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Scale:
12" = 1'-0"

CODE SUMMARY
AC0.1

CODE SUMMARY

Applicable Codes
 • MUBEC - Maine Uniform Building and Energy Code
 • 2009 International Building Code - IBC (except chapters 11 and 30)
 • 2009 IECC: International Energy Conservation Code
 • 2009 IEBC: International Existing Building Code
 • NFPA 101 Life Safety

Accessibility Codes
 • State of Maine Human Rights Act
 • ADAAG Americans with Disabilities Act
 • ICC ANSI 117.1 Accessible and Usable Buildings and Facilities

PROJECT SUMMARY:

Conversion of an existing historic building (mortuary) to a mixed-use Inn and Restaurant in accordance with the National Park Service Guidelines for Rehabilitating Historic Buildings. The work will affect all aspects of the building including, but not limited to, the foundations, the masonry, the internal structure and walls, existing historical elements for repair and replacement, doors (interior and exterior), windows, roofing and flashing. The building will be sprinkled with an NFPA 13 system.

Square Footages:

Basement -	4376 sf.	(B Restaurant - 790sf/R1 Hotel 3686sf.)
First Floor -	4080 sf.	(B Restaurant - 2435sf/R1 Hotel 1645sf.)
Second Floor -	2256 sf.	(R1 Hotel)
Third Floor -	1927 sf.	(R1 Hotel)
Total Sq Footage :	12,639	

Unit Count:		Accessibility:
Ground Floor	4	Total Rooms = 15
First Floor	3	Accessible Rooms Required = 1
Second Floor	4	(ADA Table 224.2)
Third Floor	4	Rooms with required communication features = 2
TOTAL	15	

712.3.2 Rated access doors permitted in fire rated ceiling assemblies.

713.1.1 Penetrations of fire resistance rated walls by ducts (not protected by dampers): Sleeves through walls, in cavity construction, shall be securely fastened (a fire stop assembly is required between sleeve and pipe/duct).

713.3.2 Membrane penetrations shall be limited to 16 square inches each and an aggregate of 100 square inches/100 sf of wall
 • Offset boxes by 24" on opposite sides of wall
 • Not required at sprinklers with escutcheon plate

714.4 Where fire resistance rated floor/ceiling assemblies are required, voids along curtain wall and floors shall be sealed with an approved system, matching the fire resistance rating of the floor system.

715.4 Fire Door and Shutter Assemblies

Table 715.4 Type of Assembly	Required Assembly Rating	Min Door Assembly Rating (hrs)
Fire Walls	3 hours	3 hours
Fire Barriers (2 Hr)	2 hours	1-1/2 hours
Other Fire Barriers	1 hour	3/4 hour
Fire Partitions		
Corridor walls	1 hour/5 hour	1/3 hour
Other fire partitions	1 hour	3/4 hour
Exterior Walls	2 hours	1 1/2 hours
Smoke Barriers	1 hour	1/3 hour

715.4.3.1 Fire door assemblies shall meet requirements for smoke and draft control door assemblies

717 Concealed Spaces

717.2 In combustible construction fire barriers shall be installed to cut off concealed draft openings and form a barrier between floors. Fireblocking required at:
 • Mineral wool allowed in double stud walls
 - Vertically at floors and ceilings
 - Horizontal spacing not exceeding 10 feet
 • Connections between horizontal and vertical spaces (soffits, dropped ceilings, etc.)
 • Stairways at top and bottom of run between stringers
 • Piping, vents, etc.

CODE SUMMARY - IEBC 2009:

705.3.1 Minimum Number of Exits
 Minimum number of exits based on the occupancy and occupant load in accordance with the *International Building Code*.

912.7 Enclosure of vertical shafts
 Enclosure of vertical shafts shall be in accordance with Sections 912.7.1 through 912.7.4.

912.7.1 Minimum requirements
 Vertical shafts shall be designed to meet the International Building Code requirements for atriums or the requirements of this section.

912.7.2 Stairways
 When a change of occupancy classification is made to a higher hazard category as shown in Table 912.4, interior stairways shall be enclosed as required by the International Building Code.

Exceptions:
 1. In other than Group I occupancies, an enclosure shall not be required for openings serving only one adjacent floor and that are not connected with corridors or stairways serving other floors.
 2. Unenclosed existing stairways need not be enclosed in a continuous vertical shaft if each story is separated from other stories by 1-hour fire-resistance-rated construction or approved wired glass set in steel frames and all exit corridors are sprinklered. The openings between the corridor and the occupant space shall have at least one sprinkler head above the openings on the tenant side.

1103.9 STAIRWAY RAILINGS - Grand stairways shall be accepted without complying with the handrail and guard requirements. Existing handrails and guards at all stairs shall be permitted to remain, provided they are not structurally dangerous.

CODE SUMMARY IBC 2009:

Chapter 3- Use and Occupancy Classification Mixed Use (NonSeparated)

304.1 Business Group B Restaurant, occupancy less than 50
310.1 Residential Group R-1 Hotel

Chapter 4- Special Detailed Requirements Based on Use and Occupancy

303.1 Assembly Group A Exceptions:
 (1) A building or tenant space used for assembly purposes with an occupant load of less than 50 persons shall be classified as a Group B occupancy.

420 Group R-1
420.2 Separation Walls-Walls separating Dwelling Units from Dwelling Units and from other occupancies are Fire Partitions in accordance with Section 709 (1 hour rated).

420.3 Horizontal Separation- Floor Assemblies separating Dwelling Units from Dwelling Units and from other occupancies are Horizontal Assemblies in accordance with Section 712 (1 hour)

Chapter 5- General Building Heights and Areas

Table 503 Allowable Heights and Areas
 Business Group B Type 3B Construction - 3 stories, 19,000 sf per story
 Residential Group R-1 Type 3B Construction - 4 stories, 16,000 sf per story

Total Building Sq Footage : 12,639 sf.

504.2 Automatic Sprinkler System Increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 The value specified in Table 503 for maximum building height increased by 20 feet and the maximum number of stories is increased by one.

Construction Type 3B- Group B (Business most restrictive): 3 stories allowed
 (3 proposed) Refer to building elevations for determination of basement by definition.

508 Mixed Use and Occupancy
 Buildings or portions of buildings that comply with the provisions of this section shall be considered as nonseparated occupancies.

717.2.5 Double Stud Walls Batts or blankets of mineral or glass fiber insulation shall be allowed as fire blocking in walls constructed using parallel rows of studs or staggered studs.

717.2.2 Concealed Wall Spaces Fire blocking shall be provided in concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs as follows:
 1. Vertically at ceiling and floor levels
 2. Horizontally at intervals not exceeding 10'.

71 7.3.2 Use Group R-1 Draft stopping in floor/ceiling spaces not required per Exception No. 1, Sprinkler system provided in accordance with Section 903.3.1.1.

717.4.2 Draft Stopping In Attics
717.4.2 Group R-1 Not required in attics and concealed roof spaces per Exception No. 2, Sprinkler system provided in accordance with Section 903.3.1.1.

Chapter 8- Interior Finishes

Table 803.3 Interior Wall and Ceiling Finish Requirements
 By Occupancy- Sprinklered
Group **Exit Enclosures** **Corridors** **Rooms and Enclosed Spaces**
 B Class B Class C Class C
 R-1 Class B Class C Class C

Chapter 9- Fire Protection Systems

Table 903.2 Occupancy Related Automatic Sprinkler Requirements
 Threshold Occupant Load Comment
 R-1 Sprinklers required Any level -

903.3.1.1 NFPA 13 Sprinkler Systems
 The building will be equipped throughout with an automatic sprinkler system in accordance with NFPA 13.

903.3.2 Quick response or residential automatic sprinklers shall be installed in dwelling units.

IEBC (2009)

CHAPTER 11 - HISTORIC BUILDINGS
1103.9 STAIRWAY RAILINGS - Grand stairways shall be accepted without complying with the handrail and guard requirements. Existing handrails and guards at all stairs shall be permitted to remain, provided they are not structurally dangerous.

1103.10 GUARDS - Guards shall comply with Sections 1103.10.1 and 1103.10.2.
1103.10.1 HEIGHT - Existing guards shall comply with the requirements of Section 505.
1103.10.2 GUARD OPENINGS - The spacing between existing intermediate railings or openings in existing ornamental patterns shall be accepted. Missing elements or members of a guard may be replaced in a manner that will preserve the historic appearance of the building or structure

1105.1 GENERAL - Historic buildings undergoing a change of occupancy shall comply with the applicable provisions of Chapter 9, except as specifically permitted in this chapter. When Chapter 9 requires compliance with specific requirements of Chapter 5, Chapter 6, or Chapter 7 and when those requirements are subject to the exceptions in Section 1102, the same exceptions shall apply to this section.
1105.4 OCCUPANCY SEPARATION - Required occupancy separations of 1-hour may be omitted when the building is provided with an approved automatic sprinkler system throughout.

CODE SUMMARY NFPA 101 LIFE SAFETY 2009:

SPRINKLED WITH NFPA 13

NFPA 6.1.8.1.3
OCCUPANCY - HOTEL
NFPA 6.1.10
OCCUPANCY - MERCANTILE

6.1.14.1.3 Where incidental to another occupancy, areas used and shall be permitted to be considered part of the predominant occupancy and shall be subject to the provisions of the Code that apply to the predominant occupancy:
 (1) Mercantile

A.6.1.10.1 Mercantile Occupancy: Mercantile Occupancies include the following:
 (4) Restaurants with fewer than 50 persons

508.3.1 Occupancy classification
 Nonseparated occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space except that the most restrictive applicable provisions of Section 403 and Chapter 9 shall apply to the building or portion thereof in which the nonseparated occupancies are located.

508.3.3 Separation.
 No separation is required between nonseparated occupancies.
 Exceptions: 2. Group I-1, R-1, R-2 and R-3 dwelling units and sleeping units shall be separated from other dwelling or sleeping units and from other occupancies contiguous to them in accordance with the requirements of Section 420.

Chapter 6- Types of Construction

Table 601 - Fire Resistance Ratings for Building Elements

Building Element	Type 3B
Primary Structural Frame	0 hour
Exterior Walls	2 hours
Interior Walls	0 hour
Non-Bearing Walls and Partitions, Exterior	(See Table 602)
Non-Bearing Walls and Partitions, Interior	0 hour
Floor Construction and Secondary Members	0 hour
Roof Construction and Secondary Members	0 hour

Table 602- Fire Resistance Rating Requirements For Exterior Walls Based on Fire Separation Distance (non-loadbearing walls)

Fire Separation Dist.	Construction Type	Group B, R
x < 5'	All	1 hour
5' ≤ x < 10'	Type 1A	1 hour
	Type 3A	1 hour
10' ≤ x < 30'	Type 1A	1 hour
	Type 3A	1 hour
x ≥ 30'	All	0 hour

*Higher of 2 determining factors (Tables 601 and 602) indicate exterior bearing walls to be 2 hour fire resistance rated from the inside.

903.4 Valve controlling water supply for automatic sprinkler system shall be electronically supervised by a fire alarm control unit.

905 Standpipe Systems
905.2 Standpipe Systems will be provided in accordance with NFPA 14

905.3.1 Height. Class 1 Standpipes are allowed in buildings equipped throughout with an automatic sprinkler system.

905.4 Class 1 standpipe hose connections shall be provided in the following locations:
 • In every stairway at an intermediate floor level between floors, unless otherwise approved by the fire code official
 • Where roof slope is less than 4:12 each standpipe shall be provided with a hose a connection either on the roof or the highest landing of a stairway with stair access to roof.
 • On each side of the wall adjacent to exit opening of horizontal exit (Not required where hose stream is reachable).

906 Portable Fire Extinguishers - Required in Group B, R-1 occupancies: provided in accordance with NFPA 10
 • Exception: In Group R and B occupancies extinguishers only required on each floor.

907 Fire Alarm and Detection Systems
907.2 Where Required-New Buildings and Structures
 • Exception 2: Automatic heat detection is not required in buildings with automatic sprinkler system

907.2.2 Group B: Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with section 903.3.1.1
907.2.9 Group R-1: Manual fire alarm station is required in buildings with more than 12 dwelling units in accordance with Section 907.5

907.2.9.2 Smoke alarms shall be installed per Section 907.2.11 (within sleeping units)
907.2.11.1 Group R-1: Smoke alarms shall be installed in each sleeping area and in each room on the path from the sleeping area to the means of egress.

912.2.1 Fire Department Connections: Locations as approved by fire chief so vehicles and hose lines will not interfere with building access (visible location on street side of building).

6.1.14.3 Mixed Occupancies

6.1.14.3.1 Each portion of the building shall be classified as to its use in accordance with section 6.1

6.1.14.3.2 The means of egress facilities, construction type, protection, and other safeguards in the building shall comply with the most restrictive fire and life safety requirements of the occupancies involved

NFPA TABLE A.8.2.1.2
CONSTRUCTION TYPE III(200)

28 - NEW HOTEL
28.2.5.4 Common Path of Travel <50 FT.
28.2.6.2 Travel Distance within unit < 125 FT.
28.2.6.3.2 Travel Distance from unit to exit < 200 FT.
28.2.2.1.2 Sprinkled exit enclosure 1 hour
28.2.2.12.2 In buildings protected by approved, supervised automatic sprinkler system, area of refuge shall not be required. Building to be fully sprinkled by automatic NFPA 13 system.

28.3.4.1 Fire alarm system in accordance with section 9.6 provided
28.3.4.2 Fire alarm initiation
 (1) Manual Means
 (2) Manual fire alarm box located at hotel desk
 (3) Automatic sprinkler system
 (4) Automatic detection system other than sleeping room smoke detectors

28.3.6.1.3 Corridor walls: 1/2 Hour (SPRINKLED)
28.3.6.2.1 Corridor doors: 20 min rated (.33 HOURS)
 (Existing historic unit entry doors U04 to remain - waiver required)

28.3.6.2.3 Corridor Doors: Self closing and self-latching
28.3.7.2 Dwelling unit demising walls: 1/2 Hour (1 HOUR REQ FOR IBC)

36 - NEW MERCANTILE

36.2.2.1.2.2 In buildings protected by approved, supervised automatic sprinkler system, area of refuge shall not be required.
36.2.5.2.1 Dead-end corridors shall not exceed 50 ft.
36.2.5.3 Common Path of Travel <100 ft.
36.2.6.2 Travel distance <250 ft.

602.3 Type III Construction

Exterior walls are to be noncombustible materials and interior building elements are any materials permitted by Code.
 Fire retardant treated wood is permitted as substitute for noncombustible materials for framing within exterior wall assemblies of a 2 hour rating or less. The exterior surfaces of the wall must be noncombustible.

Chapter 7- Fire and Smoke Protection Features

704 Fire Rating of Structural Members
704.3 Primary Structural Frame
 Supporting more than 2 floors, and/or required to have a fire resistance rating, or supporting a load bearing wall, shall be provided with individual encasement protection on all sides.
 Exception: Individual encasement on all exposed sides provided protection is in accordance with fire resistance rating

704.4 Secondary Structural Members
 Not required to be fire resistant rated, secondary members shall be protected by individual encasement when supporting more than 2 floors. Membrane protection is permissible if supporting 2 floors or less.

705 Exterior Walls
705.2.2 Projections from walls of Type III construction shall be of any approved materials.

705.5 Fire Resistance Ratings
 Fire Separation Distance of greater than 10 feet, at exterior walls, shall be rated for exposure from the inside. Fire separation less than 10' shall be rated for fire exposure from both sides.

705.6 Exterior walls shall have sufficient structural stability to remain in place for duration of the time required by the fire resistance rating.
 • Supporting elements must be fire resistance rated
 • Band joist, or supporting beam, must be fire rated
 • Only the structural element within the fire system that supports the vertical load of the wall must be fire resistance rated construction

Chapter 10- Means of Egress

1004 Occupant Load
Table 1004.1 Maximum Floor Area Allowances per Occupant

Business	100 gross sf	
Residential	200 gross sf	
Business Occupant Load - Basement-	790sf/100	= 8
Residential Occupant Load- Basement-	3,586sf/200	= 18
Business Occupant Load- First Floor-	2435sf/100	= 24
Residential Occupant Load - First Floor-	1645sf/200	= 9
Residential Occupant Load - Second Floor -	2256sf/200	= 12
Residential Occupant Load - Third Floor -	1927sf/200	= 10

1008.1.4.4 Group R-1 occupancies building entry doors are permitted to be equipped with access control system.
1008.1.5 Provide a level landing on each side of door, except at exterior locations with 2% slope pitch for drainage.
1008.1.9.10 Interior stairway means of egress doors shall be openable from both sides
 Exception 1: Stairway discharge doors shall only be locked from the opposite side.

1008.1.9.48 plus door width required minimum space between doors in series.
1008.1.9.10 Interior stairway means of egress doors shall be openable from both sides
 Exception 1: Stairway discharge doors shall only be locked from the opposite side.

1009 Stairways
1009.1 Stairway width- Minimum required width of 44" is provided. (Refer to Existing Stair codes in IEBC 2009).
1009.12 Handrails required on each side of stair. (Refer to Existing Stair codes in IEBC 2009).

1013.1 Guard (rails) are required at stairs more than 30" above the floor and within 36" horizontally to the edge of the open side. (Refer to Existing Stair codes in IEBC 2009).

1016 Exit Access Travel Distance
Table 1016.1 Exit Access Travel Distance

Occupancy	Max. Distance	Sprinklered	Actual Distance
B - Business	300'		32'
R - Residential	250'		32'

1007.10 Directional signage shall be provided at elevator landings.

36.3.4.1 Fire alarm system in accordance with section 9.6 provided
36.3.4.2 Fire alarm initiation
 (1) Manual Means
 (2) Automatic fire detection system
 (3) Automatic sprinkler system plus a minimum one fire alarm box

T7.2.2.2.1(b)
EXISTING STAIRS:
 Minimum width clear, 36 in.
 (Existing historic stairs A and C do not meet required width, see calculation with A.7.3.3.1 for Capacity Factors)

Maximum height of riser: 8 in.
 Minimum tread depth: 8 in.
 Minimum headroom: 6 ft. 8 in.
 Maximum height between landings: 12 ft.

7.2.2.3.1.2 Stair material same as building construction
7.2.2.4.1.1 New handrails: Not < 30 in. and not > 38 in.
7.2.2.4.4.2 Existing handrails not < 30 in. and not > 38 in.
 (Existing handrail at Stair B is being retrofitted to meet code)

7.2.2.4.4.5 New handrails provide min. 2-1/4 in. clearance between stair and wall
7.2.2.5.4 Stairway signage shall comply with 7.2.2.5.4.1 parts (A) thru (M)

28.2.4 (Number of Exits)
28.2.4 In buildings other than those complying with 28.2.4.2 not less than two separate exits shall be provided on each story.

Table 705.8 Maximum Area of Wall Openings Based on Fire Separation Distance and Degree of Opening Protection

Fire Separation Dist.	Degree of Opening Protection	Allowable Area
0' to less than 3'	Unprotected, Sprinklered	Not Permitted
3' to less than 5'	Unprotected, Sprinklered	15%
5' to less than 10'	Unprotected, Sprinklered	25%
10' to less than 15'	Unprotected, Sprinklered	45%
15' to less than 20'	Unprotected, Sprinklered	75%
20' to less than 25'	Unprotected, Sprinklered	No Limit
25' to less than 30'	Unprotected, Sprinklered	No Limit
30' or greater	Unprotected, Sprinklered	Not Required

705.8.5 Vertical Separation of openings
 Not Required, Exception no. 2. Automatic Sprinkler System in Accordance with 903.3.1.1

705.11 Parapets
 Not required on exterior walls per Exception No. 5 where the wall is permitted to have at least 25% of the exterior wall areas containing unprotected openings per Table 705.8, and Exception No.5 where the entire building is covered with a class C roof covering