Post Frame Architectural Terms Glossary

OVERVIEW: While post frame construction is common throughout North America, the terms used are not always common. In fact, many of the construction elements are referenced by various names in different locations. Following is a glossary of introductory architectural terms that are common to Post Frame Construction. The primary term to define is from the National Frame Builder Association (NFBA) Post Frame Building Design Manual.

POST FRAME BUILDING SYSTEM: A building characterized by primary structural frames of wood posts as columns and trusses or rafters as roof framing. Roof framing is attached to the posts, either directly or indirectly through girders. Posts are embedded in the soil and supported on isolated footings, or are attached to the top of piers, concrete or masonry walls, or slabs-on-grade. Secondary framing members, purlins in the roof and girts in the walls, are attached to the primary framing members to provide lateral support and to transfer sheathing loads, both in-plane and out-of-plane, to the posts and roof framing.

Other sources for terminology used in post frame construction include:

- Timber Framers Guild of North America
- Post and Beam Construction
- Cross Laminated Timber Construction
- Simple Stud Frame Construction

1. AWNING

An architectural projection that provides weather protection, identity or decoration and is partially or wholly supported by the building to which it is attached. An awning is composed of a lightweight frame structure over which a covering is attached.

Also known as: Eyebrow overhang

2. BAND BOARD

ARCHITECTURAL BAND BOARD: Transition piece used as trim for siding applications.

FRAMING BAND BOARD: Sometimes called Rim Joists, runs along the perimeter of a floor framing system to stabilize the ends of the floor joists.

Also known as: Ribbon Board, Belly Band

3. BIRD'S BEAK OVERHANG

An extension of roof overhang extending at an angle to a peak beyond the normal overhang profile.

Also known as: Widow's Peak, Turkey Tail

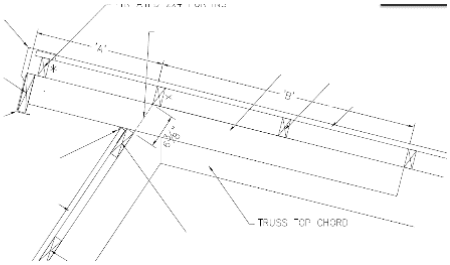
4. BRACING

Axially-loaded structural members used to help stabilize other structural components. Additional temporary bracing is generally required during construction.

Also known as: Knee Brace, Wye (Y) Brace, K Brace, Angle Brace, Wind Brace

5. CANTILEVER OVERHANG

Overhang at peak framed as an extension of one side of roof beyond the peak.



6. CARPORT

A shelter, typically used for, but not limited to, a car consisting of a roof supported on posts. May be either freestanding or attached to the wall of a structure.

7. CHAMFERED

The decorative quality of posts can increase by cutting off a small portion of the square corner leaving an angled (beveled) surface. The chamfer cut extends through much of the length of the posts but stops short of the ends.

8. CLERESTORY

A substantially windowed (or glass) wall. The glass is often above a lower adjoining roof.

Also known as: Clearstory, Overstory

9. CONCEALED (HIDDEN) FASTENER ROOF

A type of metal panel roofing system that uses interlocking panels that are fastened at the seams and hidden underneath the overlapping roofing panel.

10. COVER BLOCK

Block added to truss heel and column to help with transfer of vertical loads.

11. CUPOLA

A small structure built on top of a roof primarily for aesthetic purposes or to admit exterior lighting, but can also provide ventilation or housing interior lighting.

12. d:

Abbreviation for pennyweight. Pennyweight is a weight measure used to categorize nails.

Also known as: Penny

13. DIAPHRAGM COMPONENTS

When post-frame building components (e.g., purlins, girts, purlin blocks, mechanical fasteners, etc.) are positioned and connected in such a way to form a diaphragm to transfer loading. These individual components are known by several additional names.

14. DIAPHRAGM STRUCTURAL FRAMING

Primary and secondary framing members to which structural sheathing panels are attached to form a diaphragm assembly. Diaphragm structural framing (1) resists bending moments applied to the diaphragm, (2) helps transfer in-plane shear forces across the diaphragm, and (3) prevents out-of-plane buckling of structural sheathing.

15. DORMERS – GABLE OR SHED

A vertical window that projects from a sloping roof and usually provides natural lighting. Can have multiple roof styles.

16. DOWNLAP

To extend a material down and over the material below. For example, siding may downlap a concrete foundation. Opposite of (underlap).

17. EAVE

An eave is the part of a roof that hangs over the side of a building. Eaves allow water to run off to avoid damage to the building's structure.

18. ELL

An extension generally at a right angle to the main structure.

Also known as: Wing

19. EXPOSED FASTENER ROOF

A roofing system where the panels are fastened to the structure through the face of the metal and directly into the roof deck or framing below. The panel edges lap one another, and the fastener goes through both layers of metal. Typical of post frame.

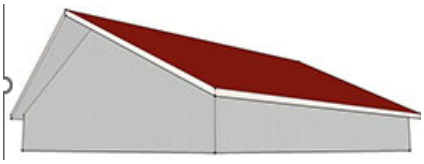
20. FIREWALL

A fire resistance rated wall having protected openings, which restricts the spread of fire and extends continuously from the foundation to or through the roof, with sufficient structural stability under fire conditions to allow collapse of construction on either side without collapse of the wall.

Also known as: Fire wall

21. FLYING GABLE OVERHANG

An overhang style that increases from eave to peak of building at an angle.



22. FRIEZE BOARDS

Boards that form an ornamental band at the top of a wall.

23. FROST-PROTECTED SHALLOW FOUNDATION

Foundation system that may use insulation or non-frost susceptible soils to conserve heat loss and reduce frost action potential in accordance with ASCE 32. This allows footings to be constructed above frost line.

24. GALVANIC CORROSION

A form of corrosion that occurs when dissimilar metals or metal alloys are brought into electrical contact by immersion in a conductive electrolyte (water).

25. GALVANIZED FASTENERS

Fasteners with an applied coating of zinc to prevent corrosion of fasteners. Typical galvanization process is called “hot-dip galvanization”.

26. GIRT

A member attached (typically at a right angle) to posts and support the wall panel between the post. Girts laterally support posts and transfer loads between any attached wall sheathing and the posts.

27. HAMMER BEAM

An elaborate type of tie beam used in “open” or unconnected trusses, often in conjunction with a curved brace, which helps to transmit the weight of a structure’s roof to the walls.

28. INSULATION

CAVITY INSULATION: Insulating material located between framing members.

CONTINUOUS INSULATION: Insulating material that is continuous across all structural members without thermal bridges other than fasteners and service openings. It is installed on the interior or exterior, or is integral to any opaque surface of the building envelope.

PERIMETER INSULATION: Insulation along the perimeter of the building under the floor slab installed vertically or with a horizontal wing preventing heat loss from the slab and building subgrade**.**

29. KING POST

This key timber forms the center point in a truss, or geometric support framework, and is often used as an intersection for other frame members. Although it is, technically speaking, a post, it is usually suspended from above and rarely extends to the floor of a structure.

30. LAG SCREW

A lag screw is a screw with a square or hexagonal head. Sometimes called a lag bolt. They are larger and stronger than regular screws.

31. LEAN-TO

A monoslope roof system attached to an existing building with the roof framing "leaning" against another wall.

32. LOUVER

An opening with horizontal slats used to admit air or light, but to keep out rain and direct sunlight. The angle of the slats may be adjustable.

33. LOWER GIRT

A girt is a lower beam. In a post and beam home, it can be a decorative beam on the inside wall of the house about 36” above the floor.

34. MEZZANINE

An intermediate level or levels between the floor and ceiling of any story.

Also known as: Balcony

35. MORTISE AND TENON

A mortise (hole or space) is cut in a post to receive a corresponding projection tenon from a beam.

36. OVERHANG RAFTER

Pre-assembled frame attached to roof truss to create overhang.

37. PURLIN

A member attached (typically at a right angle) to roof trusses/rafters. Purlins laterally support trusses/rafters and transfer load between roof sheathing and roof trusses/rafters. Purlins support the roof decking.

38. POST FRAME ROOFING TYPES

GABLE ROOF: A roof consisting of two sections whose upper horizontal edges meet to form a ridge. The most common roof shape in cold or temperate climates, it is constructed of rafters, roof trusses or purlins. The pitch of a gable roof can vary greatly.

Also known as: Saddleback Roof

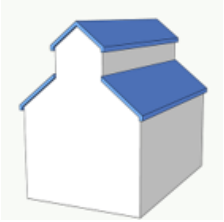
GAMBREL ROOF: A roof with two sides, each having two varying slopes (one steeper than the other).

HIPPED ROOF: A roof system with all sides sloping down towards exterior walls.

MANSARD ROOF: A multi-sided gambrel-style hip roof characterized by two slopes on each of side. The lower slope at a steeper angle than the upper, and often contains dormer windows. The steep roofline allows for additional floors of habitable space. The upper roof slope may not be visible from street level.

Also known as: French Roof, Curb Roof

MONITOR ROOF: A raised structure running along the ridge of a double-pitched roof, with its own roof running parallel with the main roof.



MONOSLOPE ROOF: A roof with 4 sides sloping downward with two slopes. With a steeper slope near the eave. A combination of hipped roof and gambrel roof.

Also known as: Monopitch Roof, Shed Roof

STANDING SEAM ROOF: A metal roof system that consists of interlocking panels with a vertical metal overlapping joint between panels that is either mechanically seamed to uses a snap lock system.

39. QUEEN POSTS

These vertical frame members are used in a truss configured with two symmetrical posts instead of, or in addition to, a single king post.

40. PORCH

A room or gallery located in front of a building entrance. A porch is placed in front of the façade of a building it commands, and forms a low front. Alternatively, it may be a vestibule, or a projecting building that houses the entrance door of a building.

Also known as: Balcony, Portico, Veranda, Deck, Stoop

41. RAKE AND FASCIA

Rake boards trim the gable (sloping) edge of a roof and fascia boards trim the eave.

42. SCARF JOINTS

Two ends of wood pieces are angle cut to interlock making the joint shed water out and down, away from the structure.

43. SECONDARY FRAMING

Bracing is a primary function of virtually all secondary framing members. For example, a principal function of purlins and girts is to provide lateral bracing to trusses and posts, respectively and to transfer loads from the sheathing to the primary frames. Unlike braces used to help stabilize other structural components, purlins and girts are generally located to facilitate sheathing attachment, and their sizes are normally based on the magnitude of the loads applied to the sheathing, and on the spacing of the primary framing members to which they must transfer load.

44. SECONDARY FRAMING MEMBERS

Structural framing members that are used to transfer load between exterior sheathing and primary framing members, and/or laterally brace primary framing members. The secondary framing members in a post-frame building include girts, purlins, eave struts and any structural wood bracing.

45. SKIRTBOARD

A nailer for the bottom of the siding, like a purlin, except wider, such as a 2”x8”, and is at the bottom for post & beam construction.

46. SLIDING DOOR

A door that opens by sliding laterally, typically on a track system, usually parallel to a wall.

Also known as: Barn Door

47. STAINLESS STEEL FASTENERS

Fasteners made of stainless steel used primarily to resist galvanic corrosion or corrosion due to other atmospheric or environmental exposure.

48. STANDING SEAM ROOF – A type of metal panel roofing that has a vertical seam which is raised above the flat surface of the panel. With this type of roofing system, the diaphragm support is generally accomplished with a decking below the roof metal. The roof metal acts as more of a weather covering.

49. TIE BEAM

An auxiliary frame member, also known as a collar tie, it is installed horizontally between roof rafters to prevent a roof from spreading apart because of structural (weight) loading.

50. TONGUE AND GROOVE

Formed by a groove cut in the edge of a material (usually wood) to receive a corresponding projection from the next piece of material in the course.

51. TREATED LUMBER (above ground / ground contact)

Wood product that, when impregnated by chemicals by a pressure process or other means during manufacture, exhibit reduced susceptibility to damage my fungi, insects, or marine borers.

52. TRUSS TYPES

SCISSOR TRUSS: A truss that gets its name from being shaped like a pair of shears (scissors). Two defining features of a scissor truss are: 1) the joint where the bottom chords pass (the hinge of a pair of scissors) must be firmly connected and 2) the rafter (top chord) feet must land on the bottom chords.

Also known as: Raised Chord Truss

SHEAR TRUSS: A truss used to transfer shear loads. Commonly used to assist in shear transfer around large openings in walls, roof, or ceilings.

WOOD TRUSS: A structural framework, generally two-dimensional (i.e., planar), whose members are almost always assembled to form a series of inter-connected triangles. Perimeter members of the assembly are called truss chords and interior members are called truss webs. The trusses of a building are the main support

system of the entire roof. The framework shape typically has a flat bottom or crossed beam and sometimes on upper floor on mezzanine.

53. VALLEY

The intersection of two (not parallel) roofs creates one or more areas (valleys) of rooftop that tend to gather rain and snow, therefore must be flashed.

54. WAINSCOT

Shorter segments of wall finish around perimeter at base of wall. Generally, three to four feet high.

Also known as: Paneling

55. WEB MEMBER CONTINUOUS LATERAL RESISTANT

A row of structural framing members that provides lateral support to the web members of adjacent trusses.