



A C O R N

ENGINEERING, INC.

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

March 16, 2017

Subject: 197 Spring Street – Fire Department Checklist
Section J of Application

On behalf of WAIT, LLC., the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

WAIT, LLC
158 Danforth Street
Portland, Maine 04102
(207) 879-0303

2. Name address, telephone number of architect

Glenn Harmon
35 Mabel Street
Portland, Maine 04103
(207) 838-4035

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

The Code Analysis was prepared by Glenn Harmon and is attached.

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

Ground Level	1,540	sf
1 st Floor	1,540	sf
2 nd Floor	1,490	sf
3 rd Floor	1,380	sf
Total	5,950	sf

5. Elevation of all structures

The average building height is less than 45 feet at four stories tall. See the attached elevations provide 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 professional design which will be performed prior the request for a building permit.

7. Hydrant locations

An existing hydrant is located 126 feet north of the property on Spring Street. The hydrant is located approximately 134 feet from the nearest proposed building edge. 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 development will be serviced by the existing water main within Spring Street. A 2" fire service line will extend from the existing water main to the building fire suppression system. A 1" domestic line will branch off the 2" fire line to service the building.

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

Access to the structure is provided from Spring Street and the paved driveway.

10. Attached is a code summary referencing NFPA 1. Please see below for more information regarding the technical standards.

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

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

- Spring Street: 30 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: one from Spring Street directly and one internally from the rear parking

lot.

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 Spring 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.

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

Response: No elevators are proposed for this project.

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 Services Division to assign street addresses and numbering to meet City Standards.

Please let me know if you have any additional questions or comments.

Sincerely,



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



197 Spring Street

Code Review

By Glenn Harmon, RA, NCARB – License # 2057

NFPA 101 2009, ICC IBC 2009

- Chapter 30 New Apartment Buildings, Sprinklered
- Exit enclosures 1 hr 30.2.2.1.2
- Winder stairs within units allowed 30.2.2.3.4
- Single exit from each unit allowed 30.2.4.2
- Common path of travel 50' max 30.2.5.3.2
- Dead end corridor 50' max 30.2.5.4.2
- Travel distance to exit 250' max 30.2.6.4
- Interior finishes: Class A at exits, Class A, B, or C elsewhere 30.3.3.3.2
- Corridor wall rating 30 Min 30.3.7.2
- Occupancy Group R2, Apartment House
- Construction type V, Table 601
- Height and area limits 2 stories 7,000 SF increase to 3 stories with sprinkler 504.2, Table 503
- Occupant load limit 200SF/PP Table 604.11
- Single exit at each unit 1021.1 exception 4



Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

March 21, 2017

Sam Lebel
Acorn Engineering
PO BOX 3372
Portland, ME 04104

Re: 197 Spring Street, PO
Ability to Serve with PWD Water

Dear Mr. Lebel:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on March 10, 2017. Based on the information provided per revised plans dated 3/15/17, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter does not constitute approval of this project from the District. Review and approval of final plans is required.**

Conditions of Service

The following conditions of service apply:

- A new 2-inch fire service with a 1-inch domestic service tapped off from it may be installed from the water main in Spring Street. The service should enter through the properties frontage on Spring Street at least 10-feet from any side property lines, however an exception will be granted to allow installation a minimum of 7-feet from the side property line.
- The existing building is currently served with a ¾-inch domestic water service; the size of this service is undersized for the proposed use. This service must be terminated by shutting the corporation valve and cutting the pipe from the water main.
- Water District approval of water infrastructure plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our current standards.
- Once the project is ready for construction, the owner or contractor will need to make an appointment to come in and complete a service application form and pay the necessary fees.



Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper water service line provides water service to this site. Please refer to the “Conditions of Service” section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 8-inch diameter cast iron water main in Spring Street and a public fire hydrant located 160 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 58 psi on February 4, 2016.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District’s Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

A handwritten signature in black ink, appearing to read "Gordon S. Johnson". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Gordon S. Johnson, P.E.
Engineering Services Manager