

AN ORDINANCE to amend and reordain Article B (FIRE PREVENTION), Chapter 2 (FIRE PROTECTION AND PREVENTION), Title 4 (PUBLIC SAFETY) of the Code of the City of Alexandria, Virginia, 1981, as amended

THE CITY COUNCIL OF ALEXANDRIA HEREBY ORDAINS:

Section 1. That Article B (FIRE PREVENTION), Chapter 2 (FIRE PROTECTION AND PREVENTION), Title 4 (PUBLIC SAFETY) of the Code of the City of Alexandria, Virginia, 1981, as amended, be, and the same hereby is, amended and reordained, to read as follows:

ARTICLE B FIRE PROTECTION

Sec. 4-2-11 - Title.

This article shall be known as the Fire Prevention Code of the City of Alexandria, Virginia. (Ord. No. 4725, 6/25/11, Sec. 1)

Sec. 4-2-12 - Adoption of Virginia Statewide Fire Prevention Code.

The Virginia Statewide Fire Prevention Code, as promulgated in ~~2009~~ 2012 is hereby adopted and incorporated as if fully set out in this article and as thereafter amended by the Virginia Board of Housing and Community Development, except such portions of the Virginia Statewide Fire Prevention Code as are deleted, modified, or amended by section 4-2-21 of this article. All future editions of the Virginia Statewide Fire Prevention Code as promulgated by the Virginia Board of Housing and Community Development are hereby automatically adopted and incorporated into this code. (~~Ord. No. 4725, 6/25/11, Sec. 1~~)

Sec. 4-2-12.1 - Local board of fire prevention code appeals.

The Alexandria Board of Building Code Appeals as created in section 8-1-37 of this code shall serve as the Local Board of Fire Prevention Code Appeals. This board shall hear appeals of the Virginia Fire Prevention Code, its referenced documents, standards and any city amendments. (Ord. No. 4725, 6/25/11, Sec. 1)

Sec. 4-2-13 - Same—official copy.

One copy of the Virginia Statewide Fire Prevention Code and the ordinances adopted, deletions, modifications and/or amendments thereto shall be manually signed on its cover by the mayor and the fire official and shall be filed and kept at all times in the office of the city clerk. (Ord. No. 4725, 6/25/11, Sec. 1)

Sec. 4-2-14 - Definition of fire official.

Whenever the term "fire official," is used in this article or the Virginia Statewide Fire Prevention Code, it shall mean the "fire official or designee". The fire official shall be designated by the chief of the fire department. In addition to the fire official, fire marshal, assistant fire

marshals, and deputy fire marshals, the chief of the fire department may designate additional personnel as fire inspectors to enforce these provisions. ~~(Ord. No. 4725, 6/25/11, Sec. 1)~~

Sec. 4-2-15 - Duties of the fire official, fire marshal, assistant fire marshals, ~~and~~ deputy fire marshals, and fire inspectors.

(a) The fire official shall enforce the applicable provisions of this article.

(b) (1) The fire official who serves as the ~~chief~~ fire marshal, ~~the~~ assistant fire marshals, and ~~the~~ deputy fire marshals shall have the same police powers as a sheriff, police officer, or law enforcement officer, and in addition to such other duties as may be prescribed by law, shall investigate and prosecute ~~have the primary responsibility of investigation and prosecution of~~ all offenses involving fire, threats to bomb, fire bombings, bombings and attempts to commit such offenses; possession and manufacture of explosive devices, substances and fire bombs; storage, use and transportation of hazardous materials and hazardous wastes and the investigation of all releases of hazardous materials and wastes and all other environmental offenses; false alarms relating to such offenses, and may investigate and prosecute all other criminal or civil offenses under local, state or federal law arising out of or during the investigation of the enumerated offenses, and out of or during such other investigations, and prosecutions as may be approved by the city manager.

(2) The police powers granted in this section shall not be exercised by the fire marshal, assistant fire marshals, or ~~any~~ deputy fire marshals until such person has satisfactorily completed a course for fire marshals with police powers, designed by the Virginia Department of Fire Programs in cooperation with the Virginia Department of Criminal Justice Services and approved by the Virginia Fire Services Board.

(3) The fire marshal, assistant fire marshals, and deputy fire marshals with police powers shall continue to exercise such powers only upon satisfactory participation in in-service and ~~advances~~ advanced courses and programs designed by the Virginia Department of Fire Programs in cooperation with the Virginia Department of Criminal Justice Services, and approved by the Virginia Fire Services Board.

(4) The fire official, fire marshal, assistant fire marshals, deputy fire marshals, and fire inspectors shall have the authority to enforce the Virginia Statewide Fire Prevention Code, the applicable sections of the Code of Virginia, and the City of Alexandria Code. ~~(Ord. No. 4725, 6/25/11, Sec. 1)~~

Sec. 4-2-15.1 - Fire inspectors.

(a) The term "fire inspector" shall mean technical assistants employed by the fire department ~~that have authority to~~ who are authorized to conduct inspections, and implement and enforce the Virginia Statewide Fire Prevention Code, and applicable sections of the City of Alexandria Code.

(b) ~~The~~ An appointed fire inspector shall have ~~the responsibility of issuing~~ the authority to issue a Virginia Uniform Summons and parking citations in accordance with the Code of Virginia, ~~the~~ the Virginia Statewide Fire Prevention Code, and ~~the~~ the applicable sections of the City of Alexandria Code. Fire Inspectors shall not be granted police powers ~~or~~ and may not implement custodial arrests. The powers granted in this section shall not be exercised by the

1 fire inspectors until such person has satisfactorily completed a course for fire inspectors with
2 summons powers; designed by the Virginia Department of Fire Programs in cooperation
3 with the Virginia Department of Criminal Justice Services and approved by the Virginia Fire
4 Services Board. ~~(Ord. No. 4725, 6/25/11, Sec. 1)~~

5 Sec. 4-2-16 - Unlawful boarding or tampering with fire department vehicles.

6 It shall be unlawful for any person, without proper authorization, to cling, attach to, climb
7 upon or board or swing upon any fire department vehicle, whether the vehicle is in motion or at
8 rest, to sound any warning device thereon or to manipulate, tamper with or destroy any lever,
9 valve, switch, starting device, brake, pump or any equipment, protective clothing or tool or a part
10 of the fire department vehicle.

11 Sec. 4-2-17 - Tampering with fire protection devices; failure to report or delaying alarm of fire;
12 failure to report hazardous material incident.

13 (a) It shall be unlawful for any person to tamper with, damage, destroy, use without just cause
14 or authorization, or to hinder the use of any fire alarm system, fire detection system, fire
15 suppression system, fire protection system, fire extinguishing system, or fire extinguisher
16 installed in any building or any structure within the city.

17 (b) It shall be unlawful for any person knowingly to delay or cause to be delayed an alarm of
18 fire, or to fail to report an alarm of fire to the fire department.

19 (c) When a fire or evidence of the occurrence of a fire is discovered, even though it has
20 apparently been extinguished, the person making such discovery shall immediately report
21 the same to the fire department.

22 (d) It shall be unlawful for any person to reset any fire alarm system, fire detection system, fire
23 suppression system, fire extinguishing system, or fire protection system without prior
24 authorization from the fire official or designees. However, the following persons are exempt
25 from this requirement: (1) Fire suppression personnel, (2) Fire protection personnel
26 conducting inspection, testing, service or maintenance on a fire protection system during
27 emergencies, and (3) Law enforcement personnel.

28 (e) It shall be unlawful for any person to knowingly delay or cause to be delayed the immediate
29 reporting to the fire department any incident related to the willful or accidental release,
30 discharge, or dumping of a hazardous material. ~~(Ord. No. 4725, 6/25/11, Sec. 1)~~

31 Sec. 4-2-17.1 - Stairway identification.

32 Stairway identification signs shall be provided at each landing in all interior exit stairways
33 connecting more than three stories, as required in the Virginia Uniform Statewide Building Code
34 and the Virginia Statewide Fire Prevention Code as amended by the Code of the City of
35 Alexandria, Virginia. (Ord. No. 4725, 6/25/11, Sec. 1)

36 Sec. 4-2-18 - Fire hydrant and water mains.

37 (a) With the exception of (1) fire department personnel who use fire hydrants for firefighting,
38 training, and testing purposes; (2) persons who have obtained a permit from the fire official
39 as provided for in this section and in accordance with the terms of the permit; (3) designated

1 Virginia American Water Company personnel and (4) designated Transportation and
2 Environmental Services personnel. ~~It~~ shall be unlawful for any person to use, tamper with,
3 damage or destroy any fire hydrant, valve or water main, water line, or fire service line
4 within the city. ~~The fire department may use fire hydrants for firefighting or training~~
5 ~~purposes, and persons who have obtained a permit as provided for in this section from the~~
6 ~~fire official may use the hydrants in accordance with the terms of the permit.~~

7 (b) Application for a permit for use of fire hydrants shall be made to the fire official on forms
8 provided for this purpose. Any permit shall be subject to the conditions, specifications, and
9 fees imposed by the fire official for the purpose of protecting equipment and preventing
10 water leakage. No permit shall be issued unless approval is first obtained from the ~~Virginia-~~
11 ~~American~~ Virginia American Water Company to use water from a hydrant. A separate permit
12 shall be required for each hydrant. If damage occurs to the hydrant, valve, or water main,
13 water line, or fire service line associated with the use of the hydrant or hydrant meter, the
14 permit holder shall be responsible for the costs of labor and materials for any repair or
15 replacement needed after hydrant use. A permit must be in the possession of the actual user
16 at the time of use.

17 (c) No person shall plant, erect or place any obstruction within three feet of any hydrant nor
18 shall a person stop, stand or cause a motor vehicle to be placed within 15 feet of a hydrant.

19 (d) No person shall plant erect or place any obstruction within three feet of any fire department
20 connection whether mounted on the exterior of a structure or freestanding. All such
21 connections shall be identified by an approved sign and/or building address as is appropriate
22 for the installation conditions. ~~(Ord. No. 4725, 6/25/11, Sec. 1)~~

23 Sec. 4-2-19 - Impersonation.

24 It shall be unlawful for any person to falsely use a fire department badge, uniform or
25 credentials to be identified as, or otherwise to impersonate a fire marshal, a fire officer, a fire
26 fighter, an emergency medical service provider, a fire inspector or another authorized
27 representative of the fire department. (Ord. No. 4725, 6/25/11, Sec. 1)

28 Sec. 4-2-20 - Reserved.

29 Sec. 4-2-21 - Changes in Virginia Statewide Fire Prevention Code.

30 The Virginia Statewide Fire Prevention Code adopted by the city in section 4-2-12, is
31 deleted, modified, or amended in the following respects:

32 101.1 Title. The regulations set forth herein, as modified and amended in Section 4-2-21 of
33 The Code of the City of Alexandria, together with the additional regulations in article B of
34 chapter 2, title 4 of that code, shall be known as the Fire Prevention Code of the City of
35 Alexandria, Virginia, and are herein referred to as such or as "the code".

36 103.4. International Fire Code Appendices and City Appendices. Appendices A, B, C, D,
37 ~~and H, I, and J~~ of the International Fire Code, ~~2009-2012~~ Edition and the Fire Prevention Code of
38 the City of Alexandria ~~2003-2009~~ Edition are deleted. ~~The following appendices replace~~
39 ~~Appendices A, B, C, and D are replaced~~ in both codes as modified within this document and are
40 hereby incorporated as fully enforceable provisions of this code.÷

1 ~~APPENDIX A – SITE PLAN REQUIREMENTS~~

2 ~~SECTION A101 – GENERAL~~

3 ~~A101.1 Scope. Appendix A, Site Plan Requirements provides specific information~~
4 ~~concerning various fire protection related issues including, fire hydrant and fire main~~
5 ~~requirements, emergency vehicle access and easements (emergency vehicle easement~~
6 ~~requirements), and construction features.~~

7 ~~A101.2 Alternatives. Alternative approaches to these requirements will be considered on a~~
8 ~~case by case basis and are subject to the review and approval by the fire official.~~

9 ~~SECTION A102 – SITE PLAN INFORMATION~~

10 ~~A102.1 Site Plan Requirements. The following general and fire protection information shall~~
11 ~~be provided on site plans:~~

12 ~~1. Submitter name, address, telephone number.~~

13 ~~2. Building name and address.~~

14 ~~3. Edition of the building code (Virginia Uniform Statewide Building Code), occupancy~~
15 ~~classification, use group and type of construction.~~

16 ~~4. Height of building in feet and stories.~~

17 ~~5. Foot print area of building and gross floor area of building.~~

18 ~~6. Identification of fire walls, fire barriers, other fire separations with hourly rating.~~

19 ~~7. Existing and proposed water and fire main locations and sizes.~~

20 ~~8. Existing and proposed fire hydrants locations, size of pipe, and expected flow and~~
21 ~~pressure.~~

22 ~~9. State if a full or partial fire sprinkler system will be installed.~~

23 ~~10. If fire sprinkler system will be installed, show location of fire department~~
24 ~~connections(s). Fire department connection shall be located on street front, address side~~
25 ~~of building but provide additional fire department connection for buildings five stories~~
26 ~~or 50 feet or greater, on the other side of the building. Fire department connection shall~~
27 ~~be visible and accessible with no obstructions within 3 feet of fire department~~
28 ~~connection. Note: Type of fire department connection will be determined by fire~~
29 ~~sprinkler system water demand.~~

30 ~~11. Topographical map relating grade and elevation to fire department connections.~~

31 ~~12. Available water pressure and flow capacity, static pressure, residual pressure, flow in~~
32 ~~gpm.~~

33 ~~13. Calculate required fire flow and indicate available fire flow at 20 psi per Insurance~~
34 ~~Services Office (ISO) methodology as described in Appendix B of this document.~~

35 ~~14. Location of all Emergency Vehicle Easements (EVE) and locations of EVE signs.~~

36 ~~15. Adequate emergency vehicle access, turning radii.~~

37 ~~Note:~~

- ~~(a) Dead end emergency vehicle easements greater than 100 feet require turnaround.~~
- ~~(b) Emergency vehicle access to within 100 feet of main entrance.~~
- ~~(c) Show all overhangs and obstructions to emergency vehicle easement. The minimum emergency vehicle clearance for canopies, overhangs, and obstructions is 15 feet.~~

~~APPENDIX B FIRE FLOW REQUIREMENTS FOR BUILDINGS~~

~~B101.1 Fire Flow Requirements. Fire flow requirements shall be based on the methodology described in the Insurance Services Office's (ISO) Guide For Determination of Needed Fire Flow, Edition 05-2008.~~

~~APPENDIX C FIRE HYDRANT AND FIRE MAIN INSTALLATION REQUIREMENTS~~

~~C101.1 Fire Hydrant Requirements. Fire hydrant installation shall conform to the requirements found in Design and Construction Standards, Department of Transportation & Environmental Services July 1989, Fire Hydrant Installation, CSFH—1, Page 9. Hydrants shall be Mueller "Super Centurion" (Catalog #A 423) provided with a 6 inch connection to the water main. The hydrant shall have on 1 1/2 inch pentagon operating nut, left turn to open, two 2 1/2 inch NSH nipple outlets capped, and one 4 inch NSH nipple outlet capped. The hydrant shall be connected to a Mueller Gate Valve (Catalog #A2360-20 or Virginia American Water Company approved equivalent) by the 6 inch water supply line and have a minimum 5 1/4 inch valve opening with 6 inch mechanical joints. Additional requirements are as follows:~~

- ~~1. The hydrant shall be supported by hard, compacted block with hard gravel bedding.~~
- ~~2. The pipe has to have a minimum bed of 6" of 21-A bluestone under hydrant laterals. All underground piping must be poly wrapped.~~
- ~~3. Hydrants shall have a minimum of 9 cu. yds. of 57 stone for the bleeders, tar paper between the concrete kicker and stone, and sitting on a concrete block.~~
- ~~4. The hydrant shall be located so that the thrust block is placed in undisturbed soil. Where this is not practical, the soil beneath the surrounding thrust block shall be compacted to 95% of maximum density.~~
- ~~5. The hydrant shall be plumb and the center of the hydrant (4 inch nozzle cover) shall be a minimum of 18 inches and maximum of 24 inches from the top face of the curb.~~
- ~~6. Excavation shall contain one ton of coarse washed gravel around base of hydrant for drainage.~~
- ~~7. The bottom of the safety flange shall be 2 1/2 inches above the edge of the shoulder on streets without curb and gutter and 2 1/2 inches above the elevation of curb on streets with curb and gutter.~~
- ~~8. Bends in underground piping shall be rodded and blocked.~~
- ~~9. Laterals shall be equipped with shut off valves at tees or tapping sleeves. Valves shall be secured by rods or bolts, to tees or mains. Valves shall be equipped with standard two inch square operating nuts and valve boxes with covers. Valves shall have right hand closure.~~
- ~~10. All hydrant branches shall have a minimum cover of four feet at the ditch line.~~

~~11. Public hydrants shall be painted with rust inhibitive primer and exterior enamel in the following color(s): Sherwin Williams "Safety Yellow" #B54YZ437 for barrels and Sherwin Williams "Pure White" #B54WZ401 for hydrant bonnets and caps.~~

~~Exception: Public hydrant barrels may be painted with an approved flat black paint where such locations are specifically approved in writing by the fire chief. Private hydrant shall be painted with a rust inhibitive primer and exterior enamel Sherwin Williams "Safety Yellow" #B54YZ437 for the barrels and bonnets and Sherman Williams "Pure White" #B54WZ401 for the caps only. Exception: Hydrant barrels may be painted with an approved flat black where such locations are specifically approved in writing by the fire chief.~~

~~12. The building official or designee shall witness all flushing, perform visual inspection, hydrostatic and flow testing of all public and private hydrants by a licensed contractor. The building official or designee personnel shall confirm the hydrant meets the 100% design flow requirement.~~

~~13. Sidewalks shall be wrapped around hydrants located in areas where the grass area is shown as two feet or less.~~

~~14. Easements shall be required for hydrants located in ditch section streets where there is less than five feet clearance from hydrant to the property line.~~

~~15. Hydrants shall be installed, either five feet from the point of curvature of curb returns or on the property line in subdivisions.~~

~~16. Fire hydrants shall be located at least 40 feet from all buildings served by the hydrant. When a hydrant cannot be placed at the required distance, the fire official or designee will consider exceptions.~~

~~17. No plantings or other obstructions shall be located within three feet of any hydrant or fire department connection.~~

~~18. Fire hydrant protection pipe bollards shall be installed as needed for industrial and commercial developments where curbs are not available and in locations where the potential for damage is greater than normal due to vehicular traffic as determined by the fire official. Bollards shall be located adjacent to the hydrant and in such a manner as not to interfere with the ability to connect hoses or operate the hydrant. Steel pipe bollards shall be installed in accordance with Virginia American Water Company Specifications for Pipeline Installation and Street Restoration Fire Hydrant Protection Pipe Bollard Detail 31-60013-SK. Where possible, bollards shall be at least 36 inches from the center of the hydrant operating nut in all directions. The bottom of the bollards and encasement shall not be located above the hydrant supply piping and valve or within the area of the hydrant supply piping to prevent the possibility of damage to the underground piping should the bollard be displaced by vehicular contact. Exact locations of bollards will be determined by the engineer of record and approved by the fire official.~~

~~19. Where standpipes or sprinkler systems are provided within buildings, a fire hydrant shall be located within 100 feet of the fire department connection. Where possible and practical, the fire hydrant shall be located on the same side of the street as the fire department connection if the hydrant does not violate the minimum distance from all buildings requirement in Item 17.~~

20. ~~All fire hydrants shall be located so the maximum distance measured from the hydrant to the most remote point of vehicular access on the site is 300 feet.~~

21. ~~Dead end water main to fire hydrant distance shall be as follows:~~

~~6" line = 380 feet max. distance~~

~~8" line = 1,550 feet max. distance~~

~~10" line = 4,600 feet max. distance~~

~~12" line = 11,150 feet max. distance~~

~~SECTION C102—INSTALLATION AND TESTING OF UNDERGROUND FIRE MAINS AND FIRE LINES~~

~~C102.1 Fire Main and Fire Lines Requirements. All installation and testing shall be in accordance with Virginia American Water Company Standards. A Contractors Material and Test Certificate for Underground Piping, (see NFPA 24 appendix) shall be completed and signed by the installing contractors. The building official or designee shall witness all required inspections and tests.~~

~~C102.2 General Requirements. The following general requirements shall be followed when installing fire main and fire lines:~~

~~1. Fire lines shall have at least four (4) feet of ground cover from the top of the pipe.~~

~~2. All bends and tees shall be provided with thrust blocks in accordance with NFPA 24.~~

~~3. All rods shall be a minimum of 5/8 inch in diameter. The number of rods shall be determined by the pipe size.~~

~~4. All rods, nuts, bolts, washers, clamps and other restraining devices shall be cleaned and thoroughly coated with bituminous or other acceptable corrosion-retarding material.~~

~~5. Thrust blocks shall be placed against undisturbed soil. Pipe clamps and tie rods, thrust blocks, locked mechanical or push on joints, mechanical joints utilizing set screw retainer glands, or other approved methods or devices shall be used. The type of pipe, soil conditions and available space shall determine the method.~~

~~6. When using clamps, rods shall be used in pairs, two to each clamp.~~

~~7. Fire lines shall not run under buildings.~~

~~8. All pipe shall be hydrostatically tested and visually inspected before being covered. The trench shall be backfilled between joints before testing to prevent movement of pipe.~~

~~9. The hydrostatic test of 200 psi or 50 psi over static pressure, whichever is higher shall be conducted for two (2) hours.~~

~~10. The contractor shall remain responsible for locating and correcting any leakage. If pipe is covered, no drop in pressure during the hydrostatic test is permitted.~~

~~11. Gauges used in performing acceptance tests shall meet the following:~~

~~(a) Gauges shall be appropriate for the type of test (i.e., air gauge for air pressure test, water gauge for hydrostatic test.~~

~~(b) Air gauges shall have increments of two (2) pounds or less. Water gauges shall have increments of ten (10) pounds or less.~~

~~(c) The gauge shall be capable of registering pressures above the minimum pressure required during the test. The pressure registered during the actual test shall be at least the minimum required for the test and less than the maximum of the gauge register. Gauges shall be marked as accepted by UL, FM, or other approved testing laboratories. No valves shall be installed in a fire line between the street valve at the water main and the OS&Y valve inside the building.~~

~~12. All fire lines shall be thoroughly flushed with an opening the same size as the pipe. The minimum rate of flow shall be not less than the water demand rate of the system, which is determined by the system design, or not less than that necessary to provide a velocity of 10 feet per second, whichever is greater. The flushing operation shall continue for sufficient time to ensure thorough cleaning.~~

~~13. When the above flow rate cannot be verified or met, supply piping shall be flushed at the maximum flow rate available to the system under fire conditions.~~

~~14. Approved site plans showing the size and location of pipe shall be on the job site before the inspection or test is performed.~~

~~15. Galvanized spool piece (potable water). The procedure for installing a galvanized pipe between the ductile iron fire line and the OS&Y valve is as follows:~~

~~(a) If a spool piece is used between the fire line stub and the OS&Y valve to raise the valve off the fire line stub, then it shall be galvanized pipe. This spool may be hydrostatically tested as part of the underground, or part of the sprinkler riser.~~

~~—or—~~

~~(b) If the OS&Y valve is rated by the AWWA as suitable for connection to a potable water system, this valve is a suitable transition piece between the fire line stub and the check valve. This OS&Y valve may be attached directly to the fire line stub if there is adequate clearance for proper operation of the valve, and then no galvanized pipe is required.~~

~~16. All items shall be inspected before any backfill.~~

~~17. Electrical ground wires shall not be connected to underground fire lines.~~

~~18. Backfill shall be well tamped, free of rocks and construction debris and free of corrosives.~~

~~APPENDIX D EMERGENCY VEHICLE ACCESS~~

~~D101.1 Requirements. The following requirements shall be followed when designing emergency vehicle access:~~

~~1. Access for emergency vehicles shall be provided to within 100 feet of the main or principal entrance to every building. The access shall be provided by a public or private street or parking lot.~~

1 2. ~~Buildings 5 stories or 50 feet or more in height require ladder truck access (open~~
2 ~~perimeter) completely on one of the longest sides and a continuance side. When that cannot be~~
3 ~~achieved, 48% of the total perimeter of the building shall be accessible by ladder truck.~~

4 3. ~~When neither of the ladder truck access methods can be achieved, access requirements~~
5 ~~necessary for fire and EMS operations will be determined by the fire official.~~

6 4. ~~Buildings 5 stories or 50 feet or more in height up to the minimum defined height for a~~
7 ~~High Rise Building as defined in the Virginia Construction Code that cannot meet one of the two~~
8 ~~ladder truck access requirements shall meet the emergency escape and rescue, elevator, standby~~
9 ~~power, emergency power, stairway communication, and smoke proof exit enclosure provisions~~
10 ~~found in Chapter 4 of the Virginia Uniform Statewide Building (International Building Code~~
11 ~~Section 403) relating to High Rise Buildings. When in the opinion of the fire official it is~~
12 ~~impractical or unnecessary to meet specific high rise building requirements noted in this section~~
13 ~~to meet reduced ladder truck access, the fire official will provide written notification to the~~
14 ~~building official verifying which provisions are not necessary.~~

15 5. ~~The access to the rear may be provided by a street, parking lot or emergency vehicle~~
16 ~~easement designed to all appropriate standards.~~

17 6. ~~The inner surface of the ladder truck access way shall be no less than 15 feet and no more~~
18 ~~than 30 feet from the exterior building wall.~~

19 7. ~~Where required, emergency vehicle easements shall have a minimum width of 22 feet.~~

20 8. ~~Required fire department access ways over 100 feet in length shall have provisions for~~
21 ~~turning apparatus around according to the requirements established by the Transportation and~~
22 ~~Environmental Services Department for emergency vehicle easements.~~

23 9. ~~Building overhangs which cross an emergency vehicle easement threshold shall not be~~
24 ~~occupied space and shall be no less than 15 feet in height, as measured from the top surface of~~
25 ~~the roadway to the lowest protrusion of the overhang.~~

26 10. ~~Residential rear service alleys that function as fire department emergency vehicle~~
27 ~~access shall meet the access criteria established by the Transportation and Environmental~~
28 ~~Services Department.~~

29 11. ~~Where there is an emergency vehicle easement over a parking structure, the~~
30 ~~design live load for the parking structure deck shall conform to A.A.H.S.T.O. Loading Standard~~
31 ~~HS-20.~~

32 D102 ~~Emergency Vehicle Easements~~

33 D102.1 ~~Emergency Vehicle Easements. Emergency vehicle easements shall be a minimum~~
34 ~~of 22 feet across the travel lane. The emergency vehicle easement shall provide access to~~
35 ~~strategic areas of the building and fire protection systems. Curbing and street components shall~~
36 ~~conform to the standards established by Transportation and Environmental Services and this~~
37 ~~document for emergency vehicle easements.~~

38 D102.2 ~~Sign Specifications. Emergency vehicle easement signs shall be metal construction,~~
39 ~~12 inches wide and 18 inches in height. Provide red letters on reflective white background with a~~
40 ~~3/8 inch red trim strip around the entire outer edge of the sign. The lettering shall say "NO~~
41 ~~PARKING," "EMERGENCY VEHICLE EASEMENT," "EM. VEH. EAS," and "City of Alex.,"~~

1 Lettering size shall be as follows: "NO PARKING" — 2 inches, "EMERGENCY VEHICLE
2 EASEMENT" — 2½ inches. EM. VEH. EAS. — 1 inch, CITY OF ALEX. — ½ inch. Directional
3 Arrows — 1 inch by 6 inches solid shaft with solid head — 1½ inches wide and 2 inches deep (For
4 examples, see Figures D102.1, D102.2, and D102.3). Signs shall be mounted with the bottom of
5 the sign 7 feet above the roadway, and shall be properly attached to a signpost or other approved
6 structure such as designated by the fire official. Posts for signs, when required, shall be metal
7 and securely mounted. Signs shall be parallel to the direction of vehicle travel and posted so the
8 directional arrows clearly show the boundaries and limits of the Emergency Vehicle Easement.
9 In areas where emergency vehicle easements involve two way traffic, double mounted signs
10 shall be provided. The maximum distance between signs shall be 100 feet. Other special signs or
11 modifications to emergency vehicle easement signs shall be approved by the fire official.

12 D102.3 Fire Dept. Access Lanes/Mountable Curbs. Where curbing is a component of the
13 emergency vehicle easement, the curbing construction shall conform to weight and grade
14 requirements for vehicular traffic. In no circumstances shall a raised curb be located in the path
15 of travel in an emergency vehicle easement. Where a mountable curb is provided as part of an
16 emergency vehicle easement, emergency vehicle easement signs shall be posted at the point
17 nearest the edge of the emergency vehicle easement, but in no case within the clear width of the
18 emergency vehicle easement.



1

2

Figure D102.1 Fire Lane Sign Left Arrow



1

2

Figure A107.2 Fire Lane Sign Right Arrow

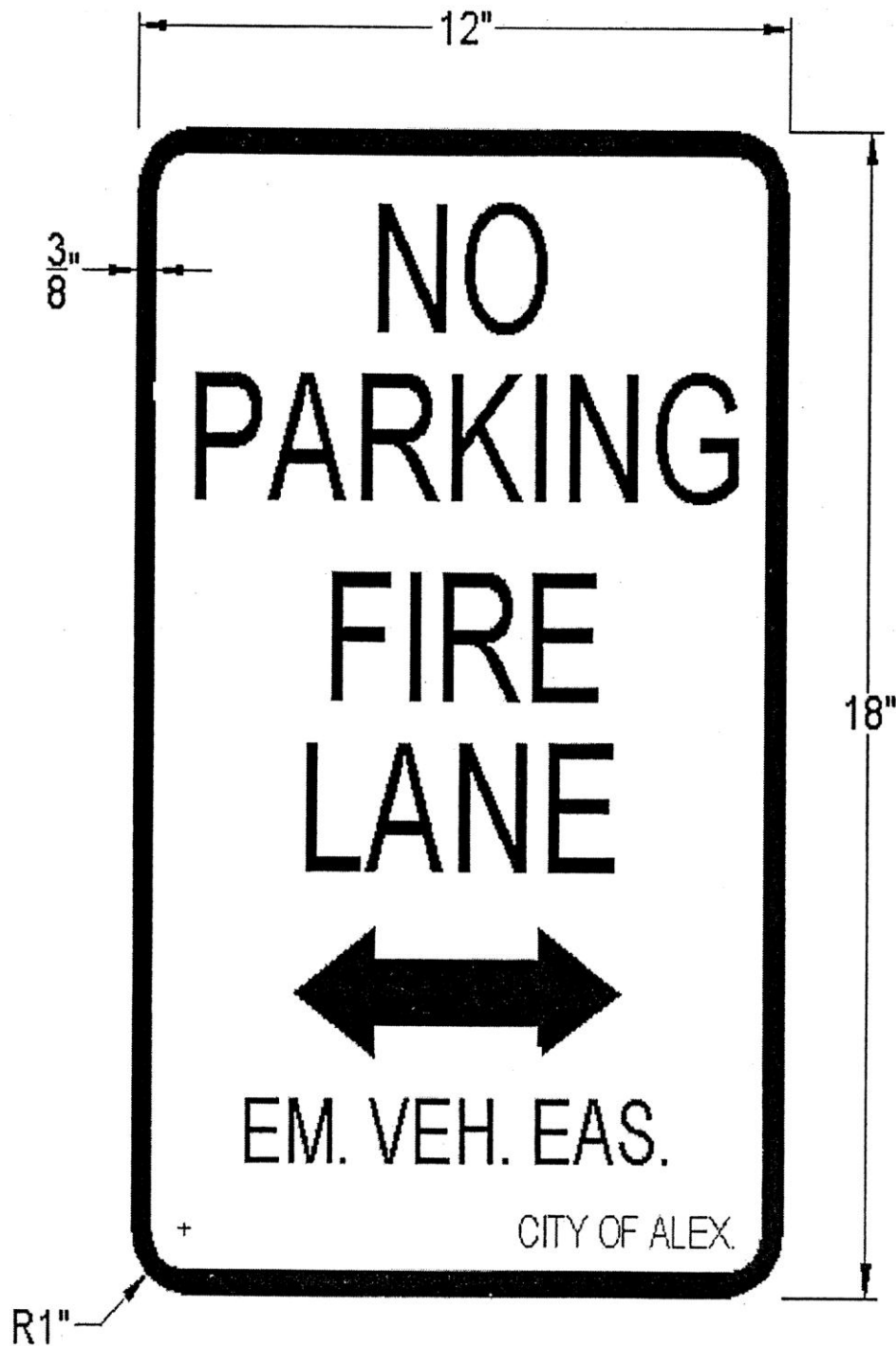


Figure A107.3 Fire Lane Sign Left and Right Arrow

SECTION D103—CONVEYANCE OF EMERGENCY VEHICLE EASEMENT TO CITY OF ALEXANDRIA

D103.1 General. The property owner shall have an Engineer or Surveyor submit to the Transportation & Environmental Services Department a preliminary plat indicating location,

~~width, boundary and a description of the composition of easement for the Emergency Vehicle Easement.~~

~~D103.2 Agency Review. The Transportation & Environmental Services Department and the fire official shall review the plat to determine whether the Emergency Vehicle Easement is necessary or desirable and has adequate access, width, and turning radius. Transportation & Environmental Services Department will determine if the existing paved surface meets city standard (CSAP 1A). All elevated surfaces shall meet H-20 specifications. If the Emergency Vehicle Easement is attached to the terms and conditions of a Special Use Permit, then the applicant must also file with the City's Planning & Zoning Office for review. All appropriate agencies will comment on the content of the plat.~~

~~D103.3 Approval. If approved, the applicant will submit a final plat and descriptive deed. The City of Alexandria will sign and return to applicant for recordation.~~

~~D103.4 Recordation. Upon recordation, the applicant will report deed book and page number (instrument number) to Transportation & Environmental Services Department so information can be kept on file. The final plat and bond will not be released until the deed has been recorded.~~

~~107.2.1 Reference to permits in other chapters. Where there is a reference to operational permits, fire prevention permits, or other permits in any chapter of the Virginia Statewide Fire Prevention Code or the Fire Prevention Code of the City of Alexandria, Virginia amendments thereof, unless specifically stated to the contrary, the provisions of Table 107.2 shall apply when determining if a permit is required and the quantity necessary (if regulated) to require the permit.~~

TABLE 107.2 OPERATION PERMIT REQUIREMENTS

Description	Code Section
Aerosol products. Aggregate quantity of Level 2 or Level 3 aerosol products in excess of 500 pounds (227 kg) net weight when manufacturing, storing or handling.	2801.2
Amusement buildings.	403.4.1
Asphalt Kettles.	303.10
Aviation facilities.	1101.3
Carnivals and fairs.	403.2.2
Battery systems. Stationary lead-acid battery systems having a liquid capacity of more than 50 gallons (189L).	608.1.1
Cellulose nitrate film. Storage, handling or use in any assembly or educational	306.3

occupancy (Group A and E)	
Combustible dust producing operations.	1301.2
Combustible fibers. Storage and handling of combustible fibers in quantities greater than 100 cubic feet (2.8 m²) Exception: Not required for agricultural storage.	2901.3
Compressed gas. Storage, use or handling at normal temperature and pressure (NTP) of compressed gases in excess of the amounts listed below. Exception: Vehicles equipped for and using compressed gas as a fuel for propelling the vehicle.	3001.2

1 -

PERMITS AMOUNTS FOR COMPRESSED GASES		
TYPE OF GAS	AMOUNT (CUBIC FEET AT NTP)	
Corrosive	200	
Flammable (except cryogenic fluids and liquefied petroleum gases).	200	
Highly toxic	Any Amount	
Inert, simple asphyxiant and non-flammable gases	6,000	
Oxidizing (including oxygen)	504	
Toxic	Any Amount	
For SI: 1 cubic foot = 0.02832 m ³		

2 -

Covered mall buildings.	408.11 .4
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1 -

Corrosives. Storage, use, handling:		3101.2
—Gases	200 cubic feet at (NTP)	
—Liquids	55 gallons	
—Solids	1,000 pounds	
Cryogenic fluids. Produce, store, transport on site, use, handle or dispense.		3201.2

2 -

Type	Inside Building (gal)	Outside Building (gal)	
Flammable	more than 1	60	
Inert	60	500	
Oxidizing (includes oxygen)	10	50	
Physical or health hazard not indicated above	Any amount	Any amount	
Exception: Vehicles equipped for and using cryogenic fluids as a fuel for propelling the vehicle or for refrigerating the lading.			
Cutting and Welding. Sweating pipes and hot works			2601.2
Dry cleaning plants.			1201.2
Exhibits and trade shows.			403.4
Explosives and fireworks. An operational permit is required for the manufacture, possession, storage, handling, sale or other disposition, transportation or use of any quantity of explosive, explosive material, fireworks, or pyrotechnic special effects			3301.2

within the scope of Chapter 33, or to operate a terminal for handling explosive materials, or to deliver or receive delivery of explosives or explosive materials from a carrier between sunset and sunrise.	
Explosive Vehicle Inspection. (Valid for 6 months only)	3309.6.1
Fire hydrants and valves. Operate or use any fire hydrants or valves used for fire suppression service.	507.5.7

1 -

Flammable and combustible liquids.		3401.4
1.	To use or operate a pipeline for the transportation with facilities or flammable or combustible liquids. This requirement shall not apply to the offsite transportation (DOTn) (see Section 3501.1.2) nor does it apply to piping systems (see Section 3503.6).	
2.	To store, handle or use of Class I liquids in excess of 5 gallons (19L) in a building or in excess or 10 gallons (37.9L) outside of a building, except that a permit is not required for the following:	
	2.1 The storage or use of Class I liquids in the fuel tanks of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant unless such storage, in the opinion of the Fire Official would cause an unsafe condition.	
	2.2 The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.	
3.	To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95L) in a building or in excess of 60 gallons (227L) outside a building, except for fuel oil used in connection with oil burning equipment.	
4.	To remove Class I or Class II liquids from an underground storage tank used for fueling motor vehicles by means other than the approved, stationary on-site pumps normally used for dispensing purposes.	

5.	To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.
6.	To install, alter, remove, abandon, place temporarily out of service (for more than 90 days) or otherwise dispose of an underground, protected above ground or above-ground flammable or combustible liquid tank.
7.	To change the type of contents stored in a flammable or combustible liquid tank to a material which poses a greater hazard than for which the tank was designed and constructed.
8.	To manufacture, process, blend, or refine flammable or combustible liquids.

1 -

Flammable Gases.	3501.2
Flammable Solids.	3601.2
Floor Finishing. Using Class I or Class II liquids exceeding 350 square feet (33 m ²).	1510.1.2
Fruit and crop ripening.	1601.2
Fumigation and thermal insecticidal fogging.	1701.2
Hazardous materials.	

2 -

PERMIT AMOUNTS FOR HAZARDOUS MATERIALS		2701.5
TYPE OF MATERIAL	AMOUNT	
Combustible liquids	See flammable and Combustible liquids	
Corrosive material	See compressed gases	

Gases	55 gallons	
Liquids	1,000 pounds	
Solids	See Explosives	
Explosive materials	See explosives	
Flammable materials		
Gases	See compressed gases	
Liquids	See flammable and combustible liquids	
Solids	100 pounds	
Highly Toxic materials		
Gases	See compressed gases	
Liquids	See flammable and combustible liquids	
Solids	100 pounds	
Oxidizing materials		
Gases	See compressed gases	
Liquids		
Class 4	Any amount	
Class 3	1 gallon	
Class 2	10 gallons	
Class 1	55 gallons	

Solids		
Class 4	Any amount	
Class 3	10 gallons	
Class 2	100 gallons	
Class 1	500 gallons	
Organic peroxides		
Liquids		
Class I	Any amount	
Class II	Any amount	
Class III	1 gallon	
Class IV	2 gallons	
Class V	No permit required	
Solids		
Class I	Any amount	
Class II	Any amount	
Class III	10 pounds	
Class IV	20 pounds	
Class V	No permit required	
Pyrophoric materials		
Gases	See compressed gases	

Liquids	Any amount	
Solids	Any amount	
Toxic materials		
Gases	See compressed gases	
Liquids	10 gallons	
Solids	100 pounds	
Unstable (reactive) materials		
Liquids		
Class 4	Any amount	
Class 3	Any amount	
Class 2	50 pounds	
Class 1	100 pounds	
Water reactive materials		
Liquids		
Class 3	Any amount	
Class 2	5 gallons	
Class 1	55 gallons	
Solids		
Class 3	Any amount	
Class 2	50 pounds	

Class 1	500 pounds	
For SI: 1 gallon = 3.785 L, 1 pound = 0.454 kg.		

1 -

Heliports and Helistops.	1107.1.1
Highly Toxic Materials.	3701.2
High piled storage. Use a building or portion exceeding 500 square feet (46 m²).	2301.2
Indoor display of vehicles or equipment.	314.4.1
Indoor Pyrotechnics.	3308.2
Industrial ovens.	2101.2
Lumber yards and woodworking plants. Storage or processing exceeding 100,000 board feet (8,333 ft³) (236m³).	1901.2
Liquid or gas fueled vehicles in assembly buildings.	3803.2.2.1
LP Gas. Storage and use inside or outside of any building. Exception: 1. Individual containers with 500 gallons (1893L) water capacity or less serving occupancies in Use Group R-3. 2. Operation of cargo tankers that transport LP gas.	3801.2
Magnesium. Melt, cast, heat treat or grind more than 10 pounds (4.54 kg).	3601.2
Miscellaneous combustible storage. Store in any building or upon any premises in excess of 2,500 cubic feet (71m³) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber cork or similar combustible material.	301.2
Open burning. Open burning—Charitable organizations.	307.2

Open flames, heat producing appliances, or torches for removing paint.	301.2
Organic coatings. Manufacturing operation producing more than 1 gallon (4L) of an organic coating in one day.	2001.2
Organic peroxides.	3901.2
Oxidizers.	4001.2
Places of Assembly/educational. occupancy less than 50 persons occupancy 50 to 100 persons occupancy over 100 persons	408.1.2
Pyrophoric materials.	4101.2
Pyroxylin plastics. Storage and handling of more than 25 pounds (11kg) or cellulose nitrate (pyroxylin) plastic and for the assembly or manufacture of articles involving pyroxylin plastics.	4201.2
Repair Garages, Service Stations and Motor Fuel Dispensing Facilities	2201.2
Semiconductor Fabrication Facilities—HPM Facilities	1801.5
Special Outdoor Assembly and Events.	403.2.2
Application of Flammable Finishes, Spraying and Dipping.	1501.3
Storage of scrap tires and tire by products. Establish, conduct or maintain storage of scrap tires and tire by products exceeding 2,500 cubic feet (71m ³) of total volume of scrap tires and for indoor storage of tires and tire by products.	2509.3
Temporary membrane structures, tents and canopies.	2403.4
Tire rebuilding plants.	2501.2
Torches for removing paint and sweating pipe.	301.2
Unstable (reactive) materials.	4301.2

Waste material and junk yards.	318.2
Water reactive materials.	4401.2
Wood products. Store chips, hogged material, lumber or plywood in excess of 200 cubic feet (6 m³)	1907.1.1

1 TABLE 107.2 OPERATIONAL PERMIT REQUIREMENTS

<u>Description</u>	<u>Code Section</u>	<u>Permit Fee</u>
<u>Aerosol products. Aggregate quantity of Level 2 or Level 3 aerosol products in excess of 500 pounds (227 kg) net weight when manufacturing, storing or handling.</u>	<u>5101.2</u>	<u>\$200.00</u>
<u>Amusement buildings.</u>	<u>401.10</u>	<u>\$200.00</u>
<u>Asphalt Kettles.</u>	<u>303.10</u>	<u>\$143.00</u>
<u>Assembly Uses.</u>	<u>401.11</u>	
<u>Educational Uses.</u>	<u>401.9</u>	
		<u>\$114.00</u>
<u>Up to 100 persons (A)</u>		
<u>Occupancy 100 to 150 persons (B)</u>		<u>\$228.00</u>
<u>Occupancy over 150 persons (C)</u>		<u>\$342.00</u>
<u>Aviation facilities.</u>	<u>2001.3</u>	<u>\$143.00</u>
<u>Battery systems. Stationary lead-acid battery systems having a liquid capacity of more than 50 gallons (189L).</u>	<u>608.1.1</u>	<u>\$171.00</u>
<u>Carnivals and fairs.</u>	<u>403.11.2.1</u>	<u>\$314.00</u>
<u>Cellulose nitrate film. Storage, handling or use in any assembly or educational occupancy (Group A and E)</u>	<u>306.3</u>	<u>\$143.00</u>
<u>Combustible dust-producing operations.</u>	<u>2201.2</u>	<u>\$200.00</u>
<u>Combustible fibers. Storage and handling of combustible fibers in quantities greater than 100 cubic feet (2.8 m²)</u>	<u>5201.3</u>	<u>\$200.00</u>
<u>Exception: Not required for agricultural storage.</u>		

<u>Compressed gas. Storage, use or handling at normal temperature and pressure (NTP) of compressed gases in excess of the amounts listed below.</u>		<u>5301.2</u>	<u>\$171.00</u>
<u>Exception: Vehicles equipped for and using compressed gas as a fuel for propelling the vehicle.</u>			
<u>PERMITS AMOUNTS FOR COMPRESSED GASES</u>			
<u>Type of Gas</u>	<u>Amount – CU FT</u>		
<u>Corrosive</u>	<u>200</u>		
<u>Flammable (except cryogenic fluids and liquefied petroleum gases)</u>	<u>200</u>		
<u>Highly toxic</u>	<u>Any Amount</u>		
<u>Inert, simple asphyxiant and non-flammable gases</u>	<u>6000</u>		
<u>Oxidizing (including oxygen)</u>	<u>504</u>		
<u>Pyrophoric</u>	<u>Any Amount</u>		
<u>Toxic</u>	<u>Any Amount</u>		
<u>For SI: 1 cubic foot = 0.02832 m³</u>			

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<u>Covered and open mall buildings.</u>	<u>403.10.1.7</u>	<u>\$570.00</u>
<u>Corrosives. Storage, use, handling:</u>	<u>5401.2</u>	<u>\$143.00</u>
<ul style="list-style-type: none"> <u>Gases</u> 200 cubic feet at (NTP) <u>Liquids</u> 55 gallons <u>Solid</u> 1,000 pounds 		
<u>Cryogenic fluids. Produce, store, transport on site, use, handle or dispense.</u>	<u>5501.2</u>	<u>\$200.00</u>
<u>Type</u> <u>Inside Bldg (gal)</u> <u>Outside Bldg (gal)</u>		

Flammable	More than 1 gallon	60		
Inert	60	500		
Oxidizing - (includes oxygen)	10	50		
Physical or health not Indicated above	Any Amount	Any Amount		
Exception: Vehicles equipped for and using cryogenic fluids as a fuel for propelling the vehicle or for refrigerating the lading				

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<u>Cutting and Welding. Sweating pipes and hot works</u> <ul style="list-style-type: none"> • <u>Per single occurrence or fixed based operation</u> • <u>Annual permit (multiple job locations in the City)</u> 	<u>3501.2</u>	<u>\$154.00</u> <u>\$314.00</u>
<u>Dry cleaning plants.</u>	<u>2101.2</u>	<u>\$171.00</u>
<u>Indoor exhibits, trade shows, and special amusement events.</u>	<u>401.10</u>	<u>\$171.00</u>
<u>Explosives and fireworks. An operational permit is required for the manufacture, possession, storage, handling, sale or other disposition, transportation or use of any quantity of explosive, explosive material, fireworks, or pyrotechnic special effects within the scope of Chapter 56, or to operate a terminal for handling explosive materials, or to deliver or receive delivery of explosives or explosive materials from a carrier between sunset and sunrise.</u>	<u>5601.2</u> <u>5607.1.1</u>	<u>\$285.00</u> <u>\$285.00</u>
<u>Note: Valid for 6 months period only</u>		
<u>Explosive Vehicle Inspection. (Valid for 6 months only)</u>	<u>5610.6.1.2</u>	<u>\$228.00</u>
<u>Fire hydrants and valves. Operate or use any fire hydrants or valves used for fire suppression service.</u>	<u>507.5.7</u>	<u>\$143.00</u>
<u>Flammable and combustible liquids.</u> <ol style="list-style-type: none"> 1. <u>To use or operate a pipeline for the transportation with facilities or flammable or combustible liquids. This requirement shall not apply to the offsite transportation (DOTn) nor does it apply to piping systems.</u> 	<u>5701.4</u>	<u>\$143.00</u>

<p>2. <u>To store, handle or use of Class I liquids in excess of 5 gallons (19L) in a building or in excess of 10 gallons (37.9L) outside of a building, except that a permit is not required for the following:</u></p> <p>2.1 <u>The storage or use of Class I liquids in the fuel tanks of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant unless such storage, in the opinion of the fire official would cause an unsafe condition.</u></p> <p>2.2 <u>The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.</u></p> <p>3. <u>To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95L) in a building or in excess of 60 gallons (227L) outside a building, except for fuel oil used in connection with oil-burning equipment.</u></p> <p>4. <u>To remove Class I or Class II liquids from an underground storage tank used for fueling motor vehicles by means other than the approved, stationary on-site pumps normally used for dispensing purposes.</u></p> <p>5. <u>To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.</u></p> <p>6. <u>To install, alter, remove, abandon, place temporarily out of service (for more than 90 days) or otherwise dispose of an underground, protected above-ground or above-ground flammable or combustible liquid tank.</u></p> <p>7. <u>To change the type of contents stored in a flammable or combustible liquid tank to a material which poses a greater hazard than that for which the tank was designed and constructed.</u></p> <p>8. <u>To manufacture, process, blend, or refine flammable or combustible liquids.</u></p>		
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<u>Flammable Gases.</u>	<u>5801.2</u>	<u>\$143.00</u>
<u>Flammable Solids.</u>	<u>5901.2</u>	<u>\$143.00</u>
<u>Flammable Finish Application.</u>	<u>2401.3</u>	<u>\$143.00</u>
<u>Floor Surfacing and Finishing. Using Class I or Class II liquids exceeding 350 square feet (33 m²).</u>	<u>2410.1.1</u>	<u>\$143.00</u>
<u>Fruit and crop ripening.</u>	<u>2501.2</u>	<u>\$143.00</u>

<u>Fumigation and thermal insecticidal fogging.</u>	<u>2601.2</u>	<u>\$143.00</u>
<u>Hazardous materials.</u>	<u>5001.5</u>	<u>\$285.00</u>
<u>PERMIT AMOUNTS FOR HAZARDOUS MATERIALS</u>		
<u>TYPE OF MATERIAL</u>	<u>AMOUNT</u>	
<ul style="list-style-type: none"> <u>Combustible Liquids</u> See flammable and combustible liquids <u>Corrosive material</u> 		
Gases	See compressed gases	
Liquids	55 gallons	
Solids	1,000 pounds	
<ul style="list-style-type: none"> <u>Explosive materials</u> See explosives and fireworks <u>Flammable materials</u> 		
Gases	See compressed gases	
Liquids	See flammable and combustible liquids	
Solids	100 pounds	
<ul style="list-style-type: none"> <u>Highly Toxic materials</u> 		
Gases	See compressed gases	
Liquids	Any Amount	
Solids	Any Amount	
<ul style="list-style-type: none"> <u>Oxidizing materials</u> 		
Gases	See compressed gases	
Liquids		

Class 4	<u>Any Amount</u>		
Class 3	<u>1 gallon</u>		
Class 2	<u>10 gallons</u>		
Class 1	<u>55 gallons</u>		
<u>Solids</u>			
Class 4	<u>Any Amount</u>		
Class 3	<u>10 pounds</u>		
Class 2	<u>100 pounds</u>		
Class 1	<u>500 pounds</u>		
<ul style="list-style-type: none"> • <u>Organic peroxides</u> 			
<u>Liquids</u>			
Class I	<u>Any Amount</u>		
Class II	<u>Any Amount</u>		
Class III	<u>1 Gallon</u>		
Class IV	<u>2 Gallons</u>		
Class V	<u>No permit required</u>		
<u>Solids</u>			
Class I	<u>Any Amount</u>		
Class II	<u>Any Amount</u>		
Class III	<u>10 Pounds</u>		
Class IV	<u>20 Pounds</u>		
Class V	<u>No permit required</u>		
<ul style="list-style-type: none"> • <u>Pyrophoric Materials</u> 			

Gases	<u>See compressed gases</u>		
Liquids	<u>Any Amount</u>		
Solids	<u>Any Amount</u>		
• <u>Toxic Materials</u>			
Gases	<u>See compressed gases</u>		
Liquids	<u>10 Gallons</u>		
Solids	<u>100 Pounds</u>		
• <u>Unstable (reactive) Materials</u>			
<u>Liquids</u>			
Class 4	<u>Any Amount</u>		
Class 3	<u>Any Amount</u>		
Class 2	<u>5 Gallons</u>		
Class 1	<u>10 Gallons</u>		
<u>Solids</u>			
Class 4	<u>Any Amount</u>		
Class 3	<u>Any Amount</u>		
Class 2	<u>50 pounds</u>		
Class 1	<u>100 pounds</u>		
• <u>Water-reactive Materials</u>			
<u>Liquids</u>			
Class 3	<u>Any Amount</u>		
Class 2	<u>5 Gallons</u>		
Class 1	<u>55 Gallons</u>		

<u>Solids</u>		
Class 3	Any Amount	
Class 2	50 pounds	
Class 1	500 pounds	
For SI: 1 gallon = 3.785 L, 1 pound = 0.454 kg.		
<u>Note:</u> <ol style="list-style-type: none"> <u>20 gallons when table 5003.1.1(1) note K applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 20 gallons or less.</u> <u>200 pounds when table 5003.1.1(1) note K applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 200 gallons or less.</u> 		

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<u>Heliports and Helistops.</u>	<u>2007.1.1</u>	<u>\$143.00</u>
<u>Highly Toxic Materials.</u>	<u>6001.2</u>	<u>\$285.00</u>
<u>High-piled storage. Use of a building or portion exceeding 500 square feet (46 m²).</u>	<u>3201.2</u>	<u>\$200.00</u>
<u>Indoor display of vehicles or equipment.</u>	<u>314.4.1</u>	<u>\$143.00</u>
<u>Indoor Pyrotechnics.</u>	<u>5608.1.1</u>	<u>\$285.00</u>
<u>Industrial ovens.</u>	<u>3001.2</u>	<u>\$200.00</u>
<u>Lumber yards and woodworking plants. Storage or processing exceeding 100,000 board feet (8,333 ft³) (236m³)</u>	<u>2801.2</u>	<u>\$200.00</u>
<u>Liquid or gas fueled vehicles in assembly buildings.</u>	<u>6103.2.2.1</u>	<u>\$143.00</u>
<u>LP Gas. Storage and use inside or outside of any building.</u> <u>Exception:</u> <ol style="list-style-type: none"> <u>Individual containers with 500 gallons (1893L) water capacity or less serving occupancies in Use Group R-3.</u> <u>Operation of cargo tankers that transport LP gas.</u> 	<u>6101.2</u>	<u>\$143.00</u>

<u>Magnesium. Melt, cast, heat treat or grind more than 10 pounds (4.54 kg).</u>	<u>5906.1.1</u>	<u>\$143.00</u>
<u>Miscellaneous combustible storage. Store in any building or upon any premises in excess of 2,500 cubic feet (71m³) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber cork or similar combustible material.</u>	<u>315.2</u>	<u>\$200.00</u>
<u>Open burning.</u>	<u>307.2</u>	<u>\$143.00</u>
<u>Open burning - Charitable organizations.</u>	<u>307.2.1.1</u>	<u>\$11.00</u>
<u>Open flames</u>	<u>308.2</u>	<u>\$143.00</u>
		<u>\$143.00</u>
<u>Examples of open flames include, but not limited to, all heat producing appliances, torches for removing paint, torches for sweating pipe, sterno utilized for warming food, BBQ grills, and aerial lanterns.</u>	<u>308.3.3</u>	
<u>Organic coatings. Manufacturing operation producing more than 1 gallon (4L) of an organic coating in one day.</u>	<u>2901.2</u>	<u>\$143.00</u>
<u>Organic peroxides.</u>	<u>6201.2</u>	<u>\$200.00</u>
<u>Oxidizers.</u>	<u>6301.2</u>	<u>\$200.00</u>
<u>Portable Food Vending Vehicles</u>	<u>321.4</u>	<u>\$171.00</u>
<u>Food vendors preparing food inside vehicles that utilize LPG, fuel tanks, open flames, heating devices, at stationary locations.</u>		
<u>Note: All inspections will be coordinated with the Health Department</u>		
<u>Pyrophoric materials.</u>	<u>6401.2</u>	<u>\$143.00</u>
<u>Pyroxylin plastics. Storage and handling of more than 25 pounds (11kg) of cellulose nitrate (pyroxylin) plastic and for the assembly or manufacture of articles involving pyroxylin plastics.</u>	<u>6501.2</u>	<u>\$200.00</u>
<u>Repair Garages, Service Stations and Motor Fuel Dispensing Facilities</u>	<u>2301.2</u>	<u>\$200.00</u>

<u>Semiconductor Fabrication Facilities - HPM Facilities</u>	<u>2701.5</u>	<u>\$285.00</u>
<u>Special Assembly and Events.</u> <u>See Alexandria Special Events policy for additional costs associated with additional staff.</u>	<u>403.11.2.1</u>	<u>\$285.00</u>
<u>Special Assembly and Events - Food Vendors.</u> <u>Food vendors preparing food that utilize LPG, fuel tanks, open flames, heating device, tents or a combination thereof as part of the special event approved by the fire official.</u> <u>Note: All inspections will be coordinated through the fire marshal's office.</u>	<u>403.11.2.4.1</u>	<u>\$171.00</u>
<u>Spraying and Dipping of Flammable Finishes</u> <u>Exterior spraying areas</u>	<u>2401.3</u> <u>2404.10.1</u>	<u>\$200.00</u> <u>\$200.00</u>
<u>Storage of scrap tires and tire by-products. Establish, conduct or maintain storage of scrap tires and tire by-products exceeding 2,500 cubic feet (71m³) of total volume of scrap tires and for indoor storage of tires and tire by-products.</u>	<u>3401.2</u>	<u>\$200.00</u>
<u>Temporary membrane structures, tents and canopies.</u> <u>Membrane structures, tents and canopies that are 200 square feet or greater.</u> <u>Note: An inspection report shall be provided to the fire official identifying structural stability, fabric compliance, and anchoring to prevent movement.</u>	<u>3103.4</u>	<u>\$171.00</u>
<u>Tire rebuilding plants.</u>	<u>3403.1.1</u>	<u>\$285.00</u>
<u>Unstable (reactive) materials.</u>	<u>6601.2</u>	<u>\$285.00</u>
<u>Waste material and junk yards.</u>	<u>319.2</u>	<u>\$228.00</u>

<u>Water reactive materials.</u>		<u>6701.2</u>	<u>\$250.00</u>
<u>Wood products. Store chips, hogged material, lumber or plywood in excess of 200 cubic feet (6 m³)</u>		<u>2801.2</u>	<u>\$200.00</u>
<u>Fire Protection and Detection Testing and Retesting Fees</u>	<u>Code Section</u>	<u>Permit Fee</u>	<u>Hourly Fee / Inspector</u>
<u>Re-Inspections Resulting From Non-Compliance</u>	<u>Res 2550</u>	<u>N/A</u>	<u>\$125</u>
<u>Testing and Re-inspection of Existing Fire Protection Systems</u>	<u>901.6.4 –</u>	<u>N/A</u>	<u>\$125</u>
<u>(per each Inspector)</u>	<u>901.6.19</u>		
<u>Cancellation of scheduled test</u>	<u>Res 2550</u>	<u>N/A</u>	<u>\$125</u>
<u>Private Hydrant Inspection</u>	<u>507.5.7</u>	<u>N/A</u>	<u>\$125</u>
<u>Faulty Fire Protection Systems</u>	<u>Res 2550</u>	<u>N/A</u>	<u>\$125</u>
<u>Child Day Care</u>			
<u>(Note this is an inspection fee only and no permit is issued).</u>			
<ul style="list-style-type: none"> <u>When requested by Department of Human Services for exempt facilities.</u> <u>When required for State licensing inspection/approval.</u> 		<u>\$35</u>	<u>N/A</u>
		<u>\$75</u>	<u>N/A</u>

1

2 Note: The permit fees for each item set forth in Table 107.2, Operational Permit
3 Requirements, ~~shall~~ may be set from time to time amended by the fire official as approved by
4 City Council ~~by resolution.~~

5 107.2.1 Reference to permits in other chapters. Where there is a reference to operational
6 permits, fire prevention permits, or other permits in any chapter of the Virginia Statewide Fire
7 Prevention Code or the Fire Prevention Code of the City of Alexandria, Virginia amendments
8 thereof, unless specifically stated to the contrary, the provisions of Table 107.2 shall apply when
9 determining if a permit is required and the quantity necessary (if regulated) to require the permit.

10 107.15 Non-refundable fees. All required operational permit fees identified in Table 107.2
11 are non-refundable once the required inspection is completed.

12 108.3.5.1 Access to permit premises. Any person or business required by ~~section~~ Table
13 107.2 to have a permit(s) on premises shall make the necessary keys, any manufacturers material
14 safety data sheets related to products regulated by the permit(s), location of the operation subject
15 to permit(s) within the premises, emergency personnel information and other pertinent
16 information relating to the permitted activity available to fire department personnel by use of an
17 approved locking box on the exterior of the building.

1 110.7 Imminent danger or threat to human health or safety or to property. If the fire official
2 determines that any violation creates an imminent danger or threat to human health or safety or
3 to property, the fire official may forthwith correct or abate such violation, and request that the
4 city attorney institute appropriate legal proceedings to recover the full cost of such response from
5 the property owner, tenant or other responsible party.

6 202 Special Assembly (definition added to existing list). A place of assembly or other area
7 where people congregate to witness a display, exhibition, performance or event that includes but
8 is not limited to sporting events, fairs, trade shows, carnivals, exhibits, special amusement
9 events, and outdoor events that present special hazards as identified by the fire official.

10 301.2 Permits. Permits shall be required as set forth in Table 107.2 for the activities or uses
11 regulated by Sections 303, 306, 307, 308, 314, 315, 319, and 321.

12 303.10 Permits. Permits shall be obtained from the fire official in accordance with Table
13 107.2.

14 303.10.1 Safety Plan. Where required by the fire official, a fire safety plan, emergency
15 procedures, and employee training programs for roof installation, repair, and other related
16 operations shall be approved by the fire official prior to operations.

17 304.3.2.1 Secondary containment. All cooking oil containers exceeding 5.88 cubic feet (44
18 gallons) shall be provided with approved secondary containment.

19 306.3 Permits. Permits shall be obtained from the fire official in accordance with Table
20 107.2.

21 307.1 General. A person shall not cause or allow open burning unless approved in
22 accordance with this code and the air pollution control code (chapter 1 of title 11 of the City
23 Code) of the city. No person shall kindle, or authorize to be kindled or maintain any fire in such
24 a manner that it constitutes a danger to public health and safety as determined by the fire official.

25 **Exception:** Approved outdoor live fire-training performed by the Alexandria Fire
26 Department.

27 307.1.1 Prohibited open burning. Open burning shall be prohibited when atmospheric
28 conditions or local circumstances make such fires hazardous as determined by the fire official.

29 307.2 Permits. Permits shall be obtained from the fire official in accordance with Table
30 107.2.

31 307.2.1.1 Permits. Charitable organizations shall obtain permits for open burning from the
32 fire official in accordance with Table 107.2.

33 308.2 Permits. Permits shall be obtained from the fire official in accordance with Table
34 107.2 (1) if a torch or open flame-producing device is used to remove paint from a structure; (2)
35 if an open flame, fire or burning is used in connection with Group A or E occupancies; (3) if the
36 use or operation of torches and other devices, machines or processes are liable to start or cause
37 fire in or upon wildfire risk areas; or (4) if a torch or open flame-producing device is used for
38 sweating or soldering pipe.

39 308.3.3 Permits required. Permits shall be obtained from the fire official in accordance with
40 Table 107.2 prior to engaging in any open flame, fire, or burning activities.

1 314.4.1 Permit Required. A permit shall be obtained from the fire official in accordance with
2 Table 107.2.

3 315.2 Permits. Permits shall be obtained from the fire official in accordance with Table
4 107.2.

5 ~~315.5 Secondary containment. All cooking oil containers exceeding 5.88 cubic feet (44~~
6 ~~gallons) shall be provided with approved secondary containment.~~

7 ~~318.0~~319.0 Waste Materials and Junk Yards.

8 ~~318.1~~319.1 General. No person making, using, storing, having charge of or having under his
9 control in a building or on any vacant lot, alley, parking lot, open space or property any
10 combustible excelsior, rubbish, sacks, bags, litter, hay, straw or other combustible waste material
11 shall fail at the close of each day to remove all such material which is not compactly baled and/or
12 stacked in an orderly manner, from the building or on any vacant lot, alley, parking lot, open
13 space or property or store it in suitable vaults or in metal-lined and covered receptacles or bins.
14 The fire official shall require suitable baling equipment to be installed in stores, apartment
15 buildings, factories and other buildings where accumulations of paper and waste material are not
16 removed at least every second day.

17 ~~318.2~~319.2 Permits. Permits shall be obtained from the fire official in accordance with Table
18 107.2 for the operation of waste material facilities, junkyards or any facility where 2500 cubic
19 feet ~~or of~~ material is stored.

20 ~~319.0~~320.0 Noxious, Flammable or ~~combustible~~ Combustible vapors.

21 ~~319.1~~320.1 General. This section shall apply to any process or operation which produces
22 flammable, combustible or noxious fumes or vapors, other than during the regular course of
23 ~~processed processes~~ or operations normally conducted at the premises.

24 ~~319.2~~320.2 Ventilation. All such processes or operations shall have sufficient natural or
25 ~~supplies supplied~~ ventilation to prevent the migration of such fumes or vapors within the
26 structure. Such processes or operations shall be conducted at times when the building has the
27 fewest number of occupants.

28 ~~319.3~~320.3 Ignition sources. No such process or operation shall be conducted prior to
29 assuring that all potential ignition sources have been identified and extinguished.

30 ~~319.4~~320.4 Alarm and sprinkler systems. If the potential exists to activate an alarm system
31 by conducting such a process or operation, the alarm system shall be disabled and a fire watch in
32 accordance with the requirements of Chapter 9 section 901.7 in this ~~document~~ code shall be
33 maintained by a person other than the person conducting the process or operation. The person
34 maintaining the fire watch shall have the capability of contacting the Fire Department without
35 having to reactivate the alarm system. No disabling of the alarm system shall be permitted,
36 without prior notification to the Alexandria Department of Emergency Communications. Any
37 protective measures taken to protect either the fire alarm or sprinkler systems at the premises,
38 such as covering detectors or taping sprinkler heads, shall be reported to the communication
39 section of the fire department, prior to such measures being taken. At the completion of the
40 process or operation, all such systems shall be fully restored to function and the fire department
41 shall be so notified.

1 ~~349.5~~320.5 Fire Department notification. Any person conducting such process or operation
2 shall notify the Alexandria Department of Emergency Communications of the time, date and
3 place at which such process or operation will be conducted at least 24 hours prior to
4 commencement. Such notice is required even ~~is~~if a permit has previously been obtained for the
5 process or operation.

6 ~~349.6~~320.6 Occupant notification. The owner, tenant, property manager or other person
7 responsible for causing such process or operation to be conducted shall give reasonable notice to
8 occupants of the premises of the type of process, date and time of occurrence and of the potential
9 for the production of flammable, combustible or noxious fumes or vapors.

10 **321.0 Portable Food Vending Vehicles.**

11 321.1 Food Vending Vehicles Producing Grease Laden Vapors. Vehicles containing
12 commercial cooking operations that produce grease laden vapors shall comply with Section 609
13 of the Virginia Statewide Fire Prevention Code when stationary and functioning as a fixed
14 stationary facility. Vehicles containing commercial cooking operations that are in transit shall be
15 governed by the Department of Transportation (DOT) when mobile.

16 321.2 Food vending Vehicles Containing Fixed Fire Protection Systems. Vehicles
17 containing commercial cooking exhaust fire protection systems shall comply with Sections
18 904.11 through 904.11.6 of the Virginia Statewide Fire Prevention Code when stationary and
19 functioning as a fixed stationary facility. Vehicles containing commercial cooking exhaust fire
20 protection systems shall be governed by the Department of Transportation (DOT) when mobile.

21 321.3 Food Vending Vehicles Containing Hazardous Materials. Vehicles containing
22 hazardous materials shall comply with Chapters 50, 57, 58, and 61 of this code when stationary
23 and functioning as a fixed stationary facility. Vehicles containing hazardous materials that are in
24 transit shall be governed by the Department of Transportation (DOT) when mobile.

25 321.4 Permits. Permits shall be obtained from the fire official in accordance with Table
26 107.2.

27 401.9 Permits. Permits shall be obtained from the fire official for all places of education in
28 accordance with Table 107.2.

29 401.10 Permits. A permit shall be obtained from the fire official for all indoor exhibits,
30 trade shows, and special amusement buildings and areas in accordance with Table 107.2.

31 401.11 Permits. A permit shall be obtained from the fire official for the utilization of a
32 space or structure for the purpose of assembly in accordance with Table 107.2.

33 ~~403.2.2 Permits. A permit shall be obtained from the fire official for special outdoor~~
34 ~~assembly events, carnivals and fairs in accordance with Table 107.2~~

35 ~~403.2.3~~403.1.2 Submission of Safety plan. A safety plan outlining the event shall be
36 submitted to the fire official 30 days prior to the event start date. The safety plan shall include a
37 site map identifying locations of fire lanes, apparatus access points, food vendors, amusement
38 rides, tents, hazardous materials, hydrants, citizen assembly points and emergency evacuation
39 shelters.

40 ~~403.2.4~~403.1.3 Emergency coordinators. The event coordinator shall provide the fire official
41 with on-site and emergency contact telephone numbers for at least five event coordinators.

~~403.2.5~~403.1.4 Outdoor food handling. All deep fat fryers, woks utilized for deep fat frying or similar cooking devices using hot oil or grease, or producing grease laden vapors, shall be in a mobile unit or trailer with a vented hood and an approved fire suppression system.

~~403.4 Permits. A permit shall be obtained from the fire official for all indoor exhibits, trade shows, and special amusement events in accordance with Table 107.2.~~

~~403.4.1 Permits. A permit shall be obtained from the fire official for the utilization of a space or structure for the purposed of assembly in accordance with Table 107.2.~~

403.4.2 Plan Approval Group E: Fire evacuation plans for all educational occupancies shall be submitted to the fire official for review and approval at least 30 days prior to the start of each school session, unless otherwise approved by the fire official.

403.10.1 Covered mall buildings. Covered and open mall buildings shall comply with the requirements of Sections 403.10.1.1 through 403.10.1.7.

403.10.1.7 Permit required. A permit shall be obtained from the fire official in accordance with Table 107.2.

403.11.2.1 Permits. A permit shall be obtained from the fire official for special outdoor assembly events, carnivals, and fairs in accordance with Table 107.2.

403.11.2.2 Submission of Safety Plan. A safety plan outlining the event shall be submitted to the fire official 30 days prior to the event start date. The safety plan shall include a site map identifying locations of fire lanes, apparatus access points, food vendors, amusement rides, tents, hazardous materials, hydrants, citizen assembly points, and emergency evacuation shelters.

403.11.2.3 Emergency coordinators. The event coordinator shall provide the fire official with on-site and emergency contact telephone numbers for at least five event coordinators.

403.11.2.4 Outdoor food handling. All deep fat fryers, woks utilized for deep fat frying, or similar cooking devices using hot oil or grease that produce grease-laden vapors shall be in a mobile unit or trailer with a vented hood and an approved fire suppression system.

403.11.2.4.1 Permits. Food vendors preparing food that utilize LPG, fuel tanks, open flames, heating devices, tents or a combination thereof shall obtain Operation Permits from the fire official in accordance with Table 107.2.

~~404.2 Where required:~~

- ~~3. Group E. Fire evacuation plans for all educational occupancies shall be submitted to the fire official for review and approval at least 30 days prior to the start of each school session, unless otherwise approved by the fire official.~~

Table 405.2

~~Note: e.~~ In those buildings equipped with "areas of rescue assistance" or "horizontal exits", evacuation to such areas by persons designated to use such areas, shall be deemed to comply with the requirements of this section.

~~408.1.2 Permits. Permits shall be obtained from the fire official for all places of assembly and education in accordance with Table 107.2.~~

~~408.11 Covered mall buildings. Covered mall buildings shall comply with the provisions of Sections 408.11.1 through 408.11.4.~~

1 ~~408.11.4 Permit required. A permit shall be obtained from the fire official in accordance~~
2 ~~with Table 107.2.~~

3 503.1 Emergency access roadways. Emergency vehicle access shall be installed and
4 maintained in accordance with this section and Appendix D, Emergency Vehicle Access.

5 503.1.4 Temporary Emergency Vehicle Easements. The fire official is authorized to
6 designate and identify temporary emergency vehicle easements during emergency conditions to
7 ensure access of fire department equipment and personnel.

8 503.2 Signs and markings. The property owner or designee shall supply, install and maintain
9 signs and other markings to designate and identify emergency vehicle easements as directed by
10 the fire official. The signs shall identify the starting point, continuation and end point for all
11 emergency vehicle easements.

12 503.3 Sign Specifications. Emergency Vehicle Easement signs shall conform to the
13 following standards, and shall be installed in accordance with the requirements of Appendix D,
14 Emergency Vehicle Easements.

15 503.4 Obstruction of fire apparatus access roads. Fire apparatus access roads and emergency
16 vehicle easements shall not be obstructed in any manner, including the parking of vehicles. The
17 minimum widths and clearances established in Appendix D, Emergency Vehicle Easements shall
18 be maintained at all times.

19 503.6.1 Security Gate Override. All newly installed security gates that restrict automatic
20 operation by the fire department and require special tools or knowledge to override shall be fitted
21 with two override functions including a yelp siren sensor and a manual key override (Knox®
22 item number 3501) as approved by the fire official.

23 ~~506.1 Key repositoryBox: Owners of building in which fire alarm or fire suppression~~
24 ~~systems are installed after June 14, 1997, shall provide a key repository to the satisfaction of the~~
25 ~~fire official. This key repository shall be of a type approved by the fire official and shall be~~
26 ~~located on the exterior of the building, near the main entrance. Keys shall be placed in the~~
27 ~~repository to allow the fire department access to investigate alarms of fire reported from the~~
28 ~~building.~~Owners of buildings in which fire alarm or fire suppression systems are installed after
29 June 14, 1997, shall provide a key box to the satisfaction of the fire official. Keys shall be
30 placed in the key box to allow the fire department access to investigate alarms of fire reported
31 from the building. This key box shall be of a type approved by the fire official and shall be
32 located on the exterior of the building, within 5 feet of the main entrance and other entrances as
33 determined by the fire official or designee. The key box shall not be more than 5 feet or less
34 than 4 feet above grade. The types of key boxes and the number of key sets placed in boxes shall
35 be determined by the fire official or designee. Key boxes shall be of sufficient size to handle the
36 number of key sets necessary to permit the fire department to operate during an emergency.
37 Keys shall be labeled and coded as follows:

38 1. Master Key (White)

39 2. Main Entrance (Green)

40 3. Any additional entrance or exit points (Yellow)

41 4. Stairwell doors that are locked to prevent entry back on to a floor if an automatic override
42 is not provided (Yellow)

- 1 5. Roof (Yellow)
- 2 6. Fire Control Room (Red)
- 3 7. Fire Alarm Reset (Red)
- 4 8. Sprinkler control pad lock(s) (Red)
- 5 9. Sprinkler Room (Red)
- 6 10. Elevator Firemen's Service (Red)
- 7 11. Elevator Machine Room (Blue)
- 8 12. Storage Room(s) (Orange)
- 9 13. Laundry Room(s) (Brown)
- 10 14. Mechanical Room(s) (Brown)
- 11 15. Trash Room(s) (Brown)
- 12 16. Electrical Room(s) (Purple)
- 13 17. Apartment Master (Black)

14 507.3 Fire flow. Fire flow requirements for buildings or portions of buildings and facilities
15 shall be determined in accordance with Appendix B, Fire Flow Requirements for Buildings.

16 507.3.1 Reduction for fire sprinkler system installation. Percentage reductions in the
17 calculated needed fire flow may be applied at the discretion of the fire official or designee for the
18 following types of systems:

- 19 1. NFPA 13 Systems – 50%
- 20 2. NFPA 13R Systems – 33%
- 21 3. NFPA 13D Systems – 25%

22 507.5.1 Where required. Fire hydrants shall be installed as required by Appendix C, Fire
23 Hydrant and Fire Main Requirements.

24 507.5.7 Permits. Permits shall be obtained from the fire official in accordance with Table
25 107.2 for all private and public fire hydrants to operate or use fire hydrants or valves used for fire
26 suppression service. All private fire hydrant use shall be coordinated with the property owner
27 and the fire official.

28 Exception: A permit is not required for authorized employees of the City of Alexandria, the
29 Virginia American Water Company or their designees that manage the water system, or the Fire
30 Department to use or operate fire hydrants or valves.

31 508.1.5 Required Features. ~~4719~~. All buildings that have a fire control room shall equip that
32 room with an operations manual. The fire official shall review and approve the contents of the
33 manual.

34 **511 Emergency Information**

1 511.1 Emergency Building Contact Information. Commercial building owners and or
2 tenants shall provide the Alexandria Department of Emergency Communications with a
3 minimum of three contact names and phone numbers for after-hours emergency contact.

4 **Exception:** Requirements for emergency contact information shall not apply to single
5 family homes or occupants in dwelling units.

6 608.1.1 Permits. Permits shall be obtained from the fire official in accordance with Table
7 107.2.

8 609.3.3.4 Documentation Alternatives. Contractors and service technicians shall install
9 approval stickers on the exterior of the kitchen exhaust hood and each clean-out opening during
10 the required inspections that identifies the date cleaned, the next due cleaning date, non-
11 accessible areas, and the service technician's name and company affiliation. Fire protection
12 service technicians shall attach an inspection tag to the manual pull station and product cylinder
13 identifying the service date, the next required service date, and the technician's name and
14 company name.

15 805.4 Use Group A and R-2 college and university dormitories: The requirements of
16 sections 805.4.1 through 805.4.2.3 shall apply to assembly areas, and college and university
17 dormitories classified in Group R-2, including decks, porches, and balconies.

18 805.4.1 Upholstered furniture. New and existing upholstered furniture shall meet the
19 requirements of sections 805.4.1.1 through 805.4.1.3.

20 901.6.2 Test records. A completed written record of all tests and inspections required under
21 this chapter shall be maintained on the premises by the owner or occupant responsible for said
22 premises and a copy of any such record shall be provided to the fire official after the completion
23 of any test or inspection if requested. Accurate logs shall be maintained, indicating the number,
24 location and type of device tested. Any defect, modification or repair shall be logged, and the log
25 shall be made available to the fire official. All records of system inspections, tests and
26 maintenance required by the referenced standards shall be maintained on the premises for a
27 minimum of 5 years and made available to the fire official upon request.

28 901.6.3 Test responsibility and notification: The fire official shall not be responsible for any
29 damages incurred during any test required under the provisions of this chapter. Any test required
30 under the provisions of this chapter shall be performed in the presence of the fire official, unless
31 such requirement is waived by the fire official. Any such test shall be scheduled at the
32 convenience of the owner or occupant responsible for said premises and the fire official.

33 901.6.4 Periodic testing, inspection and maintenance: All water-based extinguishing systems
34 including fire sprinkler, water mist, water-spray, and standpipe systems shall be periodically
35 inspected, tested, and maintained in accordance with the requirements of NFPA 25 listed in
36 Chapter 4780 of this code. Any required inspections and tests shall be performed in the presence
37 of the fire official, unless such requirement is waived by the fire official. Fees for the attendance
38 of the fire official shall be charged in accordance with the fee schedule of the Fire Prevention
39 and Life Safety Section of the Alexandria Fire Department.

40 901.6.5 Periodic testing, inspection and maintenance. All foam-extinguishing systems shall
41 be periodically inspected tested, and maintained in accordance with NFPA 11, NFPA 16, and
42 NFPA 25 listed in Chapter 47-80 of this code and Section 904.7 through 904.7.1. Any required
43 inspections and tests shall be performed in the presence of the fire official unless such

1 requirement is waived by the fire official. Fees for the attendance of the fire official shall be
2 charged in accordance with the fee schedule of the Fire Prevention and Life Safety Section of the
3 Alexandria Fire Department.

4 901.6.6 Periodic testing, inspection and maintenance. All fire suppression systems including
5 those listed in Sections 901.6.7 through 901.6.11 shall be periodically inspected, tested, and
6 maintained in accordance with the requirements and standards listed in Chapter ~~47~~80 of this
7 code. Any required inspections and tests shall be performed in the presence of the fire official
8 unless such requirement is waived by the fire official. Fees for the attendance of the fire official
9 shall be charged in accordance with the fee schedule of the Fire Prevention and Life Safety
10 Section of the Alexandria Fire Department.

11 901.6.7 Periodic testing, inspection and maintenance. All carbon dioxide extinguishing
12 systems shall be periodically inspected, tested, and maintained in accordance with NFPA 12
13 listed in Chapter ~~47~~80 of this code and Sections 904.8 through 904.8.5. Any required
14 inspections and tests shall be performed in the presence of the fire official unless such
15 requirement is waived by the fire official. Fees for the attendance of the fire official shall be
16 charged in accordance with the fee schedule of the Fire Prevention and Life Safety Section of the
17 Alexandria Fire Department.

18 901.6.8 Periodic testing, inspection and maintenance. All halogenated extinguishing systems
19 shall be periodically inspected, tested, and maintained in accordance with NFPA 12A listed in
20 Chapter ~~47~~80 of this code and Sections 904.9 through 904.9.4. Any required inspections and
21 tests shall be performed in the presence of the fire official unless such requirement is waived by
22 the fire official. Fees for the attendance of the fire official shall be charged in accordance with
23 the fee schedule of the Fire Prevention and Life Safety Section of the Alexandria Fire
24 Department.

25 901.6.9 Periodic testing, inspection and maintenance. All clean agent fire extinguishing
26 systems shall be periodically inspected, tested, and maintained in accordance with NFPA 2001
27 listed in Chapter ~~47~~80 of this code, the system manufacturer's instructions and Sections 904.10
28 through 904.10.3. Any required inspections and tests shall be performed in the presence of the
29 fire official unless such requirement is waived by the fire official. Fees for the attendance of the
30 fire official shall be charged in accordance with the fee schedule of the Fire Prevention and Life
31 Safety Section of the Alexandria Fire Department.

32 901.6.10 Periodic testing, inspection and maintenance. All dry-chemical extinguishing
33 systems shall be periodically inspected, tested, and maintained in accordance with NFPA 17
34 listed in Chapter ~~47~~80 of this code, the system manufacturer's instructions and Sections 904.6
35 through 904.6.2. Any required inspections and tests shall be performed in the presence of the fire
36 official unless such requirement is waived by the fire official. Fees for the attendance of the fire
37 official shall be charged in accordance with the fee schedule of the Fire Prevention and Life
38 Safety Section of the Alexandria Fire Department.

39 901.6.11 Periodic testing, inspection and maintenance. All wet-chemical extinguishing
40 systems shall be periodically inspected, tested, and maintained in accordance with NFPA 17A
41 listed in Chapter ~~47~~80 of this code and Sections 904.5, ~~and through~~ 904.5.2. Any required
42 inspections and tests shall be performed in the presence of the fire official unless such
43 requirement is waived by the fire official. Fees for the attendance of the fire official shall be

1 charged in accordance with the fee schedule of the Fire Prevention and Life Safety Section of the
2 Alexandria Fire Department.

3 901.6.12 Periodic testing, inspection and maintenance. All fire detection and alarm systems
4 shall be periodically inspected, tested, and maintained in accordance with NFPA 72 listed in
5 Chapter ~~47-80~~ of this code and sections 907.8 through 907.8.5 ~~907.9 and 907.9.5~~. Any required
6 inspections and tests shall be performed in the presence of the fire official unless such
7 requirement is waived by the fire official. Fees for the attendance of the fire official shall be
8 charged in accordance with the fee schedule of the Fire Prevention and Life Safety Section of the
9 Alexandria Fire Department.

10 901.6.13 Periodic testing, inspection and maintenance. Emergency alarms in building, rooms
11 or areas used for the storage of hazardous materials shall be periodically inspected, tested, and
12 maintained. Test methods and frequency shall be in accordance with NFPA 72 listed in Chapter
13 ~~47-80~~ of this code and Section 908. Any required inspections and tests shall be performed in the
14 presence of the fire official unless such requirement is waived by the fire official. Fees for the
15 attendance of the fire official shall be charged in accordance with the fee schedule of the Fire
16 Prevention and Life Safety Section of the Alexandria Fire Department.

17 901.6.14 Periodic testing, inspection and maintenance. All fire pumps shall be periodically
18 inspected, tested, and maintained in accordance with NFPA 25 listed in Chapter ~~47-80~~ of this
19 code and Section 913. Any required inspections and tests shall be performed in the presence of
20 the fire official unless such requirement is waived by the fire official. Fees for the attendance of
21 the fire official shall be charged in accordance with the fee schedule of the Fire Prevention and
22 Life Safety Section of the Alexandria Fire Department.

23 901.6.15 Periodic testing, inspection and maintenance. Water tanks, fire service mains, and
24 fire hydrants shall be periodically inspected, tested and maintained in accordance with NFPA 25
25 listed in Chapter ~~47-80~~ of this code. Any required inspections and tests shall be performed in the
26 presence of the fire official unless such requirement is waived by the fire official. Fees for the
27 attendance of the fire official shall be charged in accordance with the fee schedule of the Fire
28 Prevention and Life Safety Section of the Alexandria Fire Department.

29 901.6.16 Periodic testing, inspection and maintenance. All fire department connections shall
30 be periodically inspected and tested and maintained in accordance with NFPA 25 listed in
31 Chapter ~~47-80~~ of this code and Section 912. Any required inspections and tests shall be
32 performed in the presence of the fire official unless such requirement is waived by the fire
33 official. Fees for the attendance of the fire official shall be charged in accordance with the fee
34 schedule of the Fire Prevention and Life Safety Section of the Alexandria Fire Department.

35 901.6.17 Periodic testing, inspection and maintenance. All smoke control and smoke
36 management systems shall be periodically inspected, tested, and maintained in accordance with
37 the requirements listed in Section 909.20. Any required inspections and tests shall be performed
38 in the presence of the fire official unless such requirement is waived by the fire official. Fees for
39 the attendance of the fire official shall be charged in accordance with the fee schedule of the Fire
40 Prevention and Life Safety Section of the Alexandria Fire Department.

41 901.6.18 Periodic testing, inspection and maintenance. All access control systems shall be
42 periodically inspected, tested, and maintained in conjunction with any fire protection system
43 inspection and test. Any required inspections and tests shall be performed in the presence of the

1 fire official unless such requirement is waived by the fire official. Fees for the attendance of the
2 fire official shall be charged in accordance with the fee schedule of the Fire Prevention and Life
3 Safety Section of the Alexandria Fire Department.

4 901.6.19 Periodic testing, inspection and maintenance. All fire extinguishers shall be
5 periodically inspected, tested, and maintained in conjunction with the requirements of NFPA 10
6 listed in Chapter 80 of this code and Section 906. Any required inspections and tests shall be
7 performed in the presence of the fire official unless such requirement is waived by the fire
8 official. Fees for the attendance of the fire official shall be charged in accordance with the fee
9 schedule of the Fire Prevention and Life Safety Section of the Alexandria Fire Department.

10 901.7 Systems out of service. When a system becomes impaired or is unable to provide the
11 proper protection for which it was ~~designed.~~ For designed, for short term and on a temporary
12 basis, a fire watch shall be established in accordance with the following requirements to provide
13 onsite observation, documentation, and notification in the event of a fire emergency.

14 901.7.1 Procedures. When the establishment of a fire watch is ordered by the fire department
15 operations personnel, the fire official, the owner or the owner's representative shall implement
16 the following procedures and requirements for the duration of the fire watch. The fire watch shall
17 be maintained until such time the noted system(s) is returned to normal ready service and
18 approved for use by the fire official.

19 901.7.2 Requirements. A fire watch shall consist of ~~the~~ a designated number of staff
20 (minimum of two personnel) at all times ~~and~~ until the compromised system has been repaired,
21 inspected, tested and certified to be placed back in service by the fire official. Each participating
22 staff member shall be equipped with reliable two-way communications. One staff member shall
23 always be stationed in an area or room equipped with a working telephone or cellular phone to
24 report an alarm by dialing 9-1-1.

25 When dialing 9-1-1 from a cellular phone, some cellular phone systems may connect the
26 user with another jurisdiction's emergency communications center, therefore the caller should
27 confirm they are speaking with the Alexandria Department of Emergency Communications. A
28 Walking tour of all areas of the building ~~at~~ shall occur no less than every 10 minutes to observe
29 for conditions where fire, smoke, or hazardous situations require fire department response, or a
30 complete tour of the facility shall occur within a time frame prescribed by a representative of the
31 fire department operation personnel, fire official, or designee and with the staffing level
32 contingent upon the size of the facility and the type of occupancy.

33 If the building or property is of such size that two individuals cannot adequately perform the
34 required fire watch, fire department personnel, or the fire official may require additional on site
35 personnel. ~~The Fire Department representative personnel or the fire official~~ may permit one
36 person to perform the fire watch if the building or property is of a size that one person can
37 adequately perform the fire watch.

38 901.7.3 Required documentation. A legibly written log shall be kept on site at all times for
39 review by any fire department operations personnel, or the fire official, and it shall contain the
40 following information: reason the fire watch was implemented; date and time the fire department
41 was notified that the fire watch was initiated and concluded; start and stop time of each building
42 or property tour; key locations visited in the building(s) requiring the fire watch; name(s) of
43 personnel conducting the fire watch; and name(s) of personnel recording the information.

1 901.7.3.1 Tag Required: A tag shall be used to indicate that a system, or portion thereof, has
2 been removed from service.

3 901.7.3.2 Placement of Tag. An all-weather tag shall be posted at each fire department
4 connection, system, control valve, fire alarm control unit, fire alarm annunciator, and fire
5 command center indicating which system or part thereof has been removed from service. The
6 fire official shall specify where the tag is to be placed.

7 901.7.4 Requirement for Personnel. In all cases, the sole duty of personnel assigned to the
8 fire watch shall be to perform constant patrols of the protected premises, to keep watch for fires,
9 and if necessary to summon the fire department. Personnel conducting the fire watch shall be:
10 capable of performing patrol duties; reliable; not addicted to the use of or under the influence of
11 intoxicants, narcotics, illegal drugs, and/or physically or mentally impaired by prescription
12 drugs; able to clearly and accurately converse with fire department personnel in English, in the
13 event of any emergency; able to remain awake and alert at all times.

14 901.7.5 Determination of a Fire Emergency. If a fire is located, ~~the fire watch staff shall not~~
15 ~~do not attempt to extinguish the fire, instead, the~~ fire watch staff shall immediately call 9-1-1
16 and report the location of the fire within the building. ~~If possible, the fire watch staff shall~~
17 ~~sound the building alarm by activation of a manual station, if safe to do so, the fire watch staff~~
18 ~~shall begin the evacuation of the building starting on the fire floor, then above the fire floor, then~~
19 ~~below the fire floor.~~

20 901.7.6 Restoration of fire protection system. When the fire sprinkler, alarm, detection or
21 suppression system is back in service, the fire watch personnel shall contact the Alexandria
22 Department of Emergency Communications to place the system back in normal ready service.

23 901.7.7 Systems out of service for routine inspection, testing, and maintenance. The fire
24 department and or fire official shall be immediately notified when a fire sprinkler, alarm,
25 detection, suppression, or protection system is out of service for routine inspection, testing and
26 maintenance. Any ~~P~~person or organizations performing any of these activities shall notify the
27 Alexandria Department of Emergency Communications and provide the name of the responsible
28 person and organization, telephone number, and estimated time the system or systems will be out
29 of service. If it is determined by the fire official that the inspection, testing, or maintenance of the
30 system or systems presents an unacceptable level of risk for the period of the inspection, test, or
31 maintenance, a fire watch shall be required by the fire official.

32 901.7.7.1 Restoration of fire protection system. Upon completion of the inspection, testing,
33 or maintenance, the responsible party shall contact the Alexandria Department of Emergency
34 Communications to place the system back in normal ready service.

35 903.5.1 Flow test. All systems shall be tested at the inspector's test pipe with the proper test
36 orifice to determine that the water-flow detecting devices, including the associated alarm circuits
37 are in proper working order.

38 906.11 Maintenance. Maintenance of fire extinguishers shall be in accordance with NFPA
39 10, but at not less than monthly visual checks, yearly service by a certified individual or
40 organization, and hydrostatic test of cylinders every five years.

41 912.4.1 Additional identification sign. All fire department connections shall have an
42 additional sign that is visible from the street and permanently mounted at the height approved by
43 the fire official above the location of each fire department connection. Signs shall be 8 inch x 12

1 inch reflective metal and have red letters “FDC” that are 6 inches in height and 2 inches wide on
2 a white background. Where the FDC cannot be seen from the street, a sign shall be mounted on
3 the street front or at a viewable location that indicates by use of words or an arrow the location of
4 the fire department connection. All signs are subject to approval by the fire official.

5 1001.3 Overcrowding. Admittance of any person beyond the approved occupant load
6 established by the building official or the building code under which the building was
7 constructed, or obstructing aisles, passageways or any part of the means of egress shall not be
8 allowed. The fire official, upon finding any condition that constitutes a life safety hazard, shall
9 be authorized to cause the event to be stopped until such condition or obstruction is corrected.

10 1001.4 Accountability. A person responsible for controlling the occupancy capacity shall
11 develop a system to manage the occupancy capacity for approval by the fire official. This system
12 shall be implemented outside the main entrance and consist of a mechanism to count persons as
13 they enter a facility without restricting egress.

14 1001.5 Operator responsibility. The operator or the person responsible for the operation of
15 an assembly or educational occupancy shall check egress facilities before such building is
16 occupied to determine compliance with this section. If such inspection reveals that any element
17 of the required means of egress cannot be accessed, is obstructed, locked, fastened or otherwise
18 unsuited for immediate utilization, admittance to the building shall not be permitted until
19 necessary corrective action has been completed.

20 1004.3.1 Occupancy placards. Occupancy load placards required by the building and/or fire
21 code shall be maintained by the owner, occupant, or lessee.

22 ~~1020.1.6~~1022.9 Stairway identification signs. Stairway identification signs shall be provided
23 at each landing in all interior exit stairways connecting more than three stories. Stairways shall
24 be identified by letter designation starting next to the main entrance with "A" and continuing in a
25 clockwise or left to right pattern using consecutive letters of the alphabet for each additional
26 stairway. Two copies of the stairway signs shall be submitted to the fire official for approval
27 within 30 days of completion of construction or receipt of notification.

28 ~~1020.1.6.1~~1022.9.1 Sign requirements. Stairway signs shall designate the stairway letter,
29 state the floor level, the level of exit discharge, and if there is access or no access to the roof
30 regardless if the access door or roof hatch locks. The bottom of the sign shall be located five (5)
31 feet above the floor landing in a position that is readily visible when the stairwell door is opened
32 or closed. The signs must have lettering that is a minimum of 2 inches but no greater than 4
33 inches in height. This information may be stenciled directly onto the wall but all lettering must
34 be of a color contrasting with the background stairway wall color. (See Figure
35 ~~1020.1.6.1~~1022.9.1)

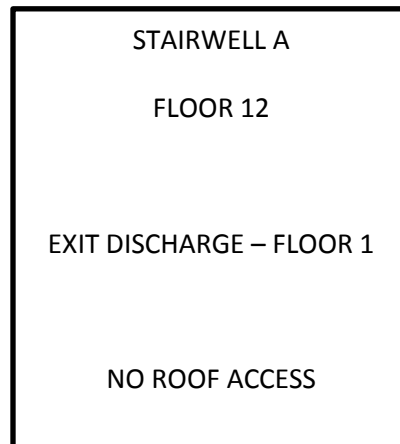


Figure ~~1020.1.6.1~~1022.9.1 Example Stairway Identification Sign

~~1020.1.6.2~~1022.9.2 Footprint requirements. In buildings greater than three stories where there is no graphic representation of the building footprint, a simplified building schematic must be on display in the lobby. The simplified building footprint shall be an overhead view of the ~~buildings~~building's exterior and the general layout of the lobby of the first floor. Stairways shall be denoted by letter as stated in section ~~1020.1.6.~~1022.9 (See Figure ~~1020.1.6.2~~1022.9.2)

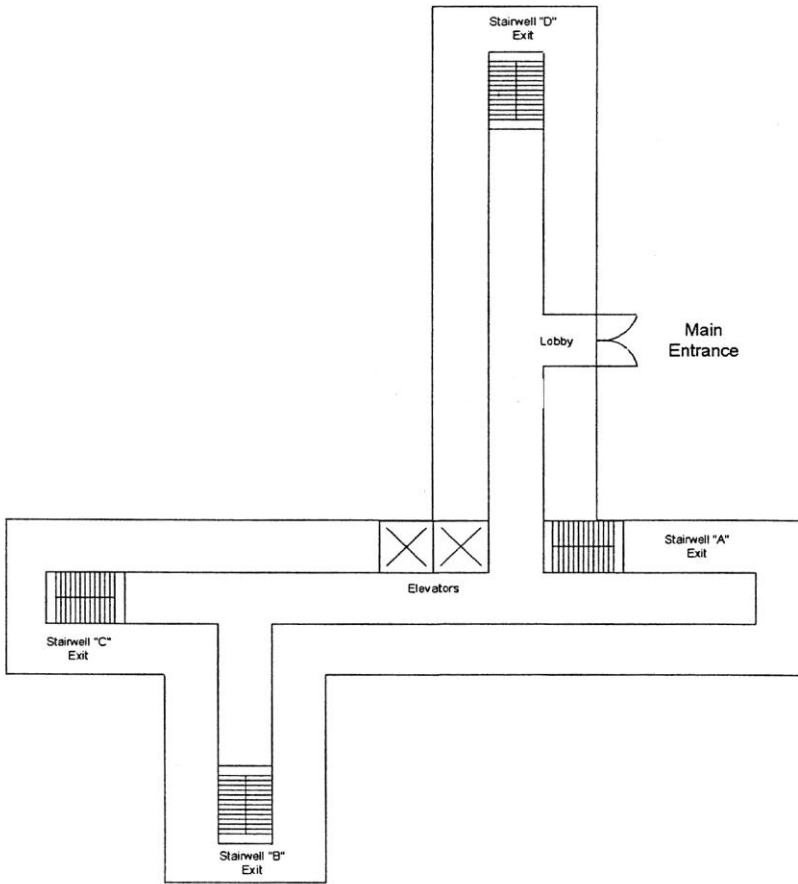


Figure ~~1020.1.6.2~~1022.9.2 Example Building Footprint Sign

1030.3.1 Overcrowding. The fire official, upon finding any condition which constitutes a life safety hazard or where the reliability of the means of egress has been reduced as a result of overcrowding shall be authorized to cause the event to be stopped until such conditions or obstructions are corrected.

~~1107.1.1~~2007.1.1 Permits. Permits shall be obtained from the fire official in accordance with Table 107.2

~~1107.2.1~~2007.1.2 Safety Personnel. A minimum of two trained safety personnel shall supervise the landing area during landing and takeoff. Safety personnel shall be dedicated to the landing area and ensure the area is clear of pedestrians and unauthorized personnel.

~~1403.1.1~~ Plans. ~~Floor plans designating location of heating equipment, heating fuel source, exits, fire extinguishers and fire department access points shall be submitted to the fire official for approval prior to implementation of temporary heat operations.~~

~~1403.1.2~~ Membranes and Sheathing. ~~All material utilized for isolation of heating areas shall be fire retardant.~~

~~1404.5~~ Fire watch. ~~When required by the fire official for building demolition that is hazardous in nature, a fire watch shall be implemented in accordance with the requirements in Section 901.7.~~

~~1405.7~~ Refueling Tanks. ~~All tanks utilized on construction sites shall be equipped with secondary containment and vehicle protection.~~

2101.2 Permits. Permits shall be obtained from the fire official in accordance with Table 107.2.

2201.2 Permits. Permits shall be obtained from the fire official in accordance with Table 107.2.

2301.2 Permits. Permits shall be obtained from the fire official in accordance with Table 107.2.

2401.3 Permits. Permits shall be obtained from the fire official in accordance with Table 107.2.

~~1504.10~~2404.10 ~~Scope~~Exterior Spray Operations. This section applies to exterior spray painting operations of flammable or combustible finishes that do not exceed an accumulative area of 9 (nine) square feet per day.

~~1504.10.1~~2404.10.1 Permit Requirements. A permit shall be applied for with all required supporting documentation, and upon approval, issued to perform limited exterior spray-painting of flammable or combustible finishes. The applicant shall submit two copies of the proposed procedure outlining the process to include the following: a complete list of Material Safety Data Sheets for materials to be utilized, a chemical/paint inventory, the method of on site storage, the method of transportation between sites, the method of paint application, the method of waste/spray paint recovery, site plans, a list of all application areas in which spraying will occur, the type of on site fire protection, ~~a~~ 24 hour emergency contact information and the site contact. The Hazardous Use Permit shall be kept in the on site contractor's vehicle at all times. Absence of the on site permit will void permitted process and the area will be deemed non-compliant. If this occurs, all equipment and paint shall be removed from the City of Alexandria limits.

~~1504.10.2~~2404.10.2 General Requirements. The following general requirements shall apply to all exterior spray painting operations of flammable and combustible finishes and are subject to review and approval by the fire official or designee ~~and the personnel~~ prior to commencing exterior spray painting operations. The following requirements apply to the exterior application of flammable and combustible finishes:

- 1) As practical, the applicant shall locate spray-painting operations away from a building, structure or a property line.
 - 2) The applicant shall ensure the spray painting operation is not continuous in nature.
 - 3) The applicant shall ensure that no exterior electrical equipment is within 20 feet unless it meets the requirement of NEC Class I, Division II, including flexible electrical extension cords, and is approved by the Department of Code Administration.
 - 4) The applicant shall not use portable electrical lamps inside the spray-painting area.
 - 5) The applicant shall provide a minimum of one (40-BC) dry chemical fire extinguisher outside the application area and within 30 feet of travel.
 - 6) The applicant shall remove all possible ignition sources. This shall include securing and stopping all motors on vehicles.
 - 7) The applicant shall not permit open flames within 20 feet of the designated spray area.
 - 8) The applicant shall not permit hot or heated surfaces within the designated spray area.
 - 9) The applicant shall not permit smoking within the spray area. Signage shall be posted and visible from the exterior of the designated spray areas.
 - 10) The applicant shall clean spray-painting equipment in a manner approved by the fire official. Only Class II or III solvents shall be utilized on the exterior.
 - 11) The applicant shall provide a smooth surface for the limited area spray operation. A porous surface such as asphalt is not permitted.
 - 12) If an interior limited area spray operation is approved and utilized, the applicant shall provide the area with approved fire protection and positive ventilation approved for flammable liquids.
 - 13) The applicant shall ensure that all equipment and containers are listed for the flammable or combustible liquid use.
 - 14) If flammable liquids will be transferred from one container to another, the applicant shall ensure that at least one container is bonded and/or grounded.
 - 15) The applicant shall ensure that Class I flammable liquids and/or solvents are not utilized for cleaning of equipment. Only Class II and III combustible liquids may be utilized for cleaning of equipment.
 - 16) The applicant shall keep the limited spray-painting area clean of over spray and residue.
 - 17) The applicant shall provide self-closing metal waste cans to handle waste and rags.
 - 18) The applicant shall control odors, smoke and any other air pollution from operations at the site and prevent them from leaving the property or becoming a nuisance to neighboring properties, as determined by the Department of Transportation and Environmental Services.
 - 19) The applicant shall not dispose of material by venting material into the atmosphere.
- ~~410.1.1~~ 2410.1.1 Permits. Permits shall be obtained from the fire official in accordance with Table 107.2

1 2501.2 Permits. Permits shall be obtained from the fire official in accordance with Table
2 107.2.

3 ~~2509.2 Indoor Storage of Scrap Tires and Tire Byproducts. The storage of scrap tires and~~
4 ~~tire by products exceeding 2,500 cubic feet (71 m³) shall require a permit.~~

5 2601.2 Permits. Permits shall be obtained from the fire official in accordance with Table
6 107.2.

7 ~~2604.2.6.1 Exterior Operations. Areas where welding and cutting carts are moved or~~
8 ~~relocated out of an approved welding and cutting area, the welding and cutting carts shall be~~
9 ~~equipped with an approved 2A 20BC fire extinguisher. The fire extinguisher shall be securely~~
10 ~~mounted to the welding and cutting cart.~~

11 2701.5 Permits. Permits shall be obtained from the fire official in accordance with Table
12 107.2.

13 2801.2 Permits. Permits shall be obtained from the fire official in accordance with Table
14 107.2.

15 2807.1.1 Permits. Permits shall be obtained from the fire official in accordance with Table
16 107.2.

17 2901.2 Permits. Permits shall be obtained from the fire official in accordance with Table
18 107.2.

19 3001.2 Permits. Permits shall be obtained from the fire official in accordance with Table
20 107.2.

21 3103.4 Permits. Permits shall be obtained from the fire official in accordance with Table
22 107.2.

23 3201.2 Permits. Permits shall be obtained from the fire official in accordance with Table
24 107.2.

25 ~~3301.1.3 Fireworks. The possession, manufacture, storage, sale, handling, display, and use~~
26 ~~of fireworks within the City of Alexandria is prohibited. The fire official or designee shall seize,~~
27 ~~take, remove or cause to be removed at the expense of the owner, all fireworks offered for sale,~~
28 ~~stored or held in violation of this code.~~

29 ~~Exception: For public and private displays as permitted by the fire official where a permit is~~
30 ~~obtained prior to any display in accordance with the requirements of this chapter.~~

31 ~~3301.2 Permits. Permits shall be obtained from the fire official in accordance with Table~~
32 ~~107.2 for all blasting operations, firework aerial displays, pyrotechnic events before an audience,~~
33 ~~the transportation, manufacture, possession, use, storage of explosives and fireworks and the~~
34 ~~operation of a terminal for handling explosive material and the delivery to or receipt from a~~
35 ~~carrier at a terminal between sunset and sunrise. An application for the display of aerial~~
36 ~~fireworks shall be completed and submitted to the fire official 45 days before the scheduled~~
37 ~~event. The application for aerial fireworks display shall include the following:~~

38 ~~1) A copy of insurance policy with the City of Alexandria named as a co-insured.~~

39 ~~2) A site plan with the layout of the discharge site, spectator site, viewing area, parking~~
40 ~~area, fallout area and distances for each; distances to all tents, buildings and structures.~~

1 ~~3) Provide a complete list of aerial fireworks to be displayed.~~

2 ~~4) Provide type and amount of fire protection.~~

3 ~~5) The type of physical barrier that will be installed around display site and number of~~
4 ~~monitors that will be used during performance.~~

5 ~~6) Identify the type of security and number of monitors that will be onsite during the~~
6 ~~display.~~

7 ~~7) Provide the shooter/operator's name, address, social security number, and date of birth.~~

8 ~~8) Provide fireworks display company address and emergency contact numbers.~~

9 ~~9) Provide emergency contact information including the owner of the property name and~~
10 ~~number, third shooter/operator (within one hour of travel), and hazardous material~~
11 ~~transport company responsible for transportation and security.~~

12 ~~10) Method of storage and location that display fireworks are to be stored.~~

13 ~~11) Copy of current ATF shooters license~~

14 ~~3301.2.2 Sale and Retail Display. The sale and retail display of fireworks, explosives or any~~
15 ~~explosive materials is prohibited within the City of Alexandria.~~

16 ~~3301.2.4 Insurance Responsibility. The fire official shall not issue any permit until the~~
17 ~~requirements of this chapter are met and an application has been submitted for review, approved,~~
18 ~~and the applicant files a certificate of insurance with the City of Alexandria named as a co-~~
19 ~~insured on all policies in the amount of two million (\$2,000,000) dollars for each bodily injury~~
20 ~~and property damage. The insurance policy shall become available for the payment of any~~
21 ~~damage arising from acts or omissions of the applicant, his agents or his employees in~~
22 ~~connection with the display of aerial fireworks. The applicant shall ensure the insurance policy is~~
23 ~~in effect at the time of the commencement of activities authorized by the permit and remains~~
24 ~~continuously in effect until such are completed.~~

25 ~~3302.1 Definitions. Fireworks. "Fireworks" shall mean and include any combustible or~~
26 ~~explosive composition, or any substance or combination of substances or articles prepared for the~~
27 ~~purpose of producing a visible or an audible effect by combustion, explosion, chemical reaction,~~
28 ~~deflagration or detonation and shall include blank cartridges, toy pistols, toy cannons, toy canes~~
29 ~~or toy guns in which explosives are used, the type of balloons which require fire underneath to~~
30 ~~propel them, firecrackers, torpedoes, skyrockets, model rockets, Roman candles, Daygo bombs,~~
31 ~~sparklers, pinwheels, poppers, or other devices containing any explosive or flammable~~
32 ~~compound, or any tablets or other devices containing any explosive; except that the term~~
33 ~~"fireworks" shall not include auto flares, paper caps containing not in excess of an average of~~
34 ~~twenty five hundredths of a grain of explosive content per cap manufactured in accordance with~~
35 ~~the DOT regulations for packing and shipping as provided therein, and toy pistols, toy cannons,~~
36 ~~toy canes, toy guns or other devices for use of the caps, the sale and use of which shall be~~
37 ~~permitted at all times. Pyrotechnics (special fireworks) shall comply with the applicable~~
38 ~~provisions of this Chapter.~~

39 3303.1.1 Plans. Floor plans designating the location of heating equipment, heating fuel
40 source, exits, fire extinguishers and fire department access points shall be submitted to the fire
41 official for approval prior to implementation of temporary heating operations.

1 3303.1.2 Membranes and Sheathing. All material utilized for isolation of heating areas shall
2 be fire retardant.

3 ~~3303.2.1 Records. Daily records shall be kept of the amount of explosives received from a~~
4 ~~supplier and the amount delivered to the magazine. A daily record shall be kept of the amount of~~
5 ~~explosives removed from the magazine for daily use and the amount returned to the magazine.~~
6 ~~This record will be kept within the magazine so that, on inspection of the magazine, an inventory~~
7 ~~for all explosives can be made. The inventory shall be separated as to the different types of~~
8 ~~explosives stored and used. Forms for these records shall be approved by the fire official.~~

9 3304.5 Fire watch. When required by the fire official for building demolition that is
10 hazardous in nature, a fire watch shall be implemented in accordance with the requirements in
11 Section 901.7.

12 ~~3304.5.2.3 Type 2 magazines: Type 2 magazines may be used for temporary storage of~~
13 ~~explosives at the site of blasting operations where the amount constitutes not more than one day's~~
14 ~~supply for use in current operations. All explosives not used in the day's operation shall be~~
15 ~~returned to a Type 1 magazine at the end of the work day for overnight storage. In no case shall a~~
16 ~~Type 2 magazine be used for overnight storage unless approved by the Fire official. Type 2~~
17 ~~magazines shall be allowed only in the I/Industrial Zone.~~

18 3304.8 Refueling Tanks. All tanks utilized on construction sites shall be equipped with
19 secondary containment and vehicle protection.

20 ~~3306.4.1 Small arms primers and ammunition. No more than 10,000 small arms primers and~~
21 ~~ammunition shall be stored in occupancies limited to Groups R-3 and R-5.~~

22 ~~3308.11 Retail display and sale. The retail display or sale of fireworks is prohibited.~~

23 SECTION 3309 TRANSPORTATION

24 ~~3309.1 Prohibited transportation. Explosive materials shall not be carried or transported on a~~
25 ~~public conveyance or vehicle carrying passengers for hire.~~

26 ~~3309.2 Vehicle design. Vehicles transporting explosive materials shall be strong enough to~~
27 ~~carry the load and shall be in good and safe mechanical condition. The floors shall be tight and~~
28 ~~have no exposed spark producing surface on the inside of the body. Where explosive materials~~
29 ~~are transported on a vehicle with an open body, the explosive material shall be stored in a~~
30 ~~portable magazine or closed container securely fastened to the vehicle body.~~

31 ~~3309.3 Vehicle prohibitions. The attachment of a trailer behind a truck, tractor or semi-~~
32 ~~trailer combination for transporting explosive materials is prohibited. The transport of explosive~~
33 ~~materials in any pole trailer is prohibited. Exception: Such transport is permitted by DOTn 49~~
34 ~~CFR listed in Chapter 45 of this code.~~

35 ~~3309.4 Vehicle restrictions. Vehicles containing explosive materials shall not be taken into a~~
36 ~~garage or repair shop for repair or storage.~~

37 ~~3309.5 Vehicle contents. Only those dangerous articles authorized to be loaded with~~
38 ~~explosive materials in accordance with the provisions of this chapter shall be carried in the body~~
39 ~~of a vehicle transporting explosive materials.~~

1 ~~3309.6 Vehicle inspections. The person to whom a permit has been issued to transport~~
2 ~~explosive materials over the streets and highways of the city shall inspect each vehicle used for~~
3 ~~such purposes daily, to ensure that:~~

4 ~~1. Fire extinguishers are filled and in working order.~~

5 ~~2. All electrical wiring is completely protected and securely fashioned to prevent short~~
6 ~~circuiting.~~

7 ~~3. The motor, chassis, oil pan and body undersides are reasonably clean and free of excess~~
8 ~~grease and oil.~~

9 ~~4. Both the fuel tank and fuel line are secure and free from leaks.~~

10 ~~5. The brakes, lights, windshield wipers, horn and steering mechanism are functioning~~
11 ~~properly.~~

12 ~~6. The tires are properly inflated, have proper tread depth and are free of defects.~~

13 ~~7. The vehicle is otherwise in proper operating condition and acceptable for transporting~~
14 ~~explosive materials.~~

15 ~~8. The operator shall maintain all inspection reports in vehicle at all times.~~

16 ~~3309.6.1 Prior Inspection. Vehicles routinely transporting explosive materials within the city~~
17 ~~shall be inspected by the fire official prior to entering the city limits. Inspection shall occur at six~~
18 ~~month intervals. The fire official shall issue a fire prevention permit to all approved vehicles.~~

19 ~~3309.7 Vehicle signs. Vehicles transporting any quantity of explosive materials shall display~~
20 ~~all placards, signs lettering or numbering in accordance with DOTn 49 CFR listed in Chapter 45.~~

21 ~~3309.8 Separation of detonators and explosives. Detonators shall not be transported in the~~
22 ~~same vehicle with Class A or Class B explosive materials or blasting agents, except as permitted~~
23 ~~by DOTn 49 CFR listed in Chapter 44.~~

24 ~~3309.9 Vehicle traveling clearances. Vehicles transporting explosive materials and traveling~~
25 ~~in the same direction shall not be driven within 300 feet (91,440 mm) of each other.~~

26 ~~3309.10 Vehicle routing. The route followed by vehicles transporting explosive materials~~
27 ~~shall not pass through congested areas or heavy traffic, except as permitted by the fire official. A~~
28 ~~transportation plan identifying the route of travel shall be submitted to the fire official for review~~
29 ~~and approval.~~

30 ~~3309.11 Restricted transportation. Explosive materials shall not be transported through any~~
31 ~~vehicular tunnel or subway or over any bridge, roadway or elevated highway through or over~~
32 ~~which such transport is prohibited.~~

33 ~~3309.12 Portable fire extinguishers. Every vehicle transporting explosive materials shall be~~
34 ~~equipped with portable fire extinguishers capable of being readily accessed, filled and ready for~~
35 ~~immediate discharge.~~

36 ~~3309.12.1 Small trucks. At least two portable fire extinguishers with a minimum 2 A:40-~~
37 ~~B:C rating shall be provided on trucks with a gross vehicle weight of 14,000 lbs. (6356 kg) or~~
38 ~~greater.~~

1 ~~3309.13 Operating precautions. No person shall carry matches of any other flame producing~~
2 ~~device, or carry unauthorized firearms or cartridges while in or near a vehicle transporting or~~
3 ~~storing explosive materials. No person shall drive, load or unload such a vehicle in a careless or~~
4 ~~reckless manner.~~

5 ~~3309.14 Spark protection. Spark producing metal or tools, oils, matches, firearms, electric~~
6 ~~storage batteries, flammable materials, acids, oxidizers or corrosives shall not be transported or~~
7 ~~stored in the body of any vehicle being used to store or transport explosive materials or blasting~~
8 ~~agents.~~

9 ~~3309.15 Unattended vehicles. Vehicles being used to store or transport explosive materials~~
10 ~~shall not be left unattended at any time within the city. No unauthorized person shall ride or be~~
11 ~~permitted to ride on any such vehicle.~~

12 ~~3309.15.1 Responsibilities. The authorized vehicle attendant shall remain awake and alert at~~
13 ~~all times.~~

14 ~~3309.16 Vehicle parking and transfer. Vehicles being used to transport explosive materials~~
15 ~~shall not be parked, attended or unattended on any street or road within the city or adjacent to or~~
16 ~~in proximity to any building or structure, including a bridge or tunnel, or other place where~~
17 ~~persons work, congregate or assemble, prior to reaching the vehicles' destination. Explosive~~
18 ~~materials shall not be transferred from one vehicle to another except in an emergency and under~~
19 ~~the supervision of the fire official.~~

20 ~~3309.16.1 Emergency conditions. In the event a vehicle being used to transport explosive~~
21 ~~materials breaks down, is involved in an accident or catches on fire, the city police and fire~~
22 ~~department shall be notified immediately. Only in the event of a breakdown or accident shall~~
23 ~~explosive materials be transferred from the disabled vehicle to another and then only by proper~~
24 ~~and qualified personnel and under the supervision of the fire official.~~

25 ~~3309.17 Delivery. Delivery of explosive materials shall only be made to authorized persons~~
26 ~~and into approved magazines or approved temporary storage or handling areas.~~

27 ~~3309.18 Explosive materials at terminals. The fire official shall designate the location and~~
28 ~~specify the maximum quantity of explosive materials which are to be loaded, unloaded, reloaded~~
29 ~~or stored at any given time at each terminal where such operations are permitted.~~

30 ~~3309.19 Carrier responsibility. A carrier shall immediately notify the fire official when~~
31 ~~explosive materials or blasting agents are to be transported within the City.~~

32 ~~3309.20 Notice to consignee. A carrier shall immediately notify the consignee of the arrival~~
33 ~~of explosive materials at the carrier's terminal.~~

34 ~~3309.21 Consignee responsibility. Upon notification that a shipment of explosive materials~~
35 ~~has arrived at a terminal, the consignee shall remove such materials to a storage area complying~~
36 ~~with the provisions of this chapter. Such removal shall be accomplished within 48 hours after~~
37 ~~receipt of notice, excluding Saturdays, Sundays and legal holidays.~~

38 ~~3401.2 Permits. Permits shall be obtained from the fire official in accordance with Table~~
39 ~~107.2.~~

40 ~~3403.1.1 Permits. Permits shall be obtained from the fire official in accordance with Table~~
41 ~~107.2.~~

1 ~~3404.2.7.12 Spill prevention plan. The owner or operator of any storage facility comprised~~
2 ~~of one or more tanks above or below ground with a total capacity of 5,000 gallons or more shall~~
3 ~~prepare and maintain on site a plan for product spill prevention, control and countermeasures~~
4 ~~certified by a professional engineer registered in the Commonwealth of Virginia and approve by~~
5 ~~the fire official. The certification of the professional engineer shall be that the plan is in~~
6 ~~substantial compliance with the spill prevention, control and countermeasures plan requirements~~
7 ~~of the Environmental Protection Agency contained in part 112 of title 40, Code of Federal~~
8 ~~Regulations. A plan that has been approved by the Environmental Protection Agency may be~~
9 ~~submitted to the fire official in lieu of one certified by a professional engineer.~~

10 ~~3404.2.7.13 Clean up of spill and leaks. The owner, tenant or other person in control of~~
11 ~~premises where a spill of leak has occurred shall be responsible for taking immediate and~~
12 ~~effective countermeasures to contain the spill, clean up the flammable or combustible liquid and~~
13 ~~dispose of all waste in an approved manner. Upon notification by the city that is has determined~~
14 ~~that such person lacks the capability or intent to perform these countermeasures, the person~~
15 ~~notified shall have a reasonable opportunity to elect either to contract with another for the~~
16 ~~performance of these countermeasures or to join the city in a contract with another for such~~
17 ~~work. In either case, the person shall pay the entire cost of the work. If a person who has~~
18 ~~received a notice from the city under this section fails to inform the city of his election within the~~
19 ~~time specified in the notice, the city may proceed without delay to undertake the required~~
20 ~~countermeasures, and to charge the owner, tenant or other person in control of the premises the~~
21 ~~entire cost of such work.~~

22 ~~3404.2.7.14 Monitoring wells. Two permanent monitoring wells shall be installed in~~
23 ~~opposing corners of the tank field on all new installation after the effective date of this~~
24 ~~regulation. These wells shall extend to a minimum depth of two feet below the bottom of the~~
25 ~~tanks in the tank field. These wells shall be a minimum of four inches schedule 40 PVC screen~~
26 ~~pipe or equivalent and shall be flush with covering surface and covered with standard metal~~
27 ~~cover and gravel packed to prevent clogging. The screened section shall have a minimum size of~~
28 ~~.025 inch.~~

29 ~~3404.2.7.15 Tank closure. All underground storage tanks permanently removed from service~~
30 ~~shall have a site assessment in accordance with the regulation of the Virginia Statewide Water~~
31 ~~Control Board. A copy of this assessment must be submitted to the fire official and to the~~
32 ~~Virginia Water Control Board if it so requires. A minimum of three soil samplings should be~~
33 ~~obtained to complete this assessment. Previously used tanks which are removed from the ground~~
34 ~~shall not be reinstalled unless the original manufacturer certifies that they are suitable for service.~~
35 ~~The manufacturers written certification must be kept on file at the facility and be available for~~
36 ~~inspection by the fire official.~~

37 ~~3404.2.7.16 Product inventory. All buried tanks installed after this regulation is effective~~
38 ~~shall have provision for taking direct measurements of readings of content level by the stick~~
39 ~~method. Liquid levels of storage tanks shall be measured by the operator each day of operation~~
40 ~~and compared with pump meter readings taken on receipt of the product. These records shall be~~
41 ~~kept in a log book and be available for reasonable inspection by the fire official. Loss of product~~
42 ~~above normal evaporation (one half of one percent of pump meter sales readings) shall be~~
43 ~~reported immediately to the fire official. Records shall be retained for two years. This period~~
44 ~~shall be extended upon request of the fire official.~~

1 ~~3404.2.7.17 Special equipment. High liquid level gauges or alarm systems as well as pump~~
2 ~~cut-off devices shall be installed by the owner or the authorized operator in all oil storage tanks~~
3 ~~wherever in the judgment of the fire official there is a possibility that product may be lost by~~
4 ~~overflowing. Since these emergency devices can fail to operate, their use for spill prevention~~
5 ~~purposes shall be considered only as auxiliary and supplementary to the use of personnel~~
6 ~~engaged in a transfer of fill operation.~~

7 ~~3406.6.5 Maintenance. Tank vehicles operating within the city while in transit into or out of~~
8 ~~the city shall be maintained in accordance with the federal regulations contained in parts 390~~
9 ~~through 397 of title 49, Code of Federal Regulations. Part 397.3 of Title 49 requires that all~~
10 ~~motor vehicles carrying hazardous materials comply with state and local laws, ordinances and~~
11 ~~regulations, unless the regulations of the U.S. Department of Transportation apply and are more~~
12 ~~strict. Pursuant to the authority granted in section 18.2-278.4 of the Code of Virginia (1950), as~~
13 ~~amended, any duly sworn law enforcement officer of the city, including the fire official, chief~~
14 ~~fire marshal, assistant fire marshal, and any deputy fire marshals may halt any tank vehicle~~
15 ~~which is observed to have a condition or characteristic which indicates that there is a violation of~~
16 ~~city, state or federal regulations governing the transportation of hazardous materials. The vehicle~~
17 ~~may be detained long enough to determine whether the permits required for transporting~~
18 ~~hazardous materials have been obtained, whether the cargo is secure, and whether the observed~~
19 ~~condition or characteristic presents a immediate threat of a transportation related spill or other~~
20 ~~catastrophic event. The tank vehicle may resume operation if it is found to be in good repair and~~
21 ~~free of leaks in accordance with NFPA 385. If that finding is not made, the vehicle shall not be~~
22 ~~detained any longer than necessary for the officer or official to determine that arrangements for~~
23 ~~the repair of the vehicle where situated or for its removal to a safe place and repair there,~~
24 ~~whichever in the judgment of the officer or official if appropriate, are made. Upon refusal of the~~
25 ~~operator to make arrangements required by the officer or official, the vehicle shall be impounded~~
26 ~~and held until the repair is made or until the officer or official is certain that it will be made.~~

27 3409.2 Indoor Storage of Scrap Tires and Tire Byproducts. The indoor storage of scrap tires
28 and tire by products exceeding 2,500 cubic feet (71 m³) shall require a permit.

29 3501.2 Permits. Permits shall be obtained from the fire official in accordance with Table
30 107.2.

31 3504.2.7 Exterior Operations. When welding and cutting carts are moved or relocated out of
32 an approved welding and cutting area, the welding and cutting carts shall be equipped with a
33 securely mounted and approved 2A-20BC fire extinguisher.

34 ~~3803.2.2.1 Permits. Permits shall be obtained from the fire official in accordance with Table~~
35 ~~107.2 for the storage and operation of industrial vehicles and floor maintenance machines. (Ord.~~
36 ~~No. 4725, 6/25/11, Sec. 1)~~

37 5001.5 Permits. Permits shall be obtained from the fire official in accordance with Table
38 107.2.

39 5101.2 Permits. Permits shall be obtained from the fire official in accordance with Table
40 107.2.

41 5201.3 Permits. Permits shall be obtained from the fire official in accordance with Table
42 107.2.

1 5301.2 Permits. Permits shall be obtained from the fire official in accordance with Table
2 107.2.

3 5401.2 Permits. Permits shall be obtained from the fire official in accordance with Table
4 107.2.

5 5501.2 Permits. Permits shall be obtained from the fire official in accordance with Table
6 107.2.

7 5601.1.3 Fireworks. The possession, manufacture, storage, sale, handling, display, and use
8 of fireworks within the City of Alexandria is prohibited. The fire official or designee shall seize,
9 take, remove or cause to be removed at the expense of the owner, all fireworks that are offered
10 for sale, stored, or are held in violation of this code.

11 Exception: For public and private displays as permitted by the fire official where a permit is
12 obtained prior to any display in accordance with the requirements of this chapter.

13 5601.2 Permits. Permits shall be obtained from the fire official in accordance with Table
14 107.2 for all blasting operations, firework aerial displays, pyrotechnic events before an audience,
15 the transportation, manufacture, possession, use, storage of explosives and fireworks and the
16 operation of a terminal for handling explosive material and the delivery to or receipt from a
17 carrier at a terminal between sunset and sunrise. An application for the display of aerial
18 fireworks shall be completed and submitted to the fire official 45 days before the scheduled
19 event. The application for aerial fireworks display shall include the following:

20 1) A copy of an insurance policy with the City of Alexandria named as a co-insured.

21 2) A site plan with the layout of the discharge site, spectator site, viewing area, parking
22 area, fallout area and the distances for each; the distances to all tents, buildings and
23 structures shall be included.

24 3) A complete list of aerial fireworks to be displayed.

25 4) The type and amount of fire protection.

26 5) The type of physical barrier that will be installed around the display site and the number
27 of monitors that will be used during performance.

28 6) Identification of the type of security and the number of monitors that will be onsite
29 during the display.

30 7) The shooter/operator's name, address, social security number, and date of birth.

31 8) The fireworks display company's address and emergency contact numbers.

32 9) Emergency contact information, including the owner of the property name and phone
33 number, third shooter/operator (within one hour of travel), and the hazardous material
34 transport company responsible for transportation and security.

35 10) The method of storage and location that display fireworks are to be stored.

36 11) A copy of the current ATF shooters license

37 5601.2.2 Sale and Retail Display. The sale and retail display of fireworks, explosives or any
38 explosive materials is prohibited within the City of Alexandria.

1 5601.2.4 Insurance Responsibility. The fire official shall not issue any permit until the
2 requirements of this chapter are met and an application has been submitted for review, approved,
3 and the applicant files a certificate of insurance with the City of Alexandria named as a co-
4 insured on all policies in the amount of two million (\$2,000,000) dollars for each bodily injury
5 and property damage. The insurance policy shall become available for the payment of any
6 damage arising from acts or omissions of the applicant, his agents or his employees in
7 connection with the display of aerial fireworks. The applicant shall ensure the insurance policy is
8 in effect at the time of the commencement of activities authorized by the permit and remains
9 continuously in effect until such are completed.

10 5602.1 (see Chapter 2 also) Definitions. Fireworks (added to existing list). "Fireworks" shall
11 mean and include any combustible or explosive composition, or any substance or combination of
12 substances or articles prepared for the purpose of producing a visible or an audible effect by
13 combustion, explosion, chemical reaction, deflagration or detonation and shall include blank
14 cartridges, toy pistols, toy cannons, toy canes or toy guns in which explosives are used, the type
15 of balloons which require fire underneath to propel them, firecrackers, torpedoes, skyrockets,
16 model rockets, Roman candles, Daygo bombs, sparklers, pinwheels, poppers, or other devices
17 containing any explosive or flammable compound, or any tablets or other devices containing any
18 explosive; except that the term "fireworks" shall not include auto flares, paper caps containing
19 not in excess of an average of twenty-five hundredths of a grain of explosive content per cap
20 manufactured in accordance with the DOT regulations for packing and shipping as provided
21 therein, and toy pistols, toy cannons, toy canes, toy guns or other devices for use of the caps, the
22 sale and use of which shall be permitted at all times. Pyrotechnics (special fireworks) shall
23 comply with the applicable provisions of this Chapter.

24 5603.2.1 Records. Daily records shall be kept of the amount of explosives received from a
25 supplier and the amount delivered to the magazine. A daily record shall be kept of the amount of
26 explosives removed from the magazine for daily use and the amount returned to the magazine.
27 This record will be kept within the magazine so that, on inspection of the magazine, an inventory
28 for all explosives can be made. The inventory shall be separated as to the different types of
29 explosives stored and used. Forms for these records shall be approved by the fire official.

30 5604.5.2.3 Type 3 magazines: Type 3 magazines may be used for temporary storage of
31 explosives at the site of blasting operations where the amount constitutes not more than one day's
32 supply for use at the blast site. All explosives not used in the day's operation shall be returned to
33 a Type 1 magazine at the end of the work day for overnight storage. In no case shall a Type 3
34 magazine be used for overnight storage unless approved by the fire official. Type 3 magazines
35 shall be allowed only in the I/Industrial Zone.

36 5606.4.3 Small arms primers and ammunition. No more than 10,000 small arms primers
37 and ammunition shall be stored in occupancies limited to Groups R-3 and R-5.

38 5607.1.1 Permits. Permits shall be obtained from the fire official in accordance with Table
39 107.2.

40 5608.1.1 Permits. Permits shall be obtained from the fire official in accordance with Table
41 107.2.

42 5608.11 Retail display and sale. The retail display or sale of fireworks is prohibited.

43 SECTION 5610 TRANSPORTATION

1 5610.1 Prohibited transportation. Explosive materials shall not be carried or transported on a
2 public conveyance or vehicle carrying passengers for hire.

3 5610.2 Vehicle design. Vehicles transporting explosive materials shall be strong enough to
4 carry the load and shall be in good and safe mechanical condition. The floors shall be tight and
5 shall have no exposed spark producing surface on the inside of the body. Where explosive
6 materials are transported on a vehicle with an open body, the explosive material shall be stored
7 in a portable magazine or other closed container that is securely fastened to the vehicle body.

8 5610.3 Vehicle prohibitions. The attachment of a trailer behind a truck, tractor or semi-
9 trailer combination for transporting explosive materials is prohibited. The transport of explosive
10 materials in any pole trailer is prohibited. Exception: Such transport as permitted by DOTn 49
11 CFR listed in Chapter 80 of this code.

12 5610.4 Vehicle restrictions. Vehicles containing explosive materials shall not be taken into a
13 garage or repair shop for repair or storage.

14 5610.5 Vehicle contents. Only those articles authorized to be loaded with explosive
15 materials in accordance with the provisions of this chapter shall be carried in the body of a
16 vehicle transporting explosive materials.

17 5610.6 Vehicle inspections. The person to whom a permit has been issued to transport
18 explosive materials over the streets and highways of the city shall inspect each vehicle used for
19 such purposes daily, to ensure that:

20 1. Fire extinguishers are filled and in working order.

21 2. All electrical wiring is completely protected and is securely fashioned to prevent short
22 circuiting.

23 3. The motor, chassis, oil pan and body undersides are reasonably clean and free of excess
24 grease and oil.

25 4. Both the fuel tank and fuel line are secure and free from leaks.

26 5. The brakes, lights, windshield wipers, horn and steering mechanism are functioning
27 properly.

28 6. The tires are properly inflated, have proper tread depth, and are free of defects.

29 7. The vehicle is otherwise in proper operating condition and is acceptable for transporting
30 explosive materials.

31 8. The operator shall maintain all inspection reports in the vehicle at all times.

32 5610.6.1 Prior Inspection. Vehicles routinely transporting explosive materials within the city
33 shall be inspected by the fire official prior to entering the city limits. Inspection shall occur at six
34 month intervals. The fire official shall issue a fire prevention permit to all approved vehicles.

35 5610.6.1.2 Permits. Permits shall be obtained from the fire official in accordance with Table
36 107.2.

37 5610.7 Vehicle signs. Vehicles transporting any quantity of explosive materials shall display
38 all placards, signs lettering or numbering in accordance with DOTn 49 CFR listed in Chapter 80.

1 5610.8 Separation of detonators and explosives. Detonators shall not be transported in the
2 same vehicle with Class A or Class B explosive materials or blasting agents, except as permitted
3 by DOTn 49 CFR listed in Chapter 80.

4 5610.9 Vehicle traveling clearances. Vehicles transporting explosive materials and traveling
5 in the same direction shall not be driven within 300 feet (91,440 mm) of each other.

6 5610.10 Vehicle routing. The route followed by vehicles transporting explosive materials
7 shall not pass through congested areas or heavy traffic, except as permitted by the fire official. A
8 transportation plan identifying the route of travel shall be submitted to the fire official for review
9 and approval.

10 5610.11 Restricted transportation. Explosive materials shall not be transported through any
11 vehicular tunnel or subway or over any bridge, roadway or elevated highway through or over
12 which such transport is prohibited.

13 5610.12 Portable fire extinguishers. Every vehicle transporting explosive materials shall be
14 equipped with portable fire extinguishers capable of being readily accessed, filled and ready for
15 immediate discharge.

16 5610.12.1 Vehicles 14,000 lbs. or greater. At least two portable fire extinguishers with a
17 minimum 2-A:40-B:C rating shall be provided on trucks with a gross vehicle weight of 14,000
18 lbs. (6356 kg) or greater.

19 5610.13 Operating precautions. No person shall carry matches of any other flame producing
20 device, or carry unauthorized firearms or cartridges while in or near a vehicle transporting or
21 storing explosive materials. No person shall drive, load or unload such a vehicle in a careless or
22 reckless manner.

23 5610.14 Spark protection. Spark producing metal or tools, oils, matches, firearms, electric
24 storage batteries, flammable materials, acids, oxidizers or corrosives shall not be transported or
25 stored in the body of any vehicle that is being used to store or transport explosive materials or
26 blasting agents.

27 5610.15 Unattended vehicles. Vehicles being used to store or transport explosive materials
28 shall not be left unattended at any time within the city. No unauthorized person shall ride or be
29 permitted to ride on any such vehicle.

30 5610.15.1 Responsibilities. The authorized vehicle attendant shall remain awake and alert at
31 all times.

32 5610.16 Vehicle parking and transfer. Vehicles being used to transport explosive materials
33 shall not be parked, attended or unattended, on any street or road within the city or adjacent to or
34 in proximity to any building or structure, including a bridge or tunnel, or other place where
35 persons work, congregate or assemble, prior to reaching the vehicles' destination. Explosive
36 materials shall not be transferred from one vehicle to another except in an emergency and under
37 the supervision of the fire official.

38 5610.16.1 Emergency conditions. In the event a vehicle being used to transport explosive
39 materials breaks down, is involved in an accident, or catches on fire, the city police and fire
40 department shall be notified immediately. Only in the event of a breakdown or accident shall
41 explosive materials be transferred from the disabled vehicle to another, and then only by proper
42 and qualified personnel and under the supervision of the fire official.

1 5610.17 Delivery. Delivery of explosive materials shall only be made to authorized persons
2 and into approved magazines or approved temporary storage or handling areas.

3 5610.18 Explosive materials at terminals. The fire official shall designate the location and
4 specify the maximum quantity of explosive materials which are to be loaded, unloaded, reloaded,
5 or stored at any given time at each terminal where such operations are permitted.

6 5610.19 Carrier responsibility. A carrier shall immediately notify the fire official when
7 explosive materials or blasting agents are to be transported within the City.

8 5610.20 Notice to consignee. A carrier shall immediately notify the consignee of the arrival
9 of explosive materials at the carrier's terminal.

10 5610.21 Consignee responsibility. Upon notification that a shipment of explosive materials
11 has arrived at a terminal, the consignee shall remove such materials to a storage area complying
12 with the provisions of this chapter. Such removal shall be accomplished within 48 hours after
13 receipt of notice, excluding Saturdays, Sundays and legal holidays.

14 5701.4 Permits. Permits shall be obtained from the fire official in accordance with Table
15 107.2.

16 5704.2.7.12 Spill prevention plan. The owner or operator of any storage facility comprised
17 of one or more tanks above or below ground with a total capacity of 5,000 gallons or more shall
18 prepare and maintain on site a plan for product spill prevention, control and countermeasures
19 certified by a professional engineer registered in the Commonwealth of Virginia and approved
20 by the fire official. The certification of the professional engineer shall be that the plan is in
21 substantial compliance with the spill prevention, control and countermeasures plan requirements
22 of the Environmental Protection Agency contained in part 112 of Title 40, Code of Federal
23 Regulations. A plan that has been approved by the Environmental Protection Agency may be
24 submitted to the fire official in lieu of one certified by a professional engineer.

25 5704.2.7.13 Clean-up of spill and leaks. The owner, tenant or other person in control of
26 premises where a spill or leak has occurred shall be responsible for taking immediate and
27 effective countermeasures to contain the spill, clean up the flammable or combustible liquid and
28 dispose of all waste in an approved manner. Upon notification by the city that it has determined
29 that such person lacks the capability or intent to perform these countermeasures, the person
30 notified shall have a reasonable opportunity to elect either to contract with another for the
31 performance of these countermeasures or to join the city in a contract with another for such
32 work. In either case, the person shall pay the entire cost of the work. If a person who has
33 received a notice from the city under this section fails to inform the city of his election within the
34 time specified in the notice, the city may proceed without delay to undertake the required
35 countermeasures, and to charge the owner, tenant, or other person in control of the premises, the
36 entire cost of such work.

37 5704.2.7.14 Monitoring wells. Two permanent monitoring wells shall be installed in
38 opposing corners of the tank field on all new installation after the effective date of this
39 regulation. These wells shall extend to a minimum depth of two feet below the bottom of the
40 tanks in the tank field. These wells shall be a minimum of four inches schedule 40 PVC screen
41 pipe or equivalent and shall be flush with covering surface and covered with standard metal
42 cover and gravel packed to prevent clogging. The screened section shall have a minimum size of
43 .025 inch.

1 5704.2.7.15 Tank closure. All underground storage tanks permanently removed from service
2 shall have a site assessment in accordance with the regulations of the Virginia Statewide Water
3 Control Board. A copy of this assessment must be submitted to the fire official and to the
4 Virginia Water Control Board if it so requires. A minimum of three soil samplings should be
5 obtained to complete this assessment. Previously used tanks which are removed from the ground
6 shall not be reinstalled unless the original manufacturer certifies that they are suitable for service.
7 The manufacturers written certification must be kept on file at the facility and be available for
8 inspection by the fire official.

9 5704.2.7.16 Product inventory. All buried tanks installed after this regulation is effective
10 shall have provision for taking direct measurements of readings of content level by the stick
11 method. Liquid levels of storage tanks shall be measured by the operator each day of operation
12 and compared with pump meter readings taken on receipt of the product. These records shall be
13 kept in a log book and be available for reasonable inspection by the fire official. Loss of product
14 above normal evaporation (one-half of one percent of pump meter sales readings) shall be
15 reported immediately to the fire official. Records shall be retained for two years. This period
16 shall be extended upon request of the fire official.

17 5704.2.7.17 Special equipment. High liquid level gauges or alarm systems as well as pump
18 cut-off devices shall be installed by the owner or the authorized operator in all oil storage tanks
19 wherever in the judgment of the fire official there is a possibility that product may be lost by
20 overflowing. Since these emergency devices can fail to operate, their use for spill prevention
21 purposes shall be considered only as auxiliary and supplementary to the use of personnel
22 engaged in a transfer of fill operation.

23 5706.6.5 Maintenance. Tank vehicles operating within the city while in transit into or out of
24 the city shall be maintained in accordance with the federal regulations contained in parts 390
25 through 397 of Title 49, Code of Federal Regulations. Part 397.3 of Title 49 requires that all
26 motor vehicles carrying hazardous materials comply with state and local laws, ordinances and
27 regulations, unless the regulations of the U.S. Department of Transportation apply and are
28 stricter. Any duly sworn law enforcement officer of the city, including the fire official, fire
29 marshal, assistant fire marshal, and any deputy fire marshals may halt any tank vehicle which is
30 observed to have a condition or characteristic which indicates that there is a violation of city,
31 state or federal regulations governing the transportation of hazardous materials. The vehicle may
32 be detained long enough to determine whether the permits required for transporting hazardous
33 materials have been obtained, whether the cargo is secure, and whether the observed condition or
34 characteristic presents an immediate threat of a transportation related spill or other catastrophic
35 event. The tank vehicle may resume operation if it is found to be in good repair and free of leaks
36 in accordance with NFPA 385. If that finding is not made, the vehicle shall not be detained any
37 longer than necessary for the officer or official to determine that arrangements for the repair of
38 the vehicle where situated or for its removal to a safe place and repair there, whichever in the
39 judgment of the officer or official if appropriate, are made. Upon refusal of the operator to make
40 arrangements required by the officer or official, the vehicle shall be impounded and held until the
41 repair is made or until the officer or official is certain that it will be made.

42 5801.2 Permits. Permits shall be obtained from the fire official in accordance with Table
43 107.2.

1 5901.2 Permits. Permits shall be obtained from the fire official in accordance with Table
2 107.2.

3 5906.1.1 Permits. Permits shall be obtained from the fire official in accordance with Table
4 107.2.

5 6001.2 Permits. Permits shall be obtained from the fire official in accordance with Table
6 107.2.

7 6101.2 Permits. Permits shall be obtained from the fire official in accordance with Table
8 107.2.

9 6103.2.2.1 Permits. Permits shall be obtained from the fire official in accordance with Table
10 107.2 for the storage and operation of industrial vehicles and floor maintenance machines.

11 6201.2 Permits. Permits shall be obtained from the fire official in accordance with Table
12 107.2.

13 6301.2 Permits. Permits shall be obtained from the fire official in accordance with Table
14 107.2.

15 6401.2 Permits. Permits shall be obtained from the fire official in accordance with Table
16 107.2.

17 6501.2 Permits. Permits shall be obtained from the fire official in accordance with Table
18 107.2.

19 6601.2 Permits. Permits shall be obtained from the fire official in accordance with Table
20 107.2.

21 6701.2 Permits. Permits shall be obtained from the fire official in accordance with Table
22 107.2.

23 **APPENDIX A - SITE PLAN REQUIREMENTS**

24 **SECTION A101 - GENERAL**

25 A101.1 Scope. Appendix A, Site Plan Requirements provides specific information
26 concerning various fire protection related issues including, fire hydrant and fire main
27 requirements, emergency vehicle access and easements (emergency vehicle easement
28 requirements), and construction features.

29 A101.2 Alternatives. Alternative approaches to these requirements will be
30 considered on a case-by-case basis and are subject to the review and approval by the fire
31 official.

32 **SECTION A102 - SITE PLAN INFORMATION**

33 A102.1 Site Plan Requirements. The following general and fire protection
34 information shall be provided on site plans:

- 35 1. Submitter name, address, telephone number.

2. Building name and address.
3. Edition of the building code (Virginia Uniform Statewide Building Code), occupancy classification, use group and type of construction.
4. Height of building in feet and stories.
4. Foot print area of building and gross floor area of building.
5. Identification of fire walls, fire barriers, other fire separations with hourly rating.
6. Existing and proposed water and fire main locations and sizes.
7. Existing and proposed fire hydrants locations, size of pipe, and expected flow and pressure.
8. State if a full or partial fire sprinkler system will be installed.
9. If fire sprinkler system will be installed, show location of fire department connections(s). Fire department connection shall be located on street front, address side of building but provide additional fire department connection for buildings five stories or 50 feet or greater, on the other side of the building. Fire department connection shall be visible and accessible with no obstructions within 3 feet of fire department connection. Note: Type of fire department connection will be determined by fire sprinkler system water demand.
10. Topographical map relating grade and elevation to fire department connections.
11. Available water pressure and flow capacity, static pressure, residual pressure, flow in gpm.
12. Calculate required fire flow and indicate available fire flow at 20 psi per Insurance Services Office (ISO) methodology as described in Appendix B of this document.
13. Location of all Emergency Vehicle Easements (EVE) and locations of EVE signs.
14. Adequate emergency vehicle access, turning radii.

Note:

- (a) Dead-end emergency vehicle easements greater than 100 feet require turnaround.
- (b) Emergency vehicle access to within 100 feet of main entrance.
- (c) Show all overhangs and obstructions to emergency vehicle easement. The minimum emergency vehicle clearance for canopies, overhangs, and obstructions is 15 feet.

APPENDIX B - FIRE-FLOW REQUIREMENTS FOR BUILDINGS

1 B101.1 Fire-Flow Requirements. Fire-flow requirements shall be based on the
2 methodology described in the Insurance Services Office's (ISO) Guide For Determination
3 of Needed Fire Flow, Edition 06-2014.

4
5 **APPENDIX C - FIRE HYDRANT AND FIRE MAIN INSTALLATION**
6 **REQUIREMENTS**

7 C101.1 Fire Hydrant Requirements. Fire hydrant installation shall conform to the
8 requirements found in Design and Construction Standards, Department of Transportation
9 & Environmental Services July 1989, Fire Hydrant Installation, CSFH - 1, Page 9.
10 Hydrants shall be Mueller "Super Centurion" (Catalog #A-423) provided with a 6-inch
11 connection to the water main. The hydrant shall have on 1-1/2 inch pentagon-operating
12 nut, left turn to open, two 2-1/2 inch NSH nipple outlets capped, and one 4-inch NSH
13 nipple outlet capped. The hydrant shall be connected to a Mueller Gate Valve (Catalog
14 #A2360-20 or Virginia American Water Company approved equivalent) by the 6 inch
15 water supply line and have a minimum 5 1/4 inch valve opening with 6 inch mechanical
16 joints. Additional requirements are as follows:

- 17 1. The hydrant shall be supported by hard, compacted block with hard
18 gravel bedding.
- 19 2. The pipe has to have a minimum bed of 6" of 21-A bluestone under
20 hydrant laterals. All underground piping must be poly wrapped.
- 21 3. Hydrants shall have a minimum of 9 cu. yds. of 57 stone for the bleeders,
22 tar paper between the concrete kicker and stone, and sitting on a concrete
23 block.
- 24 4. The hydrant shall be located so that the thrust block is placed in
25 undisturbed soil. Where this is not practical, the soil beneath the
26 surrounding thrust block shall be compacted to 95% of maximum density.
- 27 5. The hydrant shall be plumb and the center of the hydrant (4-inch nozzle
28 cover) shall be a minimum of 18 inches and maximum of 24 inches from
29 the top face of the curb.
- 30 6. Excavation shall contain one ton of coarse washed gravel around base of
31 hydrant for drainage.
- 32 7. The bottom of the safety flange shall be 2½ inches above the edge of the
33 shoulder on streets without curb and gutter and 2½ inches above the
34 elevation of curb on streets with curb and gutter.
- 35 8. Bends in underground piping shall be rodded and blocked.
- 36 9. Laterals shall be equipped with shut-off valves at tees or tapping sleeves.
37 Valves shall be secured by rods or bolts, to tees or mains. Valves shall be

1 equipped with standard two-inch square operating nuts and valve boxes
2 with covers. Valves shall have right hand closure.

3 10. All hydrant branches shall have a minimum cover of four feet at the ditch
4 line.

5 11. Public hydrants shall be painted with rust inhibitive primer and exterior
6 enamel in the following color(s): Sherwin Williams "Safety Yellow"
7 #B54YZ437 for barrels and Sherwin Williams "Pure White" #B54WZ401
8 for hydrant bonnets and caps.

10 Exception: Public hydrant barrels may be painted with an approved flat black
11 paint where such locations are specifically approved in writing by the fire chief. Private
12 hydrant shall be painted with a rust inhibitive primer and exterior enamel Sherwin
13 Williams "Safety Yellow" #B54YZ437 for the barrels and bonnets and Sherman
14 Williams "Pure White" #B54WZ401 for the caps only.

15 Exception: Hydrant barrels may be painted with an approved flat black where
16 such locations are specifically approved in writing by the fire chief.

17 12. The building official or designee shall witness all flushing, perform visual
18 inspection, hydrostatic and flow testing of all public and private hydrants
19 by a licensed contractor. The building official or designee personnel shall
20 confirm the hydrant meets the 100% design flow requirement.

21 13. Sidewalks shall be wrapped around hydrants located in areas where the
22 grass area is shown as two feet or less.

23 14. Easements shall be required for hydrants located in ditch section streets
24 where there is less than five feet clearance from hydrant to the property
25 line.

26 15. Hydrants shall be installed, either five feet from the point of curvature of
27 curb returns or on the property line in subdivisions.

28 16. Fire hydrants shall be located at least 40 feet from all buildings served by
29 the hydrant. When a hydrant cannot be placed at the required distance, the
30 fire official or designee will consider exceptions.

31 17. No plantings or other obstructions shall be located within three feet of any
32 hydrant or fire department connection.

33 18. Fire hydrant protection pipe bollards shall be installed as needed for
34 industrial and commercial developments where curbs are not available and
35 in locations where the potential for damage is greater than normal due to
36 vehicular traffic as determined by the fire official. Bollards shall be
37 located adjacent to the hydrant and in such a manner as not to interfere
38 with the ability to connect hoses or operate the hydrant. Steel pipe bollards
39 shall be installed in accordance with Virginia American Water Company

Specifications for Pipeline Installation and Street Restoration - Fire Hydrant Protection Pipe Bollard Detail 31-60013 SK. Where possible, bollards shall be at least 36 inches from the center of the hydrant-operating nut in all directions. The bottom of the bollards and encasement shall not be located above the hydrant supply piping and valve or within the area of the hydrant supply piping to prevent the possibility of damage to the underground piping should the bollard be displaced by vehicular contact. Exact locations of bollards will be determined by the engineer of record and approved by the fire official.

19. Where standpipes or sprinkler systems are provided within buildings, a fire hydrant shall be located within 100 feet of the fire department connection. Where possible and practical, the fire hydrant shall be located on the same side of the street as the fire department connection if the hydrant does not violate the minimum distance from all buildings requirement in Item 16.

20. All fire hydrants shall be located so the maximum distance measured from the hydrant to the most remote point of vehicular access on the site is 300 feet.

21. Dead-end water main to fire hydrant distance shall be as follows:

6" line = 380 feet max. distance

8" line = 1,550 feet max. distance

10" line = 4,600 feet max. distance

12" line = 11,150 feet max. distance

SECTION C102 - INSTALLATION AND TESTING OF UNDERGROUND

FIRE MAINS AND FIRE LINES

C102.1 Fire Main and Fire Lines Requirements. All installation and testing shall be in accordance with Virginia American Water Company Standards. A Contractors Material and Test Certificate for Underground Piping, (see NFPA 24 appendix) shall be completed and signed by the installing contractors. The building official or designee shall witness all required inspections and tests.

C102.2 General Requirements. The following general requirements shall be followed when installing fire main and fire lines:

1. Fire lines shall have at least four (4) feet of ground cover from the top of the pipe.
2. All bends and tees shall be provided with thrust blocks in accordance with NFPA 24.
3. All rods shall be a minimum of 5/8 inch in diameter. The number of rods shall be determined by the pipe size.
4. All rods, nuts, bolts, washers, clamps and other restraining devices shall be cleaned and thoroughly coated with bituminous or other acceptable corrosion-retarding material.
5. Thrust blocks shall be placed against undisturbed soil. Pipe clamps and tie-rods, thrust blocks, locked mechanical or push-on joints, mechanical joints utilizing set screw retainer glands, or other approved methods or devices shall be used. The type of pipe, soil conditions and available space shall determine the method.
6. When using clamps, rods shall be used in pairs, two to each clamp.
7. Fire lines shall not run under buildings.
8. All pipe shall be hydrostatically tested and visually inspected before being covered. The trench shall be backfilled between joints before testing to prevent movement of pipe.
9. The hydrostatic test of 200 psi or 50 psi over static pressure, whichever is higher shall be conducted for two (2) hours.
10. The contractor shall remain responsible for locating and correcting any leakage. If pipe is covered, no drop in pressure during the hydrostatic test is permitted.
11. Gauges used in performing acceptance tests shall meet the following:
 - (a)
Gauges shall be appropriate for the type of test (i.e., air gauge for air pressure test, water gauge for hydrostatic test.
 - (b)
Air gauges shall have increments of two (2) pounds or less. Water gauges shall have increments of ten (10) pounds or less.
 - (c)
The gauge shall be capable of registering pressures above the minimum pressure required during the test. The pressure registered during the actual test shall be at least the minimum required for the test and less than the maximum of the gauge register. Gauges shall be marked as accepted by UL, FM, or other approved testing laboratories. No valves shall be installed in a fire line between the

1 street valve at the water main and the OS&Y valve inside the
2 building.

3 12. All fire lines shall be thoroughly flushed with an opening the same size as
4 the pipe. The minimum rate of flow shall be not less than the water
5 demand rate of the system, which is determined by the system design, or
6 not less than that necessary to provide a velocity of 10 feet per second,
7 whichever is greater. The flushing operation shall continue for sufficient
8 time to ensure thorough cleaning.

9 13. When the above flow rate cannot be verified or met, supply piping shall
10 be flushed at the maximum flow rate available to the system under fire
11 conditions.

12 14. Approved site plans showing the size and location of pipe shall be on the
13 job site before the inspection or test is performed.

14 15. Galvanized spool piece (potable water). The procedure for installing a
15 galvanized pipe between the ductile iron fire line and the OS&Y valve is
16 as follows:

17 (a) If a spool piece is used between the fire line stub and the OS&Y
18 valve to raise the valve off the fire line stub, then it shall be
19 galvanized pipe. This spool may be hydrostatically tested as part of
20 the underground, or part of the sprinkler riser.

21 - or -

22 (b) If the OS&Y valve is rated by the AWWA as suitable for
23 connection to a potable water system, this valve is a suitable transition
24 piece between the fire line stub and the check valve. This OS&Y valve
25 may be attached directly to the fire line stub if there is adequate
26 clearance for proper operation of the valve, and then no galvanized
27 pipe is required.

28 16. All items shall be inspected before any backfill.

29 17. Electrical ground wires shall not be connected to underground fire lines.

30 18. Backfill shall be well tamped, free of rocks and construction debris and
31 free of corrosives.

32 **APPENDIX D - EMERGENCY VEHICLE ACCESS**

33 D101.1 Requirements. The following requirements shall be followed when
34 designing emergency vehicle access:
35

1. Access for emergency vehicles shall be provided to within 100 feet of the main or principal entrance to every building. The access shall be provided by a public or private street or parking lot.
2. Buildings 5 stories or 50 feet or more in height require ladder truck access (open perimeter) completely on one of the longest sides and a continuance side. When that cannot be achieved, 48% of the total perimeter of the building shall be accessible by ladder truck.
3. When neither of the ladder truck access methods can be achieved, access requirements necessary for fire and EMS operations will be determined by the fire official.
4. Buildings 5 stories or 50 feet or more in height up to the minimum defined height for a High Rise Building as defined in the Virginia Construction Code that cannot meet one of the two ladder truck access requirements shall meet the emergency escape and rescue, elevator, standby power, emergency power, stairway communication, and smoke proof exit enclosure provisions found in Chapter 4 of the Virginia Uniform Statewide Building (International Building Code Section 403) relating to High Rise Buildings. When in the opinion of the fire official it is impractical or unnecessary to meet specific high rise building requirements noted in this section to meet reduced ladder truck access, the fire official will provide written notification to the building official verifying which provisions are not necessary.
5. The access to the rear may be provided by a street, parking lot or emergency vehicle easement designed to all appropriate standards.
6. 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.
7. Where required, emergency vehicle easements shall have a minimum width of 22 feet.
8. Required fire department access ways over 100 feet in length shall have provisions for turning apparatus around according to the requirements established by the Transportation and Environmental Services Department for emergency vehicle easements.
9. Building overhangs which cross an emergency vehicle easement threshold shall not be occupied space and shall be no less than 15 feet in height, as measured from the top surface of the roadway to the lowest protrusion of the overhang.
10. Residential rear service alleys that function as fire department emergency vehicle access shall meet the access criteria established by the Transportation and Environmental Services Department.

11. Where there is an emergency vehicle easement over a parking structure, the design live load for the parking structure deck shall conform to A.A.H.S.T.O. Loading Standard HS-20.
12. Where curbing is a component of the emergency vehicle easement, the curbing construction shall conform to weight and grade requirements for vehicular traffic. In no circumstances shall a raised curb be located in the path of travel in an emergency vehicle easement. Where a mountable curb is provided as part of an emergency vehicle easement, emergency vehicle easement signs shall be posted at the point nearest the edge of the emergency vehicle easement, but in no case within the clear width of the emergency vehicle easement. With the exception of flush curbs, any fire department access points that require fire apparatus to mount a curb shall conform to the modified 3 inch curb design standard MOD CG-3 or MOD CG-7 design as shown.

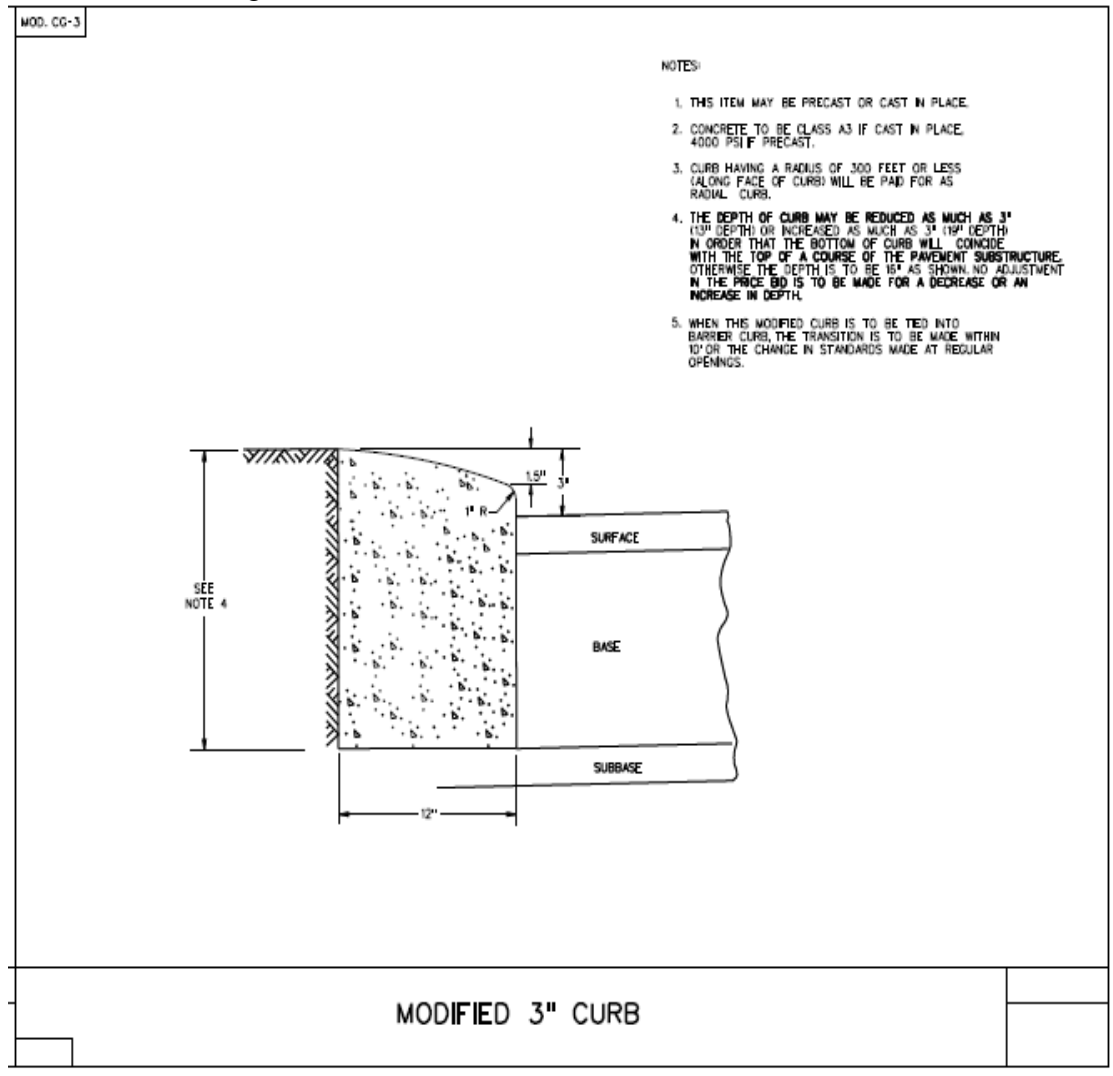


Figure D101.1 Modified 3 inch curb MOD CG-3

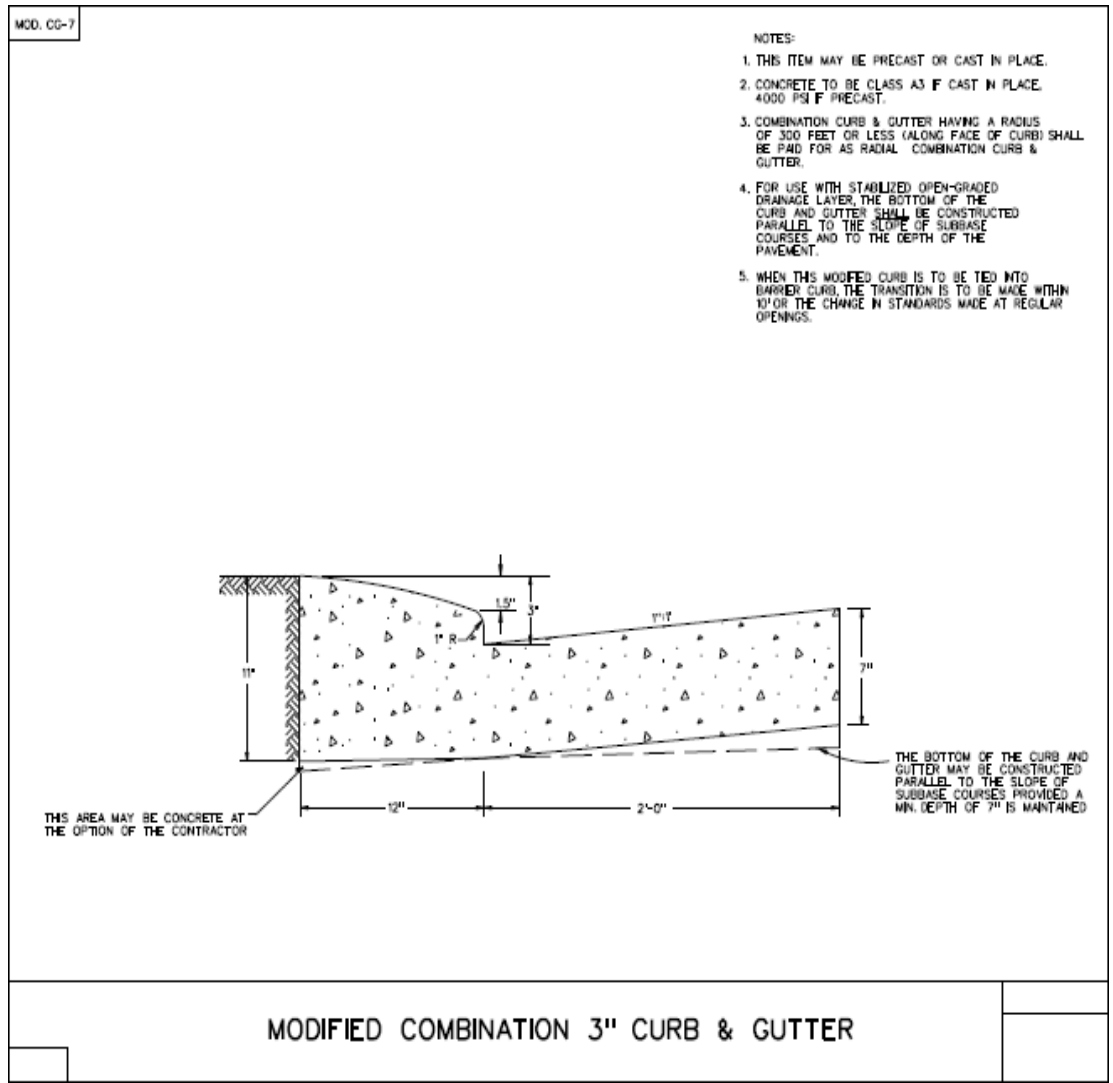


Figure D101.1 Modified Combination 3 inch curb MOD CG-7

D102 -Emergency Vehicle Easements

D102.1 Emergency Vehicle Easements. Emergency vehicle easements shall be a minimum of 22 feet across the travel lane. The emergency vehicle easement shall provide access to strategic areas of the building and fire protection systems. Curbing and street components shall conform to the standards established by Transportation and Environmental Services and this document for emergency vehicle easements.

D102.2 Sign Specifications. Emergency vehicle easement signs shall be metal construction, 12-inches wide and 18 inches in height. Provide red letters on reflective white background with a 3/8-inch red trim strip around the entire outer edge of the sign.

The lettering shall say "NO PARKING," "EMERGENCY VEHICLE EASEMENT," "EM. VEH. EAS.," and "City of Alex.," Lettering size shall be as follows: "NO PARKING" - 2 inches, "EMERGENCY VEHICLE EASEMENT" - 2½ inches. EM. VEH. EAS. - 1 inch, CITY OF ALEX. - ½ inch. Directional Arrows - 1 inch by 6 inches solid shaft with solid head - 1½ inches wide and 2 inches deep (For examples, see Figures D102.1, D102.2, and D102.3). Signs shall be mounted with the bottom of the sign 7 feet above the roadway, and shall be properly attached to a signpost or other approved structure such as designated by the fire official. Posts for signs, when required, shall be metal and securely mounted. Signs shall be parallel to the direction of vehicle travel and posted so the directional arrows clearly show the boundaries and limits of the Emergency Vehicle Easement. In areas where emergency vehicle easements involve two-way traffic, double mounted signs shall be provided. The maximum distance between signs shall be 100 feet. Other special signs or modifications to emergency vehicle easement signs shall be approved by the fire official.

D102.3 Fire Dept. Access Lanes/Mountable Curbs. Where curbing is a component of the emergency vehicle easement, the curbing construction shall conform to weight and grade requirements for vehicular traffic. In no circumstances shall a raised curb be located in the path of travel in an emergency vehicle easement. Where a mountable curb is provided as part of an emergency vehicle easement, emergency vehicle easement signs shall be posted at the point nearest the edge of the emergency vehicle easement, but in no case within the clear width of the emergency vehicle easement.

D102.4 Maintenance of Emergency Vehicle Easements. It is the responsibility of the property owner to maintain signage, access, and the drivability of the Emergency Vehicle Easement at all times. This includes Emergency Vehicle Easements constructed with materials that permit apparatus to drive on grass surfaces.

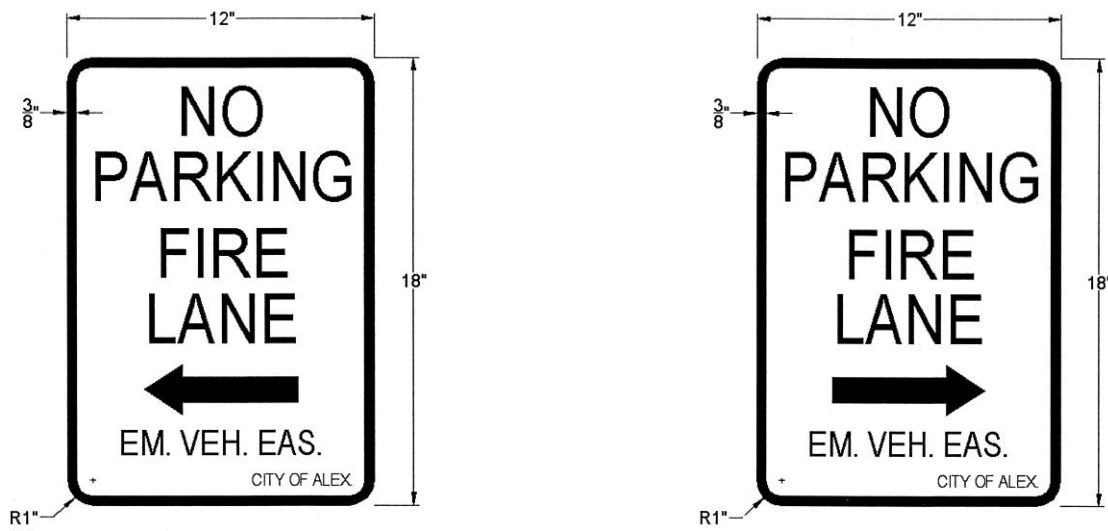


Figure D102.1 EVE Sign Left Arrow

Figure D102.2 EVE Sign Right Arrow



Figure D102.3 EVE Sign Left and Right Arrow

SECTION D103 - CONVEYANCE OF EMERGENCY VEHICLE

EASEMENT TO CITY OF ALEXANDRIA

D103.1 General. The property owner shall have an Engineer or Surveyor submit to the Transportation & Environmental Services Department a preliminary plat indicating location, width, boundary and a description of the composition of easement for the Emergency Vehicle Easement.

D103.2 Agency Review. The Transportation & Environmental Services Department and the fire official shall review the plat to determine whether the Emergency Vehicle Easement is necessary or desirable and has adequate access, width, and turning radius. Transportation & Environmental Services Department will determine if the existing paved surface meets city standard (CSAP-1A). All elevated surfaces shall meet H-20 specifications. If the Emergency Vehicle Easement is attached to the terms and conditions of a Special Use Permit, then the applicant must also file with the City's Planning & Zoning Office for review. All appropriate agencies will comment on the content of the plat.

D103.3 Approval. If approved, the applicant will submit a final plat and descriptive deed. The City of Alexandria will sign and return to applicant for recordation.

D103.4 Recordation. Upon recordation, the applicant will report deed book and page number (instrument number) to Transportation & Environmental Services

Department so information can be kept on file. The final plat and bond will not be released until the deed has been recorded.

Section 2. That this ordinance shall become effective on _____.

WILLIAM D. EUILLE
MAYOR

Introduction:

First Reading:

Publication:

Public Hearing:

Second Reading:

Final Passage: