

STRUCTURAL GENERAL NOTES

CODES

- Building Code: 2012 International Residential Code.
- Wood Framing: National Design Specifications For Wood Construction with Supplement, National Forest and Paper Products Association, 1997.
- Structural Plywood: Plywood Design Specification, American Plywood Association, Latest Edition.
- Prefabricated Metal Plate Connected Wood Trusses: Design Standard for Metal Plate Connected Wood Truss Construction, ANSI/TPI 1-95.

DESIGN LOADS

- Live Loads
 - Roof 20 psf
 - Floor 40 psf
 - Deck 60 psf
 - Stairs 40 psf

TIMBER FRAMING

- Unless otherwise noted, all structural framing lumber shall be clearly marked no. 2 southern yellow pine or douglas fir, except that non-loadbearing interior walls may be stud grade southern yellow pine, douglas fir, or spruce-pine-fir.
- All wood headers, beams, and top plates shall be no. 2 Southern Yellow Pine or Douglas Fir.
- All load bearing walls shall have solid 2x blocking at 4'-0" o.c. maximum vertically. End nail with 2-16d nails or side toe nail with 2-16d nails.
- Provide double studs at all wall corners and on each side of all openings, unless noted or detailed otherwise.
- The entire exterior wall framing shall be braced by a 4'-0" wide x 1/2" panel of APA rated sheathing with an exposure 1 rating extending from the top plate to the sill plate. Nail with 8d common nails at 6" on center at supported edges and 12" on center at intermediate supports.
- Solid 2x blocking or boardboard shall be provided at supports and cantilever ends of all wood joists, and between supports in rows not exceeding 8'-0" apart.
- All framing members framing into the side of a header, hip, valley, ridge, truss or any other beams shall be attached using metal joint hangers manufactured by the Simpson Company or equal. The hanger shall be sized and installed in accordance with the manufacturers recommendations for the size of joist supported.
- Nailing and attachment of all framing members and sheathing shall be as specified in the International Residential Code Nailing Schedule (Table R602.3) unless noted otherwise in the drawings. Common wire nails or spikes, or galvanized box nails shall be used for all framing unless noted otherwise.
- Place a single plate at the bottom and a double plate at the top of all stud walls. Exterior sill plates shall be bolted to the foundation with 1/2" anchor bolts with a minimum embedment of 8" spaced at 4'-0" on center. Provide a minimum of two bolts per plate segment. Sill plates in contact with concrete or masonry shall be pressure treated with a preservative.
- Provide double joists under all interior partition walls oriented parallel to the joists.
- Provide triple studs (or cripples) at each end of any header, beam, ridge, valley, or hip spanning over 10'-0" unless noted otherwise. Provide double studs (or cripples) at each end of any header, beam, ridge, valley, or hip spanning 5'-0" to 10'-0" unless noted otherwise.

- The new generation of pressure treated lumber products are highly corrosive to metal connectors and fasteners. All fasteners and metal connectors used in conjunction with the new generation of pressure treated lumber shall be hot-dip galvanized or stainless steel. These locations include, but are not limited to the following:
 - Anchor bolts at sole plate to foundation.
 - Nails from sole plate to wall studs.
 - Nails at exterior plywood sheathing to sole plate.
 - Bolts at ledger to concrete.
 - Joist to treated ledger connections.
 - All hangers on treated joists.
 - Wood posts to concrete.
 - Deck board to treated joists.

PREFABRICATED METAL PLATE CONNECTED WOOD TRUSSES

- Trusses shall be designed by the Contractor in accordance with the Truss Plate Institute "Design Standard for Metal Plate Connected Wood Truss Construction" (ANSI/TPI 1-95).
- Truss members shall be clamped in a mechanical or hydraulic jig with sufficient pressure to bring members into reasonable contact at all joints during application of connector plates.
- Provide adequate erection bracing in accordance with Truss Plate Institute publication HB-91.
- Truss Manufacturer shall provide permanent bracing as required by the design of the trusses. Erection bracing may remain in place as permanent bracing where it does not interfere with the architectural finishes.
- All timber truss members shall be Southern Yellow Pine with a maximum moisture content of 19%. Chord members shall be no. 2 or better and web members shall be no. 3 or better.
- Connection plates shall be manufactured by a WTCA member plate manufacturer. Plates shall be 20 gauge minimum, ASTM A446 grade A steel, with a G60 galvanized coating.
- Trusses shall be designed in accordance with the following requirements:
 - Top chords shall be designed to resist the local bending induced by the floor or roof uniform load on the top chord.
 - Limit live load deflection of floor trusses to L/480. Total load deflections shall be limited to L/360.

COMPOSITE WOOD MEMBERS

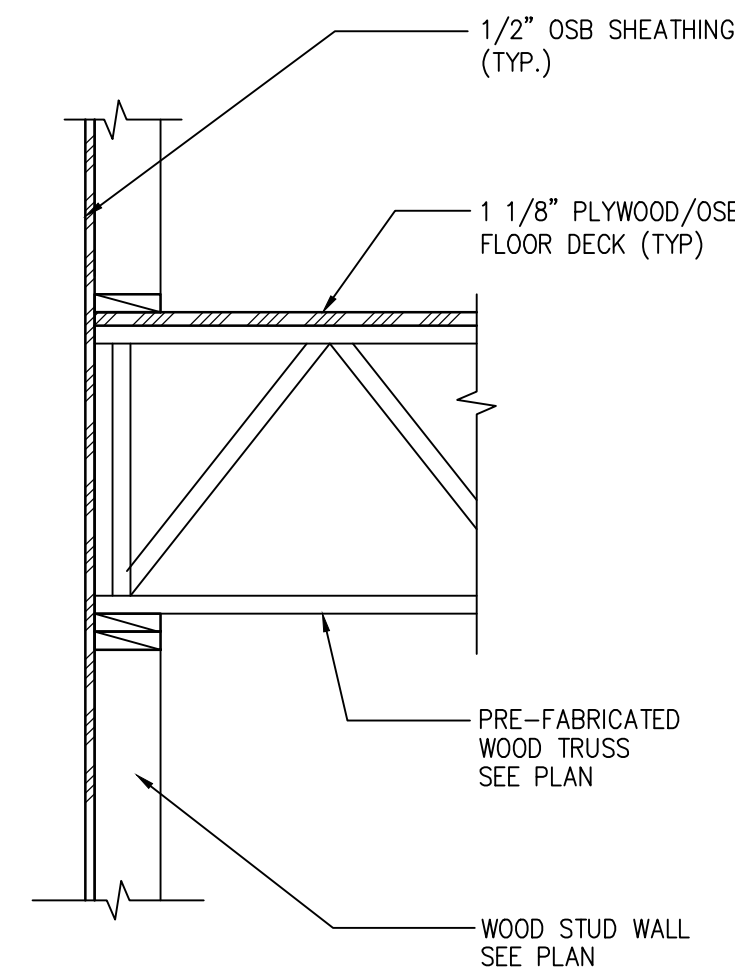
- Where noted on the drawings, joists shall be TJI "SP" series engineered wood joists, and beams shall be "Micro-Lam" or "Parallam" beams as manufactured by the Trus Joist Macmillan Corporation.
- Do not notch joists or beams. Drill holes through webs of engineered wood members for mechanical, electrical or plumbing services in accordance with the recommendations of the engineered wood product manufacturer.
- Multiple wood beams up to three members thick shall be nailed together with three rows of 16d nails at 12" on center. Four or more multiple wood beams and any multiple wood beams utilizing beams thicker than 1 3/4" shall be bolted together with 1/2" diameter bolts top and bottom at supports and ends of the beam, then at 24" on center, staggered top and bottom for the full length of the beam.
- Where multiples of two 1 3/4" Micro-Lam beams are noted on the drawings, contractor may provide single 3 1/2" beams in lieu of double 1 3/4" beams.
- Provide web stiffeners where required by the manufacturer for the specified support condition.

STRUCTURAL STEEL

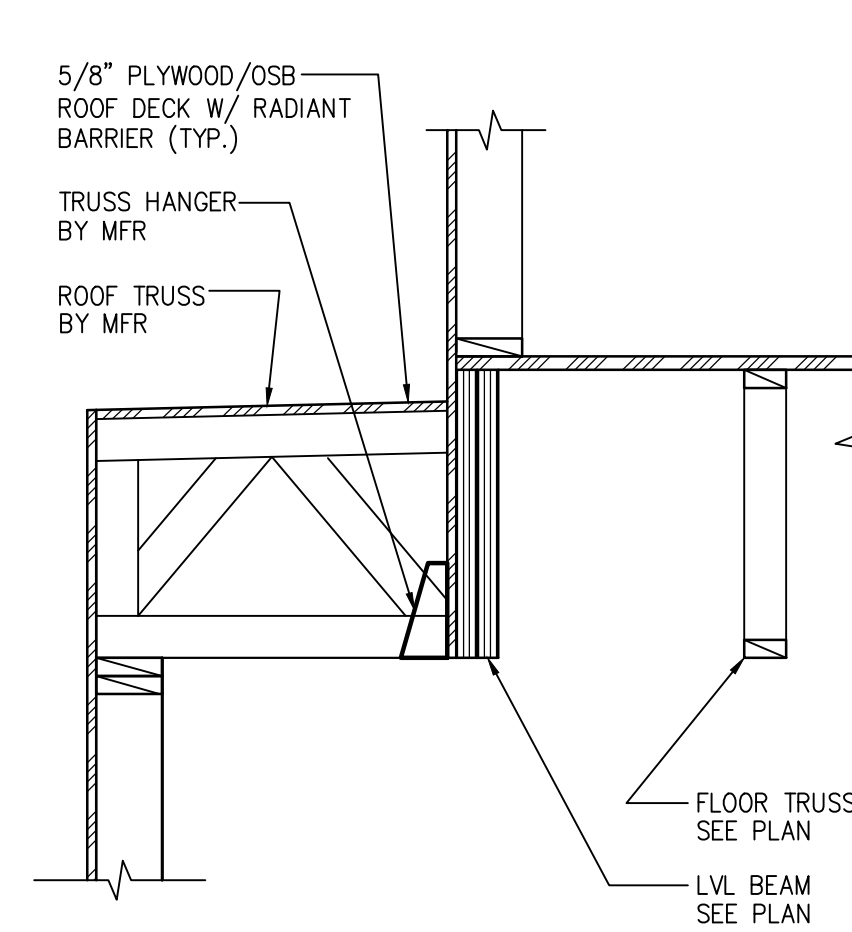
- Structural Steel W-shapes shall conform to ASTM A992. Steel plates, angles, and channels may be ASTM A572, grade 50 or ASTM A36. Steel pipe shall conform to ASTM A501 or ASTM A53, Type E or S, grade B. Steel tube shall conform to ASTM A500, grade B, Fy 46 ksi.
- Column base plates shall be grouted with a nonshrink, high strength nonmetallic grout. Pre-grouting of column base plates will NOT be permitted.
- Splicing of structural steel members is prohibited without prior approval of the Engineer as to location and type of splice to be made. Any member having splice not shown and detailed on shop drawings will be rejected.

STRUCTURAL STEEL CONNECTIONS

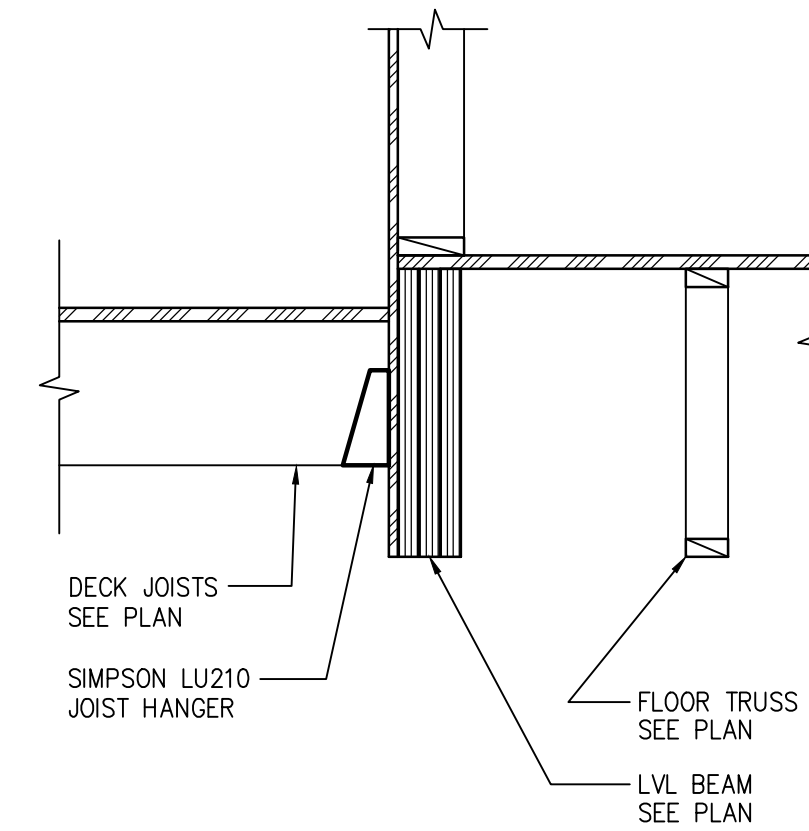
- Welding shall conform to ANSI/AWS D1.1, latest edition.
- Bolts shall conform to ASTM A325. Bolts shall be designed using values for bearing type bolts with thread allowed in the shear plane.



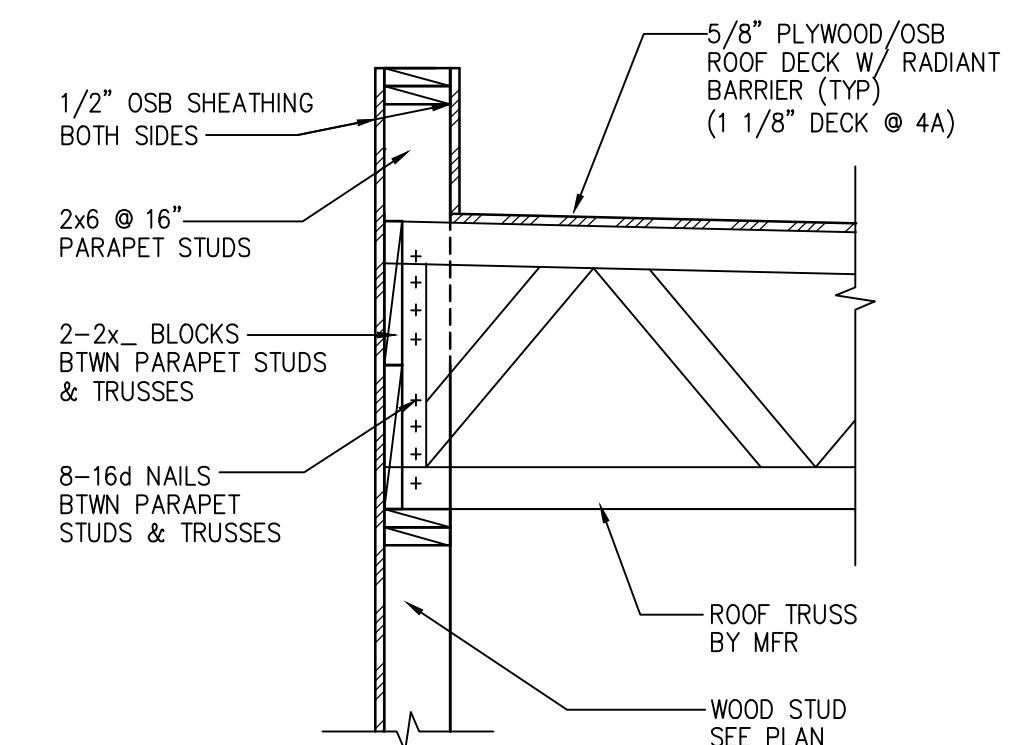
1 SECTION
3/4" = 1'-0"



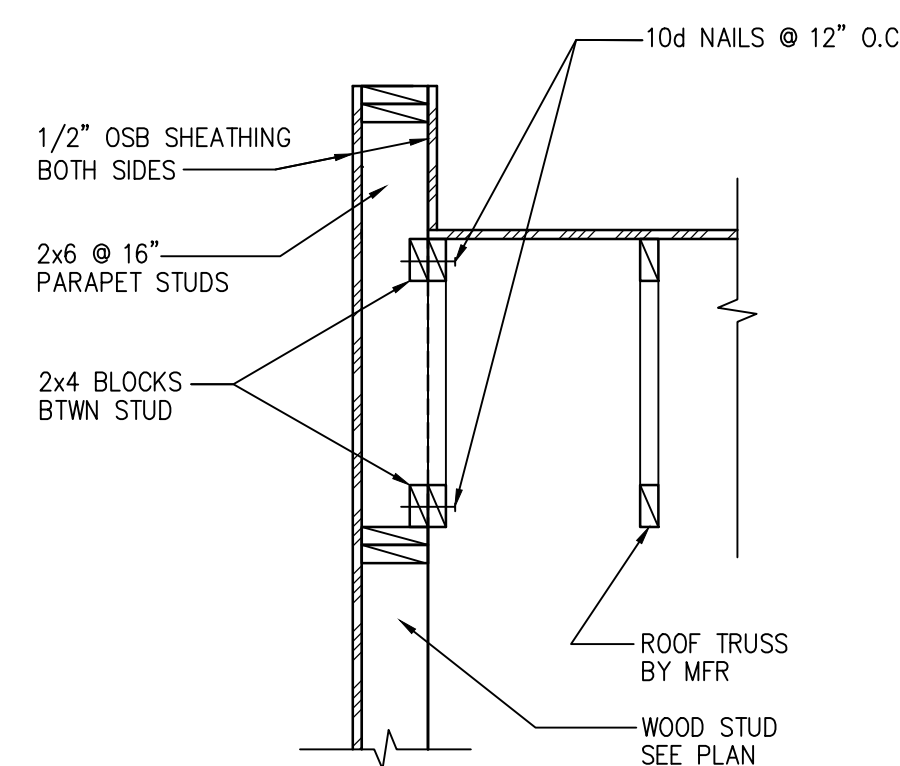
2 SECTION
3/4" = 1'-0"



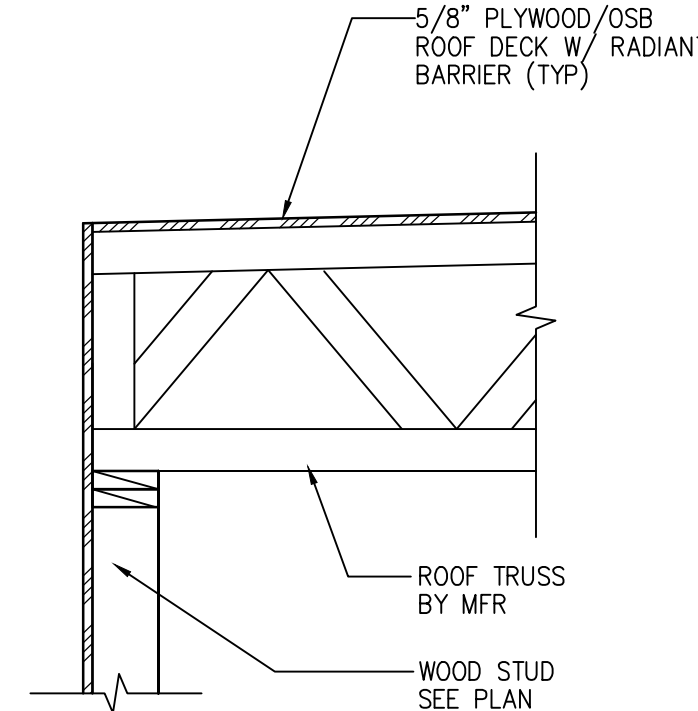
3 SECTION
3/4" = 1'-0"



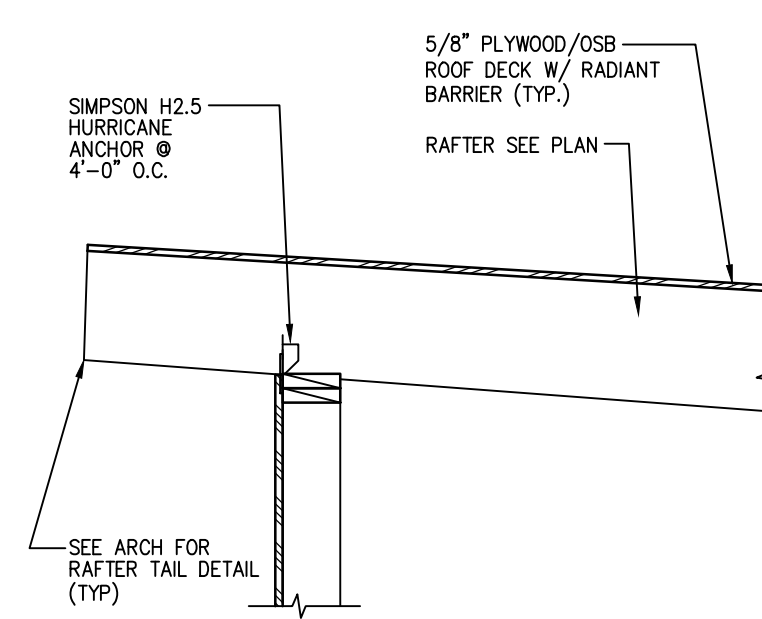
4 SECTION
3/4" = 1'-0"



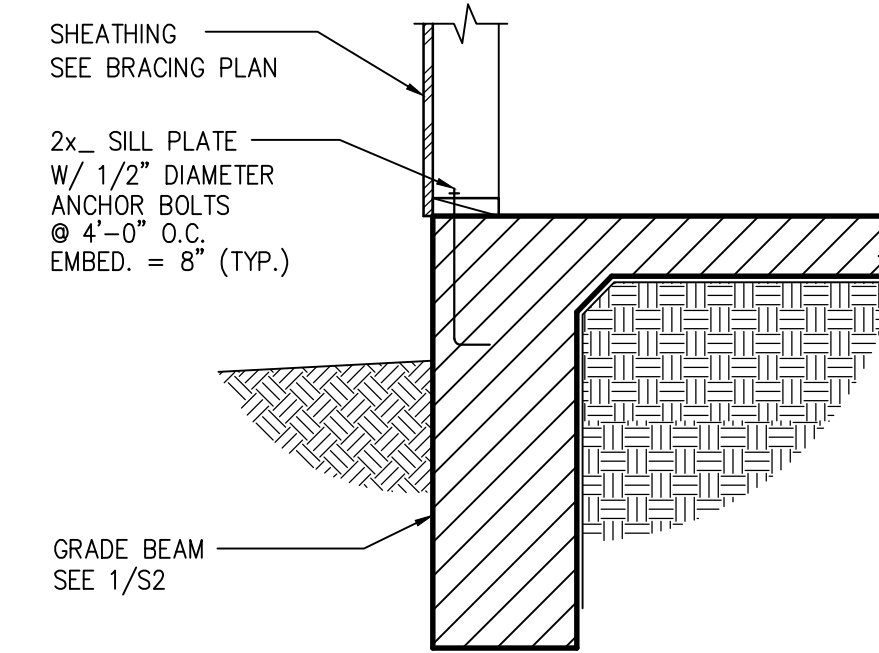
5 SECTION
3/4" = 1'-0"



6 SECTION
3/4" = 1'-0"

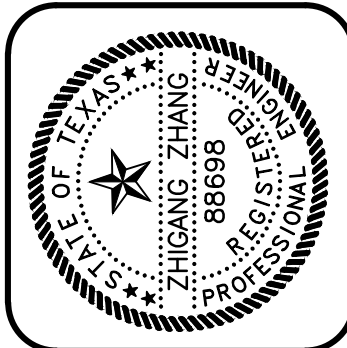


7 SECTION
3/4" = 1'-0"



8 SECTION
3/4" = 1'-0"

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