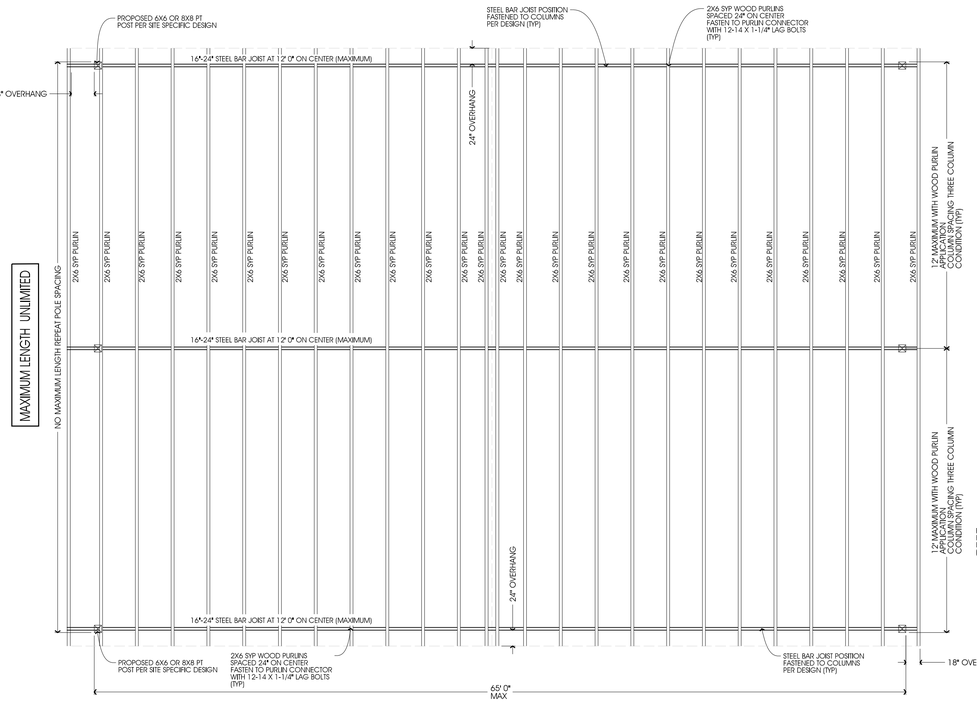
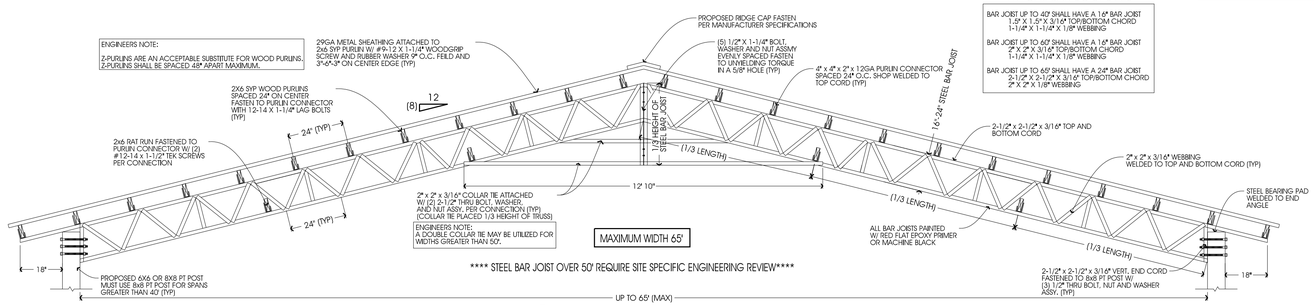


A S-1 POLE BARN PLAN VIEW
NOT TO SCALE



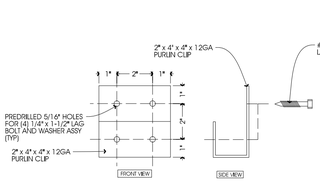
B S-1 POLE BARN SECTION VIEW
NOT TO SCALE

TYPICAL BAR JOIST SIZES

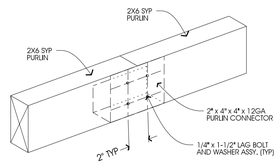
BAR JOIST UP TO 40' SHALL HAVE A 1/4" BAR JOIST
1.5" X 1.5" X 3/16" TOP/BOTTOM CHORD
1-1/4" X 1-1/4" X 1/8" WEBBING

BAR JOIST UP TO 65' SHALL HAVE A 1/4" BAR JOIST
2" X 2" X 3/16" TOP/BOTTOM CHORD
1-1/4" X 1-1/4" X 1/8" WEBBING

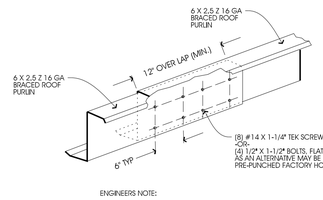
BAR JOIST UP TO 65' SHALL HAVE A 2/4" BAR JOIST
2-1/2" X 2-1/2" X 3/16" TOP/BOTTOM CHORD
2" X 2" X 1/8" WEBBING



D S-1 WOOD PURLIN CLIP
NOT TO SCALE



E S-1 WOOD PURLIN BUTT JOINT
NOT TO SCALE



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 (Open))						
VELOCITY ULTIMATE	PRESSURE (PSF)					
	ROOF		WALLS			
	1	2	4	5	4	5
				EA. AVG. INCREM.	EA. AVG. PARAPET	
140 MPH	-17.6	-47.8	-54.3	-19.4	-28.1	-28.1
150 MPH	-19.9	-54.9	-62.3	-21.2	-28.9	-28.9
160 MPH	-22.7	-62.4	-70.9	-24.1	-32.8	-32.8

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

COMPONENTS AND CLADDING (exp=B, gcpi=+/-0.55 (Partially Enclosed))						
VELOCITY ULTIMATE	PRESSURE (PSF)					
	ROOF		WALLS			
	1	2	4	5	4	5
				EA. AVG. INCREM.	EA. AVG. PARAPET	
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

GENERAL NOTES

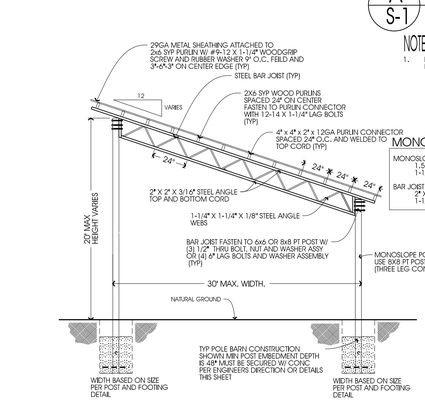
1. ALL CONCRETE WORK SHALL BE 3,000 P.S.I. AT 28 DAYS.
2. MINIMUM SOIL BEARING SHALL BE ASSUMED AT 2,000 P.S.F.
3. ALL CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH THE FLA. BLDG. CODE 2023 8TH EDITION AND ASCE 7-22 WIND CODES FOR AN ULTIMATE WIND SPEED OF 140 MPH AND GREATER. THESE PLANS INCLUDE DESIGN FOR ALL WIND SPEEDS UP TO AND INCLUDING 160 MPH. ULTIMATE WIND SPEED.
4. ALL BEVING 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 613
2. ALL STEEL SHALL BE 50 KSI IN ACCORDANCE WITH CURRENT AISC 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 SHALT 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.



MONO SLOPE BAR JOIST SIZES

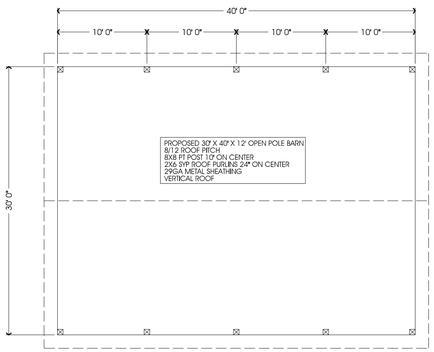
MONOSLOPE UP TO 21' SHALL HAVE A 1/6" BAR JOIST
1.5" X 1.5" X 3/16" TOP/BOTTOM CHORD
1-1/4" X 1-1/4" X 1/8" WEBBING

BAR JOIST UP TO 30' (MAX) SHALL HAVE A 1/6" BAR JOIST
2" X 2" X 3/16" TOP/BOTTOM CHORD
1-1/4" X 1-1/4" X 1/8" WEBBIN

MONOSLOPE POLE BARN MUST USE 8X8 PT POSTS (THREE LEG CONDITION)

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

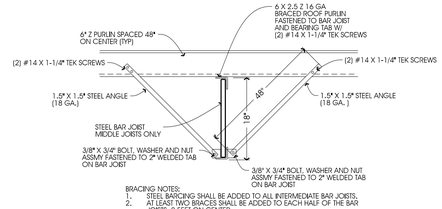
NOTE TO INSTALLER
1. INSTALLER SHALL ADD LATERAL BRACING DURING THE ERECTION PROCESS TO PREVENT BAR JOIST MOVEMENT.



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

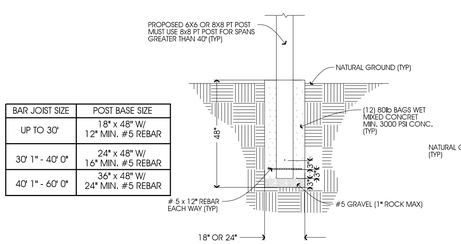
ALLOWABLE UNIFORM LOADS IN POUNDS PER LINEAR FOOT

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



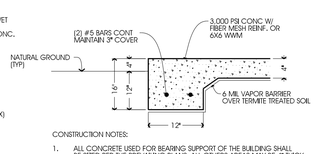
BRACING NOTES:
1. STEEL BARCING SHALL BE ADDED TO ALL INTERMEDIATE BAR JOISTS.
2. AT LEAST TWO BRACES SHALL BE ADDED TO EACH HALF OF THE BAR JOISTS, 8 FEET ON CENTER.

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



BAR JOIST SIZE	POST BASE SIZE
UP TO 30'	18" x 48" W/ 12" MIN. #5 REBAR
30' 1" - 40' 0"	24" x 48" W/ 16" MIN. #5 REBAR
40' 1" - 60' 0"	36" x 48" W/ 24" MIN. #5 REBAR

G S-1 POST AND FOOTING DETAIL
NOT TO SCALE



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

1 S-1 SITE SPECIFIC DESIGN
NOT TO SCALE

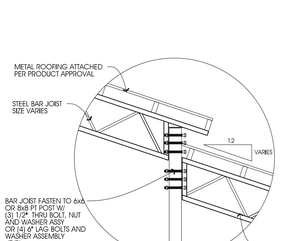
ENGINEERS NOTE ON FLORIDA BUILDING CODE COMPLIANCE:

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.

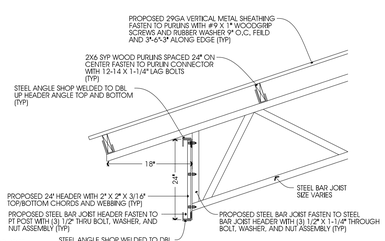
2) THE SUBSEQUENT DESIGN PROFESSIONAL IS RESPONSIBLE FOR MAKING THE BUILDING COMPLIANT TO THE FLORIDA BUILDING CODE.

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



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

I S-1 WOOD PURLIN BUTT JOINT
NOT TO SCALE



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

GENERAL NOTES

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4. ALL BEVING 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:
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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.
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   BUILDING CATEGORY: II
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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
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5. ALL WELDING SHALL BE DONE BY A CERTIFIED WELDER.
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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.

CLIENT INFORMATION:
POLE BARN PLAN PREPARED FOR:
PARCEL #31-2S-17-04804-107, GAINESVILLE, FL

PROPOSED 30' X 40' X 12' OPEN POLE BARN
8/12 ROOF PITCH
8X8 PT POST 10' ON CENTER
2X6 SYP ROOF PURLINS 24" ON CENTER
29GA METAL SHEATHING
VERTICAL ROOF

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.

SHEET NO.
S-1
DATE: 8/7/2025

FREEDOM MANUFACTURING & ROOFING SUPPLY

Michael J Wojtuniak
Digitally signed by Michael J Wojtuniak
Date: 2025.08.07 14:32:59 -04'00'

MICHAEL J. WOJTUNIAK LICENSE NUMBER No 60954 STATE OF FLORIDA PROFESSIONAL ENGINEER 8-7-2025

MICHAEL J. WOJTUNIAK, P.E.
P.E. NO. 60954
EMAIL: mwojtuniak@epieng.net

OVERALL REVISION DATE
APRIL 16, 2025

ENGINEERING • PLANNING • PERMITTING

REVISIONS:

DESCRIPTION	DATE	BY

EPI
ENGINEERED PERMITS, INC.
311 SOUTH WOODLAND BLVD.
SUITE A
DELAND, FL 32720
PHONE: 386-734-0830
FAX: 386-734-8226
CERT NO. 29298
EMAIL: ep@epieng.net

PROJECT: FREEDOM MANUFACTURING AND ROOFING SUPPLIES LLC

SHEET TITLE: STEEL BAR JOIST OPEN BUILDING

***THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. WOJTUNIAK, P.E. ON 8/7/2025 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.