



# RESIDENTIAL PROJECT PLAN REQUIREMENTS

## EFFECTIVE CODE

### 2018 International Residential Code

### TOG amendments

#### CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

WIND SPEED	Seismic Design Category	Weathering	Frost Line Depth	Termite	Winter Design Temp	Flood Hazards	Mean Annual Temp
115 (ULT) 89 (ASD)	B	Negligible	0	Moderate to Heavy	34 degrees F	Jan 16, 1980 Nov 4, 2015	69 degrees F

#### GENERAL REQUIREMENTS

Item #	Code Reference	Description
1	32-125	Plans and structural calculations prepared under supervision of an Arizona Professional Registrant must be sealed per the State of Arizona Board of Technical Registration
2	R106.1	Provide calculations with keyed layouts when structural design is by Arizona Professional Registrant
3	R106.1	Property address is required on all sheets in plan set
4	R106.1	Builder standard plans require subdivision name including neighborhood/parcel/phase on each sheet
5	R106.1	Square footage summary for (and by) each area type for all livable, garage, storage, and covered patios/porches/decks
6	R106.1	Provide Square Footage of structures
7	R302	Fire rated details for walls and projections located within five (5) feet of property line
8	R106.1	A Soil report is not required for open structures (patios/ramadas) or detached structures/additions of 600 square feet or less if the bottom of the footings are a minimum of 24" below grade. See Soils Investigation and Reports document for specific requirements or clarification
9	R401.4	Plans (and structural calculations) must note by provider and report number what Soil report was used for foundation design
10	R106.1	Provide a copy of applicable Soil report, if not on file with Town of Gilbert or engineer analysis/acceptance
11	R1004.1	When using factory-built fireplace provide the manufacture, model and listing number
12	R806	Provide Roof ventilation calculations for all enclosed attic/rafter spaces, include amount of required and provided net free ventilation
13	R806	Show type and location of attic ventilation on Roof plan or Framing plan
14	R806.5	When using Spray Foam insulation in attics provide detailed information on installation method from ES Report
15	R311.7	Plan must clearly show that stairways will comply with code requirements
16	R311.7.8	Show compliance with handrail requirement for stairs with four or more risers
17	R310	Plan must clearly show that basement egress will comply with code requirements (show sill or header heights)
18	R903.4	Provide detail of how roof drains will be constructed (when they are used)
19	Table R702.3.5	Show that gypsum board applied to ceilings complies with code requirements
20	R302.6	Show that the garage will be separated from the residence and its attic area per code requirements
21	R702.3	Show that exterior gypsum board shall be a type that is approved for exterior use
22	R106.1	Show insulation R values for building envelope at all conditioned space
23	N1101.13 amended	Provide documentation of compliance with Energy Efficiency requirements
24	R106.1	If subdivision plat or subdivision construction documents require on lot retention, a Grading and Drainage plan will need to be submitted with building plans. Grading & Drainage plan does not require an engineer's seal.
25	R106.1	Note on plans if Fire Sprinklers will be installed

**PLOT PLAN REQUIREMENTS** (not required for interior remodels)

Item #	Code Reference	Description	TOG made comment on sheet #	Response made on sheet #
26	R106.2	Label property lines with lot dimensions provide distance to buildings & pools, show and label easements, show required building setbacks, label streets		
27	R106.2	Show and label existing and proposed buildings & pools, provide distance between all structures and pools		
28	R106.2	Show and label location of All utility runs & septic tanks		

**FLOOR PLAN REQUIREMENTS**

Item #	Code Reference	Description	TOG made comment on sheet #	Response made on sheet #
29	R304 R305	Dimensioned Floor plan with all rooms and spaces labeled by use, include ceiling heights		
30	R311.6	The minimum width of a hallway shall not be less than 3 feet		
31	R106.1 R311.2	Show location of all windows and doors, provide size and type At least one required exit door shall be a side hinged door not less than 3 feet in width and 6 feet, 8 inches in height		
32	R310.1	Bedrooms and Basements shall comply with required emergency egress requirements		
33	R312.2	Operable window located more than 72 inches above the finished grade or surface below shall have a height of 24 inches above the finished floor to openings		
34	R311.3	Show a landing on exterior side of each exterior door		
35	R311.7.6	There shall be a floor or landing at the top and bottom of each stairway		
36	R106.1	Show location of appliances and equipment, specify if appliances and equipment are gas, electric, or propane		
37	R106.1	Show location of gas meter (if applicable)		
38	M1307.3	Show that appliances located in a garage and having an ignition source will be elevated such that the source of ignition is not less than 18" above the floor		
39	R302.5.1	Openings between the garage and residence shall be equipped with self closing solid wood doors not less than 1 3/8" thick, or shall be a 20-minute fire-rated door		
40	R302.5.1	Openings from a garage directly into a room used for sleeping purposes shall not be permitted		
41	M1307.3.1	Appliances shall not be installed in a location subject to vehicle damage except where protected by approved barriers, show location of barriers		
42	R308.4 Amended ARS36-1631	Glazing in hazardous locations shall be safety glazing, label all applicable glazing as tempered or safety type glazing		
43	R308.5	Butted Glazing requires engineering calculations, provide thickness of glass		
44	R312.1	Show compliance with guardrail requirements for elevated surfaces of 30" or more		

**ELEVATION VIEW REQUIREMENTS** (not required for interior remodels)

Item #	Code Reference	Description	TOG made comment on sheet #	Response made on sheet #
45	R106.1	Dimensioned Elevations for each side of building		
46	R106.1	Provide height from finished floor to window sills or headers, top plate, top of beams, roof ridge line(s) and top of parapet(s)		
47	R106.1	Specify exterior wall finish, Roof slope and Roof covering material		
48	R106.1	Show Scupper locations and provide size		

**GENERAL STRUCTURAL REQUIREMENTS**

Item #	Code Reference	Description	TOG made comment on sheet #	Response made on sheet #
49	R106.1	Provide structural details for all walls, the design shall comply with prescriptive requirements of code or shall be designed by an Arizona Professional Registrant		

50	R301.1.3	For engineered building designs provide gravity and lateral calculations with keyed layouts & design criteria		
51	R602.10	For prescriptive building designs provide code sections that were used. Provide keyed layout for braced walls that identifies where each wall line is located		
52	R602.1	Specify lumber grade and species requirements per code or engineering calculations		

### **FOUNDATION PLAN REQUIREMENTS**

Item #	Code Reference	Description	TOG made comment on sheet #	Response made on sheet #
53	R106.1	Provide Dimensioned Foundation plan or Post Tension Slab plan with detail callouts		
54	R403	Provide Footing Details that show footing depth, size and reinforcing requirements Details shall comply with applicable Soil report requirements		
55	R317	Call out preservative-treated or naturally durable wood at all locations required		
56	E3607.1 E3608.1.2	Provide "UFER" detail for Post Tension Slab plans, minimum size is 12" wide and 12" below natural grade		
57	R403.1.6	Wood sole plates shall be attached to the foundation with 1/2" diameter bolts at 6 feet on center maximum with a minimum embedment of 7"		

### **FRAMING PLAN REQUIREMENTS**

Item #	Code Reference	Description	TOG made comment on sheet #	Response made on sheet #
58	R106.1	Provide Roof (& Floor when applicable) Framing layout with all bearing and non-bearing walls shown and labeled, include detail and/or section callouts		
59	R106.1	Indicate the size of headers and lintels in all bearing and non-bearing walls		
60	R106.1	Specify all hangers (by manufacture and model number) used to hang trusses and rafters from supporting members		
61	R106.1	Indicate all post sizes and locations, provide connection details		
62	R106.1	Provide framing details as applicable for Gable end bracing, Ledgers, Etc...		
63	R106.1	Provide stairway framing information, including landings		
64	R302.12	Provide draft stopping for concealed space of a floor/ceiling assembly		
65	R312	Provide guardrail attachment detail or low wall construction detail		

### **BRACED OR SHEAR WALL PLAN REQUIREMENTS**

Item #	Code Reference	Description	TOG made comment on sheet #	Response made on sheet #
66	R602.10	Braced/Shear wall panels shall be dimensioned and be identified by panel type(shear) or panel method (braced)		
67	R106.1	Hold downs as specified on lateral design or as required for braced wall panels shall be shown on the foundation plan or braced/shear wall plan		
68	R602.10.8	Provide details to show how lateral forces are transferred from the diaphragms through intermediate elements to the foundation		

**ADD THE FOLLOWING NOTE TO THE COVER SHEET OR FOUNDATION PLAN SHEET** (when applicable. See "Soil Investigation & Reports" for exceptions)

#### **PAD CERTIFICATION REQUIREMENTS**

A current/valid pad certification is required for all lots in the Town of Gilbert **at time of footing inspection**. This certification must be from an Arizona Registered Professional Engineer verifying that the requirements of the applicable Soil report have been met. The certification must bear the engineers seal. All pad certifications are to specify expiration dates or be specific as to the length of time they remain valid. If there is not a time restriction, that must be noted as well.

## PLUMBING REQUIREMENTS

Item #	Code Reference	Description	TOG made comment on sheet #	Response made on sheet #
69	Appendix P	If residence has more than 4 bathrooms, more than 150' of building supply line, or exceeds 32 fixture units, provide plumbing fixture unit schedule for ALL fixtures. Indicate water meter and building supply line sizes per Appendix P Table AP201.1 (pressure range over 60 PSI) or per engineered design		
70	G2413	Provide a diagram of all gas piping with length and diameter of all piping, provide BTU rating for each appliance, note piping material by type		
71	G2415.8 amended	Provide vented sleeve detail with corrugated stainless-steel tubing (CSST) for gas piping installed under building slabs		
72	G2419.4	Provide typical sediment trap detail (including shutoff valve) for all fixed appliances		

## MECHANICAL REQUIREMENTS

Item #	Code Reference	Description	TOG made comment on sheet #	Response made on sheet #
73	R303.3	Provide venting for Bathrooms		
74	M1502	Show compliance with requirements for maximum Clothes Dryer exhaust duct length		
75	G2407	Provide combustion air for all fuel burning appliances		

## ELECTRICAL PLAN REQUIREMENTS

Item #	Code Reference	Description	TOG made comment on sheet #	Response made on sheet #
76	R106.1	Provide Electrical layout that shows and labels electrical items such as receptacles, lights, switches, smoke alarms, carbon monoxide alarms, exhaust fans, service entry section (SES) and sub panels <b>(per the following list of requirements)</b>		
77	E3901.2.1 E3901.2.2	Show that receptacles will be installed so that no point along the floor line in any wall space is more than 6 feet, measured horizontally, from an outlet		
78	E3901.10	Show at least 1 receptacle outlet in hallways 10 feet or more in length		
79	E3901.11	Show receptacles in foyers per code requirements		
80	E3903.3	Show a lighting outlet on the exterior side of all exterior doors		
81	E3901.6	Show at least one receptacle within 36 inches of the outside edge of each lavatory basin in bathrooms		
82	E3901.4.1	In kitchen and dining rooms, a receptacle outlet shall be installed at each wall counter space 12 inches or wider so that no point along the wall is more than 24 inches from a receptacle (show compliance on plan)		
83	E3901.4.2 E3901.4.3	In kitchens at least one receptacle outlet shall be installed at each island or peninsular counter space with a long dimension of 24 inches or greater and a short dimension of 12 inches (show compliance on plan)		
84	E3903.3	Show a lighting outlet in all stairways, switched at each floor level		
85	E3903.2	Show at least 1 switched lighting outlet in every habitable room and bathroom		
86	E3902	Show GFCI protection for receptacles located in bathrooms, within 6' of sinks, outdoor locations, garages, kitchens, unfinished basements and accessory buildings		
87	E3901.7	Show required receptacle for Balconies, Decks and Porches An exterior receptacle is required on front and back of each dwelling unit		
88	E4101.5	Show a means of disconnect within sight of hard-wired appliances (including water heaters)		
89	E3901.12	Show a service receptacle within 25' of any heating or air-conditioning equipment		
90	R106.1	If residence exceeds 4,000 sq. ft., has an electric service that exceeds 200 AMPS, or has a sub panel, provide a one-line-diagram for electrical service (SES) and all sub-panels, include AMP rating, wire size/type, bonding and conduit information. "UFER" ground is required		

**If changes are made to plans that are not related to comments made by Town staff, Cloud changes and provide separate detailed narrative that lists what has changed by sheet number.**

**THE FOLLOWING NOTES MUST BE PROVIDED ON PLAN SET**

<b>Item #</b>	<b>Code Reference</b>	<b>Description</b>
1	R806.3	Where eave or cornice vents are installed insulation shall not block the free flow of air, provide a minimum 1-inch air space between the insulation and roof sheathing & vent.
2	R106.1	Prefabricated wood trusses to be provided by an approved fabricator. Truss diagrams and keyed layout shall be available to the field inspector at the job-site at the time of framing inspection.
3	R302.1.1	Fire blocking shall be provided to cut off all concealed draft openings (both vertically and 10' horizontally) and to form an effective fire barrier between stories and between a top story and roof space.
4	R702.4.2	Cement, fiber-cement and glass mat gypsum backers shall be used as backers for wall tile in tub and shower areas and wall panels in shower areas.
5	R807	Attic access with a minimum opening size of 30" x 22" and 30" clear head room shall be provided.
6	M1305	Attics containing appliances will be provided with a work platform and lighting outlet.
7	P2804.6.1 amended	Water heater relief valve discharge pipe shall not be smaller than the diameter of the outlet of the valve served, be installed to flow by gravity and shall serve a single relief device. The drain shall extend full-size and terminate over a suitably located indirect waste receptor or shall extend to the exterior of the building and terminate not less than 6 inches or more than 24 inches above the adjacent ground surface.
8	G2420.5.1	Fireplace gas valves shall be located not more than 6 feet from appliance.
9	R314	Provide interconnected smoke alarms in each sleeping room, outside of each sleeping area in the immediate vicinity of the bedrooms, and on each additional story of the dwelling, smoke alarms shall be hard wired with battery backup.
10	R314.3.1	When alterations requiring a permit occur the dwelling unit shall be equipped with smoke alarms located as required for new dwellings, the smoke alarms shall be interconnected and hard wired.
11	R315	Provide an approved Carbon Monoxide alarm per code in dwellings in which fuel fired appliances are installed and in dwellings that have attached garages.
12	R315.2.2	When alterations requiring a permit occur the dwelling unit shall be equipped with carbon monoxide alarms located as required for new dwellings.
13	E3902.16	Branch circuits that supply 120 volt, single-phase, 15 & 20 ampere outlets installed in family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways and similar rooms or areas shall be protected by a combination type arc-fault circuit interrupter installed to provide protection of the branch circuit.
14	E3703.2	A minimum of two 20-ampere-rated branch circuits for receptacles located in the kitchen, pantry, breakfast, and dining areas, a separate 20-ampere-rated branch circuit to the laundry, and a separate 20-ampere-rated branch circuit for bathroom receptacle(s) shall be provided.
15	Chapter 40	Receptacles, Switches, Luminaires located in damp or wet locations shall be listed to be suitable for such location.
16	R1004.3	Decorative shrouds shall not be installed at the termination of vents except where the shrouds are listed and labeled for use with the specific fireplace system and are installed in accordance with the manufacturer's installation instructions.
17	G2427.6.4	B vent termination shall comply with code requirements.
18	Table 301.5	Handrails & Guardrails shall be able to resist a single concentrated load of 200 pounds applied at any point along the top, with attachment to transfer loads to the structure.
19	M1503.6 amended	Range hoods capable of exhausting in excess of 400 cubic feet per minute shall be provided with makeup air at a rate approximately equal to the difference between the exhaust air rate and 400 cubic feet per minute. The makeup air system shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the Range hood. Exception applies when all other appliances located in conditioned space are electric etc.