Inspections Division
Date: 12/11/13

Level I – Minor Residential
Fire Department Checklist
+ Building & Energy Code Summary

FD #1: Name, address, telephone number of applicant.

Dianne Balzano -Cavanaugh
52 Monument Street
Portland, Me 04101

FD #2: Name address, telephone number of architect

Denis Lachman, Lachman Architects & Planners
165 State St, Portland, ME 04101

FD #3: Proposed uses of any structures [NFPA and IBC] & Classification of Occupancy:

More than 2 dwelling units (3 units) therefore Apartment Building *(NFPA 6.1.8.1.5)* and Apartment House *(Residential R-2, IBC 310.1)*

FD #4: Square footage of all structures [total and per story]

	Existing	Proposed
3rd Floor	695 sf	894 sf
2nd Floor	915 sf	960 sf
1st Floor	907 sf	960 sf
Basement (Mechanical only)	818 sf	818 sf
Total	3,335 sf	3,632 sf

FD #5: Elevation of all structures

3rd Floor	+ 17'-4"
2nd Floor	+ 9'-2"
1st Floor	0'-0"
Basement (Mechanical only)	-7'-3"

FD #6: Proposed fire protection of all structures

Yes, fully sprinkled with an NFPA 13 R system. *(NFPA 13R. 903.2.7, 903.3.1.1)*
Option 4 Requirement (*NFPA 31.1.1.1)*

FD #7: Hydrant locations

Existing hydrant at Monument and Waterville (0')

Separate Plans for (a) Suppression System and (b) Detection System

The suppression system will be designed by Eastern Fire Protection, and will be submitted by them as part of their permit.
Smoke alarms as per Life Safety Plan.

Separate Life Safety Plan

Please see separate Sheet G2

Elevators

None

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Applicable Codes:

IBC, 2009 Edition; NFPA 101, 2009 Edition, 2009 Maine Uniform Energy & Building Code

Construction Type:

Type V(B) Construction. Floor, walls, and roof framing are of wood materials. *(IBC 602.5)*
Type V(000) Construction. (NFPA)

Allowable Area:

As per IBC; Table 503, a R-2 use of Type V(B) construction has an allowable area of 7,000 SF and a maximum allowable height of 3 stories. (additional 3rd story permitted as per Table 504.2 due to approved automatic sprinkler system)

Fire Rating of Building Elements *(IBC Table 60, NFPA A.8.2.1.2):*

Structural Frame: 0 hours
Floor Construction: 0 hours
Bearing Walls [Interior]: 0 hours
Bearing Walls [Exterior]:0 hours
Roof: 0 hours

Fire Resistance Rating of Exterior Wall Based on Fire Separation Distance *(IBC Table 602)*

Walls [Exterior Perpendicular to Lot Line]: 1 hour
Openings None Permitted (*IBC 704.8*). Existing openings to remain with no increase in size)

Existing North Wall at 1st and 2nd Floors – 5/8" GWB interior, no change to exterior
New North Wall at 3rd Floor – 5/8" GWB interior and exterior (*IBC 705.5)*

Means of Egress Components

Residential Use, Occupancy calculation based on IBC Table 1004.1.1, NFPA Table 7.3.1.2.
Floor 1 - 200 sqft gross floor area / occupant. Gross sqft = 960 Occupancy = 5
Floor 2 - 200 sqft gross floor area / occupant. Gross sqft = 960 Occupancy = 5
Floor 3 - 200 sqft gross floor area / occupant. Gross sqft = 894 Occupancy = 5
Basement - Mechanical only Occupancy = 0

One enclosed fire stair extends from the 3rd floor to exit discharge at the 1st floor. Total travel distance within the units to entering the exit stairway enclosure does not exceed 50 ft. Building up to (3) stories in height allowed a single exit in accordance with IBC Table 1021.2. (*NFPA 31.2.4.4*)

Maximum Travel Distance with (1) means of egress per unit is 50' *(IBC 1021.2)* Maximum 35' travel from apartment door to an exit. Maximum travel distance within unit 125', from unit door to exit 200' (*NFPA 31.2.4.4, Table A31.1*) All travel distances within the building comply with the above requirements. See Life Safety Plan for travel distances within the building.

Fire Rating – 0.5 hr in exit corridors, 1 hr in stairway enclosure *(IBC 1022.1, IBC Table 1018.1)* (*NFPA 31.2.4.4*)
Fire Doors – 1 hr rating with self closing hinges *(IBC Table 715.4)* (*NFPA 31.2.4.4*)

Fire Separation Between Units – 1 hr *(IBC Table 508.4, 508.3.3)* ½ hr NFPA. *((NFPA 31.2.4.4*)

Arrangement of Means of Egress:

This is an existing building and is therefore exempt from the ½ diagonal measurement separation criteria of NFPA 7.5.1.3.2, [see NFPA 7.5.1.3.5].

Inspections Division
Date: 12/11/13

Means of Escape:

This building is equipped with an approved automatic sprinkler system and is required to provide a secondary means of escape within each bedroom as per IBC Table 1021.2 (*IBC 1029.1), (Not required as per NFPA 31.2.1.2)* Secondary means of escape to be provided and conform to IBC 1029.

Portable Fire Extinguishers:

This building is equipped with an approved automatic sprinkler system and is therefore exempt from requiring portable fire extinguishers. (*NFPA 31.3.5)*
Nonetheless, (1) portable fire extinguisher is being provided per unit.

Emergency Lighting:

This building is not required to provide emergency lighting along the egress path being less than 4 stories in height and fewer than 12 units. (*NFPA 31.2.9*) (*IBC 1006.3*)

Exit Signs:

This building is only required to have one exit, and thus is not required to have Exit signs. (*NFPA 31.2.10*) (*IBC 1011.1*)

Dimensional Criteria of Stairs:

Width of Egress Path = min 36" *(IBC 1009.1)* exceeds at 38" (*NFPA 7.2.2.2.1.2 (B)*)
Headroom along Egress Path = min 80" *(IBC 1009.2)* (*NFPA 7.2.2.3.2.3*)
Stair Rise/Run = max 7" rise, 11" run. *(IBC 1009.4)* (*NFPA 7.2.2.2.1.2 (B)*)
Landings min 36" x 36" *(IBC 1009.5)* (*NFPA 7.2.2.3.2.3*)
Handrails – *(IBC 1009.12)* (*NFPA 7.2.2.4.1.1)*
Basement Stair - (*IBC 34.04.1.)* The existing basement stairs are unsafe and highly non conforming with a 9" rise and a 8" tread. The new basement stairs have a 7 ¾" rise and a 10" tread, bringing them closer to conformance.

Accessibility

Accessibility is not required as an alteration to an existing building, *(IBC 1007.1) (NFPA 7.5.4.1)*

Acoustics

(*IBC 1207.2 & 3)* Walls, partitions, floors between dwelling units or dwelling units and common areas STC < 50. Ceilings – resilient channel at underside of joists + 5/8" Type X GWB. Walls - one (quiet) side = 5/8" Type X GWB; other (noisy) side = resilient channel with (2) 5/8" Type X GWB.

Interior Finishes

As per section NFPA 10.2. Typ. Interior finishes GWB ceilings and walls, hardwood floor throughout.

2009 Uniform Energy Code Summary

Insulation Levels:

Basement Walls –	R-15 continuous closed cell sprayfoam insulation. Foam protected by an approved thermal barrier such as ½" GWB or equal (IBC 2603.4)
Crawlspace Walls -	R-10 continuous closed cell sprayfoam insulation
Wood Framed Walls Above Grade –	R-24 closed cell sprayfoam insulation
Ceiling –	R-38 closed cell sprayfoam insulation
Skylight -	0.60 U Factor Max
Windows -	0.35 U Factor Max
Doors -	0.55 U Factor Max