



# WHIPPLE-CALLENDER ARCHITECTS

**UPDATED 4-13-17, 4-18-17, 5-9-17, 8-28-17**

February 28, 2017

## **Renovations to 117 Auburn Street -Medical Offices for New England Foot & Ankle Specialist**

### **CODE REVIEW SUMMARY**

#### **Portland Zoning- 2009- Relevant sections;**

14-250 Dimensional Req.:

Zone: R-P Residence-Professional Zone permitted use: Medical offices are permitted use. Also Stream Protection Overlay Zone

No minimum lot size: 6,000 sf

#### Setback requirements

Street frontage:	60' min.
Front setback:	20'
Side setback:	12'
Rear yard:	20'

Max. permitted impervious surface – According to abutting Residential Zone R3 or .70 Surface Ratio

Max. Floor area Ratio (F.A.R.) – According to nearest residential Zone R3 or.55

Max. permitted bldg. height is 45'

First floor is 4,897 sf. Second floor is 5,024 sf

Parking- is 1 space for every 400 SF of office. When fully rented 9,921sf /400=25 spaces.

#### **IBC- 2009- Relevant sections;**

The existing building use is defined as Business Group B

**Table 503** indicates that the Type II B structure can have 23,000 s.f. per floor and can be 3 stories while remaining unsprinklered. **THE BUILDING IS SPRINKLED AND DOES NOT EXCEED THIS SF (9,921 sf total)**

**Table 601** indicates 0 hour rated components for bearing walls, partitions, floor & roof construction for Type II B construction.



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**Table 1004.1** shows maximum floor area per occupant for Business use to be 100 gross sf per occupant. 9,921 SF/ 100 is 99 people

1014.3 Common Path of travel: In occupancies other than Group H-1, H-2, and H-3 the common path of travel shall not exceed 75 feet.

Exception 1: The length of the common path of egress travel on group B, F & S occupancies shall not be more than 100 feet, provide the building is equipped throughout with an automatic sprinkler system installed in accordance with section 903.3.1.1.

**OUR BUILDING IS SPRINKLERED AND ON THE FIRST FLOOR THE LONGEST COMMON PATH OF TRAVEL IS 39'-11". ON THE SECOND FLOOR THE LONGEST COMMON PATH OF TRAVEL IS 50'-3"**

1016.1 Travel distance limitations: Exit shall be located on each story such that the maximum length of exit access travel, measured from the most remote point within a story along the natural and unobstructed path of egress travel to an exterior exit door at the level of exit discharge, an entrance to a vertical exit enclosure, an exit passageway, a horizontal exit, an exterior exit stairway or exterior exit ramp, shall not exceed the distances given in table 1016.1

IN OCCUPANCY B THE PERMITTED EXIT ACCESS TRAVEL DISTANCE IS 200' AND 300' WITH A SPRINKLER SYSTEM.

**THE LONGEST TOTAL TRAVEL DISTANCE FROM ON THE FIRST FLOOR TO BE 89'-6 AND ON THE SECOND FLOOR TO BE 74'-11".**

1018.4 Dead ends. Where more than one exit or exit access doorway is required the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet in length.

Exception 2. In occupancies in Groups, B,E,F,I-1,M,R,-1,R-2,R-4,S.and U where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of the dead end corridor shall not exceed 50 feet.

**THE LONGEST DEAD CORRIDOR ON THE FIRST FLOOR IS 14 FEET AND ON THE SECOND FLOOR 5 FEET.**

**NFPA 101, 2015- Relevant Sections:**

7.3.3.2 Egress Capacity for the approved components of means of egress shall be based on the capacity factors shown in Table 7.3.3.1 unless otherwise provided in 7.3.3.2.

For all others (table 7.3.3.1) stairways:

$$.3" / \text{person} \times 99 \text{ people} = 29.7"$$

and for level components:

$$2" / \text{person} \times 99 \text{ people} = 19.8"$$



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**THE EXISTING BUILDING CLEAR STAIRWAYS ARE 43" WIDE AND THE LEVEL COMPONENTS WIDTH IS 44" ON THE FIRST FLOOR AND 54" ON THE SECOND FLOOR.**

**IEBC- 2009-** Relevant sections;

**404.1 Scope** Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration of any systems, or installation of any additional equipment.

**404.2 Application** Level 2 alterations shall comply with the provisions of Chapter 6 for Level 1 alterations as well as the provisions of Chapter 7.

**705.3 Number of exits:** The building has 3 means of egress on the ground floor and 2 on the second floor.

**705.6 Dead-end Corridors: Exception 2:** In other than Group A or H, the maximum length of a dead-end corridor shall be 50' in buildings equipped with an automatic fire alarm system. **THE BUILDING MEETS THIS REQUIREMENT.**

**711.1 Energy Conservation minimum requirements:** Level 2 alterations to existing buildings are permitted without requiring the entire building to comply with the energy requirements of the IECC. The alterations shall conform to the energy requirements of the IECC as they relate to new construction only.

## KNOX BOX SHALL BE PROVIDED

1. Owner- Greg Pomeroy
2. Architect- Whipple Callender Architects, PO Box 1276 Portland, Maine 04101 (775-2696)
3. Proposed use- Medical offices
4. Square footage of structure- 9,921 total s.f. gross. First floor is 4,897 sf. Second floor is 5,024 sf
5. Elevation of all structures- existing 11' floor to floor
6. Proposed fire protection of all structures- fully sprinkled
7. Hydrant Locations- Auburn Street
8. Water main sizes and locations- not known
9. Access to any Fire Department Connections- Connection to existing sprinkler system provided
10. Access to all structures (2 sides Min.)- Clear access to 3 sides
11. A code summary shall be included referencing NFPA and all fire department technical standards-

**NFPA 101-2009** – Chapter 39: Existing Business Occupancies



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## **39.2 Means of Egress**

**39.2.1.1** All means of egress must be in accordance with Chapter 7 and this chapter

**39.2.2.2 Doors** Doors complying with 7.2.1 shall be permitted.

**39.2.2.3 Stairs** Stairs complying with 7.2.2 shall be permitted. Permitted minimum width clear is 36", maximum height of risers is 8 inches, minimum tread depth is 9 inches, minimum headroom is 6'-8" and maximum height between landings is 12'. **In this building clear stair width is 43", risers are 7" treads are 11", minimum head room between landings exceeds 8'. And height between landings is 11'.**

**7.2.2.4.1. Handrails** Stairs shall have handrails on both sides unless otherwise permitted. **In this building handrails exist on both sides of the stairs and are continuous for the full flight of stairs.**

**7.2.2.4.4. Handrail details:** Existing handrails shall not be less than 30" and not more than 38" above the surface of the tread, measured vertically to the top of the railing from the leading edge of the tread. **In this building the handrails are 33" above the surface of the tread**

**7.2.2.4.4.5 New Handrails** shall be installed to provide a clearance if not less than 2 1/4" between handrail and the wall to which is it fastened. **The clearance is 2" and this is not a new handrail**

**7.2.2.4.4.7 New handrails** shall be continuously graspable along their entire length. **This is not a new handrail and it is graspable along the entire length.**

**7.2.2.4.5 Guard Details** Existing guards on exiting stairs shall be permitted to be not less than 30" high. **Existing guard at stairs #2 is 43".**

**39.2.3.2** The clear width of any corridor or passageway serving an occupant load of 50 or ore people shall not be less than 44 in. **This is the minimum width of Hall 1.**

## **39.2.4 Number of Exits:**

**39.2.4.1** The number of exits shall be in accordance with 7.4.1.1.and 7.4.1.3 through 7.4.1.6. Not less that two separate exits shall be provided on every story, Not less than two separate exits shall be accessible from every part of every story. Not less than two separate exists shall be accessible from every part of every story. **The plan complies with this requirement.**

## **39.2.5 Arrangement of Means of Egress**

**39.2.5.1** Access to all required means of egress shall be in accordance with Section 7.5

**39.2.5.2** Dead-end corridors shall not exceed 50'. **The plan complies with this requirement.**



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**39.2.5.3.1** Common path of travel shall not exceed 100' on a story throughout by an approved sprinkler system in accordance with 9.7.1.1(1). **The plan complies with this requirement.**

**39.2.6 Maximum Travel Distance to Exits:** Travel distance may not exceed 200' from any point in the building unless otherwise permitted. **In this building the maximum travel distance is 89'-9". The plan complies with this requirement.**

## 7.3 Capacity of Means of Egress

**7.3.4.2.1** In existing buildings, the width of exit access shall be permitted to be not less than 28" **Exit access will typically be in excess of 28".**

## 7.5 Arrangement of Means of Egress

**7.5.1.3.2** Where 2 exits, exit accesses, or exit discharges are required, they shall be located at a distance from one another not less than ½ the length of the maximum overall diagonal dimension of the area to be served, measured in a straight line between the nearest edge of the exits, exit accesses or exit discharges unless otherwise provided in 7.5.1.2.2 through 7.5.1.3.5 **The plan complies with this requirement.**

## 7.8. Illumination of Means of Egress

**7.8.1.1.** Emergency lights shall be provided in accordance with Section 7.8 for every building or structure where required in Chapter 11 - 43. For the purpose of this requirement, exit access shall include only designated stairs, aisles, corridors, ramps and passageways leading to an exit. **Emergency Lights are provided in this project.**

## 7.10 Marking of Means of Egress

**7.10.1.2** Exits, other than the main exterior doors that are obviously and clearly identified as exits, shall be marked by an approved sign that is readily visible from any direction of exit access. **The plan will comply with this requirement.**

### 7.10.1.3 Exit Door Tactile Signage

**7.10.1.4 Existing Exemption.** The requirement of 7.10.1.3 does not apply to existing buildings, provided that the occupancy classification does not change.

**7.10.8.5 Evacuation Diagram.** Where a posted floor evacuation diagram is required in Chapters 11 -43, floor evacuation diagrams reflecting the actual floor arrangement and exit locations shall be posted and oriented in a location and manner acceptable to the authority having jurisdiction. **We will comply with this requirement**



**39.3.4 Detection, Alarm and Communication Systems**

**39.3.4.1.** A fire alarm system in accordance with Section 9.6 shall be provide in all business occupancies where any on of the following conditions exists:

1. The building is three or more stories in height,
2. The occupancy is subject to 100 or more occupants above the level of exit discharge.
3. The occupancy is subject to 1000 or more total occupants. **A fire alarm system exists and will be upgraded.**

**31.3.4.2 Initiation** of required fire alarm system shall be one of the following means:

1. Manual means in accordance with 9.6.2.1.1
2. Means if an approved automatic fire detection system that complies with 9.6.2.1.2 and provides protection throughout the building,
3. Means of an approved automatic sprinkler system that complies with 9.6.2.1.3 and provides protection throughout the building. **The fire alarm shall be initiated by automatic detectors and manual pull stations located as each egress stair exit door.**

**39.3.4.3 Occupant Notification**

**39.3.4.3** During all times that the building is occupied, the required fire alarm system, once initiated shall perform on of the following functions:

1. It shall activate a general alarm in accordance with 9.6.3 throughout the building and the following also shall apply:
  - a. Positive alarm sequence in accordance with 9.6.3.3
  - b. A pre-signal system in accordance with 9.6.3.3. shall be permitted.
2. Occupant notification shall be permitted to be made via a voice communication or public address system in accordance with 9.6.3.9.2.

**Horns sand strobes shall be installed in corridors and open office areas. Strobes shall be installed in all exam rooms and bathrooms. An existing annunciator exist in the lobby & will be upgraded.**

**39.3.5 Extinguisher Requirements.** Portable fire extinguishers shall be provided in every business occupancy in accordance with 9.7.4.1 **We will comply with this requirement**