GENERAL NOTES

- 1. DESIGN IS FOR MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT FULLY ENCLOSED 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
- 2. RISK CATEGORY: I
- 3. 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.

- 4. DEAD LOAD = 10 PSF
- 5. LIVE LOAD = 10 PSE
- 6 SPECIFICATIONS APPLICABLE TO 29 GALIGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" x 2 1/2" 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS FOR VERTICAL PANELS, 29 GAUGE METAL PANELS SHALL BE FASTENED TO 18 GAUGE HAT CHANNELS (UNLESS OTHERWISE NOTED).
- 7. OPTIONAL BASE RAIL ANCHORAGE MAY BE USED FOR LOW AND MUST BE USED FOR HIGH WIND
- 8. 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
- 9. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9"
- 10. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE: SOIL SITE CLASS = D

RISK CATEGORY I/II/III R = 3.25

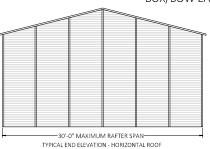
Sds = 0.087 g V = CsW Sdi = 0.084 g

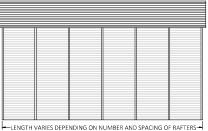
- 11. GROUND ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES.
- 12. GROUND ANCHOR (SOIL NAILS) CONSIST OF #5 REBAR W/ WELDED NUT X 30" LONG IN SUITABLE SOIL CONDITIONS MAY BE USED FOR LOW (≤ 108 MPH NOMINAL) WIND SPEEDS ONLY. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USE IN UNSUITABLE SOILS AS NOTED
- 13. MIN. LAP REQUIREMENT FOR REBAR IN FOOTER IS 25".
- 14. SOIL TO BE COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY, AT OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH ASTM D1557-93
- 15. PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE FBC.
- 16. 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

DRAWING INDEX

PAGE NO.	DESCRIPTION
1	NOTES AND SPECIFICATIONS
2	BOX EAVE FRAME RAFTER ENCLOSED BUILDING
3	BOW EAVE FRAME RAFTER ENCLOSED BUILDING/WIND PRESSURES
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

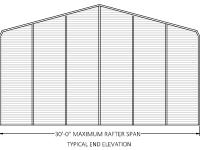
ENCLOSED METAL BUILDING DESIGN MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT **BOX/BOW EAVE FRAME**

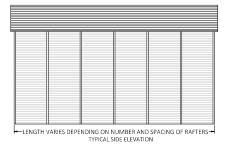




TYPICAL SIDE ELEVATION - HORIZONTAL ROOF

BOX EAVE FRAME RAFTER ENCLOSED BUILDING





BOW FRAME RAFTER ENCLOSEDBUILDING

PRODUCT CATEGORY	SUB CATEGORY	MANUFACTURER	APPROVAL No. & DATE
STRUCTURAL COMPONENTS	ROOF DECK	CAPITAL METAL SUPPLY, INC. 29 GA. CAPITAL RIB ROOF PANEL	FL20147.2-R3 12/13/2023
STRUCTURAL COMPONENTS	STRUCTURAL WALL	CAPITAL METAL SUPPLY, INC. 29 GA. CAPITAL RIB WALL PANEL	FL20148.2-R3 12/13/2023
EXTERIOR DOORS	ROLL-UP	JANUS INTERNATIONAL GROUP, LLC. SERIES 3652	FL14425.1-R6 12/15/21
EXTERIOR DOORS	ROLL-UP	JANUS INTERNATIONAL GROUP, LLC. SERIES 750	FL21450.10-R11 10/17/23
EXTERIOR DOORS	ROLL-UP	JANUS INTERNATIONAL GROUP, LLC. SERIES 3100	FL12765.4-R6 10/12/20
EXTERIOR DOORS	SWINGING	ELIXIR DOOR AND METAL COMPANY SERIES 407	FL17996.5-R3 12/26/23
WINDOWS	SINGLE HUNG	KINRO, INC 9750 SH	FL993.5-R19 11/01/23
WINDOWS	VERTICAL SLIDING	KINRO, INC 18000-R VS	FL993.8-R19 11/01/23

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 seaded by Richard E. Walker, P.E. on the data adjacent to the seal. Printed copies of this document are not considered signed and sealed and he signature must be verified on any electronic copies.

Digitally signed by

2024.01.16 10:25:52-05'00

CA CERT #30782

2322771-30-

9

PROJECT

T CHARLOTTE, FLORIDA 33952 (941) 391-5980 FLEng.com Orders@FLEng.com 5 LNN ENGINEERING TAMIAMI TRAIL, FLORIDA

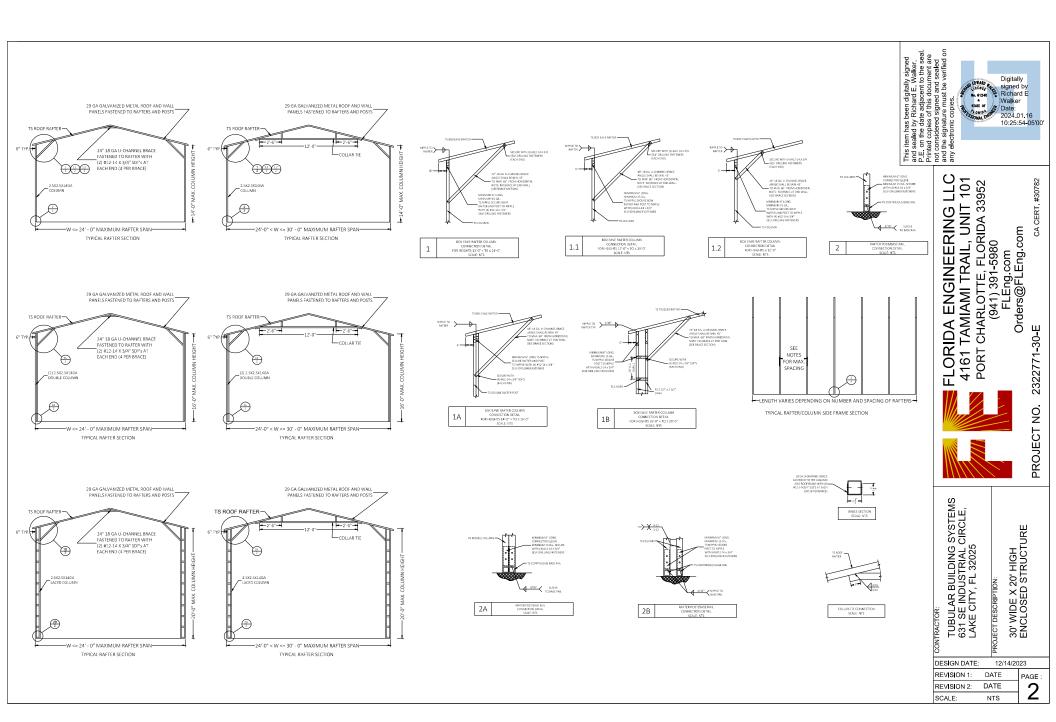
PORT 4161

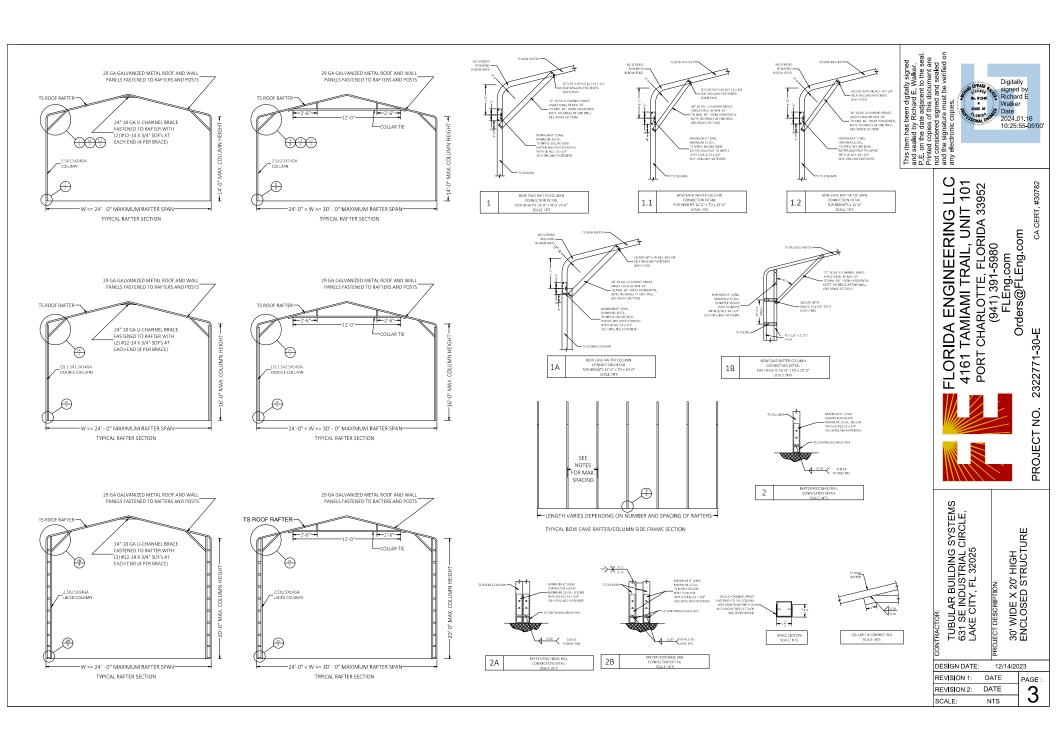


TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE, LAKE CITY, FL 32025

30' WIDE X 20' HIGH ENCLOSED STRUCTURE PROJECT DESCRIPTION

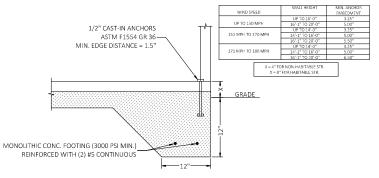
CONTRACTOR TUBUI 631 SE LAKE (PROJECT DES	ENCLO
DESIGN DATE:	12/14/20	023
REVISION 1:	DATE	PAGE :
REVISION 2:	DATE	1
SCALE:	NTS	



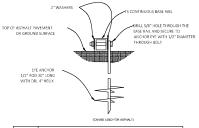


BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED

ANCHOR EDGE INSTALL 1/2" x 6 3/4" EXPANSION ANCHOR DISTANCE = 4" THROUGH BASE RAIL WITHIN 6" OF EACH POST X = 4" FOR NON-HABITABLE STR. X = 8" FOR HABITABLE STR. GRADE VARIES-MONOLITHIC CONC. FOOTING (3000 PSI MIN.) REINFORCED WITH (2) #5 CONTINUOUS CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE 3A1







GROUND BASE HELIX ANCHORAGE 3B

This item has been digitally signed and seated 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.

DRILL 5/8* DIAMETER HOLE THROUGH THE BASE

DIAMETER THROUGH BOLT

RAIL AND SECURE TO

3/4" DIA X 30" MIN.

TOP VIEW

TOP OF ASPHALT PAVEMENT OR -GROUND SURFACE

3C

SECTION

3D

TS CONTINUOUS

BASE BAIL

COMPACT SUBGRADE

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

TYPICAL ANCHOR DETAIL WHEN BASE

RAIL IS NEAR EDGE OF CONCRETE

Digitally signed by Richard E Walker 2024.01.16 10:25:56-05'00

101 ENGINEERING

CA CERT #30782

2322771-30-E

PROJECT NO.

30' WIDE X 20' HIGH ENCLOSED STRUCTURE

T CHARLOTTE, FLORIDA 33952 (941) 391-5980 FLEng.com Orders@FLEng.com TAMIAMI TRAIL, UNIT FLORIDA 161 PORT





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

DESIGN DATE: 12/14/2023

REVISION 1: DATE PAGE: REVISION 2: DATE SCALE: NTS

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

REINFORCING STEEL:

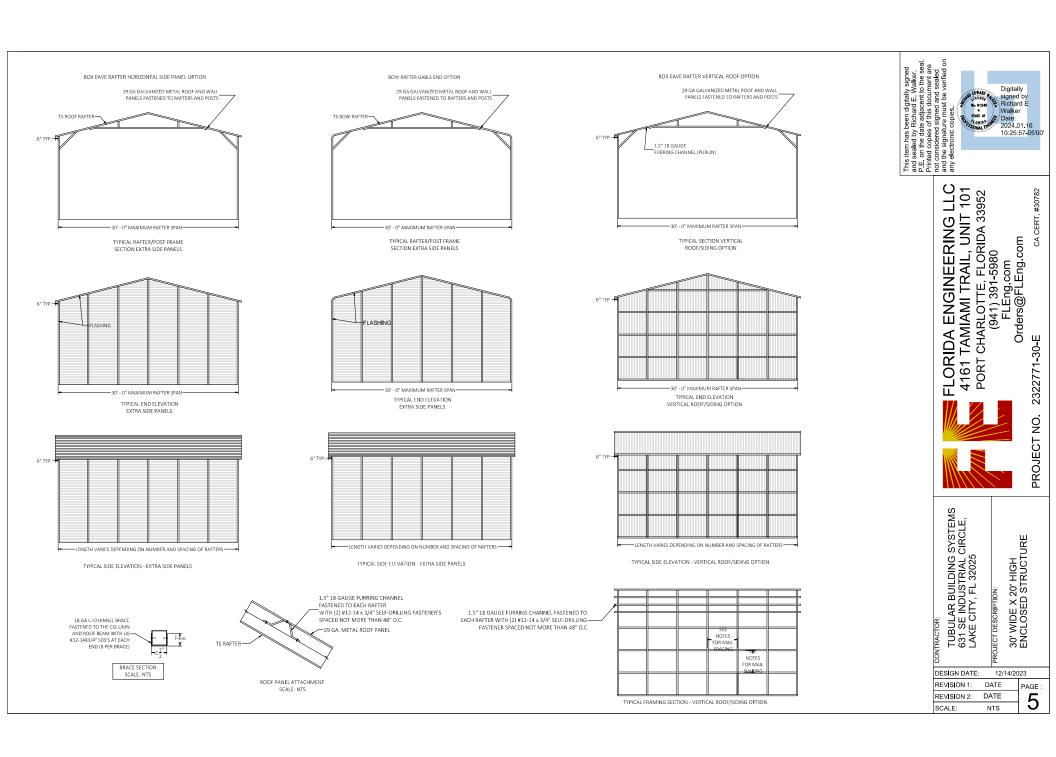
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

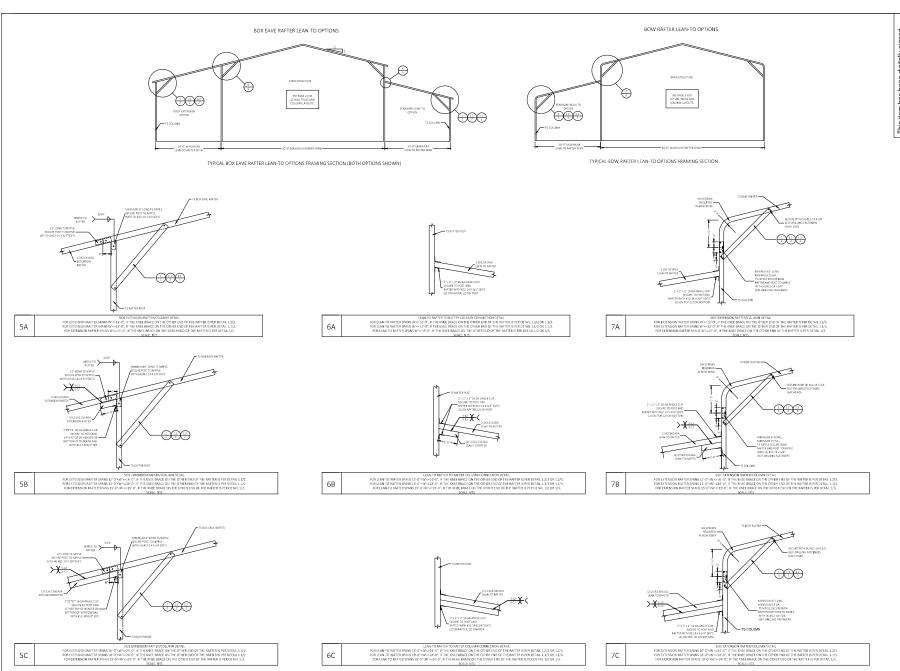
REINFORCEMENT MAY BE RENT IN THE FIELD OR SHOP AS LONG AS:

- 1. IT IS BENT COLD:
- REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT;
 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 GRAVE 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
- 4 FOR LOOSE TO MEDIUM DENSE COARSE SANDS. FIRM TO STIFE CLAYS. AND SILTS ALLUVIAL FILL USE MINIMUM (2) 6" HELICES WITH MINIMUM SO 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.





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 STATE OF Date: 2024.01.16 10:25:58-05'00

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

CA CERT. #30782

2322771-30-E

PROJECT NO.



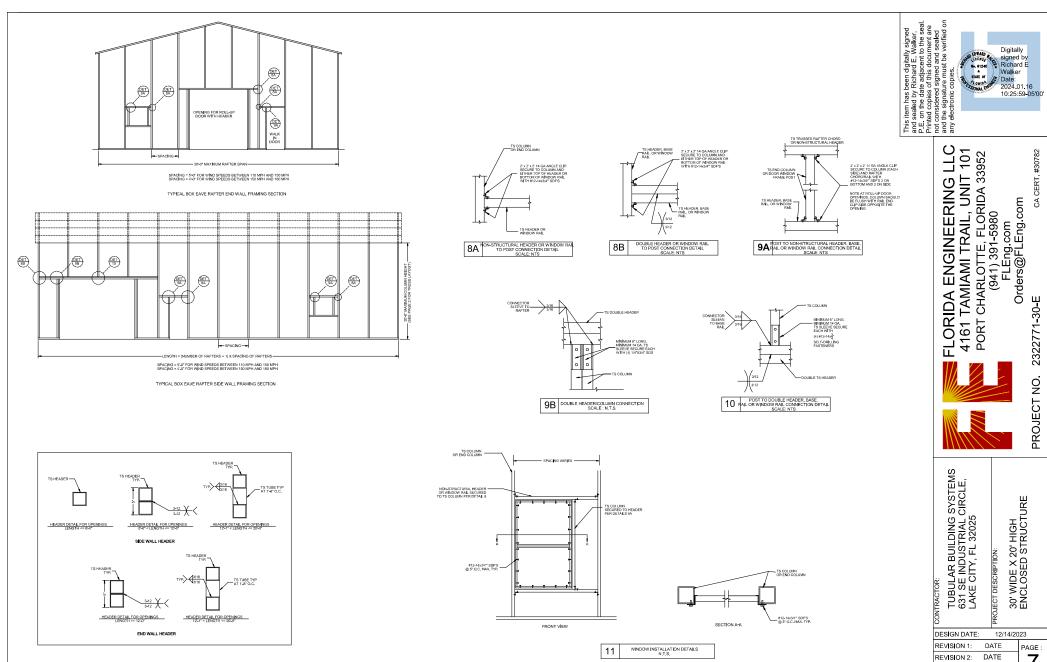




TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE, LAKE CITY, FL 32025

30' WIDE X 20' HIGH ENCLOSED STRUCTURE PROJECT DESCRIPTION

DESIGN DATE: 12/14/2023 REVISION 1: DATE PAGE DATE REVISION 2: 6 SCALE: NTS







CA CERT #30782

2322771-30-E

PROJECT NO.







30' WIDE X 20' HIGH ENCLOSED STRUCTURE

12/14/2023 DATE DATE NTS

PAGE SCALE:

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

CA CERT #30782

2322771-30-E

PROJECT NO.





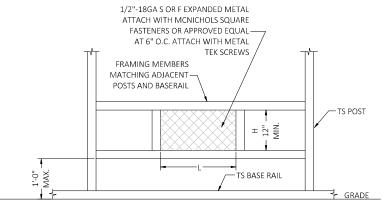


TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE, LAKE CITY, FL 32025

SCALE:

30' WIDE X 20' HIGH ENCLOSED STRUCTURE

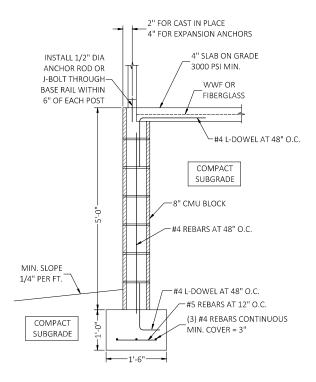
DESIGN DATE: 12/14/2023 REVISION 1: DATE PAGE: DATE REVISION 2: 8 NTS



TYPICAL FLOOD VENT DETAIL

NOTES:

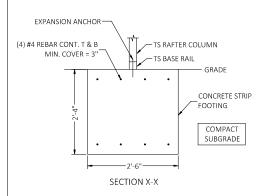
- 1. MINIMUM VENT SPACE REQUIRED = 1 SQ. IN. OF OPEN VENT AREA PER SQ. FT. OF BUILDING AREA.
- 2. PROVIDE A MINIMUM OF TWO OPENINGS ON DIFFERENT SIDES OF EACH ENCLOSED BUILDING.
- 3. APPLY A 1.3 FACTOR WHEN CALCULATING TOTAL OPEN AREA WHEN USING 1/2"-18GA S OR F EXPANDED METAL.
- 4. TOTAL OPEN AREA OF 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 USED.



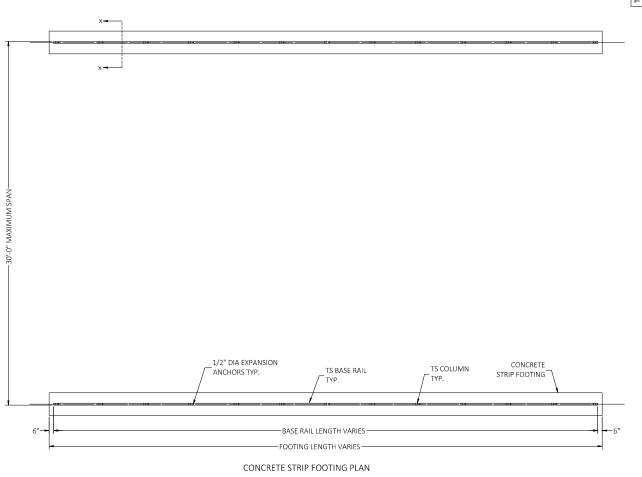
STAND-ALONE CONCRETE MASONRY UNIT (CMU) FOUNDATION STEM WALL DETAIL



- 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 seated 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 STATE OF Date: 2024.01.16 10:26:01-05'00'

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

CA CERT #30782

2322771-30-E

PROJECT NO.







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

12/14/2023 DATE

NTS

30' WIDE X 20' HIGH ENCLOSED STRUCTURE

DESIGN DATE: REVISION 1: PAGE: DATE REVISION 2:

SCALE: