CHAPTER 8
ALTERATIONS—LEVEL 2

SECTION 801
GENERAL

801.1 Scope. Level 2 *alterations* as described in Section 603 shall comply with the requirements of this chapter.

801.2 Alteration Level 1 compliance. In addition to the requirements of this chapter, all work shall comply with the requirements of Chapter 7.

801.3 Compliance. All new construction elements, components, systems, and spaces shall comply with the requirements of the *EPCOT Building Code.*

Exceptions:

1. Windows may be added without requiring compliance with the light and ventilation requirements of the *EPCOT Building Code.*
2. Newly installed electrical equipment shall comply with the requirements of Section 808.
3. The length of dead-end corridors in newly constructed spaces shall only be required to comply with the provisions of Section 805.6.
4. The minimum ceiling height of the newly created habitable and occupiable spaces and corridors shall be 7 feet (2134 mm).

SECTION 802
SPECIAL USE AND OCCUPANCY

802.1 General. *Alteration* of buildings classified as special use and occupancy as described in the *EPCOT Building Code* shall comply with the requirements of Section 801.1 and the scoping provisions of Chapter 1 where applicable.

SECTION 803
BUILDING ELEMENTS AND MATERIALS

803.1 Scope. The requirements of this section are limited to work areas in which Level 2 alterations are being performed and shall apply beyond the work area where specified.

803.2 Vertical openings. Existing vertical openings shall comply with the provisions of Sections 803.2.1, 803.2.2 and 803.2.3.

803.2.1 Existing vertical openings. All existing interior vertical openings connecting two or more floors shall be enclosed with approved assemblies having a fire-resistance rating of not less than 1 hour with approved opening protectives.

Exceptions:

1. Where vertical opening enclosure is not required by the *EPCOT Building Code* or the *Florida Fire Prevention Code*.
2. Interior vertical openings other than stairways may be blocked at the floor and ceiling of the *work area* by installation of not less than 2 inches (51 mm) of solid wood or equivalent construction.
3. The enclosure shall not be required where:
   - 3.1. Connecting the main floor and mezzanines; or
   - 3.2. All of the following conditions are met:
     - 3.2.1. The communicating area has a low hazard occupancy or has a moderate hazard occupancy that is protected throughout by an automatic sprinkler system.
     - 3.2.2. The lowest or next to the lowest level is a street floor.
     - 3.2.3. The entire area is open and unobstructed in a manner such that it may be assumed that a fire in any part of the interconnected spaces will be readily obvious to all of the occupants.
     - 3.2.4. Exit capacity is sufficient to provide egress simultaneously for all occupants of all levels by considering all areas to be a single floor area for the determination of required exit capacity.
     - 3.2.5. Each floor level, considered separately, has at least one-half of its individual required exit capacity provided by an exit or exits leading directly out of that level without having to traverse another communicating floor level or be exposed to the smoke or fire spreading from another communicating floor level.
4. In Group A occupancies, a minimum 30-minute enclosure shall be provided to protect all vertical openings not exceeding three stories.
5. In Group B occupancies, a minimum 30-minute enclosure shall be provided to protect all vertical openings not exceeding three stories. This enclosure, or the enclosure specified in Section 803.2.1, shall not be required in the following locations:
   - 5.1. Buildings not exceeding 3,000 square feet (279 m^2) per floor.

5.2. Buildings protected throughout by an approved automatic fire sprinkler system.

6. In Group E occupancies, the enclosure shall not be required for vertical openings not exceeding three stories when the building is protected throughout by an approved automatic fire sprinkler system.
7. In Group F occupancies, the enclosure shall not be required in the following locations:
   7.1. Vertical openings not exceeding three stories.
   7.2. Special purpose occupancies where necessary for manufacturing operations and direct access is provided to at least one protected stairway.
   7.3. Buildings protected throughout by an approved automatic sprinkler system.
8. In Group H occupancies, the enclosure shall not be required for vertical openings not exceeding three stories where necessary for manufacturing operations and every floor level has direct access to at least two remote enclosed stairways or other approved exits.
9. In Group M occupancies, a minimum 30-minute enclosure shall be provided to protect all vertical openings not exceeding three stories. This enclosure, or the enclosure specified in Section 803.2.1, shall not be required in the following locations:
   9.1. Openings connecting only two floor levels.
   9.2. Occupancies protected throughout by an approved automatic sprinkler system.
10. In Group R-1 occupancies, the enclosure shall not be required for vertical openings not exceeding three stories in the following locations:
   10.1. Buildings protected throughout by an approved automatic sprinkler system.
   10.2. Buildings with less than 25 dwelling units or sleeping units where every sleeping room above the second floor is provided with direct access to a fire escape or other approved second exit by means of an approved exterior door or window having a sill height of not greater than 44 inches (1118 mm) and where:
      10.2.1. Any exit access corridor exceeding 8 feet (2438 mm) in length that serves two means of egress, one of which is an unprotected vertical opening, shall have at least one of the means of egress separated from the vertical opening by a 1-hour fire barrier; and
      10.2.2. The building is protected throughout by an automatic fire alarm system, installed and supervised in accordance with the *EPCOT Building Code.*
11. In Group R-2 occupancies, a minimum 30-minute enclosure shall be provided to protect all vertical openings not exceeding three stories. This enclosure, or the enclosure specified in Section 803.2.1, shall not be required in the following locations:
   11.1. Vertical openings not exceeding two stories with not more than four dwelling units per floor.
   11.2. Buildings protected throughout by an approved automatic sprinkler system.
   11.3. Buildings with not more than four dwelling units per floor where every sleeping room above the second floor is provided with direct access to a fire escape or other approved second exit by means of an approved exterior door or window having a sill height of not greater than 44 inches (1118 mm) and the building is protected throughout by an automatic fire alarm system complying with Section 804.4.
12. One- and two-family dwellings.
13. Group S occupancies where connecting not more than two floor levels or where connecting not more than three floor levels and the structure is equipped throughout with an approved automatic sprinkler system.
14. Group S occupancies where vertical opening protection is not required for open parking garages and ramps.

803.2.2 Supplemental shaft and floor opening enclosure requirements. Where the *work area* on any floor exceeds 50 percent of that floor area, the enclosure requirements of Section 803.2 shall apply to vertical openings other than stairways throughout the floor.

Exception: Vertical openings located in tenant spaces that are entirely outside the *work area*.

803.2.3 Supplemental stairway enclosure requirements. Where the *work area* on any floor exceeds 50 percent of that floor area, stairways that are part of the means of egress serving the *work area* shall, at a minimum, be enclosed with smoke-tight construction on the highest *work area* floor and all floors below.

Exception: Where stairway enclosure is not required by the *EPCOT Building Code* or the *Florida Fire Prevention Code*.

803.3 Smoke compartments. In Group I-2 occupancies where the work area is on a story used for sleeping rooms for more than 30 care recipients, the story shall be divided into not less than two compartments by smoke barrier walls in accordance with Section 407.5 of the *EPCOT Building Code* as required for new construction.

803.4 Interior finish. The interior finish and trim of walls and ceilings in exits and corridors in any *work area* shall comply with the requirements of the *EPCOT Building Code.*

Exception: Existing materials that do not comply with the requirements of the *EPCOT Building Code* shall be permitted to be treated with an approved fire-retardant coating in accordance with the manufacturer's instructions to achieve the required classification when approved by the code official. Compliance with this section shall be demonstrated by testing the fire-retardant coating on the same material and achieving the required performance when approved by the code official. Where the same material is not available, testing on a similar material shall be permitted when approved by the code official.

803.4.1 Supplemental interior finish requirements. Where the *work area* on any floor exceeds 50 percent of the floor area, Section 803.4 shall also apply to the interior finish and trim in exits and corridors serving the *work area* throughout the floor.

Exception: Interior finish within tenant spaces that are entirely outside the *work area*.

803.5 Guards. The requirements of Sections 803.5.1 and 803.5.2 shall apply in all *work areas*.

803.5.1 Minimum requirement. Every portion of a floor, such as a balcony or a loading dock, that is more than 30 inches (762 mm) above the floor or grade below and is not provided with guards, or those in which the existing guards are judged to be in danger of collapsing, shall be provided with guards.

803.5.2 Design. Where there are no guards or where existing guards must be replaced, the guards shall be designed and installed in accordance with the *EPCOT Building Code.*

803.6 Fire-resistance ratings. Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *EPCOT Building Code* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable requirements of the *EPCOT Building Code.*

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, including fire-resistance-rated assemblies and smoke-resistive assemblies, conditions of occupancy, means-of-egress conditions, fire code deficiencies, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

SECTION 804
FIRE PROTECTION

804.1 Scope. The requirements of this section shall be limited to work areas in which Level 2 *alterations* are being performed, and where specified they shall apply throughout the floor on which the *work areas* are located or otherwise beyond the *work area*.

804.1.1 Corridor ratings. Where an approved automatic sprinkler system is installed throughout the story, the required fire-resistance rating for any corridor located on the story shall be permitted to be reduced in accordance with the *EPCOT Building Code*. In order to be considered for a corridor rating reduction, such system shall provide coverage for the stairway landings serving the floor and the intermediate landings immediately below.

804.2 Automatic sprinkler systems. Automatic sprinkler systems shall be provided in accordance with the requirements of Sections 804.2.1 through 804.2.4. Installation requirements shall be in accordance with the *EPCOT Building Code.*

804.2.1 High-rise buildings. In high-rise buildings, work areas that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection in the entire *work area* where the *work area* is located on a floor that has a sufficient sprinkler water supply system from an existing standpipe or a sprinkler riser serving that floor.

804.2.1.1 Supplemental automatic sprinkler system requirements. Where the *work area* on any floor exceeds 50 percent of that floor area, Section 804.2.1 shall apply to the entire floor on which the *work area* is located.

Exception: Occupied tenant spaces that are entirely outside the work area.

804.2.2 Groups A, B, E, F-1, H, I, M, R-1, R-2, R-4, S-1 and S-2. In buildings with occupancies in Groups A, B, E, F-1, H, I, M, R-1, R-2, R-4, S-1 and S-2, work areas that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection where all of the following conditions occur:

1. The *work area* is required to be provided with automatic sprinkler protection in accordance with the *EPCOT Building Code,* as applicable to new construction; and
2. The *work area* exceeds 50 percent of the floor area.

Exception: If the building does not have sufficient municipal water supply for design of a fire sprinkler system available to the floor without installation of a new fire pump, work areas shall

be protected by an automatic smoke detection system throughout all occupiable spaces other than sleeping units or individual dwelling units that activates the occupant notification system in accordance with Sections 907.4, 907.5 and 907.6 of the *EPCOT Building Code.*

804.2.2.1 Mixed uses. In work areas containing mixed uses, one or more of which requires automatic sprinkler protection in accordance with Section 804.2.2, such protection shall not be required throughout the *work area* provided that the uses requiring such protection are separated from those not requiring protection by fire-resistance-rated construction having a minimum 2-hour rating for Group H and a minimum 1-hour rating for all other occupancy groups.

804.2.3 Windowless stories. Work located in a windowless story, as determined in accordance with the *EPCOT Building Code*, shall be sprinklered where the work area is required to be sprinklered under the provisions of the *EPCOT Building Code* for newly constructed buildings and the building has a sufficient municipal water supply without installation of a new fire pump.

804.2.4 Supervision. Fire sprinkler systems required by this section shall be supervised by one of the following methods:

1. Approved central station system in accordance with NFPA 72;
2. Approved proprietary system in accordance with NFPA 72;
3. Approved remote station system of the jurisdiction in accordance with NFPA 72; or
4. When approved by the *code official*, approved local alarm service that will cause the sounding of an alarm in accordance with NFPA 72.

Exception: Supervision is not required for the following:

1. Underground key or hub gate valves in roadway boxes.
2. Halogenated extinguishing systems.
3. Carbon dioxide extinguishing systems.
4. Dry- and wet-chemical extinguishing systems.
5. Automatic sprinkler systems installed in accordance with NFPA 13R where a common supply main is used to supply both domestic and automatic sprinkler systems and a separate shutoff valve for the automatic sprinkler system is not provided.

804.2.5 Other required automatic sprinkler systems. In buildings and areas listed in Table 903.2.11.6 of the *EPCOT Building Code*, *work areas* that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with an automatic sprinkler system under the following conditions:

1. The *work area* is required to be provided with an automatic sprinkler system in accordance with the *EPCOT Building Code* applicable to new construction; and
2. The building has sufficient municipal water supply for design of an automatic sprinkler system available to the floor without installation of a new fire pump.

804.3 Standpipes. Where the *work area* includes exits or corridors shared by more than one tenant and is located more than 50 feet (15 240 mm) above or below the lowest level of fire department access, a standpipe system shall be provided. Standpipes shall have an approved fire department connection with hose connections at each floor level above or below the lowest level of fire department access. Standpipe systems shall be installed in accordance with the *EPCOT Building Code.*

Exceptions:

1. No pump shall be required provided that the standpipes are capable of accepting delivery by fire department apparatus of a minimum of 250 gallons per minute (gpm) at 65 pounds per square inch (psi) (946 L/m at 448KPa) to the topmost floor in buildings equipped throughout with an automatic sprinkler system or a minimum of 500 gpm at 65 psi (1892 L/m at 448KPa) to the topmost floor in all other buildings. Where the standpipe terminates below the topmost floor, the standpipe shall be designed to meet (gpm/psi) (L/m/KPa) requirements of this exception for possible future extension of the standpipe.
2. The interconnection of multiple standpipe risers shall not be required.

804.4 Fire alarm and detection. An approved fire alarm system shall be installed in accordance with Sections 804.4.1 through 804.4.3. Where automatic sprinkler protection is provided in accordance with Section 804.2 and is connected to the building fire alarm system, automatic heat detection shall not be required.

An approved automatic fire detection system shall be installed in accordance with the provisions of this code and NFPA 72. Devices, combinations of devices, appliances, and equipment shall be approved. The automatic fire detectors shall be smoke detectors, except that an approved alternative type of detector shall be installed in spaces such as boiler rooms, where products of combustion are present during normal operation in sufficient quantity to actuate a smoke detector.

804.4.1 Occupancy requirements. A fire alarm system shall be installed in accordance with Sections 804.4.1.1 through 804.4.1.7. Existing alarm-notification appliances shall be automatically activated throughout the building. Where the building is not equipped with a fire alarm system, alarm-notification appliances within the *work area* shall be provided and automatically activated.

Exceptions:

1. Occupancies with an existing, previously approved fire alarm system.

2. Where selective notification is permitted, alarm-notification appliances shall be automatically activated in the areas selected.

804.4.1.1 Group E. A fire alarm system shall be installed in *work areas* of Group E occupancies as required by the *Florida Fire Prevention Code* for existing Group E occupancies.

804.4.1.2 Group I-1. An automatic fire alarm system shall be installed in *work areas* of Group I-1 facilities as required by the *Florida Fire Prevention Code* for existing Group I-1 occupancies.

804.4.1.3 Group I-2. An automatic fire alarm system shall be installed throughout Group I-2 occupancies as required by the *Florida Fire Prevention Code*.

804.4.1.4 Group I-3. A fire alarm system shall be installed in *work areas* of Group I-3 occupancies as required by the *Florida Fire Prevention Code*.

804.4.1.5 Group R-1. A fire alarm system shall be installed in Group R-1 occupancies as required by the *Florida Fire Prevention Code* for existing Group R-1 occupancies.

804.4.1.6 Group R-2. A fire alarm system shall be installed in *work areas* of Group R-2 apartment buildings as required by the *Florida Fire Prevention Code* for existing Group R-2 occupancies.

804.4.1.7 Group R-4. A manual fire alarm system shall be installed in *work areas* of Group R-4 residential care/assisted living facilities as required by the *Florida Fire Prevention Code* for existing Group R-4 occupancies.

804.4.2 Supplemental fire alarm system requirements. Where the *work area* on any floor exceeds 50 percent of that floor area, Section 804.4.1 shall apply throughout the floor.

Exception: Alarm-initiating and notification appliances shall not be required to be installed in tenant spaces outside of the *work area*.

804.4.3 Smoke alarms. Individual sleeping units and individual dwelling units in any *work area* in Group R and I-1 occupancies shall be provided with smoke alarms in accordance with the *Florida Fire Prevention Code*.

Exception: Interconnection of smoke alarms outside of the *work area* shall not be required.

SECTION 805
MEANS OF EGRESS

805.1 Scope. The requirements of this section shall be limited to work areas that include exits or corridors shared by more than one tenant within the *work area* in which Level 2 *alterations* are being performed, and where specified they shall apply throughout the floor on which the *work areas* are located or otherwise beyond the *work area*.

805.2 General. The means of egress shall comply with the requirements of this section.

Exceptions:

1. Where the *work area* and the means of egress serving it complies with NFPA 101.
2. Means of egress conforming to the requirements of the building code under which the building was constructed shall be considered compliant means of egress if, in the opinion of the *code official*, they do not constitute a distinct hazard to life.

805.3 Number of exits. The number of exits shall be in accordance with Sections 805.3.1 through 805.3.3.

805.3.1 Minimum number. Every story utilized for human occupancy on which there is a *work area* that includes exits or corridors shared by more than one tenant within the *work area* shall be provided with the minimum number of exits based on the occupancy and the occupant load in accordance with the *EPCOT Building Code.* In addition, the exits shall be permitted to comply with Sections 805.3.1.1 and 805.3.1.2.

805.3.1.1 Single-exit buildings. A single exit or access to a single exit shall be permitted from spaces, any story or any occupied roof where one of the following exist:

1. The occupant load, number of dwelling units and exit access travel distance do not exceed the values in Table 805.3.1.1(1) or 805.3.1.1(2).
2. In Group R-1 or R-2 buildings without an approved automatic sprinkler system, individual single-story or multistory dwelling or sleeping units shall be permitted to have a single exit or access to a single exit from the dwelling or sleeping unit provided one of the following criteria are met:
   2.1. The occupant load is not greater than 10 and the exit access travel distance within the unit does not exceed 75 feet (22 860 mm).
   2.2. The building is not more than three stories in height; all third story space is part of dwelling with an exit access doorway on the second story; and the portion of the exit access travel distance from the door to any habitable room within any such unit to the unit entrance doors does not exceed 50 feet (15 240 mm).
3. In buildings of Group R-2 occupancy of any number of stories and with not more than four dwelling units per floor; served by an interior exit stairway with a smokeproof enclosure in accordance with Sections 909.20 and 1023.11 of the *EPCOT Building Code* or an exterior exit stairway outside stairway as an exit; and with such exit where the portion of the exit access travel distance from the dwelling unit entrance door to the exit is a maximum of 20 feet (6096 mm).

TABLE 805.3.1.1(1)
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
Basement, first or second story above grade plane	R-2[a]	4 dwelling units	50 feet
Third story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm. NP = Not Permitted. NA = Not Applicable.

a. Group R-2, without an approved automatic sprinkler system and provided with emergency escape and rescue openings in accordance with Section 1030 of the *EPCOT Building Code.*

TABLE 805.3.1.1(2)
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM OCCUPANT LOAD PER STORY	MAXIMUM EXIT ACCESS TRAVEL DISTANCE (feet)
First story above or below grade plane	B, F-2, S-2[a]	35	75
Second story above grade plane	B, F-2, S-2[a]	35	75
Third story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted. NA = Not Applicable.

a. The length of exit access travel distance in a Group S-2 open parking garage shall be not more than 100 feet.

805.3.1.2 Fire escapes required. For other than Group I-2, where more than one exit is required, an existing or newly constructed fire escape complying with Section 805.3.1.2.1 shall be accepted as providing one of the required means of egress.

805.3.1.2.1 Fire escape access and details. Fire escapes shall comply with all of the following requirements:

1. Occupants shall have unobstructed access to the fire escape without having to pass through a room subject to locking.
2. Access to a new fire escape shall be through a door, except that windows shall be permitted to provide access from single dwelling units or sleeping units in Group R-1, R-2 and I-1 occupancies or to provide access from spaces having a maximum occupant load of 10 in other occupancy classifications.
   2.1. The window shall have a minimum net clear opening of 5.7 square feet (0.53 m^2) or 5 square feet (0.46 m^2) where located at grade.
   2.2. The minimum net clear opening height shall be 24 inches (610 mm) and net clear opening width shall be 20 inches (508 mm).
   2.3. The bottom of the clear opening shall not be greater than 44 inches (1118 mm) above the floor.
   2.4. The operation of the window shall comply with the operational constraints of the *EPCOT Building Code.*
3. Newly constructed fire escapes shall be permitted only where exterior stairways cannot be utilized because of lot lines limiting the stairway size or because of the sidewalks, alleys, or roads at grade level.
4. Openings within 10 feet (3048 mm) of fire escape stairways shall be protected by fire assemblies having minimum $^3/_4$-hour fire-resistance ratings.

   Exception: Opening protection shall not be required in buildings equipped throughout with an approved automatic sprinkler system.
5. In all buildings of Group E occupancy, up to and including the 12th grade, buildings of Group I occupancy, rooming houses and childcare centers, ladders of any type are prohibited on fire escapes used as a required means of egress.

805.3.1.2.2 Construction. The fire escape shall be designed to support a live load of 100 pounds per square foot (4788 Pa) and shall be constructed of steel or other approved *noncombustible materials*. Fire escapes constructed of wood not less than nominal 2 inches (51 mm) thick are permitted on buildings of Type V construction. Walkways and railings located over or supported by combustible roofs in