



**ICC AD HOC COMMITTEE ON HEALTHCARE
MEETING #3
August 10 - 11, 2011**

**DRAFT MINUTES
Hyatt Rosemont
6350 North River Road
Rosemont, IL 60018**

**August 10: 8:00 am – 5:00 pm
August 11: 8:00 am – 2:00 pm**

1.0 Welcome and introductions

1.1 Chair Williams - Call to order; introductions

Chair Williams called the meeting to order at approximately 8:05 am on August 10th, noting:

- A considerable amount of Work Group (WG) work has occurred via conference calls in only one month since AHC #2
- Going forward need to focus on the completion of code changes in support of the 1/3/2012 code change deadline

Self introductions were made. See Appendix A.

2.0 Approve agenda (posted)

Move up old business item 8.1 before the discussion on WG reports in agenda item 4.0. Agenda approved as revised.

3.0 Administration

3.1 Approval of June 29 - 30, 2011 minutes (posted)

Approved

3.2 Resource documents posted since AHC #2: CMS Fire Safety Survey report – Ambulatory Surgical Centers; Link to NFPA reports on Sprinklers and Structure fires; NBSIR report on smoke movement through ceilings

It was noted that NFPA has given permission to post the documents for a limited time only.

3.3 Status of ASHE research on topics noted at AHC #2

Smoke migration – approximately 3 weeks to completion

CMS survey report analysis – Previously sent to the Fire WG

Travel distance (size of patient rooms/smoke compartments)– approximately 1 week to completion

Hazardous materials – pending distribution of survey to ASHE constituents

3.4 Status of ICC Code Action Committees (CAC) and Code Technology Committee (CTC)

Staff reported on the need to closely monitor the activities of the CTC who has been studying Care Facilities for some time and the newly appointed Code Action Committees who are code discipline specific (ie Building Code Action Committee (BCAC) for the IBC and Fire Code Action Committee (FCAC) for the IFC) to make sure the activities of the respective ICC committees do not overlap and possibly conflict.

4.0 Work Group (WG) Reports

**4.1 Fire/Fire Safety WG (IBC Chs 7 - 9, 14, 15; IFC; IMC) (posted)
a. Working meeting of the AHC**

See Appendix C for the WG report with meeting notes indicated.

4.2 Egress WG (IBC Chs 10-11; IFC Section 4604) (posted)

a. Working meeting of the AHC

See Appendix D for the WG report with meeting notes indicated.

4.3 General WG (IBC Chs 3 – 6, 12, 13, 27 – 34) (posted)

a. Working meeting of the AHC

See Appendix E for the WG report with meeting notes indicated.

5.0 Identification of Work Group cross over issues

See Appendix C – E for notes.

6.0 Review of Work Group topics- identification of additional topics

See Appendix C – E for notes.

7.0 New business

The AHC performed a review of the CMS KTAGS and made assignments to each of the Work groups to review and report back, preferably with code changes, at AHC #4. The focus being the determination of coverage in the I-Codes and the development of code change language where needed.

8.0 Old business

8.1 Hospital occupancy category (I-2 vs possible new category I-5)

Identification of issues/considerations:

- Nursing home operations/risks totally different than hospitals. See Appendix B for chart.
 - Space demands
 - Patient needs
- Simplification in terms of format facilitates CMS review and approval
- An I-5 occupancy classification requires changes to almost every I-Code, each maintained by separate code development committees
- Where does ambulatory surgical centers with anesthesia fit?
- Need coordination with CTC activities for nursing homes under the CTC Care Facilities area of study
- Instead of Group I-5, consider I-2 with use conditions similar to the I-3 occupancy in the IBC

An Occupancy WG was created to investigate – chaired by AHC member Dan Nichols.

8.2 Referenced standards – NFPA 99

It was noted that the 2010 edition of NFPA 99 Health Care Facilities was currently referenced in the IFC with the scope and application of the reference being limited to medical gas systems (Section 5306.4 of the 2012 IFC). The 2012 edition of NFPA 99 requires review to determine the scope and application of any other references.

9.0 Meeting wrap – up

9.1 Progress assessment

Each of the WG reports noted timely progress. However, there are only two meetings left with a lot of work yet to be completed, specifically a review and resolution of KTAG items. IBC code changes must be completed by AHC #5.

9.2 Assignments

See 10.2

10.0 Future Meetings

10.1 AHC Meeting #4: October 5 – 6, 2011; Chicago, IL

AHC Meeting #5: December 14 – 15 (13th if needed), 2011, Location TBD

It was determined that the optional day of December 13th will be needed. The meeting will be held in Orlando, FL on December 13 – 15, 2011.

10.2 Work Group telecons:

- General: Tuesday's at 1 pm EST
- Fire Safety: Thursday's at 10 am EST
- Egress: Friday's at 10 am EST
- Occupancy: TBD

11.0 Adjourn

Chairman Williams adjourned the meeting at approximately 12:00 pm on August 11th.

AHC website for posted materials: <http://www.iccsafe.org/cs/ahc/Pages/default.aspx>

AHC #3 Meeting Minutes - Appendix A

Meeting Attendees

AHC Committee and Staff

Committee

Ed Altizer	Virginia State Fire Marshals Office
Tom Baldwin	Benton Harbor Township, MI
Jack Chamblee	Carolinas Healthcare System; Rep: ASHE
Jonathan Flannery	University of Arkansas for Medical Sciences; Rep: ASHE
Dave Howard	Pentors – St. Francis Health Services; Rep: ASHE
Eugene Jaques	Town of Wallkill, Middletown, NY
Henry Kosarzycki	State of Wisconsin – Dept. of Health Services
Sharon Meyers	State of Ohio – Ohio Dept. of Commerce
Dan Nichols	State of New York Dept of State
Jeff O'Neill	University of Pennsylvania Health System; Rep: ASHE
Tim Peglow	MD Anderson Cancer Center; Rep: ASHE
Brad Pollitt	Shands Healthcare; Rep: ASHE
Enrique Unanue	Code Services LLC; Rep: AIA Illinois; Academy of Architecture for Health
John Williams	Washington State Dept. of Health

Staff

Chad Beebe	ASHE
Doug Erickson	ASHE
Tom Frost	ICC
Kim Paarlberg	ICC
Mike Pfeiffer	ICC
Bill Rehr	ICC

Interested Parties

Dave Collins	AIA
John Woestman	BHMA
Robert Davidson	Davidson Code Concepts
Jim Dolan	NFPA
Michael Crowley	Rolf Jensen & Assoc.
Edward Hite	Assa Abloy
Len Pursell	Besam/Ass Abloy
Carl Hellman	Assa Abloy
Vickie Lovell	Intercode Inc.
Tim Burgos	Intercode Inc.
Rick Kabele	AFSCC
Patrick Andrus	ASHE
Deanna Martin	ASHE
Larry Hamaker	Stanley Black & Decker
Jeff Bresette	FP&C/ASHE
Bill Koffel	Koffel Associates
Andrew Streifel	Univ of Minnesota MC

AHC #3 Meeting Minutes - Appendix B

Occupancy Comparison

	Nursing Facilities	Hospitals	Ambulatory Health Care
Patient/Resident Capabilities	51% received assistance in all five main activities of daily living (ADLs; bathing, dressing, toileting, transferring, eating) 28% received assistance in four ADLs Generally incapable of emergency egress ¹	Varies by department. Patients range from incapable of self-preservation (NICU, ICU, life-support) to need slight assistance from staff (minor injuries in the ED)	Generally self-sufficient. Patients incapable of self-preservation are accompanied by a staff member.
Length of Typical Stay	835 days ¹	2-8 days ⁴	Less than 1 day
Patient/Resident Room Requirements	see ICC comparison	see ICC comparison	see ICC comparison
Staffing Ratios (Staff:Patient unless otherwise noted)	Varies by State ² Arkansas: Day 1:40 Night 1:80 Maryland: at least 1:25 Oregon: Day 1:10 Evening 1:15 Night 1:25	Varies by department 2-12 patients per staff member ³	Varies by type of facility 2-12 patients per staff member ³
Fire Response Team Members	All staff	All staff	All staff

1. Jones AL, Dwyer LL, Bercovitz AR, Stahan GW. The National Nursing Home Survey: 2004 Overview. National Center for Health Statistics. Vital Health Stat 13(167). 2009.

2. "Nursing Services Staffing Ratios." NH Regulations Plus. Regent of University of Minnesota, 25 05 2010. Web. 25 May 2011. <http://www.sph.umn.edu/hpm/nhregsplus/category_face_pages/category_nursing_services_staff_ratios.htm>.

3. State of New Jersey. Hospital Patient Care Staffing Report. Trenton: , 2011. Web. 25 May 2011. <<http://web.doh.state.nj.us/apps2/nursestaffing/quarterly.aspx>>.

4. United States. QuickStats: Average Length of Hospital Stay, by Diagnostic Category. Atlanta: , 2005. Web. 25 May 2011. <<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5427a6.htm>>.

AHC #3 Meeting Minutes – Appendix C

FIRE/FIRE SAFETY WORK GROUP (FSWG) REPORT & NOTES FROM AHC #3 (IBC Chapters 7 – 9, 14, 15; IFC; IMC)

This appendix is based on the AHC's review of the noted Work Group Report at AHC Meeting #3. **Notes from the meeting are indicated in red.**

CURRENT CODE ISSUES

(based on issues identified at AHC #1)

The AHC should first review the following issues for approval/conclusion or provide additional feedback to the FSWG. Note that the code change proposals may be subject to editorial revision prior to final submittal:

Issue #1: Limiting combustible decorations on walls.

Issue #6: Ventilation rates. Adding a reference to ASHRAE 170 for detailed hospital ventilation rates.

Issue #9: Fire Alarms – Audible & visible

Issue #11: Hazardous materials locations

Issue #14: Fire Safety and Evacuation Plans

ISSUE 1. DECORATIONS ON WALLS (Eugene Jaques)

Conclusion: The following IBC code change proposal is the result of the FSWG's efforts on this issue:

[F] 806.1 General requirements. In occupancies in Groups A, E, I and R-1 and dormitories in Group R-2, curtains draperies, hangings and other *decorative materials* suspended from walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with section 806.2 or be noncombustible.

Exceptions:

1. Curtains, draperies, hangings and other decorative materials suspended from walls of *sleeping units* and *dwelling units* in dormitories in Group R-2 protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1 and such materials are limited to not more than 50 percent of the aggregate area of walls.

2. Decorative materials, including, but not limited to, photographs and paintings in dormitories in Group R-2 where such materials are of limited quantities such that a hazard of fire development or spread is not present.

In Groups I-1 and I-2, combustible *decorative materials* shall meet the flame propagation performance criteria of NFPA 701 ~~unless the *decorative materials*, including, but not limited to, photographs and paintings, are of such limited quantities that a hazard of fire development or spread is not present.~~ In Group I-3, combustible decorations are prohibited.

Exception: In Groups I-1 and I-2, decorative materials, including, but not limited to, bulletin boards, artwork, posters, photographs and paintings, covering less than 20 percent of the wall area.

Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered *interior finish* if they cover 10 percent or more of the wall or of the ceiling area, and shall not be considered *decorative materials* or furnishings.

In Group B and M occupancies, fabric partitions suspended from the ceiling and not supported by the floor shall meet the flame propagation performance criteria in accordance with Section 806.2 and NFPA 701 or shall be noncombustible.

Reason: This proposal would limit creation of continuous surfaces of combustible material such as bulletin boards, artwork, posters, photographs and paintings in **sprinklered** Groups I-1 and I-2 to 20 percent of the wall area. This is consistent with Groups E and I-4 regulations on combustible decorative materials in IFC Sections 807.4.3.2 and 807.4.4.2. These combustible decorative materials can include large sheets of lightweight paper (like newsprint) and similar material that ignite easily and propagate flame rapidly. Since the occupants in Groups I-1 and I-2 are as vulnerable as those in Groups E and I-4, they should be afforded the same level of protection.

Additional work is needed on prohibiting natural cut trees in Group B Ambulatory Care Facilities and correlating with the IFC.

Notes:

- A lesser percentage for decorative materials in non-sprinklered buildings will be addressed in the IFC for change of occupancy and alterations.
- ASHE will provide pictures for substantiation by working with Jeff O'Neill.
- Move to code change proposal document.
- Change or occupancy and alteration section should indicate clarify the broad application is assuming sprinklered buildings.
- New York and Virginia has increased the decorative materials to 50% in dormitories.

ISSUE 2. ELEVATOR RECALL PROCEDURES WHEN THERE IS SMOKE IN MACHINE ROOM/ELEVATOR LOBBY

Conclusion: By direction of the AHC at Meeting #2, moved to Means of Egress Work Group.

ISSUE 3. INTERCOMMUNICATION BETWEEN FLOOR OPENINGS (Sharon Myers)

Discussion: Sharon Myers has prepared a comparison matrix but has received no feedback/further input from the FSWG on its content. The ASHE research report on smoke resistance of membrane ceilings has not been received. Also, this issue needs coordination with the on-going CTC project on unenclosed stairs. Section 708.2.7 of IBC/2012 will be reviewed for possible code change to eliminate the exception for no smoke control system in Group I-2.

Conclusion: Additional work is needed on this issue.

ISSUE 4. MECHANICAL SYSTEMS/SMOKE CONTROL (Brooks Baker/Mark Goska, Alternate)

- 4A.SMOKE DAMPER EFFECTIVENESS
- 4B.SHUTDOWN PARAMETERS
- 4C.SMOKE CONTROL IN OPERATING ROOMS
- 4D.NFPA 99

4A Discussion: Mark Goska submitted the following code change proposal based on WG discussions and feedback from interested parties:

717.5.5 Smoke barriers. *A listed smoke damper* designed to resist the passage of smoke shall be provided at each point a duct or air transfer opening penetrates a *smoke barrier*. *Smoke dampers* and *smoke damper* actuation shall comply with section 717.3.3.2.

Exceptions:

1. *Smoke dampers* are not required where the openings in ducts are limited to a single smoke compartment and the ducts are constructed of steel.
2. *Smoke dampers* are not required with a fully ducted closed mechanical system, the building is equipped throughout with an automatic sprinkler system in accordance with Sections 903.3.1.1 and 903.3.2 and when the defend in place strategy from Section 407.X and 422.X are utilized.

4 A Conclusion: Further discussion and direction is requested from the AHC on this issue.

4B Conclusion: This item has been folded into the work on Issue #4A

4C Conclusion: At the AHC meeting #2, it was determined that smoke control requirements need not be added to the IBC or IFC. The requirement to provide smoke control in OR's appear to be rooted in the misperception of some that life safety systems are to comply w/ NFPA 92A or IBC 909. With the changes made in the type of anesthetics being administered in OR's to a non-flammable type, and the fact that healthcare personnel are trained in the movement of patients to other compartments and how to close doors to contain byproducts of a fire within the room of origin, smoke control for life safety purposes would generally not be necessary.

4D Conclusion: Moved to parking lot at AHC Meeting #2.

Notes:

- Define what is fully ducted system? See NFPA 90A.
- Coordinate with General study group

ISSUE 5. CORRIDOR WALLS/SMOKE PARTITIONS (Sharon Myers)

5A.CEILING SMOKE RESISTANT MEMBRANE

Discussion: The task group is still awaiting data and technical reports on smoke transmission through ceilings from ASHE.

Conclusion: None at this time.

ISSUE 6. VENTILATION RATES (Brooks Baker/Mark Goska, Alternate)

Discussion: Currently Group I-2 ventilation rates are outlined in Table 403.3 of the IMC, Table 2.1-2 of the Guidelines for the Design and Construction of Health Care Facilities, and ASHRAE 170. It is felt that the IMC needs more specificity for hospitals, as indicated in the proposed code change below:

Conclusion: The following code change to the IMC is proposed:

Proposed Language Change:

- “Delete” the 6 spaces identified under “Hospitals, nursing and convalescent homes” and insert footnote “J”
- “Add” footnote “J” which states the following: “For hospitals ventilation rates refer to ASHRAE Standard 170, Table 7-1 and addenda 1-5.

**IMC TABLE 403.3
MINIMUM VENTILATION RATES**

OCCUPANCY CLASSIFICATION	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, <i>R_p</i> CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHIN ZONE, <i>R_a</i> CFM/FT ²	DEFAULT OCCUPANT DENSITY #/1000 FT ²	EXHAUST AIRFLOW RATE CFM/FT ²
Food and beverage service				
Bars, cocktail lounges				
Cafeteria, fast food				
Dining rooms				
Kitchens (cooking)b				
Hospitals, nursing and convalescent homes-j Autopsy roomsb Medical procedure rooms Operating rooms Patient rooms Physical therapy Recovery and ICU				
Hotels, motels, resorts and dormitories				
Multipurpose assembly				
bathrooms/toilets-private g				

For SI: 1 cubic foot.....

- a. Based upon.....
- b. Mechanical exhaust....
- c. Spaces unheated....
- h. For nail salons....

~~j. For Hospitals ventilation rates, refer to ASHRAE Standard 170, Table 7-1, with associated issued addenda 1-~~

~~5 a, b, d, e, f and g.~~

(portions of table not shown do not change.)

Justification: Currently Table 403.3 if the IMC has a limited number of spaces identified with ventilation rates, additionally if a room is not identified in the table then one is required to use the ventilation rate of an adjacent room that is on the list which is problematic if the space usage is vastly different. ASHRAE Standard 170, Table 7-1 has more comprehensive in the spaces that are identified as well as the design parameter requirements.

Notes:

- Correct code language – Group I-2 hospital ventilation rates shall comply with ASHRAE 170 Table 7-1. Put year of standard and addenda in Chapter 35.
- Coordinate with CTC care facilities for nursing home requirements
- Move note to text (not footnote) for hospitals, ambulatory care facilities – maybe IMC 403.1.
- Delete section in IMC Table 403.3.
- ASHRAE 170 is already mandatory for ventilation for hospitals, nursing homes and ambulatory care facilities by the federal requirements. Reference standard with specific scope of ventilation requirements for these facilities.
- Back to committee for revisions.

ISSUE 7. COOKING FACILITIES IN BREAK ROOMS – APPLICATION OF COMMERCIAL EXHAUST PROVISIONS (Tom Baldwin)

Discussion: Preliminary code change development work is done however, Tom is seeking input on domestic appliances from manufacturer's and will incorporate that information into his IMC code change draft, which is as follows:

IMC 507.2 Where required. A Type I or Type II hood shall be installed at or above all commercial cooking appliances in accordance with Sections 507.2 and 507.2.2. Where any cooking appliance under a single hood requires a Type I hood, a Type I hood shall be installed. Where a Type II hood is required, a Type I or Type II hood shall be installed.

Exceptions:

1. Commercial hoods shall not be required for appliances listed and labeled as household-type appliances when used in employee break-rooms, minor teaching areas, family waiting areas, conference rooms and similar use areas.

2. Where cooking appliances are equipped with integral down-draft exhaust systems and such appliances and exhaust systems are listed and labeled for application in accordance with NFPA 96, a hood shall not be required at or above them.

Conclusion: Work is on-going.

Notes:

- PMC 403.3 starts to address this issue
- What is acceptable for a residential cooking appliance that is not in a home but used in a non-residential setting and for commercial cooking (i.e., rehab, break rooms) – IMC 507.2.3
- Exceptions must be to the primary text – this exception is not applicable to this text

ISSUE 8. IMPACT OF AUTOMATIC GUIDED VEHICLES (Enrique Unanue)

8A.CHARGING LOCATIONS

8B.PLACEMENT OF HAZARDOUS MATERIALS IN CORRIDOR

8C.IMPACT ON CORRIDOR WIDTH

Issues 8A and 8B have been transferred to Issue 14.

Issue 8C was referred to the MOE Work Group as a cross-over issue.

Conclusion: No further action as a separate item needed.

ISSUE 9. FIRE ALARMS - AUDIBLE AND VISIBLE (Tom Baldwin)

See combined report for 'defend-in-place' proposal under separate file.

Discussion: The General WG has created a definition for "defend-in-place" as an evacuation technique, which is included in the following proposal.

Conclusion: The following multi-part code change is suggested (see also issue #14 which will be correlated with this proposal):

2012 International Building Code, Chapter 2

DEFEND IN PLACE. A method of emergency response that relies on building components to ensure occupant safety during a fire that does not evacuate occupants from the building. Emergency response involves occupants remaining in place or relocating within the building, or application of both methods. Application of defend in place methods shall be described in the fire evacuation plan as described in Section 404.3 of the *International Fire Code*.

2012 International Fire Code, Chapter 2

DEFEND IN PLACE. A method of emergency response that relies on building components to ensure occupant safety during a fire that does not evacuate occupants from the building. Emergency response involves occupants remaining in place or relocating within the building, or application of both methods. Application of defend in place methods shall be described in the fire evacuation plan as described in Section 404.3.

404.3 Contents. Fire safety and evacuation plan contents shall be in accordance with Sections 404.3.1 and 404.3.2.

404.3.1 Fire evacuation plans. Fire evacuation plans shall include the following:

1. Emergency egress or escape routes and whether evacuation of the building is to be complete, ~~or, where approved,~~ by selected floors or areas only, or relocation with a defend-in-place strategy.
2. Procedures for employees who must remain to operate critical equipment before evacuating.
3. Procedures for assisted rescue for persons unable to use the general *means of egress* unassisted.
4. Procedures for accounting for employees and occupants after evacuation has been completed.
5. Identification and assignment of personnel responsible for rescue or emergency medical aid.
6. The preferred and any alternative means of notifying occupants of a fire or emergency.
7. The preferred and any alternative means of reporting fires and other emergencies to the fire department or designated emergency response organization.
8. Identification and assignment of personnel who can be contacted for further information or explanation of duties under the plan.
9. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, where provided.

404.3.2 Fire safety plans. Fire safety plans shall include the following:

1. The procedure for reporting a fire or other emergency.
2. The life safety strategy including the following:
 - ~~2.1 and 2.2~~ 2.1 Procedures for notifying occupants, including areas with a private mode alarm system.
 - 2.2 Procedures for relocating occupants under a defend-in-place strategy.
 - 2.3 Procedures for evacuating occupants, including occupants who need assistance.
3. Site plans indicating the following:
 - 3.1. The occupancy assembly point.
 - 3.2. The locations of fire hydrants.
 - 3.3. The normal routes of fire department vehicle access.
4. Floor plans identifying the locations of the following:
 - 4.1. Exits.
 - 4.2. Primary evacuation routes.
 - 4.3. Secondary evacuation routes.
 - 4.4. Accessible egress routes.
 - 4.5. Areas of refuge.
 - 4.6. Exterior areas for assisted rescue.
 - 4.7. Manual fire alarm boxes.
 - 4.8. Portable fire extinguishers.
 - 4.9. Occupant-use hose stations.
 - 4.10. Fire alarm annunciators and controls.

5. A list of major fire hazards associated with the normal use and occupancy of the premises, including maintenance and housekeeping procedures.

6. Identification and assignment of personnel responsible for maintenance of systems and equipment installed to prevent or control fires.
7. Identification and assignment of personnel responsible for maintenance, housekeeping and controlling fuel hazard sources.

408.5 Group I-1 occupancies. Group I-1 occupancies shall comply with the requirements of Sections 408.5.1 through 408.5.5 and Sections 401 through 406.

408.5.1 Fire safety and evacuation plan. The fire safety and evacuation plan required by Section 404 shall include special staff actions including fire protection procedures necessary for residents and ~~for occupants.~~ The plan shall be amended or revised upon admission of any resident with unusual needs.

408.5.2 Staff training. ~~Employees Promptly upon hiring, staff shall be periodically instructed and kept informed of their duties and responsibilities under the plan. Such instruction shall be reviewed by the staff~~ Staff shall review the plan at least every two months. A copy of the plan shall be readily available at all times within the facility.

408.5.3 Resident training. Residents capable of assisting in their own evacuation shall be trained in the proper actions to take in the event of a fire. The training shall include actions to take if the primary escape route is blocked. Where the resident is given rehabilitation or habilitation training, training in fire prevention and actions to take in the event of a fire shall be a part of the rehabilitation training program. Residents shall be trained to assist each other in case of fire to the extent their physical and mental abilities permit them to do so without additional personal risk.

408.5.4 Drill frequency. Emergency evacuation drills shall be conducted at least six times per year, two times per year on each shift. Twelve drills shall be conducted in the first year of operation. Drills are not required to comply with the time requirements of Section 405.4.

408.5.5 Resident participation. Emergency evacuation drills shall involve the actual evacuation of residents to a selected assembly point.

408.6 Group I-2 occupancies. Group I-2 occupancies shall comply with the requirements of Sections 408.6.1 and 408.6.2 ~~4~~ and Sections 401 through 406. Drills are not required to comply with the time requirements of Section 405.4.

408.6.1 Fire safety and evacuation plan. The fire safety and evacuation plan required by Section 404 shall include special staff actions including fire protection procedures necessary for residents and occupants.

408.6.2 Staff training. Promptly upon hiring, staff shall be instructed of their duties and responsibilities under the plan. Staff shall review the plan at least every two months. A copy of the plan shall be readily available at all times within the facility.

408.6.1 ~~3~~ Evacuation not required. During emergency evacuation drills, the movement of patients to safe areas or to the exterior of the building is not required.

408.6.2 ~~4~~ Coded alarm signal. When emergency evacuation drills are conducted after visiting hours or when patients or residents are expected to be asleep, a coded announcement is allowed instead of audible alarms.

408.7 Group I-3 occupancies. Group I-3 occupancies shall comply with the requirements of Sections 408.7.1 through 408.7.4 ~~6~~ and Sections 401 through 406.

408.7.1 Fire safety and evacuation plan. The fire safety and evacuation plan required by Section 404 shall include special staff actions including fire protection procedures necessary for residents and occupants.

408.7.2 Staff training. Promptly upon hiring, staff shall be instructed of their duties and responsibilities under the plan. Staff shall review the plan at least every two months. A copy of the plan shall be readily available at all times within the facility.

408.7.1 ~~3~~ Employee Fire suppression training. Employees shall be instructed in the proper use of portable fire extinguishers and other manual fire suppression equipment. Training of new staff shall be provided promptly upon ~~entrance on duty~~ hiring. Refresher training shall be provided at least annually.

408.7.2 ~~4~~ Staffing. Group I-3 occupancies shall be provided with 24-hour staffing. Staff shall be within three floors or 300 feet (91 440 mm) horizontal distance of the access door of each resident housing area. In Use Conditions 3, 4 and 5, as defined in Chapter 2, the arrangement shall be such that the staff involved can start release of locks necessary for emergency evacuation or rescue and initiate other necessary emergency actions within 2 minutes of an alarm.

Exception: Staff shall not be required to be within three floors or 300 feet (9144 mm) in areas in which all locks are unlocked remotely and automatically in accordance with Section 408.4 of the *International Building Code*.

408.7.3 ~~5~~ Notification. Provisions shall be made for residents in Use Conditions 3, 4 and 5, as defined in Chapter 2, to readily notify staff of an emergency.

408.7.4 ~~6~~ Keys. Keys necessary for unlocking doors installed in a *means of egress* shall be individually identifiable by both touch and sight.

2012 International Building & Fire Codes

[F] 907.2.6 Group I. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group I occupancies. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

Exceptions:

1. Manual fire alarm boxes in sleeping units of Group I-1 and I-2 occupancies shall not be required at exits if located at all care providers' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.4.2.1 are not exceeded.
2. Occupant notification systems are not required to be activated where private mode signaling installed in accordance with NFPA 72 is approved by the fire code official and staff evacuation responsibilities are included in the fire safety and evacuation plan required by Section 404.

[F] 907.5.2 Alarm notification appliances. Alarm notification appliances shall be provided and shall be listed for their purpose.

[F] 907.5.2.1 Audible alarms. Audible alarm notification appliances shall be provided and emit a distinctive sound that is not to be used for any purpose other than that of a fire alarm.

Exceptions:

1. ~~Visible alarm notification appliances shall be allowed in lieu of audible alarm notification appliances in critical care areas of Group I-2 occupancies. Audible alarm notification appliances are not required in areas of Group I occupancies~~ that are in compliance with Section 907.2.6, Exception 2.
2. Where provided, audible notification appliances located in each occupant evacuation elevator lobby in accordance with Section 3008.5.1 of the *International Building Code* shall be connected to a separate notification zone for manual paging only.

Notes:

- Limit the audible exception to critical care areas
- Consider sound pressure
- Define general, patient and/or critical care areas – see NFPA 99 as example
- Where do you also want to delete visible alarms? 907.5.3 – allow for private mode in NFPA 72
- Need to address audible and visible alarms in ambulatory care facility critical care areas under Group B alarm requirements
- Coordinate exceptions with CTC care facilities for nursing homes
- Just the Chapter 9 part back to committee with comments
- Defend in place and remaining portions of proposal addressed in combined proposal from John Williams and Sharon Meyers.

ISSUE 10. NEW AND EXISTING FACILITIES TO BE FULLY SPRINKLERED (Eugene Jaques)

Conclusion: This is General WG Topic #8, and so is placed in the parking lot.

ISSUE 10A. TESTING PARAMETERS (Eugene Jaques)

Conclusion: A referenced standard issue. Placed in the "Parking Lot".

ISSUE 11. HAZARDOUS MATERIAL LOCATIONS (Jack Chamblee)

Discussion: Note that the treatment of laboratories (specifically in regard to NFPA 45) was discussed in great detail on the General Workgroup call, as a standard reference that may need to added. This is a crossover issue.

Conclusion: The following code change proposal is submitted:

Purpose: To bring the relevant incidental use chart consistent with areas currently being maintained in hospital and ambulatory care occupancies.

Relevant Code Section(s): 2012 IBC Table 509, Incidental Accessory Occupancies
~~2012 IFC Table xxx.x.x, Incidental Accessory Occupancies~~

Proposed Change Language:

ROOM OR AREA	SEPARATION AND/OR PROTECTION
<u>Laboratories, and vocational shops not classified as group H, located in a Group E or Group I-2 occupancy.</u>	1 hour or provide automatic extinguishing system
<u>Laboratories, physical plant maintenance and repair shops, not classified as group H, located in a Group I-2 occupancy.</u>	1 hour
<u>Group I-2 waste and soiled linen collection rooms with containers with an aggregate quantity of greater than 64 gallons in a Group I-2 occupancy and Ambulatory Care Facilities.</u>	1 hour and provide an automatic sprinkler system
<u>Flammable Gas Storage Rooms and Flammable Liquid Storage Rooms not classified as Group H in a Group I-2 occupancy.</u>	2 hours
<u>Piped oxygen tank supply rooms not classified as Group H in a Group I-2 occupancy^a.</u>	1 hour
<u>Storage rooms for combustible materials greater than 100 square feet in a Group I-2 occupancy</u>	1 hour
<u>Gift Shops and their associated storage greater than 500 square feet in a Group I-2 occupancy</u>	1 hour

^a – Such rooms shall comply with Section 5306 of the *International Fire Code*.

Justification: Currently, more detail is needed to add spaces being maintained in healthcare and ambulatory care occupancies. The above chart makes the noted tables consistent with current operational and programmatic standards in the I-2 occupancy.

Notes:

- Should gift shops and their associated storage be included in this table and/or Section 407.2.4 – taken out of NFPA 101
- Laboratories (NFPA 45) separation to be addressed by General
- Need to look at procedural suites with flammable materials
- Coordinate with exception for alcohol based hand rubs
- Don't use storage container size to regulate waste and soiled linen room. Would encourage an inspector to consider any room to comply with soiled linen rooms
- Flammable gas and liquid storage rooms and oxygen tanks should consider the implications of small amounts in any room and conflicts with control area requirements. Same for storage of combustible materials.
- Consider coordination with 407 for gift shops
- IFC 304.3.2 and 808 – look at garbage containers

11A.MEDICAL GASES (Jack Chamblee)

Conclusion: Moved to the “parking lot” @ AHC Meeting #2.

ISSUE 12. ALCOHOL DISPENSERS IN PATIENT ROOMS (Jack Chamblee)

Discussion: The following is Jack Chamblee’s report with revised code change proposal for AHC review and

comment:

Based on our discussion last week on ABHR Dispensers, it was apparent that we were moving off of the original intent of the review of this item and were headed into some areas where we probably need to get concurrence from the Committee if this is where we need to go.

We were originally tasked with a review of this section and to incorporate language to support the position which would allow a countertop to be installed under a ABHR dispenser and to keep the wall space between the dispenser and the floor/countertop clear of any ignition sources.

We have also reviewed in these discussions the following points which will need additional attention if we so choose to address these items:

1. Type of construction materials for the countertop under a ABHR Dispenser
2. Type of finish materials on the floor underneath a ABHR Dispenser
3. Absorption rate of these materials which the liquid comes into contact and its reaction, if any, to the materials
4. The amount of clear horizontal distance from the Dispenser to an electrical device and whether a minimum dimension of 1" was enough clearance or would more space be required. This decision would be based on what type of research data to support this dimension?

The complete Code passage for reference in our upcoming discussion which we've modified below to include the "countertop" comment plus a couple of additional clarifications (credit to Robert Davidson for his input on these):

5705.5 Alcohol-based hand rubs classified as Class I or II liquids. The use of wall-mounted dispensers containing alcohol-based hand rubs classified as Class I or II liquids shall be in accordance with all of the following:

1. The maximum capacity of each dispenser shall be 68 ounces (2 L).
2. The minimum separation between dispensers shall be 48 inches (1219 mm).
3. The dispensers shall not be installed directly adjacent to, directly above or below an electrical receptacle, switch, appliance, device or other ignition source. **The wall space between the dispenser and the floor or intervening counter top shall remain clear and unobstructed.**
4. Dispensers shall be mounted so that the bottom of the dispenser is a minimum of 42 inches (1067 mm) and a maximum of 48 inches (1219 mm) above the finished floor.
5. Dispensers shall not release their contents except when the dispenser is manually activated. Facilities shall be permitted to install and use automatically activated "touch free" alcohol-based hand-rub dispensing devices with the following requirements:
 - 5.1. The facility or persons responsible for the dispensers shall test the dispensers each time a new refill is installed in accordance with the manufacturer's care and use instructions.
 - 5.2. Dispensers shall be designed and must operate in a manner that ensures accidental or malicious activations of the dispensing device are minimized. At a minimum, all devices subject to or used in accordance with this section shall have

the following safety features:

5.2.1. Any activations of the dispenser shall only occur when an object is placed within 4 inches (98 mm) of the sensing device.

5.2.2. The dispenser shall not dispense more than the amount required for hand hygiene consistent with label instructions as regulated by the United States Food and Drug Administration (USFDA).

5.2.3. An object placed within the activation zone and left in place will cause only one activation.

6. Storage and use of alcohol-based hand rubs shall be in accordance with the applicable provisions of Sections 5704 and 5705.

7. Dispensers installed in occupancies with carpeted floors shall only be allowed in smoke compartments or fire areas equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

5705.5.1 Corridor installations. Where wall-mounted dispensers containing alcohol-based hand rubs are installed in corridors, they shall also be in accordance with all of the following ~~*in addition to the requirements of Section 5705.5*~~:

1. Level 2 and 3 aerosol containers shall not be allowed in corridors.
2. The maximum capacity of each Class I or II liquid dispenser shall be ~~reduced to~~ 41 ounces (1.21 L) and the maximum capacity of each Level 1 aerosol dispenser shall be 18 ounces (0.51 kg).
3. The maximum quantity allowed in a corridor within a control area shall be 10 gallons (37.85 L) of Class I or II liquids or 1135 ounces (32.2 kg) of Level 1 aerosols, or a combination of Class I or II liquids and Level 1 aerosols not to exceed, in total, the equivalent of 10 gallons (37.85 L) or 1,135 ounces (32.2 kg) such that the sum of the ratios of the liquid and aerosol quantities divided by the allowable quantity of liquids and aerosols, respectively, shall not exceed one.
4. The minimum corridor width shall be 72 inches (1829 mm).
5. Projections into a corridor shall be in accordance with Section 1003.3.3.

Notes:

- 5705.5 Item 3. Propose to delete the 2nd section. The first sentence deals with electrical equipments. The 2nd sentence is not related and not part of the modeling for hazards. If it is a problem, it should be addressed in another section.
- Four points about surfaces before the proposal – modeling only addressed carpet (which is exempted)
- Specify 1” minimum (in NFPA 101) instead of directly adjacent to give a measurable distance.

ISSUE 13. CLINICAL LABS/HAZARDOUS EXHAUST (Jack Chamblee)

Conclusion: Jack has conducted a comparison of IMC Section 510 and NFPA 45 and found that they are sufficiently parallel that no further action is needed. Note, however, that the treatment of laboratories (specifically in regard to NFPA 45) was discussed in great detail on the General Workgroup call, as a standard reference that may need to added. This is a crossover issue.

Issue 14. Fire Safety and Evacuation Plans: (Sharon Myers)

Conclusion: The following code change proposal is submitted, to be correlated with the proposed code change for Issue #9:

At AHC Mtg #3, a revised proposal was considered. The following is the revised proposal with revisions in red. See the original WG report for the original proposal.

SECTION 404 FIRE SAFETY AND EVACUATION PLANS

404.1 General. Fire safety, evacuation and lockdown plans and associated drills shall comply with the requirements of Sections 404.2 through 404.5.1.

404.2 Where required. An *approved* fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings:

1. Group A, other than Group A occupancies used exclusively for purposes of religious worship that have an *occupant load* less than 2,000.
2. Group B.
 - 2.1 . Buildings having an ambulatory health care facility ~~use or tenant space regardless of occupant load.~~
 - 2.2. Buildings having an *occupant load* of 500 or more *persons* or more than 100 *persons* above or below the lowest *level of exit discharge*.
3. through 15. (No change to current text.)

404.3 Contents. Fire safety and evacuation plan contents shall be in accordance with Sections 404.3.1 and 404.3.2.

404.3.1 Fire evacuation plans. Fire evacuation plans shall include the following:

1. Emergency egress or escape routes and whether evacuation of the building is to be complete, ~~or, where approved,~~ by selected floors or areas only, ~~or~~ **by relocation** with a defend-in-place response.
2. Procedures for employees who must remain to operate critical equipment before evacuating.
3. Procedures for assisted rescue for persons unable to use the general *means of egress* unassisted.
4. Procedures for accounting for employees and occupants after evacuation has been completed.
5. Identification and assignment of personnel responsible for rescue or emergency medical aid.
6. The preferred and any alternative means of notifying occupants of a fire or emergency.
7. The preferred and any alternative means of reporting fires and other emergencies to the fire department or designated emergency response organization.
8. Identification and assignment of personnel who can be contacted for further information or explanation of duties under the plan.
9. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, where provided.

404.3.2 Fire safety plans. Fire safety plans shall include the following:

1. The procedure for reporting a fire or other emergency.
2. The life safety strategy including the following:
 - 2.1 ~~and-p~~ **P**rocedures for notifying occupants, including areas with a private mode alarm system. ~~r~~
 - 2.2 Procedures for **relocating** occupants under a defend-in-place response.

- 2.3 Procedures ~~or~~ for evacuating occupants, including occupants who need assistance.
- 3. Site plans indicating the following:
 - 3.1. The occupancy assembly point.
 - 3.2. The locations of fire hydrants.
 - 3.3. The normal routes of fire department vehicle access.
- 4. Floor plans identifying the locations of the following:
 - 4.1. Exits.
 - 4.2. Primary evacuation routes.
 - 4.3. Secondary evacuation routes.
 - 4.4. Accessible egress routes.
 - 4.5. Areas of refuge.
 - 4.6. Exterior areas for assisted rescue.
 - 4.7. Manual fire alarm boxes.
 - 4.8. Portable fire extinguishers.
 - 4.9. Occupant-use hose stations.
 - 4.10. Fire alarm annunciators and controls.
- 5. A list of major fire hazards associated with the normal use and occupancy of the premises, including maintenance and housekeeping procedures.
- 6. Identification and assignment of personnel responsible for maintenance of systems and equipment installed to prevent or control fires.
- 7. Identification and assignment of personnel responsible for maintenance, housekeeping and controlling fuel hazard sources.

**SECTION 408
USE AND OCCUPANCY RELATED REQUIREMENTS**

408.3 ~~Group B~~ Ambulatory Care Facilities. ~~Group B~~ Ambulatory Care Facilities shall comply with the requirements of Sections 408.3.1 through 408.3.3 and Section 401 through 406.

Section 408.3.1 Fire evacuation plan. ~~The fire safety and evacuation plan required by Section 404 shall include a description of special staff actions needed to protect patients and the members of the public requiring special assistance.~~ This shall include procedures for staff who **must** stabilize patients in a defend in place response prior to evacuation.

Section 408.3.2 Fire safety plan. A copy of the plan shall be maintained at the facility at all times. Plan shall include the following in addition to the requirements of Section 404:

1. Locations where patients are located who are rendered incapable of self preservation
2. Maximum number of any patients rendered incapable of self preservation.
3. Area Size and extent of each Ambulatory Care Facility.
4. Exits and access to exits from each Ambulatory Care Facility.
5. Location of adjacent smoke compartments or refuge areas, if required.
6. Path of travel to adjacent smoke compartments.
7. Location of any special locking, delayed egress or access control arrangements.

~~**Section 408.3.3 Maintenance of plans.** Plans required by Sections 404 and 408.3 shall be maintained to reflect the current layout and procedure. Any changes to the plan shall be approved by the fire code official.~~

~~**Section 408.3.3 Staff training.** Employees shall be instructed on their duties under the plan immediately upon employment. Such instruction shall be reviewed by the staff at least every two months. Records documenting training shall be maintained at the facility at all times.~~

408.6 Group I-2. Group I-2 occupancies shall comply with the requirements of Sections 408.3.x through 408.3.x and Section 401 through 406. ~~Drills are not required to comply with the time requirements of Section 405.4.~~

Section 408.6.1 Fire evacuation plan. The fire safety and evacuation plan required by Section 404 shall include a description of special staff ~~actions needed to protect patients and the members of the public requiring special assistance.~~ Plan shall include the following in addition to the requirements of Section 404.

1. Procedures for containment/evacuation of restrained patients, if present.
2. A written plan for maintenance of the means of egress.
3. Procedures for a full building evacuation, if necessary.

Section 408.6.2 Fire safety plans. A copy of the plan shall be maintained at the facility at all times. Plans shall include the following in addition to the requirements of Section 404:

1. Location and number of any patient sleeping rooms and operating rooms.

2. Location of adjacent smoke compartments or refuge areas.
3. Path of travel to adjacent smoke compartments.
4. Location of any special locking, delayed egress or access control arrangements.
5. Location of ~~occupant evacuation~~ elevators **utilized for patient movement in accordance with the fire safety plan**, if provided.

~~**Section 408.6.3 Maintenance of plans.** Plans required by Sections 404 and 408.3 shall be maintained to reflect the current layout and procedures. Any changes to the plan shall be approved by the fire code official.~~

~~**Section 408.6.3 Staff training.** Employees shall be instructed on their duties under the plan immediately upon employment. Such instruction shall be reviewed by the staff at least every two months. Records documenting training shall be maintained at the facility at all times.~~

~~**Section 408.6.4 Emergency Evacuation Drills.** Emergency evacuation drills shall comply with Section 405.~~

~~**Exceptions:**~~

1. Drills are not required to comply with the time requirements of Section 405.4.
2. The movement of patients to safe areas or to the exterior of the building is not required.
3. When emergency evacuation drills are conducted after visiting hours or when patients are residents are expected to be asleep, a coded announcement shall be permitted instead of audible alarms.

~~**408.6.1 Evacuation not required.** During emergency evacuation drills, the movement of patients to safe areas or to the exterior of the building is not required.~~

~~**408.6.2 Coded alarm signal.** When emergency evacuation drills are conducted after visiting hours or when patients are residents are expected to be asleep, a coded announcement shall be permitted instead of audible alarms.~~

Notes:

- **Add to 404.3.2 fire rated walls/construction and smoke compartments**
- **Add under general - fire service access elevator, occupant evacuation elevator, sized for stretcher/beds**
- **Back to Fire Safety Committee**

NEW CODE ISSUES

None at this time.

WG CROSS OVER ISSUES

None at this time.

FURTHER RESEARCH ISSUES

ISSUE 5A (AHC Mtg #2): It was suggested that the issue of ceiling tile uplift under fire conditions should be studied before final submittal of a code change proposal. Some research has been done with both standard response and QR sprinklers with no significant problems noted. This is an item that should be referred for additional ASHE research work.

AHC MEETING 3 UPDATE: The task group is still awaiting data and technical reports on smoke transmission through ceilings from ASHE.

OUT-OF-SCOPE ISSUES/"PARKING LOT"

Issue #4D: Moved here per AHC Meeting #2.

Issue #10: This duplicates General WG Topic #8, and so is placed in the parking lot.

Issue #10A: Moved here per AHC Meeting #2.

Issue #11A: Moved here per AHC Meeting #2.

ADDITIONAL ISSUES TO BE BROUGHT TO AHC ATTENTION

None at this time.

WG PROGRESS ASSESSMENT

The Fire/Fire Safety Work Group has had a total of 12 teleconference calls --- every Thursday at 10:00 AM EDT, from May 12 through August 4, 2011. Here is a summary of those calls and the FSWG member and interested party attendance:

The FSWG progress has shown fairly steady improvement over the 12 teleconferences to date. With the review and direction provided at AHC Meeting #2, things started moving along and the WG appears to have found its pace.

WG member and interested party participation has been constructive. John Williams, the AHC chair and Jeff

O'Neill, the AHC Vice-chair, have continued to participate in many of the teleconferences of this and the other WG's which has assisted in keeping the work group on track by providing some "big picture" insights and background information.

As seen in the report, several issues have come to a tentative conclusion with prepared code change proposals ready for review and approval by the AHC and the others are well on their way toward completion. An issue that has caused some slowing in progress on Issue #5 is that the task group is still awaiting data and technical reports on smoke transmission through ceilings from ASHE. If the current pace continues, the FSWG should be able to complete all assigned tasks as planned and needed.

AHC #3 Meeting Minutes – Appendix D

**MOE WORK GROUP REPORT & NOTES FROM AHC #3
(IBC Chapters 4, 10 & 11)**

This appendix is based on the AHC's review of the noted Work Group Report at AHC Meeting #3. **Notes from the meeting are indicated in red.**

CURRENT CODE ISSUES: (based on issues identified at AHC #1)

MEANS OF EGRESS WORK GROUP

CODES:

IBC: Ch 10 and 11

ISSUES:

- EGRESS THROUGH ELEVATOR LOBBY (NEED TO COORDINATE WITH CTC EFFORTS)
- GENERAL EGRESS
 - WIDTH – 8' CORRIDOR VS 5' CLEAR;
 - COMMON PATH OF TRAVEL
 - TRAVEL DISTANCE
 - SLIDING DOORS
- SPECIAL LOCKING DEVICES
 - DELAYED EGRESS
 - LATCHES ON SMOKE BARRIER DOORS
 - STAFF CONTROL IN PSYCH WARDS
 - INFANT CONTROL
- OCCUPANT EVACUATION VIA ELEVATORS
- PATIENTS AS PART OF OCCUPANT LOAD CALCULATION/REFUGE AREAS
- SUITE SIZE AND SUPERVISION
 - MEANS OF EGRESS
- WAITING SPACES OPEN TO CORRIDOR
- ACCESSIBILITY - MAXIMUM 18" CLEAR MAX ON THE SIDE OF TOILET FOR CARE-GIVER ACCESS

CHAIR: FLANNERY

AHC MEMBERS: POLLITT, KOSARZYCKI, ALTIZER, NICHOLS

INTERESTED PARTIES: WOESTMAN, MANLEY, BEBE, KOFFEL, JAQUES, HELLMAN, PURSELL, CHRIS, COLLINS

The Means of Egress Work Group chose to subdivide the issues identified at the April 20 and 21, 2011 meeting into 5 areas of study:

1. Elevators –
 - EGRESS THROUGH ELEVATOR LOBBY
 - OCCUPANT EVACUATION VIA ELEVATORS
2. Corridors-
 - GENERAL EGRESS
 - WIDTH – 8' CORRIDOR VS 5' CLEAR;
 - COMMON PATH OF TRAVEL
 - TRAVEL DISTANCE
 - PATIENTS AS PART OF OCCUPANT LOAD CALCULATION/REFUGE AREAS
 - WAITING SPACES OPEN TO CORRIDOR
3. Security and locking arrangements –
 - SPECIAL LOCKING DEVICES

- DELAYED EGRESS
- LATCHES ON SMOKE BARRIER DOORS
- STAFF CONTROL IN PSYCH WARDS
- INFANT CONTROL
- SLIDING DOORS

4. Suites

- SUITE SIZE AND SUPERVISION
 - MEANS OF EGRESS SUITE

5. Accessibility -

- ACCESSIBILITY - MAXIMUM 18" CLEAR ON THE SIDE OF TOILET FOR CARE-GIVER ACCESS

Following are the reports on each topic:

Issue #1:

1. Elevators –

- EGRESS THROUGH ELEVATOR LOBBY
- OCCUPANT EVACUATION VIA ELEVATORS

Conclusion #1:

- CTC committee on elevator lobbies is still in process – this committee will suggest specific Group I-2 criteria

Proposed Code Change:

**SECTION 407
GROUP I-2**

407.5 Smoke barriers. *Smoke barriers* shall be provided to subdivide every *story* used by persons receiving care, treatment or sleeping and to divide other *stories* with an *occupant load* of 50 or more persons, into no fewer than two *smoke compartments*. Such *stories* shall be divided into *smoke compartments* with an area of not more than 22,500 square feet (2092 m²) and the travel distance from any point in a *smoke compartment* to a *smoke barrier* door shall be not greater than 200 feet (60 960 mm). The *smoke barrier* shall be in accordance with Section 709.

407.5.3 Horizontal assemblies. *Horizontal assemblies* supporting *smoke barriers* required by this section shall be designed to resist the movement of smoke and shall comply with Section 711.9.

**SECTION 711
HORIZONTAL ASSEMBLIES**

711.9 Smoke barrier. Where *horizontal assemblies* are required to resist the movement of smoke by other sections of this code in accordance with the definition of *smoke barrier*, penetrations and joints in such *horizontal assemblies* shall be protected as required for *smoke barriers* in accordance with Sections 714.5 and 715.6. Regardless of the number of *stories* connected by elevator shaft enclosures, doors located in elevator shaft enclosures that penetrate the *horizontal assembly* shall be protected by enclosed elevator lobbies complying with Section 713.14.1. Openings through *horizontal assemblies* shall be protected by shaft enclosures complying with Section 713. *Horizontal assemblies* shall not be allowed to have unprotected vertical openings.

**SECTION 713
SHAFT ENCLOSURES**

713.14.1 Elevator lobby. An enclosed elevator lobby shall be provided at each floor where an elevator shaft enclosure connects more than three *stories*. The lobby enclosure shall separate the elevator shaft enclosure doors from each floor by *fire partitions*. In addition to the requirements in Section 708 for *fire partitions*, doors protecting openings in the elevator lobby enclosure walls shall also comply with Section 716.5.3 as required for *corridor* walls and penetrations of the elevator lobby enclosure by ducts and air transfer openings shall be protected as required for *corridors* in accordance with Section 717.5.4.1. Elevator lobbies shall have at least one *means of egress* complying

with Chapter 10 and other provisions within this code.

Exceptions:

1. Enclosed elevator lobbies are not required at the level(s) of *exit discharge*, provided the level(s) of *exit discharge* is equipped with an *automatic sprinkler system* in accordance with Section 903.3.1.1.
2. Elevators not required to be located in a shaft in accordance with Section 712.1 are not required to have enclosed elevator lobbies.
3. Enclosed elevator lobbies are not required where additional doors are provided at the hoistway opening in accordance with Section 3002.6. Such doors shall comply with the smoke and draft control door assembly requirements in Section 716.5.3.1 when tested in accordance with UL 1784 without an artificial bottom seal.
4. Enclosed elevator lobbies are not required where the building is protected by an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. This exception shall not apply to the following:
 - 4.1. ~~Group I-2 occupancies;~~
 - 4.2. Group I-3 occupancies; and
 - 4.3. Elevators serving floor levels over 75 feet above the lowest level of fire department vehicle access in high-rise buildings.
5. Smoke partitions shall be permitted in lieu of *fire partitions* to separate the elevator lobby at each floor where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. In addition to the requirements in Section 710 for smoke partitions, doors protecting openings in the smoke partitions shall also comply with Sections 710.5.2.2, 710.5.2.3, and 716.5.9 and duct penetrations of the smoke partitions shall be protected as required for *corridors* in accordance with Section 717.5.4.1.
6. Enclosed elevator lobbies are not required where the elevator hoistway is pressurized in accordance with Section 909.21.
7. Enclosed elevator lobbies are not required where the elevator serves only *open parking garages* in accordance with Section 406.5.

Reason: This code changes addresses new text in the 2009 IBC from FS81-07/08. The new text would require an elevator lobby at every elevator in a Group I-2 occupancy, “regardless of number of stories.” The proponent did not provide any substantiation for why this current code creates a life safety threat. The original code change proposal that added this information was turned down by the Fire Safety committee, but was approved at the final action hearing. The only justification provided was that this would coordinate existing language.

The current code language does not require this level of separation. There was no evidence given that smoke transfer between floors in a sprinklered, compartmented building poses a significant hazard. In all Group I-2s, there is a requirement for smoke compartmentation on each floor. If there was significant transmission of smoke from one of the smoke compartments on the floor below, the occupants on the higher floor have another smoke compartment to horizontally evacuate to. This creates a method of smoke containment in an I-2 occupancy. The addition of elevator lobbies and enclosing doors could also hamper the horizontal evacuation process. The added number of doors that must be maneuvered through to reach the adjacent smoke compartment would slow the evacuation time. The change adds cost for facilities and complicates the design process with no apparent benefit. Previous to the 2009 version, the IBC did not require hospitals, nursing homes and boarding homes to provide elevator lobbies if the building was provided with fire sprinklers. Elevator lobbies serve no purpose on floors of facilities that “defend in place”. It is a long standing practice in healthcare to evacuate patients to the adjacent smoke compartment instead of evacuating them out of the building. Group I-2 provides smoke compartmentation for an added level of protection against the spread of smoke through the building. Floors are separated into at least two smoke compartments by rated construction and provide passive protection in addition to the active protection of a sprinkler system. These compartments in effect serve the same purpose as an elevator lobby. The addition of elevator lobbies in these facilities could complicate the movement of patients to the adjacent smoke compartment by adding doors that bedridden patients must be transferred through. While alternatives to elevator lobbies exist, all increase construction cost for facility type who have a good fire record.

Notes:

- The CTC elevator lobby study group should address technical changes for lobbies.
- This committee has written letter to CTC asking for Group I-2 to not have elevator lobbies required
- The CTC technical information says that in sprinklered buildings there is not a problem with smoke migration through the elevator shafts – thus the elevators penetrating the smoke compartment is not detrimental to the defend-in-place strategy.
- Wait for CTC elevator lobby group.

Issues #2:

2. Corridors-
 - GENERAL EGRESS
 - WIDTH – 8' CORRIDOR VS 5' CLEAR;
 - COMMON PATH OF TRAVEL
 - TRAVEL DISTANCE
 - PATIENTS AS PART OF OCCUPANT LOAD CALCULATION/REFUGE AREAS
 - WAITING SPACES OPEN TO CORRIDOR

Conclusions #2 (Corridors):

The following is the intent, but needs to be drafted for code language.

In fully sprinklered buildings with defend in place principles and operational plans

- Corridor Width:
 - An 8 foot corridor with an effective clear path of 5' that allows the passage of staff, patients and equipment under normal operating conditions is allowed. Low hazard equipment, carts, and devices that are mobile (on wheels or less than 20 pounds and larger than 24x48) and do not encroach upon an effective 5' clear path are allowed provided the organization has a defend in place management plan to address egress in emergency situations.
- Areas Open to the Corridor:
 - Corridors in I-2 occupancies will be allowed open spaces such as but not limited to waiting, nurse station, chart areas, patient gathering, operational or exercise areas of unlimited size provided the contents are low hazard. Sleeping spaces are not allowed to be open to the corridor.

Notes:

Corridor width:

- This allowance is intended for IFC maintenance only, not a reduction in IBC corridor width.
- Allow the following for hospital function:
 - movable equipment that is moved first as part of the fire evacuation plan,
 - attended/in-use equipment (i.e., food cart, linen cart)
 - patient transport and handling devices (i.e. gurneys, wheelchairs)
 - emergency equipment (i.e., crash cart)
- Doug to get NFPA code change regarding available width to the MOE committee
- Eugene, Ed, Jonathan, Brad, Doug to look at permitted projections in NFPA new section

Areas open to corridor:

- Equipment in areas open to the corridor should not obstruct the required corridor width.
- Operational areas are nutrition areas, chart areas, play rooms, family waiting rooms – look at what is in 407.2 – what would we want to add? Broaden waiting and treatment areas.
- Consensus was to take out exercise/therapy areas

Issue #3

3. Security and locking arrangements –
 - SPECIAL LOCKING DEVICES
 - DELAYED EGRESS
 - LATCHES ON SMOKE BARRIER DOORS
 - STAFF CONTROL IN PSYCH WARDS
 - INFANT CONTROL
 - SLIDING DOORS

Conclusion #3:

IBC 1008.1.9.7 Delayed egress locks. *Approved, listed, delayed egress locks locking systems*¹ shall be permitted to be installed on doors serving any occupancy except Group A, E, and H occupancies in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved automatic smoke or heat detection system* installed in accordance with Section 907, provided that the doors ~~unlock~~ allow immediate free egress in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an *exit*.

1. The ~~delay electronics shall disarm doors-unlock~~ upon actuation of the *automatic sprinkler system* or automatic fire detection system, allowing immediate, free egress.
2. The ~~doors-unlock~~ delay electronics shall disarm upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.
3. The ~~door-locks~~ delay electronics shall have the capability of being ~~unlocked~~ disarmed by a ~~signal-switch~~ located at from the fire command center or other approved location.
4. An attempt to egress ~~The initiation of~~ shall initiate an irreversible process which ~~will~~ shall allow such egress ~~latch~~ in not more than 15 seconds when a ~~force of not more than 15 pounds (67 N)~~ physical effort to exit is applied to the egress side door hardware⁴ for ~~not more than 4 3 second-seconds~~³ to the release device. The effort to open the door shall not require a force greater than 15 pounds (67N). Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics ~~door lock has~~ have been released ~~disarmed, by the application of force to the releasing device, relocking-rearming the~~ delay electronics shall be by manual means only.

Exception: Where approved, a delay of not more than 30 seconds is permitted.

5. A sign with 1" high letters and numbers that are in sharp contrast to their background⁵ shall be provided on the door located above and within 12 inches (305mm) of the ~~release device~~ door hardware reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 (30) SECONDS.

Exception: In Group I-2 and I-3 health care occupancies, where approved, the use of a sign is not required where it interferes with the safety of the patients.⁶

6. Emergency lighting shall be provided at the door.

Reason:

¹Delayed egress always requires a system of electronic devices that work together to perform the delayed egress task. Sometimes they are contained within an electromagnetic lock or a bar and sometimes they are separate components, but they are never just a lock.

²Immediate free egress can be accomplished without unlocking the door. Merchants, offices and health care facilities are hesitant to use delayed egress because an "after hours" egress event will leave their building unlocked. Addressing the "delay" as a separate issue from "locked", this modification will allow the door to relock FROM THE OUTSIDE after a delayed egress event, but change the operation of the door to free egress until the system is manually reset. The intent of the code is not to keep people out. Instead, it is to let them out.

³One second is not enough time for a fully cognizant person to recognize that their action is what is causing the alarm and decide to abort the exit attempt. Dementia patients tend to wander toward doors when not otherwise engaged. Since staffing cannot be 1:1, it means that the nurses are attending other issues. Reducing these "nuisance" alarm issues can greatly reduce the need to drop everything and go check and reset the door.

⁴There are three ways to initiate a delay sequence that are in common use, today. The code has never been changed to accommodate two of these. The original one, an electromagnetic lock with delay electronics and a switch built into the case, is not addressed. It allows the use of existing door hardware and should be used with exit only applications. Otherwise, it can be triggered from both sides. The second means of delay initiation includes switches in cylindrical and mortise locks that begin the sequence when the inside lever is turned. This method has become possible with the ADA changes made to these locks to accommodate levers. The third method is the one the code seems to reference. It uses a switch bar (aka active dummy with switch), a panic bar with a switch, or fire-exit hardware with a switch. Depending on the manufacturer and the model number, the

switch may either signal an external delay timer that controls an electromagnetic lock or signal a self-contained delayed egress system that controls a latch.

⁵ Manufacturers typically supply the sign with their product, but often the sign blends in with the color of the door.

⁶ Providing escape instructions to first stage Alzheimer's disease patients who often still can read is unwise. Staff is there to assist in a fire.

Notes:

- Look at A117.1 visible signage for information on hardware
- Coordinate with CTC care facilities nursing homes

2nd Code Change proposal to add Exception 2 to Item 4:

IBC 1008.1.9.7 Delayed egress locks. *Approved, listed, delayed egress locks locking systems*¹ shall be permitted to be installed on doors serving any occupancy except Group A, E, and H occupancies in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved* automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock allow immediate free egress in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an *exit*.

1. The delay electronics shall disarm doors-unlock upon actuation of the *automatic sprinkler system* or automatic fire detection system, allowing immediate, free egress.
2. The ~~doors-unlock~~ delay electronics shall disarm upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.
3. The ~~door-locks~~ delay electronics shall have the capability of being unlocked disarmed by a signal-switch located at from the fire command center or other approved location.
4. An attempt to egress ~~The initiation of~~ shall initiate an irreversible process which ~~will~~ shall allow such egress latch in not more than 15 seconds when a ~~force of not more than 15 pounds (67 N)~~ physical effort to exit is applied to the egress side door hardware⁴ ~~for not more than 4 3 second-seconds³ to the release device~~. The effort to open the door shall not require a force greater than 15 pounds (67N). Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics door-lock has have been ~~released~~ disarmed, ~~by the application of force to the releasing device, relocking-rearming the~~ delay electronics shall be by manual means only.

Exceptions:

1. Where approved, a delay of not more than 30 seconds is permitted.
 2. Where approved, up to 2 doors within a means of egress with delays of 15 seconds each (30 seconds total) is permitted.
5. A sign with 1" high letters and numbers that are in sharp contrast to their background⁵ shall be provided on the door located above and within 12 inches (305mm) of the ~~release device~~ door hardware reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 (30) SECONDS.
- Exception:** In Group I-2 and I-3 health care occupancies, where approved, the use of a sign is not required where it interferes with the safety of the patients.⁶
6. Emergency lighting shall be provided at the door.

Reason:

NFPA as of 2009 does not limit the number of delayed egress locks in the path for means of egress.

Since delayed egress was developed in two separate theaters for two separate reasons, pilfering was a reason that is perfect for *one* 15 second delay. Back then, sprinkler requirements were not like they are today. On the other hand, delayed egress for health care in a fully sprinklered facility should be recognized as being different. A delay of thirty seconds is appropriate for this situation and so should two 15 second delays when used for good purpose, as they delay the person for no more time and often for less time. Following are two good purposes:

1. Property, especially in cities, is at a premium in both price and availability. For this reason, we see more and more two and three story ambulatory health care facilities as a result of needing to build up instead of out. This comes with a need to keep Alzheimer's disease and Head Injury patients on the floor **and** in the building. Currently, the facility is tasked with having to make a dangerous and unnecessary choice.

2. Most single story dementia facilities have a perimeter fence surrounding the back and sides of the building. All exits except the front door are into a protected yard. The front door controls entry into the office/lobby area and reception. It is a small area requiring only the front door as an exit. A second door leading from the front office area into the core of the facility keeps the residents from eloping and strangers from entering. Originally, this door was not an exit and the facility side of the door was disguised as a wall so residents (patients) would not try to get out. Since it was not an exit, a delayed egress system was placed on that door and another one on the front door. Keypads were on both sides and both systems would unlock upon activation of the fire alarm. It was a mantrap designed so that if the lobby to core door went into alarm, the front door would instantly become delayed egress. Pursuant to the "discovery" and subsequent enforcement of the idea that if people exit the way they entered, the lobby to core door was an exit, should not be disguised and the front door could no longer be delayed. Without exceptions for those with health issues, the patients were now less safe than before. Allowing two 15 second delays would return them to a safe environment. This reasoning could also be applied to ward doors leading into a common lobby with a stair tower door. The stair tower door would be free egress unless someone had triggered the ward delay in an attempt to elope from the ward. This would set off the alarm and arm the stair tower door's delayed egress system.

Notes:

- Item 4, Exception 2 – put in as separate code change.
- In reason statement, mention possibility of temporary man trap as a means to stop patients from leaving the building.
- Provide other examples of when used – top and bottom of stairs, on suite and on stairs, subdivide suite into medium and higher security areas
- Add to reason statement to show this could be used in other use groups
- Coordinate with CTC care facilities nursing homes
- Can this be used for ambulatory care?
- Ed will bring forward information from Virginia lock expert – look this up on ICC website
- Needs additional tweaks – committee has no problem with idea.

Code Change proposal:

Special locks –

1008.1.9.6 Special- Controlled egress locking arrangements in group I-2. Approved, controlled egress special egress locks, including cylindrical locks, mortise locks, electromagnetic locks, and specially designed panic bars shall be permitted in the means of egress in a Group I-2 occupancy where the clinical needs of persons receiving care require such locking. ~~Special egress locks~~ Controlled egress shall be permitted in such occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic-smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with Items 1 through 7 below.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system. Use of a pull station shall not unlock the doors.
2. The doors unlock upon loss of power ~~controlling to~~ to the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a switch that directly breaks power to the lock, located signal from at the fire command center, a nursing station or other approved location.
4. A building occupant shall not be required to pass through more than one door equipped with a ~~special~~ controlled egress lock before entering an exit.
5. The procedures for the ~~operation(s) of the~~ unlocking system of the doors shall be described and approved as part of the emergency planning and preparedness required by Chapter 4 of the International Fire Code.
6. All clinical staff shall have the keys, codes or other means necessary to operate the locking devices.
7. Emergency lighting shall be provided at the door.

Exception: Items 1 through 4 shall not apply to doors to areas where persons which because of clinical needs require restraint or containment as part of the function of a ~~psychiatric treatment~~ patient care area.

1008.1.9.9 Electromagnetically locked egress doors. Doors in the *means of egress* in buildings with an occupancy in Group A, B, E, I-2, M, R-1 or R-2 and doors to tenant spaces in Group A, B, E, I-2, M, R-1 or R-2 shall be permitted to be electromagnetically locked if equipped with listed hardware that incorporates a built-in switch and meet the requirements below:

1. The listed hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.
2. The listed hardware is capable of being operated with one hand.
3. Operation of the listed hardware directly interrupts the power to the electromagnetic lock and unlocks the door immediately.
4. Loss of power to the listed hardware automatically unlocks the door.
5. Where panic or *fire exit hardware* is required by Section 1008.1.10, operation of the listed panic or *fire exit hardware* also releases the electromagnetic lock.

Reason: The proposal will address security/abduction issues for issues. Changes will reduce confusion between delayed egress locks and these other types of locks.

Items remaining in #3:

Need to look at provisions for :

- 1008.1.9.8 Access-controlled egress locks
- 1008.1.9.10 Locking arrangement in correction facilities (as guide for what would work in secure areas)

Notes:

- 1008.1.6 Item 3 – switch could be limiting in application of options for unlocking, “unlocked by a signal that directly breaks the power” suggested
- Justification for the pull station to not open the doors – clarify that this is only for patient care areas, not all areas.
- Needs to be in emergency action plan
- 1008.1.6 Exception suggested as separate change
- Can this be used for ambulatory care? Nursing homes (see CTC care facilities group)?
- 1008.1.9.9 can be processed as a separate code change
- 1008.1.9.6 needs additional tweaks – committee has no problem with idea.

Issue #4

4. Care Suites
 - SUITE SIZE AND SUPERVISION
 - MEANS OF EGRESS SUITE

Revisions to Section 407. Waiting for report from ASHE. No proposal at this time.

Issue #5

5. Accessibility -
 - ACCESSIBILITY - MAXIMUM 18” CLEAR ON THE SIDE OF TOILET FOR CARE-GIVER ACCESS

Coordinate with new CTC Accessibility study group. No proposals at this time.

NEW CODE ISSUES:

- Evacuation for all hazards not just fire
- Doors – swing, size, corridor overlap, break out, smoke seal, maneuvering clearances
- Renovations for suites or smoke compartment vs. new construction

WG CROSS OVER ISSUES:

- The Fire Safety work group referred a proposal for delayed egress locks to the MOE work group. The MOE work group is looking at locking for security/wandering issues. Coordination/communication needs to be maintained in this area.
- If the General work group wants to increase the size of the Care Suites in 407, that will affect the MOE from that space. Coordination/communication needs to be maintained in this area.
- CMS Survey tool for existing buildings – Fire Code committee

FURTHER RESEARCH ISSUES:

Information on how elevators are used during different emergencies.

Study efficiency, occupant load and staffing needed for suite sizes.

From #1 Elevator comments above:

AHC could check with NIST or ASME to see if there has been any occupant evacuation models with hospitals either during a general evacuation (i.e., flood, hurricane, tornado) or during a fire event. Is there any history on a hospital needing to do a building evacuation for a fire event? ASHE will provide general building evacuation studies.

From #4 Suite Sizes above:

A study to statistically determine the area needed for “average patient care area” within a typical suite arrangement (i.e. area needed for an ICU care area – bed, equipment, staff movement, supplies, etc) - The 5,000 sq.ft. was an arbitrary number. Study should address

- If the suite size increases, will the travel distance still work? Is there a chance to look at travel distance for patients only – not all spaces?
- NFPA 101 will be increasing the suite size 7,500/10,000 sq.ft with smoke detection/staff notification. Should the travel distance within the suite be increased if it is suggested to increase size in IBC? Does the number of doors slow down travel?

OUT-OF-SCOPE ISSUES:

None at this time

ADDITIONAL ISSUES TO BE BROUGHT TO AHC ATTENTION

None at this time

Are you being prevented from returning through the smoke compartment of fire origin or the smoke compartment of egress origin?

WG PROGRESS ASSESSMENT:

The MOE work group has teleconferences every Friday, from approximately 10:00 to 11:30 EST. At the writing of this report we have had 14 teleconferences. Of the 5 areas of study, the committee has proposals for 2 and a direction for a third. We are waiting for additional information for the suite size and accessibility.

AHC # 3 Meeting Minutes – Appendix E

GENERAL WORK GROUP REPORT & NOTES FROM AHC #3 (IBC Chs 3-6, 12, 13, 27-34)

This appendix is based on the AHC's review of the noted Work Group Report at AHC Meeting #3. **Notes from the meeting are indicated in red.**

Note: The following items should be focused upon for approval or need for additional feedback

Code proposal action items.

Topic 2. Revised definition, new language about documentation and language permitting a defend in place strategy.

Topic 3. Revised smoke compartment size.

Topic 4. New code language in Sections 3304 and 3311.1

Topic 9. Proposed exception to 1004.6 to provide some relaxation to non healthcare portions of mixed occupancies and a footnote highlighting separation requirements for ambulatory healthcare facilities.

Topic 12. Proposing to change the term "litter" and "gurney" throughout the code to the term "stretcher."

Additional feedback needed.

Topic 3. Need more guidance from ASHE on Smoke dampers with regard to the possible exception proposed.

Topic 8. Smoke compartment alternative/tradeoff for fully suppressed buildings. Decide as to whether we still pursue.

Topic 10. More feedback from ASHE on KTag assignments to make sure this issue is addressed after the meeting in preparation for the next AdHoc Meeting.

Topic 11. Need more feedback on to what extent the IBC and related codes need to address more detailed healthcare issues such as isolated mechanical systems etc.

PART I: CURRENT CODE ISSUES:

TOPIC #1:

Ambulatory Care. (Sharon Myers) Generally there was concern during previous meetings as to whether ambulatory healthcare facilities are appropriate to remain as a Group B occupancy with special provisions in Section 422 or if it needed to be considered as an I-2 occupancy. There was extensive discussions related to the following issues

- **Definition.** This definition can include a little as one person receiving care that are rendered incapable. This definition was felt to be sufficiently inclusive.

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

- **Separation requirements.** IBC Currently requires 1 hour fire partition from adjacent tenants.
- **Sprinkler and fire alarm provisions.** Note that the sprinkler provisions have changed from the fire area concept to instead sprinklering the entire floor from the 2009 to the 2012 edition.
- **Existing buildings and mixed used.** Section 422 seemed to be a better fit for implementing into existing buildings and mixed use based upon how the requirements were designed. Smoke compartments and other relevant safety features were still provided but flexibility in design was afforded.
- **Size concerns.** There was some concern that such facilities would be too extensive perhaps there should be a size limit. It was noted that the smoke compartment requirements and all the safety requirements would continue to apply so there was not an increase in hazard. [Comments were made that the size of the facilities would not become **extremely large facilities** because it would not be economically feasible to run and would not likely be constructed as Ambulatory care facilities.]

TOPIC #1 Conclusions:

- Provisions for Ambulatory healthcare provided in Section 422 of the IBC were sufficient and classification as a Group I-2 occupancy did not seem necessary.
- In addition it was felt that Section 422 was more flexible for mixed use and existing buildings than the requirements in Section 407.
- Life Safety issues seem adequately addressed and consistent with CMS guidelines.

This topic is complete. Issues regarding related construction, systems and equipment requirements in outside standards are being addressed by Topic #11.

TOPIC #2

Defend in place (David Howard, John Williams)

The topic of defend in place was raised due to a concern that it is a concept not well addressed in the I-Codes currently. The IBC provides the necessary tools to undertake this strategy in the form of smoke compartments separated by smoke barriers, quick response sprinklers, refuge areas, corridor requirements, fire alarm systems and several other related construction requirements. Building evacuation is not an appropriate strategy for these facilities and clarification within the code is necessary.

Evacuation strategies are not mandated for any type of building within the code so the best solution was to provide a definition of “defend in place” that could be referenced. Additionally, direction needed to be provided to the Fire Safety WG on possible provisions in Chapter 4 of the IFC. Chapter 4 of the IFC deals specifically with fire safety and evacuation planning. The topic of defend in place includes both Group I-2 occupancies and ambulatory care facilities.

The following was the definition accepted at the the ad hoc meeting June 28-29, 2011. Since then more revisions have been made and further development of section language to reference the term has been developed. See conclusions for the most current version.

DEFEND IN PLACE. A method of emergency response that relies on the action of designated occupants staff and building components to ensure occupant safety during a fire that does not evacuate occupants from the building. Emergency response may involve remaining in place or relocating within or a both in the building without evacuating the building. Defend in place methods shall be described in the fire evacuation plan as described in International Fire Code Section 40x.x.

TOPIC #2 Conclusions:

The following recommendations were passed along to Firesafety group regarding what should be addressed in a fire safety plan

- **Occupant condition**
- **Maximum number of people incapable of self preservation at any one time**
- **Defend in place or evacuation plan**
- **Assessment of existing building means of egress as it relates to the above.**

The general WG is also considering adding a provision to require submission of a fire safety plan during the permitting process. Note that section 1001.4 of the IBC and IFC already require the fire safety and evacuation plan be provided.

In addition to the above conclusions a definition was drafted for inclusion into the IBC and IFC for the terms “defend in place”. Draft language that references the term is also included. Note that the phrase “the action of designated staff and” was removed as “defend in place” is used in other types of buildings/occupancies where staff does not play the same role.

DEFEND IN PLACE. A method of emergency response that ~~engages~~ ~~relies on~~ ~~the action of~~

~~designated staff and building components~~ **and trained staff** to ensure occupant safety during **an emergency a fire** ~~that does not~~ without evacuating occupants from the building. Emergency response involves remaining in place, relocating within the building, or both, without evacuating the building. ~~Defend in place methods shall be described in the fire safety and evacuation plan as described in International Fire Code Section 40x.x.~~

Notes:

- Deletion of last sentence because you cannot use the definition in itself and requirements should not be in definitions.
- Should this be limited to Group I-2 and I-3 applications vs. a general definition. Committee felt this should concentrate on Group I-2 specifically.
- Other uses have lock-down plans for other emergencies such as educational, courthouses, jails.

The following is language referencing the term and also looking for specific documentation **407.x Fire safety and evacuation plans.** Group I-2 occupancies using a *defend in place* method of emergency response ~~shall submit to the building official~~ a fire safety and evacuation plan in accordance with International Fire Code Section 40x.x. This shall include a comprehensive set of life safety drawings ~~that identify the location of the building components~~ needed to support the *defend in place* response.

Note:

- Section may not be needed since this is already in 1001.4 and fire evacuation plan requirements.
- Also, do not take approval away from the fire official – this is conflict with 1001.4 and IFC.
- Possibly ask for life/safety plan in Section 106? Committee says keep it in Chapter 4

422.x Fire safety and evacuation plans. Buildings containing a Group B Ambulatory Care Facility using a *defend in place* method of emergency response shall submit to the building official a fire safety and evacuation plan in accordance with International Fire Code Section 40x.x. This shall include a comprehensive set of life safety drawings that identify the location of the building components needed to support the *defend in place* response.

Substantiation:

The defend in place, or protect in place, concept has long been employed as the preferred method of fire response in hospitals due to the nature of the occupants. Occupants in this setting are often dependent upon the building infrastructure and immediate evacuation would place their lives at risk. Patients in these occupancies are typically on life support systems that require medical gases, emergency power, and environmental controls that rely on continued building operation. Previous versions of this code and the legacy codes have created a tried and tested set of requirements to support this concept, such as smoke compartmentation and areas of refuge. ~~However the previous codes but have never comprehensively addressed the concept itself.~~ However, previous codes while providing the necessary building components and systems have not specifically described the concept of occupants remaining within a building during a fire emergency.

- This code change would name and describe the concept to provide clarity for code officials. Since so much of the defend in place concept relies on the actions of trained staff, clear direction is provided to describe these actions in the fire safety and evacuation plan. A successful defend in place environment also requires close coordination between the initial construction and the fire safety plan. The code official must be provided with both a set of life safety plan that describes how the building is built AND an operational plan that describes how the building is going to work. Requiring the life safety and fire safety plans will give the code official all of the components needed to make an informed decision. This will lead to a more consistent application of the code.

Language to permit defend in place strategy.

407.4 Means of egress. Group I-2 occupancies shall be provided with a means of egress complying with Chapter 10 and Sections 407.4.1 through 407.4.3. Group I-2 Occupancies shall

be permitted to use a defend in place emergency response strategy. (possibly language should be added to Section 407.1)

422.1 General. Occupancies classified as *ambulatory care facilities* shall comply with the provisions of Sections 422.1 through 422.7 and other applicable provisions of this code. Ambulatory care facilities shall be permitted to use a defend in place emergency response strategy.

Notes:

- All staff has assignments in a defend-in-place. No one leaves.
- Possibly look at this as an exception
- Needs to relate to the life of the building

TOPIC #3

Size of compartments (Enrique Unanue).

The focus of this issue is whether the current smoke compartment sizes are sufficient. It was pointed out that the current smoke compartment size of 22,500 sq feet simply came from the square of the 150 foot travel distance at the time the concept was developed. There were possible concerns with the current size related to the possible limitations imposed upon large ICUs. There was also a concern with smoke dampers and the inconveniences and added expense with limited benefit they provided when the HVAC system is fully ducted. ASHE was currently researching the smoke compartment size at the time of the 1st Ad Hoc meeting.

After extensive discussion there was felt to be a need to increase the smoke compartment size. This need is based upon the movement to single patient rooms and also programmatic needs in certain portions of the building such as in radiology. .

TOPIC #3 Conclusions:

This conclusion includes several issues. The first is smoke compartment size which is looking to increase the smoke compartment from 22500 sq ft to 40,000 sq.ft. The second deals with the exemption of smoke dampers in fully ducted systems. The third was addressing unusable smoke compartments due to small size in ambulatory care facilities but during the June 19th meeting of this group that this third proposal was not necessary.

Smoke compartment size. The following proposal was developed July 19, 2011 and increases the smoke compartment size based upon various justifications. Some of the primary justification comes from move to single patient rooms, needs in areas such as radiology and decreased occupant load in actual use. The requirements will still require a minimum of two compartments per floor.

407.5 Smoke barriers. *Smoke barriers* shall be provided to subdivide every *story* used by persons receiving care, treatment or sleeping and to divide other *stories* with an *occupant load* of 50 or more persons, into no fewer than two *smoke compartments*. Such *stories* shall be divided into *smoke compartments* with an area of not more than ~~40,000~~ ~~22,500~~ square feet (2092 m2) and the travel distance from any point in a *smoke compartment* to a *smoke barrier* door shall be not greater than 200 feet (60 960 mm). The *smoke barrier* shall be in accordance with Section 709.

422.3 Smoke compartments. Where the aggregate area of one or more *ambulatory care facilities* is greater than 10,000 square feet (929 m2) on one *story*, the *story* shall be provided with a *smoke barrier* to subdivide the *story* into no fewer than two *smoke compartments*. The area of any one such *smoke compartment* shall be not greater than ~~40,000~~ ~~22,500~~ square feet (2092 m2). The travel distance from any point in a *smoke compartment* to a *smoke barrier* door shall be not greater than 200 feet (60 960 mm). The *smoke barrier* shall be installed in accordance with Section 709 with the exception that *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.

Reason: See attached documentation regarding a generic 36 bed unit. More data is being pulled together for departments such as radiology.

Notes:

- Reason will include additional information on operational requirements of areas.
- The issue is the time to move out of the smoke compartment
- Hold for additional validation

Smoke dampers. The following is a proposal developed for discussion and is based on language used for fire barriers to be consistent. The issue is to exempt smoke dampers in smoke barriers where the systems are fully ducted.

717.5.5 Smoke barriers. A *listed smoke damper* designed to resist the passage of smoke shall be provided at each point a duct or air transfer opening penetrates a *smoke barrier*. *Smoke dampers* and *smoke damper* actuation methods shall comply with Section 717.3.3.2.

Exceptions:

1. *Smoke dampers* are not required where the openings in ducts are limited to a single smoke compartment and the ducts are constructed of steel.

2. *Smoke dampers* are not required in Group I-2 occupancies where the HVAC system is fully ducted. For the purposes of this exception, a fully ducted HVAC system shall be a duct system for conveying supply, return or exhaust air as part of the structure's HVAC system. Such a duct system shall be constructed of sheet steel not less than No. 26 gage thickness and shall be continuous from the air-handling appliance or equipment to the air outlet and inlet terminals. [Smoke compartments are required to be sprinklered throughout in accordance with Section 903.3.1.1.]

Note: This last part in brackets is something that needs to be discussed in more detail as to whether this should be proposed in code text language. Also this topic of smoke dampers is also being addressed by the firesafety WG and correlation of these efforts is necessary.

Note that the 2009 & 2012 IFC retroactively requires sprinklers in any I-2 Fire area and the entire floor where the I-2 is located. The sprinklers are required to be provided from that floor to the level of exit discharge. Some debate with the above proposed exception as to whether new construction requirements should address sprinkler requirements for existing buildings that may not be sprinklered in accordance with the IBC or IFC.

The following is a summary of why NFPA 101 has eliminated smoke dampers in fully ducted systems from smoke barriers:

1. Healthcare is a highly compartmented occupancy. These compartments include:
 - a. Patient rooms
 - b. Treatment rooms
 - c. Suites
 - d. Hazardous area rooms
 - e. Corridor walls that resist the passage of smoke
 - f. Smoke barrier walls
 - g. Stair enclosures walls
 - h. Shaft enclosures walls
2. Quick response sprinklers are required in the patient sleeping areas
3. The intent of LSC is to protect the person not intimate with a fire and improve the chances of survival of person intimate with the fire.
 - a. Smoke dampers are not an issue for person intimate with a fire.
 - b. Current fire records are showing smoke movement as a minimal effect in fully sprinklered healthcare buildings.
4. Quick response sprinklers and normal response sprinkler when activated:
 - a. Reduce the temperature in the area of fire origin.

- b. Reduce the smoke generation rates by slowing the combustion or extinguishing the fire
 - c. Cause the smoke and products of combustion to mix with the room air and become less buoyant.
 - d. Less energy in the products of combustion means less movement of the smoke.
5. The LSC Technical Committee in 1991 felt this was adequate justification to remove smoke damper from the requirements of smoke barrier. Based on the items above significant amounts of smoke would not be transferred through a fully ducted system in amounts that would endanger persons not intimate with the fire.

Small smoke compartments. The following proposal was submitted by Rick Kabele for consideration of the concern of unusually small smoke compartments which could not accommodate relocation from the adjacent smoke compartment. Some concern that this was not a large issue but the concept had some merit. See proposal as follows:

422.3 Smoke compartments. Where the aggregate area of one or more *ambulatory care facilities* is greater than 10,000 square feet (929 m²) on one *story*, the *story* shall be provided with a *smoke barrier* to subdivide the *story* into no fewer than two *smoke compartments*. All such separated smoke compartments shall be sufficient to provide for the relocation of patients from the largest adjacent patient care smoke compartment. The area of any one such *smoke compartment* shall be not greater than 22,500 square feet (2092 m²). The travel distance from any point in a *smoke compartment* to a *smoke barrier* door shall be not greater than 200 feet (60 960 mm). The *smoke barrier* shall be installed in accordance with Section 709 with the exception that *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.

Decided that the above proposal is not necessary as it should be addressed by both Section 422.4 and the fire plan in chapter 4 of the IFC. July 19, 2011.

Note for future reference for existing facility requirements:

Number of smoke zones for ambulatory facilities less than 5000 square feet (NFPA 101 has exception for facilities less than 5000 square feet when detection is provided throughout) space is not required to be subdivided. Note IEBC change of occupancy would require compliance with special occupancy provisions for Ambulatory Care Facilities (Section 1002.1).

TOPIC #4

Use of facilities during renovations (Brad Pollit).

Discussed this issue and the primary focus was on Chapter 33 of the IFC and IBC. Many of the issues are fire related and thus being addressed by the Firesafety group. Some discussion on how these chapters might work with fire safety and evacuation plans.

TOPIC #4 Conclusions:

More work is needed on the fire safety and evacuation plans to perhaps generate language that would work with those provisions in Chapter 33 of the IBC. Of primary concern is how the defend in place strategies and general fire protection will function during construction/alterations. Some issues also related to HVAC shut down during construction. The following provisions for Chapter 33 of the IFC are proposed to address the concerns related to the construction and alteration process.

CHAPTER 33

FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

SECTION 3301

PRECAUTIONS AGAINST FIRE

3304.1 Smoking. Smoking shall be prohibited except in *approved* areas. Signs shall be posted in accordance with Section 310. In *approved* areas where smoking is permitted, *approved* ashtrays shall be provided in accordance with Section 310.

3304.2 Waste disposal. Combustible debris shall not be accumulated within buildings. Combustible debris, rubbish and waste material shall be removed from buildings at the end of each shift of work.

Combustible debris, rubbish and waste material shall not be disposed of by burning on the site unless *approved*.

3304.3 Open burning. *Open burning* shall comply with Section 307.

3304.4 Spontaneous ignition. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a *listed* disposal container.

3304.5 Fire watch. When required by the *fire code official* for building demolition, or building construction during working hours that is hazardous in nature, qualified personnel shall be provided to serve as an on-site fire watch. Fire watch personnel shall be provided with at least one approved means for notification of the fire department and their sole duty shall be to perform constant patrols and watch for the occurrence of fire.

3304.6 Cutting and welding. Operations involving the use of cutting and welding shall be done in accordance with Chapter 35.

3304.7 Electrical. Temporary wiring for electrical power and lighting installations used in connection with the construction, *alteration* or demolition of buildings, structures, equipment or similar activities shall comply with NFPA 70.

3304.8 Group I-2. For buildings employing a *defend in place* method in Group I-2 **hospitals**, an on-site fire watch shall be provided in accordance with the Section 901.7 of the *International Fire Code*.

SECTION 3308

OWNER'S RESPONSIBILITY FOR FIRE PROTECTION

3308.1 Program superintendent. The *owner* shall designate a person to be the fire prevention program superintendent who shall be responsible for the fire prevention program and ensure that it is carried out through completion of the project. The fire prevention program superintendent shall have the authority to enforce the provisions of this chapter and other provisions as necessary to secure the intent of this chapter.

Where guard service is provided, the superintendent shall be responsible for the guard service.

3308.2 Prefire plans. The fire prevention program superintendent shall develop and maintain an *approved* prefire plan in cooperation with the fire chief. The fire chief and the *fire code official* shall be notified of changes affecting the utilization of information contained in such prefire plans.

3308.3 Training. Training of responsible personnel in the use of fire protection equipment shall be the responsibility of the fire prevention program superintendent.

3308.4 Fire protection devices. The fire prevention program superintendent shall determine that all fire protection equipment is maintained and serviced in accordance with this code. The quantity and type of fire protection equipment shall be *approved*.

3308.5 Hot work operations. The fire prevention program superintendent shall be responsible for supervising the permit system for hot work operations in accordance with Chapter 35.

3308.6 Impairment of fire protection systems. Impairments to any *fire protection system* shall be in accordance with Section 901.

3308.7 Temporary covering of fire protection devices. Coverings placed on or over fire protection devices to protect them from damage during construction processes shall be immediately removed upon the completion of the construction processes in the room or area in which the devices are installed.

SECTION 3311

MEANS OF EGRESS

[B] 3311.1 Stairways required. Where a building has been constructed to a *building height* of 50 feet (15240 mm) or four stories, or where an existing building exceeding 50 feet (15 240 mm) in *building 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.

3311.2 Maintenance. Required *means of egress* shall be maintained during construction and demolition, remodeling or *alterations* and additions to any building.

Exception: *Approved* temporary *means of egress* systems and facilities.

3311.3 Group I-2. Temporary construction within corridors serving bed or stretcher movement in Group I-2 **hospitals** shall not reduce the corridor width to less than 60 inches.

Reason: Statement to be drafted.

Notes:

- Coordinate with CTC care facilities to see if they want this applicable to nursing homes.
- Add requirement with connection to the overall fire safety plan.
- Bring back with revision.

TOPIC #5

Hazardous materials locations (Sharon Myers).

The only concerns were possibly related to difficulty in meeting MAQ limitations on upper floors for labs and portable oxygen. The specific concerns were unclear and further direction is needed.

TOPIC #5 Conclusions:

More direction, if any, is needed as to the particular concern with this topic in order to develop possible proposals to correct problems. **No resolution at this time based upon the need for additional feedback.**

HANDED OFF TO FIRE SAFETY

TOPIC#6

Incidental use areas.

This issue was discussed and more feedback is necessary from the Adhoc committee. Currently the table addresses “waste and linen collection rooms” of any size in Group I-2 and Ambulatory care facilities. These rooms are to be separated by one hour fire barriers.

TOPIC #6 Conclusions:

Need more feedback but the WG did generate the following questions for discussion as possible areas of concern.

1. Perhaps a minimum size is necessary?
2. Only addresses waste and collection of linens – should it deal with storage of clean linens and storage in general?
3. Would the general storage requirements elsewhere in the I-Codes be considered sufficient and no changes are needed here?

HANDED OFF TO FIRE SAFETY, ITEM #11

TOPIC #7

SEISMIC REQUIREMENTS & EXISTING BUILDINGS.

This was placed in the parking lot initially due to the fact that existing building requirements were being dealt with later in the process. Generally seismic is dealt with in Chapter 34 and the IEBC throughout.

TOPIC #7 CONCLUSIONS.

Topic is on hold for future assignment & currently in the ‘parking lot’ given the majority of issues are related to existing facilities. See Part II New code issues

Move to parking lot since this deals with existing buildings

TOPIC #8

Smoke compartment alternative/tradeoff for fully suppressed buildings. (Bill Koffel and Sharon Myers/John Williams).

This issue was related to allowing sprinkler modifications for issues other than building construction type in existing buildings that are not fully sprinklered. Bill Koffel explained the concept and will be assembling draft code language to address these possible allowances. Note that the IFC requires retroactive sprinkler requirements for group I-2 by fire area, throughout the floor where the I-2 is located and all floors between the Group I-2 occupancy and the level of exit discharge. Therefore the only portions of a building that would be permitted to be unsprinklered would be above the existing Group I-2 occupancy.

TOPIC #8 Conclusions:

- In process; no conclusions or recommendations to date.

TOPIC # 9

Mixed Use and accessory occupancy provisions.

During our May 17th call this issue came to light that perhaps the requirements for non separated mixed use may not

be satisfactory in addressing ambulatory care facilities and Group I-2 occupancies. Section 508.3.1 does not reference Sections 407 and 422 in the same way the high rise building requirements are referenced. This was placed on our list but after discussion realized that the bulk of the issues were in Chapter 9 which is already clearly addressed by Section 508.3.1.

Based upon discussion there was still a need to address egress as it applies in a mixed occupancy building. This may be a larger problem in existing buildings where ambulatory care facilities are being constructed with many other uses. This issue with egress is an issue for both non separated and separated mixed use occupancies.

Emergency rooms were also a topic of discussion as it relates to mixed occupancy and accessory occupancy. Some question as to whether they were accessory to the I-2? Also when they separate through fire resistance rated construction what the occupancy classification would be. Generally such facilities whether standalone or separated from an I-2 with fire resistance rated construction would be considered as an Ambulatory care facility.

TOPIC #9 CONCLUSION: Initially there was concern with group I-2 occupancies with other occupancies as the means of egress components may not be appropriate. Section 1004.6 of the 2012 IBC was noted which generally addresses this concern. There was some concern that perhaps this could be too restrictive and an exception is proposed to address this concern. An additional issue addressed under Topic #9 was a clarification of the separation of Ambulatory care facilities from other occupancies including other Group B occupancies.

Proposed exception to 1004.6

1004.6 Multiple occupancies. Where a building contains two or more occupancies, the *means of egress* requirements shall apply to each portion of the building based on the occupancy of that space. Where two or more occupancies utilize portions of the same *means of egress* system, those egress components shall meet the more stringent requirements of all occupancies that are served.

Exception: Means of egress components in non separated mixed occupancies and accessory use areas are not required to comply with the requirements for Group I-2 occupancies where such components are not used for patients.

Reason: Since hospitals typically include accessory spaces or non separated mixed use occupancies that are not patient care, the code official should have the clear ability to apply judgment in determining the appropriate means of egress components. For example a large assembly space may need certain Group requirements, while a mechanical space with no patient would not need an 8' corridor.

Notes:

- Conflict with 1018.2, Item5 for ambulatory health care
- Not needed. This is already addressed in the code. Move to parking lot.

Ambulatory care facility separation.

Also to clarify the needed separation for ambulatory care facilities the following is offered as a revision:

Table 508.4 Add a new footnote e (referenced from Group B occupancies) as follows:

e. See Section 422.2 for ambulatory care facilities.

Note:

- Move to finished pile

Reason: This footnote reminds the reader that although there is no separation required for many B occupancy to other occupancies that Section 422.2 would still require a 1 hour fire partition between other group B occupancies and F-1, M and S-1 occupancies.

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Stand alone emergency rooms are being placed in the parking lot. Generally it was determined that any separated mixed occupancy in a hospital would have a 2 hour separation in accordance with Table 508.4.

Topic # 10 [combined existing KTAGS 7/19/2011] **K Tags/ Existing building issues non seismic**

These apply to new and existing but with a primary focus on existing. Focus needs to be on physical construction requirements not licensure requirements.

Sharon Myers labeled the General related items on the KTag document to begin the review process. ASHE is the process of doing an in depth analysis of the relative KTAG issues. Note that the issues that the WG's need to address may go beyond these lists. Need to be sure that only addressing physical construction requirements, not licensure requirements.

Seismic requirements in existing buildings were initially part of this list but placed in the parking lot to defer existing building issues until later in the process. This item expands the existing building issues beyond simply seismic. Seismic issues as initially noted in the work plan will also be addressed.

TOPIC #10 Conclusions: None at this time awaiting feedback from ASHE. Note this topic is the highest priority following the August 10 and 11th meeting.

Topic # 11 Construction , Systems and Equipment requirements

This issue came about during discussion of ambulatory care facilities and whether facilities would be designed without regard for these issues such as redundant power, mechanical isolation etc. Concern is that appropriate references within the I-Codes may be necessary to ensure that issues are not miss during the design and construction process. Specifically documents such as NFPA 99 and 45 are being reviewed to see what construction, systems and equipment requirements should be linked into the I-Codes. Other standards such as ASHRE 170 also need to be reviewed as compared to current IMC requirements. Note that this separate topic denotes that this is for both ambulatory care facilities and Group I-2 hospitals.

TOPIC #11 Conclusions: Review spread sheet Sharon Myers developed with John Williams comments to see where some of these gaps exist and whether they need to be addressed in the IBC or other I-Codes. The issues are focused only on the tab "Construction requirements and systems."

Topic # 12 Existing standard references and terminology related to health care

Current references to standards related to healthcare requirements should be reviewed to make sure they are accurate and are scoped properly for the subject matter. This topic also includes any terminology consistency issues that arise.

TOPIC #12 Conclusions. Revise term "litter" and "gurney" to "stretcher" throughout the code to be more consistent with current healthcare terminology.

Note:

- Coordinate with 3002.4 'ambulance stretcher.'
- Provide reason – update antiquated terms
- Provide final text for review, otherwise complete.

New proposal from Sharon:

SECTION 2701

GENERAL

2701.1 Scope. This chapter governs the electrical components, equipment and systems used in buildings and structures covered by this code. Electrical components, equipment and systems shall be designed and constructed in accordance with the provisions of NFPA 70.

[F] SECTION 2702

EMERGENCY AND STANDBY POWER SYSTEMS

[F] 2702.1 Installation. Emergency and standby power systems required by this code or the International Fire Code shall be installed in accordance with this code, NFPA110, and NFPA 111 AND ASCE 24.

[EDIT APPLICABLE SECTION IN THE FIRE CODE]

[EDIT CHAPTER 35 AND ADD THE 2702 REFERENCE]

REASON STATEMENT:

THERE IS NO WAY TO GET TO THE REQUIREMENTS OR LIMITATIONS REGARDING GENERATOR PLACEMENT FOR HEALTHCARE FACILITIES THAT ARE IN THE STANDARD IF THE CODETEXT FOR THE SPECIFIC CODE SECTION DOES NOT TAKE YOU THERE.

JUSITIFICATION:

THE ADHOC COMMITTEE ON HEALTHCARE IDENTIFIED THIS COORDINATION OVERSIGHT AS IT HAS BEEN IDENTIFIED IN HEALTHCARE FACILITIES AND THAT GENERATORS ARE BEING INSTALLED IN AREAS SUBJECT TO FLOODING, AND ALTHOUGH THEY WERE DESIGNED TO MEET THE STRUCTURAL LOADS FOR THE FLOODING, THEY WOULD OPERATIONALLY FAIL.

THERE IS NO COST IMPACT FOR THESE REQUIREMENTS BECAUSE THE COMPLIANCE WITH ASCE 24 IS REQUIRED FOR THESE FACILITIES; SPECIFIC REFERENCE TO ASCE FOR COORDINATION OF REQUIREMENTS APPLICABLE TO HEALTHCARE FACILITIES THAT REQUIRE EMERGENCY OR STANDBY POWER SYSTEMS PER FEDERAL, STATE AND LICENSING AGENCY REQUIREMENTS AND REFERENCES.

IT IS AN INSTALLATION CONSTRUCTION REQUIREMENT THAT IS NOT SPECIFICALLY ADDRESSED IN THE CODE; EMERGENCY AND STANDBY POWER BY GENERATORS ARE NECESSARY FOR LIFE SAFETY AND PRESERVATION FOR HEALTHCARE AND FOR OTHER OCCUPANCIES AND USES AS SPECIFIED IN 2702.

Note:

- Question to Rebecca Quinn regarding reference to ASCE 24.
- Move to section below for better placement

PART II: NEW CODE ISSUES:

None at this time. See topics 1-12 in Part I.

PART III: WG CROSS OVER ISSUES:

1. **Defend in place.** Defend in place concern communicated to the Fire safety work group. See notes under Topic #2 “defend in place” above.
2. **Smoke Dampers.** See Topic #4 for smoke damper information; code language drafts.
3. **Egress Issues For Healthcare Occupancies.** Occupancy B & I-2. See Topic #9.
4. **Smoke Compartment size.** Related to work by MOE WG with their investigations on Suite Sizes; also see narrative under Topic #3 in this report.

PART IV: FURTHER RESEARCH ISSUES:

None at this time.

Part V PARKING LOT Issues within Scope

TOPIC #7

SEISMIC REQUIREMENTS & EXISTING BUILDINGS.

This was placed in the parking lot initially due to the fact that existing building requirements were being dealt with later in the process. Generally seismic is dealt with in Chapter 34 and the IEBC throughout.

TOPIC #7 CONCLUSIONS.

Topic is on hold for future assignment & currently in the 'parking lot' given the majority of issues are related to existing facilities. See Part II New code issues

Part VI OUT-OF-SCOPE ISSUES:

Independent Emergency rooms/Emergency Healthcare facilities.

An issue was discussed during several conference calls regarding emergency rooms that are independent of the Group I-2 occupancy or separated from the Group I-2. It was noted that these facilities would either still be classified as I-2 or be classified as a Group B Ambulatory Care Facility; both classifications have been occurring across the country. Such facilities would not simply be considered Group B occupancies unless they were very small. The concern seemed to have more to do with licensing requirements; thus is outside the scope of this group.

Note that there is still some discussion in the mixed occupancy/ accessory occupancy requirements as to how these facilities, whether stand alone or in conjunction with a hospital, are classified (separated or non separated).

Statements were made by some workgroup members that this is possibly just one of many healthcare uses that may have individualized issues and/or requirements; however, given the rapidly increasing prevalence for the development of this type of facility, the General WG recommends that additional discussion, investigation and research is necessary to determine if possible code language would be advisable and emergency care facilities and requirements should be reviewed.

Note:

- Should free-standing emergency departments be considered a general doctor's office (Group B), an Ambulatory Care Center (Group B with protection) or a hospital (Group I-2)?
- The 24 hours is based on patient stay, not the fact that the facility might be open 24 hours a day.
- If licensure or risk category would require different systems – redundant power, separate mechanical systems, etc. – that should be addressed.
- Description of an urgent care facility vs. an emergency care facility.
- Emergency care is an extension of a hospital.
- Urgent care is most likely an ambulatory care center.
- Let the licensure issues be addressed by the individual states.
- Add this issue to the Parking Lot.

PART VII: ADDITIONAL ISSUES TO BE BROUGHT TO AHC ATTENTION

None at this time.

PART VIII: WG PROGRESS ASSESSMENT:

Progress is gaining momentum. The Adhoc General WG has had 11 calls all approximately 1 hour and 45 minutes in duration. There have been 4 calls since the last Ad Hoc meeting on July 12, July 21, 26 and August 2, 2011.

The group continues to move along with all of the issues and during the last meeting has added several more. All have been since moved into the workplan. The progress by this WG is approximately ½ way complete at this time.