



Ordinance 2018-30 Exhibit B



Amendments to the:
2018 International Residential Code

Chapter 1 Scope and Administration. REVISE chapter by DELETING Section R102 Applicability and Part 2- Administration and Enforcement. (Deleted sections are administered by 2018 IBC, Chapter 1).

Section R101.1 Title. Enter [Name of Jurisdiction] as "Pima County, AZ".

Table R301.2(1) Climatic and geographic design criteria. INSERT as follows:

Table with 2 columns: Design Criteria and Requirements. Rows include Ground Snow Load, Topographic Effects, Wind Speed, Seismic Design, Weathering, Frost Line Depth, Termite, Winter Design Temperature, and Flood Hazards.

Section R302.1 Exterior Walls. REVISE section by DELETING text and tables and REPLACING with the following:

Exterior walls with a fire separation distance less than 3 feet (914mm) shall have not less than a one-hour fire-resistive rating with exposure from both sides. Projections shall not extend to a point closer than 2 feet (610 mm) from the line used to determine the fire separation distance. Projections extending into the fire separation distance shall have not less than one-hour fire-resistive construction on the underside. The above provisions shall not apply to walls which are perpendicular to the line used to determine the fire separation distance.

Exceptions:

1. Detached garages accessory to a dwelling located within 2 feet of a lot line may have roof eave projections not exceeding 4 inches.
2. Tool and storage sheds, playhouses, ramadas and similar structures exempted from permits are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the lot line.

ADD new section R302.1.1 to read:

**Section R302.1.1 Openings.** Openings shall not be permitted in the exterior wall of a dwelling with a fire separation distance less than 3 feet. This distance shall be measured perpendicular to the line used to determine the fire separation distance.

**Exception:**

1. Penetrations shall be permitted in walls that are perpendicular to the line used to determine the fire separation distance.
2. Foundation vents installed in compliance with this code are permitted.

**Section R303.5.1 Intake openings.** REVISE section by ADDING an exception to read:

**Exception:** Replacement of existing evaporative coolers where the building official determines that the replacement does not constitute a high degree of hazard.

**Section R303.10 Required heating.** REVISE section by ADDING exception #4 to read:

**Exception:** Spaces able to maintain 60°F at a point 3 feet above the floor and 2 feet from exterior walls in all habitable rooms over a 48-hour period as demonstrated by section **N1105 Simulated Performance Alternative**.

**Section R309.5 Fire sprinklers.** DELETE section in its entirety.

**Section R313 Automatic Fire Sprinkler Systems.** DELETE section in its entirety.

**Section R802.11.1 Uplift resistance.** REVISE section by DELETING section in its entirety and ADDING the following:

Uplift resistance to minimize microburst effects shall be determined by either method 1 or 2 below:

**1. Design-based wind uplift criteria**

Wind uplift requirements shall be determined by using the design wind value of 115 mph within Table R802.11 for the continuous load path transmitting the uplift forces from the rafter or truss ties to the foundation.

**2. Prescriptive-based wind uplift criteria**

(Please note that the requirements of this section are in addition to those required for the structural connection of wood members).

**2.1. Conventionally-framed wood or cold-formed steel structures**

All bearing wall vertical connections shall be clipped with either approved structural sheathing or approved clips to provide a continuous load path from the joist or truss through the ledger or top plate to the bottom wall plate. Where clips are used, they shall be minimum Simpson H2.5 (A34 at ledger), or equivalent load capacity, of configuration to match connection and spaced at intervals not to exceed 24". At openings, lower cripple studs do not require clipping but king/trimmer studs require double clips at bottom and upper cripples, require both full clipping to header as well as header to king stud. All platform framing requires either strapping listed for the purpose or continuous sheathing over rim joist from stud to stud vertically at each floor level.

All non-bearing exterior walls shall be clipped as above except that the spacing may be extended not to exceed every other stud.

**2.2. Masonry or concrete structures**

If lateral design requires larger anchors or more conservative spacing, these may be used in lieu of those called out in this section.

**2.2.1. Roof bearing on wall top plate**

Top plates shall be secured to masonry or concrete walls with minimum 0.5" embedded anchor bolts spaced at intervals not to exceed 48". Each joist or truss shall be clipped to plate at bearing with minimum Simpson H2.5 or equivalent load capacity and of configuration to match connection. Gable end joists or trusses shall also be clipped at intervals not to exceed 48".

**2.2.2. Roof bearing on wall ledger**

Joists or trusses bearing on a wall ledger shall be secured to masonry or concrete walls with minimum Simpson PAI23 purlin anchors or equal with equivalent load capacity listed for the application and embedded into wall per listing at intervals not to exceed 48". Nonbearing roof diaphragm edges shall have the outermost joist or truss likewise anchored to the wall through blocking.

**2.3. Structural steel structures**

Structural steel buildings shall have roof members attached by either welds, bolts, screws or other similarly approved connections at intervals not to exceed 48". Ledger designs shall connect to roof trusses with strapping listed for the purpose at intervals not to exceed 48" on all diaphragm sides. If lateral design requires larger anchors or more conservative spacing, these may be used in lieu of those called out in this section.

**Section N1101.4 (R102.1.1) Above code programs.** REVISE section by ADDING the following at the end of the paragraph:

Compliance with the Net-Zero Energy Standard shall be deemed to comply with this code.

ADD new section N1101.09.1 (R302.2) to read:

**Section N1101.09.1 (R302.2) Exterior design conditions.**

**Table N1101.09.1  
Exterior Design Conditions**

Pima County Arizona				
CONDITION		West of the easterly boundary of the principal Tohono O'odham Reservation	Under 4,000 feet elevation	4,000 feet elevation & above
Winter	Design Dry Bulb Temp	36°F	35°F	4°F
Summer	Design Dry Bulb Temp	107°F	105°F	90°F
	Design Wet Bulb Temp	69°F	66°F	61°F
Climate zone		2B	2B	5B

**Table N1102.14 (R402.1.4) U-Factor alternative.** REVISE the section by ADDING the following to the end of footnote b:

In climate zone 2, an un-insulated earth mass wall with a maximum U-factor of 0.14 shall be deemed in compliance (for computing the U-factor, an R value of 0.3 per inch shall be used for adobe and rammed earth).

**Section N1102.4.1.2 (R402.4.1.2) Testing.** REVISE section by DELETING the third sentence and REPLACING with the following:

Testing shall be conducted by individuals holding current certification for such testing from Residential Energy Services Network (RESNET), Building Performance Institute (BPI) or other *approved* agencies.

**Section M1411.3 Condensate disposal.** REVISE section by ADDING the following at the end of the paragraph: Condensate disposal shall be allowed to terminate as follows:

1. Into an approved fixture tailpiece, funnel drain, waste air gap fitting, floor sink, slop sink and laundry tray.
2. At or below grade outside the building in an area capable of absorbing the condensate flow without surface drainage.
3. Over roof drains or gutters or downspouts that connect to drainage pipes, provided they terminate at or above grade in an area capable of absorbing the condensate flow without surface drainage.

ADD new Section M1413.2

**Section M1413.2 Water conservation.** Evaporative cooling systems shall be provided with a recirculating water system. Any bleed off rate used by the system shall be limited to that recommended by the manufacturer. Once-through evaporative cooling systems using potable water shall not be permitted.

**Section P2602.1 General.** REVISE section by DELETING last sentence of paragraph 2.

ADD new section P2602.1.1 to read:

**Section P2602.1.1 Individual metering in new dwelling units.** The water supply to all dwelling units shall be individually metered. The metering may be private or utility installed.

**Section P2603.5.1 Sewer depth.** INSERT [number] as “12” in both locations.

**Section P2801.6.1 Pan size and drain.** REVISE section by ADDING the following at the end of the second sentence: “A drain shall not be required for replacement water heaters in locations where no previously installed drain is available or when water heater is installed in a garage.”

**Section P2804.6.1 Requirements for discharge pipe.** REVISE section by DELETING item number 2 for areas at or less than 4000 feet elevation.

**Section P2902.5.4 Connection to automatic fire sprinkler systems.** REVISE section by DELETING all text therein and REPLACING it with the following:

The potable water supply to automatic fire sprinkler and standpipe systems shall be protected against backflow in accordance with ARS § 41-2168.

**Table P2903.1 Required capacities at point of outlet discharge.** REVISE table by DELETING the column titled “FLOW PRESSURE (psi)” in its entirety.

**Section P2904.1.1 Required sprinkler locations.** REVISE section by DELETING the first sentence and REPLACING with the following: “Sprinklers are not required within dwelling units. This section serves as a guide for voluntary installation or to allow for a fire separation reduction within sections R302.2 and R302.3.”

**Section P3008.1 Where Required.** REVISE section by DELETING paragraph and ADDING new text to read: Where the finish floor elevation is less than 12 inches above the elevation of the next upstream manhole cover in the sewer, a backwater valve shall be installed in the building drain or branch of the building drain serving that floor. Floors discharging from above that reference point shall not discharge through the same backwater valve.

**Section P3008.2 Allowable installations.** DELETE section in its entirety.

**Section P3009 Subsurface landscape Irrigation Systems.** Delete section in its entirety. Shall comply with Arizona Administrative Code Title 18, Chapter 9.

ADD new section E3703.8 to read:

**Section E3703.8 Dishwasher and Garbage Disposer Branch Circuits – Dwelling Units.** In residential occupancies, dishwasher and garbage disposer may be on the same 20-ampere branch circuit.

ADD new section E3802.9 to read:

**Section E3802.9 Earthen material wiring method.** Type UF Cable shall be permitted to be used in mortar joints of adobe construction in occupancies where the use of Nonmetallic Sheathed Cable is permitted by this code.

Adopt **Appendix H: Patio Covers.**

Adopt **Appendix Q: Tiny Houses.**

**Section AQ103.1 Minimum ceiling heights.** REVISE section by ADDING the following after the first sentence: “For rooms with sloped ceilings, at least 50 percent of the floor area of the room must have a ceiling height of at least 6 feet 8 inches (2032 mm) and no portion of the floor area of the room may have a ceiling height of less than 5 feet (1524).”

Adopt **Appendix R Light Straw-Clay Construction.**

Adopt **Appendix S: Strawbale Construction.**



Ordinance 2018-39



**Exhibit A: Amendments to the  
2018 International Residential Code**

**Adopt Appendix T: Solar-Ready Provisions – Detached One- and Two-Family Dwellings and Townhouses**  
REVISING the following sections:

**Section T103.1 General.** REVISE this section by DELETING “oriented between 90 degrees and 270 degrees of true north”

**Section T103.4 Obstructions.** REVISE section by REPLACING the word “vents” with the word “exhaust”

**Section T103.6 Capped roof penetration sleeve.** DELETE section in its entirety

**Section T103.10 Construction documentation certificate.** DELETE section in its entirety