

Code Review - NFPA 101 (Life Safety) 2009

Chapter 6 - Classification of Occupancy

Section 6.1.2 - This tenant space is classified as "A-3, Assembly Use" and shall meet requirements of Chapter 13 Existing Assembly Occupancy.
 Section 6.1.4.1 - This occupancy shall be classified as a "Single Occupancy".
 Table 6.1.4.4.1 - 2 Hour fire separation is required between Assembly (A-3) Occupancy and the Assembly (A-2) Tenant on the first floor. This is reduced to a 1 Hour fire separation because the building is sprinklered.

Chapter 7 - Means of Egress

Section 7.1.3.2.1(1) - Exits connecting three stories or less shall be 1-hour fire rated.
 Section 7.1.3.2.1(4) - All doors connecting to exit stairs shall have automatic door closers. Note the existing door to a second floor mechanical space within the back exit stair does not have a closer or hardware.
 Section 7.1.3.2.1(9)(c) Existing door to mechanical space of or near exit stair needs to be fire rated and the space shall only be used for storage of mechanical equipment.
 Section 7.2.1 - Doors shall be self-closing doors protected with an auto sprinkler system.
 Section 7.2.2.1.1(b) - Minimum stair width is 36 inches, max. riser is 8" min. tread is 9 inches, min. headroom is 6'-8", max. height between landings is 12 feet. Existing stairs comply.
 Section 7.2.2.4.1(2) - Existing stairs shall have handrails within 44". Only one handrail required 7.2.2.4.1.6.
 Section 7.2.2.4.4.2 - Existing handrails shall be mounted between 30" and 38" measured vertically from the nosing to top of rail.
 Section 7.2.2.4.5(3) - Existing guards shall be not less than 30" high measured vertically from the nosing to top of guard.
 Table 7.3.1.2 - Occupant Load see Egress Plans.
 Assembly spaces: 1 person per 15 square feet
 Business use: 1 person per 100 square feet

Chapter 8 - Features of Fire Protection

Table 8.2.1.2 - Construction Type shall be Type III (200).
 Section 8.2.2.3 - Fire and smoke barriers shall be continuous from outside wall to outside wall or from fire barrier to fire barrier, including continuity through all concealed spaces, such as those found above ceilings and other interstitial spaces.
 Section 8.2.3.2 - Fire resistance rated floors shall be classified as unrestrained in accordance with NFPA 251, Standard Methods of Tests of Fire Endurance of Building Construction and Materials; ASTM E 119, or UL 263, Standards for Fire Tests of Building Construction and Materials.
 Section 8.3.3.1 - Door openings to exit stairs shall be protected by approved, listed, labeled fire door assemblies and the window assemblies and their accompanying hardware, including all frames, closing devices, anchorage, and sills in accordance with NFPA 80 Standard for Fire Doors and Fire Windows.
 Section 8.3.5.1 - Penetrations in the rated partitions shall be fire-stopped according to ASTM E 814 Standard Test Method for Fire Tests of Through Penetration Fire Stops or UL 1479, Standard for Fire Tests of Through Penetration Fire Stops.

Chapter 13 - Existing Assembly Occupancies

Section 13.1.6 - Minimum Construction Requirements, Table 13.1.6 says with Type III (200) Construction that an Assembly occupancy of less than 300 is permitted one level above level of exit discharge. Assembly use is permitted on the second floor.
 Section 13.1.7.1 - Occupant Load is set by Table 7.3.1.2 - Less Concentrated Use, without fixed seating shall be 15 net SF per occupant.
 Section 13.2.2.4 - Locking devices complying with 7.2.1.5.4 are permitted if OL is less than 800. Panic hardware is only required if OL is greater than 100. The allowable OL is well less than 100, therefore panic hardware is not required.
 Section 13.2.3.6.2 - Main Entrance/Exit shall be of a width that accommodated one-half of the total OL.
 Section 13.2.3.6.3 - Main Entrance/Exit shall connect to a stairway leading to the street.
 Section 13.2.4.2 - Assembly Occupancies with OL of 500 or fewer shall have two separate means of egress.
 Section 13.2.5.1.2 - A common path of travel shall be permitted for the first 75 feet from any point for OL of 50 or less.
 Section 13.2.5.1.3 - Dead-end corridors shall not exceed 20 ft.
 Section 13.2.5.3.4.2 - Access and egress routes shall be maintained so that any individual is able to move without undue hindrance on personal narrative at any time.
 Section 13.2.6 - Means of egress shall be maintained in accordance with Section 7.8.
 Section 13.2.9 - Existing emergency lighting shall be provided in accordance with Section 7.9. Existing emergency lights are placed appropriately.
 Section 13.2.10 - Means of egress signage shall be provided in accordance with Section 7.10. Existing illuminated exit signs are placed appropriately.
 Section 13.3.5 - A portable fire extinguisher is required next to each exit door in accordance with 9.7.4.1. Two wall mounted fire extinguishers will need to be added.

Code Review - IEBC 2009

Chapter 3 - Prescriptive Compliance Method

Section 303.1 - Alterations must be no less conforming to IBC than existing. Occupancy will change from recently occupied surf shop - Mercantile occupancy to a new yoga studio - Assembly occupancy.
 Section 303.3 - Structural upgrades shall comply with requirements for new construction.
 Section 303.6 - Alterations in existing buildings are not subject to the egress factors in Section 1005.1 of the IBC for new construction. The components of the means of egress shall be considered complying in any alteration, if in the opinion of the code official, they do not constitute a distinct hazard to life.
 Section 310.7.1 - The small, two-story building does not have an elevator and the proposed scope of work is on the second floor, so it is the intent not to upgrade the existing non-ADA-compliant toilet rooms as the costs to upgrade would well exceed 20% of the costs of alterations.

Chapter 4 - Classification of Work

Section 401.3 - Occupancy and use as per IBC Chapter 3 shall be considered Group A-3, Assembly.
 Section 401.1 - Alteration Level 2 - Reworking of doors. Work area does not exceed 50% aggregate area of the building, therefore does not trigger Level 3. Level 2 needs to meet requirements of Chapters 6 and 7.

Chapter 6 - Alterations - Level 1

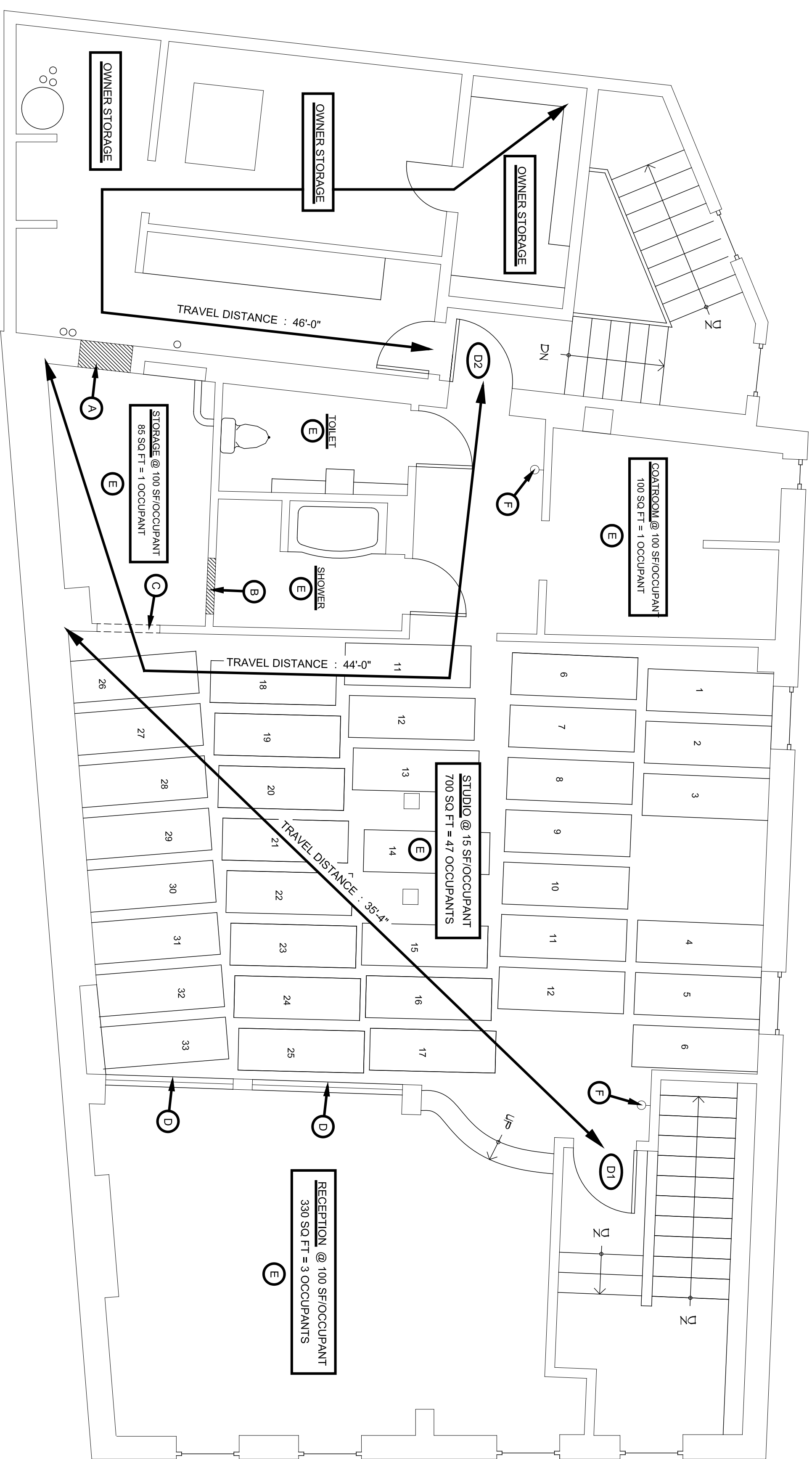
Section 601.4 - Fire Protection - Alterations shall be done in a manner that maintains the level of fire protection provided.
 Section 601.1 - Means of Egress - Repairs shall be done in a manner that maintains the level of protection provided for the means of egress.
 Section 605.1 - Accessibility - ADA upgrades shall be made where "technically feasible".
 Section 605.1.10 - Accessible toilet room is technically infeasible in that the project is on the second floor and there is no elevator.
 Section 605.1.11 - Dressing room may be unisex.
 Section 605.4.13 - Thresholds and building entries shall be ADA compliant interior thresholds are allowed to be 3/4" in height with beveled edges.
 Section 605.2.1 - Toilet rooms shall not be required to be on accessible route from primary function, if cost of providing the route exceed 20 percent of the cost of the alteration affecting the area of primary function (Assembly Occupancy of the second floor).
 Section 606.2 - Structural upgrades shall conform to the load requirements of the International Building Code.

Chapter 7 - Alterations - Level 2

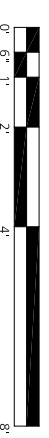
Section 701.3 - New construction elements, components, systems and spaces shall comply with the requirements of the IBC with the exception of windows, electrical to meet Section 708, dead-end corridors to meet Section 705.6 and min. ceiling height shall be 7'-0".
 Section 703.2.3 - Stairway enclosures where work area is over 50% of floor requires smoke-light construction.
 Section 703.2.3.2 - Smoke barriers at stairs shall be 30 minute fire rated in accordance with the IBC.
 Section 704.2.2 - NFPA 13 automatic sprinkler system is required in Group A because of occupant load greater than 30.
 Section 704.4 - Fire alarm and detection systems shall be installed in accordance with NFPA 72.
 Section 705.1 - Means of Egress requirements only required for work areas shared by more than one tenant.
 Section 705.4.2 - Doors must swing in the direction of travel if the occupant load is more than 50 persons.
 Section 705.4.3 - Doors to exit stairs must be self-closing by listed closing devices.
 Section 706.4.4 - Panic Hardware is not required at exit access because not occupant load is less than 100 people.
 Section 706.8(2) - Dead-end corridors shall not exceed 50 feet in Business Occupancies; No travel distance exceeds 90 feet.
 Section 706.9 - Exit signs are required within the work area as per the requirements of the IBC. Current illuminated signs comply.
 Section 706.11 - Electrical equipment and wiring in newly installed partitions and ceilings shall comply with all applicable requirements of NFPA 70, National Electrical Code.
 Section 706.1 - Accessible work area and intended for occupancy shall be provided with natural or mechanical ventilation in accordance with the International Mechanical Code.
 Section 709.1 - All reconfigured spaces within the work area and intended for occupancy shall be provided with natural or mechanical ventilation in accordance with the International Mechanical Code.
 Section 711.1 - Level 2 alterations to existing buildings are permitted without requiring the entire building comply with the International Energy Conservation Code. Those portions within the work area shall conform to the IECC as they relate to new construction.

Chapter 9 - Change of Occupancy

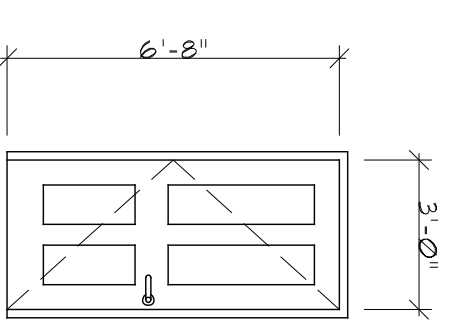
Section 901.4 - A new Certificate of Occupancy is required.
 Section 907.1 - Safety upgrades are required by the IBC.
 Section 908.3 - Change of Occupancy triggers requirement for electrical service to meet ICC Electrical Code for new A-3 occupancy.
 Section 908.4 - Change of Occupancy triggers requirement for the number of electrical outlets comply with ICC Electrical Code for A-3 Occupancy.
 Section 909.1 - Change of Occupancy triggers requirement for mechanical ventilation to meet the International Mechanical Code for A-3 Occupancy.
 Section 910.1 - Change of Occupancy triggers requirement for plumbing to meet the International Plumbing Code.
 Section 911.1 - Light and ventilation shall comply with the requirements of the International Building Code.
 Section 912.4 - Means of Egress Hazard Category is Level 3, based on Table 912.4, Previous Hazard Category for Group M is Level 3 - no change.
 Section 912.8 - Change of Occupancy triggers the following accessibility requirement "where technically feasible":
 One accessible entrance.
 At least one accessible route from entrance to primary function area.
 Signage complying with Section 1110 of the IBC.



1 LIFE SAFETY PLAN
 SCALE: 1/4" = 1'-0"

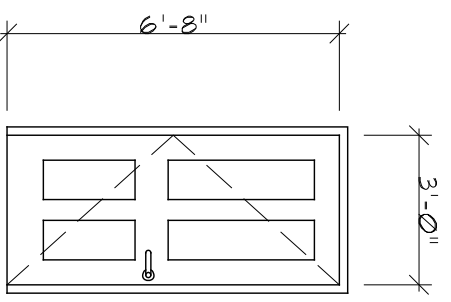


DOOR TYPES 1/4" = 1'-0"



REMOVE EXISTING DOOR AND FRAME
 PREP FOR NEW EXIT DOOR AND FRAME.
 REPAIR GMB AS REQUIRED.

D1 NEW 60 MINUTE FIRE RATED DOOR, FRAME AND HARDWARE WITH ADA LEVER



REMOVE EXISTING DOOR AND FRAME
 PREP FOR NEW EXIT DOOR AND FRAME.
 REPAIR GMB AS REQUIRED.

D2 NEW 60 MINUTE FIRE RATED DOOR, FRAME AND HARDWARE WITH ADA LEVER

- GENERAL NOTES:
- EXISTING BUILDING IS 2-STORIES WITH A FULL BASEMENT.
 - PROPOSED WORK AREA IS SECOND FLOOR (NOT OWNER OCCUPIED BACK-OFF-HOUSE SPACE)
 - EXISTING FLOOR PLATE GROSS SQUARE FOOTAGE IS 2,350 SF
 - TENANT SQUARE FOOTAGE IS 1,425 SF
 - EXISTING BUILDING HAS A SUPERVISED AUTOMATIC SPRINKLER SYSTEM - VERIFY THAT SYSTEM MEETS NFPA 13 STANDARD FOR INSTALLATION OF SPRINKLER SYSTEMS.
 - EXISTING BUILDING HAS A FIRE ALARM SYSTEM - VERIFY CONFORMANCE WITH NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE
 - EXISTING BUILDING HAS AN EMERGENCY LIGHTS - VERIFY CONFORMANCE WITH NFPA 110 STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS.
 - 33 - 2 FT. X 6 FT YOGA MATS SHOWN IN STUDIO SPACE, ARRANGED AS ANTICIPATED.
- KEY NOTES:
- A NEW 1 HR. FIRE RATED PARTITION INFILL FROM 2X4'S AND 5/8" TYPE X GWB EACH SIDE.
 - B REMOVE EXISTING FIXED DOOR AND CASING AND INFILL WITH MATCHING PARTITION.
 - C REMOVE EXISTING INTERIOR CASEMENT WINDOW, REPLACE WITH NEW CASING OPENINGS.
 - D INFILL EXISTING OPENINGS IN PARTITION WITH 1/4" TEMPERED GLASS WITH 1X PAINTED WOOD STOPS
 - E FRAME AND PAINT ALL WALL AND CEILING SURFACES.
 - F NEW WALL MOUNTED FIRE EXTINGUISHER

LIFE SAFETY PLAN

SHEET SIZE:
 22' x 34'

DATE:
 07 / 25 / 2016

ISSUED FOR/REVISION:

DRAWN BY:
 B+W
 Copyright 2016 Barba + Wheelock

ROOT(ed) YOGA STUDIO

36 MARKET STREET
 PORTLAND, MAINE 04101



BARBA+WHEELOCK
 ARCHITECTURE SUSTAINABILITY PRESERVATION

500 CONGRESS STREET
 PORTLAND, MAINE 04101
 207 772 2722

WWW.BARBAWHEELOCK.COM