

IMPORTANT: CONTRACTOR SHALL READ ALL APPLICABLE NOTES RELEVANT TO THE PLANS PRIOR TO CONSTRUCTION.

DESIGN LOADS AND GENERAL:

Table with 2 columns: Design Load Type (e.g., SLEEPING ROOMS, ALL OTHER FLOORS), and Value (e.g., 30 PSF, 40 PSF). Includes notes on wind load and floor joist deflection.

THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS AND OTHER CONTRACT DRAWINGS AND REPORT ANY DISCREPANCIES WITH THE PROJECT ENGINEER AND ARCHITECT PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.

WHERE CONFLICTS OCCUR BETWEEN GENERAL NOTES AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENT SHALL APPLY. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK.

FOUNDATIONS:

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.

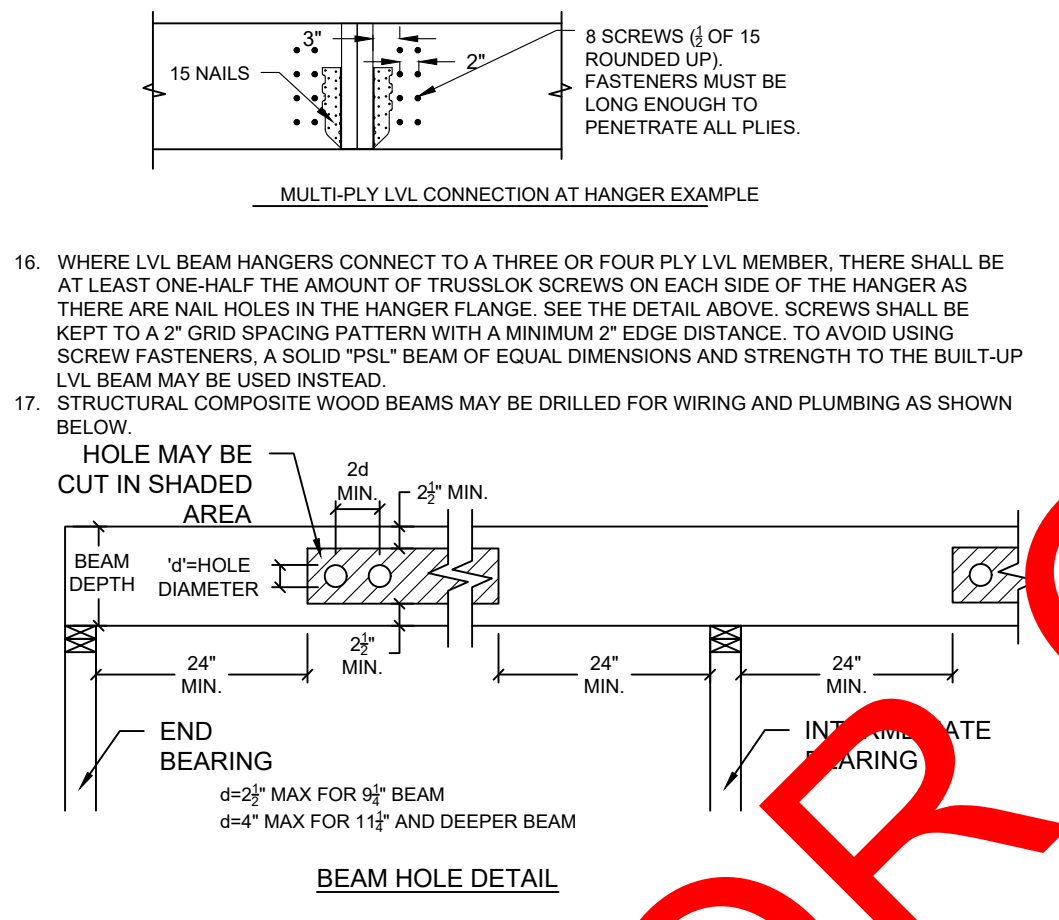
SPECIAL FOUNDATION CONSIDERATIONS:

FOR UNRESTRAINED RETAINING WALLS SEE SPECIAL DESIGNS ON DRAWINGS. ANCHOR BOLTS SHALL BE INSTALLED AS REQUIRED BY CODE UNLESS OTHERWISE NOTED ON THE PLANS.

FRAMING CONSTRUCTION - OTHER THAN ROOF:

Table with 2 columns: Member Size (e.g., 2x8, 2x10), and Simpson Hangers (e.g., LUS 28-2, LUS 210-2).

NOTE: FILL ALL HOLES IN MULTIPLE PLY BEAM HANGERS WITH 16d x 3/8" COMMON NAILS. ALL LOAD-BEARING HEADERS ARE 2X6X SPF#2 @ 16" O.C. UNLESS NOTED OTHERWISE ON THE PLAN.



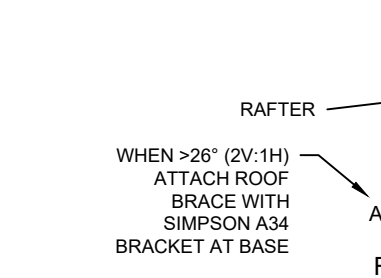
WHERE NON-LOAD BEARING PARTITIONS FALL BETWEEN FLOOR JOISTS OR TRUSSES, 2X4 LADDERS @ 24" O.C. MUST BE PLACED PERPENDICULAR TO THE JOISTS TO SUPPORT THE PLYWOOD DECKING.

HEADERS AND LINTELS:

MASONRY LINTELS SEE SECTION R703.8.3 FOR LINTEL SPAN REQUIREMENTS. WHEN SPANS EXCEED THE CODE'S REQUIREMENTS, FASTEN L4X8X8 STEEL ANGLE TO WOOD HEADER WITH 20X4 GALVANIZED LAG SCREWS @ 16" O.C.

ROOF CONSTRUCTION:

IN ADDITION TO THE CODE'S FASTENER SCHEDULE, UNLESS NOTED OTHERWISE ON THE PLAN, INSTALL SIMPSON SDWC15800 SCREWS OR H1 OR H2 SA HURRICANE CLIPS AT THE ENDS OF THE RAFTERS WHERE THEY BEAR ON THE WALL PLATE @ 48" O.C.



ROOF PLAN LEGEND:

INDICATES LOCATION OF ROOF BRACE POINT AT RAFTER LEVEL. ARROW AWAY FROM THE BRACE POINT INDICATES DIRECTION OF ROOF BRACE TO PARTITION.

MATERIALS SPECIFICATIONS:

CONCRETE GENERAL NOTES:

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.

MASONRY GENERAL NOTES:

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.

LUMBER GENERAL NOTES:

Table with 2 columns: Material (Fb, Fc, E), and Values for #2 SYPRENE and #2 SPRUCE.

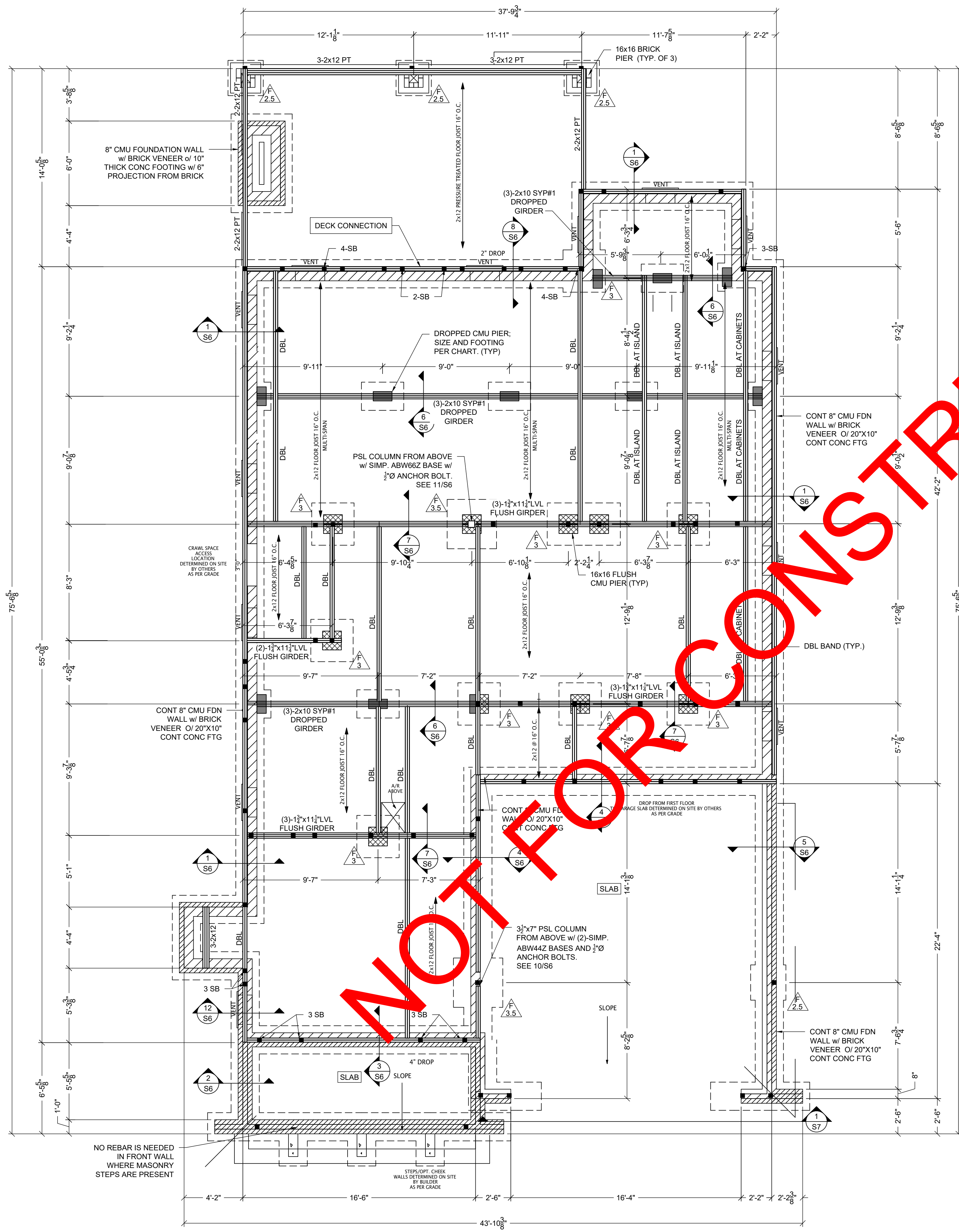
STEEL GENERAL NOTES:

ALL W-SHAPE STRUCTURAL STEEL SHALL BE ASTM A992. SQUARE OR RECTANGULAR HSS SHAPES SHALL CONFORM TO ASTM A-500.

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CADD DRAFTED STRUCTURAL ENGINEERING. EXAMPLE PLAN

General Notes



**FOUNDATION NOTES:**

- TYPICAL PERIMETER FOUNDATION WALLS TO BE CONTINUOUS 8" CMU UNLESS OTHERWISE NOTED. PERIMETER WALL FOOTINGS SHALL BE CONTINUOUS 20"x10" MINIMUM, 3000 PSI CONCRETE U.N.O. INSTALL 2-#4 CONTINUOUS REBAR WHERE BRICK VENEER IS MORE THAN 8'-0" HIGH.
- SUPPORT ALL MASONRY STEPS OVER 8" THICK CONC. FOOTING WITH 6" PROJECTION FROM MASONRY.
- BEARING CAPACITY OF SOIL IS ASSUMED TO BE 2000 PSF.
- SIZE OF INTERIOR CMU PIERS DEPEND ON HEIGHT AND LOADING. UNLESS OTHERWISE NOTED AS LARGER, CMU PIERS SHALL BE:
 

PIER	FILL	MAX. HEIGHT	CONCRETE FTG
1	HOLLOW	32"	24"x36"x10"
8	GROUTED	80"	24"x36"x10"
12	GROUTED	48"	24"x36"x10"
16	GROUTED	120"	36"x36"x10"
18	GROUTED	64"	36"x36"x10"
19	GROUTED	160"	36"x36"x10"

7. SHIMS USED BETWEEN MASONRY PIERS AND WOOD GIRDERS SHALL CONSIST OF EITHER SOLID WOOD OR A MINIMUM OF TWO STACKS OF STEEL SHIMS EQUAL IN WIDTH TO THE GIRDER AND FULLY CONTACT AT LEAST 6" THE LENGTH OF THE PIER.

**FOOTING SCHEDULE:**

F1.5: 18"x18"x8"  
 F2: 24"x24"x8"  
 F2.5: 30"x30"x12"  
 F3: 36"x36"x12" WITH 4 #4 BARS EACH WAY  
 F3.5: 42"x42"x12" WITH 5 #4 BARS EACH WAY  
 F4: 48"x48"x12" WITH 7 #4 BARS EACH WAY.

**CRAWLSPACE FRAMING NOTES:**

- "DBL" INDICATES DOUBLE JOIST. DBL JOISTS CAN BE SEPARATED BY UP TO 3/4" TO ALLOW OF PASSAGE OF PLUMBING PIPES AND ELECTRICAL WIRES.
- RIM BOARDS OR BANDS PARALLEL TO FLOOR FRAMING ARE TO BE DOUBLED. WHERE DBL BANDS ARE USED PERPENDICULAR TO FRAMING, INDICATED SQUASH BLOCKS ARE NOT NEEDED.
- WHERE DIMENSIONS ARE NOT INDICATED, BEAMS THAT RUN PARALLEL TO FLOOR JOISTS ARE INTENDED TO ALIGN UNDER LOAD BEARING WALLS. SEE THE ARCHITECTURAL PLANS FOR DIMENSIONS TO WALLS.
- WOOD BEAMS SHALL BE SUPPORTED BY METAL HANGERS OF ADEQUATE CAPACITY WHERE FRAMING INTO BEAMS OR LEDGERS. THE FOLLOWING HANGER SCHEDULE MAY BE USED UNLESS NOTED OTHERWISE ON THE PLAN: (HANGERS WITH EQUIVALENT CAPACITIES TO THOSE LISTED BELOW ARE ALSO ACCEPTABLE)

MEMBER SIZE	SIMPSON HANGERS
(2) 2x8	LUS 28-2
(2) 2x10, (2) 2x12	LUS 210-2
(3) 2x10, (3) 2x12	LUS 210-3
(2) 1 1/2" X 9 1/2" LVL	HUS 410

- NOTE: FILL ALL OF THE HOLES IN BEAM HANGERS WITH 16d x 3/4" COMMON NAILS (9/8" x 0.162") OR 16d x 2 1/4" (2 1/2" x 0.162") NAILS UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. DO NOT BEND OR MODIFY THE HANGER OR USE INAPPROPRIATE FASTENERS. DO NOT USE 10d x 1/2" "HANGER NAILS" UNLESS OTHERWISE NOTED ON THE PLANS OR IN SITUATIONS WHERE ONLY 1 1/2" OR LESS OF WOOD IS PROVIDED TO NAIL INTO.
- ALL POINT LOADS FROM ROOF BRACES, JACK STUDS, BEAM SUPPORTS CANNOT BEAR ON SHEATHING ALONE. BLOCKING EQUAL TO THE POINT LOAD SUPPORTS ABOVE MUST BE CARRIED THROUGH ALL CONSTRUCTION TO THE FOUNDATION. INSTALL 2x4 SQUASH BLOCKS (S.B.) OF EQUAL NUMBER TO STUDS ABOVE BETWEEN SUBFLOOR AND FOUNDATION WALL OR LOWER PLATE. RIM BOARDS AND JOIST BLOCKING SHALL NOT BE CONSIDERED AS AN ACCEPTABLE MEANS OF SUPPORT UNDER POINT LOADS FROM LVL AND STEEL BEAMS OR WHERE "S.B." IS INDICATED ON THE PLAN.
- FRAMER SHOULD MAKE EVERY EFFORT TO STAGGER SEAMS OF PLYWOOD SUBFLOOR A MINIMUM OF 18" AWAY FROM JOIST SPLICES AT FLUSH AND DROPPED GIRDERS IN AREAS WHERE HARDWOOD FLOORING IS TO BE USED.

**PLAN LEGEND:**

**DECK CONNECTION** - SECURE DECK JOISTS TO 2X PT BAND WITH METAL HANGERS. SECURE BAND TO HOUSE BAND WITH 7/8" GALV. CARRIAGE BOLT AT 16" O.C. AND THREE 12D NAILS AT 8" O.C. OR SELF DRILLING SCREWS AT 6" O.C. STAGGERED.

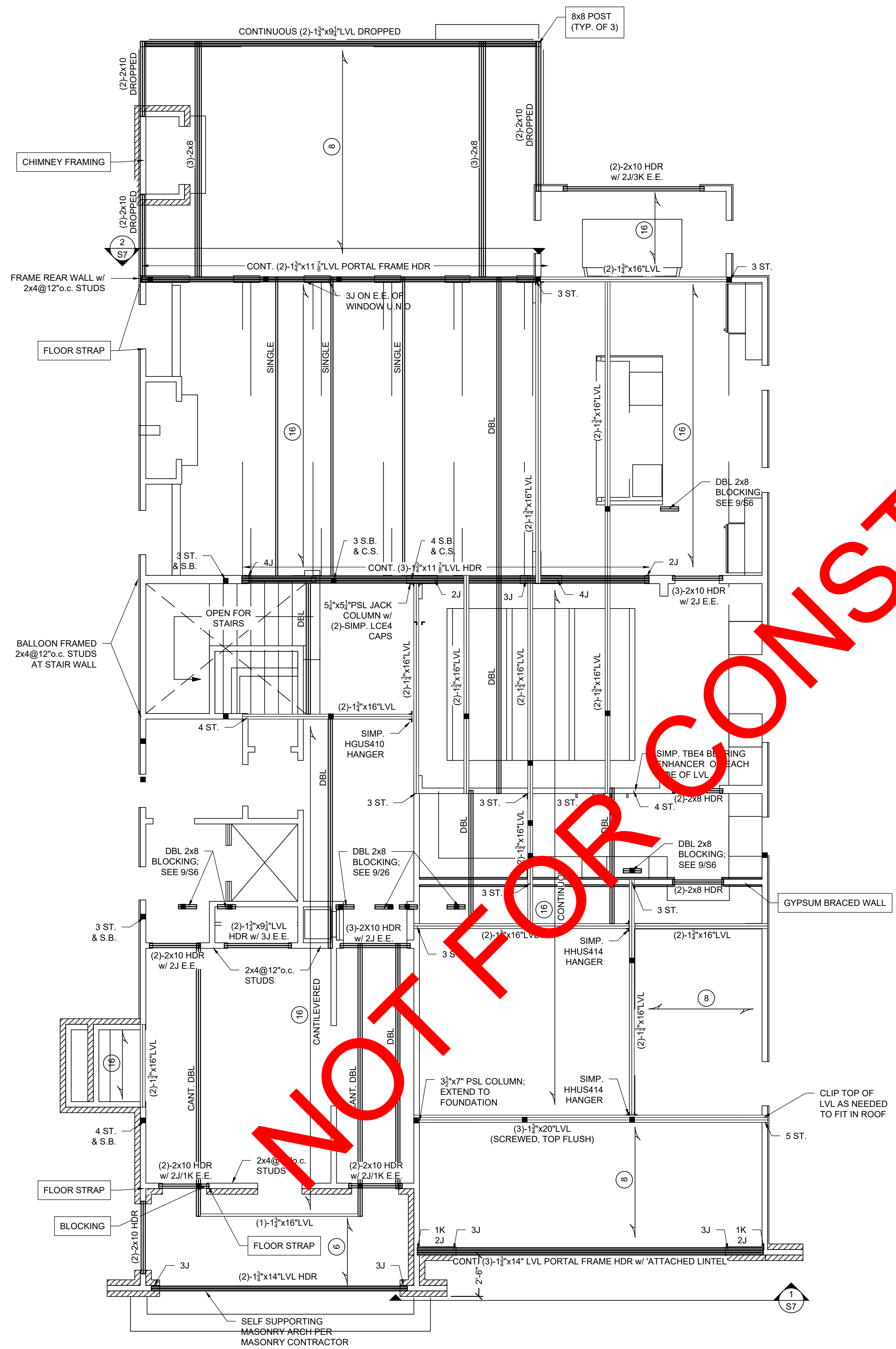
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 STRUCTURAL ENGINEERING.  
 EXAMPLE PLAN**

Foundation  
 Plan

**S1**



**PLAN LEGEND:**

J - JACK STUD  
 K - KING STUD  
 ST - STUD  
 CS - CRIPPLE STUD  
 SB - SQUASH BLOCK  
 DBL - DOUBLE JOIST  
 UNO - UNLESS NOTES OTHERWISE  
 EE - EACH END

⑥ - 2x6 SPF#2 OR SYP#2 JOISTS AT 16" o.c.  
 ⑧ - 2x8 SPF#2 OR SYP#2 JOISTS AT 16" o.c.  
 ⑩ - 16" PRI-40 I-JOISTS AT 19.2" o.c.

- FRAMING NOTES:**
- I-JOISTS ARE DESIGNED TO BE CONTINUOUS IN SOME AREAS. I-JOIST MANUFACTURER TO STOP AND START JOISTS WHERE SHOWN ON PLAN TO ALLOW FOR CONTINUOUS ACTION.
  - I-JOIST SUPPLIER TO CONTACT ENGINEER OF RECORD FOR JOIST APPROVAL IF JOISTS DIFFER FROM THOSE SPECIFIED ON PLANS.
  - ALL LOAD BEARING HEADERS SHALL BE (2)X8 SPF#2 UNLESS NOTED OTHERWISE.
  - ALL WALLS UP TO 10'-2" TALL SHALL BE A MINIMUM OF 2X4 SPF#2 @ 16" o.c. UNLESS NOTED OTHERWISE ON THE PLAN.
  - ALL WALLS OVER 10'-2" AND 13'-2" TALL SHALL BE A MINIMUM OF 2X6 SPF#2 @ 16" o.c. UNLESS NOTED OTHERWISE ON THE PLAN. TALLER WALLS ARE SPECIFICALLY NOTED ON THE PLAN.
  - WHEN DIMENSIONS ARE NOT INDICATED, BEAMS THAT RUN PARALLEL TO FLOOR JOISTS ARE INTENDED TO ALIGN UNDER LOAD BEARING WALLS (SEE THE ARCHITECTURAL PLANS FOR DIMENSIONS TO WALLS).
  - RIM BOARDS AND BANDS PARALLEL TO FLOOR FRAMING TO BE DOUBLED. DBL JOISTS OR CRIPPLES WALLS TO BE INSTALLED BETWEEN STACKING LOAD BEARING WALLS TO TRANSFER LOADING.
  - STUD SUPPORT AT EACH END OF BEAMS/HEADERS UNLESS NOTED OTHERWISE.
 

2x LUMBER	=	SAME AS NUMBER PLYS FOR BEAMS; 1 FOR HEADERS
LVL, PSL, GLU-LAM	=	3
STEEL BEAM	=	5
  - ALL POINT LOADS FROM ROOF BRACES, JACK STUDS, AND BEAM SUPPORTS MUST BE SUPPORTED WITH SOLID BLOCKING AND/OR STUDS EQUAL TO THE NUMBER OF STUDS ABOVE ALL THE WAY DOWN TO THE FOUNDATION (1 STUD/2x4 BLOCK MINIMUM) (RIM BOARDS AND I-JOIST BLOCKING SHALL NOT BE CONSIDERED AS AN ACCEPTABLE MEANS OF SUPPORT UNDER POINT LOADS FROM LVL AND STEEL BEAMS OR WHERE SQUASH BLOCKS "S.B." ARE INDICATED).
  - NUMBER OF KING STUDS BASED ON OPENING WIDTH:
 

<b>2x4 WALL</b>		
LESS THAN < 3'-0"	=	1 KING
3'-0" TO 6'-0"	=	2 KINGS
6'-1" TO 8'-0"	=	3 KINGS
8'-1" TO 10'-1"	=	4 KINGS
OVER 10'-1"	=	SEE PLAN
<b>2X6 WALL</b>		
LESS THAN < 5'-0"	=	1 KING
5'-1" TO 10'-0"	=	2 KINGS
GREAT THAN > 10'-1"	=	SEE PLAN
  - ALL FRAMING MEMBERS TO BE SPF#2 OR SYP#2 UNLESS NOTED OTHERWISE.
  - FASTEN ALL TRIPLE PLY LVLS TOGETHER WITH TWO ROWS OF 5" LONG FLATLOK OR SIMPSON SDS SCREWS @ 16" o.c. AND FOUR PLY LVLS WITH TWO ROWS OF 6 1/2" FLATLOK SCREWS @ 16" o.c. UNLESS NOTED OTHERWISE ON THE PLANS. THE SCREWS SHALL BE LOCATED A MINIMUM OF 2" AND A MAXIMUM OF 3" FROM THE TOP OR BOTTOM OF THE BEAM.
  - DOUBLE JOISTS CAN BE SEPARATED BY UP TO 3 1/2" TO ALLOW FOR PASSAGE OF PLUMBING PIPES AND ELECTRICAL WIRES.
  - WOOD BEAMS SHALL BE SUPPORTED BY METAL HANGERS OF ADEQUATE CAPACITY WHERE FRAMING INTO BEAMS OR LEDGERS. THE FOLLOWING HANGER SCHEDULE MAY BE USED UNLESS NOTED OTHERWISE ON THE PLAN. (HANGERS WITH EQUIVALENT CAPACITIES TO THOSE LISTED BELOW ARE ALSO ACCEPTABLE)
 

MEMBER SIZE	SIMPSON HANGERS
(2) 2X8	LUS 28-2
(2) 2X10, (2) 2X12	LUS 210-2
(3) 2X10, (3) 2X12	LUS 210-3
(2) 1 1/2" X 9 1/2" LVL	HUS 410
(2) 1 1/2" X 1 1/2" - 14" LVL	HUS 412
(2) 1 1/2" X 16" - 24" LVL	HHUS 410
ALL TRIPLE LVLS	HHUS 5.50/10
  - FILL ALL OF THE HOLES IN BEAM HANGERS WITH 16d x 3/2" COMMON NAILS (3/2" x 0.162") OR 16d x 2 1/2" (2 1/2" x 0.162") NAILS UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. DO NOT BEND OR MODIFY THE HANGER OR USE INAPPROPRIATE FASTENERS. DO NOT USE 10d x 1 1/2" "HANGER NAILS" UNLESS OTHERWISE NOTED ON THE PLANS OR IN SITUATIONS WHERE ONLY 1 1/2" OR LESS OF WOOD IS PROVIDED TO NAIL INTO.
  - CONTRACTOR RESPONSIBLE FOR ALL WATERPROOFING AND FLASHING.
- BRACED WALL LINE NOTE:**
- THIS STRUCTURE HAS BEEN ANALYZED FOR LATERAL LOADING USING CONTINUOUSLY SHEATHED 5/8" OSB WALL SHEATHING USING 8d NAILS AT 6" o.c. ALONG EDGES AND 12" o.c. AT INTERMEDIATE FRAMING. BLOCK AND NAIL ALL PANEL EDGES.
- WHERE BRACED WALLS DO NOT MEET THE PRESCRIPTIVE REQUIREMENTS OF SECTION R602.10 OF THE CODE, IT HAS BEEN ANALYZED BY ENGINEERING ANALYSIS INCORPORATING ENGINEERED LATERAL BRACING ELEMENTS WHERE NEEDED TO MEET THE INTENT OF THE CODE. SEE PLANS FOR ALL NOTES AND DETAILS.
- LINTELS SUPPORTING MASONRY VENEER**  
 SEE TABLE R703.8.3.1 FOR SIZE OF "LOOSE" STEEL LINTEL FOR SPANS UP TO 10'.  
 FOR SPANS GREATER THAN 10' (OR WHERE SHOWN ON PLANS BY "ATTACHED LINTEL" NOTE) FASTEN L4"x4"x1/2" STEEL ANGLE TO WOOD HEADER WITH 1/2"x4" LAG SCREWS @ 16" o.c. EXTEND ALL ANGLES 6" PAST OPENING TO BEAR ON MASONRY VENEER AT ENDS.  
 SUPPORT ALL BRICK CLIMBS PER DETAIL ON PLANS OR R703.8.2 AND FIGURE 703.8.2.1

**PLAN LEGEND:**

**FLOOR STRAP** - FOR UPPER LEVELS, SECURE LOWER PORTION OF CURRENT LEVEL STUDS TO STUDS BELOW WITH VERTICAL SIMPSON 40" LONG CS20 (MIN.) COIL STRAP.  
 - FOR CRAWLSPACE FOUNDATIONS, SECURE TO RIM BOARD WITH VERTICAL SIMPSON LSTA24 STRAP OR 24" LONG CS18 (MIN.) COIL STRAP.

**GYPSUM BRACED WALL** - SHEATH THE BOTH SIDES OF WALL WITH 1/2" GYPSUM FASTENED TO STUDS W/ 6d COLLER NAILS OR #6 SCREWS @ 7" o.c. ALONG PANEL EDGES AND IN FIELD. SEE PLANS FOR CONNECTION DETAILS.

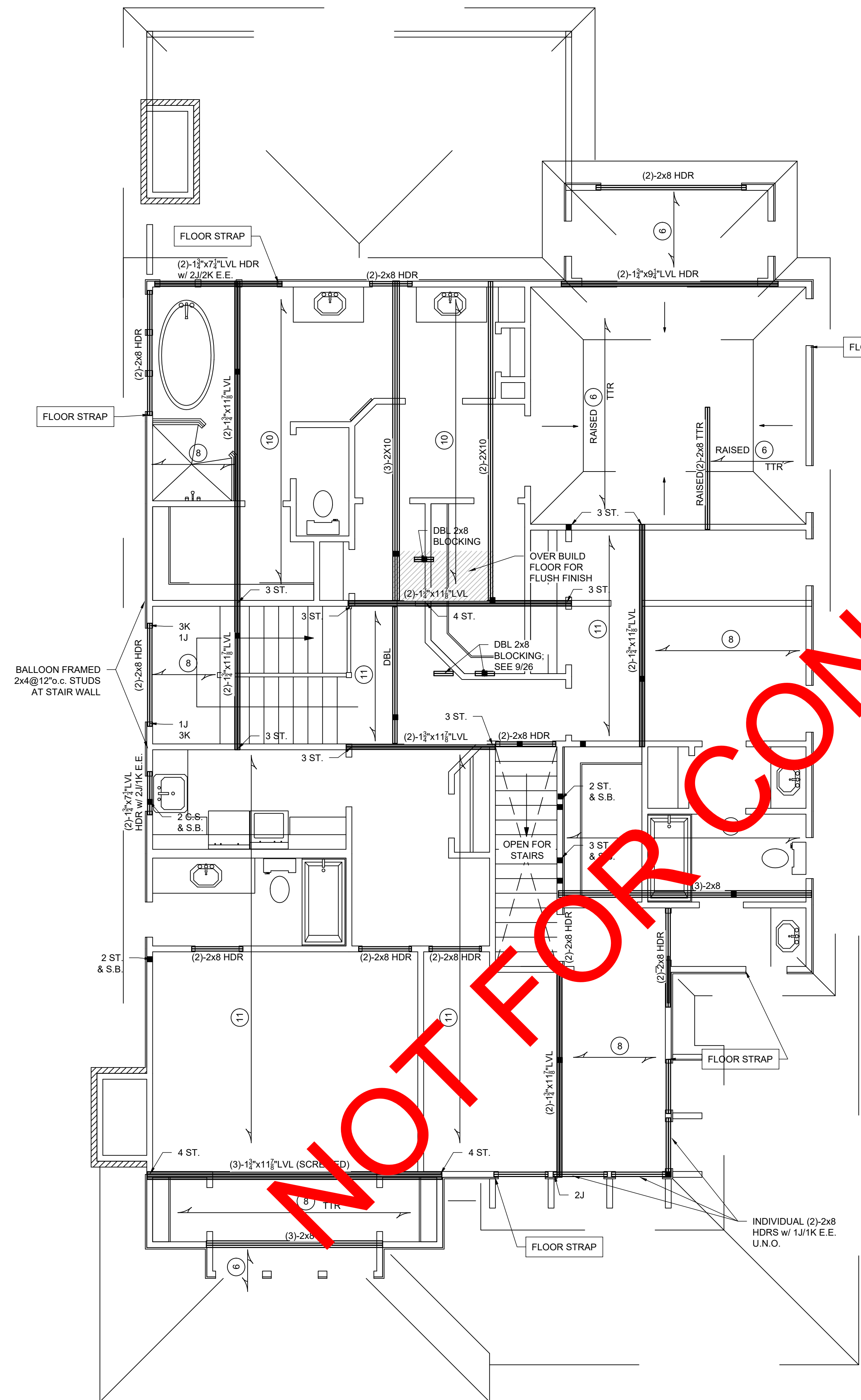
**8x8 POST** - 8x8 PT OR CEDAR POST WITH TWO SIMPSON LCE4 CAPS AT CORNER POSTS AND TWO SIMPSON AC6 CAPS AT INTERMEDIATE POSTS (BLOCK AS NEEDED) OR NOTCHED FOR BEAM SEAT W/ (2)-5/8" GALV. CARRIAGE BOLTS.  
 - IF WOOD FRAMING BELOW, SECURE WITH SAME CAPS AT BOTTOM. IF CONC. OR MASONRY BELOW, SECURE WITH SIMPSON CP57 BASE WITH 3/8" THREADED ROD EPOXY SET INTO POST AND MASONRY PER MANUF. SPECS.

NOT FOR CONSTRUCTION

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 EXAMPLE PLAN

First Floor Plan  
 and Second  
 Floor Framing



**PLAN LEGEND:**

- J - JACK STUD
- K - KING STUD
- ST - STUD
- CS - CRIPPLE STUD
- TTR - TIED TO RAFTERS
- DBL - DOUBLE JOIST
- UNO - UNLESS NOTES OTHERWISE
- EE - EACH END

(6) - 2x8 SPF#2 OR SYP#2 JOISTS AT 16" o.c.  
 (8) - 2x8 SPF#2 OR SYP#2 JOISTS AT 16" o.c.  
 (10) - 2x10 SPF#2 OR SYP#2 JOISTS AT 16" o.c.  
 (11) - 1 1/2" PRI-40 I-JOISTS AT 16" o.c.

- FRAMING NOTES:**
1. I-JOISTS ARE DESIGNED TO BE CONTINUOUS IN SOME AREAS. I-JOIST MANUFACTURER TO STOP AND START JOISTS WHERE SHOWN ON PLAN TO ALLOW FOR CONTINUOUS ACTION.
  2. I-JOIST SUPPLIER TO CONTACT ENGINEER OF RECORD FOR JOIST APPROVAL IF JOISTS DIFFER FROM THOSE SPECIFIED ON PLANS.
  3. ALL LOAD BEARING HEADERS SHALL BE (2)2X8 SPF#2 UNLESS NOTED OTHERWISE
  4. ALL WALLS UP TO 10'-2" TALL SHALL BE A MINIMUM OF 2X4 SPF#2 @ 16" o.c. UNLESS NOTED OTHERWISE ON THE PLAN.
  5. WALLS BETWEEN 10'-2" AND 13'-2" TALL SHALL BE A MINIMUM OF 2X6 SPF#2 @ 16" o.c. UNLESS NOTED OTHERWISE ON THE PLAN. TALLER WALLS ARE SPECIFICALLY NOTED ON THE PLAN.
  6. WHERE DIMENSIONS ARE NOT INDICATED, BEAMS THAT RUN PARALLEL TO FLOOR JOISTS ARE INTENDED TO ALIGN UNDER LOAD BEARING WALLS (SEE THE ARCHITECTURAL PLANS FOR DIMENSIONS TO WALLS)
  6. RIM BOARDS AND BANDS PARALLEL TO FLOOR FRAMING TO BE DOUBLED. DBL JOISTS OR CRIPPLES WALLS TO BE INSTALLED BETWEEN STACKING LOAD BEARING WALLS TO TRANSFER LOADING.
  7. STUD SUPPORT AT EACH END OF BEAMS/HEADERS UNLESS NOTED OTHERWISE
 

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STEEL BEAM	=	5
  8. ALL POINT LOADS FROM ROOF BRACES, JACK STUDS, AND BEAM SUPPORTS MUST BE SUPPORTED WITH SOLID BLOCKING AND/OR STUDS EQUAL TO THE NUMBER OF STUDS ABOVE ALL THE WAY DOWN TO THE FOUNDATION (1 STUD/2X4 BLOCK MINIMUM) (RIM BOARDS AND I-JOIST BLOCKING SHALL NOT BE CONSIDERED AS AN ACCEPTABLE MEANS OF SUPPORT UNDER POINT LOADS FROM LVL AND STEEL BEAMS OR WHERE SQUASH BLOCKS "S.B." ARE INDICATED)
  9. NUMBER OF KING STUDS BASED ON OPENING WIDTH:
 

<b>2x4 WALL</b>	
LESS THAN < 3'-0"	= 1 KING
3'-0" TO 6'-0"	= 2 KINGS
6'-1" TO 8'-0"	= 3 KINGS
8'-1" TO 10'-1"	= 4 KINGS
OVER 10'-1"	= SEE PLAN
<b>2X6 WALL</b>	
LESS THAN < 5'-0"	= 1 KING
5'-1" TO 10'-0"	= 2 KINGS
GREAT THAN > 10'-1"	= SEE PLAN
  10. ALL FRAMING MEMBERS TO BE SPF#2 OR SYP#2 UNLESS NOTED OTHERWISE
  11. FASTEN ALL TRIPLE PLY LVLs TOGETHER WITH TWO ROWS OF 5" LONG FLATLOK OR SIMPSON SDS SCREWS @ 16" o.c. AND FOUR PLY LVLs WITH TWO ROWS OF 6 1/2" FLATLOK SCREWS @ 16" o.c. UNLESS NOTED OTHERWISE ON THE PLANS. THE SCREWS SHALL BE LOCATED A MINIMUM OF 2" AND A MAXIMUM OF 3" FROM THE TOP OR BOTTOM OF THE BEAM.
  12. DOUBLE JOISTS CAN BE SEPARATED BY UP TO 3 1/2" TO ALLOW FOR PASSAGE OF PLUMBING PIPES AND ELECTRICAL WIRES.
  13. WOOD BEAMS SHALL BE SUPPORTED BY METAL HANGERS OF ADEQUATE CAPACITY WHERE FRAMING INTO BEAMS OR LEDGERS. THE FOLLOWING HANGER SCHEDULE MAY BE USED UNLESS NOTED OTHERWISE ON THE PLANS: (HANGERS WITH EQUIVALENT CAPACITIES TO THOSE LISTED BELOW ARE ALSO ACCEPTABLE)
 

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(2) 2x8	LUS 28-2
(2) 2x10, (2) 2x12	LUS 210-2
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(2) 1 1/2" X 9 1/2" LVL	HUS 410
(2) 1 1/2" X 11 1/2" - 14" LVL	HUS 412
(2) 1 1/2" X 16" - 24" LVL	HHUS 410
ALL TRIPLE LVLs	HHUS 5.50/10
  14. FILL ALL OF THE HOLES IN BEAM HANGERS WITH 16d x 3 1/2" COMMON NAILS (3 1/2" x 0.162") OR 16d x 3 1/2" (2 1/2" x 0.162") NAILS UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. DO NOT BEND OR MODIFY THE HANGER OR USE INAPPROPRIATE FASTENERS. **DO NOT USE 10d X 1 1/2" "HANGER NAILS" UNLESS OTHERWISE NOTED ON THE PLANS** OR IN SITUATIONS WHERE ONLY 1 1/2" OR LESS OF WOOD IS PROVIDED TO NAIL INTO.
  15. CONTRACTOR RESPONSIBLE FOR ALL WATERPROOFING AND FLASHING.

**BRACED WALL LINE NOTE:**

THIS STRUCTURE HAS BEEN ANALYZED FOR LATERAL LOADING USING CONTINUOUSLY SHEATHED 5/8" OSB WALL SHEATHING USING 8d NAILS AT 6" o.c. ALONG EDGES AND 12" o.c. AT INTERMEDIATE FRAMING. BLOCK AND NAIL ALL PANEL EDGES.

WHERE BRACED WALLS DO NOT MEET THE PRESCRIPTIVE REQUIREMENTS OF SECTION R602.10 OF THE CODE, IT HAS BEEN ANALYZED BY ENGINEERING ANALYSIS INCORPORATING ENGINEERED LATERAL BRACING ELEMENTS WHERE NEEDED TO MEET THE INTENT OF THE CODE. SEE PLANS FOR ALL NOTES AND DETAILS.

**LINTELS SUPPORTING MASONRY VENEER**

SEE TABLE R703.8.3.1 FOR SIZE OF "LOOSE" STEEL LINTEL FOR SPANS UP TO 10'.

FOR SPANS GREATER THAN 10' (OR WHERE SHOWN ON PLANS BY "ATTACHED LINTEL" NOTE) FASTEN L4"x4"x 1/2" STEEL ANGLE TO WOOD HEADER WITH 1/2"x4" LAG SCREWS @ 16" o.c. EXTEND ALL ANGLES 6" PAST OPENING TO BEAR ON MASONRY VENEER AT ENDS.

SUPPORT ALL BRICK CLIMBS PER DETAIL ON PLANS OR R703.8.2 AND FIGURE 703.8.2.1

**PLAN LEGEND:**

**FLOOR STRAP** - FOR UPPER LEVELS, SECURE LOWER PORTION OF CURRENT LEVEL STUDS TO STUDS BELOW WITH VERTICAL SIMPSON 40" LONG CS20 (MIN.) COIL STRAP.

- FOR CRAWLSPACE FOUNDATIONS, SECURE TO RIM BOARD WITH VERTICAL SIMPSON LSTA24 STRAP OR 24" LONG CS18 (MIN.) COIL



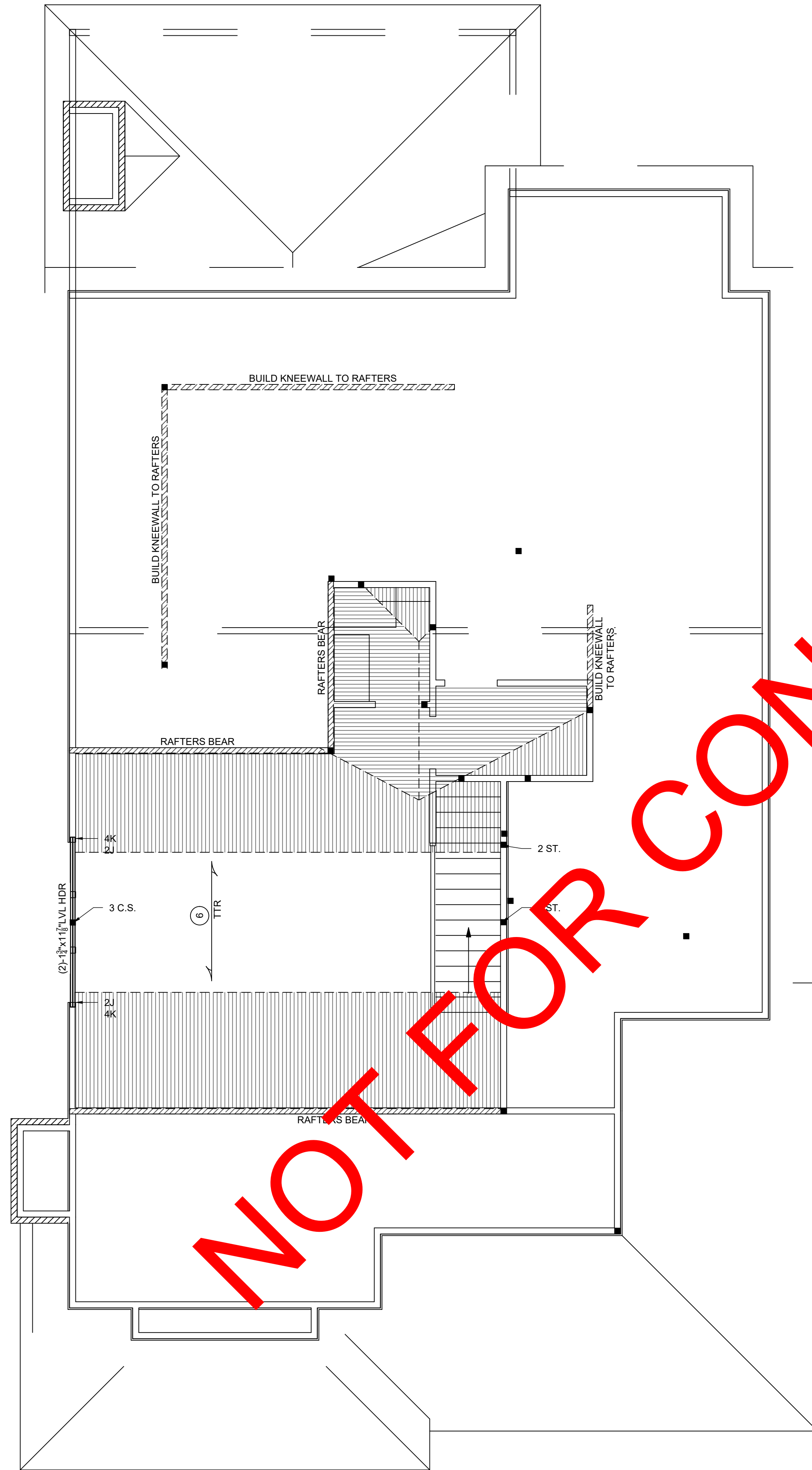
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For structural questions:  
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 STRUCTURAL ENGINEERING.  
 EXAMPLE PLAN

Second Floor  
 Plan and Third  
 Floor Framing

**S3**



**PLAN LEGEND:**

J - JACK STUD  
 K - KING STUD  
 ST - STUD  
 CS - CRIPPLE STUD  
 SB - SQUASH BLOCK  
 DBL - DOUBLE JOIST  
 UNO - UNLESS NOTES OTHERWISE  
 EE - EACH END

⑥ - 2x6 SPF#2 OR SYP#2 JOISTS AT 16"o.c.  
 ⑧ - 2x8 SPF#2 OR SYP#2 JOISTS AT 16"o.c.

**FRAMING NOTES:**

- "T.T.R" INDICATES "TIE (CEILING JOIST) TO RAFTER WITH FOUR 3"x0.131" NAILS)
- ALL LOAD BEARING HEADERS SHALL BE (2)2X8 SPF#2 UNLESS NOTED OTHERWISE
- ALL WALLS UP TO 10'-2" TALL SHALL BE A MINIMUM OF 2X4 SPF#2 @ 16" o.c. UNLESS NOTED OTHERWISE ON THE PLAN.
- WALLS BETWEEN 10'-2" AND 13'-2" TALL SHALL BE A MINIMUM OF 2X6 SPF#2 @ 16"o.c. UNLESS NOTED OTHERWISE ON THE PLAN. TALLER WALLS ARE SPECIFICALLY NOTED ON THE PLAN.
- STUD SUPPORT AT EACH END OF BEAMS/HEADERS UNLESS NOTED OTHERWISE
- STUDS: 2X LUMBER = SAME AS NUMBER PLYS FOR BEAMS; 1 FOR HEADERS  
 LVL, PSL, GLU-LAM = 3  
 STEEL BEAM = 5
- ALL POINT LOADS FROM ROOF BRACES, JACK STUDS, AND BEAM SUPPORTS MUST BE SUPPORTED WITH SOLID BLOCKING AND/OR STUDS EQUAL TO THE NUMBER OF STUDS ABOVE ALL THE WAY DOWN TO THE FOUNDATION (1 STUD/2X4 BLOCK MINIMUM) (RIM BOARDS AND JOIST BLOCKING SHALL NOT BE CONSIDERED AS AN ACCEPTABLE MEANS OF SUPPORT UNDER POINT LOADS FROM LVL AND STEEL BEAMS OR WHERE SQUASH BLOCKS "S.B" ARE INDICATED)
- NUMBER OF KING STUDS BASED ON OPENING WIDTH:  
**2x4 WALL**  
 LESS THAN < 3'-0" = 1 KING  
 3'-0" TO 6'-0" = 2 KINGS  
 6'-1" TO 8'-0" = 3 KINGS  
 8'-1" TO 10'-1" = 4 KINGS  
 OVER 10'-1" = SEE PLAN  
**2X6 WALL**  
 LESS THAN < 5'-0" = 1 KING  
 5'-1" TO 10'-0" = 2 KINGS  
 GREAT THAN > 10'-1" = SEE PLAN
- ALL FRAMING MEMBERS TO BE SPF#2 OR SYP#2 UNLESS NOTED OTHERWISE
- WOOD BEAMS SHALL BE SUPPORTED BY METAL HANGERS OF ADEQUATE CAPACITY WHERE FRAMING INTO BEAMS OR LEDGERS. THE FOLLOWING HANGER SCHEDULE MAY BE USED UNLESS NOTED OTHERWISE ON THE PLAN: (HANGERS WITH EQUIVALENT CAPACITIES TO THOSE LISTED BELOW ARE ALSO ACCEPTABLE)

MEMBER SIZE	SIMPSON HANGERS
(2) 2X8	LUS 28-2
(2) 2X10, (2) 2X12	LUS 210-2
(3)-2X10, (3)-2X12	LUS 210-3
(2) 1½" X 9½" LVL	HUS 410
(2) 1½" X 11½" - 14" LVL	HUS 412
(2) 1½" X 16" - 24" LVL	HHUS 410
ALL TRIPLE LVLS	HHUS 5.50/10

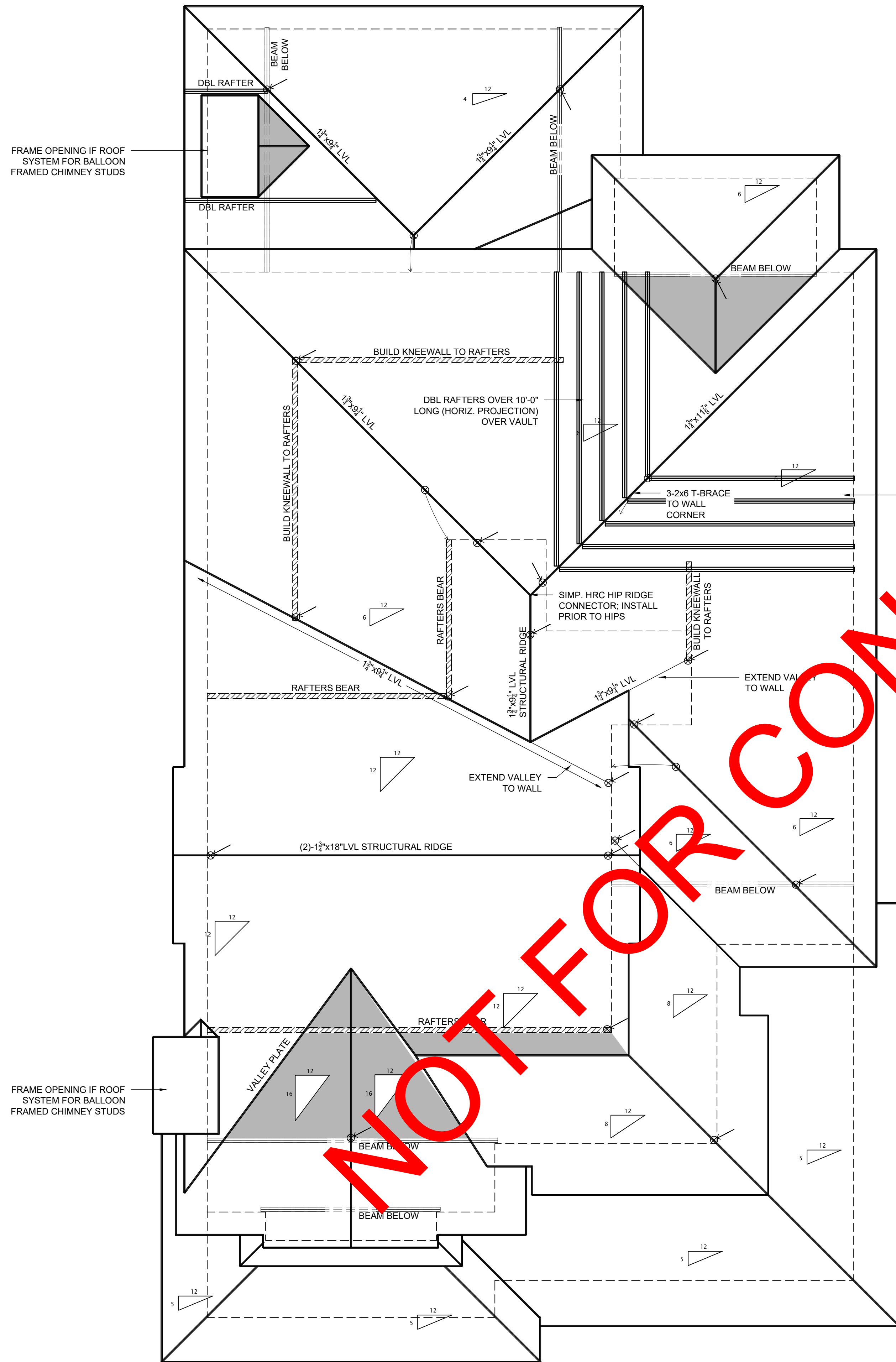
- FILL ALL OF THE HOLES IN BEAM HANGERS WITH 16d x 3½" COMMON NAILS (¾" x 0.162") OR 16d x 2½" (2½" x 0.162") NAILS UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. DO NOT BEND OR MODIFY THE HANGER OR USE INAPPROPRIATE FASTENERS. DO NOT USE 16d x 1½" "HANGER NAILS" UNLESS OTHERWISE NOTED ON THE PLANS OR IN SITUATIONS WHERE ONLY 1½" OR LESS OF WOOD IS PROVIDED TO NAIL INTO.
- CONTRACTOR TO PROVIDE 22"x30" MIN. ACCESS TO ATTIC AREAS MORE THAN 400 SF.
- CONTRACTOR RESPONSIBLE FOR ALL WATERPROOFING AND FLASHING.
- SEE ARCHITECTURAL PLANS FOR ALL DIMENSIONS.

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 (704)-999-3867

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 EXAMPLE PLAN

Third Floor Plan



FRAME OPENING IF ROOF SYSTEM FOR BALLOON FRAMED CHIMNEY STUDS

FRAME OPENING IF ROOF SYSTEM FOR BALLOON FRAMED CHIMNEY STUDS

- ROOF CONSTRUCTION NOTES:**
- ALL RAFTERS SHALL BE 2X6 SPF#2 @ 16" o.c. UNLESS NOTED OTHERWISE
  - ALL HIP, VALLEYS, AND RIDGES ARE 2X10 SPF#2 UNLESS NOTED OTHERWISE
  - ALL SHADED OR HATCHED AREAS INDICATE ROOF OVERBUILDS
  - STRUCTURAL RIDGE** - FASTEN ALL RAFTERS INTO THE STRUCTURAL RIDGE BEAMS WITH:  
 \* (3) 3"X 0.131" TOE-NAILS FOR SPANS UP TO 8 FT.  
 \* (3) 3"X 0.131" TOE-NAILS AND A BEVELED 2x LEDGER, OR SIMPSON A34 OR L50 ANGLE OVER 8 FT.
  - IN ADDITION TO THE CODES FASTENER SCHEDULE, UNLESS NOTED OTHERWISE ON THE PLAN, INSTALL SIMPSON H2.5A HURRICANE CLIPS AT THE ENDS OF THE RAFTERS WHERE THEY BEAR ON THE WALL PLATE @ 48" o.c. INSTALLING OVER WALL SHEATHING IS ACCEPTABLE.  
 AT OTHER FRAMED ROOFS, SUCH AS PORCHES, INSTALL HURRICANE CLIPS AT EACH RAFTER.
  - ALL HOGS SHALL BE COMPOSED OF TWO 2X6'S. THE BOARDS SHALL BE FASTENED TOGETHER AT THEIR ENDS WITH 3"X0.131" NAILS AT 4" ON CENTER TO FORM AN "L" SHAPE.
  - RAFTERS MAY BE SPLICED OVER HOGS. SPLICE RAFTER HOGS ONLY AT A ROOF BRACE.
  - ALL ROOF BRACES MUST HAVE A STUD FROM PLATE THROUGH ALL FLOORS TO THE FOUNDATION OR SUPPORTING BEAM BELOW.
  - FRAME OPENING IN ROOF SYSTEM FOR BALLOON FRAMED STUDS OR MASONRY FORMING CHIMNEYS WITH DOUBLE MEMBERS. CHIMNEY FRAMING IS **NOT** TO BE SUPPORTED BY ROOF FRAMING
  - ROOF BRACES UNDER 7'-0" ARE 2-2X4 NAILED WITH 3"X 0.131" NAILS @ 6" o.c. VERTICALLY FROM TOP TO BOTTOM. BRACES LONGER THAN 7'-0" SHALL CONSIST OF (2)2X6 T-BRACES. BRACES LONGER THAN 12 FT. MUST BE BRACED HORIZONTALLY IN TWO DIRECTIONS AT MID-HEIGHT.
  - CONNECT BOTTOMS OF ALL BRACES THAT ARE NOT WITHIN 26" FROM VERTICAL TO BEAMS OR WALLS WITH ONE SIMPSON A34 BRACKET, OTHERWISE CONNECT WITH FOUR 3"X 0.131" TOENAILS.

**ROOF PLAN LEGEND:**

BB - BEAM BELOW  
 RB - RAFTERS BEAR ON WALL BELOW  
 ⊗ INDICATES LOCATION OF ROOF BRACE POINT AT RAFTER LEVEL.  
 ⊗→ ARROW AWAY FROM THE BRACE POINT INDICATES DIRECTION OF ROOF BRACE TO PARTITION, BEAM, OR OTHER BRACE POINT BELOW.  
 ⊗← ARROW INTO BRACE POINT INDICATES A VERTICAL OR ALMOST VERTICAL ROOF BRACE TO PARTITION, BEAM, OR OTHER BRACE POINT BELOW.

**RAFTER BAND** - SECURE 2X BAND (ONE SIZE LARGER THAN RAFTER) TO HOUSE STUDS/BAND WITH 3-16D NAILS AT 16" o.c. SECURE EACH RAFTER TO BAND WITH 3-8D TOENAILS AND SUPPORT WITH SIMPSON A34 OR L50 SIDE ANGLE OR BEVELED 2x LEDGER.

**HOG** - (2)2X6 HOG INSTALLED AGAINST RAFTERS.

WHEN >26" (2V:1H) ATTACH ROOF BRACE WITH SIMPSON A34 BRACKET AT BASE

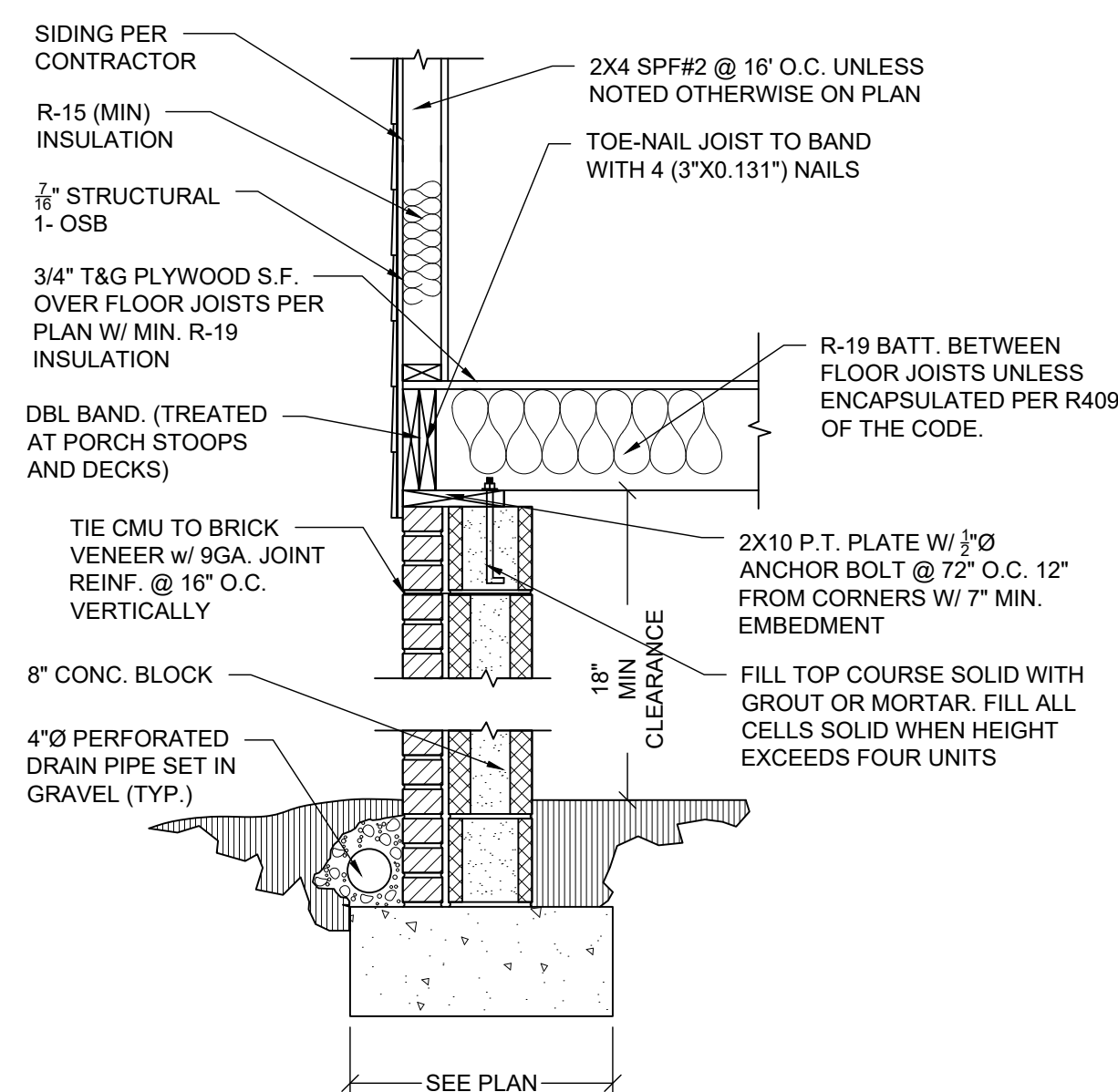
**RAFTER HOG DETAIL**

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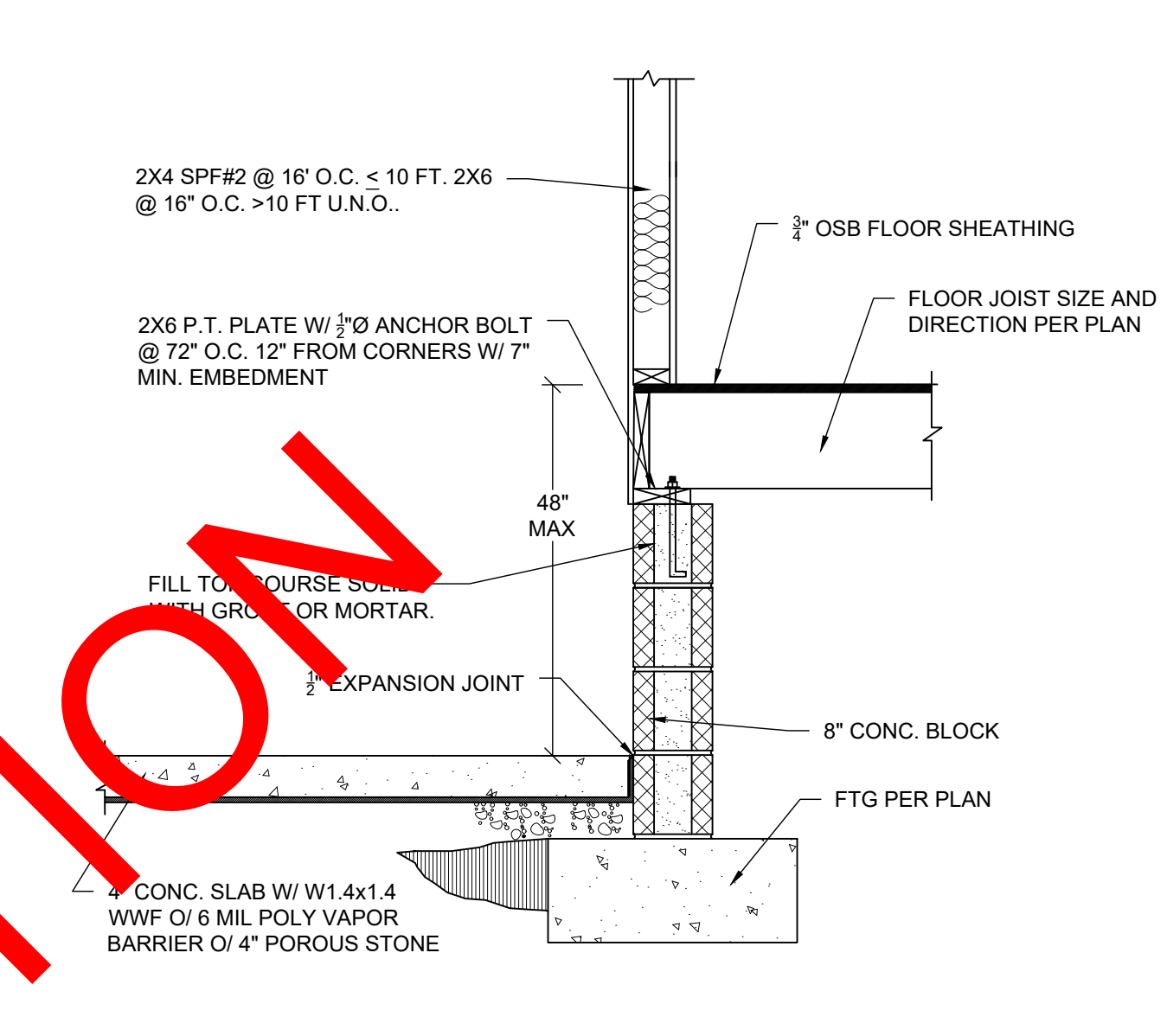
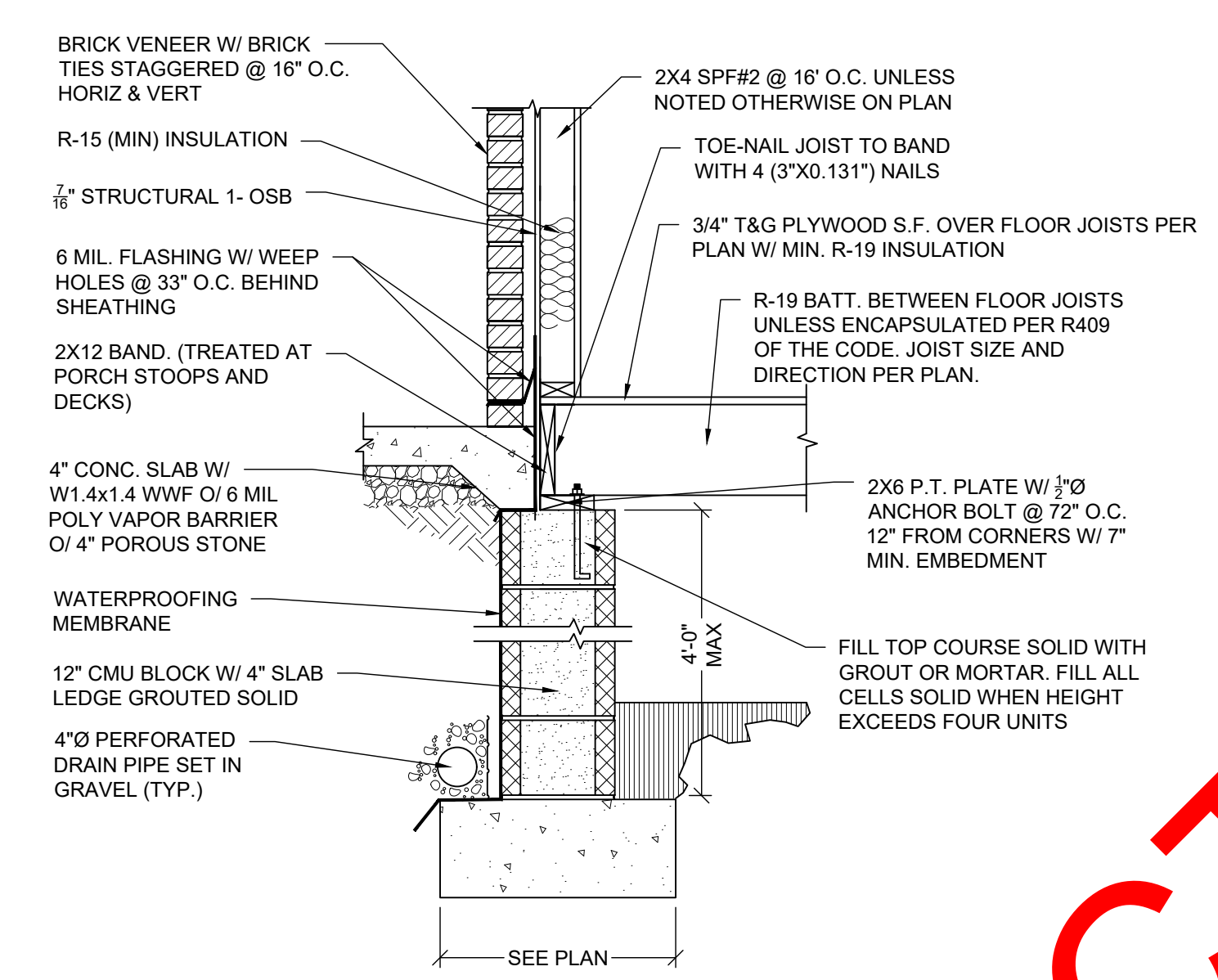
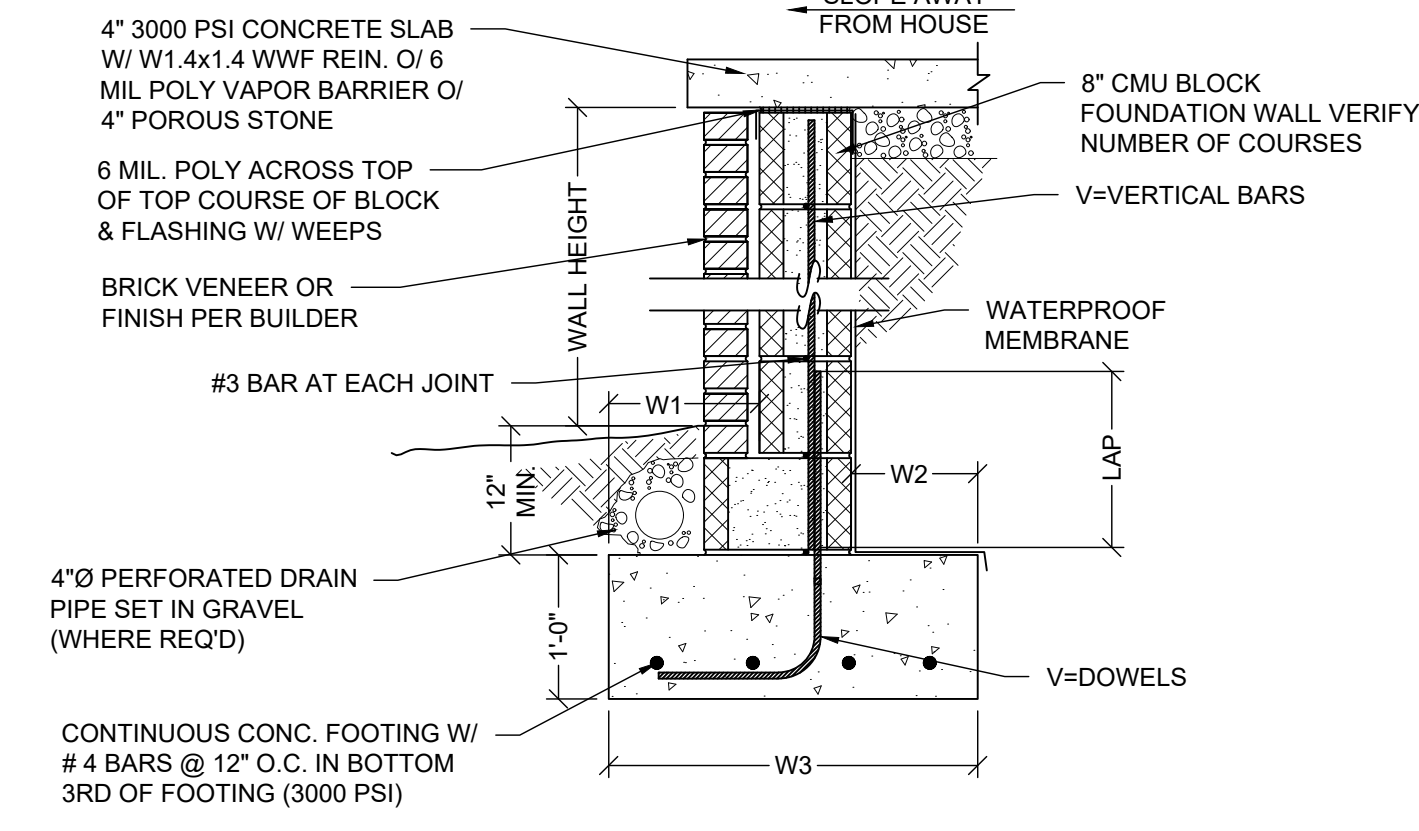
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Roof Plan



WALL HEIGHT UNBALANCED FILL	FOOTING			V = VERTICAL BARS & DOWELS	LAP
	W1	W2	W3		
0' TO 2'	8"	8"	24"	SOLID GROUTED	N/A
2' TO 4'	12"	12"	36"	#4 @ 16" O.C.	18"

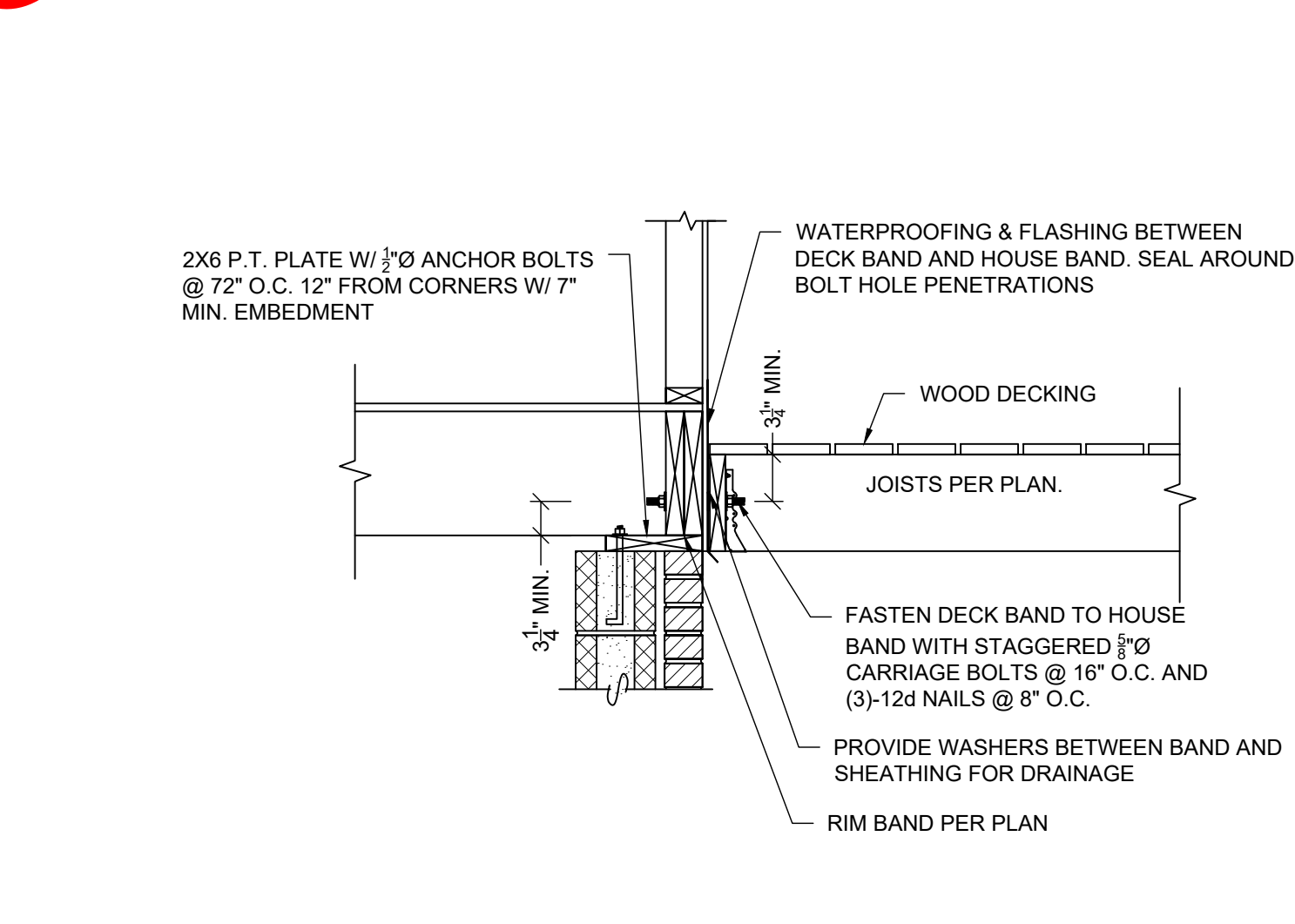
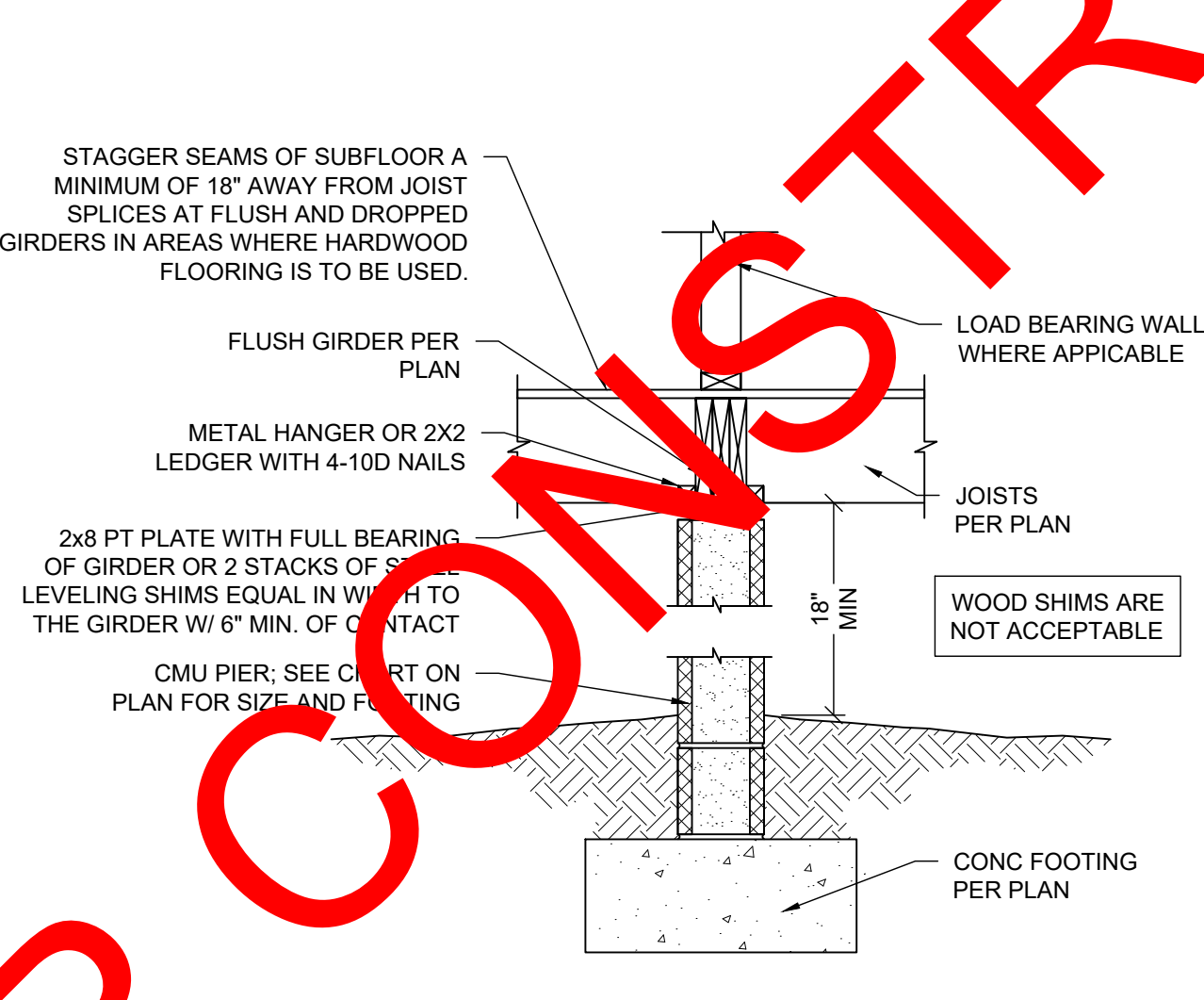
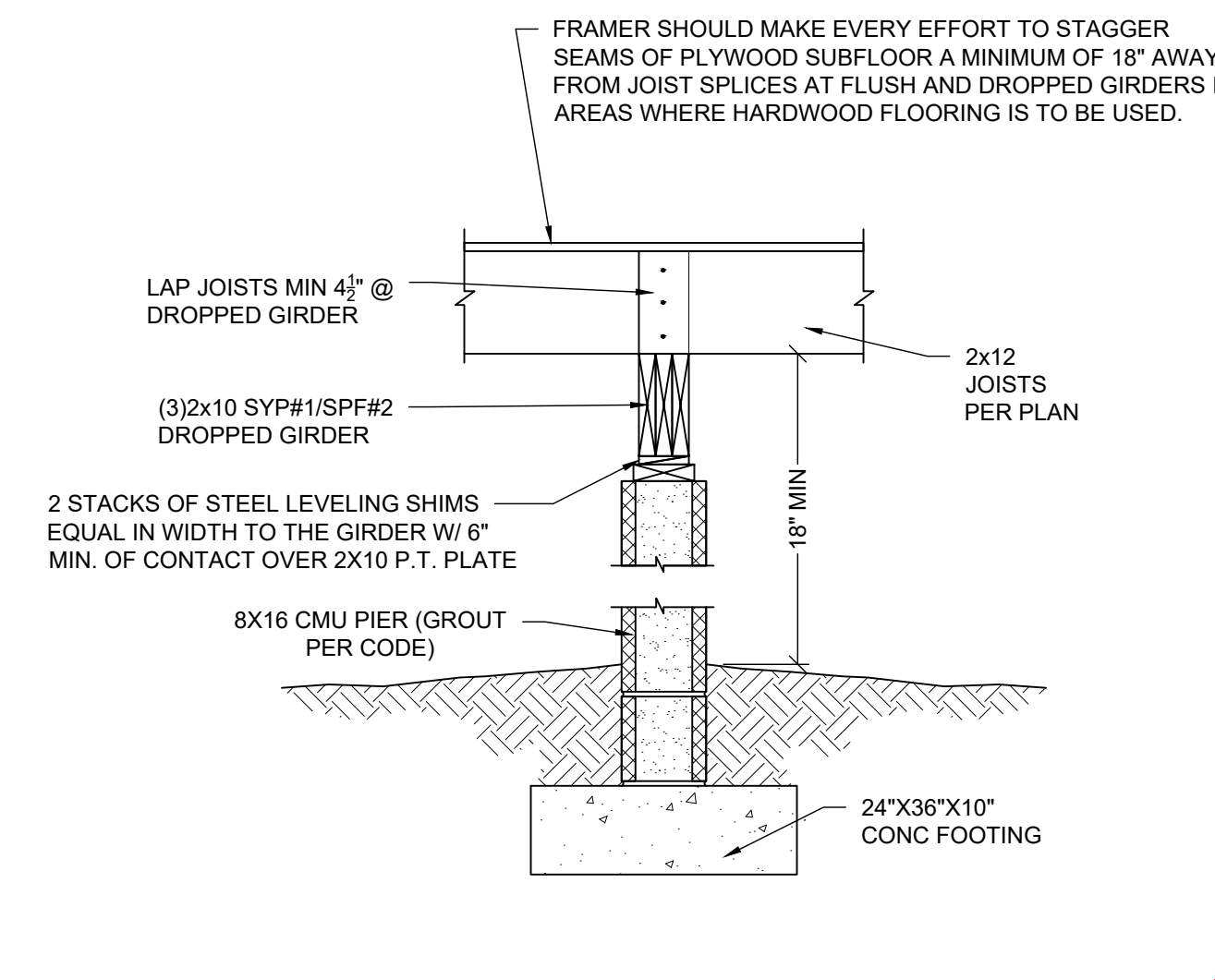
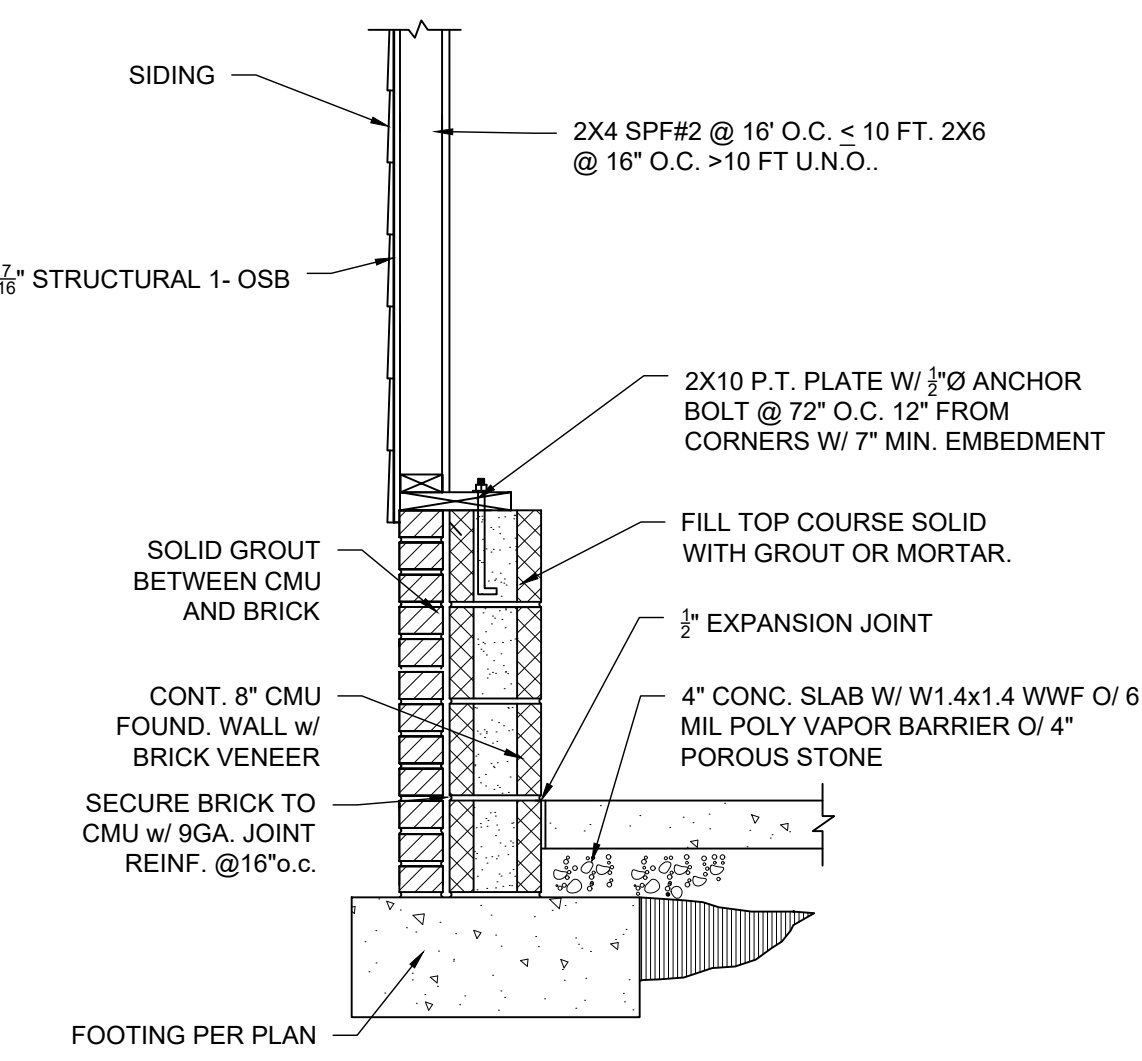


1 TYPICAL PERIMETER FOUNDATION WALL  
S6 SCALE: 3/4"=1'-0"

2 END OF TERRACE (BRICK)  
S6 SCALE: 3/4"=1'-0"

3 HOUSE TO PORCH  
S6 SCALE: 3/4"=1'-0"

4 HOUSE TO GARAGE W/ 2X12 JOISTS  
S6 SCALE: 3/4"=1'-0"

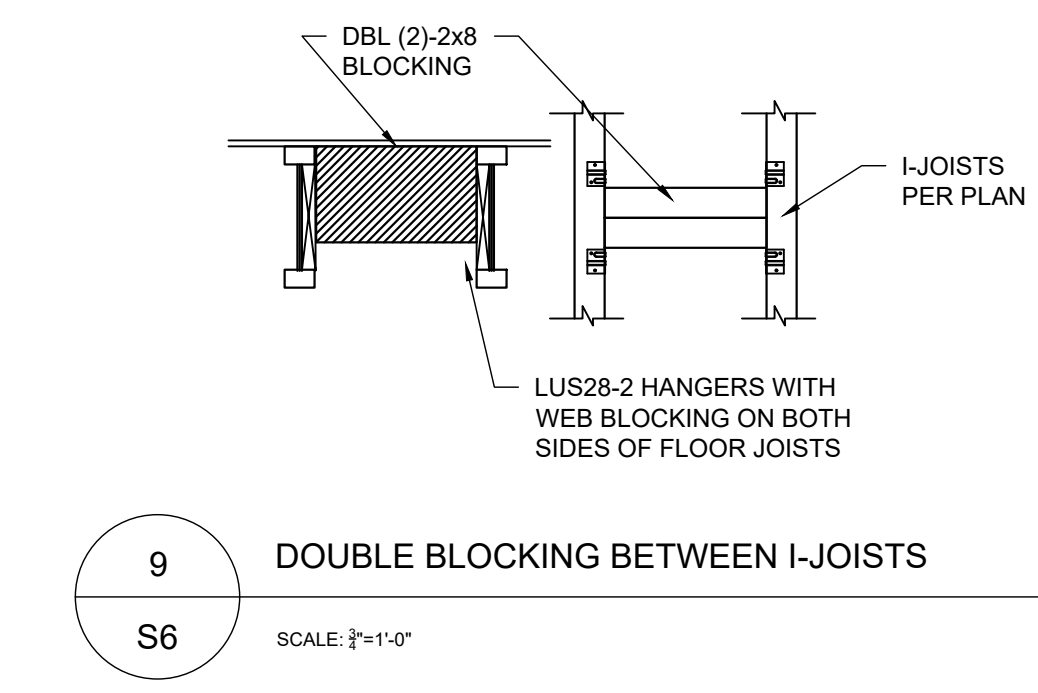


5 GARAGE WALL WITH SIDING  
S6 SCALE: 3/4"=1'-0"

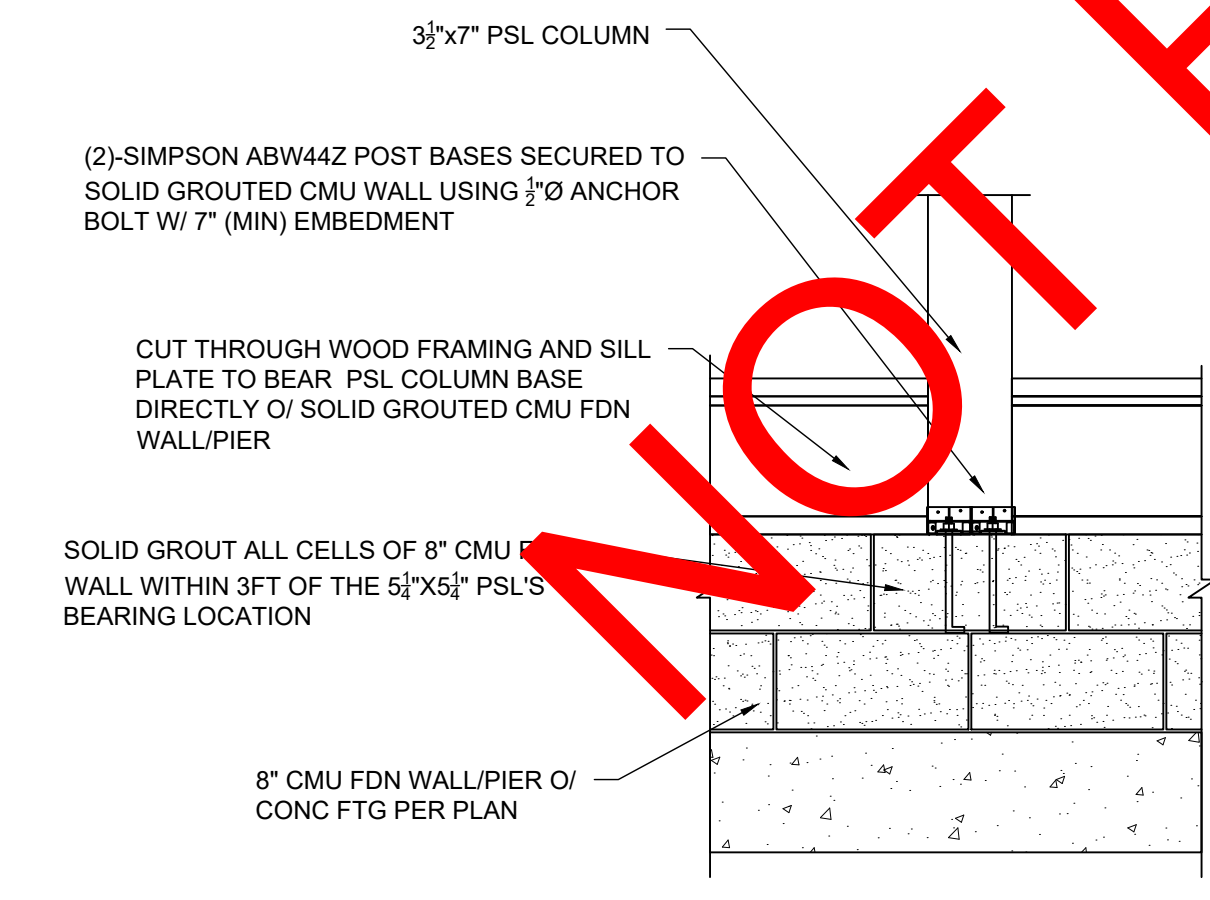
6 3-2X10 DROPPED GIRDER  
S6 SCALE: 3/4"=1'-0"

7 FLUSH GIRDER OVER CMU PIER  
S6 SCALE: 3/4"=1'-0"

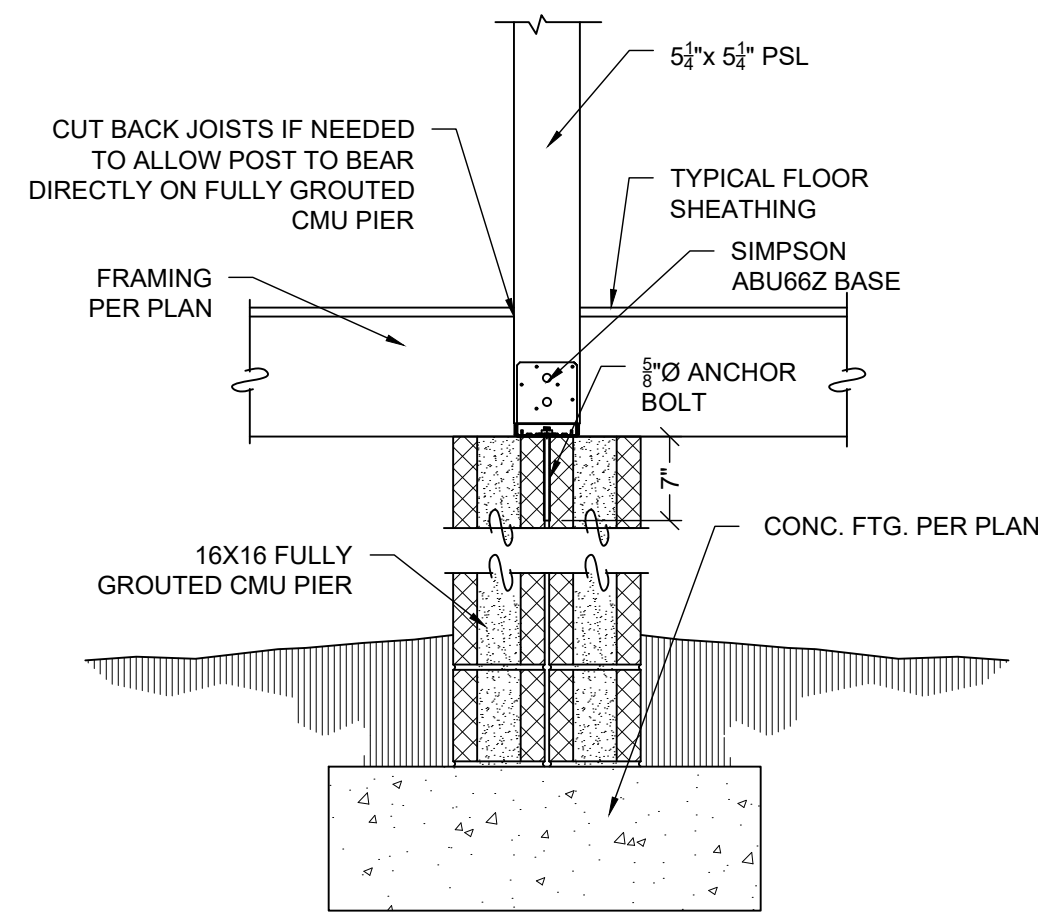
8 DECK CONNECTION  
S6 SCALE: 3/4"=1'-0"



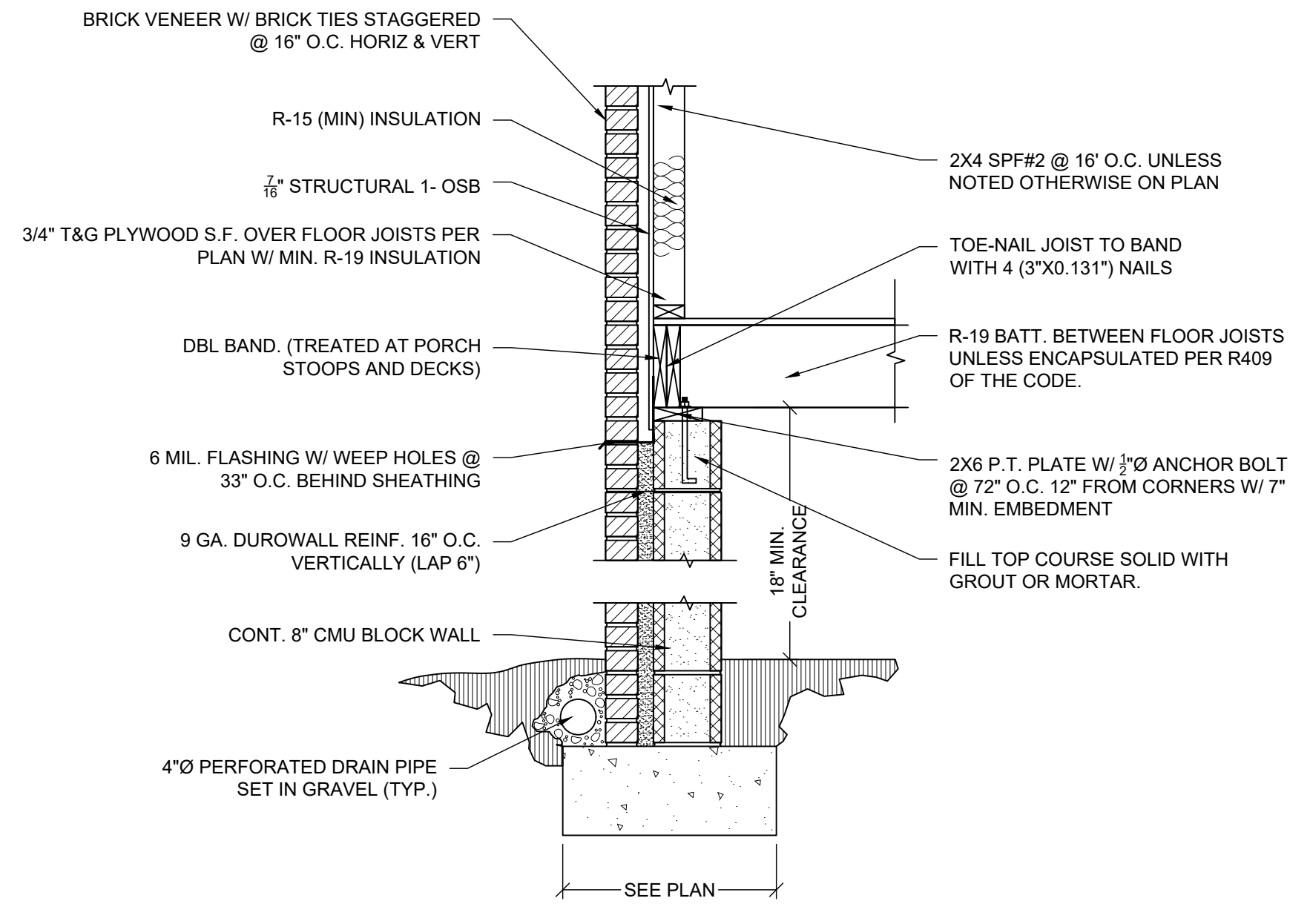
9 DOUBLE BLOCKING BETWEEN I-JOISTS  
S6 SCALE: 3/4"=1'-0"



10 3 1/2" x 7" PSL TO FDN WALL  
S6 SCALE: 3/4"=1'-0"

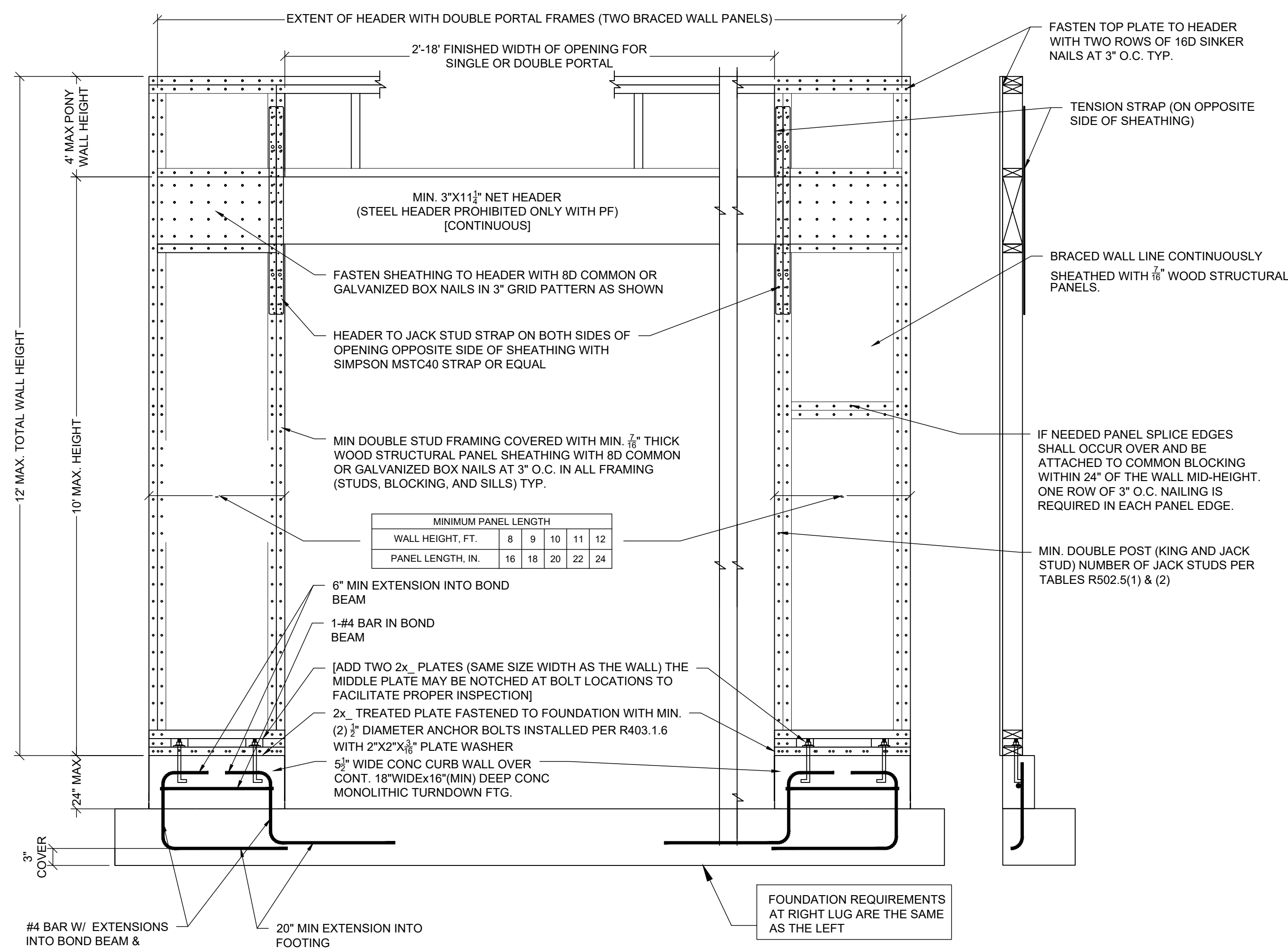


11 5 1/2" x 5 1/2" PSL BEARING O/ CMU PIER  
S6 SCALE: 3/4"=1'-0"



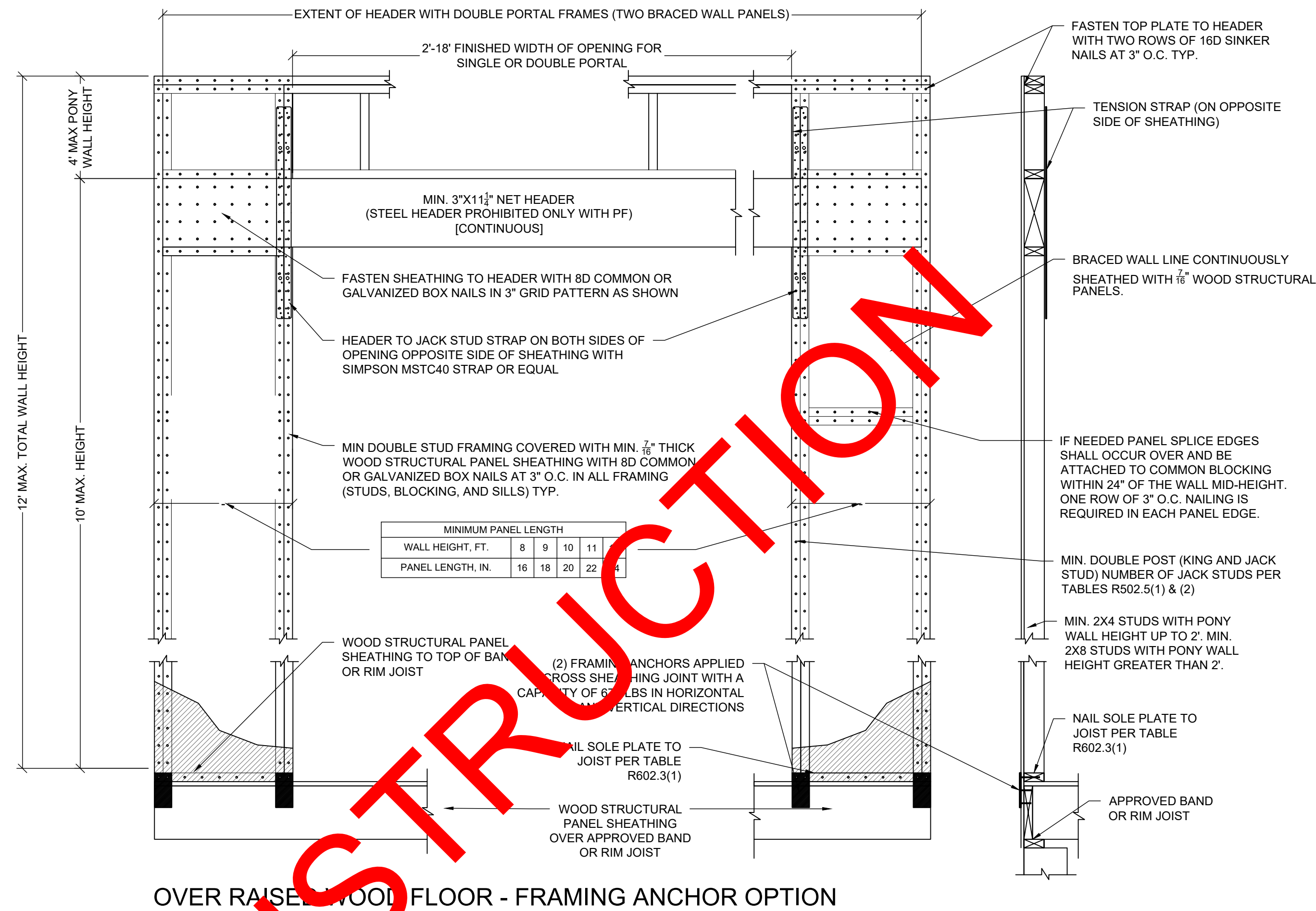
12 TYPICAL PERIMETER FOUNDATION WALL W/ FULL HGT BRICK  
S6 SCALE: 3/4"=1'-0"

NOT FOR CONSTRUCTION

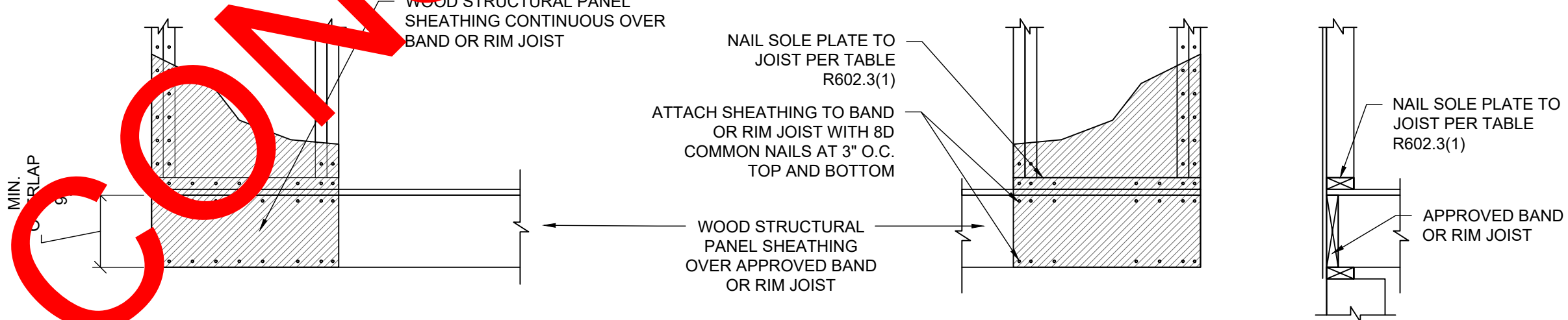


1 PORTAL FRAME CONSTRUCTION AT GARAGE

S7 SCALE: 3/4" = 1'-0"



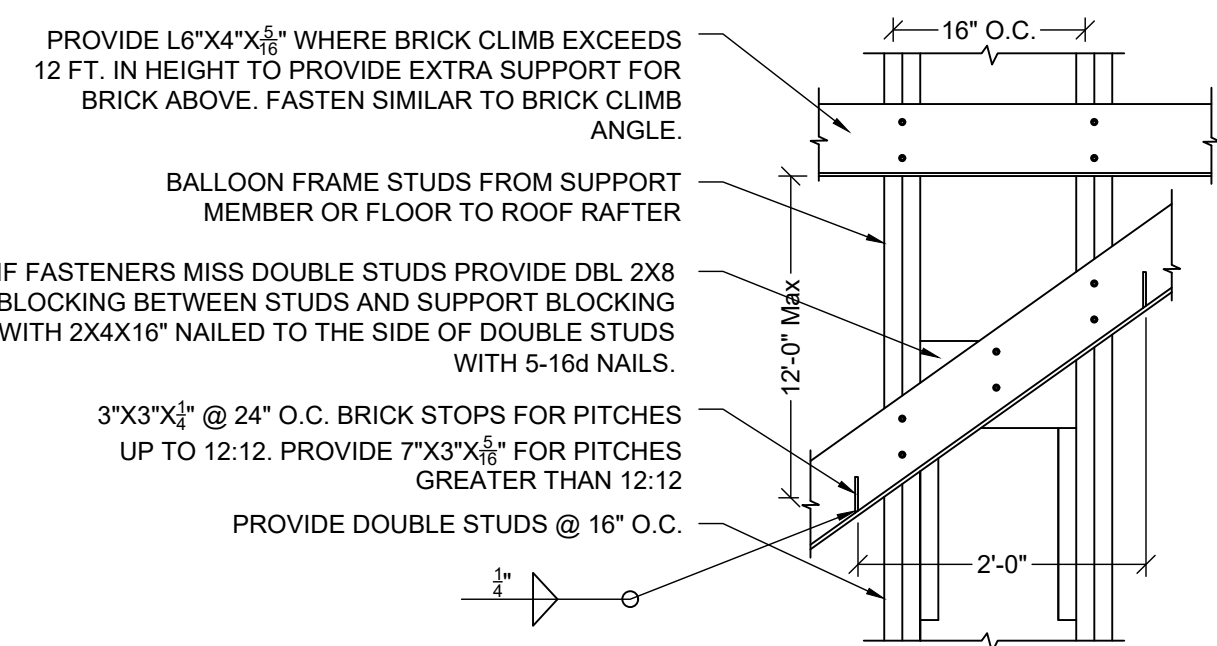
OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION



OVER RAISED WOOD FLOOR - OVERLAP OPTION

2 ENGINEERED PORTAL FRAME CONSTRUCTION

S7 SCALE: 3/4" = 1'-0"



NOTE: AVOID BURNING HOLES IN THE FIELD

- BRICK VENEER W/ BRICK TIES @ 16" O.C. PER NCRC R703.8.4
- METAL COUNTER FLASHING MUST BE BEHIND SHEATHING. BUILDING PAPER AND THRU-WALL FLASHING GO OVER ANGLE
- 1/2" X 1/2" ANGLE FASTEN TO WALL WITH TWO 3/8" LONG LEDGERLOK SCREWS OR (2) 1/2" X 4" LAG SCREWS INTO DBL BLOCKING OR DBL STUD @ 16" O.C. (HORIZ) PROVIDE VERT BRICK STOPS @ 24" O.C. WELDED TO ANGLE
- THRU WALL FLASHING WITH WEEP HOLES @ 48" O.C. PER NCRC R703.8.5 & R703.8.6
- METAL STEP FLASHING, WEAVE BETWEEN SHINGLES
- INSTALL ICE AND WATER SHIELD OVER (3) 2X4 BLOCKING AND BEHIND COUNTERFLASHING
- DOUBLE RAFTERS FASTEN FIRST RAFTER TO WALL STUD W/ (3) 16D NAILS @ 16" O.C.

3 BRICK ROOF CLIMB

S7 SCALE: 3/4" = 1'-0"

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EXAMPLE PLAN

Structural  
Details

S7