

GOVERNMENT OF THE DISTRICT OF COLUMBIA
FIRE AND EMERGENCY MEDICAL SERVICES DEPARTMENT
WASHINGTON, D. C. 20001



MEMORANDUM

TO: Matthew R. Jesick
Development Review Specialist
DC Office of Planning

FROM: Tony Falwell 
Battalion Fire Chief
FEMS Office of the Fire Marshal

DATE: November 15, 2017

SUBJECT: Phase 2 of the Wharf - Zoning Commission Case 11-03J FEMS Comments

This written correspondence is being forwarded to your office to address Zoning Commission Case 11-03J that was forwarded to the DCFEMS Office of the Fire Marshal for review and comment. The project involves the development of Phase 2 of the Wharf Parcel 6 and 7 Building which is approximately 523,770 GFA and 130' in height, Parcel 8 Building which is approximately 370,859 GFA and 130' in height, Parcel 9 building which is approximately 227,962 GFA and 130' in height, Parcel 10 Building which is approximately 76,314 GFA, Maritime Facilities and waterside development.



Based on our review, the following findings are being brought forth: FEMS Office of the Fire Marshal has no objection to this project being approved if the fire code requirements listed hereafter are adhered to for all impacted buildings to be constructed.

Fire Service Features

IFC Section 503 Fire Department Access Roads:

503.1.1 Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

503.1.2 Additional access. The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches.

503.2.3 Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

503.2.4 Turning radius. The required turning radius of a fire apparatus access road shall be determined by the fire code official.

503.2.5 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus.

503.2.7 Grade. The grade of the fire apparatus access road shall be within the limits established by the fire code official based on the fire department's apparatus.

503.2.8 Angles of approach and departure. The angles of approach and departure for fire apparatus access roads shall be within the limits established by the fire code official based on the fire department's apparatus.

503.6 Security gates. The installation of security gates across a fire apparatus access road shall be approved by the fire chief or his designated representative. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

D103.5 Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet (6096 mm).
2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools or when a key box containing the key(s) to the lock is installed at the gate location.
7. Locking device specifications shall be submitted for approval by the fire code official.
8. Electric gate operators, where provided, shall be listed in accordance with UL 325.
9. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

IFC SECTION D104 Commercial and Industrial Fire Access

D104.1 Buildings exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet or three stories in height shall have at least two means of fire apparatus access for each structure.

D104.2 Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet shall be provided with two separate and approved fire apparatus access roads.

Exception: Projects having a gross building area of up to 124,000 square feet that have a single approved fire apparatus access road when all buildings are equipped throughout with approved automatic sprinkler systems.

D104.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

IFC SECTION D105 AERIAL FIRE APPARATUS ACCESS ROADS

D105.1 Where required. Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet, approved aerial fire apparatus access roads shall be provided. For purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater.

D105.2 Width. Aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet, exclusive of shoulders, in the immediate vicinity of the building or portion thereof.

D105.3 Proximity to building. At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet and a maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official.

D105.4 Obstructions. Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building.

SECTION D106 MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENTS

D106.1 Projects having more than 100 dwelling units. Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

Exception: Projects having up to 200 dwelling units may have a single approved fire apparatus access road when all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems.

D106.2 Projects having more than 200 dwelling units. Multiple-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system.

IFC SECTION D107 ONE- OR TWO-FAMILY RESIDENTIAL DEVELOPMENTS

D107.1 One- or two-family dwelling residential developments. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads, and shall meet the requirements of Section D104.3.

Exceptions:

1. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system, access from two directions shall not be required.

2. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.

Fire Department Connections

NFPA 14 Section 6.4.5: Location and Identification

6.4.5.1 Fire department connections shall be visible and recognizable from the street or nearest point of fire department apparatus accessibility or on the street side of buildings.

6.4.5.1.1 Fire department connections shall be located and arranged so that hose lines can be attached to the inlets without interference from nearby objects, including buildings, fences, posts, landscaping, vehicles, or other fire department connections.

6.4.5.2 Each fire department connection shall be designated by a sign, with letters at least 1 inch in height that reads "STANDPIPE." For manual systems, the sign shall also indicate that the system is manual and that it is either wet or dry.

6.4.5.2.1 If automatic sprinklers are also supplied by the fire department connection, the sign or combination of signs shall indicate both designated services (e.g., "STANDPIPE AND AUTOSPKR," or "AUTOSPKR AND STANDPIPE").

6.4.5.2.2 A sign also shall indicate the pressure required at the inlets to deliver the system demand.

6.4.5.3 Where a fire department connection services multiple buildings, structures, or locations, a sign shall be provided indicating the buildings, structures, or locations served.

6.4.5.4 Fire department connections shall be located not more than 100 feet from the nearest fire hydrant connected to an approved water supply.

Fire Hydrants

507.5.1 Where a portion of the building hereafter constructed or moved into or within the jurisdiction is more than 400 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

Exception:

For buildings equipped throughout with an approved automatic sprinkler system the distance requirement shall be 600 feet.

Fire Command Center (If applicable)

508.1 A building classified as high-rise building shall have a fire command center for fire department operations.

508.1.1 Location and access. The location and accessibility of the fire command center shall be approved by the fire chief.

508.1.2 Separation. The fire command center shall be separated from the remainder of the building by not less than a 1-hour fire barrier constructed in accordance with Section 707 of the International Building Code or horizontal assembly constructed in accordance with Section 711 of the International Building Code, or both.

508.1.3 Size. The fire command center shall be a minimum of 200 square feet in area with a minimum dimension of 10 feet.

508.1.4 Layout approval. A layout of the fire command center and all features required by this section to be contained therein shall be submitted for approval prior to installation.

508.1.5 Required features. The fire command center shall comply with NFPA 72 and shall contain the following features:

1. The emergency voice/alarm communication system control unit.
2. The fire department communications system.
3. Fire detection and alarm system annunciator.
4. Annunciator unit visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air distribution systems.
6. The fire-fighter's control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking stairway doors simultaneously.
8. Sprinkler valve and water-flow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.

11. Fire pump status indicators.
12. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access, and the location of fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions.
13. An approved Building Information Card that contains, but is not limited to, the following information:
 - 13.1. General building information that includes: property name, address, the number of floors in the building (above and below grade), use and occupancy classification (for mixed uses, identify the different types of occupancies on each floor), estimated building population (i.e., day, night, weekend)
 - 13.2. Building emergency contact information that includes: a list of the building's emergency contacts (e.g., building manager, building engineer, etc.) and their respective work phone number, cell phone number, and e-mail address;
 - 13.3. Building construction information that includes: the type of building construction (e.g., floors, walls, columns, and roof assembly);
 - 13.4. Exit stair information that includes: number of exit stairs in the building, each exit stair designation and floors served, location where each exit stair discharges, exit stairs that are pressurized, exit stairs provided with emergency lighting, each exit stair that allows reentry, exit stairs providing roof access; elevator information that includes: number of elevator banks, elevator bank designation, elevator car numbers and respective floors that they serve, location of elevator machine rooms, location of sky lobby, location of freight elevator banks;
 - 13.5. Building services and system information that includes: location of mechanical rooms, location of building management system, location and capacity of all fuel oil tanks, location of emergency generator, location of natural gas service;
 - 13.6. Fire protection system information that includes: locations of standpipes, location of fire pump room, location of fire department connections, floors protected by automatic sprinklers, location of different types of automatic sprinkler systems installed (e.g., dry, wet, pre-action, etc.)
 - 13.7. Hazardous material information that includes: location of hazardous material, quantity of hazardous material.
14. Work table.
15. Generator supervision devices, manual start and transfer features.

16. Public address system, where specifically required by other sections of this code.
17. Elevator fire recall switch in accordance with ASME A17.1.
18. Elevator emergency or standby power selector switch(es), where emergency or standby power is provided.

Emergency Responder Radio Coverage:

510.1 Emergency responder radio coverage in new buildings. All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.

Additionally, the fire code specifies that “emergency responder radio coverage systems and related equipment shall comply with all additional requirements, specifications and criteria established by the District of Columbia Office of Unified Communications to satisfy the operational needs of emergency responders and to prevent adverse impact on the District of Columbia’s public safety communications”.

The set of documents that constitutes the additional requirements, specifications and criteria established by the District of Columbia Office of Unified Communications is the following:

1. Implementation and Operations Process v0
2. Technical Requirements v5.3
3. Acceptance Test Procedure v1.1
4. Annual Testing v1.0

Contact District of Columbia Office of Unified Communications for additional guidance.

Web page: <https://ouc.dc.gov/page/oucs-public-safety-building-radio-systems-requirements>

If you have any questions in reference to this correspondence, please contact me in my office at (202) 727-3292.