

GENERAL NOTES

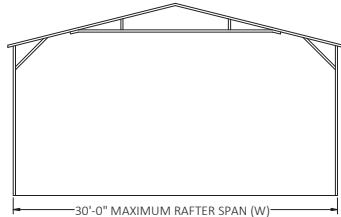
- DESIGN IS FOR MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT UTILITY STRUCTURES.
- APPLICABLE CODES, REGULATIONS, & STANDARDS:
 - 2023 FLORIDA BUILDING CODE (8TH EDITION)
 - 2024 INTERNATIONAL BUILDING CODE
 - ASCE 7-22: MINIMUM DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES
 - AISC STEEL CONSTRUCTION MANUAL (15TH EDITION)
 - ACI 318-19: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
 - TMS 402-16: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
 - AWS D1.1: STRUCTURAL WELDING
- RISK CATEGORY: I
- EXPOSURE CATEGORY: C
- 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.
- DEAD LOAD = 5 PSF
- ROOF LIVE LOAD = 12 PSF
- 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).
- OPTIONAL BASE RAIL ANCHORAGE MAY BE USED FOR LOW AND MUST BE USED FOR HIGH WIND SPEEDS.
- 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.
- 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 THIS CONNECTION PATTERN SHALL BE SUPERCEDED BY THE PANEL MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:
SOIL SITE CLASS = D
R = 3.5 I_e = 1.0
S_{ds} = 0.087 g V = C_sW
S_{d1} = 0.084 g
- GROUND ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES.
- 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.
- MIN. LAP REQUIREMENT FOR REBAR IN FOOTER IS 25".
- SOIL TO BE COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY, AT OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH ASTM D1557-93
- PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE FBC.
- 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.
- CONTRACTOR TO PROVIDE APPROVED PRODUCTS THAT MEET OR EXCEED WIND DESIGN PRESSURES.
- 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.

DRAWING INDEX

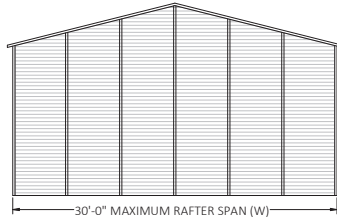
PAGE NO.	DESCRIPTION
1	NOTES AND SPECIFICATIONS
2	BOX EAVE FRAME RAFTER ENCLOSED BUILDING
3	BOW EAVE FRAME RAFTER ENCLOSED BUILDING
4	BASE RAIL AND FOUNDATION ANCHORAGE
5	BOX/BOW EAVE VERTICAL ROOF/SIDING OPTION
6	BOX/BOW EAVE RAFTER LEAN-TO OPTIONS
7	BOX EAVE RAFTER END WALL, SIDE WALL AND OPENING FRAMING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

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

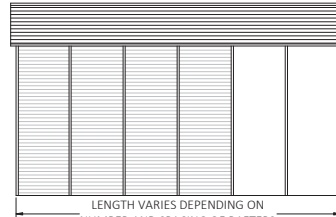
BOX EAVE FRAME RAFTER UTILITY BUILDING



TYPICAL END ELEVATION

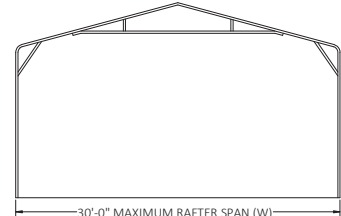


TYPICAL END ELEVATION - HORIZONTAL ROOF

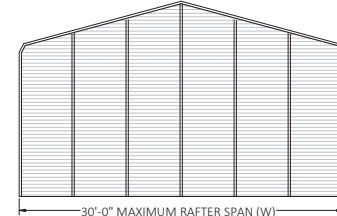


LENGTH VARIES DEPENDING ON
NUMBER AND SPACING OF RAFTERS
TYPICAL SIDE ELEVATION - HORIZONTAL ROOF

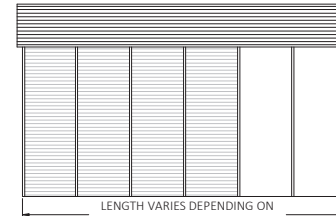
BOW FRAME RAFTER UTILITY BUILDING



TYPICAL END ELEVATION



TYPICAL END ELEVATION - HORIZONTAL ROOF

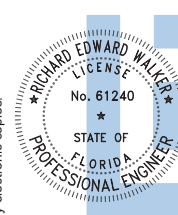


LENGTH VARIES DEPENDING ON
NUMBER AND SPACING OF RAFTERS
TYPICAL SIDE ELEVATION - HORIZONTAL ROOF

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.

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. #430782
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

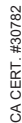
REVISION 1: DATE

REVISION 2: DATE

SCALE: NTS

PAGE :

1



3

BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED

GENERAL NOTES

CONCRETE:

1. CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
2. PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE FBC.
3. MINIMUM SOIL BEARING CAPACITY OF COMPACTED GRADE= 2000 PSF

COVERAGE OF THE REINFORCED STEEL:

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318: 3 INCHES WHERE THE CONCRETE IS POURED AGAINST AND TEMPORARY IN CONTACT WITH THE EARTH OR UNPROTECTED FROM THE EARTH OR WEATHER, OTHERWISE 1-1/2 INCHES.

REINFORCING STEEL:

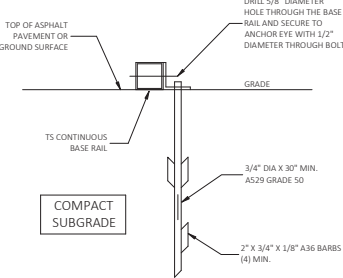
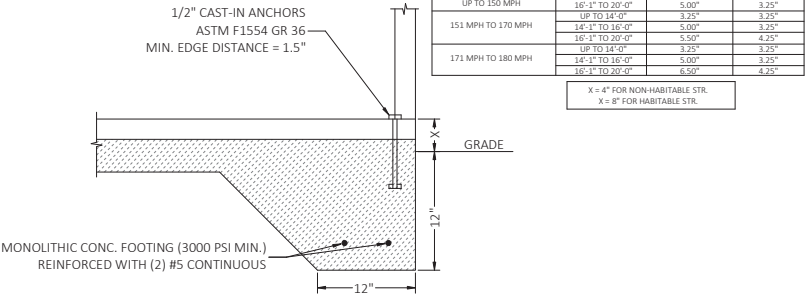
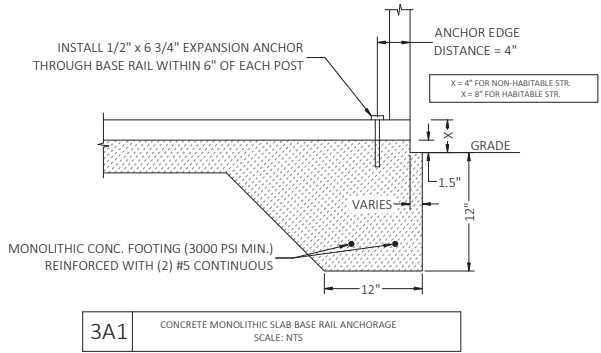
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

REINFORCEMENT MAY BE BENT IN THE FIELD OR SHOP AS LONG AS:

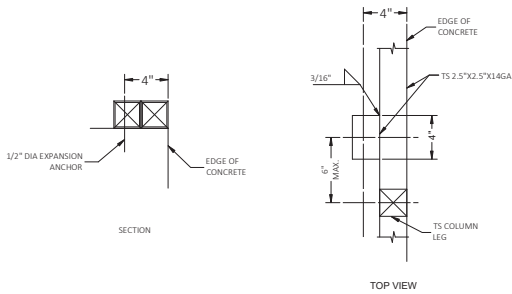
1. IT IS BENT COLD;
2. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT;
3. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.
4. MINIMUM REQUIRED LAP LENGTH SHALL NOT BE LESS THAN 57-BAR DIAMETERS.

HELIX ANCHOR NOTES

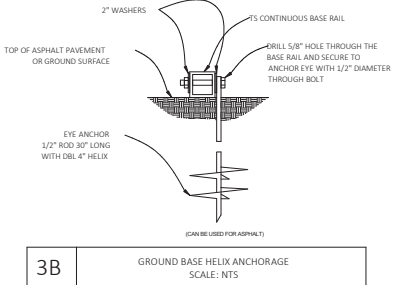
1. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT.
2. FOR CORAL USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT.
3. FOR MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT.
4. FOR LOOSE TO MEDIUM DENSE COARSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLUVIAL FILL USE MINIMUM (2) 6" HELICES WITH MINIMUM 50 INCH EMBEDMENT.
5. FOR VERY LOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL USE MINIMUM (2) 8" HELICES WITH MINIMUM 60 INCH EMBEDMENT.



3C ASPHALT BASE ANCHORAGE (HP 9 BARBED DRIVE ANCHOR)
SCALE: NTS



3D TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE
SCALE: NTS



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'

RICHARD EDWARD WALKER
LICENSE
No. 61240
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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

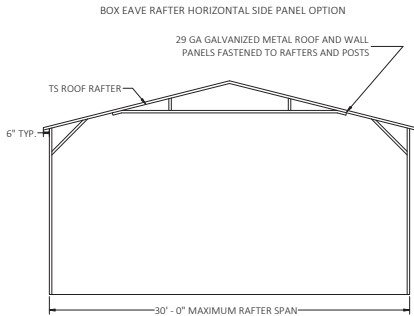
CONTRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025

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

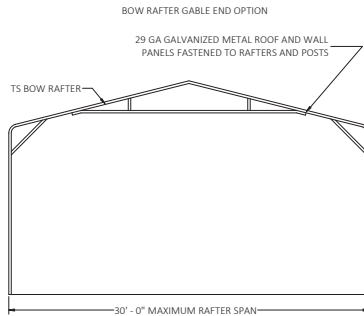
DESIGN DATE: 03/27/2025

REVISION 1: DATE
REVISION 2: DATE
SCALE: NTS

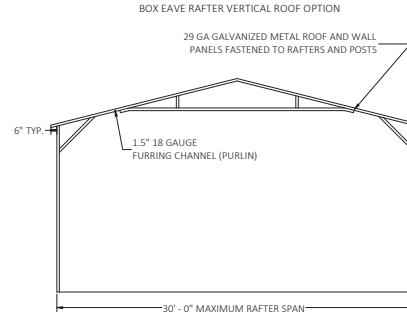
PAGE :
4



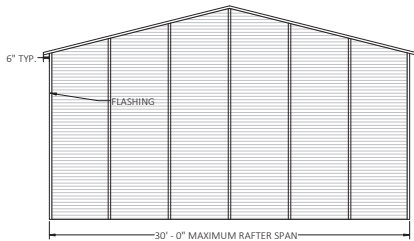
TYPICAL RAFTER/POST FRAME
SECTION EXTRA SIDE PANELS



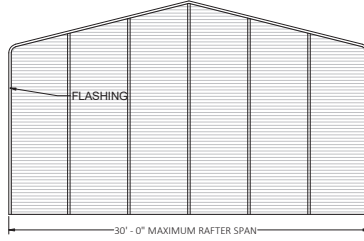
TYPICAL RAFTER/POST FRAME
SECTION EXTRA SIDE PANELS



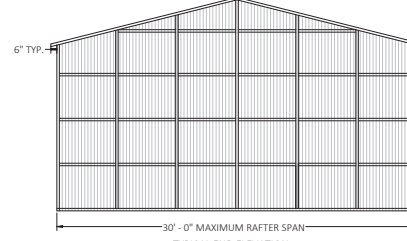
TYPICAL SECTION VERTICAL
ROOF/SIDING OPTION



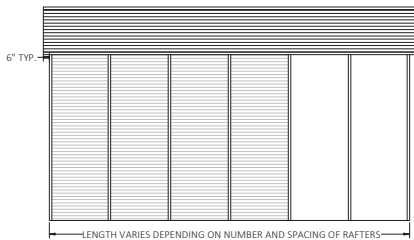
TYPICAL END ELEVATION
EXTRA SIDE PANELS



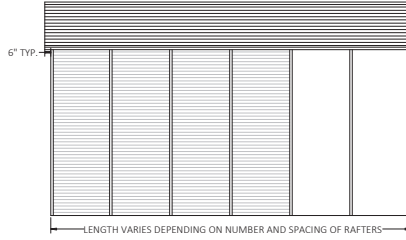
TYPICAL END ELEVATION
EXTRA SIDE PANELS



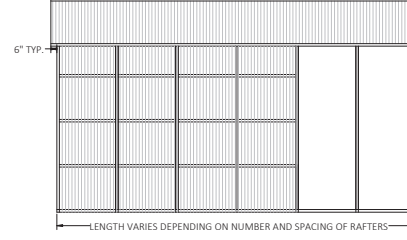
TYPICAL END ELEVATION
VERTICAL ROOF/SIDING OPTION



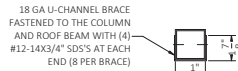
TYPICAL SIDE ELEVATION - EXTRA SIDE PANELS



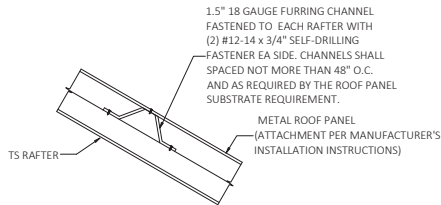
TYPICAL SIDE ELEVATION - EXTRA SIDE PANELS



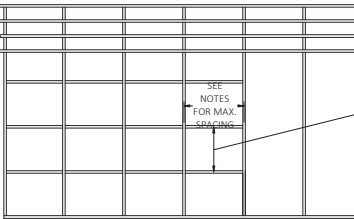
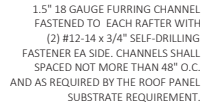
TYPICAL SIDE ELEVATION - VERTICAL ROOF/SIDING OPTION



BRACE SECTION
SCALE: NTS



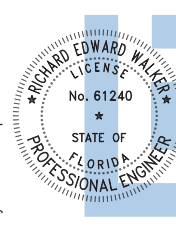
ROOF PANEL ATTACHMENT
SCALE: NTS



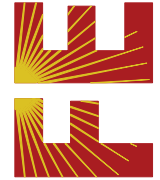
TYPICAL FRAMING SECTION - VERTICAL ROOF/SIDING OPTION

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



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

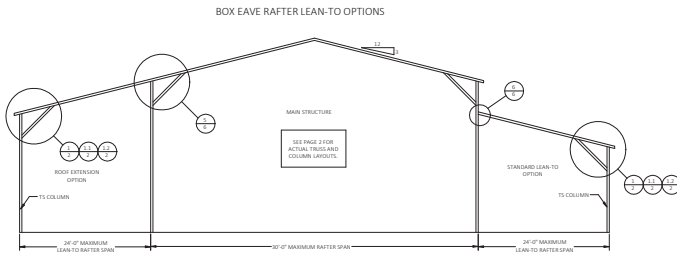
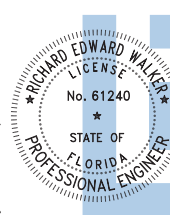
PROJECT DESCRIPTION:
30' WIDE X 20' HIGH
UTILITY STRUCTURE

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

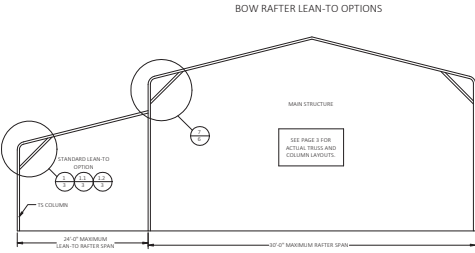
PAGE :
5

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.

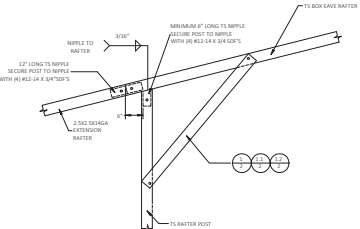
Digitally signed by Richard E Walker
Date: 2025.03.27 13:07:38-04'00'



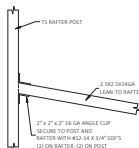
TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)



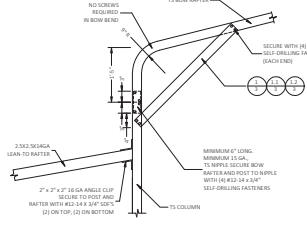
TYPICAL BOW RAFTER LEAN-TO OPTIONS FRAMING SECTION



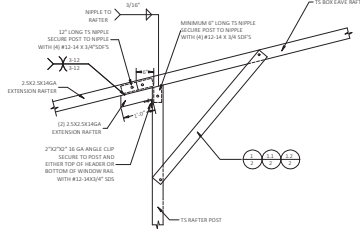
5A FOR EXTENSION RAFTER SPANS $W \leq 12'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2. FOR EXTENSION RAFTER SPANS $W \leq 15'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2. FOR EXTENSION RAFTER SPANS $W \leq 15'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2. SCALE: 1/8"



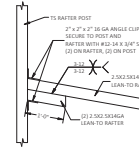
6A FOR LEAN-TO RAFTER SPANS $W \leq 12'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2 OR 1.2/3. FOR LEAN-TO RAFTER SPANS $W \leq 15'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2 OR 1.2/3. FOR LEAN-TO RAFTER SPANS $W \leq 15'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2 OR 1.2/3. SCALE: 1/8"



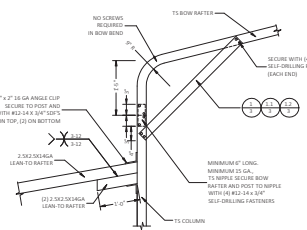
7A FOR EXTENSION RAFTER SPANS $W \leq 12'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2. FOR EXTENSION RAFTER SPANS $W \leq 15'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/3. FOR EXTENSION RAFTER SPANS $W \leq 15'-0"$, IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/3. SCALE: 1/8"



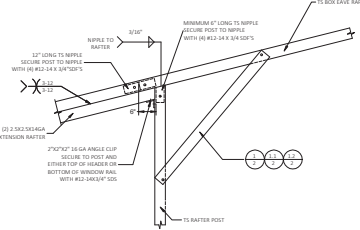
5B FOR EXTENSION RAFTER SPANS $12'-0\"/>$



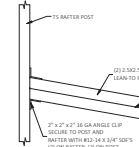
6B FOR LEAN-TO RAFTER SPANS $12'-0\"/>$



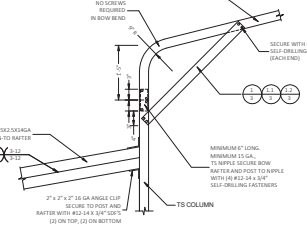
7B FOR EXTENSION RAFTER SPANS $12'-0\"/>$



5C FOR EXTENSION RAFTER SPANS $12'-0\"/>$



6C FOR LEAN-TO RAFTER SPANS $12'-0\"/>$



7C FOR EXTENSION RAFTER SPANS $12'-0\"/>$

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com
CA CERT. #30782

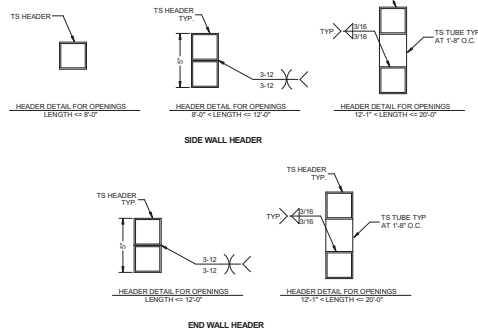
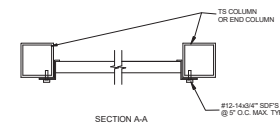
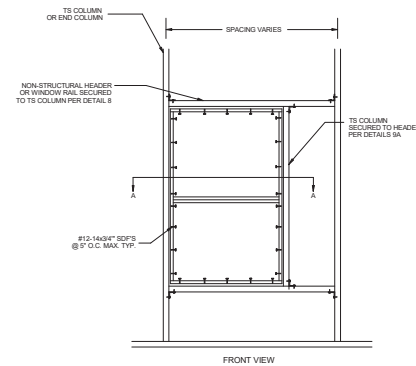
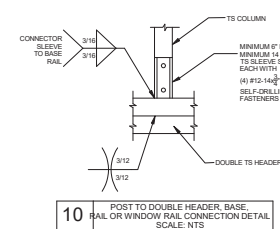
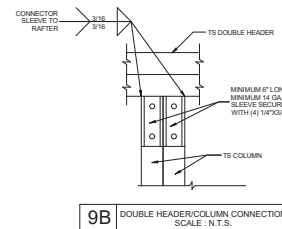
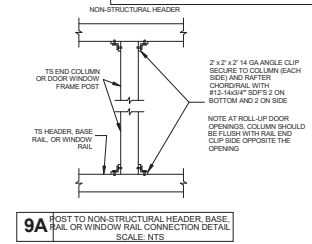
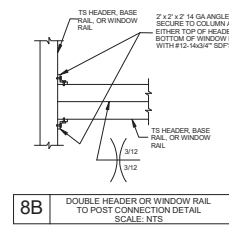
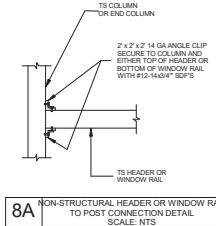
CONTRACTOR:
TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025
PROJECT DESCRIPTION:
30' WIDE X 20' HIGH
UTILITY STRUCTURE

DESIGN DATE: 03/27/2025
REVISION 1: DATE
REVISION 2: DATE
SCALE: NTS
PAGE: 6

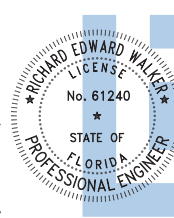
SPACING = 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 150 MPH
SPACING = 4'-0" FOR WIND SPEEDS BETWEEN 150 MPH AND 180 MPH

TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION

TYPICAL BOX EAVE RAFTER SIDE WALL 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
13:07:39-04'00'

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

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
--------------	------------

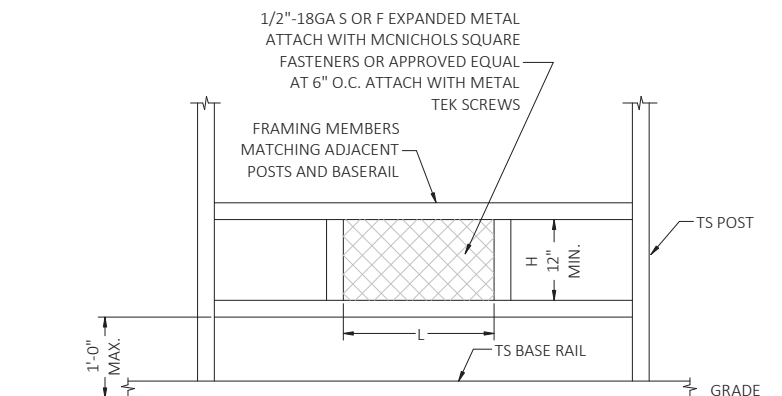
REVISION 1: DATE

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

SCALE: NTS

PAGE :

7



TYPICAL FLOOD VENT DETAIL

CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS:

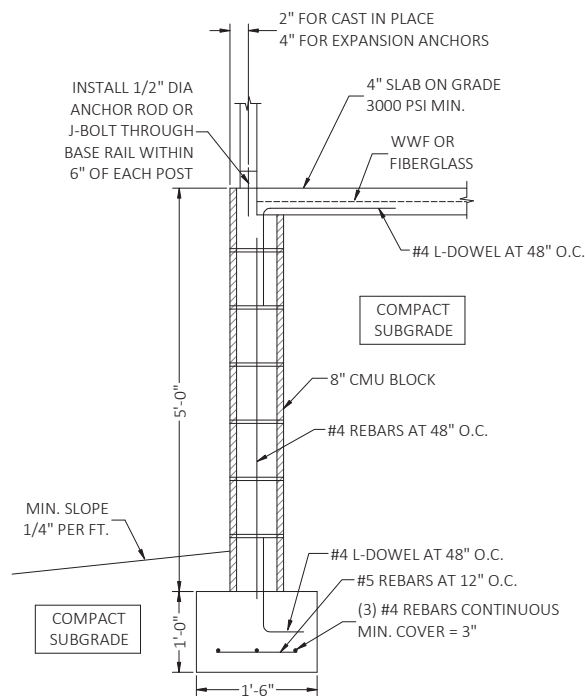
CONTRACTOR TO VERIFY THAT THE FINISHED FLOOR ELEVATION FOR THE PROPOSED STRUCTURE IS AT OR ABOVE THE GREATER OF THE FOLLOWING ELEVATIONS:

- 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:

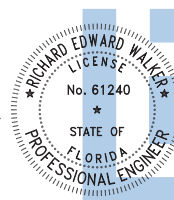
1. MINIMUM VENT SPACE REQUIRED = 1 SQ. IN. OF OPEN VENT AREA PER SQ. FT. OF ENCLOSED AREA.
2. PROVIDE A MINIMUM OF TWO OPENINGS ON DIFFERENT SIDES OF EACH ENCLOSED AREA.
3. APPLY A 1.3 FACTOR WHEN CALCULATING TOTAL OPEN AREA WHEN USING 1/2"-18GA S OR F EXPANDED METAL.
4. TOTAL OPEN AREA OF VENT = L X 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 $\frac{1}{2}$ " X 10 $\frac{1}{2}$ "	16 X 8	97	80.7
FS-1616	18 $\frac{1}{2}$ " X 18 $\frac{1}{2}$ "	16 X 16	191	158.2
FS-1412	17 $\frac{1}{2}$ " X 14 $\frac{1}{2}$ "	14 $\frac{1}{2}$ " X 12"	129	106.7
FS-1608-HEX	18 $\frac{1}{2}$ " X 10 $\frac{1}{2}$ "	16 X 8	110	91.4



STAND-ALONE CONCRETE MASONRY UNIT (CMU)
FOUNDATION STEM WALL DETAIL

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

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 :

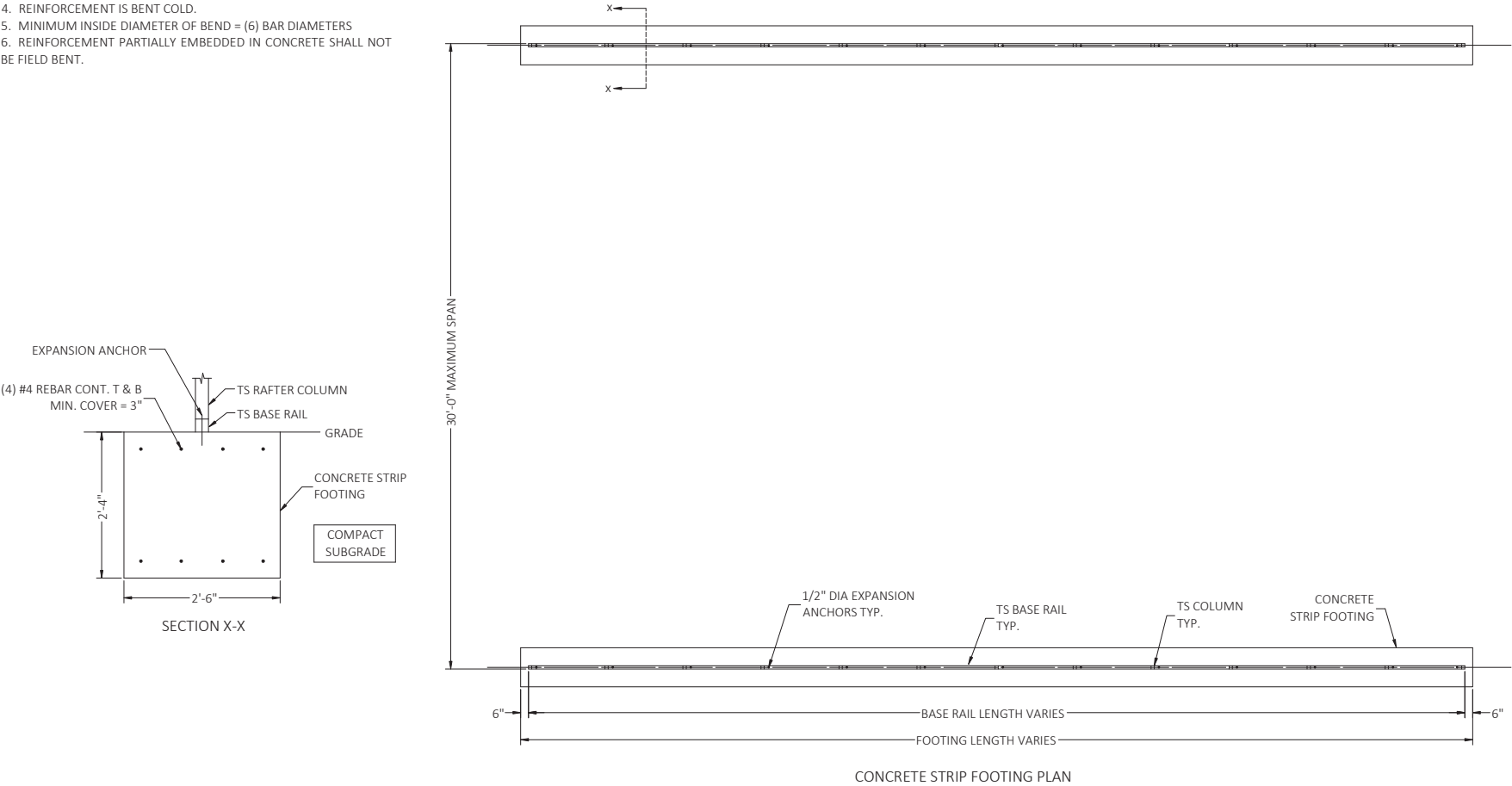
8

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

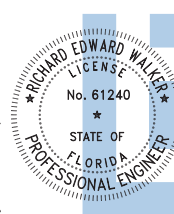
CONCRETE
MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

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 PERMENENTLY 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

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 :

9