



**CUSTOM HOME
PLAN SUBMITTAL
GUIDE**

**Handout
253**

Rev 07/19

ADOPTED CODES (with City Amendments per Ordinance 2019-12)

**2018 International Building Code (IBC)
2018 International Residential Code (IRC)
2018 International Fuel & Gas Code (IFGC)
2018 International Mechanical Code (IMC)
2018 International Energy Conservation Code (IECC)
2018 International Property Maintenance Code (IPMC)
2017 National Electric Code (NEC)
2018 International Plumbing Code (IPC)
2010 Americans with Disabilities Act Accessible Guidelines (ADAAG)
2010 NFPA 13D
2018 International Fire Code (IFC)**

Current Peoria Zoning Ordinances

**Development & Engineering Department
Building Development**

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The following is an outline to guide an applicant through the custom home permit process

PLAN REVIEW DIVISION GENERAL REQUIREMENTS:

1. Provide four (4) sets of complete, legible plans. Plans are to be 24" x 36" and a scale no smaller than 1/4" = 1' shall be used for all floor plans to include electrical floor plan, framing plans, elevations and details.
2. Provide accurate sheet index.
3. No loose sheets shall be attached with the exception of structural calculations and manufacturer's specifications. Energy efficiency calculations need to be incorporated into the plans.
4. Provide the following square foot areas listed separately: livable area, garage, covered porch, covered patios, decks and detached structures.
5. All engineers and architects involved in the design of the structure are to seal all of the related sheets to their involvement of the plans, details and calculations.
6. The City of Peoria uses the following building codes as amended by the respective adopting ordinances:

- 2018 International Building Code (IBC)
- 2018 International Residential Code (IRC)
- 2018 International Fuel & Gas Code (IFGC)
- 2018 International Mechanical Code (IMC)
- 2018 International Energy Conservation Code (IECC)
- 2018 International Property Maintenance Code (IPMC)
- 2017 National Electric Code (NEC)
- 2018 International Plumbing Code (IPC)
- 2010 Americans with Disabilities Act Accessible Guidelines (ADAAG)
- 2010 NFPA 13D
- 2018 International Fire Code (IFC)
- Current City of Peoria Zoning Ordinances and Amendments

All designs, code references and construction must comply with the aforementioned codes and designed for a wind speed of 115 mph, exposure 'C' and seismic design category 'B'. Please provide this schedule on the plans.

SUBMIT PLANS:

Plan sets should be submitted to Building Development, where they will be distributed to the appropriate review personnel.

- A. House construction plans: Submit four (4) sets of house construction plans and the appropriate plan review fee. The fee will be based on the size of the house and will be calculated at the time the plans are submitted.

- B. Site plan: a 24" x 36" site plan shall be attached to each set of construction plans/include 8 ½" x 11" or 11" x 17" plot plan. The site plan should include:
 - X A scale drawing of the lot, showing all dimensions and easements;
 - X The house footprint;
 - X All property setbacks;
 - X A legal description of the property, which may be attached if the description is long;
 - X A property deed with the County Records number and date recorded;
 - X The area of the lot, minus any required right-of-way dedication; and
 - X The area of house and any other buildings.
 - X A point feature capable of providing a spatial reference to the city addressing grid GIS. See #8 below under "SITE PLAN" for acceptable reference features

- C. Grading Plan: a lot grading plan shall be attached to each of the construction plan sets.

- D. Fire Sprinkler plans (if required): a set of fire sprinkler plans will be attached to each set of construction plans. Additionally, copies of the hydraulic calculations and data sheets must accompany each set of construction plans. The fire sprinkler plans will not have a separate permit. A current flow test is also required.

- E. Two (2) copies of: soils report, truss calc's (if structure not designed by an Arizona registrant), structural calc's

SITE PLAN:

Site plan, also referred to as a plot plan shall be drawn at a scale of 1" = 20'. You must include all of the following information on the site plan:

1. The name of the owner along with the address or parcel number and street name or names that bound the property and the width of all streets.
2. Provide the dimensions of all property lines, show and label all easements, if any, and show the location and sizes of all easements. Indicate, by dimension, the sizes of all structures and the distances from the structures to all other structures and all property lines, i.e., front setback, side-yard and rear-yard dimensions. Indicate the height of all structures.
3. Identify the name of the subdivision and the lot number. If the property is not in a recorded subdivision, a full legal description (book, map and parcel number), and a property deed with the Maricopa County Recorder's number and date recorded is required. Provide the lot area in square feet, minus any required right-of-way dedication, the percentage of lot coverage and the North arrow.
4. Indicate the location and sizes of the water and sewer or septic lines with the drain field on the property and where they enter the residence. Provide the location of the water meter or well site and the location of the electric service on the residence. (Septic tank and water well must be separated by a minimum of 100 feet.)
5. Show the location of all driveways and walks complete with dimensions and materials specified. Indicate the location, height and material of all fences to be constructed.
6. Effective October 24, 1996, the City passed a Minor Land Division Ordinance. If a property has been formed as a result of a property split since this date, it may be subject to the provisions of this ordinance. Also, a Minor Land Division is required when a permit is requested on a lot which is two times greater in size than the minimum lot area of the district.
7. The City has instituted a Hillside Development Overlay District. This district is concerned with development on mountainous and hilly areas, where the steeper slopes create unique development concerns. In

general, areas with slopes of over 10% will be affected. Contact the Planning Division at 623-773-7200 for additional information.

8. In accordance with the Desert Lands Conservation Overlay, all properties North of Pinnacle Peak need to identify any natural features on the Property (washes, rock out croppings, etc.), and provide a Native Plant Preservation Plan. Contact the Planning Division at 623-773-7200 for additional information.

GRADING PLANS / GRADING PERMIT:

The grading plan should show dimension to closest intersection with a dedicated street, if unavailable, use the closest section corner and include:

- X Vicinity Map
- X A scale drawing of the lot, showing all dimensions and existing easements;
- X Minimum of two (2) foot contours, or sufficient spot elevations if there are too few contours on the lot;
- X Proposed drainage arrows, swales indicating flow directions;
- X The house footprint located per the plot plan;
- X The minimum finish floor elevation;
- X Extreme lot outfall (low top of curb elevation.)
- X Location of water service or well(service not permitted under driveway);
- X Location of sewer service or septic tank(service not permitted under driveway);
- X Location, dimensions of the retention basin, and supporting calculations as per the Maricopa County Drainage Manual;
- X Engineering approval block;
- X Any other grading proposed to be done on the lot which affect the flow of offsite or onsite storm water routing;
- X Proposed retaining walls (details and structural calc's must be provided)
- X When requested, the Dedication of Roadway Right-of-Way or Public Utility Easement forms and fee of \$100.00 per;
- X Cut/fill quantities.

When grading plans are approved, four (4) copies of grading/drainage plans will be requested for City Engineer signature. A grading permit will be issued by Building Development with your construction permit. The permit fee is based on the cut/fill quantities and the review fee is \$360 per sheet.

ENGINEERING PRINCIPLES

1. Two (2) foot contours:

A two (2) foot contour is typically adequate for most land split lots. Some lots may be in a particularly flat area, which may not have much slope.

If there is less than four (4) foot of fall on a lot, show one (1) foot contours, or show an adequate number of spot elevations so that the finish floor elevation can be determined to be adequate.

Normally, a spot elevation spacing of fifty (50) feet would be adequate. The elevations along property lines are also important on a flat lot.

2. Minimum finish floor elevation:

The minimum finish floor elevation is to be shown on the grading plan. The minimum finish floor elevation criteria is established to prevent storm water from entering the house. The following criteria should not overrule good engineering judgment, which might be needed when a house is proposed to be near a wash, or in a level plane area that is subject to sheet flows of storm water.

X The minimum finish floor elevation is fourteen (14) inches above the lot outfall, for a relatively flat lot. When the lot is bounded by curb and gutter, the lot outfall is typically the low top of curb, and the plan should reference the finish floor this way.

X When the lot is bounded by a paved street without curb, the minimum finish floor elevation should be the higher of fourteen (14) inches above the low property line or fourteen (14) inches above the center of the paved street.

X On a relatively steep lot or a deep lot where the house is a distance from the lot outfall, the fourteen (14) inches above criteria may actually put the house in a hole. In this case the finish floor elevation should be a minimum of twelve (12) inches above the highest natural ground within ten (10) feet of the building.

3. Retention basin location and sizing:

All developments in the City are required to reduce the storm water runoff from the constructed improvements. As roofs, driveways, and streets are constructed, more rainfall is prevented from entering the ground, and instead is passed off the improved property and onto

another lot. If this construction was allowed to proceed unabated, houses on the lower end of drainage areas could be flooded with storm water that formerly was not there. To this end, all developments are to construct facilities, retention basins, to catch the increased storm water. Following are the guidelines for calculating and sizing the basin:

- X Calculations: Calculations should be based on the Maricopa County Flood Control District (MCFCD) Drainage Design Manual. Basins should be sized to contain the 100-year, two (2) hour storm.
- X Area: The area to be used for calculations depends on the type of lot. In general, the area should include the entire area of the lot. When a house is to be built on an undeveloped parcel in the desert, with a minimum lot area of one (1) acre, the basin can be sized for the area of the improvements only. In this instance, the basin can be sized based on the combined area of the house envelope, outbuildings, and driveway.
- X Basin depth: The basin should be a maximum of twelve (12) inches deep, preferably less. The basin should have a level bottom. If the bottom is not level, then the actual storage capacity of the basin should be calculated based on the overflow depth.
- X Basin location: The basin should be located so as to catch the storm water runoff from the facilities it is designed for. For instance, it should be located on the downstream side of the lot on a large desert parcel. A basin on the upstream side of the house will be able to catch only the runoff from the front of the house. In developed subdivision lots, the basin is preferred to be in the front yard. The basin can be landscaped in the front yard, and prevents having standing water in the backyard while the basin dries.
- X There may have to be some minor lot grading to make sure that the storm water runoff from the improvements reaches the basin. Make sure that this grading work is shown on the grading plan.

4. Proof of access:

The applicant must provide some sort of proof of legal access to the parcel that is to be developed. This access can come from dedicated street right-of-ways as shown on the County Assessors maps. Access can also be provided by dedicated easements across private parcels.

In some areas of the City, the land has been broken down into five (5) or ten (10) acre parcels, which have access and utility easements on all sides. These easements are acceptable as legal access. The Assessors maps do not show the presence of easements. These must be found on the title descriptions of the particular parcels. The Title Company, Real Estate Company or Bureau of Land Management may be able to research this access. These records are also available for anyone to research at the County's facilities. Just because a parcel of land exists, even if it has a deed and a road to the parcel, does not ensure that there is legal access. If the road is across private land without an easement, the owner may put up a fence or block the road at any time, removing access to a parcel, even if there is a house already constructed.

5. Right-of-way and/or Public Utility Easement dedication:

It is the City's responsibility to try to ensure proper access for residents, as well as for City services and emergency vehicles, to all areas of the City.

In developed subdivisions, this access is provided by streets that are dedicated on a subdivision plat and constructed with the subdivision improvements. On land that has been split without a subdivision, right-of-way is generally obtained by dedication at the time that the property applies for a permit for construction. Right-of-way is generally required on a predetermined grid system. More right-of-way is required for collector streets (generally at the one-half and quarter-mile street locations) than for most local streets. The presence of mountains or large washes may also affect planned street locations.

A request for right-of-way dedication will be made if a parcel is located on a planned street right-of-way. Most parcels will require at least one street dedication as well as an easement for Public Utilities. Some may require dedication on two sides, depending on the location of the lot. It is important to determine what dedications when considering the purchase of a parcel. For instance, if an applicant is planning on buying a particular parcel, and planning to split the parcel at a future date, it would be wise to confirm that there will be sufficient area left after right-of-way dedication to meet the minimum zoning area requirements for a parcel to be split. A single parcel may not even have sufficient area to meet the zoning area requirements after the dedication is made, and will have to be combined with another lot, or other provision made to make it a buildable lot.

FOUNDATION PLAN:

1. A soils report is required. It is up to the designer/homebuilder to be aware of the soils conditions of the subdivision or the property. A copy of the soils report shall be submitted with the construction plans and the foundation design shall reflect the soils report recommendations.
2. Provide the dimensions of the stem wall thickness, footing width, thickness and depth into undisturbed soil for each footing type and condition.
3. Two number four (4) rebar continuous in stems is required or designed by a Registrant.
4. Provide foundation details on the foundation plan sheet or on a separate detail sheet. Details shall be cross-referenced to the foundation plans.
5. Locate and detail all footings for the following: fireplace, girder truss, bearing locations, turndowns, interior bearing walls, posts, columns, and sunken or raised areas and provide layout dimensions for location.
6. All exterior slabs, pads and landings at all doors shall be shown and dimensioned. Indicate all slab thicknesses and slopes.
7. Locate and specify all anchor bolt spacing and post anchors. All hold-downs and anchor bolt spacing for shear walls shall be specified, located and detailed.

FLOOR PLAN:

1. Label all rooms and spaces with ceiling heights indicated for all areas (minimum 7') in accordance with IRC.
2. Show all doors and windows. Indicate all window header heights, sizes and types, and designate the operable portion of all windows. Label all tempered safety glazing glass doors and windows as in accordance with ARS 36-1631 and the IRC.
3. The light and ventilation requirements for windows in all habitable rooms, bathrooms and utility rooms shall comply with IRC.
4. Basements in dwellings and all sleeping rooms (rooms utilized as a bedroom) shall have at least one (1) operable window or door approved for emergency escape or rescue.

The window shall have a minimum clear openable height of twenty-four (24) inches and a minimum openable width of twenty (20) inches with a maximum window sill height of not more than forty-four (44) inches. The minimum net clear openable area shall be 5.7 square feet. Grade floor openings shall have a minimum net clear opening of 5 square feet. IRC.

5. Detail and specify basement window wells. At egress windows, the horizontal area shall be not less than 9 square feet, with a horizontal projection and width not less than thirty-six (36) inches. Window wells with a vertical depth greater than 44 inches shall be equipped with a permanent egress ladder. If window wells are adjacent to walkways or patio slabs, guards thirty-six (36) inches in height are required and shall comply with IRC.
6. Provide a separate attic access for each attic area that exceeds thirty (30) square feet. Designate the location and size on the plans. The minimum size shall be twenty-two (22) inches X thirty (30) inches with minimum headroom of thirty (30) inches. If a warm air furnace is installed in the attic, the opening must be large enough for removal of the unit. Attic hatch lids must be insulated and weather-stripped as required in the IRC. LPG (propane) appliances are not permitted in attics, pits, or other locations that would cause ponding or retention of gas.
7. Openings from a private garage or carport directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage/carport and residence shall be equipped with solid wood doors not less than 1 3/8" in thickness, solid or honeycomb core steel doors not less than 1 3/8" thick, or 20-minute fire-rated doors equipped with self-closing device. The garage shall be separated from the residence and its attic area by not less than 1/2" gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8" Type X gypsum board or equivalent. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than 1/2" gypsum board or equivalent. Per IRC.
8. Exterior walls, projections, opening penetrations must comply with IRC.
9. Provide details of the stairs specifying the stair width, rise and run, landing width, handrail heights, guardrail height, intermediate rail spacing and stair headroom height. Details must specify all framing

- members and connectors provided. (include detail at connection to foundation and second floor).
10. Note and specify that bathtubs with shower heads and the shower area walls shall be finished with nonabsorbent surface to a height of seventy-two (72) inches above the drain.
Shower enclosures shall have a minimum finished interior of 30"x30" inches minimum. Site built showers must provide and key detail demonstrating compliance with IRC shower pan requirements.
 11. Cement, fiber-cement or glass mat gypsum backers shall be used as backers for wall tile in tub and shower areas and wall panels in shower areas.
 12. Fireplaces shall be provided with dimensions locating the fireplace and the size of the fireplace and hearth. All materials shall be specified. Provide the make and model number along with the approval number of the testing agency for all factory built (zero clearance) fireplaces. All fireplaces shall be provided with a permanent gas or electrical log insert prior to final inspection approval. A gas or electrical stub out for future installation of a log will not be acceptable. Exception EPA40 approved solid fuel burning fireplaces. Provide specifications for fireplaces.
 13. Indicate the location of water heaters and the temperature and pressure (T & P) relief line. Maximum 6" above grade per IRC
 14. All water heaters and other appliances located in the garage shall be installed on an eighteen (18) inch platform. The platform must be capable of supporting the appliance. IRC
 15. Appliances having an ignition source shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the floor in garages. For the purposes of this section, rooms or spaces that are not part of the living space of a dwelling unit and that communicate with a private garage through openings shall be considered to be part of the garage. IRC
 16. All glass adjacent to a door, either panel of a sliding glass door, where the nearest exposed edge of the glazing is within a twenty-four (24) inch arc of the door, shall be safety glass. Provide safety glazing in all other areas as required in IRC
 17. Site address number requirements per IRC
 18. Second story window fall protection to be provided per IRC

19. Specify type and thickness for gypsum board per IRC.

STRUCTURAL:

1. Provide complete roof and floor framing plans. Show the size, spacing and spans of all framing members, i.e., trusses, (2 point bearing, 3 point bearing, etc.) joists, rafters, beams, posts, glue-lams, lintels, headers, ledgers and blocking.
2. Note and detail all framing connectors, tie straps, joist hangers, etc., by the type, size and required attachment to all framing members.
3. Specify lumber grade, species and sizes of all rafters, joists, beams and headers. Studs greater than 10' in height must be designed by an Arizona Registrant.
4. When over framing construction is being performed, provide details or otherwise indicate how roof loads from over frame areas will be transferred to the roof structure below. The required attic ventilation may not be reduced or otherwise obstructed by roof sheathing under the over framed area.
5. Detail all shear connections from the roof deck to the foundation.
6. Provide lateral analysis by an Arizona registrant for the structure.
7. Locate attic access areas, skylights and all other openings in the ceiling and roof. Provide details of framing around all ceiling and roof openings.
8. When scissor trusses are being utilized, provide a detail specifying the type of truss connector that will be used, which provides lateral/horizontal movement at one end of the truss. Interior non-bearing walls are required to have a 1/2-inch clearance between the top plates and trusses before the roof dead load.
9. Truss web members are to be designed to provide a 24" wide, unobstructed continuous passageway from the attic access opening to attic-mounted appliances. A working platform not less than 30" in depth and width shall be provided in front of the control side of the appliance and along all sides where access is required. IRC

10. The attic appliance working platform is required to have solid blocking at all plywood perimeter edges and must provide GFU/switch for maintenance.

ELEVATIONS:

1. Provide complete drawings of all elevations drawn to scale. Drawings are to include all doors, windows (indicate the type of window provided), vertical dimensions and all exterior finishes. Lots located within a hillside area need to include a color and materials palette for all exterior finishes. Provide the Light Reflectivity Value (LRV) of all colors/materials (must be <40%).
2. Note and specify all roof slopes and provide the ICC Evaluation Report number and manufacturer for all roofing.
3. If a one-coat stucco system is to be utilized, provide the ICC Evaluation Report number and the manufacturer of the system. Provide the following note on the elevation sheet:

"The Building Development Division will require the installation card from the stucco manufacturer's approved applicator be on the job site before the application of the weather-resistive barrier. A copy of the installation card must be presented to the building inspector after completion of the work and before final inspection. A copy of the installation card shall be left at the job site for the property owner."
4. Provide attic ventilation calculations. A net free ventilating area of not less than 1/150 for each attic area is required. Indicate on the plans the amount of net free area required and the amount of net free area provided. The calculations shall indicate the amount of free area provided for each type and size of vents provided. If the ventilation factor 1/300 is used, at least 40%, but no more than 50%, of the required area MUST be located in the upper portion of the space to be ventilated at least 3 feet above eave and cornice vents with the balance of the required ventilation provided by eave or cornice vents. Insulation baffles shall be installed at all eave and cornice vents to prevent insulation from blocking the attic vents. IRC Unvented attic assemblies allowed with conditions per IRC
5. Note and dimension that the fireplace chimney must terminate a minimum of two (2) feet above any point of a roof within ten (10) feet measured horizontally, but shall not be less than three (3) feet above

the point where the chimney passes through the roof. Decorative shrouds are not permitted unless listed for use with the fireplace IRC

6. Within attics and crawl spaces where entry is made only for service of utilities, foam plastics shall be protected against ignition by 1½" thick (38mm) mineral fiber insulation, ¼" thick (6.4mm) wood structural panels, 3/8" (9.5 mm) gypsum or particle board, ¼" thick hardboard or corrosion-resistant steel having a base metal thickness of 0.016" (0.406mm).
7. Flat roof coverings must specify roof drainage per IRC; demonstrate compliance with 3-inch rainfall per hour per City of Peoria. Include flashing and cricket details per IRC.
8. Provide and key details for flashing at all exterior windows and doors per IRC
9. Provide and key details for weep screed per IRC

DETAILS AND GENERAL NOTES:

1. Detail and specify foundation grade redwood or pressure treated sill plates with the size, spacing and length of embedment of anchor bolts for sill plates. IRC
2. Provide a nailing schedule on the drawings, refer to IRC and list all applicable connections on the drawings.
3. Note and/or detail all fire blocking at the following areas: IRC
 - X Openings around vents, chimneys and fireplaces at floor and ceiling levels.
 - X In concealed spaces between wall studs at stairs in line with the stringers.
 - X In concealed spaces in walls, partitions, furred spaces, at ceiling and floor levels and at intervals of ten feet horizontally along the walls, vertically at ceiling and floor levels.
4. All cross-sections and details shall be cross-referenced to the floor plans, framing plans and elevations.
5. Completely detail all connections and cross-reference to the foundation plan, framing plan and cross-section the following:

- truss to top plate
 - beam to post
 - post to slab (provide clearance to concrete as required)
 - sill to slab
 - post to sill plate
 - truss to girder truss
 - ledgers to masonry/frame, frame to ledgers
 - joist to ledger
 - strap and hanger types
 - hold down locations and types
 - nailing
 - continuous load path for shear transfer
6. Specify and detail all over framing. If solid sheathing is used on lower trusses, provide minimum openings of twenty-two (22) inches X thirty (30) inches for access and ventilation into over-framed areas. Provide vertical supports for jack rafters spanning eight (8) feet - 0 inch or more.
 7. Provide a detail which shows the clearance required between the top of interior non-bearing partitions and the bottom of scissor trusses (if utilized).
 8. When scissor trusses are specified, provide a detail indicating the type of frame connector that will be used to provide lateral/horizontal movement at one end of the truss as required by the truss manufacturer.
 9. Provide sealed integral plans and calculations, if applicable.
 10. Note on the plan, all lumber shall bear an approved grading stamp.
 11. Note and specify waterproofing and damp proofing for all basement walls. IRC
 12. Materials used in construction must comply with the material standards of the applicable section of the International Residential Code. Provide notes on the drawings establishing material quality as required by the International Residential Code for the following materials: concrete, reinforcing steel, CMU, brick, mortar, grout, lumber (species and grade for joist, rafters, posts, studs and beams), glu-lam beams, treated lumber, plywood, wood shingles, shakes and siding.

MECHANICAL:

1. The dwelling must be provided with heating and cooling capable of maintaining a room temperature between 70°F and 90°F at a point three feet above the floor and two feet from the exterior walls in all habitable rooms. IRC
2. Show exhaust fan locations and specify CFM for bathrooms, water closet compartments in lieu of operable windows. Minimum ventilation rate shall be 50 CFM intermittent. IRC
3. All gas appliances shall comply with Chapter 17 & 24 of the IRC for combustion air requirements. Compliance with these requirements shall be detailed and noted on the plans.
4. Designate on the plans by details and notes how compliance with (dryer vent length limitations) is achieved. Including length identification permanent label or tag within 6 feet of exhaust duct connection IRC
5. If the heating or air conditioning equipment is located in the attic, show the location of access, catwalk and working platform. IRC
6. Provide makeup air for all laundry rooms per IRC
7. Specify CFM for kitchen exhaust hoods. Provide makeup air detail for kitchen exhaust hoods exceeding 400 CFM demonstrate compliance IRC.
6. Duct insulation per IRC

PLUMBING:

1. Provide a plumbing waste isometric complete with the sizes of all waste piping, vents and locations of floor drains and clean outs. If an island sink is indicated, provide the required island sink venting. This drawing must be incorporated onto the plans. No small-sized sheets attached to the drawings will be allowed. IRC.
2. Note and specify all piping materials. ABS or PVC used in the Drain, Waste and Venting (DWV) system must be Schedule 40. Copper tubing used in water piping must be specified Type M minimum weight in the building above the slab and copper tubing used in water piping below the floor slab must be Type L minimum weight, installed without

- joints. Gas fuel piping shall be wrought iron, steel (galvanized or black) or CSST. IRC Chapters (Gas), (Water), (Drainage).
3. Provide a gas isometric with the length of line to each appliance from the gas meter or tank, BTU or CFH of each appliance, size of each branch, total demand and pressure of the meter. Provide type of pipe to be used such as black iron, CSST (sizing may vary per manufacturer), plastic, etc. and size pipe per appropriate Table. Provide regulator type(s) and location(s) with propane or medium pressure gas. IRC.
 4. Provide the method of surface water drainage disposal for basement window well drains. Drain lines may be to a dry well or to an approved disposal field. IRC
 5. Provide water load calculations as per 2018 International Residential Code, (standard pressure range 50 to 60 psi). Indicate the water meter and water service size to be provided. Coordinate with fire sprinkler design if applicable.
 6. Drainage piping serving fixtures which have flood level rims below the elevation of the next upstream manhole cover of the public sewer shall be protected from backflow of sewage by a backwater valve. Note and specify on the plans the location and type. IRC
 7. Indicate the location of sump and sewage ejectors on the plumbing isometric plan. IRC
 8. Hose bibs must be located on the plan. Backflow preventers are required on each hose bibb and must be specified. IRC
 9. Appliances with an ignition source located in the garage must be on an 18-inch high platform. IRC
 10. Specify fixed air gap for dishwasher drain or the discharge line may be directly connected to the tailpiece of a sink drain, or into the waste boss of a food disposal with the discharge line securely fastened per IRC
 11. A septic tank and system permit is required from the Maricopa County Environmental Services Department. Provide a copy of the "PERMISSION TO CONSTRUCT-INDIVIDUAL SEWAGE DISPOSAL SYSTEM" letter or a copy of the permit.
 12. C.O.P. well info sheets – See ELECTRICAL.

ELECTRICAL:

1. A separate electrical floor plan shall be provided.
2. Load calculations, panel schedules and one-line diagrams shall be provided and incorporated onto the plans. No loose sheets shall be attached. Provide separate load calculations for separate panel schedules. IRC.
3. Note the type and capacity of the panel, note the grounding conductor shall be a minimum of twenty (20) feet of #4 bare copper (ufer - grounding wire) wire embedded in the concrete footing. IRC
4. Note a bonding conductor. A minimum of one (1) #4 copper wire (200 amp max SES) connecting the building's metal water and gas piping system to the service equipment enclosure buss. IRC
5. Designate the location of all required light fixtures, receptacle outlets, power outlets and switches. IRC
6. At least one wall switch controlled light or outlet must be provided in bathrooms, hallways, stairways, attached garages, outdoor entrances or exits and all habitable rooms. IRC
7. Receptacle outlets shall be provided so that no point along the floor line of an unbroken wall two or more feet in length is more than six (6) feet from an outlet within that wall space. IRC
8. Provide at least one receptacle outlet in hallways ten (10) or more feet in length. IRC
9. At least one WP GFCI receptacle outlet accessible at grade level shall be installed at the front and back of the dwelling. IRC
10. Receptacle outlets shall be provided at each kitchen counter space wider than twelve (12) inches and shall be installed so that no point along the wall is more than twenty-four (24) inches from a receptacle outlet. IRC
11. Island or peninsular counter tops twelve (12) inches or wider shall have at least one receptacle outlet. IRC
12. A GFCI receptacle outlet shall be provided within 36" to each basin in each bathroom IRC. Foyers not part of hallway greater than 60 square feet receptacles required per IRC

13. All receptacle outlets in bathrooms, unfinished basements, garages or carports at grade level and all outlets within six (6) feet of a wet bar or kitchen sink shall have ground fault circuit interrupting protection (GFCI). Note on the drawings at each outlet requiring such protection. IRC
14. Note and specify that two (2) or more, 20 amp small appliance circuits shall be provided to serve the kitchen, breakfast room and dining room. Such circuits shall have no other outlets. IRC
15. Note and specify that at least one (1) 20 amp branch circuit shall be installed to serve the laundry room and one (1) 20 amp circuit for bathrooms. These circuits shall have no other outlets. IRC
16. Indicate the location of all air conditioning and heating units, air handlers, compressors and disconnects. All ground mounted condensers shall have a disconnect readily accessible. IRC
17. Indicate the location of a convenience outlet and light with a switch for the attic heating and air conditioning equipment. The switch must be located at the access area to the attic. IRC
18. Provide smoke and carbon monoxide alarms, show the locations and note the installation requirements on the drawings. Comply with the location requirements of the IRC. Note that all smoke alarms must be interconnected with a power source from the building wiring and shall be equipped with a battery back-up.
19. Where ceiling fans are shown on the plans, provide a note indicating that only approved outlet boxes shall be used.
20. Provide a note indicating that surface mounted incandescent light fixtures in clothes closets shall maintain twelve (12) inches between the fixture and the nearest point of storage and six (6) inches for recessed and fluorescent fixtures.
21. Provide note that all branch circuits that supply 125 volt, single phase, 15 and 20 ampere outlets installed in dwelling shall be protected by arc-fault circuit-interrupter.
22. Pre-wired future lighting boxes to be fan rated per IRC
22. Arc fault protection and arc fault circuit breakers required per IRC. Label AFCI circuits in panel schedules.

23. Tamper resistant receptacles required per IRC.
24. All garage and unfinished basement receptacles to be GFCI protected per IRC
25. Outdoor receptacle outlets required including decks, balconies and porches per IRC
26. Carbon Monoxide alarms are required per IRC. Provide a carbon monoxide alarm at all areas centrally located in the corridor or area giving access to each separate sleeping area.

SOUND ATTENUATION STANDARDS:
ARS Statute 28-8482

- Insulation required R-30 roof/ceiling assembly and R-18 exterior wall assembly which will be verified by Building Inspector during field inspection
- Exterior doors must be solid wood or foam-filled fiberglass or metal
- Dual-glazed windows
- Dwelling must be airtight by using weather-stripping and caulking
- Duct insulation required one-inch thick coated glass fiber
- Alternative: Provide certification by an Architect or Engineer to achieve maximum interior noise level of forty-five decibels at time of final construction

ENERGY EFFICIENCY:

1. Demonstrate compliance with IRC and incorporate energy report such as RESCHECK into plans.

FIRE DEPARTMENT REQUIREMENTS:

1. Fire sprinkler requirements for one and two family dwellings shall comply with the 2018 edition of the International Fire Code with the City of Peoria Ordinance #2019-11 included and the 2016 edition of National Fire Protection Association 13D standard.
2. Structures are required to have a fire hydrant within five hundred (500) feet hose lay distance from any exterior portion of a building on the property and will provide the following gallons per minute of fire flow:

*Fire hydrants shall be located within two hundred (200) feet of a dead end or cul-de-sac street.

<u>Square footage (Fire Area-Livable plus Garage) of residence</u>	<u>Fire flow (gallons per minute)</u>
Up to 3,600	1,000 gpm at twenty (20) psi
3,601 and up to 4,800	1,750 gpm at twenty (20) psi
4,801 and up to 5,000	2,000 gpm at twenty (20) psi

The flow duration period is two (2) hours for Type V-B construction.

3. A residential fire sprinkler system shall be provided for all dwellings which cannot meet the fire flow requirements listed above. A flow test may be required to prove meeting the required fire flow.
4. All residential dwellings, with more than five thousand (5,000) square feet of total fire area (fire area = livable and garage) **ARE REQUIRED** to have a residential fire sprinkler system installed.
5. All residential dwellings north of and immediately adjacent to the center line of Dixileta Road and west of Agua Fria River shall have residential fire sprinkler system installed.
6. Any residential dwelling not connected to a municipal or public service corporation water supply shall have a residential fire sprinkler system installed.
7. Requirements can be placed on certain hillside lots and subdivisions due to water supply and/or access issues which will require a residential fire sprinkler system to be installed. Check with the developer to determine whether restrictions have been put in place.

8. Designers of residential fire sprinkler plans shall be NICET Level III Certified or a Registered Professional Engineer. Signatures and information shall appear on the drawing(s) to identify the designer.
9. Fire lanes, roads, and emergency access shall be provided and maintained per the 2018 International Fire Code.
10. If Liquefied Petroleum Gas (LPG) is to be used on the site, the LPG container location must be noted on the Site Plan and Grading and Drainage Plan. The capacity of the container must be noted along with whether the container is to be installed above ground or underground.
11. If LPG is used on the site, dimensions must be provided from the container to the building and to the nearest property line(s). The minimum distance required from containers is as follows:
 - Less than 125 gallons = 5 feet (above ground only)
 - Less than 125 gallons = 10 feet (underground only)
 - 125 to 500 gallons = 10 feet (above or underground)
 - 501 to 2,000 gallons = 10 feet (underground only)
 - 501 to 2,000 gallons = 25 feet (above ground only)
12. If LPG is used on the site and the capacity is larger than one hundred twenty five (125) gallons, a separate permit is required from the Fire Department for the installation of the container. A note will be required on the drawing that states this requirement.

CUSTOM HOME PLAN SUBMITTAL CHECKLIST

Owner: _____

Address of proposed residence: _____

Parcel/ (permit) number: _____

Has the following information been provide in your plan submittal?

- Four (4) sets of Building plans drawn to scale $\frac{1}{4}''=1'$ with a minimum size of 24" x 36"
- Grading and Drainage plans (should be incorporated into Building plans)
- Site Plan (should be incorporated into Building plans)
- Fire Flow Provision/Fire Sprinkler plans/Hydrant flow test
- Gravity and Lateral Analysis Calculation
- Soils Report
- 8 ½" x 11" or 11" x 17" plot plan
- Septic/well permits if applicable

FINAL / UTILITY CLEARANCE REQUIREMENTS:

1. Finished floor elevation must be certified **prior** to stem inspection. Must be certified by a qualified surveyor. A copy is to be provided to the appropriate City inspector.
2. All required building inspections have been made and approved by the City building inspector. A checklist is available for use during construction.
3. Driveways and exterior property line walls, if included with the building permit, must be installed **prior** to FINAL inspection.
4. Compaction report for basement homes (without perimeter drains), performed by a qualified soils engineer, 90% minimum compaction required. Compaction report required for fill which exceeds 12", minimum 95% compaction required.
5. Maricopa County approval for septic tank installation.
6. State approval for private water well installation and building permit is required for water well site.
7. One-coat stucco installation card.
8. Final approval for any required special inspections by third party, i.e., post-tension slabs, Perform Wall systems, etc.
9. Provide as-built grading and drainage plan for approval for on-site storm water drainage and retention requirements.
10. City approval for sprinkler system, if required.
11. All required reports and clearances must be obtained **prior** to requesting a FINAL inspection by the building inspector.