

**Fire Department - Review Comments Checklist:**

<b>Date In:</b>	<b>Out:</b>	<b>Planning App. #:</b>	<b>Public Works AC #:</b>
<b>To:</b>		___ <b>Planning Dept. Planner</b>	___ <b>Public Works Engineer</b>
<b>Project Name and Location:</b>			
<b>Status of Review/Submittal #:</b>		___ <b>Approved as submitted</b>	___ <b>Contingent App. Pend. Comments</b>
<b>Fire Department Review Code Official:</b>		<b>Name/ID:</b>	<b>Signed:</b>

The Chesapeake Public Facilities Manual (PFM), online at <http://cityofchesapeake.net/services/depart/pub-wrks/engineer-publicfacilitiesmanual.html> (click on Volume I, Fire Protection, Chapter 13), is modeled after the Statewide Fire Prevention Code (SFPC), including referenced standards. **The following is an outline of PFM requirements. Comments apply as checked, however, the full PFM is applicable – refer to online PFM for detailed information.**

- I. Introduction:** General Information and Reference Material.
- II. Use Group:** . Determines application of fire protection requirements.
- III. Fire Service and Protection Features:** Applicable as checked below.

**Section A - Emergency Access:**

No.	Applies	Section	Requirement
1		1b	Fire apparatus access roads shall be provided w/temp. street signage & adequate water supplies prior to & during const. for fire fighting and rescue, as approved by code official
2		2a, 2b-3 2b-3.1	Fire apparatus access roads shall be all weather surface (concrete, asphalt, or other apprd. surface) capable of supporting the weight of largest fire apparatus at 75,000 lbs. in accord. with fire code
3		2a-1	Provide fire apparatus access roads to within 150 ft. of any portion of facility or structure(s)
4		2a-2	<b>Fire Code Official may require more than one fire apparatus access road based on item numbers 5-12:</b>
5		2a-2.1	Water access shall be provided to significant body of water for water rescue operations
6		2a-2.2.1	Commercial bldgs. exceeding 3 stories/30 ft. height-at least 3 site access points for each structure
7		2a-2.2.2	Commercial bldgs exceeding 62,000 sf in area-two separate and approved site access points
8		2a-2.2.3	Remoteness of access points to be spaced not less than ½ maximum diagonal of site dimension
9		2a-2.3.1	More than 100 mult. fam.dwelling units- 2 separate & approved site access points
10		2a-2.3.2	More than 200 mult. fam. dwelling units-2 sep/appd access pts. regardless of sprinklers
11		2a-2.4.1	More than 30, 1 or 2 fam. dwellings-2 separate/approved subdivision access points
12		2a-3	Fire Dept. access to bldgs. containing high piled combustible storage-comply w/SFPC, Chp. 23
13		2b	<b>Specifications for fire apparatus access roads shall comply w/item numbers 14-21 as follows:</b>
14		2b-1	Minimum fire apparatus access road width-20 ft. wide with clearance of 13 ft. 6 inches
15		2b-2	Fire code official may increase width of fire apparatus access road as deemed necessary:
16		2b-1.1	D103.1-Fire apparatus access roads with a fire hydrant shall be min. of 26 ft. wide
17		2b-1.2.2	D105.1-Where bldgs. more than 30 ft. in height fire app. access rd. shall be min. of 26 ft wide
18		2b-4	Turning radius shall accommodate largest fire apparatus without obstructions, leaving paved or all weather surface, or with out driving upon curbs
19		2b-5	Dead-end fire apparatus access roads in excess of 150 ft. require an approved turn around consisting of a hammerhead or cul-de-sac in accordance with IFC, Appendix D
20		2b-6	Bridges and elevated surfaces must comply with this section
21		2b-7	Grade of fire apparatus access road shall not exceed 10% or a 10 ft. rise per 100 ft. section

No.	Applies	Section	Requirement
22		2c,c-1, c-2,c-3 c-3.1	Marking of fire apparatus access roads-3 components: establish boundaries w/yellow reflective paint , lettering boundary surface area “No Parking-Fire Lane-Towing Enforced”, posting with proper signage “No Parking Symbol”-accompanied by “Fire Lane-Towing Enforced-Penalty-\$250 Fine”. Road surface lettering and signage to be spaced every 75-100 ft.
23		2c-4	D103.6.1-Roads 20-26 feet wide or less post on both sides as a fire lane
24		2c-5	D103.6.2-Roads more than 26 feet up to 32 feet post on one side as fire lane. Generally, roads 30 feet and greater do not require posting as fire lane as determined by Fire Marshal
25		2f & 2f-1	Security Gates across access roads shall be approved and include an approved lock box for emerg. access in accord. w/section 506. Gates shall include all components of IFC D103.5
26		3a	Walkway access leading from fire apparatus access roads to required bldg. exterior openings shall be provided. Openings reqd. on accessible side of bldg. If bldg. depth > than 75 ft then additional opening reqd. on opposite side unless sprinklered. Spacing of openings not to exceed 50 ft. apart on each floor facing reqd. accessible side(s) of bldg. up to 75 ft.
27		4a & b	Premises ID-Bldgs. shall contain proper alpha and/or numeric addressing ID which shall include the rear of any structure that faces an alley or roadway. Streets & Rds. shall be properly ID'd w/appd. signs. Temp. signs shall be placed upon const. until permanent signs can be placed.
28		5a	Key boxes reqd. for emerg. access through gates & where bldg. has fire alarm or sprinklers
29		6a	Signage reqd. to ID fire protect. equip. locations. Appurtenances(fdc/hyd) to be <50 ft. from road

#### Section B - Water Supplies for Firefighting:

No.	Applies	Section	Requirement
30		1a & b	An appd. water supply is required for fire protection to meet manual fire flow in accordance with Appendix B & C of the IFC, & sprinkler demand, if any reqd., for premises upon which facilities, bldgs., or portions of bldgs. are constructed. A municipal supply is the reqd. supply, however if a municipal supply is not available an approved alternate supply may be utilized in accord. with NFPA 1142. Water calcs are reqd. to substantiate site demand along w/source availability
31		1b-1	Private service mains shall be installed in accord. w/NFPA 24. Locate FDC's, fire hydrants, & post indicator valves (PIV) a min. of 40 ft. off bldg. PIV is required by code official & is to be locked in open position and monitored by alarm system for tamper
32		1b-2	Water tanks for private fire protection shall be installed in accord. w/NFPA 22 & the SFPC
33		1c, 1c-1, 1c-2, 1d	Fire flow calcs. reqd. to be submitted for every bldg. or portions of bldgs. or facilities to include two components: <u>needed fire flow</u> and <u>available fire flow</u> (municipal supply to be documented by flow from Pub. Utilities within last 6 mths. of project submittal – other sources shall be documented by engineer calcs supporting source avail.). Code official may increase needed fire flow under certain circumstances. Usually fire flow is determined by largest fire area. Minimum 20 psi residual pressure allowable for flow readings regarding availability. Note that total site water demand for fire protection must be met and shall include manual firefighting and automatic fire protection (sprinkler) systems. Use IFC table B105.1 for determination of manual fire flow. Water demand for auto. fire protect. systs. shall use NFPA 13 for hydraulic calculations.
34		1c-3	Min. fire flow for 1 & 2 family dwellings: 3600 sf ≤ =1000 GPM, 3600 sf > = use table B105.1. Can reduce by 50% for appd. sprinklers but resulting flow cannot be less than 1500 GPM
35		1c-4	Manual fire flow for Bldgs. others than 1 & 2 family dwelling: use table B105.1. Can reduce by 75% for approved sprinklers but resulting flow cannot be less than 1500 GPM
36		1e,1e-1	Include proper fire hydrant placement. Two criteria: 1. Maximum distance from hydrant to most remote part of structure = 400 ft. 2. Spacing along a fire apparatus access road as determined by fire flow of the structure(s) to be protected in accordance with table C105.1 in appendix C. #1 distance may be increased to 600 ft. if R-3 or if bldg. equipped throughout w/sprinkler syst. If municipal water supply not avail. then alternate water supply in accord. w/NFPA allowable
37		1e-1.1	Private fire hydrants - min. 1000 GPM @ 20 psi residual pressure, color coding-barrel red with bonnet painted in accord. w/GPM flow: red (<500), orange (500-999), green (1000-1499), light blue 1500 > (Dedicated public hydrants must meet Pub. Utilities req. @ 1000 gpm @ 25 psi res)

No.	Applies	Section	Requirement
38		1e-2, e-3, e-4, e-4.1 e-4.2	No obstructions to prevent usage or functioning of fire hydrant. Req. 3 ft. clear space around fire hydrant. Centerline of hose connections must be not less than 18" or more than 36". Caps reqd. for protection of threads. Potential for impact may require physical protection by posts/bollards

**Section C – Fire Protection Systems:**

No.	Applies	Section	Requirement
39		1a	Construction documents (plans) reqd. for all fire protection & hazardous materials dispensing or storage system (hazmat systems) installations, modifications, or rehabilitations. 3 sets of plan submittals shall include calcs., "cut sheets", drawings and Fire permit application for Fire review and approval.
40		1a-1	Written statement of compliance is reqd. from contractor prior to final acceptance of fire protect. or hazmat syst. that syst. is installed & tested in accord. w/code, plans and manufacturer's specs
41		1b, b-1 & b-2	Reqd. fire protection systs. shall be extended, altered, or augmented as necessary to maintain & continue protection when a bldg. is altered, remodeled or added to in accord. w/applicable code or standard. Reqd. systs. by USBC or SFPC to be installed/tested per code. Non-reqd. systs. may be partial or complete, however must comply with code requirements.
42		1c	All fire protection systems and hazmat systems shall be acceptance tested & inspected with code or installation standards. Code official to be notified before any required acceptance testing
43		1c-1, c-1.1 c-1.2,c-1.3 c-1.4	Before any acceptance test will be witnessed, approved or accepted by the fire code official the installing contractor must furnish: Contractors Material and Test Certificate for Underground & Aboveground Piping (sprinkler and standpipes systs.); Record of Completion (fire alarm and detection systs.); Certification of functionality & compliance w/min. 1000 GPM flow for private fire hydrants provided by third party private contractor
44		c-2	A fire inspection must be conducted & approved by the fire code official prior to occupancy & shall include final approval of all fire protection systs. C/O or temp.issued by Bldg. Code Official
46		2a	Appropriate NFPA 13, 13R or 13D sprinkler system shall be reqd. per section 903 of the SFPC. Bldg. Code Official may also require a sprinkler system in accord. w/appropriate USBC sections & USBC table 503 in accordance w/bldg. const. type., and who shall have final determination
47		2a-1	Alternative fire protection systs. shall be permitted in lieu of sprinkler protection where comply
48		2b,1-9	Where a sprinkler system is required following items shall also be required: 1). PIV, FDC, fire Hydrant serving FDC all reqd. and shall be min. located on street side of structure and be located remotely off structure a min. of 40 ft. w/exception of qualifying limited area systems. 2). Fire hydrant to be within 50 ft. of FDC. 3). PIV locked in open position & monitored for tamper by alarm syst. 4). FDC to not have any shut off valves. 5). FDC & fire hydrant to be located no more than 50 ft. from fire apparatus access road. 6). Sprinkler syst. to be monitored by fire alarm for tamper & flow in accord. w/SFPC section 903.4. 7). Proper sizing of fire main and appurtenances in accord. w/NFPA 24 & 13. 8). Water demand calcs. to be provided to ensure min. sprinkler demand in conjunction w/fire flow for manual firefighting operations. 9). Proper signage for FDC(s) & location of sprinkler risers, fire pumps, fire alarms or other pertinent fire protection equipment.
49		2c, c-1	Water supplies for automatic sprinkler systems shall comply w/NFPA 13, 13R, or 13D. Where domestic service provides water supply for the sprinkler syst., supply shall be in accord. w/SFPC
50		2d	Fire hose threads used in conjunction w/sprinkler systs. shall comply w/NFPA 1963 and must be compatible with Fire Dept. hose threads (National Fire Hose Connection Screw Threads"-NH).
51		2e, 6a-f	FDC's shall be remotely located off the structure out of potential hazard zone by min. 40 ft. and shall be installed in accord. w/the applicable NFPA standard under which the particular sprinkler syst. is designed. The FDC shall be located in an appd. area on the street side of the structure & shall not contain any shut off valves, but must contain a one way check valve and a drip valve to prevent freezing. The FDC shall be protected by listed caps to protect the threads, & be provided with a chain attaching the caps to prevent loss. The FDC shall be visibly located with a min. 3 ft. clear space, with the centerline of the hose connections to be not less than 18" nor more than 48". Signage is reqd. for Identification and/or clarification of service. Must meet backflow protection.

