


1. *The City of Ripon Water Master Plan is in effect and any design deviation from this plan shall be submitted in writing to the City Engineer for approval.*
2. *Water line design and construction shall conform to California Administration Code Title 22, "California Water Works Standard" and the requirements of the California Health Department.*
3. *Water line sizing and routing, in new development not covered by the water master plan, shall be determined by the City Engineer.*
4. *Water lines in cul-de-sacs shall be of the following sizes:*
  - a. *4 inch minimum when serving residences that have fire protection from another line.*
  - b. *6 inch minimum when used in a looped system that also supplies fire protection.*
  - c. *8 inch minimum up to the fire hydrant tee on dead end lines.*
5. *Water lines shall have a minimum of 30 inches and a maximum of 36 inches of cover to finished grade.*
6. *Minimum separation requirements for water mains from sanitary sewer and storm drain lines shall be as follows:*
  - a. *The parallel horizontal separation between water mains and sanitary sewers and storm drains shall be at least ten feet.*
  - b. *Sanitary sewer and storm drain lines shall be constructed of ductile iron cement lined pipe for a distance of ten feet in each direction from the crossing of any water mains unless the water main is at least one (1) foot above the sanitary sewer or storm drain line.*
  - c. *At sanitary sewer or storm drain crossings, the water main shall be constructed so that the pipe joints of the water main will be located equal distances from the sewer or storm drain line.*
7. *Valve installation requirements shall be as followed:*
  - a. *Minimum of two (2) valves at tees.*
  - b. *Minimum of three (3) valves at crosses.*
  - c. *Transmission mains to residential areas shall have a maximum of 800 feet between valves.*
  - d. *Transmission mains to commercial areas shall have a maximum of 500 feet between valves.*
8. *Blow-offs or fire hydrants shall be installed at all dead end water mains.*
9. *Fire hydrant locations shall be approved by the City of Ripon and the Ripon Consolidated Fire District.*
10. *All water lines, valves, and other appurtenances shall conform to AWWA and th City of Ripon Standard Plans and Specifications.*
11. *Prior to construction, contractor shall make arrangements with the Public Works Department to shut off any City water valves.*
12. *Existing valves in water mains shall only be opened or closed by an authorized representative of City of Ripon.*
13. *All water meters will be provided and installed by the Developer and/or the Contractor.*
14. *All water services for residential lots shall be a minimum of one (1) inch in diameter.*
15. *A locating 'trace wire' is required on all non-metallic water service lines.*
16. *Backflow prevention devices may be required by the City Engineer. City Standards for backflow prevention are available in the public works department.*
17. *Connection of new mains to existing City mains will require 'Hot-Tap' connections, unless otherwise approved by the City Engineer. All 'Hot-Tapping' hardware shall be approved by the City Engineer.*

NO.	REVISED	BY	<b>Water Line Design Criteria</b>	APPROVED	
				CITY ENGINEER RCE-28191	
DRAWN BY: MATT				DATE: 2-2-99	
CHECKED BY: DJR			<b>CITY OF RIPON</b>	STANDARD NO.	<b>W-3</b>
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