3404.2 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 and repaired in accordance with the applicable provisions of Sections 3404.2.1 through 3404.2.3.

3404.2.1 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 this code for wind and earthquake loads. Evaluation for earthquake loads shall be required if the substantial structural damage was caused by or related to earthquake effects or if the building is in Seismic Design Category C, D, E, or F.

Wind loads for this evaluation shall be those prescribed in Section 1609. Earthquake loads for this evaluation, if required, shall be permitted to be seventy-five percent of those prescribed in Section 1613. Values of R, Ω_0, and C_d for the existing seismic force-resisting system shall be those specified by this code for an Ordinary system unless it is demonstrated that the existing system will provide performance equivalent to that of an Intermediate or Special system.

3404.2.2 Extent of repair for compliant buildings. If the evaluation establishes compliance of the pre-damage building in accordance with Section 3404.2.1, then repairs shall be permitted that restore the building to its pre-damage state using materials and strengths that existed prior to the damage.

3404.2.3 Extent of repair for noncompliant buildings. If the evaluation does not establish compliance of the pre-damage building in accordance with Section 3404.2.1, then the building shall be rehabilitated to comply with applicable provisions of this code for load combinations, including wind or seismic loads. The wind loads for the repair shall be as 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 as required by the code in effect at the time of original construction or as required by this code, whichever are greater. Earthquake loads for this rehabilitation design shall be those required for the design of the pre-damage building, but not less than seventy-five percent of those prescribed in Section 1613. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of this code for new buildings of similar structure, purpose and location.

3404.3 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 of this code for dead and live loads. Snow loads shall be considered if the substantial structural damage was caused by or related to snow load effects. Existing gravity load-carrying structural elements shall be permitted to be designed for live loads approved prior to the damage. Non-damaged gravity load-carrying components that receive dead, live, or snow loads from rehabilitated components shall also be rehabilitated or shown to have the capacity to carry the design loads of the rehabilitation design. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of this code for new buildings of similar structure, purpose and location.

3404.3.1 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 earthquake effects, then the building shall be evaluated in accordance with Section 3404.2.1 and, if noncompliant, rehabilitated in accordance with Section 3404.2.3.

3404.4 Less than substantial structural damage. For damage less than substantial structural damage, repairs shall be allowed that restore the building to its pre-damage state using materials and strengths that existed prior to the damage. New structural members and connections used for this repair shall comply with the detailing provisions of this code for new buildings of similar structure, purpose and location.

3404.5 Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3, any repair that constitutes substantial improvement of the existing structure, as defined in Section 1612.2, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

(Renumber subsequent sections)

Reason: To provide reasonable requirements for building improvements in the interest of public safety and within the intent of the building code. The proposal does the following:

- Defines Substantial Structural Damage to capture conditions of severe or widespread damage, as opposed to local effects or member distress, and to distinguish the damage requiring structural upgrade from damage to architectural and mechanical components.
- Separates repairs from current Section 3403 for clarity. (This is a nominal editorial revision, as repairs are scarcely mentioned in Section 3403 despite the current title of that section.)
- Creates a new Section 3404 with a logical method for evaluating damage and identifying cases where upgrade is warranted. The logic and language is based on IEBC Section 506.2, with certain editorial clarifications.

Chapter 34 currently requires structural improvements meeting "the code for new structures" in certain cases of additions, alterations, and changes of occupancy. It does not, however, require any improvements in the event of damage due to fire, structural overload, settlement, natural hazard, or any other cause, no matter how extensive or disproportionate the damage. This proposal identifies conditions of damage that should warrant improvements to the structural system for purposes of increasing safety and limiting attrition from the existing building stock.

In doing so, the proposal retains Chapter 34's basic philosophy that triggered structural upgrades should be relatively rare. With this proposal, structural upgrade would be triggered only upon substantial structural damage to the lateral system, and only when evaluation shows that the pre-damage building was sub-standard. "Reduced" earthquake loads, a concept from the IEBC long in use in California and consistent with FEMA standards, are used both for evaluation and any required seismic rehabilitation to recognize that existing buildings should not be expected to perform as well as newer buildings.

Structural upgrade remains *not* required for:

- Architectural damage
- Equipment and other nonstructural damage
- Any structural damage less than "substantial"
- Any structural damage that does not affect the lateral system, except in rare cases of extreme non-conformance.
- Any building adequate for current wind loads and "reduced" seismic loads, even if damage was substantial.

The proposal's language borrows heavily from the 2006 IEBC. The IEBC has been through two full code cycles and is adopted in part or in full by jurisdictions across the country.

Additional explanatory notes:

- The proposed definition of substantial structural damage is from IEBC Chapter 2.
- Proposed Section 3404 mirrors IEBC Section 506.2, with two substantive changes: 1) the addition of snow loads in proposed Section 3404.3 and 2) the limitation on seismic evaluation and upgrade for SDC A and B in proposed Section 3404.2.1.
- Proposed Section 3404.1 clarifies that proposed Section 3404.2 does not limit the code official's discretion with respect to dangerous conditions.
- Proposed Section 3404.2.1 refers to Section 1613 for earthquake loads and limits the selection of design parameters. Section 1613 requires the engineer to identify the seismic force-resisting system of the existing building. In many cases, the existing building will not possess the detailing necessary to qualify for "Special" or even "Intermediate" systems. If the detailing is unknown, design parameters for "Ordinary" systems must be used. The language proposed is based on similar language in IEBC Section 506.1.1.2.
- Wording from IEBC Section 506.1.2 is modified to remove the bright line that the 2006 IEBC uses to distinguish when design parameters for Ordinary systems are needed. Rather than require strict compliance with the "proportioning and detailing requirements" of Intermediate or Special systems, general equivalence, similar to that contemplated by IBC Section 3406.4 is preferable because for many existing buildings there are no applicable provisions to check against. Also, "equivalent performance" preserves some engineering and regulatory discretion appropriate to work with existing buildings.
- Wording from IEBC Section 506.2 is modified by using "gravity load" as opposed to "vertical load" in order to avoid confusion over the term "vertical load-carrying component".
- The flood provision in proposed Section 3404.5 is identical to the existing provision in current Section 3403.1.1.

Note to ICC: NCSEA and SEAOC have separately proposed a broad reorganization of current Section 3403. If Section 3403 is reorganized per that proposal, the revisions proposed here to current Section 3403 will be unnecessary, and the text proposed here as new Section 3404 would be incorporated into proposed Section 3405.

Cost Impact: The code change proposal will not increase the cost of new construction. It might increase the cost of rare but already extensive repairs after one damaging event, but if it does, it will also reduce the cost of repairs in subsequent events.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G207–07/08

3403.1.1 (IEBC [B] 302.1.1), 3410.2.4.1 (IEBC [B] 1301.2.4.1); IEBC 501.4, 506.2.5, 601.3, 1003.5, 1101.4, 1202.6

Proponent: William Easterling, Grand Haven, MI, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC STRUCTURAL AND IEBC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

PART I – IBC STRUCTURAL

Revise as follows:

3403.1.1 (IEBC [B] 302.1.1) Flood hazard areas. For buildings and structures in flood hazard areas ~~established in Section 1612.3 of the *International Building Code*~~, any additions, alterations or repairs ~~that constitute substantial improvement of the existing structure, as defined in Section 1612.2 of the *International Building Code*~~, below the design flood elevation shall comply ~~with the flood design requirements for new construction and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design~~ with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*. Any substantial damage to or substantial improvement of an existing building or structure shall require all aspects of the existing building or structure to be brought into compliance with the requirements of Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.

3410.2.4.1 (IEBC [B] 1301.2.4.1) Flood hazard areas. For existing buildings located in flood hazard areas established in Section 1612.3, if the alterations and repairs constitute substantial improvement of the existing building, the existing building shall be brought into compliance with the requirements for new construction for flood design. Any additions, alterations, and repairs made below the design flood elevation shall comply with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.

PART II – IEBC

Revise as follows:

501.4 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 324 of the *International Residential Code*.

506.2.5 Flood hazard areas. In flood hazard areas, buildings that have sustained substantial damage shall be brought into compliance with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.

601.3 Flood hazard areas. In flood hazard areas, alterations that constitute substantial improvement shall require that the building comply with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.

1003.5 Flood hazard areas. Additions and foundations in flood hazard areas shall comply with the following requirements:

1. For horizontal additions that are structurally interconnected to the existing building:
   1.1. If the addition and all other proposed work, when combined, constitute substantial improvement, the existing building and the addition shall comply with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.
   1.2. If the addition constitutes substantial improvement, the existing building and the addition shall comply with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.
2. For horizontal additions that are not structurally interconnected to the existing building:
   2.1. The addition shall comply with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.
   2.2. If the addition and all other proposed work, when combined, constitute substantial improvement, the existing building and the addition shall comply with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.
3. For vertical additions and all other proposed work that, when combined, constitute substantial improvement, the existing building shall comply with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.
4. For a new, replacement, raised, or extended foundation, if the foundation work and all other proposed work, when combined, constitute substantial improvement, the existing building shall comply with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.

1101.4 Flood hazard areas. In flood hazard areas, if all proposed work, including repairs, work required because of a change of occupancy, and alterations, constitutes substantial improvement, then the existing building shall comply with Section 1612 of the *International Building Code* or Section 324 of the *International Residential Code*.

Exception: If a historic building will continue to be a historic building after the proposed work is completed, then the proposed work is not considered a substantial improvement. For the purposes of this exception, a historic building is:

1. Listed or preliminarily determined to be eligible for listing in the National Register of Historic Places;
2. Determined by the Secretary of the U.S. Department of Interior to contribute to the historical significance of a registered historic district or a district preliminarily determined to qualify as a historic district; or
3. Designated as historic under a state or local historic preservation program that is approved by the Department of Interior.

1202.6 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 324 of the *International Residential Code*.

Reason: The purpose of the proposed code change is to give better direction on where to go depending on the type of structure, being either the *International Building Code* or the *International Residential Code* when dealing with a flood hazard area. This code change proposal also brings the IEBC more inline with the *International Residential Code* by requiring that any new materials installed below the design flood elevation be the same as what is required for a new building. Like with other hazards (snow, wind, etc…) that become known of or better understood after a structure is built, any subsequent repairs and alterations to an existing structure should be afforded same the minimum protections as established for new structures.

Such enforcement will incrementally provide, at least to the repair or alteration undertaken, the already established minimum protection for new structures from the known hazard of floods; which when enforced properly does protect emergency responders from falling through a residential floor that was repaired with 5/8" flood-resistant floor sheathing 16" O.C. in a flood situation as opposed to if no flood-resistant materials were used on the repair. Additionally consistent enforcement of flood-resistant material requirements on repairs and alterations will help reduce repetitive losses and assist in keeping future repair costs from reaching the substantial damage threshold.

The proposed code clarification is also inline with 44CFR60.3.3 – Floodplain Management Criteria for Flood-Prone Areas; which requires a local jurisdiction participating in FEMA's National Flood Insurance Program to "Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall (i) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, (ii) be constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damages, and (iv) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding."

Likewise according to federal law, being 44CFR60.1.d, FEMA encourages jurisdictions to adopt more comprehensive floodplain management regulations such as what *International Residential Code* has already done with plain meaning of Section R102.7.1, Section R301.2.4, and Section R324. Federal law states in part at 44CFR60.1.d that: "Any community may exceed the minimum criteria under this part by adopting more comprehensive flood plain management regulations … Therefore, any flood plain management regulations adopted by a State or a community which are more restrictive than the criteria set forth in this part are encouraged and shall take precedence".

Cost Impact: The code change proposal will increase the cost of construction.

This code change will incrementally increase the first cost of construction; however given the known fact of a flood hazard and the design flood elevation it will only be matter of time before the initial incremental cost will be recognized as a savings.

Analysis: There is an errata to the 2006 IEBC. Section 1301.2.4.1 does not currently exist in the 2006 IEBC and should be a duplicate of section 3410.2.4.1 of the IBC. Additionally, IEBC Section 1301.3.3 should be deleted and is therefore not addressed in this code change. Code change EB34-03/04 added section 3410.2.4.1.

PART I – IBC STRUCTURAL

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IEBC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G208–07/08

3403.1.2 (IEBC [B] 302.1.2) (New)

Proponent: Jerry R. Tepe, FAIA, JRT-AIA Architect, representing the American Institute of Architects

THIS PROPOSAL IS ON THE AGENDA OF THE IBC STRUCTURAL CODE DEVELOPMENT COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THE IBC STRUCTURAL CODE DEVELOPMENT COMMITTEE.

Add new text as follows:

3403.1.2 [IEBC [B] 302.1.2] Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3, any additions, alterations or repairs that do not constitute substantial improvement or substantial damage of the existing structure, as defined in Section 1612.2, are not required to comply with the flood design requirements for new construction.

Reason: Although it is clear in Section 1612 that additions, alterations and/or repairs that do not constitute substantial improvements or restoration of substantial damage are not required to comply with the requirements for new construction as regards flood resistant construction (see attached IBC Committee Interpretation 42-06), the first sentence of 3403.1 is being used to force flood resistant design and construction. The argument goes further stating that 3403.1 confirms this and also requires the balance of the building to be brought into compliance when the scope exceeds the level of substantial improvement as an exception to the last sentence in 3403.1. Adding the proposed subsection will clarify the intent of the code.

SECTION 1612.1
IBC Interpretation No. 42-06
2006 Edition
Issued: 12-08-2006

1612.1 General. Within flood hazard areas as established in Section 1612.3, all new construction of buildings, structures and portions of buildings and structures, including substantial improvements and restoration of substantial damage to buildings and structures, shall be designed and constructed to resist the effects of flood hazards and flood loads. For buildings that are located in more than one flood hazard area, the provisions associated with the most restrictive flood hazard area shall apply.

REFERENCED SECTIONS:

1612.2 Definitions. The following words and terms shall, for the purposes of this section, have the meanings shown herein.
EXISTING CONSTRUCTION. Any buildings and structures for which the "start of construction" commenced before the effective date of the community's first flood plain management code, ordinance o r standard. "Existing construction" is also referred to as "existing structures."
EXISTING STRUCTURE. See "Existing construction."
SUBSTANTIAL IMPROVEMENT. Any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.
2. Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.. Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

1612.3 Establishment of flood hazard areas. To establish flood hazard areas, the governing body shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for [INSERT NAME OF JURISDICTION]," dated [INSERT DATE OF ISSUANCE], as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.

Q: An existing building constructed prior to the effective date established in Section 1612.3 is located within a flood hazard area. Is an addition (to the existing building) that is not defined as a substantial improvement required to comply with the provisions of Section 1612.1 of the *International Building Code* for new construction?

A: No. The provisions in Section 1612.1 apply only to new construction to the extent indicated. As defined in Section 1612.2 of the *International Building Code*, a structure constructed prior to the effective date established in Section 1612.3 is considered an existing structure. Additions (improvements) to an existing building that does not equal or exceed 50 percent of the market value of the existing structure before the improvement is not a substantial improvement and is not required to comply with the provisions of Section 1612.1 for the effects of flood hazards and flood loads.

Cost Impact: Correct enforcement of the code will save costs.

Analysis: The referenced committee interpretation is limited to "existing buildings constructed prior to the effective date established in Section 1612.3", and is not applicable to all existing buildings.

Public Hearing:				
	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G209–07/08

3403.2.3 (IEBC [B] 302.2.3), 3403.2.3.1 (IEBC [B] 302.2.3.1), 3403.2.3.2 (IEBC [B] 302.2.3.2), 3406.4; IEBC 506.1.1.2, 506.1.1.3

Proponent: David Bonowitz, SE, representing the National Council of Structural Engineers Associations Existing Buildings Committee

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC STRUCTURAL AND IEBC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC STRUCTURAL

Revise as follows:

3403.2.3 (IEBC[B] 302.2.3) Seismic. Seismic requirements for additions and~~,~~ alterations ~~or modification or change of occupancy of existing buildings~~ shall be in accordance with this section ~~for the purposes of seismic considerations~~. Values of R, Ω_0, and C_d for the existing seismic force-resisting system shall be those specified by this code for an Ordinary system unless it is demonstrated that the existing system will provide performance equivalent to that of an Intermediate or Special system.

3403.2.3.1 (IEBC[B] 302.2.3.1) Additions to existing buildings. An addition that is structurally independent from an existing structure shall be designed and constructed with the seismic requirements for new structures. An addition that is not structurally independent from an existing structure shall be designed and constructed such that the entire structure conforms to the seismic-force-resistance requirements for new structures unless the following conditions are satisfied:

1. The addition conforms with the requirements for new structures,
2. The addition does not increase the seismic forces in any structural element of the existing structure by more than 10 percent cumulative since the original construction, unless the element has the capacity to resist the increased forces determined in accordance with this code and ASCE 7, and
3. Additions do not decrease the seismic resistance of any structural element of the existing structure by more than 10 percent cumulative since the original construction, unless the element has the capacity to resist the forces determined in accordance with this code and ASCE 7. If the building's seismic base shear capacity has been increased since the original construction, the percent change in base shear may be calculated relative to the increased value.

3403.2.3.2 (IEBC[B] 302.2.3.2) Alterations. Alterations are permitted to be made to any structure without requiring the structure to comply with Section 1613, provided the alterations conform to the requirements for a new structure. Alterations that increase the seismic force in any existing structural element by more than 10 percent cumulative since the original construction or decrease the design strength of any existing structural element to resist seismic forces by more than 10 percent cumulative since the original construction shall not be permitted unless the entire seismic-force-resisting system is determined to conform to this code and ASCE 7 for a new structure. If the building's seismic base shear capacity has been increased since the original construction, the percent change in base shear may be calculated relative to the increased value.

Exception: Alterations to existing structural elements or additions of new structural elements that are not required by this code and ASCE 7 and are initiated for the purpose of increasing the strength or stiffness of the seismic-force-resisting system of an existing structure need not be designed for forces conforming to this code and ASCE 7, provided that an engineering analysis is submitted indicating the following:

1. The design strength of existing structural elements required to resist seismic forces is not reduced.
2. The seismic force to required existing structural elements is not increased beyond their design strength.
3. New structural elements are detailed and connected to the existing structural elements as required by Chapter 16.
4. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by Chapter 16.
5. The alterations do not create a structural irregularity as defined in this code and ASCE 7 or make an existing structural Irregularity more severe.
6. The alterations do not result in the creation of an unsafe condition.

3406.4 Change of occupancy. When a change of occupancy results in a structure being reclassified to a higher occupancy category, the structure shall conform to the seismic requirements for a new structure of the higher occupancy category. Values of R, Ω_0, and C_d for the existing seismic force-resisting system shall be those specified by this code for an Ordinary system unless it is demonstrated that the existing system will provide performance equivalent to that of an Intermediate or Special system.

Exceptions:

1. Specific seismic detailing requirements of this code or this code and ASCE 7 for a new structure shall not be required to be met where it can be shown that the level of performance and seismic safety is equivalent to that of a new structure. Such analysis shall consider the regularity, overstrength, redundancy and ductility of the structure within the context of the existing and retrofit (if any) detailing provided.
2. When a change of use results in a structure being reclassified from Occupancy Category I or II to Occupancy Category III and the structure is located in a seismic map area where $S_{DS} < 0.33$, compliance with the seismic requirements of this code and this code and ASCE 7 are not required.

PART II – IEBC

1. Revise as follows:

506.1.1.2 (Supp) IBC level seismic forces. When seismic forces are required to meet the *International Building Code* level, they shall be one of the following:

1. One-hundred percent of the values in the *International Building Code*. ~~The *R*-factor~~ Values of R, Ω_0, and C_d used for analysis in accordance with Chapter 16 of the *International Building Code* shall be ~~the *R*-factor~~ those specified for structural systems classified as "Ordinary" in accordance with Table 12.2-1 of ASCE 7, unless it ~~can be~~ is demonstrated that the structural system ~~satisfies the proportioning and detailing requirements for systems classified as "Intermediate" or "Special."~~ Will provide performance equivalent to that of an "Intermediate" or "Special" system.
2. Those associated with the BSE-1 and BSE-2 Earthquake Hazard Levels defined in ASCE 41. Where ASCE 41 is used, the corresponding performance levels shall be those shown in Table 506.1.1.2.

506.1.1.3 (Supp) Reduced IBC level seismic forces. When seismic forces are permitted to meet reduced *International Building Code* levels, they shall be one of the following:

1. Seventy-five percent of the forces prescribed in the *International Building Code*. ~~The *R*-factor~~ Values of R, Ω_0, and C_d used for analysis in accordance with Chapter 16 of the *International Building Code* shall be the *R*-factor as specified in Section 506.1.1.2 of this code.
2. In accordance with the applicable chapters in Appendix A of this code as specified in Items 2.1 through 2.5 below. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A shall be deemed to comply with the requirements for reduced *International Building Code* force levels.
   2.1. The seismic evaluation and design of unreinforced masonry bearing wall buildings in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A1.
   2.2. Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A2.
   2.3. Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light frame wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A3.
   2.4. Seismic evaluation and design of soft, weak or open-front wall conditions in multiunit residential buildings of wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A4.
   2.5. Seismic evaluation and design of concrete buildings and concrete with masonry infill buildings in all occupancy categories are permitted to be based on the procedures specified in Appendix Chapter A5.
3. In accordance with ASCE 31 based on the applicable performance level as shown in Table 506.1.1.2.
4. Those associated with the BSE-1 Earthquake Hazard Level defined in ASCE 41 and the performance level as shown in Table 506.1.1.2. Where ASCE 41 is used, the design spectral response acceleration parameters *SXS* and *SX1* shall not be taken less than 75 percent of the respective design spectral response acceleration parameters *SDS* and *SD1* defined by the *International Building Code* and its reference standards.

Reason: IBC: To clarify the intent of the code, correct overlaps between code sections, and ensure appropriate application to existing buildings of "seismic requirements for a new structure."

Sections 3403.2.3 and 3406.4 refer to ASCE 7 for seismic design criteria. First, they should actually refer to Section 1613, which contains important provisions besides those in ASCE 7 and which modifies ASCE 7 in certain respects. Second, whether Section 1613 or ASCE 7, these criteria for new design require the engineer to identify the seismic force-resisting system of the existing building. In many cases, the existing building will not possess the detailing necessary to qualify for "Special" or even "Intermediate" systems. If the detailing is unknown or inadequate, design parameters for "Ordinary" systems must be used.

The language proposed is based on existing language in IEBC Section 506.1.1.2, but the current IEBC wording is modified to remove the bright line the IEBC uses to distinguish when design parameters for Ordinary systems are needed. Rather than require strict compliance with the "proportioning and detailing requirements" of Intermediate or Special systems, general equivalence, similar to that contemplated by IBC Section 3406.4 is preferable because for many existing buildings there are no applicable provisions to check against. Also, "equivalent performance" preserves some engineering and regulatory discretion appropriate to work with existing buildings. A coordination change to IEBC Section 506.1.1.2 is being submitted separately.

3403.2.3, first sentence: The wording is clarified, and "modification or change of occupancy" is deleted because change of occupancy is covered by 3406, not by 3403.

Note to ICC: NCSEA and SEAOC have separately proposed a broad reorganization of current Section 3403. If Section 3403 is reorganized per that proposal, the text proposed here as the second sentence of current Section 3403.2.3 would go at the end of proposed Section 3403.4 and at the end of proposed Section 3404.4.

IEBC: This proposal is submitted in coordination with a separate proposal also submitted by the NCSEA Existing Buildings Committee regarding IBC Section 3403.2.3.2. It replaces current IEBC language on the subject of voluntary seismic rehabilitation in two places.

To improve usability and to ensure complete and appropriate application of Chapter 16 code provisions to existing buildings. The proposal:

- addresses all three seismic design parameters, not just *R*.
- changes the bright line criteria established by the IBC's "proportioning and detailing requirements" for new structures to a more appropriate criterion based on equivalent performance.

These sections require the engineer to identify the seismic force-resisting system of the existing or rehabilitated building. In many cases, the existing building will not possess the detailing necessary to qualify for "Special" or even "Intermediate" systems. If the detailing is unknown or inadequate, the current provisions properly require use of design parameters for "Ordinary" systems.

However, the current provisions would require the existing building to meet the letter of the IBC's prescriptive requirements for proportioning and detailing, which is problematic and sometimes inappropriate for existing buildings. This proposal would replace the current prescriptive criteria with a requirement for equivalent performance, which can be demonstrated in a number of ways. (For example, some or all of the criteria used by the IBC for undefined structural systems or for change of occupancy in IBC Section 3406.4 may be applied as appropriate.) The performance-based criterion is preferable because for many existing buildings there are no applicable provisions to check against. Also, "equivalent performance" preserves some engineering and regulatory discretion appropriate to work with existing buildings.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IBC STRUCTURAL

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IEBC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G210–07/08

3403.2.3.1 (IEBC [B] 302.2.3.1), 3403.2.3.2 (IEBC [B] 302.2.3.2), 3406.4 (IEBC [B] 305.4)

Proponent: Philip Brazil, PE, Reid Middleton, Inc., representing himself

THIS PROPOSAL IS ON THE AGENDA OF THE IBC STRUCTURAL CODE DEVELOPMENT COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THE IBC STRUCTURAL CODE DEVELOPMENT COMMITTEE.

Revise as follows:

3403.2.3.1 (IEBC 302.2.3.1) Additions to existing buildings. An addition that is structurally independent from an existing structure shall be designed and constructed with the seismic requirements for new structures. An addition that is not structurally independent from an existing structure shall be designed and constructed such that the entire structure conforms to the seismic-force-resistance requirements for new structures unless the following conditions are satisfied:

1. The addition conforms with the requirements for new structures,
2. The addition does not increase the seismic forces in any structural element of the existing structure by more than 10 percent cumulative since the original construction, unless the element has the capacity to resist the increased forces determined in accordance with ~~ASCE 7~~ Section 1613, and
3. Additions do not decrease the seismic resistance of any structural element of the existing structure by more than 10 percent cumulative since the original construction, unless the element has the capacity to resist the forces determined in accordance with ~~ASCE 7~~ Section 1613. If the building's seismic base shear capacity has been increased since the original construction, the percent change in base shear may be calculated relative to the increased value.

3403.2.3.2 (IEBC 302.2.3.2) Alterations. Alterations are permitted to be made to any structure without requiring the structure to comply with Section 1613, provided the alterations conform to the requirements for a new structure. Alterations that increase the seismic force in any existing structural element by more than 10 percent cumulative since the original construction or decrease the design strength of any existing structural element to resist seismic forces by more than 10 percent cumulative since the original construction shall not be permitted unless the entire seismic-force-resisting system is determined to ~~conform to ASCE 7~~ comply with Section 1613 for a new structure. If the building's seismic base shear capacity has been increased since the original construction, the percent change in base shear may be calculated relative to the increased value.

Exception: Alterations to existing structural elements or additions of new structural elements that are not required by ASCE 7 and are initiated for the purpose of increasing the strength or stiffness of the seismic-force-resisting system of an existing structure need not be designed for forces ~~conforming to ASCE 7~~ comply with Section 1613, provided that an engineering analysis is submitted indicating the following:

1. The design strength of existing structural elements required to resist seismic forces is not reduced.
2. The seismic force to required existing structural elements is not increased beyond their design strength.

3. New structural elements are detailed and connected to the existing structural elements as required by Chapter 16.
4. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by Chapter 16.
5. The alterations do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.
6. The alterations do not result in the creation of an unsafe condition.

3406.4 Change of occupancy (IEBC [B] 305.4 Structural). When a change of occupancy results in a structure being reclassified to a higher occupancy category, the structure shall conform to the seismic requirements for a new structure.

Exceptions:

1. Specific seismic detailing requirements of this code ~~or ASCE 7~~ for a new structure shall not be required to be met where it can be shown that the level of performance and seismic safety is equivalent to that of a new structure. Such analysis shall consider the regularity, overstrength, redundancy and ductility of the structure within the context of the existing and retrofit (if any) detailing provided.
2. When a change of use results in a structure being reclassified from Occupancy Category I or II to occupancy Category III and the structure is located ~~in a seismic map area~~ where the seismic coefficient S_{DS} ~~<~~ is less than 0.33, compliance with the seismic requirements of this code ~~and ASCE 7~~ are not required.

Reason: The purpose of this proposal is to align the references to ASCE 7 in the affected sections with related sections of the IBC that currently reference ASCE 7. The references to ASCE 7 are for requirement to determine seismic forces, to design for forces complying with ASCE 7 or meet specific seismic detailing requirements contained therein. IBC Section 1613, however, contains the primary charging language for the design and construction of structures or portions thereof to resist the effects of earthquake motions, including the determination of seismic forces, and accomplishes the task by referencing ASCE 7, excluding Chapter 14 and Appendix 11A. Exception 2 to Section 3406.4 is revised for consistency with other references in the IBC to seismic spectral response acceleration parameters (i.e., Section 1808.2.23.1).

This proposal was prompted, in part, because the references to ASCE 7 in the affected sections are the only instances in the 2006 IBC where ASCE 7 is cited without a specific reference to the portions of ASCE 7 applicable to the subject matter.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G211–07/08
3403.2.3.2 (IEBC [B] 302.2.3.2), IEBC 807.7

Proponent: David Bonowitz, SE, representing the National Council of Structural Engineers Associations Existing Buildings Committee

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC STRUCTURAL AND IEBC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

PART I – IBC STRUCTURAL

Revise as follows:

3403.2.3.2 (IEBC [B] 302.2.3.2) Alterations. Alterations are permitted to be made to any structure without requiring the structure to comply with Section 1613, provided the alterations conform to the requirements for a new structure. Alterations that increase the seismic force in any existing structural element by more than 10 percent cumulative since the original construction or decrease the design strength of any existing structural element to resist seismic forces by more than 10 percent cumulative since the original construction shall not be permitted unless the entire seismic-force-resisting system is determined to conform to ASCE 7 for a new structure. If the building's seismic base shear capacity has been increased since the original construction, the percent change in base shear may be calculated relative to the increased value.

Exception: Alterations to existing structural elements or additions of new structural elements that are not ~~required by ASCE 7~~ otherwise required by this chapter and are initiated for the purpose of ~~increasing the strength or stiffness~~ improving the performance of the seismic-force-resisting system of an existing structure or the

performance of seismic bracing or anchorage of existing nonstructural elements ~~need not be designed for forces conforming to ASCE 7~~ shall be permitted, provided that an engineering analysis is submitted ~~indicating~~ demonstrating the following:

1. ~~The design strength of existing structural elements required to resist seismic forces is not reduced.~~ The altered structure and the altered nonstructural elements are no less conforming with the provisions of this code with respect to earthquake design than they were prior to the alteration.
2. ~~The seismic force to required existing structural elements is not increased beyond their design strength.~~
3. ~~2.~~ New structural elements are detailed and connected to the existing structural elements as required by Chapter 16.
4. ~~3.~~ New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by Chapter 16.
5. ~~4.~~ The alterations do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.
6. ~~The alterations do not result in the creation of an unsafe condition.~~

PART II – IEBC

Delete and substitute as follows:

~~**807.7 Voluntary lateral-force-resisting system alterations.** Alterations of existing structural elements and additions of new structural elements that are initiated for the purpose of increasing the lateral force-resisting strength or stiffness of an existing structure and that are not required by other sections of this code shall not be required to be designed for forces conforming to the *International Building Code*, provided that an engineering analysis is submitted to show that:~~

1. ~~The capacity of existing structural elements required to resist forces is not reduced;~~
2. ~~Either the lateral loading to existing structural elements is not increased beyond their capacity or the lateral loading to existing structural elements is not increased by more than 10 percent;~~
3. ~~New structural elements are detailed and connected to the existing structural elements as required by the *International Building Code*;~~
4. ~~New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the *International Building Code*; and~~
5. ~~A dangerous condition as defined in this code is not created.~~

~~Voluntary alterations to lateral-force-resisting systems conducted in accordance with Appendix A and the referenced standards of this code shall be permitted.~~

807.7 Voluntary improvement of the seismic force-resisting system. Alterations to existing structural elements or additions of new structural elements that are not otherwise required by this chapter and are initiated for the purpose of improving the performance of the seismic-force-resisting system of an existing structure or the performance of seismic bracing or anchorage of existing nonstructural elements shall be permitted, provided that an engineering analysis is submitted demonstrating the following:

1. The altered structure and the altered nonstructural elements are no less conforming with the provisions of this code with respect to earthquake design than they were prior to the alteration.
2. New structural elements are detailed and connected to the existing structural elements as required by Chapter 16 of the *International Building Code*.
3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by Chapter 16 of the *International Building Code*.
4. The alterations do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

Voluntary alterations to the seismic force-resisting system in accordance with the applicable chapters of Appendix A of this code shall be permitted.

Reason. Part I. To better meet the intent of this exception, which is to allow voluntary improvements that do not necessarily bring the whole structure "up to code," as might otherwise be required by 3403.2.3.2(IEBC 302.2.3.2),

- The initial paragraph is revised editorially to make it explicit language, to remove improper references to ASCE 7, and to refer more generally to "improvement" as opposed to simply increased strength or stiffness.
- The initial paragraph is supplemented to include voluntary improvements to seismic bracing of nonstructural components, which are as common and as effective at reducing earthquake risk as are structural retrofits.

- Current items 1, 2, and 6 are replaced by a more general requirement that the voluntary improvement must leave the building “no less conforming”. This is the intent of the exception expressed most clearly and directly. The “no less conforming” standard allows for greater creativity and design flexibility in the service of improved performance and reduced risk.
- Current item 1 is well-intentioned but can be contrary to the intent of the exception. Consider, for example, the installation of a steel frame as a backup system to prevent collapse of an inadequate stucco shear wall in the first story of an existing building. If the replacement involves demolition of some of the existing shear wall, that would represent a reduction in capacity and would therefore not be allowed by the current provision even though the altered structure would certainly be more safe. Similarly, the current provision would appear to prevent the minor demolition or modification of existing elements in order to install load path elements such as hold-downs, collectors, or out-of-plane wall anchors. The proposed language would allow these reasonable improvements.

Part II. This proposal is submitted to coordinate with proposed revisions to IBC section 3403.2.3.2.(IEBC 302.2.3.2) It replaces current IEBC language on the subject of voluntary seismic rehabilitation.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A concern is if the last sentence of the proposed IEBC Section 807.7 would conflict with IEBC Section 101.7.

PART I – IBC STRUCTURAL

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IEBC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G212–07/08
3403.3.1 (IEBC [B] 302.3.1) (New); IFC 316 (New)

Proponent: Edward “Ted” Itchon, Salt Lake City, UT, representing Utah Chapter of ICC

THIS CODE CHANGE IS ON THE AGENDA OF THE IBC GENERAL AND IFC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FORE THESE COMMITTEES.

PART I – IBC GENERAL

Add new text as follows

3403.3.1 (IEBC [B] 302.3.1) Remodels renovations tenant improvements. When new walls, ceilings and equipment are installed during upgrading, remodeling, renovations, or tenant improvements the existing items which are being replaced or covered up shall be removed. Multiple void or interstitial spaces and abandoned equipment shall not exist within the structure.

> **Exception:** When proven by an engineers report indicating the existing equipment are being used for the purpose intended these existing items may be reused as part of the upgrading, remodeling, renovations, or tenant improvement.

PART II – IFC

Add new text as follows:

SECTION 316
REMODELS RENOVATIONS TENANT IMPROVEMENTS

316.1 General. When new walls, ceilings and equipment are installed during upgrading, remodeling, renovations, or tenant improvements the existing items which are being replaced or covered up shall be removed. Multiple void or interstitial spaces and abandoned equipment shall not exist within the structure.

> **Exception:** When proven by an engineers report indicating the existing equipment are being used for the purpose intended these existing items may be reused as part of the upgrading, remodeling, renovations, or tenant improvement.

Reason: It is the intent for this new section to be added to eliminate additional void spaces in buildings and remove abandon wiring, piping and communication equipment when a structure undergoes upgrading, remodeling, renovations, or tenant improvements. Major fire losses are due to accidental fires which occur in multiple interstitial spaces such as roofs, ceilings and mansards. Fire origins between the deck above and the original ceiling with a new ceiling installed on the room side posses the inability to access the area of fire origin to suppress and extinguish the fire resulting in more extensive damage.

It is the intent for this new exception to permit equipment such as ducts, cables, conduits and pipes to be reused.

Cost Impact: The code change proposal will increase the cost of construction

PART I – IBC GENERAL

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IFC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G213–07/08

3409.1 (IEBC [B] 308.1), 3409.8.8 (IEBC [B] 308.8.8)(New); IEBC 605.1, 605.1.9 (New)

Proponent: Dominic Marinelli, United Spinal Association, Deb A. Cotter, National Council on Independent Living (NCIL), Marilyn Golden, Disability Rights Education and Defense Fund, Susan Prokop, Paralyzed Veterans of America, Anne Sommers, American Association of People with Disabilities, Elinor Ginzler, (AARP) American Association of Retired Persons

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND IEBC CODE DEVELOPMENT COMMITTEE AS 2 SEPARATE CODE CHANGES. PLEASE SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

1. Revise as follows:

3409.1 (IEBC [B] 308.1) (Supp) Scope. The provisions of Sections 3409.1 through 3409.9 apply to maintenance, change of occupancy, additions and alterations to existing buildings, including those identified as historic buildings.

Exception: Type B dwelling or sleeping units required by Section 1107 are not required to be provided in existing ~~buildings and facilities~~ structures for which an occupancy permit was first issued prior to March 13, 1991 and where Type B dwelling units were not required at the time of first occupancy in buildings designed and constructed after March 13, 1991 ~~being altered or undergoing a change of occupancy~~.

2. Add new text as follows:

3409.8.8 (IEBC [B]308.8.8)Type B dwelling or sleeping units. Where Group I-1, I-2, R-1, R-2, R-3 or R-4 dwelling or sleeping units are being altered, the requirements of Section 3409.1 for Type B units and Section 907 for visible alarms apply only to dwelling units and sleeping units being altered.

(Renumber subsequent sections)

PART II – IEBC

Revise as follows:

605.1 General. A building, facility or element that is altered shall comply with the applicable provisions in Sections 605.1.1 through 605.1.12, Chapter 11 of the *International Building Code* and ICC A117.1 unless it is technically infeasible. Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent that is technically feasible. A building, facility or element that is constructed or altered to be accessible shall be maintained accessible during occupancy.

Exceptions:

1. The altered element or space is not required to be on an accessible route unless required by Section 605.2.
2. Accessible means of egress required by Chapter 10 of the *International Building Code* are not required to be provided in existing buildings and facilities.
3. Type B dwelling or sleeping units required by Section 1107 of the *International Building Code* are not required to be provided in existing ~~buildings and facilities~~ structures for which an occupancy permit was first issues prior to March 13, 1991 and where Type B dwelling units were not required at the time of first occupancy in buildings designed and constructed after March 13, 1991.
4. The alteration to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provisions for Type B dwelling units and shall comply with the applicable provisions in Chapter 11 of the *International Building Code* and ICC A117.1.

IEBC 605.1.9 Type B dwelling or sleeping units. Where Group I-1, I-2, R-1, R-2, R-3 or R-4 dwelling or sleeping units are being altered, the requirements of Section 1107 of the International Building Code for Type B units and Chapter 9 of the International Building Code for visible alarms apply only to dwelling units and sleeping units being altered.

Reason: The code change is necessary to ensure that Type B features be provided or maintained when alterations are done to a multifamily dwelling that was previously covered under the Federal Fair Housing Amendments Act's Accessibility Guidelines (i.e., was first occupied after March 13, 1991).

Adding and where Type B dwelling units were not required at the time of first occupancy in buildings designed and constructed after March 13, 1991 will ensure that permit applicants will comply with the FH Act and avoid complaints and litigation.

The proposal is an effort to not have the building code sanction past violations of the Federal Fair Housing Act. If a residential facility was required to provide Type B units at the time it was constructed, the building code cannot waive this obligation at the time the building is altered. If an occupancy permit was first issued prior to March 13, 1991, Type B units were not required by the Fair Housing Act or the building code. Similarly, certain residential facilities, such as multi-story dwellings are not required to provide Type B units even if they were constructed subsequent to March 13, 1991. However, if a structure was required to provide Type B units and those units were not provided or they were altered below the requirements of the code, the Type B units must be provided to ensure that the facility meets the requirements of the Federal Fair Housing Act.

Cost Impact: The code change proposal will not increase the cost of construction – merely reflects Federal Fair Housing Amendments Act Accessibility Guidelines.

PART I – IBC MEANS OF EGRESS

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IEBC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G214–07/08

3409.1 (IEBC [B] 308.1), 3409.4 (IEBC [B] 308.4), 3409.4.1 (IEBC [B] 308.4.1), 3409.4.2 (IEBC [B] 308.4.2), 3409.5 (IEBC [B] 308.5), 3409.6 (IEBC [B] 308.6), 3409.7 (IEBC [B] 308.7) (New), 3409.8 (IEBC [B] 308.8), 3409.8.7 (IEBC [B] 308.8.7); IEBC 605.1, 605.1.8, 605.1.9 (New), 706.3, 912.8, 1005.1, 1005.2 (New)

Proponent: Cheryl Kent, U.S. Department of Housing and Urban Development (HUD)

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IEBC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

1. Revise as follows:

3409.1 (IEBC 308.1) (Supp) Scope. The provisions of Sections 3409.1 through ~~3409.9~~ 3409.10 apply to maintenance, change of occupancy, additions and alterations to existing buildings, including those identified as historic buildings.

~~**Exception:** Type B dwelling or sleeping units required by Section 1107 are not required to be provided in existing buildings and facilities being altered or undergoing a change of occupancy.~~

3409.4 (IEBC 308.4) (Supp) Change of occupancy. Existing buildings that undergo a change of group or occupancy shall comply with this section.

Exception: Type B dwelling or sleeping units required by Section 1107 are not required to be provided in existing buildings and facilities undergoing a change of occupancy.

3409.4.1 (IEBC 308.4.1) (Supp) Partial change in occupancy. Where a portion of the building is changed to a new occupancy classification, any alterations shall comply with Sections 3409.6, 3409.7 and 3409.8.

3409.4.2 (IEBC 308.4.2) (Supp) Complete change of occupancy. Where an entire building undergoes a change of occupancy, it shall comply with Section 3409.4.1 and shall have all of the following accessible features:

1. At least one accessible building entrance.
2. At least one accessible route from an accessible building entrance to primary function areas.
3. Signage complying with Section 1110.
4. Accessible parking, where parking is being provided.
5. At least one accessible passenger loading zone, when loading zones are provided.
6. At least one accessible route connecting accessible parking and accessible passenger loading zones to an accessible entrance.

Where it is technically infeasible to comply with the new construction standards for any of these requirements for a change of group or occupancy, the above items shall conform to the requirements to the maximum extent technically feasible.

3409.5 (IEBC 308.5) Additions. Provisions for new construction shall apply to additions. An addition that affects the accessibility to, or contains an area of, a primary function shall comply with the requirements in Section 3409.8~~7~~.

Exception: Where Group I-1, I-2, I-3 or R dwelling or sleeping units are being added, the requirements of Section 1107 for dwelling units or sleeping units and Section 907 for visible alarms apply where the quantity of units being added is four or more.

3409.6 (IEBC 308.6) (Supp) Alterations. A building, facility or element that is altered shall comply with the applicable provisions in Chapter 11 and ICC A117.1, unless technically infeasible. Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent technically feasible.

Exceptions:

1. The altered element or space is not required to be on an accessible route, unless required by Section 3409.7.
2. Accessible means of egress required by Chapter 10 are not required to be provided in existing buildings and facilities.
3. The alteration to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provision for a Type B dwelling unit and shall comply with the applicable provisions in Chapter 11 and ICC A117.1.
4. Type A dwelling units or sleeping units required by Section 1107 are not required to be provided in existing building and facilities being altered.

2. Add new text as follows:

3409.7 (IEBC 308.7) Alterations in Group I-1, I-2 and R, and in structures, facilities, or elements serving Groups I or R. Where Group I-1, I-2 and R occupancies are altered the entire structure shall comply with the applicable provisions of Section 1107. Additionally, where structures, facilities, or elements serving Groups I-1, I-2 and R occupancies are altered the entire structure shall comply with Section 1107.

Exceptions:

1. Structures built for first occupancy before March 13, 1991 are not required to provide Type B units.
2. Type B units are not required to be provided where Type B dwelling units and sleeping units were not required at the time of first occupancy in structures designed and constructed after March 13, 1991.

3. Structures that are not required to provide Type B dwelling units and structures not serving Type B dwelling units in accordance with Section 1107 shall comply with Section 3409.6.
4. Alterations limited to one individually owned dwelling unit or sleeping unit shall comply with Section 3409.6.

3. Revise as follows:

~~3409.7 (IEBC 308.7)~~ 3409.8 (IEBC 308.8) Alterations affecting an area containing a primary function. Where an alteration affects the accessibility to, or contains an area of primary function, the route to the primary function area shall be accessible. The accessible route to the primary function area shall include toilet facilities or drinking fountains serving the area of primary function.

Exceptions:

1. The costs of providing the accessible route are not required to exceed 20 percent of the costs of the alterations affecting the area of primary function.
2. This provision does not apply to alterations limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to alterations limited solely to mechanical systems, electrical systems, installation or alteration of fire protection systems and abatement of hazardous materials.
4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of an existing building, facility or element.

(Renumber subsequent sections)

~~3409.8.7 (IEBC 308.8.7)~~ 3409.9.7 (IEBC 308.9.7) (Supp) Accessible dwelling or sleeping units. Where Group I-1, I-2, I-3, R-1, R-2 or R-4 dwelling or sleeping units are being altered or added, the requirements of Section 1107 for Accessible units and Section 907 for visible alarms apply only to the quantity of spaces being altered or added.

PART II – IEBC

1. Revise as follows:

605.1 General. A building, facility or element that is altered shall comply with the applicable provisions in Sections 605.1.1 through ~~605.1.12~~ 605.1.13, Chapter 11 of the *International Building Code* and ICC A117.1 unless it is technically infeasible. Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent that is technically feasible.

A building, facility or element that is constructed or altered to be accessible shall be maintained accessible during occupancy.

Exceptions:

1. The altered element or space is not required to be on an accessible route unless required by Sections 605.1.9 or 605.2.
2. Accessible means of egress required by Chapter 10 of the *International Building Code* are not required to be provided in existing buildings and facilities.
3. ~~Type B dwelling or sleeping units required by Section 1107 of the *International Building Code* are not required to be provided in existing buildings and facilities.~~

~~4.~~ 3. The alteration to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provisions for Type B dwelling units and shall comply with the applicable provisions in Chapter 11 of the *International Building Code* and ICC A117.1.

605.1.8 (Supp) Accessible and Type A dwelling or sleeping units. Where Group I-1, I-2, I-3, R-1, R-2, or R-4 dwelling or sleeping units are being altered, the requirements of Section 1107 of the *International Building Code* for Accessible or Type A units and Chapter 9 of the *International Building Code* for visible alarms apply only to the quantity of the spaces being altered.

2. Add new text as follows:

605.1.9 Alterations in Group I and R, and in structures, facilities, or elements serving Groups I or R. Where Group I-1, I-2 and R occupancies are altered the entire structure shall comply with the applicable provisions of Section 1107. Additionally, where structures, facilities, or elements serving Groups I-1, I-2 and R occupancies are altered they shall comply with Section 1107 of the *International Building Code*.

Exceptions:

1. Structures built for first occupancy before March 13, 1991 are not required to provide Type B units.
2. Type B units are not required to be provided where Type B dwelling units and sleeping units were not required at the time of first occupancy in structures designed and constructed after March 13, 1991.
3. Structures that are not required to provide Type B dwelling units and structures not serving Type B dwelling units in accordance with Section 1107 of the *International Building Code* shall comply with Section 605.1.8.
4. Alterations limited to one individually owned dwelling unit or sleeping unit shall comply with Section 308.6.

(Renumber subsequent sections)

3. Revise as follows:

605.2 Alterations affecting an area containing a primary function. Where an alteration affects the accessibility to a, or contains an area of, primary function, the route to the primary function area shall be accessible. The accessible route to the primary function area shall include toilet facilities or drinking fountains serving the area of primary function.

Exceptions:

1. The costs of providing the accessible route are not required to exceed 20 percent of the costs of the alterations affecting the area of primary function.
2. This provision does not apply to alterations limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to alterations limited solely to mechanical systems, electrical systems, installation or alteration of fire protection systems and abatement of hazardous materials.
4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of an existing building, facility or element.

706.3 (Supp) Accessible and Type A dwelling units and sleeping units. Where Group I-1, I-2, I-3, R-1, R-2, or R-4 dwelling units or sleeping units are being added, the requirements of Section 1107 of the *International Building Code* for accessible units or Type A units and Chapter 9 of the *International Building Code* for visible alarms apply only to the quantity of spaces being added.

912.8 (Supp) Accessibility. Existing buildings that undergo a change of group or occupancy classification shall comply with this section.

Exception: Type B dwelling or sleeping units required by Section 1107 of the *International Building Code* are not required to be provided in existing buildings and facilities undergoing a change or occupancy.

912.8.1 (Supp) Partial change in occupancy. Where a portion of the building is changed to a new occupancy classification, any alterations shall comply with Sections 605 and 706 as applicable.

912.8.2 (Supp) Complete change of occupancy. Where an entire building undergoes a change of occupancy, it shall comply with Section 912.8.1 and shall have all of the following accessible features:

1. At least one accessible building entrance.
2. At least one accessible route from an accessible building entrance to primary function areas.
3. Signage complying with Section 1110 of the *International Building Code*.
4. Accessible parking, where parking is provided.
5. At least one accessible passenger loading zone, where loading zones are provided.
6. At least one accessible route connecting accessible parking and accessible passenger loading zones to an accessible entrance.

Where it is technically infeasible to comply with the new construction standards for any of these requirements for a change of group or occupancy, the above items shall conform to the requirements to the maximum extent technically feasible.

~~**Exception:** Type B dwelling or sleeping units required by Section 1107 of the *International Building Code* are not required to be provided in existing buildings and facilities.~~

1005.1 Minimum requirements. Accessibility provisions for new construction shall apply to additions. An addition that affects the accessibility to, or contains an area of, primary function shall comply with the requirements of Section 605.

1005.2 Type B dwelling or sleeping units. Where Group I-1, I-2 or R dwelling or sleeping units are being added, the requirements of Section 1107 of the *International Building Code* for Type B dwelling units or sleeping units and Section 907 of the *International Building Code* for visible alarms apply only to the quantity of spaces being added.

Reason: Change to Section 3409.1 Scope: The purpose of this code change is to clarify misleading and potentially inaccurate scoping requirements in the IBC and IEBC.

The exception in the main scoping paragraph of Section 3409 (IEBC 308.1) is too broad and is, therefore, misleading because it deals with the entire section and makes it appear that there are NO requirements for Type B dwelling units and sleeping units intended to be occupied as a residence, which is not true. Scoping requirements for Type B dwelling units and sleeping units intended to be occupied as a residence in the IBC are intended to reflect the federal Fair Housing Act's accessible design and construction requirements, which apply, without question, to additions to buildings having 4 or more units. There is also ambiguity in the code with respect to how the term "existing structure" is defined. Therefore, requirements for Type B dwelling units and sleeping units intended to be occupied as a residence need to be addressed under each subsection of Section 3409 (IEBC 308).

New Section 3409.7 (renumber accordingly) and New Section 3409.8.7: The purpose of these changes is to ensure that buildings covered by the Fair Housing Act's accessible design and construction requirements and which were not built in compliance, and which also, therefore, do not meet current code requirements for accessibility, are brought up to code.

Many residential structures and facilities serving residential uses that were built after March 13, 1991 and before IBC 2003 (the first building code safe harbor without a supplement) were not built in compliance with the design and construction requirements of the federal Fair Housing Act. Developers are beginning to renovate these facilities. They may not realize that the facilities do not comply with the Fair Housing Act. Therefore, those buildings constructed during the 12 year period prior to the 2003 IBC (1991 through 2003) that are subject to the Fair Housing Act's design and construction requirements must be brought into compliance during any alteration.

New Exception 5 at Section 3409.8 Section 1107.4 which is referenced by proposed new Section 3409.7 requires an accessible route to serve dwelling units and sleeping units. Therefore, an additional path of travel requirement which requires an accessible route serving altered dwelling units and sleeping units would be redundant. Adding a new Exception 5 to exempt Type B dwelling units and sleeping units addresses this concern.

New Exception at 3409.9.7 The purpose of these changes is to ensure that buildings covered by the Fair Housing Act's accessible design and construction requirements and which were not built in compliance, and which also, therefore, do not meet current code requirements for accessibility, are brought up to code.

Many residential structures and facilities serving residential uses that were built after March 13, 1991 and before IBC 2003 (the first building code safe harbor without a supplement) were not built in compliance with the design and construction requirements of the federal Fair Housing Act. Developers are beginning to renovate these facilities. They may not realize that the facilities do not comply with the Fair Housing Act. Therefore, those buildings constructed during the 12 year period prior to the 2003 IBC (1991 through 2003) that are subject to the Fair Housing Act's design and construction requirements must be brought into compliance during any alteration.

Cost Impact: Change to Section 3409.1 - No cost impact involved since this change will correct inaccurate scoping requirements in IBC 3409.1 (IEBC 308.1).

Changes to Sections 3409.7 (new) and 3409.8.7 will not increase the cost of construction as they are intended to ensure that buildings covered by the Fair Housing Act's design and construction requirements reflect those requirements.

PART I –IBC MEANS OF EGRESS

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IEBC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G215–07/08

3409.6 (IEBC [B] 308.6), 3409.8.7 (IEBC [B] 308.8.7), 3409.8.8 (IEBC [B] 308.8.8) (New), 3409.8.9 (IEBC [B] 308.8.9) (New); IEBC 605.1.8, 605.1.9 (New), 706.3, 706.4 (New), 706.5 (New)

Proponent: Dominic Marinelli, United Spinal Association, Deb A. Cotter, National Council on Independent Living (NCIL), Marilyn Golden, Disability Rights Education and Defense Fund, Susan Prokop, Paralyzed Veterans of America, Anne Sommers, American Association of People with Disabilities, Elinor Ginzler, (AARP) American Association of Retired Persons

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND IEBC CODE DEVELOPMENT COMMITTEE AS 2 SEPARATE CODE CHANGES. PLEASE SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

1. Revise as follows:

3409.6 (IEBC [B] 308.6) (Supp) Alterations. A building, facility or element that is altered shall comply with the applicable provisions in Chapter11 and ICC A117.1, unless technically infeasible. Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent technically feasible.

Exceptions:

1. The altered element or space is not required to be on an accessible route, unless required by Section 3409.7.
2. Accessible means of egress required by Chapter 10 are not required to be provided in existing buildings and facilities.
3. The alteration to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provision for a Type B dwelling unit and shall comply with the applicable provisions in Chapter 11 and ICC A117.1.
4. ~~Type A dwelling units or sleeping units required by Section 1107 are not required to be provided in existing building and facilities being altered.~~

3409.8.7 (IEBC [B] 308.8.7)(Supp) Accessible dwelling or sleeping units. Where Group I-1, I-2, I-3, R-1, R-2 or R-4 dwelling or sleeping units are being altered or added, the requirements of Section 1107 for Accessible units and Section 907 for visible alarms apply only to the quantity of spaces being altered or added.

2. Add new text as follows:

3409.8.8 (IEBC [B] 308.8.8)Type A dwelling or sleeping units. Where more than 20 Group R-2 dwelling or sleeping units are being altered or added, the requirements of Section 1107 for Type A units and Section 907 for visible alarms apply only to the quantity of spaces being altered or added.

3409.8.9 (IEBC [B] 308.8.9)Type B dwelling or sleeping units. Where 4 or more Group I-1, I-2, R-1, R-2, R-3 or R-4 dwelling or sleeping units are being added, the requirements of Section 1107 for Type A units and Section 907 for visible alarms apply only to the quantity of spaces being added.

(Renumber subsequent sections)

PART II – IEBC

1. Revise as follows:

605.1.8 [Supp] Accessible dwelling or sleeping units. Where Group I-1, I-2, I-3, R-1, R-2, or R-4 dwelling or sleeping units are being altered, the requirements of Section 1107 of the *International Building Code* for accessible ~~or Type A~~ units and Chapter 9 of the *International Building Code* for visible alarms apply only to the quantity of the spaces being altered.

2. Add new text as follows:

605.1.9 Type A dwelling or sleeping units. Where more than 20 Group R-2 dwelling or sleeping units are being altered, the requirements of Section 1107 of the *International Building Code* for Type A units and Chapter 9 of the *International Building Code* for visible alarms apply only to the quantity of the spaces being altered.

3. Revise as follows:

706.3 [Supp] Accessible dwelling units and sleeping units. Where Group I-1, I-2, I-3, R-1, R-2, or R-4 dwelling units or sleeping units are being added, the requirements of Section 1107 of the *International Building Code* for accessible units ~~or Type A~~ units and Chapter 9 of the *International Building Code* for visible alarms apply only to the quantity of spaces being added.

4. Add new text as follows:

706.4 Type A dwelling or sleeping units. Where more than 20 Group R-2 dwelling or sleeping units are being added, the requirements of Section 1107 of the *International Building Code* for Type A units and Chapter 9 of the *International Building Code* for visible alarms apply only to the quantity of the spaces being added.

706.5 Type B dwelling or sleeping units. Where 4 or more Group I-1, I-2, R-1, R-2, R-3 or R-4 dwelling or sleeping units are being added, the requirements Section 1107 of the *International Building Code* for Type B units and Chapter 9 of the *International Building Code* for visible alarms apply only to the quantity of the spaces being added.

Reason: The original proponent of the code change G206-06/07 to eliminate Type A dwelling units in existing buildings (IBC Section 3409.6 Exp. 4) was concerned that the alteration of a single dwelling unit would require 2% of units to provide Type A features. G206 was approved by the IBC Means of Egress Committee, but disapproved by the IEBC committee. Currently there is a conflict between these two codes.

The intent of this proposal is to coordinate and clarify in IBC and IEBC by do the following:

- IBC 3409.8.8 and IEBC 605.1.9 clarifies that more than 20 units would have to be altered before 2% would have to provide Type A features.
- IBC 3409.8.8 and IEBC 706.4 clarify that Type A units are required in additions that contain 20 or more units.
- IBC 3409.8.9 and IEBC 706.5 clarify that Type B units are required in additions that contain 4 or more units. This is consistent with the Fair Housing Act.
- Current IBC 3409.5.1 and IEBC 605.1.12 ensures that alterations will not require greater accessibility than that which would be required for new construction.
- If altering an existing apartment to comply with Type A requirements has little likelihood of being accomplished because of existing conditions, the permit applicant can't take advantage of the "technically infeasible" exception in IBC 3409.6 and IEBC 605.1.

The Type A units (previously Adaptable units) has been in the codes since 1975. Most existing apartment buildings have been built or modified during that time period (i.e. they have Type A units already), so this should have minimal effects on housing while it has significant effects on persons with disabilities if these units start to disappear in existing buildings.

Cost Impact: The code change proposal will not increase the cost of construction – reflects 2006 IBC.

PART I – IBC MEANS OF EGRESS

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IEBC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G216– 07/08

3410.4.1 (IEBC 1301.4.1)

Proponent: Peter Somers, SE, Magnusson Klemencic Associates, representing NCSEA Existing Building Committee

THIS PROPOSAL IS ON THE AGENDA OF THE IBC STRUCTURAL CODE DEVELOPMENT COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THE IBC STRUCTURAL CODE DEVELOPMENT COMMITTEE.

Revise as follows:

3410.4.1 (IEBC 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 ~~existing building shall be capable of supporting the minimum load requirements of~~ analysis shall demonstrate that the building with the work completed is capable of resisting the loads specified in Chapter 16.

Reason: Editorial clarification. Buildings don't support load requirements, they resist loads. Also, the proposal clarifies that the analysis applies to the final, not pre-alteration, condition

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G217–07/08
3410.5.1 (IEBC [B] 1301.5.1)

Proponent: Bill McHugh, Firestop Contractors International Association

Revise as follows:

3410.5.1 (IEBC [B] 1301.5.1) Fire safety. Included within the fire safety category are the structural fire resistance, compartmentation, automatic fire detection, fire alarm and fire suppression system features of the facility.

Reason: Effective compartmentation is important to means of egress, fire and general safety. Chapter 34 has much information about evaluation of compartmentation in buildings. Where chosen as a strategy for means of egress fire and general safety, compartmentation is important. Since there is a complete section 3410.6.3 devoted to evaluation of compartmentation, it should be part of the introductory language of the section. This code change completes the introduction to include the important concept of compartmentation.

Cost Impact: The code change proposal will not increase the cost of construction

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G218–07/08
3410.6.2 (IEBC [B] 1301.6.2), 3410.6.2.1 (IEBC [B] 1301.6.2.1)

Proponent: Maureen Traxler, City of Seattle, WA, representing the Department of Planning and Development

Revise as follows:

3410.6.2 (IEBC [B] 1301.6.2) Building area. The value for building area shall be determined by the formula in Section 3410.6.2.2. Section 503 and the formula in Section 3410.6.2.1 shall be used to determine the allowable area of the building. This shall include any allowable increases due to frontage ~~open perimeter~~ and automatic sprinklers as provided for in Section 506. Subtract the actual building area from the allowable area and divide by 1,200 square feet (112 m2). Enter the area value and its sign (positive or negative) in Table 3410.7 under Safety Parameter 3410.6.2, 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 3410.8, Mandatory Safety Scores.

3410.6.2.1 (IEBC [B] 1301.6.2.1) Allowable area formula. The following formula shall be used in computing allowable area:

$$\text{~~AA~~} = \left(\frac{(SP + OP + 100) \times (Area, Table 503)}{100} \right) \qquad \textbf{(Equation 34-2)}$$

$$A_a = (1 + I_f + I_s) \times A_t$$

where:

~~AA~~ A_a = Allowable area.
~~SP~~ I_s = Area ~~Percent~~ increase factor for sprinklers (Section 506.3).
~~OP~~ I_f = Area ~~Percent~~ increase factor for frontage ~~open perimeter~~ (Section 506.2).

Reason: This proposal updates Equation 34-2 to be consistent with the manner in which allowable building area is calculated in IBC Equations 5-1 and 5-2. In the 2006 IBC, I_f and I_s are no longer expressed as percentages.

Cost Impact: This code change does not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G219–07/08
3410.6.6, Table 3410.6.6(2) (IEBC [B] 1301.6.6, Table 1301.6.6(2))

Proponent: Daniel E. Nichols PE, New York State Division of Code Enforcement and Administration, Albany, NY

Revise as follows:

3410.6.6 (IEBC [B] 1301.6.6) Vertical openings. Evaluate the fire-resistance rating of exit enclosures, hoistways, escalator openings, and other shaft enclosures within the building, and openings between two or more floors. Table 3410.6.6(1) contains the appropriate protection values. Multiply that value by the construction type factor found in Table 3410.6.6(2). Enter the vertical opening value and its sign (positive or negative) in Table 3410.7 under Safety Parameter 3410.6.6, Vertical Openings, for fire safety, means of egress, and general safety. If the structure is a one-story building~~, enter a value of 2.~~ or if all the unenclosed vertical openings ~~that~~ within the building conform to the requirements of Section 707, enter a value of 2. The maximum positive value for this requirement shall be 2. ~~shall not be considered in the evaluation of vertical openings~~.

TABLE 3410.6.6(2) (IEBC TABLE 1301.6.6(2))
CONSTRUCTION-TYPE FACTOR

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

Reason: The purpose of this code change proposal is correct the calculation of points regarding the protection of vertical openings in existing buildings, or lack thereof. The scope of this code change is to further quantify the benefits or hazards associated with vertical openings by limiting the benefit to the same level of not having them at all and to align similar construction types regarding interior construction.

First, Section 3410.6.6 has been modified to align conditions that meet or exceed vertical opening requirements in new buildings with that of buildings with no shafts at all. The current language would give a one-story Type VB building a +2 score but a Type VB two-story building with a one-hour rated shaft +7 points. Clearly, the addition of a rated shaft does not provide any additional fire protection when compared to not having a shaft at all. Furthermore, the current language gives a four story type IA building with a two-hour rated shaft a vertical opening score of +2.4 and a Type VB a vertical opening score of +14. This proposal limits the benefit points to the same score that one-story buildings receive.

The modification of Table 3410.6.6(2) addresses a non-consistent regulation of identical interior conditions. Table 3410.6.6(2) currently permits Type III buildings to not receive as severe of a negative score for unprotected vertical openings as a Type V building, even though IBC Section 602 permits the interior of a Type III and a Type V building to be constructed of identical materials. The current assumption in Table 3410.6.6(2) is that Type III buildings offer superior fire performance in interior vertical openings over Type V, which is not the case. The proposal aligns the Type III buildings to their Type V counterparts, relative to fire-resistance rating values.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF

G220–07/08
3310.1 (IFC [B] 1411.1); IFC Table 803.3, 1027.19

Proponent: Philip Brazil, PE, Reid Middleton, Inc., representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC GENERAL AND IFC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC

Revise as follows:

3310.1 (IFC [B] 1411.1) Stairways required. Where a building has been constructed to a height greater than 50 feet (15 240 mm) or to four stories above grade plane, or where an existing building exceeding 50 feet (15 240 mm)in height is altered, at least one temporary lighted stairway shall be provided unless one or more of the permanent stairways are erected as the construction progresses.

PART II – IFC

Revise as follows:

TABLE 803.3
INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY[k]

(Portions of table not shown remain unchanged)

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929m^2.

a. Class C interior finish materials shall be allowed for wainscotting or paneling of not more than 1,000 square feet of applied surface area in the grade lobby where applied directly to a noncombustible base or over furring strips applied to a noncombustible base and fireblocked as required by Section 803.4 of the *International Building Code*.
b. In exit enclosures of buildings less than three stories ~~in height~~ above grade plane of other than Group I-3, Class B interior finish for nonsprinklered buildings and Class C for sprinklered buildings shall be permitted.
c. Requirements for rooms and enclosed spaces shall be based upon spaces enclosed by partitions. Where a fire-resistance rating is required for structural elements, the enclosing partitions shall extend from the floor to the ceiling. Partitions that do not comply with this shall be considered as enclosing spaces and the rooms or spaces on both sides shall be considered as one. In determining the applicable requirements for rooms and enclosed spaces, the specific occupancy thereof shall be the governing factor regardless of the group classification of the building or structure.
d. Lobby areas in Group A-1, A-2 and A-3 occupancies shall not be less than Class B materials.
e. Class C interior finish materials shall be allowed in Group A occupancies with an occupant load of 300 persons or less.
f. In places of religious worship, wood used for ornamental purposes, trusses, paneling or chancel furnishing shall be allowed.
g. Class B material is required where the building exceeds two stories.
h. Class C interior finish materials shall be allowed in administrative spaces.
i. Class C interior finish materials shall be allowed in rooms with a capacity of four persons or less.
j. Class B materials shall be allowed as wainscoting extending not more than 48 inches above the finished floor in corridors.
k. Finish materials as provided for in other sections of this code.
l. Applies when the vertical exits, exit passageways, corridors or rooms and spaces are protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

1027.19 Exterior stairway protection. Exterior exit stairs shall be separated from the interior of the building as required in Section 1023.6. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions:

1. Separation from the interior of the building is not required for buildings that are two stories or less above grade plane where the level of exit discharge is the first story above grade plane.
2. Separation from the interior of the building is not required where the exterior stairway is served by an exterior balcony that connects two remote exterior stairways or other approved exits, with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the opening not less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the interior of the building is not required for an exterior stairway located in a building or structure that is permitted to have unenclosed interior stairways in accordance with Section 1020.1.
4. Separation from the interior of the building is not required for exterior stairways connected to open-ended corridors, provided that:
   4.1. The building, including corridors and stairs, is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
   4.2. The open-ended corridors comply with Section 1017.
   4.3. The open-ended corridors are connected on each end to an exterior exit stairway complying with Section 1023.1.
   4.4. At any location in an open-ended corridor where a change of direction exceeding 45 degrees occurs, a clear opening of not less than 35 square feet (3 m^2) or an exterior stairway shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

Reason: The changes are proposed for consistency with the actions taken by the membership on Proposals G44-04/05-AM, G6-06/07-AS and G8-06/07-AMPC1. In Exception #1 to IFC Section 1027.19, "grade" is changed to "grade plane" for consistency with the similar Exception #1 to IBC Section 1023.6. In Footnote (b) to IFC Table 803.3, "in height" is changed to "above grade plane" for consistency with Footnote (b) to IBC Table 803.9. In IBC Section 3310.1 and IFC Section 1411.1 on providing temporary lighted stairways, "above grade plane" is added.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: This proposal is based on Section 1027 – Means of Egress for Existing Buildings of the IFC 2006 edition.

PART I – IBC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

PART II – IFC

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G221–07/08
Chapter 35

Proponent: Standards writing organizations as listed below.

Revise standards as follows:

ALI — Automotive Lift Institute, P. O. Box 85, Cortland, NY 13045

Standard reference number	Title
ALI ALCTV— 2006 ~~98~~	Standard for Automobile~~motive~~ Lifts—Safety Requirements for Construction, Testing and Validation (ANSI)

ASME — American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990

Standard reference number	Title
A17.1/CSA B44-2007 ~~2004~~	Safety Code for Elevators and Escalators
A18.1-2005 ~~03~~	Safety Standard for Platform Lifts and Stairway Chairlifts
A112.19.8M—1987(R1996)	Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs~~, and Whirlpool Bathtub Appliances~~
A112.19.17—2002	Manufactured Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub and Wading Pool Suction Systems
B20.1—2006 ~~2003~~	Safety Standard for Conveyors and Related Equipment

ASTM — ASTM International, 100 Barr Harbor Drive, West Conshocken, PA 19428-2959

Standard reference number	Title
C 94/C 94M- 07 ~~05~~	Specification for Ready-Mixed Concrete
D 86-07a ~~05~~	Test Method for Distillation of Petroleum Products at Atmospheric Pressure
D 93—07 ~~02a~~	Test Method for Flash Point By Pensky-Martens Closed Cup Tester

NFPA	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02269-9101

Standard reference number	Title
32—07 ~~04~~	Dry Cleaning Plants
40—07 ~~01~~	Storage and Handling of Cellulose Nitrate Film
85—07 ~~04~~	Boiler and Combustion System Hazards Code
110-05 ~~02~~	**Emergency and Standby Power Systems**
111-05 ~~01~~	**Stored Electrical Energy Emergency and Standby Power Systems**
655—07 ~~01~~	Prevention of Sulfur Fires and Explosions
664—07 ~~02~~	Prevention of Fires Explosions in Wood Processing and Woodworking Facilities
704— 07 ~~01~~	Standard System for the Identification of the Hazards of Materials for Emergency Response

UL	Underwriters Laboratories Inc. 333 Pfingsten Road Northbrook, IL 60062-2096

Standard reference number	Title
1975— 2006 ~~96~~	Fire Test of Foamed Plastics Used for Decorative Purposes
2017—2000	Standards for General-Purpose Signaling Devices and Systems—with Revisions through ~~June 2004~~ August 2005
2200—04 ~~98~~	Stationary Engine Generator Assemblies (Revisions through July 2004)

Reason: The *CP 28 Code Development Policy*, Section 4.5* requires the updating of referenced standards to be accomplished administratively, and be processed as a Code Change Proposal. In May 2007, a letter was sent to each developer of standards that are referenced in the International Codes, asking them to provide the ICC with a list of their standards in order to update to the current edition. Above is the received list of the referenced standards that are under the maintenance responsibility of the IBC General Committee.

***4.5 Updating Standards:** The updating of standards referenced by the Codes shall be accomplished administratively by the appropriate code development committee in accordance with these full procedures except that multiple standards to be updated may be included in a single proposal.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G222 –07/08
K110.8 (New)

Proponent: Philip Brazil, PE, Reid Middleton, Inc., representing himself

Add new text as follows:

K110.8 Transformer rooms and vaults. Where transformers are required by NFPA 70 to be installed in rooms or vaults of fire-resistant construction, the rooms or vaults shall be separated from all other areas of the building by fire barriers or horizontal assemblies, or both, constructed in accordance with the *International Building Code*. The fire-resistance ratings of the transformers rooms or vaults shall be at least equal to that specified for them by NFPA 70.

Reason: The National Electrical Code, NFPA 20, specifies protection for transformers of certain types, ratings and classes by means of locating them in transformer rooms or vaults of fire-resistant construction. I assume the 2005 edition of NFPA 70 will be the edition that is referenced in Appendix K of the 2009 IBC. I interpret "fire-resistant construction" to be a reference to separation by a fire barrier, horizontal assembly, or both. Section 450.21(B) of NFPA 70 specifies transformer rooms with a 1-hour fire-resistance rating for individual dry-type transformers of more than 112.5 kVA rating and installed indoors. There are exceptions for transformers with Class 155 or higher insulation systems. Transformer vaults are specified for several types of individual transformers rated over 35,000 volts (e.g., dry-type, nonflammable fluid-insulated, askarel-insulated, etc.). Section 450.42 of NFPA 70 specifies a minimum fire resistance rating of 3 hours for the walls and roofs of transformer vaults. There is an exception

for a 1-hour rating where the transformers are protected with certain types of automatic fire-extinguishing systems. Section 450.43 specifies protection of doorways leading into the vault with 3-hour fire doors. There is also a similar exception for a 1-hour rating. Ventilation openings are required to be protected by automatic-closing fire dampers but a 1-1/2 hour rating is specified rather than the 3-hour rating specified by IBC Table 716.3.1 for 3-hour or greater fire-resistance-rated assemblies.

By referencing NFPA 70 in IBC Appendix K, the fire-resistant construction specified in NFPA 20 for transformers rooms and vaults becomes a construction requirement in local jurisdictions where Appendix K is adopted. The purpose of this proposal is to specify this as a requirement in the IBC so that designers and building officials are made aware of it. The proposed language will also clarify what is required. The reference to "fire-resistant construction" for transformer rooms in NFPA 70 does not make it clear what is required for protection of the separating walls and horizontal assemblies at openings, penetrations, joints, ducts and air transfer openings. The detailed requirements for transformer vaults in NFPA 70 provides clarify for some, but not all, of them. NFPA 70 is also silent on requirements for continuity, where one or more of the separating walls is an exterior wall, and where one of the horizontal assemblies is a roof assembly. Specifying fire barriers and horizontal assemblies makes it clear what is required by virtue of their provisions in Sections 706 and 711, respectively. The provision in NFPA 70 for 1-1/2 hour fire dampers rather than 3-hour fire dampers for the protection of ducts and air transfer openings at 3-hour fire-resistance-rated assemblies of transformer vaults is not considered to be justified. An exception for such dampers is not included in this proposal. Consistency with other provisions of the IBC that consistently specify 3-hour fire-protection-rated assemblies at doors, windows, ducts and air transfer openings penetrating 3-hour fire-resistance-rated assemblies is judged to be more warranted than establishing an exception for transformer vaults. Also, NFPA 70 contains exceptions for 1-hour fire-resistance ratings as described above.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: Appendix K was substantially reconfigured in the 2007 Supplement. This proposal if approved will be under Section K110 Electrical provisions.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G223–07/08
Appendix L (New), Chapter 35 (New)

Proponent: Steve Ferguson, American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)

1. Add new text as follows:

APPENDIX L
HIGH-PERFORMANCE GREEN BUILDINGS

The provisions in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

SECTION L101
GENERAL

L101.1 Scope. The provisions of this appendix are applicable to all buildings except those within the scope of the IRC and Group R-2, R-3 and R-4 occupancies three stories or less in height above grade plane.

L101.2 Intent. The intent of this appendix is to provide mandatory requirements for the construction, alteration and renovation of and addition to buildings within its scope. Such requirements are intended to conserve energy and natural resources and lessen, overall, the negative impact on the environment from buildings and the occupation and use of buildings.

L101.3 Requirements. In addition to the requirements of applicable codes, the construction, alteration, and renovation of and addition to buildings shall comply with ASHRAE 189.1

2. Add standard to Chapter 35 as follows:

ASHRAE

ASHRAE/USGBC/IESNA 189.1- 07	Standard for High-Performance Green Buildings Except Low-Rise Residential Buildings

Reason: 1. The purpose of this proposed change is to add a new appendix to the IBC.

2. The proposed appendix will reference ASHRAE/USGBC/IESNA Standard 189.1 for High-Performance Green Buildings Except Low-Rise Residential Buildings and this will provide jurisdictions with a newly-developed, consensus-based standard that can be used to develop local code requirements specific to green buildings or that could be applied to all buildings covered by the standard.

3. Green buildings are currently being designed and constructed nationwide using different programs guidelines, rating systems, and standards that are not develop using consensus-based methods. ASHRAE's standard was developed under the direction of ASHRAE members and in conjunction with representatives from other nationally-recognized organizations with experience and expertise in this field. This standard will provide

a publicly-reviewed resource for local jurisdictions to use in the administration of green building construction. Several state and local jurisdictions already require, or are considering a requirement, that building projects within their jurisdiction be designed and constructed according to "green building" principles. In many cases, limited guidance is given as to the criteria to be used to determine if the building project meets the expectations. Standard 189.1 provides a publicly-reviewed resource for local jurisdictions to adopt and use in the administration of green building construction.

Cost Impact: The code change proposal will increase the cost of construction where jurisdictions adopt the standard.

Analysis: A review of the standard proposed for inclusion in the code, ASHRAE/USGBC/IESNA 189.1, for compliance with ICC criteria for referenced standards given in Section 3.6. of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G224–07/08
Appendix L (New)

Proponent: Rick Thornberry, PE, The Code Consortium, Inc., representing the Alliance for Fire and Smoke Containment and Control (AFSCC)

NOTE: Strikeout/underline format is being used for the purpose of identifying where changes are being proposed to the current text in Chapter 5 for ease in understanding the text being proposed as a new Appendix L. The Chapter 5 component of this code change proposal is intended to be entirely new text that can be adopted by a local jurisdiction to replace Chapter 5 in the body of the code or that can be used as a code compliance alternate method to Chapter 5. The revisions proposed to specific subsections of Section 903.2 are intended to be used in conjunction with Chapter 5 in Appendix L when Appendix L is adopted or allowed to be used as an acceptable alternate method by a local jurisdiction in order to provide a complete package.

Add new Appendix L as follows:

APPENDIX CHAPTER L
GENERAL BUILDING COMPARTMENTATION AND HEIGHT

This Appendix is intended for adoption by local jurisdictions that want to substitute the text herein for the text in Chapter 5 of the *International Building Code* and to modify portions of Section 903.2 of the International Building Code. This Appendix can also be used as an alternative to the International Building Code requirements for allowable building heights and areas based on Section 104.11 of the International Building Code. The provisions contained in this Appendix are otherwise not mandatory unless specifically referenced in the adopting ordinance of the local jurisdiction.

L501.1 Scope. The provisions of this chapter control the height and ~~area of~~ the type and number of fire compartments within all structures hereafter erected and additions to existing structures

[F] L501.2 (Supp) Address identification. New and existing buildings shall be provided with approved address numbers or letters. Each character shall be a minimum 4 inches (102 mm) high and a minimum of 0.5 inch (12.7 mm) wide. They shall be installed on a contrasting background and be plainly visible from the street or road fronting the property. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other approved sign or means shall be used to identify the structure.

SECTION L502
DEFINITIONS

L502.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AREA, ~~BUILDING~~ FIRE COMPARTMENT. The area included within surrounding exterior walls, compartment walls, (or exterior walls and firewalls) exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the ~~building~~ fire compartment area if such areas are included within the horizontal projection of the roof or floor above.

(Supp) BASEMENT. A story that is not a story above grade plane (See "Story above grade plane" in Section 202).

EQUIPMENT PLATFORM. An unoccupied, elevated platform used exclusively for mechanical systems or industrial process equipment, including the associated elevated walkways, stairs and ladders necessary to access the platform (see Section 505.5).

FIRE COMPARTMENT. An area enclosed and bounded by fire walls, fire barrier walls, exterior walls, or fire-resistance-rated horizontal assemblies of a building.

GRADE PLANE. A reference plane representing the average of finished ground level adjoining the building at exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet (1829 mm) from the building, between the building and a point 6 feet (1829 mm) from the building.

HEIGHT, BUILDING. The vertical distance from grade plane to the average height of the highest roof surface.

MEZZANINE. An intermediate level or levels between the floor and ceiling of any story and in accordance with Section 505.

SECTION L503
GENERAL HEIGHT AND FIRE COMPARTMENT AREA LIMITATIONS

L503.1 (Supp) General. The height and maximum area of any fire compartment and the number of fire compartments in a buildings shall not exceed the limits specified in Tables 503.1(1), 503.1(2), 503.1(3) and 503.1(4) based on the type of construction as determined by Section 602 and the occupancies as determined by Section 302 except as modified hereafter. Each portion of a building separated by one or more fire walls complying with Section 705 shall be considered to be a separate building.

(Delete existing Table 503 entire in its entirety and replace with Tables L503.1(1) through L503.1(4))

~~**TABLE 503**~~
~~**ALLOWABLE HEIGHT AND BUILDING AREAS[a]**~~
~~**Height limitations shown as stories and feet above grade plane.**~~
~~**Area limitations as determined by the definition of "Area, building," per story**~~

TABLE L503.1(1)
MAXIMUM ALLOWABLE BUILDING HEIGHT (Feet and Stories above grade plane)

OCCUPANCY	TYPE IA	TYPE IB	TYPE IIA	TYPE IIB	TYPE IIIA	TYPE VA	TYPE IV	TYPE IIIB	TYPE VB
Feet	UL	160	65	55	65	50	65	55	40
A-5	UL	UL	UL	UL	UL	UL	UL	UL	UL
S-2	UL	11	5	4	4	5	5	4	2
F-2	UL	11	5	3	4	3	5	3	2
B	UL	11	5	4	5	3	5	4	2
R-1, R-2, R-4	UL	11	4	4	4	3	4	4	2
R-3	UL	11	4	4	4	3	4	4	3
M	UL	11	4	4	4	3	4	4	1
F-1	UL	11	4	2	3	2	4	2	1
S-1	UL	11	4	3	3	3	4	3	1
A-3, A-4	UL	11	3	2	3	2	3	2	1
M	UL	11	4	4	4	2	4	4	1

OCCUPANCY	TYPE IA	TYPE IB	TYPE IIA	TYPE IIB	TYPE IIIA	TYPE VA	TYPE IV	TYPE IIIB	TYPE VB
A-2	UL	11	3	2	3	2	3	2	1
I-1	UL	9	4	3	4	3	4	3	2
H-4	UL	7	5	3	5	3	5	3	2
H-3	UL	6	4	2	4	2	4	2	1
U	UL	5	4	2	3	2	4	2	1
A-1	UL	5	3	2	3	2	3	2	1
I-4	UL	5	3	2	3	1	2	3	1
E	UL	5	3	2	3	1	3	2	1
H-5	4	4	3	3	3	3	3	3	2
I-2	UL	4	2	1	1	1	1	NP	NP
I-3	UL	4	2	1	2	2	2	1	1
H-2	UL	3	2	1	2	1	2	1	1
H–1	1	1	1	1	1	1	1	1	NP

UL = unlimited in height
NP = not permitted

TABLE L503.1(2)
MAXIMUM AREA PER FIRE COMPARTMENT (sf) - WITHOUT SPRINKLERS [a, b, c]

OCCUPANCY	TYPE IA/IB	TYPE IIA	TYPE IIIA	TYPE IV AND VA	TYPE IIB AND IIIB	TYPE VB
S-2, F-2	30,267	16,933	16,933	10,933	7,867	4,800
A-3, A-4, B, H-4, I, R, E	26,706	14,941	14,941	9,647	6,941	4,235
A-1, A-2, M	22,700	12,700	12,700	8,200	5,900	3,600
F-1, S-1, H-5	19,739	11,043	11,043	7,130	5,130	3,130
H–1, H-2, H-3	NP	NP	NP	NP	NP	NP

a. One or more fire compartment in the building does not have an automatic fire suppression system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
b. A-5 Assembly uses intended for participation in or viewing outdoor activities shall be permitted to be unlimited in area.
c. Round table values off to nearest 1000.
NP = not permitted

TABLE L503.1(3)
MAXIMUM AREA PER FIRE COMPARTMENT (sf) - WITH SPRINKLERS[a, b, c]

OCCUPANCY	TYPE IA/IB	TYPE IIA	TYPE IIIA	TYPE IV AND VA	TYPE IIB AND IIIB	TYPE VB
S-2, F-2	423,733	237,067	169,333	109,333	78,667	48,000
A-3, A-4, B, H-4, I, R, E	373,882	209,176	149,412	96,471	69,412	42,353
A-1, A-2, M	227,000	127,000	63,500	41,000	29,500	18,000
F-1, S-1, H-5	98,696	55,217	40,861	26,383	18,983	11,583
H–1, H-2, H-3	67,192	37,592	37,592	24,272	17,464	10,656

a. All fire compartments in the building have an automatic fire suppression system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
b. A-5 Assembly uses intended for participation in or viewing outdoor activities shall be permitted to be unlimited in area.
c. Round table values off to nearest 1000.

TABLE L503.1(4)
MAXIMUM BUILDING AREA FACTOR

ACTUAL BUILDING HEIGHT, STORIES	NUMBER OF STORIES ALLOWED BY TABLE 503.1(1								
	1	2	3	4	5	6	7	8	9
1	4	8	12	16	20	24	28	32	36
2	-	6	9	12	15	18	21	24	27
3	-	-	6	8	10	12	14	16	18

L503.2 Building area. The maximum allowable building area shall not exceed the maximum area of fire compartments in accordance with Tables 503.1(2) or 503.1(3) multiplied by the number in Table 503.1(4). A building shall be considered one fire compartment except where subdivided by compartment fire barriers conforming with this section.

L503.2.1 Absolute maximum allowable building area. Regardless of the provisions in Section 503.2, the maximum allowable building area shall not exceed 500,000 square feet.

Exception: Type I construction for buildings containing any occupancy group other than Groups H-1, H-2, H-3, I-1, I-4, S-1, S-2 and U.

L503.2.2 Enclosure. Each fire compartment shall be enclosed by exterior walls, roof, fire rated horizontal assemblies or fire compartment barrier walls. If a building has more than one fire compartment, each fire compartment shall be separated by horizontal or vertical compartment barrier having a fire resistance rating determined in accordance with Table 503.2.2.

L503.2.3 Fire compartment barriers. Fire compartment barriers separating a building into fire compartments shall comply with Sections 503.2.3.1 and 503.2.3.2 and Table 503.3.2.

TABLE L503.2.2
FIRE COMPARTMENT FIRE RESISTANCE (hrs)

	SPRINKLERED	NON-SPRINKLERED
Assembly		
A-1	2	2
A-2	2	2
A-3	2	2
A-4	2	2
A-5	NA	NA
Business		
B	1	2
Educational		
E	2	2
Factory and Industry		
F-1	2	3
F-2	1	2
Hazardous		
H-1	4	4
H-2	3	4
H-3	3	3
H-4	1	2
H-5	2	2
Institutional		
I-1	2	2
I-2	2	2
I-3	2	2
I-4	2	3
Mercantile		
M	1	2
Residential		
R-1	2	2
R-2	2	2
R-3	2	2
R-4	2	2

Storage		
S-1	2	3
S-2	1	2
Utility		
U	1	1

NA = Not Applicable

L503.2.3.1 Horizontal fire compartment barriers. Horizontal fire compartment barriers shall be constructed in accordance with Section 711.

L503.2.3.2 Vertical fire barriers. Vertical fire compartment barriers shall extend from the top of the floor/ceiling assembly below to the underside of the floor or roof slab or deck above or to a termination point at least 30 inches above both adjacent roofs and shall be securely attached thereto. Such fire barriers shall be continuous through concealed spaces, including but not limited to spaces such as above a suspended ceiling.

L503.2.3.2.1 Vertical continuity. Fire compartment barriers shall extend from the foundation to a termination point at least 30 inches above both adjacent roofs.

Exceptions:

1. Two-hour fire-resistance-rated walls shall be permitted to terminate at the underside of the roof sheathing, deck or slab provided:
   - 1.1. The lower roof assembly within 4 feet (1220 mm) of the wall has not less than a 1-hour fire-resistance rating and the entire length and span of supporting elements for the rated roof assembly has a fire-resistance rating of not less than 1 hour.
   - 1.2. Openings in the roof shall not be located within 4 feet (1220 mm) of the fire wall.
   - 1.3. Each building shall be provided with not less than a Class B roof covering.
2. Walls shall be permitted to terminate at the underside of noncombustible roof sheathing, deck, or slabs where both buildings are provided with not less than a Class B roof covering. Openings in the roof shall not be located within 4 feet (1220 mm) of the fire compartment barrier.
3. In buildings of Type III, IV and V construction, walls shall be permitted to terminate at the underside of combustible roof sheathing or decks provided:
   - 3.1. There are no openings in the roof within 4 feet (1220 mm) of a fire wall,
   - 3.2. The roof is covered with a minimum Class B roof covering, and
   - 3.3. The roof sheathing or deck is constructed of fire-retardant-treated wood for a distance of 4 feet (1220 mm) on both sides of the wall or the roof is protected with 5/8 inch (15.9 mm) Type X gypsum board directly beneath the underside of the roof sheathing or deck, supported by a minimum of 2-inch (51 mm) nominal ledgers attached to the sides of the roof framing members for a minimum distance of 4 feet (1220 mm) on both sides of the fire wall.
4. Buildings located above a parking garage designed in accordance with Section 509.2 shall be permitted to have the fire compartment barriers for the buildings located above the parking garage extend from the horizontal separation between the parking garage and the buildings.

L503.2.3.2.2 Supporting construction. The supporting construction for fire compartment barrier walls shall be protected to afford the required fire-resistance rating of the fire compartment barrier supported.

L503.2.3.3 Glazed openings. Glazed openings in fire compartment barriers shall be limited to those in fire doors complying with 715.4.

L503.2.3.4 Fire compartment doors. Doors in fire compartment barriers shall have a fire protection rating of at least 1 hour in accordance with Table 503.2.3.4. Doors in fire compartment barriers shall limit temperature rise to 450°F (250°C) when tested in accordance with NFPA 252.

TABLE L503.2.3.4
FIRE PROTECTION RATING OF DOORS IN FIRE COMPARTMENT BARRIERS (HRS)

FIRE COMPARTMENT BARRIER	DOOR IN FIRE COMPARTMENT BARRIER
1 hr.	1 hr.
2 hr.	1½ hr.
3 hr.	2 hr.

L503.2.3.5 Other openings fire compartment barriers. Openings in 1-hour fire compartment barriers for air-handling shall be protected with fire dampers having a fire protection rating of 1 hour.

L503.3 Smoke management for adjacent fire compartments. Where adjacent fire compartments share a common fire compartment wall or horizontal assembly, or both, for the purpose of creating separate fire compartments, a method of smoke management shall be provided in accordance with Section 503.3.1 for such fire compartments that meet any of the following conditions:

1. The fire compartment is not protected with an automatic sprinkler system in accordance with Section 903.3.1 and contains one or more stories located more than one story above grade plane or
2. The fire compartment contains one or more stories located more than two stories above grade plane having any of the following occupancies:
   2.1. Group A occupancy with an occupant load of 300 or more persons;
   2.2. Group I-1 occupancy; or
   2.3. Group I-2 occupancy.

L503.4 Smoke management methods. Smoke management as required by Section 503.3 shall comply with any one or a combination of any of the following methods, as applicable:

1. Door openings, joints and penetrations in fire compartment separation walls and horizontal assemblies shall be protected as required for smoke barriers in accordance with the following:
   1.1. Door openings shall comply with Section 715.4.3.1.
   1.2. Penetrations shall comply with Section 712.5.
   1.3. Joints shall comply with Section 713.6.
   1.4. Ducts and air transfer openings shall comply with Section 716.5.5.
2. Openings in fire compartment separation horizontal assemblies shall be protected by shaft enclosures in accordance with Section 707. For the purpose of smoke management at fire compartment separations, Section 707.2 shall not apply.
3. Exit stair enclosures penetrating a fire compartment separation horizontal assembly shall be protected as for smokeproof enclosures in accordance with Section 909.20.
4. One or more of the following mechanical methods shall be permitted to be used for smoke management in lieu of Items 1 and 2 above:
   4.1. The pressurization method in accordance with Section 909.6
   4.2. The air flow design method in accordance with Section 909.7 for buildings protected by an automatic sprinkler system in accordance with Section 903.3.1
   4.3. The exhaust method in accordance with Section 909.8 for buildings protected by an automatic sprinkler system in accordance with Section 903.3.1

~~**503.1.1**~~ **L503.5 Special industrial occupancies.** Buildings and structures designed to house special industrial processes that require large areas and unusual heights to accommodate craneways or special machinery and equipment, including, among others, rolling mills; structural metal fabrication shops and foundries; or the production and distribution of electric, gas or steam power, shall be exempt from the height and area limitations of Table ~~503~~ 503.1(1) through 503.1(3).

~~**503.1.2**~~ **L503.6 Buildings on same lot.** Two or more buildings on the same lot shall be regulated as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate maximum area of fire compartments ~~area of buildings~~ are within the limitations of Table ~~503~~ 503.1(1) through 503.1(3) as modified by Sections 504 ~~and 506~~. The provisions of this code applicable to the aggregate building shall be applicable to each building.

~~**503.1.3**~~ **L503.7 Type I construction.** Buildings of Type I construction permitted to be of unlimited tabular heights ~~and areas~~ or number of fire compartments are not subject to the special requirements that allow unlimited fire compartments ~~area buildings~~ in Section 507 or unlimited height in Sections 503.5~~1.1~~ and 504.3 or increased height and areas for other types of construction.

SECTION L504
HEIGHT

L504.1 General. The height permitted by Table 503.1(1) shall be increased in accordance with this section.

Exception: The height of one-story aircraft hangars, aircraft paint hangars and buildings used for the manufacturing of aircraft shall not be limited if the building is provided with an automatic fire-extinguishing system in accordance with Chapter 9 and is entirely surrounded by public ways or yards not less in width than one and one-half times the height of the building.

L504.2 (Supp) Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the value specified in Table 503.1(1) for maximum height ~~is~~ shall be increased by ~~20~~ 5 feet (6096 mm) and the maximum number of stories ~~is~~ shall be increased by one. ~~These increases are permitted in addition to the area increase in accordance with Sections 506.2 and 506.3. For Group R buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2, the value specified in Table 503 for maximum height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one, but shall not exceed 60 feet (18 288 mm) or four stories, respectively.~~

Exceptions:

1. Buildings, or portions of buildings, classified as a Group I-2 occupancy of Type IIB, III, IV or V construction.
2. Buildings, or portions of buildings, classified as a Group H-1, H-2, H-3 or H-5 occupancy.
3. Fire-resistance rating substitution in accordance with Table 601, Note e.

L504.3 Roof structures. Towers, spires, steeples and other roof structures shall be constructed of materials consistent with the required type of construction of the building except where other construction is permitted by Section 1509.2.1. Such structures shall not be used for habitation or storage. The structures shall be unlimited in height if of noncombustible materials and shall not extend more than 20 feet (6096 mm) above the allowable height if of combustible materials (see Chapter 15 for additional requirements).

SECTION L505
MEZZANINES

L505.1 General. A mezzanine or mezzanines in compliance with Section 505 shall be considered a portion of the story below. Such mezzanines shall not contribute to either the ~~building~~ fire compartment area or number of stories as regulated by Section 503.1. The area of the mezzanine shall be included in determining the fire area defined in Section 702. The clear height above and below the mezzanine floor construction shall not be less than 7 feet (2134 mm).

L505.2 Area limitation. The aggregate area of a mezzanine or mezzanines within a room shall not exceed one-third of the floor area of that room or space in which they are located. The enclosed portion of a room shall not be included in a determination of the floor area of the room in which the mezzanine is located. In determining the allowable mezzanine area, the area of the mezzanine shall not be included in the floor area of the room.

Exceptions:

1. The aggregate area of mezzanines in buildings and structures of Type I or II construction for special industrial occupancies in accordance with Section 503.5~~1.1~~ shall not exceed two-thirds of the floor area of the room.
2. The aggregate area of mezzanines in buildings and structures of Type I or II construction shall not exceed one-half of the floor area of the room in buildings and structures equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 and an approved emergency voice/alarm communication system in accordance with Section 907.2.12.2.

L505.3 Egress. Each occupant of a mezzanine shall have access to at least two independent means of egress where the common path of egress travel exceeds the limitations of Section 1014.3. Where a stairway provides a means of exit access from a mezzanine, the maximum travel distance includes the distance traveled on the stairway measured in the plane of the tread nosing. Accessible means of egress shall be provided in accordance with Section 1007.

Exception: A single means of egress shall be permitted in accordance with Section 1015.1.

L505.4 (Supp) Openness. A mezzanine shall be open and unobstructed to the room in which such mezzanine is located except for walls not more than 42 inches (1067 mm) high, columns and posts.

Exceptions:

1. Mezzanines or portions thereof are not required to be open to the room in which the mezzanines are located, provided that the occupant load of the aggregate area of the enclosed space does not exceed 10.
2. A mezzanine having two or more means of egress is not required to be open to the room in which the mezzanine is located if at least one of the means of egress provides direct access to an exit from the mezzanine level.
3. Mezzanines or portions thereof are not required to be open to the room in which the mezzanines are located, provided that the aggregate floor area of the enclosed space does not exceed 10 percent of the mezzanine area.
4. In industrial facilities, mezzanines used for control equipment are permitted to be glazed on all sides.
5. In other than Groups H and I occupancies no more than two stories above grade plane and equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, a mezzanine having two or more means of egress shall not be required to be open to the room in which the mezzanine is located.

L505.5 (Supp) Equipment platforms. Equipment platforms in buildings shall not be considered as a portion of the floor below. Such equipment platforms shall not contribute to either the building area or the number of stories as regulated by Section 503.1. The area of the equipment platform shall not be included in determining the fire area in accordance with Section 903. Equipment platforms shall not be a part of any mezzanine and such platforms and the walkways, stairs and ladders providing access to an equipment platform shall not serve as a part of the means of egress from the building.

L505.5.1 Area limitations. The aggregate area of all equipment platforms within a room shall not exceed two-thirds of the area of the room in which they are located. Where an equipment platform is located in the same room as a mezzanine, the area of the mezzanine shall be determined by Section 505.2 and the combined aggregate area of the equipment platforms and mezzanines shall not exceed two-thirds of the room in which they are located.

[F] L505.5.2 Fire suppression. Where located in a building that is required to be protected by an automatic sprinkler system, equipment platforms shall be fully protected by sprinklers above and below the platform, where required by the standards referenced in Section 903.3.

L505.5.3 Guards. Equipment platforms shall have guards where required by Section 1013.1.

~~**SECTION 506**~~
~~**AREA MODIFICATIONS**~~

~~**506.1 General.** The areas limited by Table 503 shall be permitted to be increased due to frontage *(I_f)* and automatic sprinkler system protection *(I_s)* in accordance with the following:~~

~~$$A_a = \{A_t + [A_t \times I_f] + [A_t \times I_s]\}$$~~ ~~**(Equation 5-1)**~~

~~where:~~

~~*A_a* = Allowable area per story (square feet).~~
~~*A_t* = Tabular area per story in accordance with Table 503 (square feet).~~
~~*I_f* = Area increase factor due to frontage as calculated in accordance with Section 506.2.~~
~~*I_s* = Area increase factor due to sprinkler protection as calculated in accordance with Section 506.3.~~

~~**506.2 Frontage increase.** Every building shall adjoin or have access to a public way to receive an area increase for frontage. Where a building has more than 25 percent of its perimeter on a public way or open space having a minimum width of 20 feet (6096 mm), the frontage increase shall be determined in accordance with the following:~~

~~$$I_f = [F / P - 0.25]W / 30$$~~ ~~**(Equation 5-2)**~~

~~where:~~

~~*I_f* = Area increase due to frontage.~~
~~*F* = Building perimeter that fronts on a public way or open space having 20 feet (6096 mm) open minimum width (feet).~~

~~*P* = Perimeter of entire building (feet).~~
~~*W* = Width of public way or open space (feet) in accordance with Section 506.2.1.~~

~~**506.2.1 (Supp) Width limits.** The value of *W* shall be at least 20 feet (6096 mm). Where the value of *W* varies along the perimeter of the building, the calculation performed in accordance with Equation 5-2 shall be based on the weighted average of each portion of exterior wall and open space where the value of *W* is greater than or equal to 20 feet (6096 mm). Where the value of *W* exceeds 30 feet (9144 mm), a value of 30 feet (9144 mm) shall be used in calculating the weighted average, regardless of the actual width of the open space.~~

~~**Exception:** The value of *W* divided by 30 shall be permitted to be a maximum of 2 when the building meets all requirements of Section 507 except for compliance with the 60-foot (18 288 mm) public way or yard requirement, as applicable.~~

~~**506.2.2 Open space limits.** Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved fire lane.~~

~~**506.3 (Supp) Automatic sprinkler system increase.** Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the area limitation in Table 503 is permitted to be increased by an additional 200 percent (I_s = 2) for buildings with more than one story above grade plane and an additional 300 percent (I_s = 3) for buildings with no more than one story above grade plane. These increases are permitted in addition to the height and story increases in accordance with Section 504.2.~~

~~**Exception:** The area limitation increases shall not be permitted for the following conditions:~~

1. ~~The automatic sprinkler system increase shall not apply to buildings with an occupancy in Group H-1.~~
2. ~~The automatic sprinkler system increase shall not apply to the building area of an occupancy in Group H-2 or H-3. For buildings containing such occupancies, the allowable area shall be determined in accordance with Section 508.3.3.2, with the sprinkler system increase applicable only to the portions of the building not classified as Group H-2 or H-3.~~
3. ~~Fire-resistance rating substitution in accordance with Table 601, Note e.~~

~~**506.4 (Supp) Buildings with more than one story.** The total allowable building area of a building with more than one story shall be determined in accordance with this section. The actual aggregate building area at all stories in the building shall not exceed the total allowable building area.~~

~~**Exception:** A single basement need not be included in the total allowable building area, provided such basement does not exceed the area permitted for a building with no more than one story above grade plane.~~

~~**506.4.1 (Supp) Area determination.** The maximum area of a building with more than one story above grade plane shall be determined by multiplying the allowable area of the first story (A_a), as determined in Section 506.1, by the number of stories above grade plane as listed below:~~

1. ~~For buildings with two stories above grade plane, multiply by 2;~~
2. ~~For buildings with three or more stories above grade plane, multiply by 3; and~~
3. ~~No story shall exceed the allowable area per story (A_a), as determined in Section 506.1, for the occupancies on that story.~~

~~**Exceptions:**~~

1. ~~Unlimited area buildings in accordance with Section 507.~~
2. ~~The maximum area of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.2 shall be determined by multiplying the allowable area per story (A_a), as determined in Section 506.1, by the number of stories above grade plane.~~

~~**506.4.1.1 (Supp) Mixed occupancies.** In buildings with mixed occupancies, the allowable area per story (A_a) shall be based on the most restrictive provisions for each occupancy when the mixed occupancies are treated according to Section 508.3.2. When the occupancies are treated according to Section 508.3.3 as separated occupancies, the maximum total building area shall be such that the sum of the ratios for each such area on all floors as calculated according to Section 508.3.3.2 shall not exceed 2 for two-story buildings and 3 for buildings three stories or higher.~~

SECTION ~~507~~ L506
FIRE COMPARTMENTS PERMITTED TO BE UNLIMITED IN AREA ~~BUILDINGS~~

~~507.1~~ L506.1 General. The area of a fire compartment shall not be limited and only one fire compartment is required in buildings meeting the requirements of Sections 506~~7~~.2 through 506~~7~~.11. ~~The area of buildings of the occupancies and configurations specified herein shall not be limited.~~

~~507.2~~ L506.2 (Supp) Nonsprinklered, one story. The area of the fire compartment in a Group F-2 or S-2 occupancy ~~building~~ no more than one-story in height, shall not be limited when the building is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

~~507.3~~ L506.3 (Supp) Sprinklered, one story. The area of the fire compartment in a Group B, F, M or S occupancy ~~building~~ no more than one-story above grade plane, or the fire compartment in a Group A-4 occupancy ~~building~~ no more than one-story above grade plane, of other than Type V construction, shall not be limited when the building is provided with an automatic sprinkler system throughout in accordance with Section 903.3.1.1 and is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) n width.

Exceptions:

1. ~~Buildings and~~ The fire compartment in structures of Type I and II construction for rack storage facilities that do not have access by the public shall not be limited in height, provided that such ~~buildings~~ fire compartment conform to the requirements of Sections 506~~7~~.2 and 903.3.1.1 and NFPA 230.
2. The automatic sprinkler system shall not be required in ~~areas~~ parts of fire compartments that are occupied for indoor participant sports, such as tennis, skating, swimming and equestrian activities in occupancies in Group A-4, provided that:
   2.1. Exit doors directly to the outside are provided for occupants of the participant sports areas; and
   2.2. The ~~building~~ fire compartment is equipped with a fire alarm system with manual fire alarm boxes installed in accordance with Section 907.
3. Group A-1 and A-2 occupancies of other than Type V construction shall be permitted, provided:
   3.1. All assembly occupancies are separated from other spaces as required for separated occupancies in Section 508.4.4 with no reduction allowed in the fire-resistance rating of the separation based upon the installation of an automatic sprinkler system;
   3.2. Each Group A occupancy shall not exceed the maximum allowable area permitted in Section 503.1; and
   3.3. All required exits shall discharge directly to the exterior.

~~507.4~~ L506.4 (Supp) Two story. The area of the fire compartment in a Group B, F, M or S occupancy ~~building~~ no more than two stories above grade plane shall not be limited when the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, and is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

~~507.5~~ L506.5 Reduced open space. The permanent open space of 60 feet (18 288 mm) required in Sections 507.2, 507.3, 507.4, 507.6 and 507.10 shall be permitted to be reduced to not less than 40 feet (12 192 mm), provided the following requirements are met:

1. The reduced open space shall not be allowed for more than 75 percent of the perimeter of the building.
2. The exterior wall facing the reduced open space shall have a minimum fire-resistance rating of 3 hours.
3. Openings in the exterior wall facing the reduced open space shall have opening protectives with a minimum fire protection rating of 3 hours.

~~507.6~~ L506.6 (Supp) Group A-3 buildings. The area of the fire compartment in a Group A-3 occupancy ~~building~~ no more than one-story above grade plane, used as a place of religious worship, community hall, dance hall, exhibition hall, gymnasium, lecture hall, indoor swimming pool or tennis court of Type II construction shall not be limited when all of the following criteria are met:

1. The fire compartment ~~building~~ shall not have a stage other than a platform.
2. The fire compartment ~~building~~ shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
3. The assembly floor shall be located at or within 21 inches (533 mm) of street or grade level and all exits are provided with ramps complying with Section 1010.1 to the street or grade level.
4. The building shall be surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

~~507.7~~ **L506.7 (Supp) Group H occupancies.** Group H-2, H-3 and H-4 occupancies shall be permitted in unlimited area fire compartments ~~buildings~~ containing Group F and S occupancies, in accordance with Sections 507.3 and 507.4 and the limitations of this section. The aggregate floor area of the Group H occupancies located at the perimeter of the unlimited area fire compartment ~~building~~ shall not exceed 10 percent of the area of the building nor the area limitations for the Group H occupancies as specified in Tables 503.1(2) and 503.1(3) ~~as modified by Section 506.2~~, based upon the percentage of the perimeter of each Group H floor area that fronts on a street or other unoccupied space. The aggregate floor area of Group H occupancies not located at the perimeter of the building shall not exceed 25 percent of the fire compartment area limitations for the Group H occupancies as specified in Tables 503.1(2) and 503.1(3). Group H occupancies shall be separated from the rest of the unlimited area building and from each other in accordance with Table 508.4. For two-story unlimited area fire compartments ~~buildings~~, the Group H occupancies shall not be located more than one story above grade plane unless permitted by the allowable height in stories and feet as set forth in Table 503.1(1) based on the type of construction of the unlimited area building.

~~507.8~~ **L506.8 (Supp) Aircraft paint hangar.** The area of the fire compartment for a Group H-2 aircraft paint hangar no more than one-story above grade plane, shall not be limited where such aircraft paint hangar complies with the provisions of Section 412.4 and is entirely surrounded by public ways or yards not less in width than one and one-half times the height of the building.

~~507.9~~ **L506.9 (Supp) Group E buildings.** The area of the fire compartment for a Group E occupancy ~~building~~ no more than one-story above grade plane, of Type II, IIIA or IV construction shall not be limited when the following criteria are met:

1. Each classroom shall have not less than two means of egress, with one of the means of egress being a direct exit to the outside of the building complying with Section 1018.
2. The fire compartment ~~building~~ is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
3. The fire compartment ~~building~~ is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

~~507.10~~ **L506.10 (Supp) Motion picture theaters.** In fire compartment ~~buildings~~ of Type II construction, the area of the fire compartment for a motion picture theater located on the first story above grade plane shall not be limited when the building is provided with an automatic sprinkler system throughout in accordance with Section 903.3.1.1 and is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

~~507.11~~ **L506.11 Covered mall buildings and anchor stores.** The area of the fire compartment for a covered mall buildings and anchor stores not exceeding three stories in height that comply with Section 402.6 shall not be limited.

SECTION ~~508~~ L507
MIXED USE AND OCCUPANCY

~~508.1~~ **L507.1 (Supp) General.** Each portion of a building shall be individually classified in accordance with Section 302.1. Where a building contains more than one occupancy group, the building or portion thereof shall comply with the applicable provisions of Section 508.2, 508.3 or 508.4, or a combination of these sections.

Exceptions:

1. Occupancies separated in accordance with Section 509.
2. Where required by Table 415.3.2, areas of Group H-1, H-2 and H-3 occupancies shall be located in a separate and detached building or structure.
3. Live/Work Units in accordance with Section 419 are not considered separate occupancies.

~~508.2~~ **L507. 2 (Supp) Accessory occupancies** Accessory occupancies are those occupancies that are ancillary to the main occupancy of the building or portion thereof. Accessory occupancies shall comply with the provisions of Sections 508.2.1 through 508.2.5.3.

~~508.2.1~~ **L507.2.1 (Supp) Area limitations.** Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall not exceed the tabular values in Tables 503.1(2) and 503.1(3), ~~without area increases in accordance with Section 506 for such accessory occupancies~~

~~508.2.2~~ **L507.2.2 (Supp) Occupancy classification.** Accessory occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space.

~~508.2.3~~ **L507.2.3 (Supp) Allowable area and height.** The allowable area of the fire compartment and height of the building shall be based on the allowable area and height for the main occupancy in accordance with Section 503.1. The height of each accessory occupancy shall not exceed the tabular values in Table 503.1(1), without increases in accordance with Section 504 for such accessory occupancies. The area of the accessory occupancies shall be in accordance with Section 508.2.1

~~508.2.4~~ **L507.2.4 (Supp) Separation of occupancies.** No separation is required between accessory occupancies and the main occupancy.

Exceptions:

1. Group H-2, H-3, H-4 and H-5 occupancies shall be separated from all other occupancies in accordance with Section 508.4.
2. Incidental accessory occupancies required to be separated or protected by Section 508.2.5.
3. Group R occupancies shall be separated from other accessory occupancies in accordance with Section 508.4.4

~~508.2.5~~ **L507.2.5 (Supp) Separation of incidental accessory occupancies.** The incidental accessory occupancies listed in Table 508.2.5 shall be separated from the remainder of the building or equipped with an automatic fire-extinguishing system, or both, in accordance with Table 508.2.5.

Exception: Incidental accessory occupancies within and serving a dwelling unit are not required to comply with this section.

TABLE ~~508.2.5~~ L507.2.5 (Supp)
INCIDENTAL USE AREAS

ROOM OR AREA	SEPARATION AND/OR PROTECTION
Furnace room where any piece of equipment is over 400,000 Btu per hour input	1 hour or provide automatic fire-extinguishing system
Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower	1 hour or provide automatic fire-extinguishing system
Refrigerant machinery room	1 hour or provide automatic sprinkler system
Hydrogen cut-off rooms, not classified as Group H	1-hour in Group B, F, M, S and U occupancies. 2-hour in Group A, E, I and R occupancies.
Incinerator rooms	2 hours and automatic sprinkler system
Paint shops, not classified as Group H, located in occupancies other than Group F	2 hours; or 1 hour and provide automatic fire-extinguishing system
Laboratories and vocational shops, not classified as Group H, located in Group E or I-2 occupancies	1 hour or provide automatic fire-extinguishing system
Laundry rooms over 100 square feet	1 hour or provide automatic fire-extinguishing system
Group I-3 cells equipped with padded surfaces	1 hour
Group I-2 waste and linen collection rooms	1 hour
Waste and linen collection rooms over 100 square feet	1 hour or provide automatic fire-extinguishing system
Stationary storage battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies	1-hour in Group B, F, M, S and U occupancies. 2-hour in Group A, E, I and R occupancies

For SI: 1 square foot = 0.0929 m^2, 1 pound per square inch = 6.9 kPa,
1 British thermal unit per hour = 0.293 watts, 1 horsepower = 746 watts,
1 gallon = 3.785 L.

~~508.2.5.1~~ **L507.2.5.1 (Supp) Fire resistance rated separation.** Where Table 508.2.5 specifies a fire-resistance rated separation, the incidental accessory occupancies shall be separated from the remainder of the building by a fire barrier constructed in accordance with Section 706 or a horizontal assembly constructed in accordance with Section 711, or both.

~~508.2.5.2~~ **L507.2.5.2 (Supp) Nonfire-resistance rated separation and protection.** Where Table 508.2.5 permits an automatic fire extinguishing system without a fire barrier, the incidental accessory occupancies shall be separated from the remainder of the building by construction capable of resisting the passage of smoke. The walls shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the fire-resistance-rated floor/ceiling assembly above or fire-resistance-rated roof/ceiling assembly above or to the underside of the floor or roof sheathing, deck or slab above. Doors shall be self- or automatic closing upon detection of smoke in accordance with Section 715.4.7.3. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80.

~~508.2.5.3~~ **L507.2.5.3 (Supp) Protection.** Where an automatic fire-extinguishing system or an automatic sprinkler system is provided in accordance with Table 508.2.5, only the space occupied by the incidental accessory occupancy need be equipped with such a system.

~~508.3~~ **L507.3 (Supp) Nonseparated occupancies.** Buildings or portions of buildings that comply with the provisions of this section shall be considered as nonseparated occupancies.

~~508.3.1~~ **L507.3.1 (Supp) Occupancy classification.** Nonseparated occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space except that the most restrictive applicable provisions of Section 403 and Chapter 9 shall apply to the building or portion thereof in which the nonseparated occupancies are located.

~~508.3.2~~ **L507.3.2 (Supp) Allowable fire compartment area and height.** The allowable fire compartment area and height of the building or portion thereof shall be based on the most restrictive allowances for the occupancy groups under consideration for the type of construction of the building in accordance with Section 503.1.

~~508.3.3~~ **L507.3.3 (Supp) Separation.** No separation is required between nonseparated occupancies.

Exceptions:

1. Group H-2, H-3, H-4 and H-5 occupancies shall be separated from all other occupancies in accordance with Section 508.3.3.
2. All Group R occupancies shall be separated from other occupancies in accordance with Section 508.4.4.

~~508.4~~ **L507.4 (Supp) Separated occupancies.** Buildings or portions of buildings that comply with the provisions of this section shall be considered as separated occupancies.

TABLE ~~508.4~~ L507.4 (Supp)
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

	A[d], E		I		R[c]		F-2, S-2[b,c], U[c]		B, F-1, M, S-1		H-1		H-2		H-3, H-4, H-5	
OCCUPANCY	**S**	**NS**	**S**	**NS**	**S**	**NS**	**S**	**NS**	**S**	**NS**	**S**	**NS**	**S**	**NS**	**S**	**NS**
A[d], E[d]	N	N	1	2	1	2	N	1	1	2	NP	NP	3	4	2	3[a]
I	--	--	N	N	1	NP	1	2	1	2	NP	NP	3	NP	2	NP
R[c]	--	--	--	--	N	N	1	2	1	2	NP	NP	3	NP	2	NP
F-2, S-2[b,c], U[d]	--	--	--	--	--	--	N	N	1	2	NP	NP	3	4	2	3[a]
B, F-1, M, S-1	--	--	--	--	--	--	--	--	N	N	NP	NP	2	3	1	2[a]
H-1	--	--	--	--	--	--	--	--	--	--	N	NP	NP	NP	NP	NP
H-2	--	--	--	--	--	--	--	--	--	--	--	--	N	NP	1	NP
H-3, H-4, H-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	N	NP

For SI: 1 square foot = 0.0929 m^2.

S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
N = No separation requirement.
NP = Not permitted.

a. For Group H-5 occupancies, see Section 903.2.4.2.
b. Areas used only for private or pleasure vehicles shall be allowed to reduce separation by 1 hour.
c. See Section 406.1.4.
d. Commercial kitchens need not be separated from the restaurant seating areas that they serve.

~~508.4.1~~ **L507.4.1 (Supp) Occupancy classification.** Separated occupancies shall be individually classified in accordance with Section 302.1. Each separated space shall comply with this code based on the occupancy classification of that portion of the building.

~~508.4.2~~ **L507.4.2 (Supp) Allowable fire compartment area.** In each story, the ~~building~~ fire compartment area shall be such that the sum of the ratios of the actual building area of each separated occupancy divided by the allowable area of each separated occupancy fire compartment shall not exceed one.

~~508.4.3~~ **L507.4.3 (Supp) Allowable height.** Each separated occupancy shall comply with the height limitations based on the type of construction of the building in accordance with Section 503.1.

Exception: Special provisions permitted by Section 509.

~~508.4.4~~ **L507.4.4 (Supp) Separation.** Individual occupancies shall be separated from adjacent occupancies in accordance with Table 508.4.

~~508.4.4.1~~ **L507.4.4.1 (Supp) Construction.** Required separations shall be fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711, or both, so as to completely separate adjacent occupancies.

SECTION ~~509~~ L508
SPECIAL PROVISIONS

~~509.1~~ **L508.1 (Supp) General.** The provisions in this section shall permit the use of special conditions that are exempt from, or modify, the specific requirements of this chapter regarding the allowable heights and areas of buildings based on the occupancy classification and type of construction, provided the special condition complies with the provisions specified in this section for such condition and other applicable requirements of this code. The provisions of Sections 509.2 through 509.8 are to be considered independent and separate from each other.

~~509.2~~ **L508.2 (Supp) Horizontal building separation allowance**. A building shall be considered as separate and distinct buildings for the purpose of determining fire compartment area limitations, continuity of fire walls, limitation of number of stories and type of construction where all of the following conditions are met:

1. The buildings are separated with a horizontal assembly having a minimum 3-hour fire-resistance rating.
2. The building below the horizontal assembly is no more than one story above grade plane
3. The building below the horizontal assembly is of Type IA construction.
4. Shaft, stairway, ramp and escalator enclosures through the horizontal assembly shall have not less than a 2-hour fire-resistance rating with opening protectives in accordance with Table 715.4.

   Exception: Where the enclosure walls below the horizontal assembly have not less than a 3-hour fire resistance rating with opening protectives in accordance with Table 715.4, the enclosure walls extending above the horizontal assembly shall be permitted to have a 1-hour fire-resistance rating, provided:

   1. The building above the horizontal assembly is not required to be of Type I construction;
   2. The enclosure connects less than four stories; and
   3. The enclosure opening protectives above the horizontal assembly have a minimum 1-hour fire protection rating.

5. The building or buildings above the horizontal assembly shall be permitted to have multiple Group A uses, each with an occupant load of less than 300, or Group B, M, R or S uses.
6. The building below the horizontal assembly shall be protected throughout by an approved automatic sprinkler system in accordance with Section 903.3.1.1, and shall be permitted to be any of the following occupancies:

   1. Group S-2 parking garage used for the parking and storage of private motor vehicles;
   2. Multiple Group A, each with an occupant load of less than 300;

3. Group B;
4. Group M;
5. Group R; and
6. Uses incidental to the operation of the building (including entry lobbies, mechanical rooms, storage areas and similar uses).

7. The maximum building height in feet shall not exceed the limits set forth in Section 503 for the building having the smaller allowable height as measured from the grade plane.

~~509.3~~ L508.3 (Supp) Group S-2 enclosed parking garage with Group S-2 open parking garage above. A Group S-2 enclosed parking garage with no more than one story above grade plane and located below a Group S-2 open parking garage shall be classified as a separate and distinct building for the purpose of determining the type of construction where the following conditions are met:

1. The allowable area of the building shall be such that the sum of the ratios of the actual area divided by the allowable area for each separate occupancy shall not exceed 1.0.
2. The Group S-2 enclosed parking garage is of Type I or II construction and is at least equal to the fire resistance
requirements of the Group S-2 open parking garage.
3. The height and the number of tiers of the Group S-2 open parking garage shall be limited as specified in Table 406.3.5.
4. The floor assembly separating the Group S-2 enclosed parking garage and Group S-2 open parking garage shall be protected as required for the floor assembly of the Group S-2 enclosed parking garage. Openings between the Group S-2 enclosed parking garage and Group S-2 open parking garage, except exit openings, shall not be required to be protected.
5. The Group S-2 enclosed parking garage is used exclusively for the parking or storage of private motor vehicles, but shall be permitted to contain an office, waiting room and toilet room having a total area of not more than 1,000 square feet (93 m_2), and mechanical equipment rooms incidental to the operation of the building.

~~509.4~~ L508.4 Parking beneath Group R. Where a maximum one-story above grade plane Group S-2 parking garage, enclosed or open, or combination thereof, of Type I construction or open of Type IV construction, with grade entrance, is provided under a building of Group R, the number of stories to be used in determining the minimum type of construction shall be measured from the floor above such a parking area. The floor assembly between the parking garage and the Group R above shall comply with the type of construction required for the parking garage and shall also provide a fire-resistance rating not less than the mixed occupancy separation required in Section 508.3.3.

~~509.5~~ L508.5 (Supp) Group R-1 and R-2 buildings of Type IIIA construction. The height limitation for buildings of Type IIIA construction in Groups R-1 and R-2 shall be increased to six stories and 75 feet (22 860 mm) where the first-floor construction above the basement has a fire-resistance rating of not less than 3 hours and the floor area is subdivided by 2-hour fire-resistance-rated fire walls into areas of not more than 3,000 square feet (279 m_2).

~~509.6~~ L508.6 (Supp) Group R-1 and R-2 buildings of Type IIA construction. The height limitation for buildings of Type IIA construction in Groups R-1 and R-2 shall be increased to nine stories and 100 feet (30 480 mm) where the building is separated by not less than 50 feet (15 240 mm) from any other building on the lot and from lot lines, the exits are segregated in an area enclosed by a 2-hour fire-resistance-rated fire wall and the first-floor construction has a fire-resistance rating of not less than $1^1/_2$ hours.

~~509.7~~ L508.7 Open parking garage beneath Groups A, I, B, M and R. Open parking garages constructed under Groups A, I, B, M and R shall not exceed the height and area limitations permitted under Section 406.3. The height and fire compartment area of the portion of the building above the open parking garage shall not exceed the limitations in Section 503 for the upper occupancy. The height, in both feet and stories, of the portion of the building above the open parking garage shall be measured from grade plane and shall include both the open parking garage and the portion of the building above the parking garage.

~~509.7.1~~ L508.7.1 Fire separation. Fire barriers constructed in accordance with Section 706 or horizontal assemblies constructed in accordance with Section 711 between the parking occupancy and the upper occupancy shall correspond to the required fire-resistance rating prescribed in Table 508.3.3 for the uses involved. The type of construction shall apply to each occupancy individually, except that structural members, including main bracing within the open parking structure, which is necessary to support the upper occupancy, shall be protected with the more restrictive fire-resistance-rated assemblies of the groups involved as shown in Table 601. Means of egress for the

upper occupancy shall conform to Chapter 10 and shall be separated from the parking occupancy by fire barriers having at least a 2-hour fire-resistance rating as required by Section 706 with self-closing doors complying with Section 715 or horizontal assemblies having at least a 2-hour fire-resistance rating as required by Section 711, with self-closing doors complying with Section 715. Means of egress from the open parking garage shall comply with Section 406.3.

~~509.8~~ **L508.8 (Supp) Group B or M with Group S-2 open parking garage below**. Group B or M occupancies located no higher than the first story above grade plane shall be considered as a separate and distinct building for the purpose of determining the type of construction where all of the following conditions are met:

SECTION L509
SPRINKLER REQUIREMENTS

L509.1 General. When this appendix is adopted replace the sprinkler requirements for Group E, F-1, M, S-1 Occupancies and repair garages with the following requirements.

903.2.2 (Supp) Group E. An automatic sprinkler system shall be provided for portions of Group E occupancies ~~as follows:~~

1. ~~Throughout all Group E fire areas greater than 20,000 square feet (1858 m_2) in area.~~
2. ~~Throughout every portion of educational buildings~~ located below the lowest level of exit discharge that serves that portion of the building.

   Exception: An automatic sprinkler system is not required in any fire area or area below the level of exit discharge where every classroom throughout the building has at least one exterior exit door at ground level.

[F] 903.2.3 Group F-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy ~~where one of the following conditions exists:~~

1. ~~Where a Group F-1 fire area exceeds 12,000 square feet (1115 m^2);~~
2. ~~Where a Group F-1 fire area is located more than three stories above grade plane; or~~
3. ~~Where the combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2)~~.

[F] 903.2.6 Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy ~~where one of the following conditions exists:~~

1. ~~Where a Group M fire area exceeds 12,000 square feet (1115 m^2);~~
2. ~~Where a Group M fire area is located more than three stories above grade plane; or~~
3. ~~Where the combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2)~~.

[F] 903.2.8 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy ~~where one of the following conditions exists:~~

1. ~~A Group S-1 fire area exceeds 12,000 square feet (1115 m^2);~~
2. ~~A Group S-1 fire area is located more than three stories above grade plane; or~~
3. ~~The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2)~~.

[F] (Supp) 903.2.8.1 Repair garages. An automatic sprinkler system shall be provided throughout all buildings used as repair garages in accordance with Section 406~~, as shown:~~

1. ~~Buildings having two or more stories above grade plane, including basements, with a fire area containing a repair garage exceeding 10,000 square feet (929 m^2).~~
2. ~~Buildings no more than one story above grade plane, with a fire area containing a repair garage exceeding 12,000 square feet (1115 m^2).~~
3. ~~Buildings~~ with a repair garage servicing vehicles ~~parked~~ in the basement.

L509.2 Commercial parking garages. Where this appendix is adopted delete Section 903.2.9.1 of this code.

~~[F] 903.2.9.1 Commercial parking garages.~~ ~~An automatic sprinkler system shall be provided throughout buildings used for storage of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m^2).~~

Reason: The Alliance for Fire and Smoke Containment and Control (AFSCC) Code Action Committee met from August 14 – August 16, 2007 to review the draft of the ICC Code Technology Committee Balanced Fire Protection Features Study Group Code Change Proposal for a new Chapter 5 Compartmentation to replace the current Chapter 5 on Heights and Areas in the International Building Code (IBC). This draft was supplied to us by our representative on the Study Group, Rick Thornberry, and was based on the revised draft which was distributed for the Study Group's August 14, 2007 teleconference. It is also our understanding that there have been further revisions which have occurred to that draft, as well as to the supporting statement, which we have not as yet seen. However, we conducted our review with the information we had available in order to develop an understanding of this very new and challenging concept which we support in general.

We developed this alternative code change proposal in the spirit of working with the Study Group to provide additional input which could be considered by the Committee and the ICC membership as they review it and prepare for the hearings and participate in the upcoming hearings to be held in Palm Springs, CA. By no means are we attempting to circumvent the diligent work of the Study Group or to not honor our commitment to continue to work with the Study Group to develop the alternative concept approach to the traditional height and area requirements in Chapter 5. Rather, it is our purpose to provide constructive input in an effort to highlight some of the technical areas where we have concerns about how the details of the concept will be implemented. Naturally, the devil is always in the details. We believe that our draft will help to facilitate even more discussion and understanding of how this compartmentation concept is intended to be implemented to provide an overall balanced fire protection approach to the construction of buildings under the IBC.

We understand that the Study Group basically put the guts of this code change proposal together in a three day meeting held on August 1 – 3, 2007 in Chicago, IL. Obviously, it would be impossible to get it exactly right within that short period of time. But during that meeting our representative contributed to the proposal and voted to support the concept that it represents realizing that there is a great deal of work required to refine it and develop it to a point where it can actually be used a substitute for Chapter 5. We realize there is still a great deal of work to be done and we want the ICC voting membership to understand that this concept is in its very formative stages and will require a lot of thoughtful and detailed input through the code development process before it is perfected to the point where it can deliver what is being promised.

It is in this spirit of cooperation and working toward the common goal of establishing a truly evolutionary concept of compartmentation to replace the traditional heights and area approach that we want to highlight some of the significant revisions we have made to the Study Group's code change proposal draft or which we believe still need to be made to reflect some of our thoughts as to areas that need additional consideration in depth as follows:

Adequate fire department access to the fire compartments.

Footnote a to Table 503.1(2) which establishes when a building and/or fire compartment is not considered to be sprinklered.

The compartment area limits for sprinklered compartments. The table we have provided is based upon a 1500 gpm fire flow rather than the 2000 gpm fire flow used in the Study Group proposal. It should be noted that the numbers for the nonsprinklered condition are also based on a 1500 gpm basic fire flow (not changed in our proposal).

Determination of the maximum building area factor and the recognition that the number of compartments allowed for the sprinklered case should be greater than for the nonsprinklered case.

Clarification of the maximum allowable building area and the establishment of an absolute maximum allowable building area regardless of the number of compartments allowed within a building.

Clarification of what a fire compartment consists of.

Fire-resistance ratings for compartment separations especially for the sprinklered building case.

A requirement for the supporting construction of fire-resistance rated compartment enclosures providing the same degree of fire-resistance as the compartment enclosure.

Protection of openings in fire compartment barriers.

The application of smoke management methods for adjacent fire compartments that intercommunicate with each other and when the requirement for smoke management should be triggered.

The need for a definition for fire compartment barrier.

The rounding off to the nearest 1000 of the fire compartment areas in the tables.

Reformatting of the tables so that they look more like the current Table 503 which will provide for ease of transition.

Termination of vertical fire compartment barriers that intersect the roof and pass through the roof with a parapet with certain exceptions allowed.

Clarification of what is a building versus what is a compartment when there are multiple compartments within a building.

Automatic sprinkler system thresholds and application of various sprinkler trade-offs.

The revisions proposed to Chapter 9 are necessary for the proper application of Chapter 5 in the proposed new Appendix L. One of the basic concepts behind Chapter 5 in Appendix L is that it establishes, in essence, threshold fire compartment areas for providing automatic sprinkler protection. In other words, if a building designer intends to utilize fire compartments having areas greater than those allowed by Table 503.1(2), then it becomes necessary to install an automatic sprinkler system. So the areas in Table 503.1(2), in essence, replace the areas specified in the subsections of Section 903.2 proposed to be deleted. It should also be noted that the other thresholds for requiring sprinklers in the subsections of Section 903.2 remain unchanged. That is because they are based on factors other than area such as height, occupant load, life safety, or high hazard

In conclusion, we only wish that we had had more time ourselves to review the Study Group's draft and provide more suggested revisions and improvements before the code change submittal deadline. Our one last suggestion is that this new approach be developed as an Appendix Chapter so that it can gain some use as an alternate method after it has been drafted to a point where everyone feels comfortable that it will provide the necessary level of fire and life safety we intend. Then, eventually, it can be substituted for the current Chapter 5 Height and Area approach. This will allow for an orderly transition and also allow code enforcement officials, as well as designers, to become more familiar with the concept and how it is applied before it actually becomes a part of the body of the IBC.

We look forward to the upcoming code hearings in Palm Springs and the opportunity to further review, refine, and comment on the Study Group's code change proposal, as well as ours, in a spirit of cooperation and constructive criticism to arrive at the final destination we all seek.

Cost Impact: This new approach to regulation of building height and area will not increase the cost of overall construction

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G225–07/08
Appendix M (New)

Proponent: Roger Severson, RSA Consulting, representing the Oregon Department of Health Services

Add a new appendix as follows:

APPENDIX M
MEDICAL FACILITIES; CLINIC-OUTPATIENT AND AMBULATORY HEALTH CARE FACILITIES

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance

SECTION M101
SCOPE

M101.1 Scope. The provisions of this appendix, and other applicable provisions of this code, are intended to assist in the determination of classification, certification and other applicable requirements for medical facilities.

The provisions of this appendix apply to buildings, or portions thereof including, but not limited to, the following:

1. Clinic-Outpatient Facilities
2. Ambulatory Health Care Facilities

SECTION M102
DEFINITIONS

M102.1 Definitions. The following words and terms shall, for the purposes of this appendix and as used elsewhere in this code, have the meanings shown herein.

AMBULATORY HEALTH CARE FACILITY. Ambulatory Health Care Facilities shall be as defined in Section 202, of this code.

CAPABILITY FOR SELF-PRESERVATION. For the purposes of determining the classification of health care facilities the capability for self-preservation is the ability of a patient to both mentally and physically recognize and react positively to an emergency and evacuate to a safe location without physical assistance.

CENTER FOR MEDICARE AND MEDICAID SERVICES (CMS). Federal authority having jurisdiction for certification under Medicare and Medicaid health care programs.

CLINIC-OUTPATIENT. Clinic-Outpatient facilities shall be as defined in Section 304.1.1, of this code.

MEDICAL FACILITY. Outpatient offices, clinics or ambulatory health care facilities that provide medical treatment or procedures for patients who are either capable of self-preservation or incapable of self-preservation.

OUTPATIENT. Medical facilities where individual patient care is provided for less than 24 hours, that does not require an overnight occupancy, and where patient care services are performed in a medical facility.

SECTION M103
DETERMINATION OF NUMBER OF PATIENTS

M103.1 General. The number of patients shall be determined as follows using whichever method that generates the greater number of patients served.

1. Two patients for each procedure or treatment room, or;
2. The actual number of procedure/treatment and preparation/recovery spaces within the facility.

SECTION M104
CERTIFICATION FOR FEDERAL FUNDING

M104.1 General. Ambulatory health care facilities that are intended to be certified for federal funding shall, in addition to this code, meet the standards adopted by the Certification of Medicare and Medicaid Services (CMS) and shall include but not be limited to compliance with NFPA 101.

SECTION M105
DETERMINATION OF PATIENTS CAPABILITIES

M105.1 Treatments and procedures rendering patients incapable of self presentation. For the purposes of determining the capability of self-preservation, procedures or treatments that will render patients incapable of self-preservation are those occurring in Ambulatory Health Care Facilities or in Group I-2 occupancies.

M105.2 Treatments and procedures not rendering patients incapable. For the purposes of determining the capability of self-preservation, procedures or treatments not expected to render patients incapable of self-preservation are those occurring in Group B Outpatient clinics.

M105.3 Portion of patients incapable. When it is not possible to determine the capability of self-preservation for every patient, if a large portion of patients using the facility become incapable of self-preservation, the facility should be classified according to the requirements needed to protect such patients.

Reason: A new Appendix M would provide information that will help determine classifications for clinics and health care facilities and provide a process for determining the number of patients that would affect this determination. Additionally, the appendix will assist in conditions relative to health care facilities becoming certified by the Center for Medicare and Medicaid Services (CMS) for federal funding. The provisions within the appendix would help eliminate conflicts between ICC requirements and those for certification which could actually reduce the cost, in some cases.

Cost Impact: The provisions within this appendix would not increase the cost of construction.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

G226–07/08
3108.1

Proponent: Edward L. Keith, APA – The Engineered Wood Association

Revise as follows:

3108.1 (Supp) General. Towers shall be designed and constructed in accordance with the provisions of TIA-222.

Exception: Single freestanding poles used to support lightweight electrical equipment such as cell-phone antennas shall not be required to be non-combustible.

Reason: 1. The proposed code change clarifies the intent of the building code.

2. Historically under the *Uniform Building Code* (1997 UBC, Section 1512, which exempted freestanding "towers" from the non-combustibility requirement provided they extended no more than 75 feet above grade) single, freestanding wood poles have been used for many years to support small, lightweight electronic equipment such as cell phone antennas. The current code is silent on the use of poles.

This code change seeks a clarification of the requirements of Section 3108 for single freestanding poles supporting lightweight electrical equipment such as cell phone antennas, based on many years of good performance in areas covered by the Uniform Building Code. Note that wood poles are used throughout the United States for high voltage electrical, cable, DSL, and telephone lines. In addition to the lines and often considerable stresses they impose on the poles, the poles are also very often used to support very heavy transformers, street lights, traffic signals and junction boxes. Even carrying electrical loads far greater than cell phone antennas, there has historically been no requirement for non-combustible construction for wood poles.

Requiring non-combustible construction for cell phone poles will greatly increase the cost of such items and yet not provide a single iota of public safety as a result. The clarification is requested to prevent the incorrect interpretation of Section 3108 to include single, wood poles supporting cell phone antennas, thus denying the use of an inexpensive solution to a common situation with a long history of excellent performance simply because wood is combustible. Applying Section 3108 is an unnecessary solution to a non-problem.

Cost Impact: The code change proposal will have no impact on the cost of construction and will decrease the cost of cell-phone towers.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF
