

L. TESTING:

1. Pressure: All newly laid pipe or any valved section thereof shall be subject to a hydrostatic pressure of 150-200 psi (approximately 150% maximum operating pressure) for a period of one hour. This pressure test will be made by the contractor and supervised by Columbia Water and Light personnel.

2. Connection to Existing Mains:

Taps: It will be the contractor's responsibility to acquire utility locates, excavate the water main and install the tapping sleeve and valve on the water main. The valve shall be located a minimum of 36 inches from the nearest bell or fitting. The contractor will also contact the Water & Light Inspector to let him know that work has started. For a fee established by City Ordinance, the Water Department will pressure test the valve and cut the coupon on the existing water main. Once the Water Department is finished, the contractor may begin to construct the water main out of the tapping valve.

Dead Ends: It will be the contractor's responsibility to acquire utility locates and excavate the water main. The contractor will also contact the Water and Light Inspector to let him know that work has started. The contractor will be responsible for tying into the existing dead end per the plans. This work shall take place only under direct supervision of the Water & Light Inspector.

All materials used to tie into existing mains must be disinfected in accordance with the most recent revision of AWWA Standard C651.

3. Operation of Existing Pressurized Valves: All valves under pressure in the mains supplied by the Columbia Water and Light Department shall be operated only by employees of the Water and Light Department except in cases of extreme emergency. All valves installed as a part of new construction shall be left fully closed by the contractor.
4. Leakage: After satisfactory completion of the aforesaid pressure test, a leakage test shall be run. Leakage tests shall be maintained for a period of at least 18 hours under a pressure of 100 psi. All lines shall meet the

AWWA leakage standards as shown on the following chart and said chart is hereby made a part of these specifications.

ALLOWABLE LEAKAGE FOR DI PIPE						
Hydrostatic testing allowance per 1000 feet of pipeline - gph						

Average Test Pressure psi	Nominal Pipe Diameter, inches					
psi	6	8	12	16	20	24
100	0.45	0.60	0.90	1.20	1.50	1.80
125	0.50	0.67	1.01	1.34	1.68	2.01
150	0.55	0.74	1.10	1.47	1.84	2.21
175	0.59	0.80	1.19	1.59	1.98	2.38
200	0.64	0.85	1.28	1.70	2.12	2.55
225	0.68	0.90	1.35	1.80	2.25	2.70
250	0.71	0.95	1.42	1.90	2.37	2.85

ALLOWABLE LEAKAGE FOR PVC PIPE						
Allowable leakage per 50 joints of PVC pipe - gph						

Average Test Pressure psi	Nominal Pipe Diameter, inches					
psi	6	8	12	16	20	24
100	0.41	0.54	0.81	1.08	1.35	1.62
125	0.45	0.60	0.91	1.21	1.51	1.81
150	0.50	0.66	0.99	1.32	1.66	1.99
175	0.54	0.72	1.07	1.43	1.79	2.15
200	0.57	0.76	1.15	1.53	1.91	2.29
225	0.61	0.81	1.22	1.62	2.03	2.43
250	0.64	0.85	1.28	1.71	2.14	2.56

5. Warranty: It shall be the responsibility of the owner or City's (whichever is applicable) contractor to maintain the main and the associated trench and construction area for one year after the acceptance of the main by the City. This responsibility shall not be limited to just faulty materials and workmanship but shall also include damage by other parties such as contractors and utilities. Damage to be within the scope of this responsibility include but is not limited to the cutting of the main by other utilities, theft of valve boxes and lids, over paving of valve boxes, misalignment of valve boxes and flush outs by construction traffic, crushing or misalignment of the main, valves and flushes by construction traffic, settling of the trench, and failure of the seeded and mulched or sodded areas to grow.