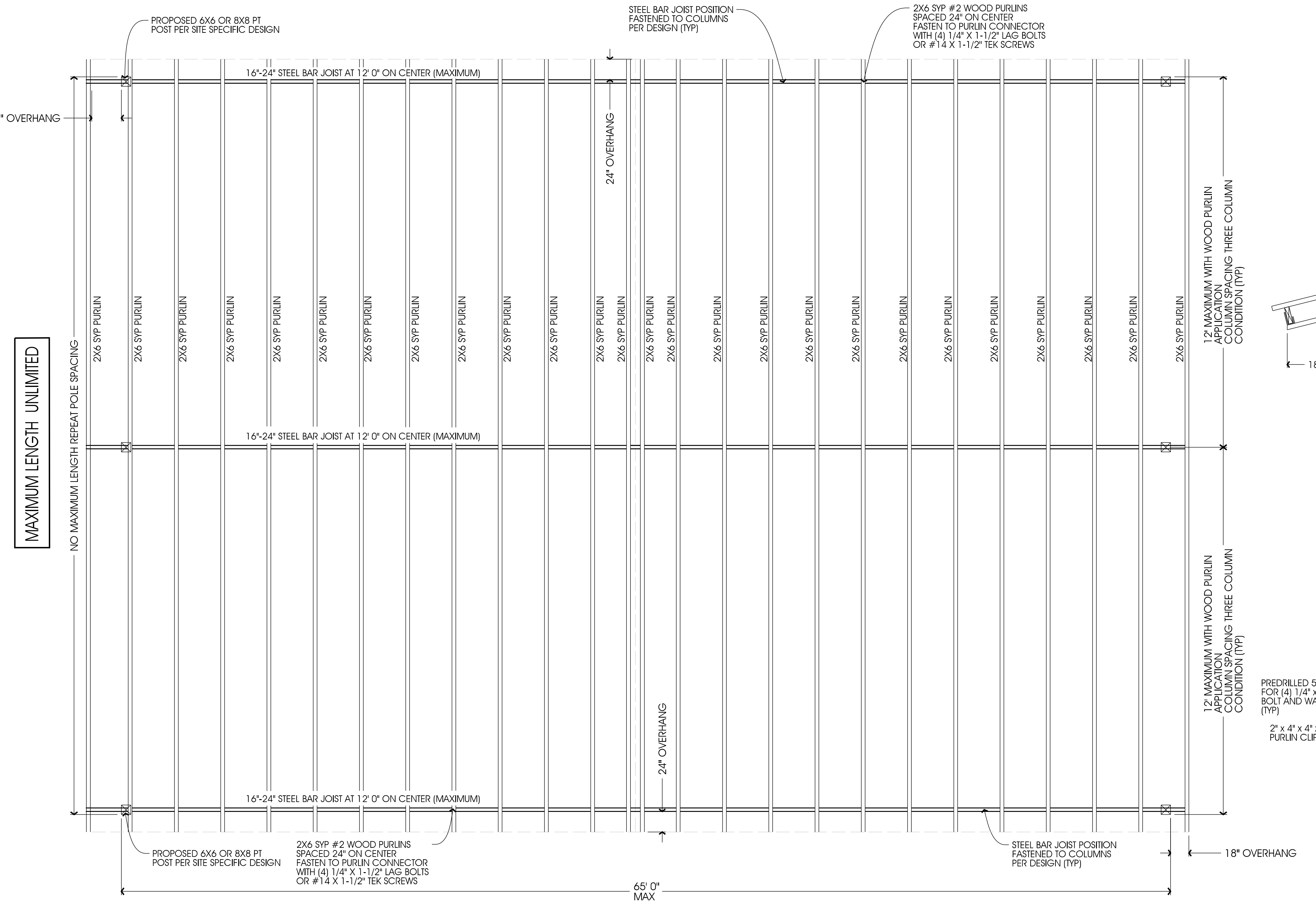
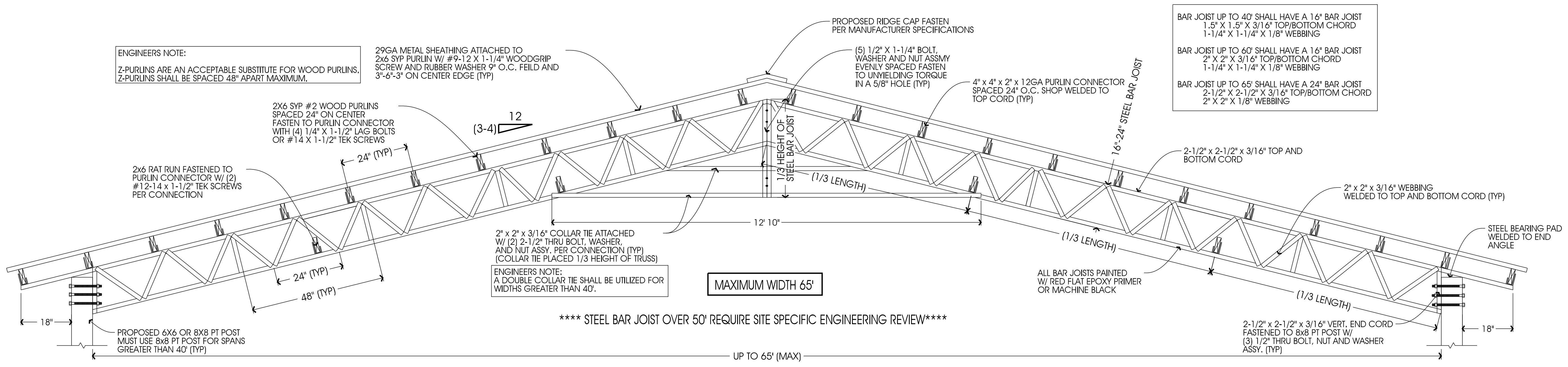

PROPOSED 6X6 OR 8X8 PT POST PER SITE SPECIFIC DESIGN
STEEL BAR JOIST POSITION FASTENED TO COLUMNS PER DESIGN (TYP)
2X6 SYP #2 WOOD PURLINS SPACED 24" ON CENTER FASTEN TO PURLIN CONNECTOR WITH (4) 1/4" X 1-1/2" LAG BOLTS OR #14 X 1-1/2" TEK SCREWS
16'-24" STEEL BAR JOIST AT 12' 0" ON CENTER (MAXIMUM)
18" OVERHANG
24" OVERHANG
2X6 SYP PURLIN
MAXIMUM LENGTH UNLIMITED
NO MAXIMUM LENGTH REPEAT POLE SPACING
12' MAXIMUM WITH WOOD PURLIN APPLICATION COLUMN SPACING THREE COLUMN CONDITION (TYP)
65' 0" MAX

A / S-1 POLE BARN PLAN VIEW
NOT TO SCALE


PROPOSED RIDGE CAP FASTEN PER MANUFACTURER SPECIFICATIONS
29GA METAL SHEATHING ATTACHED TO 2x6 SYP PURLIN W/ #9-12 X 1-1/4" WOODGRIP SCREW AND RUBBER WASHER 9" O.C. FEILD AND 3"-6"-3" ON CENTER EDGE (TYP)
(5) 1/2" X 1-1/4" BOLT, WASHER AND NUT ASSMY EVENLY SPACED FASTEN TO UNYIELDING TORQUE IN A 5/8" HOLE (TYP)
4" x 4" x 2" x 12GA PURLIN CONNECTOR SPACED 24" O.C. SHOP WELDED TO TOP CORD (TYP)
16"-24" STEEL BAR JOIST
2X6 SYP #2 WOOD PURLINS SPACED 24" ON CENTER FASTEN TO PURLIN CONNECTOR WITH (4) 1/4" X 1-1/2" LAG BOLTS OR #14 X 1-1/2" TEK SCREWS
(3-4) 12
2x6 RAT RUN FASTENED TO PURLIN CONNECTOR W/ (2) #12-14 x 1-1/2" TEK SCREWS PER CONNECTION
24" (TYP)
48" (TYP)
1/3 HEIGHT OF STEEL BAR JOIST
(1/3 LENGTH)
12' 10"
2" x 2" x 3/16" COLLAR TIE ATTACHED W/ (2) 2-1/2" THRU BOLT, WASHER, AND NUT ASSY. PER CONNECTION (TYP) (COLLAR TIE PLACED 1/3 HEIGHT OF TRUSS)
2-1/2" x 2-1/2" x 3/16" TOP AND BOTTOM CORD
2" x 2" x 3/16" WEBBING WELDED TO TOP AND BOTTOM CORD (TYP)
ALL BAR JOISTS PAINTED W/ RED FLAT EPOXY PRIMER OR MACHINE BLACK
STEEL BEARING PAD WELDED TO END ANGLE
2-1/2" x 2-1/2" x 3/16" VERT. END CORD FASTENED TO 8x8 PT POST W/ (3) 1/2" THRU BOLT, NUT AND WASHER ASSY. (TYP)
18"
PROPOSED 6X6 OR 8X8 PT POST MUST USE 8x8 PT POST FOR SPANS GREATER THAN 40' (TYP)
UP TO 65' (MAX)

ENGINEERS NOTE:

Z-PURLINS ARE AN ACCEPTABLE SUBSTITUTE FOR WOOD PURLINS.
Z-PURLINS SHALL BE SPACED 48" APART MAXIMUM.

ENGINEERS NOTE:
A DOUBLE COLLAR TIE SHALL BE UTILIZED FOR WIDTHS GREATER THAN 40'.

MAXIMUM WIDTH 65'

**** STEEL BAR JOIST OVER 50' REQUIRE SITE SPECIFIC ENGINEERING REVIEW****

B / S-1 POLE BARN SECTION VIEW
NOT TO SCALE

OVERALL REVISION DATE
JANUARY 15, 2026

TYPICAL BAR JOIST SIZES

BAR JOIST UP TO 40' SHALL HAVE A 16" BAR JOIST
1.5" X 1.5" X 3/16" TOP/BOTTOM CHORD
1-1/4" X 1-1/4" X 1/8" WEBBING

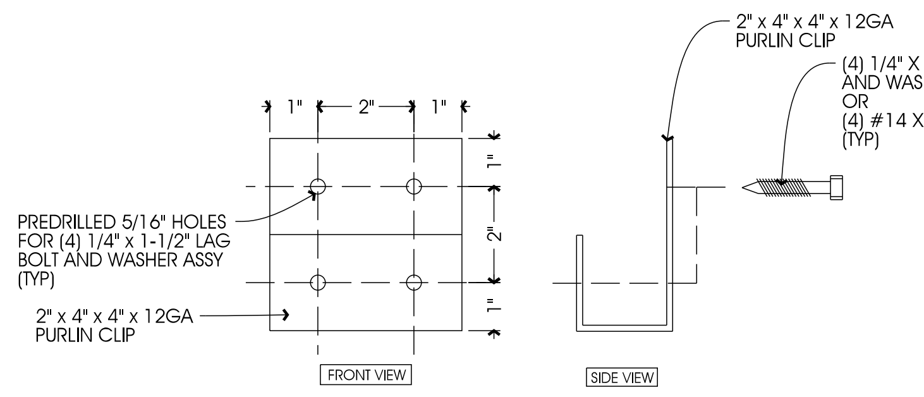
BAR JOIST UP TO 60' SHALL HAVE A 16" BAR JOIST
2" X 2" X 3/16" TOP/BOTTOM CHORD
1-1/4" X 1-1/4" X 1/8" WEBBING

BAR JOIST UP TO 65' SHALL HAVE A 24" BAR JOIST
2-1/2" X 2-1/2" X 3/16" TOP/BOTTOM CHORD
2" X 2" X 1/8" WEBBING

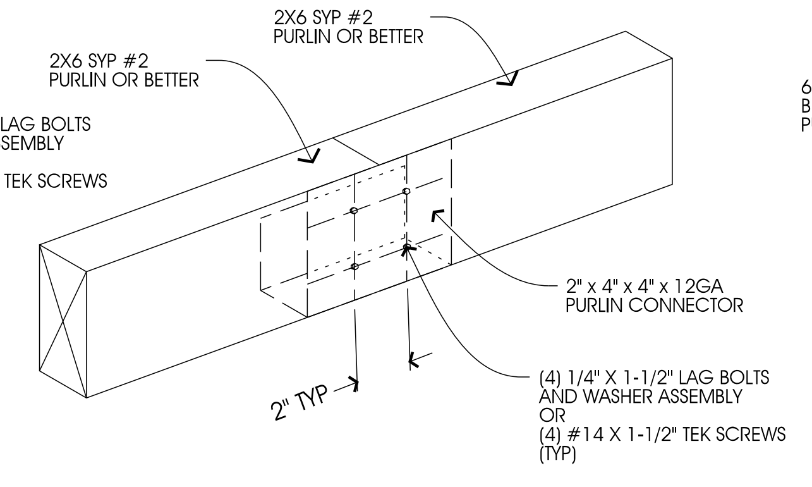
ENGINEERS NOTE:
STEEL BAR JOIST FASTEN TO PT POST WITH (2) 1/2" THOUGH BOLT, NUT WASHER ASSEMBLY INTO POST FOR UP TO 40' WIDE.

(3) 1/2" THROUGH BOLT, NUT, AND WASHER ASSEMBLY SHALL BE INSTALLED FOR WIDTHS GREATER THAN 40' WIDE.

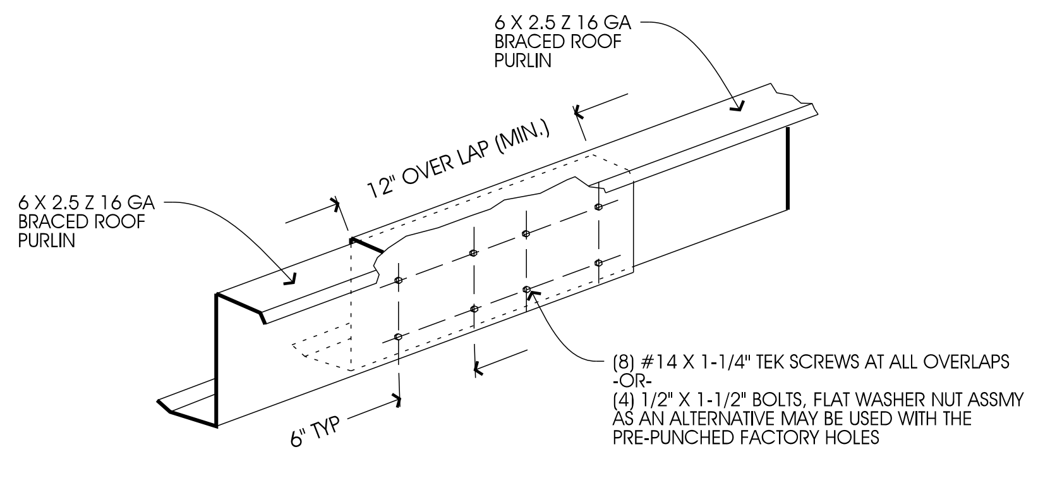
(4) 6" LAG BOLTS IS AN ACCEPTABLE ALTERNATIVE.


1" 2" 1"
2"
PREDRILLED 5/16" HOLES FOR (4) 1/4" X 1-1/2" LAG BOLT AND WASHER ASSY (TYP)
2" x 4" x 4" x 12GA PURLIN CLIP
(4) 1/4" X 1-1/2" LAG BOLTS AND WASHER ASSEMBLY OR (4) #14 X 1-1/2" TEK SCREWS
FRONT VIEW
SIDE VIEW

D / S-1 WOOD PURLIN CLIP
NOT TO SCALE


2X6 SYP #2 PURLIN OR BETTER
2" x 4" x 4" x 12GA PURLIN CONNECTOR
(4) 1/4" X 1-1/2" LAG BOLTS AND WASHER ASSEMBLY OR (4) #14 X 1-1/2" TEK SCREWS (TYP)
2" TYP

E / S-1 WOOD PURLIN BUTT JOINT
NOT TO SCALE


6 X 2.5 Z 16 GA BRACED ROOF PURLIN
12" OVER LAP (MIN.)
6 X 2.5 Z 16 GA BRACED ROOF PURLIN
6" TYP
(8) #14 X 1-1/4" TEK SCREWS AT ALL OVERLAPS -OR- (4) 1/2" X 1-1/2" BOLTS, FLAT WASHER NUT ASSMY AS AN ALTERNATIVE MAY BE USED WITH THE PRE-PUNCHED FACTORY HOLES

ENGINEERS NOTE:

1. Z-PURLINS ARE AN ACCEPTABLE SUBSTITUTE FOR WOOD PURLINS.

2. Z-PURLINS SHALL BE SPACED 48" APART MAXIMUM.

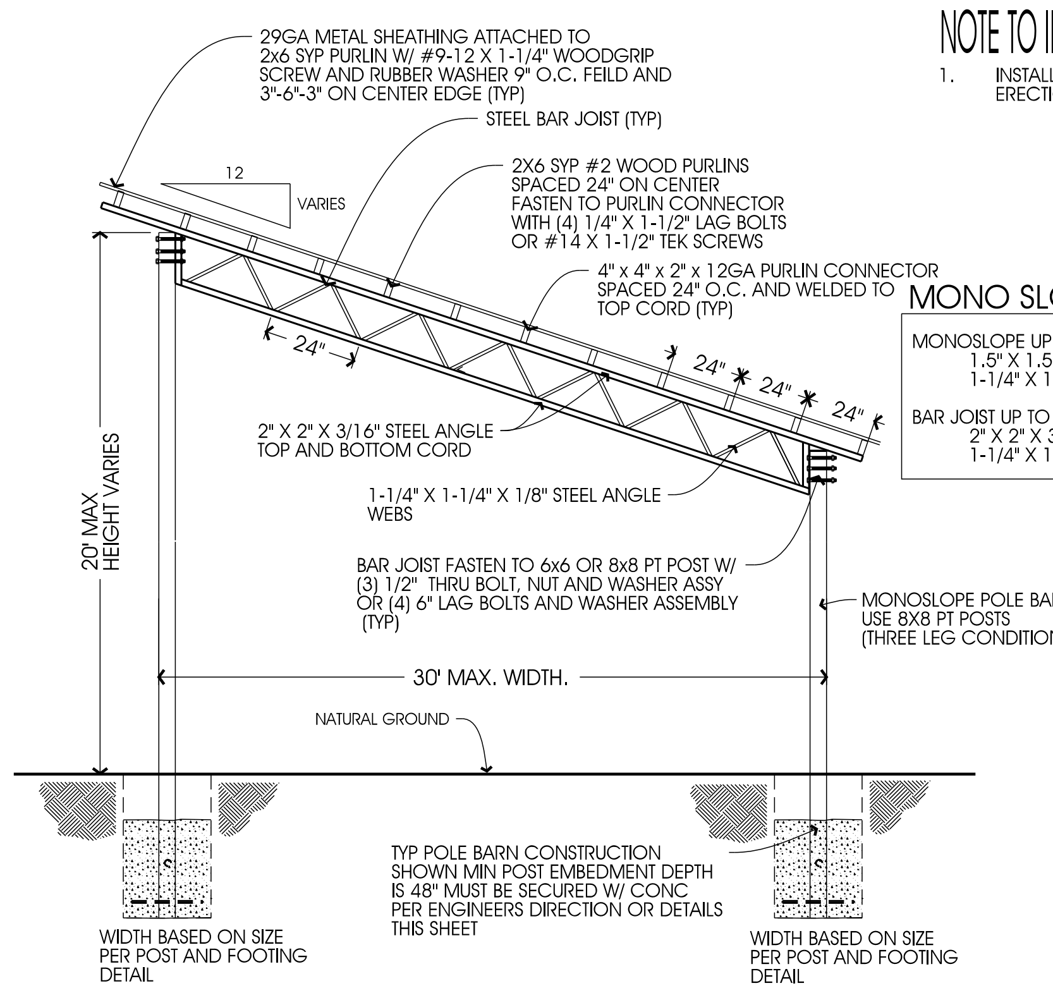
F / S-1 Z PURLIN SPLICE JOIST
NOT TO SCALE

COMPONENTS AND CLADDING (exp=B, gcpi=0.00 (0pen))							
VELOCITY ULTIMATE	PRESSURE (PSF)						
	ZONE						
	ROOF			WALLS			
	1	2	3	4/5 AVG NORMAL		4/5 AVG PARALLEL	
140 MPH	-17.4	-47.8	-54.3	+18.4	-25.1	+18.4	-25.1
150 MPH	-19.9	-54.9	-62.3	+21.2	-28.9	+21.2	-28.9
160 MPH	-22.7	-62.4	-70.9	+24.1	-32.8	+24.1	-32.8

COMPONENTS AND CLADDING (exp=B, gcpi=+/-0.18 (Enclosed))							
VELOCITY ULTIMATE	PRESSURE (PSF)						
	ZONE						
	ROOF			WALLS			
	1	2	3	4/5 AVG NORMAL		4/5 AVG PARALLEL	
140 MPH	-21.3	-51.7	-58.2	+22.1	-28.7	+22.1	-28.7
150 MPH	-24.4	-59.3	-66.8	+22.3	-32.9	+22.3	-32.9
160 MPH	-27.8	-67.5	-76.0	+28.9	-37.4	+28.9	-37.4

COMPONENTS AND CLADDING (exp=B, gcpi=+/-0.55 (Partially Enclosed))							
VELOCITY ULTIMATE	PRESSURE (PSF)						
	ZONE						
	ROOF			WALLS			
	1	2	3	4/5 AVG NORMAL		4/5 AVG PARALLEL	
140 MPH	-29.3	-59.7	-66.3	+30.2	-36.7	+30.2	-36.7
150 MPH	-33.7	-68.6	-76.1	+34.7	-42.1	+34.7	-42.1
160 MPH	-38.3	-78.0	-86.5	+39.4	-47.9	+39.4	-47.9

all figures updated as of 8/14/2025 utilizing SKYCIVIL


29GA METAL SHEATHING ATTACHED TO 2x6 SYP PURLIN W/ #9-12 X 1-1/4" WOODGRIP SCREW AND RUBBER WASHER 9" O.C. FEILD AND 3"-6"-3" ON CENTER EDGE (TYP)
STEEL BAR JOIST (TYP)
12
VARIES
2X6 SYP #2 WOOD PURLINS SPACED 24" ON CENTER FASTEN TO PURLIN CONNECTOR WITH (4) 1/4" X 1-1/2" LAG BOLTS OR #14 X 1-1/2" TEK SCREWS
4" x 4" x 2" x 12GA PURLIN CONNECTOR SPACED 24" O.C. AND WELDED TO TOP CORD (TYP)
24"
24" 24" 24"
2" X 2" X 3/16" STEEL ANGLE TOP AND BOTTOM CORD
1-1/4" X 1-1/4" X 1/8" STEEL ANGLE WEBS
BAR JOIST FASTEN TO 6x6 OR 8x8 PT POST W/ (3) 1/2" THRU BOLT, NUT AND WASHER ASSY OR (4) 6" LAG BOLTS AND WASHER ASSEMBLY (TYP)
20' MAX HEIGHT VARIES
MONOSLOPE POLE BARN MUST USE 8X8 PT POSTS (THREE LEG CONDITION)
30' MAX. WIDTH.
NATURAL GROUND
TYP POLE BARN CONSTRUCTION SHOWN MIN POST EMBEDMENT DEPTH IS 48" MUST BE SECURED W/ CONC PER ENGINEERS DIRECTION OR DETAILS THIS SHEET
WIDTH BASED ON SIZE PER POST AND FOOTING DETAIL

NOTE TO INSTALLER

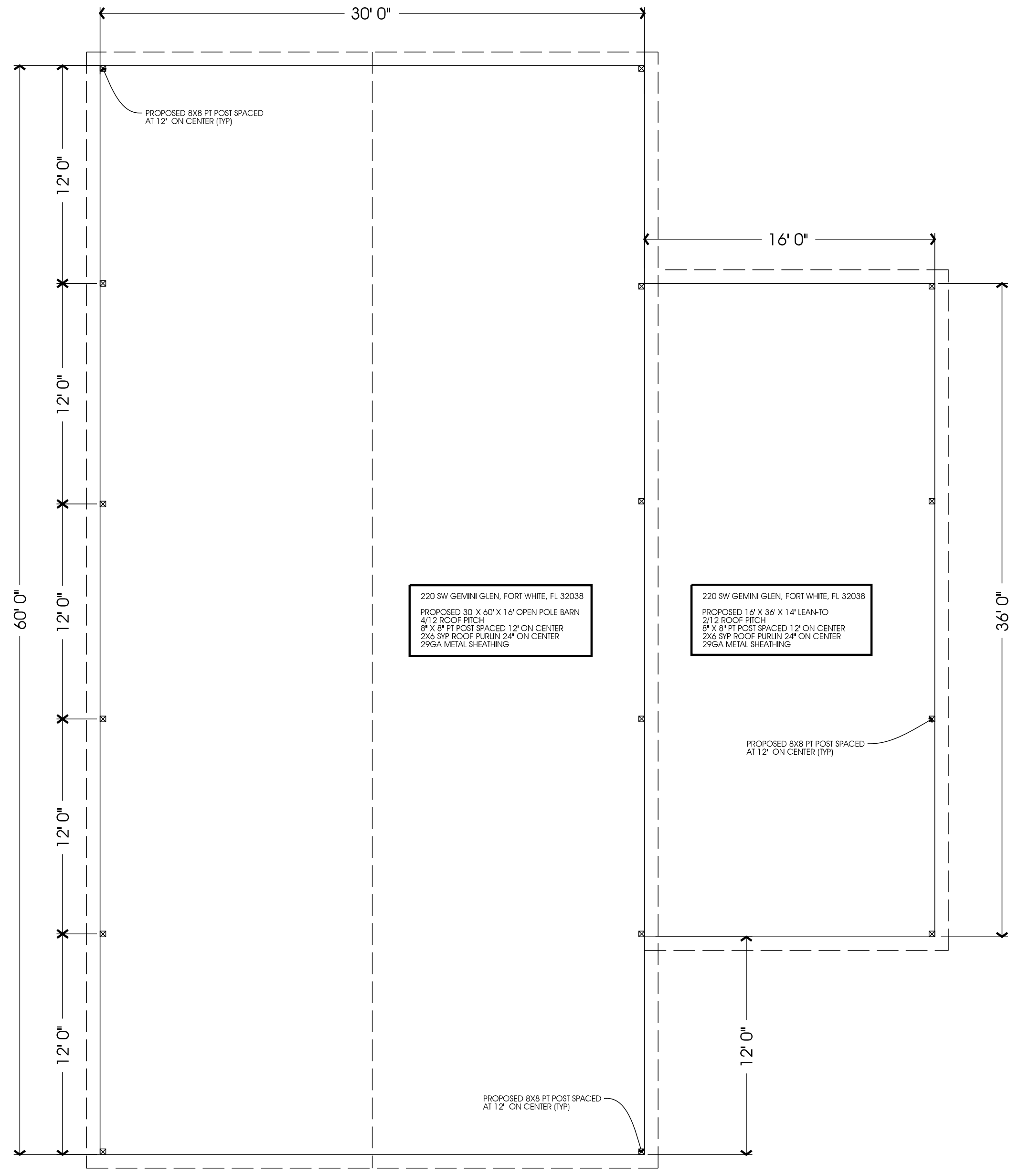
1. INSTALLER SHALL ADD LATERAL BRACING DURING THE ERECTION PROCESS TO PREVENT BAR JOIST MOVEMENT.

MONO SLOPE BAR JOIST SIZES

MONOSLOPE UP TO 21' SHALL HAVE A 16" BAR JOIST
1.5" X 1.5" X 3/16" TOP/BOTTOM CHORD
1-1/4" X 1-1/4" X 1/8" WEBBING

BAR JOIST UP TO 30' (MAX) SHALL HAVE A 16" BAR JOIST
2" X 2" X 3/16" TOP/BOTTOM CHORD
1-1/4" X 1-1/4" X 1/8" WEBBIN

C / S-1 POLE BARN MONOSLOPE (OPTIONAL)
NOT TO SCALE

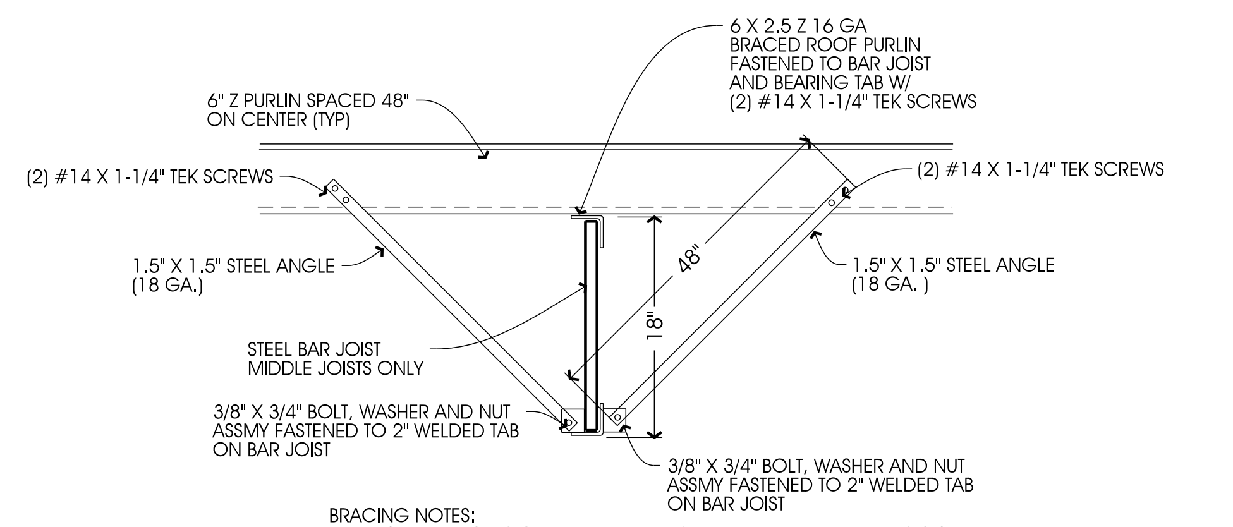


1 / S-1 SITE SPECIFIC DESIGN
NOT TO SCALE

ZEE PURLIN LOADING/SPAN TABLE			
ZEE		3 OR MORE SPANS, STD. LAP	
		16 GAUGE	14 GAUGE
SECTION	BAY		
6" WEB	15 FT	176	235
	18 FT	118	157
	20 FT	94	124
	25 FT	76	104

ALLOWABLE UNIFORM LOADS IN POUNDS PER LINEAR FOOT

USE 4" (16 GA) UP TO 15' SPAN
USE 6" (16 GA) UP TO 20' SPAN
USE 8" (16 GA) UP TO 25' SPAN


6 X 2.5 Z 16 GA BRACED ROOF PURLIN FASTENED TO BAR JOIST AND BEARING TAB W/ (2) #14 X 1-1/4" TEK SCREWS
6" Z PURLIN SPACED 48" ON CENTER (TYP)
(2) #14 X 1-1/4" TEK SCREWS
(2) #14 X 1-1/4" TEK SCREWS
1.5" X 1.5" STEEL ANGLE (18 GA.)
1.5" X 1.5" STEEL ANGLE (18 GA.)
48"
18"
STEEL BAR JOIST MIDDLE JOISTS ONLY
3/8" X 3/4" BOLT, WASHER AND NUT ASSMY FASTENED TO 2" WELDED TAB ON BAR JOIST
3/8" X 3/4" BOLT, WASHER AND NUT ASSMY FASTENED TO 2" WELDED TAB ON BAR JOIST

BRACING NOTES:
1. STEEL BARCING SHALL BE ADDED TO ALL INTERMEDIATE BAR JOISTS.
2. AT LEAST TWO BRACES SHALL BE ADDED TO EACH HALF OF THE BAR JOISTS, 8 FEET ON CENTER.

K / S-1 Z-PURLIN BRACING DETAIL
SCALE: NTS

GENERAL NOTES

1. ALL CONCRETE WORK SHALL BE 3,000 P.S.I. AT 28 DAYS.
2. MINIMUM SOIL BEARING SHALL BE ASSUMED AT 2,000 P.S.F.
3. ALL CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH THE FLA. BLDG. CODE 2023 8TH EDITION AND ASCE 7-22 WIND CODES FOR AN ULTIMATE WIND SPEED OF 140 MPH AND GREATER. THESE PLANS INCLUDE DESIGN FOR ALL WIND SPEEDS UP TO AND INCLUDING 160 MPH ULTIMATE WIND SPEED.
4. ALL SIDING AND ROOFING TO MINIMUM OF 29 GAUGE ATTACHED TO THE COLUMNS AS SHOWN AND CONSIDERED TO BE A MIN. OF 3 SPAN.
5. FOR ZONE LOCATIONS SEE ASCE 7-22. THE VALUE OF "a" SHALL BE A MINIMUM OF 3'-0". FOR ZONE LOADING SEE COMPONENTS AND CLADDING LOADING CHARTS THIS SHEET.
6. DESIGN LOADINGS:
   DEAD LOAD = 5 PSF
   ROOF LIVE LOAD = 20 PSF
   WIND LOAD = PER TABLE
7. DOOR AND WINDOW DATA: SEE TABLE THIS SHEET.
8. ALL WINDOWS AND MAN DOORS MAY USE 1/4"X1" LONG TEK SCREWS IN LIEU OF THE WOOD SCREWS WHEN CONNECTING THE UNITS TO METAL FRAME. FOLLOW THE MANUFACTURERS SPECIFICATIONS FOR LOCATING CONNECTORS.
9. TYPE OF CONSTRUCTION TYPE II-B
   BUILDING CATEGORY (II)
10. ADDITIONAL BRACES REQUIRED ONLY REQUIRED WITH WIND SPEEDS GREATER THAN OR EQUAL TO 150 MPH OR AS CALLED OUT ON PLANS.
11. ALL WELDS ARE CONTINUOUS WELDS DONE AT THE FACTORY.
12. MANUFACTURER IS NOT RESPONSIBLE FOR FAILURES OF OR INDUCED BY MATERIALS NOT PROVIDED BY MANUFACTURER; FRAMEWORK, METAL SIDING, METAL ROOFING, FASTENERS, DOORS, WINDOWS, SEALANTS, CLOSURES AND OTHER METAL BUILDING ACCESSORIES. THE LIMITED WARRANTY ALSO DOES NOT COVER USING THE MATERIALS IN A MANNER THAT THEY ARE NOT DESIGNED OR ENGINEERED FOR. ADDITIONALLY UNCONTROLLABLE EVENTS "ACT OF GOD" SUCH AS TORNADOES, FLOODS OR HURRICANES ARE OUTSIDE THE DESIGN PARAMETERS OF THE LIMITED WARRANTY.

STRUCTURAL NOTES:

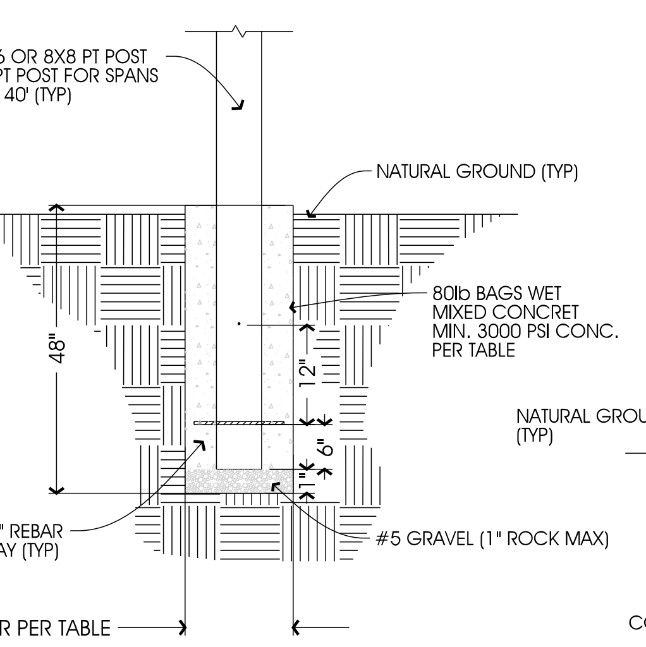
1. MATERIALS SHALL CONFORM TO STEEL ASTM 513
2. ALL STEEL SHALL BE 50 KSI IN ACCORDANCE WITH CURRENT ALSC MANUAL.
3. WELDING ELECTRODES TYPE E70XX
4. ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT AWWA REQUIREMENTS
5. ALL WELDING SHALL BE DONE BY A CERTIFIED WELDER.
6. BOLTS SHAT BE ASTM A325 W/ WASHERS AND NUTS (TYP).
7. WELD STRENGTH 70 KSI MIN.
8. ALL POST SHALL BE PRESSURE TREATED GROUND CONTACT.
9. PRIMING & PAINTING SHALL BE DONE BY TRUSS MANUFACTURER
10. MIN. EDGE DISTANCE FOR BOLTS HOLES SHALL BE 3/4" MIN.
11. MAX TRUSS SPACING SHALL NOT EXCEED 12' 0" O.C UNLESS NOTED OTHERWISE.
12. THE DESIGNER DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF POOR WORKMANSHIP, OR IMPROPER USE, AND ACCEPTS NO RESPONSIBILITY OR EXERCISES NO CONTROL WITH REGARD TO FABRICATION, HANDLING, AND INSTALLATION OF TRUSSES

STEEL NOTE

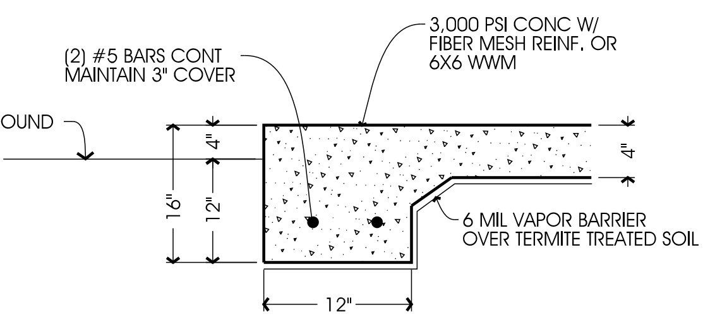
THE DESIGN, FABRICATION, AND CREATION OF STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH AISC 360 AND AISC CODE OF STANDARD PRACTICE, 2023.

FREEDOM MANUFACTURING & ROOFING SUPPLY

BAR JOIST SIZE	POST BASE SIZE	CONCRETE
UP TO 30'	18" x 48" W/ 12" MIN. #5 REBAR	(8) 80LB BAGS
30' 1" - 40' 0"	24" x 48" W/ 16" MIN. #5 REBAR	(15) 80LB BAGS
40' 1" - 50' 0"	36" x 48" W/ 24" MIN. #5 REBAR	(20) 80LB BAGS


PROPOSED 6X6 OR 8X8 PT POST MUST USE 8x8 PT POST FOR SPANS GREATER THAN 40' (TYP)
NATURAL GROUND (TYP)
80lb BAGS WET MIXED CONCRET MIN. 3000 PSI CONC. PER TABLE
48"
12"
6"
1"
# 5 x 12" REBAR EACH WAY (TYP)
#5 GRAVEL (1" ROCK MAX)
DIAMETER PER TABLE

G / S-1 POST AND FOOTING DETAIL
NOT TO SCALE


3,000 PSI CONC W/ FIBER MESH REINF. OR 6X6 WWM
(2) #5 BARS CONT MAINTAIN 3" COVER
NATURAL GROUND (TYP)
4"
16"
12"
4"
6 MIL VAPOR BARRIER OVER TERMITE TREATED SOIL
12"

CONSTRUCTION NOTES:

1. ALL CONCRETE USED FOR BEARING SUPPORT OF THE BUILDING SHALL BE SIZED PER THE PREVAILING PLANS. ALL OTHERS AREAS MAY BE 4" THICK 3000 PSI WET MIX OVER 6-MIL VAPOR BARRIOR AND CLEAN COMPACTED TERMITE TREATED SOIL.

H / S-1 CONCRETE FOUNDATION (OPTIONAL)
NOT TO SCALE

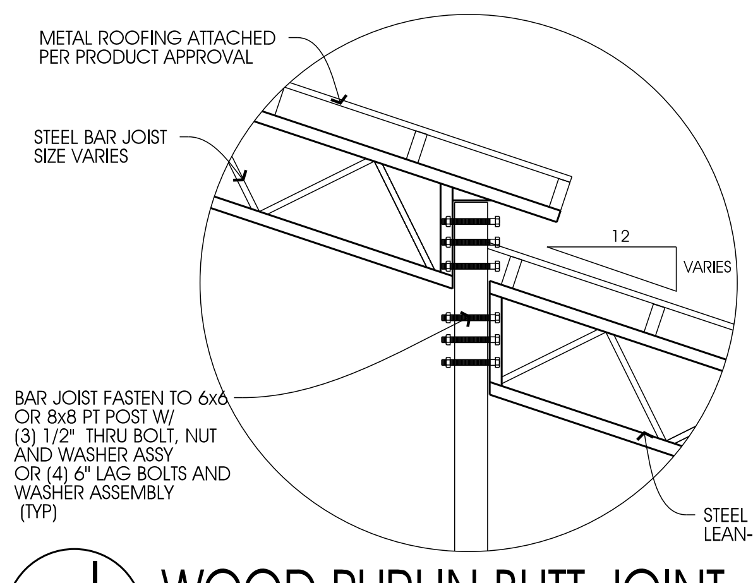
ENGINEERS NOTE ON FLORIDA BUILDING CODE COMPLIANCE:

THIS PLAN HAS BEEN ENGINEERED FOR A RISK CATEGORY II BUILDING WITHOUT A SITE PLAN/SURVEY. THIS BUILDING IS FOR AGRICULTURAL USE AND HAS NOT BEEN ENGINEERED FOR A RESIDENCE.

1) STRUCTURES USED AS CATEGORY II STRUCTURES (SINGLE FAMILY RESIDENCE OR OCCUPIED STRUCTURES) REQUIRE ADDITIONAL CODE COMPLIANCE BY A LICENSED DESIGN PROFESSIONAL.

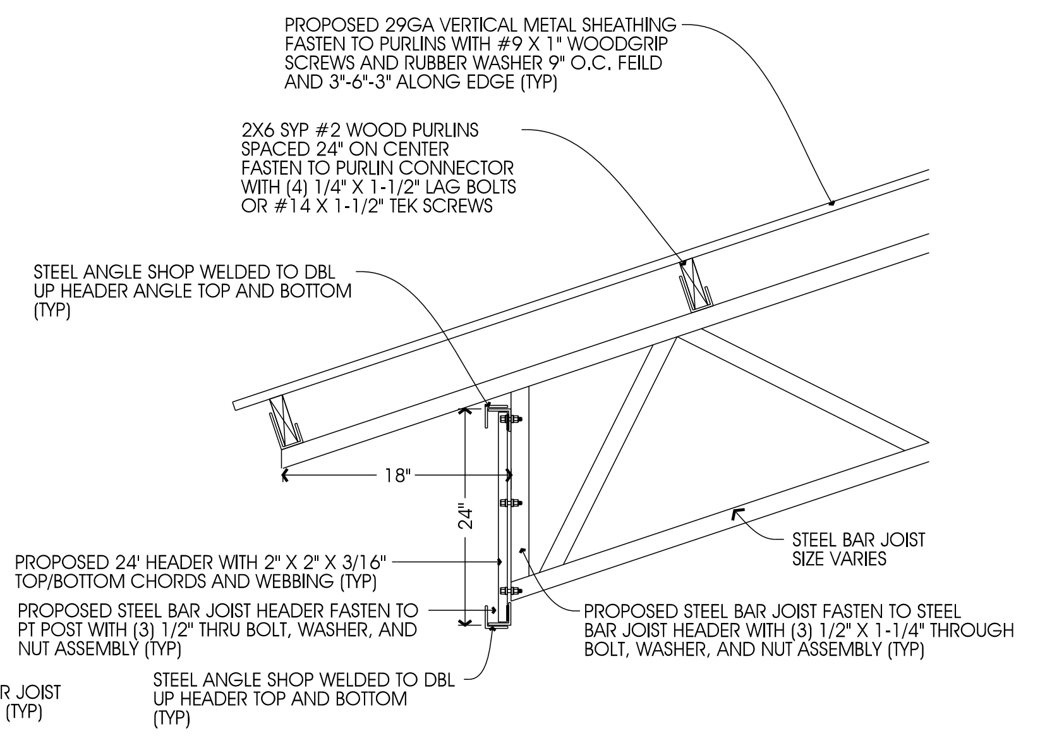
2) THE SUBSEQUENT DESIGN PROFESSIONAL IS RESPONSIBLE FOR MAKING THE BUILDING COMPLIANT TO THE FLORIDA BUILDING CODE.

a. SPECIAL ATTENTION SHALL BE MADE TO FBC-R 703.2 WATER RESISTIVE BARRIER.


METAL ROOFING ATTACHED PER PRODUCT APPROVAL
STEEL BAR JOIST SIZE VARIES
12
VARIES
BAR JOIST FASTEN TO 6x6 OR 8x8 PT POST W/ (3) 1/2" THRU BOLT, NUT AND WASHER ASSY OR (4) 6" LAG BOLTS AND WASHER ASSEMBLY (TYP)
STEEL BAR JOIST LEAN-TO (TYP)

I / S-1 WOOD PURLIN BUTT JOINT
NOT TO SCALE

ENGINEERS NOTE:
LEAN-TO SPANS UP TO 14' = 12" BAR JOIST
LEAN-TO SPANS UP TO 25' = 18" BAR JOIST
MAXIMUM SPAN 30' 0" = 24" BAR JOIST


PROPOSED 29GA VERTICAL METAL SHEATHING FASTEN TO PURLINS WITH #9 X 1" WOODGRIP SCREWS AND RUBBER WASHER 9" O.C. FEILD AND 3"-6"-3" ALONG EDGE (TYP)
2X6 SYP #2 WOOD PURLINS SPACED 24" ON CENTER FASTEN TO PURLIN CONNECTOR WITH (4) 1/4" X 1-1/2" LAG BOLTS OR #14 X 1-1/2" TEK SCREWS
STEEL ANGLE SHOP WELDED TO DBL UP HEADER ANGLE TOP AND BOTTOM (TYP)
18"
24"
PROPOSED 24' HEADER WITH 2" X 2" X 3/16" TOP/BOTTOM CHORDS AND WEBBING (TYP)
PROPOSED STEEL BAR JOIST HEADER FASTEN TO PT POST WITH (3) 1/2" THRU BOLT, WASHER, AND NUT ASSEMBLY (TYP)
STEEL ANGLE SHOP WELDED TO DBL UP HEADER TOP AND BOTTOM (TYP)
STEEL BAR JOIST SIZE VARIES
PROPOSED STEEL BAR JOIST FASTEN TO STEEL BAR JOIST HEADER WITH (3) 1/2" X 1-1/4" THROUGH BOLT, WASHER, AND NUT ASSEMBLY (TYP)

J / S-1 STEEL BAR JOIST TO STEEL BAR JOIST HEADER
NOT TO SCALE

CLIENT INFORMATION:

POLE BARN PLAN PREPARED FOR:

NATHAN BRADY
220 SW GEMINI GLEN, FORT WHITE, FL 32038

PROPOSED 30' X 60' X 16' OPEN POLE BARN
4/12 ROOF PITCH
W/ 16' X 36' X 14' OPEN LEAN-TO
2/12 ROOF PITCH
8" X 8" PT POST SPACED 12' ON CENTER
2X6 SYP ROOF PURLIN 24" ON CENTER
29GA METAL SHEATHING

DESIGN STATEMENT:

THESE PLANS WERE DESIGNED FOLLOWING THE 2023 8TH EDITION FLORIDA BUILDING CODE AND ASCE 7-22. INCLUDING CHAPTER 16 ON STRUCTURAL DESIGN. AN ULTIMATE WIND SPEED OF 140 MPH, (3 SECOND GUST) IN WIND EXPOSURE CATEGORY "B". THIS STRUCTURE HAS BEEN DESIGNED AS RISK CATEGORY II.

ENGINEERING • PLANNING • PERMITTING

REVISIONS:

DATE	BY	DESCRIPTION

DATE	BY	DESCRIPTION

EPI

ENGINEERED PERMITS, INC.
311 SOUTH WOODLAND BLVD.
SUITE A
DELAND, FL 32720
PHONE: 386-734-0830
FAX: 386-734-8226
CERT NO. 26298
EMAIL: epi@epieng.net

PROJECT: FREEDOM MANUFACTURING AND ROOFING SUPPLIES LLC

SHEET TITLE: STEEL BAR JOIST OPEN BUILDING

Michael J Wojtuniak

Digitally signed by Michael J Wojtuniak
Date: 2026.06.08 11:08:08 -04'00'

No 60984
6-8-2026

MICHAEL WOJTUNIAK, P.E.
P.E. NO. 60984
EMAIL: mwojtuniak@epieng.net

SHEET NO.
S-1
DATE: 6/8/2026

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. WOJTUNIAK, P.E. ON 6/8/2026 USING A SHA AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES. UNLESS THE RAISED SEAL HAS BEEN UTILIZED.