2.100 GENERAL

Water facilities shall be designed in accordance with accepted engineering principles and shall conform to these Design Standards.

All materials shall conform to current American Water Works Association Standards.

All installations shall conform to the City of Morgan Hill Standard Details for Construction.

The latest edition of the California State Department of Health Services "Criteria for the Separation of Water Mains and Sanitary Sewers" shall take precedence in horizontal and vertical alignment issues.

2.200 VERTICAL ALIGNMENT

The minimum cover on water mains shall be 36 inches. When crossing a sanitary sewer it is desirable that the water main be installed above the sanitary sewer with a clearance of 12 inches.

2.300 HORIZONTAL ALIGNMENT

Water mains shall be installed within street rights-of-way unless an easement installation is specifically approved by the City Engineer. Alignment shall be parallel to the street centerline wherever possible.

The alignment may vary, but in no case shall there be less than 10 feet horizontal clearance to a sanitary sewer, or 6 feet horizontal clearance to a storm drain.

2.400 PIPE

Water mains shall be sized according to the City's Master Water Plan and Grid system. For waterlines other than the 10 inch or 8 inch grid, a 6 inch size line may be used if looped.

All pipe shall be Ductile Iron Pipe Class 50. Cast iron pipe or mechanical joint cast iron pipe may be used with specific approval of the City Engineer.

2.500 WATER SERVICE

The minimum size service is 1 inch.

2.600 FIRE HYDRANTS

All fire hydrants must be supplied from the largest available main; minimum 8 inch.

Fire hydrant spacing and distribution shall be determined as follows:

1. The maximum hose lay shall be 150 feet in high density residential, commercial, industrial zoning or high-value districts, with a maximum fire hydrant spacing of 250 feet.

2. The maximum hose lay shall be 250 feet in residential areas with a maximum fire hydrant spacing of 500 feet.

3. On divided streets, planned divided streets or state highway, the above spacing shall apply to both sides of the street.

4. A fire hydrant shall be located within 200 feet of the radius point of all cul-de-sacs.

5. Distribution main, fire hydrant and fire flow requirements shall also conform to the recommended standards of Insurance Services Office and National Fire Code.

6. On-site hydrants may also be required in conformance with ISO-NFC.

Fire flow and fire hydrant distribution, including the number of hydrants required and specific locations, shall be approved by the City Engineer and the Fire Chief.

2.700 VALVES

Valves shall be spaced and located in conformance with the following criteria:

1. 500-foot maximum spacing.

2. Water mains shall be valved on each side of railroad, freeway and canal right-of-way crossings

3. At “tees”, 3 valves will be required.

4. At “crosses”, 4 valves will be required.

5. At locations so that future tie-ins will not interrupt service and provide isolation and pressure testing of new systems.

2.800 DEAD-END RUNS

Permanent dead-end runs shall be no longer than 600 feet unless specifically approved by the city Engineer. Eight inch mains shall be used on dead-end runs which serve fire hydrants. Reasonable looping of water mains will be required.

2.900 BLOW OFFS

Blow-offs shall be constructed at the end of all dead-end runs.

2.1000 AIR RELIEF VALVES

Air relief valves shall be installed at high points.

2.1100 THRUST BLOCKS

Thrust blocks shall be installed in conformance with the City of Morgan Hill Standard Details for Construction.

2.1200 WATER LINE ACCEPTANCE TEST

Water lines shall be pressure tested, disinfected, flushed, and tested for bacteria in conformance with the City of Morgan Hill Standard Details for Construction prior to final acceptance by the City.