



Some Observations on What the New California Building Code Means to Multi-Family Housing Developers

Many developers of multi-family housing in California have been anticipating—or is it dreading?—the arrival of a totally new Building Code to affect any new projects going to Permit on or after January 1, 2008. I have been to a couple of classes on this subject, and done some studying of the new code, and think that all-in-all, for most typical projects that you are engaged in, the news is pretty good. The following charts, while by no means being definitive, are some observations about LOW and MID-RISE buildings that may be of interest to you as you plan future projects.

The new code California Building Code (CBC) is no longer based on the Uniform Building Code (UBC), but rather on the International Building Code (IBC). However, we Californians can't do anything simple, so the new CBC has been made more complex by the fact that the State Fire

Marshal (SFM) pretty much did not adopt the IBC, but used separate—and often stricter—requirements for Occupancies under their jurisdiction, which includes R occupancies. I think there are still conflicts and/or interpretations that will be coming up. Keep that in mind particularly in mixed-use buildings: It may be better to err on the side of caution and use SFM requirements if there is any question.

Speaking of which, R Occupancies have changed somewhat:

- R-1: Transient multi-unit buildings such as hotels & motels.
- R-2: Apartments & Condos.
- R-3: 1 & 2-family dwellings and townhouses not more than 3 stories above grade. There is no apparent designation for townhouses more than 3 stories—perhaps R-2?
- R-3.1: Residential care for 6 or fewer residents.
- R-4: Assisted Living: More than 6 ambulatory residents.

Some Changes that are Likely to Reduce Costs or Increase Flexibility

Issue	Change	Benefits
1 Egress: Separation Distance between Exits	When sprinklered, the distance between exits can be reduced from ½ to ⅓ the greatest diagonal distance of a floor. If there is a rated exit corridor with two exits, this distance can be measured along the path of the corridor, not “as the crow flies.”	This won't have much effect on senior (typically 1 BR projects), but for multi-floor family projects, you can locate large units at ends (where they fit better) moving stairs towards the center, reducing square footage given over to corridors. Note: Maximum distance to exits is 250' with sprinklers, and 200' without.
2 Openings in Exterior Walls	Allows for a combination of protected and unprotected openings.	When adding a building adjacent to an existing one, such as adding housing on property owned by a Church, it is likely that the new building can be sited closer to the existing building than before, allowing for a larger project.
3 Building Height	For Type V (wood or light steel stud frame) construction equipped with sprinklers, allowable height is increased from 50' to 60'	Of particular benefit to urban infill, mixed-use, and podium projects. For example, this allows four stories of frame construction over a TALL one story podium that conceivably could have a tall retail space in front with two levels of parking behind. Further increases are allowed for buildings of higher construction types.



4 Sprinklers	Under the old code, use of sprinklers could increase height or size, but not both. The new code has multiple benefits for the use of sprinklers (except as a substitute for rated construction).	For example, in R-2 occupancies of Type VA (one-hour protected frame construction) equipped with sprinklers, not only can the height be increased per Item 3 above, but the size can be doubled as well. Further increases are allowed for frontage on a public way. Sprinklers also provide other benefits, such as increased allowable distances to exits.
5 Podium Projects <ul style="list-style-type: none"> ▪ Garage Ventilation ▪ Building Height 	Reduction in the amount of open wall area required for open parking garages, including allowing openings on adjacent sides (there is a greater requirement for open area than if on opposite sides). See Item 4 above.	This will reduce the threshold when mechanical ventilation will be required for parking garages. Of particular benefit to urban infill, mixed-use, and podium projects where two adjacent sides are open, but not opposite sides, such as on corner lots. Note: As with the old code, the podium level is still considered “ground level” for the units above so long as proper exiting is maintained.
6 Townhouses <ul style="list-style-type: none"> ▪ Sprinklers ▪ Upper Floors* 	Sprinklers are NOT required so long as the building is no more than 3 stories, and party walls are two (2) one-hour walls or a two hour wall WITHOUT any plumbing or ducts. No 500 square foot limit to floor area above the second level.	In the past, sprinklers were not required for less than four units (and 2 hour area separation walls were not allowed to divide up a larger assemblage into smaller “buildings”). It was possible in some jurisdictions to divide using double one-hour party walls. That is now codified. Further, I can’t find anything that says you need sprinklers when there are more than two units together. It seems illogical, and I highly doubt that a jurisdiction like San Francisco would allow it to stand. It may be a good idea for liability and salability concerns to add them anyway. Before, a townhouse floor above the second floor was limited to 500 sf if there was only one exit from the floor. At most this meant two small bedrooms and a bath. Now it seems that bigger or more bedrooms/ bathrooms are possible. See also Items 4 above and 7, 8, and 9 below.
7 Parapets	Parapets are not required in R-2 and R-3 when the roof deck is protected by a layer of 5/8” Type X gypsum board for a distance of 4’ to either side of the wall.	The old code allowed horizontal extensions of rated construction to either side of a fire wall in lieu of a parapet sticking up at least 30” above the roof. This appears to be an added—and perhaps a less expensive—method of avoiding costly and unsightly parapets at Type III, IV, and V construction. Note: No openings in the roof are allowed within the 4’ area.

**This is allowed so long as “a separate means of egress is provided”. My reading of this is means that each townhouse has a separate—not shared—egress. I don’t think it means that a second exit is required, but this is one of those issues that needs to be clarified.*



Some Changes that are Likely to Increase Costs, or Decrease Flexibility

Issue	Change	Consequences
8 Fire Rating of Exterior Walls	Exterior walls are required to have a one-hour rating at R-1 (e.g.: hotel) and R-2 (e.g.: apartment and condo) occupancies.	In addition to structural sheathing, fire-rated sheathing will be required on exterior walls. There are some fire-rated plywoods out there, but Mayers Architecture has no experience using them and cannot state whether or not they would be allowed by local jurisdictions. Additionally, there may be environmental issues related to the fire-rated treatments of these materials. See also Item 9.
9 Extension of Exterior Fire Walls	Fire Walls are required to extend to the outer edge of horizontal projections (balconies, roof overhangs, etc.), unless the exterior walls are rated for certain distances (generally 4' or equal to the depth of the projection if greater) to either side of the Fire Wall.	This may not be an issue except at Townhouses. After all, as noted in Item 8 above, larger multi-family projects will have to have rated exterior walls anyway. The New Code makes a distinction between fire WALLS, BARRIERS, and PARTITIONS. My reading is that a party wall would be considered a Fire Wall, so at townhouses, where it is possible to have non-rated exterior walls due to the R-3 occupancy, party walls would have to extend out to the outer edge of any projections—even eaves, unless the exterior wall is protected a minimum of 4' to either side of a party wall. However, protecting the whole wall might be easier-- you would avoid the cost (and appearance) of these projections.
10 Sprinklers	Required of exit corridors in all R occupancies, regardless of size.	Sprinklers: Pretty much got to have 'em. For example at R-1 and R-2 Occupancies, egress corridors must be sprinklered unless the occupancy is less than 10. As noted 4 above, many other benefits apply. However, see Issue 6.
11 Exit Signs	Low level exit signs AND path marking are required in R-1 and R-2 occupancies.	Note: You should confirm with the local building official what constitutes "Path Marking".
12 Stair Enclosures	Required egress stairs in a two-story building must be enclosed, unless the building is sprinklered, in which case half the stairs can be open.	In the Old Code, exit stairs serving two floors could be open, reducing costs and making for a nice, open feel that promotes use of stairs rather than the elevator. Now, at least half of required stairs must be enclosed in a shaft.
13 Use of Egress	An exit passageway cannot be used for any other use except egress.	This one needs interpretation: Do they mean that not even a reception desk/waiting area can be in a lobby through which travels an egress path?

The above is intended a quick overview of a few issues pertaining to low and mid-rise residential projects. It should not be used as a Code Check for any specific project. You should have your Architect do a thorough Code Check of your specific Project to test its viability under the new CBC.