

UTILITY SHED PLANS

STATE OF WEST VIRGINIA (160 MPH) WINDS

GENERAL NOTES:

1. THIS STRUCTURE WAS DESIGNED IN ACCORDANCE WITH THE 2018 IRC & 2018 IBC.
2. ALL MATERIALS AND LABOR SHALL BE IN ACCORDANCE WITH THE ABOVE CODE AND ALL OTHER APPLICABLE LOCAL CODES AT THE TIME OF MANUFACTURE.
3. WRITTEN DIMENSIONS SHALL TAKE PRIORITY OVER SCALED DIMENSIONS.
4. THE FOUNDATION PLAN IS A SEPARATE SET OF PLANS FOR APPROVAL BY LOCAL MUNICIPALITIES.
5. EXTERIOR DIMENSIONS CAN VARY BETWEEN LIMITS SHOWN @ 2'-0" o/c BUT MEMBER SPACING SHALL NOT EXCEED LIMITS AS INDICATED.
6. ALL THE FOLLOWING LUMBER SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWWA USE CATEGORY UC4B (GROUND CONTACT, HEAVY DUTY) SKIDS.
7. ALL THE FOLLOWING LUMBER SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWWA USE CATEGORY UC3B (EXTERIOR ABOVE GROUND, UNCOATED OR POOR WATER RUNOFF), FLOORS JOISTS, PLYWOOD FLOOR DECKING, AND EXTERIOR RATED WOOD STRUCTURAL PANEL SIDING.
8. LP PROSTRUCT SUB-FLOORING $\frac{1}{2}$ " MAY BE USED IN LIEU OF PRESSURE TREATED PLYWOOD FLOORING.
9. P.T. PLYWOOD FLOORING NOT REQUIRED WHERE THE BOTTOM OF THE FLOORING IS OVER 18" ABOVE GROUND SECTION 2304.11.2.1 WBC 2018 ICCIRC.
10. ALL FASTENERS AND CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED (G185) OR STAINLESS STEEL.
11. ALL WINDOWS WITHIN 24" OF DOORS, AND ALL GLASS IN DOORS SHALL BE SAFETY, TEMPERED, OR ACRYLIC PLASTIC SHEET.
12. FOR ROOFS WITH ASPHALT SHINGLES AND A SLOPE BETWEEN 2 TO 12 AND 4 TO 12 SHALL HAVE A DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH SECTION 1507.2.8 OF THE 2018 ICCIRC WBC.
13. UNDERLAYMENT SHALL CONFORM WITH SECTION 1507.2.3 (ASPHALT SHINGLES) AND 1507.4.5 (METAL ROOF PANEL) OF THE 2018 ICCIRC WBC.
14. ASPHALT SHINGLES SHALL CONFORM WITH SECTION 1507.2.5 OF THE 2018 ICCIRC WBC ATTACHMENT OF ASPHALT SHINGLES SHALL CONFORM WITH 1507.2.7 OF THE 2018 ICCIRC WBC.
15. FASTENERS FOR ASPHALT SHINGLES SHALL CONFORM TO SECTION 1507.2.6 OF THE 2018 ICCIRC WBC.
16. TIE-DOWNS SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE CODES.
17. THESE PLANS HAVE NOT BEEN DESIGNED FOR HAZARD REQUIREMENTS AS SET FORTH IN THE 2018 ICCIRC WBC OR FOR USE AS A COMMERCIAL BUILDING.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY AND PLACEMENT OF LAWN STORAGE UNIT TO INSURE THE INTEGRITY OF THE BUILDING AND ITS COMPONENT PARTS.
20. NO FIELD REVISIONS TO ANY STRUCTURAL COMPONENT OR DEVIATION FROM THESE DRAWINGS SHALL BE MADE.
21. THE OWNER AND THE CONTRACTOR SHALL HOLD HARMLESS THE ENGINEER FROM AND AGAINST ALL LIABILITY CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING LEGAL FEES ARISING OUT OF OR RESULTING FROM ERROR OR OMISSIONS IN THE PERFORMANCE OF THE WORK BY THE CONTRACTOR.
22. SECTIONS AND DETAILS ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY AT ALL SIMILAR LOCATIONS, UNLESS OTHER SECTIONS AND DETAILS ARE SPECIALLY REFERENCED.
23. REFER TO SUPPLIED FASTENING SCHEDULE FOR FASTENING BASE ON CONNECTION AND LOCATION OF MEMBERS AS PER 2018 ICCIRC CODE TABLE 2304.9.1 UNLESS NOTED OTHERWISE.
24. BUILDINGS HAVE BEEN DESIGNED FOR LP SMARTSIDE PRECISION PANEL SIDING, LP SMARTSIDE PRECISION LAP SIDING SHALL NOT BE USED.
25. FASTENERS IN LP SMARTSIDE PRECISION PANEL SIDING MUST NOT BE INSTALLED IN PANEL SIDING GROOVES IN THE FIELD OF THE PANEL SIDING OR WHEN THE PANEL SIDING GROOVES OCCUR AT CUT EDGES OF THE PANEL SIDING.
26. REFER TO THE ICC-ES EVALUATION REPORT ESR-1301 FOR ADDITIONAL DATA AND SPECIFICATIONS OF LP SMARTSIDE PRECISION PANEL SIDING, WEST VIRGINIA PRODUCT APPROVAL #1910.5 & 9190.6
27. MAX OPENING WIDTHS MUST COMPLY WITH DESIGN RATIOS AS PER ANSI/AF&P SDPWS-2008. BUILDINGS HAVE DESIGNED TO HAVE ONLY OPENINGS WITH MAX WIDTHS EQUAL TO THOSE IN THE ENDWALL SHEAR WALL CHART.
28. AS PER SECTION 553.7(1)(b), WEST VIRGINIA STATUTES, STORAGE SHEDS THAT ARE NOT DESIGNED FOR HUMAN HABITATION AND THAT HAVE A FLOOR AREA OF 720 SQUARE FEET OR LESS ARE NOT REQUIRED TO COMPLY WITH THE MANDATORY WIND-BORNE-DEBRIS-IMPACT STANDARDS OF THE WEST VIRGINIA BUILDING CODE. IN ADDITION, SUCH BUILDINGS THAT ARE 400 SQUARE FEET OR LESS AND THAT ARE INTENDED FOR USE IN CONJUNCTION WITH ONE-AND-TWO FAMILY RESIDENCES ARE NOT SUBJECT TO THE DOOR HEIGHT AND WIDTH REQUIREMENTS OF THE WEST VIRGINIA BUILDING CODE. SEE WBC 1008.1.1 EXCEPTION (8).
29. BUILDINGS HAVE BEEN DESIGNED TO HAVE ANCHORS DIRECTLY ATTACHED TO ALL FOUR CORNERS OR THE BUILDING TO RESIST TENSION FORCES FROM LATERAL WIND LOADS. THIS DESIGN CONSIDERATION MUST BE MADE BY INSTALLER WHEN ATTACHING ANCHORING SYSTEM TO BUILDING.
30. UNLESS NOTED OTHERWISE, ATTACH ALL MANUFACTURED PRODUCTS IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

NOTE:

THIS BUILDING IS NOT DESIGNED FOR HUMAN HABITATION AND DOES NOT HAVE RUNNING WATER OR SANITATION SERVICES. THIS BUILDING IS DESIGNED AS A UTILITY SHED TO STORE LAWN EQUIPMENT SUCH AS WHEEL BARROWS, GARDENING SUPPLIES, FLOWER POTS, AND CARDBOARD BOXES WITH VARIOUS SMALL ITEMS.

SITE INSTALLED ITEMS:

NOTE THAT THIS LIST DOES NOT NECESSARILY LIMIT THE ITEMS OF WORK AND MATERIALS THAT MAY BE REQUIRED FOR A COMPLETE INSTALLATION. ALL SITE RELATED ITEMS ARE SUBJECT TO LOCAL JURISDICTIONAL APPROVAL.

1. THE COMPLETE FOUNDATION SUPPORT AND TIE-DOWN SYSTEM.
2. RAMPS, STAIRS, AND GENERAL ACCESS TO THE BUILDING IF NECESSARY.
3. GUTTERS AND DOWNSPOUTS ON ALL BUILDINGS WITH EAVES OF LESS THAN 6 INCHES HORIZONTAL PROJECTION EXCEPT FOR GABLE END RAKES.

SHED MANUFACTURER SHALL HAVE A LIST OF ALL REQUIRED PRODUCTS THAT NEED WEST VIRGINIA STATE APPROVAL AVAILABLE FOR 3RD PARTY INSPECTOR AND REVIEW BY E.O.R. FOR COMPLIANCE WITH WIND LOADS



DESIGN CRITERIA:

1. WIND VELOCITY 170 MPH.
2. BUILDING CATEGORY I
3. WIND EXPOSURE C
4. INT. PRESSURE COEFFICIENT ± 0.18
5. ENCLOSURE CLASSIFICATION ENCLOSED
6. BASED ON HEIGHT 15 FEET
7. OVERHANG NO
8. FLOOR DESIGN LIVE LOAD 50 PSF
FLOOR DESIGN DEAD LOAD 4 PSF
9. ROOF DESIGN LIVE LOAD 20 PSF
ROOF DESIGN DEAD LOAD 7 PSF
10. WALL DESIGN DEAD LOAD 3 PSF
11. SNOW LOAD 60 PSF
(FOR 61-90 PSF SNOW, TRUSSES @ 16" SPECIAL ORDER)
12. CONSTRUCTION TYPE V B
13. BUILDING OCCUPANCY = U
14. FIRE RATING EXT. WALLS 0
15. ALLOWABLE NUMBER OF FLOORS 1
16. THE CONTRACTOR / MANUFACTURER MUST COMPLY WITH THE FOLLOWING CODES AND ALL OF THEIR AMENDMENTS / SUPPLEMENTS.

WEST VIRGINIA CODE SUMMARY
LATEST BUILDING CODE
2018 WEST VIRGINIA CONSTRUCTION
CODE ADOPTS THE IBC 2018 W/ AMENDMENTS

SHEET LIST	
SHEET NUMBER	SHEET TITLE
C-1	COVER SHEET
C-2	FASTENING SCHEDULE / WIND LOADING / SHEARWALL CHART
A-1	FRAMING PLANS & DETAILS
A-2	FRAMING PLANS & DETAILS
A-3	SECTIONS
A-4	PLANS & DETAILS
A-5	TYPICAL DETAILS
A-6	TYPICAL DETAILS
A-7	OPTIONAL PORCH DETAILS
A-8	ANCHORING DETAILS & SCHEDULES
A-9	ANCHORING SPEC SHEETS
A-10	TRUSS DETAILS

PROJECT:
UTILITY SHED

COVER SHEET & GENERAL NOTES

DON VAN GERVE, P.E.
SPECIALTY STRUCTURAL ENGINEER



ENGINEERING SERVICES PROVIDED FOR:
PREMIER PORTABLE BUILDINGS
317 EAST STATE LINE ROAD
SOUTH FULTON, TN 38257
WWW.PREMIERBUILDINGS.US

REVISION	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			

DATE: 5.15.25	PROJECT NO.: 20062 DRAWING BY: JH CHK BY: DVG DWG NO.: C-1

CONTRACTOR'S SIGNATURE: 

DATE: 5/15/25
16154
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER

1 of 12

2304.10.2 Fastener Requirements

Connections for wood members shall be designed in accordance with the appropriate methodology in Section 2302.1. The number and size of fasteners connecting wood members shall be not less than that set forth in Table 2304.10.2.

TABLE 2304.10.2

FASTENING SCHEDULE		
DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ⁶	SPACING AND LOCATION
Roof		
1. Blocking between ceiling joists, rafters or trusses to top plate or other framing below	4-8d box (2 $\frac{1}{2}$ " x 0.113"); or 3-8d common (2 $\frac{1}{2}$ " x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each end, toenail
2. Blocking between rafters or truss not at the wall top plate, to rafter or truss	2-8d common (2 $\frac{1}{2}$ " x 0.131"); 2-3" x 0.131" nails; 2-3" 14 gage staples	Each end, toenail
3. Flat blocking to truss and web filler	16d common (3 $\frac{1}{2}$ " x 0.162") @ 6" o.c. 3" x 0.131" nails @ 6" o.c. 3" x 14 gage staples @ 6" o.c.	Face nail
2. Ceiling joists to top plate	4-8d box (2 $\frac{1}{2}$ " x 0.113"); or 3-8d common (2 $\frac{1}{2}$ " x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each joist, toenail
3. Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (see Section 2308.7.3.1, Table 2308.7.3.1)	3-16d common (3 $\frac{1}{2}$ " x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
4. Ceiling joist attached to parallel rafter (heel joint) (see Section 2308.7.3.1, Table 2308.7.3.1)	Per Table 2308.7.3.1	Face nail
5. Collar tie to rafter	3-10d common (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
6. Rafter or roof truss to top plate (See Section 2308.7.5, Table 2308.7.5)	3-10 common (3" x 0.148"); or 3-16d box (3 $\frac{1}{2}$ " x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	2 toenails on one side and 1 toenail on opposite side of rafter or truss ⁷
7. Roof rafters to ridge valley or hip rafters; or roof rafter to 2-inch ridge beam	2-16d common (3 $\frac{1}{2}$ " x 0.162"); or 3-16d box (3 $\frac{1}{2}$ " x 0.135"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	End nail
8. Stud to stud (not at braced wall panels)	16d common (3 $\frac{1}{2}$ " x 0.162");	24" o.c. face nail
9. Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	10d box (3" x 0.128"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	16" o.c. face nail
10. Built-up header (2" x 2" header)	16d common (3 $\frac{1}{2}$ " x 0.162")	16" o.c. each edge, face nail
11. Continuous header to stud	16d common (3 $\frac{1}{2}$ " x 0.162"); or 4-10d box (3" x 0.128"); or 5-8d box (2 $\frac{1}{2}$ " x 0.113")	Toenail
12. Top plate to top plate	16d common (3 $\frac{1}{2}$ " x 0.162")	16" o.c. face nail
13. Top plate to top plate, at end joints	8-16d common (3 $\frac{1}{2}$ " x 0.162"); or 12-16d box (3 $\frac{1}{2}$ " x 0.135"); or 12-10d box (3" x 0.128"); or 12-3" x 0.131" nails; or 12-3" 14 gage staples, 7/16" crown	Each side of end joint, face nail (minimum 24" lap splice length each side of end joint)
14. Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common (3 $\frac{1}{2}$ " x 0.162")	16" o.c. face nail
15. Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	2-16d common (3 $\frac{1}{2}$ " x 0.162"); or 3-16d box (3 $\frac{1}{2}$ " x 0.135"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	16" o.c. face nail
16. Stud to top or bottom plate	3-16d box (3 $\frac{1}{2}$ " x 0.135"); or 4-8d common (2 $\frac{1}{2}$ " x 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-8d box (2 $\frac{1}{2}$ " x 0.113"); or 4-3" 14 gage staples, 7/16" crown	Toenail
17. Top plates, laps at corners and intersections	2-16d common (3 $\frac{1}{2}$ " x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Face nail
18. 1" brace to each stud and plate	3-8d box (2 $\frac{1}{2}$ " x 0.113"); or 2-8d common (2 $\frac{1}{2}$ " x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Face nail

BUILDING WIDTH	OPENING WIDTHS IN END WALL	MAX. LENGTH OF BUILDING		
		19 $\frac{1}{2}$ " T1-111	3 $\frac{1}{2}$ " LP SMARTSIDE PANEL ²	ALUMINUM OVER 1 $\frac{1}{2}$ " OSB ⁴
8'-0"	3'-0" MAX.	40'-0"	20'-0"	40'-0"
10'-0"	3'-0" MAX.	60'-0"	30'-0"	60'-0"
	6'-0"		16'-0"	
11'-2"	3'-0" MAX.	60'-0"	36'-0"	60'-0"
	6'-0"		24'-0"	
	10'-0"		12'-0"	
14'-0"	3'-0" MAX.	60'-0"	40'-0"	60'-0"
	6'-0"		34'-0"	
	10'-0"		20'-0"	
16'-0"	6'-0" MAX.	60'-0"	40'-0"	60'-0"
	12'-0"		30'-0"	

a. COMMON OR BOX NAIL ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.

b. NAILED SPACED @ 6" o/c AT EDGES, 12" AT INTERMEDIATE SUPPORTS EXCEPT 6" AT SUPPORTS WHERE SPANS ARE 48" OR MORE, FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305 FBC. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.

c. COMMON OR DEFORMED SHANK (6d - 2" x 0.113"; 8d - 2 $\frac{1}{2}$ " x 0.131"; 10d 3" x 0.148").

d. COMMON (6d - 2" x 0.113"; 8d - 2 $\frac{1}{2}$ " x 0.131"; 10d 3" x 0.148").

e. DEFORMED SHANK (6d - 2" x 0.113"; 8d 2 $\frac{1}{2}$ " x 0.131"; 10d 3" x 0.148").

f. CORROSION-RESISTANT SIDING (6d - 1 $\frac{1}{2}$ " x 0.106"; 8d 2 $\frac{1}{2}$ " x 0.128") OR CASING (6d 2" x 0.099"; 8d 2 $\frac{1}{2}$ " x 0.113") NAIL.

g. FASTENERS SPACED 3" o/c AT EXTERIOR EDGES AND 6" o/c AT INTERMEDIATE SUPPORTS WHEN USED AS STRUCTURAL SHEATHING.

h. CORROSION-RESISTANT ROOFING NAILS w/ 1/8" DIAMETER HEAD AND 1 1/2" LENGTH FOR 1/2" SHEATHING AND 1 3/4" LENGTH FOR 5/8" SHEATHING.

i. CORROSION-RESISTANT STAPLES WITH NOMINAL 1/8" CROWN OR 1" CROWN AND 1 1/4" LENGTH FOR 1/2" SHEATHING AND 1 1/2" LENGTH FOR 5/8" SHEATHING. PANEL SUPPORTS @ 16" o/c (20" IF STRENGTH AXIS IS THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED.)

j. FOR ROOF SHEATHING APPLICATIONS, 8d NAILS (2 $\frac{1}{2}$ " x 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 1/8".

k. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4" o/c AT EDGES, 8" o/c AT INTERMEDIATE SUPPORTS.

l. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4" o/c AT EDGES, 8" o/c AT INTERMEDIATE SUPPORTS FOR SUBFLOOR AND WALL SHEATHING AND 3" o/c AT EDGES, 6" AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.

m. FASTENERS SPACED 4" o/c AT EDGES, 8" o/c AT INTERMEDIATE SUPPORTS FOR SUBFLOOR AND WALL SHEATHING AND 3" o/c AT EDGES, 6" AT INTERMEDIATE SUPPORTS.

Panel siding to framing			
	Edges (inches)	Intermediate supports (inches)	
38. 1 $\frac{1}{2}$ " or less	6d common or deformed (2" x 0.113"); or 6d corrosion-resistant siding (1 $\frac{1}{2}$ " x 0.106"); or 6d corrosion-resistant casing (2" x 0.099")	6	12
39. 3 $\frac{1}{2}$ "	8d corrosion-resistant siding (2 $\frac{1}{2}$ " x 0.128"); or 8d corrosion-resistant casing (2 $\frac{1}{2}$ " x 0.113")	6	12
Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing ⁸			
		Edges (inches)	Intermediate supports (inches)
30. 3 $\frac{1}{2}$ " - 1 $\frac{1}{2}$ "	6d common or deformed (2" x 0.113"); or 2 $\frac{1}{2}$ " x 0.113" nail (subfloor and wall)	6	12
	8d common or deformed (2 $\frac{1}{2}$ " x 0.131" x 0.281" head) (roof) or RSRS-01 (2 $\frac{1}{2}$ " x 0.113" nail) (roof) ⁹	6"	6"
	1 $\frac{1}{4}$ " 16 gage staple, 7/16" crown (subfloor and wall)	4	8
	2 $\frac{1}{2}$ " x 0.113" x 0.266" head nail (roof)	3"	3"
	1 $\frac{1}{4}$ " 16 gage staple, 7/16" crown (roof)	3"	3"
	8d common (2 $\frac{1}{2}$ " x 0.131" x 0.281" head) or deformed (2 $\frac{1}{2}$ " x 0.113" nail) (subfloor and wall)	6	12
	8d common or deformed (2 $\frac{1}{2}$ " x 0.131" x 0.281" head) (roof) or RSRS-01 (2 $\frac{1}{2}$ " x 0.113" nail) (roof) ⁹	6"	6"
	2 $\frac{1}{2}$ " x 0.113" x 0.266" head nail; or 2 $\frac{1}{2}$ " 16 gage staple, 7/16" crown	4	8
	10d common (3" x 0.148"); or deformed (2 $\frac{1}{2}$ " x 0.131" x 0.281" head)	6	12
Other exterior wall sheathing			
33. 1 $\frac{1}{2}$ " fiberboard sheathing ^b	1 $\frac{1}{2}$ " x 0.120", galvanized roofing nail (7/16" head diameter); or 1 $\frac{1}{4}$ " 16 gage staple with 7/16" or 1" crown	3	6
34. 2 $\frac{1}{2}$ " fiberboard sheathing ^b	1 $\frac{1}{2}$ " x 0.120" galvanized roofing nail (7/16" diameter head); or 1 $\frac{1}{2}$ " 16 gage staple with 7/16" or 1" crown	3	6
Wood structural panels, combination subfloor underlayment to framing			
35. 7/4" and less	8d common (2 $\frac{1}{2}$ " x 0.131"); or deformed (2" x 0.113"); or deformed (2 $\frac{1}{2}$ " x 0.20")	6	12
36. 7/8" - 1"	8d common (2 $\frac{1}{2}$ " x 0.131"); or deformed (2 $\frac{1}{2}$ " x 0.131"); or deformed (2 $\frac{1}{2}$ " x 0.20")	6	12
37. 1 $\frac{1}{8}$ " - 1 $\frac{1}{4}$ "	10d common (3" x 0.148"); or deformed (2 $\frac{1}{2}$ " x 0.131"); or deformed (2 $\frac{1}{2}$ " x 0.20")	6	12
d. RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.			

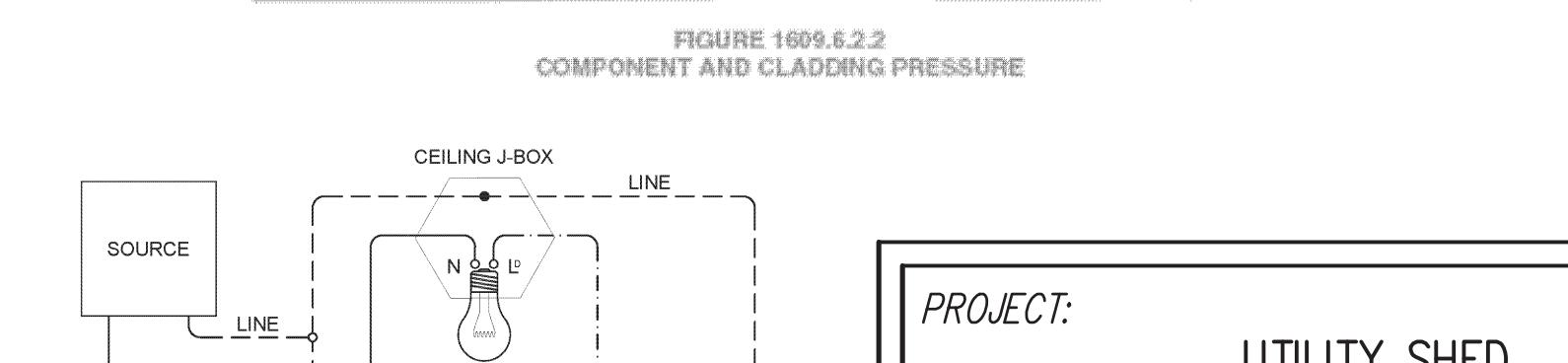
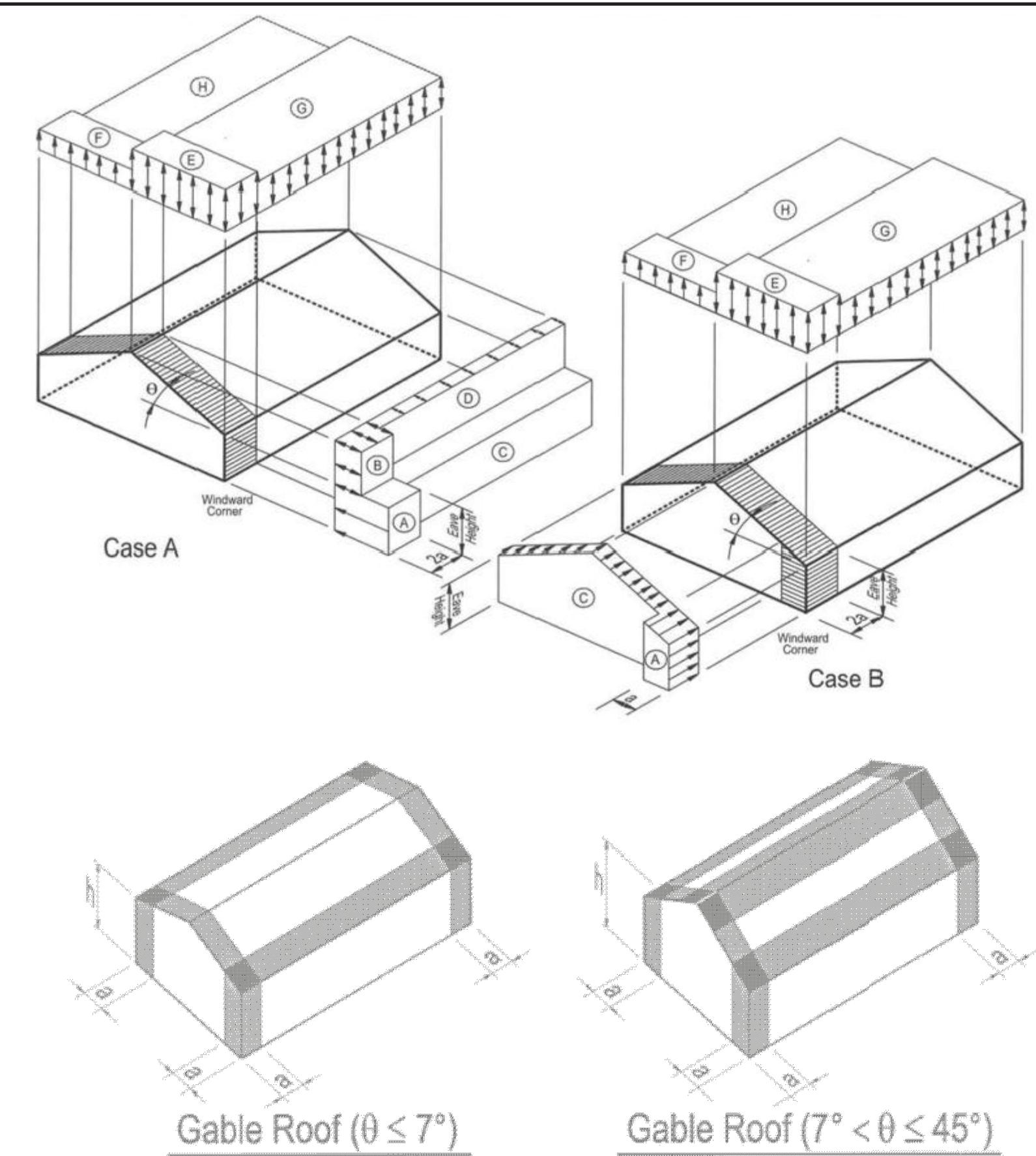
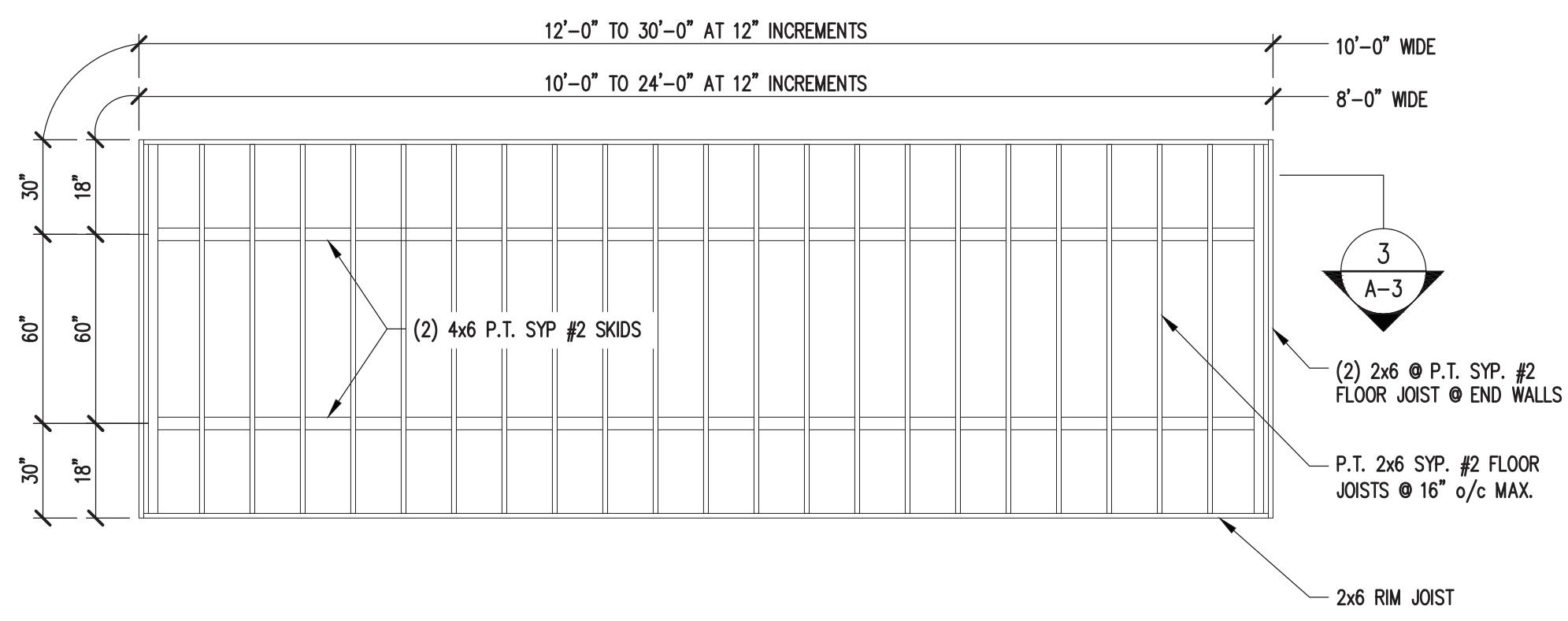


FIGURE 1609.6.2.2
COMPONENT AND CLADDING PRESSURE

PROJECT:	UTILITY SHED
FASTENING SCHEDULE / WIND LOADING	

DON VAN GERVE, P.E.
SPECIALTY STRUCTURAL ENGINEER

ALTERNATE DESIGN



8'-0" & 10'-0" WIDE FLOOR FRAMING PLAN

(DO NOT SCALE DRAWING)

1 A-1

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

1 A-4

12'-0" TO 30'-0" AT 12" INCREMENTS

10'-0" TO 24'-0" AT 12" INCREMENTS

2x4 SPF#2 STUDS @ 16" o/c

2x4 SPF#2 SOLE PLATE

DOOR SWING OPTIONAL

OPTIONAL DOOR AND

WINDOW LOCATIONS

NOTE: WINDOWS AND DOORS MAY BE LOCATED IN EITHER THE SIDE

WALL OR ENDWALL. DOORS ARE PERMITTED TO BE IN BOTH

ENDWALLS OR ENDWALL AND SIDE WALL IF REQUESTED BY

CUSTOMER. SEE NOTE 3 UNDER CHART ON SHEET C-2

SEE NOTE #7

4'-0"

8'-0" - 10'-0" WIDE

NOTE: 7

NOTE:
1. 2x6 STUD FRAMING MAY BE USED IN LIEU OF 2x4's
(ALSO FOR ROOF TRUSSES AS WELL)

1 A-1

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

3 A-4

12'-0" TO 30'-0" AT 12" INCREMENTS

10'-0" TO 24'-0" AT 12" INCREMENTS

2x4 SPF#2 STUDS @ 16" o/c

2x4 SPF#2 SOLE PLATE

DOOR SWING OPTIONAL

OPTIONAL DOOR AND

WINDOW LOCATIONS

NOTE: WINDOWS AND DOORS MAY BE LOCATED IN EITHER THE SIDE

WALL OR ENDWALL. DOORS ARE PERMITTED TO BE IN BOTH

ENDWALLS OR ENDWALL AND SIDE WALL IF REQUESTED BY

CUSTOMER. SEE NOTE 3 UNDER CHART ON SHEET C-2

SEE NOTE #7

4'-0"

11'-2", 12'-0", 14'-0" &

16'-0" WIDE FLOOR FRAMING PLAN

2 A-1

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

4 A-4

12'-0" TO 60'-0" AT 12" INCREMENTS

12'-0" TO 60'-0" AT 12" INCREMENTS

12'-0" TO 60'-0" AT 12" INCREMENTS

2x4 SPF#2 STUDS @ 16" o/c

2x4 SPF#2 SOLE PLATE

DOOR SWING OPTIONAL

OPTIONAL DOOR AND

WINDOW LOCATIONS

NOTE: WINDOWS AND DOORS MAY BE LOCATED IN EITHER THE SIDE

WALL OR ENDWALL. DOORS ARE PERMITTED TO BE IN BOTH

ENDWALLS OR ENDWALL AND SIDE WALL IF REQUESTED BY

CUSTOMER. SEE NOTE 3 UNDER CHART ON SHEET C-2

SEE NOTE #7

4'-0"

11'-2", 14'-0", 16'-0" WIDE

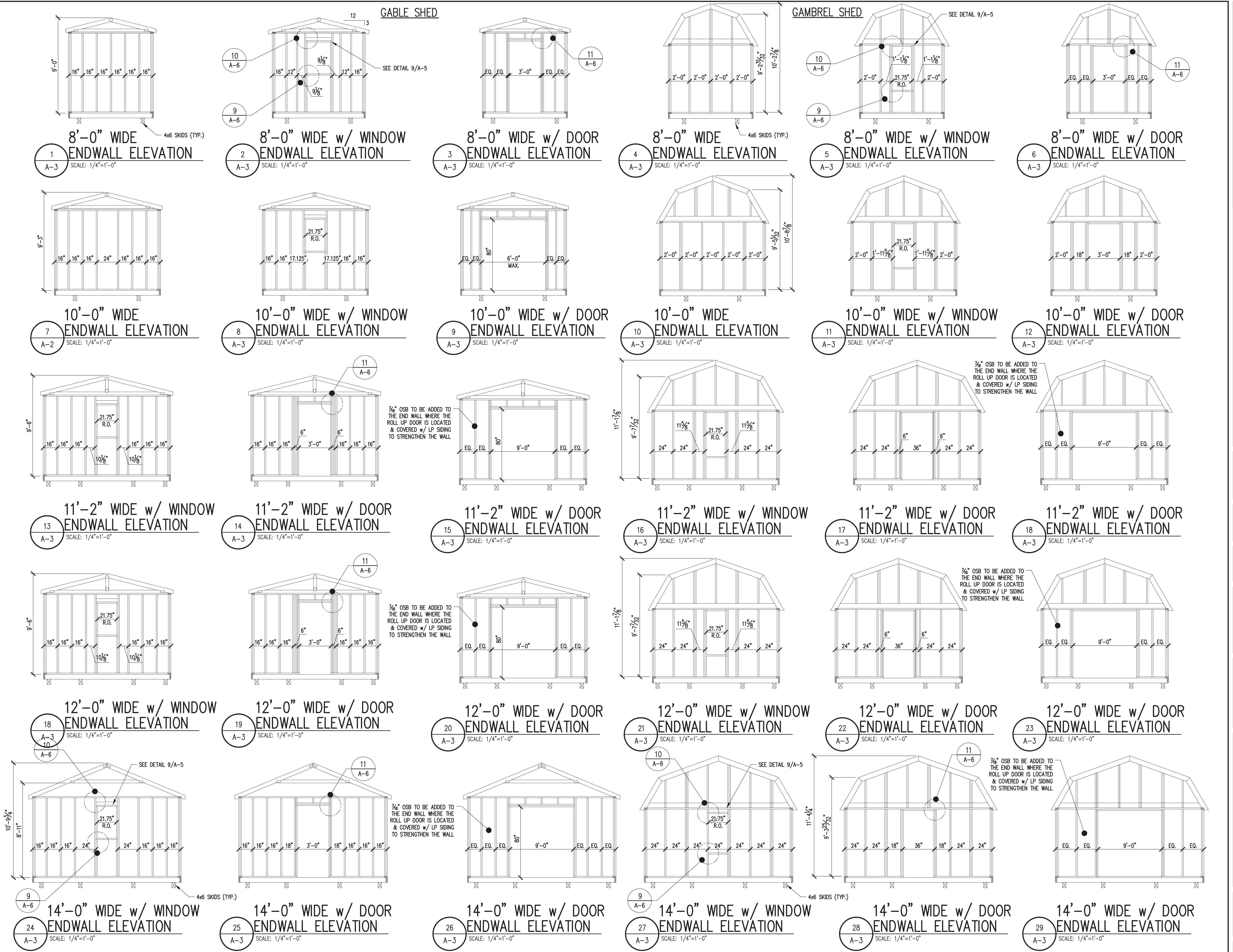
NOTE: 7

12'-0" TO 40'-0" AT 12" INCREMENTS

SLOPE

RIDGE

SLOPE

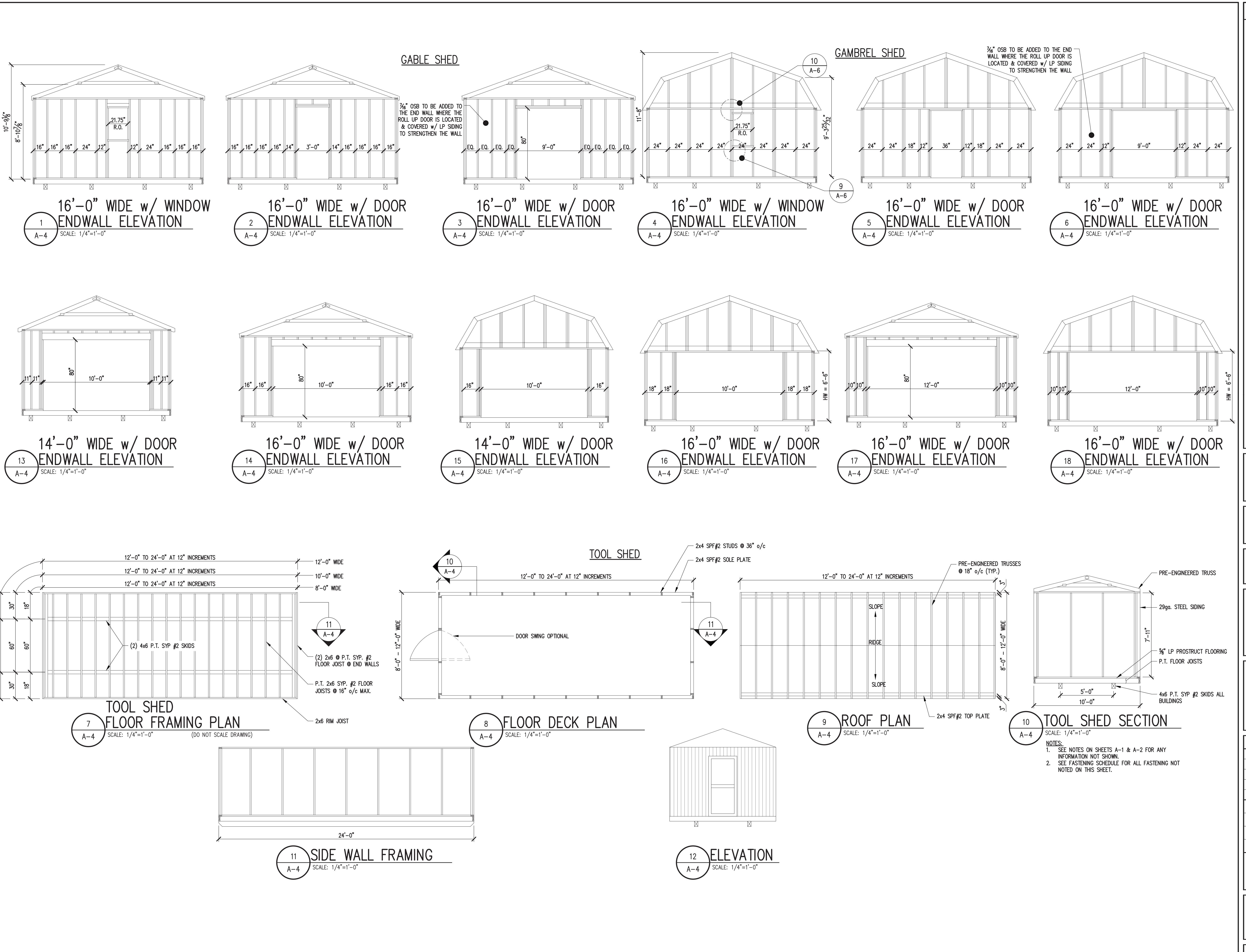


PROJECT: UTILITY SHED

SECTIONS

DON VAN GERVE, P.E.
SPECIALTY STRUCTURAL ENGINEERENGINEERING SERVICES PROVIDED FOR:
PREMIER PORTABLE BUILDINGS
317 EAST STATE LINE ROAD
SOUTH FULTON, TN 38257
WWW.PREMIERBUILDINGS.US

REVISION	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			
DATE:	5.15.25		
PROJECT NO.:	20062		
DRAWING BY:	JH		
CHK BY:	DVG		
DWG NO.:	A-3		
A-3			



PROJECT:
UTILITY SHED

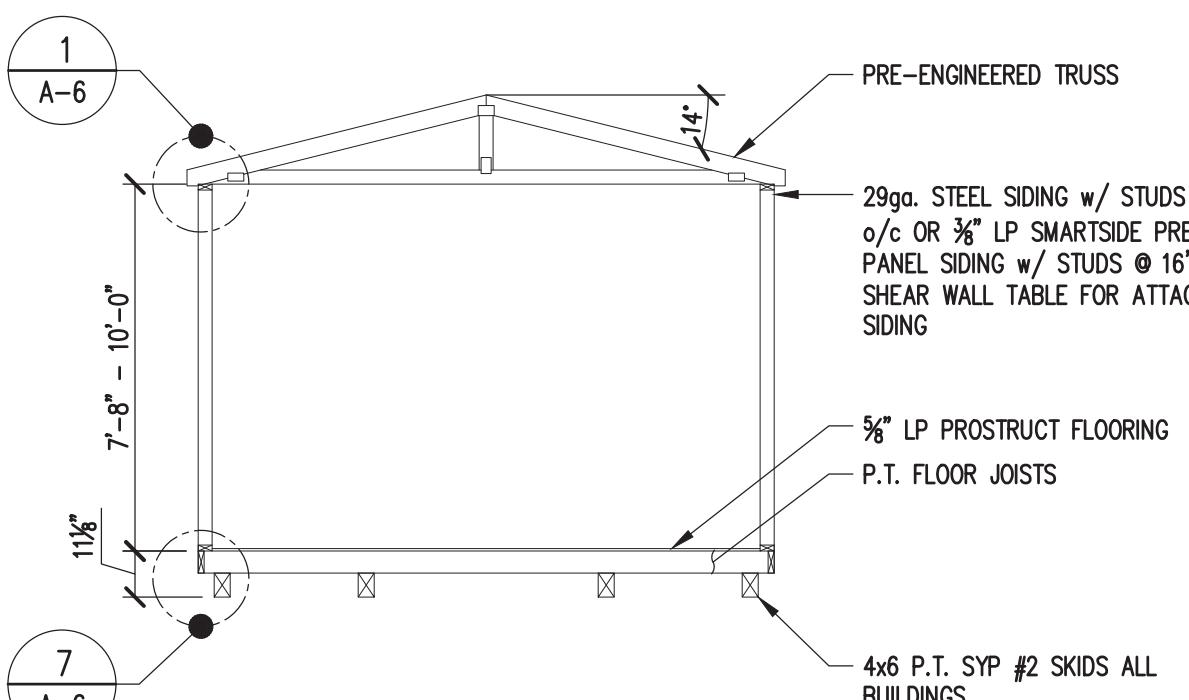
SECTION CUTS
CRAFTSMAN & TOOL SHED

DON VAN GERVE, P.E.
SPECIALTY STRUCTURAL ENGINEER



ENGINEERING SERVICES PROVIDED FOR:
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317 EAST STATE LINE ROAD
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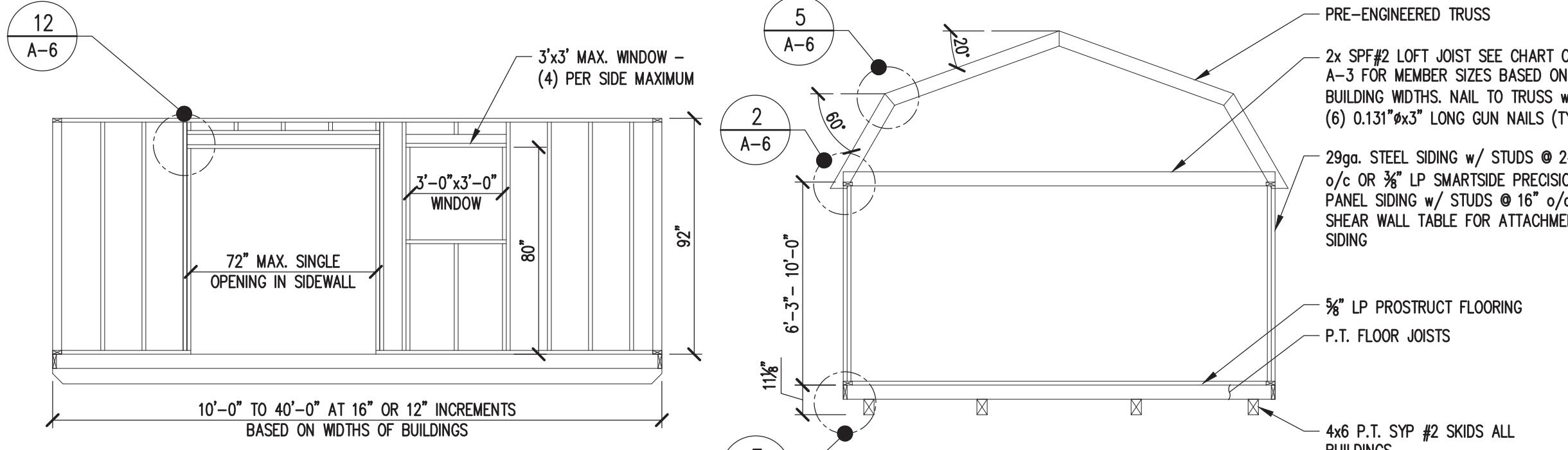
REVISION	DESCRIPTION	DATE	BY
1			
2			
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5			
		DATE: 5.15.25	
		PROJECT NO.: 20062	
		DRAWING BY: JH	
		CHK BY: DVG	
		DWG NO.: A-4	
		8/15/25 16154	
		6 of 12	



1 GABLE SECTION

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

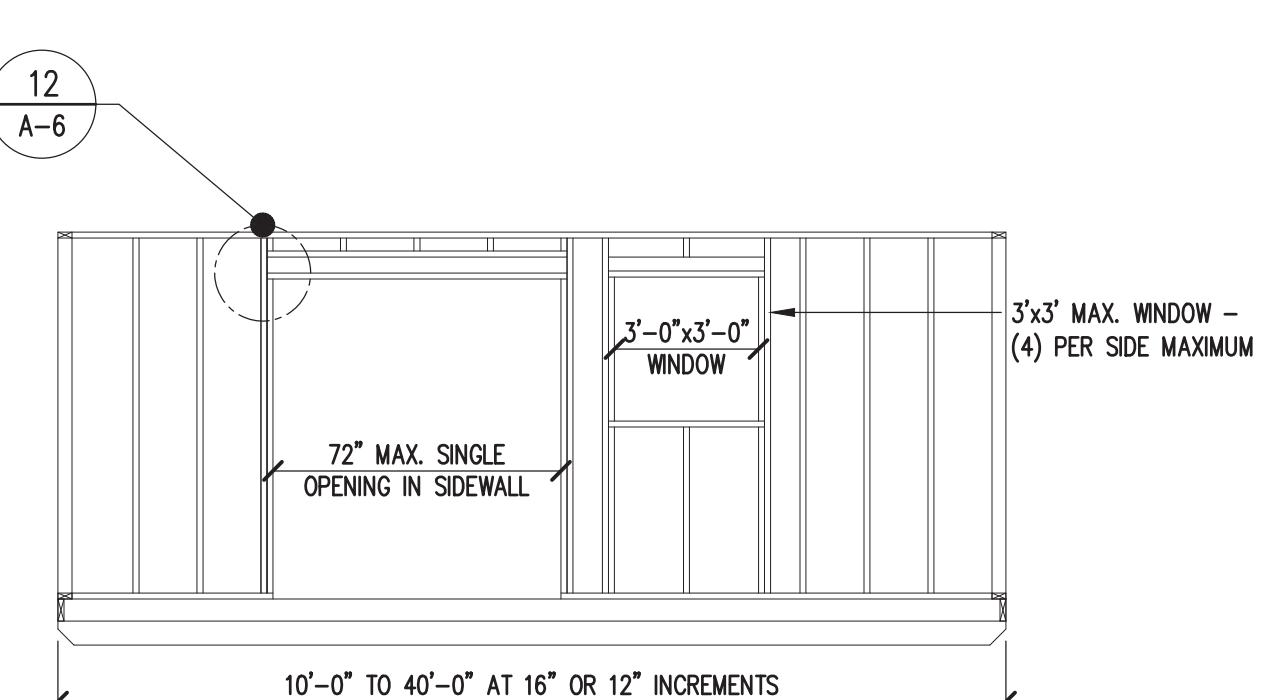
NOTES:
1. SEE NOTES ON SHEETS A-1 & C-2 FOR ANY INFORMATION NOT SHOWN.
2. SEE FASTENING SCHEDULE FOR ALL FASTENING NOT NOTED ON THIS SHEET.



3 GAMBREL SECTION

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

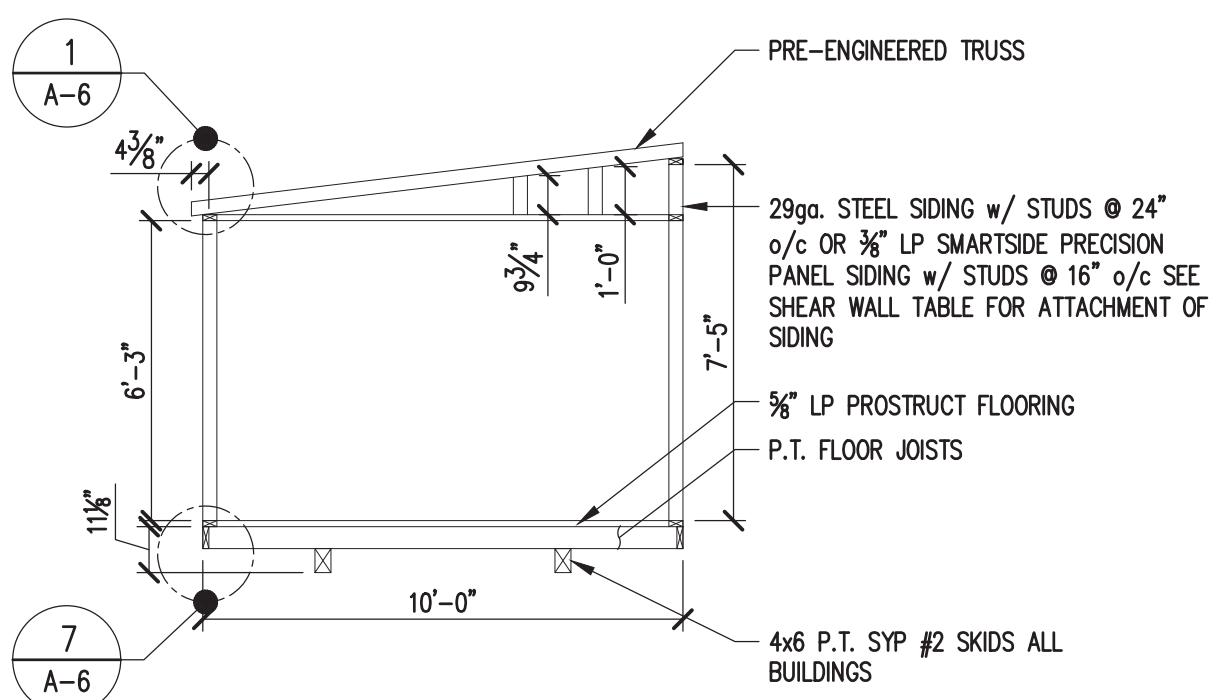
NOTES:
1. SEE NOTES ON SHEETS A-1 & C-2 FOR ANY INFORMATION NOT SHOWN.
2. SEE FASTENING SCHEDULE FOR ALL FASTENING NOT NOTED ON THIS SHEET.



4 SIDEWALL FRAMING

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

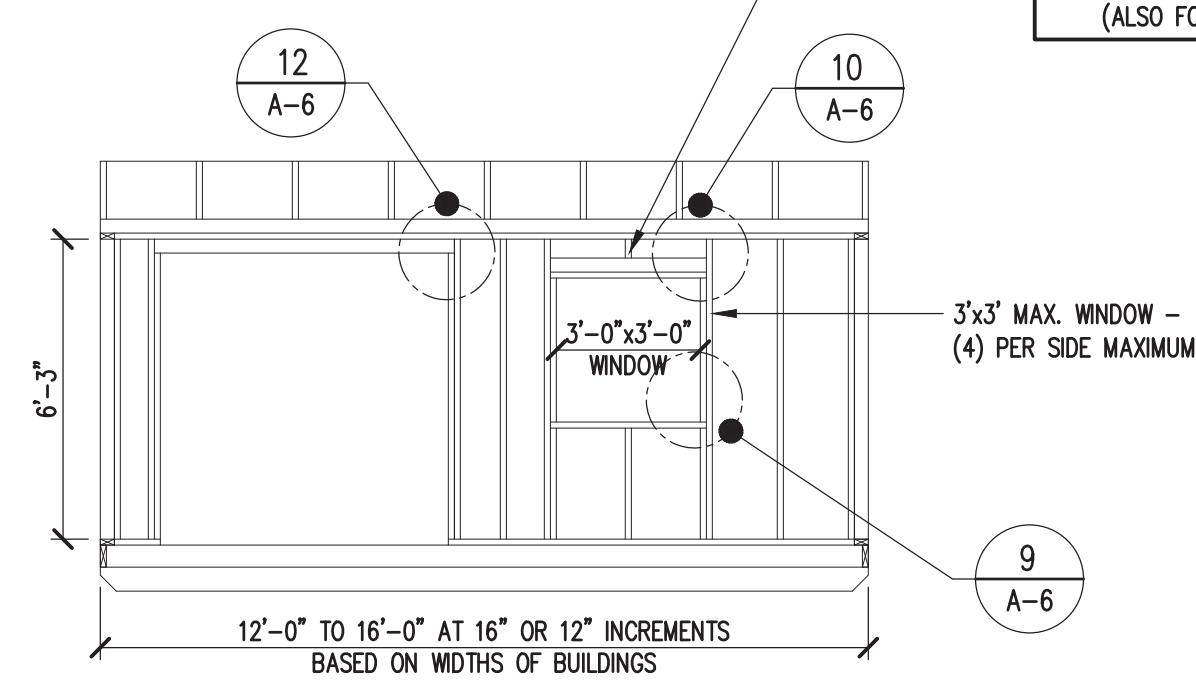
NOTES:
MAX. OPENING MAY BE INCREASED TO 9'-0" WITH HEADER PROVIDED THE BUILDING LENGTH IS OVER 16' IN LENGTH AND THE CRITERIA IN NOTE NUMBER 3 OF THE SHEARWALL CHART IS MET.



5 GARDEN SHED SECTION

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

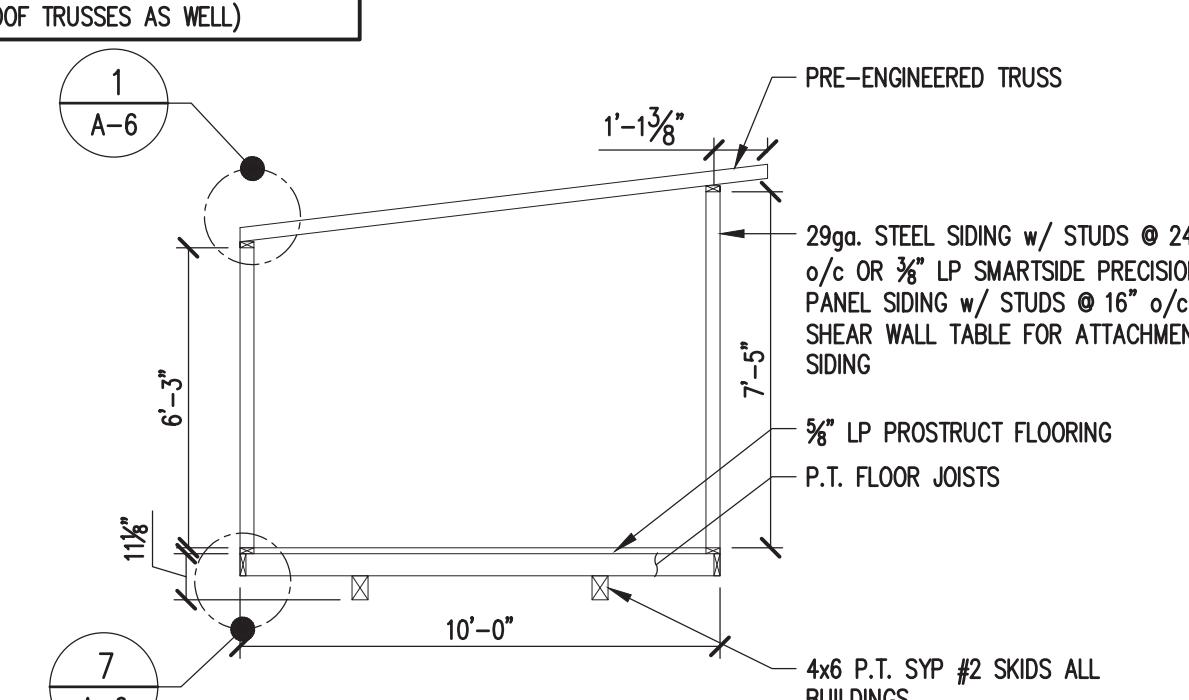
NOTES:
1. SEE NOTES ON SHEETS A-1 & A-2 FOR ANY INFORMATION NOT SHOWN.
2. SEE FASTENING SCHEDULE FOR ALL FASTENING NOT NOTED ON THIS SHEET.



6 SIDEWALL FRAMING

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

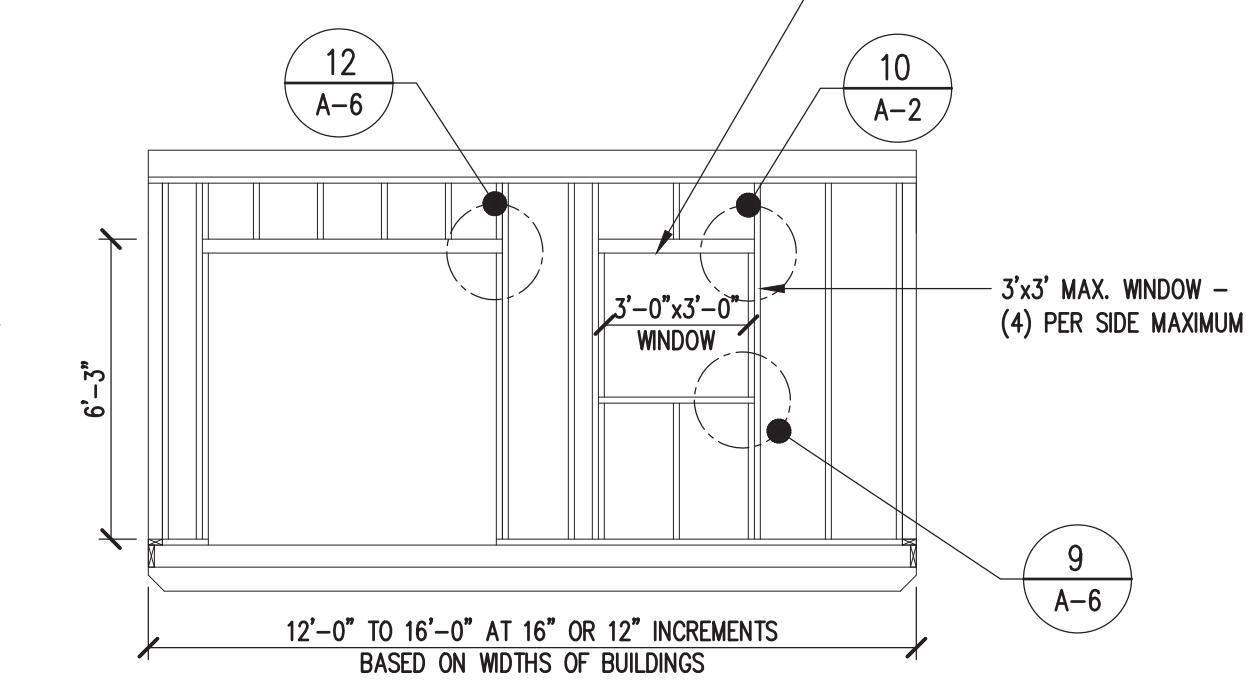
NOTES:
MAX. OPENING MAY BE INCREASED TO 9'-0" WITH HEADER 8/A-11 PROVIDED THE BUILDING LENGTH IS OVER 16' IN LENGTH AND THE CRITERIA IN NOTE NUMBER 3 OF THE SHEARWALL CHART IS MET.



7 COTTAGE SHED SECTION

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

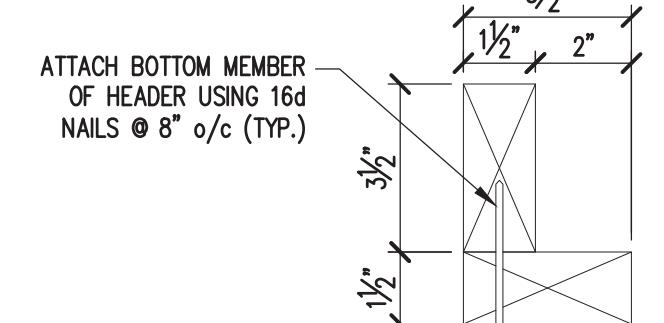
NOTES:
1. SEE NOTES ON SHEETS A-1 & A-2 FOR ANY INFORMATION NOT SHOWN.
2. SEE FASTENING SCHEDULE FOR ALL FASTENING NOT NOTED ON THIS SHEET.



8 SIDEWALL FRAMING

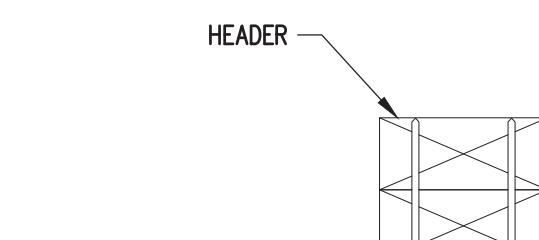
SCALE: 1/4"=1'-0"

NOTE:
1. 2x6 STUD FRAMING MAY BE USED IN LIEU OF 2x4's (ALSO FOR ROOF TRUSSES AS WELL)



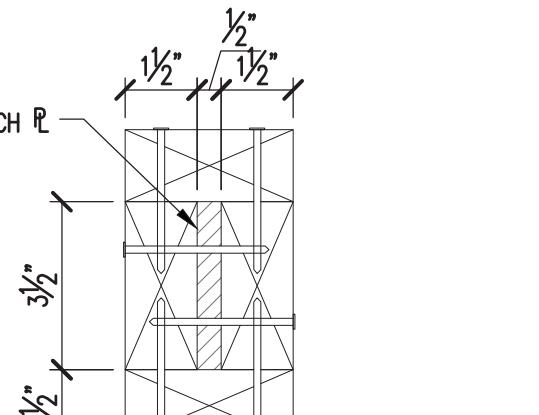
9 WINDOW HEADER DETAIL

SCALE: 3'=1'-0"



10 DOOR HEADER DETAIL

SCALE: 3'=1'-0"

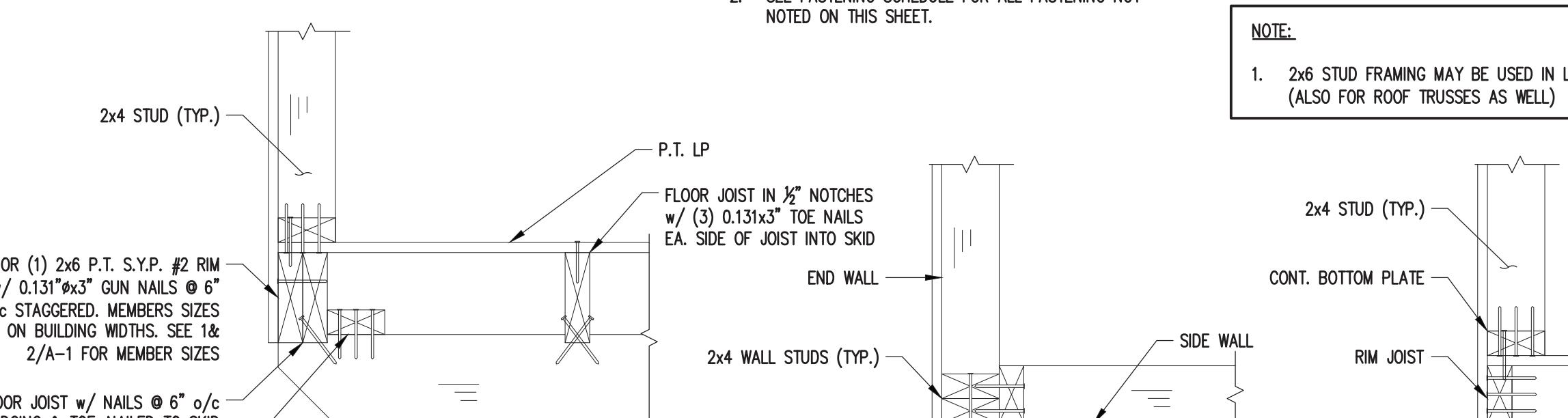


11 DOOR HEADER DETAIL

SCALE: 3'=1'-0"



12 DOOR HEADER DETAIL

NOTE:
1. SEE NOTES ON SHEETS A-1 & A-2 FOR ANY INFORMATION NOT SHOWN.
2. SEE FASTENING SCHEDULE FOR ALL FASTENING NOT NOTED ON THIS SHEET.

13 SKID TO JOIST DETAIL

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

NOTES:
1. SEE NOTES ON SHEETS A-1 & C-2 FOR ANY INFORMATION NOT SHOWN HERE.
2. SEE FASTENING SCHEDULE FOR ALL FASTENING NOT NOTED ON THIS SHEET.

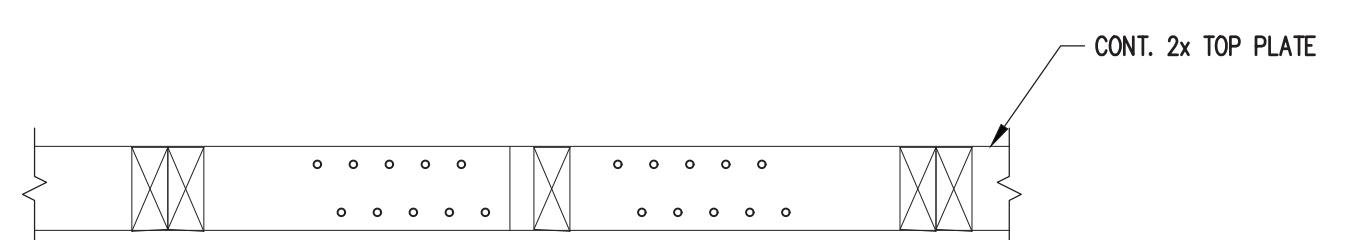
14 CORNER CONNECTION DETAIL

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

NOTES:
1. 2x6 STUD FRAMING MAY BE USED IN LIEU OF 2x4's (ALSO FOR ROOF TRUSSES AS WELL)

15 WALL TO RIM JOIST

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



PLAN VIEW

ELEVATION

SPICE LOCATION

PLAN VIEW

ELEVATION

SPICE LOCATION

16 TOP PLATE SPICE DETAIL

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

NOTES:
1. SEE NOTES ON SHEETS A-1 & A-2 FOR ANY INFORMATION NOT SHOWN HERE.
2. SEE FASTENING SCHEDULE FOR ALL FASTENING NOT NOTED ON THIS SHEET.



17 SPLICE CONNECTION DETAIL

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

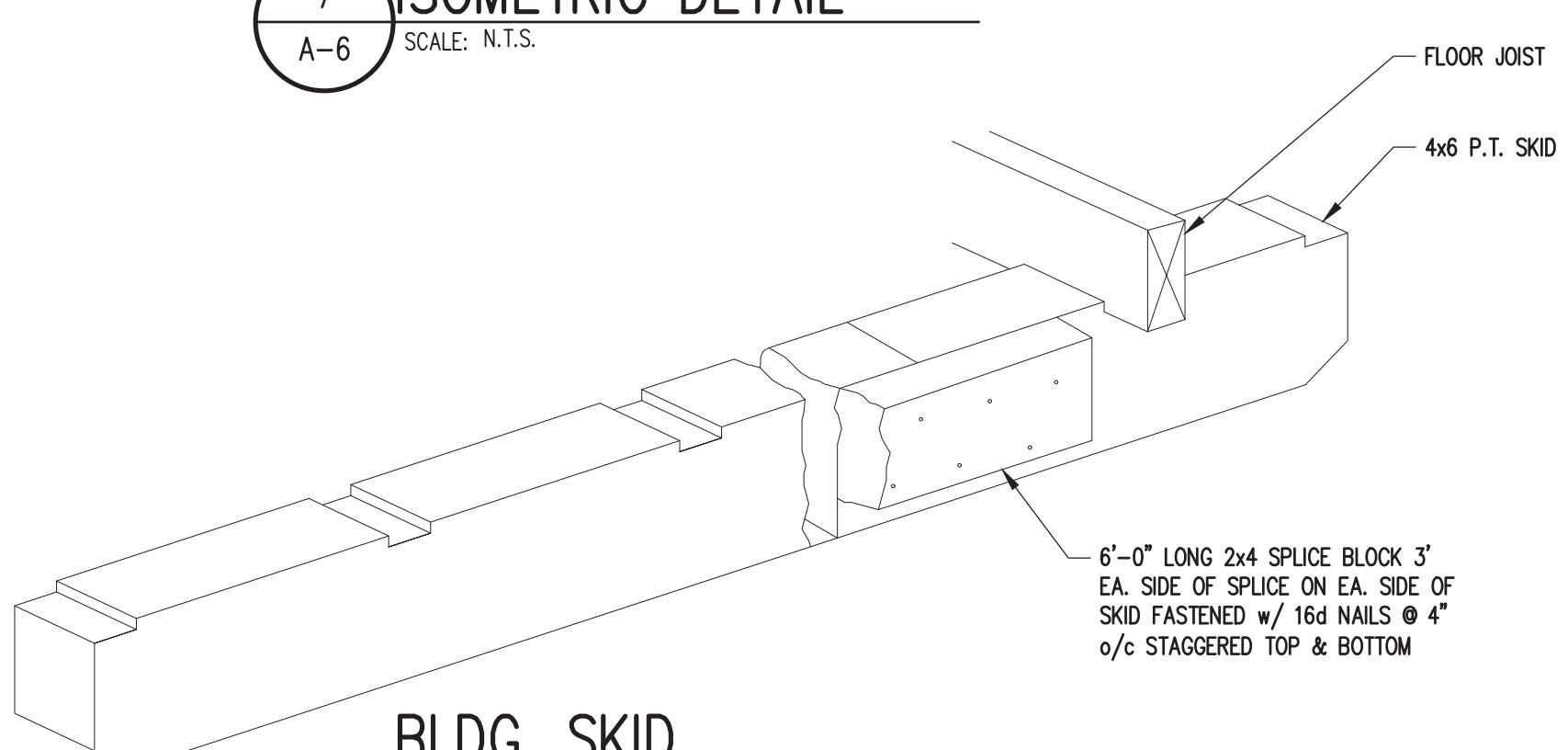
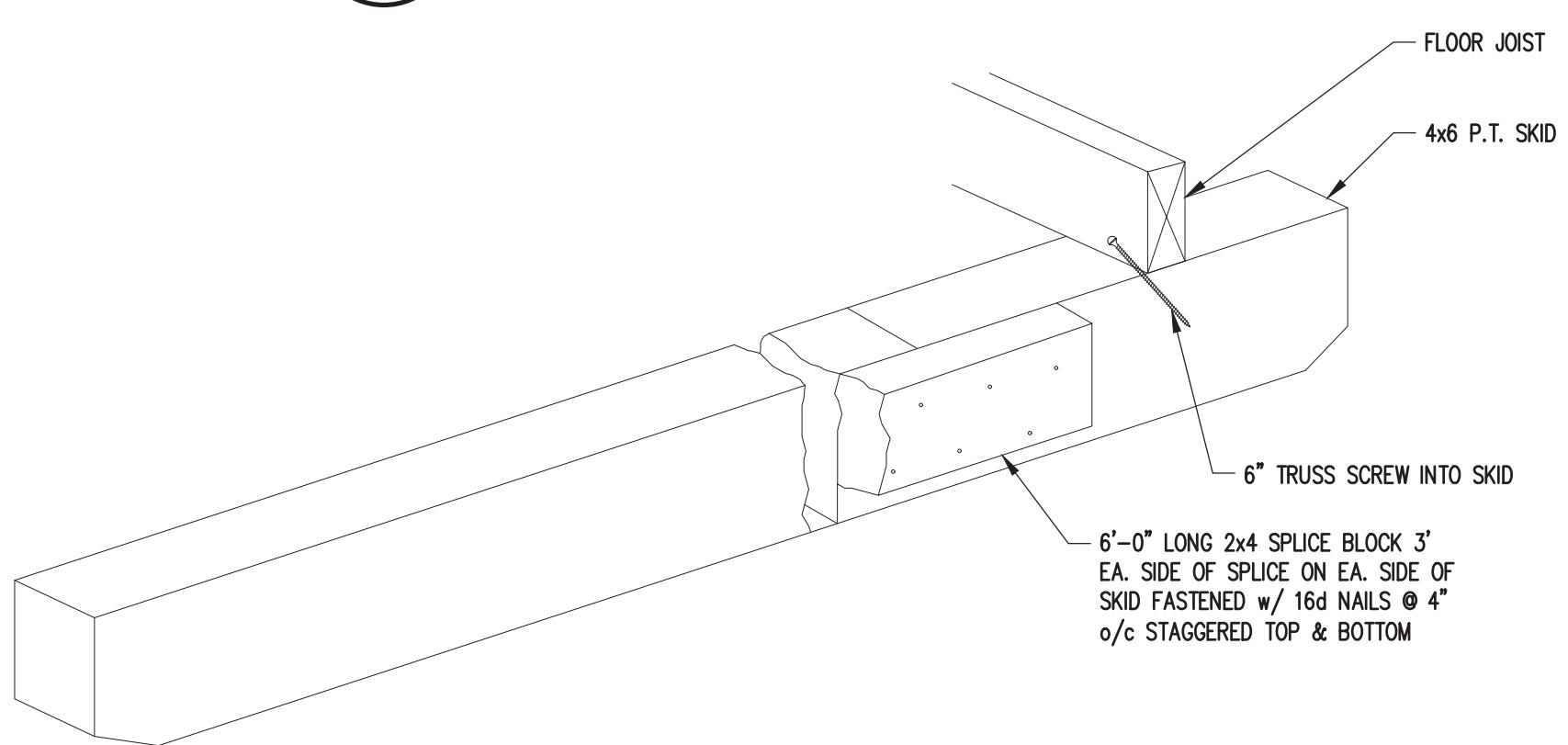
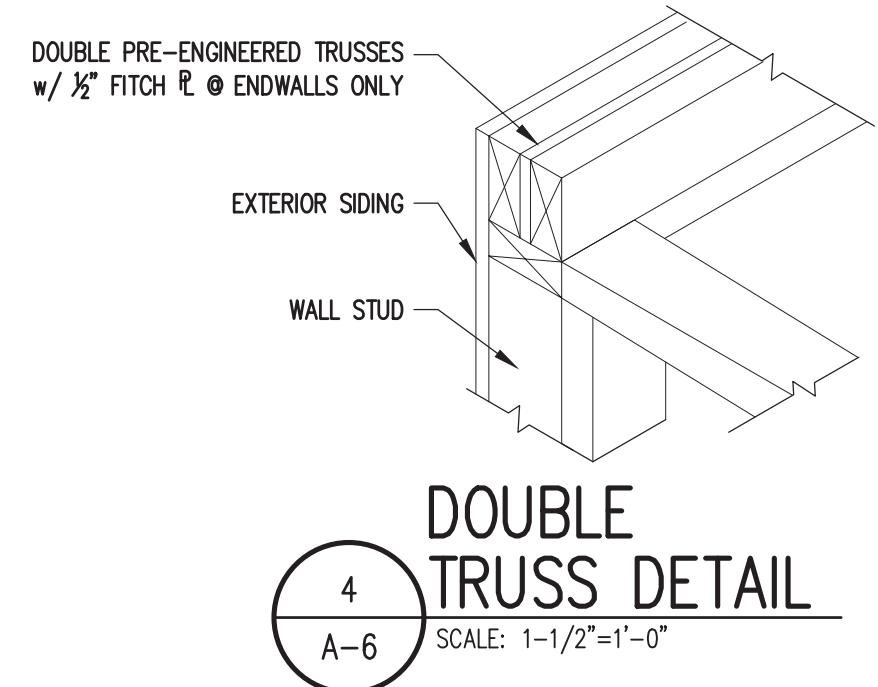
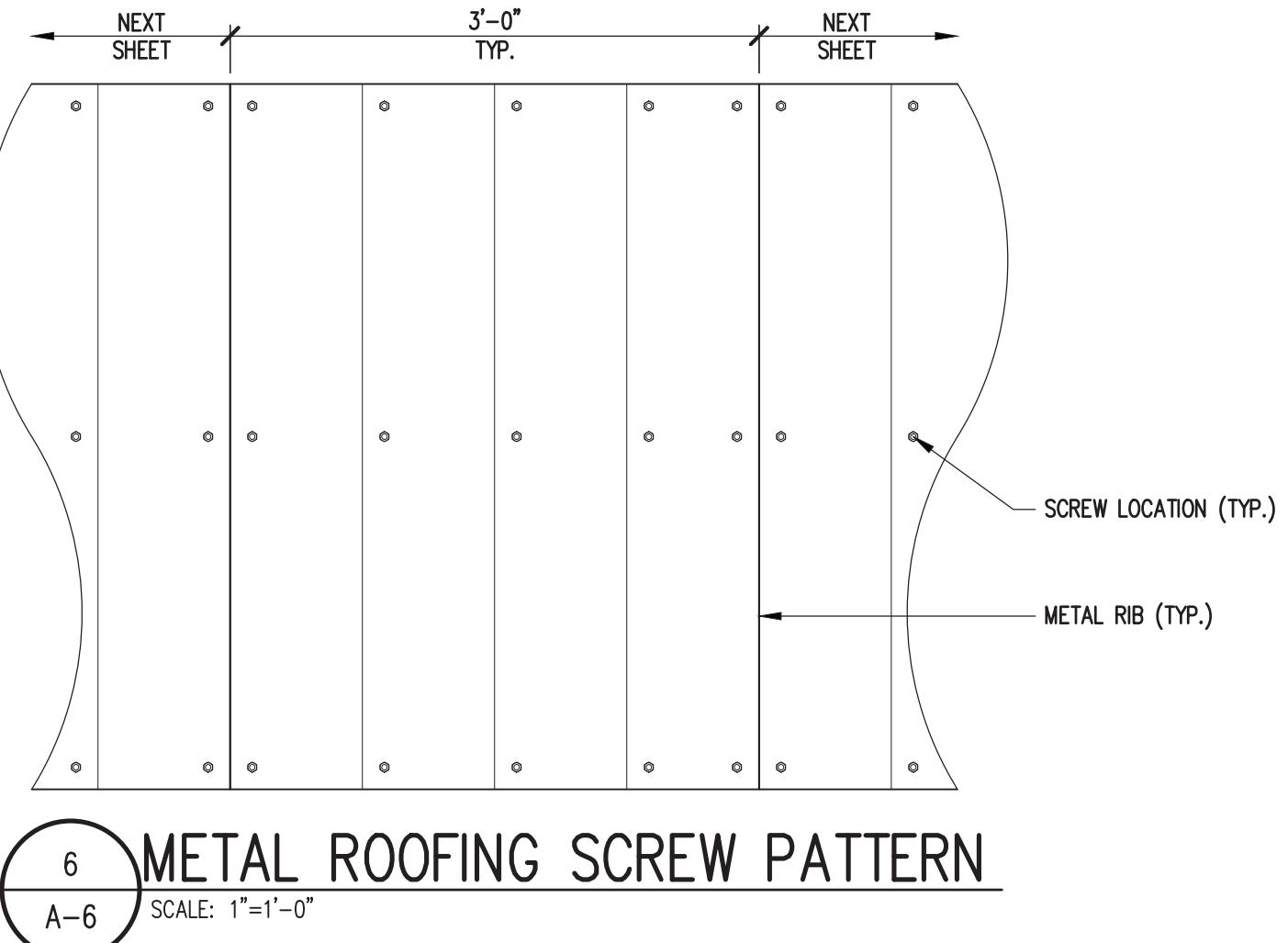
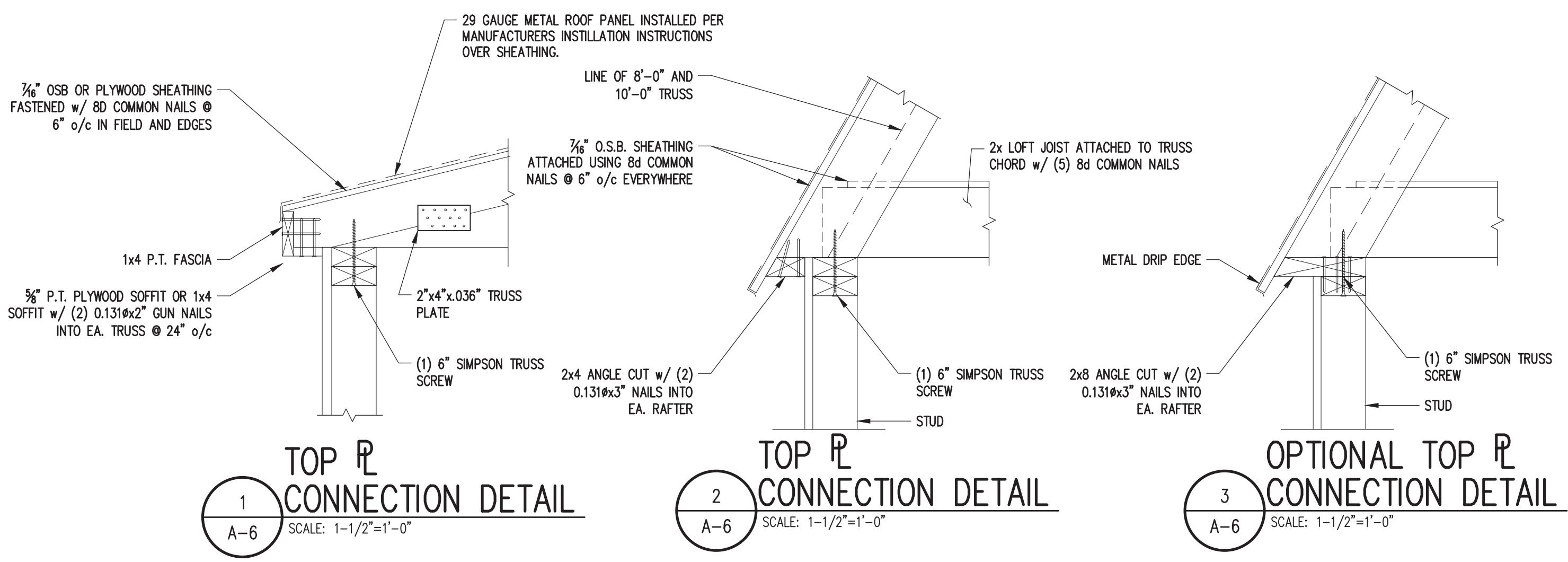
NOTES:
1. SEE NOTES ON SHEETS A-1 & A-2 FOR ANY INFORMATION NOT SHOWN HERE.
2. SEE FASTENING SCHEDULE FOR ALL FASTENING NOT NOTED ON THIS SHEET.

PROJECT:
UTILITY SHED

TYPICAL DETAILS

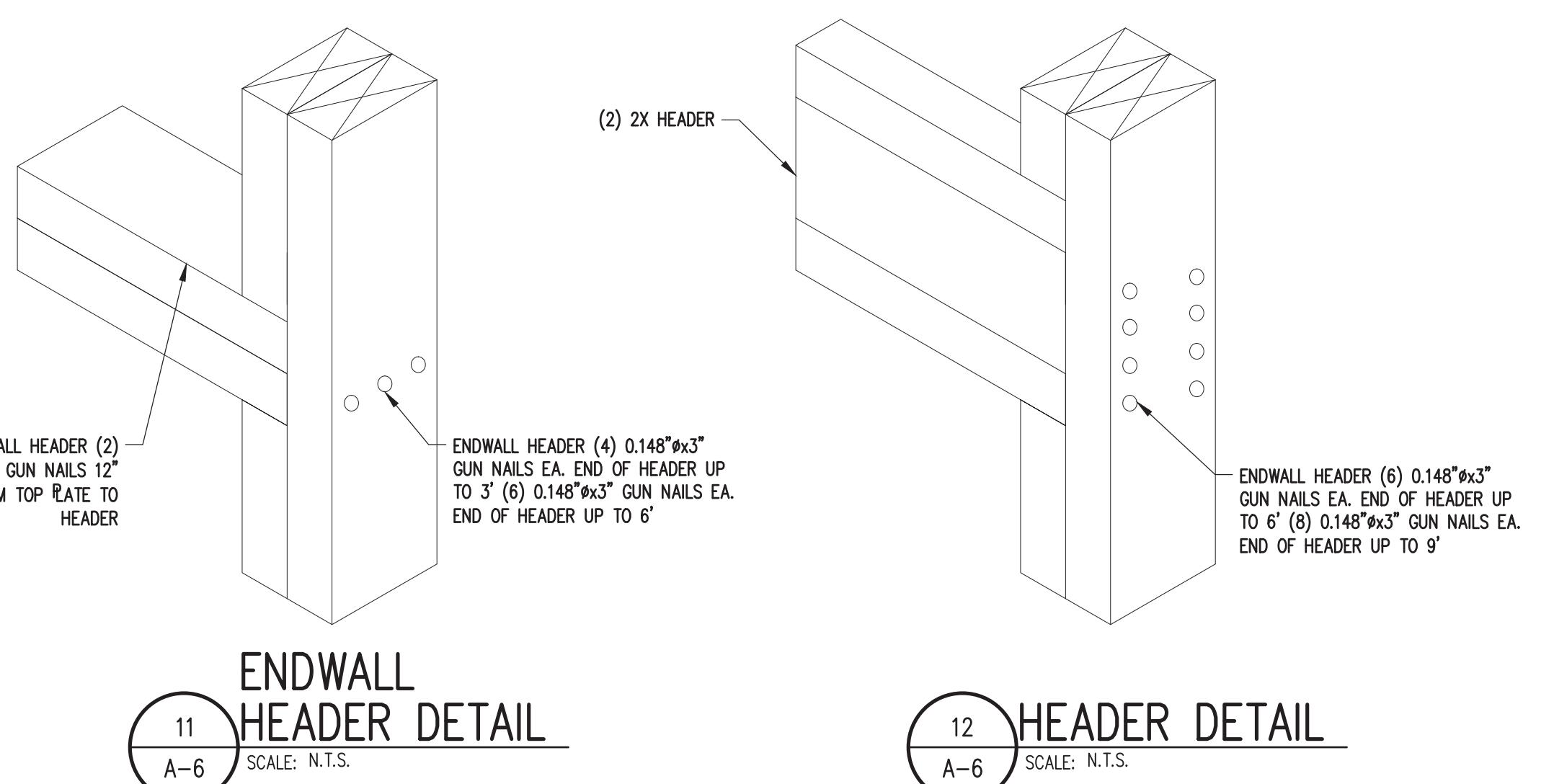
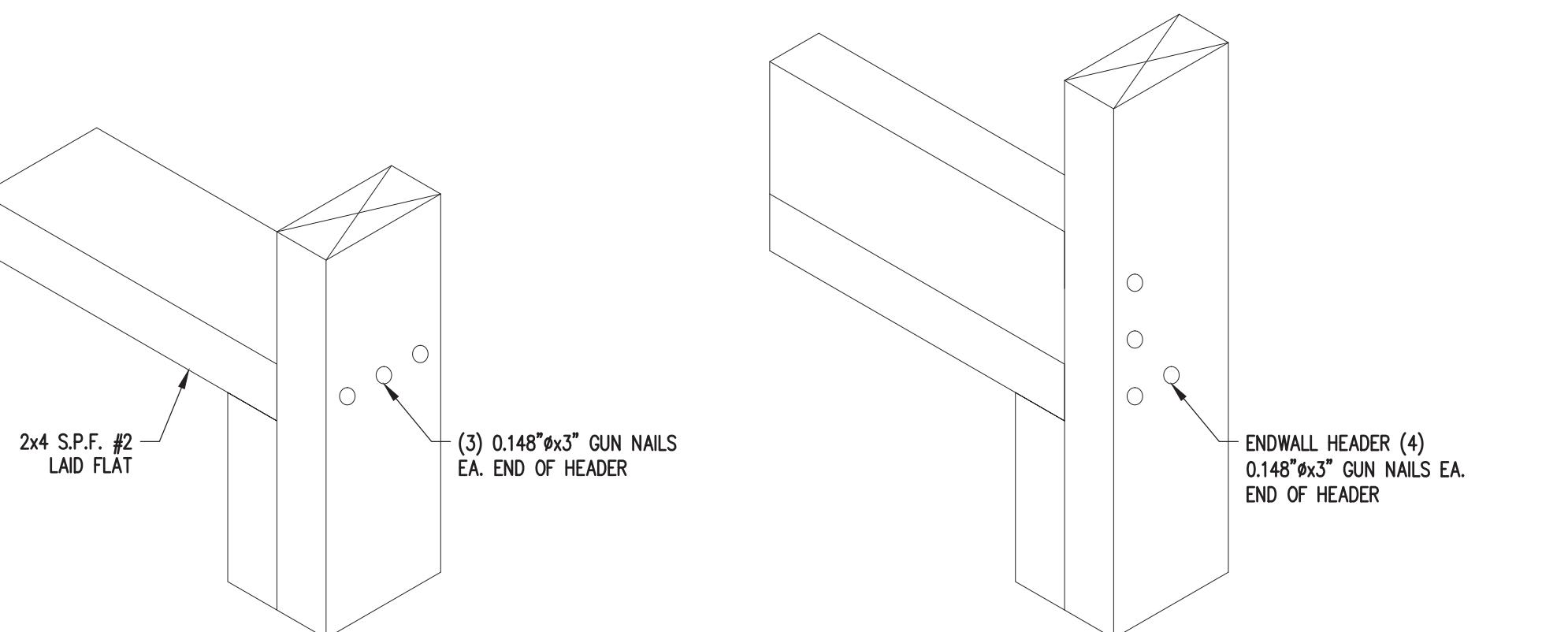
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SPECIALTY STRUCTURAL ENGINEERENGINEERING SERVICES PROVIDED FOR:
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SOUTH FULTON, TN 38257
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REVISION	DESCRIPTION	DATE	BY
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3			
4			
5			
		DATE: 5.15.25	
		PROJECT NO.: 20062	
		DRAWING BY: JH	
		CHK BY: DVG	
		DWG NO.: A-5	
		CONSTRUCTION STAMP	
		STATE OF VIRGINIA PROFESSIONAL ENGINEER	
		8/15/25 16154	
		7 of 12	



NOTES:

1. SEE NOTES ON SHEETS A-1 & A-2 FOR ANY INFORMATION NOT SHOWN HERE.
2. SEE FASTENING SCHEDULE FOR ALL FASTENING NOT NOTED ON THIS SHEET.



PROJECT:
UTILITY SHED

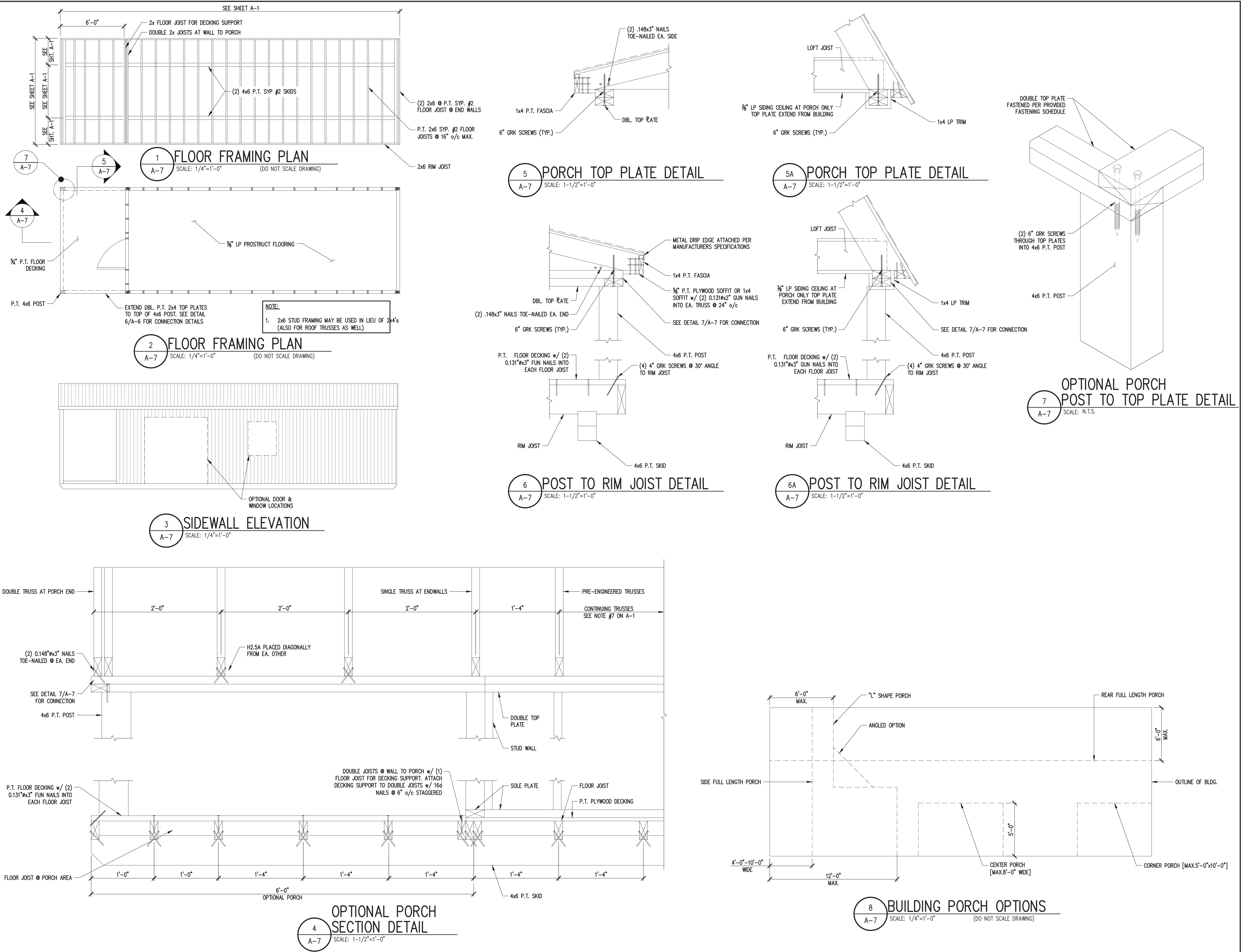
TYPICAL DETAILS

DON VAN GERVE, P.E.
SPECIALTY STRUCTURAL ENGINEER



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DWG NO.:	A-6		
	8/15/25	16154	
			STATE OF VIRGINIA PROFESSIONAL ENGINEER



AREA FOR APPROVAL STAMPS

PROJECT: **UTILITY SHED**

OPTIONAL PORCH PLANS, SECTIONS & DETAILS

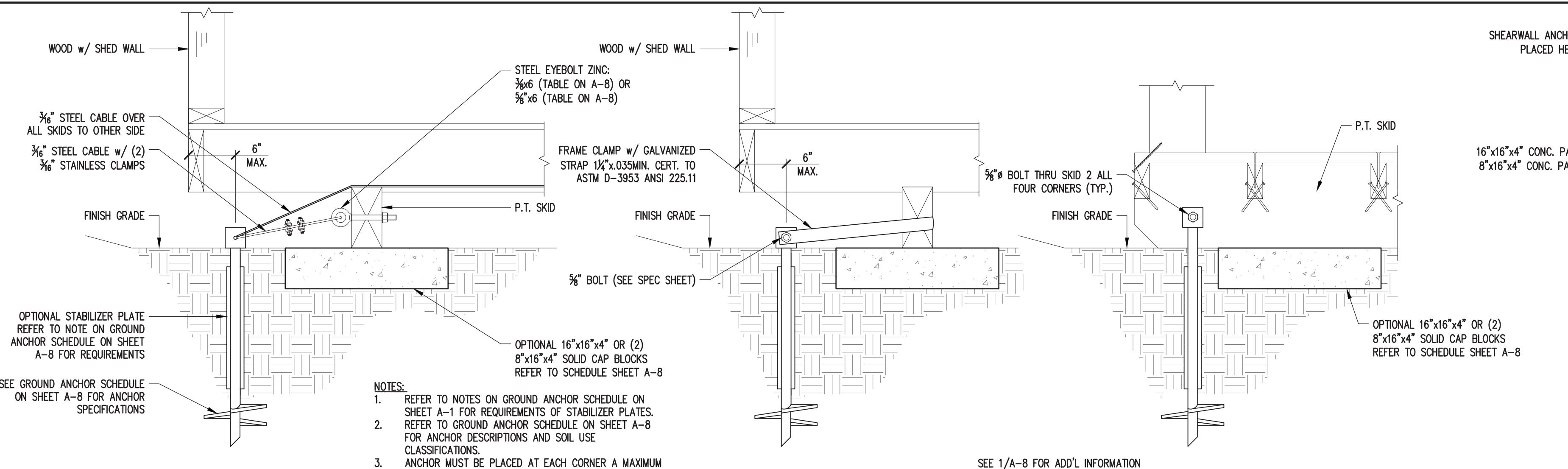
DON VAN GERVE, P.E. SPECIALTY STRUCTURAL ENGINEER



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CHK BY:	DVG		
WG NO.:			
A-7			





1 HELIX ANCHOR DETAIL
A-8 SCALE: 1-1/2"=1'-0"

2 OPTIONAL ANCHOR DETAIL
A-8 SCALE: 1-1/2"=1'-0"

3 ANCHOR DETAIL
A-8 SCALE: 1-1/2"=1'-0"

OPTIONAL PAD SCHEDULE FOR ALL WIND SPEEDS AND EXPOSURES

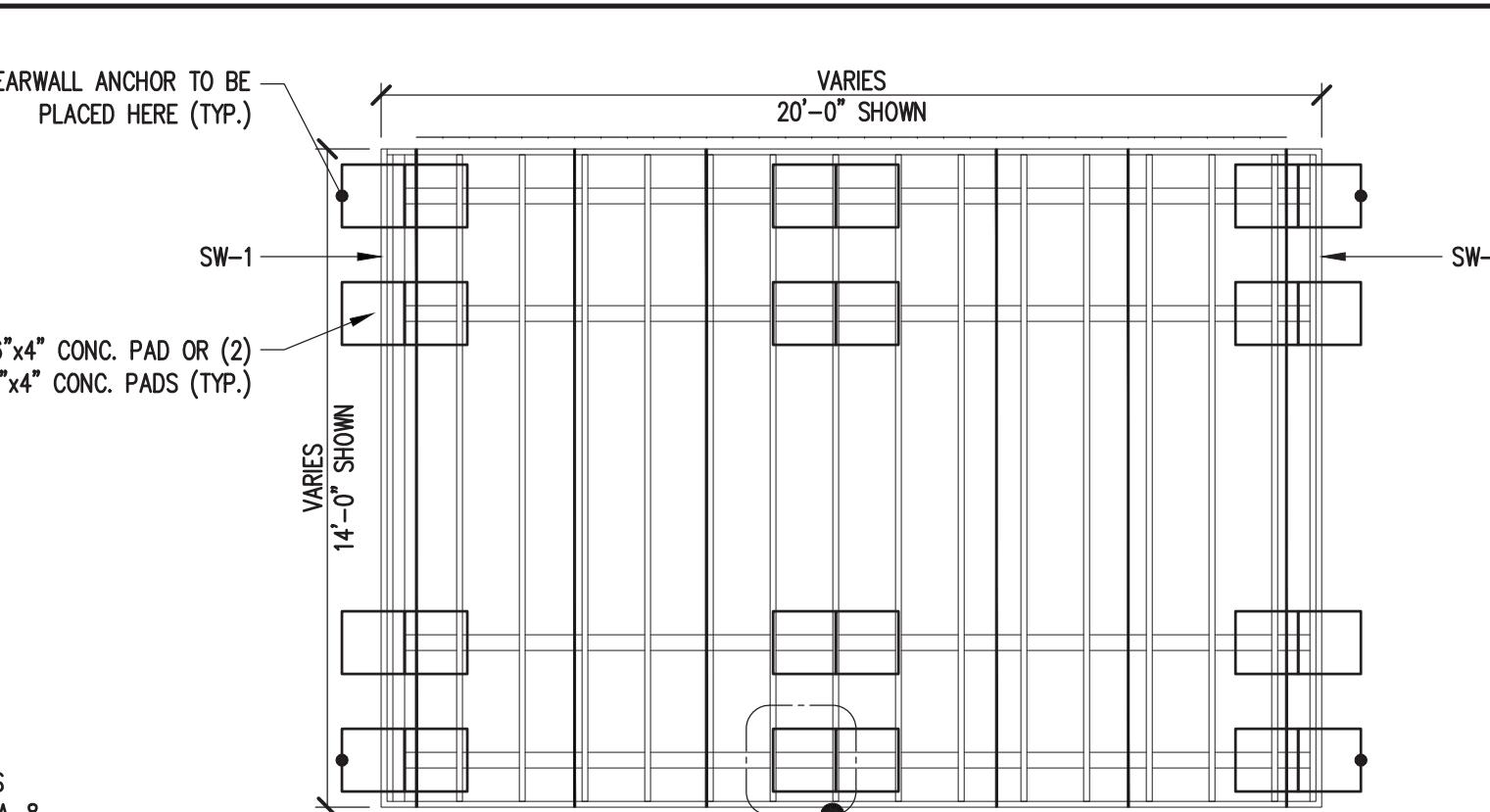
BUILDING WIDTH	NUMBER OF PADS BY LENGTH UNDER EACH SKID																			
	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	22'-0"	24'-0"	26'-0"	28'-0"	30'-0"	32'-0"	34'-0"	36'-0"	38'-0"	40'-0"	50'-0"	60'-0"		
8'-0"	3	3	3	3	3	4	4	4	N/A											
10'-0"	3	3	3	4	4	4	5	5	5	5	N/A									
11'-2"	2	2	3	3	3	3	3	3	4	4	4	N/A								
12'-0"	2	2	3	3	3	3	3	3	4	4	4	4	N/A	N/A	N/A	N/A	N/A	N/A		
14'-0"	2	3	3	3	3	3	3	4	4	4	4	4	5	5	5	6	7			
16'-0"	2	3	3	3	3	3	3	4	4	4	4	4	5	5	5	6	7			

ANCHORING FOR 170 M.P.H. WIND SPEED, EXPOSURE "C" - 3/8" ANCHOR BOLT

BUILDING WIDTH	NUMBER OF ANCHORS EACH SIDE WALL																				
	MAX. SPACING OVERTURN	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	22'-0"	24'-0"	26'-0"	28'-0"	30'-0"	32'-0"	34'-0"	36'-0"	38'-0"	40'-0"	50'-0"	60'-0"		
8'-0"	3.15	5	5	6	7	8	8	9	10	10	11	12	13	14	14	17	20				
10'-0"	3	5	6	6	7	8	8	9	10	10	11	12	13	14	14	15	17	20			
11'-2"	3.98	4	5	5	6	6	7	8	8	9	9	10	11	11	12	16	19				
12'-0"	4.01	4	4	5	5	6	6	7	8	8	9	9	10	11	11	15	18				
14'-0"	4.10	4	4	5	5	6	6	7	8	8	9	9	10	10	11	14	16				
16'-0"	4.18	4	4	5	5	6	6	7	8	8	9	9	10	10	11	14	16				

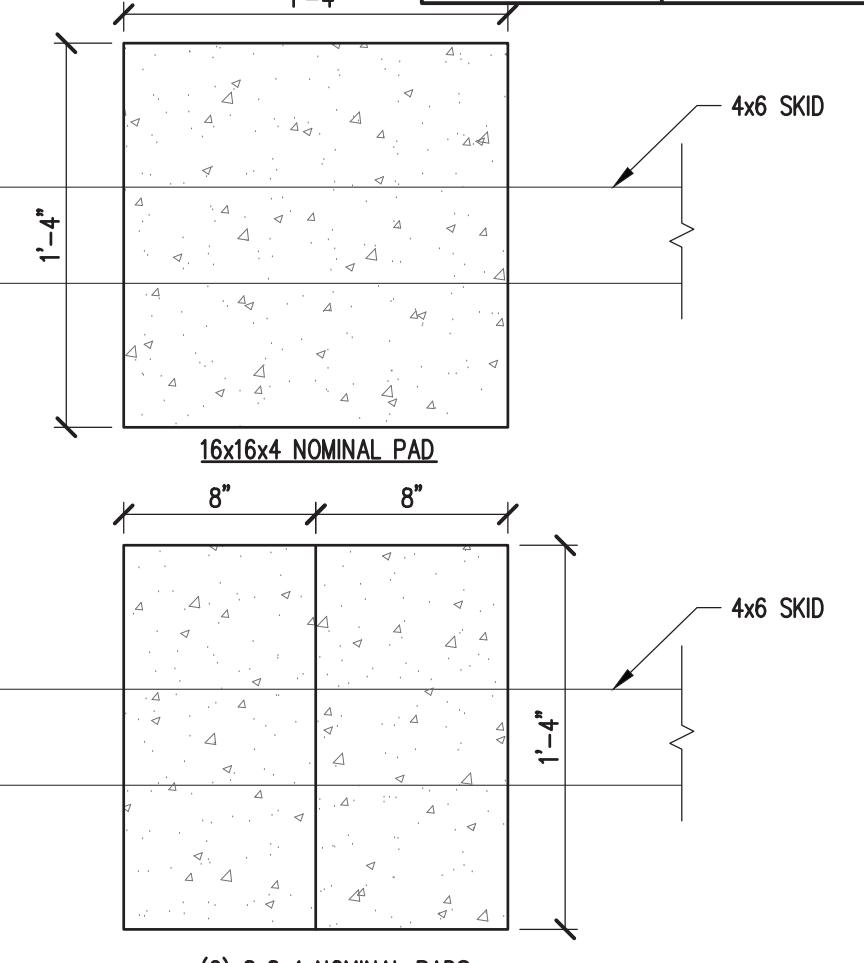
ANCHORING FOR 170 M.P.H. WIND SPEED, EXPOSURE "C" - 5/8" ANCHOR BOLT

BUILDING WIDTH	NUMBER OF ANCHORS EACH SIDE WALL																				
	MAX. SPACING OVERTURN	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	22'-0"	24'-0"	26'-0"	28'-0"	30'-0"	32'-0"	34'-0"	36'-0"	38'-0"	40'-0"	50'-0"	60'-0"		
8'-0"	4.61	4	4	5	5	6	6	7	7	8	8	8	9	9	10	10	12	14			
10'-0"	4.30	4	4	5	5	6	6	7	7	8	8	8	9	9	10	10	11	12	14		
11'-2"	5.84	3	4	4	5	5	5	6	6	6	6	7	7	8	8	8	11	13			
12'-0"	5.88	3	4	4	5	5	5	6	6	6	6	7	7	8	8	8	11	13			
14'-0"	6.01	3	3	4	4	5	5	5	6	6	6	6	7	7	8	8	11	13			
16'-0"	6.13	3	3	4	4	5	5	5	6	6	6	6	7	7	8	8	1	13			



4 FLOOR FRAMING PLAN
A-8 SCALE: 1/4"=1'-0" (DO NOT SCALE DRAWING)

NOTES:
1. CONCRETE PADS ARE OPTIONAL.
2. DIMENSIONS SHOWN ARE NOMINAL.
3. ANCHORS ARE REQUIRED MIN. (4) PER SHEAR WALL (SW-#).
4. REFER TO SCHEDULES ON SHEET A-8 FOR ANCHOR SPACING & OPTIONAL PAD LOCATION.
5. SPACE OPTIONAL PADS EQUALLY.



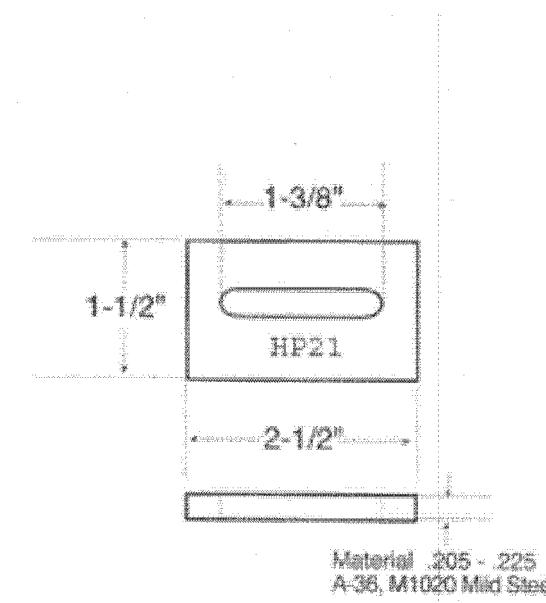
5 PAD DETAILS
A-8 SCALE: 1-1/2"=1'-0"

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DETAIL AND DIMENSIONS. ANY DISCREPANCIES BETWEEN SUCH DETAILS AND DIMENSIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTION PROCEDURE AND SEQUENCE TO INSURE THE INTEGRITY OF THE BUILDING AND ITS COMPONENT PARTS DURING CONSTRUCTION.
4. THESE PLANS HAVE BEEN PREPARED PER REGULATIONS OF THE 2018 WV IRC CODE. THE WORK OF ALL CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS SET FORTH IN THE AFOREMENTIONED CODE. NO DEVIATIONS FROM THE WORK SHOWN OR REASONABLY IMPLIED SHALL BE UNDERTAKEN WITHOUT THE ENGINEER'S WRITTEN CONSENT - A COPY OF WHICH WILL BE FILLED WITH THE CONSTRUCTION OFFICIAL.
5. ANY CHANGES TO OR DEVIATIONS FROM THESE DRAWINGS SHALL NOT BE MADE WITHOUT WRITTEN CONSENT FROM THE ENGINEER.
6. THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER AND SHALL NOT BE USED WITHOUT HIS CONSENT. DRAWINGS SHALL NOT BE USED FOR ISSUE OF BUILDING PERMIT UNLESS SIGNED AND SEALED BY THE ENGINEER.
7. THE OWNER AND CONTRACTOR SHALL HOLD HARMLESS THE ENGINEER FROM AND AGAINST ALL LIABILITY CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING LEGAL FEES ARISING OUT OF OR RESULTING FROM ERRORS OR OMISSIONS IN THE PERFORMANCE OF THE WORK BY THE CONTRACTOR. ALL WORK AND MATERIAL SHALL MEET THE REQUIREMENTS OF ALL LOCAL AND STATE BUILDING CODES. THE DRAWING SHOW THE GENERAL ARRANGEMENTS AND EXTENT OF THE WORK. AS THE WORK PROGRESSES, THE OWNER AND THE CONTRACTOR, AT NO EXTRA COSTS, SHALL MAKE MODIFICATIONS TO MAKE THE PARTS ALIGN.
8. CONTRACTORS SHALL CHECK AND VERIFY ALL PLAN DIMENSIONS AND CONDITIONS BEFORE PROCEEDING CONSTRUCTION. HE SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER FOR CORRECTION PRIOR TO BEGINNING ANY WORK. THE DISCOVERY OF DISCREPANCIES AFTER THE BEGINNING OF WORK WILL BE EVIDENCE OF FAULTY WORK AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DO NOT SCALE DRAWINGS. ALL WRITTEN DIMENSIONS COVER.
9. THE CONTRACTOR FOR THIS PROJECT SHALL INCLUDE ALL MATERIALS AND LABOR REQUIRED TO COMPLETE THE TOTAL PROJECT. THE CONTRACTOR SHALL FURNISH AND PAY FOR ALL MATERIALS, TOOLS, EQUIPMENT, LABOR, MACHINERY, TRANSPORTATION, HEAT, WATER, UTILITIES, AND ALL OTHER FACILITIES AND SERVICES REQUIRED FOR THE SAFE AND PROPER EXECUTION AND COMPLETION OF THE WORK. THE ENGINEER SHALL BE THE INTERPRETER OF THE CONTRACT DOCUMENTS.
10. THE DOCUMENTS SHOWN AN OVERVIEW OF THE WORK REQUIRED UNDER THIS CONTRACT AND RELATED REQUIREMENTS AND CONDITIONS THAT WILL IMPACT THE PROJECT. ALL DRAWINGS ARE COMPLEMENTARY. THE DRAWINGS GENERALLY SHOW THE INTENT OF THE OVERALL COMPLEXITY AND CONCEPTS OF THE PROJECT, AND DO NOT NECESSARILY SHOW ALL DETAILS AND CONDITIONS.
11. ALL NEW INTERIOR CONCRETE SLABS AND FOUNDATION WALLS AND FOOTING SHALL HAVE SOLID POISONING UNDER NEW WORK AND SHALL BE INSTALLED BY A LICENSED CONTRACTOR. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL STATE AND DEPARTMENT OF AGRICULTURE, STRUCTURAL, PEST CONTROL DIVISION REGULATIONS, RULES, DEFINITIONS AND REQUIREMENTS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND MAINTAINING ALL EXISTING SETBACKS, EASEMENTS, AND ANY DEED RESTRICTIONS.
13. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CLEANUP AND SHALL INCLUDE THE SITE, AND THE BUILDING. THE ENTIRE PROJECT SHALL BE LEFT IN A NEW, CLEAN CONDITION.

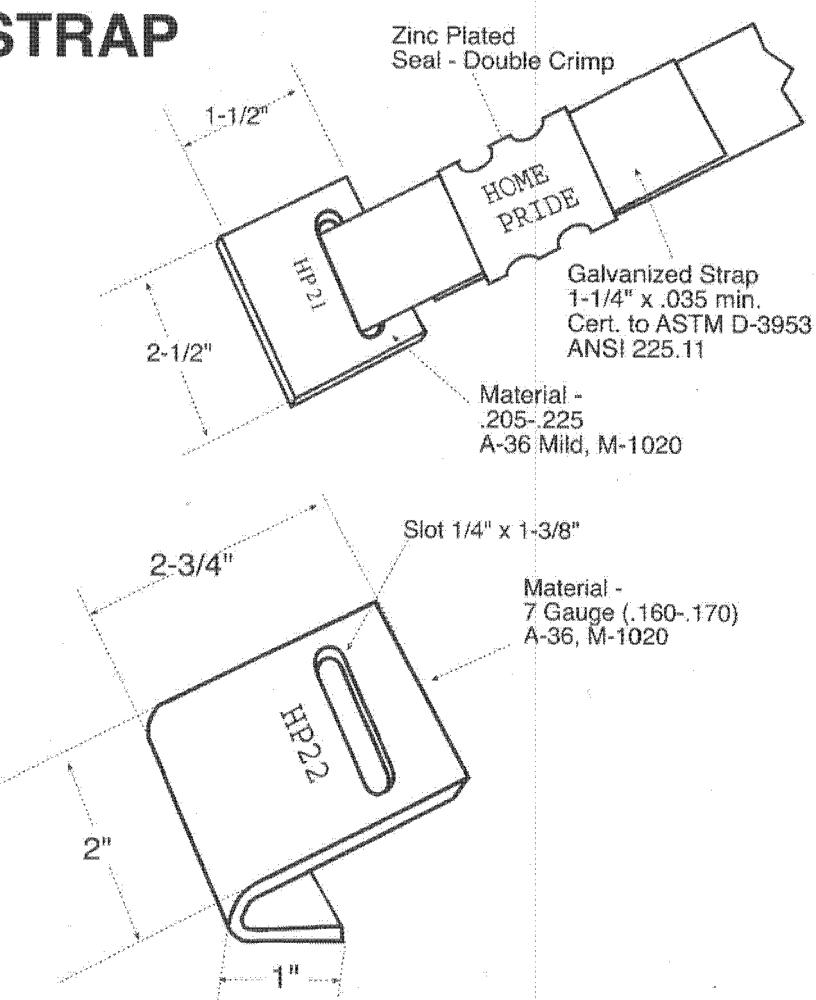
GROUND ANCHOR SCHEDULE			
MODEL #	PART #	DESCRIPTION	SOIL CLASS
M12H5/8	59080 / 59081	48" x 5/8" ROD w/ (1) 6" HELIX	4A
M12H3/4	59085 / 59094	48" x 3/4" ROD w/ (1) 6" HELIX	4A
M1423/4	59128	42" x 3/4" ROD w/ (2) 4" HELIX	4A
M1483/4	59086	48" x 3/4" ROD w/ (2) 4" HELIX	4A
M12H64	59250	36" x 3/4" ROD w/ (1) 4" HELIX & (1) 6" HELIX	4A
N/A	59065	EYE ANCHOR - 48" x 5/8" w/ (1) 6" HELIX	4A
N/A	59045	EYE ANCHOR - 48" x 3/4" w/ (1) 6" HELIX	4A
M607	59099	60" x 3/	

HP21
SINGLE SLOT
BUCKLE

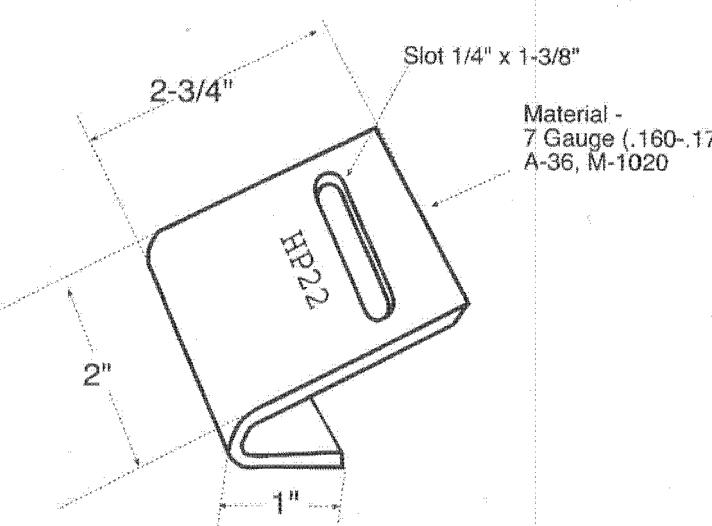


HP21-(6 thru 15)
(HP21-6', HP21-7', HP21-8', HP21-10', HP21-12', HP21-15')

SINGLE BUCKLE
W/STRAP



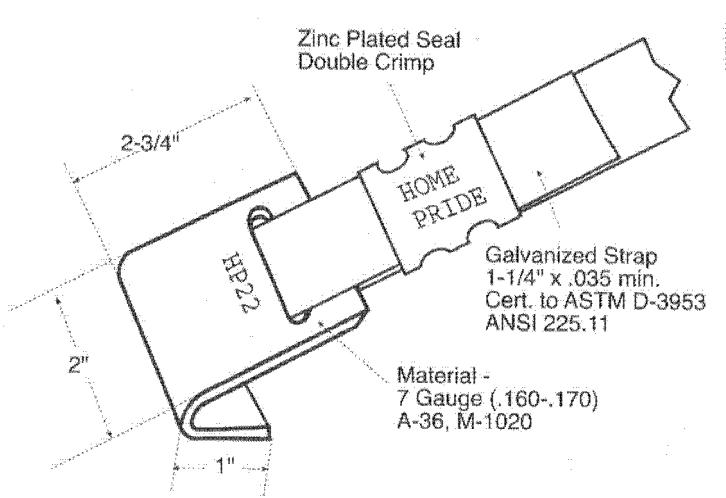
HP22
FRAME
CLAMP



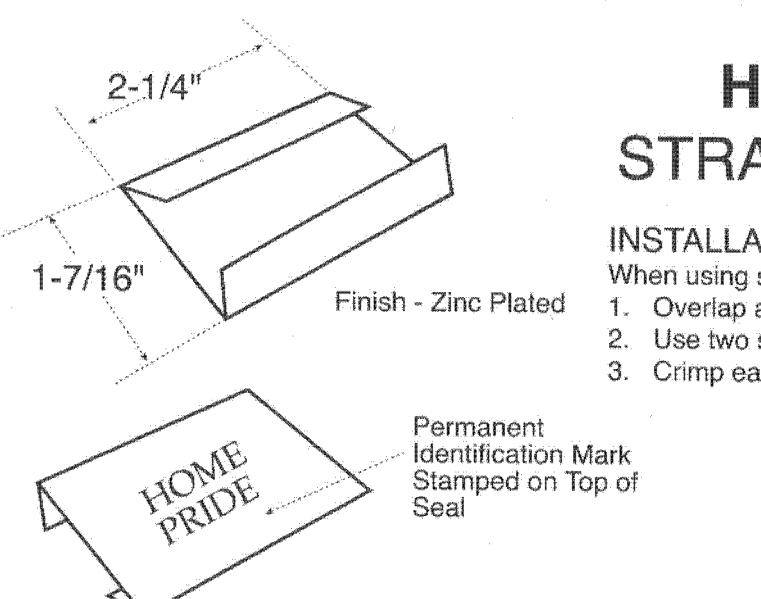
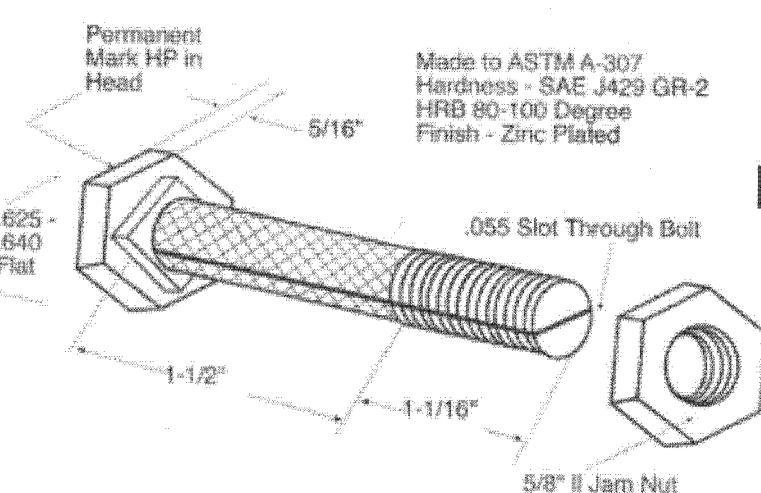
8

HP22-(6 thru 15)
(HP22-6', HP22-7', HP22-8',
HP22-10', HP22-12', HP22-15')

FRAME CLAMP
W/STRAP



HPAB
ANCHOR
BOLT & NUT



HPSS
STRAP SEAL

INSTALLATION INSTRUCTIONS:
When using seals to extend the strap:
1. Overlap a minimum of 8".
2. Use two seals placed together.
3. Crimp each seal twice.

9

PROJECT:
UTILITY SHED

PRODUCT CUT SHEETS

DON VAN GERVE, P.E.
SPECIALTY STRUCTURAL ENGINEER



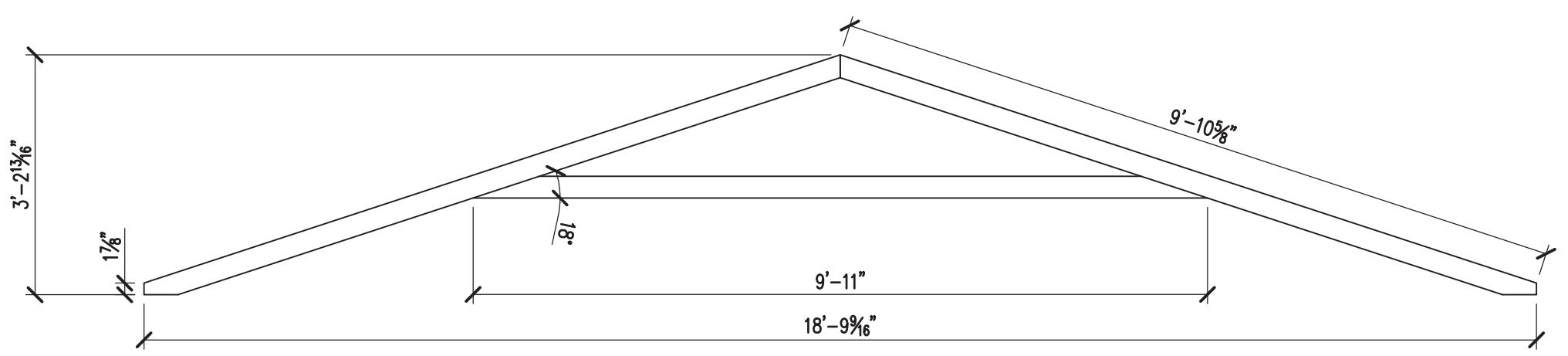
ENGINEERING SERVICES PROVIDED FOR:
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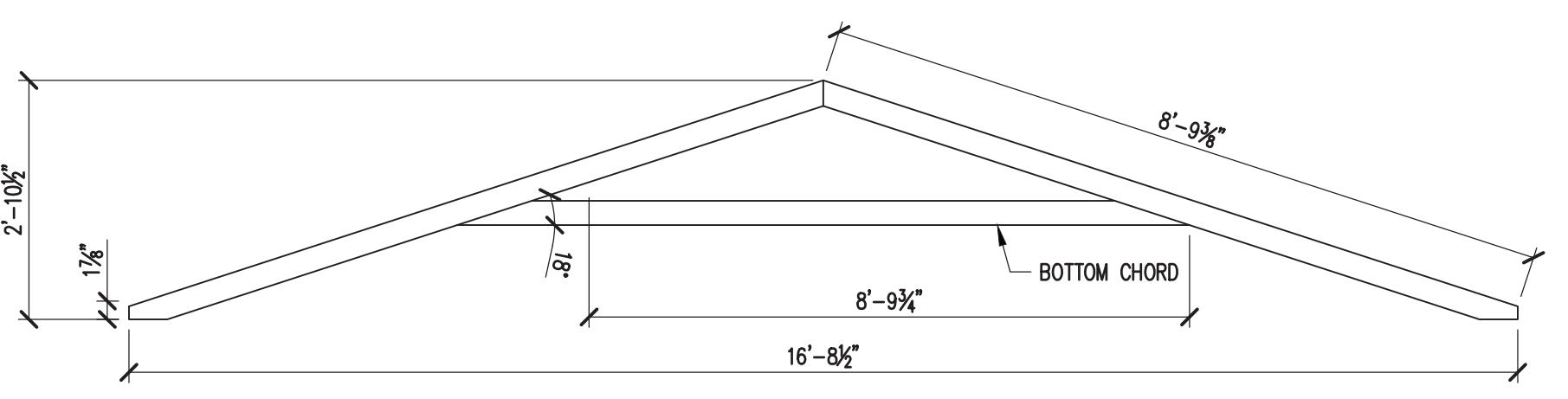
DATE:	5.15.25	
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DWG NO.:		

A-9

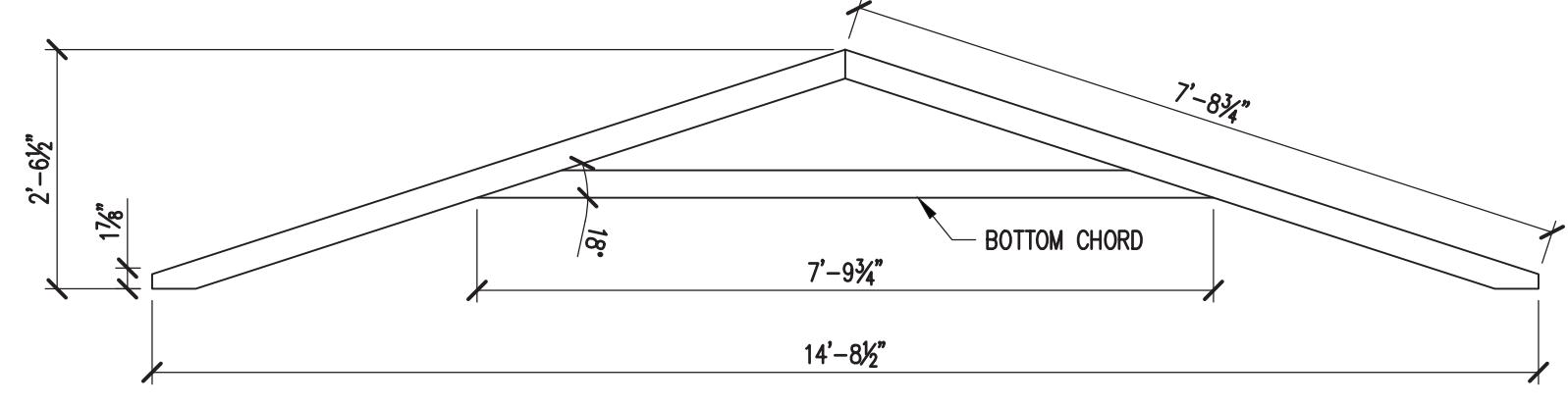




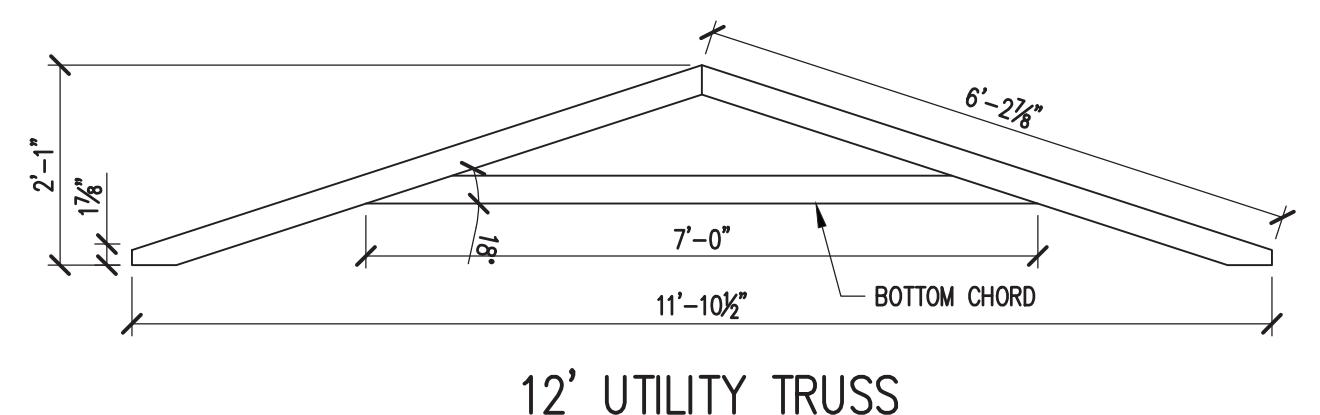
18' UTILITY TRUSS



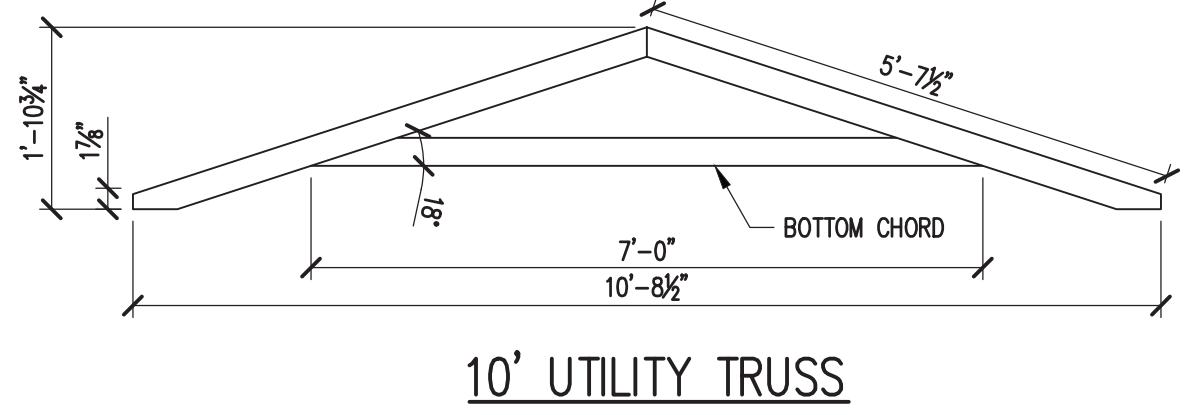
16' UTILITY TRUSS



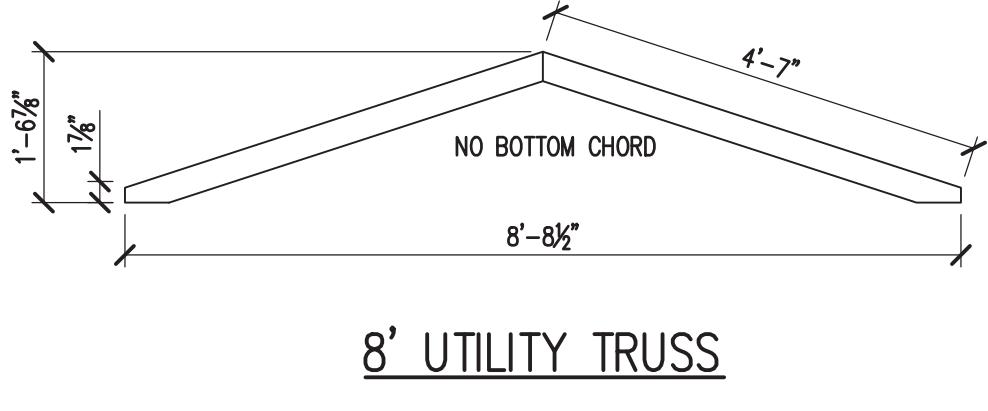
14' UTILITY TRUSS



12' UTILITY TRUSS



10' UTILITY TRUSS



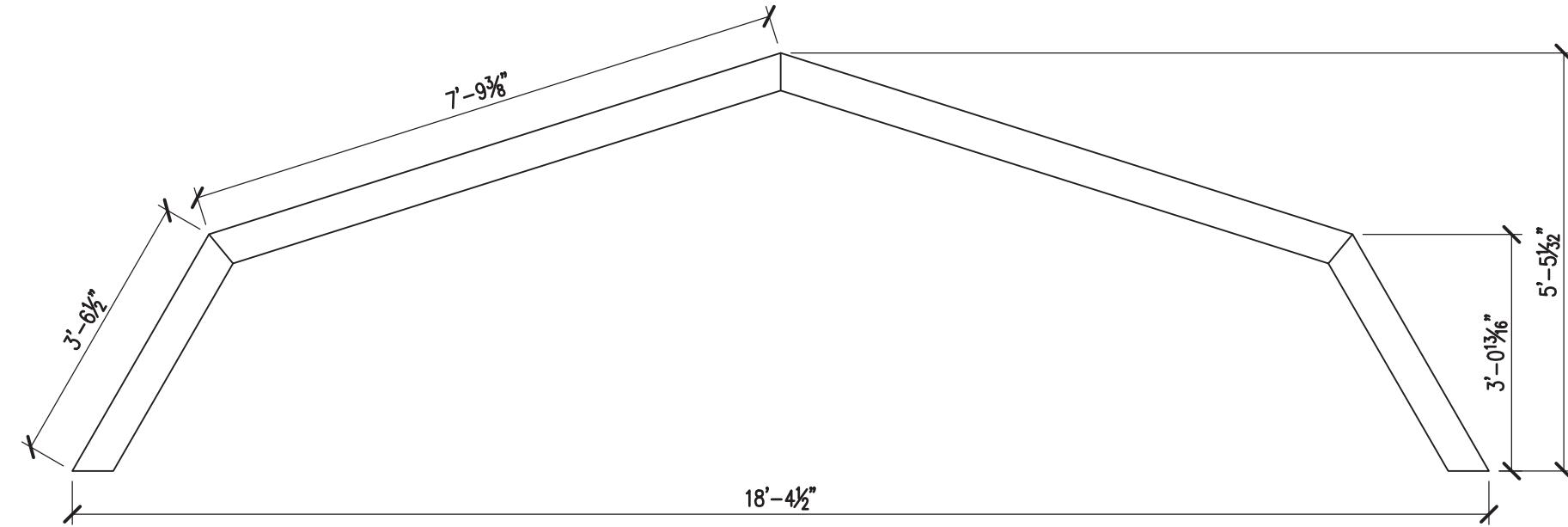
8' UTILITY TRUSS

TRUSS DESIGN: LRFD V=180mph
 ASCE 7-22 83 psf uplift x 0.85(Kd) x 0.85(Kh expC) = 60 psf uplift.
 add internal pressure 18% = 71 psf design (LRFD)
 Utility: Lmax=5.25 ft. 2x4@24"; w=142 plf
 $M=wL^2/8x12=5871$ in-lbs; $s=3.06\text{in}^3$; $fb=1919\text{psi}$
 $Fb(\text{LRFD})=3000$ psi - this value is met by lumber.

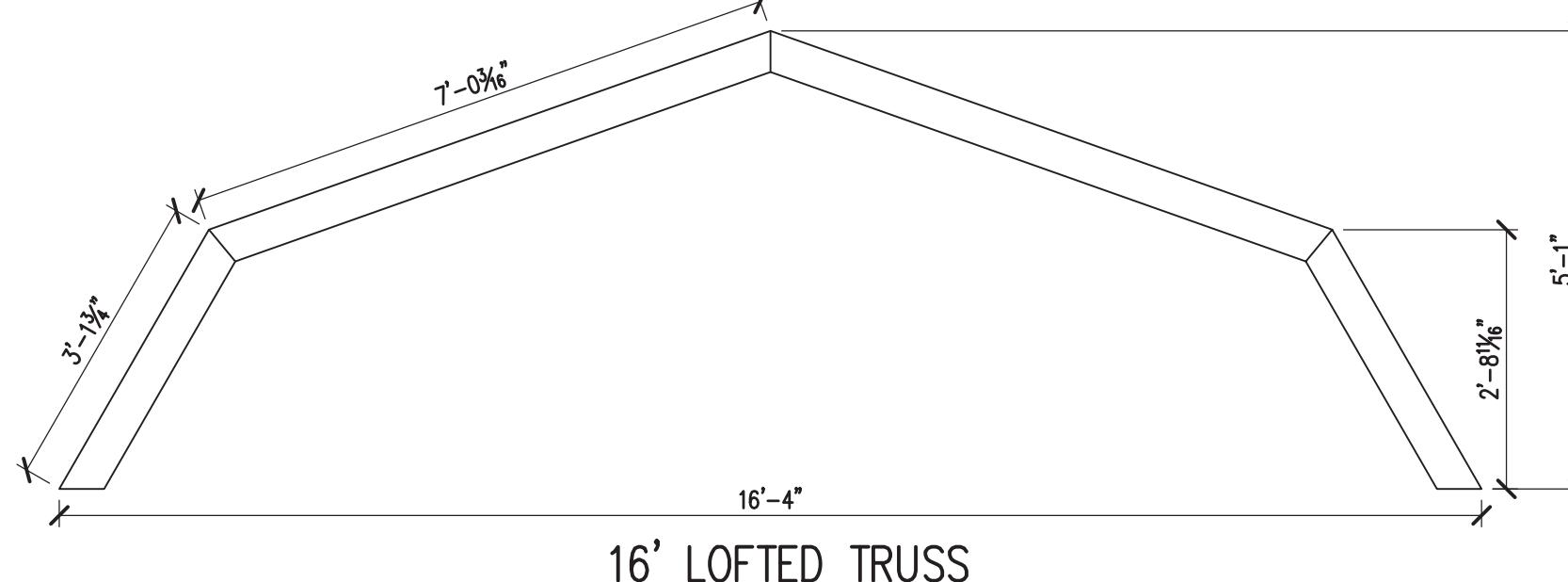
Lofted: Lmax=7.01 ft; 16' truss@16" o/c; w= 95 plf;
 $M=7002$ in-lbs; $fb= 2288$ psi < 3000 psi LRFD

Wall Calculations: 5/8" LP nailed 6" edges, 10" interior, 2x4x7ft@16"o/c;
 Pressure= 58.1 psfExternal= 10.5 psfInternal Total p= 68.6
 $I=18.74\text{ in}^4$ per 16" o/c; $S=6.03\text{ in}^3$.

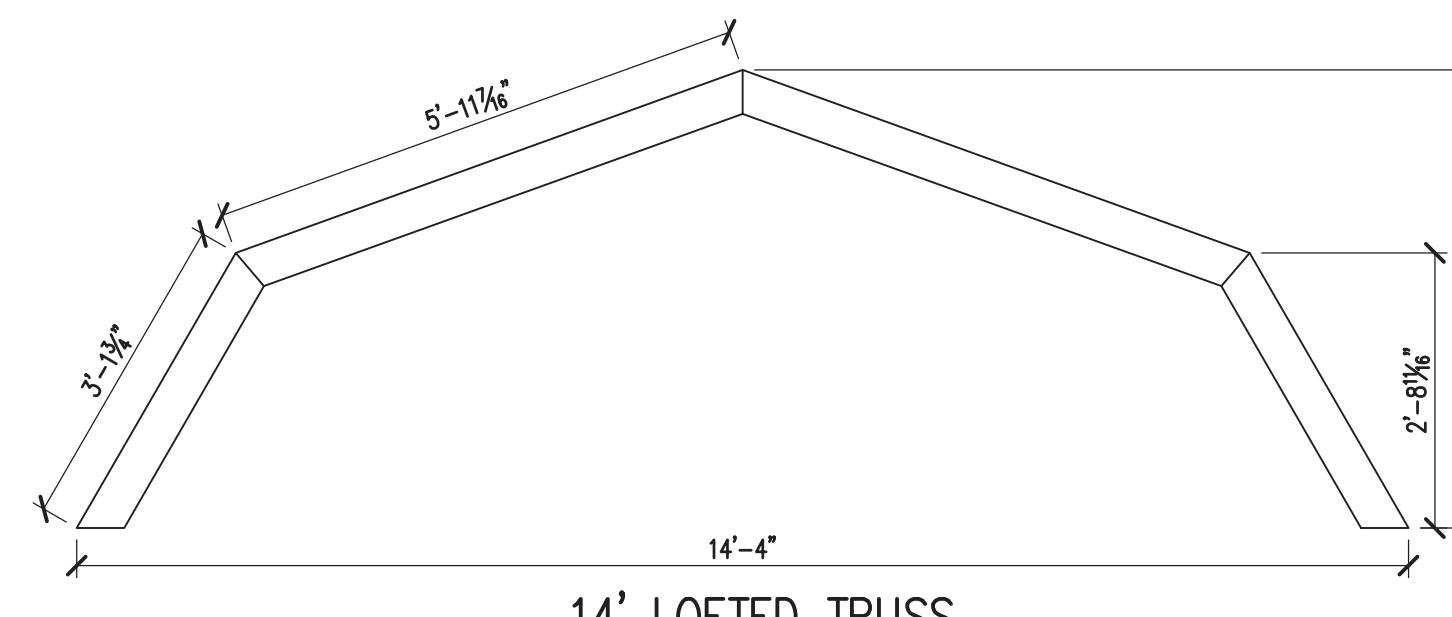
$M=68.6(1.33)(7^2)/8 x(12) = 6657.1$ in-lbs;
 $fb= 1104$ psi < 3000 psi LRFD OK



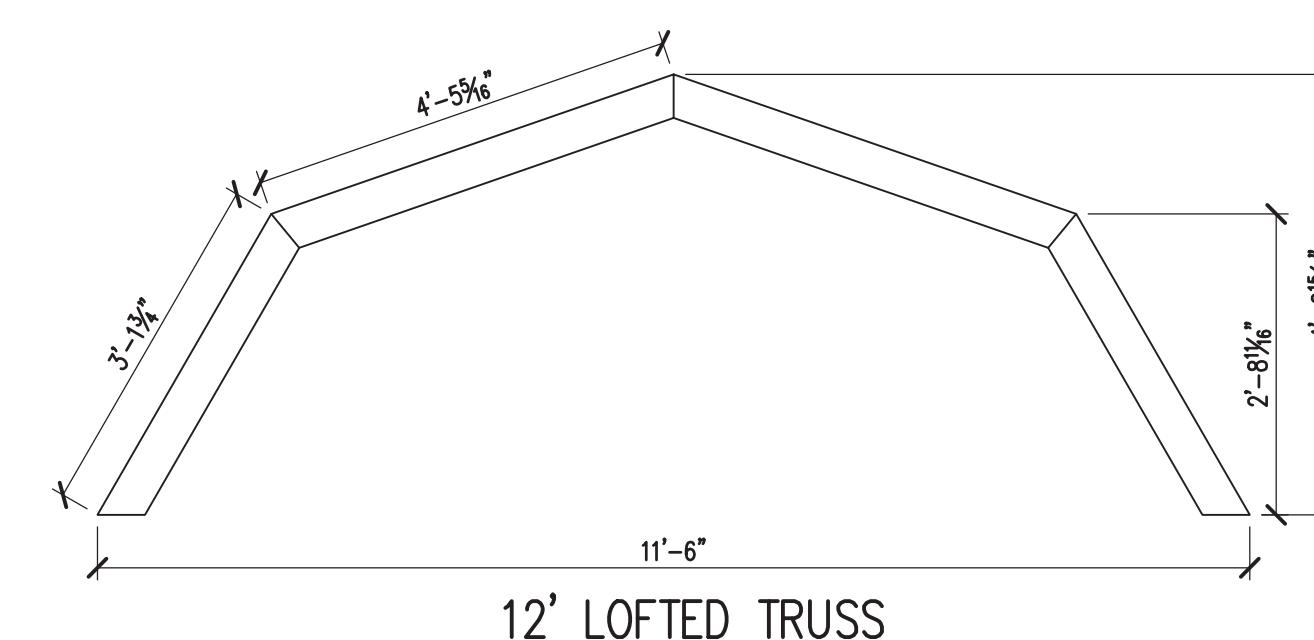
18' LOFTED TRUSS



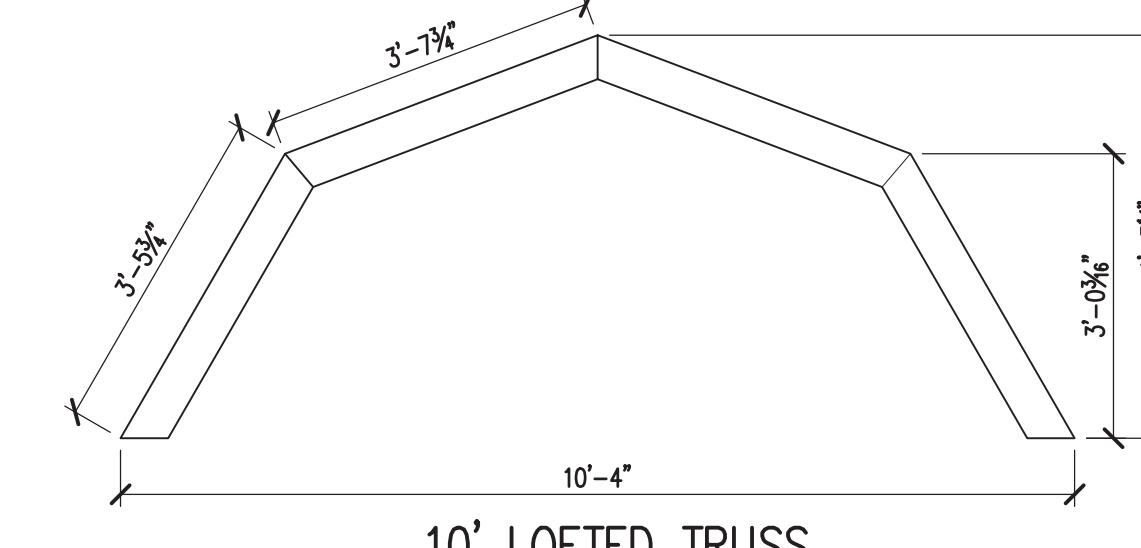
16' LOFTED TRUSS



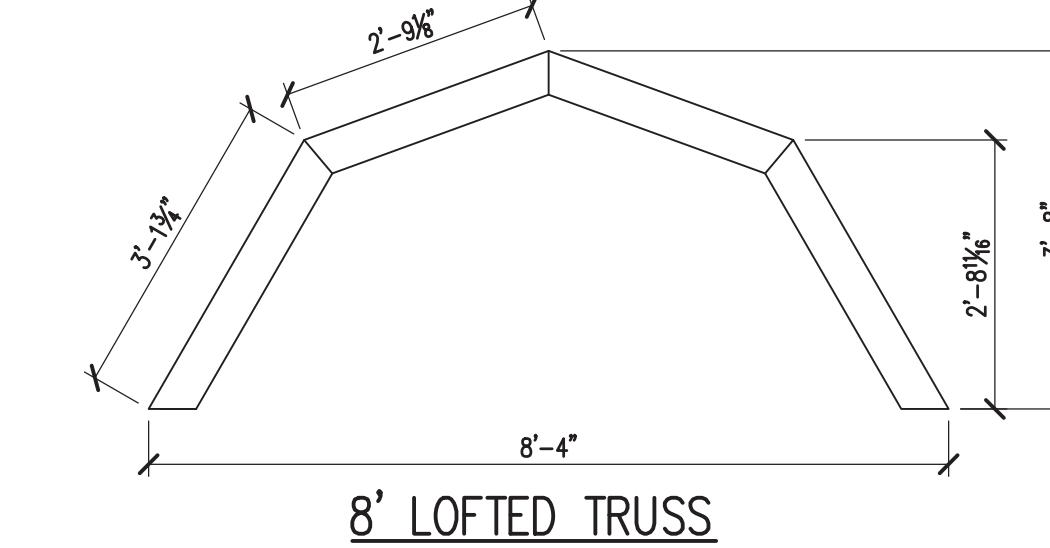
14' LOFTED TRUSS



12' LOFTED TRUSS



10' LOFTED TRUSS



8' LOFTED TRUSS

PROJECT:
 UTILITY SHED

PRODUCT CUT SHEETS

DON VAN GERVE, P.E.
 SPECIALTY STRUCTURAL ENGINEER



ENGINEERING SERVICES PROVIDED FOR:
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REVISION	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			
		DATE: 5.15.25	
		PROJECT NO.: 20062	
		DRAWING BY: JH	
		CHK BY: DVG	
		DWG NO.: A-10	

