

March 21, 2013

Structural Advisory Committee (SAC), Meeting notes from 3/21/13 SAC meeting at MnSPE

See attached sign-in sheet.

The following items were discussed:

1. This meeting was called to review the 2012 IBC Table 1607.1 Minimum Uniformly Distributed Live Loads and Minimum Concentrated Live Loads; specifically, No. 25 Residential Occupancy and No. 30 Stairs and Exits. Dan Kelsey noted that this issue was to be discussed as a possible MN amendment to the proposed 2012 IBC code adoption. While the 2006 IBC Interpretations No. 37-07 and 42-07 clarified Table 1607.1 for Residential Occupancy, structural engineers on the SAC continue to have differences of opinion.
2. Regarding 2012 IBC Table 1607.1 No. 25 Residential occupancy: The uniform live load for Hotels (R-1 occupancy) and Multifamily dwellings (R-2 occupancy) is listed as 40 psf for 'private rooms and corridors serving them' and listed as 100 psf for 'public rooms and corridors serving them.' While 'public-use areas' are defined in the 2012 IBC, 'public rooms' are not defined and an occupant load is not listed in the Table (such as greater than 10 occupants (R-1) or greater than 20 occupants (R-2)). While all agreed with Mike Lederle that an assembly occupancy, such as a party room off the corridor, would be considered a 'public room,' there was some disagreement on whether a small room for use by the public off the corridor would be considered a 'public room.' The wording in the 2006 IBC interpretation no. 42-07 includes laundry rooms, exercise rooms and vending areas as 'public rooms,' requiring 100 psf. In addition, some interpreted private access or private egress corridors as being located inside the individual units. However, 2006 IBC interpretation no. 37-07 reads "Corridors designed for a uniform live load of 40 psf and are provided exclusively for serving individual sleeping units or dwelling units can be located either outside and/or inside the individual units." One of the main concerns with using 40 psf in lieu of 100 psf for R-1 and R-2 corridors was the non-uniform, unpredictable nature of wood and lack of redundancy in buildings of Type V (combustible) construction as noted by Doug Whitney, Jim McDonagh and Dan Murphy.
3. Regarding 2012 IBC Table 1607.1 No. 30, Stairs and exits (requiring 100 psf): As noted by Gene Abbott, the term 'corridor' is not included in the definition of 'Exit' in the 2012 IBC. Definition reads "Exit components include exterior exit doors at the level of exit discharge, interior exit stairways, interior exit ramps, exit passageways, exterior exit stairways and exterior exit ramps and horizontal exits." The corridor is defined as 'exit access.' However, sometimes exits (such as horizontal exits, exit passageways and interior ramps) may also form part of the corridor. *Clarification note from Beth: Regarding Dan Murphy's example of widening of corridors that may allow other uses: Fire-resistance-rated corridors shall be continuous from the point of entry to an exit, and shall not be interrupted by intervening rooms, 2012 IBC 1018.6. (Exception: Foyers, lobbies or reception rooms constructed as required for corridors). Occupied spaces within the corridor should have very limited uses and hazards. The mechanism by which this Division allows a rated corridor to be interrupted by an intervening 'room' is a Horizontal Exit (2-hour rated partition/wall with 90-min protected openings). While a corridor is defined as exit access, a horizontal exit is included in the IBC definition of 'exit.' For example, (Division project)—a new college dorm R-2 occupancy, where the widening of the corridor created a room with a use greater than a lobby. The architect designed a 2-hour horizontal exit with 90-min. doors that bisected the corridor. Also, we do see projects with a change in elevation in the corridor by 'interior ramp' (included in the definition of 'exit').* As noted by Dan Murphy, structural engineers should verify with architects where horizontal exits, interior exit ramps and exit passageways (included in Exit definition) happen to also form part of the corridor in R-1/R-2 occupancies.
4. Jim McDonagh recommended adopting the model code without amendments in general. While Frank Berg did note that more areas off the corridor in Hotels (R-1) would be considered public rather than in Multi-family buildings (R-2), he also noted that these types of occupancies/buildings would be required to be engineered. Mike Lederle moved that the 2012 IBC Table 1607.1 should remain without amendment, seconded by Gene Abbott, and consensus was reached to approve proposal.
5. Frank Berg noted that AMBO should appoint a SAC replacement for him for any future committee meetings.

SAC COMMITTEE

MARCH 21, 2013

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