

ORDINANCE NO. 2627

AN ORDINANCE CLARIFYING THE STANDARDS ESTABLISHED IN ORDINANCE 2497 AND REQUIRED BY ORDINANCE 2506 ALLOWING, IN CERTAIN CIRCUMSTANCES, DEAD END LINES AND REQUIRING MINIMUM LINE SIZES

There are two primary purposes served by requiring minimum line sizes and standards concerning maximum distances of water lines that are not looped. The question of upgrading water lines in existing development, whether residential or commercial/industrial, should be considered in two different contexts: 1) whether the existing line will supply the required fire flow demand for the particular use or structure; and, 2) whether the line size is adequate so that it will be an integrated part of a larger distribution network.

In the first case, the distribution lines supplying a hydrant need to be sized to provide the required fire flows, as determined by the fire department based on applicable regulations and laws. A looped or redundant system would be preferable but not always be required due to excessive costs, depending on the length of the dead-end line. Based on an estimate of probability for line failure, the Public Works and Fire Departments have proposed that dead-end lines off a looped system supplying fire hydrants not exceed: one thousand (1000) feet in length if the line is six inches (6 in.) in diameter or larger; two hundred and fifty (250) feet in length if the line is six inches (6 in.) in diameter, in areas not zoned exclusively for one and/or two family dwellings. A six inch (6 in.) diameter line should be the minimum allowed under any circumstances. For any line, the line to the hydrant shall be upgraded if the required flow cannot be sustained through the existing line.

In the second case, where a new line is being installed for whatever reason, not only would required fire flow be part of the sizing criteria but minimum line sizes, as shown on the matrix below, be required to accommodate future expansion of the system. Only in cases where the Public Works Department determined that no further expansion of the system could take place would the requirements for a supply line be based on required flow in lieu of minimum lines sizes.

New lines, installed by a developer, may qualify for a cost share arrangement with the City or a reimbursement agreement under certain predetermined conditions and with the approval of the Public Works Director. Guidelines establishing criteria for cost sharing or reimbursement have not been formulated to date. The guidelines will be proposed to the Council once the minimum requirements proposed in this ordinance are effective.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION:

1. The following matrix is adopted. It shall be designated as a

part of Section 31-94 (2) (a).

Minimum Standards for Lines Supplying Fire Hydrants

	I	NEW DEVELOPMENT	I	EXISTING DEVELOPMENT
	I		I	
1 & 2 FAMILY DWELLINGS	I	6 IN. LOOP OR	I	6 IN. LOOP OR
	I	6 IN. DEAD-END	I	6 IN. DEAD-END
	I		I	
	I		I	
ALL OTHER STRUCTURES	I	8 IN. LOOP	I	6 IN. LOOP
	I	10 IN. DEAD-END	I	8 IN. DEAD-END
	I		I	

[Additional rules]:

Notes:

A. One thousand (1,000) feet is the maximum allowable length for dead-end lines supplying fire hydrants.

B. A hydrant will be deemed to be supplied by a looped system if the hydrant is supplied by a line that is less than two hundred fifty (250) feet from a looped supply line.

C. In all cases, adequate flows for each structure shall be maintained: not less than five hundred (500) gallons per minute at twenty (20) pounds per square inch residual pressure.

D. These standards shall apply whenever existing pipe or lines are changed or replaced, no matter the reason.

2. The following changes are hereby adopted and shall amend Section 31-94(2) of the City Code. These amendments replace the existing subsections 2(a) and 2(b) and amend, to the extent inconsistent, the first paragraph of section (2). These amendments set forth minimum standards which apply and read as follows:

(b) 1. EXISTING DEVELOPMENT. The following minimum standards shall apply throughout the City ("existing development"):

(A) In areas zoned exclusively for one and two family dwellings, or where the density is greater than one (1) unit per two (2) acres, and which are in the 201 Persigo Planning area:

(i) Hydrant spacing.

a. Hydrants shall be placed in the public right-of-way and shall not be spaced more than five hundred (500) feet from each other.

b. In no case shall there be more than two hundred fifty (250) feet from any hydrant to any property frontage.

(ii) Hydrant flow.

a. Hydrants shall provide at least five hundred (500) gallons per minute at twenty (20) pounds per square inch residual pressure.

(iii) Hydrant supply.

a. The line supplying the hydrant must be at least six inches (6 in.) in diameter.

b. The line supplying the hydrant may not exceed one thousand (1,000) feet in length from the looped supply system to the hydrant.

(B) In all other zones within the Persigo Planning area:

(i) Hydrant spacing.

a. Hydrants shall be placed in the public right-of-way and shall not be spaced more than three hundred (300) feet from each other.

b. In no case shall there be more than one hundred fifty (150) feet from any hydrant to any property frontage.

(ii) Hydrant flow.

a. Hydrants shall provide at least five hundred (500) gallons per minute at twenty (20) pounds per square inch residual pressure.

b. Hydrants shall provide at least the minimum amount of water required to protect the properties within its respective area, in accordance with the 1984 ISO Guide.

(iii) Hydrant supply.

a. The line supplying the hydrant must be at least six inches (6 in.) in diameter.

b. The line supplying the hydrant may not exceed two hundred fifty (250) feet in length from the looped supply system to the hydrant.

(1) A hydrant supply line may be increased in length provided:

(a) it does not exceed one thousand (1,000) feet in length; and

(b) it is at least eight inches (8 in.) in diameter.

2. NEW DEVELOPMENT. When there is a change of use, occupancy, or need for any other city approval, pursuant to any provision of the Zoning Development Code, such as but not limited to a special use permit, a conditional use permit, or any other approval pursuant to Chapter 32 of the City Code and there is no existing water line which is at least 6 in. or larger providing service to the affected property ("new development"), the following minimum standards shall apply:

(A) In areas zoned exclusively for one and/or two family dwellings, or with a density greater than one (1) unit per two (2) acres, and situated within the 201 Persigo Planning area:

(i) Hydrant spacing.

a. Hydrants shall be placed in the public right-of-way and shall not be spaced more than five hundred (500) feet from each other.

b. In no case shall there be more than two hundred fifty (250) feet from any hydrant to any property frontage.

(ii) Hydrant flow.

a. Hydrants shall provide at least five hundred (500) gallons per minute at twenty (20) pounds per square inch residual pressure.

(iii) Hydrant supply.

a. The line supplying the hydrant shall be at least six (6) inches in diameter.

b. The line supplying the hydrant shall not exceed one thousand (1000) feet in length from the looped supply system to the hydrant.

(B) In all other zones lying within the 201 Persigo Planning area:

(i) Hydrant spacing.

a. Hydrants shall be placed in the public right-of-way and shall not be spaced more than three hundred (300) feet from each other.

b. In no case shall there be more than one hundred fifty (150) feet from any hydrant to any property frontage.

(ii) Hydrant flow.

a. Hydrants shall provide at least five hundred (500) gallons-per-minute at twenty (20) pounds per-square-inch residual pressure.

b. Hydrants shall provide at least the minimum amount of water required to protect the properties within its respective area, in accordance with the December 1984 "Guide for the Determination of Required Fire Flow," published by the Insurance Services Office, 16 Water Street, New York, New York, ("1984 ISO Guide"), which 1984 ISO Guide is hereby adopted and incorporated herein by this reference. One copy shall be kept in the office of the City Clerk for public reference.

(iii) Hydrant supply.

a. The line supplying the hydrant must be at least eight inches (8 in.) in diameter.

b. The line supplying the hydrant may not exceed two hundred fifty (250) feet in length from the looped supply system to the hydrant.

(1) A hydrant supply line may be increased provided:

(i) it does not exceed one thousand (1,000) feet in length; and

(ii) it is at least ten inches (10 in.) in diameter.

(C) The City Manager, or his designee, shall promulgate such regulations as may be necessary to implement the intent and provisions of this Ordinance.

(4) A line or pipe larger than as described in this section 31-94 may be required based on the standards adopted herein and otherwise applicable to water providers in the City.

(5) To the extent permitted by law, the provisions of this ordinance shall apply to areas outside of existing City limits. To the extent that applicable law does not permit such extra-territorial application, the provisions of this ordinance shall be limited to the limits of the City of Grand Junction.

(6) Any conflicting provisions in Ordinance No. 2512 are hereby amended. The provisions of this ordinance shall supersede any provisions of Ordinance No. 2512 and any provisions of the adopted Uniform Fire Code.

Introduced this 2nd day of December, 1992.

Passed and adopted this 6th day of January, 1993.

William E. McCurry

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President of the City Council Pro Tem

ATTEST:

Sandra Glaze

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Acting City Clerk

I HEREBY CERTIFY that the foregoing ordinance, being Ordinance No. 2627, was introduced, read, and ordered published by the City Council of the City of Grand Junction, Colorado, at a regular meeting of said body held on the 2nd day of December, 1992, and that the same was published in The Daily Sentinel, a newspaper published and in general circulation in said City, at least ten days before its final passage.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of said City this 7th day of January, 1993.

Sandra Glaze

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Sandra Glaze  
Acting City Clerk

Published: December 11, 1992

Published: January 8, 1993

Effective: February 7, 1993