Residential Patio Covers
Guideline

Patio cover definition and uses
One-story structures not exceeding 12 feet in height, open on two sides or more, attached to the existing residence. Patio covers shall be used only for recreational and outdoor living purposes.

Location of the permitting office:
The Planning & Development permitting office is located on the 2nd floor of City Hall, 200 W. Washington St., Phoenix AZ 85003.

What information is needed to obtain a building permit?
Construction drawings shall be required. Homeowners may prepare the drawings, provided the drawings are accurate, legible and complete. Drawings will be reviewed, checking for compliance to the Zoning Ordinance and Building Codes. Permits are issued when drawings show compliance.

Submittal requirements:
- **Plot plan** showing compliance with setbacks and lot coverage requirements of the Zoning Ordinance and Building Code. See attached plot plan example on page 5.
- **Cross section drawing** showing the size and spacing of all framing members, rafter connections to the exterior wall, roof covering material, rafter to beam connection, beam to post connections, post to footing connections, and size and depth of all footings. See the attached cross section examples on pages 7, 8 & 9.
- **Roof framing plan** showing the layout of all framing members and the location and width of all openings in the existing wall supporting the patio. See the attached example for specific requirements on page 6.
- **Foundation plan**. Footings shall be designed using a presumptive load bearing soil value of 1,500 pounds per square foot from table R401.4.1. The concrete mix for footings shall meet a compressive strength of f'c = 2,500 psi minimum from table R402.2. A minimum depth shall be placed 12" below the undisturbed ground surface per section R403.1.4.

Structural calculations are not required if:
- Patio rafters are not connected to the rafter tails of the residence.
- Total roofing live and dead loads do not exceed the design criteria for all dead loads (no tile roofing) at 10 pounds per square foot (psf) and a minimum live load of 10 psf per Appendix H. The patio cover is conventionally framed, and connections all meet standard practices as determined by the Planning and Development Department staff.

Note: The size of the existing headers at openings adjoining the proposed patio cover may need to be verified based on the configuration of the existing building and the depth of the patio cover. If the patio structure consists of simple conventional framing like the sample illustrations, you may refer to the tables enclosed for allowable size/spacing of structural

For more information about this publication, contact Planning & Development at (602) 262-7811.To request a reasonable accommodation, please contact Saneeya Mir, (602) 686-6461, Saneeya.Mir@phoenix.gov TTY: Use 7-1-1.

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members.

If the patio does not comply with the simple conventional framing consistent to the examples provided, additional assistance may be acquired at the residential counter. If framing methods are beyond conventional framing, a structural analysis/evaluation may be required by a registrant. Additional plan information may be requested if the plans provided are unclear or incomplete.

Additional Regulations:

- Hillside lots require a Grading and Drainage plan approval prior to permit review. For more information call (602) 262-6551.
- Historic Preservation subdivisions shall require approval by the Historic Preservation Office prior to permit review. For more information call (602) 262-7468.
- Flood plain properties shall obtain Floodplain Management approval prior to permit review. For more information call (602) 262-4960.

Permit and Plan Review Fees

Patio covers are subject to permit and plan review fees. Please refer to https://www.phoenix.gov/administration/departments/pdd/tools-resources/fees.html for more information about how fees are assessed.

Inspections

The project is not legally complete until there is an approved final inspection. Building permits shall remain valid for 180 days from the date of issuance or from the date of previous inspections. Once work has started and inspections have commenced every 180 days, the permit shall remain valid for two years. Call (602) 262-7811 to schedule an inspection.

RAFTER SPACING TABLE 1					
RAFTER SPAN	RAFTER SPACING (CENTER TO CENTER)				
	12”	**16”**	**19.2”**	**24”**	
8’-0”	2 X 4	2 X 4	2 X 4	2 X 4	
9’-0”	2 X 4	2 X 6	2 X 6	2 X 6	
10’-0”	2 X 6	2 X 6	2 X 6	2 X 6	
11’-0”	2 X 6	2 X 6	2 X 6	2 X 6	
12’-0”	2 X 6	2 X 6	2 X 6	2 X 8	
RAFTERS SHALL BE GRADE MARKED DOUGLAS FIR GRADE #2 OR BETTER					

MINIMUM HEADER/BEAM SIZES TABLE 2					
RAFTER SPAN (12” O.H.)	POST/COLUMN SPACING				
	8’-0”	**9’-0”**	**10’-0”**	**11’-0”**	**12’-0”**
8’-0”	4” X 6”	4” X 6”	4” X 8”	4” X 8”	4” X 8”
9’-0”	4” X 6”	4” X 6”	4” X 6”	4” X 8”	4” X 8”
10’-0”	4” X 6”	4” X 6”	4” X 8”	4” X 8”	4” X 10”
11’-0”	4” X 6”	4” X 6”	4” X 8”	4” X 10”	4” X 10”
12’-0”	4” X 8”	4” X 8”	4” X 8”	4” X 10”	4” X 10”

MINIMUM “SQUARE” FOOTING SIZES TABLE 3					
POST SPACING	RAFTER SPAN (12” MAX OVERHANG)				
	8’-0”	**9’-0”**	**10’-0”**	**11’-0”**	**12’-0”**
8’-0”	14” SQ	14” SQ	14” SQ	14” SQ	14” SQ
9’-0”	14” SQ	14” SQ	14” SQ	14” SQ	16” SQ
10’-0”	14” SQ	14” SQ	16” SQ	16” SQ	18” SQ
11’-0”	14” SQ	16” SQ	16” SQ	16” SQ	18” SQ
12’-0”	16” SQ	16” SQ	16” SQ	16” SQ	18” SQ

ROOF SLOPES FOR ROOF COVERINGS TABLE 4			
TYPE OF ROOFING	SLOPE	TYPE OF ROOFING	SLOPE
ASPHALT SHINGLES	2:12	BUILT-UP ROOFS	¼:12
CLAY AND CONCRETE TILE	2-1/2:12	MODIFIED BITUMEN	¼:12
MINERAL-SURFACE ROLL	1:12	SPRAY POLYURETHANE FOAM	¼:12
WOOD SHINGLE OR SHAKES	3:12	METAL ROOF SHINGLES	3:12
THE SLOPES ABOVE ARE MINIMUM UNITS HORIZONTAL TO UNITS VERTICAL			

1. FRAMING HARDWARE SHALL BE ICC APPROVED FOR THE INTENDED USE AND INSTALLED PER MANUFACTURES SPECIFICATIONS USING ALL RECOMMENDED FASTENERS.
2. ROOF SHEATHING SHALL BE CONTINUOUS OVER 2 OR MORE RAFTER SPANS, FACE GRAIN SHALL BE PERPENDICULAR TO SUPPORTS AND MACIMUM SPAN SHALL BE AS FOLLOWS.
3. CONCRETE SHALL HAVE MINIMUM STRENGH OF 2000 PSI 28 DAYS.
4. OPEN LATTICE OR TRELLIS SHALL BE PRESSURE TREATED LUMBER.

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Plot Plan
Single Family Example

Prior to developing a plot plan, contact the Planning and Development Department's Zoning section at 602-262-7131 (option 6) OR email: zoning@phoenix.gov to verify the property's zoning, required setbacks and allowable lot coverage. Property dimensions and easements can be found on the recorded subdivision plat. Subdivision plats can be viewed/searched online via Maricopa County Assessor at https://mcassessor.maricopa.gov/ For Site Planning submittal inquiries, email us at pdd.siteplanning@phoenix.gov

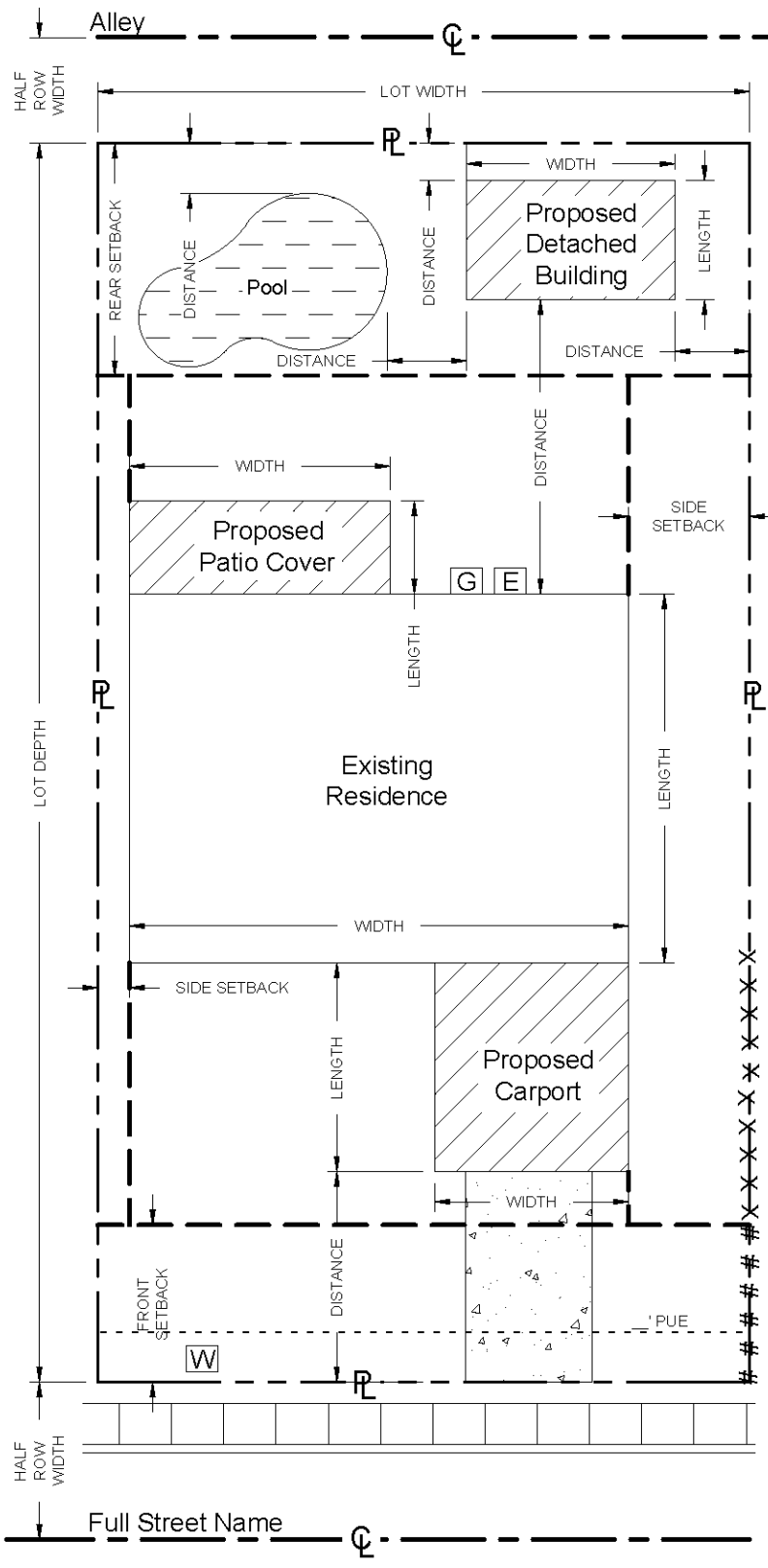
Electronic submittal is through SHAPE PHX (https://shapephx.phoenix.gov/s/). Upload a PDF copy of the plot plan with the rest of the residential permit submittal requirements (https://www.phoenix.gov/content/dam/phoenix/pddsite/documents/trt/external/dsd_trt_pdf_00082.pdf).

The plot plan must be drawn to scale. Please include all applicable details listed below with the plot plan to minimize corrections:

- Scope of work for the permit (e.g. livable addition, detached ADU, attached patio, etc.)
- Number of existing and proposed primary dwelling units and accessory dwelling units
- Address and APN (Maricopa County Assessor Parcel Number)
- Provide a Project Data Table
- Zoning district (see My Community Map at https://www.phoenix.gov/administration/departments/pdd/tools-resources/maps/my-community-map.html)
- North arrow & scale (suggested scale 1" = 20')
- Show, label, and dimension all property lines (check plat map if available)
- Label adjacent streets and alleys
- Dimension rights-of-way of adjacent street and alley to centerlines
- Show, label, and dimension all easements
- Show, label, and dimension all existing structures to remain and all proposed structures
- Show, label, dimension, and list the required and provided building setbacks (see Phoenix Zoning Ordinance at https://phoenix.municipal.codes/ZO)
- List the required and provided parking (see https://phoenix.municipal.codes/ZO/702)
- Show and dimension the provided parking
- Show the locations and heights of existing and proposed fences, walls, and gates
- Provide a Lot Coverage Table and Lot Coverage Totals Table:
  - Lot area in square feet
  - Allowed lot coverage in percent and square feet
  - Proposed lot coverage
    - Primary structure (square feet)
    - Attached shade (square feet)
    - Detached accessory structure(s) (square feet)
    - Total proposed lot coverage in square feet and percent (area under roof ÷ net lot area; note that the first three feet of roof overhang can be excluded from the area under roof)

Please use the template on Page 2 to help with your plot plan.

This publication can be made available in alternate formats (Braille, large print, or digital media) upon request. Contact Planning & Development at (602) 262-7811 voice or (602) 534-5500 TTY.



Scope of work (proposed):_____

Number of primary dwelling units:____
Number of accessory dwelling units:__
Parking provided:_____

PROJECT DATA
Address:_____
Zoning:_____
APN:_____

LOT COVERAGE TABLE
Lot Area (sq ft):_____
First Floor Livable (sq ft):_____
Garage (sq ft):_____
Patio (sq ft):_____
Porch (sq ft):_____
Detached Structure (sq ft):_____
Other (sq ft):_____
Total (sq ft):_____

LOT COVERAGE TOTALS (% & sq ft)
Allowed:_____
Primary Structure:_____
Attached Shade:_____
Other:_____
Proposed Total:_____

PL	Property Line
CL	Center Line
G	Gas Meter
E	Electric Meter
W	Water Meter
ROW	Rights-of-Way

New Proposed Fencing:
X-X X-X 6 foot high, __ LF CMU Fence
#- #- #- # 3 foot high, __ LF CMU Fence

PUE - - - - - - - - -

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Drawing Scale

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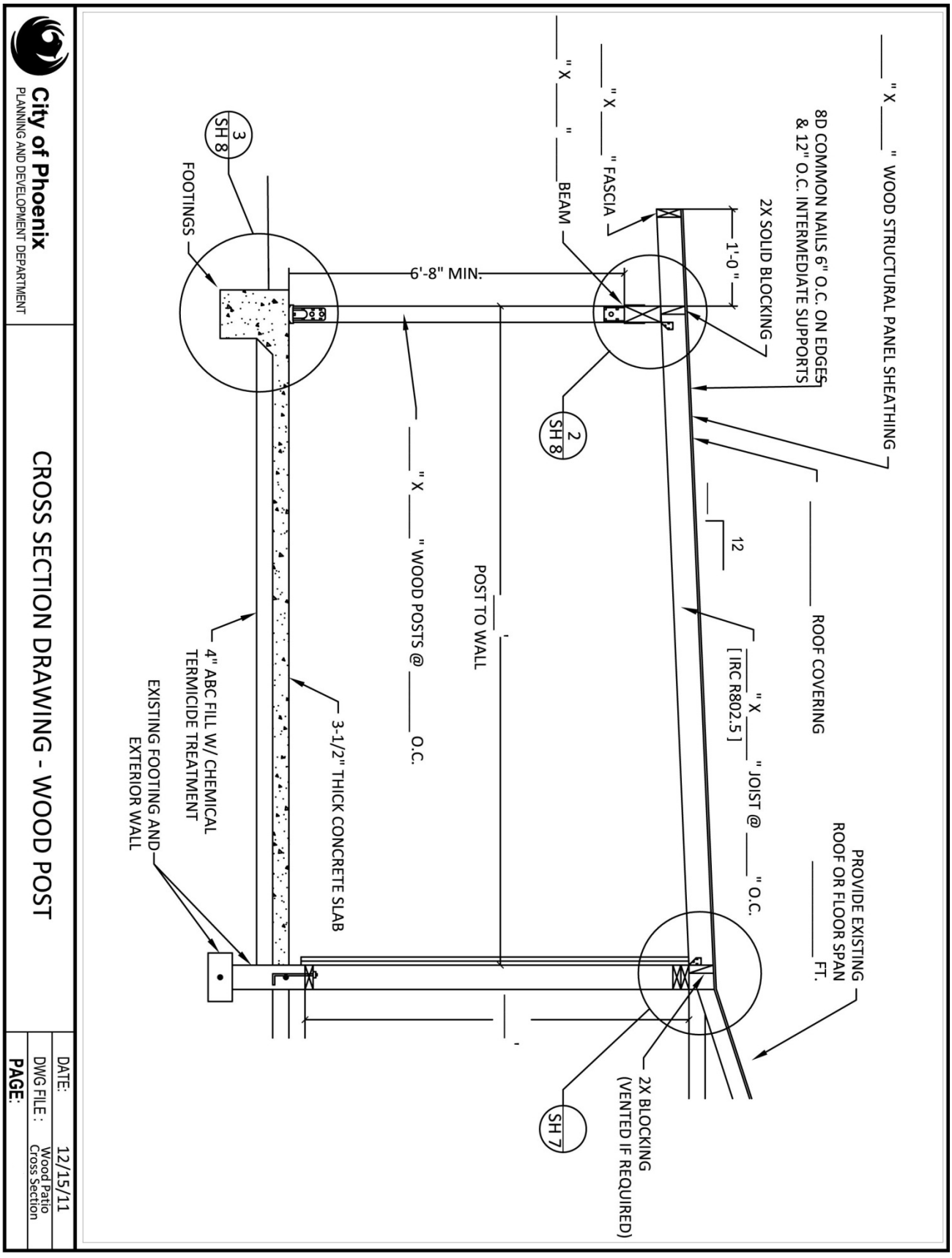
RESIDENTIAL SINGLE FAMILY PLOT PLAN REQUIREMENTS (SAMPLE)


___" X ___" WOOD STRUCTURAL PANEL SHEATHING
8D COMMON NAILS 6" O.C. ON EDGES & 12" O.C. INTERMEDIATE SUPPORTS
2X SOLID BLOCKING
1'-0"
___" X ___" FASCIA
___" X ___" BEAM
6'-8" MIN.
___" X ___" WOOD POSTS @ ___ O.C.
POST TO WALL
3-1/2" THICK CONCRETE SLAB
4" ABC FILL W/ CHEMICAL TERMICIDE TREATMENT
EXISTING FOOTING AND EXTERIOR WALL
FOOTINGS
3 SH 8
2 SH 8
SH 7
ROOF COVERING
12
___" X ___" JOIST @ ___" O.C. [IRC R802.5]
PROVIDE EXISTING ROOF OR FLOOR SPAN ___ FT.
2X BLOCKING (VENTED IF REQUIRED)
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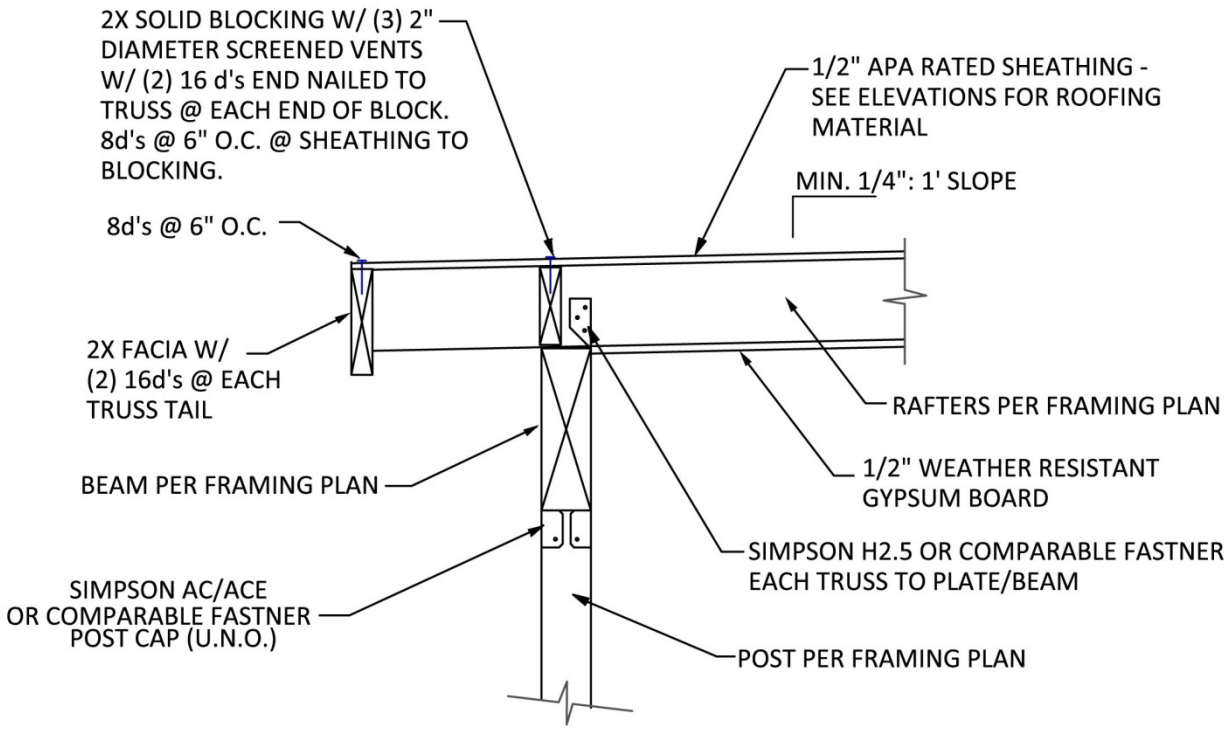
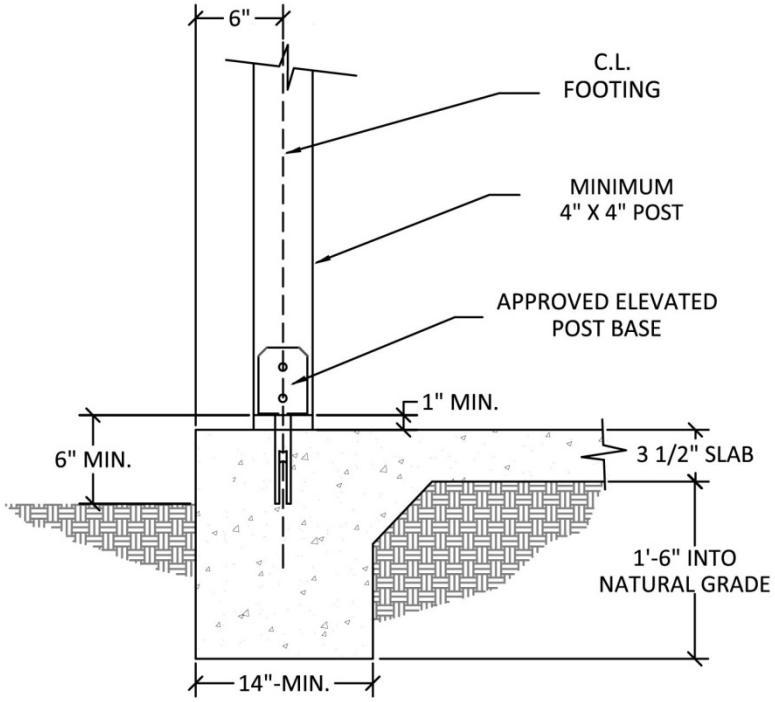
CROSS SECTION DRAWING - WOOD POST
DATE: 12/15/11
DWG FILE : Wood Patio Cross Section
PAGE:

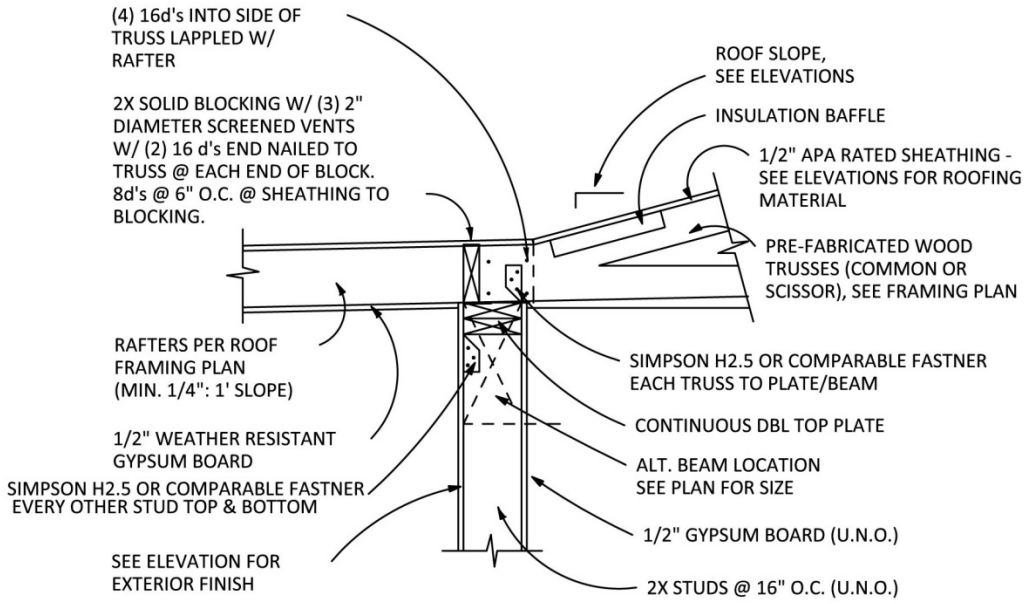


RAFTER TO BEAM DETAIL 2



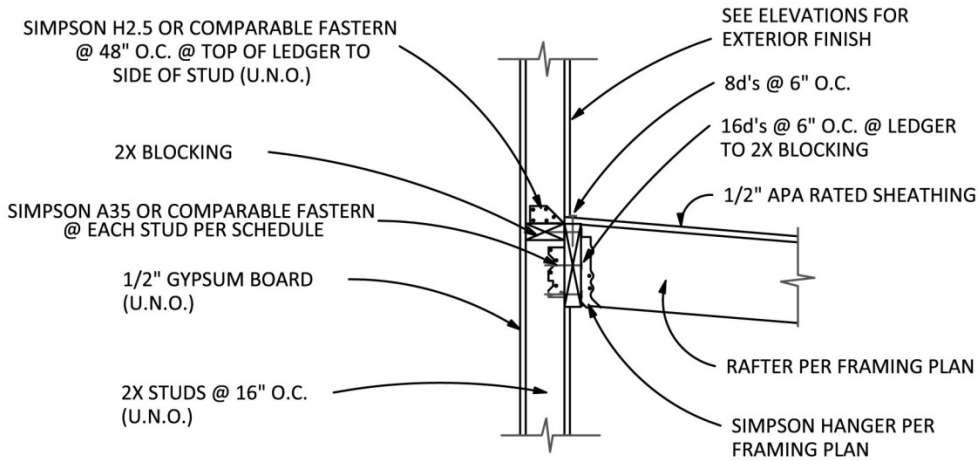
FOOTING DETAIL 3

City of Phoenix PLANNING AND DEVELOPMENT DEPARTMENT	PATIO POST DETAIL	DATE: 6/15/11 DWG FILE : FOOT_RAFTER **PAGE**:



ALLOW FOR FREE HORIZONTAL MOVEMENT AT ONE SUPPORT AT SCISSOR TRUSS LOCATIONS. INSTALL NAILS IN H2.5 AFTER LOADING ROOF WITH ALL MATERIALS.

NOTE: USE SAME ANCHORAGE @ TRUSS TO BEAM CONNECTION (U.N.O.)



RAFTER SPAN	ROOF LEDGER & CONNECTION	DECK LEDGER & CONNECTION
0'-0" TO 10'-0"	2X6 CONT. LEDGER W/ (3) 16d's @ EACH STUD	2x8 CONT. LEDGER W/ (5) 16d's @ EACH STUD
10'-1" TO 13'-0"	2x8 CONT. LEDGER W/ (4) 16d's @ EACH STUD	2x* CONT. LEDGER W/ (4) 16d's @ EACH STUD W/ (1) SIMP. A35 @ EACH STUD
13'-1" TO 15' MAX	2x8 CONT. LEDGER W/ (4) 16d's @ EACH STUD W/ (1) SIMP. A35 @ EACH STUD	N/A

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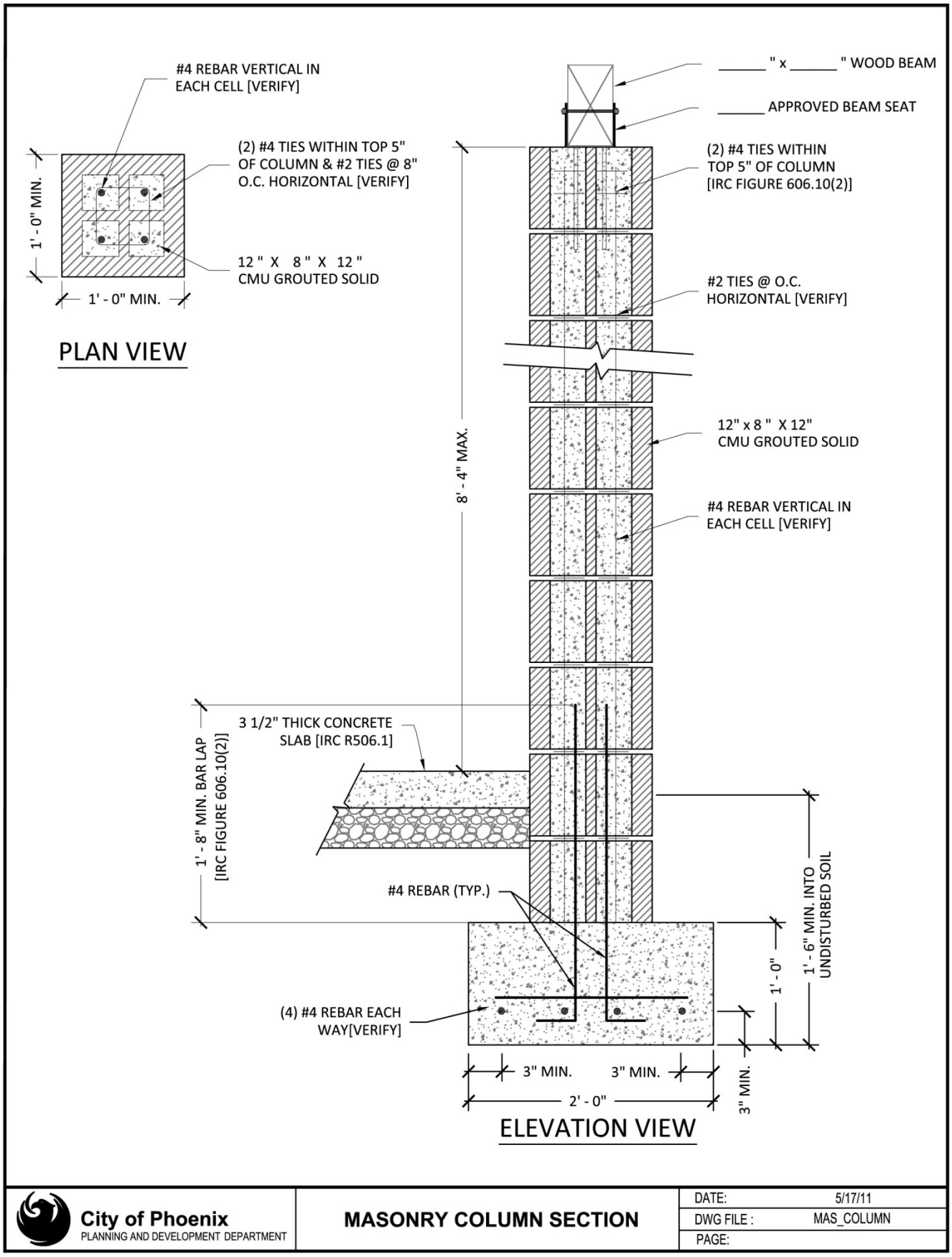
RAFTER TO WALL DETAILS

DATE: 5/17/11
DWG FILE : Rafter_to_Wall
PAGE:



City of Phoenix PLANNING AND DEVELOPMENT DEPARTMENT	**MASONRY COLUMN SECTION**	DATE: 5/17/11 DWG FILE : MAS_COLUMN PAGE: