

TABLE OF CONTENTS

9-0100 PUBLIC WATER SUPPLY3
 9-0101 General Requirements3
 9-0102 Public Water Supply Agency Data.....4
 9-0103 Fire Hydrants8

9-0200 FIRE MARSHAL REQUIREMENTS10
 9-0201 General Data.....10
 9-0202 Construction Requirements11

LIST OF TABLES

Table 9.1 Fire Hydrant Maximum Coverage Distance.....12
 Table 9.2 Fire Flow.....13
 Table 9.3 Fire Flow Coefficient.....14
 Table 9.4 Maximum Fire Flow14
 Table 9.5 Exposure Surcharges15
 Table 9.6 Occupancy Reductions15

LIST OF PLATES

Standard Designation	Plate No.	Description	Section
FH-1	1-9	Location of Fire Hydrants	9-0202 0103
FH-2	2-9	Standard Fire Hydrant Island Parking Area	9-0202 0103
FH-3	3-9	Standard Fire Hydrant Island Parking Areas	9-0202 0103
FH-4	4-9	Standard Fire Hydrant Island Parking	9-0202 0103
FH-5	5-9	Fire Hydrant Protection in Area Where Island Cannot be Constructed	9-0202 0103
FH-7	6-9	Fire Lanes	9-0202

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9-0100 PUBLIC WATER SUPPLY

9-0101 General Requirements ~~(103-09-PFM)~~

9-0101.1 A public water supply approved by the appropriate agencies ~~shall~~ must be provided to serve subdivision lots of less than 75,000 square feet in size.

9-0101.2 All extensions of public water supply systems required by [§ 9-0100](#) *et seq.* ~~shall~~ must conform to the requirements established by the public water supply agency ~~§ 70-1-13 of the Code~~ and [§ 9-0200](#) *et seq.*

9-0101.3 In residential developments containing twenty or fewer lots which are 20,000 square feet in size or greater and in which the nearest boundary is located more than an average of 125 feet per lot¹ from the nearest existing water main:

9-0101.3A

A. ~~(80-03-PFM)~~ The [County Executive](#) may waive the requirements set forth in [§ 9-0101.1](#) & [and 2](#) and established by the public water supply agency, ~~§ 70-1-13 of the Code~~ which include a requirement that water capacity for fire flow complies with [§ 9-0202.2F](#).

9-0101.3B

B. The [County Executive](#) may refuse to grant such a waiver if he determines from the plans and plats submitted to the County for approval that substantial development is anticipated for the areas surrounding the proposed development.

9-0101.3C

C. Wherever such waiver is granted:

9-0101.3C(1)

1. ~~(80-03-PFM)~~ Either a central well water supply system, with all necessary water mains and facilities or individual wells, ~~shall~~ must be designed and installed as required by the approved water supply agency or the County; and

9-0101.3C(2)

2. Requisite fire hydrants ~~shall~~ must be furnished or payment to the value of said hydrants at time of waiver, and an installation fee therefore ~~shall~~ must be paid to the approved water supply agency; ~~provided, however, that~~ where the [County Executive](#) determines that, based on the adopted [Comprehensive Plan](#) and capital improvements program of the County, the installation of a public water main within an average of 125 feet per lot¹ from the nearest boundary of the proposed development is not expected

¹ Such footage must be computed as follows: distance between nearest existing water main and nearest boundary of the proposed development divided by the number of proposed lots must equal more than 125 feet.

9-0000 WATER AND FIRE REGULATIONS

within the next ten years, individual wells may be installed without providing dry water mains and fire hydrants.

9-0101.4 ~~(80-03-PFM)~~ In residential developments with lots 75,000 square feet in size or greater, when the developer elects to install a central well water supply system with all necessary appurtenant water facilities, the requirements established by the public water supply agency set forth in § 70-1-13 of the Code regarding fire flow availability and water storage capacity need not be provided.

9-0101.5 ~~All requests for the above waivers shall be submitted in writing to the Site Development and Inspections Divisions, Land Development Services, DPWES.~~

9-0101.65 ~~(80-03-PFM)~~ Plan approval of any outside agency (i.e., City of Fairfax, City of Falls Church, the Town of Vienna, and the Town of Herndon) shall must be obtained by the County ~~prior to~~ before plan approval.

9-0102 Public Water Supply Agency Data ~~(80-03-PFM)~~

9-0102.1 Any proposed extension of a public water supply system will, upon acceptance, become property of the public water supply agency. Any person proposing an extension of a public water supply system shall, at the time of submitting subdivision plans, profiles and specifications, agree by written contract approved by the public water supply agency that, upon completion of the extension of such water system and the approval and acceptance thereof by the proper official, the water system so constructed shall become the property of the public water supply agency.

9-0102.2 All water mains, their sizes, valves and fire hydrants, and their relationship to gas lines shall must be shown as indicated below:

9-0102.2A

A. In subdivision streets, the water main shall should be located 8 feet north or east of the street centerline, and the gas main shall should be located 8 feet south or west of the centerline.

9-0102.2B

B. On loop streets the water main shall should be located 8 feet north or east of the predominate centerline of the street. The gas main shall should be located 8 feet south or west of the predominate centerline of the street. The water and gas mains shall should then continue on the same side of the centerline as determined above for their entire length of the streets.

9-0102.2C

C. Due to space restrictions of most townhouse streets, it is not feasible to specify the side of the street on which the water line should be located. Developers of townhouse sites shall must confer with the public water supply agency and the

9-0000 WATER AND FIRE REGULATIONS

appropriate natural gas supply agency ~~Washington Gas Light Company~~ for satisfactory utility locations.

~~9-0102.2D~~

D. Service connections must be stubbed to the property line before the street paving section is constructed.

9-0102.3 Design and Construction Guidelines:

~~9-0102.3A~~

A. All water main design and construction ~~shall~~ must comply with the standard specifications and plans of the public water supply agency serving the location.

~~9-0102.3B~~

B. All water mains ~~shall~~ must have a cover of 4 feet unless otherwise designated.

~~9-0102.3C~~

C. The developer ~~shall~~ must request inspection by the public water supply agency three days ~~prior to~~ before commencing construction of any water mains.

~~9-0102.3D~~

D. No underground electric, telephone, television cable, gas, chilled water lines or any other underground utilities ~~shall~~ may be installed within the public water supply easement parallel to the proposed water main. In addition, no permanent structures ~~shall~~ may be placed within the public water supply easement. Plan and profiles of all utility crossings of water mains within the easements ~~shall~~ must be submitted to the public water supply agency for approval ~~prior to~~ before construction. With the exception of sanitary sewers and laterals described in [§ 9-0102.3T](#), the horizontal separation between water mains and all utilities or structures including poles, tracks, pipes, wires, conduits, vaults, manholes, and other appurtenances, ~~shall~~ must be a minimum of 5 feet or as approved by the public water supply agency.

~~9-0102.3E~~

E. Any relocation of existing water mains and appurtenances due to development ~~shall~~ must be provided for by the developer.

~~9-0102.3F~~

F. No water main valves are to be open or closed ~~prior to~~ before notification of the appropriate water supply agency. Authorized personnel only are allowed to operate valves.

~~9-0102.3G~~

G. Water mains ~~shall~~ may not be installed on a site until easements are recorded and the developer has furnished proper forms for water main installations.

~~9-0102.3H~~

H. All water mains 4 inches through 12 inches ~~shall~~ must be Class 52, Ductile Iron Pipe Water Main unless otherwise designated.

~~9-0102.3I~~

I. For oversize water mains and appurtenances requested by [Fairfax Water](#), the developer is required to submit unit prices for [Fairfax Water](#) approval thirty days ~~prior to~~ before construction of the oversize portion of water main.

9-0000 WATER AND FIRE REGULATIONS

Approval by the [Fairfax County Planning Commission](#) of the oversized water main alignment may be required under provisions of [§ 15.2-2232](#) of the [Code of Virginia](#), as amended.

9-0102.3J

J. All hydrant, water service, fire line and stub-out valves ~~shall~~ must be restrained. Swivel fittings are optional.

9-0102.3K

K. When the property is located in areas where the pressure is less than 35 psi, booster pumps ~~shall be~~ are required to provide adequate pressure in accordance with [Virginia Plumbing Code 606.5.1](#).

9-0102.3L

L. The developer ~~shall~~ must make provision for discharge of water as required by the public water supply agency for water meter repairs and testing with proper arrangements for erosion and sediment control during discharge.

9-0102.3M

M. The working pressure ~~shall~~ must be shown on the plans. In accordance with the [VCC Virginia USBC](#), a pressure regulating valve must be installed by the property owner in the building plumbing system where the working pressure exceeds 80 psi in order to eliminate water hammer and unnecessary wastage of water. Thermal expansion protection may also be required to reduce potential discharge from water heater relief valves.

9-0102.3N

N. The developer ~~shall~~ must agree to assume complete responsibility and all costs for the installation of the mains and appurtenances and for any adjustments in alignment and grade, location, repairs, and maintenance which may be required ~~prior to~~ before finish grading and surfacing of streets and/or easements and final acceptance of the facilities. Final acceptance ~~shall~~ will not be considered until after the streets have been surfaced or the easements finally graded.

9-0102.3O

O. Corrosion control measures ~~shall~~ must be used in accordance with the guidelines of the public water supply agency to protect water mains.

9-0102.3P

P. ~~Prior to~~ Before any water main installation all required sanitary sewers, including laterals, and storm sewers must be installed, their ditches compacted for full depth according to current requirements, the sanitary sewer accepted for service by [DPWES](#), and the streets and/or easements rough graded to meet current standards.

9-0102.3Q

Q. When connecting to existing water mains, the locations of existing valves requiring operation ~~shall~~ must be indicated on plans.

9-0102.3R

R. Where feasible, all water mains ~~shall~~ must be looped to promote better water quality and increase fire protection.

9-0102.3S

9-0000 WATER AND FIRE REGULATIONS

- 9-0102.3T S. All water mains ~~shall~~ must be installed in travel areas where possible. Proposed water mains within dedicated rights-of-way maintained by or to be maintained by VDOT must comply with VDOT established guidelines for water main placement. Profiles are required for all water mains.
- 9-0102.3U T. Horizontal and vertical separation between sanitary sewer mains and laterals and water mains ~~shall~~ must be in accordance with the Virginia Department of Health's Waterworks Regulations.
- 9-0102.3V U. Air releases and blow-offs ~~shall~~ must be installed on all 12-inch and larger diameter water mains ~~12 inches and larger~~. Hydrants should be utilized for this purpose where feasible.
- 9-0102.3W V. When utilities are proposed in close proximity to an existing water main, or when grade changes are proposed above an existing water main, test holes ~~shall be~~ are required ~~prior to~~ before the plan approval, unless otherwise noted.
- 9-0102.4 W. Depending upon test hole results, sheeting or bracing may be required when other facilities cross an existing water main.
- 9-0102.4A Service Connections
- 9-0102.4B A. All water meters and service connections ~~shall~~ must be installed, tested, repaired and maintained in accordance with the rules and regulations of the public water supply agency.
- 9-0102.4C B. More than two pipestem lots ~~shall~~ requires a 4-inch water main installation for water service.
- 9-0102.4D C. Water meters 3 inches and larger ~~shall~~ must be located inside the building with a bypass. The bypass valve ~~shall~~ must be sealed by the water supply agency. When required, the remote register ~~shall~~ must be installed on the outside of the building.
- 9-0102.4E D. Commercial development such as office buildings, warehouses, churches, etc., which require a fire line to the building ~~shall~~ must have separate fire and domestic lines for service, unless otherwise noted.
- 9-0102.4F E. The developer ~~shall~~ must notify the public water supply agency ~~prior to~~ before the installation of interior plumbing to determine the location of the water meter and any pre-wiring for remote register.
- 9-0102.4G F. The approximate location of water meters ~~shall~~ must be shown on the plans by symbol.

9-0102.5 Miscellaneous Notes

~~9-0102.5A~~

~~A. Two advanced copies~~ Electronic review of easement plats ~~are is~~ required for [Fairfax Water](#) approval ~~prior to~~ before plat recordation. For Town of Herndon and Town of Vienna, refer to their requirements.

~~9-0102.5B~~

~~B.~~ Plan approval by [Fairfax Water](#) may be subject to developer acceptance of satisfactory agreement for the installation of off-site or oversize facilities.

~~9-0102.5C~~

~~C.~~ All off-site water main extensions require a formal proposal from [Fairfax Water](#) as per the current design standards.

~~9-0102.5D~~

~~D.~~ [Fairfax Water](#) FCWA approval may be contingent upon the installation of water mains in other sections or subdivisions and connections thereto.

9-0103 Fire Hydrants (80-03 PFM)

9-0103.1 Fire hydrant installation requires plan approval from the public water supply agency.

9-0103.2 All fire hydrants ~~shall~~ must be installed in accordance with current specifications of the public water supply agency and the [Fire Marshal's Office](#).

9-0103.3 Fire hydrants ~~shall~~ must be of 3-way class, with one 4½-inch pumper outlet and two 2½-inch hose outlets all with National Standard fire hose coupling threads.

9-0103.4 ~~(100-07 PFM)~~ Fire hydrants ~~shall~~ must conform to the [American Water Works Association](#) Specifications, C-502.614, and will be provided a 6-inch connection to the main with a minimum 5¼-inch valve opening. The center of the hydrant ~~shall~~ must be located a maximum of 30 inches from the face of curb. The closest part of the hydrant (4½-inch nozzle cover) ~~shall~~ must be a minimum 18 inches from top face of curb.

9-0103.5 Fire hydrants placed on streets without curb and gutter ~~shall~~ must be in accordance with the standard and the terms of the permit. The 2½-inch hose connection ~~shall~~ must have a minimum clearance of 5 feet from the side slopes.

9-0103.6 The bottom of the safety flange ~~shall~~ must be 2½ inches above the elevation of the edge of the shoulder on streets without curb and gutter and above the elevation of curb on streets with curb and gutter.

9-0103.7 Provisions for adequate drainage of the hydrant is required.

9-0000 WATER AND FIRE REGULATIONS

- 9-0103.8 The location of all existing and proposed fire hydrants relevant to the development project ~~shall~~ must be shown on the plans.
- 9-0103.9 The hydrant ~~shall~~ must be located so that the thrust block is placed in undisturbed soil. In those cases where this is not practical, the soil beneath and surrounding the thrust block ~~shall~~ must be compacted to 95 percent of maximum density in accordance with [VDOT](#) Sections 200, 302, 303 and 520.
- 9-0103.10 Fire hydrant branch connections placed in fill material ~~shall~~ must be installed using restrained joint pipe as approved by the public water supply agency.
- 9-0103.11 The 4½-inch nozzle ~~shall~~ must face the street, travel lane, service drive or normal vehicular travelway, whichever applies.
- 9-0103.12 Easements ~~shall~~ must be ~~required~~ provided for hydrants located in ROW when they are less than 5-feet from the property line. ~~on ditch section streets where there is less than 5 feet clearance from hydrant to the property line.~~
- ~~9-0103.13 Whenever possible hydrants shall be placed in grassy areas.~~

9-0200 FIRE MARSHAL REQUIREMENTS

9-0201 General Data. (~~51-96 PFM~~) In accordance with [§ 901.8 of the Fire Prevention Code of the County of Fairfax](#), as adopted by the County pursuant to [§ 62-2-7 et seq.](#), of the Code:

9-0201.1 No person ~~shall~~ may use, tamper with, damage or destroy any fire hydrants, valves or water mains within the County; except that a fire department may use such hydrants for firefighting and training purposes. Also, a person who has obtained a permit for use from the public water supply agency ~~authority~~ or utility having proper jurisdiction over said items may use the items.

9-0201.2 When use is by a person under permit from the authority having jurisdiction, the user ~~shall~~ must comply with all policies that are outlined on said permit or application.

9-0201.3 Fire Protection Modification Procedures

A. The following information is to be provided when requesting a modification of any fire protection requirement of the PFM. Please follow the requirements of the code modification process.

B. All requests must be submitted and addressed to the [Fire Marshal's Office](#), and include the following:

1. A plan or sketch showing the proposed location of all improvements on the site and the type of construction involved.
2. The address, tax map reference number and the proposed use of the property.
3. The current zoning classification of the property and if recently rezoned, the rezoning number and the date of approval by the [Board](#).
4. Copies of any required special exception or special permit with date of approval.
5. The specific item requested to be modified.
6. The length of time for which the modification is requested.
7. Any proposed alternate form of fire protection.
8. The name, address and telephone number of the person making the request.

9. The County assigned number for site and subdivision plans and modification requests associated with the property.

9-0202 Construction Requirements²

9-0202.1 Fire Hydrant Information

~~9-0202.1A~~

A. All fire flow requirements ~~shall be~~ are determined by the ~~Fire Marshal~~ Fire Marshal's Office.

~~9-0202.1B~~

B. Fire flow waivers ~~shall~~ must be requested through ~~DPWES~~ LDS (§ 9-0100 et seq.).

~~9-0202.1C~~

C. ~~(80-03-PFM)~~ If hydrants are to be located in an area of possible guardrail construction, plans should be checked for notes regarding possible obstruction.

~~9-0202.1D~~

D. ~~(80-03-PFM)~~ Hydrants ~~shall~~ must be installed either 5 feet from the point of curvature of curb returns or on the property line in subdivisions.

~~9-0202.1E~~

E. ~~(80-03-PFM)~~ Steel posts (bollards), conforming to Plate 5-9 ~~shall~~ must be installed around hydrants as needed for industrial and commercial development where curbs are not available.

~~9-0202.1F~~

F. ~~(80-03-PFM)~~ Unless otherwise approved by the Fire Code Official, all fire hydrants ~~shall~~ must be located a minimum of 50 feet from all buildings.

~~9-0202.1G~~

G. ~~(80-03-PFM)~~ No plantings or other obstructions ~~shall~~ may be made within 4 feet of any fire hydrant, or within 10 feet of a ~~siamese connection~~ Fire Department Connection (FDC).

~~9-0202.1H~~

H. ~~(80-03-PFM)~~ Where standpipes or sprinkler systems are required within buildings, a fire hydrant ~~will~~ must be located within 100 feet of the ~~fire department connection~~ FDC. Exception:

1. For fee simple townhouses equipped with FDC's hydrant coverage must be in compliance with § 9-0202.1I.

~~9-0202.1I~~

I. ~~(80-03-PFM, 51-96-PFM)~~ Fire hydrants ~~shall~~ must be located so as to maximize the coverage potential of each hydrant. Maximum coverage distances, as set out below, are measured along the fire department vehicular access way as defined in § 9-0202.2I ~~9-0202.2J(1)~~. The maximum distances set

² See § 9-0103 and Plates 1-9 through 5-9 for fire hydrant details.

9-0000 WATER AND FIRE REGULATIONS

forth in [Table 9.1](#) ~~shall~~ must be measured from the fire hydrant to the most remote point of access along the fire department vehicular access way.

Table 9.1 Fire Hydrant Maximum Coverage Distance

Building Type	Maximum Distance (ft.)
Industrial buildings and warehouses	250
Schools, day care centers	300
Offices, commercial, church, hospitals, nursing homes	350
Apartments, multi-family dwellings, townhouses	350
<u>Detached</u> Single family dwellings	500

~~9-0202.1J~~

~~J. (80-03 PFM, 51-96 PFM) All fire hydrants and water mains located in or on parking structures shall must be protected from freezing. Heat tape is inadequate for this purpose.~~

~~9-0202.1K~~

~~K. (80-03 PFM, 51-96 PFM) Siamese connections At least one FDC shall must be located on the street front, address side of buildings or near the main entrance and shall must be visible and accessible from the street, parking area or fire department access way.~~

9-0202.2 Guideline Criteria

~~9-0202.2A~~

~~A. All hydrant branches shall must have a minimum cover of 3 feet at the ditch line.~~

~~9-0202.2B~~

~~B. All fire hydrant locations shall must be reviewed by the County for conformity to the Fairfax County Standards as shown in [Plates 1-9](#) ~~thru~~ through 5-9.~~

~~9-0202.2C~~

~~C. It has been requested by the Fire Marshal's Office that all Site plans submitted to the [Fire Marshal's Office](#) will for review include the following information:~~

~~9-0202.2C(1)~~

~~1. Use group classification (defined by the [VCC Virginia USBC](#)).~~

~~9-0202.2C(2)~~

~~2. Type of construction (defined by the [VCC Virginia USBC](#)).~~

~~9-0202.2C(3)~~

~~3. Existing and proposed water mains.~~

~~9-0202.2C(4)~~

~~4. Existing and proposed fire hydrants.~~

~~9-0202.2C(5)~~

~~5. Water main size.~~

~~9-0202.2C(6)~~

9-0000 WATER AND FIRE REGULATIONS

- 9-0202.2C(7) 6. Available water pressure and flow capability, static pressure, residual pressure, flow in GPM (LPM).
- 9-0202.2C(8) 7. Type of fire suppression or detection equipment to be provided;—e.g., sprinklers, standpipes, smoke or heat detectors. (See current edition of the [VCC Virginia USBC](#) for requirements.)
- 9-0202.2C(9) 8. Location and size of underground fire lines.
- 9-0202.2C(10) 9. Location of ~~fire department~~ FDC ~~siamese connections (street front of building).~~
- 9-0202.2C(11) 10. Height of building in feet and stories.
- 9-0202.2C(12) 11. Breakdown of building interiors such as firewalls, tenant separations, etc.
- 9-0202.2D 12. ~~(51-96 PFM)~~ Footprint area of building and gross floor area of building.
- 9-0202.2E D. If a fixed fire suppression or detection system is to be provided, the type of system ~~shall~~ must be clearly indicated. The installation ~~shall be~~ is subject to the applicable section of the [VCC Virginia USBC](#).
- 9-0202.2F E. Private bridges ~~shall~~ must have a design satisfactory to the Director to carry fire equipment where necessary. [AASHTO “Standard Specifications for Highway Bridges”](#) and the [VDOT](#) Bridge Engineer will be consulted for guidance on a case by case basis.
- 9-0202.2F(1) F. Fire Flow Requirements
 - 1. One- and two-family dwellings - maximum exposure distances.

Minimum Exposure Distance	Fire Flow GPM
0 ft. – 10 ft.	1500 – 2000
11 ft. – 30 ft.	1000 – 1500
31 ft. and greater	1000

- 9-0202.2F(2) 2. Townhouses or multiplex units - residential or professional 2500 GPM.
- 9-0202.2F(3) 3. Other uses - fire flow requirements established by the procedures and formulas delineated below.
- 9-0202.2G

G. Fire Flow Requirement Determination³:

9-0202.2G(1)

1. Definitions (for this determination only):

Required Fire Flow: Fire flow water to the site required for the firefighting for any and all structures and appurtenances on the site.

Floor level: Any occupiable level of a structure whether above or below grade.

F: Required fire flow in GPM.

C: Coefficient related to the type of construction (see [Table 9.3](#)).

A: The total area of all floor levels in the structure being considered. (Gross floor area of the whole structure.)

Table 9.3 Fire Flow Coefficient

C	TYPE OF CONSTRUCTION
1.5	for wood construction (VCC USBC , types VA, VB)
1.0	for ordinary construction (VCC USBC , types IIIA, IIIB)
0.9	for heavy timber construction (VCC USBC , type IV)
0.8	for noncombustible construction (VCC USBC , types II2A, IIB)
0.6	for fire resistive construction (VCC USBC , types IA, IB)

9-0202.2G(2)

2. Maximums fire flows (before taking any reductions) are: ~~required shall not exceed the following maximums (before any reductions are taken):-~~

Table 9.4 Maximum Fire Flow

GPM	TYPE OF CONSTRUCTION
8000	Wood, heavy timber or ordinary construction
6000	Noncombustible or fire-resistive construction

9-0202.2G(3)

3. Minimums - Fire flow required ~~shall~~ must never be less than 500 ~~GPM~~ GPM for a structure. Fire flow required for single-family detached

³ All required fire flow must be calculated at a minimum 20 psi residual pressure remaining on the public water or central well system to comply with [Commonwealth of Virginia Waterworks Regulations](#).

9-0000 WATER AND FIRE REGULATIONS

dwelling shall ~~must~~ never be less than 1000 ~~GPM~~ gpm. Both values are absolute minimums after all reductions are taken.

9-0202.2G(4)

4. Complete automatic sprinkler protection reduction - Value obtained from the formula given below may be reduced 50 percent only if the structure or structures under consideration are completely covered with a sprinkler system. Partial protection will not be allowed for any reduction in fire flow.

9-0202.2G(5)

5. Calculation formula: $F = 18 CA^{1/2}$ where F, C, A are defined in [§ 9-0202.2G\(1\)](#). This formula shall ~~must~~ be applied sequentially to each structure on the site. The largest fire flow calculated then applies.

9-0202.2G(6)

6. Exposure surcharges - The value calculated in the above formula shall ~~must~~ be increased by a percentage for exposure of other structures within 150 feet of the structure under consideration. The percentage increase for any one side shall ~~must~~ be as follows:

Table 9.5 Exposure Surcharges

Separation ft.	Percentage (%)
0-10	25
10.1-30	20
30.1-60	15
60.1-100	10
100.1-150	5

Total exposure surcharge shall ~~be~~ is the sum of the percentages for all sides of the building but shall ~~may~~ not exceed 75%.

9-0202.2G(7)

7. Special consideration - The above calculation procedure does not apply to: high hazard structures; lumber yards or lumber storage; petroleum storage; refineries; chemical plants; grain storage; power generating facilities; hazardous manufacturing processes; and paint storage, high piled combustible storage, flammable liquids storage, etc. All of the above require special consideration and direct consultation with the ~~Fire Prevention Division~~ [Fire Marshal's Office](#) regarding fire flow requirement.

9-0202.2G(8)

8. Occupancy reductions - The following percentage reductions to the value calculated by the above formula may be taken:

Table 9.6 Occupancy Reductions

Type Occupancy	%	Type Occupancy	%
----------------	---	----------------	---

9-0000 WATER AND FIRE REGULATIONS

Asylums	15	Prisons	10
Churches	15	Public Buildings	10
Clubs	10	Rooming Houses	10
Dormitories	25	Schools	15
Hospitals	20	Parking Structures (stand alone, not under buildings)	25
Hotels	10		
Nursing Homes	15		
Office Buildings	10		

9-0202.2G(9)

9. Procedure for Calculation of Required Fire Flow:

9-0202.2G(9)(a)

a. Determine type of construction and hence "C."

9-0202.2G(9)(b)

b. Determine the gross floor area (A).

9-0202.2G(9)(c)

c. Determine the occupancy reductions, if any.

9-0202.2G(9)(d)

d. Apply the sprinkler reduction, if fully covered by a sprinkler system.

9-0202.2G(9)(e)

e. Determine the total surcharge for exposures.

9-0202.2G(9)(f)

f. Perform the following multiplication:

9-0202.2G(9)(f)(1)

i. $F = 18CA^{1/2}$

9-0202.2G(9)(f)(2)

ii. (F) (occupancy reduction) (sprinkler reduction) (exposure surcharge) equals total required fire flow for the structure under consideration.

Note: Occupancy reduction is 100% - % given in [Table 9.6](#). Sprinkler reduction is 50%. Exposure surcharge is 100% + % given in [Table 9.5](#)

9-0202.2H

H. Central Well Systems

9-0202.2H(1)

1. Central well systems apply to one and two-family developments where public water is not available within specified distances required for public water main extension.⁴

9-0202.2H(2)

⁴ Specified distance required equals 125 times the number of proposed lots to the nearest boundary line of the proposed development.

9-0000 WATER AND FIRE REGULATIONS

2. Central well systems ~~shall~~ must be designed for a minimum 30,000-gallon storage capacity with adequate pressure for firefighting activities.

~~9-0202.2I — Fire Protection Modification Procedures (113-13-PFM)~~

~~9-0202.2I(1) — The following information is to be provided when requesting a modification of any fire protection requirement of the PFM:~~

~~9-0202.2I(2) — All requests must be submitted and addressed to the Fairfax County Fire Marshal, and include the following:~~

~~9-0202.2I(2)(a) — A plan or sketch showing the proposed location of all improvements on the site and the type of construction involved.~~

~~9-0202.2I(2)(b) — The address, tax map reference number and the proposed use of the property.~~

~~9-0202.2I(2)(c) — The current zoning classification of the property and if recently rezoned, the rezoning number and the date of approval by the Board.~~

~~9-0202.2I(2)(d) — Copies of any required special exception or special permit with date of approval.~~

~~9-0202.2I(2)(e) — The specific item requested to be modified.~~

~~9-0202.2I(2)(f) — The length of time for which the modification is requested.~~

~~9-0202.2I(2)(g) — Any proposed alternate form of fire protection.~~

~~9-0202.2I(2)(h) — The name, address and telephone number of the person making the request.~~

~~9-0202.2I(2)(i) — The County assigned number for site and subdivision plans and modification requests associated with the property.~~

~~9-0202.2J — Fire Department Access (113-13-PFM)~~

~~Regulations governing fire department access established under the Virginia Statewide Fire Prevention Code (SFPC) and Fairfax County Fire Prevention Code (Chapter 62 of the County Code) are set forth below. When requesting a code modification of any fire department access requirement, refer to the procedure set forth in Chapter 1 of the SFPC.~~

~~9-0202.2J(1)~~

~~I. (51-96-PFM) Access for emergency vehicles shall must be provided to within 100 feet of the main or principal entrance of every building. The fire department vehicular access may be provided by a public or private street, parking lot, and/or fire lanes.~~

1. When buildings are more than three stories or 30 feet in height, aerial fire apparatus access must be approved by the [Fire Marshal's Office](#).
Exceptions:
 - a. Aerial fire apparatus access is not required when the building is equipped throughout with an automatic sprinkler system installed in accordance with [Virginia Construction Code \(VCC\) § 903.3.1.1](#) or [§ 903.3.1.2](#) and does not exceed 5 stories or 50 feet in height.
 - b. Residential occupancies classified as R-5 as defined by the [VCC](#).
2. The approved access may be provided by either a street, parking lot or fire lane.
3. The required aerial access meeting this condition will conform to the following conditions: the inner boundary must be no less than 15 feet and no more than 30 feet from the exterior building wall and must be positioned along the entire main front entrance side and a second continuous side of the building. Exception:
 - a. Buildings that meet the defined height for a high-rise building, as defined by [VCC](#) and comply fully with [VCC § 403](#), are only required to have a single aerial apparatus access on the entire main front entrance side of the building.

~~9-0202.2J(2) When buildings are more than five stories or 50 feet in height, ladder truck access shall be provided to both the front and rear of the building.~~

~~9-0202.2J(3) The access to the rear may be provided by either a street, parking lot, or fire lane.~~

~~9-0202.2J(4) The inner surface of the ladder truck access way shall be no less than 15 feet and no more than 30 feet from the exterior building wall.~~

~~9-0202.2J(5)~~

4. ~~(51-96 PFM)~~ When fire lanes are required, they ~~shall~~ must have an unobstructed width of not less than 20 feet, exclusive of shoulders. Fire lanes ~~shall~~ must have parking, curb painting and signage as further described on [Plate 6-9](#).

~~9-0202.2J(6)~~

5. ~~(51-96 PFM)~~ Dead-end fire apparatus access roads in excess of 100 feet in length ~~shall~~ must be provided with an approved area for turning around fire apparatus. (Due to the size of the ladder truck, it is suggested that guidance be obtained from the ~~Fire Prevention Division~~ [Fire Marshal's Office](#) to determine adequate turnaround dimensions.)

9-0000 WATER AND FIRE REGULATIONS

9-0202.2J(7)

6. A 12-foot wide access lane to within 50 feet of the edge of swimming pools, with an 8-foot personnel gate in the fence at the point of access is required except for individually owned pools located on single family lots.
Exception:
 - a. Swimming pools located on the interior of buildings or on the rooftop of buildings. These pool locations require stretcher access from the location of fire department access to the edge of the pool.

9-0202.2J(8)

7. ~~(51-96 PFM)~~ A minimum height clearance of ~~15 feet~~ 13 feet, 6 inches is required for overheads, canopies and other obstructions which are located over emergency access ways.

9-0202.2J(9)

8. ~~(51-96 PFM)~~ For ladder truck access on parking garages where a parking garage is attached to a building structure in such a manner that such garage constitutes a portion of the fire department vehicular access way, design calculations ~~shall~~ must be provided by a PE ~~which and~~ show that the deck of such garage is designed to support an 80,000-pound vehicle and all outrigger (pad) point loads or that such garage is designed for a nominal 450 lb/sf uniform live load.

~~¹Such footage shall be computed as follows: distance between nearest existing water main and nearest boundary of the proposed development divided by number of proposed lots shall equal more than 125 feet.~~

~~²See § 9-0103 and Plates 1-9 through 5-9 for fire hydrant details.~~

~~³All required fire flow shall be calculated at a minimum 20 psi residual pressure remaining on the public water or central well system to be in conformance with Commonwealth of Virginia Waterworks Regulations.~~

~~⁴Specified distance required equals 125 times the number of proposed lots to the nearest boundary line of the proposed development.~~