

APPLICABLE CODES, REGULATIONS, & STANDARDS

- A. THE 2023 FLORIDA BUILDING CODE, 8TH EDITION  
B. ASCE/SEI 7-22: MINIMUM DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES  
C. ACI 318-19: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE  
D. AISC STEEL CONSTRUCTION MANUAL (15TH EDITION)  
E. AWS D1.1: STRUCTURAL WELDING

1. THESE PLANS BELONG EXCLUSIVELY TO THE STRUCTURE, INCLUDING MAIN WIND FORCE RESISTING SYSTEM (MWFRS), COMPONENTS AND CLADDING (C&C), AND BASE RAIL ANCHORAGE. OTHER DESIGN ISSUES, INCLUDING BUT NOT LIMITED TO PROPERTY SET-BACKS, ELECTRICAL, PLUMBING, INGRESS/EGRESS, FINISH FLOOR SLOPES AND ELEVATIONS, OR OTHER LOCAL ZONING REQUIREMENTS ARE THE LIABILITY OF OTHERS.

2. THESE STRUCTURES ARE ENGINEERED AS CAPABLE OF SUPPORTING DEAD LOAD OF THE STRUCTURE AND LIVE AND WIND LOADS. UPGRADES NOT SPECIFICALLY ADDRESSED HEREIN, SUCH AS WINDOWS, DOORS, OR ANOTHER COMPONENT NOT LISTED IN THE FLORIDA BUILDING CODE APPROVED PRODUCT LIST, AND NOT PROVIDED AND INSTALLED BY TUBULAR BUILDING SYSTEMS, WHICH CAUSE ADDITIONAL LOADS ON THE STRUCTURE SHALL BE AT THE OWNER'S RISK. FLORIDA ENGINEERING LLC, SHALL NOT BE RESPONSIBLE FOR FAILURE OR STRUCTURAL DAMAGE DUE TO THE EXTRA LOAD.

3. LOW ULTIMATE WIND SPEED 105 TO 140 MPH (NOMINAL WIND SPEED 81 TO 108 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 5.0 FEET.

4. HIGH ULTIMATE WIND SPEED 141 TO 170 MPH (NOMINAL WIND SPEED 109 TO 132 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 4.0 FEET.

5. ALL STEEL TUBING SHALL BE 50 KSI GALVANIZED STEEL. ALL FASTENERS SHALL BE ZINC COATED HARDWARE.

6. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" x 2 1/2" - 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS FOR VERTICAL PANELS, 26 GAUGE METAL PANELS SHALL BE FASTENED TO 18 GAUGE HAT CHANNELS (UNLESS OTHERWISE NOTED).

7. 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.

8. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9" OR END = 6", (MAX.).

9. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:  
SOIL SITE CLASS = D  
RISK CATEGORY I/II/III  
R = 3.25      Ie = 1.0  
Sds = 0.087 g      V = CsW  
Sdi = 0.084 g

10. GROUND ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES.

11. 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.

12. MIN. LAP REQUIREMENT FOR REBAR IN FOOTER IS 25".

13. SOIL TO BE COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY, AT OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH ASTM D1557-93

14. PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE FBC. FOR RISK CATEGORY II, III, & IV STRUCTURES ONLY.

15. ALL OPEN AREAS OF CONCRETE OUTSIDE OF THE PROPOSED STRUCTURE SHALL BE DESIGNED TO SLOPE AWAY FROM THE STRUCTURE.

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.

PRODUCT CATEGORY	SUB CATEGORY	MANUFACTURER	APPROVAL No. & DATE
STRUCTURAL COMPONENTS	ROOF DECK	GULF COAST SUPPLY & MANUFACTURING, LLC. 03: 29GA GULFRIB ON PURLINS	FL44688.03 02/13/2024
STRUCTURAL COMPONENTS	STRUCTURAL WALL	CAPITAL METAL SUPPLY, INC. 29 GA. CAPITAL RIB WALL PANEL	FL20148.2-R3 12/13/23
EXTERIOR DOORS	ROLL-UP	C.H.I. OVERHEAD DOORS 15012.14 PAN DOORS, RESIDENTIAL	FL15012.14-R11 12/12/23
EXTERIOR DOORS	SWINGING	PLASTPRO INC. / NANYA PLASTICS CORP. A. SMOOTH/WOOD GRAIN/RUSTIC/ MAHOGANY SERIES N FIBERGLASS DOOR	FL15220.1-R5 10/17/23
WINDOWS	SINGLE HUNG	MI WINDOWS AND DOORS 3500 HP	FL17894.1-R7 04/09/24

CTP = CONTRACTOR TO PROVIDE APPROVED PRODUCTS THAT MEET OR EXCEED WIND DESIGN PRESSURES.

DESIGN DATA		
DESIGN CRITERIA :	ASCE/SEI 7	
RISK CATEGORY :	II	
OCCUPANCY CLASSIFICATION :	R3	
CONSTRUCTION TYPE :	II-B	
DEFLECTION LIMIT =	L/240	
ULTIMATE DESIGN WIND SPEED (MPH) VULT =	120	
NOMINAL DESIGN WIND SPEED (MPH) VASD =	93	
EXPOSURE CATEGORY :	C	
MEAN BUILDING HEIGHT (FT) =	12.25	
MINIMUM BUILDING PLAN DIMENSION (FT) =	36.00	
END ZONE DIMENSION (FT) a =	3.60	
ROOF STYLE :	GABLE	
ROOF PITCH (IN 12) :	3	
OCCUPANCY CLASSIFICATION :	PARTIALLY OPEN	
DEAD LOAD (DUE TO SELF-WEIGHT) =	5.2 PSF	
ROOF LIVE LOAD =	12 PSF	
GROUND SNOW LOAD =	0 PSF	

ADJUSTED C & C WIND PRESSURES (ASD) (PSF)		
EFFECTIVE WIND AREA FOR ROOF (SQ. FT) :	108.00	
ZONE 1' (POSITIVE) =	NA	
ZONE 1' (NEGATIVE) =	NA	
ZONE 1' (OVERHANG) =	NA	
ZONE 1 (POSITIVE) =	8.7	
ZONE 1 (NEGATIVE) =	-18.1	
ZONE 1 (OVERHANG) =	-31.2	
ZONE 2 (POSITIVE) =	8.7	
ZONE 2 (NEGATIVE) =	-24.5	
ZONE 2 (OVERHANG) =	-37.6	
ZONE 3 (POSITIVE) =	8.7	
ZONE 3 (NEGATIVE) =	-31.7	
ZONE 3 (OVERHANG) =	-44.8	
EFFECTIVE WIND AREA FOR WALLS (SQ. FT) :	33.33	
ZONE 4 (POSITIVE) =	17.4	
ZONE 4 (NEGATIVE) =	-19.0	
ZONE 5 (POSITIVE) =	17.4	
ZONE 5 (NEGATIVE) =	-22.4	

CONTRACTOR TO PROVIDE BUILDING CODE APPROVED PRODUCTS TO MEET OR EXCEED THE DESIGN PRESSURES AS TABULATED.

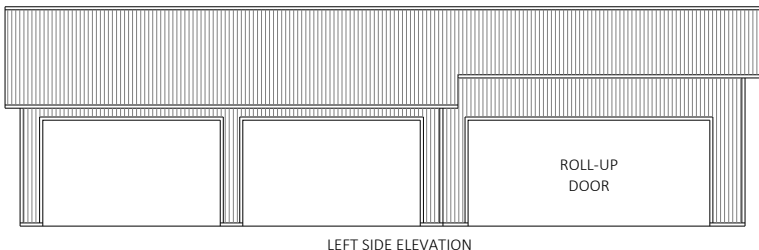
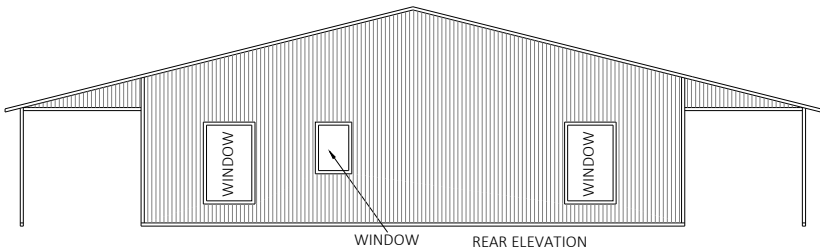
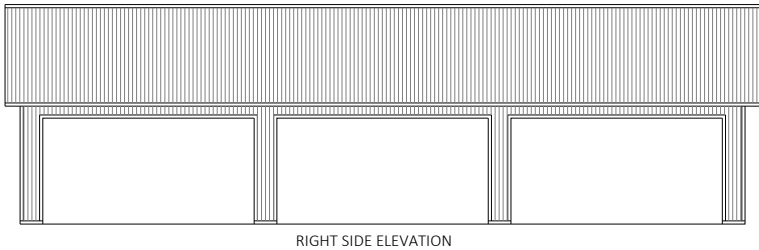
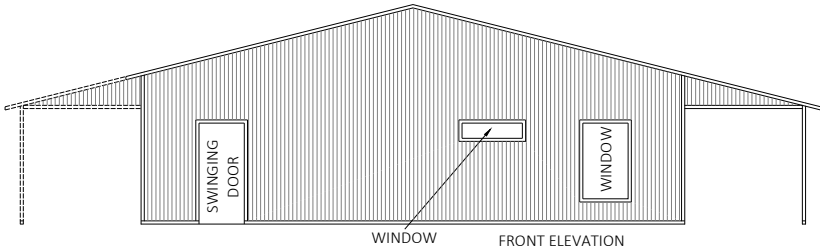
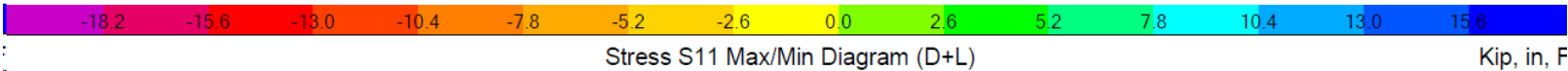
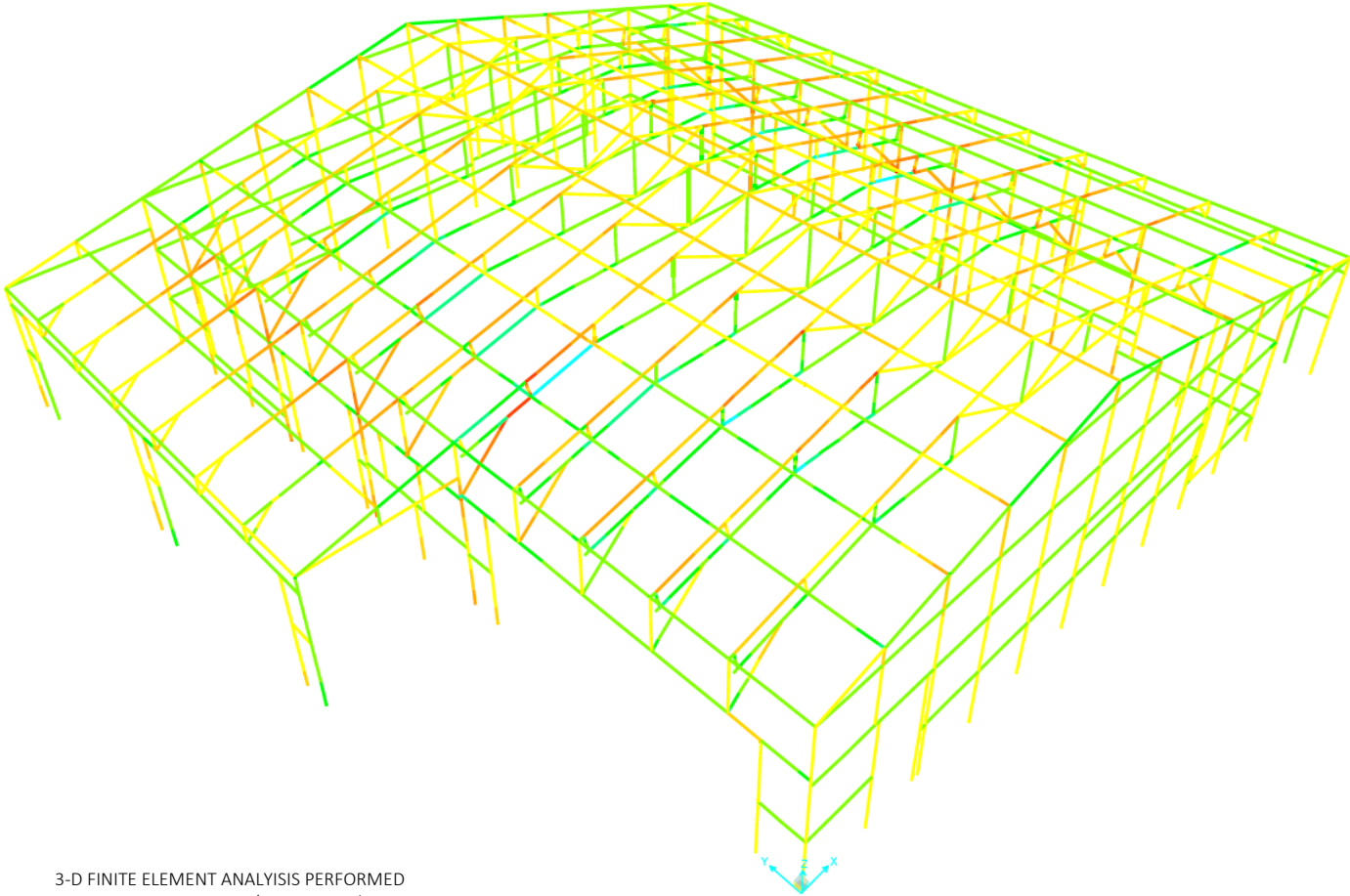
ADJUSTED C & C WIND PRESSURES (ASD) (PSF) FOR OPENINGS	
SWING DOOR	
EFFECTIVE WIND AREA (SQ. FT) =	20.00
ZONE 4 (POSITIVE) =	18.1
ZONE 4 (NEGATIVE) =	-19.7
ZONE 5 (POSITIVE) =	18.1
ZONE 5 (NEGATIVE) =	-23.6
ROLL-UP DOOR	
EFFECTIVE WIND AREA (SQ. FT) =	112.00
ZONE 4 (POSITIVE) =	15.9
ZONE 4 (NEGATIVE) =	-17.6
ZONE 5 (POSITIVE) =	15.9
ZONE 5 (NEGATIVE) =	-19.4
WINDOW	
EFFECTIVE WIND AREA (SQ. FT) =	4.00
ZONE 4 (POSITIVE) =	18.9
ZONE 4 (NEGATIVE) =	-20.5
ZONE 5 (POSITIVE) =	18.9
ZONE 5 (NEGATIVE) =	-25.3

PROPOSED METAL BUILDING FOUNDATION & SHELL STRUCTURAL DESIGN ONLY. ALL OTHER REQUIRED PERMITS TO BUILD OUT TO A HABITABLE LIVING SPACE ARE TO BE BY OTHERS/ PER SEPERATE CERTIFICATE. INCLUDING BUT NOT LIMITED TO, ELECTRICAL, PLUMBING, ENERGY CALCS., ETC. FOR MORE INFORMATION VISIT: <https://flengineeringllc.com/order/> OR SCAN QR CODE.

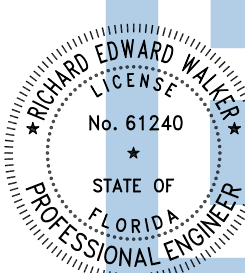


THE ENGINEERING ON THESE PLANS IS SITE SPECIFIC FOR (1) STRUCTURE ONLY AT THE PROVIDED ADDRESS(ES).

SHEET NO.	DRAWING INDEX
S/01	GENERAL NOTES
S/02	PLAN/ ELEVATIONS
S/03	FOUNDATION PLAN
S/04	DETAILS



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FLORIDA ENGINEERING LLC

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CA CERT. #30782

PROJECT NO. 2418731-R

CONTRACTOR:

TUBULAR BUILDING SYSTEMS

P.O. BOX. 2254

LAKE CITY, FL 32056

PROJECT ADDRESS:

LANGLEY

1833 SE ALFRED MARKHAM RD

LAKE CITY, FL 32025

DESIGN DATE: 07/18/2024

REVISION 1: DATE

REVISION 2: DATE

DRAWN BY: TCP

SCALE: NTS

SHEET:

01

A circular professional engineer seal for Richard Edward Walker. The outer ring contains the text "RICHARD EDWARD WALKER" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. Inside this ring, the word "LICENSE" is at the top and "STATE OF FLORIDA" is at the bottom, also separated by two stars. In the center of the seal, the license number "No. 61240" is displayed above a single star.

CA CERT. #30782

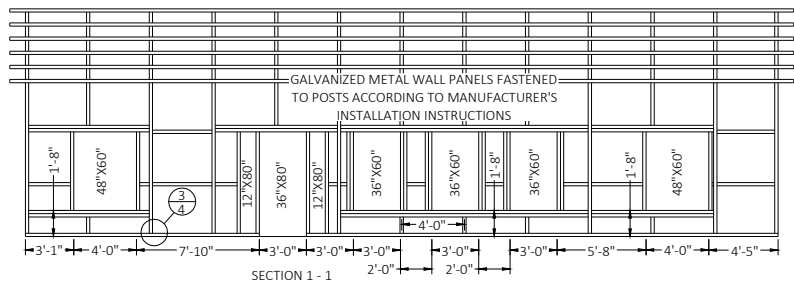
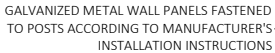
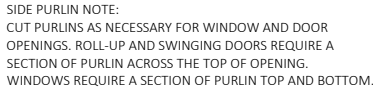
PROJECT NO. 2418731-R



JECT ADDRESS:  
 LANGLEY  
 1833 SE ALFRED MARKHAM RD  
 LAKE CITY, FL 32025

PROJECT ADDRESS:

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SHEET:  
02



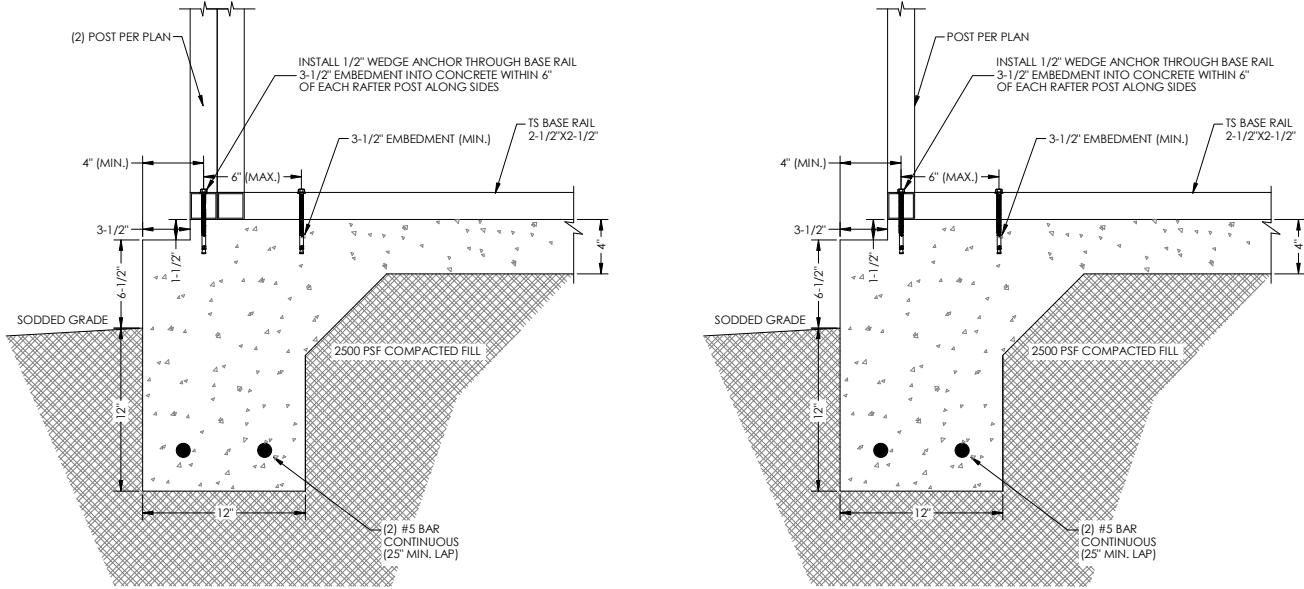
 - 2.5X2.5X14GA COLUMN  
 - (2) 2.5X2.5X14GA COLUMN

GENERAL NOTES

- CONCRETE:
1. CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
  2. ALL OPEN AREAS OF CONCRETE OUTSIDE OF THE PROPOSED STRUCTURE SHALL BE DESIGNED TO SLOPE AWAY FROM THE STRUCTURE.
  3. WHERE CONCRETE SPECIFICATIONS ARE REQUIRED, BY ONE OR MORE REGULATORY AGENCY, THE FOLLOWING SPECIFICATIONS ARE APPLICABLE:
    - a. CONCRETE SHALL CONFORM TO ASTM C94 FOR THE FOLLOWING COMPONENTS:
      - i. PORTLAND CEMENT TYPE 1 - ASTM C 150
      - ii. AGGREGATES - LARGE AGGREGATE 3/4 MAX. - ASTM C 33
      - iii. AIR ENTRAINING +/- 1 % - ASTM C 260
      - iv. WATER REDUCING AGENT - ASTM C 494
      - v. CLEAN POTABLE WATER
      - vi. OTHER ADMIXTURES NOT PERMITTED
    - b. CONCRETE SLUMP AT DISCHARGE CHUTE NOT LESS THAN 3" OR MORE THAN 5". WATER ADDED AFTER BATCHING IS NOT PERMITTED.
    - c. PREPARE & PLACE CONCRETE PER AMERICAN CONCRETE INSTITUTE MANUAL OF STANDARD PRACTICE, PART 1, 2, & 3 INCLUDING HOT WEATHER RECOMMENDATIONS.
    - d. MOIST CURE OR POLYETHYLENE CURING PERMITTED.
    - e. PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE BUILDING CODE (FOR RISK CATEGORY II, III, & IV STRUCTURES ONLY).
    - f. CONCRETE SLAB SHALL BE PLACED OVER A POLYETHYLENE VAPOR BARRIER (SLAB ONLY).

- REINFORCING STEEL:
1. THE REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.
  2. REINFORCEMENT MAY BE BENT IN THE FIELD OR SHOP AS LONG AS:
    - a. IT IS BENT COLD;
    - b. REINFRCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT;
    - c. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.
  3. 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.

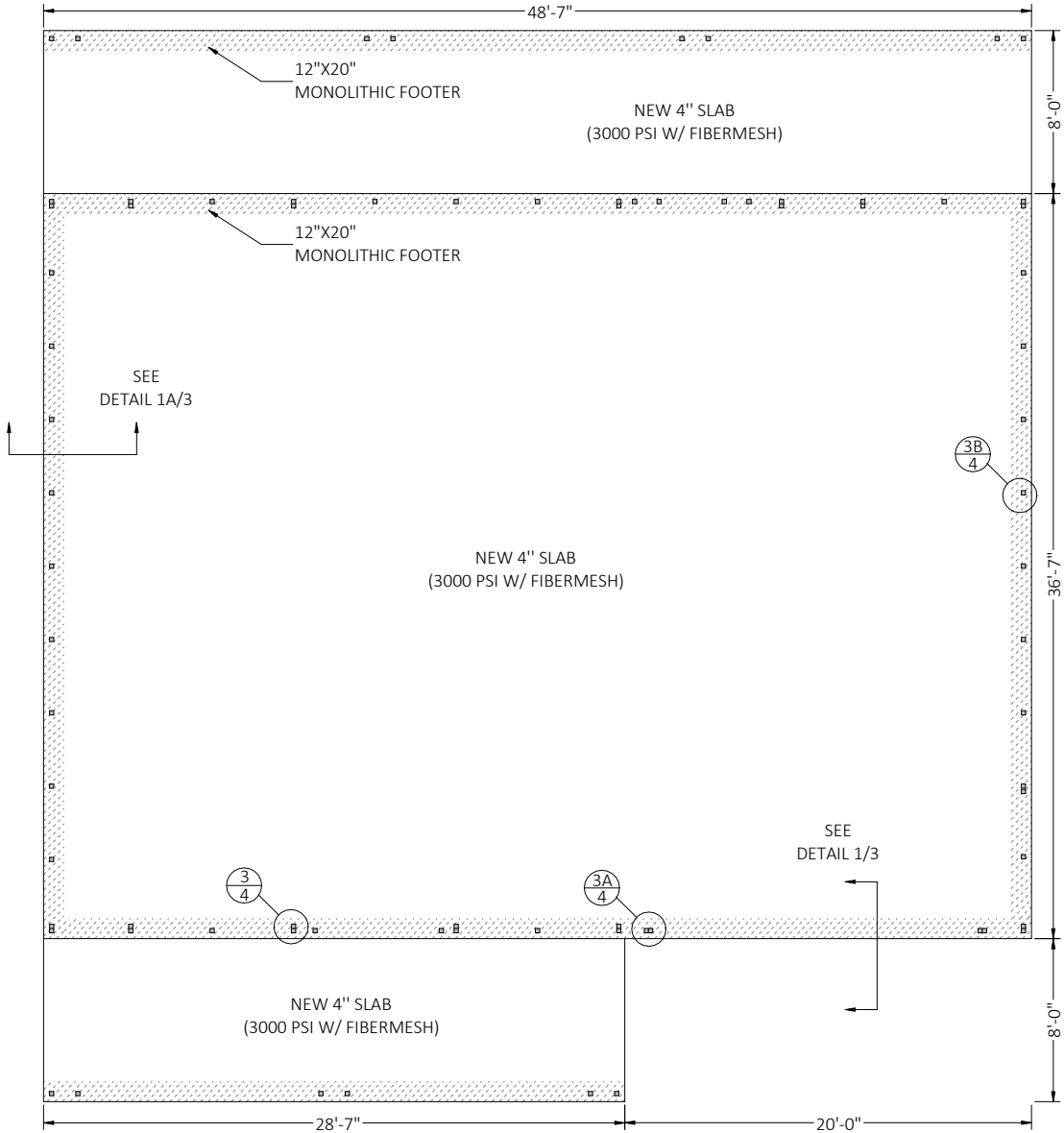
- FROST PROTECTION:
1. FOUNDATION SHALL BE PROTECTED AGAINST FROST USING RIGID FOAM INSULATION (EPS OR EQUIVALENT). FOR NO FROST PROTECTION OPTION, COORDINATE WITH LOCAL BUILDING CODE AND/OR BUILDING OFFICIAL REGARDING REQUIRED FOOTING DEPTH BASED ON FROST LINE DEPTH.



1 12"x20" MONO. FOOTER BASE RAIL ANCHORAGE  
SCALE: NTS

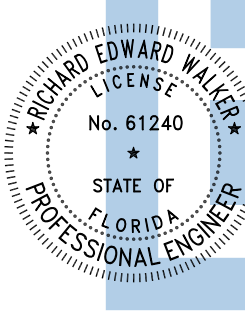
1A 12"x20" MONO. FOOTER BASE RAIL ANCHORAGE  
SCALE: NTS

- 2.5X2.5X14GA COLUMN
- (2) 2.5X2.5X14GA COLUMN



FOUNDATION PLAN SCALE :  
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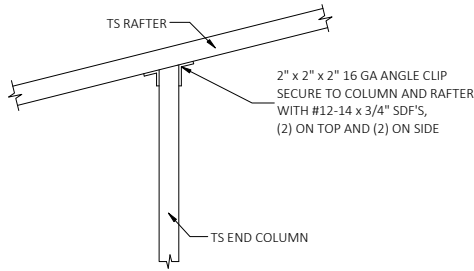
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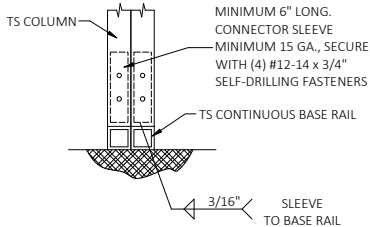
PROJECT NO. 2418731-R

CONTRACTOR: TUBULAR BUILDING SYSTEMS P.O. BOX. 2254 LAKE CITY, FL 32056		PROJECT ADDRESS: LANGLEY 1833 SE ALFRED MARKHAM RD LAKE CITY, FL 32025	
DESIGN DATE:		07/18/2024	
REVISION 1:		DATE	
REVISION 2:	DATE	SHEET <div>03</div>	
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SCALE: NTS			

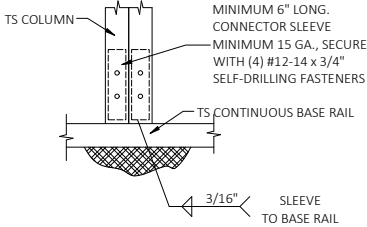




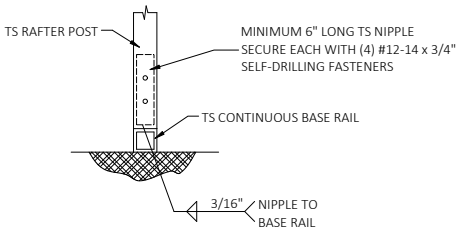
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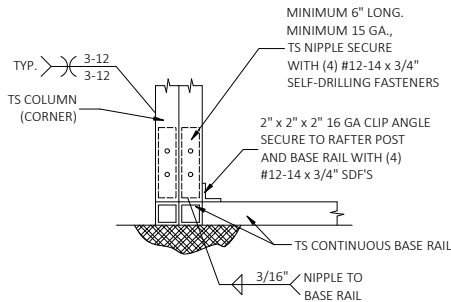
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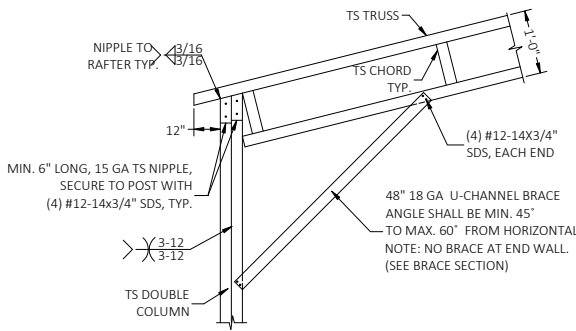
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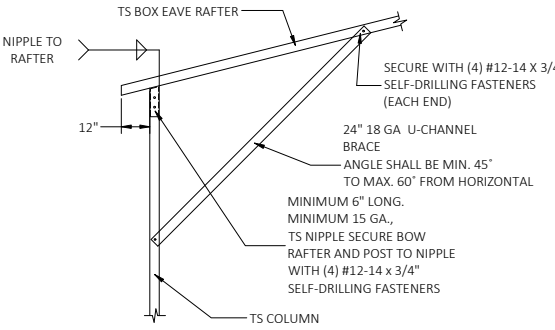
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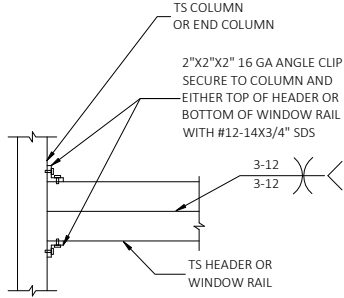
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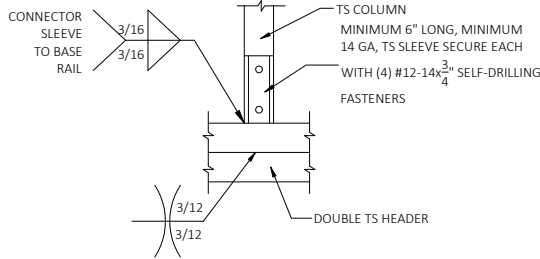
5 BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL SCALE: NTS



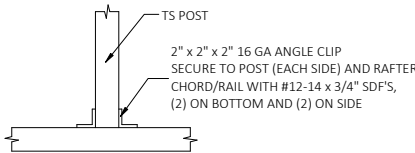
6 BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL SCALE: NTS



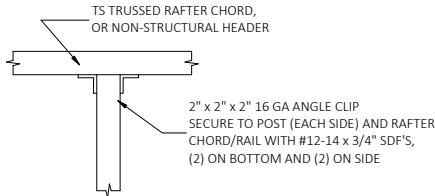
7 DOUBLE HEADER TO COLUMN CONNECTION DETAIL SCALE: NTS



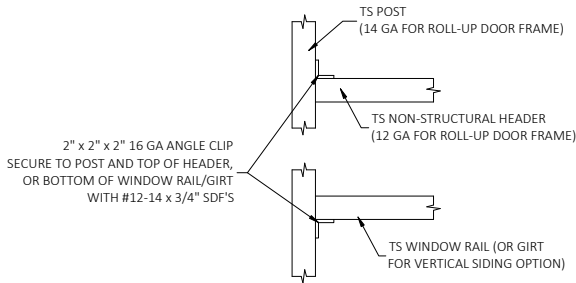
8 COLUMN/DOUBLE HEADER CONNECTION DETAIL SCALE: NTS



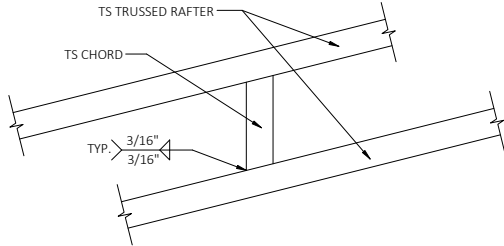
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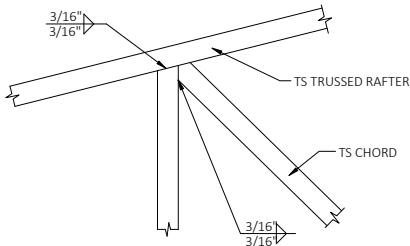
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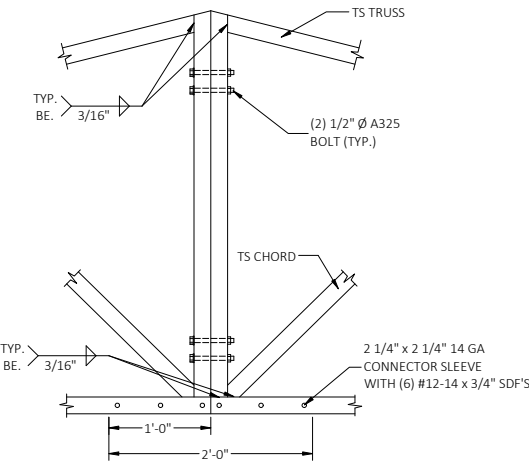
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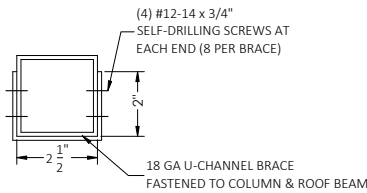
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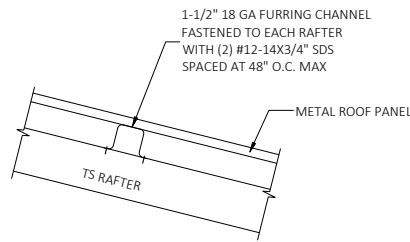
13 CHORD/RAFTER CONNECTION DETAIL SCALE: NTS



14 SPLICE CONNECTION DETAIL SCALE: NTS

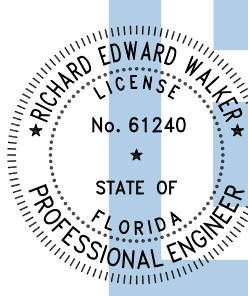


15 BRACE SECTION SCALE: NTS



16 PANEL ATTACHMENT (ALTERNATE FOR VERTICAL ROOF PANELS) SCALE: NTS

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PROJECT NO. 2418731-R

CONTRACTOR:  
TUBULAR BUILDING SYSTEMS  
P.O. BOX. 2254  
LAKE CITY, FL 32056

PROJECT ADDRESS:  
LANGLEY  
1833 SE ALFRED MARKHAM RD  
LAKE CITY, FL 32025

DESIGN DATE: 07/18/2024

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