Code Update

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Overview

- Schedule for ICC and NFPA codes
- Strategies for issues of interest to the FCIA
- Summary of “balanced design issues”
ICC Schedule

- August 27, 2007 – Deadline for proposals for this code change cycle
- February, 2008 – Code Development Committee hearings
- June 9, 2008 – Deadline for Public Comments
- September, 2008 – Membership vote
- Publish 2009 Editions of I-Codes
NFPA 5000/101 Schedule

• Fire Protection Features TC met in November, 2006
• Fire Protection Features TC met in October, 2007
• NFPA Membership vote – June, 2008
• Publish 2009 Editions of codes
ASTM E2174 – ICC History

• Various attempts to adopt by reference
  – Added reference to ASTM E2174
  – Disapproved
    • Concern over laundry list
    • Difficult to tell building official how to do their job
    • Some felt it should be a special inspection
• NFPA 5000, Section 40.9 requires a quality assurance program for firestop systems and references
  – ASTM E2174 for tested firestop systems
  – ASTM E2393 for tested joint systems
• NFPA 101 included reference to ASTM E2164 and proposed to add E2393 for next edition
  – Annex notes
ISSUES

• Inspection standards
  – Who does inspection?
    • Building official
    • Special inspection
    • Self-certification
OPTIONS

• Propose change to IBC
  – Education of code officials essential
• Address through project specifications
L-Ratings - History

• Proposals to both IBC and NFPA have failed
  – IBC does contain a requirement for leakage for smoke barriers
  – NFPA Technical Committee has supported leakage concept during the meeting but ballot fails
• NFPA Research Foundation to study issue
ISSUES

- What is the correct value?
- Required for what penetrations?
  - Fire barriers
  - Smoke barriers
  - Smoke partitions
- Cost?
- Is it necessary?
  - “Show me the deaths….”
Recent Changes

• Compartmentation
  – Some recommended for approval and some recommended for disapproval
  – Concerns
    • Is it needed?
    • If trying to address more than fire, language is related to fire
    • Concern with penetrations in structural assemblies
Recent Changes

• 2006 IBC reduced requirements for separating certain occupancies
  – Some thought the change was not a technical change
• FCIA and IFC jointly submitted a Public Comment to reverse the action last cycle
• Code change proposals submitted this cycle to return to 2003 Code text/concepts
Recent Changes

• Height and Area
  – Last cycle -27 Proposals, all recommended for disapproval
  – Task Group within CTC project
  – Goal was to submit a unified Public Comment
  – Change submitted this cycle to use compartmentation option
Recent Changes

• Wetted glass assembly
  – Proposal recommended for approval within NFPA 101 process to not permit wetted glass assembly as a fire barrier without special approval by code official
  – Committee recommendation failed to achieve required majority during formal balloting
  – Similar proposal was submitted and accepted for exit enclosures
Recent Changes

- Marking of barriers
  - Some barriers required to be marked by 2007 Supplement
  - Proposals to delete the marking requirements in this cycle
Balanced Design

• ICC Code Technology Committee efforts
  – Comparison with Legacy Codes
  – Reasonably credible fire scenarios
• Increasing support from code officials and the fire service
• Recent emphasis on height and area
Balanced Design

- Height and area study group giving considerable attention to compartmentation
- CA fire officials have expressed interest in the compartmentation approach
- May use NFPA 5000 Annex as a basis for ongoing work
  - Proposal this cycle used this approach with substantially larger fire compartment sizes
    - ISO fire flow formula
Height and Area – NFPA 5000

- Compartmentation option included as an Annex
  - Considered to be acceptable alternative to existing height and area table
Height and Area

• Assumptions
  – Building height in feet is a function of type of construction
  – Building height in number of stories is a life safety issue
  – Overall building area is not as critical as individual compartment size
Height and Area

• Typical compartment size is 12,000 sq. ft.
  – Based on fire flow capability
• Compartment size may be increased based upon sprinkler protection
  – NFPA 13 systems only
  – Factor varies per occupancy based upon fire data for extent of flame damage beyond the floor of origin
Height and Area

- **Number of compartments**
  - Proposed to limit number of compartments similar to control area concept for hazardous materials

- **Fire department access**
  - Maintained requirements for direct access from the exterior for all nonsprinklered compartments
FCIA Code Changes

- **G7**
  - Requires submission of shop drawings for compartmentation features
    - Disapproved
    - Fire alarm systems have requirements for shop drawings typically prepared by installing contractor with details of the system
    - NFPA 72 and NFPA 13 define details to be shown on shop drawings
    - No similar provision for walls
    - Multiple contractors
    - Information already on design documents
FCIA Code Changes

• G9
  – Requires inspection of fire rated construction, smoke barriers, penetrations, and protected openings
    • Disapproved
    • Committee was concerned with the laundry list of items to be inspected
    • Felt that other sections of the code required inspection
FCIA Code Changes

• G10
  – Requires inspection of penetrations of smoke barriers/partitions before concealed
    • Approval as Submitted
    • Already required for fire barriers
FCIA Code Changes

• G11
  – Actually submitted by IFC
  – Allows code official to permit inspection of protection of penetrations and joints by approved agency in accordance with ASTM standards
    • Disapproved
    • Standards are not in mandatory language
    • Should be in Chapter 17 – tried before
FCIA Code Changes

• G217
  - Adds “compartmentation” to a list of fire safety features in an alternate compliance option for existing buildings
    • Disapproved
    • Committee agreed that compartmentation needed to be included but preferred a more significant revision to the section in lieu of an incomplete laundry list
FCIA Code Changes

• FS83
  – Requires certified firestop contractors
    • Disapproved
    • Do not want to verify that contractors are certified
    • I recall concern over “small jobs”
FCIA Code Changes

• FS82
  – Firestop assemblies must be appropriate for the environment in which they are installed
    • Withdrawn by proponent
Related Changes

- **G110**
  - Total rewrite of height and area provisions
    - Disapproved
    - Various reasons for disapproval
    - Fire areas were too large
Related Changes

- **G159**
  - Occupancy separation reductions in 2006 Code
    - Disapproved
    - Individual problems should be addressed as compared to replacing the entire table
Related Changes

• E117, et al.
  – Various proposals for one hour corridors in sprinklered buildings of various occupancies
    • Disapproved
    • Where is the data to support the increase in requirements
    • Creative proposal from CA to include consideration of seismic risk
Related Changes

• FS162
  – Total rewrite of Chapter 7
    • Disapproved
    • One of several rewrite attempts
    • Editorial and technical
    • Allows vertical openings up to 2, 3, or 4 stories depending on sprinkler protection and smoke control
    • Public Comment being developed
Questions??

Thank you for your attention and participation