

PART 1

SECTION R101—SCOPE AND GENERAL REQUIREMENTS

R101.2 Scope. The provisions of the *International Residential Code for One- and Two-Family Dwelling* shall apply to the construction, *alteration*, movement, enlargement, replacement, *repair*, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings, *adult family homes*, and *townhouses* not more than three stories above *grade plan* in height with a separate means of egress and their *accessory structures* not more than three stories above *grade plane* in height.

Exceptions:

[Exceptions 1-6 unchanged]

7. Multiplex buildings shall be permitted to be constructed in accordance with the *International Residential Code for One- and Two-Family Dwellings* as modified by appendix XX.

SECTION R202—DEFINITIONS

[RB] BUILDING. Any one- or two-family *dwelling*, ~~or townhouse~~, or multiplex, or portion thereof, used or intended to be used for human habitation, for living, sleeping, cooking or eating purposes, or any combination thereof, or any *accessory structure*.

[RB] MULTIPLEX. A building of up to three stories, containing three to six *dwelling units* consolidated into a single structure with common walls and floors.

PART 2

APPENDIX XX

MULTIPLEX BUILDINGS

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User note: *Appendix XX is intended to provide special requirements that in addition to this code, apply to multiplex buildings while maintaining life safety and public health, in an effort to provide more affordable construction of housing in accordance with [RCW 19.27.800](#).*

SECTION XX101—GENERAL

XX101.1 Scope. *Multiplex buildings meeting the following conditions are permitted to be constructed in accordance with the *International Residential Code* as modified by this appendix. Multiplex buildings are subject to all of the following conditions:*

1. Use of [any portion of] the building is limited to residential apartment use only, with no *common-use* areas.

Exception. *Common-use* areas used for the means of egress, for bicycle parking, mail packages, shared laundry, or trash bins are permitted where such areas are separated from the rest of the building in accordance with Sections XX103.3 or XX104, as applicable.

2. The total floor area of the building shall not exceed 8,000 square feet.
3. The building shall not exceed 3 stories above *grade plane* and shall not exceed 60 feet in height.

Exception. *Mezzanines* and *lofts* are permitted in accordance with sections R314 and R315.

A *multiplex* building not complying with all of the above conditions shall be designed in accordance with the *International Building Code*. Unless otherwise specified, *multiplex* buildings designed using this appendix shall comply with the provisions of the *International Fire Code* for Group R-2 apartment occupancies.

XX101.2 Modifications. Local jurisdictions are permitted to amend or supplement the provisions of this appendix following the procedure outlined in WAC 51-04-035 to address regional needs or hazards, subject to consistency with the intent of the IRC.

SECTION XX102—DEFINITIONS

XX102.1 General. The following words and terms shall, for the purposes of this appendix, have the meanings shown herein:

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AUTOMOBILE PARKING SPACE. A space within a building or private or public parking lot, exclusive of driveways, ramps, columns, office and work areas, for the parking of an automobile.

AUTOMATIC LOAD MANAGEMENT SYSTEM (ALMS). A system designed to manage electrical load across one or more *EV ready spaces*.

CIRCULATION PATH. An exterior or interior way of passage from one place to another for pedestrians.

COMMON USE. Interior or exterior *circulation paths*, rooms, spaces or elements that are not for public use and are made available for the shared use of two or more people.

CORRIDOR. An enclosed *means of egress* component that defines and provides a path of egress travel in a horizontal direction from *dwelling units* to an exit stair or exterior exit door.

ELECTRIC VEHICLE (EV) READY PARKING SPACE. An automobile parking space that is provided with a branch circuit and an outlet, junction box, or receptacle that will support an installed EVSE.

EXIT PASSAGEWAY. An enclosed *means of egress* component that is used to extend an exit *stairway* to an exterior exit door or the *public way*.

EXTERIOR EXIT STAIRWAY. A *stairway* that serves as a component of the *means of egress* between *dwelling units* and the public way, and is open to *yards, courts, or public ways*.]

FIRE PROTECTION RATING. The period of time that an *opening protective* prevents or retards the passage of excessive flames to confine a fire as determined by tests specified in Section XX103.2.1.

FIRE-RESISTANCE RATING. The period of time a building element, component or assembly maintains the ability to confine a fire, continues to perform a given structural function, or both, as determined by the tests, or the methods based on tests.

INTERIOR EXIT STAIRWAY. An enclosed *stairway* that serves as a component of the *means of egress* between *dwelling units* and the *public way*.]

MEANS OF EGRESS. A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a *public way*.

OPENING PROTECTIVE. A *fire door* assembly, fire shutter assembly, *fire window assembly* or glass-block assembly in a fire-resistance-rated wall or partition.

SECTION XX103—FIRE PROTECTION FEATURES

XX103.1 Fire-resistance rated assemblies. Where fire-resistance-rated assemblies are required by this appendix, the assemblies shall comply with this section. *Fire-resistance ratings* shall be determined in accordance with one of the following:

1. The prescriptive fire-resistance-rated assemblies in Section 721 of the *International Building Code*
2. Where tested in accordance with ASTM E119, UL 263.
3. Where established by an analytical method in accordance with Section 703.2.2 of the *International Building Code*.

XX103.1.1 Continuity. Fire-resistance-rated floor/ceiling assemblies shall extend to and be tight against the *exterior wall*, and fire-resistance-rated wall assemblies shall extend from the foundation to the underside of the roof or floor sheathing.

XX103.1.2 Supporting Construction. Fire-resistance-rated floor/ceiling assemblies shall be supported by construction having an equal or greater fire-resistance rating.

XX103.2 Opening protectives. *Opening protectives* and smoke and draft control assemblies required by this appendix shall comply with this section.

XX103.2.1 Fire protection ratings. *Fire protection ratings* for *opening protectives* shall be determined in accordance with NFPA 252 or UL 10C. *Opening protectives* shall be *labeled*.

XX103.2.2 Smoke and draft control. Smoke and draft control assemblies shall be tested in accordance with UL 1784 and shall be *labeled*.

XX103.3 Dwelling unit and common use area separations. *Dwelling units in multiplex buildings shall be separated from each other by wall and floor/ceiling assemblies having not less than a 1-hour fire-resistance rating. Common use areas shall be separated from other portions of the building by wall and floor/ceiling assemblies having not less than a 1-hour fire-resistance rating.*

XX103.3.1 Openings. Openings in walls and floor/ceiling assemblies separating *dwelling units* or separating *dwelling units* from *common use* areas shall not be permitted. Duct and air transfer openings between *dwelling units* or between *dwelling units* and *common use* areas shall not be permitted.

Openings in walls separating *dwelling units* from the *means of egress* shall comply with Section XX104.

Openings in walls separating *common use* areas from the *means of egress* shall be provided with *opening protectives* with a minimum *fire-protection rating* of 1-hour

XX103.3.2 Penetrations. Penetrations of fire-resistance-rated wall or floor/ceiling assemblies shall be protected in accordance with Section R302.4. Penetrations of *interior exit stairway* walls or floor/ceiling assemblies shall also comply with Section XX104.4.2.

XX103.4 Automatic sprinkler system. *Multiplex* buildings shall be equipped throughout with an NFPA 13R automatic sprinkler system in accordance with Section 903.2.8 of the *International Building Code*.

XX103.5 Portable fire extinguishers. Portable fire extinguishers having a minimum rating of 2-A:10-B:C shall be provided in each *dwelling unit* of a *multiplex* building.

XX103.6 Fire Department Access and Water Supply. Fire department access and water supply shall comply with the locally adopted fire code. Alternative materials, design, or methods are subject to approval by the fire code official.

XX103.7 Fire Separation Distance. Fire separation distances for *multiplex* buildings shall be in accordance with Table R302.1(1). Table R302.1(2) shall not apply to *fire separation distances* for *multiplex* buildings.

SECTION XX104—MEANS OF EGRESS

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XX104.1 General. Spaces in *multiplex* buildings shall be provided with a minimum of one *means of egress* in accordance with this section in addition to the requirements in Section R318. *Multiplex* buildings with *dwelling units* having access to a single *means of egress* from a first, second, or third *story above grade plane* shall have a maximum of four *dwelling units* on each *story*.

User note: Figures XX104.1(1) through XX104.1(6) are provided to illustrate examples of protection for the *means of egress*. They are for information only, and do not supersede requirements in the text of this appendix.

XX104.1.1 Means of egress continuity. The *means of egress* for a *multiplex* building shall be continuous in accordance with all of the following:

1. The *means of egress* shall provide continuous and unobstructed access to the *public way*. Elements of the *means of egress* are permitted to include *corridors*, egress balconies, *interior exit stairs*, *exterior exit stairs*, exterior exit doors, or a combination of those elements.
2. The path of egress travel along a means of egress shall not pass through other rooms or uses. *Interior* and *exterior exit stairways* shall be continuous from the point of entry into the stair to the exterior of the building.

Exception: *Interior* and *exterior exit stairways* are permitted to be extended to an exterior exit door or the *public way* by an *exit passageway* at the ground level provided both of the following conditions are met:

1. The *exit passageway* is only used for egress or access to *dwelling units* or *common use* areas or facilities allowed by Section XX101.1.
 2. The *exit passageway* is separated from the rest of the building by a minimum of 1-hour fire-resistance-rated construction and fire door assemblies with a *fire protection rating* of not less than 1 hour.
3. The level of protection shall not be diminished along the path of egress travel.
 4. Obstructions shall not be placed in the minimum width of a *means of egress* component except projections permitted by this code.

XX104.1.2 Means of egress dimensions. The *means of egress* from the *dwelling unit* to the *public way* shall be not less than 36 inches in width, and except for *stairways*, shall be provided with a ceiling height of not less than 7 feet.

XX104.1.3 Travel distance. Travel distance from the most remote portion of a story to an exterior exit door or an *interior* or *exterior exit stairway* shall not exceed 125 feet.

XX104.1.4 Doors. Doors in the path of egress travel from *dwelling units* or *common use* areas to the *public way* that are required to have a *fire protection rating*, and exterior exit doors shall comply with following:

1. The minimum clear opening width of doorways shall not be less than 32 inches (813 mm). The clear opening width of doorways with swinging doors shall be measured between the face of the door and the frame stop, with the door open 90 degrees (1.57 rad). The minimum clear opening height of doorways shall be not less than 80 inches (2032 mm).
2. Doors shall be of the side-hinged swinging type.
3. The operational force to unlatch the door shall not exceed 15 pounds.
4. The door shall not require more than a 30-pound force to be set in motion and shall move to a full-open position when subjected to not more than a 15-pound force.
5. There shall be a floor or landing on each side of a door, at the same elevation on each side of the door.

Exception: Landings at exterior exit doors are permitted to be not more than 7 inches below the landing on the egress side of the door, provided that the door does not swing over the landing.

6. Landings at doors shall have a width of not less than 3 feet. Doors in the fully open position shall not reduce a required dimension by more than 7 inches.
7. Thresholds at doorways shall not exceed ½ inch above the finished floor or landing.
8. Doors required to have a *fire protection rating* shall be self-closing and provided with an active latch bolt that will secure the door when it is closed.
9. Doors shall be readily openable from both sides without the use of a key or special knowledge or effort.

Exception: *Stairway* exit doors are permitted to be locked from the side opposite the egress side where the only interior access to *dwelling units* is from an exit *stairway*.

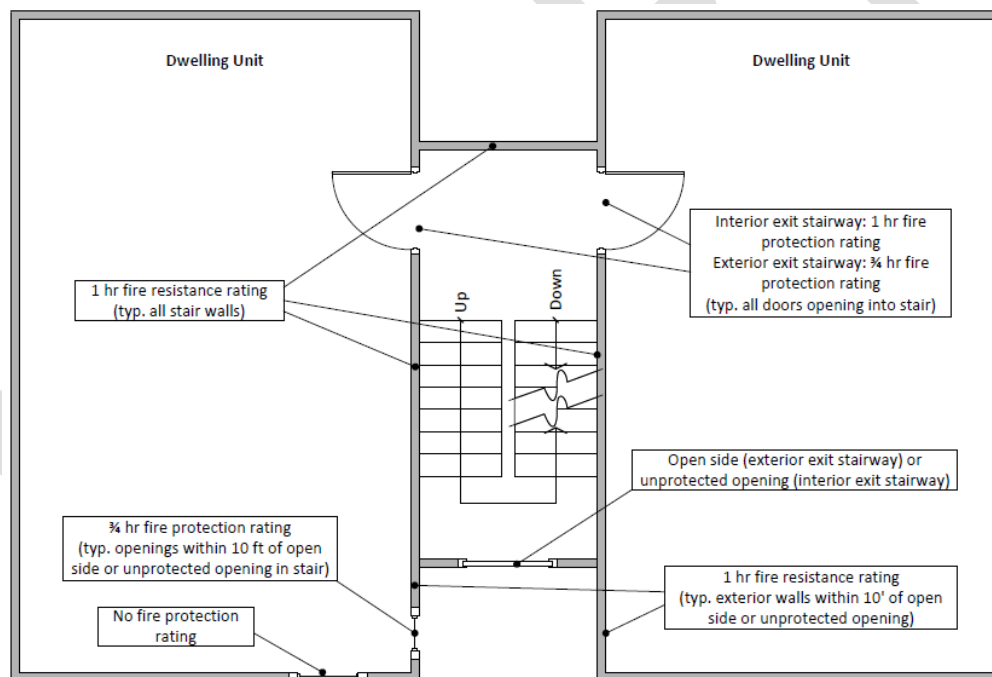
10. Unlatching of doors shall not require more than one motion in a single linear or rotational direction to release the latching and locking device. Manual bolts are not permitted.

XX104.1.5 Means of egress illumination. *Means of egress* illumination shall be provided from the exterior of the *dwelling unit* to the *public way*. The *means of egress* illumination level under normal power shall be not less than 1 footcandle (11 lux) at the walking surface. Along exit *stairways* and at their required landings, the illumination level shall not be less than 10 footcandles (108 lux) at the walking surface when the *stairway* is in use.

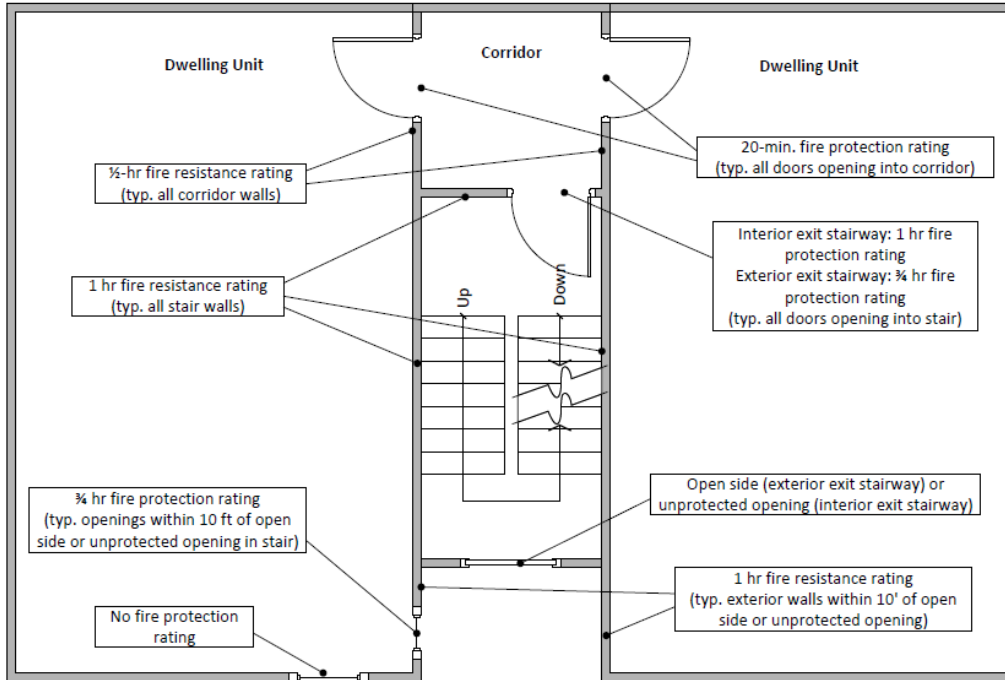
XX104.1.6 Slip-resistant surface. The *means of egress* from the *dwelling unit* to the *public way* shall have a slip-resistant surface and be securely attached.

XX104.1.7 Guards. Guards shall comply with Section R321, except guards adjacent to the *means of egress* shall have a minimum height of 42 inches.

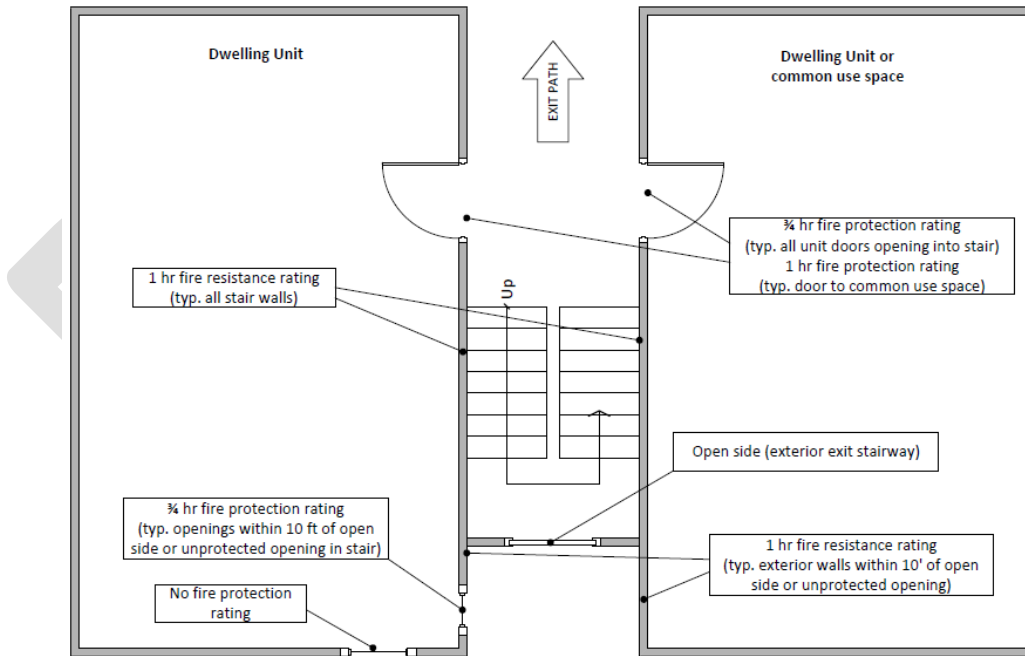
XX104.1.7 Maintenance. The *means of egress* shall be maintained in a manner that does not reduce the minimum width or protection of the *means of egress* to less than required by this appendix.



**Fig. XX104.1(1) - 3-story Building, Interior or Exterior Stair (Unseparated)
2nd/3rd Story**

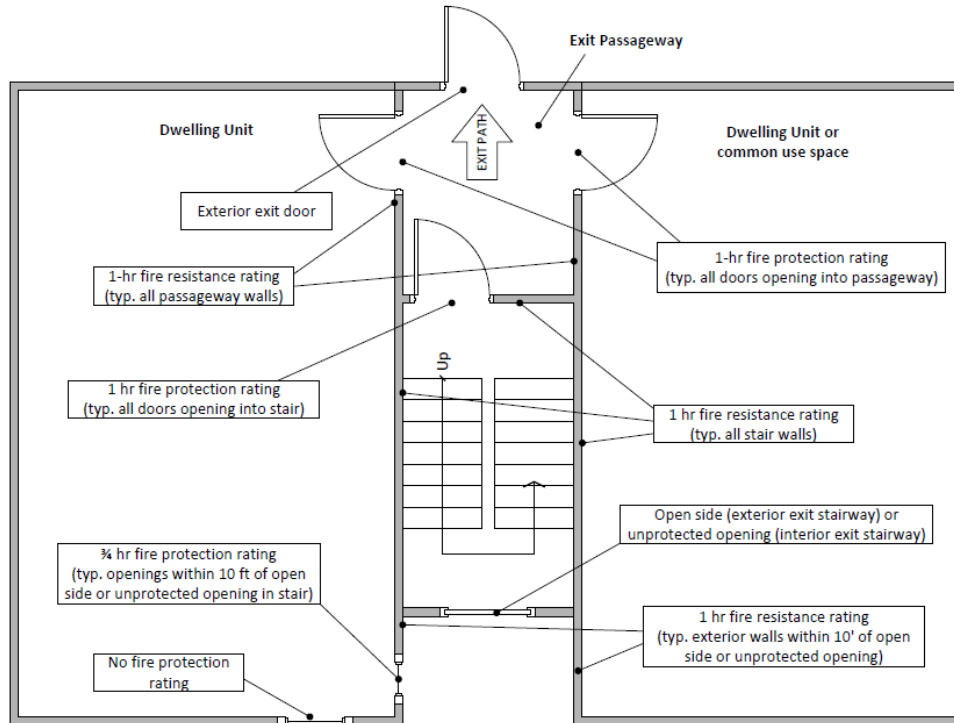


**Fig XX104.1(2) - 3-story Building, Interior or Exterior Stair (Separated)
2nd/3rd Story**

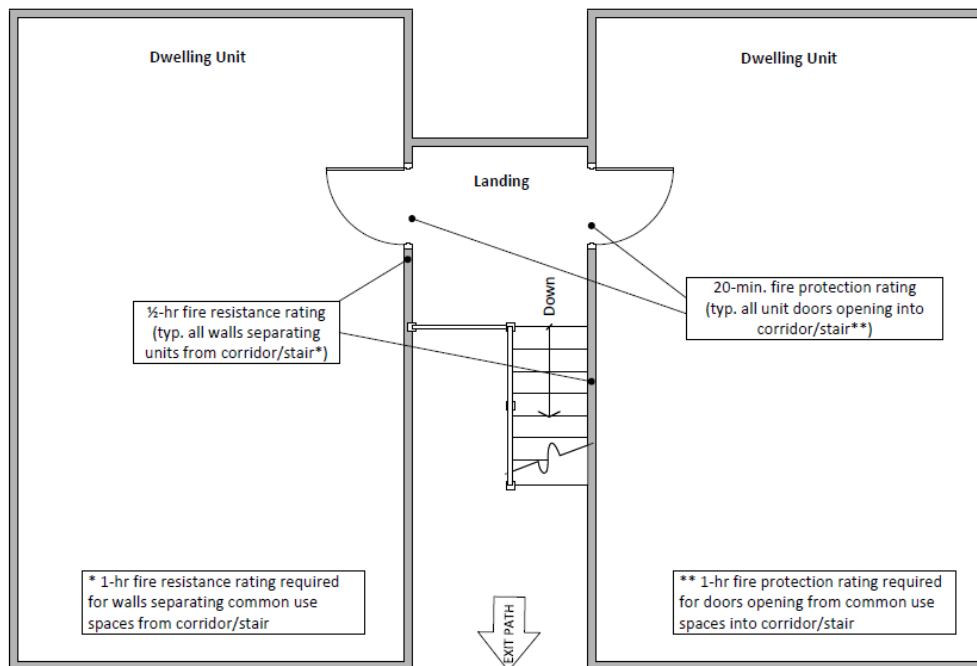


**Fig. XX104.1(3) - 3-story Building, Exterior Stair
Ground Level**

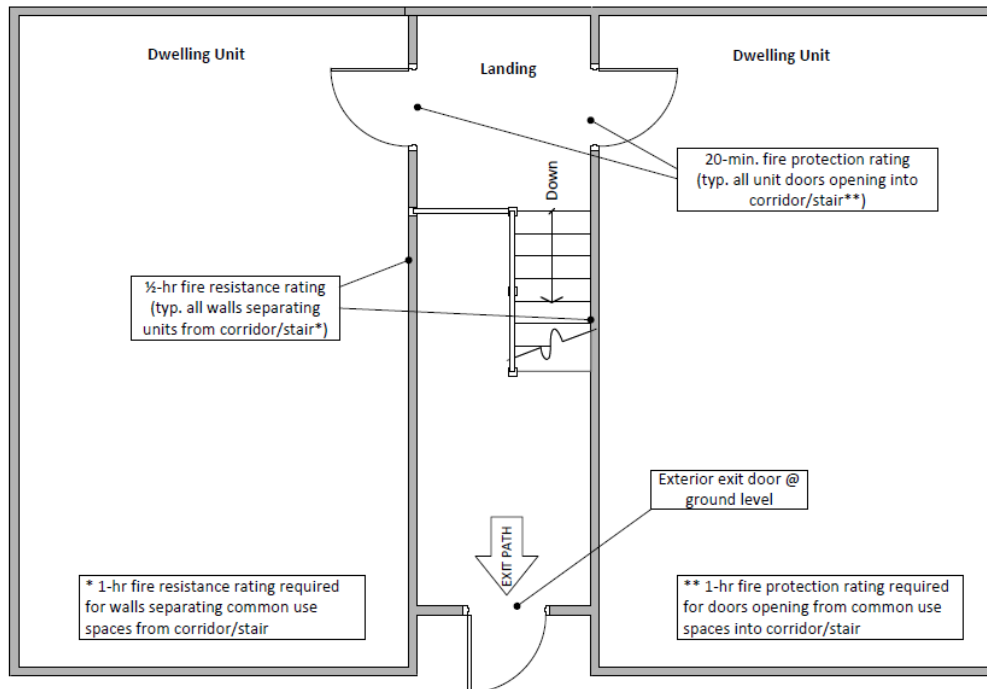
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**Fig. XX104.1(4) - 3-story Building - Interior Stair
Ground Level**



**Fig. XX104.1(5) - 2-story Building, Exterior Stair
Upper Story (ground level sim.)**



**Fig. XX104.1(6) - 2-story Building, Interior Stair
Upper Story (ground level sim.)**

XX104.2 Corridors and exterior egress balconies. *Corridors* and exterior egress balconies used for egress purposes in a *means of egress* system shall comply with this section.

XX104.2.1 Corridors. *Corridors* shall comply with the following:

1. A minimum width of 36" shall be provided for all *corridors*.
2. *Corridors* shall be limited to 20 feet maximum in length.
3. Air supplied to *corridors* shall not be considered as providing ventilation air to individual *dwelling units* where the air supplied is 100 percent outside air, where units have conforming ventilation air independent of the air supplied to the *corridor*, and where the supply fan will automatically shut off upon activation of the *corridor* smoke detector.

XX104.2.1.1 Corridor protection. *Corridor* walls shall have a *fire-resistance rating* of not less than ½ hour. Openings in *corridor* walls shall be protected by smoke and draft control assemblies with a 1/3 hour *fire protection rating*.

Exception: Exterior walls in *corridors* are permitted to be unrated where a fire separation distance greater than 10 feet is provided.

XX104.2.2 Egress balconies. Egress balconies used for egress purposes shall conform to the same requirements as *corridors* for minimum width and length.

XX104.2.2.1 Egress balcony protection. Exterior egress balconies shall be separated from the interior of the building by walls and *opening protectives* as required for *corridors*.

XX104.2.2.2 Openness. Exterior egress balconies shall be a minimum of 50 percent open, and the open area above the guards shall be constructed to minimize the accumulation of smoke.

XX104.2.2.3 Location. Exterior egress balconies shall have a minimum fire separation distance of 10 feet measured at right angles from the exterior edge of the egress balcony to the following:

1. Adjacent lot lines.
2. Other buildings on the same lot.

XX104.3 Exit stairways. *Interior* and *exterior exit stairways* shall comply with this section. *Winders, spiral stairways, alternating tread devices, ship's ladders, or ladders* are not permitted in *interior* or *exterior exit stairways*.

XX104.3.1 Riser height and tread depth. Stairs in *exit stairways* shall have a maximum riser height of 7 inches, and a minimum tread depth of 11 inches.

XX104.3.2 Stairway landings. There shall be a floor or landing at the top and bottom of each *stairway*. The width of landings, measured perpendicularly to the direction of travel, shall be not less than 3 feet. Every landing shall have a minimum depth, measured parallel to the direction of travel, of not less than 3 feet. When fully open, doors shall not project more than 7 inches into the required width of a landing.

XX104.3.3 Outdoor conditions. Outdoor *stairways* and outdoor approaches to *stairways* shall be designed so that water will not accumulate on walking surfaces.

XX104.3.4 Openings. Openings in *interior* and *exterior exit stairways* other than unprotected exterior openings shall be limited to those necessary for egress from *dwelling units*, openings for egress from *common use* areas allowed in accordance with Section XX104.1.1, and for egress from the enclosure.

XX104.3.5 Stairway construction. *Interior and exterior exit stairways shall be constructed in accordance with this section and Sections XX104.4 or XX104.5, as applicable.*

Exception: *Interior or exterior stairways in multiplex buildings not exceeding two stories above grade plane are permitted to be separated from the dwelling units by ½ -hour fire-resistance-rated walls with 20-minute fire-protection rated smoke and draft control openings. Such stairways are permitted to be unenclosed.*

User Note: See Figures XX104.1(5) and XX104.1(6) for illustrative examples of this two-story condition.

XX104.3.5.1 Exterior walls of exit stairways. Exterior walls of exit *stairways* shall comply with the requirements of Section R302.1 for exterior walls. Where nonrated walls or unprotected openings enclose the exterior of the *stairway* and the walls or openings are exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), building construction within 10 feet (3048 mm) of the exterior walls of the exit *stairway* shall comply with Section XX104.4.1 or XX104.5.4 as applicable.

XX104.4 Interior exit stairways. *Interior exit stairways serving as an exit component in a means of egress system shall comply with the requirements of this section. An interior exit stairway shall not be used for any purpose other than as a means of egress and a circulation path.*

XX104.4.1 Interior exit stairway construction and openings. *Interior exit stairway enclosures in multiplex buildings shall have a fire-resistance rating of not less than 1 hour. Openings in interior exit stairways other than unprotected exterior openings shall be protected by fire door assemblies with a fire protection rating of not less than 1 hour.*

Elevators shall not open into *interior exit stairways*.

XX104.4.2 Penetrations. Penetrations into or through *interior exit stairways* are prohibited except for the following:

1. Fire protection systems.
2. Security systems.
3. Electrical raceway serving the *interior exit stairway* and terminating at a steel box not exceeding 16 square inches (0.010 m²).
4. Structural elements, such as beams or joists, supporting the *interior exit stairway* or enclosure.

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5. Structural elements, such as beams or joists, supporting a roof at the top of the *interior exit stairway*.

Exception: Membrane penetrations shall be permitted on the outside of an *interior exit stairway*. Such penetrations shall be protected in accordance with Section R302.4.2.

XX104.4.3 Enclosures under interior exit stairways. The walls and soffits within enclosed usable spaces under enclosed and unenclosed *interior exit stairways* shall be protected by 1-hour fire-resistance-rated construction. Access to the enclosed space shall not be directly from within the *stairway* enclosure.

XX104.5 Exterior exit stairways. *Exterior exit stairways* serving as an exit component for *multiplex* buildings shall comply with the requirements of this section.

XX104.5.1 Exterior exit stairway open side. *Exterior exit stairways* serving as an element of a required *means of egress* shall be open on not less than one side, except for required structural columns, beams, handrails, and guards. An open side shall have not less than 35 square feet (3.3 m²) of aggregate open area adjacent to each floor level and the level of each intermediate landing. The required open area shall be located not less than 42 inches (1067 mm) above the adjacent floor or landing level.

XX104.5.2 Side yards adjoining exterior exit stairways. The open areas adjoining *exterior exit stairways* shall be either *yards*, *courts*, or *public ways*. The remaining sides are permitted to be enclosed by the exterior walls of the building.

XX104.5.3 Exterior exit stairway location. *Exterior exit stairways* shall have a minimum *fire separation distance* of 10 feet (3048 mm) measured at right angles from the exterior edge of the *stairway* or ramps, including landings, to:

1. Adjacent lot lines.
2. Other buildings on the same lot

XX104.5.4 Exterior exit stairway construction and opening protection. *Exterior exit stairways* shall be separated from the interior of the building by assemblies having a *fire-resistance rating* of not less than 1 hour. Openings in *exterior exit stairways* other than unprotected exterior openings shall be protected by fire door assemblies with a *fire protection rating* of not less than $\frac{3}{4}$ hour.

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Where a vertical plane projecting from the edge of an *exterior exit stairway* and landings is exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), the exterior wall shall be rated in accordance with this subsection.

XX104.5.5 Enclosures under exterior exit stairways. The open space under *exterior exit stairways* shall not be used for any purpose.

Exception: Usable space under *exterior exit stairways* is permitted provided the space is completely enclosed in 1-hour fire-resistance-rated construction.

XX104.6 Ramps. Exterior ramps from an exterior exit door to the *public way* shall comply with the following:

1. Ramps shall have a running slope not steeper than 1 unit vertical in 12 units horizontal (8.3 percent slope).
2. The slope measured perpendicular to the direction of travel of a ramp shall not be steeper than one unit vertical in 48 units horizontal (2-percent slope).
3. The rise for any ramp run shall be 30 inches (762 mm) maximum.
4. Ramps shall be not less than 36 inches in width. Ramps used as part of an *accessible* route shall be not less than 48 inches in width.
5. Ramps shall have landings at the bottom and top of each ramp, points of turning, entrance, exits, and at doors.
6. Ramp landings shall be not less than 60 inches in length or width.
7. Exterior ramps and approaches to exterior ramps shall be designed so that water will not accumulate on walking surfaces.

SECTION XX105—PARKING REQUIREMENTS

XX105.1 On-site parking. Where shared on-site parking is provided for new *dwelling units* in new *multiplex* buildings, 20% of shared spaces provided shall be *electric vehicle ready parking spaces* (*EV ready parking spaces*). Calculations shall be rounded up to the nearest whole number.

Exception: *EV ready parking spaces* are not required to be provided where there is no public utility or commercial power supply.

XX105.2 Electric vehicle charging infrastructure. A minimum of 40-ampere dedicated 208/240-volt branch circuit shall be installed for each *EV ready parking space*. The branch

circuits shall terminate at a receptacle outlet or *EVSE* in close proximity to the proposed location of the *EV ready parking space*.

Electric vehicle charging infrastructure shall be permitted to be designed and installed such that *electric vehicle supply equipment (EVSE)* or future *EVSE* can serve multiple adjacent spaces with multiple output connections.

XX105.3 Electric vehicle charging infrastructure for accessible parking spaces. Where *accessible* parking spaces are required, electric vehicle charging infrastructure shall be provided for *accessible* parking spaces in accordance with Table XX105.3. *Accessible* spaces provided with electric vehicle charging infrastructure to meet the requirements of Table XX105.3 shall be permitted to count towards the requirements of XX105.1. Electrical vehicle charging infrastructure serving *accessible* parking spaces shall be permitted to be designed to serve adjacent *automobile parking spaces* that are not designated as *accessible* parking.

TABLE XX105.3

Electric vehicle charging infrastructure for accessible parking spaces.

Required Minimum Number of Accessible Spaces	Required level of electric vehicle charging infrastructure
1	<i>EV ready space</i>
2	<i>EV ready space</i>

XX105.4 Electrical room(s) and equipment. Electrical room(s) or areas for dedicated electrical equipment shall be sized to accommodate the requirements of Section XX105.2.

The electrical service and the electrical system, including any on-site distribution transformer(s), shall have sufficient capacity to simultaneously charge all electric vehicles at all required *EV ready parking spaces* at a minimum of 40-amperes each.

EXCEPTION: An *Automatic Load Management System (ALMS)* is permitted to be used to adjust the maximum electrical capacity required for the *EV ready parking spaces*. The *ALMS* must be designed to allocate charging capacity among multiple future *EVSE* at a minimum of 16 amperes per *EVSE*.

SECTION XX106—ACCESSIBILITY

XX106.1 Scope. Where there are four or more *dwelling units* in a single structure, the provisions of Chapter 11 of the *International Building Code* shall apply. *Multiplex* buildings shall be considered a Group R-2 (apartment) occupancy for the purpose of accessibility requirements.

SECTION XX107--ELEVATORS AND PLATFORM LIFTS

XX107.1 Elevators. Where provided in *multiplex* buildings for *common use*, passenger elevators, limited-use and limited-application elevators shall comply with ASME A17.1/CSA B44.

XX107.2 Platform Lifts. Where provided, platform lifts shall comply with ASME A18.1.

XX107.3 Accessibility. Elevators or platform lifts that are part of an accessible route required by Chapter 11 of the *International Building Code*, shall comply with ICC A117.1

SECTION XX108—HABITABLE ATTICS

XX108.1 General. *Habitable attics* are not permitted in *multiplex* buildings.

SECTION XX109—STRUCTURAL PROVISIONS

XX109.1 Lateral Design. The lateral force resisting system for *multiplex* buildings in Seismic Design Category D₂ exceeding two stories shall be designed by a registered design professional in accordance with accepted engineering practice.