

Life Safety and Building Code Analysis

Elsmere 2 Restaurant - Interior Renovation

476 Stevens Ave., Portland, ME

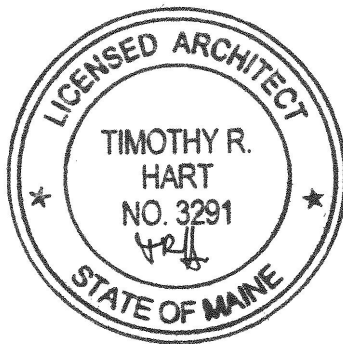


Submitted to:

City of Portland Maine – Permitting and Inspections Department

Submitted on behalf of:

Nat Towl – Owner’s Representative, Elsemere 2



Submitted by:

Canal 5 Studio - Timothy R. Hart, Architect (ME #3291)



CODE SUMMARY

Project Description:	Renovate an existing bar/restaurant space for a new tenant.
Business Name:	Elsmere Restaurant
Address:	476 Stevens Ave., Portland, ME 04103
Owner Contact:	Nat Towl NMT Woodworking, Inc. 183 Mariner Street South Portland, ME 04106-2939 (207) 321-9038 nmtwoodworking@yahoo.com
Architect:	Canal 5 Studio Timothy R. Hart, AIA, Principal One Canal Plaza, #888 Portland, ME 04101 (207) 415-7695 thart@canal5studio.com
Design Engineer(s)	n/a
Zone:	City of Portland, B1 Relevant criteria: Side and rear setbacks for accessory structures are 5' where abutting a residential zone.
Relevant Districts and Overlays	n/a

Proposed Use:	Restaurant and Bar, Assembly A-2 (IBC), Existing Assembly (Ch.13—NFPA)
Former Use:	Restaurant/Bar ("Siano's")
Change of Use:	No
Sprinklered:	No
Fire Alarm:	No.
Building Description:	Two story, single tenant, free standing building with small attic office space. appears to be predominantly type 3B.
Total Sq.Ft.	3,500 sq.ft.
Occupant Load	133 (see life-safety plan)
# Exits	2
Mixed Occupancy	No
IEBC Classification	International Existing Building Code (IEBC) – "Alteration – Level 3" (under section 405 of IEBC).
Panic Hardware	Yes. At both exits.
Relevant Codes	IBC 2009, IEBC 2009, IEEC 2009 NFPA 101, 2009 Maine State Plumbing Code Maine State Food Code

USE AND OCCUPANCY

Code Criteria	IBC 2009	NFPA 101 2009	DISCUSSION / FINDINGS
CLASSIFICATION OF OCCUPANCY	§303.1	§6.1.2.1	A-2 Assembly
SEPARATION OF OCCUPANCIES	§508 Table 508.4	§6.1.14.4 Table 6.1.14.4.1	Single tenant, free standing building. No occupancy separation required.
ACCESSORY OCCUPANCIES	§508.2		n/a
INCIDENTAL OCCUPANCIES	§508.2.5	§13.3.2.1.2(b)	Wood storage room rated 1 hr. with 45-minute door.
MIXED OCCUPANCY			No mixed occupancy.

SPECIAL USES & OCCUPANCIES

Code Criteria	IBC 2009	NFPA 101 2009	DISCUSSION / FINDINGS
SPECIAL USES & OCCUPANCIES	Ch.4	Ch.11	n/a. No special uses.

CONSTRUCTION TYPE

Code Criteria	IBC 2009	NFPA 101 2009	DISCUSSION / FINDINGS
CONSTRUCTION CLASSIFICATION	§602 Table 601		Existing brick building with wood framed floor ceiling assemblies. Type 3B

BUILDING HEIGHT AND AREA

Code Criteria	IBC 2009	NFPA 101 2009	DISCUSSION / FINDINGS
BUILDINGS ON SAME LOT	§503.1.2		n/a
BUILDING HEIGHT	§504		n/a

	Table 503		
Automatic Sprinkler Increase	§504.2		n/a
BUILDING AREA	§506 Table 503		Base allowance is 9,500 sq.ft. per floor
Frontage Increase	§506.2		0
Automatic Sprinkler Increase	§506.		0

MEANS OF EGRESS

Code Criteria	IBC 2009	NFPA 101 2009	DISCUSSION / FINDINGS
GENERAL MEANS OF EGRESS	§1003		
Ceiling Height	§1003.2		minimum ceiling height 7'6"
Protruding Objects	§1003		minimum protruding height 6'-8"
Horizontal Projections	§1003		4" max.
Floor Surface	§1003		Slip resistant surface & securely attached.
OCCUPANT LOAD	§1004 Table 1004.1.1	§7.3.1.2 §13.1.7	Total occupant load = 133 See life safety plan drawing. Egress components will accommodate up to 500.
EGRESS WIDTH	§1005		
Components Width (doors & corridors)	§1005.1		0.2" per occupant 133 occupants x 0.2"/occupant = 27" required. With one 32" clear egress door and one 68" clear egress door, 100" of egress width provided ∴ OK Aisles serving egress doors 27" (or 13.5" per door). 44" provided ≥ 13.5" required ∴ OK
Misc			
Emergency power	§1006.3		Aisles, corridors, exit enclosures need emergency lighting.
Accessible means of egress	§1007.1	§7.5.4	Not required for existing buildings
Doors	§1008.1.1		32" clear (36" door)

Code Criteria	IBC 2009	NFPA 101 2009	DISCUSSION / FINDINGS
Panic and Fire Exit Hardware	§1008.1.10	§7.2.1.7 §13.2.2.2.3	Panic hardware required for group A occupancies > 50 occupants.
Stair Width	§1009.1		Minimum width 44"
Ramps	§1010	§7.2.5	Slope ≤ 1 in 12. Max rise 30". landing length 5' min., landing width ≥ ramp width (at widest).
Exit Signs	§1011	§7.10	Exits (other than main exits clearly identifiable as such) need exit signs. Exit access clearly marked with signs.
Handrails	§1012		Of uniform height 34" to 38".
Guards	§1013		Required where ≥ 30" grade change at stairs & ramps.
EXITS & EXIT ACCESS			
Egress through intervening spaces	§1014.1	§7.5.1.6 §13.2.5.2	Can only pass through adjoining spaces if they are accessory to each other and provide a discernible path of egress. Cannot pass through a room that can be locked to prevent egress. No egress through kitchens.
Common Path of Travel	§1014.3 §1028.8(2)	§13.2.5.1.2	20' max for area serving any number of occupants, 75 feet for area serving ≤ 50 occupants (nfpa more restrictive than IBC)
# Exits	§1015 Table 1015.1 §1021.1 Table 1021.1	§7.4 §13.2.4	50 ≤ Occupant load ≤ 500 ∴ 2 exits req.
Remoteness of Exits	§1015.2		1/3 diagonal rule. See code plan for compliance.
Boiler room # Exits	§1015.3		Boiler ≥ 400K BTU requires two exits. (n/a)
Refrigeration machine rooms	§1015.4		If ≥ 1,000 sq.ft. then two exits. (n/a)
Exit Access Travel Distance	§1028.7 Table 1016.1	§13.2.6.2	250' max distance.
Aisles	§1028.9.1(4) §1028.9.1(5)	§13.2.5.8.2 §13.2.5.8.2	Minimum clear width for aisles is 44" (NFPA more restrictive than IBC). 19" perpendicular to table or bar marks the beginning of aisle.
Corridor rating	§1018 Table 1018.1		n/a (no corridors)

Code Criteria	IBC 2009	NFPA 101 2009	DISCUSSION / FINDINGS
Corridor Width	§1018.2		n/a (no corridors) 44" minimum. Must not be less than that set for "components" by 1005.1
Dead End Corridors	§1018.4	§13.2.5.1.3	20' max dead-end corridor.
Exit Enclosures	§1022		Exit stairways enclosed with 1 HR barrier where connecting four or less stories. <i>NOTE: Exit stairs go up one floor and exit directly onto Free Street. They do not connect to any other floors.</i>
Common Path of Egress Travel	§1014.3 §1028.8		30' for space serving more than 50 occupants. 75' for space serving less than 50 occupants.

FIRE AND SMOKE PROTECTION FEATURES

Code Criteria	IBC 2009	NFPA 101 2009	DISCUSSION / FINDINGS
FIRE BARRIERS	§707.3.2		n/a
Continuity	§707.5		Attaches to bottom of floor ceiling assembly continuous through any concealed spaces.
Penetrations	§707.7		
Horizontal Assemblies	§712		Ceiling floor assembly must be one hour rated to separate occupancy above.

Interior Finishes

Code Criteria	IBC 2009	NFPA 101 2009	DISCUSSION / FINDINGS
DECORATIVE MATERIALS AND TRIM	§806		In group A, decorative materials suspended from walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 or be non-combustible.
WALL AND CEILING FINISHES	§803 Table 803.9		Group A-2, non-sprinklered spaces require class A finishes in corridors and exit enclosures and class C finishes in rooms and enclosed spaces. Class C = flame spread index of 76-200, smoke developed index of 0-450.

FIRE PROTECTION SYSTEMS

Code Criteria	IBC 2009 IEBC 2009	NFPA 101 2009	DISCUSSION / FINDINGS
AUTOMATIC SPRINKLER SYSTEMS	§903.2.1.2	§13.3.4.1.1	In group A-2 occupancies of ≥ 100 occupants, IBC requires NFPA 13 sprinklers. In NFPA 101 the threshold is 300 occupants. Ordinarily the more restrictive (IBC) would rule. However, in this case MUBEC (Maine Uniform Building and Energy Code) overrides IBC and changes 100 occupants to 300 occupants. (see MUBEC 16-642 ch. 3 pp. 4-5). Therefore, sprinklers are not required for this project.
STANDPIPE SYSTEMS	§905		Not required
PORTABLE FIRE EXTINGUISHERS	§906		Within 30' of commercial cooking equipment 906.1(2)
	Table 906.3(1)		Assume ordinary (moderate) hazard occupancy for Class A fire hazard. Maximum travel distance to extinguisher = 75'