

October 4, 2016

Jeanie Bourke
Code Enforcement Officer/Plan Reviewer
City of Portland, Building Inspections
389 Congress Street
Portland ME 04101



Re: 2009 IBC/ NFPA101 Code Review
Station 415
415 Cumberland Avenue
Portland ME 04101

2009 INTERNATIONAL BUILDING CODE REVIEW:
(w/ references to NFPA 101 Life Safety Code)

Project Description:

For purposes of this review the project will be evaluated as two separate buildings.
415 Cumberland Ave and 62 Forest Ave

415 Cumberland- No Change of Use. Interior Renovation of existing unoccupied offices.
62 Forest Avenue Change in Use from Business-B use group to R-2 Residential with 4 new
apartments over an existing parking garage as shown above.

Interior Renovation of existing unoccupied 49,187 sf building for a new marketing/sales
center.

2009 IBC and 2009 NFPA 101 Code Review
Station 415, 415 Cumberland Avenue, Portland, Maine

For purposes of this review the project will be evaluated as two separate buildings:
415 Cumberland Ave (M-Mercantile) and 62 Forest Ave (R-2, residential)
415 will be a traditional 2 exit building and 62 will be a single exit building.

Proposed Primary Use Group: B- Business (IBC 2009, 304.1), 7247 s.f.

Proposed Primary Use Group: R-2 (IBC 2009, 310.1), 3662 s.f.

Secondary Use Groups: Storage 1569 s.f.
Parking 1844 s.f.
Common 1423 s.f.
Assembly 1242 s.f.

Construction Type: Type III(B) and Type V(B)

Automatic Sprinkler System: New Type 13 & Type 13r

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Allowable Height & Area: IBC 2009 Table 503

Type III(B) Front- Offices

Allowable Area: 24,000 s.f. / floor

Existing: 3,200 s.f. / floor

Allowable Height 65' / 4 stories

Existing: 40' / 4 stories

Type V(B) Rear-(4) Apartments

Allowable Area: 12,000 s.f. / floor

Existing: 1,700 s.f. / floor

Allowable Height: 50' / 3 stories

Existing: 30' / 3 stories

Occupancy:

NFPA 6.1.11 Business

NFPA 6.1.8 Residential

NFPA 6.1.8.1.5 Apartment Buildings

NFPA 6.1.13 Storage (Residential & Parking)

NFPA 6.1.14 Multiple

Occupant Load: IBC Table 1004.1.1

Residential: 24 maximum occupants

Business: 73 max

Garage/ Storage: 24 max

Rooftop Business: 83 max

Total Occupant Load: 204

Egress:

415 Cumberland- Minimum Number of Exits: IBC 2009 Table 1021.1

1-500 occupants: 2 exits minimum

62 Forest Ave- Single Exit: NFPA 101 2009 30.2.4.4

Egress Width:

204 occupants / 2 exits = 102 occupants / exit

204 occupants / 2 stairs = 102 occupants / stair

Doors: $(occ * 0.2) = 102 * 0.2 = 20.4$ inches minimum, 36 provided

Stairs: $(occ * 0.3) = 102 * 0.3 = 30.6$ inches minimum, 44 provided

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Travel Distance:

IBC 2009 allowable:

Residential: 250' w/ sprinklers

Business: 300' w/ sprinklers

Storage: 400' w/ sprinklers

Max Travel Distance 176'

NFPA: (Table a.31.1)

Residential: 200' apartment door to exit

Smoke Barriers: Not Required

Interior Finish: A or B

Exit Fire Resist: 1 hour

Door Fire Resist: 60 MIN/ 90 MIN

Escape Windows: Type 'E' egress windows in apartment bedrooms

Fire and Smoke Protection Features:

IBC Table 705.8

0 to Less Than 3': Not Permitted (1940 s.f. wall with 47.9 sf of window opening 2.4%-Fire shutters provided, 12 s.f. of existing windows removed) Building is sprinklered. *

3' to Less Than 5': 15% Max.Wall Opening (1084 s.f. wall with 100.9 s.f. window opening 9.3% < 15% allowable) Building is sprinklered. *

*Reference drawing A2.0 for graphic representation of values.

Respectfully submitted,

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