Post Frame Construction Guide

Please provide the following Items:

1. **Zoning Approval Letter and Permit Application**
2. **Site Plan** (include distances to property lines and other structures)
3. **Post Layout Sheet**
   a. dimensions of structure
   b. locations of posts and spacing
   c. wall bracing locations and size
   d. door types, locations, and sizes

328.1 Post Frame Accessory Structures

The following requirements serve as minimum standards for post and frame structures within all of the following structural limitations:

1. Residential accessory structures,
2. Single story,
3. Solid exterior structural sheathing or metal roof, and solid wall panels,
4. No attic storage,
5. Maximum building width of thirty-six feet including the overhang,
6. Maximum wall height of sixteen feet,
7. Maximum mean roof height of twenty feet, and
8. Maximum post spacing of eight feet.

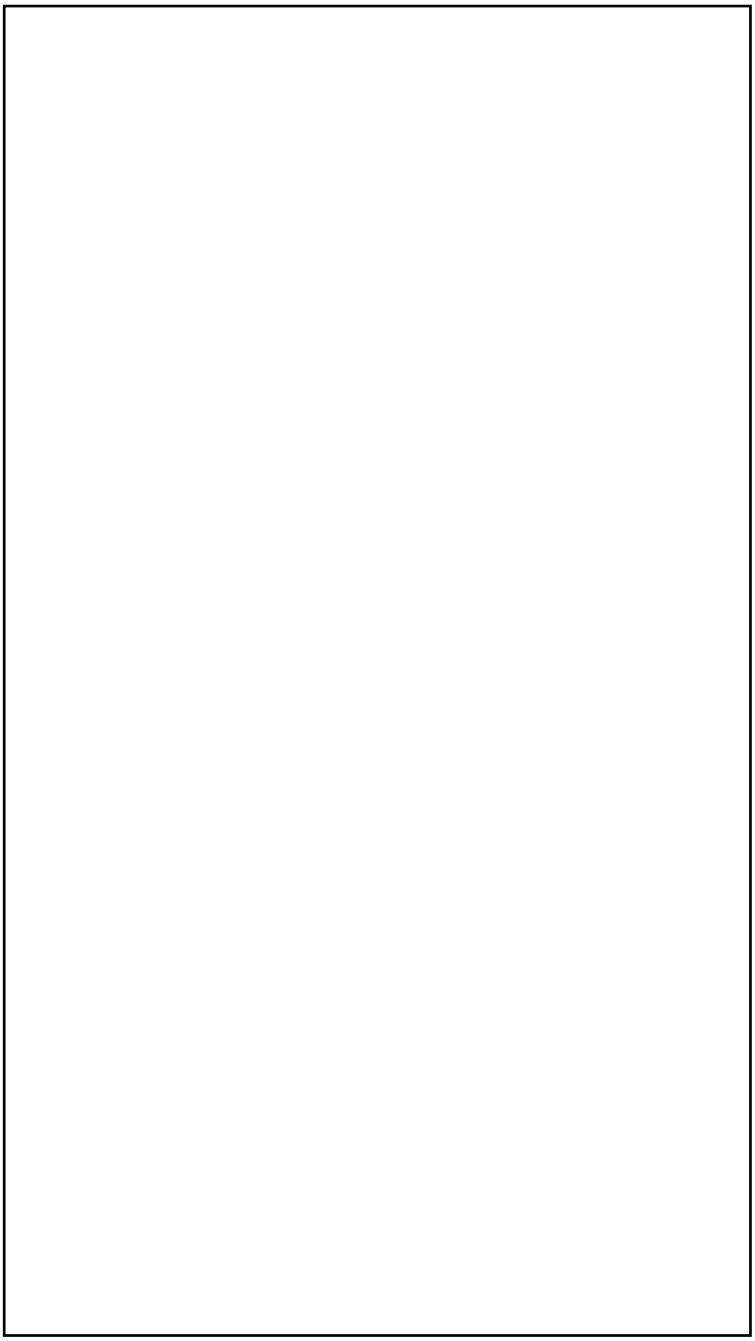
Post and frame structures and portions thereof outside the above structural limitations of this standard shall be accompanied by structural calculations as required by the residential building official or designed under the provisions of Section 106.5 of the Residential Code of Ohio (RCO). Post and frame structures shall comply with the structural design requirements of Section 301 of the RCO.

TABLE 328.3
POST FRAME PIER FOOTING DIAMETERS[1, 2, 3, 4]

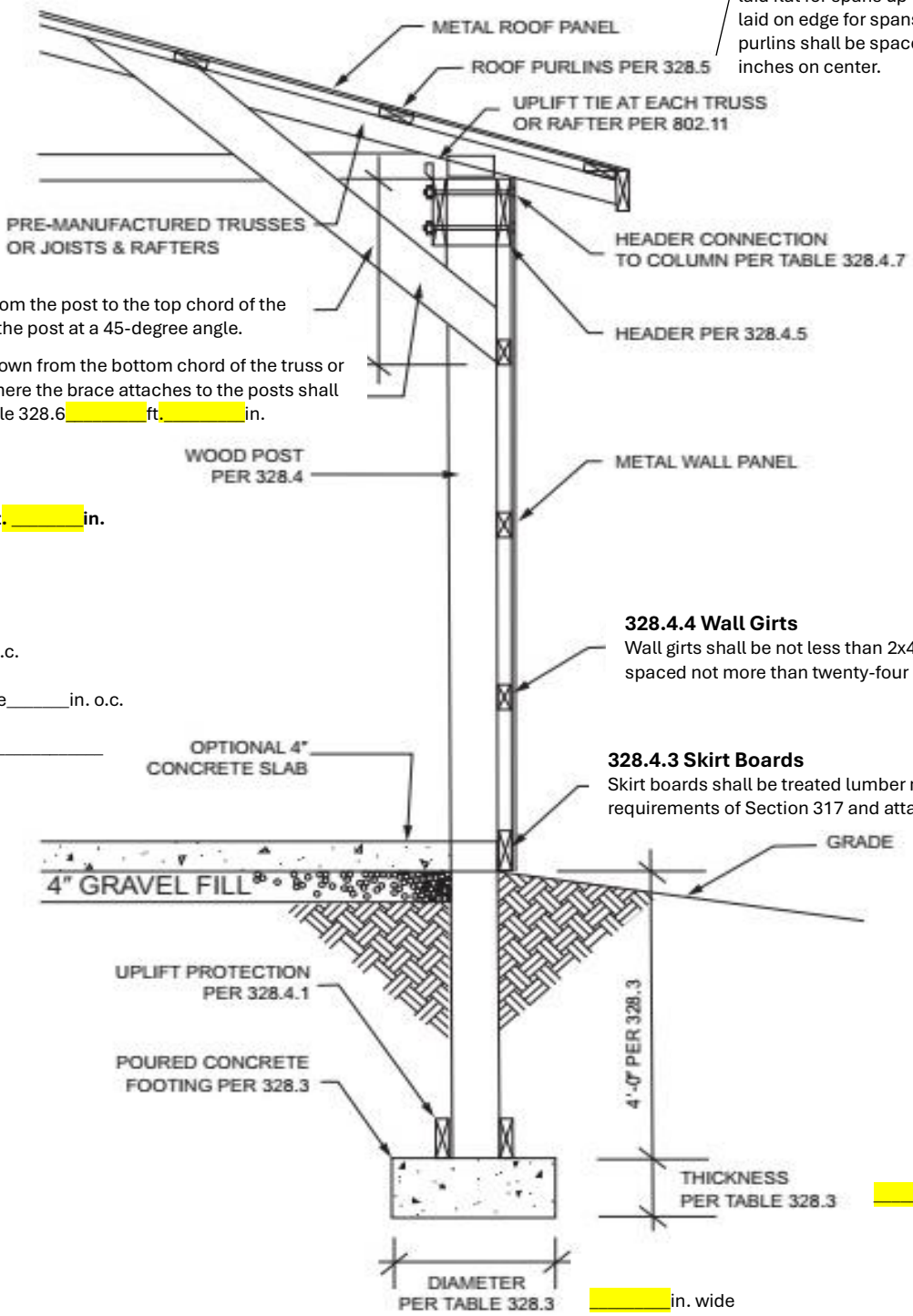
	BUILDING WIDTH (length of truss) INCLUDING OVERHANG (feet)			
	24	28	32	36
Diameter (inches) 20# roof snow load	18	20	22	22

1. Pier footing thickness shall be a minimum one-half of the diameter of the footing.

Post Layout Sheet



Roof purlins shall be a minimum of 2x4 SPF#2 laid flat for spans up to 4 feet, and 2x4 SPF#2 laid on edge for spans up to 8 feet. Roof purlins shall be spaced not more than 24 inches on center.



328.6 Knee Bracing
A 2x6 brace shall extend from the post to the top chord of the truss or rafter adjacent to the post at a 45-degree angle.

The **vertical distance** down from the bottom chord of the truss or ceiling joist to the point where the brace attaches to the posts shall be in compliance with Table 328.6_____ft._____in.

Wall Height- _____**ft.** _____**in.**

(Choose one)
_____Truss_____ft. o.c.

_____Rafter_____size_____in. o.c.

Species_____

Grade_____

328.4.4 Wall Girts
Wall girts shall be not less than 2x4 inches nominal and spaced not more than twenty-four (24) inches on center.

328.4.3 Skirt Boards
Skirt boards shall be treated lumber meeting the requirements of Section 317 and attached per Table 328.7.

_____in. thick

_____in. wide

FIGURE 328
POST AND FRAME WALL SECTION (NO SCALE)

328.4 Post and Wall Construction
Posts shall be three (3) ply unspliced, reinforced spliced or solid wood and shall not be less than 4-inch by 6-inch nominal size. Posts shall comply with the requirements of Section 317.
(Choose One)
_____4x6
_____6x6
_____Other ____x_____(provide size)

328.4.1 Uplift Protection
Posts shall have uplift protection by one of the following methods:
(Choose one)

1. _____Two 2×6×12-inch post uplift protection blocks attached to each side of the base of the post. The post uplift blocks shall be placed horizontally, attached per Table 328.7 and comply with Section 317.
2. _____12-inch high, concrete collar poured on top of footing around the post, with 2-#5 × 9-inch rebar placed through the post at 3 inches and 9 inches from bottom of post in opposite directions. The rebar ends must be 1 1/2 inches from the soil. See Figure 328.1.

328.4.2 Post Spacing
The maximum spacing for posts shall be (eight) 8 feet on center.

328.4.5 Load Bearing Beams and Headers
(Choose one)

1. _____2-2x10 building width up to 26ft.
2. _____2-2x12 building width up to 36ft.
3. _____Other size. _____-_____x_____ (for overhead doors on load bearing walls exceeding 8ft o.c. post spacing)
4. _____LVL _____-_____x_____ (provide size and load calculation sheet)

328.4.6 Bracing
Wall bracing shall be provided to resist all racking and shearing forces and must comply with the applicable provisions of section 602.10 or by installing 2x6 diagonal cross braces in the bays between adjacent posts as described in this section. The diagonal cross braces shall be placed from the top header or girt to the next adjacent post at the skirt board. The cross bracing shall be placed or installed on all sides of the building and shall be spaced at a maximum of 25 feet on center and within 12 feet of the corners of the building and attached per Table 328.7. Any splices of the diagonal brace required due to excessive length, must lap over two consecutive wall girts.

328.4.7 Beams Supporting Trusses or Rafters and Ceiling Joists Attachment to Column
Bearing beams supporting roof trusses or rafters and ceiling joists shall be connected to the posts by one of the following methods:
(Choose one)

1. _____Bolts that are 1/2-inch diameter through-bolted to the side of the post
2. _____Bolts that are 1/2-inch diameter, directly attached to a 3-ply post notch, enclosing the truss or rafter at the top of post
3. _____Other fasteners with minimum shear or withdraw values stated in Table 328.4.7 (provide type_____, quantity per post_____, and attach manufacturer documentation for shear/withdraw)

TABLE 328.4.7
BEAM OR TRUSS CONNECTION AT POSTS
MINIMUM FASTENERS OR TOTAL SHEAR OR WITHDRAW VALUES [a,b,c]

	BUILDING WIDTH (Length of Truss) INCLUDING OVERHANG (feet)			
	24	**28**	**32**	**36**
Shear or withdraw (pounds) 20 lb snow load	3360	3920	4480	5040
Number of Bolts, 20 lb roof snow load	2	2	2	3

328.6 Knee Bracing
A 2 x 6 brace shall extend from the post to the top chord of the truss or rafter adjacent to the post at a 45-degree angle. The vertical distance down from the bottom chord of the truss or ceiling joist to the point where the brace attaches to the posts shall be in compliance with Table 328.6 as shown on Figure 328. Trusses or rafters must be spaced such that they align with the post intervals. Attachment of knee brace shall be per Table 328.7.

TABLE 328.6
KNEE BRACE VERTICAL DISTANCE

Wall Height	Vertical Dimension
8'-0" and 9'-0"	1'-6"
10'-0" and 11'-0"	2'-0"
12'-0" and 13'-0"	3'-0"
14'-0" through 16'-0"	4'-0"

TABLE 328.7
STRUCTURAL FASTENERS

FASTENER SCHEDULE FOR STRUCTURAL MEMBERS		
Description of Building Element	**Number and Type of Fastener**	**Attachment type**
Uplift blocking to post	5-16d Hot Dipped Galvanized	Each block
Skirt board to post	2-16d Hot Dipped Galvanized	Face nail
Wall girt to post	2-16d Hot Dipped Galvanized	Face nail
Diagonal cross bracing to post	2-16d Hot Dipped Galvanized	Face nail
Diagonal cross bracing to skirt board	2-10d Hot Dipped Galvanized	Face nail
Diagonal cross bracing to wall girts, beam, or header	2-10d	Face nail
Knee brace to post	3-16d Hot Dipped Galvanized	Face nail
Knee brace to top chord of truss or rafter	3-10d	Face nail
Knee brace to bottom chord of truss or ceiling joist	3-10d	Face nail
Roof purlin to truss or rafter with span of 2' or 4'	2-16d	Face nail
Roof purlin to truss or rafter with span of 8'	Mechanical fastener with uplift protection greater than 225 pounds.	Per manufacturer installation manual