

Clements - King Residence

Portland, Maine

Relevant MUBEC Codes

2009 IBC	
310.1	R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including: Buildings that do not contain more than two dwelling units.
406.1	Private garages and carports.
406.1.1	Classification. Buildings or parts of buildings classified as Group U occupancies because of the use or character of the occupancy shall not exceed 1,000 square feet
406.1.4	Separation. Separations shall comply with the following: 1. The private garage shall be separated from the dwelling unit and its attic area by means of minimum 1/2-inch gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than a 5/8-inch Type X gypsum board or equivalent. Door openings between a private garage and the dwelling unit shall be equipped with either solid wood doors or solid or honeycomb core steel doors not less than 1 3/8 inches (34.9 mm) thick, or doors in compliance with Section 715.4.3. Doors shall be self-closing and self-latching.
503	Table 503 - Allowable Building Heights and Areas Type V-A with approved automatic sprinkler system - R-3 Stories allowed: 4 - Height allowed: 60' (Per 504.2)
504.2	For Group R buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2, the value specified in Table 503 for maximum building height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one, but shall not exceed 60 feet (18 288 mm) or four stories, respectively.
602	Table 601 - Construction Classification: Type V-A Fire-Resistance Rating Requirement for Building Elements Primary Structural Frame: 1-hour Exterior Bearing Walls: 1-hour Interior Bearing Walls: 1-hour Nonbearing walls and partitions: 0-hour Floor Construction & Secondary Members: 1-hour Roof Construction & Secondary Members: 1-hour
715.4.3	Door assemblies in corridors and smoke barriers. Fire door assemblies required to have a minimum fire protection rating of 20 minutes where located in corridor walls or smoke barrier walls having a fire-resistance rating.
1003.2	Ceiling height. The means of egress shall have a ceiling height of not less than 7 feet 6 inches.
1003.3.3	Horizontal projections. Structural elements, fixtures or furnishings shall not project horizontally from either side more than 4 inches over any walking surface between the heights of 27 inches and 80 inches above the walking surface.
1004	Table 1004.1 - Max. Floor Area Allowances per Occupant Residential: 200 gross sf per occupant 3968 sf / 200 = 20 Occupant Load
1008.1.1	The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of 32 inches. The maximum width of a swinging door leaf shall be 48 inches nominal. Exceptions: 1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies. 5. Door openings within a dwelling unit or sleeping unit shall not be less than 78 inches in height. 7. In other than Group R-1 occupancies, the minimum widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be an Accessible unit.
1009.1	Exception 1. Stairways serving an occupant load of less than 50 shall have a width of not less than 36 inches.
1009.2	Stairways shall have a minimum headroom clearance of 80 inches (2032 mm) measured vertically from a line connecting the edge of the nosings. Exception 2. In Group R-3 occupancies ... where the nosings of treads at the side of a flight extend under the edge of a floor opening through which the stair passes, the floor opening shall be allowed to project horizontally into the required headroom a maximum of 4 3/4 inches.
1009.4.2	Exception 5. The maximum riser height shall be 7 1/4 inches; the minimum tread depth shall be 10 inches. A nosing not less than 3/4 inch but not more than 1 1/4 inches shall be provided on stairways with solid risers where the tread depth is less than 11 inches.
1012.2	Handrail height, measured above stair tread nosings, or finish surface of ramp slope, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm).
1013.2	Required guards shall be not less than 42 inches (1067 mm) high, measured vertically above the adjacent walking surfaces. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, guards on the open sides of stairs shall have a height not less than 34 inches measured vertically from a line connecting the leading edges of the treads.
1013.3	Required guards shall not have openings which allow passage of a sphere 4 inches in diameter from the walking surface to the required guard height.
1015	Exit and Exit Access Doorways Exception: In Group R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
1016.1	Table 1016.1 - Occupancy: R Exit Access Travel Distance (with sprinkler system): 250 ft
1018.1	Corridors shall be fire-resistance rated in accordance with Table 1018.1. The corridor walls required to be fire-resistance rated shall comply with Section 709 for fire partitions. Exception: 2. A fire-resistance rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group R.
1019.1	Balconies used for egress purposes shall conform to the same requirements as corridors for width, head-room, dead ends and projections.
1019.2	Wall separation. Exterior egress balconies shall be separated from the interior of the building by walls and opening protectives as required for corridors.
1404.10	Fiber-cement siding shall conform to the requirements of ASTM C 1186, Type A, and shall be so identified on labeling listing an approved quality control agency.



2009 NFPA 101

- 24.3.5.1 All new one- and two-family dwellings shall be protected throughout by an approved automatic sprinkler system in accordance with 24.3.5.2
- 24.3.5.2 Where an automatic sprinkler system is installed, either for total or partial building coverage, the system shall be in accordance with section 9.7; in buildings of four or fewer stories in height above grade plane, systems in accordance with NFPA 13R shall also be permitted.

2009 IECC Climate Zone 6

- Fenestration U-Factor 0.35
- Ceiling R-Value 49
- Wood Framed Wall R-Value 20 or R-13 in cavity +R-5 insulated sheathing, Mass wall R-Value R-15/15 the second R-value applies when more than half the insulation is on the interior of the mass wall
- Floor R-Value 30 or insulation sufficient to fill the framing cavity R-19 min.
- Basement wall R-Value 15/19 R-15 continuous insulated sheathing on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall.
- Slab R-Value & depth R-10, 4ft

Relevant City of Portland - Code of Ordinances

Chapter 10 Fire Prevention and Protection

- Section 10-3 Amendments
- (g) Section 39.3.4.4, Fire department notification shall be accomplished in accordance with section 9.6.4.
- (h) Stair risers 7 3/4" max, guards 36" min, treads depth 10" min, and tread nosing 3/4" min. to 1 1/4" max.
- (i) New smoke alarm installations must use photoelectric technology. Further, in new single or multiple-station smoke alarm installations in buildings subject to NFPA 101, Chapter 31, the primary power source must be the building's electrical service and the smoke alarms must be provided with a secondary (standby) power source.
- (l) All residential occupancies, and all new multiple occupancies containing parking structures shall be protected in accordance with NFPA 720, Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment, 2009 edition.

Relevant Zoning Ordinances

46 Merrill Street, Portland, Maine	
Zone	R-6
Section 14-139.	Dimensional requirements
Setbacks	Front - 5' Back - 10' Side 2.5+ story - 5'
Lot Coverage	60% Structure 20% non-permeable Surfaces minimum of 20% of the lot must be maintained as "Landscaped Open Space"
Maximum Height	45' portions of the building above 35' in height must be no closer than 10' from the side property line and 15' from the rear property line.
Minimum Lot Size	2,000 sf
Minimum Street Frontage	20'
Minimum lot Width	20'
Maximum Garage Opening	not to exceed the greater of 9' or 40% of front facades. not to exceed 20'

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REVISIONS:
9-19-2017: Issue for permit
1-14-2018: Reissue for permit per clouded areas
2-14-2018: Reissue for permit per clouded areas
2-22-2018: Reissue for permit per clouded areas

CONSULTANTS:

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Cover Sheet

DRAWN: KBA
SCALE: As Noted

DATE: 2/22/18
PROJECT NO.: 2017-10

C1.0