

ARTICLE 25. WATER MAIN AND FIRE HYDRANT REGULATIONS

Section 25-1: Water Line Sizing

All major water transmission lines (6" and above) shall be sized in accordance with this Ordinance of the Town of Lillington. In residential areas, mains shall be a minimum of 6" in diameter. Eight-inch lines shall be used when the minimum flow requirements cannot be met. Preliminary plans for water lines and hydrants shall be submitted to the Zoning Administrator for proper line sizing. The total maximum length of a 6-inch water line, without connecting to a larger main, is 600 feet. The total maximum length of an 8-inch water line, without connecting to a larger main, is 1,000 feet. Six-inch water mains are permitted on residential cul-de-sacs less than 400 feet long where water lines are not looped.

Section 25-2: Fire Hydrants

- (A) ***Location and Spacing for Residential Districts.*** All fire hydrants shall be installed on a minimum 6-inch water line. Only one fire hydrant may be installed on a dead end 6-inch line. There shall be at least one fire hydrant at each street intersection. The maximum distance between fire hydrants, measured along street centerlines, shall be 500 feet, except when residential intersections are not more than 700 feet apart; no hydrant is required between the intersections.
- (B) ***Location and Spacing for Other Districts.*** In all other districts, the maximum distance between fire hydrants, measured along street centerline, shall be 300 feet except when business, office and institutional areas are not more than 450 feet apart, no fire hydrant is required between intersections. On major thoroughfares and collector streets with access points only at street intersections, hydrants shall be located at each street intersection and at 1,000 foot intervals along the street. Where these intersections are less than 1,200 feet apart, no hydrant is required between the intersections. Fire hydrants shall be placed in a staggered arrangement on both sides of any roadway classified as a major or minor thoroughfare with the hydrant spacing as stated above.
- (C) ***Minimum Flows.*** The minimum acceptable flow is 1,000 gallons per minute in residential areas, and 1,500 gallons per minute in other districts. These flows will be computed at 20 psi residual.
- (D) ***Square Footage and Sprinkler Requirements.*** When new buildings are constructed or existing buildings expanded and contain 10,000 total square feet of

floor space (all floors of all buildings, new and existing, added together), hydrants shall be installed at 300 foot intervals along all sides of the building that are accessible to Fire Department pumpers. These hydrants shall be within a minimum of twenty (20) feet and a maximum of forty (40) feet away from the building. Existing hydrants along streets can be counted in the 10,000 square foot requirements.

Where sprinkler systems are used, a fire department connection shall be provided on the building. The fire department connections shall be located within fifty (50) feet of a fire hydrant. There shall be no obstruction or fencing between the fire department connection and its closest hydrant. Where sprinkler systems or a riser room are required, outside access in accordance with the North Carolina State Building Code shall be provided. Backflow prevention for sprinkler systems shall be as specified in NC Building Code or as directed by the Harnett County Fire Marshal.

- (E) **Hydrant Specifications.** Hydrants shall be manufactured by AVK or Clow and conform to the AWWA C502 with a minimum valve opening of 4-1/2 inches. Hydrants shall be furnished with a 4-1/2 inch steamer and double 2-1/2 inch hose connections with caps and chains, National Standard Threads, mechanical joint, 1-1/2 inch pentagonal operating nut, open left, painted fire hydrant red, bronze-to-bronze seating, a minimum 3-V₂ foot bury depth with a breakaway ground line flange and breakaway rod coupling.

The hydrant bonnet will be designed with a sealed oil or grease reservoir with O-ring seals and Teflon thrust bearing as furnished by AVK or Clow. Fire hydrant caps shall be attached to the body of the fire hydrant with a minimum 2/0 twist link, heavy duty, non-kinking machine chain.

- (F) **Installation.** Hydrants shall be set plumb with a finish grade, which shall measure 18" from ground to center of the steamer cap. Hydrants shall be properly located on the right side of the road with the pumper nozzle facing the closest curb. The back of the hydrant opposite the pipe connection shall be firmly blocked against the vertical face of the trench with 1/3 cubic yard of concrete. Double bridle rods and collars shall be connected from the tee to the hydrant. Rods shall not be less than 5/8 inch diameter stock and coated with bituminous paint. A minimum of eight (8) cubic feet of stone shall be placed around the drains. The backfill around the hydrants shall be thoroughly compacted. Hydrant installation shall be in accordance with the Ordinances of the Town or as directed

by the Public Works Director. All hydrants will have individual controlling valves located no more than fifteen (15) feet from the hydrant.

- (G) ***Plans Approval and Requirements.*** Preliminary water main and hydrant plans shall be submitted with the Zoning Application to the Zoning Administrator. These plans shall be inspected and approved by the Fire Chief, the Public Works Director, and Town Zoning Administrator before review by the Planning Board or any work is done on the project. Appeals to this regulation shall be in accordance with Section 20-1 of this Ordinance.