

GENERAL NOTES – WATER

1. ALL MATERIALS AND WORKMANSHIP SHALL ALSO BE IN CONFORMANCE WITH DISTRICT STANDARDS AND SPECIFICATIONS. ALL MAIN INSTALLATIONS/SYSTEM MODIFICATIONS SHALL BE APPROVED AND INSPECT BY THE DISTRICT AS WELL.
2. PIPE JOINTS SHALL BE MADE USING AN INTEGRAL BELL WITH ELASTOMERIC GASKET PUSH ON TYPE JOINT. SOLVENT CEMENT JOINTS ARE STRICTLY PROHIBITED.

THE DISTRICT ONLY PERMITS THE FOLLOWING MECHANICAL JOINT RESTRAINT DEVICES:

- FOR DIP: MEGALUG 1100 SERIES
- FOR PVC: MEGALUG 2000 PV SERIES

THE DISTRICT ONLY PERMITS THE FOLLOWING JOINT RESTRAINT DEVICES:

- FOR DIP: MEGALUG 1700 SERIES
- FOR PVC: MEGALUG 1500 SERIES

FIRE HYDRANT ASSEMBLIES SHALL INCLUDE ALL PIPE, FITTINGS, VALVES, MATERIALS AND LABOR NECESSARY TO INSTALL THE HYDRANT COMPLETE IN PLACE. ALL VALVE BOXES, FIRE HYDRANTS AND RIMS SHALL BE ADJUSTED TO FINAL GRADE PRIOR TO ACCEPTANCE OF THE WATER DISTRIBUTION MAIN BY THE DISTRICT. THE DISTRICT ONLY PERMITS THE FOLLOWING FIRE HYDRANTS:

- WATEROUS WB-67-250

3. ALL WATER PIPE SHALL HAVE 12 GAUGE, SINGLE STRAND COPPER TRACER WIRE SECURED TO THE TOP OF PIPE WITH 2-INCH WIDE PVC TAPE. SPLICING OF TRACER WIRE SHALL BE PER MANUFACTURER'S RECOMMENDATION. TRACER WIRE SHALL RUN TO TEST STATIONS INSTALLED IN A VALVE BOX NEXT TO EACH FIRE HYDRANT.
4. ALL DEVIATIONS FROM APPROVED PLAN REQUIRE APPROVAL FROM THE DISTRICT, INCLUDING MINIMUM COVER, ALIGNMENT AND MATERIAL.
5. ANY CHANGES IN ALIGNMNET AND GRADE SHALL BE AUTHORIZED BY THE DISTRICT AND SHALL BE ACCOMPLISHED BY THE INSTALLATION OF ADDITIONAL FITTINGS. THE DEFLECTION OF JOINTS IS PERMITTED ONLY WHEN INSTALLING PIPE ON HORIZONTAL OR VERTICAL CURVES, AT PIPE MANUFACTURES RECOMMENDATIONS.
6. VALVE BOXES SHALL NOT BE SET IN CONCRETE CURB AND GUTTER PANS AND SHALL BE SET AT AN ELEVATION IN ACCORDANCE WITH CITY/COUTNY PAVING REQUIREMENTS.
7. ALL BENDS, TEES, FIRE HYDRANTS, BLOWOFFS AND PLUGS SHALL BE PROTECTED FROM THRUST BY USING CONCRETE THRUST BLOCKS BASED ON 1500 PSF MAXIMUM ALLOWABLE SOIL PRESSURE, THUS REQUIRING THRUST BLOCKS TO BE DOUBLE THE SIZE INDICATED IN THE DW STANDARD DETAIL. ALL

BENDS, TEES, FIRE HYDRANT LATERALS, BLOWOFFS, PLUGS AND IN-LINE VALVES SHALL ALSO BE MECHANICALLY RESTRAINED USING EITHER MEGA-LUGS OR RODDING. THE DISTRICT REQUIRES TEES BE INSTALLED IN LIEU OF 90 DEGREE BENDS.

8. ALL WATER LINE VALVES SHALL BE SET WITHIN **FIVE (5) FEET** OF FITTINGS AND SERVICE VALVES ARE TO BE LOCATED ON PROPERTY LINE EXTENSIONS EXCEPT FOR TAPPING TEES, IN WHICH CASE AN ADDITIONAL VALVE SHALL BE PLACED ON THE TAPPING TEE. VALVE BOXES SHALL **NOT** BE SET IN CONCRETE CURB AND GUTTER PANS AND SHALL BE SET AT AN ELEVATION IN ACCORDANCE WITH COUNTY OR CITY OF LAKEWOOD PAVING REQUIREMENTS (CURRENTLY ½-INCH BELOW FINISHED GRADE). ALL VALVE BOXES, FIRE HYDRANTS, AND RIMS SHALL BE ADJUSTED TO FINAL GRADE BY THE CONTRACTOR PRIOR TO ACCEPTANCE OF THE WATER MAIN BY THE DISTRICT.
9. THE DISTRICT REQUIRES A MINIMUM 18-INCHES CLEARANCE BE MAINTAINED VERTICALLY BETWEEN OUTSIDE OF PIPES AT ALL UTILITY CROSSINGS.
10. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE APPROVED PLANS BY THE DISTRICT.
11. ONLY ONE POINT OF CONNECTION WILL BE ALLOWED UNTIL THE TESTING OF THE NEW INSTALLATIONS IS COMPLETE. ALL WATER MAINS SHALL BE CHLORINATED AND FLUSHED IN ACCORDANCE WITH AWWA C651, "DISINFECTING WATER MAINS". CHLORINE SLURRY IS REQUIRED FOR ALL WATER PIPE DISINFECTION. USE OF CHLORINE TABLETS IS PROHIBITED. CHLORINATION OF ANY PIPELINE SHALL BE DONE PRIOR TO HYDROSTATIC TESTING.
12. ALL WATER MAINS SHALL BE TESTED IN ACCORDANCE WITH AWWA C-600 SECTION 4 "HYDROSTATIC TESTING". THE DISTRICT REQUIRES A HYDROSTATIC TEST PRESSURE OF 150 PSI OR DOUBLE THE OPERATING PRESSURE, WHICHEVER IS GREATER. ALL TESTING SHALL BE DONE IN THE PRESENCE OF A DISTRICT INSPECTOR. ALLOWABLE LEAKAGE FOR EACH SECTION OF PIPE BETWEEN LINE VALVES SHALL NOT EXCEED THE LEAKAGE RATE SET FORTH.

PIPE SIZE INSIDE DIAMETER	ALLOWABLE LEAKAGE PER 1000 FEET GALLONS PER HOUR	
	<u>DIP</u>	<u>PVC</u>
6"	0.55	0.50
8"	0.74	0.66
12"	1.10	1.00

13. NO ADDITION TO DW NOTE.
14. THE DISTRICT REQUIRES THE CONTRACTOR TO NOTIFY ALL CUSTOMERS POSSIBLY AFFECTED BY OUTAGE OF WATER AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ALSO CONTACT THE DISTRICT'S INSPECTOR AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.