

PPRBD 2009 IRC REVIEW NOTES

SEPTEMBER 24, 2009

CHAPTER 2 – DEFINITIONS

R202

- ²⁰⁰⁶**ACCESSORY STRUCTURE.** New definition to the 06 IRC. Sets the limit at 3,000 square feet and two stories. No change in 09 IRC, minor change.
- **ADHERED STONE OR MASONRY VENEER.** New to the 2009 IRC. Group discussed inspection of this material and decided that it will be revisited in the review of the administration section of the RBC. IRC does not list a lath inspection as a required inspection. **ACTION REQUIRED.**
- **AIR BARRIER.** New definition to 09 IRC.
- **AIR-IMPERMEABLE INSULATION.** New definition to the 09 IRC. The criteria are used in the 06 IRC in relation to un-vented attics. No change.
- **ANCHORED STONE OR MASONRY VENEER.** New definition to the 09 IRC. Added definition does not change the application of the code. The group discussed inspection on these elements as well. Consensus was to revisit in the review of the administration section of the RBC. **ACTION REQUIRED.**
- **ASPECT RATIO.** Revised definition used in lateral loading and braced wall criteria. Revision removed reference to shear wall as this can be a term used for other criteria.
- **ATTIC.** Revised, changed *roof rafter* to *roof assembly*.
- **ATTIC, HABITABLE.** Added definition looks to be a good addition that will add clarity to the IRC. See *Significant Changes* book for more info.
- **BALCONY, EXTERIOR.** Removed this definition from the IRC. Not sure why this has been deleted. Watch for errata, this term is still listed in the index of the 09 IRC and refers to Section 202. Group did not feel that it was necessary to add this back into the code as an amendment.
- **BASEMENT.** RBC amendment here, review with group. Consensus of group was to keep RBD amendment (delete and replace) but reword RBC definition to simplify. Keep permanent floor provision and refer to *story above grade plane*. **ACTION REQUIRED.**
- **BEDROOM / SLEEPING ROOM.** The IRC does not define this term. RBD has a code interpretation to define this. The group suggested that we define this term in the RBC but attempt to clean up the interpretation. **ACTION REQUIRED.**
- **BALL COCK.** Removed this definition. Should not be a problem as it deals with plumbing requirements that will be addressed by the IPC, not the IRC.
- **BRACED WALL LINE.** Reformatted, part of definition moved to *braced wall panel* definition. No change.
- **BRACED WALL LINE, CONTINUOUSLY SHEATHED.** New definition, added clarity.
- **BRACED WALL PANEL.** Reformatted, added clarity.
- **CAP PLATE.** New definition. Added to clarify SIP Construction that is now prescriptive in IRC.
- **CEMENT PLASTER.** New definition helps to specify how cement plaster is mixed and what materials may be used.
- **CONFINED SPACE.** Removed this definition, may not be applicable to IRC.
- **CORE.** New definition. Added to clarify SIP Construction that is now prescriptive in IRC.
- **CRAWLSPACE.** This term is not defined in the IRC. Locally we have a code amendment that defines a crawlspace and sets the maximum height of a crawlspace. The group felt it necessary to keep the maximum height in the crawlspace in order to avoid an 8' tall crawlspace with a stairway and no egress window (there is nothing in the code to prevent this). **ACTION REQUIRED.**

- **DECK.** Removed this definition. Group did not feel it necessary to define as an amendment. The term deck is used in the IRC but it appears to be clear with need for a definition. See section R502
- **ESCARPMENT.** New definition. 2009 IRC has revised wind loading and in turn has added new terms. Most likely this will not apply to RBD, as it would require an analysis of each building site.
- **EXTERIOR INSULATION FINISH SYSTEMS (EIFS).** Revised definition from 2006 code to reflect non-structural. Minor revision.
- **EXTERIOR INSULATION FINISH SYSTEMS (EIFS) WITH DRAINAGE.** New definition that reflects EIFS systems with drainage. Without the definition there may be question regarding is a system like this permissible. Good change.
- **FACING.** New definition. Added to clarify SIP Construction that is now prescriptive in IRC.
- **FIBER-CEMENT SIDING.** Few minor revisions that do not affect the definition. Added language to address exterior use only.
- **FIREBLOCKING.** Added "materials approved". The definition still allows the use of "building materials". Unclear as to when the materials would need to be "approved" if the code allows the use of "building materials". Minor change that resulted in less clarity in the code.
- **FIRE RETARDANT TREATED WOOD.** Added definition that is likely carried over from the IBC. I am unaware of any requirement to use FRTW in the 2003 IRC. Watch for FRTW in the review of the 2009 IRC.
- ²⁰⁰⁶**FIRE SEPARATION DISTANCE.** Note, revised definition in 2006 IRC, no change in 2009 IRC. No technical change, formatting only.
- **FLIGHT.** Added definition, no technical change.
- **FLAME SPREAD INDEX.** No technical change, added clarity.
- ²⁰⁰⁶**FOAM BACKER BOARD.** No change in 2009 IRC but added to 2006 IRC. Added clarity.
- ²⁰⁰⁶**FOAM PLASTIC INSULATION.** No change in 2009 IRC but revised in 2006. No technical change, added clarity.
- ²⁰⁰⁶**FOAM PLASTIC INTERIOR TRIM.** Added to 2006 IRC. Addresses use a foam plastic for interior finish. No code impact.
- **GARAGE.** Not a defined term in the IBC. The group agreed that it would be a good idea to add a definition in the RBC to address this. Suggest reference to a *"finished or unfinished space, attached or detached with a vehicular access door"*. **ACTION REQUIRED.**
- ²⁰⁰⁶**GRIDDED WATER DISTRIBUTION SYSTEM.** New to the 2006 IRC, no change in 2009. Added clarity, probably no impact to RBD, as we do not intend to adopt plumbing portion of this code. May also be in IPC.
- **HIGH-EFFICACY LAMPS.** Added definition to address new materials. This is part of the 2009 IECC.
- **HILL.** Added definition for wind loading. May not impact RBD, See also *ESCARPMENT*.
- **LABELED.** Revised definition to match IBC. Removed "materials". Clarification. See *Significant Changes* book for more info.
- **LISTED.** Separated from Listed and Listing in the 2006 / 2003 IRC. Revised definition adds clarity when a product is required to be listed. Previous definition only addressed equipment, new definition address equipment, materials, products or services. Also specifies that the code official can determine if an organization may be accepted for listing.
- ²⁰⁰⁶**NATURALLY DURABLE WOOD.** New definition to the 2006 and revised in the 2009. The definition provides direction as to what materials may be *considered Naturally Durable, Decay Resistant, and Termite Resistant*. The definition is vague in relation to

"an occasional piece" but this not likely to be an issue locally. Code clarification aids in the application of the code.

- **NOSING.** New definition, no technical change.
- **PANEL THICKNESS.** This definition added for prescriptive SIP construction.
- **²⁰⁰⁶PRECAST CONCRETE.** New definition in 2006 IRC. Even if the concrete element is cast on site such as "tilt up wall panels" it is considered *PRECAST*.
- **PRECAST CONCRETE FOUNDATION WALLS.** Added definition to address precast wall sections used as foundation components. Adds code clarity.
- **²⁰⁰⁶RESIDENTIAL BUILDING TYPE.** Removed from 2006 IRC. This definition has not been applied locally likely due to modification to the energy code section of the IRC. The energy code section was completely revised in the 2006 IRC and this definition probably was no longer necessary. No impact locally.
- **RIDGE.** Added definition for wind loading. May not impact RBD, See also *HILL* and *ESCARPMENT*.
- **SEISMIC DESIGN CATEGORY (SDC).** This term has been in the IRC but has not been defined. It is used in Table R301.2(1) and refers to the seismic risk in a given region. El Paso County's SDC is B. No change, code clarification.
- **SMOKE DEVELOPED INDEX.** This term was SMOKE DEVELOPED RATING in the 2003 and 2006 IRC. It likely was changed to match the definition in the IBC and the correct language. The code does refer to a "rating"; it refers to an "index" when addressing smoke development when a product is tested in accordance with ASTM E84.
- **SPLINE.** This definition added for prescriptive SIP construction.
- **STAIR.** New definition to the IRC. Note, for purposes of safety glazing RBD has determined that a *STAIR* consists of a change of elevation with two or more risers. In review of the 2009 IRC we may either need to amend safety glazing or enforce a change. This definition now matches that in the IBC. The group discussed the definition of a stair and the current RBD code interpretation that requires 2 or more risers for a *stair*. The consensus was to leave the IRC as written as an amendment to the definition may have far reaching impacts. There was also concern as to "watering down" the code in relation to safety glazing. This will be a change to code enforcement.
- **STAIRWAY.** New definition to the IRC that matches that in the IBC. Code clarification that was needed. See discussion above regarding a *stair*.
- **STORY ABOVE GRADE PLANE.** Revised to add "plane". While the modification appears to change the intent or definition of this term it really just clarifies it. The three criteria listed have not been revised and the end result is the same. Need to revise RBC basement definition to reflect this change. **ACTION REQUIRED.**
- **STRUCTURAL INSULATED PANEL (SIP).** Definition added as prescriptive SIP construction is new to the 2009 IRC.
- **SUB SOIL DRAIN.** New definition has been added to the IRC. Locally this is known as a "foundation drain".
- **TERMITE-RESISTANT MATERIAL.** New definition to the IRC. Also addressed under *naturally durable wood*. Code clarification that will have little impact locally as El Paso County does currently have a termite issue.
- **THERMAL ISOLATION.** This definition has been revised in all three version of the IRC. The 2006 clarified the definition by requiring a physical separation as well as separate heating / cooling zones. No technical change.
- **TOWNHOUSE.** Definition has been revised but is not a technical change. The modification changed "*open space on at least two sides*" to "*a yard or public way on at least two sides*". The change uses terms that are defined in the IRC rather than open space, which is not defined. Code clarification, no change.
- **UNCONFINED SPACE.** This definition has been removed from the 2009 IRC. Little to no impact locally with this change.

- **UNUSUALLY TIGHT CONSTRUCTION.** This definition has been removed from the 2009 IRC. It is not in the 2009 IECC. Likely the criteria required to meet this definition has been moved into the body of the code. This definition does not fit in Chapter two as it contains requirements that must be met unlike other definitions.
- **VAPOR RETARDER CLASS.** Previously this term was defined as *VAPOR RETARDER*. Due to increasing demand for energy efficient construction it is necessary to define different levels of permeability of a material. The 2003 and 2006 IRC classify a VAPOR RETARDER as a material with a permeance rating of 1.0 or less. The new definition adds three classes that address materials that range from a perm rating of 0.1 to 10 perm.
- ²⁰⁰⁶**VEHICULAR ACCESS DOOR.** Added to the 2006 IRC. The 2006 and 2009 IRC contain criteria for garage doors or Vehicular Access doors that is not contained in the 2003 IRC. Maybe helpful in defining a Garage and where to apply the requirements of R302.5 and R302.6. Garage is not defined but used in the IRC.
- ²⁰⁰⁶**VINYL SIDING.** Added to the 2006 code. No change in 2009
- ²⁰⁰⁶**WALL, RETAINING.** Added to the 2006 code. No change in 2009. Added clarity, as this is a term used in the IRC.
- ²⁰⁰⁶**WATER-RESISTIVE BARRIER.** New to the 2006 code. Addresses the drainage plane at an exterior wall. The 2006 code added new criteria for exterior wall construction. Little to no impact locally, no change in 2009 IRC.
- **WOOD/PLASTIC COMPOSITE.** Defines materials that are commonly used in exterior decking and guard applications. Added clarity.

SEPTEMBER 29, 2009

CHAPTER 3 – BUILDING PLANNING

R301

R301.1.1. Added reference to ANSI S230. Added option 3 for ICC-400, log home construction.

R301.2.1.1. Changes to IRC do not impact this jurisdiction. For the 100 mph criteria to apply we must be in a hurricane prone region, which are not yet. More info in Sig. Changes book.

Table R301.2(1) Added “topographical effects” and revised footnote “g”. Need to review footnote modification. Also review changes to wind design criteria later in this chapter. Likely we will enter a “NO” in this table.

- Group was in agreement to enter “NO” in table R301.2(1). **ACTION REQUIRED.**

Table R301.2(2) Revised footnotes at bottom of table. Does not appear to be a technical change.

R301.2.1.2. – This has been revised in the 2009 code but does not have an impact locally as we are not in a Windborne Region per the definition of Windborne Region. Windborne regions are those in a hurricane

prone region or where the wind speed exceeds 110 mph. No impact locally.

R301.2.1.4. Added language to reflect master planned communities. If a community of Townhomes is to be constructed the exposure category may take into account the sheltering of adjacent buildings provided construction starts within a year. Locally, we have established the exposure category and do not ovulate it on a site-by-site basis. Should we continue to establish the exposure category we may need to amend this section and delete the last part. Should we choose to allow site-specific analysis we should review the implications of this section. Suggest we add an amendment to delete the last part of this section and continue to set the exposure category.

- Group did not feel it necessary to modify this section of the IRC as Table R301.2(1) sets the minimum Exposure at C. The RBC does not delete other aspects of the code that are not applicable in this jurisdiction such as criteria for SDC

E. No amendment to R301.2.1.4 and delete all RBC amendments pertaining to Exposure A and B. **ACTION REQUIRED.**

R301.2.1.5. New code section. In locations where documented wind damage from topographical effects occurs this section is used to apply addition wind loading criteria. If a "YES" is answered in Table R301.1(2) this section may apply. Suggest we enter a "NO" in Table R301.1(2) and leave this section of code as is. Should a condition arise, such as a house on the summit of Pikes Peak we may address it on a site by site case but I am not aware of any historical data to indicate that the current wind speeds established by RBD are not adequate in all but a few select locations in El Paso County.

R301.2.1.5.1. See previous comment.

R301.2.2. Removed reference to Seismic Design Category E. Table R301.1(2) as amended by RBD assigns a SDC of B to structures constructed under the IRC. As noted in section R301.2.2 applies to "buildings constructed in SDC C, D₀, D₁, and D₂" This section does not include SBC B and therefore this R301.2.2 is not applicable in this jurisdiction. The remainder of this section has been reorganized but there is little technical change. No impact locally. Skipped to R301.2.3

R301.2.3 Added SIP construction. No impact locally as the ground snow load does not exceed 70 psf.

R301.2.4. Changed code section from R324 to R322 (no bar). The exception in the 06 IRC sends the user to IBC which in turn directs the user to ASCE 24. The 2009 IRC sends the user directly to ASCE 24, no technical change.

R301.2.4.1. New section, applies to V Zones only (coastal high hazard areas). El Paso County is not a coastal area.

R301.3

- 1. Exception.** Revised for clarity. If the story height is increased to 12 feet bracing required by Table R602.10.1.2(1) must be increased by 1.10. The requirements of Table R602.10.1.2(2) must be increased by 1.20. Previously a factor of 1.20

applied both tables. Review the tables listed above further.

- 5.** Added criteria for SIP construction and story height. We may need an amendment here, as engineering is required when the story height exceeds 11 feet 7 inches. Suggest we delete item 5. Review further.
 - The group was in agreement and felt it necessary to delete / modify item 5 as engineering is required for all SIP construction. **ACTION REQUIRED.** Upon further inspection items 2-5 all require engineering locally. Rather than modify this section of the IRC we have chosen to modify each section of the code that address prescriptive steel, ICF, masonry, and SIP construction to require stamped drawings. No amendment made.

R301.5. Table R301.5 has been a source of contention as it was revised in the 06 IRC and again in the 09 IRC. The problem involves the required loading for "attics with limited storage". The 09 IRC helps to clarify but if large open trusses are used the bottom chord of the truss must be designed for a 20 psf live load and 10 psf dead load. The 09 IRC adds a restriction that includes the necessary presence of a pull down stair OR attic access as required by other sections of the code.

- The suggestion was made to remove "or framed in accordance with R807.1" from footnote g. With this amendment only attics that meet the criteria listed AND those with a pull down stair must be design for limited storage loading". **ACTION REQUIRED.**

The following amendment has been removed. **Footnote e:** Add the following after the first sentence:

Ledger connection of decks to existing structures shall be capable of supporting a load equal to 1.2 times the total live and dead load. The design dead load shall not be less than 15 pounds per square foot (718 N/m²). Reasoning: The 2009 IRC adds Section 502 for deck loading and construction. If this amendment is necessary it should be located in 502 but

the new code section contains prescriptive criteria for ledger connections. The 1.2 factor would make these tables un-usable. Review under Section 502.

Table R301.7. Added footnote d and e. No technical change.

OCTOBER 3, 2009

R302. Upon initial review it appears that R302 has been expanded up in the 2009 IRC. Reality is most of the criteria in R302 has been relocated from other sections of the code. Only the changes that impact the code will be addressed in this document.

R302.1. Exception 2 has been added. No technical change.

Table 302.1. This table has been revised from the 2006 IRC but no technical changes have been made. Changes are clarifications only.

- It was suggested to review the Fire Separation Distance and modify required distance for exterior walls as per the proposed amendments to 2006 IRC. **ACTION REQUIRED.** The 2009 IRC removed the language addressing projections from R302.1 and put it into table R302.1. Projections are not permitted with a Fire Separation Distance of less than 2 feet. A wall that is located 2 feet from a property line many not have any projections. This is not initially clear in table R302.1. Locally, the proposal is to modify the minimum FSD for exterior walls from 5 feet to 3 feet. The primary concern is projections; fire will impact a projection before it impacts a wall. The intent is to allow for a reduced FSD for exterior walls but continue to address projections. Because the FSD is measured at the wall and not at the projection this becomes difficult. The local amendments to 2006 IRC only address the wall; revised 5 feet to 3 feet. A wall with a FSD of 5 feet is not be required to be rated, but any projections would have to be rated. This has the potential to impact many homes in

this jurisdiction. If the minimum FSD for rated construction of projections were reduced to 4 feet the impact would be less substantial and would still accomplish the goal of protecting the projections. Suggest the following modification: Change the 5' dimension for projections to 4'.

R302.2. The entire contents of R302.2 have been moved from 317.2 of the 2006 IRC.

Exception: The 2hr wall was changed to a 1hr wall due to the fact that all Townhomes are required to be sprinkled per R313.1.

- The group discussed this change as well as sprinklers in general. The consensus of the group was to recommend an amendment to not require sprinklers in one and two family homes but not to modify the sprinkler requirement for Townhomes. Based on this proposal the group was comfortable with this change.

R302.2.4. "and roof" has been added to Exception 3. The group felt that this exception allows for a roof covering (shingles) to be continuous over the dividing line between Townhomes. The decking would require a break, or to be structurally independent between units.

Exception 5 changed from 2hr to 1hr in accordance with R302.2 above.

R302.3. Moved from R317.1 in the 2006 IRC. Added "UL 263". No technical change.

R302.4. Moved from R317, formatting changes only through R302.4.2.

Table R302.6. This table is new table to 2009 IRC but does not contain any technical changes from the 2006 IRC. The information has been reformatted.

- The proposal was made to modify this table as has been done in the proposed amendment to the 2006 IRC. **ACTION REQUIRED.**

R302.5.3. This section of the code should reference R302.5, not R309.2. Should be addressed in errata.

R302.6 - R302.10. No technical change, information moved from other code sections.

R302.11. Fireblocking information has been reformatted, no technical change.

R302.13. This code section is new. Does not appear to present a problem and does allow for insulation contact with fixtures approved for this use.

R303.4.2. Removed "nuisance" criteria. Good change.

R303.7. This section has been revised and is less restrictive. The exceptions are now broken out and have been expanded upon. Code clarification, no technical change.

OCTOBER 13, 2009

R304. No changes to this section

R305.1. Removed "The required height shall be measured from the finish floor to the lowest projection from the ceiling".

Exception 1 has been removed from the IRC.

Exception 2 has been revised and is now a new section R305.1.1

Exception 3 has become Exception 1, no other changes

Exception 4 has become Exception 2 and has been revised for clarity.

- The proposal was made to modify R305.1 and add language similar to what has been removed. The group was unsure as to how projections should be addressed. It was agreed upon that the body of the ceiling should be no lower than 7'-0" and any projection should not extend below 6'-8". The suggestion was made to review the use of the word "projection" and maybe use "obstruction". The exact language needs to be worked on. **ACTION REQUIRED.**

R305.1.1. New code section that has been revised as discussed above.

- The proposal was made to delete the exception and add our local amendment for projections in basements. The 6'-8" dimension was still acceptable to the group. Later discussions were had addressing how the exception is to be applied. The consensus of the group was the 6'8" height could be a max of 8' wide OR up to 50% of

the room. The group felt that this was the intent of this code section but it does not read clearly. The suggestion was made to reword this section to be more clear. **ACTION REQUIRED.**

- The proposal was made to add a new code section to address ceiling height in unfinished basements. The group was comfortable with the dimensions as proposed in the 2006 IRC amendments. **ACTION REQUIRED.**
- Later discussion were had in regards to the amendment pertaining to ceiling height in finished basements. It was noted that the correct code reference should be R305.1 and the amendment should be added as a third exception. R305.1.1 applies to portions of basements that contain non habitable (unfinished) and requires the ceiling height to be 6'-8". When the basement is finished R305.1 will require a 7'-0" ceiling height. The decision was made to replace R305.1.1 with the local amendment for 7'-1½".

R306. No changes to this section.

R307.1. The figure has been revised to reflect a minimum clearance at the front of a sink. This is a new criterion.

- The group discussed the change and did not feel that it presented a problem. Minor change.

R307. No changes to this code section.

R308. This section has been revised in its entirety. The revisions are not of a technical manner but serve to simplify the use of this section. The list of criteria has been reduced by combining like elements and the exceptions have been moved to the appropriate item number. The only relevant change is pertains to item 7 & 8. Previous editions of the IRC had not defined a "stair" or "stairway". Because these terms were not defined RBD interpreted this section to apply only when there is an elevation change of two or more risers. See the proposed amendments to the 2006 IRC for more information. The 2009 IRC does define a stair and stairway in chapter 2 and this definition matches that in the IBC. The

impact of the change is safety glazing is now required at one riser where it was previously required at two risers.

- This change was discussed and while this is a change the group felt this revision should remain. One step is as much of a trip hazard as two or more steps. If this section of code was to be amended what criteria does RBD base the amendment on when the national code is more restrictive? The suggestion was made to delete RBC303.4.7. **ACTION REQUIRED.**

OCTOBER 15, 2009

R309. No technical changes.

R310.1. The group discussed the amendment that requires egress windows in unfinished spaces based upon the square footage. The consensus was to keep the current amendment but rework to match the intent of the code. The intent of this section is that R310.1 requires the 1st egress window. The amendment requires 1 egress window for each 500 sf after the initial 500 sf. A 700 sf unfinished basement would have 2 egress windows, one per the IRC, one per the RBC. This amendment also applies to portions of unfinished basements such as mechanical rooms. Per the amendment a 450 sf mechanical room would not require a egress window but a 550 sf mechanical room would require 1 egress window as it is in excess of the initial 500 sf.

R310.2. This section has been revised but it does not appear to be of a technical manner. The section has been rewritten to read better but the criteria have not changed. The group discussed the proposed amendments to the 06 IRC and everyone agreed the re-worked amendments to Section 310 were acceptable. The only comment was to research the date that the 1999 RBC was adopted and revise the date in RBC303.4.11 accordingly. **ACTION REQUIRED.** Group decision was to leave date as is, Jan 1st 2000.

R310.5. The proposal was made to modify R310.5 as it only addresses escape windows

under decks and porches but does not address "other projections" such as bay windows, etc. It was also noted that the IRC does not address the width of the path out from under the projection, only the height. Later it was suggested to add language into the amendment that allows for the 9 square foot window well with the projection provided the 9 square feet is not below the projection as per the previous RBC. **ACTION REQUIRED.**

R311. As with other sections of the code R311 has been re-worked for clarity but there is no technical change.

R311.3. It was noted that this section as well as subsequent sections establish the landing elevation and step height by measuring from the top of the threshold. RBD's policy has been to measure from finish floor OR top of threshold and apply whichever criteria are less restrictive. The group discussed this but did not feel it was worthy of an amendment as this criteria occurs in several code section and would result in numerous minor amendments to the IRC. The group concluded that this will remain an RBD policy and one the 2009 IRC has been adopted an interpretation will be written.

R311.3.2. The group discussed the 18" landing amendment in RBC303.4.15. The intent of this amendment was to allow for a reduced landing at a patio door one or two steps to grade. The intent was not to allow for a reduced landing with numerous steps. The Exception to R311.3.2 allows for up to two risers at the door with no landing at the top provided the door does not swing over the steps. This exception falls in line with the intent of the RBC amendment and the group was in agreement that the amendment is no longer needed. **ACTION REQUIRED.**

R311.5.1. Relocated, no technical change.

R311.6. The group discussed hallways and what defines a hallway. A definition was suggested but decided against because as soon as a definition is written a case arises that does not fit.

R311.7.2. This section was reworded to address the intent of the code. The reworked section addresses the headroom

at the center line of the stair and adds some flexibility.

R311.7.4.4. New section, composite products must be listed, no change locally.

R311.7.7.2 Proposal to keep current RBC amendment (RBC303.4.16). The group was not aware of any problems created by this amendment and felt that it added flexibility. The group discussed the term "safety terminus" and agreed that it was not in our best interest to attempt to define it. It has yet to be defined on a national basis.

ACTION REQUIRED.

R311.7.7.4. Composite products must now be listed, no change locally.

R312.1. The proposal was made to delete RBC303.4.17 for both the window well protection and well as the added definition for "grade". The IRC now defines the horizontal distance to be measured for guard protection. The revised code section will address window wells that have been covered under our local code. This will result in a change as per the RBC a guard is required when the waling surface it within 12" of window well deeper than 30". Per the 2009 IRC a guard is required when the horizontal distance is less than 36".

When the 2006 code was reviewed the proposal was made to add criteria for the slope adjacent to a deck or elevated walking surface where a guard may be required as previous codes had not addressed this. The 2009 IRC does address the horizontal distance and it more restrictive than the proposed amendment to the 2006 IRC. Delete RBC303.4.17. **ACTION REQUIRED.**

R312.2. The code section has been revised. Under previous codes a bench or seating surface could be part of a guard. The 2009 IRC requires the guard height to be measured from the seating surface of the fixed bench. This is a change and will have a local impact. The group was not comfortable amending this code section as it is a life safety issue.

OCTOBER 20, 2009

R313.1.1. This section of the code requires a sprinkler system to be installed in Townhomes per P2904 of the IRC but does not address NFPA 13D. Section P2904.1

states that a system installed in accordance with P2904 is equivalent to an NFPA 13D system. Section R313.2.1 requires a sprinkler system to be installed in one and two family dwellings per P2904 OR NFPA 13D? The group agreed that this topic needs to be discussed with the Plumbing Department to determine how the code will be enforced. See the following proposed amendments. **COORDINATE WITH PLUMBING AND FIRE.**

R313.1. The group agreed that Townhomes should be provided with sprinklers. If this section of the code was to be amended or contained a "sunset clause" all pertinent sections of R302 would also have to be amended. All codes have "fingers" and this would complicate the IRC / RBC and would lead to greater confusion. The group was also uncomfortable amending this section.

R313.2 & R313.2.1. The group discussed sprinklers in one and two family homes and agreed to follow the direction of previous discussions with management. The proposal was made to delete the code sections listed above and not to require one and two family dwellings to be sprinkled. **ACTION REQUIRED.**

R314. This section has been revised to include monitored fire alarm systems. These systems have not been permissible under previous codes. The code does require "the system to be monitored by an approved supervising station". The group was unclear as to what this means, does this require a fire alarm panel in the dwelling or does this require the system to be monitored by a private party such as ADT? At this time a commentary on the code is not available; when it is available the group suggested we look at this section to get a better understanding. The group did not feel an amendment was necessary.

R315. The 2009 IRC requires carbon monoxide detectors where as previous codes have not. The criteria for where / when the detectors must be placed is similar to that for smoke detectors. The enforcement of this section will be difficult and will be a field issue that is not popular with homeowners or contractors but the group was not in favor of an amendment.

The stamps used by plan review for smoke detectors will need to be revised.

NOVEMBER 17, 2009

R317.1. It was noted that item #5 has been revised and includes criteria for wood framing adjacent to a slab. This has not been addressed in earlier codes. The group felt this was a good change and adds clarity to the code.

The group agreed that the current amendment to item 7 was appropriate as this is a relatively dry climate.

When the 2006 IRC was reviewed there was discussion relating to items 1, 2 and 5. They all appear to address similar conditions and the group was unable to determine when item 2 would be invoked as item 1 and 5 are more specific and appear to cover all applications with the exception of decks and similar structures. The group agreed that it was appropriate to modify item 2 to address exterior wood framing (decks) to require treated material when the framing is less than 6" above exposed ground. This has been an RBD policy and has not been in the code and therefore should have a minor impact locally. **ACTION REQUIRED.**

R317.4. The 2009 IRC now requires all composite guards to be listed. Locally, RBD has permitted alternate materials (such as aluminum or steel) to be substituted for composite balusters in a composite guard provided the structural integrity is not impacted. The group did not desire to amend the code but did agree the written interpretation should remain.

RBC303.4.18. It was noted that the criteria for vapor retarders has been removed from chapter 3 of the IRC and moved to chapter 6. This was section R318 in the 2006 IRC.

R318. The group agreed to keep the current amendment "for reference only" as the RBD staff was not aware of any new or historical cases of termite infestation.

R319.1. This section has been expanded upon in the 2009 IRC but the RBC contains section RBC312 as the primary enumeration code and therefore the current amendment should remain. The group discussed this section and did like the 100' criteria and

agreed it would be beneficial to premises identification if the 100' criteria was added to the current enumeration code. **ACTION REQUIRED, MODIFY RBC312 – Enumeration Code.**

R320. The group discussed the proposed amendment to the 2006 IRC and discovered that the proposed amendment is incorrect as it deletes the section where the intent was only to add reference to CRS Title 9. **ACTION REQUIRED.**

R321. The proposal was made to keep the current amendment for elevators but change the section number to match, RBC303.4.23, as the RBC contains its own elevator section. **ACTION REQUIRED.**

R322. The proposal was made to keep RBC303.4.24 but update the section number as the RBC contains a Floodplain Code.

R323. This section is new to the 2009 IRC and the group did not feel that there is a local need to enforce additional requirements for a storm shelter. If a customer desires to construct a storm shelter the IRC/IBC/RBC would dictate the minimum design loads. Should the customer decide to exceed the requirements why hold the structure to a higher level of compliance? The suggestion was made to add "for reference only". **ACTION REQUIRED.**

DECEMBER 8, 2009

R401.1. The group suggested to keep RBC303.4.25 as proposed for the 2006 IRC amendments but update the code references. **ACTION REQUIRED.**

R401.3. It was noted that the 5% slope criteria have been removed for drainage. This change provides a performance based approach rather than a prescriptive approach. The group liked the change.

R401.4. The proposal was made to keep RBC303.1.26.

R402.2. The proposal was made to keep RBC303.4.27 as the group felt because of unique soil and weather conditions in this area air entrainment of concrete should be left to the discussion of the engineer.

R403.1.4.1. The proposal was made to keep RBC 303.4.28 as well as the three exceptions with one change. The group

came to conclusion that exception 2 should be revised to permit a deck no higher than 24", detached from the house supported directly on grade by an approved method. The approved method may be the use of deck blocks or similar materials but would not permit a wood post bearing directly on grade. The suggestion was also to add that the deck must be uncovered as the group felt that wind loading could be an issue and did not feel comfortable applying this criteria to a gazebo type structure. **ACTION REQUIRED.**

The suggestion was also made to add an exception for decks and landing in conjunction with a temp set modular. The group felt it was necessary to research the permissible size but agreed to a maximum of 32 square feet and 42" above grade as a starting point. **ACTION REQUIRED.**

DECEMBER 15, 2009

R403.1.8. The proposal was made to keep RBC303.4.30 but change the code reference to the 2009 IRC. **ACTION REQUIRED.**

RBC303.4.29. The group noted that this amendment is no located in the appropriate section of the code. The amendment should be located in section R602.3.4. **ACTION REQUIRED.**

R404.1. The proposal was made to keep the current amendment addressing stepped walls.

R404.1.1. The proposal was made to keep the current amendment RBC303.4.31 but eliminate the language addressing lateral support. The group also noted that the section number should be changed to R404.1.1 in lieu of R404.1.

RBC303.4.33. ICF Construction was located in Chapter 4 of the 2006 IRC but has been moved to Chapter 6 of the 2009 IRC. The proposal was made to keep the current amendment but move it to Section R611.1. **ACTION REQUIRED.**

R404.4. The proposal was made to keep RBC303.4.34 but update the section number to R404.4. **ACTION REQUIRED.**

R405.1. The proposal was made to keep the current amendment (RBC303.4.35.).

R405.2.3. The proposal was made to keep RBC303.4.36 with a few minor revisions.

The suggestion was made to revise the amendment to only require a sump pit when gravity drainage is not possible or provided. This section has been enforced in this manner but does require a sump pit anytime a drainage system is provided. There will be no impact from this change as the code will be revised to reflect how the amendment has been enforced. **ACTION REQUIRED.**

R408.3. This section does not require exterior ventilation of crawlspace that meets specific criteria. Item #1 requires that the floor of the crawlspace is covered with a Class 1 vapor retarder that is tape and sealed to the foundation walls. If the vapor retarder must be sealed to the walls it must be in place prior to insulation thus the potential for damage to the barrier is increased during the insulation process. Because this jurisdiction is generally "dry" the group suggested that the sealing requirements apply only when required by the soils report. **ACTION REQUIRED.**

R502.2.2.1. Deck construction is new to the 2009 IRC and presents quite a few problems locally. The desire of the group was to keep amendments to a minimum but all agreed that this section may buck the rule. Historically, staff is not aware of a significant number of deck failure or problems in this jurisdiction. Prior to 2005 the RBC required a live load of 60 psf on deck. This was reduced in the 2005 RBC but the ledger was required to be loaded at 1.2 times the deck load. The consensus of the group was that the previous amendments resulted in a stronger deck and thus fewer failures than have occurred nationally. The group was not comfortable decreasing the live load further. The proposal was to revise R502.2.2.1 to reflect a 15 psf dead load rather than 10 psf. The basis for this amendment is the increased use of heavier composite decking, alternate materials and to a degree snow loading. Decks are a cold surface and therefore may collect snow sooner than a warm roof. Drifting can also be an issue on a deck. Snow is a live load but is also a short term and for that short term the deck doesn't know the difference between a live and dead load. **ACTION REQUIRED.**

Table R502.2.2.1. The group proposed to revise the lag table to reflect RBD standards. This information has not been part of the RBC in the past but seeing as the IRC now does have a table the group felt it necessary to make sure the table matches what is considered good engineering practice in this jurisdiction. The group also proposed to add the 1.2 ledger factor as a footnote and footnote stating that ledgers may not be attached to an un-supported rim. Footnote should also be re-worked to reflect the intent of this jurisdiction. The group discussed ledger spacing and was not comfortable using prescriptive criteria for ledger spacing. It was also proposed to modify footnote c to allow for “sealing or flashing” as adding flashing to an existing structure can develop in a major problem if not done correctly. **ACTION REQUIRED.**

R502.2.2.3. The proposal was made to delete this section in its entirety. This section appears to require a lateral connection per figure R502.2.2.3 but sources have confirmed that the connection shown in the figure is a “suggestion”. This section requires two lateral connections per deck but makes no mention to the size of the deck, be it a landing or large deck. This detail also provide an additional entry point for moisture and in the opinion of the group could subject the home to substantial water damage as well as structural damage in the event of a deck failure. A code change has been submitted to ICC by NADRA proposing that section be removed from future codes. The suggestion of the group was to follow the proposed code change and delete R502.2.2.3. **ACTION REQUIRED.**

R505.1. The proposal was made to keep RBC303.4.37 as the group was not comfortable permitting or inspecting prescriptive steel floor framing. No change locally.

R506.1. The group discussed RBC303.4.38 and came to the conclusion that this amendment is not necessary. R506.1 directs the user back to R403.1.8 which has been modified to reference the soils report rather than the IBC. [Upon further inspection the amendment is necessary as it requires compliance with R403.1.8 regardless of expansive soils with is the intent of the RBC.](#)

The IRC only require compliance with the soils report when there are expansive soils present. It has been determined that expansive soils are very common in this jurisdiction and therefore strict compliance with the soils report is necessary. [Suggestion: Keep RBC303.4.38 but update code reference and verify section reference.](#) **ACTION REQUIRED.**

R601.3. It was noted that R601.3 requires a vapor retarder on the interior face of the exterior wall. Historically this has not been required in this jurisdiction due to concerns over condensation and mold. The group was not comfortable with this requirement and per the review of the 2006 IRC suggested that this requirement be removed from the 2009 IRC. The suggestion was made to delete zone 5 from the requirement. Per N1101.2 El Paso County is zone 5B. The “B” represents a “Dry” climate and therefore the group was comfortable with the suggestion.

ACTION REQUIRED.

R602.3. The exception directs the user to Table R502.5(1)(2) which are not applicable in this jurisdiction because the tables reference the ground snow load were as the RBC establishes the flat roof snow load. Per ASCE 7 the ground snow load is reduced 30% to establish the flat roof snow load. Therefore a flat roof snow of 30 psf equates to a 43 psf ground snow load. The group felt that the number of trimmers should be established by header load (i.e. 405 psi at bearing for Hem-Fir) as has historically been done. The suggestion was to delete the exception. **ACTION REQUIRED.**

R602.3.1. It was noted in review of the 2006 IRC that exception 2 directs the user to table R602.3.1 and during that review the group noted that footnote b excluded El Paso County. Upon further review of the table footnote b applies only to SDC D₂. Therefore Table R602.3.1 is applicable to this jurisdiction. The group discussed the stud height table in the RBC and could not come up with a good reason to continue to establish a table when the IRC does. The suggestion was made the delete Table R602.3(5) from the RBC and follow the IRC but to add footnotes 4,5,6, and 7 to the Table R602.3.1. The IRC table is less restrictive than the current amendment. It

was also suggested that the amendment deleting exception 2 to section R602.3.1 be deleted. **ACTION REQUIRED.**

R602.6. The proposal was made to keep the current amendment to this section as the group felt it was a good idea to have a repair method in the code for studs that have been notched or drilled beyond IRC provisions. The only change to this suggestion was to change the required thickness of the strap from 1/8" to 12 gauge. 12 gauge mild steel has a thickness of 0.1046" vs. the previous 0.125" requirement. **ACTION REQUIRED.**

R602.10. The group spent an extensive amount of time researching the code changes and concluded that the revisions will have little impact locally as the changes are not technical in manner. The group agreed that braced wall panels will be handled as we have in the past. There is no inspection for wall nailing. If the home is continuously sheeted with OSB there are no additional requirements for braced wall panels. The suggestion was made to request at time of plan review to require the sheeting material to be specified. If other than structural wood panels plan review would review the plan for braced wall panels. RBD will investigate this further as this requires additional time on the designer's part as well as staff. It was agreed that under the 2009 IRC inspection and plan review of braced wall panels will remain as until further notice. The group also suggested that RBC 303.4.42 and RBC 303.4.43 be removed as let in metal bracing is now an approved method. **ACTION REQUIRED.**

R603.1. The group discussed steel wall framing and was in favor to keep the current amendment requiring all steel wall framing to bear the stamp of a Colorado Licensed Design Professional. The proposal was made to keep the current amendment to R603.1.1

R604. No changes in the 2009 IRC.

R605. No changes in the 2009 IRC.

R606.1. The proposal was made to keep the current amendment that requires residential masonry construction to be stamped by a design professional. The group was not comfortable with prescriptive

criteria for structural masonry. The suggestion was made to rework the amendment so that it reads similar to the amendment to R603.1.1. **ACTION REQUIRED.**

R607. No significant changes in the 2009 IRC.

R608. No changes in the 2009 IRC.

R609. No changes in the 2009 IRC.

R610. No changes in the 2009 IRC.

R611.1. The group noted that the 2009 IRC has combined concrete wall construction with ICF wall construction. The proposal was made to keep the current amendments requiring a design professional stamp but rework so that the amendments are similar to previous amendments that also require a stamp. **ACTION REQUIRED.**

R611.2 The group discussed the current amendment to the section (RBC303.4.48) and agreed that if the amendment was made to R611.1 this amendment is not necessary. The proposal was made to delete RBC303.4.48. **ACTION REQUIRED.**

R612. The group noted that there have been a few major changes to this section that include a minimum window sill height of 24". The code does permit window sills below 24" provided they meet specific criteria or are equipped with opening limiting devices. These devices may be overridden should full operation of the window be desired but shall default to the limiting position once the window is closed. It was noted that window limiting devices may be an issue at egress windows but the group agreed that the majority of egress windows have a sill height greater than 24" although the code does provide for egress windows with a sill height of less than 24" (R612.4.2). Provided this code section is enforced correctly there should be minor impact under the 2009 IRC. No modifications were proposed.

R613.1. This section is new to 2009 IRC and addresses SIP construction. As this is not considered conventional construction the suggestion was made to amend the section to require the construction documents be stamped by a design professional. The proposal was made to use language similar to the amendment for section R603.1.1. **ACTION REQUIRED.**

R702.1. Reference added to smoke development requirements.

R702.2. Minor changes, nothing technical.

R703.2. It was noted that this section requires a water resistive barrier applied on all exterior walls. There are three exceptions that provide little relief. Exception 2 references Table R703.4 which requires this barrier with virtually all products. This was also the case with 2006 IRC and the conclusion of the group at the time was to review this under the 2009 IRC. The review group for the 2006 IRC was uncomfortable removing this requirement as they felt there was little ground to justify the amendment. The review group for the 2009 IRC came to same conclusion; moisture infiltration can cause significant problems. The group was not comfortable amending out the requirement for a water resistive barrier as it could void the use the exterior siding material. Example: If the manufacturer requires a moisture barrier and the local code removes this requirement the siding manufacturer will not stand behind the product. The first sentence of R703.2 contains the language "or other approved water resistive barrier" which in the opinion of the group appeared to provide relief provided the ES report for the siding material also listed the product as a "water resistive barrier". The group noted that the RBC does not require an inspection for the water resistive barrier and did not propose to add an inspection. No amendment was proposed.

R703.7. Revised but no impact locally.

R703.9. EIFS was moved from chapter 6 of the 2006 IRC. No technical change.

R703.10. Revised but there did not appear to be a technical change.

R801.3. The proposal was made to keep the current amendment to this section. Due to smaller setbacks extending the roof drainage 5 feet from the structure can be problematic. If the soils report requires drainage to be extended beyond the 3 feet required by the RBC the soils report requirement must be met. It was also noted that in previous code sections any reference to expansive or collapsible soils has been replaced with reference to the soils report as

these materials are very common in El Paso County.

R802.8. This section addresses lateral support at cut roof framing. It was noted that the 5:1 ratio matches the local amendment for truss lateral support.

R802.10.3. The proposal was made to keep RBC303.4.51. **ACTION REQUIRED.**

R804. This section has been revised to reflect ASNI S230 requirements, no change locally.

R804.1.1. The proposal was made to keep the current amendment requiring a design professional for all steel roof framing. This amendment is in line with previous amendments that require a stamp for steel wall and floor framing. **ACTION REQUIRED.**

R806. This section is new to 2006 IRC and allows "conditioned" attics. The 2009 IRC has revised this section and changed the name to "unvented" attics. Options have been added and the section has been improved. Addition of this code section will allow for unvented attics which are not permitted up the 2003 IRC.

R807.1. The provisions for attic access have been revised and the group concluded that the IRC requirements are similar to the RBC amendment and felt that the current amendment (RBC303.4.53) was no longer necessary. The proposal was made to delete the amendment. **ACTION REQUIRED.**

R903.2.3. The group discussed roof penetrations such as roof jacks located in a valley. Locally this has been a problem and proper sealing of a roof jack or similar penetration within the valley is difficult at best. The proposal was made to add an amendment that requires a minimum of 18" from the center of the valley to the closest edge of the penetration. The 18" allows for 10" of flashing (R905.2.8.2) and an additional 8" to accommodate for the base of the jack flashing. **ACTION REQUIRED.**

R903.4.1. No change to the 2009 IRC, the group proposed keeping RBC303.4.54.

R905.2.4. The 2009 IRC has added criteria to address wind resistance of roofing materials (R905.2.4.1). Upon investigation Roger Lovell determined that even most low end asphalt roofing product met the local criteria for a 100 mph wind gust. The local

amendment for 240 #/sq shingles likely comes from the days of T-Lock and lighter shingles. If the roofing product is tested per the ASTM requirements of section R905.2.4.1 and meets the wind speed requirements of this jurisdiction the amendment is not necessary. The intent of the amendment was to require a heavier shingle in colder months as the single would not self seal until the roof warmed up. Oakridge 30 year shingles have been tested in accordance with the standards referenced in table R605.2.4.1 and meet the criteria for both a sealed roof (ASTM D 7158) and an un-sealed roof (ASTM D 3161). The local amendment is no longer necessary.
ACTION REQUIRED.

R905.2.8.2. This section was not revised in the 2009 IRC but the RBC does amend this section to change the 24" requirement to 20". This amendment required 16" in the 2003 IRC but during the 2006 IRC review process it was changed to 20" at the suggestion of the roofing industry. The group proposed to keep the current amendment.

R905.2.8.4. The RBC amends this section to allow for alternate flashing methods. The group proposed keeping the current amendment.

R905.2.9 – Section added by RBC. The group suggested that the current amendment be retained but remove item 1 as it is no longer necessary. Face nailing at the rake of the roof is only necessary with T-Lock shingles and should not be used with current roofing materials. The group also proposed adding "jack flashing" to item 3 as the exposed nail heads should be sealed but are not addressed in the current amendment. This will have no impact locally. **ACTION REQUIRED.**

R905.3.7. The proposal was made to keep the current amendment to this section but add a reference to the Asphalt Roofing Manufacturers Association (ARMA). **ACTION REQUIRED.**

R905.7.5. The proposal was made to keep the current amendment but add reference to roof jacks and modified in R905.2.9. **ACTION REQUIRED.**

R905.8.6. The proposal was made to keep the current amendment.

R907.2. Currently the RBC amends R970.3 regarding the total weight of new and existing roofing (RBC303.4.62). The intent of this amendment is to address the added load of installing a heavier roof (tile) on a roof / building structure that was not intended for a heavy roof. Section R907.3 has been revised and this current amendment no longer fits in this code section. The suggestion was made to keep the current amendment, reword it and move to R907.2. The requirements of R907.3 must still be met. **ACTION REQUIRED.**

R907.3. This section has been revised and while the revision is minor the impact is significant. R907.3 requires all roofing layers to be removed prior to a re-roof if one of four criteria is met. Item number 4 references Figure R903.5 in which El Paso County is shown to be subject to moderate hail exposure. Moderate hail exposure is defined as a location subject to hail 1.5" to 5.0" a minimum of one hail day in a 20 year period. While the group did not research this they did feel that there is historical data to support this. The impact of the requirement was discussed and the reason for the requirement. When an asphalt roof consists of one layer the roof is not as subject to hail damage as when there are more layers. The softer the roof the more subject is it to damage. The group concluded that the change is beneficial to property owners as most insurance companies do require a complete tear off. If the local code is modified to lessen the requirement and the roof is not torn off future hail claims may be denied as the roof was not installed per the national code. The group did not propose to modify the section but did strongly suggest that this new criteria be advertised and passed along to roofing community.

R907.3.1. Section RBC303.4.63 requires a minimum of one layer of roofing on a manufactured structure unless it can be demonstrated that the structure is capable of supporting additional loads. Because R907.3 requires all layers of roofing be removed prior to the installation of the new roof covering (with three limited exceptions) the group felt that the current amendment was no longer necessary. The proposal was made to remove RBC303.4.62 provided

R907.3 is not modified. Should R907.3 be modified to permit more than one layer of roofing the group suggested this amendment be retained. **ACTION REQUIRED.**

R1000. No significant changes to this section.

R1003.9.1. The group agreed to keep the current amendment that requires spark arrestors on all masonry chimneys. This was also agreed upon when the review of the 2006 IRC was conducted.

M2301. – Solar Systems. The group briefly reviewed this section and agreed that it would a good idea to review the IMC to determine exactly how these sections will be addressed.

E4201. – Swimming Pools. The group briefly reviewed this section and felt it would be a good idea to consider this section for adoption. No review at this point.

AH101. – Patio Covers. The group reviewed Appendix H and noted that there have been no changes to the 2009 IRC. The proposal was made to keep the current amendments.

AM101. – Home Day Care. This section needs to be reviewed when Day Care is reviewed under the IBC.

This concludes the review of the 2009 IRC. Not all chapters have been reviewed as it is the intent of RBD to adopt only the sections listed in section RBC303.3.

OUTSTANDING ITEMS:

- **Review lag numbers in Table R502.2.2.1**
- **Review Solar M2301**
- **Review Pools E4201**
- **Review elimination of daylight saving time shingle amendment.**
- **Home Daycare IBC?**
- **More? What did we miss??**