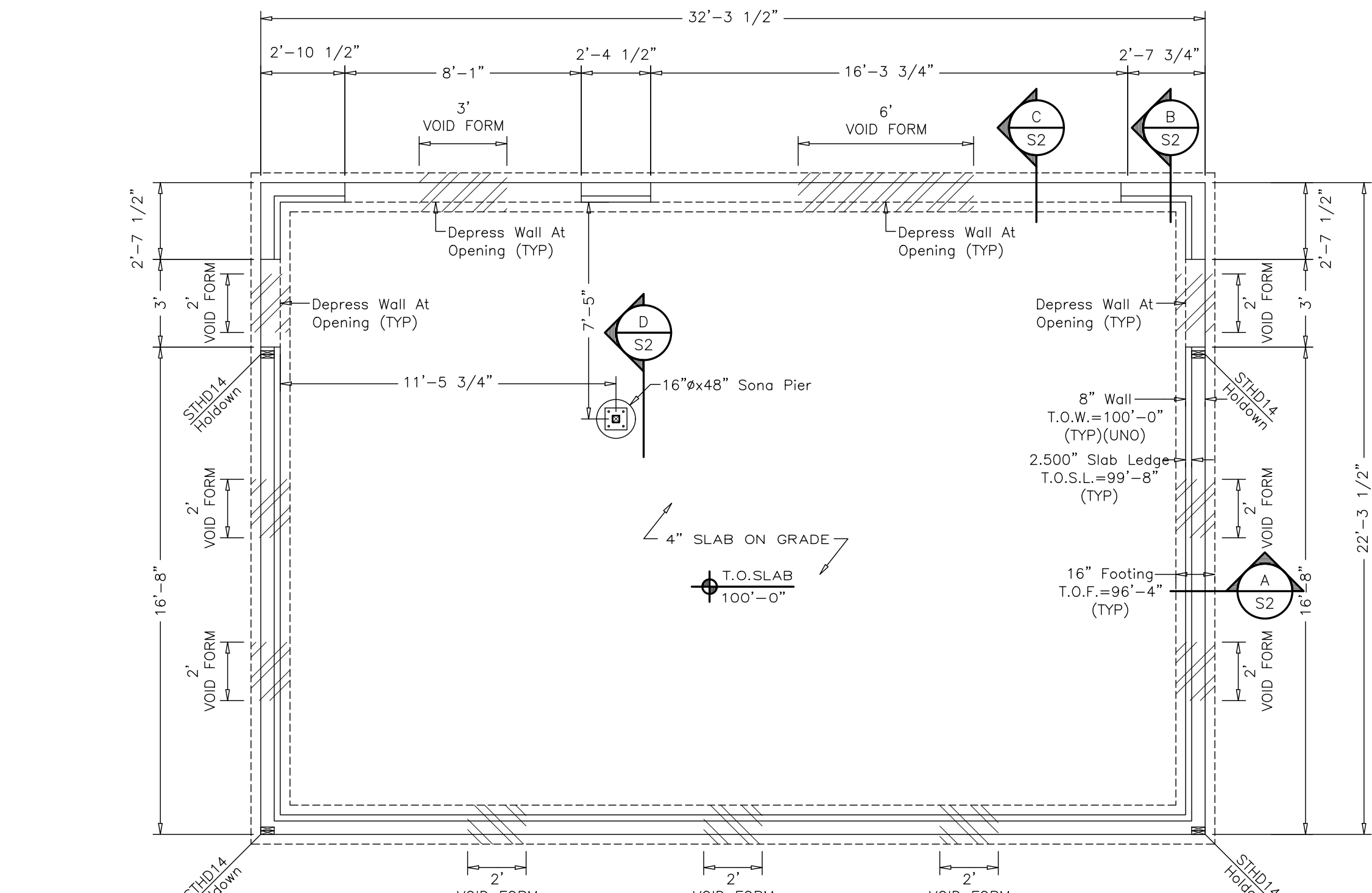


- GENERAL
1. DESIGN LOADS:  
Roof: Snow Load=85 psf, Live Load=20 psf  
Storage Loft: Live Load=20 psf  
Wind: Ultimate Wind Speed=115mph (3 Second Gust) Exposure C, No Topographic Effects
2. RESPONSIBILITY: The contractor is responsible for cross referencing all plans and inspecting work placement at the site to assure that no omissions or discrepancies exist that might adversely affect construction or the integrity of the finished product. Job site and construction safety are not addressed in these plans and are the responsibility of the contractor. These responsibilities are industry standard.
3. These plans are intended to be in accordance with 2018 IBC and IRC codes. All construction to be in conformance with these codes and all applicable local codes.
4. Contractor to verify existing conditions match those per plan and to consult Engineer of Record if existing conditions differ.

- FOUNDATION
1. Foundation designed in accordance with NWCC site specific Subsoils & Foundation report.  
Project No. 09-8295, dated March 24, 2009, which is hereby made a part of these drawings. Maximum allowable soil bearing pressure = 3000 psf, 600 psf min. Authorization for use of the report or its recommendations are the responsibility of the owner. We recommend a soils engineer verify during excavation (and before construction of any part of the foundation) that soils types and conditions warrant assumed values. EDW is not responsible for structural issues resulting from the placement of foundations on improperly assumed soils.
2. Drainage and grading details to divert surface drainage at least 10' away from the structure. Do not backfill against any foundation or retaining wall until all supporting floor and slab systems are in place and securely anchored, or other adequate wall support is provided.
3. Where exterior backfill rises above any adjacent floor, use granular free draining backfill from drain tile up. Exterior backfill may be native inorganic material where final grade is below lowest floor (UNO). Before placing finish topsoil, we recommend capping backfill with a Mirafi fabric under 12"-24" of water impermeable material (e.g. clay).
4. Provide 4" diameter perforated PVC drain tile in a 12" by 12" gravel envelope at lowest levels of and perimeter of excavation sloped a minimum of 1/8" per foot to an adequate daylighting drain. Provide cleanouts and screen end. Mirafi or other filter barriers will help prevent drain clogging. Test drain tile before and after backfilling.
5. All construction and materials to conform with ACI 318.
6. Reinforcing bar to be deformed 60 ksi steel (per ASTM A-615). Lap all rebar splices and corners 38 bar diameters minimum.
7. Concrete supplier to provide mixes that replace 20% of portland cement with recycled fly ash from local coal burning power plants.
8. Minimum concrete 28 day compressive strength = 3500psi for walls, footers, and pads, and 4000psi for slabs.
9. Concrete cover: Concrete cast against and permanently exposed to earth: footing, pad = 3". Concrete exposed to earth or weather: walls, slabs = 1.5".
10. Consolidate concrete per ACI 309. Cast in place concrete shall be poured continuously so as to prevent cold joints.
11. Provide 1/2" diameter by 10" min anchor bolts at 24" on center with an embedment of 7" to connect framing to foundation (UNO). Anchor bolts to be located not more than 12" from foundation corner (TYP). Use galvanized anchor bolts with pressure treated plates. Finish all concrete wall tops to within 1/8" of specified elevations.
12. Foundation insulation and waterproofing to be specified and installed in accordance with the above mentioned soils report, IRC, local codes, and accepted construction practice.
13. Do not use foam form systems without approval of Engineer.
14. Provide slab shrinkage reinforcement of 6x6W14 welded wire mesh with 2" laps. Exterior slabs to be 5" minimum thickness with #3 rebar at 12" on center each way as reinforcement.
15. Slab surfaces to be left free from travel marks, uniform in appearance, and with a surface plane tolerance not exceeding 1/8" in 10' or 10' straightedge.
16. Provide 1" deep tooled (or cut) control joints at approximately 10' on center in each direction.
17. Provide 1/2" expansion joint material at all slab to wall, footing, or column interfaces. Provide a 6 mil poly barrier under all interior slabs for moisture protection and as a bond breaker. Provide an approved hardener and sealer to the surface of all slabs.
18. If foundation is to sit through winter without complete framing, we recommend the building achieve enough backfill, framing, and floor sheathing to protect foundation bearing soils from moisture accumulation and frost heave.
19. STD14 Holdowns (UNO) at locations per foundation plan. At Holdown locations provide (4)2x6 min. posts at all floor levels. WSTD66 strap posts across rim joist to corner posts above for continuous tension load transfer. Install per manufacturer requirements.

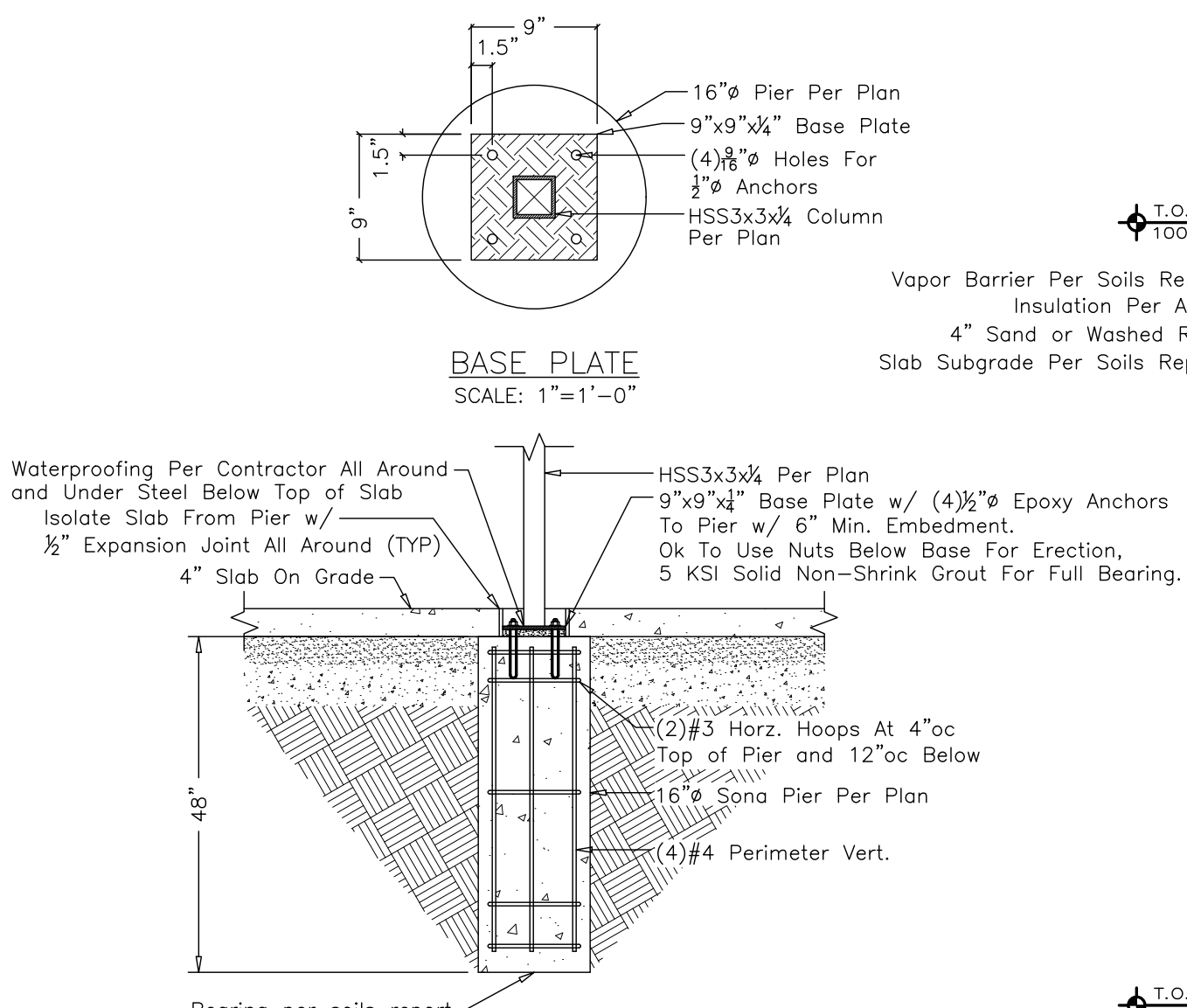
- WOOD FRAMING
1. Framing plans show structural requirements only. Additional members may be required for blocking, nailers and code requirements.
2. Use Douglas Fir or Hem Fir "stud grade" (S4S) 2x6 for all wall studs(UNO). Use DF#2 (S4S) or better for all multi-stud posts, joists, rafters, headers, posts, beams and plates.
3. Sill plates and any other lumber in direct contact with concrete- California Foundation Grade Redwood or Species Group B Pressure Treated Lumber. Use galvanized anchor bolts with pressure treated plates.
4. Glulams (GL) - 24F-V8 manufactured in accordance with AITC 117-84, fb=2400psi. OK to use 24F-V4 for simple span applications only. All Glulams used in exterior applications must be sealed and protected from moisture with an appropriate preservative.
5. Laminated Veneer Lumber (LVL) - manufactured in accordance with APA criteria, fb=2600psi.
6. Timbers- Douglas Fir (DF) Grade specified on plan- #1 Fb>1300psi, #2 Fb>850psi.
7. Exterior Wall Studs- 2x6 APA rated 24/16 min with 8d's @ 6" oc edge, 12" oc field. Manufactured in conformance with APA PS 1-83. Floor Ply- 3/4" T&G OSB APA rated 24/0 minimum, 8d's @6" oc edge, 6" oc field. Glue to joists. Roof Ply- 5/8" OSB APA rated 40/20 minimum, 8d's @ 6" oc edge, 6" oc field.
8. All wall, floor, and roof sheathing to be placed with 8' dimension perpendicular to framing with end joints staggered.
9. 1/2" Plywood sheath 100% all exterior frame. Ply to lap floor rim, top plates and sill plate.
10. Roof Trusses- L/360 maximum total deflection with 1/2" maximum deflection, 24" oc maximum spacing. Floor Trusses- L/500 maximum total deflection, 1/720 maximum live load deflection, 16" oc maximum spacing. Truss design and fabrication by others to be approved by engineer of record prior to fabrication and construction.
11. Provide 1 1/4" Timberstrand Rim with depth to match floor framing at all floor edges and perimeter (UNO). Where rafters, trusses, or joists run parallel to exterior wall, solid block first 2 bays at 24" oc.
12. Exterior walls <12' height to have 2x6 At 16" oc studs (UNO), at wall heights > 12' provide studs per Exterior Wall Stud Schedule. Exterior walls to have (2)2x6 top and bottom plates. Wall studs to be continuous from floor to floor or floor to roof. Balloon frame all gable walls. Provide firestop blocking at 10' max intervals in any wall with studs over 10' height.
13. Posts and trimmers to stack over equal below continuous to foundation or to beam/header below (UNO).
14. Nail exterior wall sole plate to joists below with (3)10d and to blocking, rim or eave with 10d's @ 4" oc.
15. Maintain 6" clearance between untreated wood or siding and soils at finish grade.
16. Shear Walls- Shear wall sheathing, panel fastening edge and field, and studs, holdowns, and connections per Shear Wall Schedule, plan, and typical shear wall details. Shear walls to have 2x6 At 16" oc studs, (2)2x6 top and bottom wall plates. Wall panels to be oriented with long panel dimension perpendicular to studs. Stagger panel edges and stagger to different studs on opposite sides of wall. Block all panel edges. End studs to have continuous load path from upper floors to foundation below.
17. All partition walls framed on slab to be slip jointed per typical slip joint detail as required by soils report.
18. All load bearing headers in exterior 2x6 wall to be (3)2x10 (UNO). At interior walls headers to be (3)2x10 in 2x6 walls and (2)2x10 in 2x4 walls. 100% glue header plys together and provide (3)16d at 12" oc staggered face to face.
19. Window sills at rough openings <= 7' to be (2)2x6 with (2)16d to nails each side of each end sill to kings. At rough openings > 7' provide window sills per schedule with L550 clip each side of each end and HDR.
20. Provide 2 studs under each end of all load bearing beams or headers >32"(UNO). (1)King stud min. (UNO), (4)16d toe nails each side of header to king studs (UNO). At LVL headers, provide (3)SDS25600 toe screws each side and each end header to king posts (UNO).
21. Multiple stud posts anticipate 2" min wall sections preventing buckling. Verify new adjacent openings with engineer.
22. Studs removed for doors and windows shall be placed equally at the end of headers, up to (2)king studs each end.
23. Solid block all bearing walls and posts for continuity to foundation.
24. Block all trusses, outlooks, rafters and joists at all bearing points.
25. Where full height foundation wall parallel to joists, block first 2 joist bays @ 24" oc.
26. Connect joists to blocking with a minimum of (2)10d nails and connect joists to plate or beam below with a minimum of (3)16d toe nails. Connect rim joist to plate below with (2)16d toe nails @ 8" oc or A35 clip at 16" oc.
27. Connect all BCI rafters to blocking with (3)10d nails, and to plate or beam below with (4) 10d nails.
28. Provide beveled bearing plate at upper bearing, birdsmouth cut at lower bearing per manufacturer. Provide beveled web stiffeners at interior bearing. Strap BCI rafters across ridge with LSTA18. Connect roof blocking to plate below with 16d At 4" oc toe nails or A35 clip at 24" oc minimum. Refer to BCI Specifier/Installer Guides for full bearing requirements.
29. Connect all 2x and LVL rafters to blocking with (3)10d nails, and to plate or beam below with (4)10d nails. Provide birdsmouth or spot cut bearing at all beams and wall plates (UNO).
30. Connect common trusses to all bearing points with Simpson H2.5 connectors (UNO). Connect girder trusses to bearing w/ LG1 holdown to match truss plys. Scissor trusses connect one end with Simpson TC26. Connect to blocking with (3)16d nails and connect roof blocking to top plates w/ 16d At 4" oc toe nails or A35 clip at 24" oc.
31. Ventilate roof framing per local codes.
32. Nailing, blocking, and all other construction details per 2018 IBC and IRC, such as Table R602.3(1), (UNO).
33. All connector callouts to be Simpson Strong-Tie or equal by Simpson Strong-Tie Company, Inc. Install per manufacturer's instructions.
34. T&I and MicroLam (ML) are products by Weyerhaeuser. BCIs and VLs are products of Boise Cascade. Install per manufacturer's instructions. Multiple ML's glue and nail together with (2) rows 16d @ 12" oc (UNO).
35. Steel beams pack out per detail where noted. Where not otherwise noted, provide 2x full width nailer on top with 1/2" thru bolt at 24" oc staggered side to side of beam web. Use 10d x 1 1/2" nails at top flange joint hangers per Simpson specifications. (TYP) At steel beam bearing rafters, OK to weld bolts to top flange and notch plate into rafters as required for ceiling finish. At HSS tube steel beams, provide full width 2x nailer on top with 1/2" All thread studs at 24" oc welded all around. Where frame wall pocket prevents beam rolling, connect steel beam base to post at beam below with (2)5/8" lags. Otherwise connect beam to bearing via welded "ears" i.e., flanges similar to Simpson CC. Provide 1/4" fitted web stiffeners at steel beam point loads and bearing points (UNO).
36. Where steel borders rough openings, provide 2x6 DF or PSL plate for window or door attachment. Connect to W section flanges with 1/2" carriage bolts at 24" oc staggered side to side of web and to HSS sections with 1/2" all thread studs at 24" oc with 3/4" fillet weld all around to HSS.
37. Connect steel column cap per plan to W section bottom flange w/ (2)1/2" thru bolts each side of web or 1/2" fillet weld all around (4 sides). Steel column beams per plan to bear directly on steel or LVL beam below or on foundation. Do not bear on plywood or plates. At LVL bearing provide (2)3/4" lag screw each side of column bearing plate to beam, on foundation bearing provide (1)3/4" All-thread epoxy anchor each side of column with 8" min. embedment. At steel bearing connect base to beam with (2)3/4" thru bolts each side of web or 3/4" fillet weld all around.
38. Provide DT12Z tension tie each corner of deck where it meets exterior wall. Install per manufacturer requirements.

- STRUCTURAL STEEL
1. All structural steel shall conform to ASTM specifications A36 except W sections which shall conform to A992 Grade 50 and HSS sections which shall conform to ASTM A500 Grade B. Steel to steel member connection bolts shall be A325 steel and all anchors and components embedded in concrete shall be ASTM F1554 Grade 36 galvanized or stainless steel.
2. Steel column base plates shall bear completely and evenly to concrete below via 5000 psi non shrink grout.
3. Minimum welds to be per AISC and/or AWS, but not less than 3/16" continuous fillet unless otherwise noted. Welding quality control shall be per AWS. All welders shall have evidence of passing the American Welding Society Standard Qualifications Test as detailed in AWS D11.1.



FOUNDATION PLAN

Scale: 1/4"=1'-0"



TYPICAL PIER DETAIL

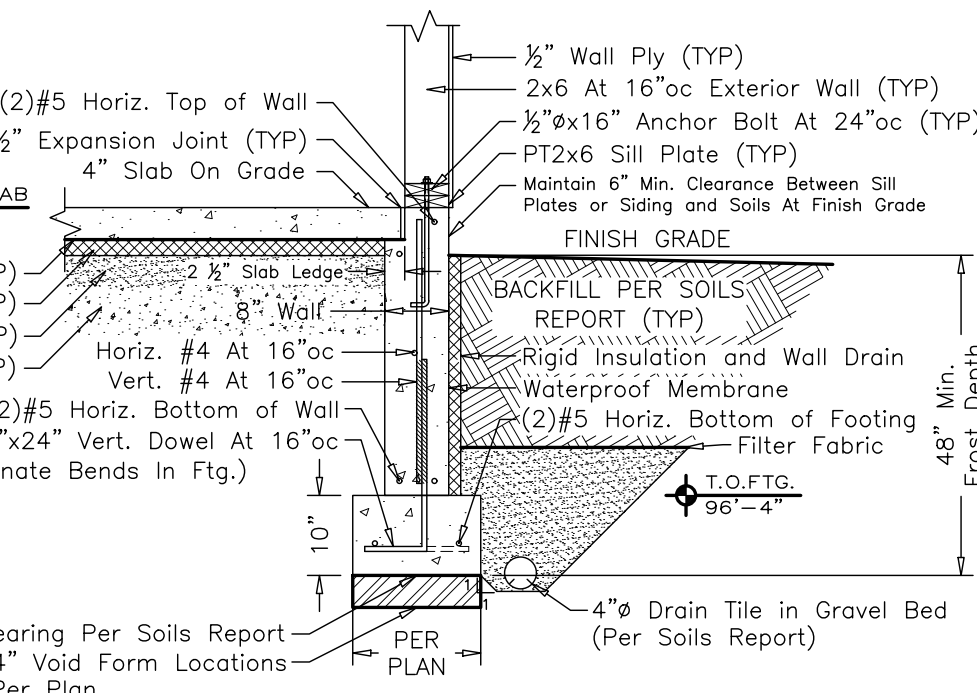
Scale: 1/2"=1'-0"

TYPICAL ABBREVIATIONS

BRG = bearing  
CL = center line  
E.E. = each end  
E.M. = each member  
E.S. = each side  
E.W. = each way  
GL = Glulam  
HDR = header  
LVL = Laminated veneer lumber  
oc = on center  
OF = overframe  
OH = overhang  
OPP SIM = opposite similar  
PL = plate  
PT = pressure treated  
PSL = parallel  
R.O. = Rough opening  
SOG = slab on grade  
STR = Structural  
TOBL = top of brick ledge  
TOF = top of footing  
TOS = top of slab  
TOW = top of wall  
TYP = Typical  
UNO = Unless noted otherwise  
WS = steel web stiffeners

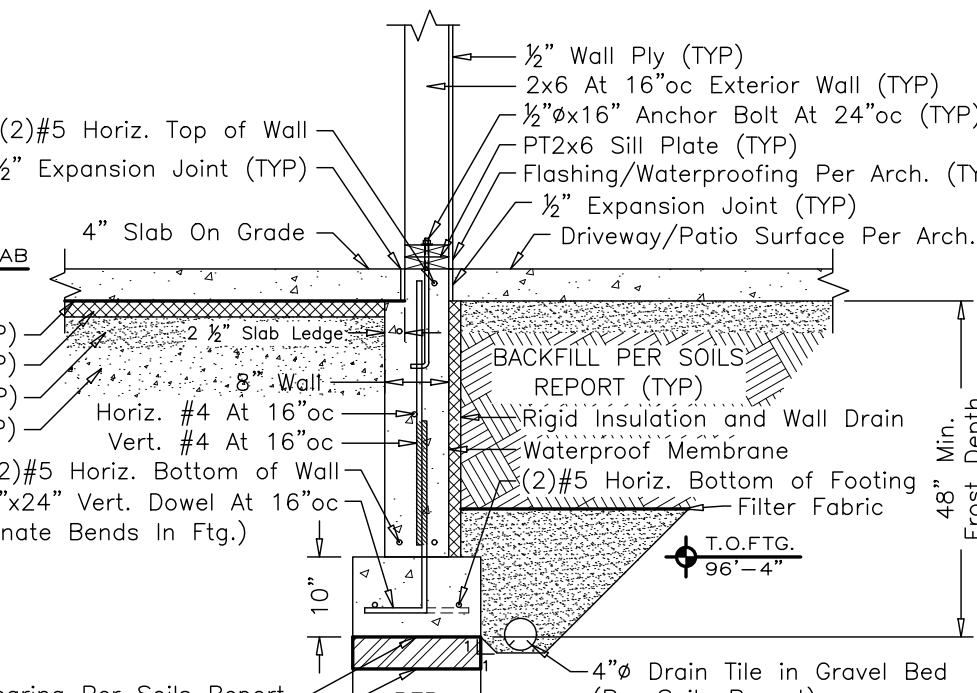
EXTERIOR WALL STUD SCHEDULE:

STUD HEIGHT:	PRODUCT:	SPACING:
<=12'	2x6 DF#2	16" oc
>12' to <=16'	1 1/2"x5 1/2" 1.3E Timberstrand LSL	16" oc
>16' to <=18'	1 1/2"x5 1/2" 1.3E Timberstrand LSL	12" oc



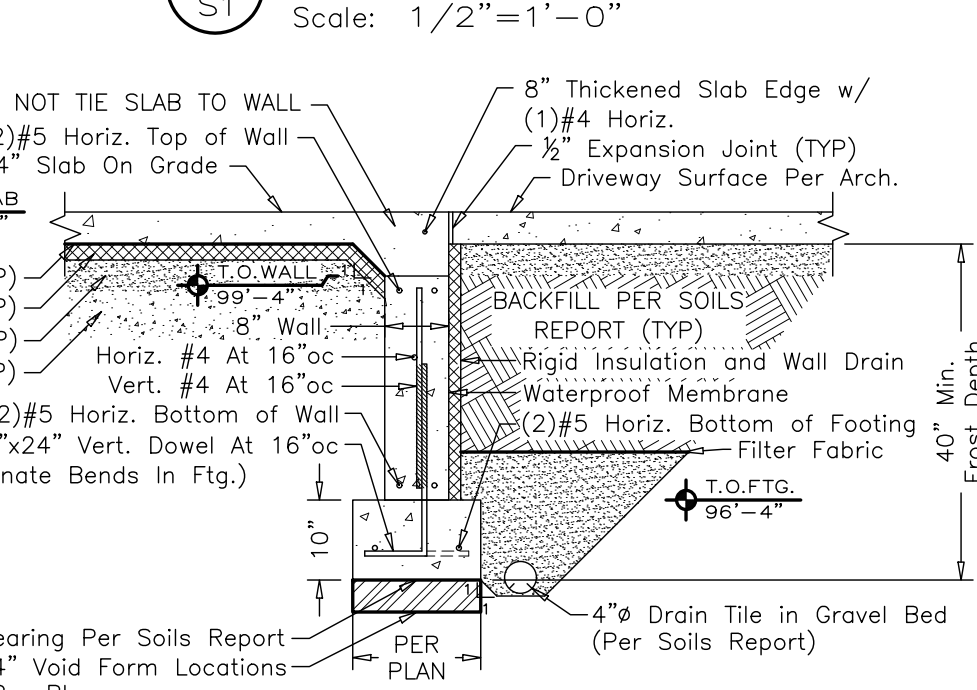
WALL DETAIL A

Scale: 1/2"=1'-0"



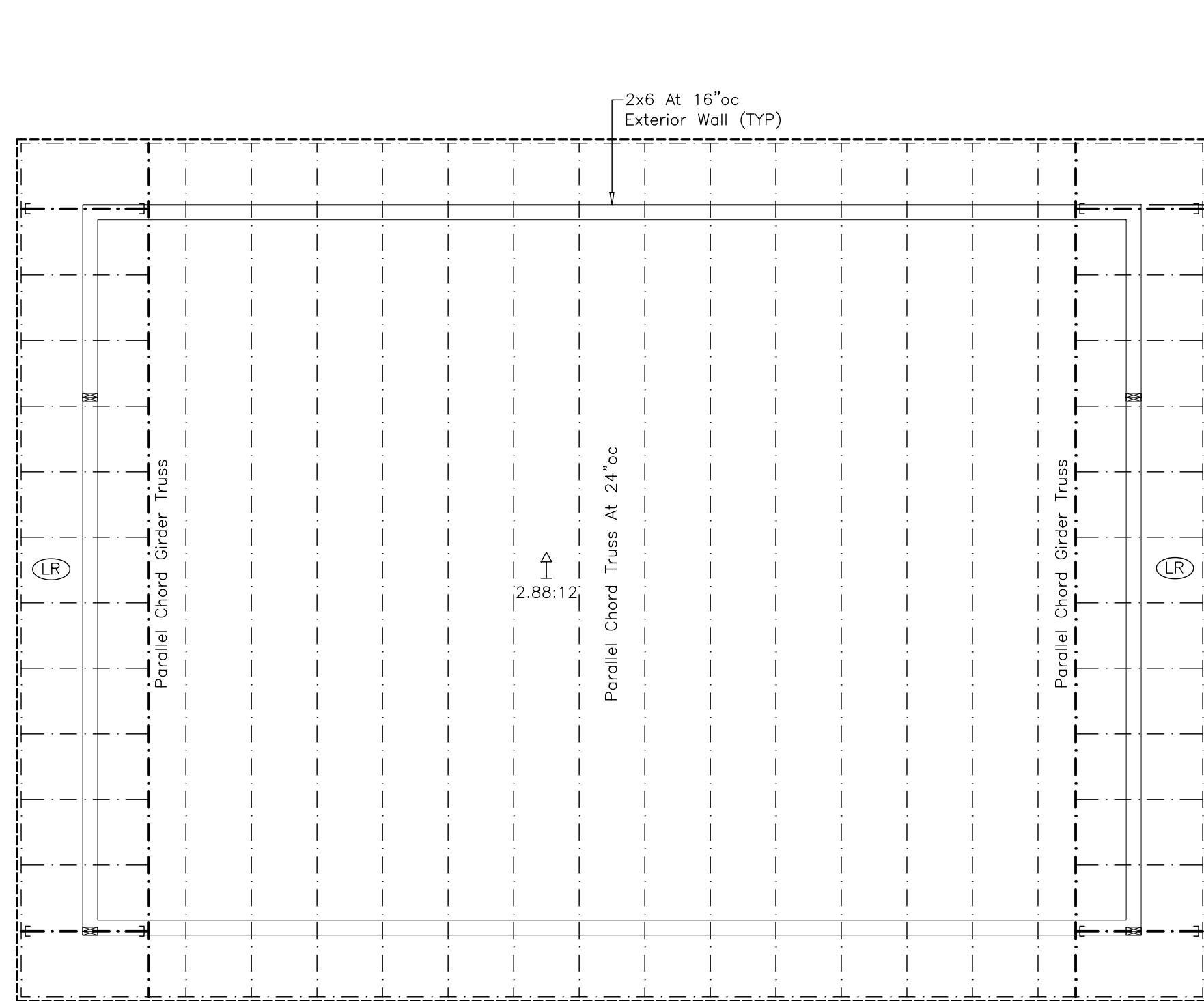
WALL DETAIL B

Scale: 1/2"=1'-0"



WALL DETAIL C

Scale: 1/2"=1'-0"



ROOF FRAMING PLAN

Scale: 1/4"=1'-0"

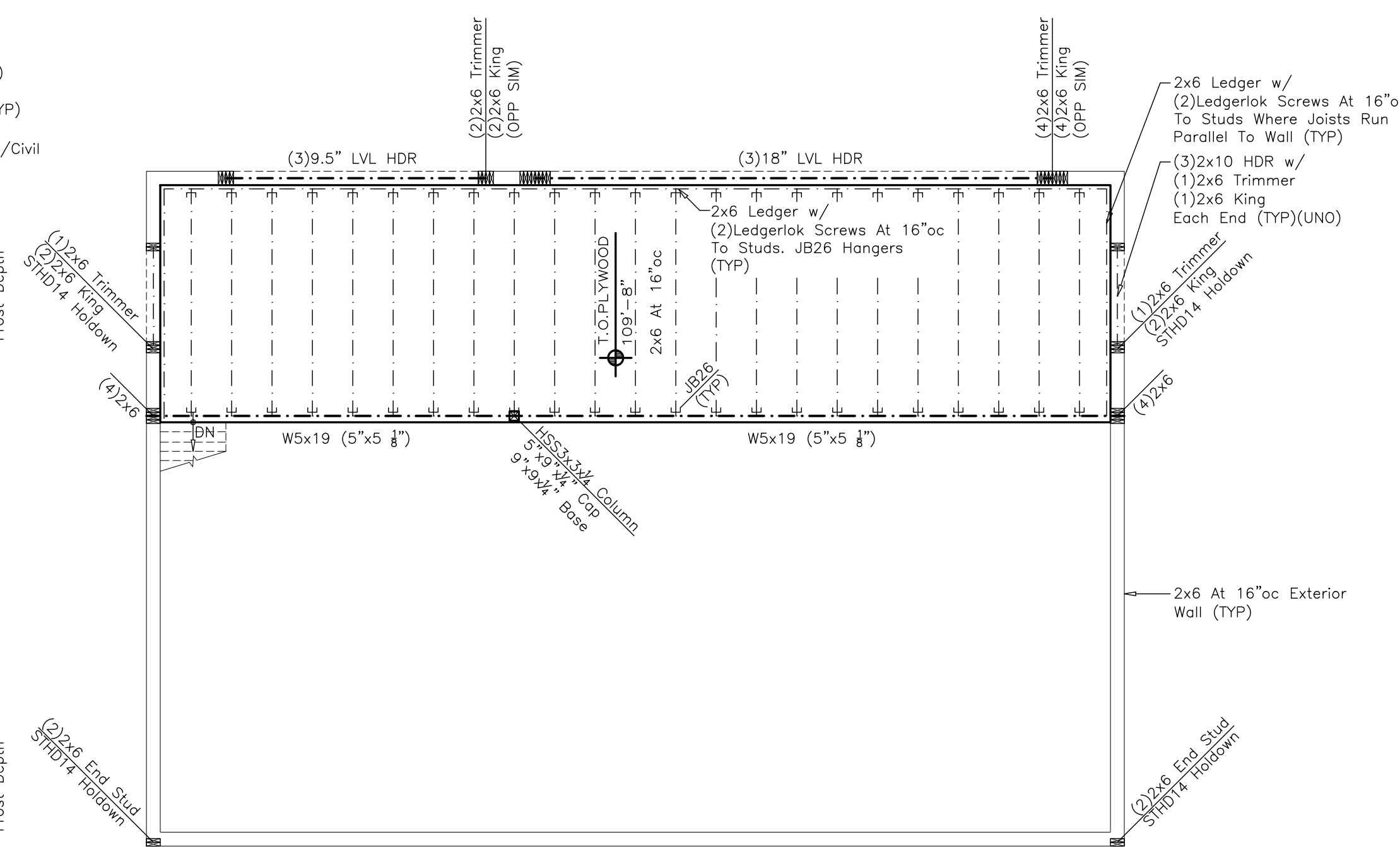


GENERAL ROOF FRAMING NOTES

- Engineer to review and approve truss manufacturers shop drawings prior to ordering trusses. Truss Mfg. to provide matching tails.
- Full height block all trusses, outlookers, and rafters at all bearing points.
- Wall studs to be continuous from floor to roof.
- Balloon frame all gable walls. Provide firestop blocking at 10' max intervals.
- Provide full birdsmouth bearing at 2x rafters at exterior wall top plate.
- Connect all 2x rafters to blocking with (3)10d nails, and top plate with (4)10d nails.
- Connect trusses to top plates w/ H2.5A clip and H8 at girder trusses.
- LADDER RAFTERS: 2x6 At 24" oc. w/ Full 2x6 Blocking
- LUS2x6 Hanger Where Shown, (4)10d End Nails Each End of Ladder Rafter.
- (2)2x6 Corner Ladder Rafter w/ HUS26-2 Each End
- 2x8 (Min.) Subfascia Continuous 6' From All Corners w/ L550 Clip at Corner
- Roof Ventilation per Local Codes and Architect.

MULTIPLE LVL CONNECTIONS

- (2) Single LVL Beams to Each Other: Glue & (2)LedgerLok At 16" oc.
- (3) Single LVL Beams to Each Other: Glue & (3)LedgerLok At 16" oc.
- (4) Single LVL Beams to Each Other: Glue & (2)5/8" Thru Bolts At 24" oc.
- (5) Single LVL Beams to Each Other: Glue & (2)5/8" Thru Bolts At 16" oc.



LOFT FRAMING PLAN

Scale: 1/4"=1'-0"



REVIEWED  
FOR  
CODE  
COMPLIANCE  
09/18/2023



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DATE: 7-18-23  
JOB #: 202349  
DRAWN: RCB  
ENG: RCB  
REVISED: ----  
REVISED: ----

ISSUE: PERMIT

PLANS, DETAILS, AND NOTES for the proposed:

HEITER GARAGE  
29550 COUNTY ROAD 14D  
ROUIT COUNTY, COLORADO

PAGE

S1

#202349 of 1