

# GENERAL NOTES

## RESIDENTIAL STANDARD NOTES

### DESIGN LOADS:

1) Design loads are all dead loads plus:

- A) Sleeping rooms ..... 30 PSF
- B) All other floors ..... 40 PSF
- C) Balconies ..... 60 PSF
- D) Attic floor live loading with the following:
  - i) Area accessible by stairs ..... 30 PSF
  - ii) Roof slopes > 3:12 ..... 20 PSF
  - iii) Roof slopes < 3:12 ..... 10 PSF
- E) Roof live load ..... 20 PSF, or as required by code
- F) Wind load ..... 120 MPH, or as required by code
- G) Snow load ..... 20 PSF, or as required by code

2) All designs are in accordance with the 2018 North Carolina Residential Code. Refer to the relevant Code for any additional information not covered in these notes or the designs.

3) Engineering design is for structural information only. The Engineer of Record does not accept responsibility for dimension errors, architectural errors, detailing of waterproofing, plumbing, electrical, or mechanical information or any part of the plan not relevant to the structural information.

### RESIDENTIAL FOUNDATIONS:

- 1) All continuous wall footings are 8" x 16" for one- and two-story houses and footings for three-story walls shall be 12" x 24" unless otherwise noted. Reinforcing is to be as noted on plans. Footings on original soil do not need rebar. Rebar is required on any compacted fill regardless of compaction.
- 2) All interior piers are 8" x 16" CMU up to a maximum height of 32". All piers over 32" high must be filled with Type 3 mortar. Maximum height for 8" x 16" filled pier is 6'-0". Piers larger than 8" x 16" are noted on plans and must be filled with Type 3 mortar. For one-story structures, pier caps are to be 4" solid masonry. For two-story structures, pier caps are to be 8" of solid masonry.
- 3) Footings for 8" x 16" piers are 24" x 36" x 10" unless noted otherwise. Reinforcing is to be as noted on plans.
- 4) Interior thickened slab footings which occur in basements and 'slab on grade' floors are 10" deep by 16" wide with 2-#4 reinforcing bars running continuously unless noted otherwise. Thickened footings are required under all bearing walls.
- 5) All rebar splices shall be a minimum of 2'-0" unless otherwise noted.
- 6) Shallow foundations are designed for an assumed soil bearing capacity of 2,000 psf. The contractor is responsible for notifying the Engineer of Record if any soils are found to be unsuitable for this bearing capacity. This contractor is responsible for obtaining soil testing to ensure that the bearing capacity of the soil meets or exceeds this value. All fill is to be compacted to 95% density as measured by the Standard Proctor Test (ASTM D-698).
- 7) All soils and fill under floors and/or within or under buildings shall have preconstruction soil treatment for protection against termites. Certification of Compliance shall be issued to the Building Department by a licensed pest control company.
- 8) All footing excavations shall be neat, straight, and level in the proper elevations to receive the concrete. Excessive variations in the dimensions of footings or slabs will not be permitted. Reinforcing steel and mesh shall be accurately placed and supported to maintain their position during the concrete pouring. Edge forms shall be used for concrete that will be exposed.
- 9) All slab penetrations are to be the responsibility of the contractor. Penetrations interfering with reinforcing shall be approved by the Engineer of Record prior to the placement of concrete.
- 10) Elevation differences between the bottom of adjacent footings shall be less than their horizontal distance less one foot. Differential heights between footings can become excessive usually where a pier footing in a crawlspace or garage footing is next to a basement wall footing.

### SPECIAL FOUNDATION CONSIDERATIONS:

- 1) Waffle slabs are self-supporting slabs reinforced according to details and do not require firm soil for support. Soil must only be capable of supporting concrete until it hardens and develops strength.
- 2) Caisson foundations shall be a minimum of 12" diameter drilled unreinforced concrete caissons. Caissons shall extend to a minimum depth providing 2' penetrations into good original ground. Depth of drilling is limited to 15'. Therefore, no poor material more than 13' deep is suitable for a caisson foundation. A caisson cannot be used if water rises immediately into a drilled hole. Piles will have to be used in such cases.
- 3) Treated wood piles with a minimum diameter of 6" and a minimum design load of six tons are used for all foundations with unsuitable soil deeper than 13' or with water in drilled caisson holes. Drive per North Carolina or South Carolina Code.
- 4) Sizes and reinforcing for footing caps over caissons or piles shall be as shown on plans.
- 5) Chimney footings are to be 12" larger than the chimney footprint by 12" thick.
- 6) Foundation walls backfilled with dirt which support structural framing shall be constructed as follows:
  - A) For earth fill up to a maximum height of 4': Use 8" CMU or 8" brick with Bituthene membrane waterproofing on exterior. Footings are to be 8" x 16" or 8" x 24" as noted on the plan.
  - B) For earth fill 4' to a maximum height of 9': Use 8" x 24" footing with #4 at 16" dowels hooked in footing and projecting 18" above footings. Use 12" CMU walls with #4 at 16" vertical bars located 4" from non-dirt fill face, lap all splices 12" and use Dur-o-wall horizontal reinforcing every 8" in CMU joints. Install 1-#3 L-bar with 24" legs in every other joint horizontally at all corners; i.e., #3 corner bars at 16" o.c. vertically. Fill all open cells of CMU with either type S or M mortar or fill with 2,500 psi concrete. Install waterproof Bituthene membrane or equal.
  - C) In lieu of the preceding design, basement walls may be constructed in accordance with R404.1 of the Code. However, 24" x 24", #3 corner bars shall be installed at 16" o/c vertically regardless of the wall height.

### ERECT ALL FRAMING BEFORE BACKFILLING.

7) For retaining walls without framing see special designs on drawings.

### FRAMING CONSTRUCTION - OTHER THAN ROOF:

- 1) See Table R602.3(1) of the Code for a fastener schedule for structural members.
- 2) Wood beams shall be supported by metal hangers of adequate capacity where framing into beams or ledgers. The allowable load capacity of the hanger shall be equal to or greater than the load specified on the plan. Where no load is specified, the 'lightest' available hanger for the application is acceptable.
- 3) Crawl girders and band with 4" curtain wall and pier construction shall be 2-2 x 10 Southern Yellow Pine #2 unless noted otherwise. Maximum clear spans are to be 4'-8" (6'-0" o/c spacing of piers).
  - To avoid objectionable cracking in finished hardwood floors over any girders, use the following procedure:
    - A) Nailing
      - i) All floor joists must be toenailed to their support girders with a minimum of 3-8d nails at each end. Larger nails will split and render the toenail ineffective. No end nailing through the girder or band is permitted.
      - ii) If dropped girders are used, end lap all joints and side nail each with a minimum of 3-16d nails at each end of each joist. Ledger strips should be spaced 3' apart and nailed with 3-16d nails at each joist end.
      - iii) Nail multiple member built-up girders with two rows of 16d nails staggered at 32" o/c, 2' down from the top and 2' up from the bottom with 3-16d nails at each end of each piece in the joist through the members making up the multiple girder.
      - iv) This nailing pattern will ensure a tight floor on the outside of the house to the outside so that when the framing shrinks during the first heating season, the shrinkage will be uniformly distributed over the entire floor. If the girder nailing pattern is omitted, then the shrinkage will accumulate over the girders and an objectionable crack will develop in the finished hardwood floor over the girder line.
    - B) At all girders where the joists change direction, install bridging at 6' o/c for a minimum of six joist spacings beyond any joint direction change. This will insure shrinkage distribution over the floor and not let it accumulate at the girder.
    - C) There must be wood blocking thru bolted to the steel beam with joists toenailed or attached to the beam with metal hangers under any hardwood floors that pass over a steel beam supporting floor joists. This condition often exists over basement areas.
  - 4) All other lumber may be Spruce #2 unless noted otherwise.
  - 5) Steel beams must have 5-2x 4 stud jacks under each end support unless noted otherwise.
  - 6) 'Lam' beams must have 3-2x4 stud jacks under each end support unless noted otherwise.
  - 7) Masonry lintels:
    - A) For spans up to 6': Use 3 1/2" x 3 1/2" x 1/4" steel angles.
    - B) For spans from 6' to 10': Use 5" x 3 1/2" x 5/16" steel angles.
    - C) For spans from 9' to 18': Use a pair of 9-gauge wires in each of the first 3 courses of brick on a 5" x 3 1/2" x 5/16" steel angle. Lap all 9-gauge wire splices a minimum of 12" and extend wires a minimum of 12" into jambs. Temporarily support the steel angles before laying masonry. The shoring may be removed five days following the installation of masonry.
    - D) When structural steel beams with bottom plates are used to support masonry, the bottom plate must extend the full length of the steel beam. This provides support to the ends of the plate by bearing on the adjacent masonry jambs. The beam should be temporarily shored prior to laying the masonry. The shoring may be removed five days after laying the masonry.
  - 8) All brick veneer over lower roofs (brick climbs) must have a structural angle lag screwed to an adjacent stud wall in accordance with detail, with steel brick stops to prevent sliding of brick.
  - 9) All rafter braces must have two studs from plate through all floors to the foundation or supporting beam below. No braces shall be attached to top wall plate without studs directly under them.

- 10) Where partitions fall between floor joists or trusses, 2 x 4 ladders at 16" o/c must be placed perpendicular to the trusses to support the plywood decking. The ladders shall be supported with Simpson Z' clip or similar device.
- 11) All wood I-joists and open joists must be braced in accordance with the manufacturer's details shown on plans. Load-bearing partitions, jacks, beams and column supports must be solid blocked through floor. Trusses and plywood shall not carry concentrated point loads. 1-joist material should not be used as blocking under concentrated point loads. All point loads must be carried to foundations with adequate blocking and/or beams.
- 12) All steel columns Where steel columns bear on concrete or masonry, unless otherwise noted, a 5/8" x 6 1/4" x 6 1/4" or 5/8" x 3 1/2" x 8" base plate shall be used to spread the column load across the bearing surface. Base plates shall be bolted with at least two 1/2" diameter anchor bolts or expansion bolts to concrete or masonry.
- 13) Unless noted otherwise on plans, all exterior facing wall studs taller than 10' shall be constructed as follows:
  - A) Walls 10' to 12' high: Balloon frame 2 x 4 studs at 12" o/c with 1/2" OSB sheathing and 3 king studs on each side of each opening nailed securely to the header.
  - B) Walls 12' to 20' high: Balloon frame 2 x 6 studs at 16" o/c (1/2" OSB sheathing required for wall heights > 17'). Provide 2-1 1/2" x 5 1/2" LVL king studs on each side of openings 3' to 6' wide and 2-2 x 6 king studs for openings less than 3' wide. Fasten king studs securely to all headers with a minimum of 12-16d nails or 4-3/8" diameter lag screws embedded a minimum of 4" into the header.
  - C) Gable end walls or rooms with vaulted ceiling joists: Balloon frame wall and provide triple king stud on each side of openings, nailed securely to the header.
  - D) Two-story high foyer walls less than 9' wide: Extend 3 1/2" x 9 1/2" PSL member with 3-2 x 4 flat plates across the entire wall. Locate the beam near mid-height of the wall at or near first floor top plate.

NOTE: SEE SPECIAL DESIGN OR ENGINEER FOR WALLS TALLER THAN 20', WHEN OPENINGS IN HIGH WALLS EXCEED 6' IN WIDTH, OR IF THE WALL CANNOT BE CONSTRUCTED USING ANY OF THE METHODS MENTIONED.

- 14) Continuous 2 x 6 bridging shall be nailed to diagonal or vertical web members of all open-web floor trusses over 10' long. They shall be installed near mid-span as a load distribution member. If the 2 x 6 bridging is not continuous, lab ends of bridging one truss space.
- 15) Lower stud walls for buildings over two stories, but not more than three stories:
  - A) Interior walls
    - i) Load bearing ..... 2 x 4 @ 12" o/c
    - ii) Non load bearing ..... 2 x 4 @ 12" o/c
  - B) Exterior walls
    - Use 2 x 6 at 16" o/c with 1/2" x 4' x 8' plywood sheathing at all corners and every 25'; OR use 2 x 4 at 12" o/c with 1/2" plywood sheathing solid on walls.

16) Headers shall be as shown unless noted differently on plans:

- A) Interior and exterior
  - i) Spans up to 2'-6" ..... 2-2 x 6's
  - ii) Spans 2'-6" to 3'-6" ..... 2-2 x 8's
  - iii) Spans 3'-6" to 6'-6" ..... 2-2 x 10's
  - iv) Spans 6'6" or more ..... See Plan
- B) Headers wider than 5' shall have a minimum of three king studs on each side unless noted otherwise.

- 17) When ceiling joists are parallel to an exterior wall, tie the rafters near the top plate to ceiling joists with a 2 x 6 strongback a minimum of 6' long at 4 feet on center across the top of the ceiling joists. 2 x 4 rafter ties shall be fastened to the side of the rafter and the strongback.
- 18) At all exterior diagonal panel panels, each panel shall be nailed to each adjacent panel with 5-16d nails or tied together with metal stripping nailed at four locations between floors with a minimum of 2-16d nails into each panel at each strap. This will avoid vertical cracking in panel joints due to horizontal oscillating panels.
- 19) At all stairs, every stud at each stringer must be nailed to each stringer with a minimum of 2-16d nails. This will avoid cracking between wallboard and top of base molding due to vertical oscillation of stair stringers.
- 20) Roof trusses that have non-bearing partitions passing under them should be nailed to the partition plates to avoid ceiling-wall cracking.
- 21) Roof trusses close to side walls framing and used as dead wood for sheetrock boards should be nailed to the wall framing to prevent ceiling-wall cracking.
- 22) All structural framing lumber exposed directly to the weather or bearing directly on exterior masonry piers or concrete shall be treated. All wood in contact with the ground is to be ground-contact approved. All wood exposed directly to the weather shall be protected to prevent the occurrence of rot.
- 23) Unless otherwise detailed, all stick-built 'false chimneys' shall be constructed with 2 x 4 studs at 12" o/c, balloon-framed from attic ceiling or floor. Fasten 15/32" CDX plywood on all sides of the chimney along the full length of the studs. Fasten each stud to the supporting beam or ceiling joist with a 1 1/2" x 24", 18-gauge metal strap, or a similar connector.
- 24) Item unchanged, but moved from under #14 on old Page 2:

NOTE: ALL POINT LOADS FROM ROOF BRACES, JACK STUDS, BEAM SUPPORTS - WHETHER WOOD OR STEEL - CANNOT BEAR ON SHEATHING ALONE. BLOCKING EQUAL TO OR BETTER THAN THE POINT LOAD SUPPORTS ABOVE MUST BE CARRIED THROUGH ALL CONSTRUCTION TO THE FOUNDATION.

25) Note to apply to all hard coat stucco exterior finishes:

- A) Joints are necessary at the following locations:
    - i) Horizontally at each floor line.
    - ii) No areas larger than 144 S.F. surface exposed.
    - iii) No dimension longer than 18'.
    - iv) No dimension longer than 2 1/4 times the shortest dimension.
  - B) Drip screed required at the bottom of all walls 2' above paved areas and 4' above grade.
  - C) See ASTM 926 and 1063 for further information.
  - D) Application of an approved chemical curing compound.
- The curing shall continue until the cumulative number or days when the ambient temperature above 50°F has totaled seven. During curing, the concrete shall be protected from any mechanical injury, load stresses, shock, vibration, or damage to finished surfaces.

### ROOF CONSTRUCTION:

- 1) All roof trusses must be built in accordance with truss manufacturers' requirements. Tie-down connections to resist uplift shall be installed where required. When roof truss manufacturers do not provide the required connectors, it is the responsibility of the contractor to notify the roof truss engineer or the Engineer of Record to provide an adequate connector.
- 2) In addition to the Code's fastener schedule, unless noted otherwise on the plan, roof members shall be tied down with additional metal connectors as follows:
  - A) Stick-framed rafter members exceeding 10' in length, as measured from their horizontal projection, and all roofs over unenclosed areas such as porches use Simpson H2.5 connectors every 4' or at every third rafter to fasten the lower end of the rafter to the top plate.
  - B) All lower ends of valley and hip members which bear on a top plate use a Simpson HCP or equivalent connector.
- 3) Rafters shall be 2 x 6 at 16" o/c spruce-pine-fur #2 for shingles except as noted. They are to be cut into hips, rafters, etc., unless noted otherwise. Tile, slate and other heavy roof coverings shall use 2 x 8 at 16" o/c spruce-pine-fur #2 rafters unless noted otherwise.
- 4) Collar ties shall be 2 x 6 at 48" o/c at all ridges unless noted otherwise and located a nominal 3' below the ridge. Vaulted ceilings require special collar tie or ridge beam details. See the end of Table R602.5.1 in the Code unless otherwise detailed on the plan.
- 5) A minimum of three collar ties shall be used at all ridges even if two ties must be put on one set of rafters.
- 6) All hips and ridges are a size larger than rafters unless noted otherwise.
- 7) All hogs on ceiling joists or rafters are 12' long and 2 x 6's unless noted otherwise. Rafters may be spliced over hogs. Splice rafter hogs only at a roof brace.
- 8) Gable end framing must be braced parallel to ridges with a minimum of 2 x 6 diagonal braces at 6' o/c along the gable wall to interior ceiling joists. Braces to bear on 2 x 6 hogs and to the gable wall at approximately mid-height of gable walls. Braces shall be at an angle of approximately 45°. Other bracing may be used with the design engineer's approval.
- 9) Gable end framing must be braced parallel to ridges with a minimum of 2 x 6 diagonal braces at 6' o/c along the gable wall to interior ceiling joists. Braces to bear on 2 x 6 hogs and to the gable wall at approximately mid-height of gable walls. Braces shall be at an angle of approximately 45°. Other bracing may be used with the design engineer's approval.
- 10) Ceiling joists when erected parallel to rafters must be sistered to rafters and nailed with 3-16d nails at each rafter. If a kneewall is used and ceiling joists cannot touch rafters, then rafters must be tied to the ceiling joists using 2 x 4 or 1 x 6 rafter ties spaced no more than 4' on center.
- 11) Roof Plan Legend:
  - A) ⊗ Indicates location of roof brace point at rafter level
  - B) ⊙→ Arrow away from the brace point indicates direction of roof brace to partition, beam, or other brace point below.
  - C) ⊙← Arrow into brace point indicates a vertical or almost vertical roof brace to partition, beam, or other brace point below.
  - D) All roof braces are 2-2 x 4 nailed with 16 penny nails at 9" o/c vertically from top to bottom. Braces longer than 10' must be braced horizontally in two directions at mid-height.
  - E) Maximum spacing of roof braces is to be as follows:
    - i) For 2 x 6 Hog ..... 6'-0" o/c
    - ii) For 2 x 8 Hog ..... 7'-6" o/c

### MATERIALS SPECIFICATIONS:

#### CONCRETE GENERAL NOTES:

- 1) Except where otherwise noted, for all concrete, the proportions of cement, aggregate, and water to attain required plasticity and compressive strength shall be in accordance with ACI 318 Code. Concrete shall be 2,500 psi in 28 days for footings and 3,000 psi for walls, beams, and columns, unless noted otherwise.
- 2) Before placing concrete, all debris, water and other deleterious material shall be removed from the places to be occupied by the concrete. The placing of all concrete shall be in accordance with ACI 318 and ASTM C94 requirements. Pumping of concrete will be permitted only with the Engineer of Record's approval of proposed concrete mix and method of pumping. Concrete shall be rapidly handled from the mixer to forms and deposited as nearly as possible to its final position to avoid segregation due to rehandling. Concrete to be spaded and worked by hand and vibrated to assure close contact with all surfaces of forms and reinforcing steel and leveled off at proper grade to receive finish. All concrete shall be placed upon clean, damp surfaces. Vibration shall be applied directly to the concrete and shall be sufficient to cause flow of settlement but not long enough to cause segregation of the mix.
- 3) Construction joints shall be located in accordance with ACI 301. All reinforcing steel shall be continuous across joints. In slabs on grade, saw contraction joints shall not be over 20 feet center to center each way. Joints shall be sawn a depth of one-third of the slab thickness. Sawing of the joints shall commence as soon as the concrete has hardened sufficiently to permit sawing without excessive raveling. Fill the saw cuts with approved joint filler after the concrete has cured.
- 4) Concrete, when deposited, shall have a temperature not below 50°F and not above 90°F. The methods and recommended practices as described in ACI 308 shall be followed for cold weather concreting and ACI 305 for hot weather concreting.
- 5) Freshly placed concrete shall be protected from premature drying by one of the following methods:
  - A) Ponding or continuous sprinkling.
  - B) Absorbent mat or fabric kept continuously wet.
  - C) Waterproof paper conforming to ASTM C171
  - D) Application of an approved chemical curing compound.

The curing shall continue until the cumulative number or days when the ambient temperature above 50°F has totaled seven. During curing, the concrete shall be protected from any mechanical injury, load stresses, shock, vibration, or damage to finished surfaces.

- 6) Reinforcing steel bars shall be deformed in accordance with ASTM A305 and or A408 and formed of ASTM A615-78 Grade 60 steel. Welded wire fabric reinforcing to be ASTM A185 steel wire. Accessories shall conform to the CRSI 'Manual of Standard Practice.' The following minimum concrete cover shall be provided over reinforcing bars:
  - A) Exposed to Earth ..... 3"
  - B) Exposed to Weather ..... 1 1/2"
  - C) Slabs not Exposed to Weather ..... 1/2"
  - D) Beams and Columns ..... 1 1/2"

#### MASONRY GENERAL NOTES:

- 1) Masonry walls are to be of the sizes and in the locations shown on the plans and shall be constructed in accordance with the provisions of ACI 530.
- 2) Hollow Load Bearing Units: ASTM C90 made with lightweight or normal weight aggregates. Grade N-1 units shall be provided for exterior and foundation walls. Grade N-1 or S-1 units shall be provided for other load-bearing walls or partitions.
- 3) Concrete Building Brick: ASTM C55 made with lightweight or normal aggregates, Grade N-1 or S-1 except that brick exposed to weather shall be N-1.
- 4) Mortar: ASTM C270-95, Type S prepackaged mortar mix which shall not contain any non-cementitious fillers combined with not more than three parts sand per on part mix.
- 5) Reinforcing Steel: ASTM A615 Grade 60 steel deformed bars where indicated on the plans. Where reinforcing bars are installed in the cells of concrete masonry units, they shall be secured with wire ties at intervals not exceeding 24" o/c to maintain the bars location in the cell. The tolerance for spacing of vertical bars is ± 2 inches along the length of the wall. The tolerance for the distance between the face of the concrete masonry unit and the center of the bar shall not exceed ± 1/4".
- 6) Mortar protrusion shall be less than 1/4". A protrusion of 1/4" or greater must be removed before grouting.
- 7) Horizontal Joint Reinforcement: ASTM A82 fabricated from cold drawn steel wire and hot dip zinc coated (ASTM A153). It shall consist of two or more parallel, longitudinal wires 0.1875" in diameter with weld-connected cross wires 0.1489" in diameter at a minimum of 16" o/c. Joint reinforcement is to be installed in every other course and in the first two courses at the bottom and top of wall openings and shall extend not less than 24" past the opening. Splices shall overlap not less than 12".
- 8) Execution: Masonry units shall be laid in a running bond pattern unless noted otherwise. The walls shall be carried up level and plumb within the tolerances specified in ACI 530.1-88, Section 2.3.3.2. If nonstandard dimensions are encountered, block shall be cut with a masonry saw to fit, not by stretching or shrinking joints. Unfinished work shall be stepped back for joining with new work. Tooling will not be permitted except where specifically approved. Damaged units are to be cut out and new units set in place.
- 9) The filled cells and bond beam blocks of reinforced masonry walls are to be filled with ASTM C478-91, Grout for Masonry with minimum compressive strength of 2,000 psi and slump range of 8" to 11". The outside face of the bottom block of each cell is to be broken out for inspection of reinforcing and clean out of mortar droppings in cell. The grout is to be pumped into the cell in maximum five foot lifts and immediately vibrated to minimize any voiding of the grout. Reconsolidate each lift by vibrating several inches into the preceding lift before plasticity is lost. Reconsolidate the top lift and fill with grout any space left by settlement shrinkage.

#### LUMBER GENERAL NOTES:

- 1) All common framing lumber is to meet the following minimum specifications at 19% moisture content:
 

MATERIAL	F <sub>b</sub> (psi)	F <sub>t</sub> (psi)	F <sub>c</sub> (psi)(Perp.)	E (psi)
# 2 Spruce Pine Fir	875	450	425	1,400,000
Southern Yellow Pine	750	450	565	1,400,000
- 2) All Structural Composite Lumber (LVL, LSL, PSL) is to meet the following minimum specifications:
 

APPLICATION	F <sub>b</sub> (psi)	F <sub>c</sub> (psi)(Parallel)	F <sub>c</sub> (psi)(Perp.)	E (psi)
Girders & Beams (LVL,PSL)	2,600	2,310	650	1,900,000
Columns (LSL) & Rimboards	1,700	1,400	400	1,900,000
- 3) All Glue Laminated Timber (Glu-lam) is to meet the following minimum specifications:
 

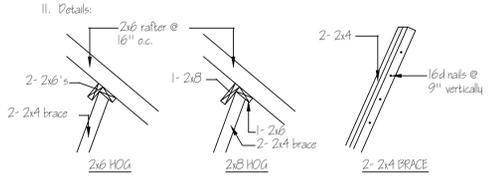
APPLICATION	F <sub>b</sub> (psi)	F <sub>c</sub> (psi)(Parallel)	F <sub>c</sub> (psi)(Perp.)	E (psi)
Girders & Beams	2,400	1,700	740	1,700,000
Columns	1,600	1,550	560	1,600,000
- 4) Open Web Floor Trusses:
 

APPLICATION	F <sub>b</sub>
Top & Bottom Chords	2,500
Columns (LSL) & Rimboards	950

1.9E MSR Lumber  
1.4E Lumber
- 5) Where three or four-ply 'Lam' beams are side-loaded (joists frame into the side at the outside plice), fasten all plies together with two rows of 1/2" diameter bolts at 16" o/c. The bolts shall be located a minimum of 2 1/4" and a maximum of 3 1/2" from the top or bottom of the beam.
- 6) Built-up wood columns consisting of multiple studs shall have each lamination nailed with 16d nails at 9" o/c.

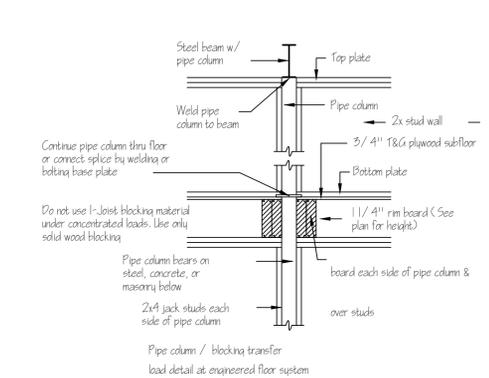
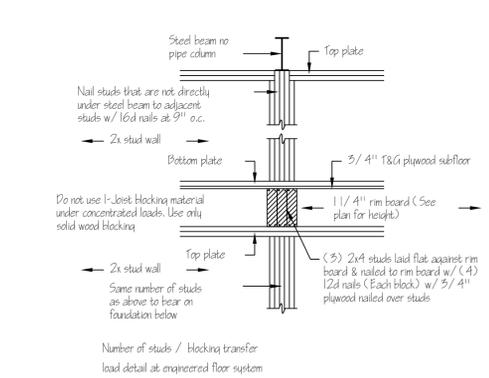
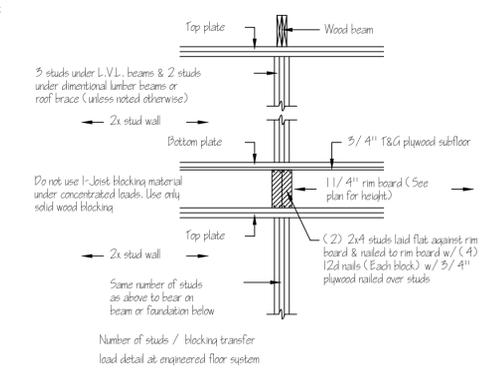
#### STEEL GENERAL NOTES:

- 1) All steel wide flange beams shall conform to ASTM A572 having a minimum yield stress of 50,000 psi.
- 2) All steel pipes shall be Schedule 40 or better with a minimum yield stress of 35,000 psi.
- 3) All steel tubes shall conform to ASTM A500, Grade B, having a minimum yield stress of 46,000 psi.
- 4) All other shapes not listed above shall conform to ASTM A36 having a minimum yield stress of 36,000 psi.
- 5) Unless otherwise noted, all welds shall be fillet type with a minimum 3/16" leg. Welding electrodes shall be E70xx type having a minimum yield strength of 70,000 psi. Welding work and materials shall conform to the American Welding Society Code (AWS D.1).
- 6) Bolted connections shall include high strength bolts conforming to ASTM A325. Foundation anchor bolts or tie rods shall conform to ASTM A36 having a minimum yield strength of 36,000 psi.



Stucco Code Requirements

- A. Joints are necessary at the following locations:
  - i) Horizontally at each floor line
  - ii) No areas larger than 144 sq.ft. exposed
  - iii) No dimension longer than 18'-0"
  - iv) No dimension shorter than 2 1/2 times the shortest dimension
- B. Drip screed required at the bottom of all walls 2" above paved areas and 4" above grade.
- C. See ASTM 926 and 1063 for further information.



RESIDENTIAL STRUCTURES P.C.  
NC 3295

NC COA NO. 3295

Residential Structures, P.C.  
3410 North Davidson St.  
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

**Hammons Residence**  
**79 Vanstore Drive**  
**Fuquay Varina, NC**

REV.	DATE	DESCRIPTION
DESIGNER:		CWB
DRAFTER:		BAS
SCALE:		
DATE:	10/24/2024	

GENERAL NOTES

SHEET: GN1



**Residential Structures, P.C.**  
 Engineering and Design  
 Charlotte: 704-332-5460  
 Myrtle Beach/Florence: 704-301-9521  
 www.residentialstructurespc.com



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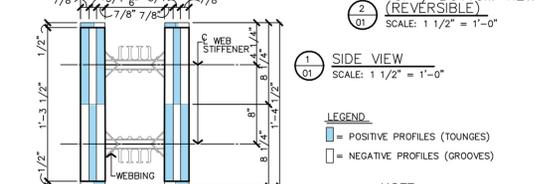
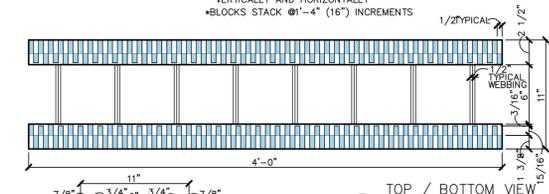
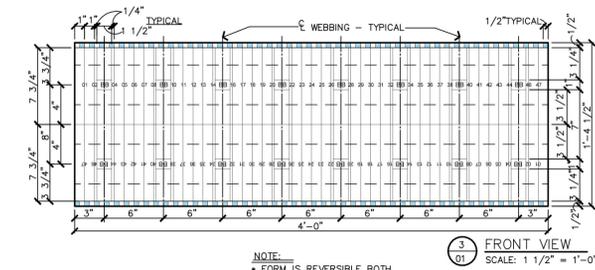


NC COA NO. 3295

Residential Structures, P.C.  
 3410 North Davidson St.  
 Charlotte, NC 28205

Plans to be used in conjunction  
 with Residential Structures P.C.  
 general notes

**Hammons Residence**  
 79 Vanstore Drive  
 Fuquay Varina, NC

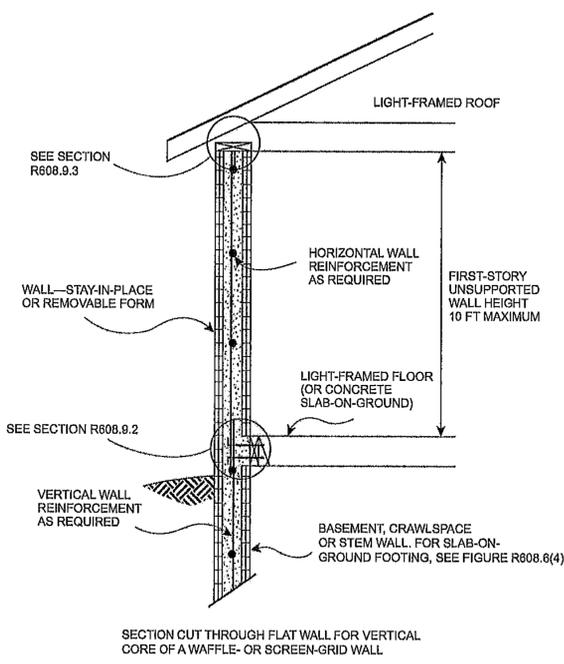


LEGEND  
 [Blue Box] = POSITIVE PROFILES (TOUNGES)  
 [White Box] = NEGATIVE PROFILES (GROOVES)

NOTE:  
 DUE TO VARIATIONS IN SELECTED  
 PRINTED SETTINGS, NOTED SCALES  
 MAY NO LONGER BE APPLICABLE

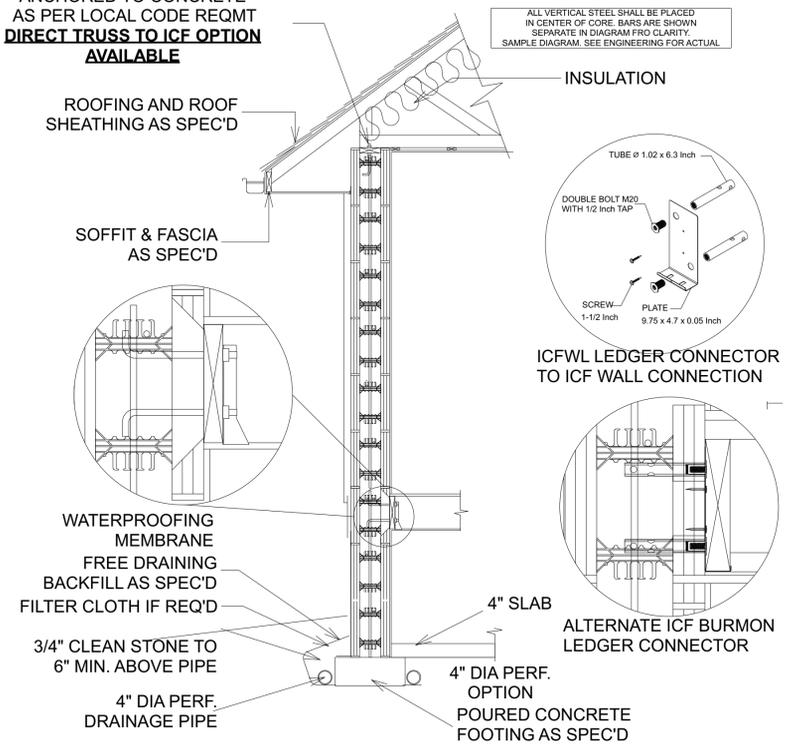
<b>BuildBlock</b> BUILDING SYSTEMS	<b>6" STRAIGHT BLOCK</b>	DATE/REV: 3-12-07/2	SCALE: NTS	DETAIL SHEET
NOTES		<b>1</b>		
<small>9755 N. BROADWAY EXTENSION, SUITE 200, OKLAHOMA CITY, OK 73114        OFFICE: 405-840-3386   TOLL FREE: 866-222-2275   FAX: 405-851-9742        BUILDBLOCK.COM</small>				

**BuildBlock Details**  
**ICF Wall Section:**  
**See Engineering**



For SI: 1 foot = 304.8 mm.  
**FIGURE R808.6(1)**  
**ABOVE-GRADE CONCRETE WALL CONSTRUCTION ONE STORY**

2" x 6" PLATE ON SILL GASKET  
 ANCHORED TO CONCRETE  
 AS PER LOCAL CODE REQMT  
**DIRECT TRUSS TO ICF OPTION**  
**AVAILABLE**



**1 WALL SECTION 1 STORY ABOVE GRADE**  
**6 INCH BUILDBLOCK**

REV.	DATE	DESCRIPTION
DESIGNER:		CWB
DRAFTER:		BAS
SCALE:		1/4"=1'-0"
DATE:		10/24/2024

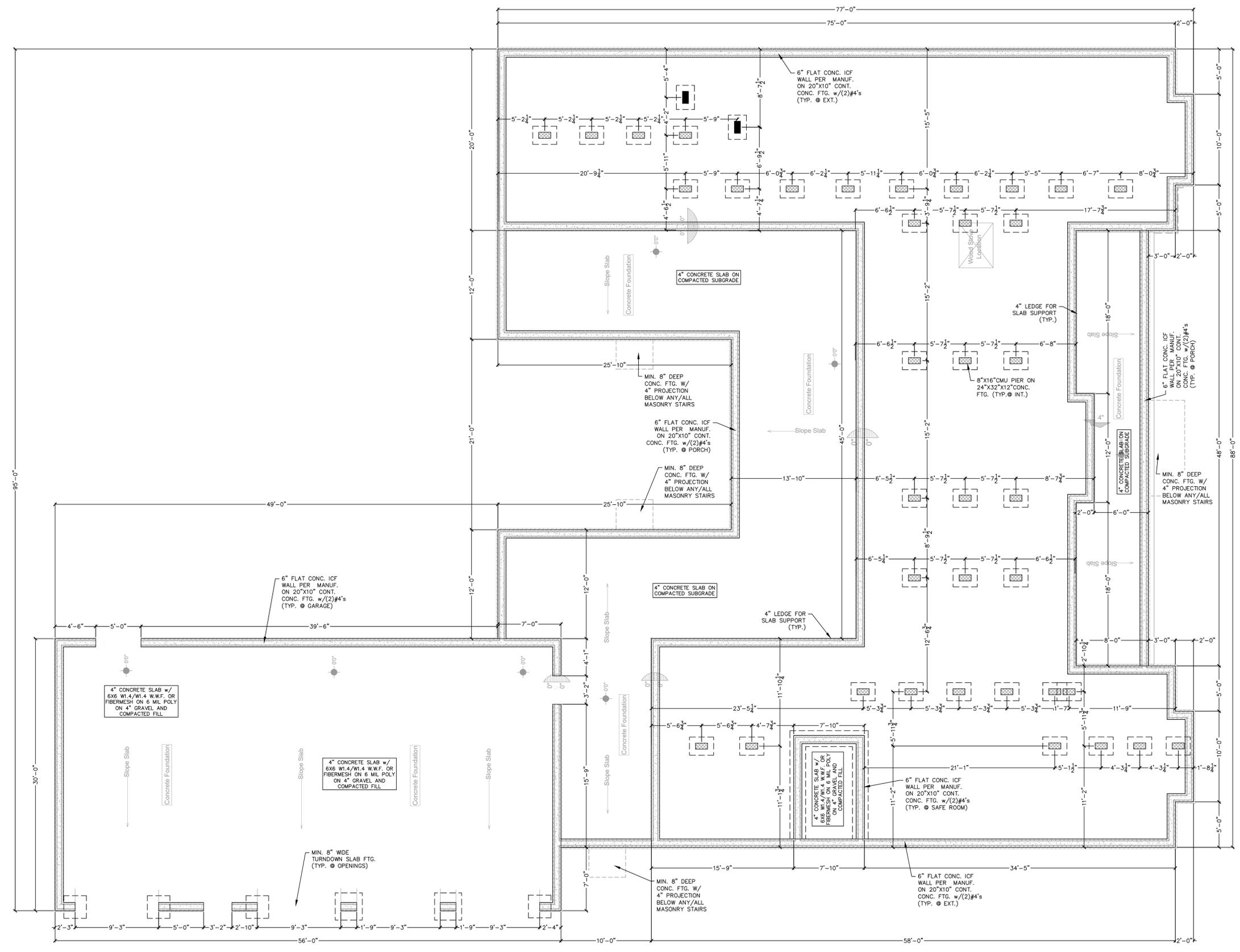
**STRUCTURAL FRAMING ICF DETAILS**

SHEET:  
**SN1**

- FOUNDATION NOTES:**
- ALL DIMENSIONS SHALL BE VERIFIED AGAINST ARCHITECTURAL PLANS.
  - SEE DETAILS FOR TYPICAL FOUNDATION REINFORCEMENT
  - TRANSFER ALL POINT LOADS ABOVE TO FOUNDATION WITH AN EQUAL NUMBER OF STUDS
  - ALL CONCRETE TO BE 3000 PSI (MIN)
  - SOIL TO HAVE A MIN 2000 PSF BEARING CAPACITY
  - ALL FOOTINGS TO BEAR MIN 12" BELOW GRADE OR AS RECOMMENDED PER GEOTECHNICAL EVALUATION
  - ALL PIERS TO BE 8"x16" CMU PIERS ON 24"x32"x12" CONC. FTG. U.N.O.

- FOUNDATION LEGEND: MIN PIER SIZE. INCREASE SIZE AS NECESSARY FOR HEIGHT BASED ON CODE REQUIREMENTS**
- = 8X16 CMU PIER
  - = 8X16 CMU PIER (FLUSH)
  - = 16X16 CMU PIER
  - = 16X16 CMU PIER (FLUSH)

FOOTING SCHEDULE		
MARK	SIZE	REBAR
1	24"x24"x12"	(3) #4'S EACH WAY OR: (2) #5'S EACH WAY
2	30"x30"x12"	(4) #4'S EACH WAY OR: (3) #5'S EACH WAY
3	36"x36"x12"	(5) #4'S EACH WAY OR: (3) #5'S EACH WAY
4	42"x42"x12"	(6) #4'S EACH WAY OR: (4) #5'S EACH WAY
5	48"x48"x12"	(6) #4'S EACH WAY OR: (4) #5'S EACH WAY
6	54"x54"x12"	(7) #4'S EACH WAY OR: (5) #5'S EACH WAY
7	60"x60"x12"	(6) #5'S EACH WAY



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 3410 North Davidson St.  
 Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

**Hammons Residence**  
 79 Vanstore Drive  
 Fuquay Varina, NC

REV.	DATE	DESCRIPTION
DESIGNER:		CWB
DRAFTER:		BAS
SCALE:		3/16"=1'-0"
DATE:		10/24/2024

**FOUNDATION PLAN**

SHEET:  
**S1**

- FRAMING NOTES**
- ALL ROOF SECTIONS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO ALL FRAMING MEMBERS W/ 8d NAILS @ 6" O.C. EDGE AND 12" MAX O.C. FIELD
  - ALL RAFTERS TO BE 2X6 (SPF #2) @ 16" O.C. U.N.O
  - ALL RIDGES, HIPS, AND VALLEYS TO BE DIMENSIONAL LUMBER (SPF #2) MINIMUM 1 SIZE LARGER THAN ASSOCIATED RAFTERS U.N.O.
  - AT CLIP LINES, CEILING JOISTS TO BE NAILED TO RAFTERS W/ (5) 16d NAILS U.N.O.
  - INSTALL AN EXTRA JOIST UNDER ALL PARALLEL PARTITION WALLS. NOTE, NOT ALL EXTRA JOISTS SHOWN FOR CLARITY
  - TRANSFER ALL POINT LOADS FROM ABOVE THROUGH FLOOR SYSTEMS W/ AN EQUAL AMOUNT OF STUD MATERIAL
  - ALL 2-PLY LVL'S (9'-14" TO 11'-7/8") TO HAVE PLY'S ATTACHED W/ (2) ROWS 16d NAILS (3.5") @ 12" O.C. STAGGERED (U.N.O.)
  - ALL 2-PLY LVL'S (14" TO 24") TO HAVE PLY'S ATTACHED W/ (3) ROWS 16d NAILS (3.5") @ 12" O.C. STAGGERED (U.N.O.)
  - ALL 3-PLY LVL'S TO HAVE PLY'S ATTACHED PER 2-PLY FROM BOTH FACES (U.N.O.)
  - ALL 4-PLY LVL'S TO HAVE PLY'S ATTACHED W/ (2) ROWS 1/4"x6 3/4" TRUSSLOK SCREWS @ 24" O.C. STAGGERED (U.N.O.)
  - ALL LVL PLY TO PLY FASTENERS TO HAVE 2" EDGE DISTANCE @ TOP/BOTTOM W/ 4" END DISTANCE
  - ALL HOLD-DOWNS REFERENCED ARE SIMPSON PRODUCTS U.N.O.
  - ALL EXTERIOR ICF WALLS PER MANUF. DESIGN TO MEET OR EXCEED 2018 NRCR DESIGN STANDARDS

- FRAMING LEGEND**
- ROOF TRUSSES PER MANUF. @ MAX 24" O.C.
  - R.T. = TRUSS DESIGN TO HAVE NO INTERMEDIATE BEARING U.N.O.
  - V.T. = VALLEY TRUSSES PER MANUF. @ MAX 24" O.C.
  - G.T. = GIRDER TRUSS PER MANUF.
  - B.B. = BEAM BELOW
  - D.R. = DOUBLE RAFTER
  - T.R. = TRIPLE RAFTER
  - R.B. = RAFTER BRACE
  - B.R.O.W. = BRACE RAFTERS ON WALL
  - D.J. = DOUBLE JOIST
  - E.O.R. = ENGINEER OF RECORD
  - E.E. = EACH END
  - E.S. = EACH SIDE
  - E.W. = EACH WAY
  - HDR = HEADER
  - B.W.A. = BEARING WALL ABOVE. PROVIDE BLOCKING b/w JOISTS/TRUSSES
  - #/JK/E = # OF JACK STUDS AND # OF KING STUDS @ EACH END
  - ⊗ = ROOF BRACE POINT AND BRACE TO POINT
  - ▨ = AREA TO BE OVERFRAMED
  - ▩ = INTERIOR BEARING WALL
  - NUMBER OF STUDS. STUDS TO BE SAME SIZE AS ASSOCIATED WALL FRAMING STUDS U.N.O.
  - # = NOTE: STUD COUNTS DO NOT ACCOUNT FOR KING STUDS. SEE KING STUD CHART FOR REQUIRED KING STUDS.
  - \* = PROVIDE 6"x4"x1/2" STEEL ANGLE ATTACHED TO HEADER/BEAM/FRAMING W/ (2) ROWS 1/2"x4" LAGS @ 16" O.C. FOR BRICK SUPPORT
  - \*\* = ATTACH LVL PLY'S W/ (2) ROWS 1/2"x3 1/2" SDS SCREWS @ 16" O.C.
  - \*\*\* = ATTACH LVL PLY'S W/ (2) ROWS 1/2"x3 1/2" SDS SCREWS @ 16" O.C. ON E.S. OF BEAM
  - \*\*\*\* = ATTACH LVL PLY'S W/ (2) ROWS 1/2"x6" SDS SCREWS @ 16" O.C. ON E.S. OF BEAM
  - ① = 2X6 (SPF #2) @ 16" O.C. U.N.O.
  - ② = 2X8 (SPF #2) @ 16" O.C. U.N.O.
  - ③ = 2X10 (SPF #2) @ 16" O.C. U.N.O.
  - ④ = 2X12 (SPF #2) @ 16" O.C. U.N.O.
  - ⑤ = 16" OPEN WEB FLOOR TRUSSES PER MANUF.

**NOTE:**  
THIS STRUCTURE HAS BEEN ANALYZED BY A PROFESSIONAL ENGINEER FOR LATERAL LOADING. IT HAS BEEN DESIGNED USING CONTINUOUS SHEATHED 7/16" OSB SHEATHING FASTENED @ 6" O.C. ALONG THE EDGES AND 12" O.C. ALONG THE INTERIOR (W/ 8d COMMON NAILS OR 8d-2 1/2" LONG X 0.113" DIAMETER NAILS) TO MEET OR EXCEED THE INTENT OF THE 2018 NRCR. BLOCKING SHALL BE PROVIDED @ ALL PANEL EDGES. ALL INTERIOR WALLS (WHERE NOTED) SHOULD BE METHOD "GB" AND FASTENED W/ 5d COOLER NAILS OR #6 SCREWS @ 7" ALONG THE EDGES AND FIELD. ANY METHOD THAT DEVIATES FROM THE ABOVE ARE NOTED ON THE PLAN SET. THE INTERIOR OF ALL EXTERIOR WALLS SHOULD HAVE GYPSUM BOARD INSTALLED PER CODE. WHERE WALL LINES REQUIRE FURTHER REINFORCEMENT, ADDITIONAL BRACING METHODS, ENGINEERED WALL SECTIONS AND HOLD DOWNS HAVE BEEN INCLUDED TO RESIST THE LATERAL LOADS.

**TYPICAL HANGERS**

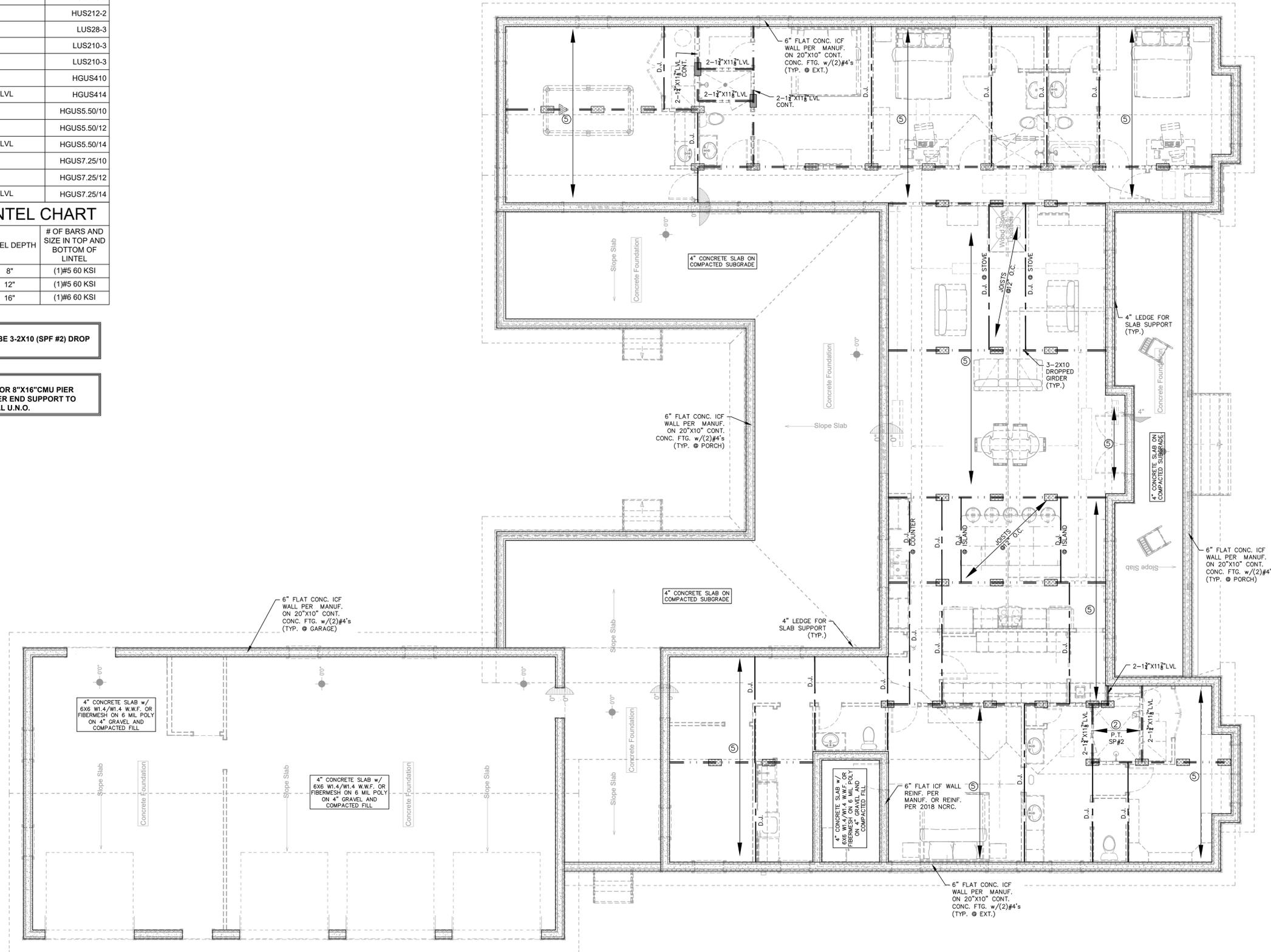
MEMBER	HANGER
2X8	LUS28
2X10	LUS210
2X12	LUS210
(2) 2X8	HUS28-2
(2) 2X10	HUS210-2
(2) 2X12	HUS212-2
(3) 2X8	LUS28-3
(3) 2X10	LUS210-3
(3) 2X12	LUS210-3
(2) 9 1/2" / (2) 11 1/8" LVL	HGUS410
(2) 14" / (2) 16" / (2) 18" LVL	HGUS414
(3) 9 1/2" LVL	HGUS5.50/10
(3) 11 1/8" LVL	HGUS5.50/12
(3) 14" / (3) 16" / (3) 18" LVL	HGUS5.50/14
(4) 9 1/2" LVL	HGUS7.25/10
(4) 11 1/8" LVL	HGUS7.25/12
(4) 14" / (4) 16" / (4) 18" LVL	HGUS7.25/14

**6" ICF LINTEL CHART**

OPENING WIDTH (W)	LINTEL DEPTH	# OF BARS AND SIZE IN TOP AND BOTTOM OF LINTEL
3'-0" - 4'-0"	8"	(1)#5 60 KSI
4'-0" - 6'-0"	12"	(1)#5 60 KSI
6'-0" - 9'-0"	16"	(1)#6 60 KSI

**NOTE:**  
ALL GIRDERS TO BE 3-2X10 (SPF #2) DROP GIRDERS U.N.O.

**NOTE:**  
4" BEAM POCKET OR 8"x16" CMU PIER TYPICAL AT GIRDER END SUPPORT TO FOUNDATION WALL U.N.O.



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REV.	DATE	DESCRIPTION
DESIGNER:		CWB
DRAFTER:		BAS
SCALE:		3/16"=1'-0"
DATE:		10/24/2024

**FIRST FLOOR FRAMING PLAN**

SHEET: **S2**

- FRAMING NOTES**
- ALL ROOF SECTIONS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO ALL FRAMING MEMBERS W/ 8d NAILS @ 6" O.C. EDGE AND 12" MAX O.C. FIELD
  - ALL RAFTERS TO BE 2X6 (SPF #2) @ 16" O.C. U.N.O
  - ALL RIDGES, HIPS, AND VALLEYS TO BE DIMENSIONAL LUMBER (SPF #2) MINIMUM 1 SIZE LARGER THAN ASSOCIATED RAFTERS U.N.O.
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  - ALL 3-PLY LVL'S TO HAVE PLY'S ATTACHED PER 2-PLY FROM BOTH FACES (U.N.O.)
  - ALL 4-PLY LVL'S TO HAVE PLY'S ATTACHED W/ (2) ROWS 14"x6 3/4" TRUSSLOK SCREWS @ 24" O.C. STAGGERED (U.N.O.)
  - ALL LVL PLY TO PLY FASTENERS TO HAVE 2" EDGE DISTANCE @ TOP/BOTTOM W/ 4" END DISTANCE
  - ALL HOLD-DOWNS REFERENCED ARE SIMPSON PRODUCTS U.N.O.
  - ALL EXTERIOR ICF WALLS PER MANUF. DESIGN TO MEET OR EXCEED 2018 NCR.C DESIGN STANDARDS

- FRAMING LEGEND**
- ROOF TRUSSES PER MANUF. @ MAX 24" O.C.
  - R.T. = TRUSS DESIGN TO HAVE NO INTERMEDIATE BEARING U.N.O.
  - V.T. = VALLEY TRUSSES PER MANUF. @ MAX 24" O.C.
  - G.T. = GIRDER TRUSS PER MANUF.
  - B.B. = BEAM BELOW
  - D.R. = DOUBLE RAFTER
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  - E.W. = EACH WAY
  - HDR = HEADER
  - B.W.A. = BEARING WALL ABOVE. PROVIDE BLOCKING b/w JOISTS/TRUSSES
  - #/JK/E. = # OF JACK STUDS AND # OF KING STUDS @ EACH END
  - ☒ = ROOF BRACE POINT AND BRACE TO POINT
  - ▨ = AREA TO BE OVERFRAMED
  - ▩ = INTERIOR BEARING WALL
  - NUMBER OF STUDS. STUDS TO BE SAME SIZE AS ASSOCIATED WALL FRAMING STUDS U.N.O.
  - NOTE: STUD COUNTS DO NOT ACCOUNT FOR KING STUDS. SEE KING STUD CHART FOR REQUIRED KING STUDS.
  - PROVIDE 6"x4"x3/8" STEEL ANGLE ATTACHED TO HEADER/BEAM/FRAMING W/ (2) ROWS 1/2"x4" LAGS @ 16" O.C. FOR BRICK SUPPORT
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  - \*\*\* = ATTACH LVL PLY'S W/ (2) ROWS 1/2"x3/8" SDS SCREWS @ 16" O.C. ON E.S. OF BEAM
  - \*\*\*\* = ATTACH LVL PLY'S W/ (2) ROWS 1/2"x6" SDS SCREWS @ 16" O.C. ON E.S. OF BEAM
  - ① = 2X6 (SPF #2) @ 16" O.C. U.N.O.
  - ② = 2X8 (SPF #2) @ 16" O.C. U.N.O.
  - ③ = 2X10 (SPF #2) @ 16" O.C. U.N.O.
  - ④ = 2X12 (SPF #2) @ 16" O.C. U.N.O.
  - ⑤ = 16" OPEN WEB FLOOR TRUSSES PER MANUF.

**NOTE:**  
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**TYPICAL HANGERS**

MEMBER	HANGER
2X8	LUS28
2X10	LUS210
2X12	LUS210
(2) 2X8	HUS28-2
(2) 2X10	HUS210-2
(2) 2X12	HUS212-2
(3) 2X8	LUS28-3
(3) 2X10	LUS210-3
(3) 2X12	LUS210-3
(2) 9 1/2" / (2) 11 1/8" LVL	HGUS410
(2) 14" / (2) 16" / (2) 18" LVL	HGUS414
(3) 9 1/2" LVL	HGUS5.50/10
(3) 11 1/8" LVL	HGUS5.50/12
(3) 14" / (3) 16" / (3) 18" LVL	HGUS5.50/14
(4) 9 1/2" LVL	HGUS7.25/10
(4) 11 1/8" LVL	HGUS7.25/12
(4) 14" / (4) 16" / (4) 18" LVL	HGUS7.25/14

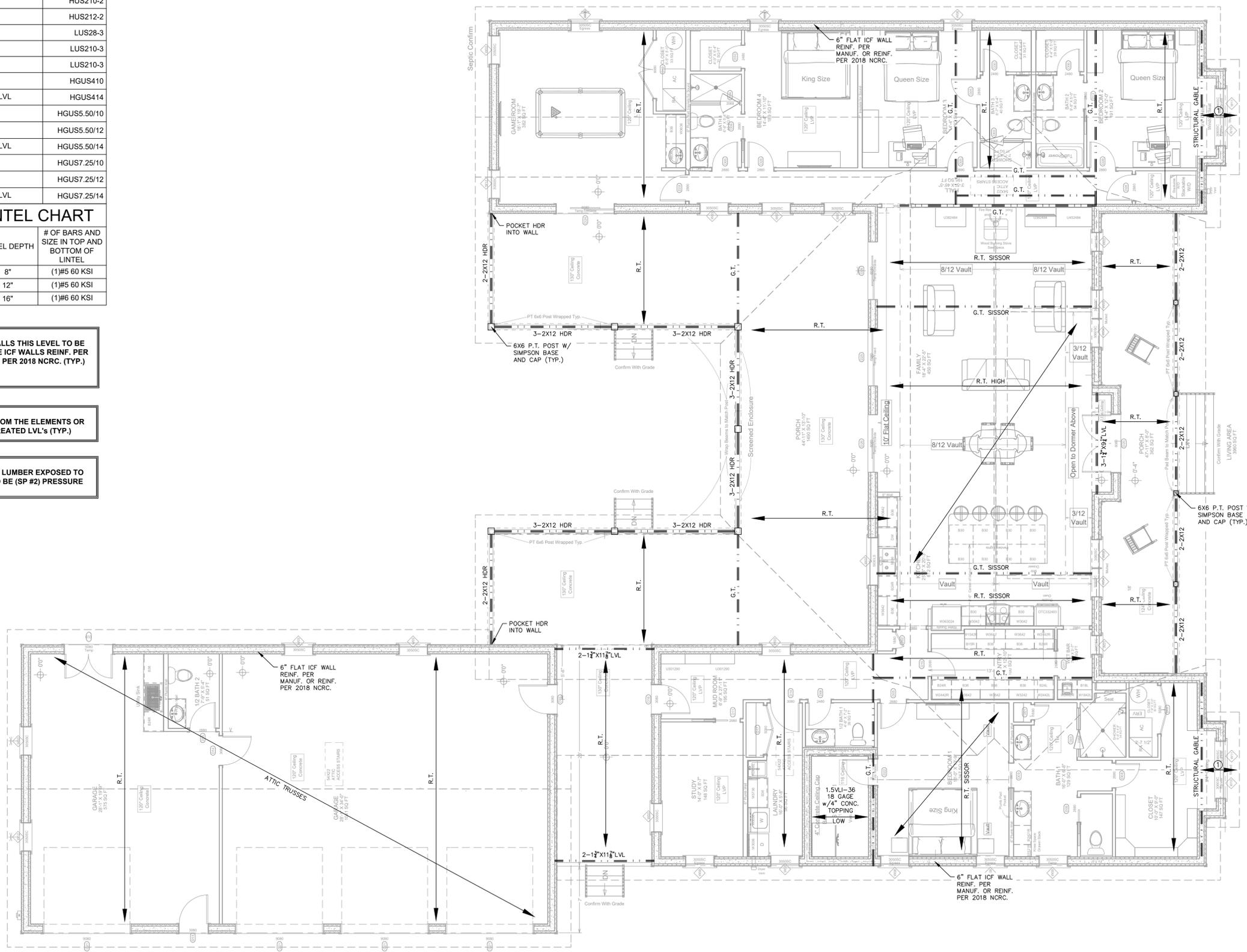
**6" ICF LINTEL CHART**

OPENING WIDTH (W)	LINTEL DEPTH	# OF BARS AND SIZE IN TOP AND BOTTOM OF LINTEL
3'-0" - 4'-0"	8"	(1)#5 60 KSI
4'-0" - 6'-0"	12"	(1)#5 60 KSI
6'-0" - 9'-0"	16"	(1)#6 60 KSI

**NOTE:**  
ALL EXTERIOR WALLS THIS LEVEL TO BE 6" FLAT CONCRETE ICF WALLS REINF. PER MANUF. OR REINF. PER 2018 NCR.C. (TYP.)

**NOTE:**  
PROTECT LVL'S FROM THE ELEMENTS OR USE PRESSURE TREATED LVL'S (TYP.)

**NOTE:**  
ALL DIMENSIONAL LUMBER EXPOSED TO THE ELEMENTS TO BE (SP #2) PRESSURE TREATED (TYP.)



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DESIGNER:		CWB
DRAFTER:		BAS
SCALE:		3/16"=1'-0"
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**CEILING FRAMING PLAN**

SHEET: **S3**

- FRAMING NOTES**
- ALL ROOF SECTIONS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO ALL FRAMING MEMBERS W/ 8d NAILS @ 6" O.C. EDGE AND 12" MAX O.C. FIELD
  - ALL RAFTERS TO BE 2X6 (SPF #2) @ 16" O.C. U.N.O
  - ALL RIDGES, HIPS, AND VALLEYS TO BE DIMENSIONAL LUMBER (SPF #2) MINIMUM 1 SIZE LARGER THAN ASSOCIATED RAFTERS U.N.O.
  - AT CLIP LINES, CEILING JOISTS TO BE NAILED TO RAFTERS W/ (5)16d NAILS U.N.O.
  - INSTALL AN EXTRA JOIST UNDER ALL PARALLEL PARTITION WALLS. NOTE, NOT ALL EXTRA JOISTS SHOWN FOR CLARITY
  - TRANSFER ALL POINT LOADS FROM ABOVE THROUGH FLOOR SYSTEMS W/ AN EQUAL AMOUNT OF STUD MATERIAL
  - ALL 2-PLY LVL'S (9'-11" TO 11'-7") TO HAVE PLY'S ATTACHED W/ (2) ROWS 16d NAILS (3.5") @ 12" O.C. STAGGERED (U.N.O.)
  - ALL 2-PLY LVL'S (14" TO 24") TO HAVE PLY'S ATTACHED W/ (3) ROWS 16d NAILS (3.5") @ 12" O.C. STAGGERED (U.N.O.)
  - ALL 3-PLY LVL'S TO HAVE PLY'S ATTACHED PER 2-PLY FROM BOTH FACES (U.N.O.)
  - ALL 4-PLY LVL'S TO HAVE PLY'S ATTACHED W/ (2) ROWS 1/4"X6 3/4" TRUSSLOK SCREWS @ 24" O.C. STAGGERED (U.N.O.)
  - ALL LVL PLY TO PLY FASTENERS TO HAVE 2" EDGE DISTANCE @ TOP/BOTTOM W/ 4" END DISTANCE
  - ALL HOLD-DOWNS REFERENCED ARE SIMPSON PRODUCTS U.N.O.
  - ALL EXTERIOR ICF WALLS PER MANUF. DESIGN TO MEET OR EXCEED 2018 NCRS DESIGN STANDARDS

- FRAMING LEGEND**
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  - R.T. = TRUSS DESIGN TO HAVE NO INTERMEDIATE BEARING U.N.O.
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  - NUMBER OF STUDS. STUDS TO BE SAME SIZE AS ASSOCIATED WALL FRAMING STUDS U.N.O. **NOTE: STUD COUNTS DO NOT ACCOUNT FOR KING STUDS. SEE KING STUD CHART FOR REQUIRED KING STUDS.**
  - \* = HEADER/BEAM/FRAMING W/ (2) ROWS 1/2"X4" LAGS @ 16" O.C. FOR BRICK SUPPORT
  - \*\* = ATTACH LVL PLY'S W/ (2) ROWS 1/2"X3" SDS SCREWS @ 16" O.C.
  - \*\*\* = ATTACH LVL PLY'S W/ (2) ROWS 1/2"X3" SDS SCREWS @ 16" O.C. ON E.S. OF BEAM
  - \*\*\*\* = ATTACH LVL PLY'S W/ (2) ROWS 1/2"X6" SDS SCREWS @ 16" O.C. ON E.S. OF BEAM
  - ① = 2X6 (SPF #2) @ 16" O.C. U.N.O.
  - ② = 2X8 (SPF #2) @ 16" O.C. U.N.O.
  - ③ = 2X10 (SPF #2) @ 16" O.C. U.N.O.
  - ④ = 2X12 (SPF #2) @ 16" O.C. U.N.O.
  - ⑤ = 16" OPEN WEB FLOOR TRUSSES PER MANUF.

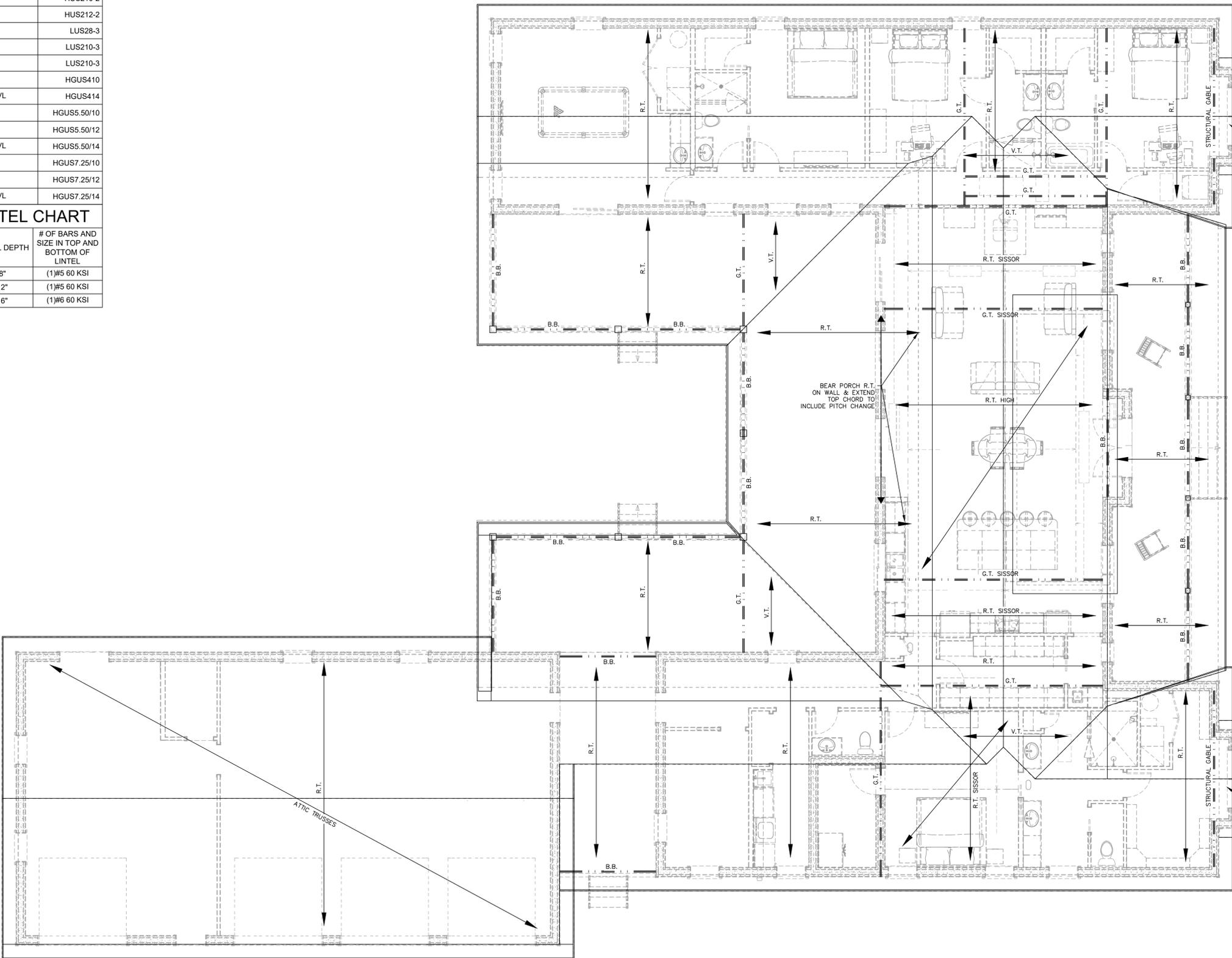
**TYPICAL HANGERS**

MEMBER	HANGER
2X8	LUS28
2X10	LUS210
2X12	LUS210
(2) 2X8	HUS28-2
(2) 2X10	HUS210-2
(2) 2X12	HUS212-2
(3) 2X8	LUS28-3
(3) 2X10	LUS210-3
(3) 2X12	LUS210-3
(2) 9 1/2" / (2) 11 1/8" LVL	HGUS410
(2) 14" / (2) 16" / (2) 18" LVL	HGUS414
(3) 9 1/2" LVL	HGUS5.50/10
(3) 11 1/8" LVL	HGUS5.50/12
(3) 14" / (3) 16" / (3) 18" LVL	HGUS5.50/14
(4) 9 1/2" LVL	HGUS7.25/10
(4) 11 1/8" LVL	HGUS7.25/12
(4) 14" / (4) 16" / (4) 18" LVL	HGUS7.25/14

**6" ICF LINTEL CHART**

OPENING WIDTH (W)	LINTEL DEPTH	# OF BARS AND SIZE IN TOP AND BOTTOM OF LINTEL
3'-0" - 4'-0"	8"	(1)#5 60 KSI
4'-0" - 6'-0"	12"	(1)#5 60 KSI
6'-0" - 9'-0"	16"	(1)#6 60 KSI

**NOTE:**  
THIS STRUCTURE HAS BEEN ANALYZED BY A PROFESSIONAL ENGINEER FOR LATERAL LOADING. IT HAS BEEN DESIGNED USING CONTINUOUS SHEATHED 7/16" OSB SHEATHING FASTENED @ 6" O.C. ALONG THE EDGES AND 12" O.C. ALONG THE INTERIOR (W/ 8d COMMON NAILS OR 8d-2 1/2" LONG X 0.113" DIAMETER NAILS) TO MEET OR EXCEED THE INTENT OF THE 2018 NCRS. BLOCKING SHALL BE PROVIDED @ ALL PANEL EDGES. ALL INTERIOR WALLS (WHERE NOTED) SHOULD BE METHOD "GB" AND FASTENED W/ 5d COOLER NAILS OR #6 SCREWS @ 7" ALONG THE EDGES AND FIELD. ANY METHOD THAT DEVIATES FROM THE ABOVE ARE NOTED ON THE PLAN SET. THE INTERIOR OF ALL EXTERIOR WALLS SHOULD HAVE GYPSUM BOARD INSTALLED PER CODE. WHERE WALL LINES REQUIRE FURTHER REINFORCEMENT, ADDITIONAL BRACING METHODS, ENGINEERED WALL SECTIONS AND HOLD DOWNS HAVE BEEN INCLUDED TO RESIST THE LATERAL LOADS.



**Residential Structures, P.C.**  
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Charlotte: 704-332-5460  
Charleston: 843-406-7174  
Myrtle Beach/Florence: 704-301-9521  
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Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

**Hammons Residence**  
79 Vanstore Drive  
Fuquay Varina, NC

REV.	DATE	DESCRIPTION
DESIGNER:		CWB
DRAFTER:		BAS
SCALE:		3/16"=1'-0"
DATE:		10/24/2024

**ROOF FRAMING PLAN**

SHEET: **S4**