

175 Anderson Street - Change of Use						7/14/2016	
Portland, ME						REVISED 9-21-16	
Code Analysis							
IBC 2009				NFPA 101 - 2009			
Category	Reference	Code Requirements		Reference	Code Requirements		Proposed
Use Group	304.1	Unseparated Mixed Use: M-Mercantile + B-Business		3.3.178.9	M - Mercantile (Class C per 36.1.4.2.1)		Sales on lower level only
Building Construction	Tables 601 & 602	Type II (B)		NFPA 220	Construction Type II (000) - Unprotected		
	Primary Struct. Frame OHR	CMU Exterior Walls and Steel Frame - steel joists bearing on steel beams and CMU exterior walls.					
	NR	Foundation - Concrete frost wall and slab					
	Bearing OHR	Exterior - 8 and 12 inch CMU.					
	Non-Bearing OHR	Exterior - 8 and 12 inch CMU.					
	Non-Bearing OHR	Interior walls - Wood stud with GWB surfacing					
	Floor & Secondary Members OHR	Floors - metal deck with concrete slab and suspended GWB and ACT ceilings					
	Roof Construction & Secondary Members OHR	Floors - metal deck with suspended GWB and ACT ceilings					
Height & Area Limitations	Table 503	Most Restrictive (M): 12,500 SF Per Floor					3,307 SF
		2 Stories / 55'					2 stories / 23'-2" height from lowest grade to midpoint of highest roof plane
Height Modifications	504.2	Automatic Sprinkler System Increase - not used					Not Sprinklered
Maximum allowable height	504.2	Automatic Sprinkler System increase - not used					Not Sprinklered
Area Modifications	506.2	Street Frontage Increase - not used					
	506.3	Automatic Sprinkler Increase - not used					3,307 SF - "Building Area" - First Floor per IBC 502.1
Maximum allowable area	506.3	12,500 SF Per Floor - No increases used					1,067 SF - "Building Area" - Second Floor per IBC 502.1
							4,374 SF Total "Building Area"
Mezzanines	505.2	1/3 area max: 3,307 / 3 = 1,102 s.f. max		8.6.9.2.1	1/3 area max: 3,307 / 3 = 1,102 s.f. max		1,067 s.f.
	505.3	Single exit permitted per 1014.3		36.2.4.3	Minimum number of exits = 1 where travel distance < 75'		Single Exit
	505.4	Not required to be open per exception 1: 10 occupants		8.6.9.3.1	Not required to be open per exception: does not exceed 10 occupants		Not open to floor below
Fire ratings - Exterior	Table 602	Loadbearing Ext walls >30' = 0 hr					0 Hour
		Nonloadbearing Ext walls >30' = 0 hr					0 Hour
		Exterior walls 10'-30' from adjacent structures - 0 Hr					0 Hour
Fire Ratings - Interior	Table 1018.1	Exit access corridors - 0 Hour (with sprinkler system)		36.3.6	Exit Access Corridors need not be rated if occupied by a single tenant		NA - none
	1022.1 (1)	Stairway is not required to be enclosed when the stairway serves an occupant load of < 10		36.3.1 (2)	Unprotected opening to mezzanine is permitted		Unprotected stair to office space at mezzanine shall remain
	708.2 (7)	Shaft enclosures - 0 hr					No applicable conditions
	Table 601	Int. nonloadbearing walls - 0 Hour					0 Hour
	Table 601	Floor Construction - 0 Hour		36.3.7	Subdivision of Building Spaces: None		0 Hour

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	Table 601	Roof construction - 0 Hour			0 Hour
			36.3.2 > 8.7	No high hazard areas, no cooking equipment	No applicable conditions
	1009.6.3	Enclosures under stairs shall be 1 hour fire rated construction			Existing stair storage area finishes shall be upgraded to provide 1-hour finish rating
Fire Door and Fire Shutter Fire Protection Ratings	Table 715.4	No applicable conditions	Table 8.3.4.2	No applicable conditions	No applicable conditions
Fire Window Assembly Fire Protections Ratings	Table 715.5	No applicable conditions	Table 8.3.4.2	No applicable conditions	No applicable conditions
	Table 705.8	Area Limitations - 10' from property line, unprotected, unsprinklered - 15%			No openings at nearest property line
Fire Damper Rating	Table 716.3.2.1	No applicable conditions			No applicable conditions
Ducts and Air Transfer Openings	716.5.1	Fire Walls - Fire Dampers required			No applicable conditions
	716.5.1.1	Fire Walls in Horizontal Exits - Smoke Barriers required			No applicable conditions
	716.5.2.1	Fire Barriers in Horizontal Exits - Smoke Dampers required			No applicable conditions
	716.5.3	Shaft Enclosures - Fire Dampers and Smoke Dampers required			No applicable conditions
	716.5.4	Fire Partitions - Ducts penetrating fire partitions shall be equipped with fire dampers.			No applicable conditions
Interior Flame Spread Index	Table 803.9	Required exit enclosures and passageways - B permitted in buildings			No applicable conditions
			36.3.3.2	Walls & ceilings - Class A or B	As required
		Corridors - B	36.3.3.3.2	Exit enclosure floors - Class I or II	No applicable conditions
		Rooms or enclosed spaces - C	36.3.3.3.1	Other floors - Class A, B or C	As required
Occupant Load	Table 1004.1.1	Mercantile Group Occupancy = 1/60 GSF* Accessory business use spaces = 1/100 GSF Accessory mechanical / storage use spaces = 1/300 GSF	Table 7.3.1.2	New Mercantile occupant load: 1/30 SF Offices in Mercantile = 1/100 SF Storage areas, mechanical equipment rooms: 1/500 GSF	
		1st Floor Mercantile: 2784 net / 60 = 47 OCC		1st Floor Mercantile: 110 OCC	
		2nd Level Business: 9 OCC		Second Level Offices: 9 OCC	
		2nd Level Mechanical: 1 OCC		Second Level Mechanical: 1 OCC	
		Total = 57 Occupants		Total = 120 Occupants	
Means of Egress	1005.1	Egress width per occupant @ stairways = 0.3" x 10 = 3" Egress width capacity per occupant @ doors and corridors = .2" x 57 = 11.4"	Table 7.3.3.1	Egress width per occupant @ stairways = 0.3" x 10 = 3" Egress width capacity = 0.2" per occupant @ level components & ramps .2 x 120 = 24"	40" min. clear (32" min. clear between handrails)
	1009.1	Exception 1. Stairways serving an Occupant Load of < 50 shall have a width of not less than 36"	7.2.2.2.1.2	OCC Load < 50: 36" min clear (allowing 4-1/2" obstructions at or below handrail)	
	1008.1.1	Minimum door opening width = 32" clear	7.2.1.2.3	Minimum door opening width = 32" clear	Typ. = 36" Doors = 34" net clear opening
	Table 1016.1	Length of travel <= 200'	36.2.6.1	Length of travel < 150'	68' Travel from second floor to exterior

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	1018.4	Dead ends < 20'	36.2.5.2.2	Dead ends < 20' (not sprinklered)	No dead ends proposed
	1014.3	Common path of travel ≤ 75' (not sprinklered)	36.2.5.3	Common path of travel ≤ 75' (not sprinklered)	63' Travel from most remote second floor area to foot of stairs
	1018.2	Minimum corridor width = 44" clear	7.3.4.1	Minimum corridor width = 36" clear	No corridor conditions proposed
	Table 1021.2	Stories with one exit: First floor mercantile less than 49 occupants, second floor business less than 29 occupants	36.2.4.3	Minimum number of exits = 1 where travel distance < 75'	
	Table 1015.1	Allows M occupancies of 49 or less to have a single means of egress.	7.5.1.3.5	Allows for existing buildings to be exempt from the minimum separation requirement	Existing exits are less than 1/2 the building distance apart: Additional exit IF REQUIRED is proposed at furthest existing overhead door opening with pass-door in new overhead door system
	Table 1021.2	Single Exit Permitted from second story (mezzanine)			Single unenclosed stairway
	1022.1	Exit enclosure not required if second floor is <10 occupants			Single unenclosed stairway
Emergency Lighting	1006.1	Emergency lighting is required	36.2.9	Not required	Provided
	1011.1 (exc. #2)	Exit Signs are required except at main exterior exit doors	7.10.1.2	Exit Signs are required except at main exterior exit doors	Illuminated signage exists: Tactile Signage must be added
Fire Suppression Systems	903.2 > 903.2.7	No sprinkler system required	36.3.5.1	No sprinkler system required	No sprinkler system provided
Standpipes	905.3	Standpipes are not required			No standpipe provided
Fire Alarm Systems	907.2.7	Automatic Fire Alarm System is not required	36.3.4.1	Fire alarm is not required	No fire alarm provided
Smoke Detectors	907.2.7	There is no requirement for smoke alarms	38.3.4 > 9.6.2.10	Smoke alarms not required	No smoke alarms shall be provided
Extinguishment requirements	906	Portable fire extinguishers shall be installed as per NFPA 10 (IFC 2009)	38.3.5.3	Portable fire extinguishers required	Provided