



**A C O R N**

**ENGINEERING, INC.**

Chief Keith Gautreau  
City of Portland Fire Department  
380 Congress St.  
Portland, ME 04101

November 26, 2018

Subject: 10 Hammond Street – Fire Department Checklist  
Section L of Application

On behalf of The Preserve at South Ridge, LLC, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

The Preserve at South Ridge, LLC  
94 South Street  
Yarmouth, ME 04096  
(207) 773-2345

2. Name address, telephone number of architect

Ryan Senatore Architecture  
500 Congress Street Floor 2  
Portland, Maine 04101  
207-650-6414

3. Proposed uses of any structures [NFPA and IBC classification]

NFPA: Apartments / IBC: R-2

4. Square footage of all structures, including decks [total and per story]

Existing Building		
<b>Total</b>	Approx. 4,000	<b>sf</b>

Proposed Building		
Garage	8,115	sf
1 <sup>st</sup> Floor	8,023	sf
2 <sup>nd</sup> Floor	8,052	sf
3 <sup>rd</sup> Floor	8,052	sf
<b>Total</b>	<b>32,242</b>	<b>sf</b>

5. Elevation of all structures

Based upon the average grade plane defined by the IBC, the proposed building height is just under 40'. This height is below the allowable 45 feet within the R-6 zone. Please refer to the building elevations provided by the Architect for additional information.

6. Proposed fire protection of all structures

The building will have a sprinkler system with additional protection per code. Fire flows and requirements for system storage or booster pumping are subject to the fire designer which will be performed prior the request for a building permit.

7. Hydrant locations

An existing hydrant is located on the same side of the street as the site on the south-easterly corner of the property. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

8. Water main size and location

The redevelopment will be serviced by a new 6" sprinkler line and domestic water main within Hammond Street. A 4" or 6" fire service line will extend from the domestic water main to the building fire suppression system. The building is expected to have internal sprinkler risers and a Fire Department pump connection on the street side of the building.

9. Access to all structures [min. 2 sides]

Access to the structure is provided directly on Hammond Street. Additionally, the site is accessible by a fire truck through Fox Street and the 18-foot driveway.

10. The Architect has provided a code summary (attached).

**NFPA 1 – Chapter 18 Fire Department Access and Water Supply**

18.2 Fire Department Access:

The project site is located in a heavily developed area and is fronted by a public street. The following pavement street width is currently available:

- Hammond Street: 32 feet

Per NFPA 1 – Chapter 18.2.3.3.1, there will be public street access within 50 feet of at least one exterior door. Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 feet from a Fire Department access road.



**City of Portland Technical Manual – Section 3 Public Safety**

*3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).*

Response: Not applicable

*3.4.2 Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.*

Response: As depicted on the site plan, the proposed building layout provides a minimum of two paved access points to the structure: from Hammond Street directly and one from Fox Street.

*3.4.3 Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:*

- *Building Height.*
- *Building Occupancy.*
- *Construction Type.*
- *Impediments to the Structures.*
- *Safety Features Provided.*

Response: The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access along the public street for emergency vehicles.

*3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.*

Response: The building will be provided with exterior doors that will be within 50' of a Fire Department access route, namely Hammond Street.

*3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.*

Response: The proposed site maintains the required clearance height of nine feet in all cases except for the subsurface parking area.

*3.4.6. Elevators shall be sized to accommodate an 80 x 24-inch stretcher.*

Response: The elevators will be sized to accommodate an 80 x 24 stretcher, per the Architect's designs.

*3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.*

Response: The applicant will work with the City's Public Works Division to assign street addresses and numbering to meet City Standards.



Thank you for your review. Please let me know if you have any additional questions or comments.

Sincerely,



William H. Savage, P.E.  
Principal  
Acorn Engineering, Inc.



## Hammond House Residences

	IBC 2015		NFPA 101 2009	
3 floors above grade pln.	504.1			
Story above grade pln.	Ch 2	First floor is (5'-9-3/4") less than 6'-0" above grade plane (avg. grade) Thus the basement is NOT a story and this is a 3 Story building		
Sprinklers		NFPA 13		NFPA 13
Fire Alarm		Monitored Fire Alarm Required		Monitored Fire Alarm Required
Smoke and CO Detectors		Smoke and CO detectors required		Smoke and CO detectors required
Occupant Load	T 1004.1.1		7.3.1.2	
		Floor 1 = 7,381 sf Parking (200 gsf/oc) = 37		Floor 1 = 7,381 sf Parking (200 gsf/oc) = 37
		Floor 1 = 900 sf Residential (200 gsf/oc) = 5		Floor 1 = 900 sf Residential (200 gsf/oc) = 5
		Floor 2 = 8,019 sf Residential (200 gsf/oc) = 41		Floor 2 = 8,019 sf Residential (200 gsf/oc) = 41
		Floor 3 = 8,019 sf Residential (200 gsf/oc) = 41		Floor 3 = 8,019 sf Residential (200 gsf/oc) = 41
		Floor 4 = 8,019 sf Residential (200 gsf/oc) = 41		Floor 4 = 8,019 sf Residential (200 gsf/oc) = 41
		Roof decks 1,468 sf (divided into 4 separate decks (200) = 8 occ.		Roof decks 1,468 sf (200) = 8 occ.
		<b>Total Building Occupant Load = 173</b>		<b>Total Building Occupant Load = 173</b>
Use Group(s)	311.3	Floor 1 - Parking (S2)	6.1.13.1	Storage (Vehicles)
	310.1	Floors 2, 3,4 - Apartments (R2)	6.1.8.1.5	Apartment Building
Const. Type	T 503	5B - combustible Unprotected		V (000) combustible unprotected
Building Height	T 504.3	60' with NFPA 13 sprinkler		
	T504.4	3 stories with NFPA 13 sprinkler		
Building Area	T 506.2	21,000 sf floor plate with NFPA 13 sprinkler		

Building Elements	T 601	0 hr Structural Frame	30.1.6	No Minimum Construction requirements	
	T 602	0 hr Bearing Walls Exterior			
	T 602	1 hr Bearing Walls Exterior (sep. dist <10')			
	T 601	0 hr Bearing Walls Interior			
	T 601	0 hr Non-Bearing Walls Interior			
	T 602	0 hr Non-Bearing Walls Exterior			
	T 602	1 hr Non-Bearing Walls Exterior (sep. dist <10')			
	705.5	Exterior Wall with >10' sep. needs rating only from inside			
	T 601	1 hr Floor Construction ( 1hr between units )			
	T 601	0 hr Roof Construction			
Separations					
	508.4	S2 and R2 = 1 hr	6.1.14.4.1	Storage (ord.) and Apartment = 1hr with sprink.	
	708.4	2 hr Elevator Shaft >= 4 stories	8.6.5	1 hr < 4 stories	
	708	1 hr Mechanical Shaft < 4 stories		2hr >= 4 stories	
	1022.1	1 hr Stair Shaft < 4 stories			
		2hr >= 4 stories			
	709.1	1 hr Between Dwelling Units			
	1018.1	1/2 hr Corridor	30.3.6.1.2	1/2 hr corridor	
	508.2.5	1 hr Boiler Room	30.3.2.1.1	1 hr Boiler Room	
	508.2.5	1 hr Trash Room	30.3.2.1.1	1 hr Trash Room	
	508.2.5	1 hr Storage Room	30.3.2.1.1	1 hr Storage Room	
	508.2.5	1 hr Laundry Room	30.3.2.1.1	1 hr Laundry Room	
	3006.4	1 hr Elevator Machine Room			
	715.4	90 minute Stairwell Doors (2hr shaft)			
	715.4	20 minute Apartment Entry Doors (1/2 hr corridor wall)	30.3.6.2.1	20 minute Apartment Entry Doors	
Distances and Exits	1021.1	2 Exits required	7.4.1.1	2 Means of Egress required	
	1017.2	250' Travel Distance to exits with Sprinklers	30.2.6.3.2	200' Travel distance from apt. door to exit	
	1006.2.1	125' Common Path of Travel	30.2.5.3.2	50' Common Path of Travel	
	1020.4	50' Dead End	30.2.5.4.2	50' Dead End	
			30.2.6.2	125' Travel Distance within Dwelling to Corridor	

Unprotected Openings	T 705.8	15% when exterior wall sep. dist. is 3'>5'			
	T 705.8	25% when exterior wall sep. dist. is 5'>10'			
	T 705.8	45% when exterior wall sep. dist. is 10'>15'			
	T 705.8	75% when exterior wall sep. dist. is 15'>20'			
	T 705.8	Unlimited when exterior wall sep. dist. is 25'>30'			
	T 705.8	Unlimited when exterior wall sep. dist. is >30'			
Elevator Lobby	3006.2 ex.1	Not required as building is sprinkled			
Elevator as MoE	1009.2.1	Not req. as bldg. is not 4 stories above the level of exit discharge			
Egress Windows	1029.1.1	Not Required as Sprinkled with NFPA13			
Egress Stairs	1009.1	Occ. Load >50 = 44" min width	24.2.5.4	36" min. stair width	
	1009.1	Occ. Load <=50 = 36" min width	7.2.2.2.1.2(B)	44" min. over 50 occ.	
	1003.3	Handrails can protrude into stair 4.5" max	7.2.2.2.1.2	Handrails can protrude into stair 4.5" max	
	1005.2	Door Swings may not reduce egress width by > 1/2			
	1009.2	80" min headroom	7.2.2.2.1.1(a)	6'-8" min. headroom	
	1009.3	7" max. riser	7.2.2.2.1.1(a)	7" max. riser	
	1009.3	11" min Tread depth	7.2.2.2.1.1(a)	11" min. tread	
	1009.6	12' max. total rise between floors or landings	7.2.2.2.1.1(a)	12' max. height between landings	
Ramps	1010.2	1:12 (8%) Max slope	7.2.5.2(a)	1:12 max. slope	
	1010.6	60" long landings at top and bottom			
	1010.6	2% max slope of landings	7.2.5.2(a)	1:48 max. cross slope	
	1010.8	>6" rise must have handrails on both sides of ramp			
Egress Corridors	1018.2	44" min. when Occ. > 50			
	1018.2	36" min. when Occ. <= 50			
	1018.2	24" min. at service corridors to mechanical equipment			
Sound	1207.2	STC > 50 at walls and floors/ceilings			
	1207.3	IIC > 50 at walls and floors/ceilings			

Energy IECC 2009		T 402.1.1	0.35 Fenestration U-Factor		
<b>Zone 6</b>			R-49 Ceiling		
Residential			R-20 or 13+5c Framed wall		
			R-30 Floor		
			R-19 or 15c Basement wall		
			R-10 to 4ft Slab		
Accessibility		Fair Housing Act Applies			
		Maine Human Rights Act Applies			