



**ICC CODE TECHNOLOGY COMMITTEE
MEETING #14
December 5 - 6, 2007**

DRAFT MINUTES

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Wednesday, December 5, 2007: 8:00 am – 5:00 pm
Thursday, December 6, 2007: 8:00 am – 4:00 pm

1.0 Welcome and introductions - Chair Heilstedt

1.1 Call to order; introductions; welcoming remarks

Chair Heilstedt called the meeting to order at approximately 8:00 am on December 5th, welcoming those in attendance. New CTC member William Schock was noted as replacing Steve Jones who was elected to the ICC Board.

Members present (company/representation): Carl Baldassarra (Schirmer Engineering- Vice Chair), Dick Bukowski (NIST), Dave Collins (AIA), Paul Heilstedt (self- Chair), Ray Kothe (NAHB), Marsha Mazz, (US Access Board), Brian Meacham (Arup), Ron Nickson (NMHC), William Schock (San Leandro, CA), Paul Tellez (Phoenix, AZ), Carl Wren (Austin, TX)

Members absent: Ron Clements (Chesterfield, VA), Jeff Tubbs (alternate to Meacham)

Staff liaison: Mike Pfeiffer

Attendees: A list of attendees is provided at the end of these minutes.

2.0 Approve agenda

It was noted that not all the interested parties who will be presenting information on roof vents (items 9.2 and 9.3) are present at the meeting. These two agenda items will be held until the next meeting.

3.0 Approve minutes of CTC Meeting #13 October 4, 2007

Review and approval held until Thursday morning. Approved as written.

4.0 Carbon Monoxide Alarms

4.1 Working meeting – Review of 2007/2008 cycle code changes

IRC: RB 71

IFGC: FG 48

CTC position: Oppose both. It was noted that CTC currently has established a position in opposition to mandatory CO alarms. Threshold levels are still an issue. UL2034 is not a standard dealing with efficacy of the alarms, just the electronics and electrical continuity. Life expectancy of 5-7 years is problematic.

5.0 Climbable Guards

5.1 Working meeting – Review of 2007/2008 cycle code changes

IBC: E 83 – E 87.

IRC: RB 58 – RB 60

It was suggested that S72, E88, E89, and RB 53 should be considered by the CTC.

S72: Oppose. This code change deals with balusters and cables and the horizontal force which may cause the cable to displace and allow passage of a 4 inch sphere. This issue is covered by ASTM E935 test method for spreading non-rigid rails. However, the standard only applies to metal rails, not plastic. CTC may submit a public comment based on the standard.

E83, E84, E85, E86, E87, RB 58, RB 59, RB 60: Request E85 to be heard first – this is a CTC code change. Support E85. If approved, oppose the remaining changes. If not approved:

E83 – Support. Consistent with CTC position.

E84 – Support. Consistent with CTC position.

E86 – Support. Consistent with CTC position.

E87 – Oppose. Deletes term “seatboard”. This term is needed in order to evaluate guard heights for those scenarios where kids may stand on the seat and thus the guard height needs to be measured from this point.

RB 58 – RB 60. Support. Consistent with CTC position.

E88: No position.

E89: Outside scope of CTC area of study.

RB53. No position on Sections R311.5.3.1 and R311.5.3.3 as this is a tread/riser issue.

Oppose the change to R312.2 as this increases the guard opening height from 4” to 4 3/8”.

5.2 Research program update

It was noted that CTC comments to date have been incorporated into the report. The next step in the process is the peer review. The report is scheduled to be finalized and issued in Jan/Feb 2008. Questions arose concerning the 61 incidents noted in the report and whether or not NOMMA was going to further investigate the details of the incidents. It was reported that NOMMA could not further investigate - such requests of CPSC had to come from a representative of government.

In response to whether or not further investigation is warranted, it was stated that the report was conservative in nature as the number of incidents was .032% and an additional 61 incidents will not impact the outcome appreciably.

CTC will not request further investigation of the 61 incidents.

5.3 Study Group report

In anticipation of the NOMMA report being completed soon, a CTC draft report on Guards was distributed. Under the “recommendations” portion of the report, CTC requested that the report be revised to not cite Interim Reports 1 and 2 but rather summarize Interim Reports 1 and 2 and be included in this report in order to make the report comprehensive. This report will not be issued until the NOMMA report is issued in its final form and the CTC takes a formal position on the NOMMA report.

6.0 Child Window Safety

6.1 Working meeting – Review of 2007/2008 cycle code changes

IRC: RB 173, RB 174

RB173: The Child Window Safety Study Group recommends the following modification to be presented at the 2008 Code Development Hearing. It was reported that the SG was not unanimous in this recommendation – WDMA was not in favor of this modification.

***R613.2 Window sills.** In dwelling units, where the opening of an operable window is located more than 72 inches (1829 mm) above the finished grade or surface below, the*

lowest part of the clear opening of the window shall be a minimum of 24 36 inches (mm) above the finished floor of the room in which the window is located. Glazing between the floor and 24 36 inches shall be...[Remainder unchanged]

In making this recommendation modification, the following was offered:

The CTC Window Safety Study Group must address the minimum sill height of windows which are not protected with guards, screens or opening limiting devices. The study of Fall Safety prepared for NOMMA very efficiently places within a few pages the data on window fall incidents and the means of reducing the number of incidents.

U.S. Fall Injury Data

The 1,421,137 injuries reported by NEISS between 2002 and 2005, inclusive, correspond to a national average of 51,217,603 based on weighting data included with the record data. The average over the four years is 12,804,401. The weighted estimate of 1,117,278 incidents on average annually for children between the ages of 18 months and 4 years represents 8.7 percent of these incidents. For all the incidents to children between the ages of 18 months and 4 years, 5.6 percent involved stairs, 1.22 percent involved windows, and 0.87 percent involved porches, balconies, open-sided floors, and floor openings. (NOMMA, pg. 7, 1st para.)

This data results in an estimate of 12,603 incidents of U.S. children between the ages of 18 months and 4 years falling from a window each year.

The NOMMA Study summarizes on pages 30-33 the results of studies of window falls in several jurisdictions.

Study	Location	Falls	% fatalities
Vish et al. (2005)	Chicago	11/yr	
Istre et al. (2003)	Dallas county	17/yr	
Benoit et al. (2002)	L.A. county	12/yr (11%)	4% (4 yrs old or less)
Stone et al. (2000)	Cincinnati	12/yr (6.3%)	4.7%
Benoit et al. (2000)	Northern Virginia	11/yr (11%)	

Center of Gravity

The standing center of gravity of children aged 2 to 3.5 years is 24.1 inches (50th percentile is 22.2 inches) and of children aged 3.5 to 4.5 is 25.2 (50th percentile is 23.6). (NOMMA, pg.11, Table 2). A reasonable expectation for the Code is that, absent any fall protection in the window opening, a minimum sill height will be required to reduce the ability of a child to climb onto the sill enabling the fall through the opening. Using a child target age of up to 4 years of age and the associated center of gravity, the code mandated height of 24” is not adequate. A child need only extend themselves on their toes, stand on modest stack of books or blocks or hoist themselves a matter of a few inches with their arms to be able to flop onto the sill and expose themselves to the window opening and the associated risk of falling.

Protection Devices

The window opening limiting devices as regulated in the code provide an unobtrusive, inexpensive and fail-safe opportunity to provide window fall protection for all windows at every window sill height.

The CTC voted to approve submitting the modification above.

The following second modification was suggested. It should be noted that this modification was not voted on by the SG:

R613.2 Window sills. *In dwelling units, where the opening of an operable window is located more than 72 inches (1829 mm) above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches (mm) above the finished floor of the room in which the window is located. Glazing that have an operable active section capable of permitting an opening between the floor and 24 inches (mm) shall be fixed or such openings shall not permit passage ~~have openings~~ through which a 4-inch-diameter (102 mm) sphere can ~~cannot~~ pass.*

CTC noted confusion on the proposed wording. The intent being one of limiting the operable portion of the window to a 4 inch maximum. The following was suggested to replace the second sentence:

Operable sections of windows shall not permit openings that allow passage of a 4 inch diameter sphere where such openings are located within 24 of the finished floor.

CTC agreed to submit the modification above.

The CTC then discussed the applicability of the proposed referenced standard SMA 6001 in the exceptions dealing with screen compliance. Under letter of October 2, 2007 (previously distributed to the CTC), SMA indicates that the standard should not be referenced within the scope as noted in the proposed exception. SMA notes that the screen provisions in the standard are not intended to prevent falls.

CTC agreed to submit a modification to delete the reference to SMA 6001.

RB174: Oppose. Support RB 173 as noted above with the modifications.

6.2 Study group report

See item 6.1 and the modification to raise the sill height to 36”.

7.0 Care Facilities

7.1 Working meeting – Review of 2007/2008 cycle code changes IBC: G 22 – G 24, G 30 – 36, G 225

G23: As directed by the CTC at the last meeting, the Care Facilities Study Group has been focusing their attention on ambulatory health care and modifications to G23 for the following areas:

- Smoke compartments and how multi-tenants impact such design
- Sprinkler thresholds for facilities such as strip malls
- Fire alarm provisions

The CTC voted to submit the following modification to G23:

304.1 Business Group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

Ambulatory health care facilities (see section 421)

AMBULATORY HEALTH CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to individuals who are rendered incapable of self-preservation by the services provided.

SECTION 421 AMBULATORY HEALTH CARE FACILITIES

421.1 General. Occupancies classified as ~~Group B~~ Ambulatory Health Care Facilities shall comply with the provisions of this section and other applicable provisions of this code.

Delete proposed sections 421.2 and replace with the following:

421.2 Separation. Ambulatory Health Care Facilities where four or more care recipients are rendered incapable of self preservation at any given time shall be separated from adjacent spaces, corridors or tenants with a fire partition installed in accordance with Section 708.

421.3 Smoke compartments. Each Ambulatory Health Care Facility larger than 10,000 square feet (929 m²) shall be provided with a smoke barrier to subdivide the facility into not less than two smoke compartments. The area of any one such smoke compartments shall not exceed 22,500 square feet (2092 m²). The travel distance from any point in a smoke compartment to a smoke barrier door shall not exceed 200 feet (60 960 mm). The smoke barrier shall be installed in accordance with Section 709 with the exception smoke barriers shall be continuous from outside wall to an outside wall, a floor to a floor, or from a smoke barrier to a smoke barrier or a combination thereof.

421.3.1 Refuge area. At least ~~30-15~~ net square feet (2.8 m²) per ~~nonambulatory~~ patient occupant shall be provided within the aggregate area of corridors, patient rooms, treatment rooms, lounge or dining areas and other low-hazard areas on each side of each smoke barrier.

421.3.2 Independent egress. A means of egress shall be provided from each smoke compartment created by smoke barriers without having to return through the smoke compartment from which means of egress originated.

421.4 Automatic Sprinkler Systems. Automatic sprinklers systems shall be provided for ambulatory health care facilities in accordance with Section 903.2.2.

421.5 Fire alarm systems. A fire alarm system shall be provided for ambulatory health care facilities in accordance with Section 907.2.2.

903.2.2 (IBC [F] 903.2.2) ~~Group B~~ ambulatory health care facilities. An automatic sprinkler system shall be ~~provided for~~ installed throughout all fire areas containing a ~~Group B~~ Ambulatory Health Care Facility occupancy, when either of the following conditions exist at any given time ~~are met:~~

1. Four or more care recipients are rendered incapable of self preservation ~~at any given time~~

2. One or more care recipients that are incapable of self preservation are located at other than the level of exit discharge.

[F] 907.2.2.1 Group B. A manual fire alarm system ~~that activates the occupant notification system in accordance with Section 907.6~~ shall be installed in Group B occupancies where one of the following conditions exists:

1. The combined Group B occupant load of all floors is 500 or more.
2. The Group B occupant load is more than 100 persons above or below the lowest level of exit discharge.
3. Fire areas containing a Group B occupancy classified as an ambulatory health care facility

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

~~A manual and automatic fire alarm system shall be installed in all Group B ambulatory health care facilities.~~

[F] 907.2.2.2 Group B - Ambulatory health care facilities. Fire areas containing ambulatory health care facilities, shall be provided with an electrically supervised automatic smoke detection system installed within the ambulatory health care facility(s) and in public use areas outside of tenant spaces, including public corridors and elevator lobbies.

Exception: Building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

G22, G24, G30 and G33. Oppose. These proposals deal with ambulatory health care – G23 as modified reflects CTC’s position.

G31. Support with a modification to delete the exception. An I-4 classification is appropriate for all adult care facilities where the occupants are under supervision, regardless of their response capabilities.

G32. Oppose in favor of G31 as modified. If G31 fails, support G32.

G34. Oppose. Accreditation differs from state to state.

G35. Originally CTC was in a position of support. A concern was voiced that the exception to the R-3 provisions may be interpreted as requiring sprinklers in all single family dwellings constructed to the IRC. No position.

G36. Support as modified with the following modification.

R-4 Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code, or shall comply with the International Residential Code provided that the building is protected by an automatic extinguishing system installed in accordance with Section 903.2.7.

~~*Exception: Facilities complying with the International Residential Code need not meet the construction requirements of a Group R-3 provided that the building is protected by an automatic extinguishing system installed in accordance with Section 903.3.1.1 or 903.3.1.2.*~~

G225. No position. A CTC position on this code change is premature as the CTC has not completed this area of study. It is noted that much of the proposal seems to be more like commentary than code text.

7.2 Working meeting – Review of CTC Study Group Draft 2

No activity.

7.3 Study group report

See item 7.1 – proposes modifications to G23.

8.0 Review of NIST WTC Recommendations

8.1 Working meeting – Review of 2007/2008 cycle code changes

IBC: S 59, S81

IFC: F 84 – F87, F 95, F 171, F 204, F 211

IBC: FS 7, FS 113 - FS 115

IBC: G 46, G 51 – G 53, G 56 – G 58, G 60, G 61, G 65 – G69, G 108, G 193 – G 200

IBC: E 3 , E 4, E 14, E 135, E 145 – E 149

Add S101 to the list of code changes for CTC consideration.

S101. Support. This proposal reflects a broad based consensus of the structural community. Both the NIBS MMC and ICC TRB will be reviewing this proposal in advance of the hearings.

S59. Oppose. The concerns voiced last cycle with the ICC TRB proposal remain. CTC prefers S101.

S81. Support. Questions arose as to availability of the standard. Staff to contact ASCE.

F84. Support with a modification. It is not clear as to the basis for the increase in room size from 96 sq. ft. to 250 sq. ft. What seems to be important is not the overall size but rather the net clear space in order to adequately staff the room.

Modification: Revise 250 sq. ft. to 200 sq. ft.

F85. Support. These are key fire resistant components to ensuring adequate fire separation of the building.

F86. Oppose only the portion of the change dealing with 509.2 – the code can't control the entrances to a building.

F87. Oppose. Support F171 as modified.

F95. Support as modified. Replace “furnishings” with “furniture”. Consistent with the IFC.

F171. The “Repeater” task group has reviewed the original proposal and based on the feedback from the CTC at the last meeting, proposes the following modifications in an effort to coordinate both F171 as proposed by the CTC and F87 as proposed by the Joint Fire Service Review Committee.

907.2.12.2 (IBC [F] 907.2.12.2) (Supp) ~~Fire department~~ Emergency response communication system. *An approved two-way, ~~fire department~~ emergency response communication system designed and installed in accordance with this section shall be provided for ~~fire department~~ use during emergencies in buildings classified as high rise buildings or underground buildings, in accordance with Section 403.1 or Section 405.1 respectively, of the International Building Code.*

Exceptions:

1. ~~Where approved by the building code official and the fire code official, a wired communication system shall be permitted to be installed or maintained in lieu of a bi-directional amplifier system. Wired fire department communications systems shall be designed and installed in accordance with NFPA 72 and shall operate between a fire command center complying with Section 509, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department communication device shall be provided at each floor level within the enclosed exit stairway.~~

2. ~~Where it is determined by the fire code official that amplification of the fire department communication systems is not needed.~~

907.2.12.2.1 (IBC [F] 907.2.12.2.1) System operation. *The ~~fire department~~ emergency response communication system shall operate between the exterior of the building, a fire command center complying with Section 509 where required or provided, and internal areas of the building. The bi-directional amplifier system shall be compatible with the ~~fire department~~ emergency response radio communication system and shall be designed to provide 95% radio coverage over 95% of the net floor area while operating the response agency’s standard portable radio located between 20 inches and 48 inches above finished floor based on a 3 watt portable radio nominally located at waist level of a standing or walking adult.*

Exceptions:

1. Where a wired communication system is required by the fire department, a wired system shall be installed and maintained in lieu of a bi-directional amplifier system. Wired emergency response communications systems shall be designed and installed in accordance with NFPA 72 and shall operate between a fire command center complying with Section 509, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. An emergency response communication device shall be provided at each floor level within the enclosed exit stairway.

2. Where affected emergency response agency radio communication systems achieve adequate radio reception without amplification.

907.3.5 ~~Fire department~~ Emergency response communications in existing buildings. *An approved two-way, ~~fire department~~ emergency response communication system designed in accordance with Section 907.2.12.2 shall be provided for fire department use in existing buildings classified as high rise buildings or underground buildings, in*

accordance with Section 403.1 or Section 405.1 respectively, of the International Building Code.

Exceptions:

1. Where ~~approved by the building code official and the fire code official, a wired communication system is required by the fire department, a wired system shall be permitted to be installed or~~ and maintained in lieu of a bi-directional amplifier system. Wired fire department emergency response communications systems shall be designed and installed in accordance with NFPA 72 and shall operate between a fire command center complying with Section 509, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department emergency response communication device shall be provided at each floor level within the enclosed exit stairway.

2. Where ~~it is determined by the fire code official that amplification of the fire department communication systems is not needed~~ affected emergency response radio communication systems achieve adequate radio reception without amplification.

~~907.3.5.1 Timing of Installation. Wherever existing wired communication systems cannot be repaired, they shall be replaced with a compliant bi-directional amplifier system. All existing high-rise buildings shall be made compliant within a time frame established by the adopting authority.~~

The “repeater” task group further recommends the following public comment to F171:

~~403.7 (IBC [F] 403.7) Fire department Emergency response communications system. A two-way fire department emergency response communications system shall be provided for fire department use during emergencies in accordance with Section 907.2.12.3~~

~~403.11 (IBC [F] 403.11) Emergency power systems. An emergency power system complying with Section 2702 shall be provided for emergency power loads specified in Section 403.11.1.~~

~~403.11.1 (IBC [F] 403.11.1) Emergency power loads. The following are classified as emergency power loads:~~

- ~~1. Exit signs and means of egress illumination required by Chapter 10;~~
- ~~2. Elevator car lighting;~~
- ~~3. Emergency voice/alarm communications systems;~~
- ~~4. Automatic fire detection systems; and~~
- ~~5. Fire alarm systems.~~
- ~~6. Emergency response communication system~~

~~New definition: **EMERGENCY RESPONSE COMMUNICATION SYSTEM.** A system to facilitate communications by response agencies during emergency conditions, including but not limited to fires and medical emergencies.~~

Discussion:

- Non wired systems do not work in all cases. Instances of them not working were cited.
- Performance of system is impacted by the amount of tenant fit-out. Tests yield different results in empty vs occupied buildings.
- Timing of installation (907.3.5.1) should not be a code requirement. The systems last approximately 18 years and as such they will be replaced. No need for a further upgrade at the time of replacement.

CTC voted to propose the modification noted above.

F204. Oppose. Support F171 as modified.

F211. Oppose. This places an undue burden due to its retroactivity. Although the NIST WTC report is cited as the basis, this has not been substantiated.

FS7. Oppose. This is similar to the 2 psi robustness criteria proposed last cycle for exit stair walls but applies to all fire rated walls. No basis to support this requirement.

FS113. Support as modified. Modification – Keep first sentence without change. Second sentence as proposed.

FS114. Oppose. The code is structured such that the specific provisions needed to achieve a rating are found in Ch 7 – not in a definition. A definition may be easily overlooked.

FS115. Support as modified. Keep the phrase “and assemblies” in 714.1. CTC’s position is that it supports FS113 and FS115 – this means the two will need to be correlated by staff in order to make it clear that the bracing members essential for vertical stability (FS113) are considered part of the primary structural frame – effectively FS113 text would modify Item 4 of 714.1.1 and Item 3 of 714.1.2.

G46. Oppose. This proposal is similar to TRB’s proposal last cycle. Issues: does not allow for hydraulic calculation as an alternative; riser separation may fall outside of stair enclosures; remote operated valves may not be reliable.

CTC created a Task Group of: Wren, Baldassarra, Collins and Schock to develop a public comment to address this issue. A rep from the TRB will be invited to participate.

G51 & G52. Oppose. Issues:

- Both define local failure but define it differently. Difficult to achieve consensus on what constitutes local failure.
- As a performance option, it relies heavily on the input criteria which may or may not be supported
- Does not address the reliability of systems such as sprinklers as it assumes the sprinklers are not operational – eliminates part of the performance package that can be designed into the building.

G53. Oppose. Support F171.

G56 ,G57, G65. Oppose all three. These proposals are similar to proposals heard last cycle dealing with impact resistance of rated stair enclosures. G65 expands the application to elevator shafts. In all three proposals, the event being designed for is not stated or substantiated.

G58. Oppose. Similar to TRB proposal from last cycle. Issues noted are the same as last years proposal: false sense of security; privacy and liability concerns; maintenance of system not identified.

It was noted that a holistic approach to high rise provisions is preferred over a piece-meal approach. In early April/2008, NIST and the NIBS/MMC will be sponsoring a planning session conference similar to the “Early House” conference from years back. Place this issue on the May CTC agenda – Carl Baldassarra to develop a scope and objectives to be discussed

at the next meeting. The possible outcome being a request to the ICC Board that an Area of Study be assigned to the CTC.

G60. No position. The proposal is very prescriptive – there may be other solutions.

G61. Oppose. Section 1015.2 regulates separation of exit enclosures – why have similar requirements in the high rise section?

G66 & G67. CTC appointed a task group to study the new requirements for the additional stair. The task group feels the provisions are: overly restrictive; lack substantiation; and do not address issues such as a small floor plate and the overdesign resulting from the additional stair as it relates to floor egress capacity. G 66 proposes to relax the impact of the required additional stair that was approved last cycle and G67 proposes the deletion of the requirement altogether. Support G67. If G67 fails, CTC supports G66, modified as follows:

***403.17 (Supp) Additional Exit Stairway means of egress.** For buildings other than Group R-2 that are more than 420 feet (128 m) in height, one additional exit stairway means of egress meeting the requirements of Section 1009 and 1020 Chapter 10 shall be provided in addition to the minimum number of exits required by section 1019.1. The total width of any combination of remaining stairways with one stairway removed shall not be less than the total width required by Section 1005.1. Scissor stairs shall not be considered the additional exit stair required by this section. An additional stair is not required on any floor where the minimum number of exits required by Section 1019.1 is provided and the total width of any combination of exit stairs with any one stairway removed satisfies the requirement of Section 1005.1 for total width required.*

G68 & G69. Oppose G68 in favor of supporting G69. There has been additional information that has been investigated and reported on the relationship between bond strength and density of spray-on fire resistant materials. It was originally thought that the higher the density, the more robust the material and the higher the bond strength. New investigations note:

- Porosity is more important than density and bond strength relative to robustness and adhesion
- There is a new standard being developed to measure thermal conductivity – “slug calorimeter”. This is being processed via ASTM and is anticipated to be complete in about one year
- Inspection is the best mechanism to ensure adequate coverage

G108. Support. Issues noted:

- What is the criteria the AHJ is to use relative to risk?
- Better suited for the Performance Code?
- This has been developed by a consensus of the structural community
- Reduces burden on AHJ as it impacts the AHJ however the AHJ is not responsible for the cost of the assessment

G193 – G200. This group of proposals are a follow-up to the approval of the fire service elevator provisions approved last cycle.

G193. Oppose. The term “robust” carries with it a measure of integrity. The provisions have not been evaluated as being “robust”.

G194. Oppose. Consistent with CTC position on G57.

G195. Oppose. How is the light level measured when the car is blocking the light source?

G196. Oppose. Code change goes beyond the scope of fire fighter use of elevators. This proposal does not have ASME task group support.

G197. Oppose. The basis for the increase in size is not noted. How many firefighters does this assume? The number of fire fighters will vary by fire department.

G198. Oppose. The ASME task group is continuing with its hazard analysis. The proposal lacks justification for this level of redundancy.

G199. No position.

G200. No position. This proposal is viewed by the elevator industry as addressing the most important issue – water infiltration in the elevator shaft. The CTC considered a modifications to require shunt trips and delete the requirements for water protection in the machine rooms – no consensus. Questions arose as to what constitutes a “gasketed barrier”.

E3. Support. Prefer this proposal over CTC’s E4 proposal.

E4. CTC proposal - Support only if E3 fails.

E14. Support provisions for occupant use of elevators. Issues:

- The provisions are voluntary, not mandatory.
- These provisions were derived from the ASME task force although the task force has not completed its work.
- It is time for a change in philosophy in the use of elevators and this will initiate the discussion.
- CTC should only support the concept but not as written as the proposal includes interpretive statement such as: “ approved egress analysis”; the second sentence in 3008.3.
- Proposal lacks impact protection for hoistway in addition to the lobby

E135. Oppose. Similar TRB proposal as last cycle. No technical basis for the 50’ limitation. Not practical for buildings with offsets as the building gets taller.

E145 – E149. Exit path markings.

E145. No position. The CTC has not reviewed UL 1994.

E146. No position. The phrase “solid and continuous” may eliminate other viable options.

E147. No position.

E148. No position.

E149. No position.

9.0 Balanced Fire Protection

9.1 Working meeting – Review of 2007/2008 cycle code changes

Vertical openings: IBC: FS 118, FS 161, FS 162

FS 118, FS 161, FS 162. Oppose all three. See agenda item 9.4 for a discussion on the Vertical Opening Study Group. The CTC has asked the SG to look at all three proposals with an eye towards a public comment to address the three code changes.

Features: IBC: G 110, G 111, G 115, G 117 – G 120

G110, G111, G113, G115 - G120, G123 – G127, G133, G137 – G139, G224. These are all height and area related code changes. It was noted that the CTC BFP Features SG met in late November and took positions on all of these code changes. CTC considered each of the proposals individually, with input as to the BFP Features SG position on each proposal. The following is the position of the CTC on each proposal, which mirrors the position of the BFP Features SG for all the proposals except as noted.

G110. This is a CTC BFP Features SG proposal. CTC position - As modified. During the

discussion this code change, the proponent of G224 noted the significant differences between this proposal and G224. This comparison also occurred at the CTC BFP Features SG meeting. During the discussion on this proposal, a spreadsheet was presented which illustrated the impact on building size based on G110 vs the current code – typically G110 would allow a larger building, while it was noted that it would also be compartmented into fire rated compartments.

AREA, FIRE COMPARTMENT. *The floor area of a fire compartment 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 fire compartment area if such areas are included within the horizontal projection of the roof or floor above.*

503.2.2.2.1 Vertical continuity. *Fire compartment barriers shall extend from the foundation ~~to the underside of the roof deck.~~ to a termination point at least 30 inches above both adjacent roofs.*

Exceptions: As proposed

503.2.2.2.2 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.*

Exceptions:

1. *The supporting construction for a 1 hr. fire compartment barrier wall in buildings of Type IIB, IIIB and VB construction, not protected throughout by sprinklers in accordance with Section 903.3.1.1 or 903.3.1.2, shall be supported by a structure having a layer of 20 minute fire-resistance rated finish protection.*
2. *The supporting construction for a 1 hr. fire compartment barriers in buildings of Type IIB, IIIB and VB construction that are protected by sprinklers throughout in accordance with Section 903.3.1.1 ~~or 903.3.1.2~~ shall not be required to be protected.*

503.2.2.5 Other openings fire compartment barriers. *Openings in ~~4-hour~~ fire compartment barriers for ducts and air transfer openings air handling shall be protected in accordance with Section 707 and 716 with fire dampers having a shall have a minimum fire protection rating of 1 hour.*

G111. As modified. It was noted that the cost statement should state the proposal will not increase the cost of construction. Modification – Delete “any” in the exception to 3403.1 and in 3410.2.3.

G113. Oppose.

G114. Oppose.

G115, G117 – G120. Support. CTC BFP Features SG proposal to reduce building height for non-rated construction of certain occupancies. G115 and G117 cost statement should state that the proposals will increase the cost of construction.

G116. Oppose.

G123. Oppose.

G124. Oppose. Lack of substantiation. CTC BFP Features SG took a “no position” on this

code change as the requisite voting majorities were not achieved.

G125. Oppose. Lack of substantiation. CTC BFP Features SG took a “no position” on this code change as the requisite voting majorities were not achieved.

G126. Oppose. The concern voiced by the CTC was the level of ambiguity in FS 17. CTC BFP Features SG took a “no position” on this code change as the requisite voting majorities were not achieved.

G 127. Oppose.

G133. Oppose.

G137. Oppose.

G138. Oppose.

G139. Oppose.

G224. Oppose. It was noted that there was difficulty transcribing the provisions of the current text along with that of G110 and revisions there-to into this proposal. The CTC BFP Features SG acted on each significant difference between G110 and G224 at their meeting. The rationale for placing this in the appendix was to allow on a case-by-case basis the use of what will be viewed by many as a radical departure for height and area considerations.

F298. Oppose.

9.2 Roof vent presentations

Presentations held until the next meeting due to one of the presenters not in attendance at the meeting.

9.3 Roof vent working meeting – Review of 2007/2008 code changes

IFC: F 191 – F 200

IBC: E 112 - 115

No position on all roof vent proposals. Action pending roof vent presentations.

9.4 Study Group reports: Features, Methodology, Vertical openings

Features: The SG met November 27 -28, the focus being to determine positions on the 2007/2008 height and area related code changes. Next action is a conference call on January 15th to discuss the upcoming code development hearings and to assess the risk management study being performed.

Methodology. CTC need to evaluate and assess the future of this SG.

Vertical openings. A brief report was provided. It noted that the SG had two courses of action to pursue relative to the smoke migration provisions of Chapter 7: a “surgical” approach which identifies the problems and concerns and then submitting changes in response; and a “clean sheet” approach which takes an overview approach to looking at the problem. To date, the SG has not come to consensus.

Some members of the SG feel the SG should be disbanded. It was noted that the response to emails in this regard has been minimal. The SG agrees that Chapter 7 needs work but there is no consensus on how to solve the problem.

CTC position on this SG is as follows:

- Retain the SG
- Look towards achieving consensus, and see if the SG can agree on a public comment to address FS118, FS161 and FS162.
- If a public comment cannot be agreed on, issue a SG report, including minority view
- If SG is disbanded, do not roll this activity into the CTC BFP Features SG

10.0 2008 CTC

The ICC Board acted on the Steering Committee on Councils nominations for the 2008 CTC, including staggering the appointments. All current CTC members who re-applied were re-appointed. New members appointed are: Erin Ashley (National Ready Mix Concrete Association); Bob Boyer (West Palm Beach, FL); Barry Gupton (North Carolina Department of Insurance); Wade Hill (Nashville, TN); Mike Love (Montgomery County, MD).

Out-going CTC members Marsha Mazz, Brian Meacham and Paul Tellez were thanked for their participation as initial members of the CTC when it was formed.

11.0 Old business

None.

12.0 New business

None.

13.0 Future Meetings (tentative)

13.1 CTC Meeting #15: May 22 – 23, 2008

Due to Memorial Day weekend, CTC meeting was revised to May 21 – 22. CTC Study Groups will meet on May 19 – 20.

CTC Meeting #16: August 13 – 14, 2008

CTC Meeting #17: October 15 – 16, 2008

CTC Meeting #18: December 10 – 11, 2008

13.2 Establish tentative meeting #15 agenda

- Review actions at 2008 Code Development Hearings and develop public comments (due June 9th)
- Finalize Climbable Guards report
- Finalize Care Facilities report

14.0 Adjourn

The meeting was adjourned at approximately 3:30 pm on December 6th.

CTC website for posted materials: <http://www.iccsafe.org/cs/cc/ctc/index.html>

**ICC CODE TECHNOLOGY COMMITTEE
MEETING #14**

DRAFT MINUTES

List of Attendees

Greg Keith	The Boeing Company
Diana Hanson	NADRA
Dave Cooper	SMA
Sam Francis	AF&PA
Tom Zuzik, Jr.	Artistic Railings
Rick Thornberry	The Code Consortium
Tom Lariviere	IFCC
Dave Frable	GSA
John Williams	WA Dept of Health
Kurt Roeper	Ingersoll Rand
Steve Orłowski	NAHB
Robert Davidson	Davidson Code Concepts
Jim Messersmith	PCA
Robert Polk	NASFM
Allison Crowley	NASFM
Holly Gerberding	herself
Gerry Jones	NIBS/MMC
Jimbo Schifiliti	Fire Safety
Sarah Rice	Schirmer Engineering
Bill McHugh	Firestop Contractors International Association