS NECESSARY TO SHUT DOWN ANY PORTIONS OF THE EXISTING SYSTEM TO MAKE SUCH A CONNECTION, THE CONTRACTOR SHALL NOTIFY THE DISTRICT AT LEAST 48 HOURS PRIOR TO SUCH OUTAGE. IF TYING INTO AN EXISTING MANHOLE THE NEAREST PROPOSED MANHOLE TO THE POINT OF TIE IN SHALL BE PLUGGED WITH A PLUMBERS PLUG ON THE OUTLET SIDE BY THE CONTRACTOR. THE PLUG SHALL REMAIN IN PLACE UNTIL ACCEPTANCE BY THE DISTRICT. ITS PURPOSE IS TO PREVENT ANY MUD, WATER, OR OTHER MATERIALS FROM ENTERING THE EXISTING LINE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PUMPING AND CLEANING THESE MANHOLES AND REMOVING THE PLUG WHEN INSTRUCTED BY THE DISTRICT. IF TYING INTO AN EXISTING LINE WITH A NEW MANHOLE THE EXISTING PIPE AT THE POINT OF CONNECTION SHALL NOT BE BROKEN OUT UNTIL DIRECTED TO DO SO BY THE DISTRICT.

9. ALL MANHOLES SHALL BE 48 INCHES IN DIAMETER WITH 24 INCH RING AND COVER AND ECCENTRIC CONE UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL TAKE CARE TO PROPERLY SHAPE ALL MANHOLE INVERTS AND BENCHES TO PROMOTE SMOOTH FLOW THROUGH THE MANHOLE. MANHOLE INVERTS SHALL BE CONSTRUCTED WITH A SMOOTH TROWEL FINISH, AND BENCHES FINISHED WITH A LIGHT BROOM, NON-SKID FINISH.
10. TEES ARE REQUIRED AT ALL SERVICE TO MAIN CONNECTIONS. SEWER TEES SHALL BE STAKED BY A SURVEY CREW AND FURNISHED AND INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER "AS CONSTRUCTED" LOCATION OF THE TEES. SERVICE LINES SHALL BE STUBBED TEN FEET BEYOND THE RIGHT-OF-WAY AND PLUGGED. STATIONS ON SEWER SERVICES ARE UPSTREAM FROM THE NEAREST MANHOLE.
11. ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
12. ALL REINFORCING STEEL SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF ASTM A-15, INTERMEDIATE GRADE.
13. ALL BACKFILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY. COMPACTION TEST REPORTS MUST BE SUBMITTED TO THE DISTRICT PRIOR TO PROBATIONARY ACCEPTANCE.
14. THE BEDDING MATERIAL SHALL BE CLEAN WELL GRADED SQUEEGEE SAND AND SHALL CONFORM TO THE FOLLOWING LIMITS WHEN TESTED BY MEANS OF LABORATORY SIEVES:

| <u>SIEVE SIZE</u> | <u>TOTAL PERCENT PASSING BY WEIGHT</u> |
|-------------------|--|
| 3/8 INCH | 100 |
| NO. 200 | 0 – 5 |
15. ALL SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE DISTRICT'S STANDARDS PRIOR TO ACCEPTANCE OR ANY CONNECTION TO AN EXISTING SEWER LINE.
16. SEWER RIM ELEVATIONS ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. THE PIPELINE CONTRACTOR SHALL BRICK UP TO A MINIMUM OF TWO AND A MAXIMUM OF FOUR ROWS AS REQUIRED TO ALLOW FOR LATER ADJUSTMENT TO MATCH FINAL PAVEMENT ELEVATIONS. CONCRETE RINGS MAY ALSO BE USED WHERE APPROVED BY THE DISTRICT.

17. THE DISTRICT REQUIRES THAT A SET OF RECORD DRAWINGS BE SUBMITTED BY THE CONTRACTOR TO THE DESIGN ENGINEER. THE DESIGN ENGINEER WILL SUPPLY A REPRODUCIBLE SET OF THE RECORD DRAWINGS AS WELL AS A DISK COPY IN AUTOCAD 2000 OR HIGHER FORMAT TO THE DISTRICT'S ENGINEER PRIOR TO PROBATIONARY ACCEPTANCE OF THE UTILITIES BY THE DISTRICT. ALL UTILITIES ENCOUNTERED IN THE FIELD MUST BE PROPERLY STATIONED AND ACCURATELY SHOWN ON THE PLANS BY THE DESIGN ENGINEER. ALL MANHOLES, VALVES, FIRE HYDRANTS, BLOW-OFFS, AND ANY OTHER SURFACE FEATURES SHALL BE SURVEYED IN AND ALL COORDINATES FOR THESE ITEMS MUST BE SHOWN ON THE AS-BUILT PLANS SUBMITTED TO THE DISTRICT PRIOR TO RECEIVING PROJECT APPROVAL. THE COORDINATES FOR THESE ITEMS MUST BE TIED TO A SECTION CORNER WITH A BASIS OF BEARING PROVIDED. ALL ORIGINAL DESIGN INFORMATION MUST BE SHOWN ON THE AS-BUILT PLANS AND CROSSED OUT IF INACCURATE. A STATEMENT MUST BE ON THE COVER SHEET OF THE AS-BUILTS ATTESTING TO WHO PROVIDED THE AS-BUILT INFORMATION AND WHO PREPARED THE AS-BUILT WITH A SIGNATURE OF THE PREPARER AND DATE.