

CITY OF PORTLAND PUBLIC WORKS OPERATIONS CENTER
250 Canco Road, Portland

2009 - NFPA CODE / 2009 – IBC SUMMARY
02.24.16

Background Information:

•Existing Building Description: The former Seltzer and Reydholm bottling building is a one story warehouse structure with multiple vehicle entrance bays and an attached 1 story office wing.

•Existing Building Area Totals: Warehouse area & ancillary spaces: 52,194 S.F.
Office Area: 6,271 S.F.
Total: 58,465 S.F.

•Proposed Renovations: Minor reconfigurations in the existing office area to improve function for public works staff; modification of existing bathrooms to make ADA compliant; Conversion of the former "bottling room" into a staff break room with small kitchen area; conversion of the former "syrup room" into Men's and Women's toilets, showers and dressing rooms; and the addition of lockers. The office area is more than 10% of the overall building area so it cannot be considered an accessory use to the vehicle storage use. The renovations include the addition of a small section of 1 hour rated corridor that allows the office area to have independent exiting separate from the vehicle area while also acting as a Use Group Occupancy Separation between the Storage and Business uses.

Because the proposed shower and dressing area serves the field personnel who are operating the trucks stored in the garage, and because it is less than 10% of the vehicle storage area, it is being considered as an accessory use to the storage area.

•Construction Type: IBC: Type IIIB NFPA: Type III (200)

•Occupancy Classification: Mixed Use - Separated. Uses include:

IBC:	NFPA:
S2 - Low Hazard - Vehicle Storage	S - Ordinary Hazard – Vehicle Storage
B - Business Use -Office	B - Business Use – Office

•Sprinkler, Fire Alarm & Emergency Lighting: Building is equipped with an approved automatic, supervised sprinkler system and fire alarm. Emergency lights and exit signs will be provided as indicated on the life safety plan.

•Occupancy Loads: (NFPA Table 7.3.1.2)

(S) Ordinary Storage: 52,194 s.f. @ 500 s.f./pers. = 104 People

(B) Business Use: 6,271 s.f. @ 100 s.f./pers. = 63 People

TOTAL OCCUPANCY LOAD = 167 People.

Applicable Primary Requirements:

1. General Egress Components

Egress Capacity Factors (NFPA): Stairs .3"/person for stairways; .2"/person for level components Egress Capacity Factors:and ramps (Table 7.3.3.1) Minimum clear width of new stairs is 44" for occupant load <2,000 (Table 7.3.3.1)

Requirement Met. Work area has no stairs.

Requirement Met. All doors are 36" width yielding a 34" clear opening. 34"/.2" = 170 people. Four ground level exit doors are provided at the Storage Use = (4) 36" wide doors: 34"/.2" = 170 people x 4 = 680 people. Two exits are provided for the Business Use = (2) 36" wide doors: 34"/.2" = 170 people x 2 = 340 people.

Travel Distance Limits (NFPA): Travel distance limits for Ordinary Hazard Storage and General Industrial with the more restrictive distance listed below:

Common Path Limit:
(Sec. 38.2.5.3.1) Business 100' for sprinklered bldg.
(Table 42.2.5) Ordinary Stor. 100' for sprinklered bldg.

Dead-end Corridor:
(Sec. 38.2.5.2.1) Business 50' for sprinklered bldg.
(Table 42.2.5) Ordinary Stor. 100' for sprinklered bldg.

Travel Distance:
(Sec. 38.2.6.3) Business 300' for sprinklered bldg.
(Table 42.2.6) Ordinary Stor. 400' for sprinklered bldg.

Requirements Met – See Life Safety Plan

Remoteness of Exits (NFPA):

(7.5.1.3.2) Where two exits or exit access doors are required, they shall be located at a distance from one another not less than one half the length of the maximum overall diagonal dimension of the building or area served, measured in a straight line between the nearest edge of the exit doors or exit access doors.....
(7.5.1.3.3) In buildings protected throughout by an approved supervised sprinkler system... the minimum distance is reduced to 1/3 the maximum overall diagonal dimension.

Requirement Met – See Life Safety Plan

2. Occupancy Separation/Ratings/Fire Protection Features:

Occupancy Separation:

The Business Use portion of the building represents more than 10% of the total building area so it cannot be considered to be accessory to the predominant S2 Storage Use. If the two uses are treated as mixed use unseparated, the most restrictive requirements of the two uses would prevail putting undue burden on the S2 Storage use in terms of exiting. It is therefore proposed to separate the business use from the storage use with an occupancy separation in accordance with section 508.

The shower/toilet room area is less than 10% of the overall building area (per 508.2.1) so it qualifies as an accessory use to the storage use and requires no separation.

Mixed Use and Occupancy Separated: (IBC)

(Table 508.4)- The required separation between Business and S2 Storage occupancies is 1 hour if the building is sprinkled.

Requirement Met. Through a combination of existing CMU partitions and new rated stud partitions, a continuous, 1 hour rated, occupancy separation has been provided.

Portable Fire Extinguishers:

(40.3.5/42.3.5) Extinguishment Requirements: none

Requirement Met. Portable Fire Extinguishers are provided in accordance with NFPA 10. PFEs are located within the maximum allowed 75' distance for any location in the building.

3. IEBC Requirements:

Alteration Classification:

(404.1) Alteration - Level 2: Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment.

Requirement Met. Renovation meets the description for Level 2 Alteration. The extent of renovation proposed is less than 50% of the total first floor area so it is not required to meet Level 3 Alteration requirements.

(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.

(701.3) All new construction elements, components, Systems, and spaces shall comply with the requirements of the International Building Code.

Requirements Met. All new work will be constructed to meet IBC requirements for new construction. The building is sprinkled and is equipped with a fire alarm and detection system. There are no existing exit stairs or vertical openings in the work areas so enclosure /protection requirements don't apply. There are no new structural components proposed and the existing structure will not be modified.

PLUMBING FIXTURE COUNTS:
(Uniform Plumbing Code 2012)

Business Use: The calculated occupant load for the Business Use is 63 people resulting in a gender split occupant load of 32 men and 32 women. Table 422.1 - Minimum Plumbing Facilities indicates that 1 water closet, 1 urinal, and 1 sink for the men and 2 water closets and 1 sink for the women.

The existing office area of the building contains two single fixture toilet rooms that are scheduled to be renovated to meet ADA requirements. While this count does not meet the criteria of table 422.1, the Table's preface indicates that the minimum fixture count does not apply to existing facilities where no addition is being constructed and there is no change of use that would result in an increased occupant load. In addition, the project is adding additional fixtures in the toilet/shower/dressing rooms that can be used by the office occupants.

S2 -Storage Use: The calculated occupant load for the Business Use is 104 people resulting in a gender split occupant load of 52 men and 52 women. Table 422.1 - Minimum Plumbing Facilities indicates that 1 water closet and 1 sink for the men and for the women are required. The number of fixtures provided exceeds these minimums for both men and women.. The reason there are less fixtures proposed in the women's room is because the actual work force is predominately male.



CITY OF PORTLAND
DEPT. OF PUBLIC WORKS

INTERIOR RENOVATIONS

Canco Road
Portland, Maine

REVISIONS

PERMIT DOCUMENTS
FEBRUARY 25, 2016

WRITTEN CODE SUMMARY

Scale: As Noted

LS 1.2