

Code Review - NFPA 101 (Life Safety) 2009

SUMMARY

This project consists of three areas, an 2,489 square foot loading dock (shared with adjacent tenant), a 8,623 square foot storage / warehouse space, and an 1,852 square foot retail space. The storage space will be used for storing and aging beer, while the retail space will be used for tasting/purchasing beer and other promotional items. The size of the retail area requires the area to be classified as an "Assembly" use, while the remainder will be classified as "Storage". This tenant space has been classified as a "Non-separated, Mixed-Use" space.

There is an existing sprinkler system throughout the space that shall be maintained per NFPA 25. There is an existing fire alarm system throughout the remainder of this building, but not in this current tenant space. The system will be expanded to include this tenant space.

Chapter 6 - Classification of Occupancy

Section 6.1.2.1 - The Retail / Tasting room is classified as "Assembly" (over 50 occupants).

Section 6.1.1.3 - The remainder of the space to be classified as "Storage".

Table 6.1.1.4.1 - The requirements of a Non-Separated Mixed-Use occupancy shall be utilized.

Table 6.1.1.4.1 - The separation between this tenant space (Assembly) and the adjacent tenant (Industrial - General Purpose) to be a 1-hour rated assembly (reduction of 1-hour due to sprinkler system).

Section 6.2.2.3 - The contents shall be classified as Ordinary Hazard contents.

Chapter 7 - Means of Egress

Section 7.1.3.2 - The existing exit stair out of the Warehouse area shall comply with this section and be 1-hour rated.

Section 7.2.1 - Doors shall comply with this section (including panic hardware and fire exit hardware, section 7.2.1.1).

Section 7.2.5 - The ramp at the front entry shall comply with this section - OMIT

Table 7.3.1.2 - Occupant Load

Tasting / Retail area: 1,852 s.f. / 15 s.f. = 124 people (designed for 97, see Note)
 Note: As the seating is not fixed, a 1 person per 15 square feet was used. However, the space is designed for 97 seats.

Warehouse area: 8,623 s.f. / 500 s.f. = 18 people (designed for 9, see Note)

Note: Table 7.3.1.2 does not designate a square footage number; therefore, 500 square feet per person was used. However, in discussions with the owner, the maximum anticipated staff of the warehouse is 9 people (6 in the warehouse, and 3 at the bar area in the Tasting / Retail area).

Total Occupant Load = 142 people (max), designed for 106.

Section 7.4.1.2 - For an occupant load of 142 people, 2 exits are required (Two exits out of the Warehouse space and two separate exits out of the Assembly space are provided).

Section 7.5.1.3.3 - The exits shall be separated by a minimum of 1/3 the overall diagonal of each space (see Sheet T1.1, Egress Plan).

Section 7.5.4.1 - Two accessible means of egress are not required, as this is an existing building. However, three accessible means of egress have been provided (one out of the Warehouse space and two out of the Assembly space).

Table 7.6 - Common Path Limit = 75'; Dead-End Limit = 20'; Travel Distance Limit = 250' (All distances must defer to the Assembly occupancy per the requirements for Mixed-Use).

Chapter 8 - Features of Fire Protection

Table 8.2.1.2 - Construction shall by Type III (200).

Section 8.6.5(3) - The existing stair exit shall be a minimum of 1/2-hour rated (currently 1-hour rated).

Chapter 9 - Building Services and Fire Protection Equipment

Section 9.7.4.1 - Portable fire extinguishers shall be provided.

Note: Although fire extinguishers are not required in Assembly or Storage spaces, the Tasting Room functions as Mercantile. Since this is a Non-separated mixed use, fire extinguishers shall be installed in throughout this tenant space (they are required in IBC 2009).

Chapter 12 - New Assembly Occupancies

Table 12.1.6 - Construction Type III (200) is allowed 1000 occupants (sprinkled - one story).

Section 12.1.7 - Occupant Load - see Section 7 notes (above)

Section 12.2.2.3 - Doors out of the Tasting / Retail space (Assembly) shall be furnished with panic hardware due to the occupant load over 100.

Section 12.2.3.6.2(2) - The main entrance shall accommodate 1/2 of the total occupant load (71 people) hardware due to the occupant load over 100.

Section 12.2.8 - Means of egress shall be illuminated.

Section 12.2.9 - Emergency lighting shall be provided.

Section 12.2.10 - Exit signs shall be provided (see Egress Plan for locations).

Section 12.3.4.1.2 - Although this tenant space does not currently have a fire alarm system, a system exists throughout the remainder of the building. The current fire alarm system will be expanded to cover this tenant space.

Section 12.3.5.2 - The current space is protected throughout with an automatic sprinkler system.

Chapter 12 - Storage Occupancies

Note: It is widely regarded that the Assembly occupancy is the more stringent of the two occupancies in this space. Since this space is being classified as a Non-Separated Mixed-Use, the requirements of the Assembly occupancy shall usually be used for the entire space.

Section 42.1.5 - The contents of the storage area are classified as Ordinary Hazard.

Section 42.2.4.1(3) - Two means of egress are required from each space (Warehouse and Retail).

Section 42.2.5 - Dead End Corridors: 100' Common Path of Travel: 100' (use Assembly requirements).

Section 42.2.6 - Travel distance to exits: 400' (use Assembly requirements).

Section 42.2.8 - Means of egress shall be illuminated.

Section 42.2.9 - Emergency lighting shall be provided.

Section 42.2.10 - Exit signs shall be provided.

Section 42.3.4 - A fire alarm system is not required due to the sprinkler system (Section 42.3.4.1.3). However, the Assembly requirements must be applied and a fire alarm system shall be provided.

Code Review - IBC 2012

SUMMARY

This project consists of three areas, an 2,489 square foot loading dock (shared with adjacent tenant), a 8,623 square foot storage / warehouse space, and an 1,852 square foot retail space. The storage space will be used for storing and aging beer, while the retail area is defined as Assembly in NFPA (due to over 50 occupants), there is more definition of "Assembly" in the IBC code. It could be argued that the retail space is an A-2 occupancy. However, drink consumption is not the main intent of this space. The main intent is to purchase beer and other promotional items by individuals (see commentary in Section 309.1). Therefore, this space is classified as a Retail space. The remainder is defined as a Storage occupancy. This tenant space has been classified as a "Non-separated, Mixed-Use" space.

There is an existing sprinkler system throughout the space that shall be maintained per NFPA 25. There is an existing fire alarm system throughout the remainder of this building, but not in this current tenant space. The system will be expanded to include this tenant space.

Chapter 3 - Use and Occupancy Classification

Section 309.1 - The Tasting / Retail area is defined as a Mercantile occupancy.

Section 311.2 - The remainder of the space is defined as Storage - S-1 (Moderate Hazard Storage).

Note: This is defined as Moderate Hazard Storage due to the wood barrel storage. Although the beer is less than 16% alcohol (see Section 311.3), the containers are not metal, glass, or ceramic.

Section 308.3 - The requirements of this section to allow a Non-Separated occupancy within this tenant space.

Table 508.4 - The separation between this tenant space (Mercantile or S-1) and the adjacent tenant space (assumed to be F-2 for alcohol under 16%, see section 306.3) to be 1-hour.

Chapter 6 - Types of Construction

Section 602.3 - The construction type shall be Type III B.

Chapter 7 - Fire and Smoke Protection Features

Section 705.8 - The allowable area of exterior wall openings for the front wall to be 75% (less than 20% unprotected, sprinklered).

Section 708 - The existing exit stairway out of the Storage area complies with this section and has a 1-hour rating.

Chapter 9 - Fire Protection Systems

Figure 903.2 - A sprinkler system is required (over 12,000 s.f.) and is currently installed.

Section 906 - Portable fire extinguishers are required.

Section 907.2.7 - The current space does not have a fire alarm system. The remainder of the building is protected with a fire alarm system, and this system shall be extended to include this space. (Note: These drawings do not specify the requirements for the fire alarm system. A separate permit will be required for this work). Although it does not appear that a fire alarm system is required with IBC, a system is required per NFPA.

Chapter 10 - Means of Egress

Table 1004.1.1 - Occupant Load

Warehouse / Storage area: 8,623 square feet / 500 s.f. = 18 people (designed for 9, see Note)
 Note: Although 500 square feet per person was used, in discussions with the owner, the maximum anticipated staff of the warehouse is 9 people (6 in the warehouse, and 3 at the bar area in the Tasting / Retail area).

Tasting / Retail area: 1,852 square feet / 15 s.f. = 124 people (designed for 97, see Note)
 Note: As the seating is not fixed, a 1 person per 15 square feet was used. However, the space is designed for 97 seats. If a standard Retail figure of 1 person per 30 s.f. were used, the occupant load for this area would be 62 people, therefore the 124 figure was used.

Total Occupant Load = 142 people (max), designed for 106.

Note: This occupant load was used to determine egress. However, per the commentary for Section 1004.1.1, the actual (designed) occupant load may be used in determining certain requirements. The Retail area has been designed for 97 people and it is this number that was used to determine the number of plumbing (restroom) fixtures required by the State of Maine Plumbing Code.

Section 1004.3 - The occupant load for the Tasting / Retail area shall have posted signage as req'd.

Section 1007.1 - Three accessible means of egress are provided (one out of the Warehouse space, and two out of the Tasting / Retail space).

Section 1008.1.10 - Although the Retail area is not classified as Assembly, panic hardware on the exits from this space is required by NFPA, and will be provided.

Section 1009 - The existing exit stairway out of the Storage area complies with this section.

Section 1010 - The ramp (due to existing grade issues) at the entrance to the Retail area will comply with this section.

Section 1011.1 - Exit signs will be provided (see Egress Plan for locations).

Section 1014.2 - Two means of egress from the Warehouse space and two means of egress from the Retail area are provided so ensure egress is not required to pass through the intervening space.

Section 1014.2.1 - This tenant space has separate means of egress from other tenants (see Egress Plan for added door to allow egress out of the Storage area that does not pass through the shared Loading Dock area).

Section 1014.3 - The common path of travel for the Retail area is 75', and for the Storage area is 100'.

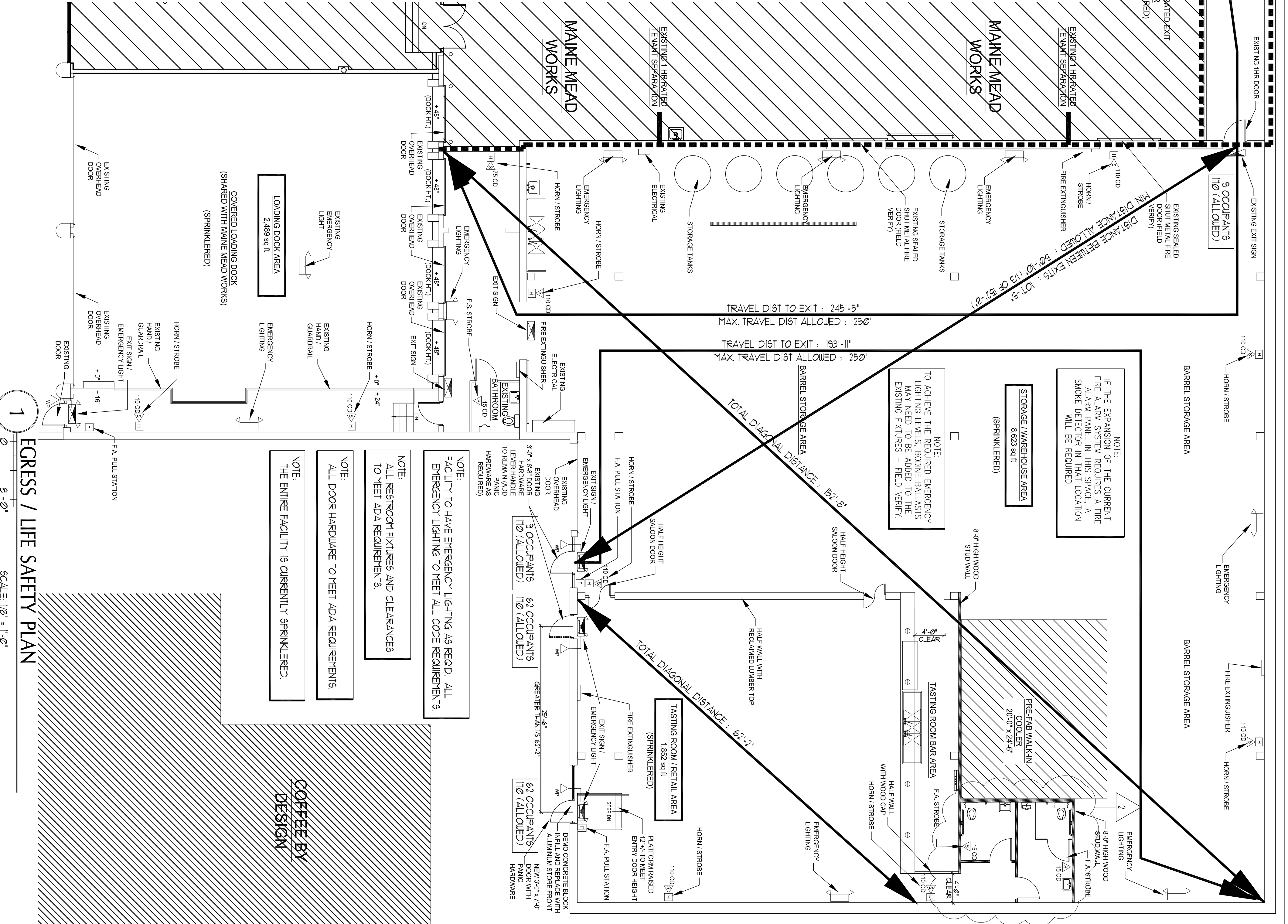
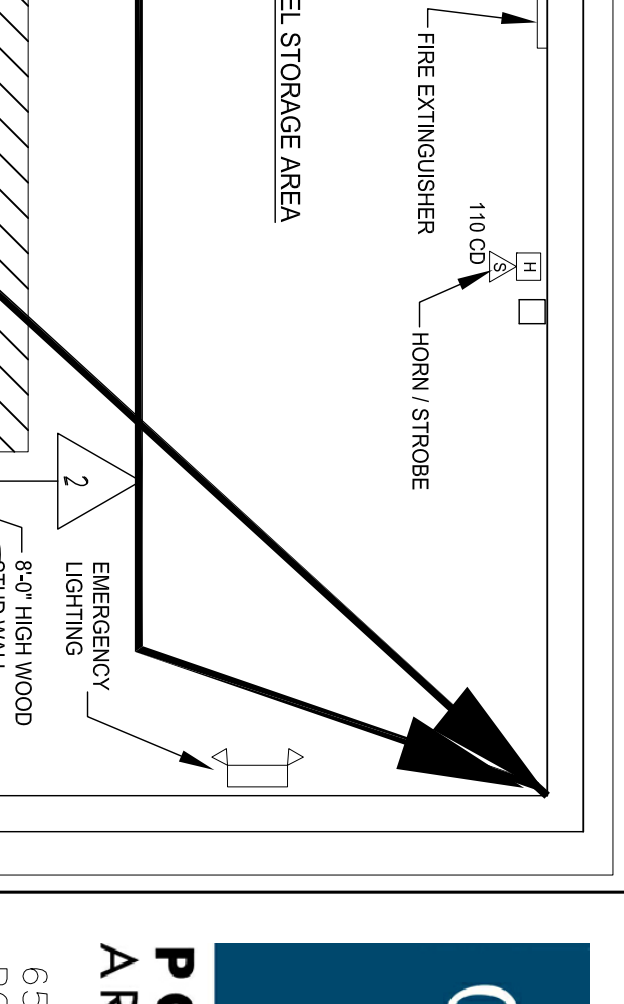
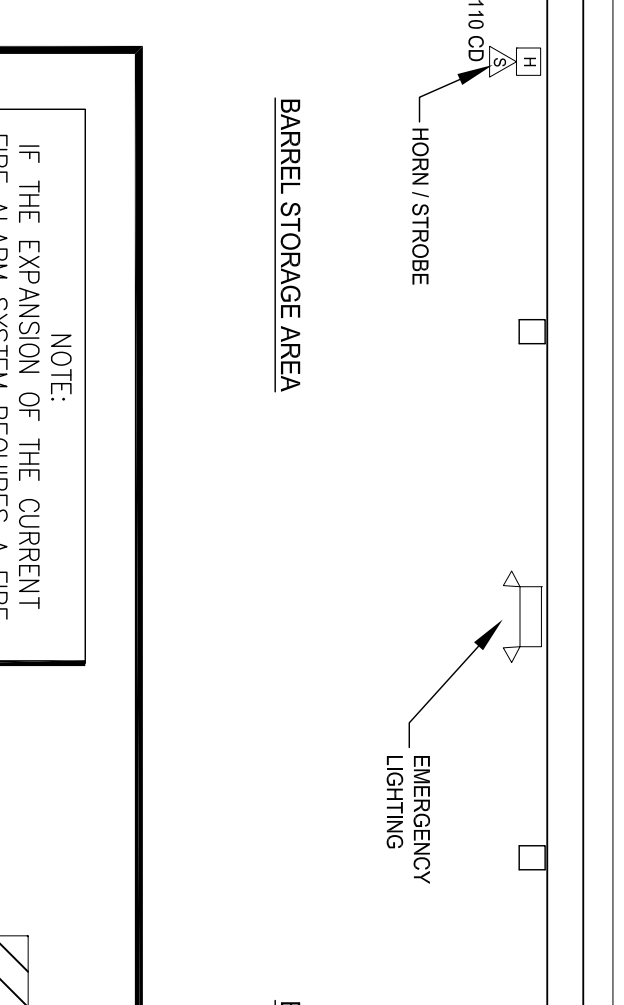
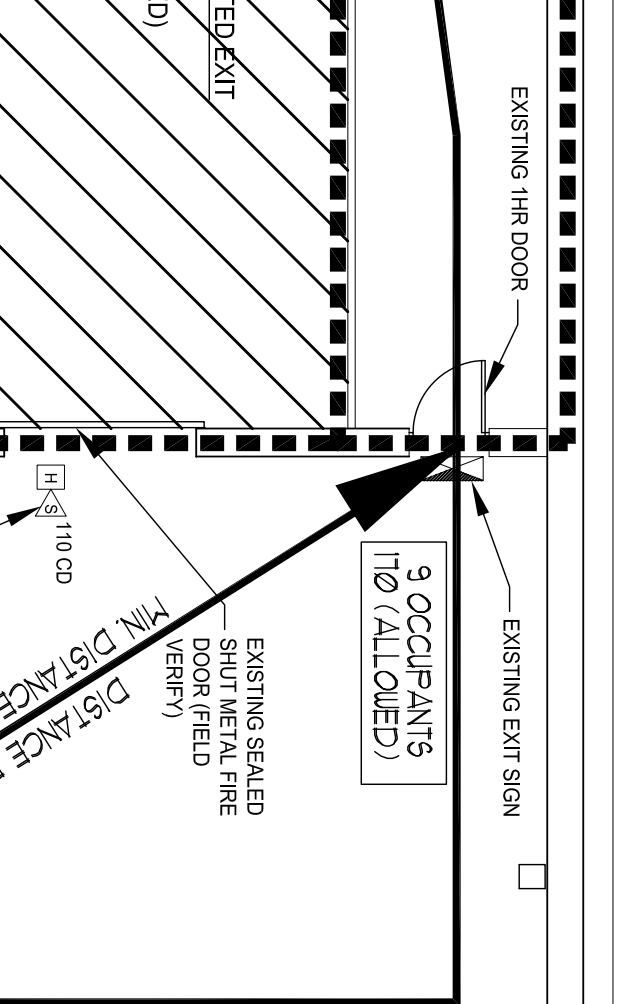
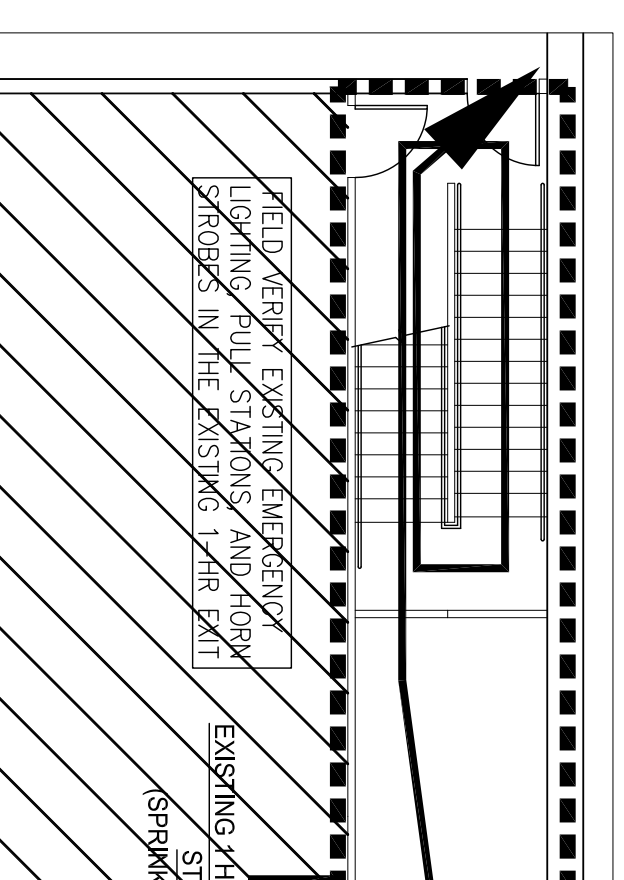
Section 1015.1 - Two exits have been provided for each space (Retail and Storage).

Section 1015.2(2) - The exits from each space shall be placed a minimum of 1/3 of the diagonal of each space due to the sprinkler system.

Table 1016.1 - The maximum exit travel distance shall be 250' (for both the Retail and the Storage areas).

Section 1018.4(2) - The maximum dead end length is 50'.

Section 1022.1 - The existing exit stair serving the Storage area is 1-hour rated and meets this requirements in this section.



PORT CITY ARCHITECTURE
 65 NEWBURY STREET
 PORTLAND, ME 04101
 207.761.9000

REGISTERED ARCHITECT
 ANDREW C. HYLAND
 #20197
 STATE OF MAINE

PERMIT SET
 NOT FOR CONSTRUCTION

OXBOW BREWING CO.

59 Washington Ave.
 Portland, Maine

#	DATE	DESCRIPTION
01	1-31-14	PERMIT SET
02	8-1-14	REV 1
03	8-5-14	REV 2

Date Issued: 08-05-14
 Project Number: 1402
 Drawing Scale: AS NOTED

T.11
 SIGNED: [Signature]
 Checked By: ACH