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PROJECT: **735 WASHINGTON AVE. PORTLAND, MAINE**
 SHEET TITLE: **LIFE SAFETY / EGRESS CODE STUDIES ISSUED FOR PERMITTING**

NO.	BY	DATE	REVISIONS
1	ASW	12/7/16	DESCRIPTION
2			REVISED PER CITY REG. COMMENTS
3			
4			
5			
6			
7			
8			

DATE : 11-23-16
 SCALE : AS NOTED
 DESIGN BY: ASW
 DRAWN BY: RSC
 FILE #: 16333-A1.dwg
 PROJECT NUMBER:
16333
 SHEET NO:
AO

FIRE SUPPRESSION AND LIFE SAFETY SYSTEM NOTES

THE ENTIRE BUILDING WILL HAVE AN NFPA 13R FIRE SUPPRESSION SYSTEM INSTALLED. REFER TO SPRINKLER DRAWINGS BY EASTERN FIRE PROTECTION FOR SYSTEM DESIGN.

THE ENTIRE BUILDING WILL HAVE A MANUAL FIRE ALARM SYSTEM INSTALLED PER NFPA 9.6. REFER TO DRAWINGS BY SIMPLEX-GRINNEL FOR FIRE ALARM AND NOTIFICATION SYSTEM DESIGN.

THE OPERATOR OF THE FACILITY WILL BE APPROVED/LICENSED TO HOUSE 10 CLIENTS. STAFF OCCUPANCY WILL BE 1 FROM 12AM TO 8AM, 5 FROM 8AM TO 4PM, 2 FROM 4 PM TO 12AM.

EXISTING WALL AND CEILING FINISHES ARE GYPSUM WALL BOARD OR PLASTER CLASSIFIED AS TYPE A.

CODE ANALYSIS

International Existing Building Code – 2009 Ed
 International Building Code – 2009 ed.

Work is classified as an Alteration Level 2 per section 404.1
 Work Scope includes the change of use from 2009 IRC one and two family dwelling (2-unit apartment) to R-4 Residential Care Facility (no change in occupancy hazard classification level 3 – T912.4). The existing un-finished attic storage space at the 3rd floor is to be converted to heated living space (exercise room). A new single stair accessing the 3rd floor will be constructed at the location of the current attic access stair. Minor reconfiguration of space at the 2nd floor will also be performed, along with 1 hr rated walls and ceilings around the existing forced hot water oil burner in the basement. A new NFPA 13R sprinkler system will be installed throughout the facility, along with a manually operated fire alarm system per NFPA 101 Sec 9.6.

Section 310	Building Use Group:	Residential Care R-4 (3120 sf net, 4724 sf gross). R-4 must comply with R-3 construction standards.
T 601	Construction Type:	Vb
T1004.1.1	Hazard Classification:	Moderate Hazard
	Occupant Loads:	Residential: 200 gross sf occ. @ 3078 sf = 16 occ. 1 st flr = 7.2, 2 nd flr = 5.4, 3rd flr = 3.0. 3 stories, 24,000 sf (sprinkled, 504.2, 506.3)
TS03	Max Height/Area	N/A
TS08.4	Separation of Use Rating:	N/A, fully sprinkled
TS08.4	Janitor, Mech, Stor. Rating:	N/A, Furnace <400,000 BTU input.
TS08.2.5	Accessory Room Ratings:	1hr, (NR if occ load served < 10 per 1022.1 Exp 1)
1022.1	Exit Stair Enclosure Rating:	1hr (0.5hr if sprinkled)
T1018.1	Corridor Enclosure Rating:	1hr
	Shafts/Elevators:	N/A
	Area of Refuge:	N/A
1009.1	Minimum Stair width:	36" (Occ load <50)
	Maximum Riser height:	7"
	Minimum Tread width:	11"
1009.2	Minimum Headroom:	6'-8" at stairs; 7'-6" at occupied spaces
	Maximum ht between landings:	12'-0"
1013.2	Guardrail Height:	42"
1012.2	Handrail height:	34"
	Handrail top extension:	12" horz.
	Handrail bottom extension:	11" angled + 12" horz.
1012.3.1	Handrail diameter:	1-1/4" O.D.
1013.3	Maximum balluster open space:	less than 4"
T1016.1	Max. Allowable Travel Distance:	200' (250' if fully sprinkled)
1014.3	Max. Allowable Common Path:	75'
1018.4	Max. Allowable Dead End Corridor:	20' (50' if fully sprinkled)
1018.2	Minimum Egress Corridor Width:	36" for occ load <50.
1021.2	Minimum Number of Required Exits:	1 at each floor (single exits allowed in R-3, and R-4 must meet the requirements of R-3 Construction per 310.1)
1022.1	Minimum Horz Egress Enclosure rating:	Not required for stairs that serve an Occ load < 10 (exception 1, 1.1, 1.2)
1015.2.1	Separation of exits:	0.5 the diagonal distance (.33 if fully sprinkled)
	Panic Hardware	Required if over 50 total occupants
	Fire Escapes as means of egress:	Allowed (Not provided in current work scope)
1008.1.1	Minimum Egress Door Clear Width:	32"
	Exit Lighting:	Required
912.1.1	Emergency Lighting:	Required
912.1.1	Separated uses to comply with IBC Ch18	No Separated Uses
912.2.1	Fire Sprinkler System:	Required
912.2.2	Fire Alarm System:	Required
912.3 (803.1.1)	Classification of Finishes:	Class B at Exit enclosures/passageways. Class C at corridors, rooms, and enclosed spaces (sprinkled, T803.9)
912.4	Hazard Category	3
912.4.2	Means of Egress	Existing elements must comply with sec. 805, new elements must comply with IBC Ch10
912.6.2	Exterior Wall Finish	Existing finishes are acceptable.
912.8	Accessibility	Existing building is not ADA accessible. Crossroads for Women Inc. has alternate properties (care facilities) that are ADA accessible. If a person requiring ADA compliant building features enters their program, they will be assigned to and cared for at a facility (other than 735 Washington Ave) that is ADA compliant.
906.1	Portable Fire Extinguishers:	Required
907.2.9.2	Smoke Detector/Alarms:	Required
	Heat Detectors/Alms:	Will be provided.

CODE ANALYSIS

NFPA 101 Life Safety Code – 2009 ed.

Section 3.3.168.12 32.1.4.1	Building Classification:	Chapter 32 – New Res. Board and Care (3120 net) This work is classified as a Conversion. v (000)
T7.3.1.2 T6.1.14.4.1B T32.3.3.2.2	Construction Type: Hazard Classification: Occupant Loads: Separation of Use Rating: Boiler rooms Storage Rooms w/ combustible materials between 50sf and 100sf Rating: Storage Rooms w/ combustible materials over 100sf Rating:	200 sf / occ. @ 3120sf = 16 occ. N/A 1 hour Smoke Partition
32.2.2.4.7 32.2.3.6.1	Exit Stair Enclosure Rating: Corridor Wall Rating:	Not Req'd if Sprinkled 1/2 Hour (lathe and plaster)
7.2.2.2.1.2 17.2.2.2.1.1a,b	Area of Refuge: Minimum New Stair width: Maximum Riser height: Minimum Tread width: Minimum Headroom:	Permitted per 7.2.12 36" (occ load < 50) 7" (8" at exg stairs) 11" (9" at exg stairs) 6'-8" at stairs; 7'-6" at occupied spaces
7.2.2.4	Maximum ht between landings: Guardrail Height: Handrail height: Handrail top extension: Handrail bottom extension: Handrail diameter: Maximum balluster open space:	12'-0" 42" 34" 12" horz. 11" angled + 12" horz. 1-1/4" O.D. less than 4"
32.4.2 31.2.6.2(3) 31.2.5.3.2 31.2.5.4 7.3.4.1.2 31.2.4.4 31.2.4.1	Means of Egress Requirements Max. Allowable Travel Distance: Max. Allowable Common Path: Max. Allowable Dead End Corridor: Minimum Egress Corridor Width: Minimum Number of Required Exits	Use section 31.2 per 32.4.2.2 200' if sprinkled 50' 50' 28" 1 per story where stair is 1hr rated 2 per story where stair is not enclosed n/a
31.2.2.9 31.2.2.10 7.2.1.2.4(4) 31.2.8 31.2.9 32.2.3.5.1 32.2.3.4.1 32.3.3.5.6 32.2.3.4.3.1 32.3.3.3.2	Minimum Horz Egress Enclosure rating: Separation of exits: Panic Hardware Fire Escapes stairs as means of egress: Fire Escapes ladders as means of egress: Minimum Egress Door Width: Exit Lighting: Emergency Lighting: Fire Sprinkler System: Fire Alarm System: Portable Fire Extinguishers: Smoke Detector/Alarms: Heat Detectors/Alarms: Classification of Finishes:	0.5 the diagonal distance (.33 if fully sprinkled) Required if over 50 total occupants Allowed Allowed 28" at conversions (32.2.2.5.1.2) Required Not Required (<12 units, < 3 stories in height) NFPA 13R system required (32.2.3.5.3.1) Manual Fire Alarm System Required Required Required Not Required Class A at Exit Enclosures Class B at Lobbies and Corridors Class B at Rooms and enclosed spaces