

28 Federal Street 2 Family Attached Building

Portland, Maine

| IBC Relevant Codes | Reference | Discussion or Finding |
|--|----------------------------------|--|
| Use Group R-2, Residential Occupancy | 310 | |
| Use Group U, Utility, (garage) | 406.1.1 | Private Garage less than 1000 sf |
| Separation of Garage from residential occupancy | 406.1.4 | proposed 1 hour wall and ceiling assembly exceeds requirements |
| garage floor sloped | 406.2.6 | |
| Separation Walls | 420.2 | 1 hour fire partitions required, no reduction for NFPA 13R sprinkler |
| Horizontal Separation | 420.3 | 1 hour fire partitions required, no reduction for NFPA 13R sprinkler |
| Construction Type: VB | Table 601 | Primary structural frame 0 Bearing walls 0 Exterior 0 Interior 0 Non Bearing Exterior per Table 602 Floor construction and secondary members 0 Roof construction and secondary members 0 |
| Building Height and Area limitations | Table 503 | Type VB= 2 stories, 40' and 7000 sf. Floor area provided is less than allowable |
| Building Height increase for sprinkler = 1 story and 20' | 504.2 | Height limit = 3 stories, 60' |
| Mezzanine provided for unit at 3rd floor | 505 | see 3rd floor plan for mezzanine area and openness calculation |
| Exterior Walls | Table 602 | South wall: 1 hour rated |
| Openings in Exterior Wall for Sprinkled Building | Table 705.8 | 25% max openings with fire separation distance of 5' to less than 10' 45% max openings with fire separation distance of 10' to less than 15' See Sheets A2.1, A2.2, and A2.3 for calculations |
| Parapet not required | 705.11 | Exception 5.1 Fire retardant roof sheathing used 4' in from exterior wall |
| Fire Barriers | 707 | Stair enclosure, elevator enclosure Continuous wall assembly for height of shaft |
| Shaft Enclosure | 708 | Stairs and Elevator: 1 hour rated shaft required |
| Shaft Enclosure Openings | 708.7 | Provide self or automatic closing doors |
| Shaft Enclosure at the top of the shaft | 708.12 | Stair shaft enclosure separated from stair to mezzanine by 1 hour rated construction |
| Fire Partitions | 709 | Walls separating existing structure from building addition |
| Horizontal Assemblies | 712.3 | One hour separation between floors, no exception for NFPA 13R sprinkler |
| Support of Horizontal Assemblies | 712.4 except 2 | Supporting structure in VB construction not required to be rated |
| Firestopping of Penetrations | 713 | Contractor shall firestop all penetrations as required by IBC section 713 |
| Fire Door Protection | Table 715.4 | Shaft Enclosure, exit passageway: 1 hour Corridor Walls at 2nd floor |
| Sprinkler System Required | 903.2.8 903.2.10 | Sprinkler required in all R occupancies Sprinkler required at enclosed garage is located below other groups Sprinkler design/build by licensed sprinkler contractor by separate permit |
| NFPA 13R system shall be provided | 9.3.3.1.2 | Group R Occupancy, 4 stories or less |
| Standpipe not required | 905.3.1 | 3 story building with 3rd floor less than 30' above lowest level of fire department access |
| Fire Extinguishers Required | 906.1 | 1 per floor in accordance with NFPA 10 |
| Manual Fire Alarm System not required | 907.2.9.1 | building is 3 stories |
| Smoke Alarms Provided | 907.2.11 | Smoke alarms shall be photoelectric and installed per City of Portland Requirements |
| Occupant Load (occupied space @ 28 Federal St.) | Table 1004.1.1 | 1st floor: Not occupied 2nd floor: 1005sf = 6 occupants 3rd floor: Not occupied |
| Means of Egress Illumination | 1006.3 | Emergency power for illumination not required where 1 exit only required |
| Stairway Width | 1009.1 | 3-0 minimum required 3-6 provided |
| Single means of egress permitted | 1015.1.1 except. | Maximum occupant load per dwelling unit of 20 with sprinkler |
| Exit Access Travel Distance | Table 1016.1 | 250' allowed 49' maximum provided |
| Corridor Rating | Table 1018.1 | Rating at corridor required by other sections: 420.2 and 420.3 |
| Dead Ends in Corridors | 1018.4 | |
| Single Exit Permitted | 1021.1 except. 4 Table 1021.2 | Maximum occupant load per dwelling unit of 20 with sprinkler 2nd floor maximum travel distance to exit: 50' allowed 49' provided 3rd floor maximum travel distance to exit: 50' allowed 50' provided |
| Single Exit Permitted | 1021 IBC 2012 Table 1021.2(a) | Travel distance increased to 125', provided building is sprinklered and egress windows are provided in accordance with section 1029 |
| Exterior Wall of exit Stair Rated | 1022.6 | exit enclosure wall on west elevation to be 2 hour rated |
| Exit Passageway at 1st Lobby | 1023.3 | 1 hour rated fire barriers and horizontal assemblies required |
| 2nd emergency escape and rescue openings required in sleeping rooms by IBC | table 1021.2 footnote c | egress windows required by Laws of the Fire Service, State of Maine for single exit building. Floor plans at all stories show egress windows at bedrooms |
| Sound Transmission | 1207.2 1207.3 | minimum STC 50 at walls and floor/ceilings separating dwelling units Minimum IIC 50 at floor/ceilings separating dwelling units |
| Interior Dwelling Unit Space Dimensions | 1208.2 | 7-0 minimum ceiling height at bathrooms, storage rooms |



Minimum Insulation Required (per IECC Table 402.1.1)
Climate Zone 6

| | |
|----------------------------|-----------------------------|
| Windows and doors U Factor | 0.35 |
| Ceiling/roof | R-30 |
| Wood framed wall | R-13 Cavity, R-5 continuous |
| Floor | R-30 |
| Slab | R-10 48" deep |

NOTE: provide spray foam insulation to seal all rim locations.
Spray foam at rims shall be as follows:

- Maximum 3/4" thick
- Density of foam shall be between 1.5 and 2.0 pcf
- The foam plastic shall have a flame spread index of 25 or less and an accompanying smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723

| NFPA 101 Relevant Codes | Reference | Discussion or Finding |
|---|------------------|--|
| Existing Apartment Building/ New Attached 2 Family | | |
| Dwelling units permitted above non-residential occupancy (parking garage) when non-residential use has sprinkler system | 30.1.2.3 | The garage shall be be sprinklered in accordance with NFPA 13. The apartment building shall be sprinklered in accordance with NFPA 13R Sprinkler system shall be supervised |
| Occupant Load: 1 per 200 sf gross | Table 7.3.1.2 | 1st floor: Not occupied 2nd floor: 1005sf = 6 occupants 3rd floor: Not Occupied |
| 2 Means of Escape from bedrooms and living rooms within dwelling units, provided by egress windows | 30.2.1.2 | NFPA13R Sprinkler eliminates requirement for egress window under 24.2.2.3 note: egress windows required by Laws of the Fire Service, State of Maine for single exit building |
| Exit Enclosure shall be 1 hour rated with 1 hour rated doors | 30.2.2.1.2 | Assumes sprinklered building |
| Single (stair enclosure) exit permitted | 30.2.4.4 | |
| Common path of travel: Unit door to stair enclosure | 30.2.5.3.2 | 50' allowed |
| Dead end Corridor | 30.2.5.4.2 | 35' allowed |
| Travel Distance to corridor door: within dwelling unit | 30.2.6.2 | 125' allowed |
| Travel Distance to Exits: Unit door to stair enclosure | 30.2.6.3.1 | 200' allowed |
| Illumination of Means of Egress | 30.2.8 | Lighting provided at corridors, exit enclosure, exit passageway, and exit discharge |
| Emergency Lighting, per requirements of 7.9 | 30.2.9 | not required in building 3 stories or less |
| Vertical Openings 1 hour rated with 1 hour doors | 30.3.1.1.4 | |
| Protections from Hazards | Table 30.3.2.1.1 | |
| Fire Alarm System. | 30.3.4.1.2 | Not required for apartment buildings less than 4 stories |
| Smoke Alarms | 30.3.4.5 | provided at all sleeping rooms and outside each sleeping room. Type and location of units shall be per requirements of the City of Portland |

LAWS FOR THE FIRE SERVICE, STATE OF MAINE

any apartment building of 3 stories or less is permitted to have a single exit under the condition that the building is protected throughout by an approved automatic sprinkler system, meets the requirements of the applicable chapter of NFPA 101 and every sleeping room has a 2nd means of escape.

ACCESSIBILITY
This project has been design to comply with the requirements of the Maine Human Rights Act and applicable sections of ANSI ICC A117.1

Interior Finishes: (NFPA)

Interior Wall and Ceiling Finish:
Interior wall and ceiling finish materials complying with shall be permitted as follows:

Exit Class A
Exit Access Corridors Class A or B
Other spaces Class A, B, or C

Interior floor finish:

Interior floor finish in exit enclosures and exit access corridors shall be not less than Class II.

List of Drawings

Introduction
COV1 Coversheet, code reviews
COV2 Coversheet, summary

Architectural

- A1.1 First Floor Plan
- A1.2 Second Floor Plan
- A1.3 Third Floor Plan
- A1.4 Mezzanine and Roof Plan
- A2.1 West Elevation
- A2.2 East Elevation
- A2.3 South and North Elevations
- A3.1 Section A
- A3.2 Section B
- A4.1 Details- Wall and Floor Types
- A4.2 Details- Stairs and Rails

Site

- X-1 - Existing Conditions Plan & Survey
- C-1 Site Plan
- C-2 Street Parking Diagram

C-3 Demolition Plan

Structural

- S0.0 Structural Notes
- S1.1 Framing Plans
- S2.1 Structural Details

Life Safety

- LS1.1 Life Safety Plan and Travel Distances

Sunny Time Solar
PO Box 15372
Portland, ME
04112
9411224345
fvchase@yahoo.com

PROJECT NO.
2016
PROJECT NAME
**49 HANCOCK STREET
PORTLAND, MAINE**

REVISIONS
1 - 3/29/16
2 - 7/11/16
3 -
4 -
5 -

**PERMITTING
DOCUMENTS**

DRAWN BY
LRC
SHEET TITLE

ISSUE DATE
1/9/15
SHEET SCALE

COV

1.0