

## Foundation Notes

- beams and girders.
- to post.
- Cover entire crawl space with 6 mil black visqueen vapor barrier.
- Excavate a min. of 18" below bottom of all beams.
- S1.0)

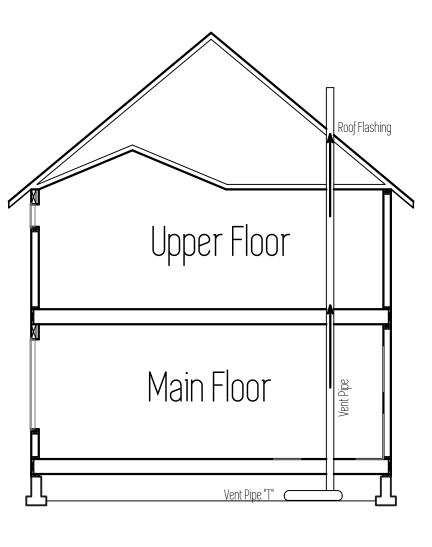
## Shear Wall Panel

Interior Bearing Wall (above) HoldDown

Footing Schedule				
F1	24" x 24" x 8" Concrete footing with (2) #4 bars each way.			
F3	30" x 30" x 8" Concrete footing with (3) #4 bars each way.			
F5	36" x 36" x 8" Concrete footing with (3) #4 bars each way.			

# Radon Passive System

AF103.5.1.3 Vent Pipe adjoining or adjacent buildings.



• Concrete : Minimum 28 day concrete strength = 2500 psi. • Grade beams, piers and spread footings shall be poured onto undisturbed, native soil which is free from any material that will adversely affect the soil bearing pressure.

• Footings are to be on undisturbed soil with an assumed 1500 PSF

• All slabs to be supported with a min. of 4" of compacted crushed rock fill.

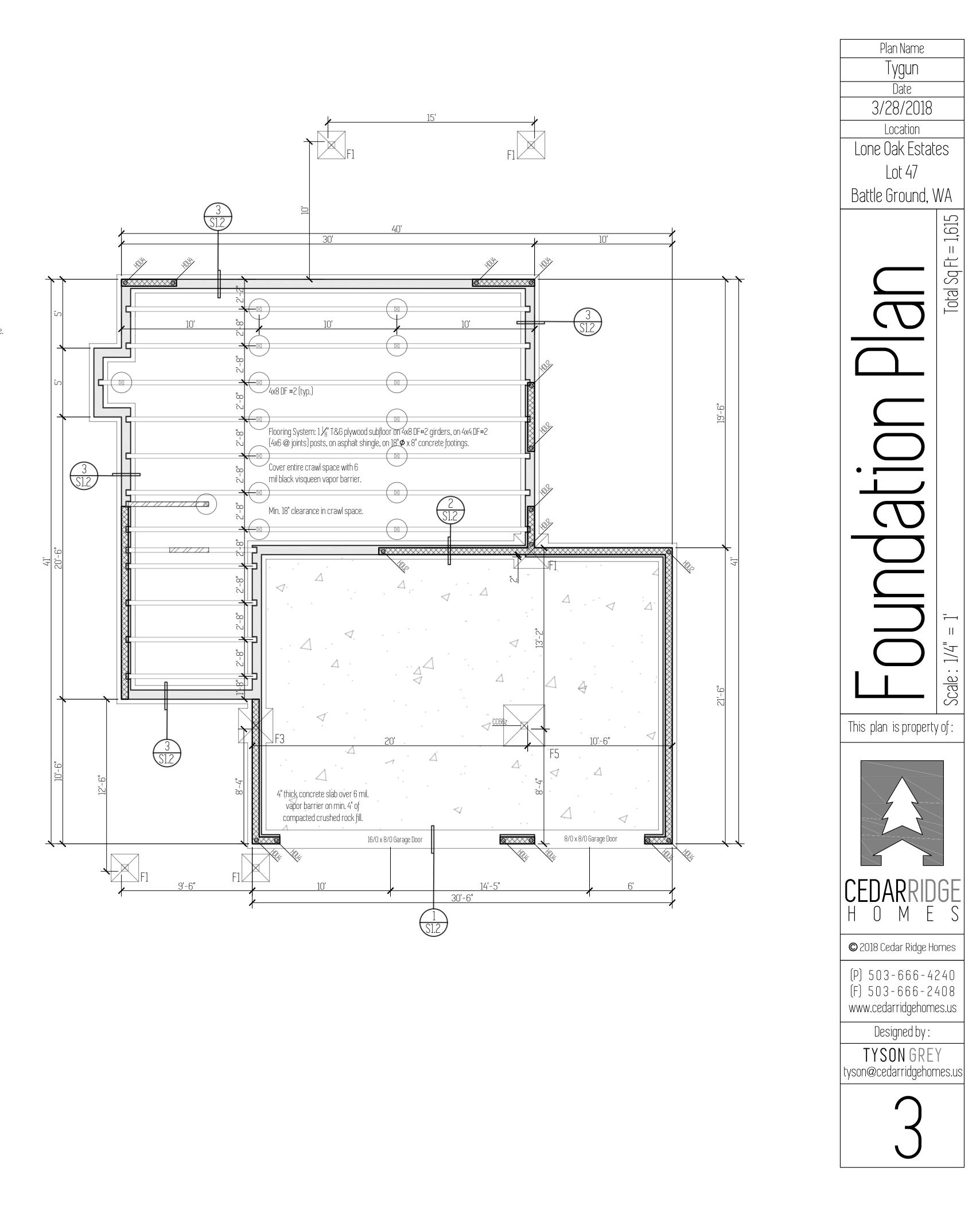
• Beam pockets in concrete walls to have a min.  $\frac{1}{2}$ " air space on sides, and min. 3" of bearing for all

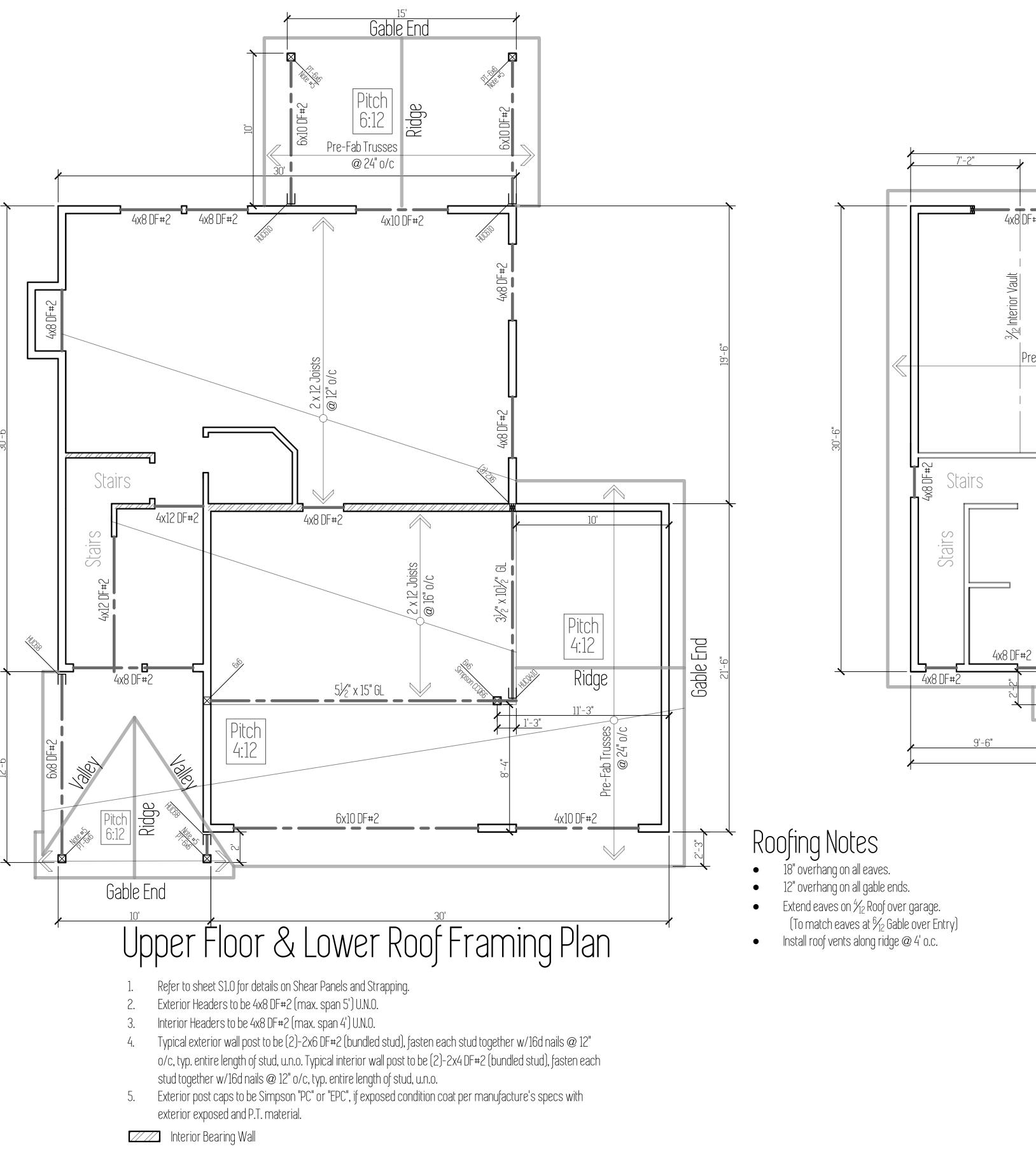
• Typical pier pad to be 18" dia. x 8" concrete footing with 4x4 DF#2 post.

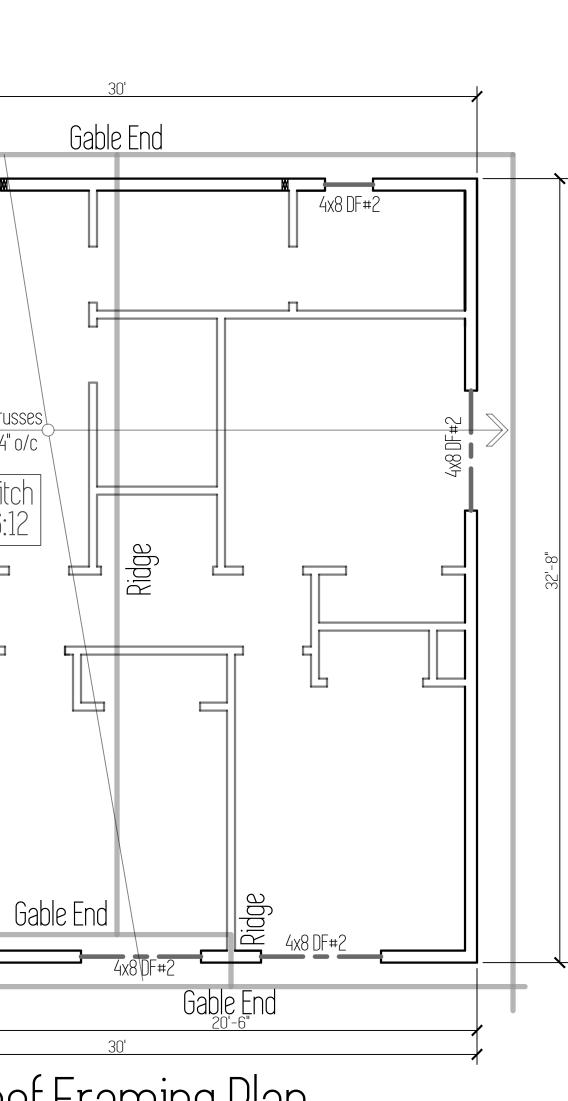
• Typical crawl space beam to be 4x8 DF#2. Single gusset plate to be used on both sides of attachment

• Install 15" x 7" closable FND vents in FND walls. Min 1 sq ft vented area for every 150 sq ft of crawl space. • Refer to Shear Wall Schedule and Hold-Down Schedule for sill bolt spacing and hold-down size. (PAGE

A plumbing tee or other approved connection shall be inserted horizontally beneath the sheeting and connected to a 3- or 4-inch-dia. fitting with a vertical vent pipe installed through the sheeting. The vent pipe shall be extended up through the building floors, terminate at least 12" above roof in a location at least 10' away from any window or other opening into the conditioned spaces of the building that is less than 2' below the exhaust point, and 10' from any window or other opening







# Roof Framing Plan

4x8 DF#2

3/2 Interior Vault

Pre-Fab Trusses

@24" o/c

Pitch 6:12

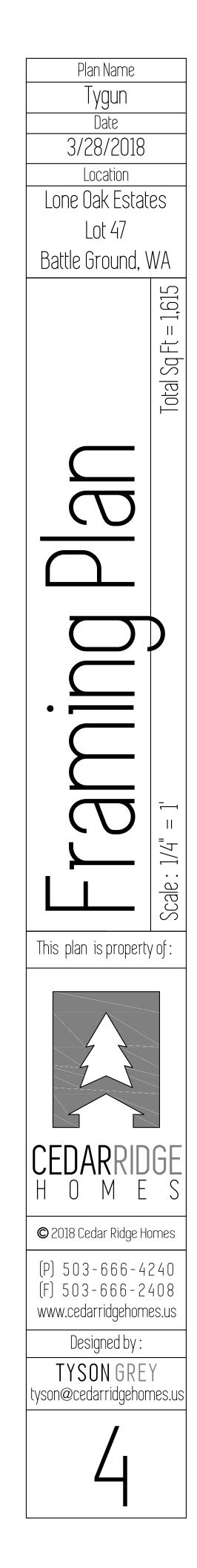
5.

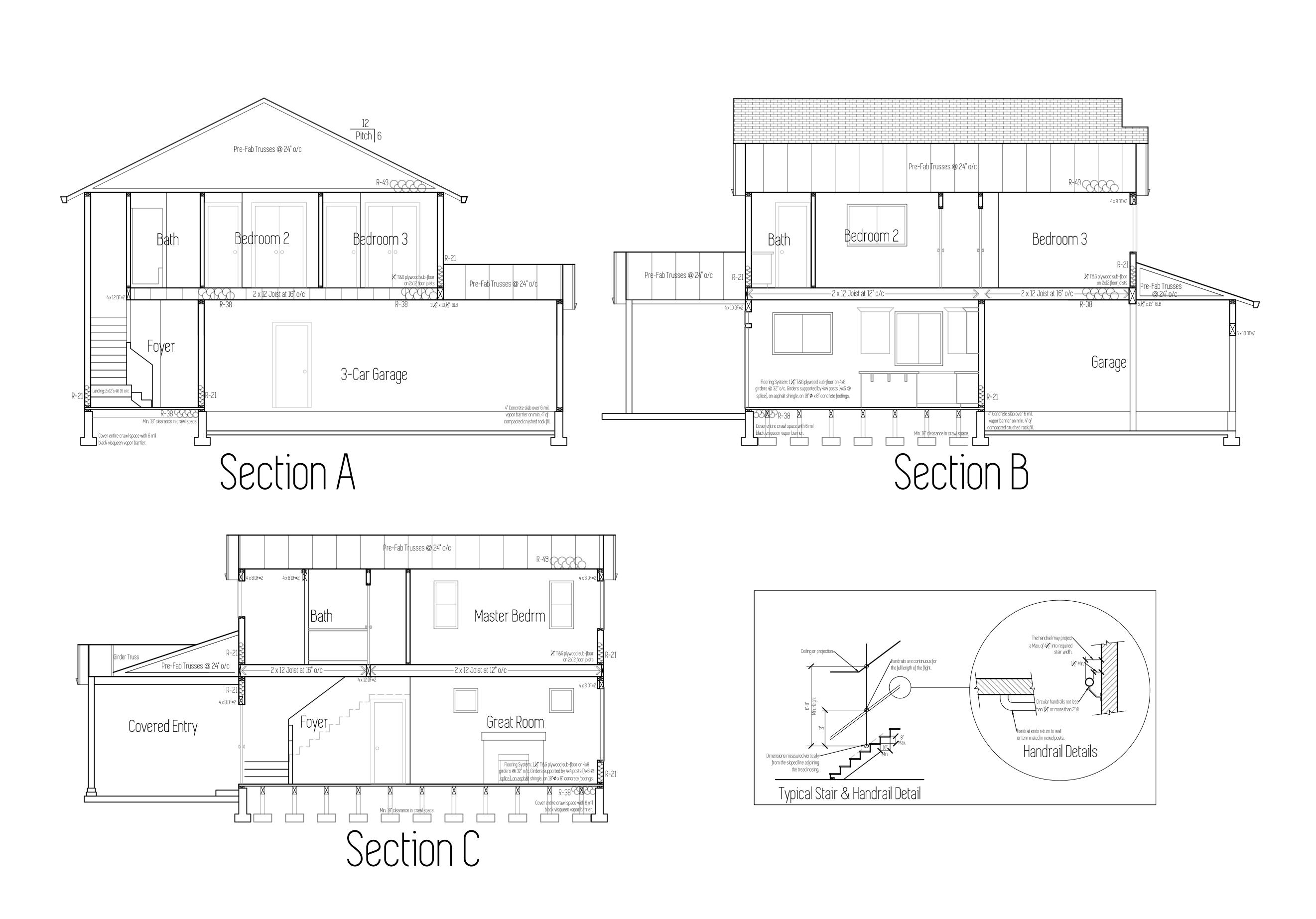
Refer to sheet S1.0 for details on Shear Panels and Strapping.

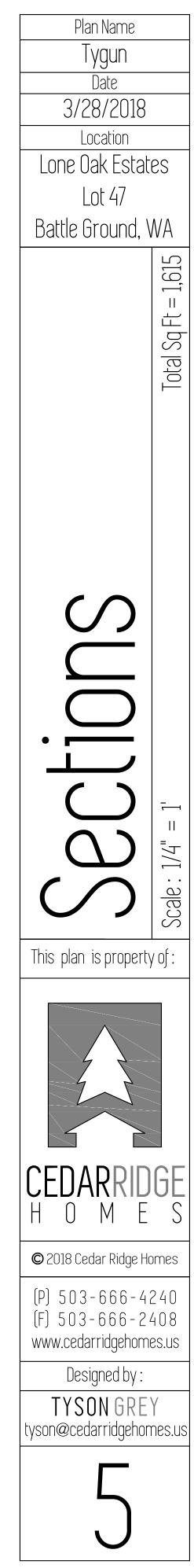
Exterior Headers to be 4x8 DF#2 (max. span 6') U.N.O. Interior Headers to be 4x8 DF#2 (max. span 4') U.N.O.

Typical exterior wall post to be (2)-2x6 DF#2 (bundled stud), fasten each stud together w/16d nails @ 12" o/c, typ. entire length of stud, u.n.o. Typical interior wall post to be (2)-2x4 DF#2 (bundled stud), fasten each stud together w/16d nails @ 12" o/c, typ. entire length of stud, u.n.o.

Exterior post caps to be Simpson "PC" or "EPC", if exposed condition coat per manufacture's specs with exterior exposed and P.T. material.







## SUMMARY OF WORK:

LOCATION: LOAN OAK ESTATES LOT 47 VANCOUVER, WASHINGTON STRUCTURAL ANALYSIS AND DESIGN FOR SINGLE FAMILY RESIDENCE DESIGN LOADS:

CODE: 2012 IBC USE OR OCCUPANCY OF BUILDINGS AND STRUCTURES RISK CATEGORY (ASCE TABLE 1.5-1): II WIND SPEED Vult: 135 MPH EXPOSURE 'B', Vasd = 105 MPH (IBC EQUATION 16-33) SEISMIC DESIGN CATEGORY: 'D' GROUND SNOW LOAD: 25 PSF (ROOF SNOW LOAD: 25 PSF) ROOF DEAD LOAD: 15 PSF

FLOOR LIVE LOAD: 40 PSF FLOOR DEAD LOAD: 10 PSF

SOIL BEARING PRESSURE: 1500 PSF SOIL PASSIVE SOIL PRESSURE: 200 PSF

## FRAMING REQUIREMENTS:

1. WALL STUDS TO BE 2X6 DFL-#2 @ 16" O.C., TYPICAL U.N.O.

2. ROOF SHEATHING TO BE <sup>15</sup>/<sub>32</sub>" APA RATED CDX SHEATHING OR OSB. INSTALL PANELS HORIZONTALLY. SPACE 8d NAILS MAXIMUM 6" O.C. ALONG PANEL EDGES. FOR OTHER CONDITIONS, SPACE 8d NAILS MAXIMUM 12" O.C. ON INTERMEDIATE SUPPORTS.

3. TYPICAL WALL SHEATHING (TSN) TO BE  ${}^{15}\!\!_{32}$ " APA RATED CDX SHEATHING OR OSB. ALL PANEL EDGES TO BE BACKED WITH 2-INCH NOMINAL OR WIDER FRAMING. INSTALL PANELS HORIZONTALLY OR VERTICALLY. SPACE 8d NAILS MAXIMUM 6" O.C. ALONG PANEL EDGES. FOR OTHER CONDITIONS AND PANEL THICKNESSES, SPACE 8d NAILS MAXIMUM 12" O.C. ON INTERMEDIATE SUPPORTS.

4. FLOOR SHEATHING TO BE 5/8" APA RATED CDX SHEATHING OR OSB. SPACE 8d NAILS MAXIMUM 6" O.C. ALONG PANEL EDGES. FOR OTHER CONDITIONS, SPACE 8d NAILS MAXIMUM 12" O.C. ON INTERMEDIATE SUPPORTS. 5. SILL PLATE TO BE 2X P.T. U.N.O. (REFER TO SILL BOLT SPACING IN SCHEDULE BELOW). 6. FOR NAIL SIZES REFER TO BELOW.

## SHEAR WALL SCHEDULE: (1) (2) (4) SDPWS

TABLE 4.3A								
PANEL NOTATION	SHEATHING THICKNESS (IN.)	NAILS/ SPACING	DBL. STUD CONN. (FACE NAIL)	SILL BOLT <sup>(5)</sup> SPACING	SHEAR CAPACITY (SEISMIC)	SHEAR CAPACITY (WIND)		
D6	<sup>15</sup> / <sub>32</sub> " <sup>(8)</sup>	8d @ 6" O/C	16d @ 9" O/C	½" Ø@36" O/C	260 PLF	365 PLF		
D4 <sup>(3)</sup>	<sup>15</sup> / <sub>32</sub> " <sup>(8)</sup>	8d @ 4" O/C	16d @ 6" O/C	½" Ø@24" O/C	380 PLF	532 PLF		
D3 <sup>(3)</sup>	<sup>15</sup> / <sub>32</sub> " <sup>(8)</sup>	8d @ 3" O/C	16d @ 4" O/C	½" Ø @ 18" O/C	490 PLF	685 PLF		
D2 <sup>(3)</sup>	15/ <sub>32</sub> " <sup>(8)</sup>	8d @ 2" O/C	16d @ 3" O/C	½" Ø@ 16" O/C	640 PLF	895 PLF		
E2 <sup>(6)</sup>	15/32"	10d @ 2" O/C	N/A	<sup>1</sup> / <sub>2</sub> " Ø @ 14" O/C <sup>(6)</sup>	770 PLF	1077 PLF		

### NOTES:

LENGTH 2" 2<sup>1</sup>/<sub>2</sub>" 3" 3<sup>1</sup>/<sub>2</sub>" (1) SHEATHING TO BE APA RATED SHEATHING OR OSB (GRADE C-C OR C-D STRUCTURAL II OR BETTER). ALL PANEL EDGES TO BE BACKED WITH 2-INCH NOMINAL OR WIDER FRAMING (DFL-#2). INSTALL PANELS EITHER (9) COMMON OR GALVANIZED B HORIZONTALLY OR VERTICALLY. SPACE NAILS MAXIMUM 6" O.C. ALONG PANEL EDGES FOR STUDS SPACED 24" O.C FOR OTHER CONDITIONS AND PANEL THICKNESSES, SPACE NAILS MAXIMUM 12" O.C. ON INTERMEDIATE SUPPORTS.

(3) FRAMING AT ADJOINING PANEL EDGES SHALL BE A SINGLE 3" NOMINAL MEMBER OR (2) 2-INCH NOMINAL MEMBER FASTENED TOGETHER WITH 16d NAILS (SPACING ABOVE) TYPICAL ENTIRE HEIGHT OF DBL. STUD. NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED 2" O.C. (4) AT SHEAR WALL LOCATIONS, REFER RW/S1 AND FF/S1 FOR ROOF TO WALL AND FLOOR TO FLOOR FRAMING

(5) INSTALL 3" SQUARE X  $\frac{1}{4}$ " STEEL PLATE WASHER. (5) INSTALL 5 SQUARE A 74 STEEL FLATE WASHER.
 (6) FRAMING AT ADJOINING PANEL EDGES SHALL BE SINGLE 3X NOMINAL FRAMING MEMBERS AT EACH END OF THE PANEL. NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED 2" O.C. INSTALL MIN. 3X P.T. SILL PLATE, U.N.O. (7) PLYWOOD TO BE INSTALLED ON BOTH SIDES OF PANEL.

(8) IF  $\frac{7}{6}$ " NOMINAL THICK PLYWOOD OR OSB IS USED, STUDS TO BE SPACED AT 1'-4" O/C, TYPICAL. (9) GALVANIZED NAILS SHALL BE HOT-DIPPED OR TUMBLED

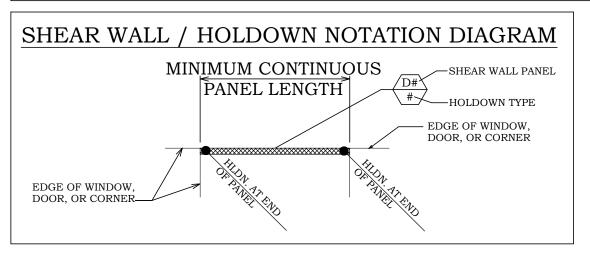
### HOLD-DOWN SCHEDULE:<sup>(2) (3) (4)</sup>

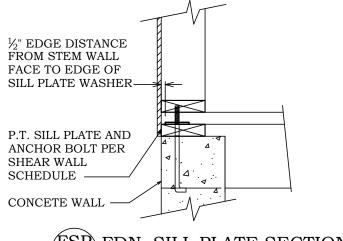
HOLDOWN NOTATION	'SIMPSON' HOLDOWN TYPE	INSTALLATION INSTRUCTIONS
2	HDU2 (3075#)	STD. 'SB $\frac{5}{8}$ X 24' MIN. 18" EMBEDMENT (le) CONCRETE. ANCHOR TO BE INSTALLED PLUMB AND LOCATED ALONG CENTER LINE OF (2)2X6 DFL+#2 WALL STUDS (MIN. $\frac{2}{4}$ " EDGE DISTANCE). FASTEN STUDS TOGETHER WITH 16d NAILS @ 6" O/C ENTIRE HEIGHT OF STUD. INSTALL HOLDOWN PER MANUFACTURER'S SPECIFICATIONS.
4	HDU4 (4565#)	STD. 'SB $\frac{5}{8}$ X 24' MIN. 18" EMBEDMENT (le) CONCRETE. ANCHOR TO BE INSTALLED PLUMB AND LOCATED ALONG CENTER LINE OF (2)2X6 DFL-#2 WALL STUDS (MIN. 2½" EDGE DISTANCE). FASTEN STUDS TOGETHER WITH 16d NAILS @ 6" O/C ENTIRE HEIGHT OF STUD. INSTALL HOLDOWN PER MANUFACTURER'S SPECIFICATIONS.
5	HDU5 (5645#)	STD. 'SB $\frac{5}{8}$ X 24' MIN. 18" EMBEDMENT (le) CONCRETE. ANCHOR TO BE INSTALLED PLUMB AND LOCATED ALONG CENTER LINE OF (2)2X6 DFL-#2 WALL STUDS (MIN. 2½" EDGE DISTANCE). FASTEN STUDS TOGETHER WITH 16d NAILS @ 6" O/C ENTIRE HEIGHT OF STUD. INSTALL HOLDOWN PER MANUFACTURER'S SPECIFICATIONS.
8	HDU8 (5980#,6970#, 7870#)	STD. 'SB 7% X 24' MIN. 18" EMBEDMENT (le) CONCRETE. ANCHOR TO BE INSTALLED PLUMB AND LOCATED ALONG CENTER LINE OF (3)2X6 DFL-#2 WALL STUDS (MIN. 2¾" EDGE DISTANCE). FASTEN STUDS TOGETHER WITH 16d NAILS @ 6" O/C ENTIRE HEIGHT OF STUD. INSTALL HOLDOWN PER MANUFACTURER'S SPECIFICATIONS.
28	MSTC28	INSTALL STRAP ACROSS FLOOR LINE, INSTALL MIN. (8) 16d NAILS INTO DOUBLE WALL STUDS ABOVE FLOOR AND INTO DOUBLE WALL STUDS BELOW. CENTER STRAP ON STUDS TO INSTALL NAILS INTO MIDDLE THIRD OF STUD.
40	MSTC40	INSTALL STRAP ACROSS FLOOR LINE, INSTALL MIN. (16) 16d NAILS INTO DOUBLE WALL STUDS ABOVE FLOOR AND INTO DOUBLE WALL STUDS BELOW. CENTER STRAP ON STUDS TO INSTALL NAILS INTO MIDDLE THIRD OF STUD.
52	MSTC52	INSTALL STRAP ACROSS FLOOR LINE, INSTALL MIN. (24) 16d NAILS INTO DOUBLE WALL STUDS ABOVE FLOOR AND INTO DOUBLE WALL STUDS BELOW. CENTER STRAP ON STUDS TO INSTALL NAILS INTO MIDDLE THIRD OF STUD.

NOTES:

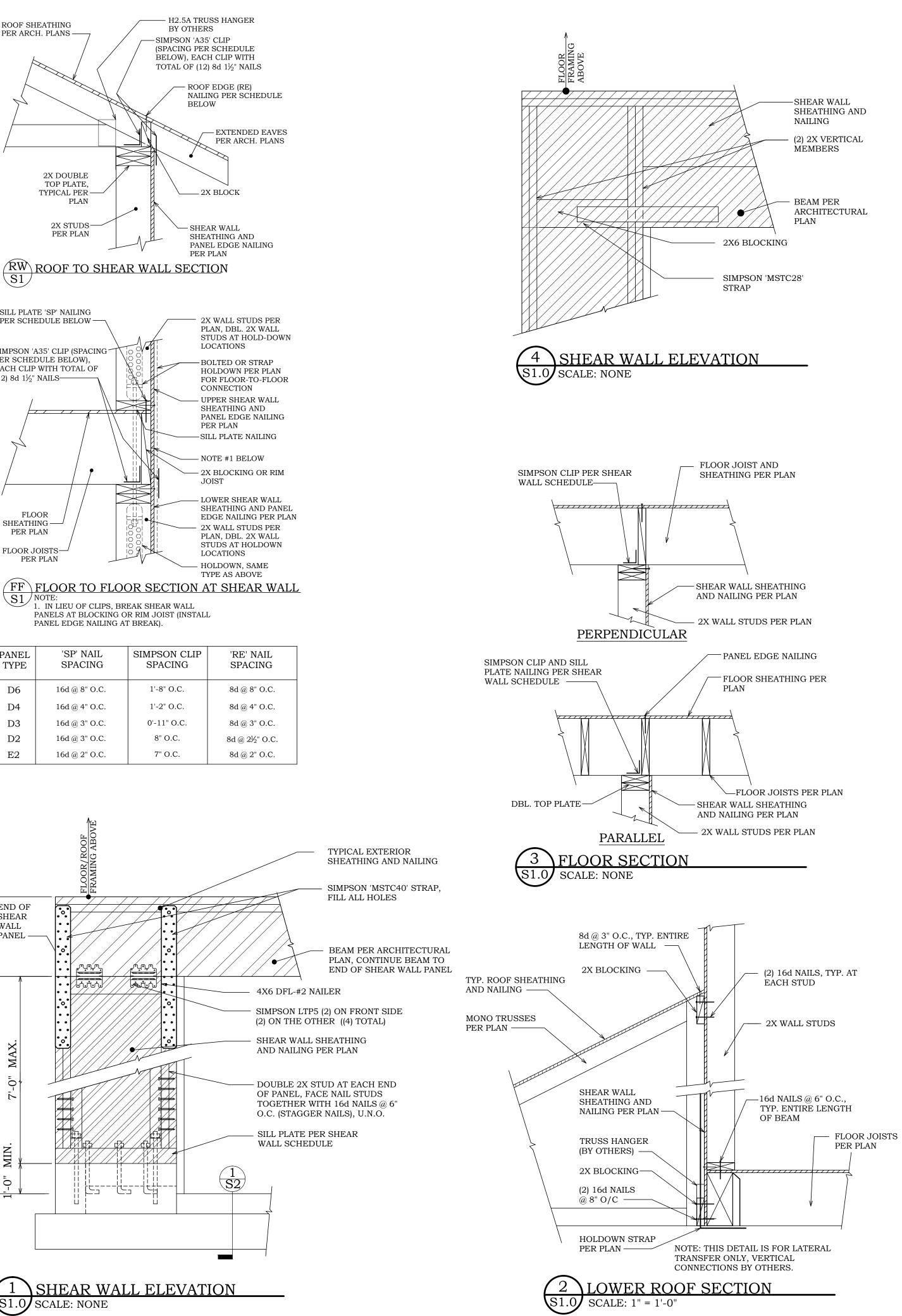
(1) IN LIEU OF SIMPSON 'SSTB' BOLTS ANCHOR BOLTS TO BE A307 OR 'A36' THREADED ROD WITH STD. NUT AND 2" X 2" X <sup>3</sup>/<sub>6</sub>" STEEL PLATE WASHER ON BOTTOM OF BOLT.
(2) HOLDOWNS TO BE FASTENED TO DOUBLE STUDS (CONTINUOUS FROM SILL PLATE TO DOUBLE TOP PLATE) AT PANEL ENDS. WALL STUDS SHOULD HAVE PANEL EDGE NAILING FROM SHEAR WALL SHEATHING.
(3) IF HOLDOWNS 2, 5, 6, AND 8 ARE INSTALLED FROM FLOOR TO FLOOR, REFER TO DETAIL FF/S1.

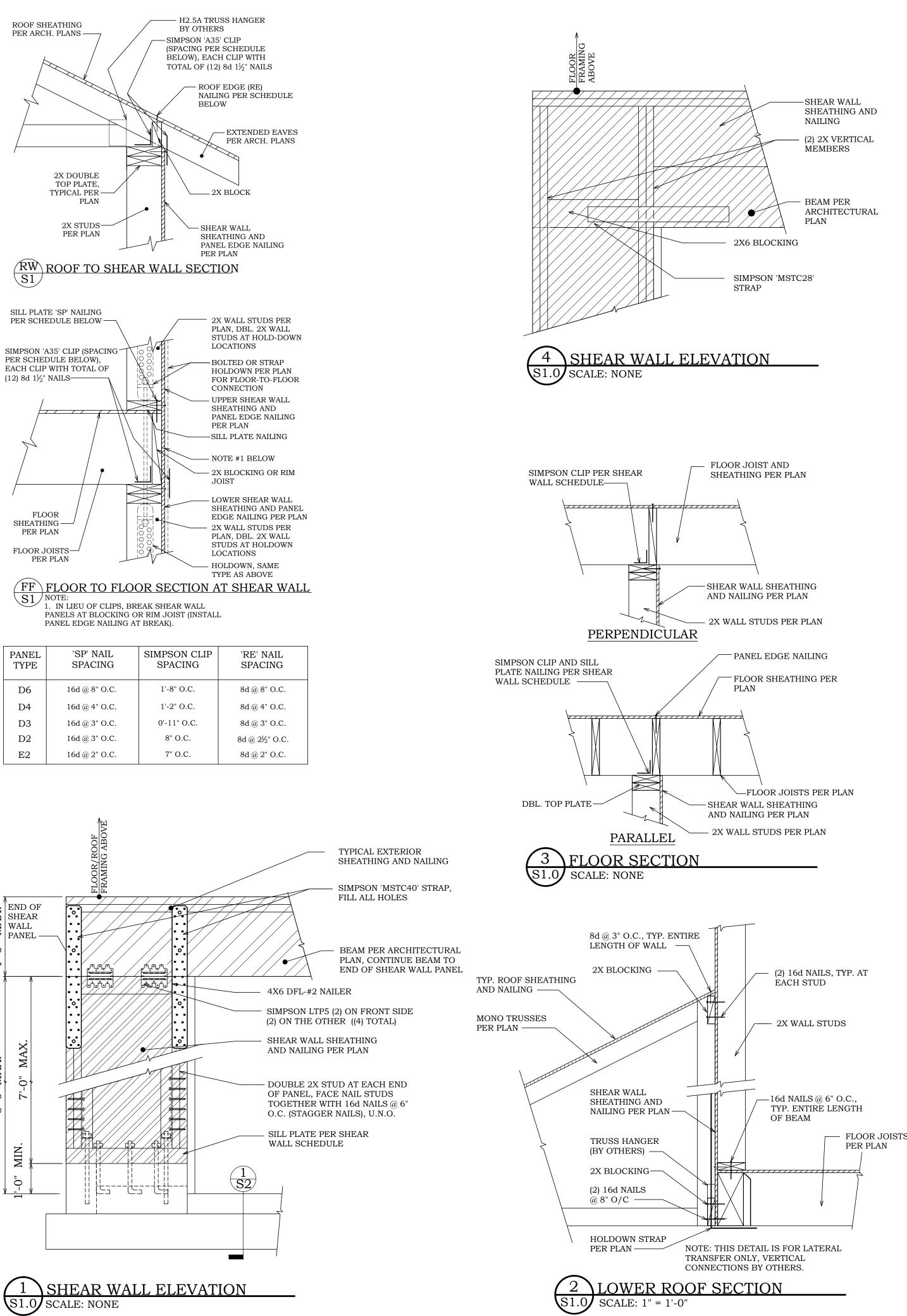
(4) U.N.O., INSTALL (1)-#4 CONTINUOUS HORIZONTAL TOP BAR 3" DOWN FROM TOP OF WALL AT ALL HOLDOWN ANCHORS. EXTEND BAR MIN. 5'-0" PAST HOLDOWN IN BOTH DIRECTIONS (BEND BAR AROUND AT CORNER CONDITION). FOR THIS 10'-0" SECTION INSTALL (1)-#4 VERTICAL BAR @ 24" O.C. TIE HOLDOWN ANCHOR TO HORIZONTAL TOP BAR.



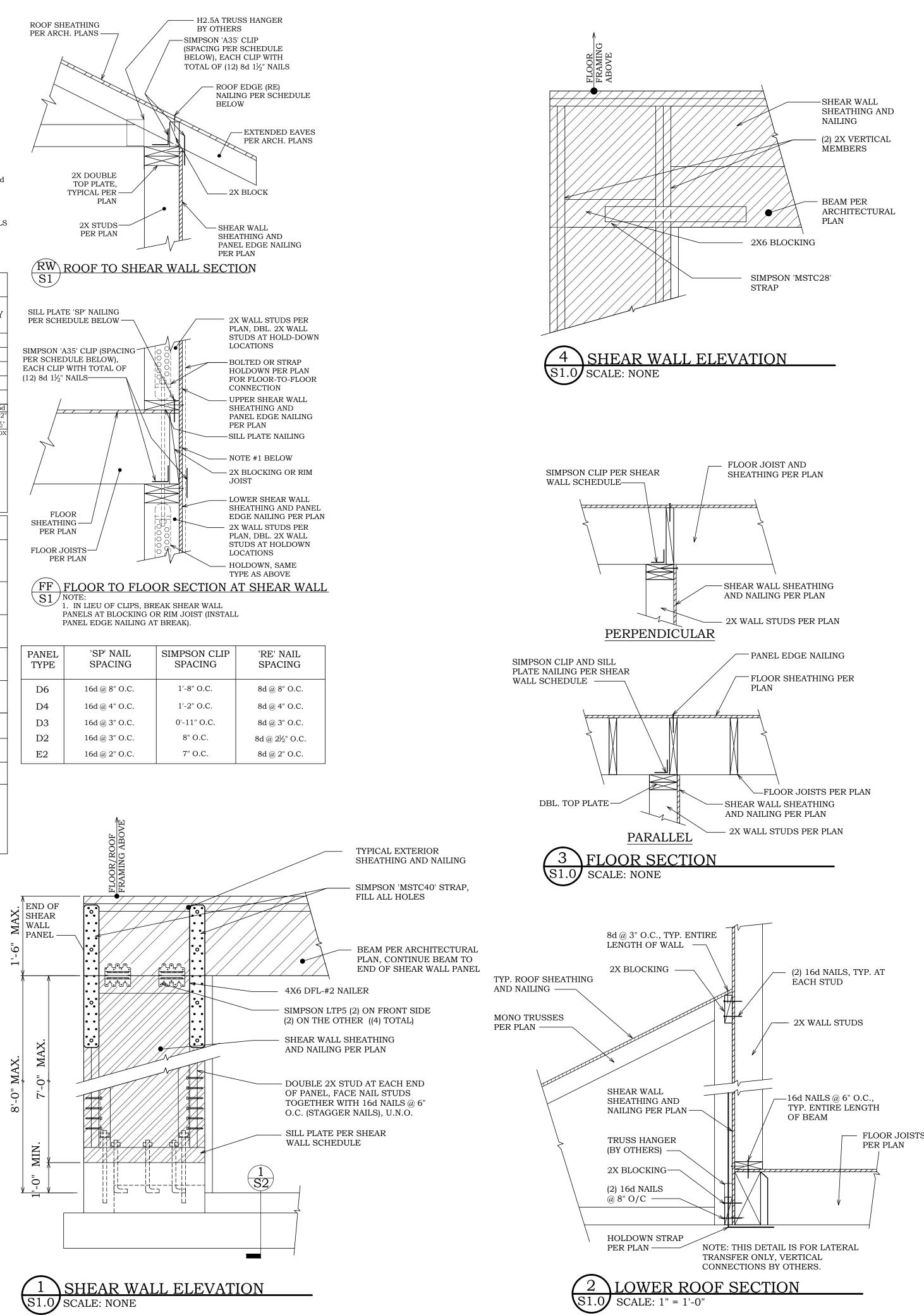


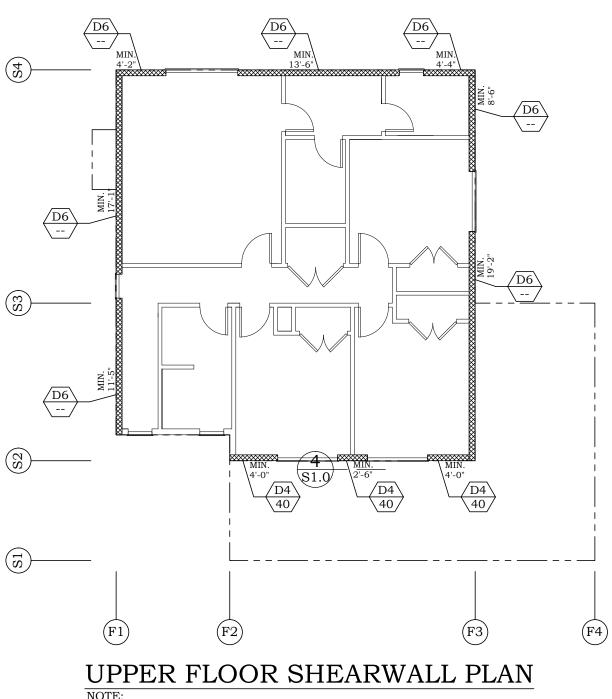
(FSP) FDN. SILL PLATE SECTION S1)



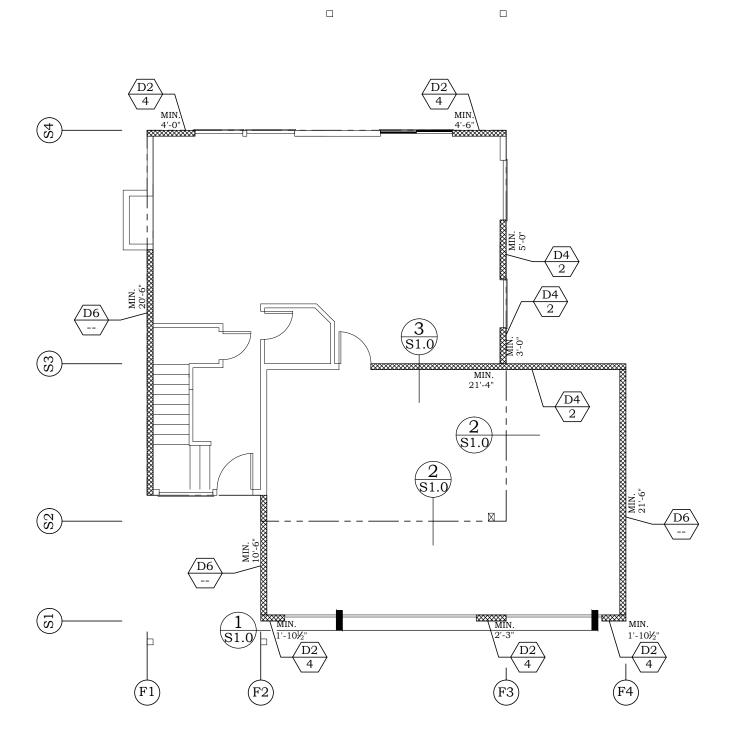


PANEL TYPE	'SP' NAIL SPACING	SIMPS SP
D6	16d @ 8" O.C.	1'-
D4	16d @ 4" O.C.	1'-
D3	16d @ 3" O.C.	0'-1
D2	16d @ 3" O.C.	8
E2	16d @ 2" O.C.	7





<sup>1.</sup> REFER TO FRAMING REQUIREMENTS FOR TYPICAL EXTERIOR SHEATHING AND NAILING, ROOF SHEATHING AND NAILING AND FLOOR SHEATHING AND NAILING REQUIREMENTS.



MAIN FLOOR SHEARWALL PLAN 1. REFER TO FRAMING REQUIREMENTS FOR TYPICAL EXTERIOR SHEATHING AND NAILING, ROOF SHEATHING AND NAILING AND FLOOR SHEATHING AND NAILING REQUIREMENTS.

