

GDI ENGINEERING



220 Bryan Guest House

Residential

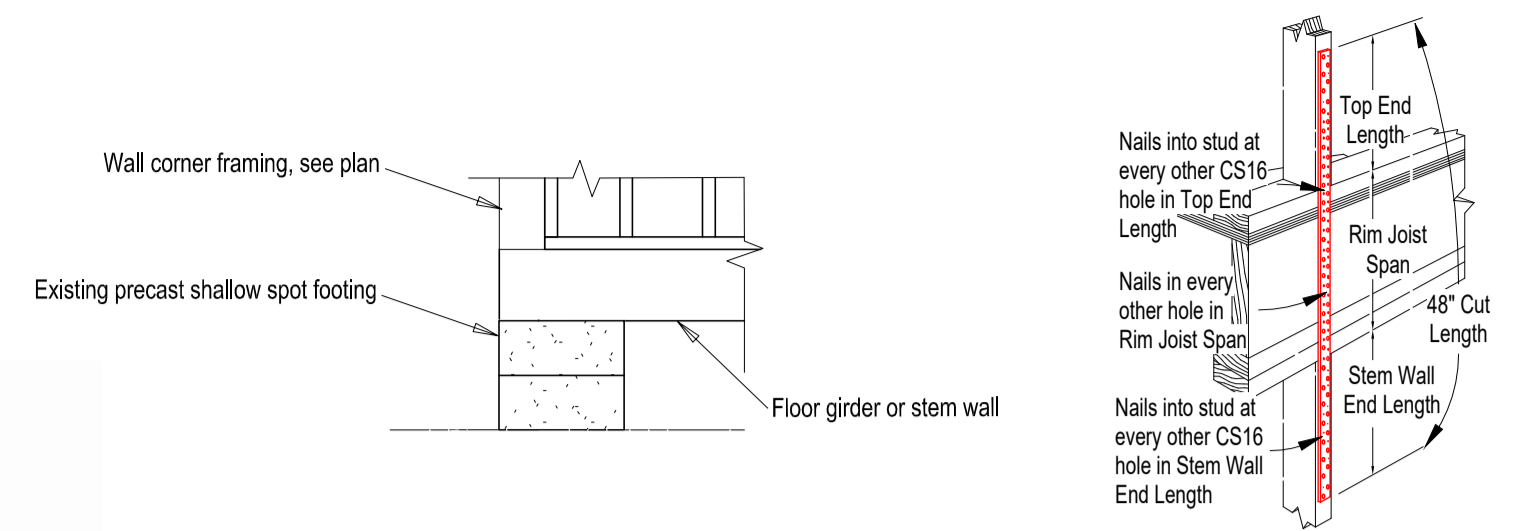
Houston- Texas

USDA WEBSOIL DAAT BASE SUMMARY FOR 220 BRYAN ST. HOUSTON, TX 77011 HARRIS COUNTY, TEXAS						
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Liquid limit	Plasticity index
Lake charles: Lu-Lake	55	D	In		L-R-H	L-R-H
Charles- Urban land complex, 0 to 3 percent slopes			0-22	Clay	66-70 -85	37-39-46
			22-36	Clay	60-70 -80	35-42-48
			36-52	Clay	60-69 -79	36-42-48
			52-80	Silty clay, clay	54-73 -82	31-45-51

FOUNDATION DESIGN BASIS: The foundation design basis was based on IRC Table R401.4.1 for soil types of Cl, MI, MH, and CH with allowable soil load estimated to be up to 2500 psf, based on supporting estimated soil data (summary copied above) from the USDA WebSoilSurvey (usda.gov/app/WebSoilSurvey.aspx) developed for a defined for the padsite area by an approximate area of interest for this address. The soil on this site is indicated to be of high plasticity meaning it will have a high shrink-swell. Moisture management site drainage will be critical to the long term performance of any foundation constructed in high shrink-swell soils. The design of the foundation element additions to the existing home and guest house structures are based on lowest reasonable cost which assumes that some minor movement over the life of the structure can be tolerated. The soil for this site will shrink and swell with moisture changes. Water drainage away from the foundation is required to reduce soil swelling which will cause some movement. Foundation movement may also be caused by excessive soil drying, or the removal or the addition of a tree within 25' of any foundation edge. New trees should not be planted within 20' of the foundation unless root barriers are installed. Foundation crack control joints should be applied per code and across narrow sections. Brick, stone, and stucco veneers must have crack control joints and expansion joints applied per code. Long and tall gypsum walls should be broken by architectural offsets and/or by surface material changes.

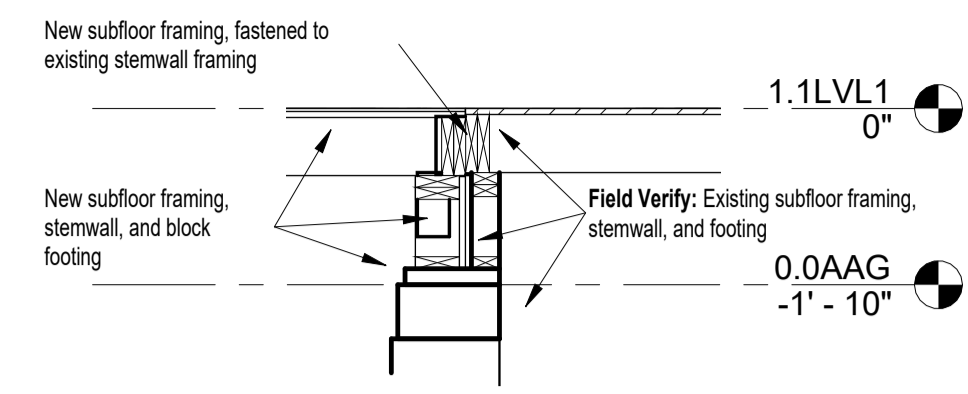
FOUNDATION ADDITION NOTES: The site is not in a flood plain. The existing house was built applying a low clearance crawl space that places the finished floor approximately 1'-9" about average grade with service clearance of #12". If constructed as new crawl space foundation, there would be inadequate clearance of ~12" below the new joists. A new crawl space foundation also must have adequate air ventilation and planned moisture management, both difficult for low clearance crawl spaces.

Based on this review, the best foundation for the house addition would be a new reinforced concrete stiffened slab on grade foundation formed on approximately 16" of raised and compacted select fill soil. To allow for flooring choices, the new slab should be formed to be ~34" below the existing house finished floor elevation.

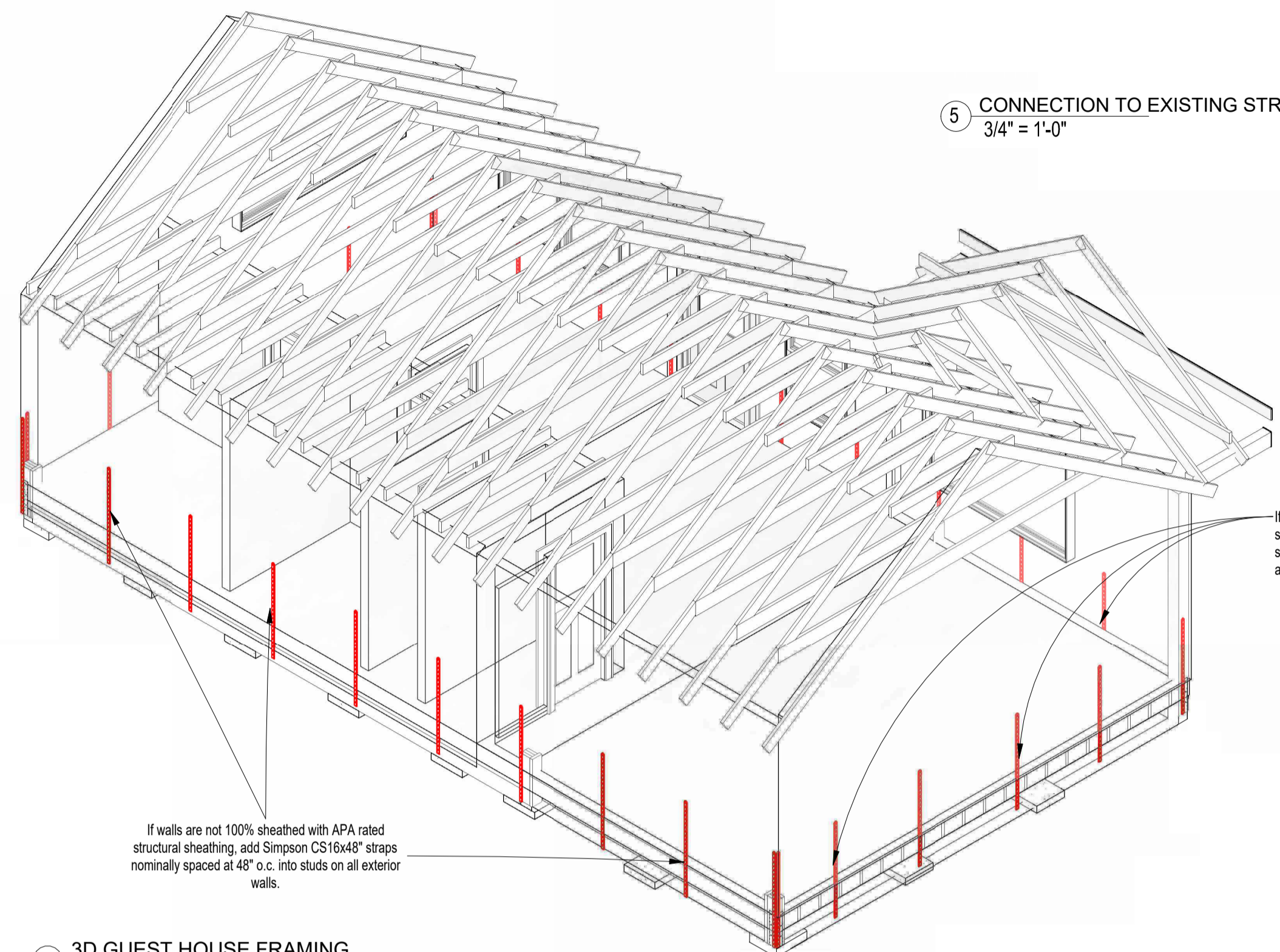


5 CONNECTION TO EXISTING STRUCTURE
3/4" = 1'-0"

Simpson Strong-Tie CS16 Strap for Connecting Stem Wall to Rim Joist Structure and to Upper Wall Studs
Install (2)CS16 at exterior wall corners. If walls not sheathed then add CS16 at nominal 48" o.c. horizontal spacing (CS16 is not needed if APA Rated Sheathing spans same 48" length, is blocked at all edges, and is nailed at 4" o.c. on edges and 8" o.c. in field).



9 GUEST HOUSE SUBFLOOR SECTION
1/2" = 1'-0"

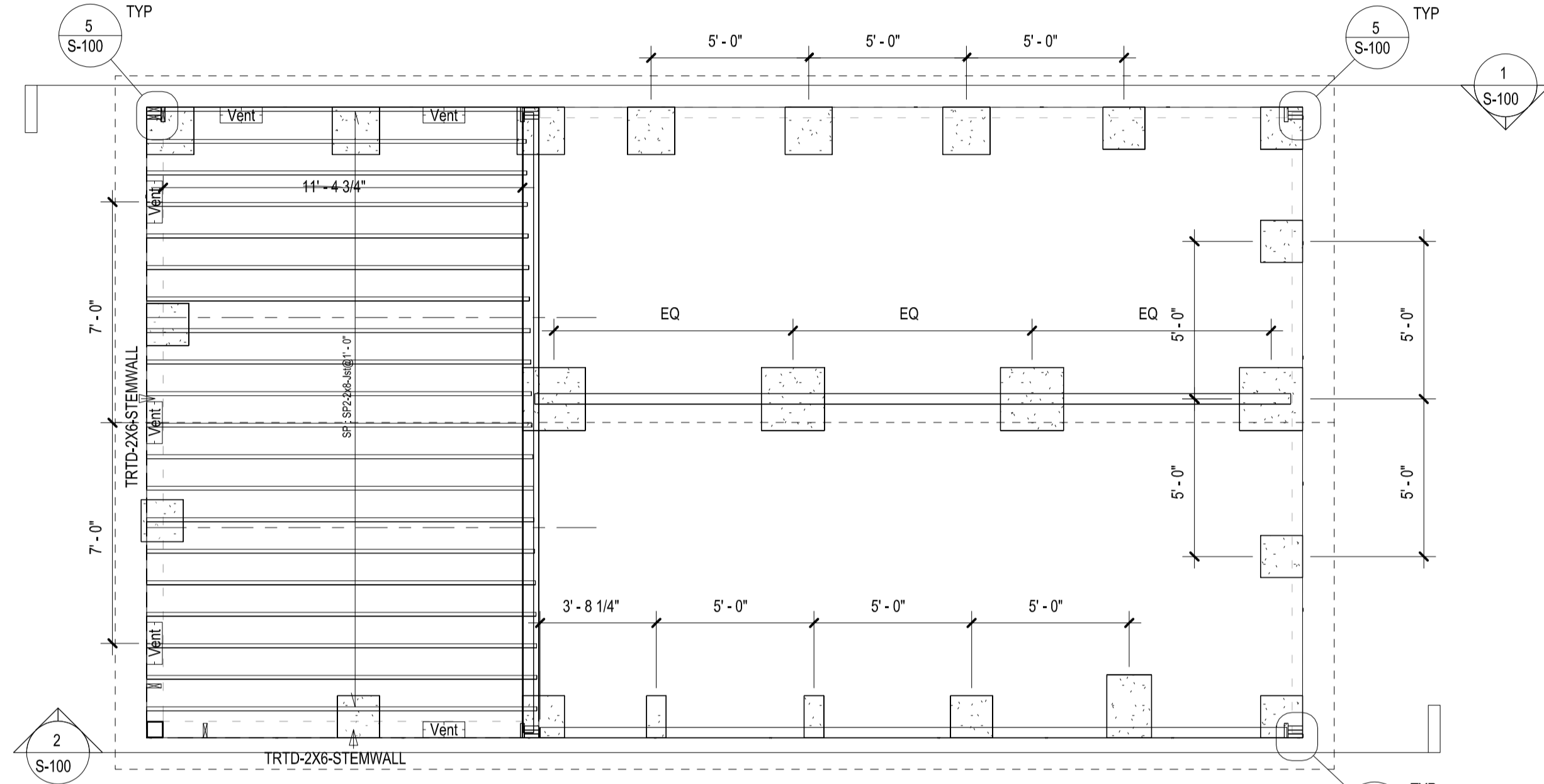


3 3D GUEST HOUSE FRAMING

4 CRAWL SPACE CS16 STRAP DETAIL
3/4" = 1'-0"

If walls are not 100% sheathed with APA rated structural sheathing, add Simpson CS16x48" straps nominally spaced at 48" o.c. into studs on all exterior walls.

If walls are not 100% sheathed with APA rated structural sheathing, add Simpson CS16x48" straps nominally spaced at 48" o.c. into studs on all exterior walls.

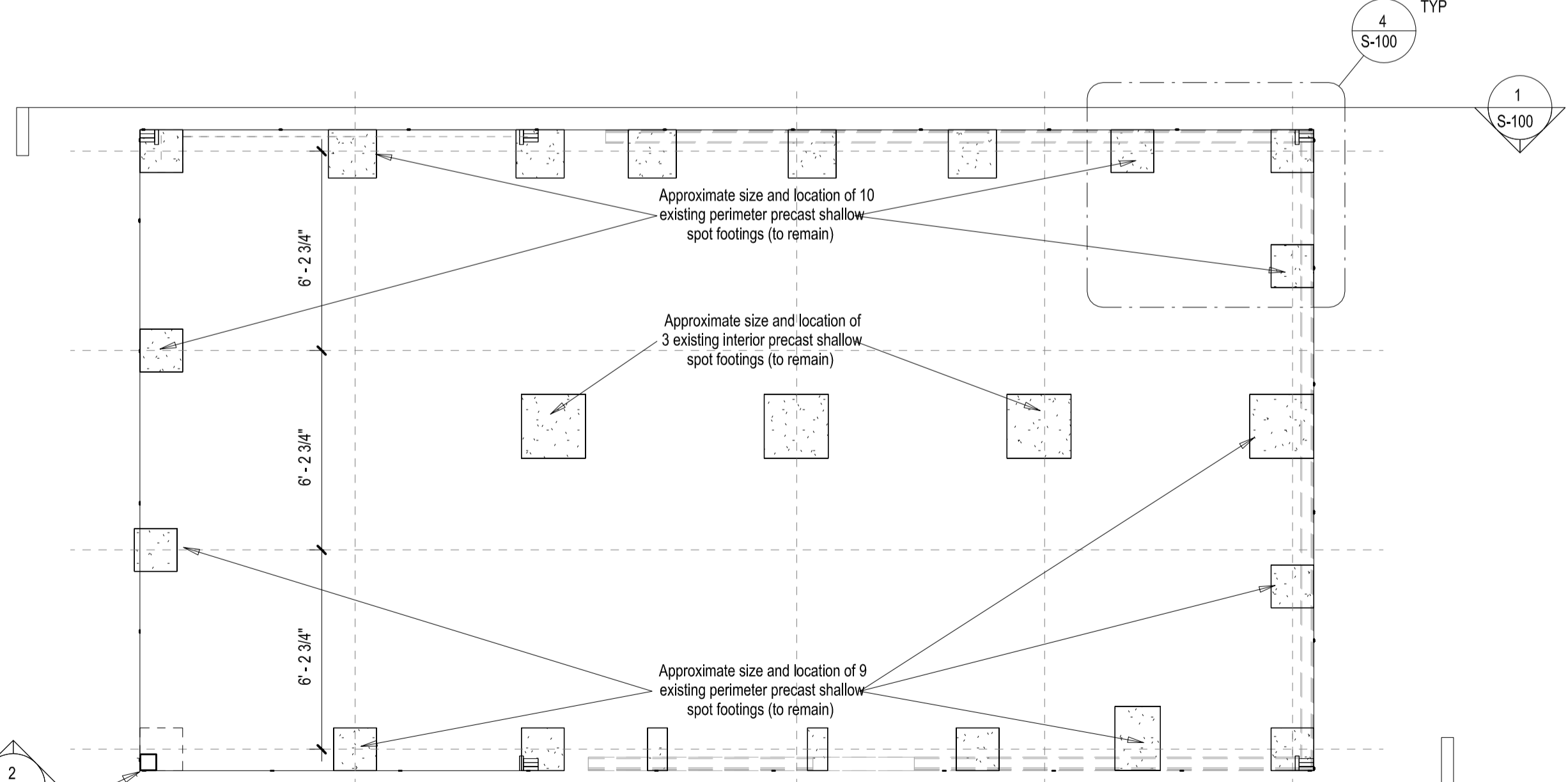


8 GUEST HOUSE SUBFLOOR FRAMING PLAN
1/4" = 1'-0"

New Elevated Framed Floor: New elevated crawl space floor supported by treated 2x6 stem wall to match elevation to existing Guest House finished floor. Add corner spot footings as shown. Frame new treated 2x6 stem walls, and center framing to support center (3)2x6 beams and new 2x6 subfloor joists.

GUEST HOUSE CRAWL SPACE FOUNDATION NOTES: The existing 1-car garage and existing Guest House structure is not in a flood plain. The existing Guest House occupied area was built applying a low clearance crawl space that places the finished floor approximately 2' about average grade with service clearance of ~14". The existing 1-Car Garage area is to be changed to become an addition to the Guest House. The existing Garage walls will be replaced with new treated 2x6 framed stemwalls with siding that will support a new crawl space floor built over 10 mil poly matching the existing crawl space floor. The new crawl space area will either be open to the sides, or will have 8"x16" air vents per plan and will be open to the existing crawl space area. Contact the EOR for any questions, issues or discoveries. See subfloor framing plan below.

For Unconditioned naturally venting Crawl Space: The crawl space will be vented with insulation only in the subfloor. Install continuous tape sealed poly meeting ASTM E1745 Class C installed per ASTM E1643. Provide slope to drain out through flood vents or through underground piped area drains.

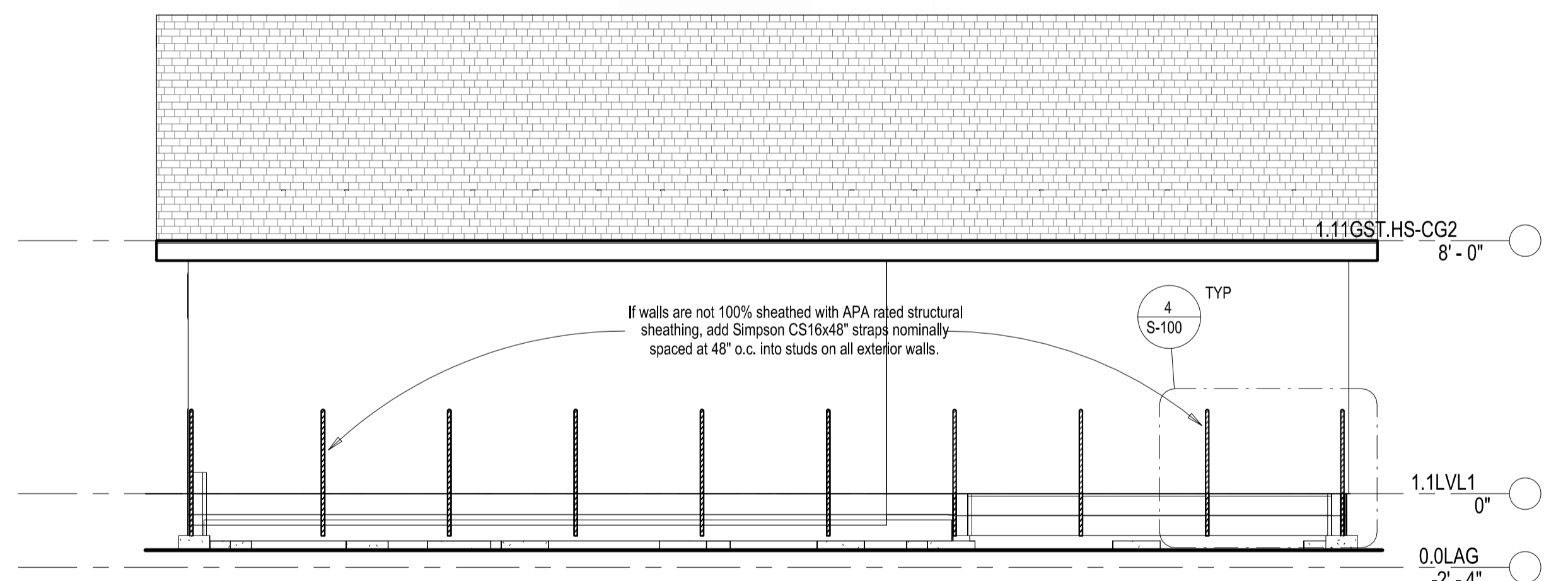


7 GUEST HOUSE EXISTING + PROPOSED FOUNDATION
1/4" = 1'-0"

GUEST HOUSE CRAWL SPACE FOUNDATION NOTES: The existing 1-car garage and existing Guest House structure is not in a flood plain. The existing Guest House occupied area was built applying a low clearance crawl space that places the finished floor approximately 2' about average grade with service clearance of ~14". The existing 1-Car Garage area is to be changed to become an addition to the Guest House. The existing Garage framed walls will be replaced, while using temporary bracing, with new treated 2x6 framed stemwalls. Siding would be removed from the existing wall, and then short structural stem walls built with siding that will support a new crawl space floor built over 10 mil poly matching the existing crawl space floor. The new crawl space area will have 6"x16" air vents per plan and will be open to the existing crawl space area.

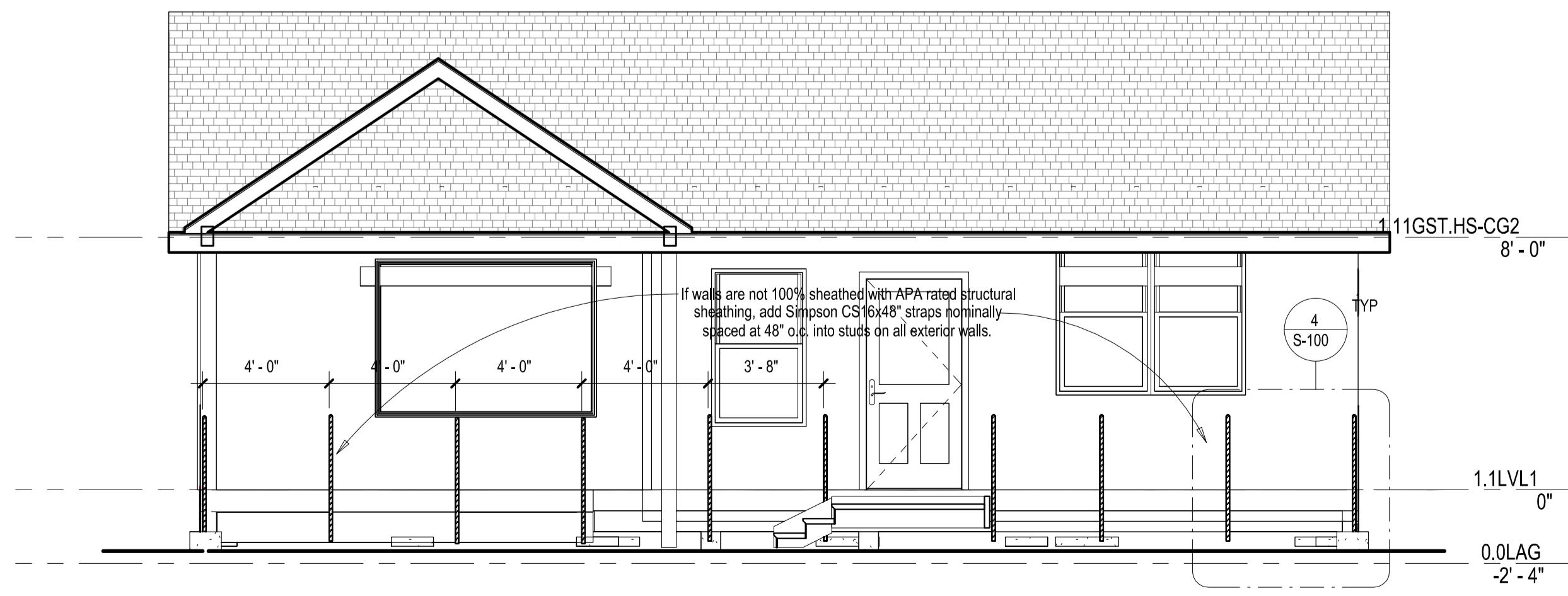
Note: Existing 6x6 post and footing is unknown

1 GUEST HOUSE REAR ELEVATION
1/4" = 1'-0"



If walls are not 100% sheathed with APA rated structural sheathing, add Simpson CS16x48" straps nominally spaced at 48" o.c. into studs on all exterior walls.

2 GUEST HOUSE FRONT ELEVATION
1/4" = 1'-0"



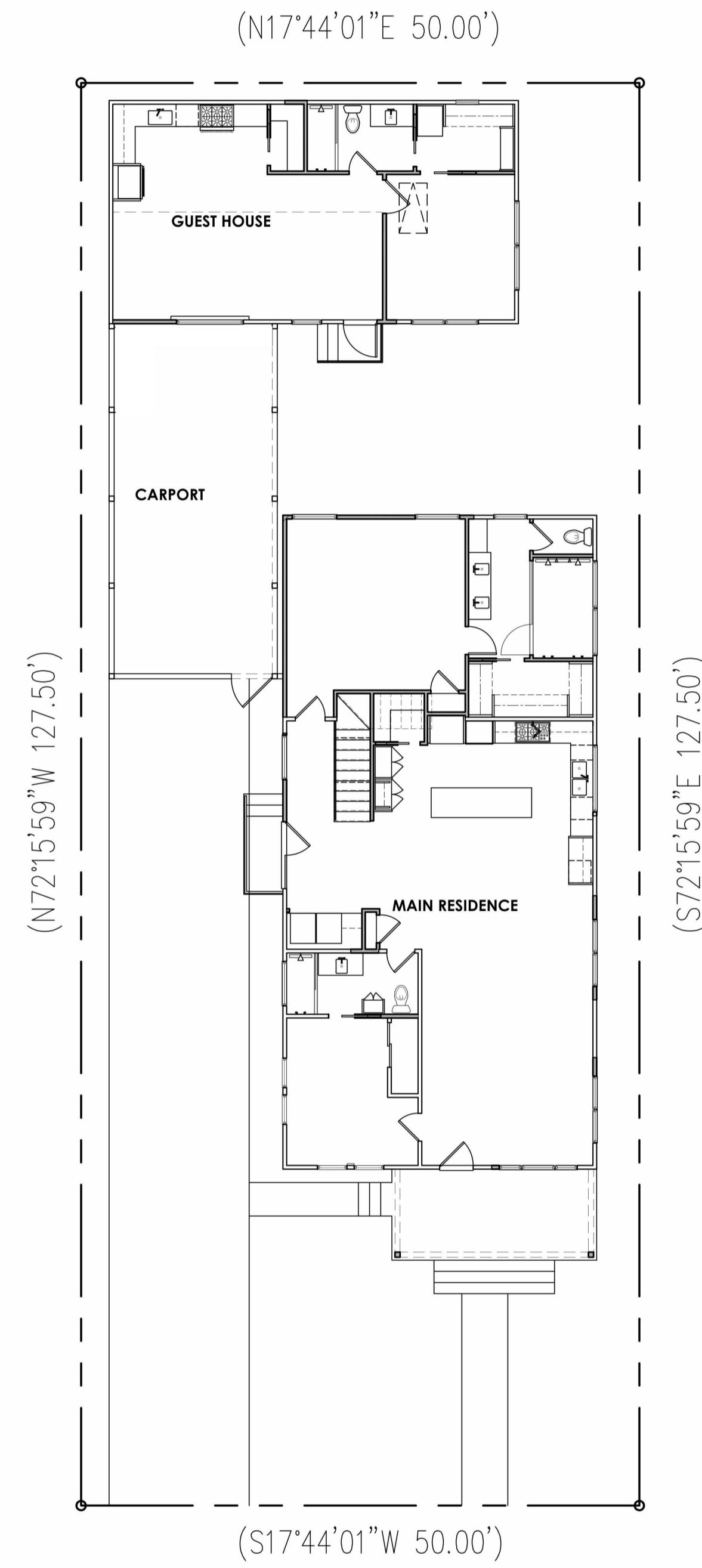
If walls are not 100% sheathed with APA rated structural sheathing, add Simpson CS16x48" straps nominally spaced at 48" o.c. into studs on all exterior walls.

FOUNDATION PLAN NOTES:
Plans drawn to scale (scaled measurements may be taken)
Forming (edge) dimensions provided (scale from plans OK)
Foundation beam centerlines provided (scale from plans OK)
Slab slopes defined (if not use 2% as ~2" per 8', 6" per 25')
Rebar Separation: 3" min. earth, 2" min. poly, 1" min cover

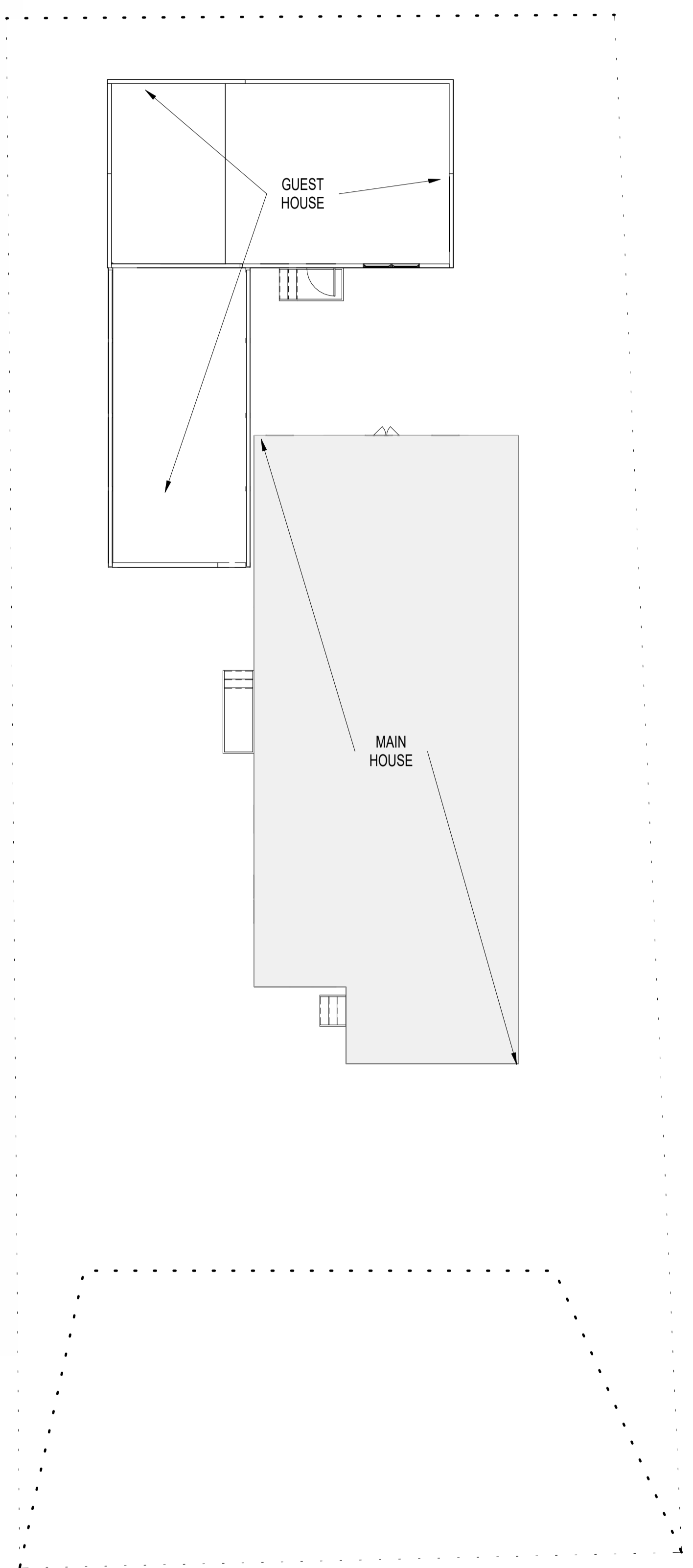
220 BRYAN ST.
HOUSTON, TX 77011

SHEET NAME
GUEST HOUSE
FOUNDATION PLAN

S-100



SITE PLAN



1 GUEST HOUSE OVERVIEW
1" = 10'-0"

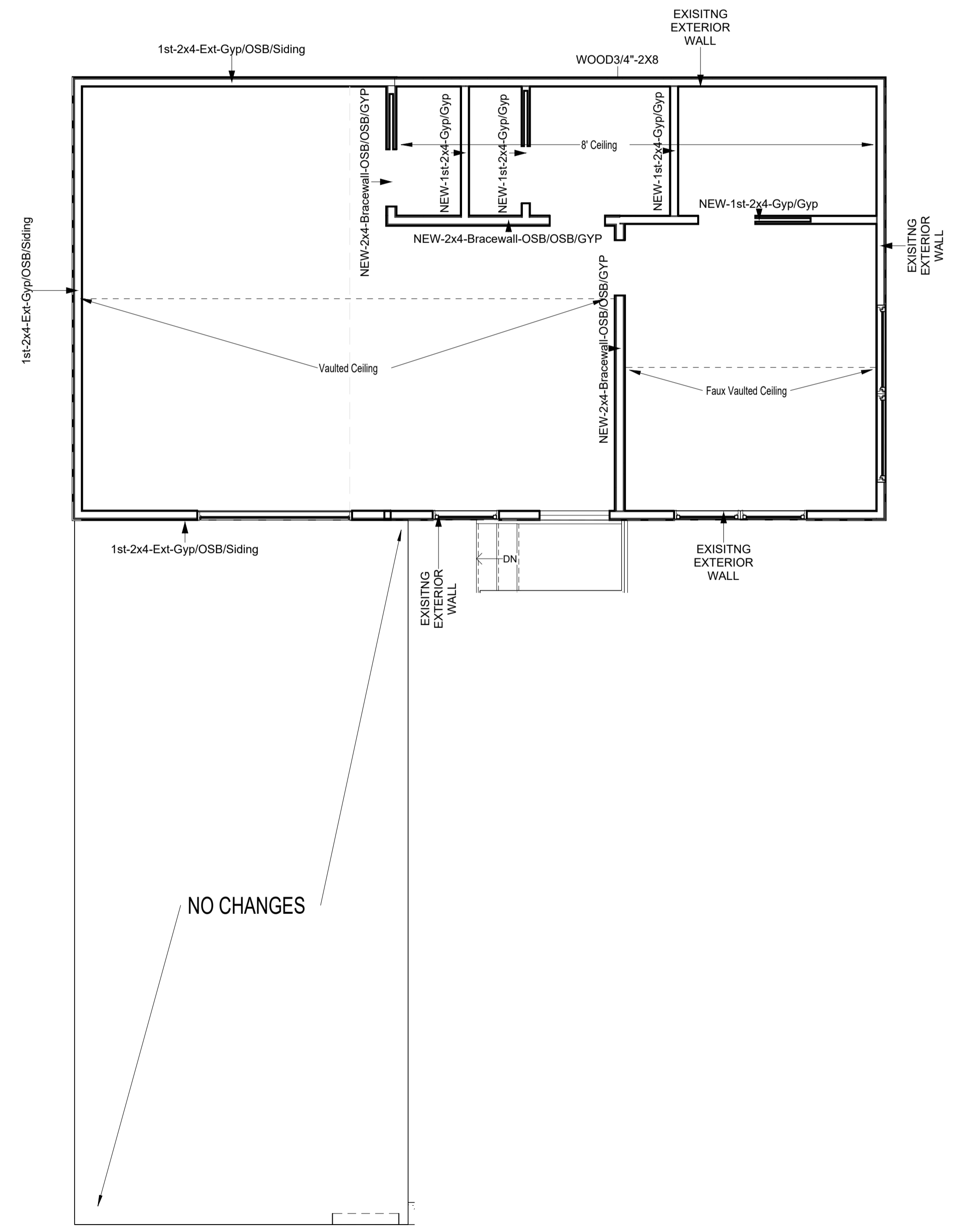
DEMOLITION AND STRUCTURAL CHANGE REQUIREMENTS:
 Failure to do demolition and structural changes correctly can result in damage to a structure, injury, or death. Demolition of existing structures (floors, walls, roofs, columns, beams) must only be done only by a qualified contractor familiar with framing and loads etc. If there are any questions, Stop All Work and contact the Engineer-Of-Record for review, inspection, and engineer sealed instructions.

Replacement of the load-bearing beam or wall by a correctly sized wood beam should only be done only by a qualified contractor. Failure to do structural changes correctly can result in damage to a structure, injury, or death.

All work must be done by someone experienced with the correct method of installing/removing temporary bracing, installing the replacement beam and its supports, attaching existing joist, beams, or new joists in hangers to the new load bearing beam, before removing any temporary bracing. Only after properly bracing the existing structures (columns, beams, joist, rafters, etc.) can the new beam or new structural member(s) be installed. For a flush beam, the existing joists/rafters must be trimmed, and steel hangers added and nailed/screwed to the new beam. For trimmed joists or rafters, temporary bracing and a load receiving beam, ledger, or plate must be installed before trimming and installing the trimmed member ends in hangers or by other specified connection method.

If there is any problem or any different structure item found during the work phase. Stop All Work and contact the Engineer-Of-Record for review, inspection, and engineer sealed instructions or for engineer discussion and instruction before proceeding further. If a field inspection is required by an engineer, the cost of the inspection and report is additional.

PROVIDE EGRESS PER IBC/IRC
 WINDOW EGRESS PER R310.1 - One per sleeping room/basement. Minimum 5.7 sf (or 5 sf if at grade) of clear opening space, minimum 24" tall, minimum 20" wide, and 44" maximum sill elevation above the floor, opened without tools or keys.
 Acceptable Minimum Window Types:
 Single Casement Type - Minimum 2226CS (26"Wx30"T RO, 20"Wx24"T clear opening)
 Single or Double Hung Type - Minimum 2245SH (26"Wx57"T RO, 20"Wx24"T minimum clear bottom opening)
 Windows sill height can be field adjusted during construction but must remain no more than 44" above the floor surface.
 DOOR EGRESS PER R311.2 - Minimum of one 32" wide x 78" tall door opening per dwelling requires a 36" door width.



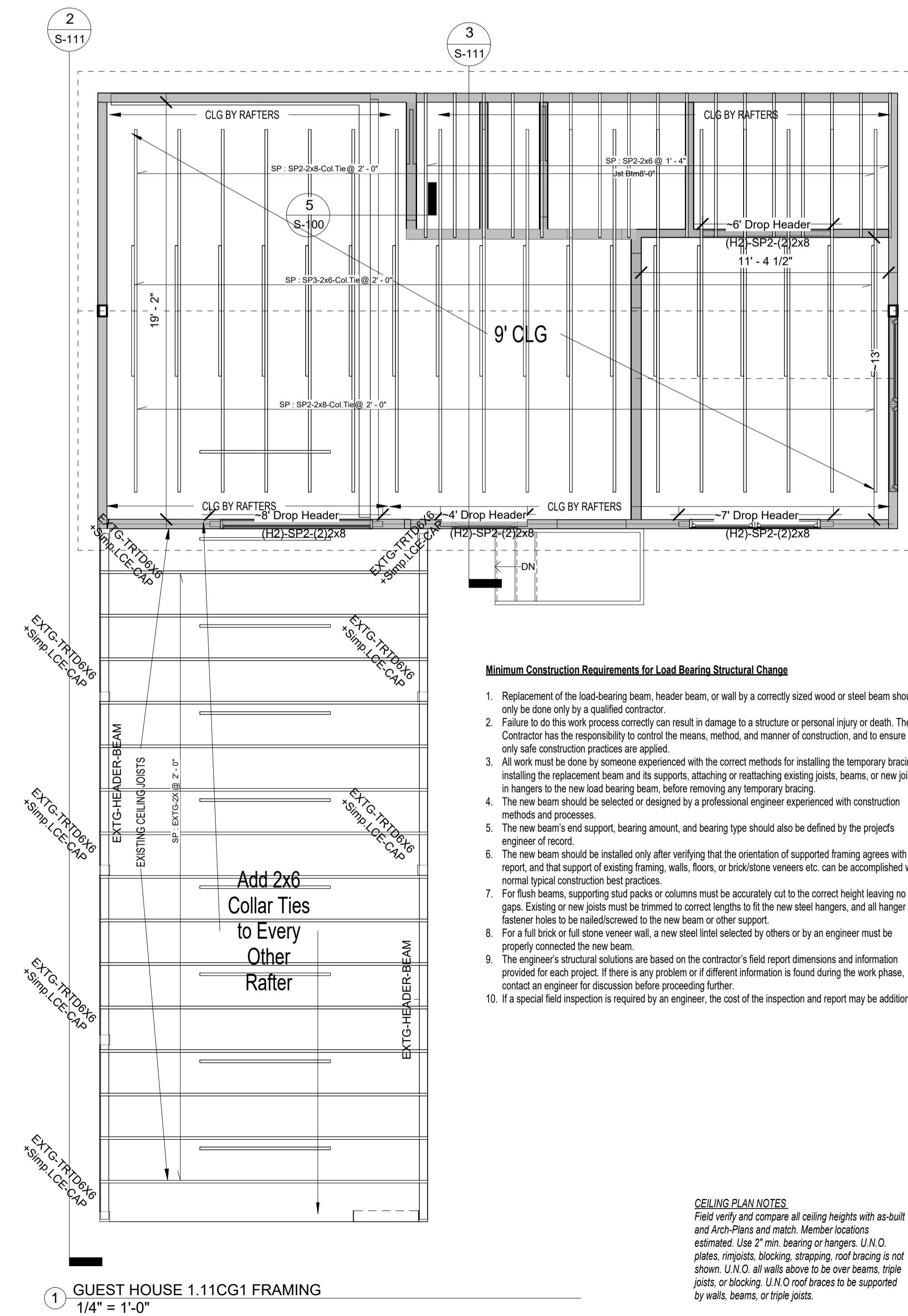
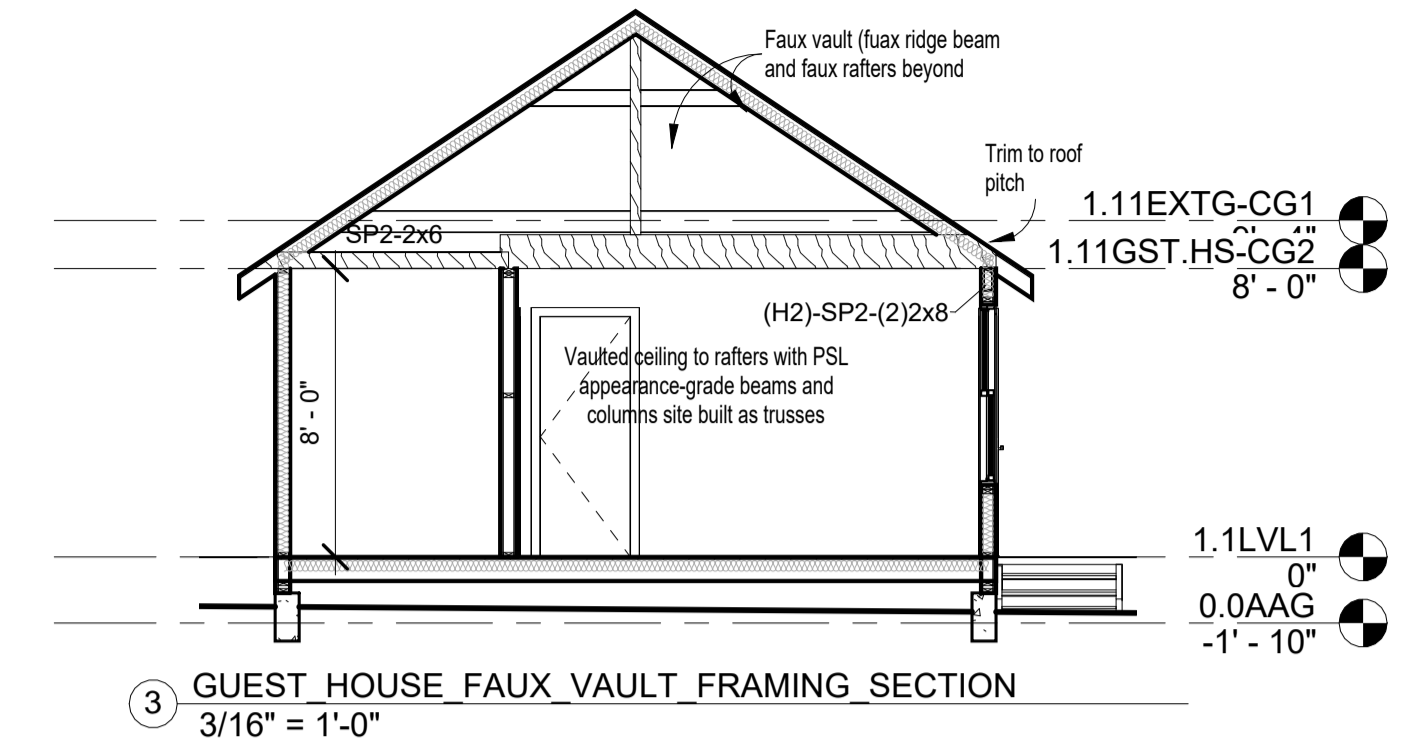
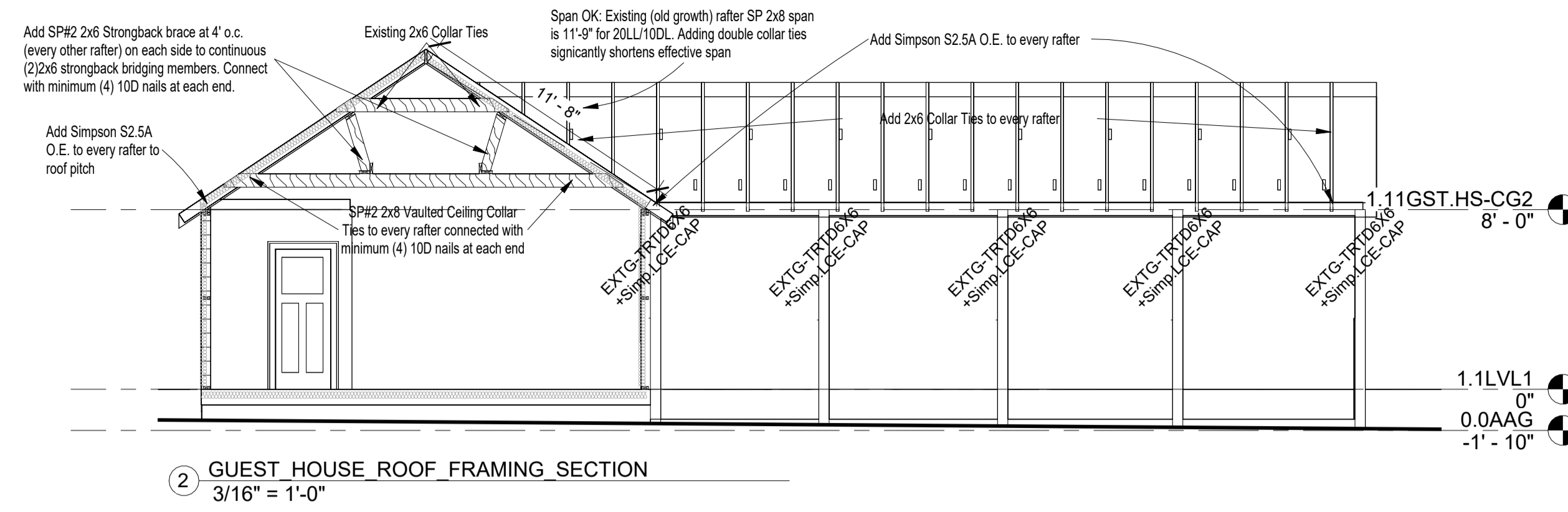
2 GUEST HOUSE WALL PLAN
1/4" = 1'-0"

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 PROJ#
 220 BRYAN ST.
 HOUSTON, TX 77011

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HOUSTON, TX 77011

SHEET NAME
WALL PLANS
 WALL PLAN / MODEL NOTES
 Typical modeling aligns ext. wall edges w/ foundation edges.
 Normal construction cantilevers exterior wall sheathing.
 Siding, stucco, and thin stone veneers past foundation edges.
 Full brick and full stone will not cantilever (fully supported).
 Column locations are critical.

S-110



- Minimum Construction Requirements for Load Bearing Structural Change**
1. Replacement of the load-bearing beam, header beam, or wall by a correctly sized wood or steel beam should only be done only by a qualified contractor.
 2. Failure to do this work process correctly can result in damage to a structure or personal injury or death. The Contractor has the responsibility to control the means, method, and manner of construction, and to ensure that only safe construction practices are applied.
 3. All work must be done by someone experienced with the correct methods for installing the temporary bracing, installing the replacement beam and its supports, attaching or reattaching existing joists, beams, or new joists in hangers to the new load bearing beam, before removing any temporary bracing.
 4. The new beam should be selected or designed by a professional engineer experienced with construction methods and processes.
 5. The new beam's end support, bearing amount, and bearing type should also be defined by the projects engineer of record.
 6. The new beam should be installed only after verifying that the orientation of supported framing agrees with the report, and that support of existing framing, walls, floors, or brick/stone veneers etc. can be accomplished with normal typical construction best practices.
 7. For flush beams, supporting stud packs or columns must be accurately cut to the correct height leaving no gaps. Existing or new joists must be trimmed to correct lengths to fit the new steel hangers, and all hanger fastener holes to be nailed/screwed to the new beam or other support.
 8. For a full brick or full stone veneer wall, a new steel lintel selected by others or by an engineer must be properly connected to the new beam.
 9. The engineer's structural solutions are based on the contractor's field report dimensions and information provided for each project. If there is any problem or if different information is found during the work phase, contact an engineer for discussion before proceeding further.
 10. If a special field inspection is required by an engineer, the cost of the inspection and report may be additional.

CEILING PLAN NOTES
 Field verify and compare all ceiling heights with as-built and Arch-Plans and match. Member locations estimated. Use 2" min. bearing or hangers. U.N.O. plates, rimpots, blocking, strapping, roof bracing is not shown. U.N.O. all walls above to be over beams, triple joists, or blocking. U.N.O. roof braces to be supported by walls, beams, or triple joists.

PROJECT: 220 BRYAN ST. HOUSTON, TX 77011
 SHEET NAME: CEILING FRAMING PLANS
 S-111

ENERGY EFFICIENT WALL FRAMING SPECIFICATIONS

ENERGY EFFICIENT WALL CONSTRUCTION SPECIFICATIONS

GENERAL: Excellent sealing & insulating of buildings can reduce utilities usage by up to 40%. Only after this is completed, can high efficiency windows, doors, and HVAC provide additional savings. The following Energy Efficient Wall Construction Specifications are recommendations for construction to minimize energy usage. These specifications are in addition to the "MINIMUM WOOD FRAMING SPECIFICATIONS" and any code or city required construction practices. This specification contains options that may exceed the "MINIMUM WOOD FRAMING SPECIFICATIONS" in some areas such as sheathing thickness (5/8" vs 7/16").

ADDITIONAL PLANNING: The owner should consider asking the building designer to provide an additional paid review of the plans applying a 'Whole-House' design basis. The expectation should be for no impact on the total cost of construction while reducing energy consumption by 10 to 40% for the home's life. The designer should add construction sections and details of sealed and insulated building envelope types for walls, windows, doors, roof and floors. The designer should identify HVAC all component locations and each air ventilation location. The designer should locate all ductwork routing and should attempt to locate all ductwork and HVAC equipment inside the conditioned building envelope. HVAC equipment should be specified to be sized only per Manual J. For additional reference download "Build Energy Efficient Walls" publication number J440 from www.APWood.org and "Building America Best Practices Series: Volume 1 - Builders and Buyers Handbook for Improving New Home Efficiency, Comfort, and Durability in the Hot and Humid Climate" from U.S. DOE. www.nibs.org/http://www.p2pays.org/ref/36/35780.pdf

Check here if these low energy framing practices are to be applied, and inform the builder and the framer in writing. The builder and framer should also be informed that a 'check-list' inspection will be completed.

WALL CONSTRUCTION PROCEDURES:

1. **BOTTOM PLATE SEALING:** Install Dow Styrofoam "Sill Seal" or equal, under treated wall bottom plates on all exterior and all garage walls.
3. **WALLS:** For RT19 use 2x6 @ 16" o.c. in high wind, @ 24" o.c. in other areas)
4. **WALL CORNERS:** Use construction adhesive caulk between for all corner stud assemblies. Apply sealant caulk at vertical inside corner of all corner studs
5. **TOP PLATE SEALING:** Add adhesive caulk between top plate faces, at all plate splice ends, and at all exterior wall corner top plate joints.
6. **CRAWL SPACE OR UPPER FLOOR JOISTS AND RIM BOARDS:** Use construction adhesive to seal at top and bottom plates at all rim joists, and over all joints between framing sections. Extend exterior sheathing over rim joists
7. **USE WOOD WALL SHEATHING:** Use APA 19/32" or minimum 15/32" OSB or Plywood. Wood sheathing provides variable permeability so as to not trap moisture.
8. **LAP AND BLOCK ALL SHEATHING:** Lap exterior sheathing panels over intersections between Rim Boards, band joists and plates and/or seal at panel joints and around edges. Install blocking with construction adhesive at panel joints
9. **SEAL ALL PENETRATIONS:** Use expanding foam* to close and seal ALL wiring/plumbing penetrations in all areas (plates, sheathing, studs) *HILTI CF-116 filler foam or *Dow "GREAT STUFF PRO" or equal urethane foam sealant.
10. **HOUSE WRAP:** House Wraps are required per code for all exterior sheathing types. CORRECT INSTALLATION WILL ALWAYS INCLUDE CORRECT OVERLAPPING AND CORRECT WINDOW AND DOOR OPENING OVERLAP DETAILS. Suggested wraps include Dow "WEATHERMATE PLUS" or DuPont "TYVEK HomeWrap" or equal installed per product information.
11. **WINDOW AND DOOR FLASHING:** Install flashing, flashing tape, or equal flashing system at all windows/doors. Suggested flashing systems include Dow "WEATHERMATE Flashing" tape or DuPont™ Flashing Tape.
12. **INSULATION:** With the above sealing done properly any properly installed insulation system can be used. Suggested types are either batts or spray in place. Blanket fiberglass or natural fiber Batts and Rolls are the most cost-effective. Pieces must be hand-cut to fit snugly around obstructions. Spray-in-Place Insulation cellulose or Spray polyurethane open cell foam. Be sure to allow wet-blown insulation to dry completely before installing dry wall. Spray foam materials and installation cost more than blanket insulation, but its effectiveness at minimizing air infiltration can reduce the amount of air sealing needed, making spray foam a cost-competitive option.
13. **WINDOWS AND DOORS:** We recommend a U-factor of 0.35 or below and solar heat gain coefficient (SHGC) of 0.70 or below with coatings to reduce solar heat gain. Double or triple pane windows with low emissivity (low-e) coating on the glass minimize heat loss. Windows and doors cause one-third of the total energy loss and the cost of high-performance windows and doors will often offset the size of the required HVAC equipment.
14. **HVAC SYSTEMS:** Over-sizing of HVAC equipment is a common mistake for a correctly sealed and insulated building. DO NOT ALLOW SIZING OF HVAC ON A TON PER SF BASIS. Require sizing only by written Manual J Residential Load Calculation (per Air Conditioning Contractors of America (www.acca.org)).
15. **VENTILATION:** Under-sizing of ventilation is a common mistake for well sealed homes. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (www.ashrae.org) recommends the greater of 0.35 air changes per hour or 15 cubic feet per minute (cfm) per person. We recommend timer controlled spot ventilation at all bathrooms, laundry rooms, and cooking areas. Install 15 min timers on 250 cfm ventilation fan with exterior wall mounted flap-vents, or a humidity controlled ventilation fan with flap vents such as a 110 cfm Broan model QTKE110S or equal.
16. **INSPECTIONS:** We recommend use of a third party inspector to verify air tightness by use of a blower door test and a thermo-graphic scan. Energy audits are often required to qualify for most energy efficiency incentive programs.

ENERGY EFFICIENT WALL FRAMING INSPECTION CHECK LIST

WALL CONSTRUCTION ENERGY SEALING CHECK LIST:

The framer and builder is to inspect and check off each item as confirmation that each source of air infiltration has been properly sealed during wall framing construction while still accessible.

- Top and bottom plates
- Sill plates, Rim Boards, and band joists
- Partition intersections
- Subfloor and wallboard joints
- Exterior wall corner assemblies
- Seams and tears in house wrap or building paper
- Window frames
- Door frames and thresholds
- Dropped ceilings and soffits
- Attic hatches and knee wall access doors
- Vents, registers and HVAC penetrations
- Ductwork penetrations
- Plumbing and condensate penetrations
- Bathtubs and showers on outside walls
- Utility chases
- Chimney / flue penetrations and fireplace dampers
- Electrical outlets and wiring penetrations
- Recessed light and fan fixtures
- Exterior penetrations (utility service holes, etc.)

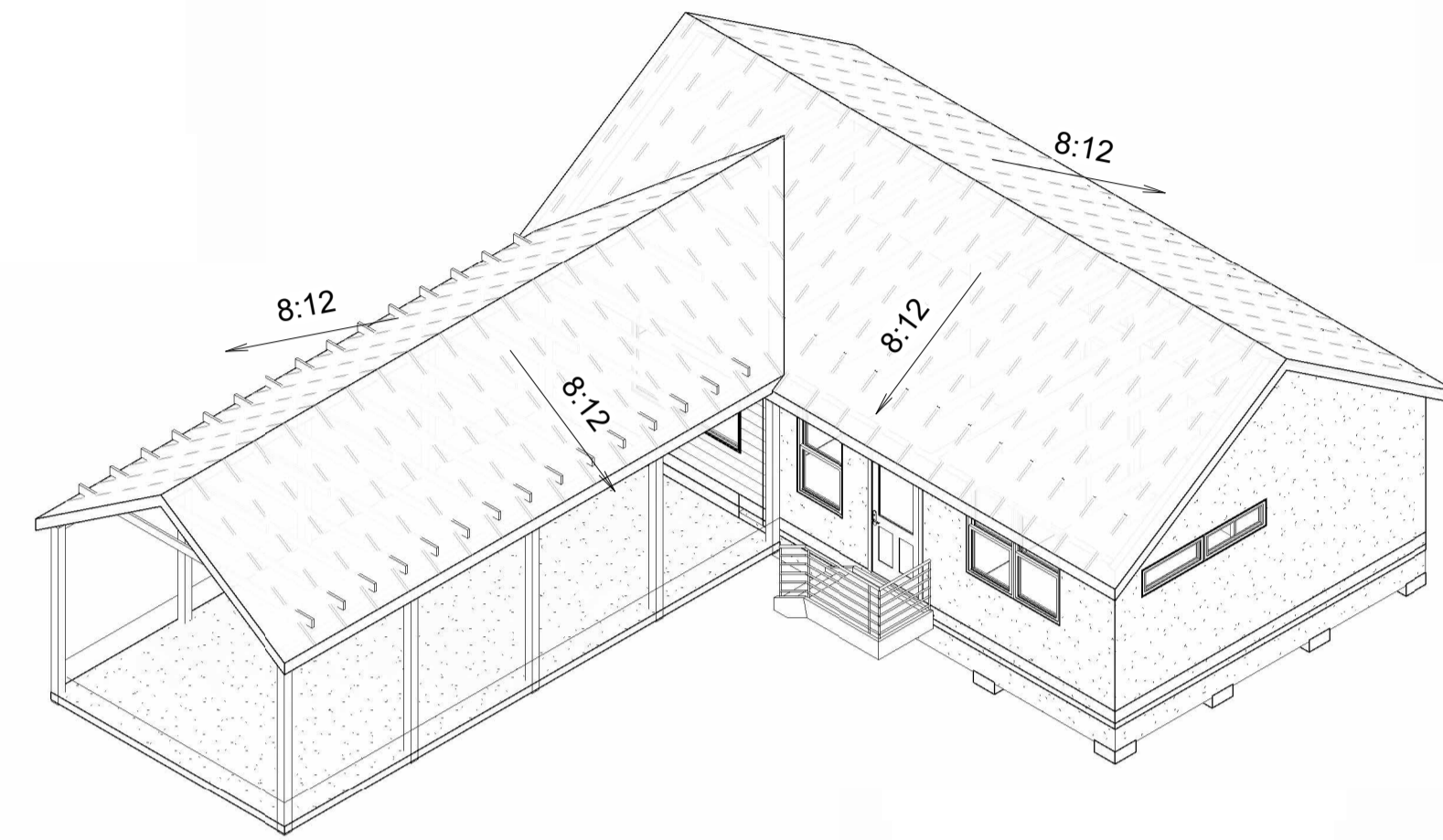
CORROSION SPECIFICATIONS FOR EXTERIOR CONNECTORS

- a. Minimum specifications for steel anchors, straps, ties, fasteners, and connectors. Suitable for all treated and untreated wood. Obtain approval for changes in materials. Exterior exposed to element steel connectors to be applied as meeting either 'exterior-wet' or 'exterior-coastal' specifications as follows.
- b. 'Exterior-wet' (non-coastal) exposed anchors, straps, ties, fasteners and connectors to meet ASTM A153 such as Simpson ZDMAX/HDG or Simpson double barrier coating, or equal.
- c. 'Exterior-coastal' exposed steel anchors, straps, ties, fasteners and connectors to be AISI type A316, A303, A304, or A305 stainless steel.
- d. All other material exposed non-stainless steel anchors, straps, ties, fasteners and connectors to be salt protected by maintained 100% encapsulation using only approved marine specification exterior two-part epoxy paint, with annual inspection and reapplication as needed.

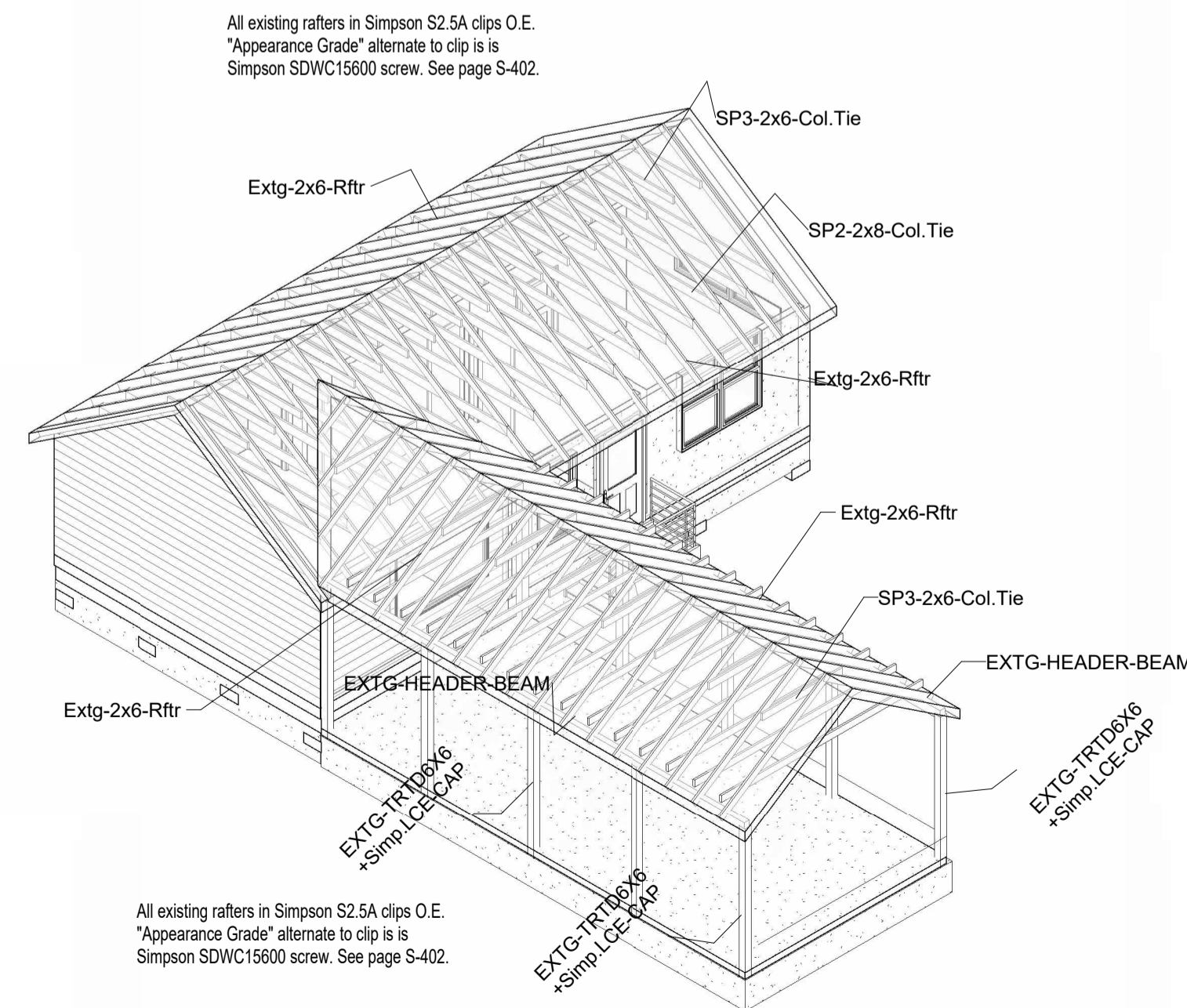
ENERGY STRATEGIES (IF NOT PLAN SPECIFIED)

EFFICIENT WALLS INSPECTION SEALING OWNER CHECK LIST

- The framer and builder is to inspect and check off each item as confirmation that each source of air infiltration has been properly sealed during wall framing construction while still accessible.
- Top and bottom plates
 - Sill plates, Rim Boards, and band joists
 - Partition intersections
 - Subfloor and wallboard joints
 - Exterior wall corner assemblies
 - Seams and tears in house wrap or building paper
 - Window frames
 - Door frames and thresholds
 - Dropped ceilings and soffits
 - Attic hatches and knee wall access doors
 - Vents, registers and HVAC penetrations
 - Ductwork penetrations
 - Plumbing and condensate penetrations
 - Bathtubs and showers on outside walls
 - Utility chases
 - Chimney / flue penetrations and fireplace dampers
 - Electrical outlets and wiring penetrations
 - Recessed light and fan fixtures
 - Exterior penetrations (utility service holes, etc.)



2 3D ROOF FRAMING - RIGHT

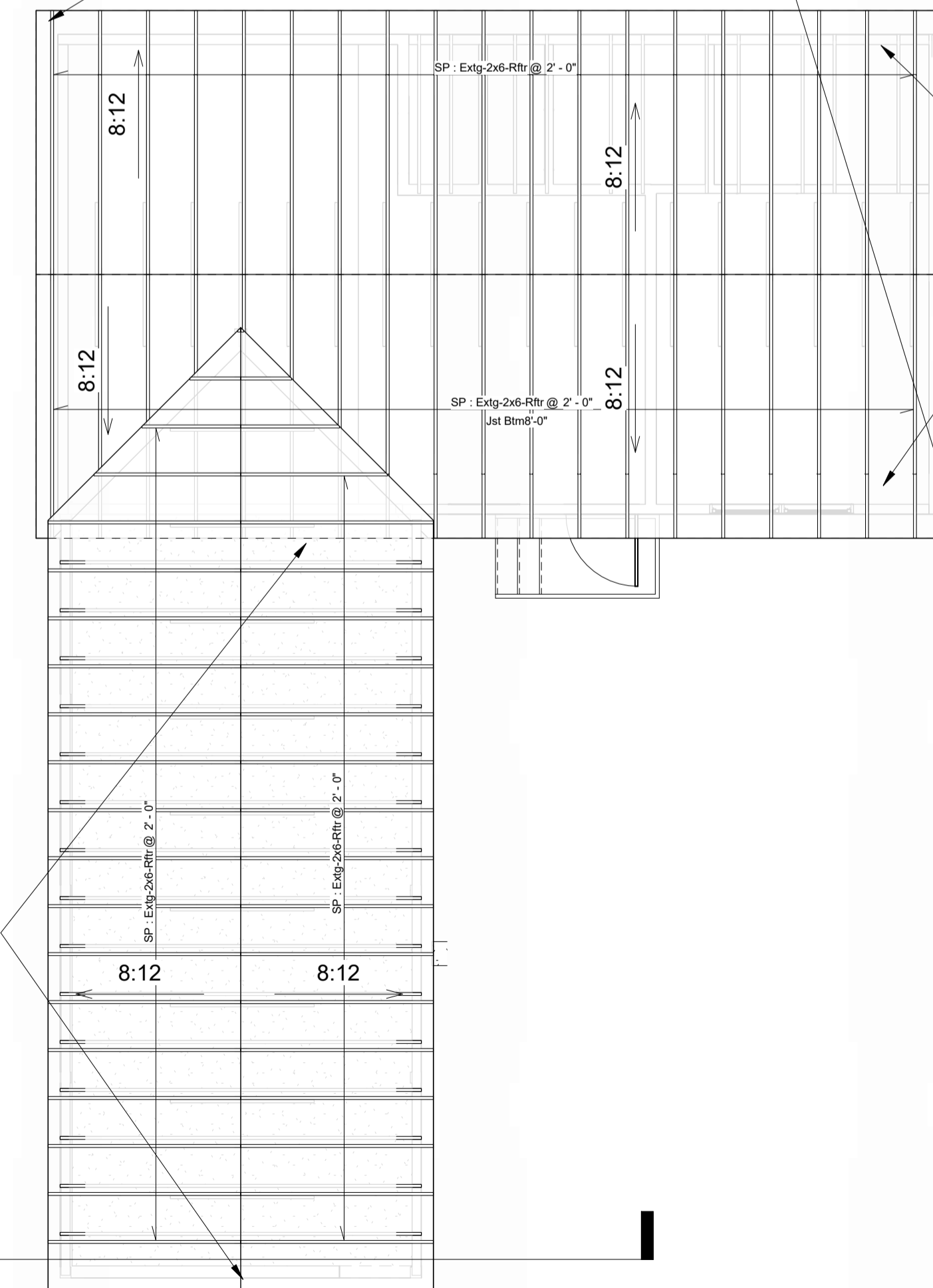


3 3D ROOF FRAMING - LEFT

DESIGN CRITERIA: Minimum Wind Speed = V(ult) = 142 mph 3 second gust.

NOTE: ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY (FV) ALL DIMENSIONS DURING CONSTRUCTION. UNLESS NOTED OTHERWISE ON PLANS. ANY NEW RAFTERS SHALL BE SP2 2X @ 16"OC WITH PURLINS, BRACING, AND VAULTED AREA RAFTERS PER PLANS.

No rafter changes to existing roof structure accept to repair damaged members and decking. Repair any existing upper collar tie as needed. Add new SP#2 2x8 lower collar tie to every rafter to create 9' center coffered ceiling with sloped ceiling edge by rafters. Add Simpson S2.5A O.E. to every rafter end. "Appearance Grade" alternate to clip is Simpson SDWC15600 screw. See page S-402.



All existing rafters in Simpson S2.5A clips O.E. "Appearance Grade" alternate to clip is Simpson SDWC15600 screw. See page S-402.

No rafter changes to existing roof accept to repair damaged members and decking. Add 2x6 collar tie at every other rafter. Add Simpson S2.5A O.E. to every rafter end. "Appearance Grade" alternate to clip is Simpson SDWC15600 screw. See page S-402.

1 ROOF FRAMING
3/16" = 1'-0"

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PROJ#:

220 BRYAN ST.
HOUSTON, TX 77011

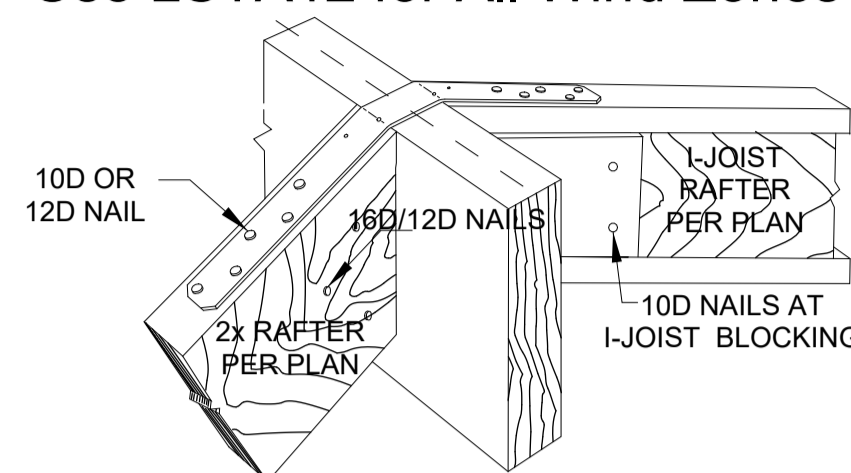
SHEET NAME
ROOF FRAMING PLAN

ROOF PLAN NOTES:
Roof slope per arch. plans. Use 2" min. bearing and 1/3 member depth max. natching. U.N.O. plates, rimpjoints, blocking, strapping, roof bracing is not shown. U.N.O. all walls above to be over beams, triple joists, or blocking. U.N.O. roof braces to be supported by walls, beams, or triple joists.

S-200

SIMPSON STRONG-DRIVE® SYSTEM SCREWS FOR RETOFIT AND ENHANCED RESISTANCE IN HIGH WIND SITES, OR FOR NEW 110 MPH PROJECTS AS REPLACEMENT OF CLIPS/STRAPS IN SAME FRAMING APPLICATIONS

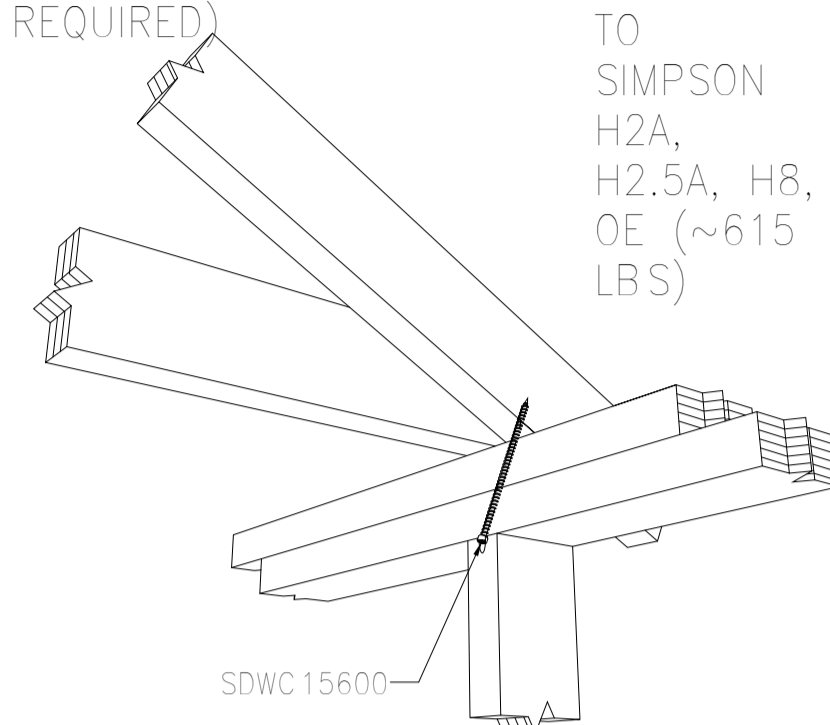
Use LSTA12 for All Wind Zones



LSTA12 is installed in line with rafter/truss to top plate screw, or clip/strap, over ridge to rafter ends under roof decking. LSTA12 will not interfere with roof deck nailing due to ~5" length on each side. Rafter/truss must be opposite of each other. Alternate is LSTA18 installed over 15/32" to 25/32" maximum decking.

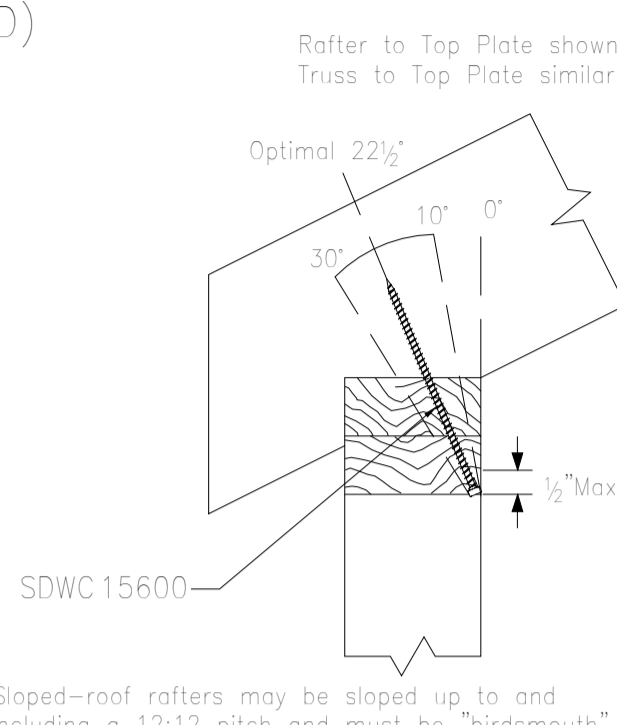
AT EVERY RIDGE RAFTER TO RAFTER

(NAILING STILL REQUIRED)



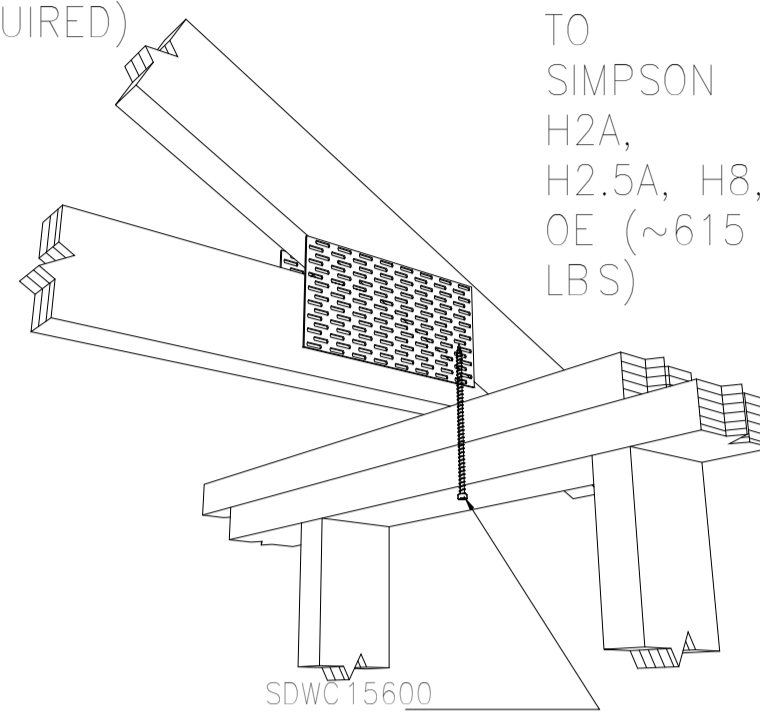
ALTERNATE TO SIMPSON H2A, H2.5A, H8, OE (~615 LBS)

(NAILING STILL REQUIRED)



Note: 1. Sloped-roof rafters may be sloped up to and including a 12:12 pitch and must be "birds-mouth" cut.
2. Reference detail 4 for installation instructions.

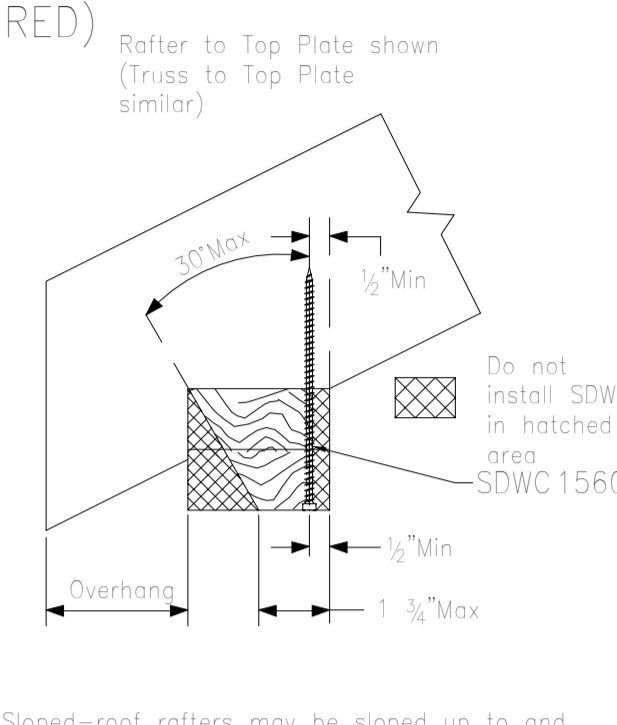
(NAILING STILL REQUIRED)



ALTERNATE TO SIMPSON H2A, H2.5A, H8, OE (~615 LBS)

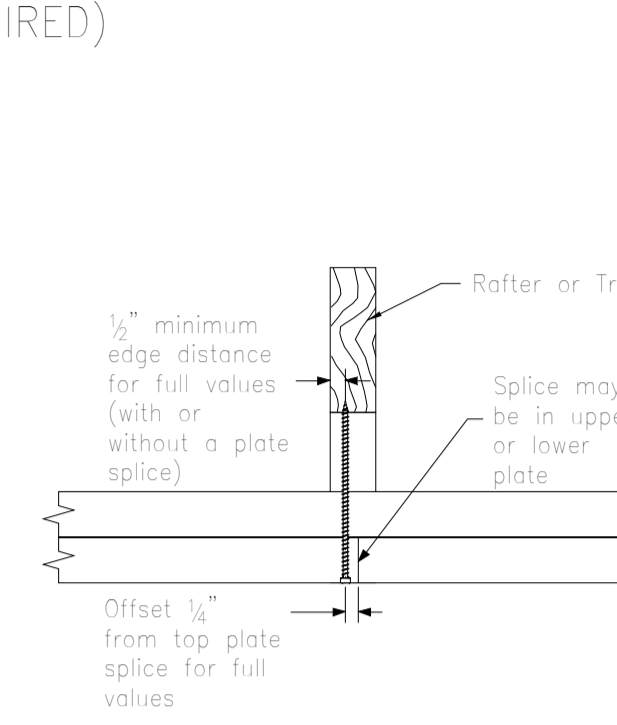
Note: Reference detail 2a for installation angle limit

(NAILING STILL REQUIRED)

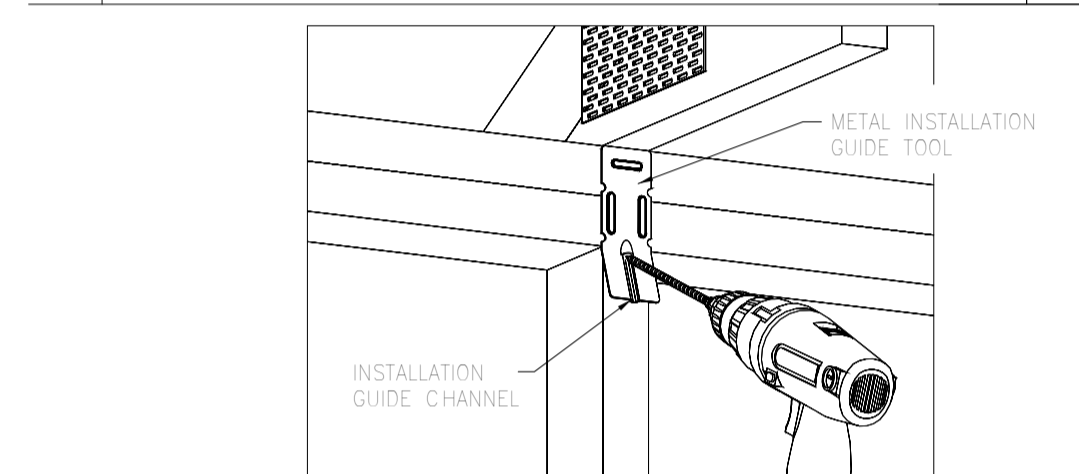


Note: Sloped-roof rafters may be sloped up to and including a 12:12 pitch and must be "birds-mouth" cut.

(NAILING STILL REQUIRED)



1 STANDARD SDWC ROOF TO WALL INSTALLATION

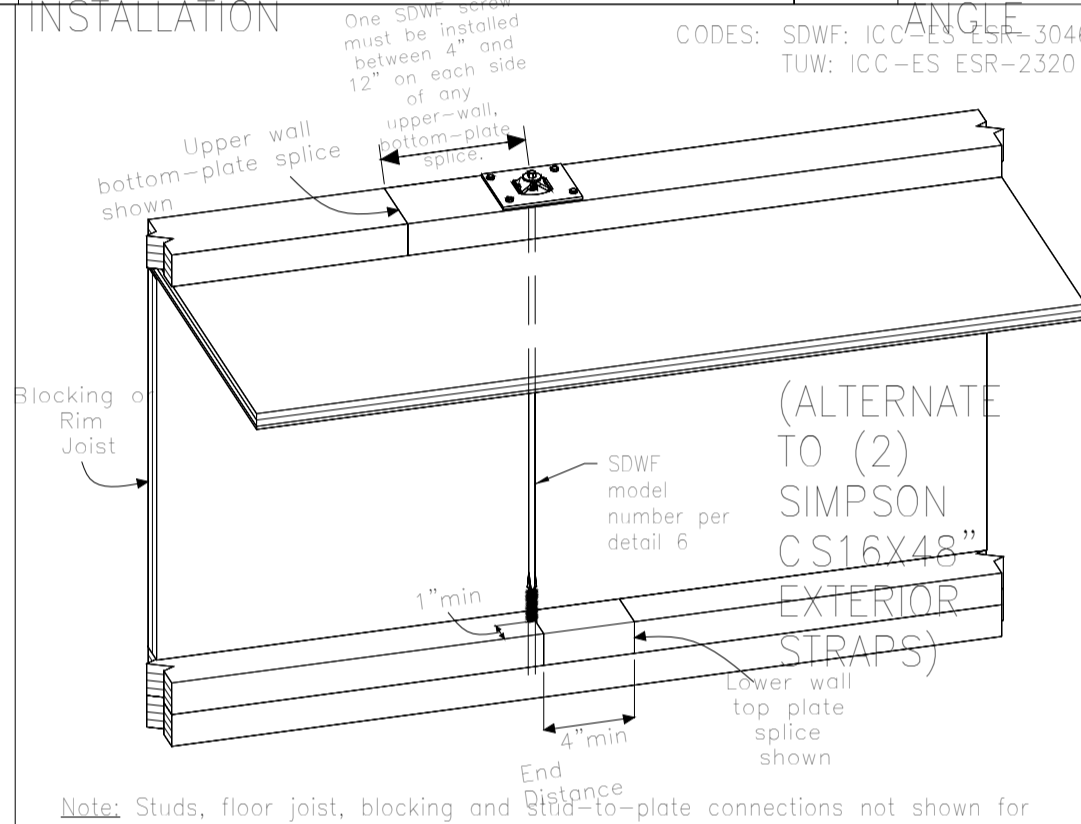


Step 1 - Align the metal installation guide tool (included) with the truss or rafter, and drive the tip of the Strong-Drive SDWC to engage the threads.

Step 2 - While continuing to drive the SDWC, "drop" the fastener head into the guide channel to ensure optimal installation angle of 22.5°. The installation angle range is 10°-30° (see detail 1a). Once the installation angle is established, the metal installation guide tool may be removed.

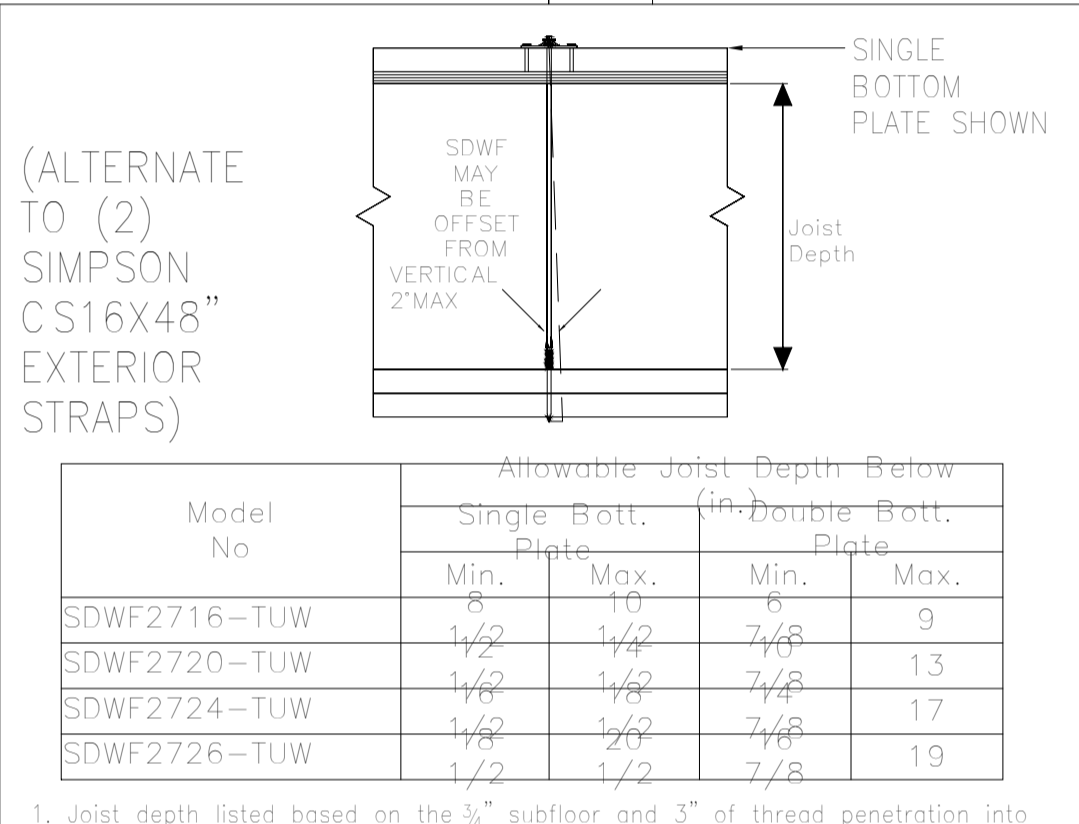
Step 3 - Drive the SDWC until the head of the fastener is fully countersunk into the double top plate. Verify that the entire shank of the fastener is installed into a wood member.

2 SDWC15600 RAFTER TO PLATE INSTALLATION

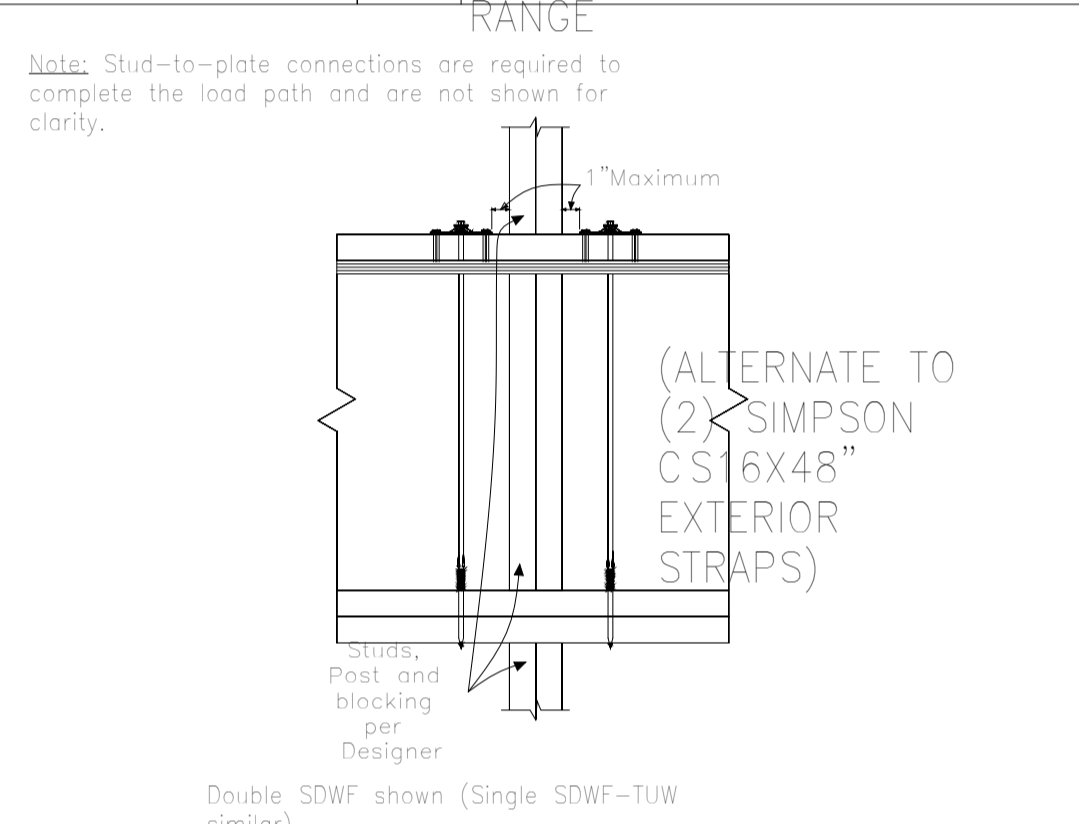


Note: Stud, floor joist, blocking and brace-to-plate connections not shown for clarity.

1a STANDARD SDWC RAFTER TO WALL

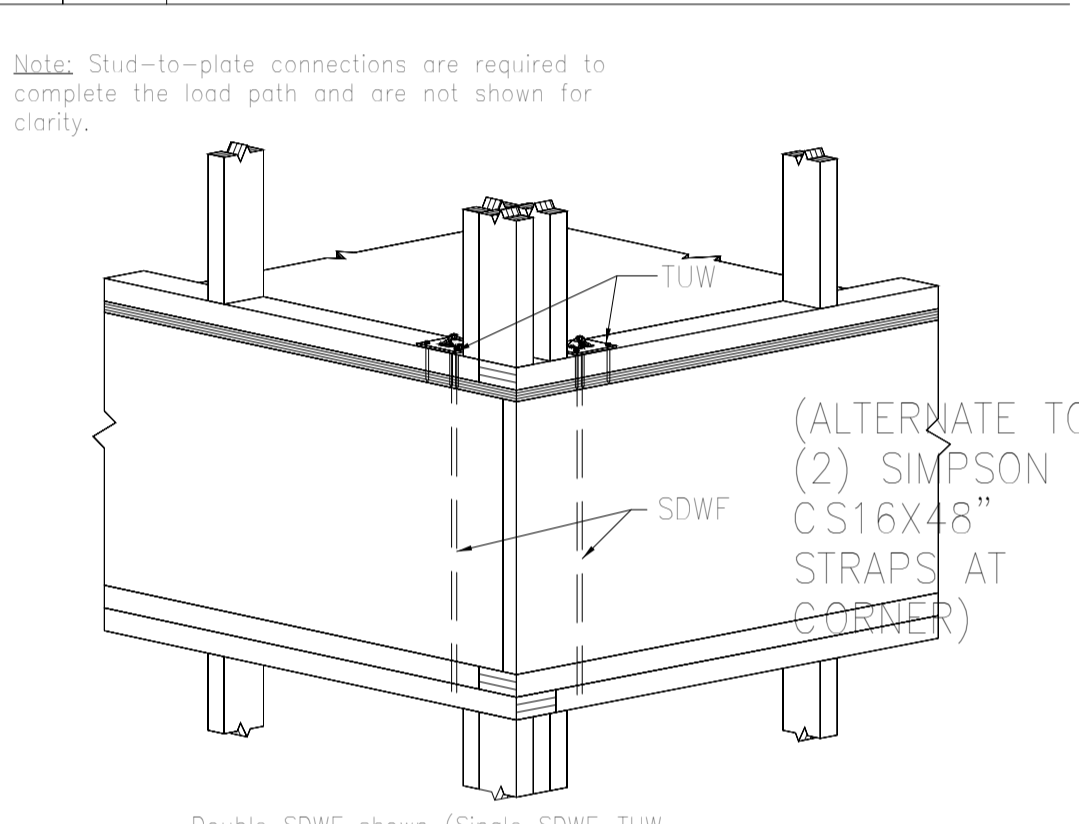


2 SDWC15600 WHEN TRUSS OFFSET FROM STUD



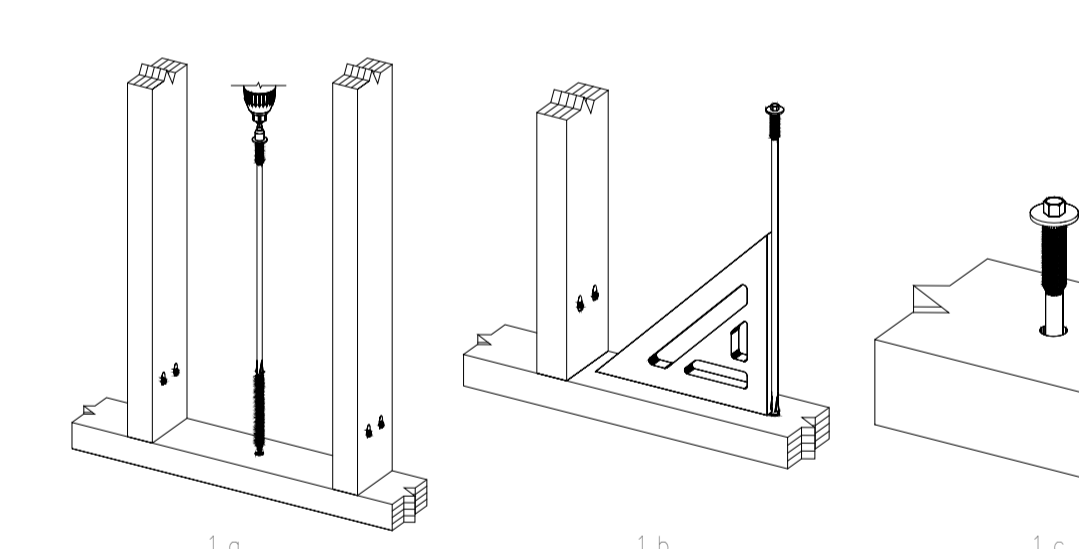
Note: Stud-to-plate connections are required to complete the load path and are not shown for clarity.

3 SDWC MIN. EDGE DISTANCE FOR T.P. SPLICE



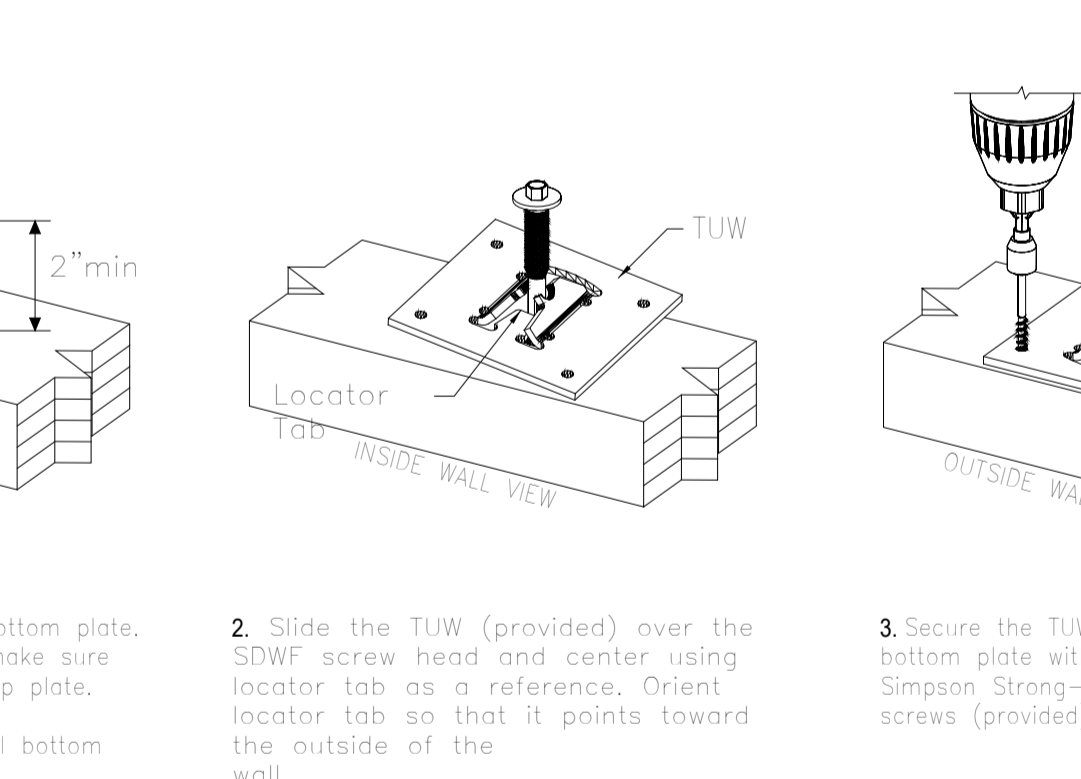
Note: Stud-to-plate connections are required to complete the load path and are not shown for clarity.

4 SDWC INSTALLATION INSTRUCTIONS (ROOF TO WALL)

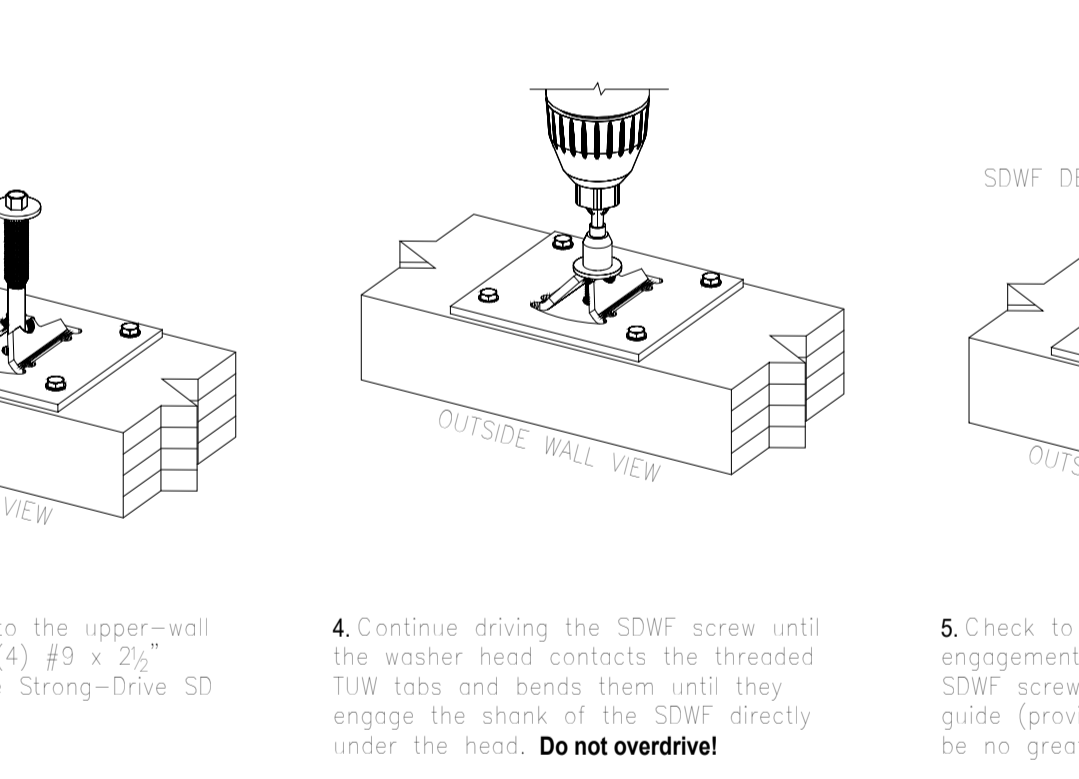


1a Drive the SDWF screw vertically (90° ± 2°) into the center of the upper-wall bottom plate.
1b Once SDWF has passed through upper-wall bottom plate and floor sheathing, make sure SDWF is still vertical (90° ± 2°) prior to driving SDWF into lower-wall double top plate. Adjust if necessary.
1c Continue driving SDWF until the head is a minimum of 2" above the upper-wall bottom plate.

5 TYPICAL SDWF-TUW (ALT. TO SIMPSON CS16X48" STRAP)

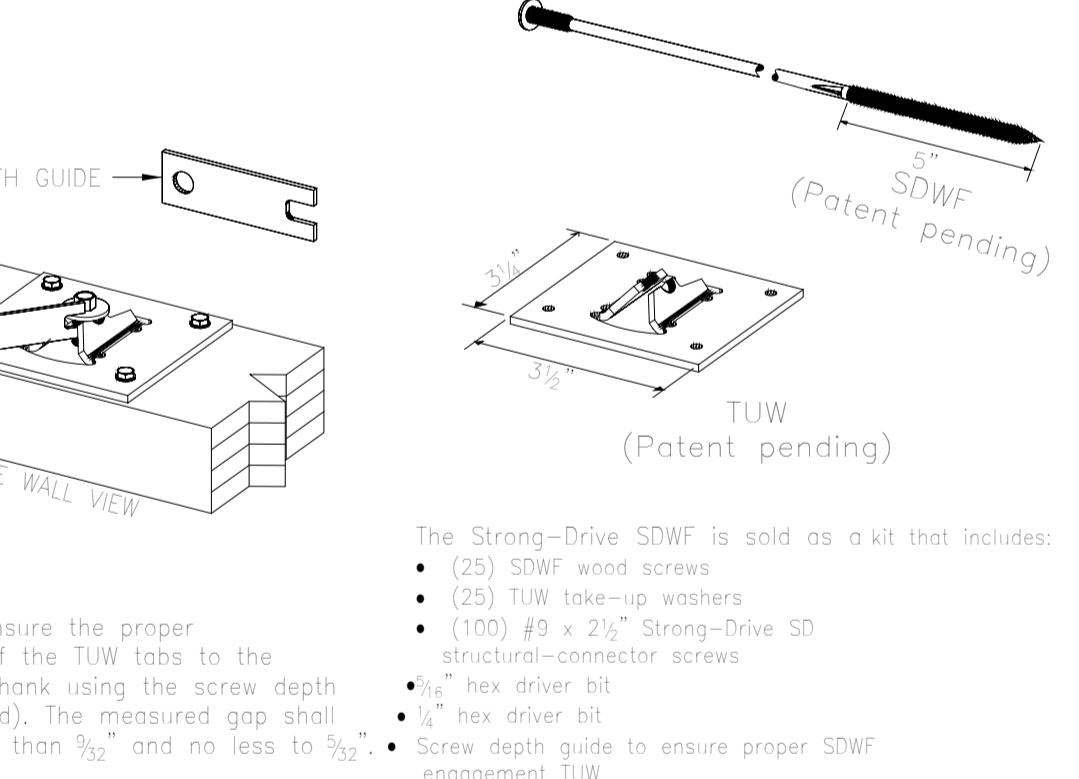


6 SDWF ANGLE LIMIT INSTALLATION & ALLOWABLE JST. DEPTH



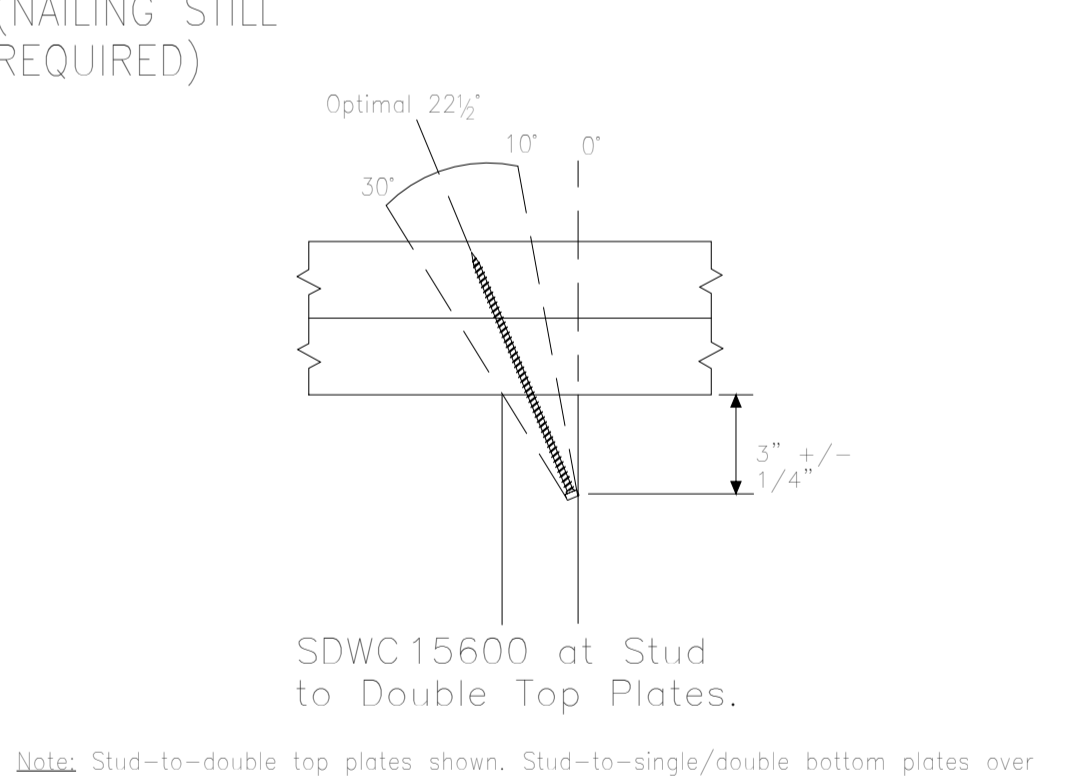
1. Joist depth listed based on the 3/4" subfloor and 3" of thread penetration into double top plates

7 SDWF-TUW CONCENTRATED LOAD RESTRAINT AT CONTINUOUS WALL



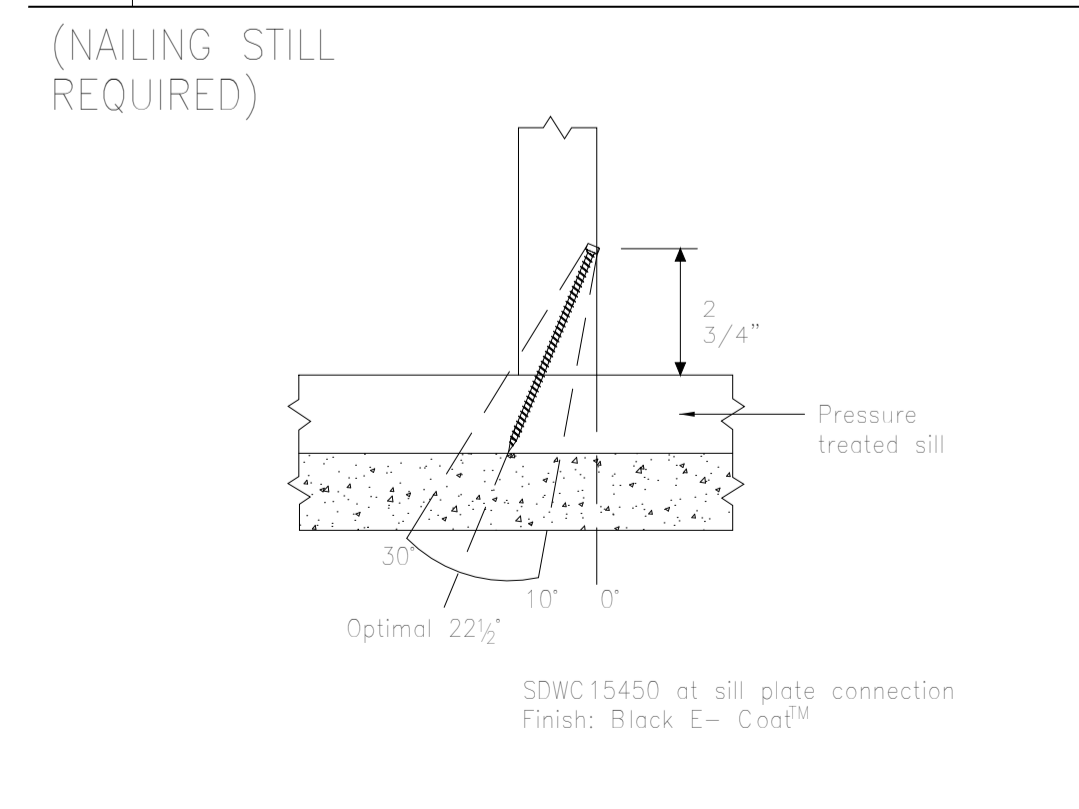
Note: Stud-to-plate connections are required to complete the load path and are not shown for clarity.

8 SDWF-TUW CONCENTRATED LOAD RESTRAINT AT CORNER



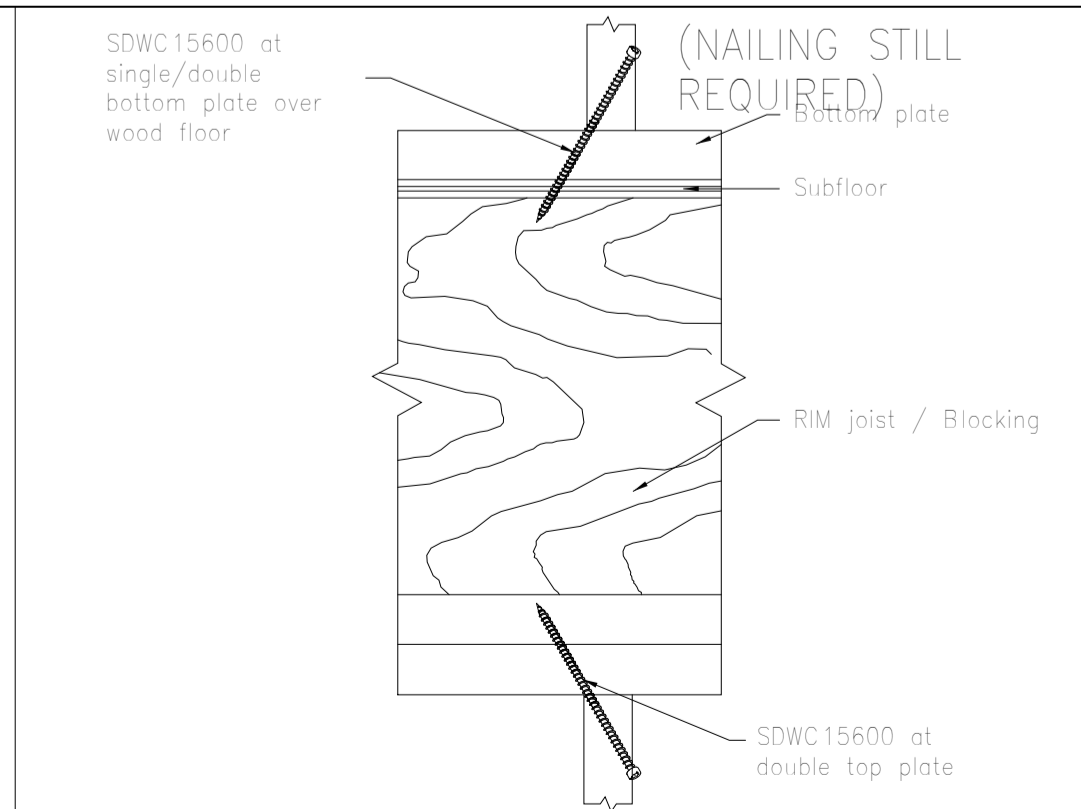
Note: Stud-to-plate connections are required to complete the load path and are not shown for clarity.

9 SDWF-TUW INSTALLATION AND PRODUCT INFORMATION



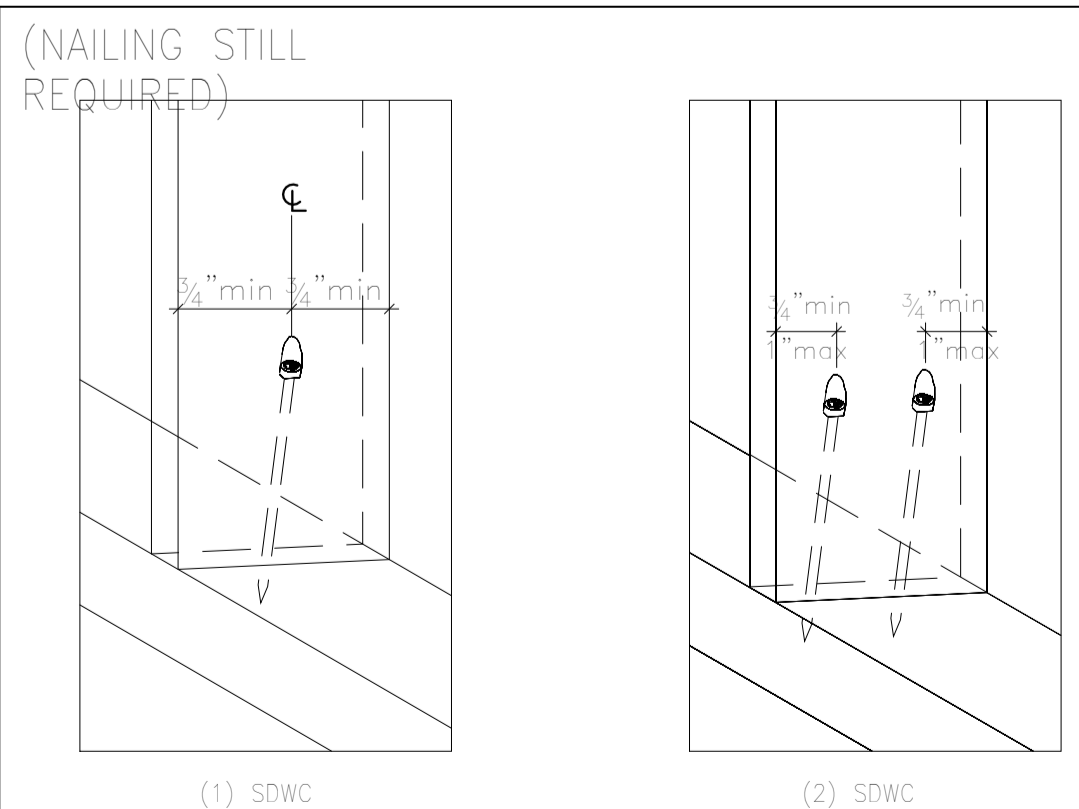
Note: Sill plate anchor to foundation not shown for clarity.

10 SDWC STUD-TO-TOP/BOTTOM PLATES CONNECTION



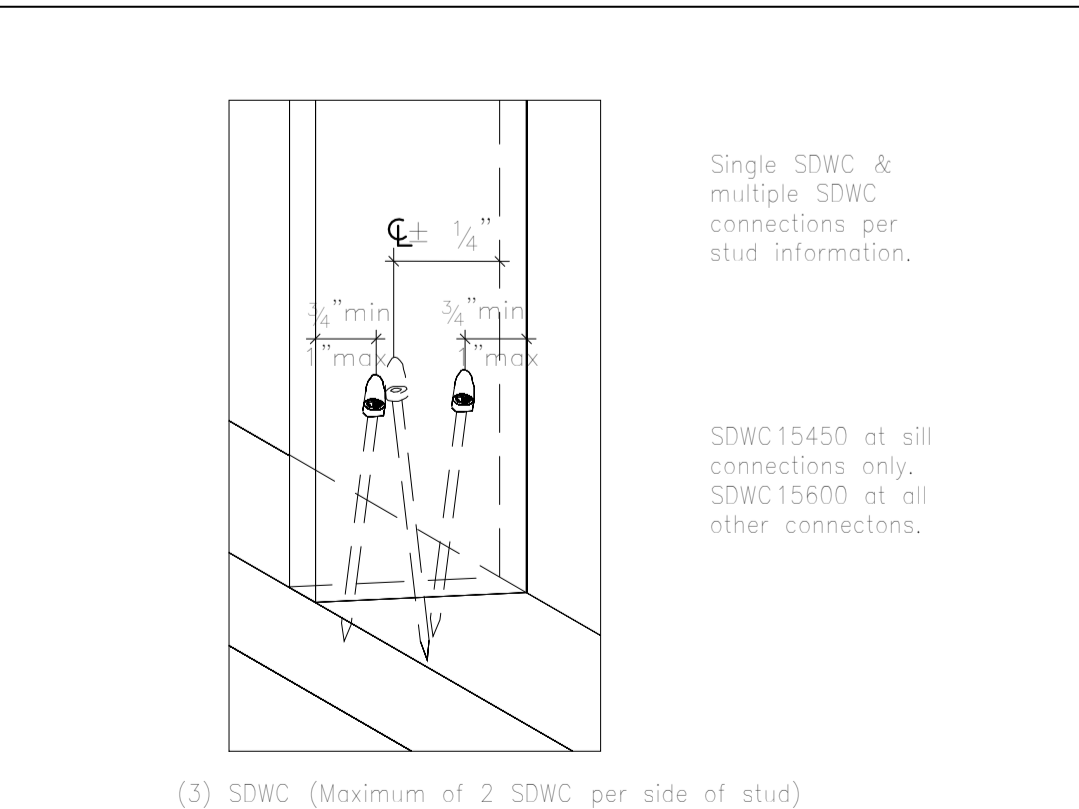
Note: Stud-to-bottom plate shown. All other installations similar.

11 SDWC STUD-TO-SILL PLATE CONNECTION



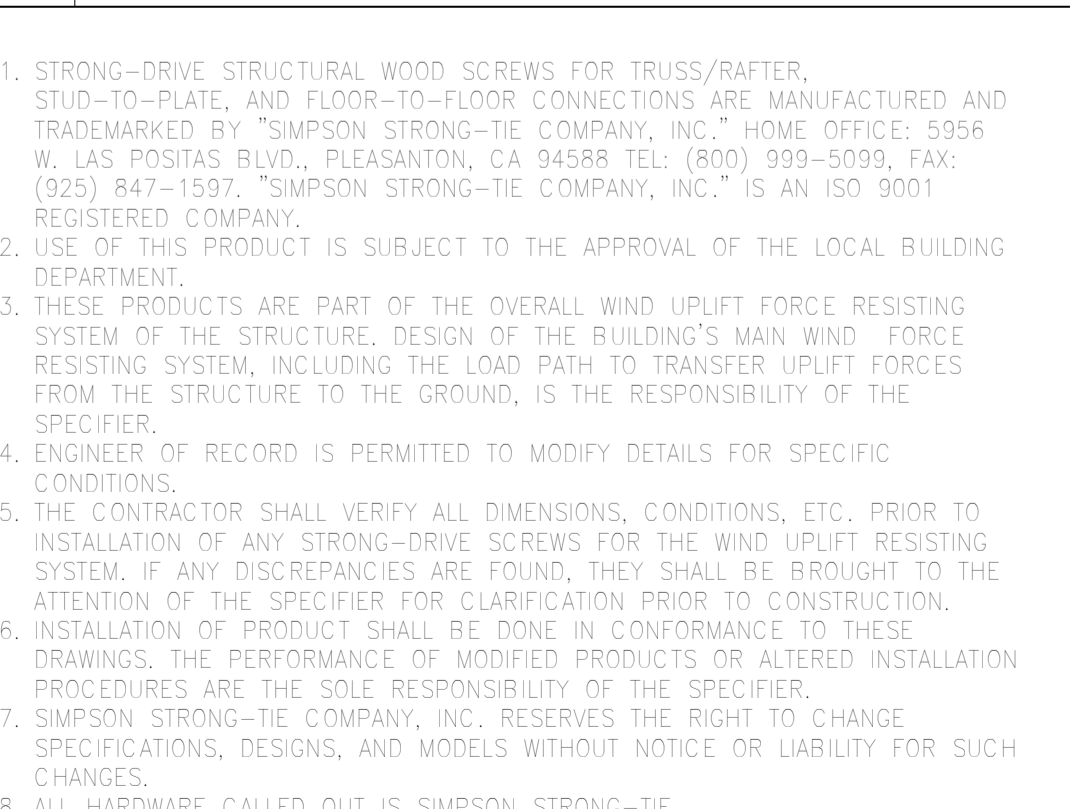
Note: Stud-to-bottom plate shown. All other installations similar.

12 SDWC STUD-TO-BOTT. PLATE CONNECTION OVER WOOD FLOOR



Note: Stud-to-bottom plate shown. All other installations similar.

13 SDWC EDGE DISTANCE AND SPACING INFORMATION



Note: Stud-to-bottom plate shown. All other installations similar.

ALTERNATE WOOD FRAMING SCREW CONNECTION DETAILS

(S-109.1)

220 BRYAN ST.
HOUSTON, TX 77011

SHEET NAME
WIND SCREW
DETAILS

S-402