

**Exhibit G – Existing Buildings**  
**Repairs, Performance Compliance Methods, Relocated or Moved Buildings**

**Reference 2021 International Existing Building Code Chapters 4, 13, 14**  
**(All other portions of the 2021 IEBC are intentionally not included)**

**CHAPTER 4 REPAIRS**

**SECTION G-401 GENERAL**

**G-401.1 Scope.** *Repairs* shall comply with the requirements of this chapter. *Repairs to historic buildings* need only comply with Chapter 12.

**G-401.1.1 Bleachers, grandstands and folding and telescopic seating.** *Repairs* to existing bleachers, grandstands and folding and telescopic seating shall comply with ICC 300.

**G-401.2 Compliance.** The work shall not make the building less complying than it was before the *repair* was undertaken.

**G-401.3 Flood hazard areas.** In flood hazard areas, *repairs* that constitute *substantial improvement* shall require that the building comply with Section 1612 of the *International Building Code*, or Section R322 of the *International Residential Code*, as applicable.

**SECTION G-402 BUILDING ELEMENTS AND MATERIALS**

**G-402.1 Glazing in hazardous locations.** Replacement glazing in hazardous locations shall comply with the safety glazing requirements of the *International Building Code* or *International Residential Code* as applicable.

**Exception:** Glass block walls, louvered windows and jalousies repaired with like materials.

**SECTION G-403 FIRE PROTECTION**

**G-403.1 General.** *Repairs* shall be done in a manner that maintains the level of fire protection provided.

**SECTION G-404 MEANS OF EGRESS**

**G-404.1 General.** *Repairs* shall be done in a manner that maintains the level of protection provided for the means of egress.

**SECTION G-405 STRUCTURAL**

**G-405.1 General.** Structural *repairs* shall be in compliance with this section and Section 401.2.

**G-405.2 Repairs to damaged buildings.** *Repairs* to damaged buildings shall comply with this section.

**G-405.2.1 Repairs for less than substantial structural damage.** Unless otherwise required by this section, for damage less than *substantial structural damage*, the damaged elements shall be permitted to be restored to their pre-damage condition.

**G-405.2.1.1 Snow damage.** Structural components whose damage was caused by or related to snow load effects shall be repaired, replaced, or altered to satisfy the requirements of Section 1608 of the *International Building Code*.

**G-405.2.2 Disproportionate earthquake damage.** A building assigned to Seismic Design Category D, E or F that has sustained *disproportionate earthquake damage* shall be subject to the requirements for buildings with substantial structural damage to vertical elements of the lateral force-resisting system.

**G-405.2.3 Substantial structural damage to vertical elements of the lateral force-resisting system.** A building that has sustained *substantial structural damage* to the vertical elements of its lateral force-resisting system shall be evaluated in accordance with Section 405.2.3.1, and either repaired in accordance with Section 405.2.3.2 or repaired and retrofitted in accordance with Section 405.2.3.3, depending on the results of the evaluation.

**Exceptions:**

1. Buildings assigned to Seismic Design Category A, B or C whose *substantial structural damage* was not caused by earthquake need not be evaluated or retrofitted for load combinations that include earthquake effects.
2. One- and two-family dwellings need not be evaluated or retrofitted for load combinations that include earthquake effects.

**G-405.2.3.1 Evaluation.** The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the *code official*. The evaluation shall establish whether the damaged building, if repaired to its pre-damage state, would comply with the provisions of the *International Building Code* for load combinations that include wind or earthquake effects, except that the seismic forces shall be the reduced seismic forces.

**G-405.2.3.2 Extent of repair for compliant buildings.** If the evaluation establishes that the building in its pre-damage condition complies with the provisions of Section 405.2.3.1, then the damaged elements shall be permitted to be restored to their pre-damage condition.

**G-405.2.3.3 Extent of repair for noncompliant buildings.** If the evaluation does not establish that the building in its pre-damage condition complies with the provisions of Section 405.2.3.1, then the building shall be retrofitted to comply with the provisions of this section. The wind loads for the *repair* and *retrofit* shall be those required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be in accordance with the *International Building Code*. The seismic loads for this *retrofit* design shall be those required by the building code in effect at the time of original construction, but not less than the reduced seismic forces.

**G-405.2.4 Substantial structural damage to gravity load-carrying components.** Gravity load-carrying components that have sustained *substantial structural damage* shall be rehabilitated to comply with the applicable provisions for dead, live and snow loads in the *International Building Code*. Undamaged gravity load-carrying components that receive dead, live or snow loads from rehabilitated components shall also be rehabilitated if required to comply with the design loads of the *rehabilitation* design.

**G-405.2.4.1 Lateral force-resisting elements.** Regardless of the level of damage to vertical elements of the lateral force-resisting system, if *substantial structural damage* to gravity load-carrying components was caused primarily by wind or seismic effects, then the building shall be

evaluated in accordance with Section 405.2.3.1 and, if noncompliant, retrofitted in accordance with Section 405.2.3.3.

**Exceptions:**

1. Buildings assigned to Seismic Design Category A, B or C whose *substantial structural damage* was not caused by earthquake need not be evaluated or retrofitted for load combinations that include earthquake effects.
2. One- and two-family dwellings need not be evaluated or retrofitted for load combinations that include earthquake effects.

**G-405.2.5 Substantial structural damage to snow load-carrying components.** Where substantial structural damage to any snow load-carrying components is caused by or related to snow load effects, any components required to carry snow loads on roof framing of similar construction shall be repaired, replaced, or retrofitted to satisfy the requirements of Section 1608 of the *International Building Code*.

**SECTION G-406 ELECTRICAL**

**G-406.1 Material.** Existing electrical wiring and equipment undergoing *repair* shall be allowed to be repaired or replaced with like material.

**G-406.1.1 Receptacles.** Replacement of electrical receptacles shall comply with the applicable requirements of Section 406.4(D) of NFPA 70.

**G-406.1.2 Plug fuses.** Plug fuses of the Edison-base type shall be used for replacements only where there is no evidence of over fusing or tampering per applicable requirements of Section 240.51(B) of NFPA 70.

**G-406.1.3 Non-grounding-type receptacles.** For replacement of non-grounding-type receptacles with grounding type receptacles and for branch circuits that do not have an equipment grounding conductor in the branch circuitry, the grounding conductor of a grounding-type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system or to any accessible point on the grounding electrode conductor in accordance with Section 250.130(C) of NFPA 70.

**G-406.1.4 Health care facilities.** Portions of electrical systems being repaired in Group I-2, ambulatory care *facilities* and outpatient clinics shall comply with NFPA 99 requirements for *repairs*.

**G-406.1.5 Grounding of appliances.** Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers and outlet or junction boxes that are part of the existing branch circuit for these appliances shall be permitted to be grounded to the grounded circuit conductor in accordance with Section 250.140 of NFPA 70.

**SECTION G-407 MECHANICAL**

**G-407.1 General.** Existing mechanical systems undergoing *repair* shall not make the building less complying than it was before the damaged occurred.

**G-407.2 Mechanical draft systems for manually fired appliances and fireplaces.** A mechanical draft system shall be permitted to be used with manually fired appliances and fireplaces where such a system complies with all of the following requirements:

1. The mechanical draft device shall be listed and installed in accordance with the manufacturer's installation instructions.
2. A device shall be installed that produces visible and audible warning upon failure of the mechanical draft device or loss of electrical power at any time that the mechanical draft device is turned on. This device shall be equipped with a battery backup if it receives power from the building wiring.
3. A smoke detector shall be installed in the room with the appliance or fireplace. This device shall be equipped with a battery backup if it receives power from the building wiring.

## **SECTION G-408 PLUMBING**

**G-408.1 Materials.** Plumbing materials and supplies shall not be used for *repairs* that are prohibited in the *International Plumbing Code*.

**G-408.2 Water closet replacement.** The maximum water consumption flow rates and quantities for all replaced water closets shall be 1.6 gallons (6 L) per flushing cycle.

**Exception:** Blowout-design water closets [3.5 gallons (13 L) per flushing cycle].

**G-408.3 Health care facilities.** Portions of medical gas systems being repaired in Group I-2, ambulatory care *facilities* and outpatient clinics shall comply with NFPA 99 requirements for *repairs*.

## **CHAPTER 13 PERFORMANCE COMPLIANCE METHODS**

### **SECTION G-1301 GENERAL**

**G-1301.1 Scope.** The provisions of this chapter shall apply to the *alteration, addition and change of occupancy* of *existing structures*, including historic structures, as referenced in Section 301.3.3. The provisions of this chapter are intended to maintain or increase the current degree of public safety, health and general welfare in *existing buildings* while permitting, *alteration, addition and change of occupancy* without requiring full compliance with Chapters 6 through 12, except where compliance with the prescriptive method of Chapter 5 or the work area method of other provisions of this code is specifically required in this chapter.

**G-1301.1.1 Compliance with other methods.** *Alterations, additions, and changes of occupancy* to *existing structures* shall comply with the provisions of this chapter or with one of the methods provided in Section 301.3.

**G-1301.2 Applicability.** *Existing buildings* in which there is work involving *additions, alterations or changes of occupancy* shall be made to conform to the requirements of this chapter or the provisions of Chapters 6 through 12. The provisions of Sections 1301.2.1 through 1301.2.6 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, I-2, M, R and S. These provisions shall also apply to Group U occupancies where such occupancies are undergoing a *change of occupancy* or a partial change in occupancy with separations in accordance with Section 1301.2.2. These provisions shall not apply to buildings with occupancies in Group H, I-1, I-3, or I-4.

**G-1301.2.1 Change in occupancy.** Where an *existing building* is changed to a new occupancy classification and this section is applicable, the provisions of this section for the new occupancy shall be used to determine compliance with this code.

**G-1301.2.2 Partial change in occupancy.** Where a portion of the building is changed to a new occupancy classification and that portion is separated from the remainder of the building with fire barrier or horizontal assemblies having a fire-resistance rating as required by Table 508.4 of the *International Building Code* or Section R302 of the *International Residential Code* for the separate occupancies, or with *approved* compliance alternatives, the portion changed shall be made to conform to the provisions of this section. Only the portion separated shall be required to be evaluated for compliance. Where a portion of the building is changed to a new occupancy classification and that portion is not separated from the remainder of the building with fire barriers or horizontal assemblies having a fire-resistance rating as required by Table 508.4 of the *International Building Code* or Section R302 of the *International Residential Code* for the separate occupancies, or with *approved* compliance alternatives, the provisions of this section which apply to each occupancy shall apply to the entire building. Where there are conflicting provisions, those requirements which secure the greater public safety shall apply to the entire building or structure.

**G-1301.2.3 Additions.** *Additions to existing buildings* shall comply with the requirements of the *International Building Code* or the *International Residential Code* for new construction. The combined height and area of the *existing building* and the new *addition* shall not exceed the height and area allowed by Chapter 5 of the *International Building Code*. Where a fire wall that complies with Section 706 of the *International Building Code* is provided between the *addition* and the *existing building*, the *addition* shall be considered a separate building.

**G-1301.2.4 Alterations.** An *existing building* or portion thereof shall not be altered in such a manner that results in the building being less safe or sanitary than such building is currently.

**Exception:** Where the current level of safety or sanitation is proposed to be reduced, the portion altered shall conform to the requirements of the *International Building Code*.

**G-1301.2.5 Escalators.** Where escalators are provided in below-grade transportation stations, existing and new escalators shall be permitted to have a clear width of less than 32 inches (815 mm).

**G-1301.2.6 Plumbing fixtures.** Plumbing fixtures shall be provided in accordance with Section 1009 for a change of occupancy and Section 808 for *alterations*. Plumbing fixtures for *additions* shall be in accordance with the *International Plumbing Code*.

**G-1301.3 Acceptance.** For *repairs, alterations, additions, and changes of occupancy to existing buildings* that are evaluated in accordance with this section, compliance with this section shall be accepted by the *code official*.

**G-1301.3.1 Hazards.** Where the *code official* determines that an *unsafe* condition exists as provided for in Section such *unsafe* condition shall be abated in accordance with Section 115.

**G-1301.3.3 Compliance with flood hazard provisions.**

In *flood hazard areas*, buildings that are evaluated in accordance with this section shall comply with Section 1612 of the *International Building Code*, or Section R322 of the *International Residential Code*, as applicable, if the work covered by this section constitutes *substantial improvement*.

**G-1301.4 Investigation and evaluation.** For proposed work covered by this chapter, the building owner shall cause the *existing building* to be investigated and evaluated in accordance with the provisions of Sections 1301.4 through 1301.9.

**G-1301.4.1 Structural analysis.** The owner shall have a structural analysis of the *existing building* made to determine adequacy of structural systems for the proposed *alteration, addition or change of occupancy*. The analysis shall demonstrate that the building with the work completed is capable of resisting the loads specified in Chapter 16 of the *International Building Code*.

**G-1301.4.2 Submittal.** The results of the investigation and evaluation as required in Section 1301.4, along with proposed compliance alternatives, shall be submitted to the *code official*.

**G-1301.4.3 Determination of compliance.** The *code official* shall determine whether the *existing building*, with the proposed *addition, alteration or change of occupancy*, complies with the provisions of this section in accordance with the evaluation process in Sections 1301.5 through 1301.9.

**G-1301.5 Evaluation.** The evaluation shall be composed of three categories: fire safety, means of egress and general safety, as defined in Sections 1301.5.1 through 1301.5.3.

**G-1301.5.1 Fire safety.** Included within the fire safety category are the structural fire resistance, automatic fire detection, fire alarm, automatic sprinkler system and fire suppression system features of the *facility*.

**G-1301.5.2 Means of egress.** Included within the means of egress category are the configuration, characteristics, and support features for means of egress in the *facility*.

**G-1301.5.3 General safety.** Included within the general safety category are the fire safety parameters and the means of egress parameters.

**G-1301.6 Evaluation process.** The evaluation process specified herein shall be followed in its entirety to evaluate *existing buildings* in Groups A, B, E, F, M, R, S and U. For *existing buildings* in Group I-2, the evaluation process specified herein shall be followed and applied to each and every individual smoke compartment. Table 1301.7 shall be utilized for tabulating the results of the evaluation. References to other sections of this code or other codes indicate that compliance with those sections is required in order to gain credit in the evaluation herein outlined. In applying this section to a building with mixed occupancies, where the separation between the mixed occupancies does not qualify for any category indicated in Section 1301.6.16, the score for each occupancy shall be determined, and the lower score determined for each section of the evaluation process shall apply to the entire building or to each smoke compartment for Group I-2 occupancies. Where the separation between the mixed occupancies qualifies for any category indicated in Section 1301.6.16, the score for each occupancy shall apply to each portion or smoke compartment of the building based on the occupancy of the space.

**G-1301.6.1 Building height and number of stories.** The value for building height and number of stories shall be the lesser value determined by the formula in Section 1301.6.1.1. Section 504 of the *International Building Code* shall be used to determine the allowable height and number of stories of the building. Subtract the actual building height from the allowable height and divide by 121/2 feet (3810 mm). Enter the height value and its sign (positive or negative) in Table 1301.7 under Safety Parameter 1301.6.1, Building Height, for fire safety, means of egress and general safety. The maximum score for a building shall be 10.

**G-1301.6.1.1 Height formula.** The following formulas shall be used in computing the building height value.

$$\text{Height value, feet} = \frac{(AH) - (EBH)}{12.5} \times CF$$

**(Equation 13-1)**

$$\text{Height value, stories} = (AS - EBS) \times CF$$

**(Equation 13-2)**

where:

*AH* = Allowable height in feet (mm) from Section 504 of the *International Building Code*.

*EBH* = Existing building height in feet (mm).

*AS* = Allowable height in stories from Section 504 of the *International Building Code*.

*EBS* = Existing building height in stories.

*CF* = 1 if *(AH) - (EBH)* is positive.

*CF* = Construction-type factor shown in Table 1301.6.6(2) if *(AH) - (EBH)* is negative.

**Note:** Where mixed occupancies are separated and individually evaluated as indicated in Section 1301.6, the values *AH*, *AS*, *EBH* and *EBS* shall be based on the height of the occupancy being evaluated.

**G-1301.6.2 Building area.** The value for building area shall be determined by the formula in Section 1301.6.2.2. Section 506 of the *International Building Code* and the formula in Section 1301.6.2.1 shall be used to determine the allowable area of the building. Enter the area value and its sign (positive or negative) in Table 1301.7 under Safety Parameter 1301.6.2, Building Area, for fire safety, means of egress and general safety. In determining the area value, the maximum permitted positive value for area is 50 percent of the fire safety score as listed in Table 1301.8, Mandatory Safety Scores. Group I-2 occupancies shall be scored zero.

**G-1301.6.2.1 Allowable area formula.** The following formula shall be used in computing allowable area:

$$Aa = At + (NS \times If) \quad \text{(Equation 13-3)}$$

where:

*Aa* = Allowable building area per story (square feet).

*At* = Tabular allowable area factor (NS, S1, S13R, or SM value, as applicable) in accordance with Table 506.2 of the *International Building Code*.

*NS* = Tabular allowable area factor in accordance with Table 506.2 of the *International Building Code* for a non-sprinklered building (regardless of whether the building is sprinklered).

*If* = Area factor increase due to frontage as calculated in accordance with Section 506.3 of the *International Building Code*.

**G-1301.6.2.2 Area formula.** The following formulas shall be used in computing the area value. Equation 13-4 shall be used for a single occupancy buildings and Equation 13-5 shall be used for multiple occupancy buildings. Determine the area value for each occupancy floor area on a floor-by-floor basis. For multiple occupancy, buildings with the minimum area value of the set of values obtained for the particular occupancy shall be used as the area value for that occupancy.

For single occupancy buildings:

Area value  $i = (\text{Allowable area} - \text{Actual area})/1200$  square feet **(Equation 13-4)**

For multiple occupancy buildings:

$$\text{Area value } i = \frac{\text{Allowable area } i}{1200 \text{ square feet}} \left[ 1 - \left( \frac{\text{Actual area } i}{\text{Allowable area } i} + \dots + \frac{\text{Actual area } n}{\text{Allowable area } n} \right) \right]$$

**(Equation 13-5)**

where:

$i$  = Value for an individual separated occupancy on a floor.

$n$  = Number of separated occupancies on a floor.

**G-1301.6.3 Compartmentation.** Evaluate the compartments created by fire barriers or horizontal assemblies which comply with Sections 1301.6.3.2 and 1301.6.3.3 and which are exclusive of the wall elements considered under Sections 1301.6.4 and 1301.6.5. Conforming compartments shall be figured as the net area and do not include shafts, chases, stairways, walls, or columns. Using Table 1301.6.3, determine the appropriate compartmentation value (CV) and enter that value into Table 1301.7 under Safety Parameter 1301.6.3, Compartmentation, for fire safety, means of egress and general safety.

**TABLE 1301.6.3  
COMPARTMENTATION VALUES**

OCCUPANCY	CATEGORIES <sup>a</sup>				
	a	b	c	d	e
A-1, A-3	0	6	10	14	18
A-2	0	4	10	14	18
A-4, B, E, S-2	0	5	10	15	20
F, M, R, S-1	0	4	10	16	22
I-2	0	2	8	10	14

a. For compartment sizes between categories, the compartmentation value shall be obtained by linear interpolation.

**G-1301.6.3.1 Categories.** The categories for compartment separations are:

1. Category a—Compartment size of 15,000 square feet (1394 m<sup>2</sup>) or more.
2. Category b—Maximum compartment size of 10,000 square feet (929 m<sup>2</sup>).
3. Category c—Maximum compartment size of 7,500 square feet (697 m<sup>2</sup>).
4. Category d—Maximum compartment size of 5,000 square feet (464 m<sup>2</sup>).
5. Category e—Maximum compartment size of 2,500 square feet (232 m<sup>2</sup>).

**G-1301.6.3.2 Wall construction.** A wall used to create separate compartments shall be a fire barrier conforming to Section 707 of the *International Building Code* with a fire-resistance rating of not less than 2 hours. Where the building is not divided into more than one compartment, the compartment size shall be taken as the total floor area on all floors. Where there is more than one compartment within a story, each compartmented area on such story shall be provided with a horizontal exit conforming to Section 1026 of the *International Building Code*. The fire door



serving as the horizontal exit between compartments shall be so installed, fitted and gasketed that such fire door will provide a substantial barrier to the passage of smoke.

**G-1301.6.3.3 Floor/ceiling construction.** A floor/ceiling assembly used to create compartments shall conform to Section 711 of the *International Building Code* and shall have a fire-resistance rating of not less than 2 hours.

**G-1301.6.4 Tenant and dwelling unit separations.** Evaluate the fire-resistance rating of floors and walls separating tenants, including dwelling units, and not evaluated under Sections 1301.6.3 and 1301.6.5. Group I-2 occupancies shall evaluate the rating of the separations between care recipient sleeping rooms. Under the categories and occupancies in Table 1301.6.4, determine the appropriate value and enter that value in Table 1301.7 under Safety Parameter 1301.6.4, Tenant and Dwelling Unit Separation, for fire safety, means of egress and general safety. The value shall be zero for single tenant buildings and buildings without dwelling units.

**TABLE 1301.6.4  
SEPARATION VALUES**

OCCUPANCY	CATEGORIES				
	a	b	c	d	e
A-1	0	0	0	0	1
A-2	-5	-3	0	1	3
R	-4	-2	0	2	4
A-3, A-4, B, E, F, M, S-1	-4	-3	0	2	4
I-2	0	1	2	3	4
S-2	-5	-2	0	2	4

**G-1301.6.4.1 Categories.** The categories for tenant and dwelling unit separations are:

1. Category a—No fire partitions; incomplete fire partitions; no doors; doors not self-closing or automatic-closing.
2. Category b—Fire partitions or floor assemblies with less than 1-hour fire-resistance ratings or not constructed in accordance with Section 708 or 711 of the *International Building Code*, respectively.
3. Category c—Fire partitions with 1-hour or greater fire-resistance ratings constructed in accordance with Section 708 of the *International Building Code* and floor assemblies with 1-hour but less than 2-hour fire-resistance ratings constructed in accordance with Section 711 of the *International Building Code* or with only one tenant within the floor area.
4. Category d—Fire barriers with 1-hour but less than 2-hour fire-resistance ratings constructed in accordance with Section 707 of the *International Building Code* and floor assemblies with 2-hour or greater fire-resistance ratings constructed in accordance with Section 711 of the *International Building Code*.
5. Category e—Fire barriers and floor assemblies with 2-hour or greater fire-resistance ratings and constructed in accordance with Sections 707 and 711 of the *International Building Code*, respectively.

**G-1301.6.5 Corridor walls.** Evaluate the fire-resistance rating and degree of completeness of walls which create corridors serving the floor and that are constructed in accordance with Section 1020 of the *International Building Code*. This evaluation shall not include the wall elements

considered under Sections 1301.6.3 and 1301.6.4. Under the categories and groups in Table 1301.6.5, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.5, Corridor Walls, for fire safety, means of egress and general safety.

**TABLE 1301.6.5  
CORRIDOR WALL VALUES**

OCCUPANCY	CATEGORIES			
	a	b	c <sup>a</sup>	d <sup>a</sup>
A-1	-10	-4	0	2
A-2	-30	-12	0	2
A-3, F, M, R, S-1	-7	-3	0	2
A-4, B, E, S-2	-5	-2	0	5
I-2	-10	0	1	2

a. Corridors not providing at least one-half the exit access travel distance for all occupants on a floor shall use Category b.

**G-1301.6.5.1 Categories.** The categories for corridor walls are:

1. Category a—No fire partitions; incomplete fire partitions; no doors; or doors not self-closing.
2. Category b—Less than 1-hour fire-resistance rating or not constructed in accordance with Section 708.4 of the *International Building Code*.
3. Category c—1-hour to less than 2-hour fire resistance rating, with doors conforming to Section 716 of the *International Building Code* or corridors as permitted by Section 1020 of the *International Building Code* to be without a fire-resistance rating.
4. Category d—2-hour or greater fire-resistance rating, with doors conforming to Section 716 of the *International Building Code*.

**G-1301.6.6 Vertical openings.** Evaluate the fire-resistance rating of interior exit stairways or ramps, hoistways, escalator openings and other shaft enclosures within the building, and openings between two or more floors. Table 1301.6.6(1) contains the appropriate protection values. Multiply that value by the construction-type factor found in Table 1301.6.6(2). Enter the vertical opening value and its sign (positive or negative) in Table 1301.7 under Safety Parameter 1301.6.6, Vertical Openings, for fire safety, means of egress and general safety. If the structure is a one-story building or if all the unenclosed vertical openings within the building conform to the requirements of Section 712 of the *International Building Code*, enter a value of 2. The maximum positive value for this requirement (VO) shall be 2.

**TABLE 1301.6.6(1)  
VERTICAL OPENING PROTECTION VALUE**

PROTECTION	VALUE
None (unprotected opening)	-2 times number of floors connected
Less than 1 hour	-1 times number of floors connected
1 to less than 2 hours	1
2 hours or more	2

**TABLE 1301.6.6(2)  
CONSTRUCTION-TYPE FACTOR**

FACTOR	TYPE OF CONSTRUCTION									
	IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB	
	1.2	1.5	2.2	3.5	2.5	3.5	2.3	3.3	7	

**G-1301.6.6.1 Vertical opening formula.** The following formula shall be used in computing vertical opening value.

$$VO = PV \times CF \quad \text{(Equation 13-6)}$$

where:

*VO* = Vertical opening value. The calculated value shall not be greater than positive 2.0.

*PV* = Protection value from Table 1301.6.6(1).

*CF* = Construction-type factor from Table 1301.6.6(2).

**G-1301.6.7 HVAC systems.** Evaluate the ability of the HVAC system to resist the movement of smoke and fire beyond the point of origin. Under the categories in Section 1301.6.7.1, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.7, HVAC Systems, for fire safety, means of egress and general safety. *Facilities* in Group I-2 occupancies meeting Category a, b or c shall be considered to fail the evaluation.

**G-1301.6.7.1 Categories.** The categories for HVAC systems are:

1. Category a—Plenums not in accordance with Section 602 of the *International Mechanical Code*. -10 points.
2. Category b—Air movement in egress elements not in accordance with Section 1020.6 of the *International Building Code*. -5 points.
3. Category c—Both Categories a and b are applicable. -15 points.
4. Category d—Compliance of the HVAC system with Section 1020.6 of the *International Building Code* and Section 602 of the *International Mechanical Code*. 0 points.
5. Category e—Systems serving one story; or a central boiler/chiller system without ductwork connecting two or more stories or where systems have no ductwork. +5 points.

**G-1301.6.8 Automatic fire detection.** Evaluate the smoke detection capability based on the location and operation of automatic fire detectors in accordance with the *International Mechanical Code* and Section 907 of the *International Building Code*. Under the categories and

occupancies in Table 1301.6.8, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.8, Automatic Fire Detection, for fire safety, means of egress and general safety. *Facilities* in Group I-2 occupancies meeting Category a, b or c shall be considered to fail the evaluation.

**TABLE 1301.6.8  
AUTOMATIC FIRE DETECTION VALUES**

OCCUPANCY	CATEGORIES					
	a	b	c	d	e	f
A-1, A-3, F, M, R, S-1	-10	-5	0	2	6	NA
A-2	-25	-5	0	5	9	NA
A-4, B, E, S-2	-4	-2	0	4	8	NA
I-2	NP	NP	NP	4	5	2

NA = Not Applicable.

NP = Not Permitted.

**G-1301.6.8.1 Categories.** The categories for automatic fire detection are:

1. Category a—None.
2. Category b—Existing smoke detectors in HVAC systems and maintained in accordance with the *International Fire Code*.
3. Category c—Smoke detectors in HVAC systems. The detectors are installed in accordance with the requirements for new buildings in the *International Mechanical Code*.
4. Category d—Smoke detectors throughout all floor areas other than individual sleeping units, tenant spaces and dwelling units.
5. Category e—Smoke detectors installed throughout the floor area.
6. Category f—Smoke detectors in corridors only.

**G-1301.6.9 Fire alarm systems.** Evaluate the capability of the fire alarm system in accordance with Section 907 of the *International Building Code*. Under the categories and occupancies in Table 1301.6.9, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.9, Fire Alarm System, for fire safety, means of egress and general safety.

**TABLE 1301.6.9  
FIRE ALARM SYSTEM VALUES**

OCCUPANCY	CATEGORIES			
	a	b <sup>a</sup>	c	d
A-1, A-2, A-3, A-4, B, E, R	-10	-5	0	5
F, M, S	0	5	10	15
I-2	-4	1	2	5

a. For buildings equipped throughout with an automatic sprinkler system, add 2 points for activation by a sprinkler water-flow device.

**G-1301.6.9.1 Categories.** The categories for fire alarm systems are:

1. Category a—None.

2. Category b—Fire alarm system with manual fire alarm boxes in accordance with Section 907.4 of the *International Building Code* and alarm notification appliances in accordance with Section 907.5.2 of the *International Building Code*.
3. Category c—Fire alarm system in accordance with Section 907 of the *International Building Code*.
4. Category d—Category c plus a required emergency voice/alarm communications system and a fire command station that conforms to Section 911 of the *International Building Code* and contains the emergency voice/alarm communications system controls, fire department communication system controls, and any other controls specified in Section 911 of the *International Building Code* where those systems are provided.

**G-1301.6.10 Smoke control.** Evaluate the ability of a natural or mechanical venting, exhaust, or pressurization system to control the movement of smoke from a fire. Under the categories and occupancies in Table 1301.6.10, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.10, Smoke Control, for means of egress and general safety.

**TABLE 1301.6.10  
SMOKE CONTROL VALUES**

OCCUPANCY	CATEGORIES					
	a	b	c	d	e	f
A-1, A-2, A-3	0	1	2	3	6	6
A-4, E	0	0	0	1	3	5
B, M, R	0	2 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	4 <sup>a</sup>
F, S	0	2 <sup>a</sup>	2 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>
I-2	-4	0	0	0	3	0

a. This value shall be 0 if compliance with Category d or e in Section 1301.6.8.1 has not been obtained.

**G-1301.6.10.1 Categories.** The categories for smoke control are:

1. Category a—None.
2. Category b—The building is equipped throughout with an automatic sprinkler system. Openings are provided in exterior walls at the rate of 20 square feet (1.86 m<sup>2</sup>) per 50 linear feet (15 240 mm) of exterior wall in each story and distributed around the building perimeter at intervals not exceeding 50 feet (15 240 mm). Such openings shall be readily openable from the inside without a key or separate tool and shall be provided with ready access thereto. In lieu of operable openings, clearly and permanently marked tempered glass panels shall be used.
3. Category c—One enclosed exit stairway, with ready access thereto, from each occupied floor of the building. The stairway has operable exterior windows, and the building has openings in accordance with Category b.
4. Category d—One smokeproof enclosure and the building has openings in accordance with Category b.
5. Category e—The building is equipped throughout with an automatic sprinkler system. Each floor area is provided with a mechanical air-handling system designed to accomplish smoke containment. Return and exhaust air shall be moved directly to the outside without recirculation to other floor areas of the building under fire conditions. The system shall exhaust not less than

six air changes per hour from the floor area. Supply air by mechanical means to the floor area is not required. Containment of smoke shall be considered as confining smoke to the floor area involved without migration to other floor areas. Any other tested and *approved* design that will adequately accomplish smoke containment is permitted.

6. Category f—Each stairway shall be one of the following: a smokeproof enclosure in accordance with Section 1023.12 of the *International Building Code*; pressurized in accordance with Section 909.20.5 of the *International Building Code*; or shall have operable exterior windows.

**G-1301.6.11 Means of egress capacity and number.** Evaluate the means of egress capacity and the number of exits available to the building occupants. In applying this section, the means of egress are required to conform to the following sections of the *International Building Code*: 1003.7, 1004, 1005, 1006, 1007, 1016.2, 1026.1, 1028.3, 1028.5, 1030.2, 1030.3, 1030.4 and 1031. The number of exits credited is the number that is available to each occupant of the area being evaluated. Existing fire escapes shall be accepted as a component in the means of egress when conforming to Section 504. Under the categories and occupancies in Table 1301.6.11, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.11, Means of Egress Capacity, for means of egress and general safety.

**TABLE 1301.6.11  
MEANS OF EGRESS VALUES**

OCCUPANCY	CATEGORIES				
	a <sup>a</sup>	b	c	d	e
A-1, A-2, A-3, A-4, E, I-2	-10	0	2	8	10
M	-3	0	1	2	4
B, F, S	-1	0	0	0	0
R	-3	0	0	0	0

a. The values indicated are for buildings six stories or less in height. For buildings over six stories above grade plane, add an additional -10 points.

**G-1301.6.11.1 Categories.** The categories for means-of-egress capacity and number of exits are:

1. Category a—Compliance with the minimum required means-of-egress capacity or number of exits is achieved through the use of a fire escape in accordance with Section 405.
2. Category b—Capacity of the means of egress complies with Section 1005 of the *International Building Code*, and the number of exits complies with the minimum number required by Section 1006 of the *International Building Code*.
3. Category c—Capacity of the means of egress is equal to or exceeds 125 percent of the required means-of-egress capacity, the means of egress complies with the minimum required width dimensions specified in the *International Building Code*, and the number of exits complies with the minimum number required by Section 1006 of the *International Building Code*.
4. Category d—The number of exits provided exceeds the number of exits required by Section 1006 of the *International Building Code*. Exits shall be located a distance apart from each other equal to not less than that specified in Section 1007 of the *International Building Code*.
5. Category e—The area being evaluated meets both Categories c and d.

**G-1301.6.12 Dead ends.** In spaces required to be served by more than one means of egress, evaluate the length of the exit access travel path in which the building occupants are confined to a single path of travel. Under the categories and occupancies in Table 1301.6.12, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.12, Dead Ends, for means of egress and general safety.

**TABLE 1301.6.12  
DEAD-END VALUES**

OCCUPANCY	CATEGORIES <sup>a</sup>			
	a	b	c	d
A-1, A-3, A-4, B, F, M, R, S	-2	0	2	-4
A-2, E	-2	0	2	-4
I-2	-2	0	2	-6

a. For dead-end distances between categories, the dead-end value shall be obtained by linear interpolation.

**G-1301.6.12.1 Categories.** The categories for dead ends are:

1. Category a—Dead end of 35 feet (10,670 mm) in non-sprinklered buildings or 70 feet (21,340 mm) in sprinklered buildings.
2. Category b—Dead end of 20 feet (6096 mm); or 50 feet (15 240 mm) in Group B in accordance with Section 1020.5, Exception 2, of the *International Building Code*.
3. Category c—No dead ends; or ratio of length to width (l/w) is less than 2.5:1.
4. Category d—Dead ends exceeding Category a.

**G-1301.6.13 Maximum exit access travel distance to an exit.** Evaluate the length of exit access travel to an *approved* exit. Determine the appropriate points in accordance with the following equation and enter that value into Table 1301.7 under Safety Parameter 1301.6.13, Maximum Exit Access Travel Distance for means of egress and general safety. The maximum allowable exit access travel distance shall be determined in accordance with Section 1017.1 of the *International Building Code*.

$$\text{Points} = 20 \times \frac{\text{Maximum allowable travel distance} - \text{Maximum actual travel distance}}{\text{Maximum allowable travel distance}}$$

(Equation 13-7)

**G-1301.6.14 Elevator control.** Evaluate the passenger elevator equipment and controls that are available to the fire department to reach all occupied floors. Emergency recall and in-car operation of elevators shall be provided in accordance with the *International Fire Code*. Under the categories and occupancies in Table 1301.6.14, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.14, Elevator Control, for fire safety, means of egress and general safety. The values shall be zero for a single-story building.

**TABLE 1301.6.14  
ELEVATOR CONTROL VALUES**

ELEVATOR TRAVEL	CATEGORIES			
	a	b	c	d
Less than 25 feet of travel above or below the primary level of elevator access for emergency fire-fighting or rescue personnel	-2	0	0	+2
Travel of 25 feet or more above or below the primary level of elevator access for emergency fire-fighting or rescue personnel	-4	NP	0	+4

For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

**G-1301.6.14.1 Categories.** The categories for elevator controls are:

1. Category a—No elevator.
2. Category b—Any elevator without Phase I emergency recall operation and Phase II emergency in-car operation.
3. Category c—All elevators with Phase I emergency recall operation and Phase II emergency in-car operation as required by the *International Fire Code*.
4. Category d—All meet Category c; or Category b where permitted to be without Phase I emergency recall operation and Phase II emergency in-car operation; and at least one elevator that complies with new construction requirements serves all occupied floors.

**G-1301.6.15 Means of egress emergency lighting.** Evaluate the presence of and reliability of means of egress emergency lighting. Under the categories and occupancies in Table 1301.6.15, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.15, Means of Egress Emergency Lighting, for means of egress and general safety.

**TABLE 1301.6.15  
MEANS OF EGRESS EMERGENCY LIGHTING VALUES**

NUMBER OF EXITS REQUIRED BY SECTION 1006 OF THE INTERNATIONAL BUILDING CODE	CATEGORIES		
	a	b	c
Two or more exits	NP	0	4
Minimum of one exit	0	1	1

NP = Not Permitted.

**G-1301.6.15.1 Categories.** The categories for means of egress emergency lighting are:

1. Category a—Means-of-egress lighting and exit signs not provided with emergency power in accordance with Section 2702 of the *International Building Code*.
2. Category b—Means of egress lighting and exit signs provided with emergency power in accordance with Section 2702 of the *International Building Code*.
3. Category c—Emergency power provided to means of egress lighting and exit signs, which provides protection in the event of power failure to the site or building.



**G-1301.6.16 Mixed occupancies.** Where a building has two or more occupancies that are not in the same occupancy classification, the separation between the mixed occupancies shall be evaluated in accordance with this section. Where there is no separation between the mixed occupancies or the separation between mixed occupancies does not qualify for any of the categories indicated in Section 1301.6.16.1, the building shall be evaluated as indicated in Section 1301.6, and the value for mixed occupancies shall be zero. Under the categories and occupancies in Table 1301.6.16, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter

**G-1301.6.16, Mixed Occupancies,** for fire safety and general safety. For buildings without mixed occupancies, the value shall be zero. *Facilities* in Group I-2 occupancies meeting Category a shall be considered to fail the evaluation.

**TABLE 1301.6.16  
MIXED OCCUPANCY VALUES<sup>a</sup>**

OCCUPANCY	CATEGORIES		
	a	b	c
A-1, A-2, R	-10	0	10
A-3, A-4, B, E, F, M, S	-5	0	5
I-2	NP	0	5

NP = Not Permitted.

a. For fire-resistance ratings between categories, the value shall be obtained by linear interpolation.

**G-1301.6.16.1 Categories.** The categories for mixed occupancies are:

1. Category a—Occupancies separated by minimum 1-hour fire barriers or minimum 1-hour horizontal assemblies, or both.
2. Category b—Separations between occupancies in accordance with Section 508.4 of the *International Building Code*.
3. Category c—Separations between occupancies having a fire-resistance rating of not less than twice that required by Section 508.4 of the *International Building Code*.

**G-1301.6.17 Automatic sprinklers.** Evaluate the ability to suppress or control a fire based on the installation of an automatic sprinkler system in accordance with Section 903.3.1 of the *International Building Code*. “Required sprinklers” shall be based on the requirements of the *International Building Code*. Under the categories and occupancies in Table 1301.6.17, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.17, Automatic Sprinklers, for fire safety, means of egress divided by 2, and general safety. High-rise buildings defined in Chapter 2 of the *International Building Code* that undergo a *change of occupancy* to Group R shall be equipped throughout with an automatic sprinkler system in accordance with Section 403 of the *International Building Code* and Chapter 9 of the *International Building Code*. *Facilities* in Group I-2 occupancies meeting Category a, b, c, or f shall be considered to fail the evaluation.

**TABLE 1301.6.17  
SPRINKLER SYSTEM VALUES**

OCCUPANCY	CATEGORIES					
	a <sup>a</sup>	b <sup>a</sup>	c	d	e	f
A-1, A-3, F, M, R, S-1	-6	-3	0	2	4	6
A-2	-4	-2	0	1	2	4
A-4, B, E, S-2	-12	-6	0	3	6	12
I-2	NP	NP	NP	8	10	NP

NP = Not Permitted.

a. These options cannot be taken if Category a in Section 1301.6.18 is used.

**G-1301.6.17.1 Categories.** The categories for automatic sprinkler system protection are:

1. Category a—An *approved* automatic sprinkler system is required throughout; an *approved* automatic sprinkler system is not provided.
2. Category b—An *approved* automatic sprinkler system is required in a portion of a building; an *approved* automatic sprinkler system is not provided; the sprinkler system design is not adequate for the hazard protected in accordance with Chapter 9 of the *International Building Code*.
3. Category c—An *approved* automatic sprinkler system is not required; none are provided.
4. Category d—An *approved* automatic sprinkler system is required in a portion of a building; an *approved* automatic sprinkler system is provided in a portion of a building in accordance with Chapter 9 of the *International Building Code*.
5. Category e—An *approved* automatic sprinkler system is required throughout; an *approved* automatic sprinkler system is provided throughout in accordance with Chapter 9 of the *International Building Code*.
6. Category f—An *approved* automatic sprinkler system is not required throughout; an *approved* automatic sprinkler system is provided throughout in accordance with Chapter 9 of the *International Building Code*.

**G-1301.6.18 Standpipes.** Evaluate the ability to initiate attack on a fire by making a supply of water readily available through the installation of standpipes in accordance with Section 905 of the *International Building Code*. “Required Standpipes” shall be based on the requirements of the *International Building Code*. Under the categories and occupancies in Table 1301.6.18, determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.18, Standpipes, for fire safety, means of egress and general safety.

**TABLE 1301.6.18  
STANDPIPE SYSTEM VALUES**

OCCUPANCY	CATEGORIES			
	a <sup>a</sup>	b	c	d
A-1, A-3, F, M, R, S-1	-6	0	4	6
A-2	-4	0	2	4
A-4, B, E, S-2	-12	0	6	12
I-2	-2	0	1	2

a. This option cannot be taken if Category a or Category b in Section 1301.6.17 is used.

**G-1301.6.18.1 Standpipe categories.** The categories for standpipe systems are:

1. Category a—Standpipes are required; standpipe is not provided, or the standpipe system design is not in compliance with Section 905.3 of the *International Building Code*.
2. Category b—Standpipes are not required; none are provided.
3. Category c—Standpipes are required; standpipes are provided in accordance with Section 905 of the *International Building Code*.
4. Category d—Standpipes are not required; standpipes are provided in accordance with Section 905 of the *International Building Code*.

**G-1301.6.19 Incidental uses.** Evaluate the protection of incidental uses in accordance with Section 509.4.2 of the *International Building Code*. Do not include those where this code requires automatic sprinkler systems throughout the building including covered and open mall buildings, high-rise buildings, public garages, and unlimited area buildings. Assign the lowest score from Table 1301.6.19 for the building or floor area being evaluated and enter that value into Table 1301.7 under Safety Parameter 1301.6.19, Incidental Uses, for fire safety, means of egress and general safety. If there are no specific occupancy areas in the building or floor area being evaluated, the value shall be zero.

**TABLE 1301.6.19  
INCIDENTAL USE AREA VALUES**

PROTECTION REQUIRED BY TABLE 509.1 OF THE <i>INTERNATIONAL BUILDING CODE</i>	PROTECTION PROVIDED						
	None	1 hour	AS	AS with CRS	1 hour and AS	2 hours	2 hours and AS
2 hours and AS	-4	-3	-2	-2	-1	-2	0
2 hours, or 1 hour and AS	-3	-2	-1	-1	0	0	0
1 hour and AS	-3	-2	-1	-1	0	-1	0
1 hour	-1	0	-1	-1	0	0	0
1 hour, or AS with CRS	-1	0	-1	-1	0	0	0
AS with CRS	-1	-1	-1	-1	0	-1	0
1 hour or AS	-1	0	0	0	0	0	0

AS = Automatic Sprinkler System.

CRS = Construction capable of resisting the passage of smoke (see Section 509.4.2 of the *International Building Code*).

**G-1301.6.20 Smoke compartmentation.** Evaluate the smoke compartments for compliance with Section 407.5 of the *International Building Code*. Under the categories and occupancies in Table 1301.6.20, determine the appropriate smoke compartmentation value (SCV) and enter that value into Table 1301.7 under Safety Parameter 1301.6.20, Smoke Compartmentation, for fire safety, means of egress and general safety. *Facilities* in Group I-2 occupancies meeting Category b or c shall be considered to fail the evaluation.

**TABLE 1301.6.20  
SMOKE COMPARTMENTATION VALUES**

OCCUPANCY	CATEGORIES <sup>a</sup>		
	a	b	c
A, B, E, F, M, R and S	0	0	0
I-2	0	-10	NP

NP = Not Permitted.

a. For areas between categories, the smoke compartmentation value shall be obtained by linear interpolation.

**G-1301.6.20.1 Categories.** Categories for smoke compartment size are:

1. Category a—Smoke compartment complies with Section 407.5 of the *International Building Code*.
2. Category b—Smoke compartment are provided but do not comply with Section 407.5 of the *International Building Code*.
3. Category c—Smoke compartments are not provided.

**G-1301.6.21 Care recipient ability, concentration, smoke compartment location and ratio to attendant.** In I-2 occupancies, the ability of care recipients, their concentration and ratio to attendants shall be evaluated and applied in accordance with this section. Evaluate each smoke

compartment using the categories in Sections 1301.6.21.1, 1301.6.21.2 and 1301.6.21.3 and enter the value in Table 1301.7. To determine the safety factor, multiply the three values together; if the product is less than 6, compliance has failed.

**G-1301.6.21.1 Care recipient ability for self-preservation.** Evaluate the ability of the care recipients for self-preservation in each smoke compartment in an emergency. Under the categories and occupancies in Table 1301.6.21.1, determine the appropriate value and enter that value in Table 1301.7 under Safety Parameter 1301.6.21.1, Care Recipient Ability for Self-preservation, for means of egress and general safety.

**TABLE 1301.6.21.1  
CARE RECIPIENT ABILITY VALUES**

OCCUPANCY	CATEGORIES		
	a	b	c
I-2	3	2	1

**G-1301.6.21.1.1 Categories.** The categories for care recipient ability for self-preservation are:

1. Category a—(mobile) Care recipients are capable of self-preservation without assistance.
2. Category b—(not mobile) Care recipients rely on assistance for evacuation or relocation.
3. Category c—(not movable) Care recipients cannot be evacuated or relocated.

**G-1301.6.21.2 Care recipient concentration.** Evaluate the concentration of care recipients in each smoke compartment under Section 1301.6.21.2. Under the categories and occupancies in Table 1301.6.21.2 determine the appropriate value and enter that value in Table 1301.7 under Safety Parameter 1301.6.21.2, Care Recipient Concentration, for means of egress and general safety.

**TABLE 1301.6.21.2  
CARE RECIPIENT CONCENTRATION VALUES**

OCCUPANCY	CATEGORIES		
	a	b	c
I-2	3	2	1

**G-1301.6.21.2.1 Categories:** The categories for care recipient concentration are:

1. Category a—smoke compartment has 1 to 10 care recipients.
2. Category b—smoke compartment has more than 10 to 40 care recipients.
3. Category c—smoke compartment has more than 40 care recipients.

**G-1301.6.21.3 Attendant-to-care recipients ratio.** Evaluate the attendant-to-care recipients ratio for each compartment under Section 1301.6.21.3. Under the categories and occupancies in Table 1301.6.21.3 determine the appropriate value and enter that value in Table 1301.7 under Safety Parameter 1301.6.21.3, Attendant-to-Care Recipients Ratio, for means of egress and general safety.

**TABLE 1301.6.21.3  
ATTENDANT-TO-CARE RECIPIENTS RATIO VALUES**

OCCUPANCY	CATEGORIES		
	a	b	c
I-2	3	2	1

**G-1301.6.21.3.1 Categories.** The categories for attendant-to-care recipient concentrations are:

1. Category a—attendant-to-care recipients concentration is 1:5 or no care recipients.
2. Category b—attendant-to-care recipients concentration is 1:6 to 1:10.
3. Category c—attendant-to-care recipients concentration is greater than 1:10.

**G-1301.7 Building score.** After determining the appropriate data from Section 1301.6, enter those data in Table 1301.7 and total the building score.

**G-1301.8 Safety scores.** The values in Table 1301.8 are the required mandatory safety scores for the evaluation process listed in Section 1301.6.

**TABLE 1301.8  
MANDATORY SAFETY SCORES<sup>a</sup>**

OCCUPANCY	FIRE SAFETY(MFS)	MEANS OF EGRESS (MME)	GENERAL SAFETY (MGS)
A-1	20	31	31
A-2	21	32	32
A-3	22	33	33
A-4, E	29	40	40
B	30	40	40
F	24	34	34
I-2	19	34	34
M	23	40	40
R	21	38	38
S-1	19	29	29
S-2	29	39	39

- a. MFS = Mandatory Fire Safety.  
MME = Mandatory Means of Egress.  
MGS = Mandatory General Safety.

**TABLE 1301.7 - SUMMARY SHEET – BUILDING CODE**

Existing occupancy:		Proposed occupancy:	
Year building was constructed:		Number of stories: _____ Height in feet:	
Type of construction:		Area per floor:	
Percentage of open perimeter increase: _____ %			
Completely suppressed:	Yes _____ No	Corridor wall rating:	
		Type:	
Compartmentation:	Yes _____ No	Required door closers:	Yes _____ No
Fire-resistance rating of vertical opening enclosures:			
Type of HVAC system: _____, serving number of floors:			
Automatic fire detection:	Yes _____ No	Type and location:	
Fire alarm system:	Yes _____ No	Type:	
Smoke control:	Yes _____ No	Type:	
Adequate exit routes:	Yes _____ No	Dead ends:	Yes _____ No
Maximum exit access travel distance:		Elevator controls:	Yes _____ No
Means of egress emergency lighting:	Yes _____ No	Mixed occupancies:	Yes _____ No
Standpipes:	Yes _____ No	Care recipients ability for self-preservation:	
Incidental use:	Yes _____ No	Care recipients concentration:	
Smoke compartmentation less than 22,500 sq. feet (2092 m <sup>2</sup> ):	Yes _____ No	Attendant-to-care recipients ratio:	
<b>SAFETY PARAMETERS</b>		<b>FIRE SAFETY (FS)</b>	
<b>SAFETY PARAMETERS</b>		<b>MEANS OF EGRESS (ME)</b>	
<b>SAFETY PARAMETERS</b>		<b>GENERAL SAFETY (GS)</b>	
1301.6.1 Building height			
1301.6.2 Building area			
1301.6.3 Compartmentation			
1301.6.4 Tenant and dwelling unit separations			
1301.6.5 Corridor walls			
1301.6.6 Vertical openings			
1301.6.7 HVAC systems			
1301.6.8 Automatic fire detection			
1301.6.9 Fire alarm system			
1301.6.10 Smoke control	* * * *		
1301.6.11 Means of egress	* * * *		
1301.6.12 Dead ends	* * * *		
1301.6.13 Maximum exit access travel distance	* * * *		
1301.6.14 Elevator control			
1301.6.15 Means of egress emergency lighting	* * * *		
1301.6.16 Mixed occupancies		* * * *	
1301.6.17 Automatic sprinklers		÷ 2 =	
1301.6.18 Standpipes			
1301.6.19 Incidental use			
1301.6.20 Smoke compartmentation			
1301.6.21.1 Care recipients ability for self-preservation <sup>a</sup>	* * * *		
1301.6.21.2 Care recipients concentration <sup>a</sup>	* * * *		
1301.6.21.3 Attendant-to-care recipients ratio <sup>a</sup>	* * * *		
<b>Building score—total value</b>			

\* \* \* \*No applicable value to be inserted.

a. Only applicable to Group I-2 occupancies.

**G-1301.9 Evaluation of building safety.** The mandatory safety score in Table 1301.8 shall be subtracted from the building score in Table 1301.7 for each category in accordance with the evaluation formulas in Table 1301.9. Where the final score for any category equals zero or more, the building is in compliance with the requirements of this section for that category. Where the final score for any category is less than zero, the building is not in compliance with the requirements of this section.

**G-1301.9.1 Mixed occupancies.** For mixed occupancies, the following provisions shall apply:

1. Where the separation between mixed occupancies does not qualify for any category indicated in Section 1301.6.16, the mandatory safety scores for the occupancy with the lowest general safety score in Table 1301.8 shall be utilized (see Section 1301.6).
2. Where the separation between mixed occupancies qualifies for any category indicated in Section 1301.6.16, the mandatory safety scores for each occupancy shall be placed against the evaluation scores for the appropriate occupancy. An evaluation is not required for areas of the building with separated occupancies in accordance with Table 508.4 of the *International Building Code* in which there are no *alterations* or *change of occupancy*.

**TABLE 1301.9  
EVALUATION FORMULAS<sup>a</sup>**

FORMULA	TABLE 1301.7	TABLE 1301.8		SCORE	PASS	FAIL
FS - MFS $\geq$ 0	____(FS) -	____(MFS)	=	____	____	____
ME - MME $\geq$ 0	____(ME) -	____(MME)	=	____	____	____
GS - MGS $\geq$ 0	____(GS) -	____(MGS)	=	____	____	____

- a. FS = Fire Safety.  
 ME = Means of Egress.  
 GS = General Safety.  
 MFS = Mandatory Fire Safety.  
 MME = Mandatory Means of Egress.  
 MGS = Mandatory General Safety.

## CHAPTER 14 RELOCATED OR MOVED BUILDINGS

### SECTION G-1401 GENERAL

**G-1401.1 Scope.** This chapter provides requirements for relocated or moved structures, including *relocatable buildings* as defined in Chapter 2.

**G-1401.1.1 Bleachers, grandstands and folding and telescopic seating.** Relocated or moved bleachers, grandstands and folding and telescopic seating shall comply with ICC 300.

**G-1401.2 Conformance.** The building shall be safe for human occupancy as determined by the *International Fire Code* and the *International Property Maintenance Code*. Any *repair*, *alteration* or *change of occupancy* undertaken within the moved structure shall comply with the requirements of this code applicable to the work being performed. Any field fabricated elements shall comply with the requirements of the *International Building Code* or the *International Residential Code*, as applicable.



## SECTION G-1402 REQUIREMENTS

**G-1402.1 Location on the lot.** The building shall be located on the lot in accordance with the requirements of the *International Building Code* or the *International Residential Code*, as applicable.

**G-1402.2 Foundation.** The foundation system of relocated buildings shall comply with the *International Building Code* or the *International Residential Code*, as applicable.

**G-1402.2.1 Connection to the foundation.** The connection of the relocated building to the foundation shall comply with the *International Building Code* or the *International Residential Code*, as applicable.

**G-1402.3 Wind loads.** Buildings shall comply with *International Building Code* or *International Residential Code* wind provisions, as applicable.

**Exceptions:**

1. Detached one- and two-family dwellings and Group U occupancies where wind loads at the new location are not higher than those at the previous location.
2. Structural elements whose stress is not increased by more than 10 percent.

**G-1402.4 Seismic loads.** Buildings shall comply with *International Building Code* or *International Residential Code* seismic provisions at the new location, as applicable.

**Exceptions:**

1. Structures in Seismic Design Categories A and B and detached one- and two-family dwellings in Seismic Design Categories A, B and C where the seismic loads at the new location are not higher than those at the previous location.
2. Structural elements whose stress is not increased by more than 10 percent.

**G-1402.5 Snow loads.** Structures shall comply with *International Building Code* or *International Residential Code* snow loads, as applicable, where snow loads at the new location are higher than those at the previous location. **Exception:** Structural elements whose stress is not increased by more than 5 percent.

**G-1402.6 Flood hazard areas.** If relocated or moved into a *flood hazard area*, structures shall comply with Section 1612 of the *International Building Code*, or Section R322 of the *International Residential Code*, as applicable.

**G-1402.7 Required inspection and repairs.** The *code official* shall be authorized to inspect, or to require *approved* professionals to inspect at the expense of the owner, the various structural parts of a relocated building to verify that structural components and connections have not sustained structural damage. Any *repairs* required by the *code official* as a result of such inspection shall be made prior to the fin