

GENERAL NOTES

1. DESIGN IS FOR MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT UTILITY STRUCTURES.
2. APPLICABLE CODES, REGULATIONS, & STANDARDS:

A. 2023 FLORIDA BUILDING CODE (8TH EDITION)

B. 2024 INTERNATIONAL BUILDING CODE

C. ASCE 7-22: MINIMUM DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES

D. AISC STEEL CONSTRUCTION MANUAL (15TH EDITION)

E. ACI 318-19: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

F. TMS 402-16: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES

G. AWS D1.1: STRUCTURAL WELDING
3. RISK CATEGORY: I
4. EXPOSURE CATEGORY: C
5. LOW ULTIMATE WIND SPEED 105 TO 150 MPH (NOMINAL WIND SPEED 81 TO 116 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 5.0 FEET.

HIGH ULTIMATE WIND SPEED 151 TO 180 MPH (NOMINAL WIND SPEED 117 TO 139 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 4.0 FEET.
6. DEAD LOAD = 5 PSF
7. ROOF LIVE LOAD = 12 PSF
8. SPECIFICATIONS APPLICABLE TO 29/26 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" x 2 1/2" - 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS FOR VERTICAL PANELS, 29/26 GAUGE METAL PANELS SHALL BE FASTENED TO 18 GAUGE HAT CHANNELS (UNLESS OTHERWISE NOTED).
9. OPTIONAL BASE RAIL ANCHORAGE MAY BE USED FOR LOW AND MUST BE USED FOR HIGH WIND SPEEDS.
10. FASTENERS CONSIST OF #12-14 x 3/4" SELF DRILLING FASTENER (SDF), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20 FEET OR LESS, AND ROOF SLOPES OF 14° (3:12 PITCH) OR LESS SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
11. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9" OR END = 6", (MAX.). THIS CONNECTION PATTERN SHALL BE SUPERCEDED BY THE PANEL MANUFACTURER'S INSTALLATION INSTRUCTIONS.
12. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:

SOIL SITE CLASS = D

R = 3.5 Ie = 1.0

Sds = 0.087 g V = CsW

Sdi = 0.084 g
13. GROUND ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES.
14. GROUND ANCHOR (SOIL NAILS) CONSIST OF #5 REBAR W/ WELDED NUT X 30" LONG IN SUITABLE SOIL CONDITIONS MAY BE USED FOR LOW (≤ 108 MPH NOMINAL) WIND SPEEDS ONLY. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USE IN UNSUITABLE SOILS AS NOTED.
15. MIN. LAP REQUIREMENT FOR REBAR IN FOOTER IS 25".
16. SOIL TO BE COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY, AT OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH ASTM D1557-93
17. PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE FBC.
18. A LANDING OF MIN. 36" WIDTH IN THE DIRECTION OF TRAVEL SHALL BE PROVIDED AT THE EXTERIOR DOORS. SLOPE OF LANDING NOT TO EXCEED 1/4"-1'. LANDING LEVEL NOT TO BE LOWER THAN 1-1/2" (FOR EGRESS DOORS) & 7-3/4" (FOR OTHER EXTERIOR DOORS) BELOW THE TOP OF THRESHOLD.
19. CONTRACTOR TO PROVIDE APPROVED PRODUCTS THAT MEET OR EXCEED WIND DESIGN PRESSURES.
20. CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS:

CONTRACTOR TO VERIFY THAT THE FINISHED FLOOR ELEVATION FOR THE PROPOSED STRUCTURE IS AT OR ABOVE THE GREATER OF THE FOLLOWING ELEVATIONS:

I) BFE (BASE FLOOD ELEVATION) + 2'-0"

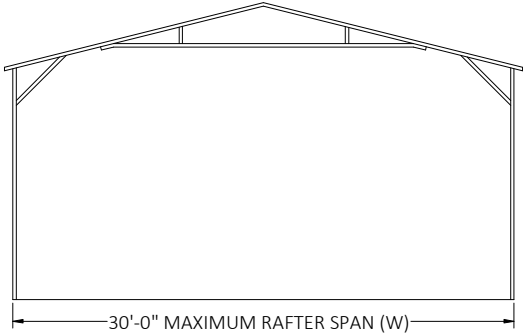
II) DFE (DESIGN FLOOD ELEVATION)

III) THE MINIMUM ELEVATION MANDATED BY THE BUILDING CODES ADOPTED BY THE AUTHORITY HAVING JURISDICTION.

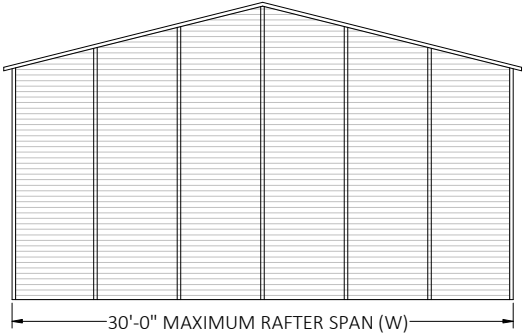


UTILITY METAL BUILDING DESIGN
MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT
BOX/BOW EAVE FRAME

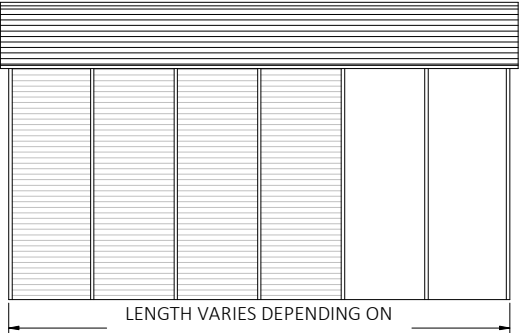
BOX EAVE FRAME RAFTER UTILITY BUILDING



TYPICAL END ELEVATION

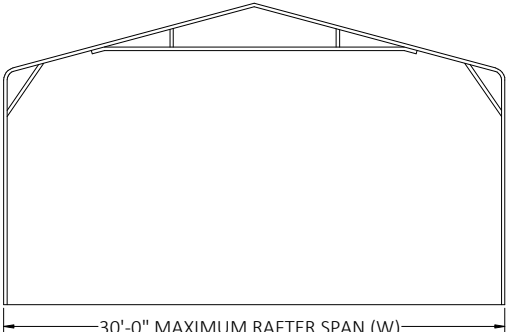


TYPICAL END ELEVATION - HORIZONTAL ROOF

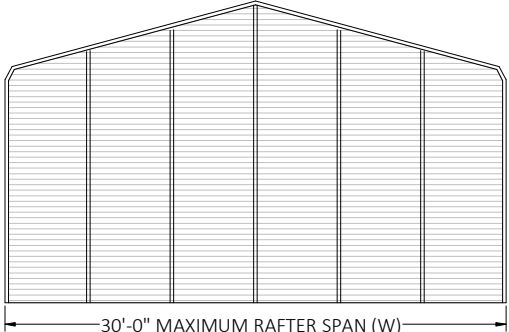


TYPICAL SIDE ELEVATION - HORIZONTAL ROOF

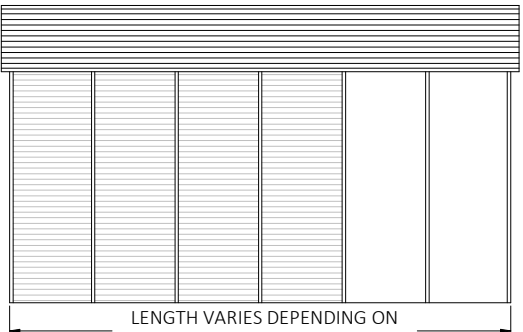
BOW FRAME RAFTER UTILITY BUILDING



TYPICAL END ELEVATION



TYPICAL END ELEVATION - HORIZONTAL ROOF

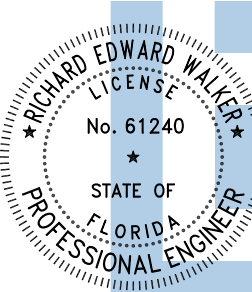


TYPICAL SIDE ELEVATION - HORIZONTAL ROOF

DRAWING INDEX

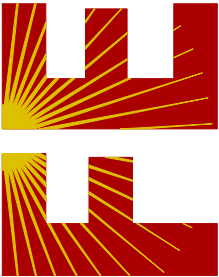
PAGE NO.	DESCRIPTION
1	NOTES AND SPECIFICATIONS
2	BOX EAVE FRAME RAFTER ENCLOSED BUILDING
3	BOW EAVE FRAME RAFTER ENCLOSED BUILDING
4	BASE RAIL AND FOUNDATION ANCHORAGE
5	BOX/BOW EAVE VERTICAL ROOF/SIDING OPTION
6	BOX/BOW EAVE RAFTER LEAN-TO OPTIONS
7	BOX EAVE RAFTER END WALL, SIDE WALL AND OPENING FRAMING
8	VENT AND CMU STEM WALL DETAIL
9	OPTIONAL CONCRETE STRIP FOOTING

This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Digitally signed
by Richard E Walker
Date:
2025.03.27
13:07:35-04'00'

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com



CA CERT. #30782

PROJECT NO. 2504211-30-U

FLORIDA ENGINEERING LLC PROJECT NO. 2504211-30-U
SIGNED AND SEALED DATED 03/27/2025 REVISES AND
SUPERSEDES FLORIDA ENGINEERING LLC PROJECT NO.
2322771-30-U SIGNED AND SEALED DATED 01/16/2024.

DIGITAL CERTIFICATION NOTES:
1. THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SHALL REMAIN IN DIGITAL FORMAT, SHALL BE VERIFIED BY ELECTRONIC MEANS & PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED.
2. THIS DOCUMENT HAS BEEN CREATED BY FLORIDA ENGINEERING LLC FOR TUBULAR BUILDING SYSTEMS ONLY. IT SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT THE WRITTEN CONSENT OF FLORIDA ENGINEERING LLC AND TUBULAR BUILDING SYSTEMS.
3. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE FLORIDA ENGINEERING LLC'S CERTIFICATION.
4. THESE PLANS ARE GENERIC AND DO NOT PROVIDE INFORMATION FOR A SITE-SPECIFIC PROJECT WHERE THE SITE CONDITIONS DEVIATE FROM WHAT HAS BEEN CALLED OUT ON THESE PLANS.
5. CONTRACTOR MUST NOT DEVIATE FROM THE CONDITIONS DETAILED ON THESE PLANS.
6. CONSTRUCTION SAFETY AT THE SITE IS THE CONTRACTOR'S RESPONSIBILITY.

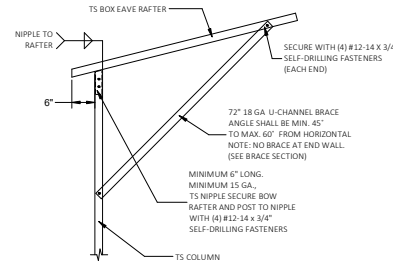
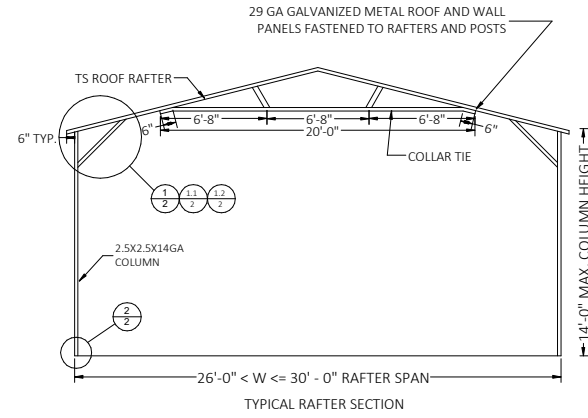
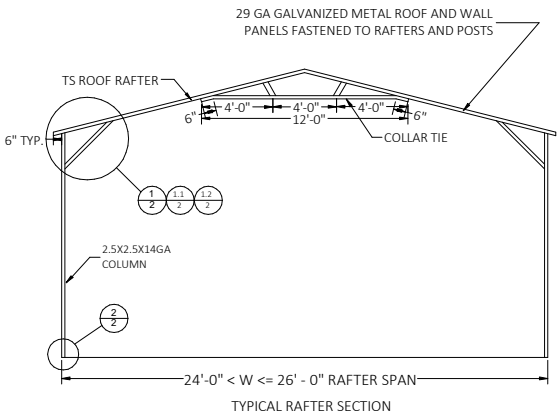
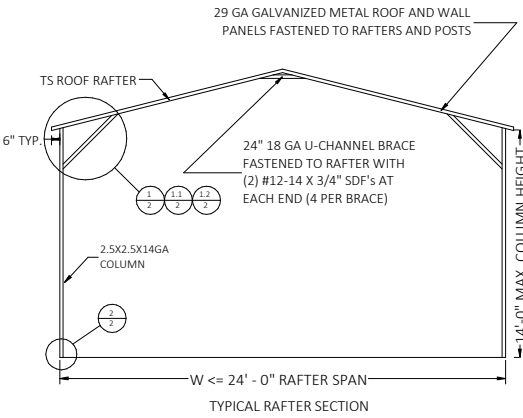
CONTRACTOR:

TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025

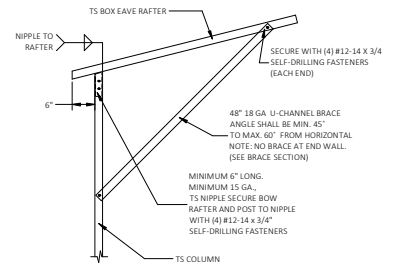
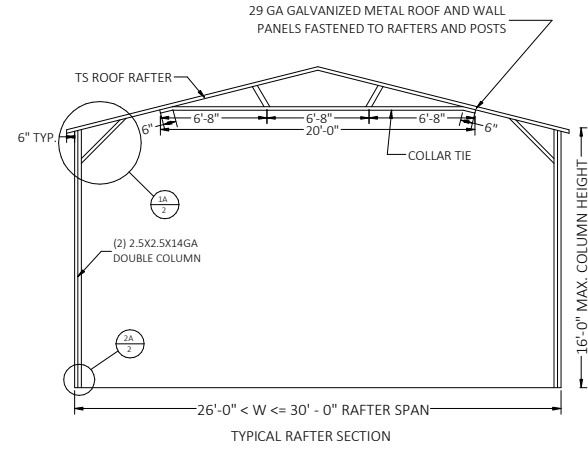
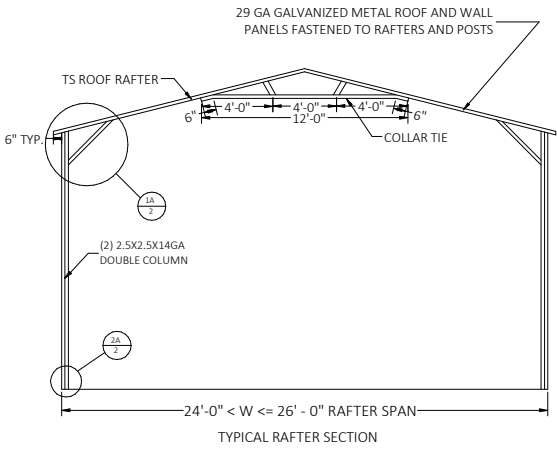
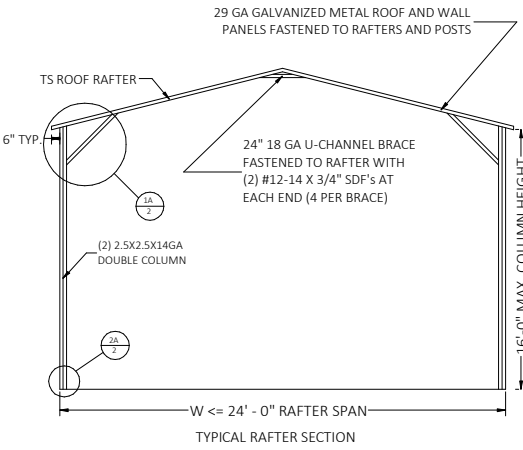
PROJECT DESCRIPTION:

30' WIDE X 20' HIGH
UTILITY STRUCTURE

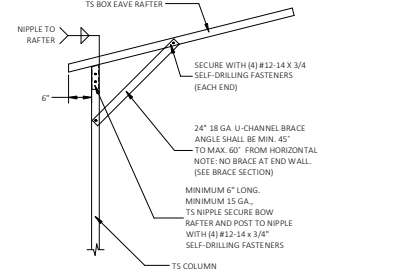
DESIGN DATE: 03/27/2025
REVISION 1: DATE
REVISION 2: DATE
SCALE: NTS



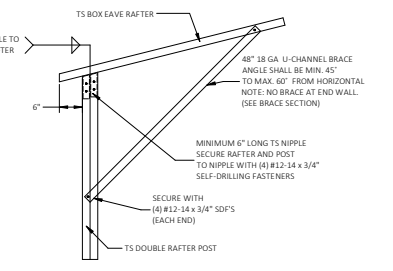
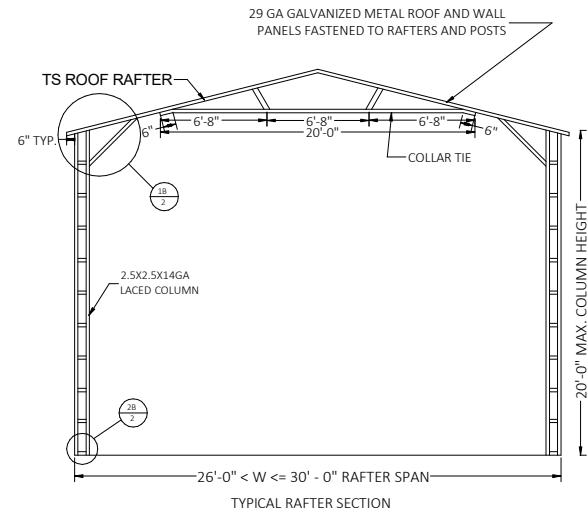
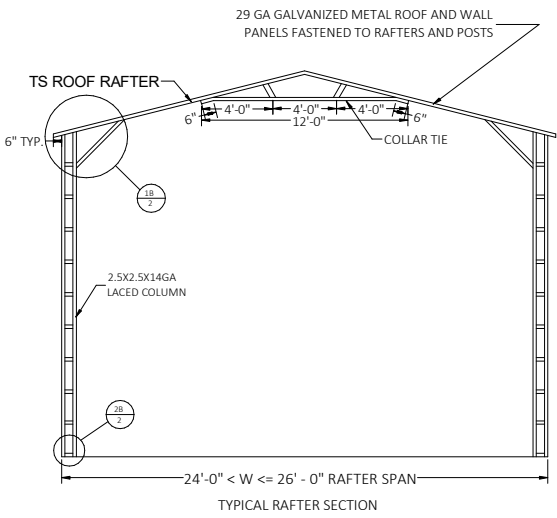
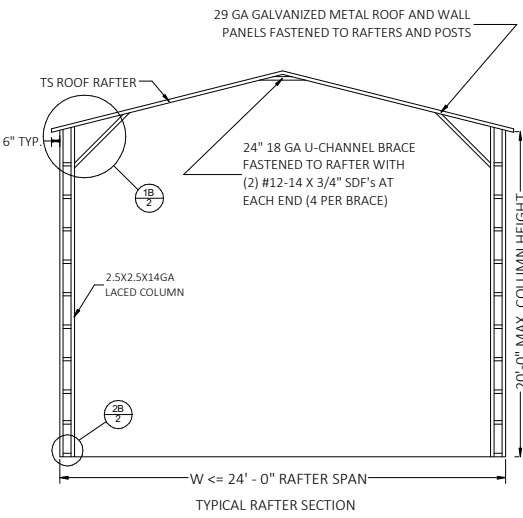
1 BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 13'-0" < TO <= 14'-0" SCALE: NTS



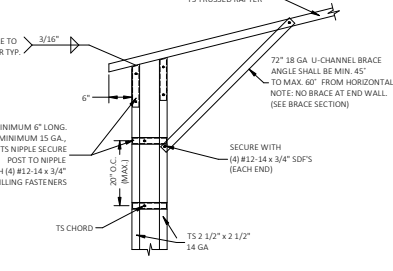
1.1 BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO <= 13'-0" SCALE: NTS



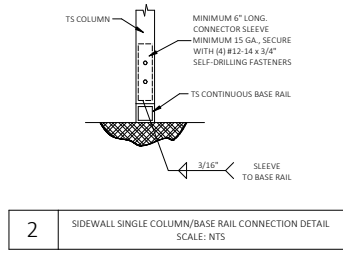
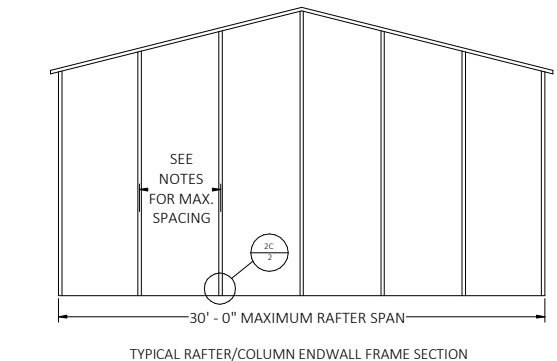
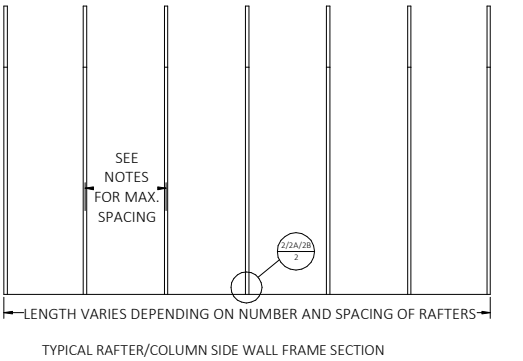
1.2 BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO <= 13'-0" SCALE: NTS



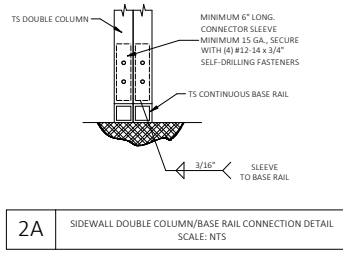
1A BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 14'-0" < TO <= 16'-0" SCALE: NTS



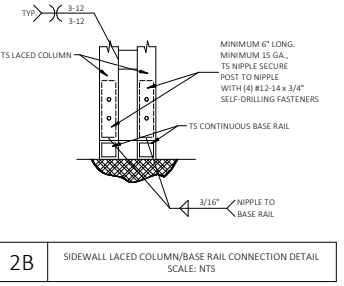
1B BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 16'-0" < TO <= 20'-0" SCALE: NTS



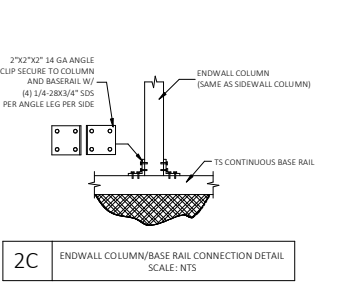
2 SIDEWALL SINGLE COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS



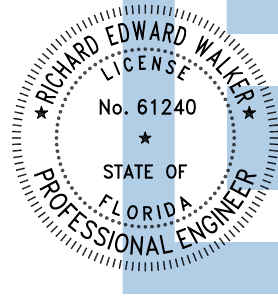
2A SIDEWALL DOUBLE COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS



2B SIDEWALL LACED COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS



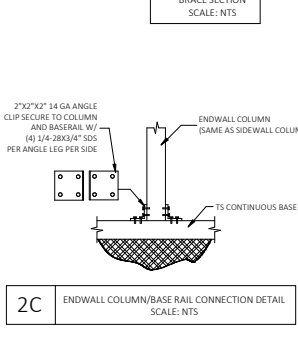
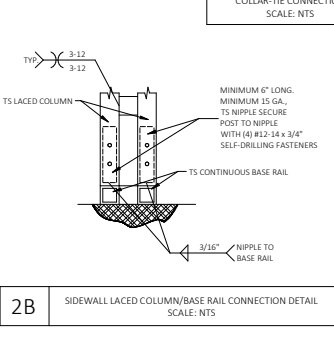
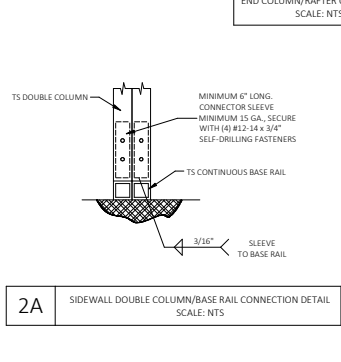
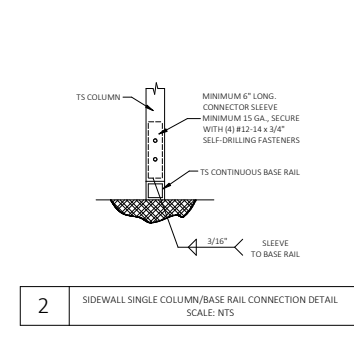
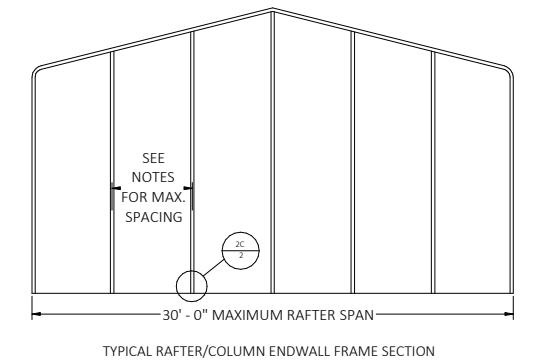
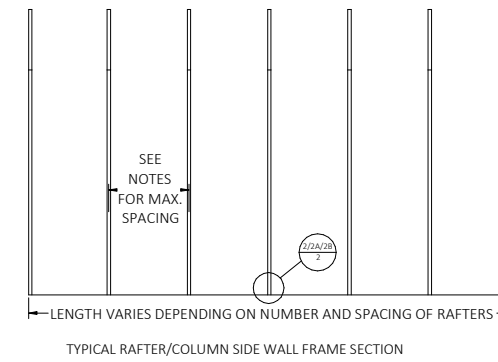
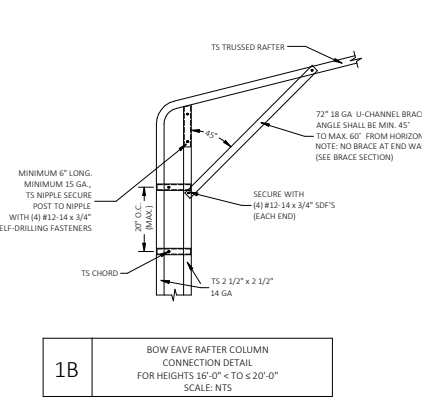
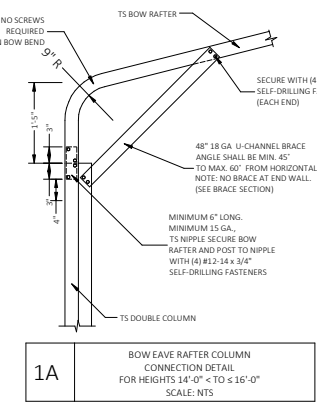
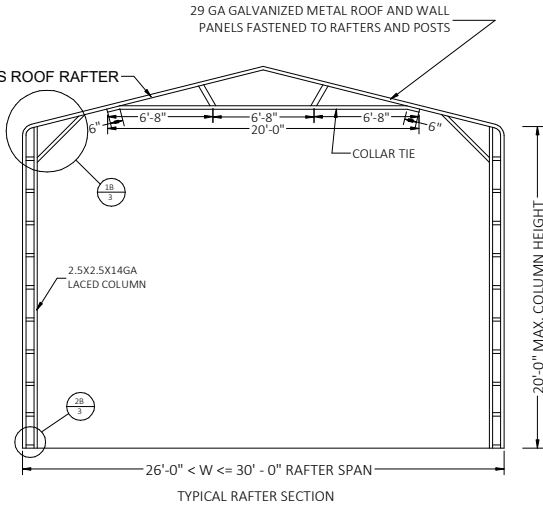
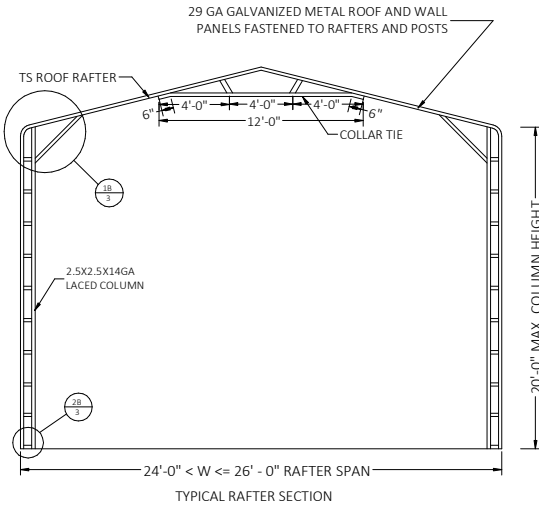
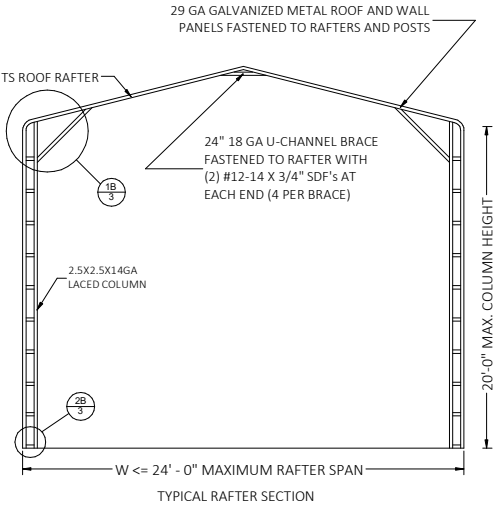
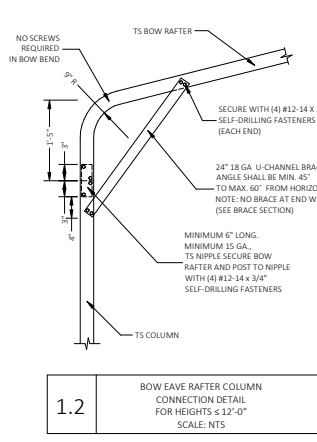
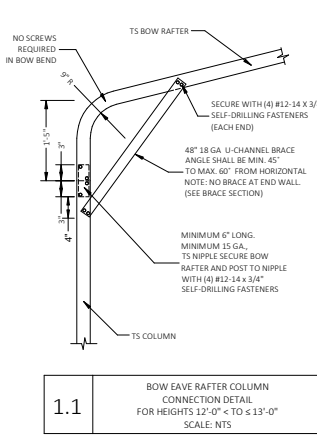
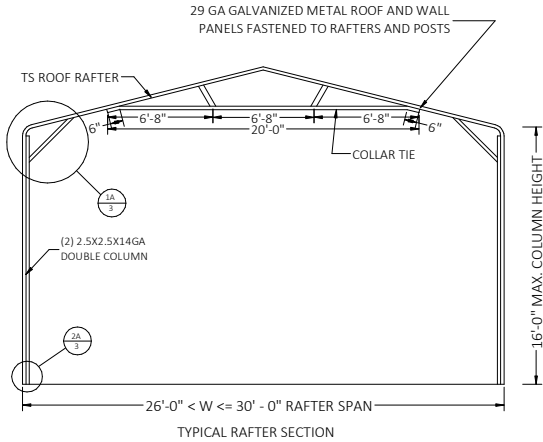
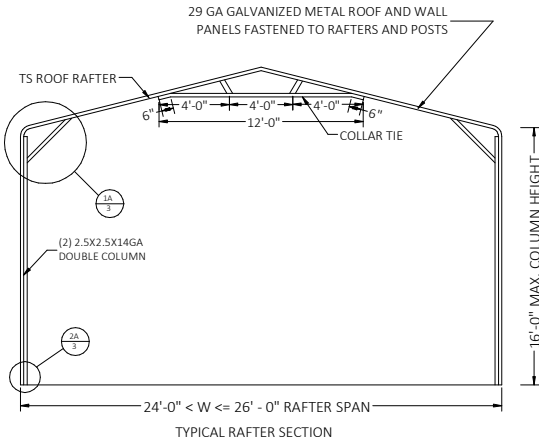
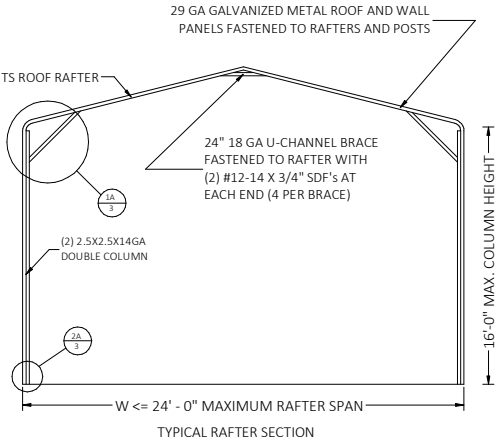
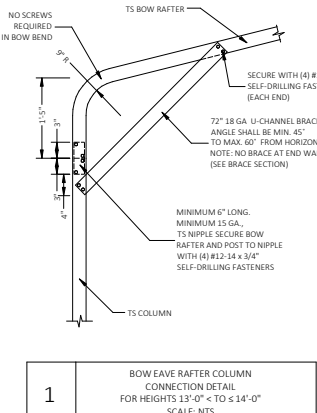
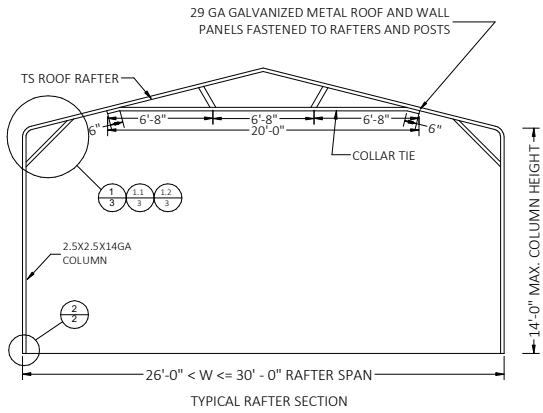
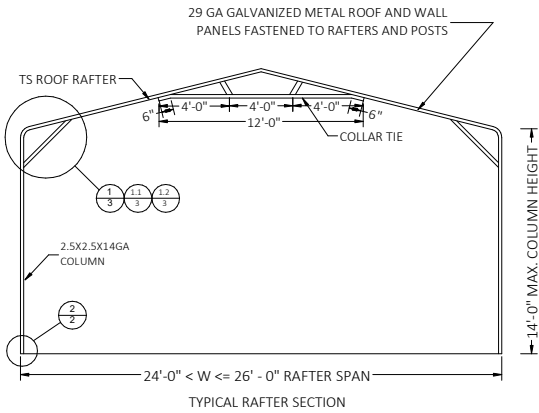
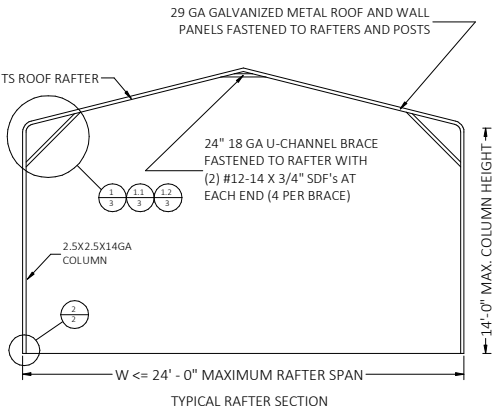
2C ENDWALL COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS



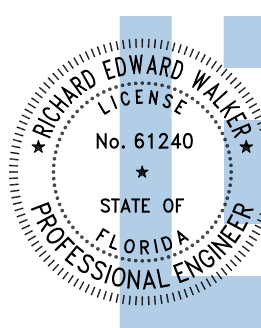
Digitally signed by Richard E Walker
Date: 2025.03.27 13:07:36-04'00'

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLeng.com
Orders@FLeng.com
CA CERT. #30782
PROJECT NO. 2504211-30-U

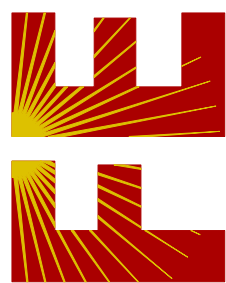
CONTRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025
PROJECT DESCRIPTION:
30' WIDE X 20' HIGH
UTILITY STRUCTURE
DESIGN DATE: 03/27/2025
REVISION 1: DATE
REVISION 2: DATE
SCALE: NTS
PAGE : 2



Digitally signed
by Richard E
Walker
Date:
2025.03.27
13:07:37-04'00'



FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com



CA CERT. #30782

PROJECT NO. 2504211-30-U

CONTRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025

PROJECT DESCRIPTION:

30' WIDE X 20' HIGH
UTILITY STRUCTURE

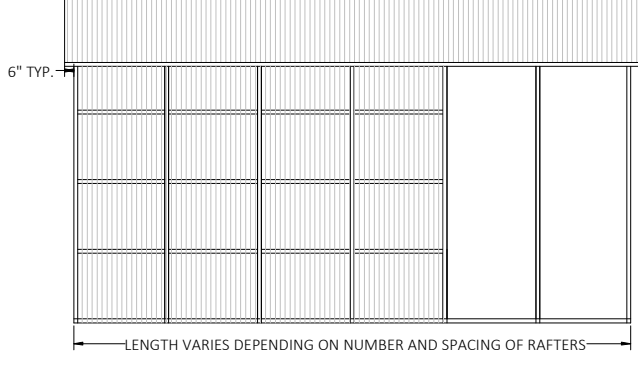
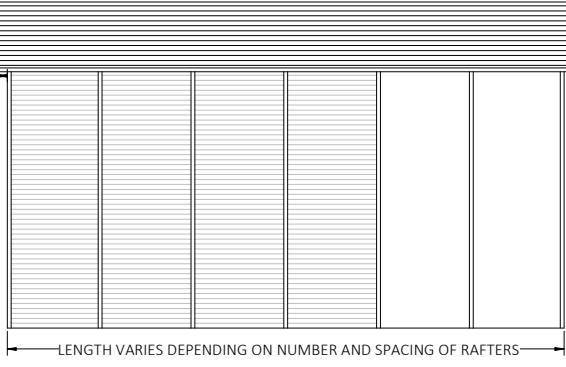
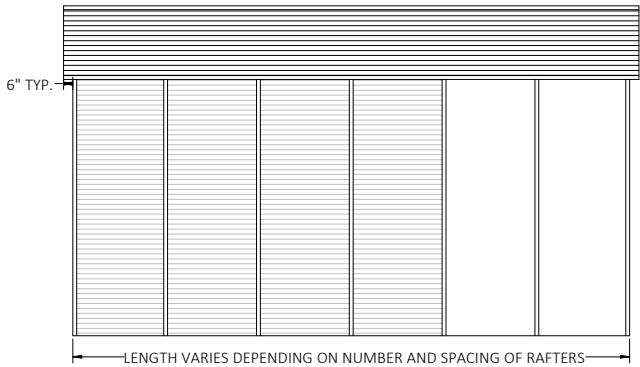
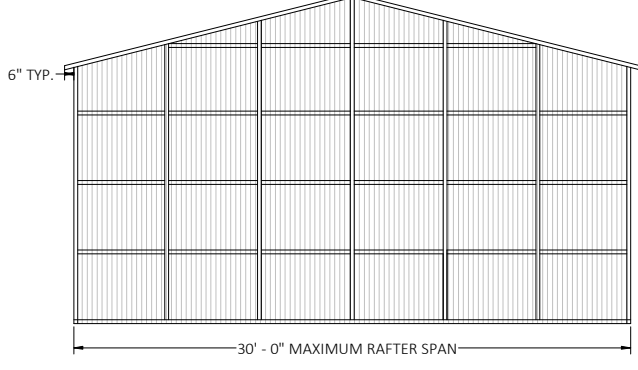
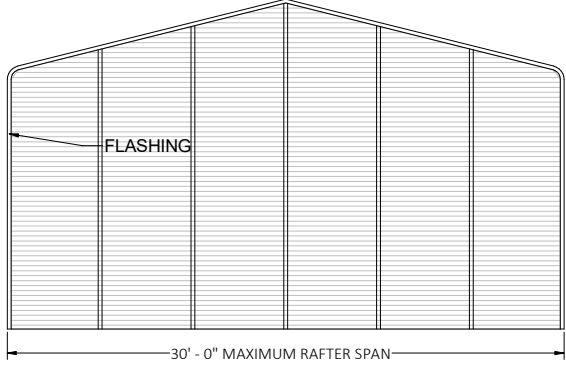
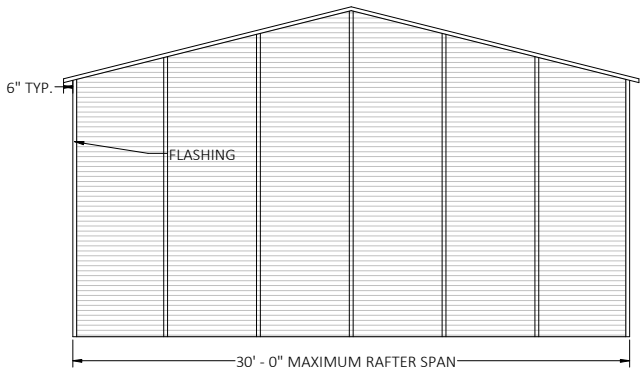
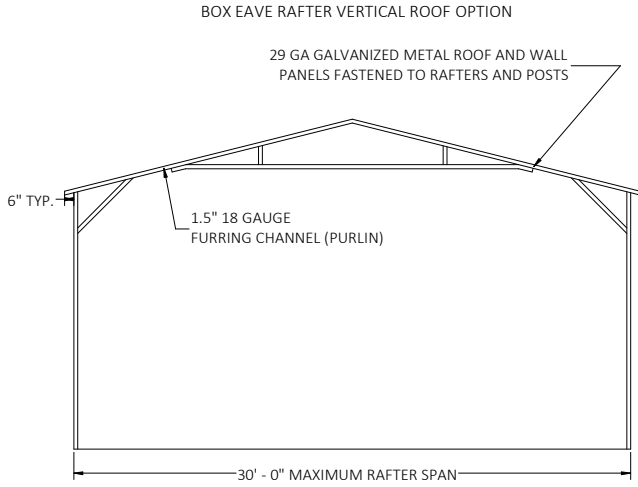
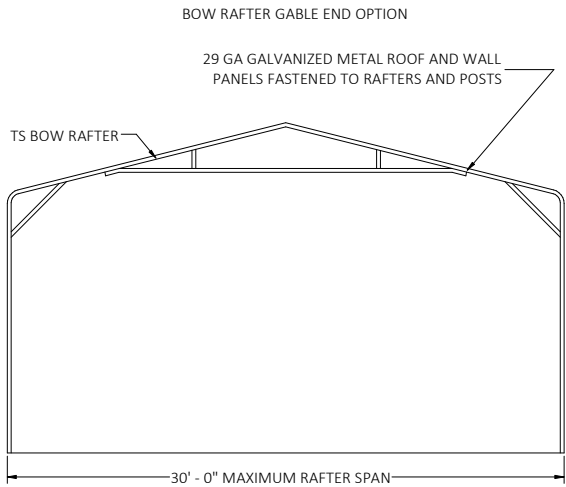
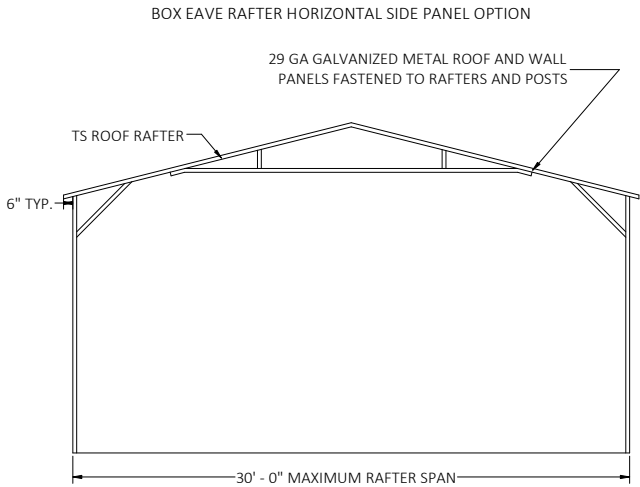
DESIGN DATE: 03/27/2025
REVISION 1: DATE
REVISION 2: DATE
SCALE: NTS

PAGE :
3

This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Digitally signed
by Richard E
Walker
Date:
2025.03.27
13:07:37-04'00'

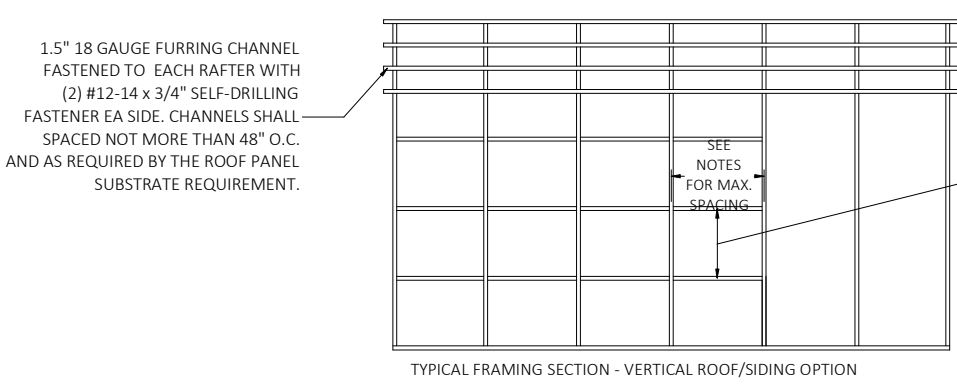
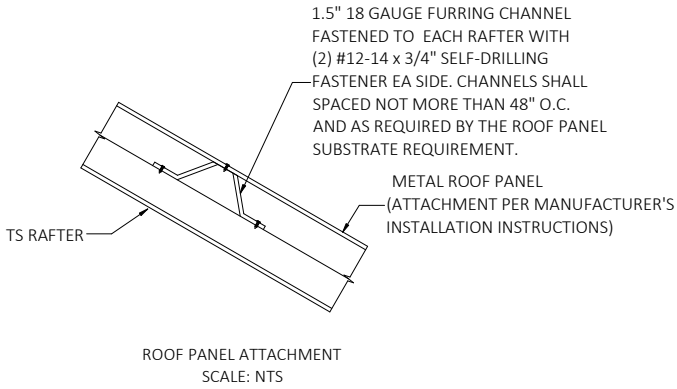
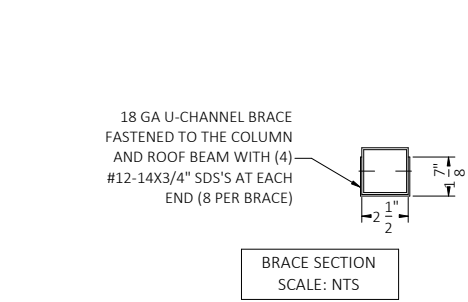
DESIGN DATE: 03/27/2025		PAGE 4
REVISION 1:	DATE	
REVISION 2:	DATE	
SCALE:	NTS	



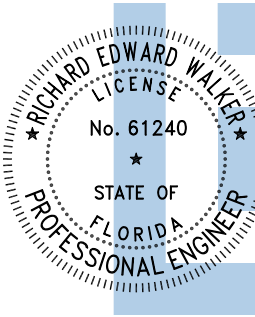
TYPICAL SIDE ELEVATION - EXTRA SIDE PANELS

TYPICAL SIDE ELEVATION - EXTRA SIDE PANELS

TYPICAL SIDE ELEVATION - VERTICAL ROOF/SIDING OPTION

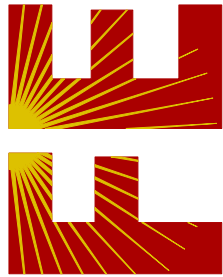


This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Digitally signed
by Richard E Walker
Date: 2025.03.27 13:07:38-04'00'

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com



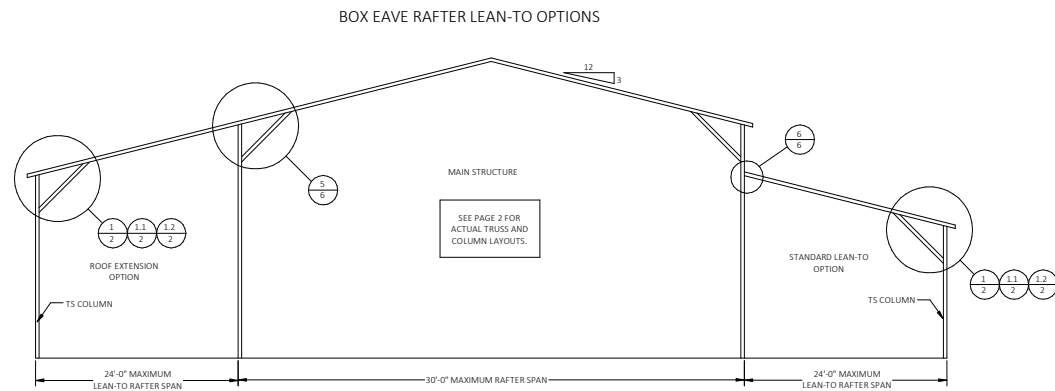
CA CERT. #30782

PROJECT NO. 2504211-30-U

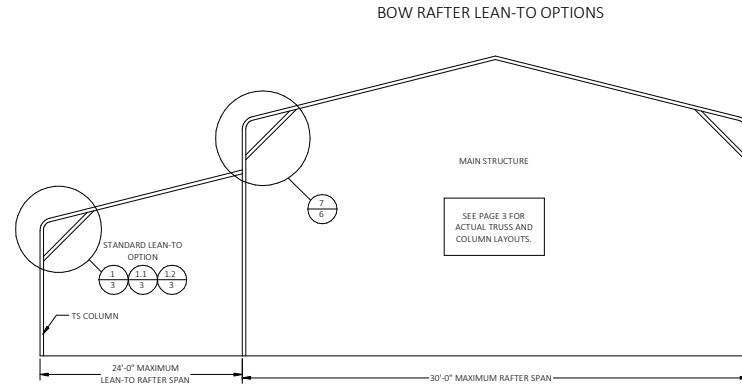
CONTRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025

PROJECT DESCRIPTION:
30' WIDE X 20' HIGH
UTILITY STRUCTURE

DESIGN DATE:	03/27/2025
REVISION 1:	DATE
REVISION 2:	DATE
SCALE:	NTS

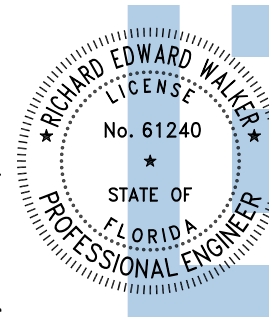


TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

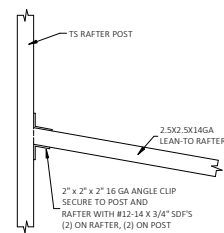
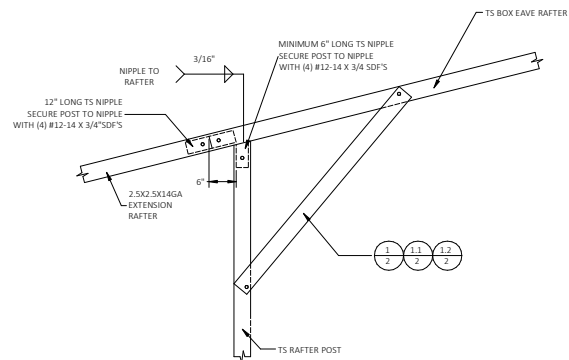


TYPICAL BOW RAFTER LEAN-TO OPTIONS FRAMING SECTION

This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



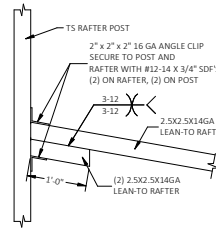
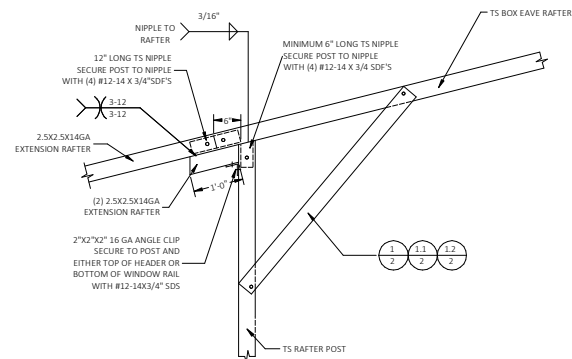
Digitally signed
by Richard E
Walker
Date:
2025.03.27
13:07:38-04'00'



5A

FOR EXTENSION RAFTER SPANS $W' \leq 12'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2.
FOR EXTENSION RAFTER SPANS $W' \leq 13'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/2.
FOR EXTENSION RAFTER SPANS $W' \leq 15'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/2.

SCALE: NTS



6A

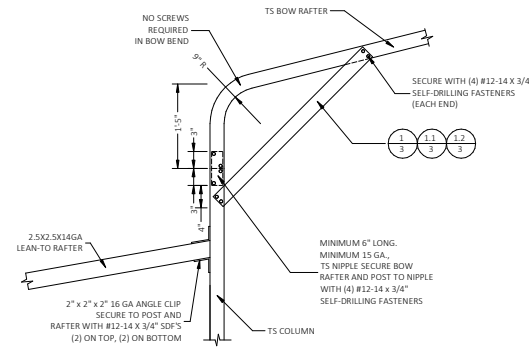
LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL

FOR LEAN-TO RAFTER SPANS $W < 12'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2 OR 1.2/3.

FOR LEAN-TO RAFTER SPANS $W < 13'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/2 OR 1.1/3.

FOR LEAN-TO RAFTER SPANS $W < 15'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/2 OR 1/3.

SCALE: NTS

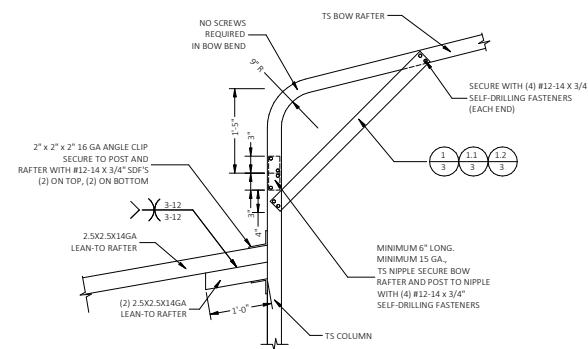


7A

SIDE EXTENSION RAFTER/COLUMN DETAIL

FOR EXTENSION RAFTER SPANS $W' \leq 12'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/3
FOR EXTENSION RAFTER SPANS $W' \leq 13'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/3
FOR EXTENSION RAFTER SPANS $W' \leq 15'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/3.

SCALE: NTS



7B

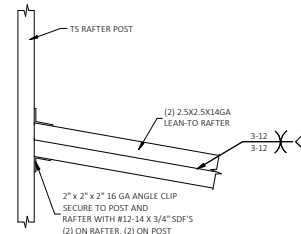
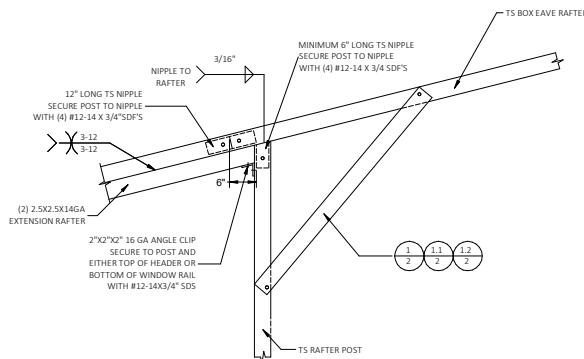
SIDE EXTENSION RAFTER/COLUMN DETAIL

FOR EXTENSION RAFTER SPANS 12'-0" <W<=16'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/3.

FOR EXTENSION RAFTER SPANS 13'-0" <W<=18'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/3.

FOR EXTENSION RAFTER SPANS 15'-0" <W<=19'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/3.

SCALE: NTS



5C

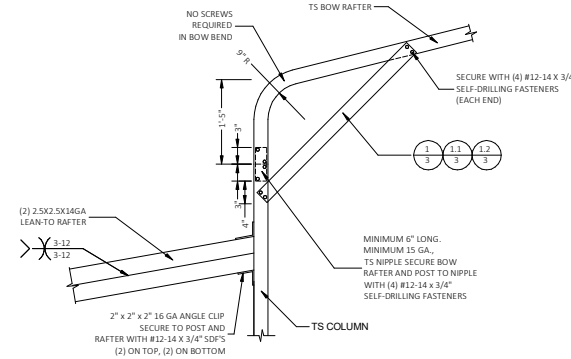
SIDE EXTENSION RAFTER/COLUMN DETAIL

FOR EXTENSION RAFTER SPANS $16'-0" < W' <= 24'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2.

FOR EXTENSION RAFTER SPANS $18'-0" < W' <= 24'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/2.

FOR EXTENSION RAFTER SPANS $19'-0" < W' <= 24'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/2.

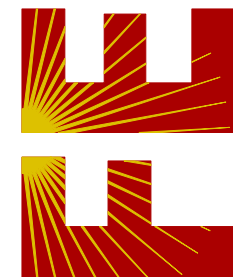
SCALE: NTS



7C

X- EXTENSION RAFTER/COLUMN DETAIL
 FOR EXTENSION RAFTER SPANS 16'-0" < W <= 24'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/3.
 FOR EXTENSION RAFTER SPANS 18'-0" < W <= 24'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/3.
 FOR EXTENSION RAFTER SPANS 19'-0" < W <= 24'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/3.
 SCALE: NTS

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com



CA CERT. #30782

PROJECT NO. 2504211-30-U

TRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025

PROJECT DESCRIPTION:
30' WIDE X 20' HIGH
UTILITY STRUCTURE

DESIGN DATE:	03/27/2025
--------------	------------

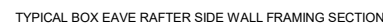
REVISION 1:	DATE	PAGE
-------------	------	------

REVISION 2:	DATE	
-------------	------	--

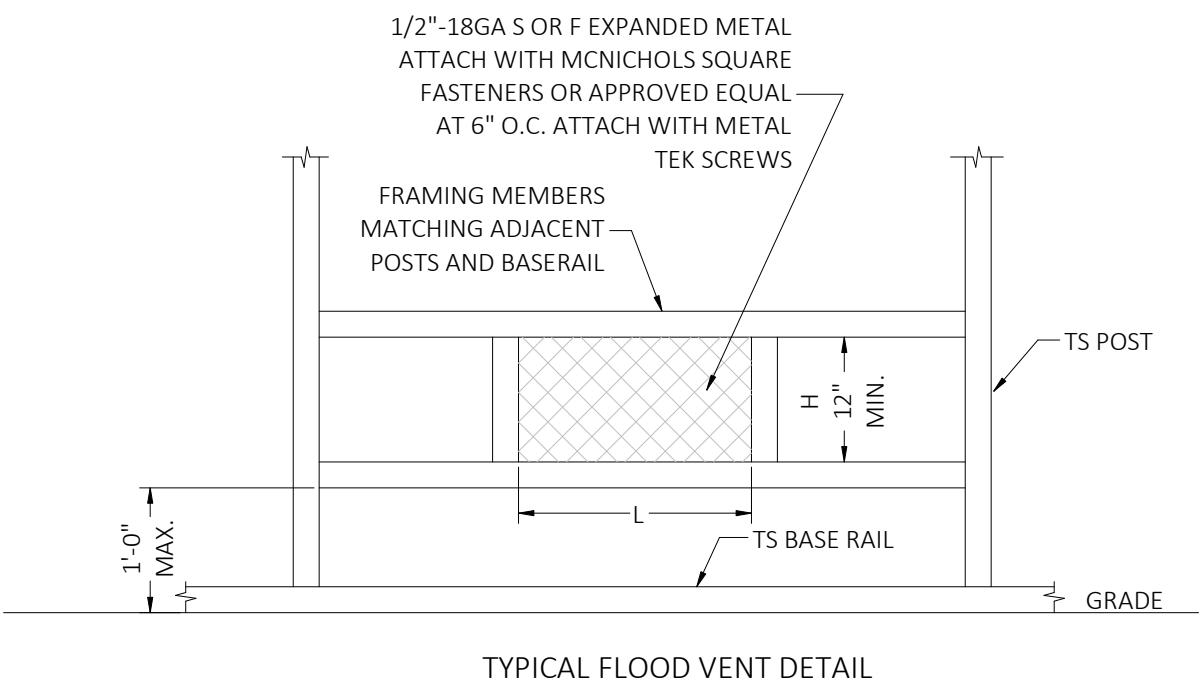
SCALE: NTS

PAGE :

6



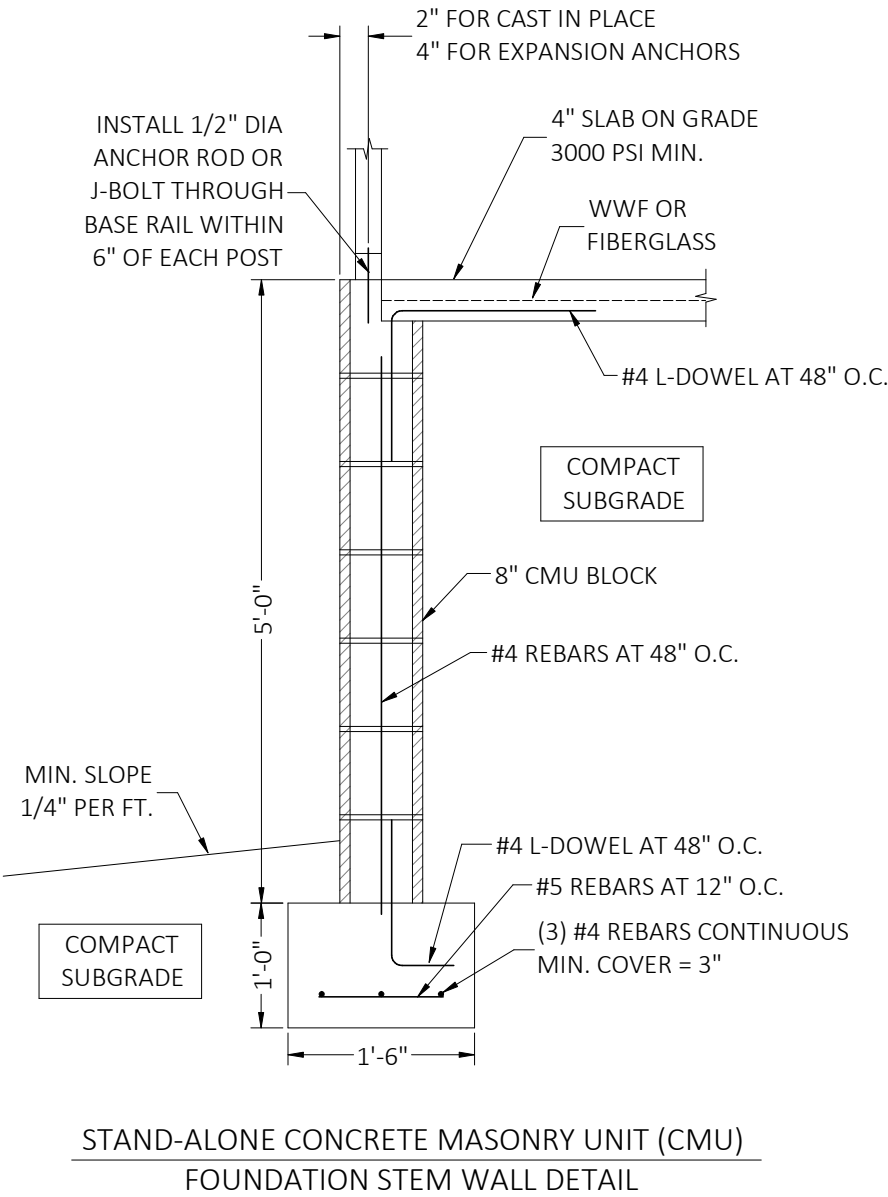
PAGE :
7



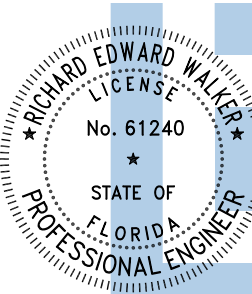
CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS:
CONTRACTOR TO VERIFY THAT THE FINISHED FLOOR ELEVATION FOR THE PROPOSED STRUCTURE IS AT OR ABOVE THE GREATER OF THE FOLLOWING ELEVATIONS:
I) BFE (BASE FLOOD ELEVATION) + 2'-0"
II) DFE (DESIGN FLOOD ELEVATION)
III) THE MINIMUM ELEVATION MANDATED BY THE BUILDING CODES ADOPTED BY THE AUTHORITY HAVING JURISDICTION.

- FLOOD VENT INSTALLATION NOTES:
- 1. MINIMUM VENT SPACE REQUIRED = 1 SQ. IN. OF OPEN VENT AREA PER SQ. FT. OF ENCLOSED AREA.
 - 2. PROVIDE A MINIMUM OF TWO OPENINGS ON DIFFERENT SIDES OF EACH ENCLOSED AREA.
 - 3. APPLY A 1.3 FACTOR WHEN CALCULATING TOTAL OPEN AREA WHEN USING 1/2"-18GA S OR F EXPANDED METAL.
 - 4. TOTAL OPEN AREA OF VENT = L X H (MIN. 12").
 - 5. FLOOD VENT DETAIL COMPLIES WITH FEMA/NFIP.
 - 6. PREFABRICATED FLOOD VENTS MEETING THE REQUIREMENTS OF FEMA/NFIP MAY BE INSTALLED.

FLOOD SOLUTIONS STATIC FLOOD VENTS FL #17588.1-R4				
VENT MODEL	VENT SIZE (WIDHT x HEIGHT) (in.)	ROUGH OPENING SIZE (Width x Height) (in.)	ENCLSOED AREA COVERAGE (sq. ft.)	NET FREE AREA (sq. in.)
FS-1608	18 ¹ / ₂ " X 10 ¹ / ₂ "	16 X 8	97	80.7
FS-1616	18 ¹ / ₂ " X 18 ¹ / ₂ "	16 X 16	191	158.2
FS-1412	17 ¹ / ₂ " X 14 ¹ / ₂ "	14 ¹ / ₂ " X 12"	129	106.7
FS-1608-HEX	18 ¹ / ₂ " X 10 ¹ / ₂ "	16 X 8	110	91.4

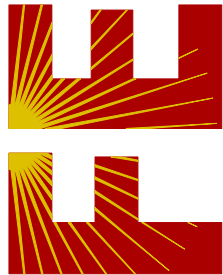


This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Digitally signed
by Richard E Walker
Date: 2025.03.27 13:07:39-04'00'

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com



CA CERT. #30782

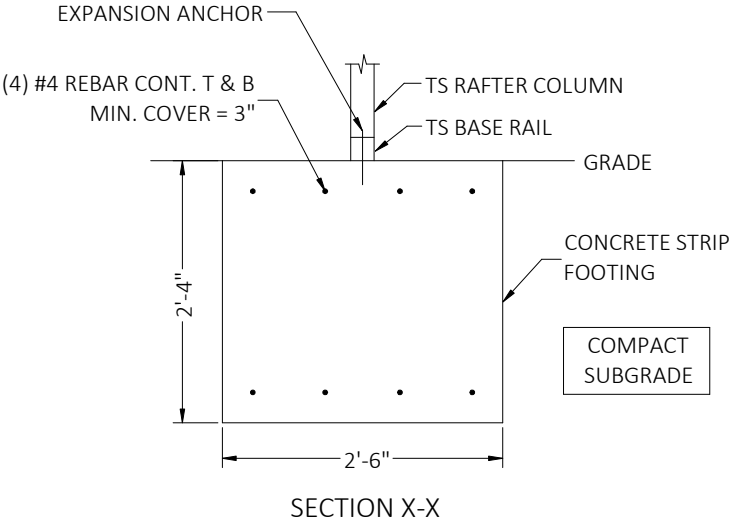
PROJECT NO. 2504211-30-U

CONTRACTOR: TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE, LAKE CITY, FL 32025	PROJECT DESCRIPTION: 30' WIDE X 20' HIGH UTILITY STRUCTURE	
	DESIGN DATE:	03/27/2025
	REVISION 1: DATE	PAGE : 8
	REVISION 2: DATE	
SCALE: NTS		

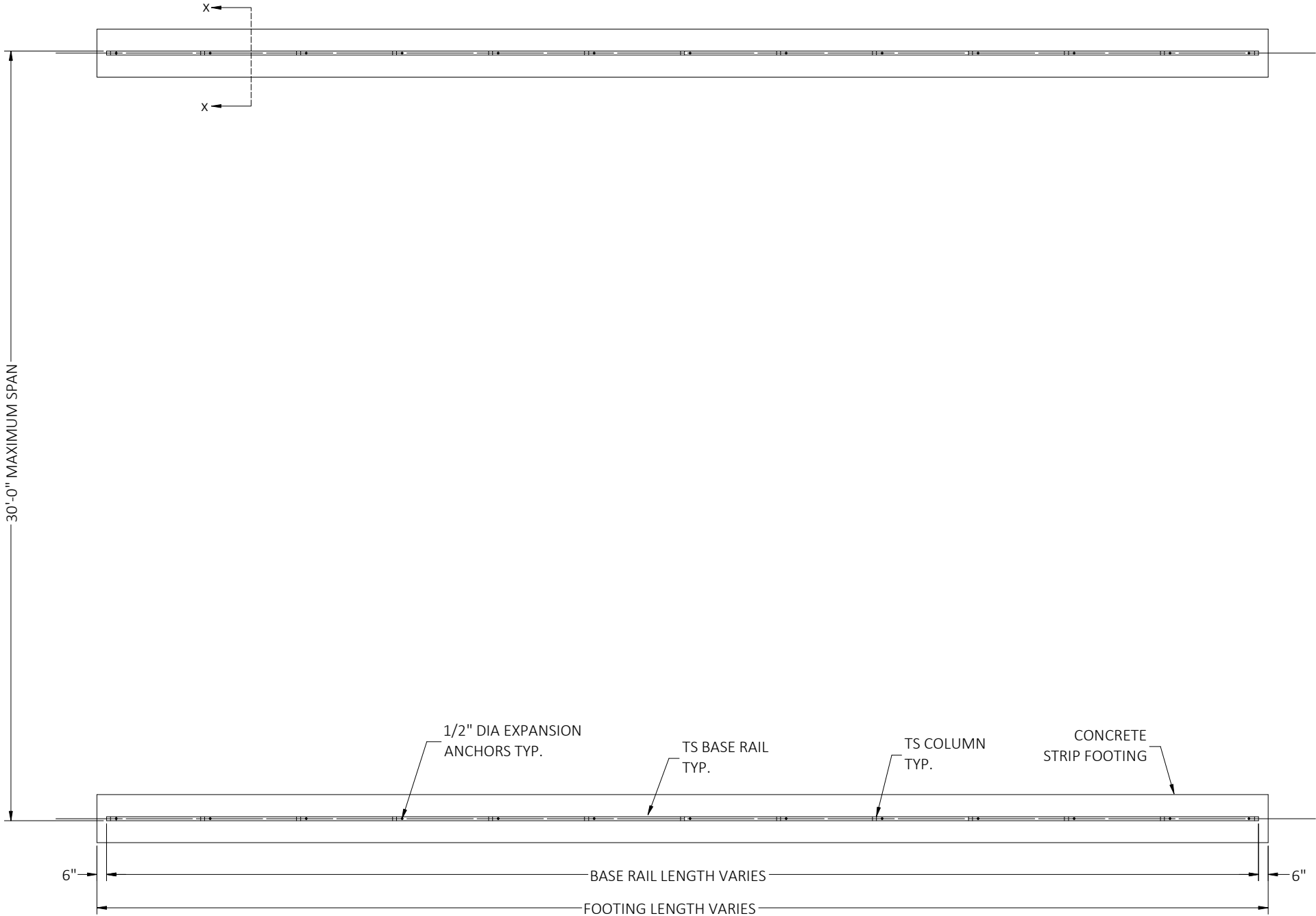
GENERAL NOTES
CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF 1500 PSF.

CONCRETE
MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

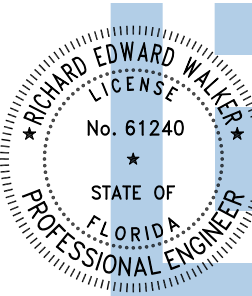
- REINFORCING STEEL
1. TURNDOWN REINFORCING STEEL = ASTM A615 GRADE 60
 2. SLAB REINFORCEMENT = WELDED WIRE FABRIC PER ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT
 3. REINFORCING STEEL COVER = 3" WHERE CASE AGAINST AND PERMENTENTLY EXPOSED TO SOIL OR WATER, 1.5" EVERYWHERE ELSE.
 4. REINFORCEMENT IS BENT COLD.
 5. MINIMUM INSIDE DIAMETER OF BEND = (6) BAR DIAMETERS
 6. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.



OPTIONAL CONCRETE STRIP FOOTING

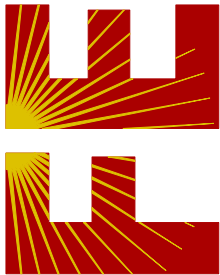


This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Digitally signed
by Richard E Walker
Date:
2025.03.27
13:07:40-04'00'

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com



CA CERT. #30782

PROJECT NO. 2504211-30-U

CONTRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025

PROJECT DESCRIPTION:
30' WIDE X 20' HIGH
UTILITY STRUCTURE

DESIGN DATE:	03/27/2025	
REVISION 1:	DATE	PAGE : 9
REVISION 2:	DATE	
SCALE:	NTS	