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

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 THIS CONNECTION PATTERN SHALL BE SUPERCEDED BY THE PANEL MANUFACTURER'S INSTALLATION INSTRUCTIONS.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 = 3.25 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.

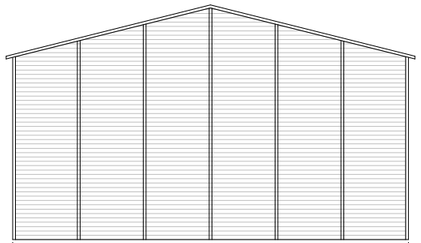
18. A LANDING OF MIN. 36" WIDTH IN THE DIRECTION OF TRAVEL SHALL BE PROVIDED AT THE EXTERIOR DOORS. SLOPE OF LANDING NOT TO EXCEED 1/4"-1'. LANDING LEVEL NOT TO BE LOWER THAN 1-1/2" (FOR EGRESS DOORS) & 7-3/4" (FOR OTHER EXTERIOR DOORS) BELOW THE TOP OF THRESHOLD.

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

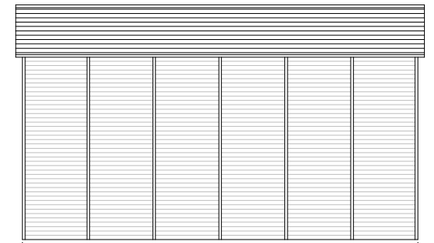
20. CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS:
CONTRACTOR TO VERIFY THAT THE FINISHED FLOOR ELEVATION FOR THE PROPOSED STRUCTURE IS AT OR ABOVE THE GREATER OF THE FOLLOWING ELEVATIONS:
I) BFE (BASE FLOOD ELEVATION) + 2'-0"
II) DFE (DESIGN FLOOD ELEVATION)
III) THE MINIMUM ELEVATION MANDATED BY THE BUILDING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

DRAWING INDEX

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

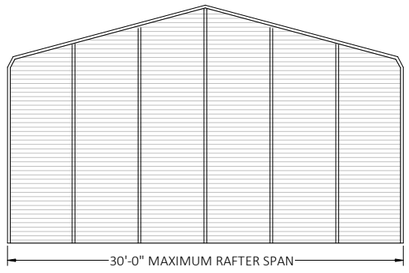


TYPICAL END ELEVATION - HORIZONTAL ROOF

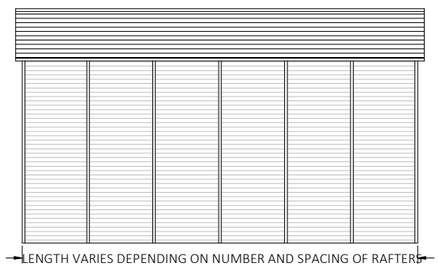


TYPICAL SIDE ELEVATION - HORIZONTAL ROOF

BOX EAVE FRAME RAFTER ENCLOSED BUILDING



TYPICAL END ELEVATION



TYPICAL SIDE ELEVATION

BOW FRAME RAFTER ENCLOSEDBUILDING

FLORIDA ENGINEERING LLC PROJECT NO. 2504211-30-E SIGNED AND SEALED DATED 03/27/2025 REVISES AND SUPERSEDES FLORIDA ENGINEERING LLC PROJECT NO. 2322771-30-E SIGNED AND SEALED DATED 03/04/2024.

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.

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

Digitally signed by Richard E Walker
Date: 2025.03.27 13:07:41-04'00'

FLORIDA ENGINEERING LLC
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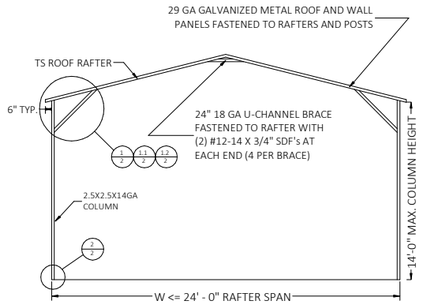
Orders@FLEng.com
CA CERT. #30782

PROJECT NO. 2504211-30-E

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

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

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



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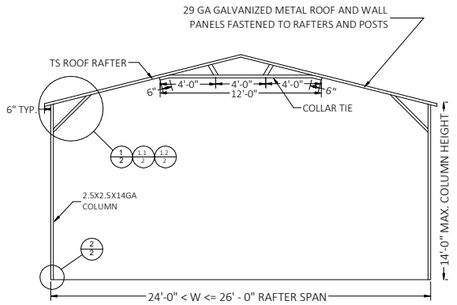

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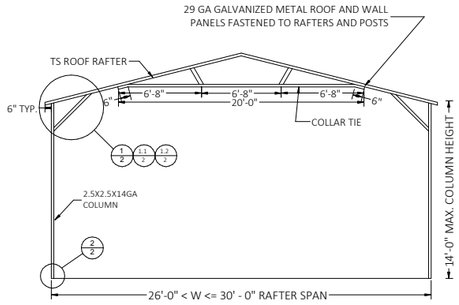

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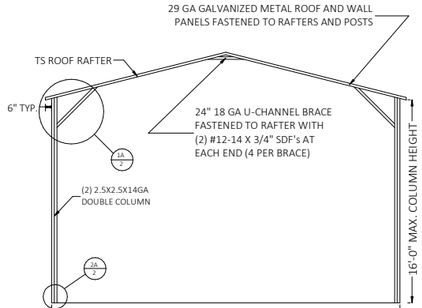

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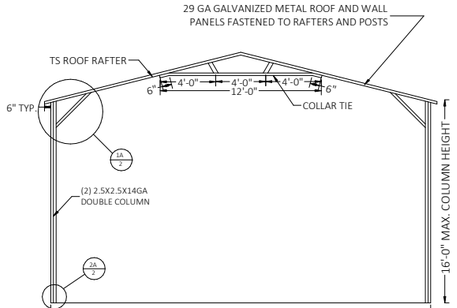

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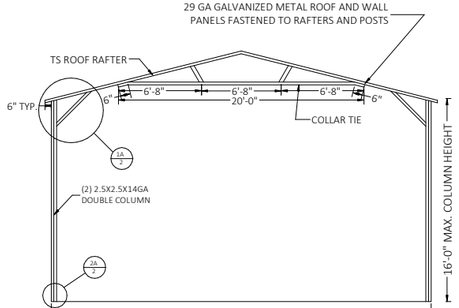

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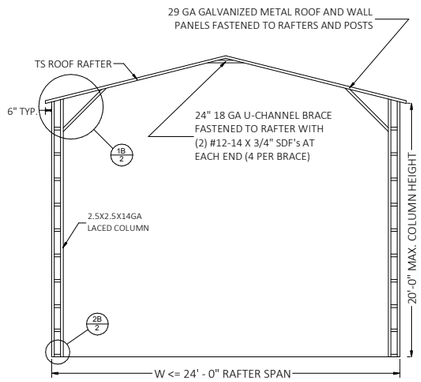

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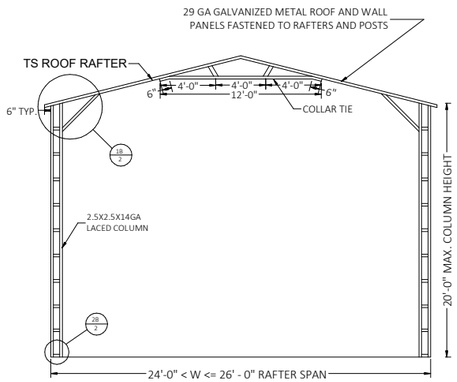

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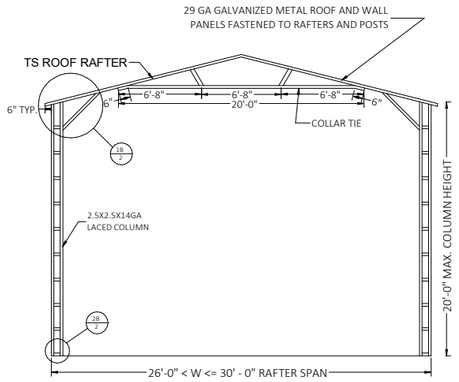

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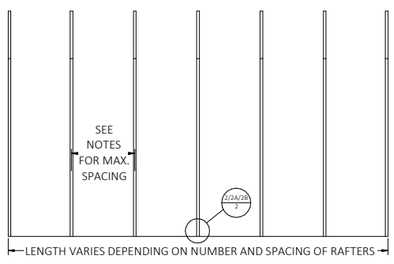
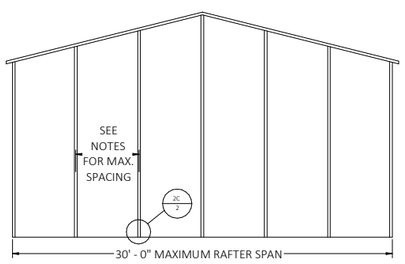


TYPICAL RAFTER/COLUMN SIDE WALL FRAME SECTION



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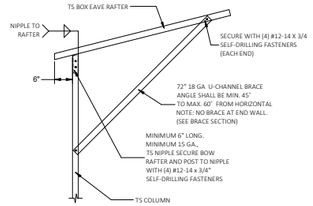
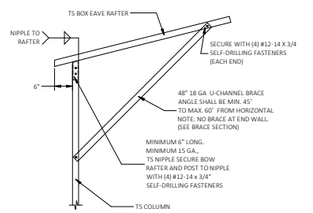
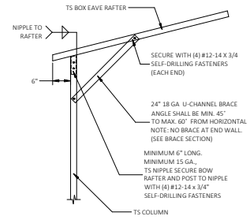


1	BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 13'-0" < TO ≤ 14'-0" SCALE: NTS



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



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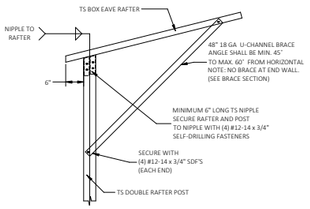
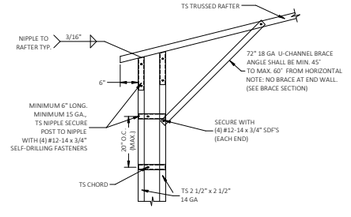
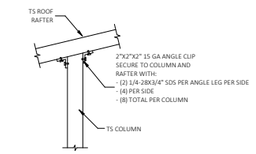


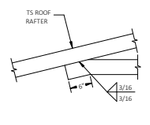
1A	BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 14'-0" < TO ≤ 16'-0" SCALE: NTS



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



END COLUMN/RAFTER CONNECTION
SCALE: NTS



COLLAR-TIE CONNECTION
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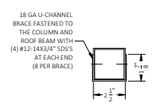

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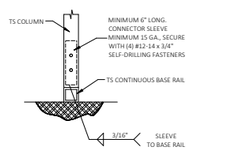
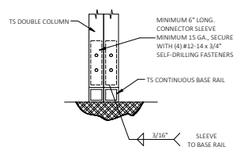


2	SIDEWALL SINGLE COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS



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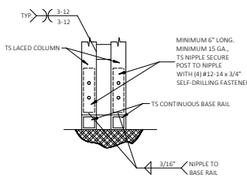

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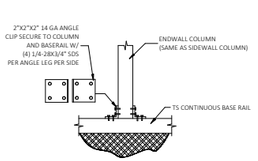

2C	ENDWALL COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS

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.

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

Digitally signed by Richard E Walker
Date: 2025.03.27 13:07:42-04'00'

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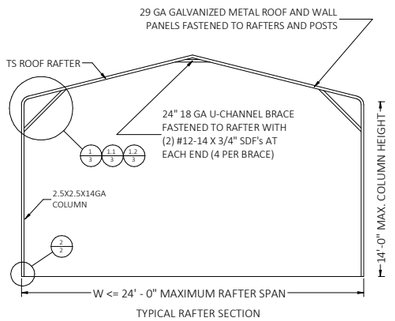
CA CERT. #30782

PROJECT NO. 2504211-30-E

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

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

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



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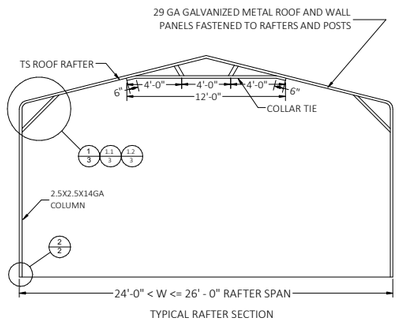

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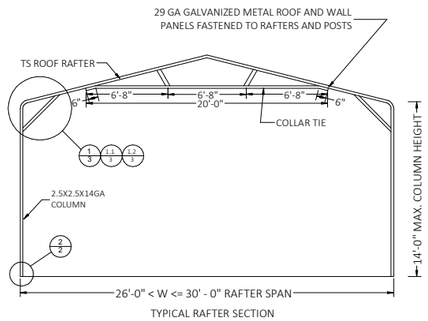

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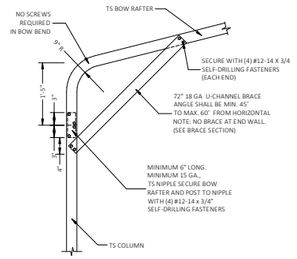
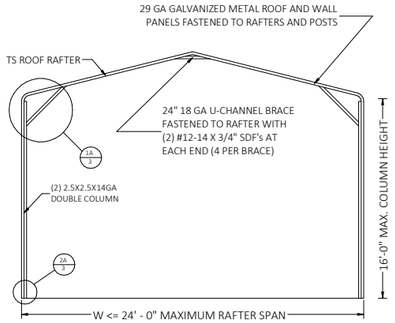


1 BOW EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 13'-0" < TO ≤ 14'-0" SCALE: NTS



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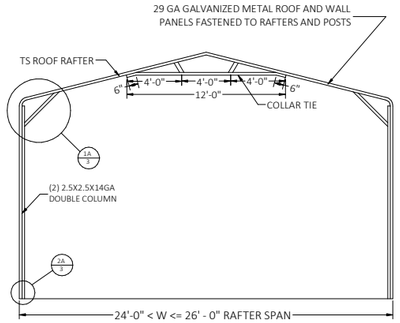

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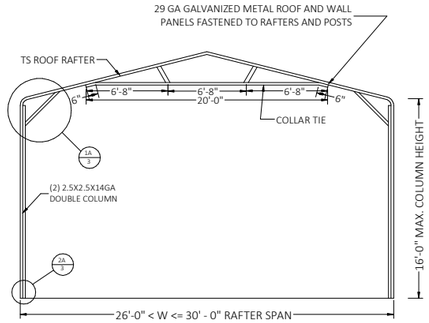

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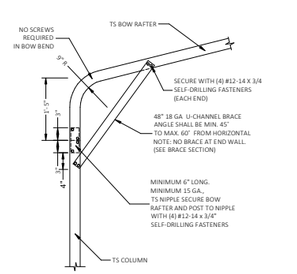

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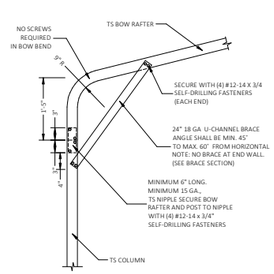

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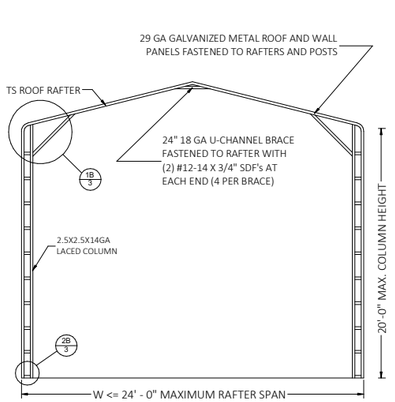

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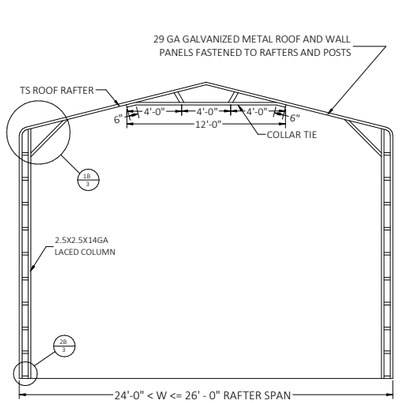

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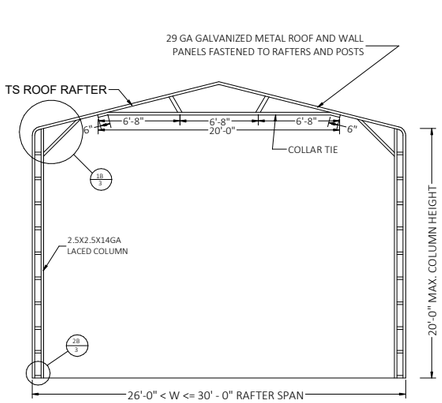
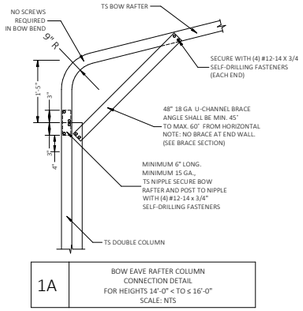
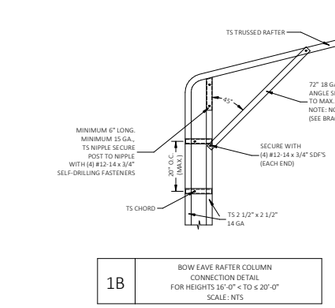


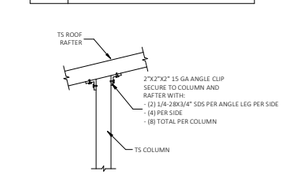
TYPICAL RAFTER SECTION



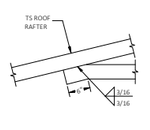
1A BOW EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 14'-0" < TO ≤ 16'-0" SCALE: NTS



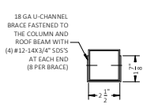
1B BOW EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 16'-0" < TO ≤ 20'-0" SCALE: NTS



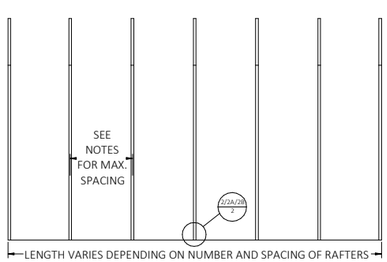
END COLUMN/RAFTER CONNECTION SCALE: NTS



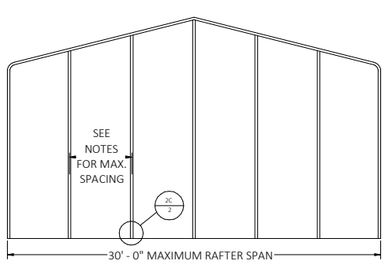
COLLAR-TIE CONNECTION SCALE: NTS



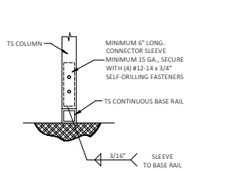
BRACE SECTION SCALE: NTS



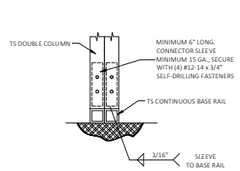
TYPICAL RAFTER/COLUMN SIDE WALL FRAME SECTION



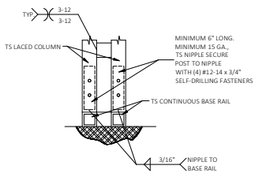
TYPICAL RAFTER/COLUMN ENDWALL FRAME SECTION



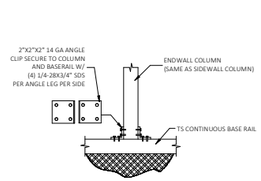
2 SIDEWALL SINGLE COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS



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

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Date: 2025.03.27 13:07:43-04'00'

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PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
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CA CERT. #30782

PROJECT NO. 250421-30-E

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

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

DESIGN DATE:	03/27/2025	
REVISION 1:	DATE	PAGE : 3
REVISION 2:	DATE	
SCALE:	NTS	

BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED

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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:

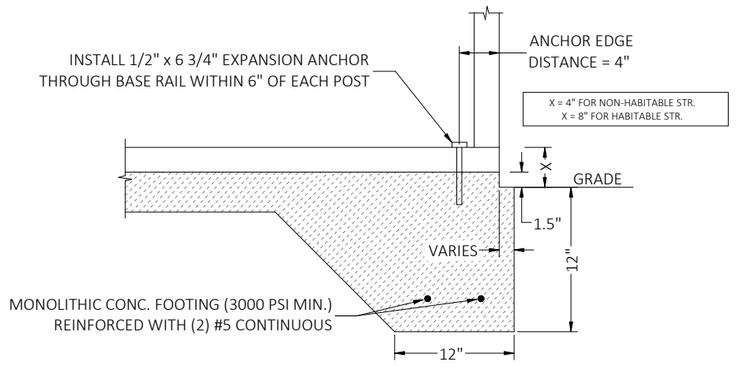
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

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

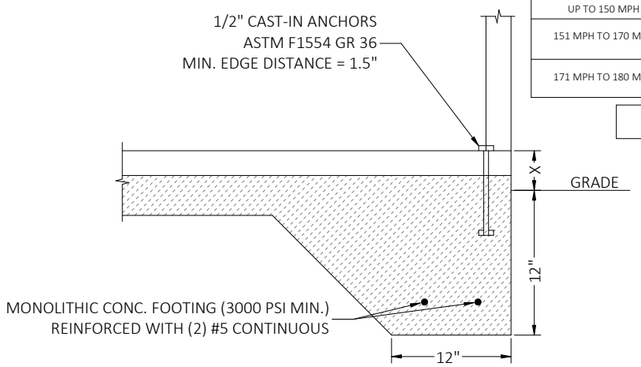
1. IT IS BENT COLD;
2. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT;
3. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.
4. MINIMUM REQUIRED LAP LENGTH SHALL NOT BE LESS THAN 57-BAR DIAMETERS.

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.



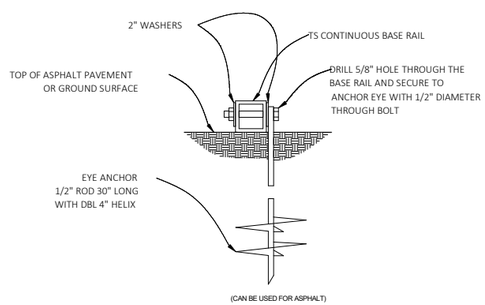
3A1 CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE
SCALE: NTS



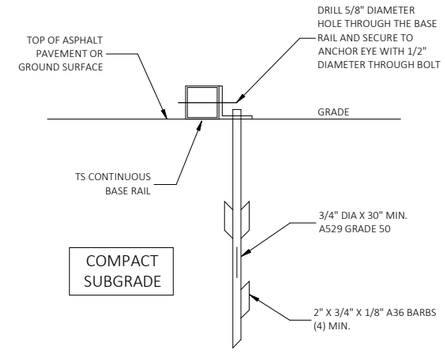
WIND SPEED	WALL HEIGHT	MIN. ANCHOR EMBEDMENT
UP TO 150 MPH	UP TO 16'-0"	3.25"
	16'-1" TO 20'-0"	5.00"
151 MPH TO 170 MPH	UP TO 14'-0"	3.25"
	14'-1" TO 16'-0"	5.00"
	16'-1" TO 20'-0"	5.50"
171 MPH TO 180 MPH	UP TO 14'-0"	3.25"
	14'-1" TO 16'-0"	5.00"
	16'-1" TO 20'-0"	6.50"

X = 4" FOR NON-HABITABLE STR.
X = 8" FOR HABITABLE STR.

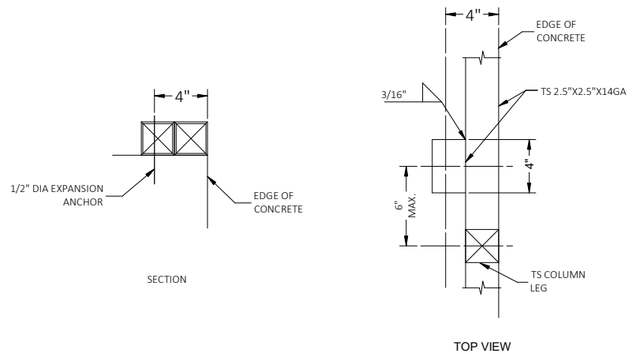
3A2 CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE
SCALE: NTS



3B GROUND BASE HELIX ANCHORAGE
SCALE: NTS



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

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CA CERT. #30782

PROJECT NO. 2504211-30-E

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

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

DESIGN DATE: 03/27/2025
REVISION 1: DATE
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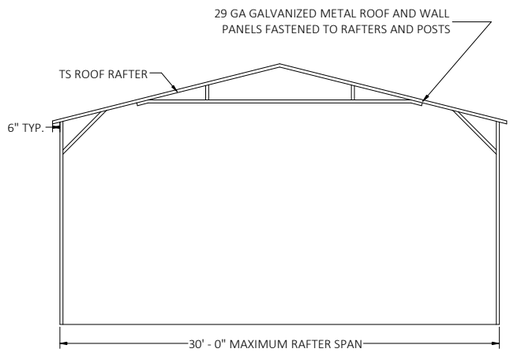
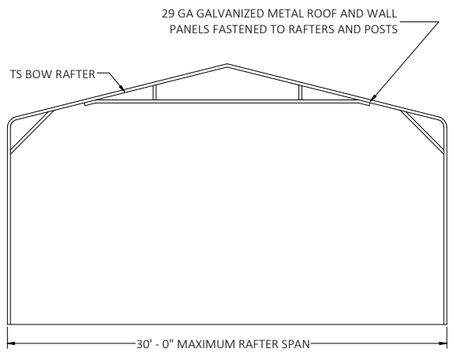
BOX EAVE RAFTER HORIZONTAL SIDE PANEL OPTION



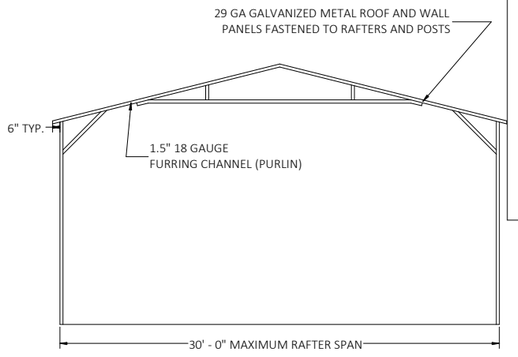
TYPICAL RAFTER/POST FRAME
SECTION EXTRA SIDE PANELS

BOW RAFTER GABLE END OPTION

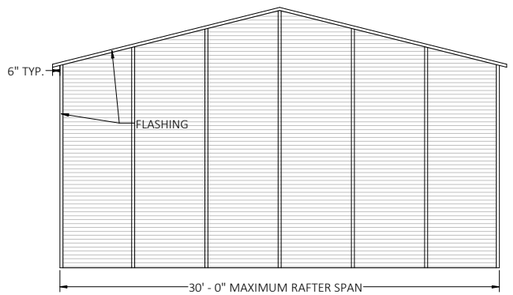


TYPICAL RAFTER/POST FRAME
SECTION EXTRA SIDE PANELS

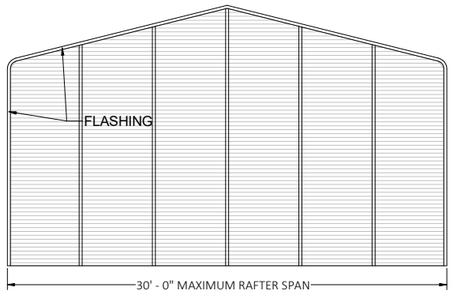
BOX EAVE RAFTER VERTICAL ROOF OPTION



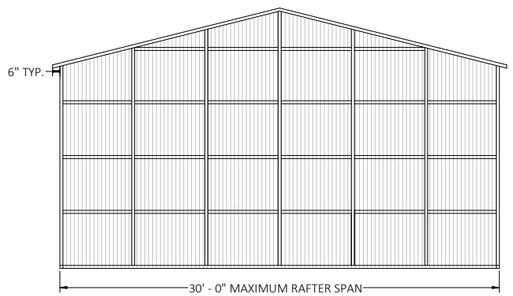
TYPICAL SECTION VERTICAL
ROOF/SIDING OPTION



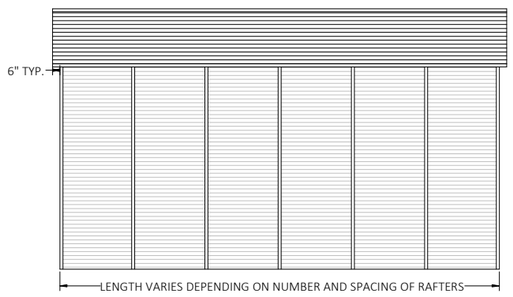
TYPICAL END ELEVATION
EXTRA SIDE PANELS



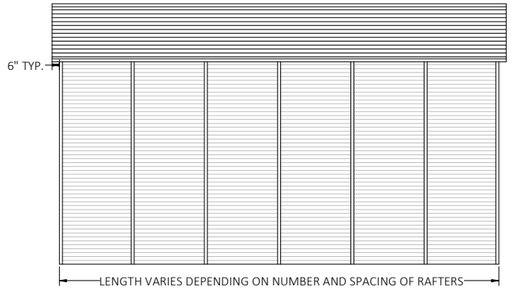
TYPICAL END ELEVATION
EXTRA SIDE PANELS



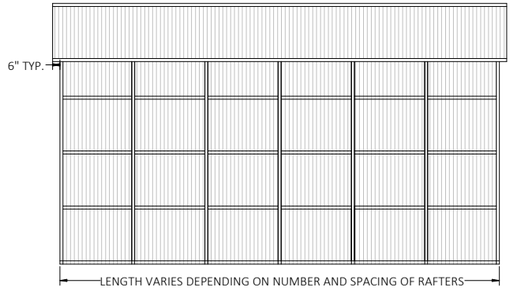
TYPICAL END ELEVATION
VERTICAL ROOF/SIDING OPTION



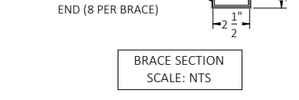
TYPICAL SIDE ELEVATION - EXTRA SIDE PANELS



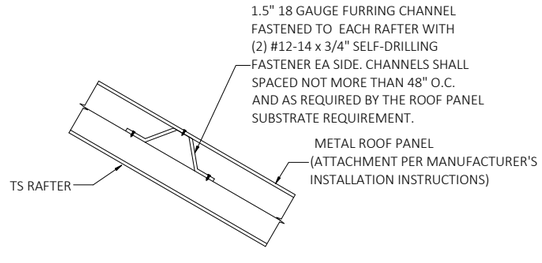
TYPICAL SIDE ELEVATION - EXTRA SIDE PANELS



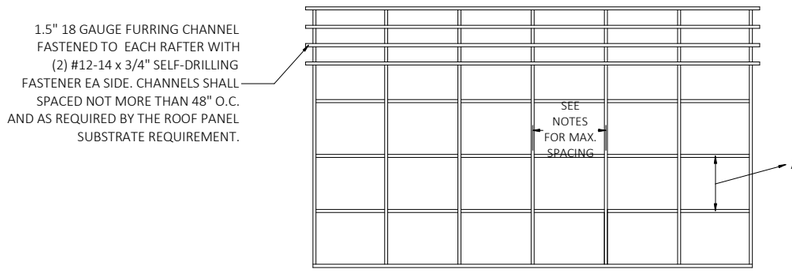
TYPICAL SIDE ELEVATION - VERTICAL ROOF/SIDING OPTION



BRACE SECTION
SCALE: NTS



ROOF PANEL ATTACHMENT
SCALE: NTS



TYPICAL FRAMING SECTION - VERTICAL ROOF/SIDING OPTION

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PROJECT NO. 2504211-30-E

CONTRACTOR:
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631 SE INDUSTRIAL CIRCLE,
LAKE CITY, FL 32025

PROJECT DESCRIPTION:
30' WIDE X 20' HIGH
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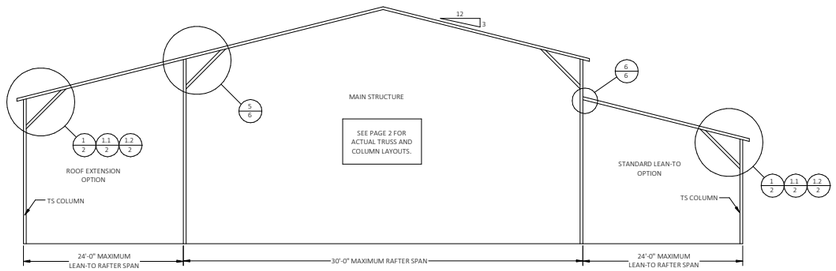
SCALE:	NTS

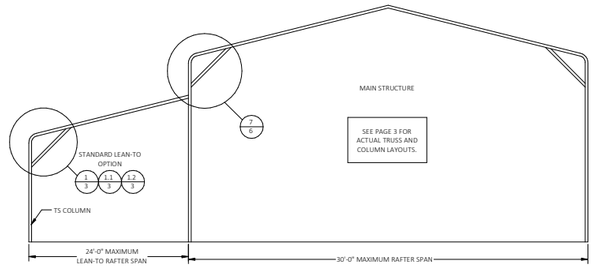
PAGE : 5

BOX EAVE RAFTER LEAN-TO OPTIONS

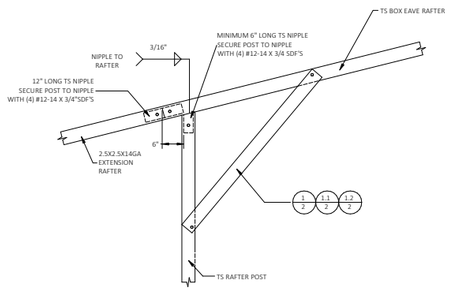


TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

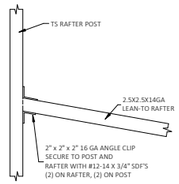
BOW RAFTER LEAN-TO OPTIONS



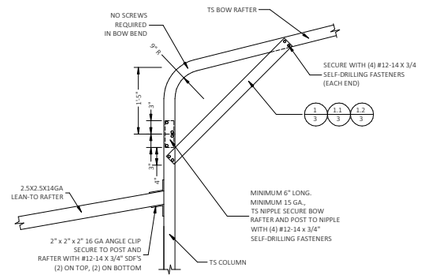
TYPICAL BOW RAFTER LEAN-TO OPTIONS FRAMING SECTION



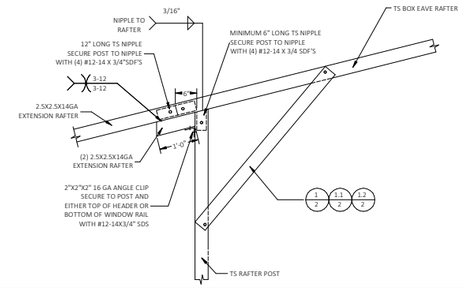
5A SIDE EXTENSION RAFTER/COLUMN DETAIL
FOR EXTENSION RAFTER SPANS W'<=12'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2.
FOR EXTENSION RAFTER SPANS W'<=13'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/2.
FOR EXTENSION RAFTER SPANS W'<=15'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/2.
SCALE: NTS



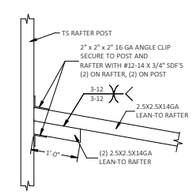
6A LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL
FOR LEAN-TO RAFTER SPANS W'<=12'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2 OR 1.2/3.
FOR LEAN-TO RAFTER SPANS W'<=13'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/2 OR 1.1/3.
FOR LEAN-TO RAFTER 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



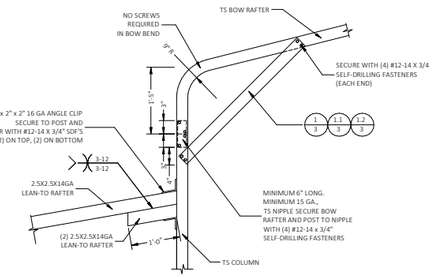
7A SIDE EXTENSION RAFTER/COLUMN DETAIL
FOR EXTENSION RAFTER SPANS W'<=12'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/3.
FOR EXTENSION RAFTER SPANS W'<=13'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/3.
FOR EXTENSION RAFTER SPANS W'<=15'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/3.
SCALE: NTS



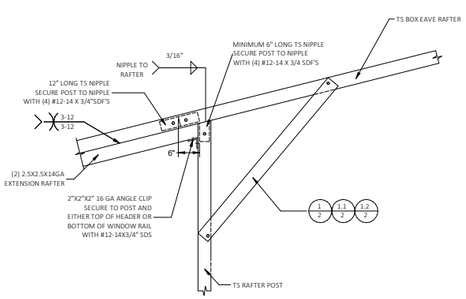
5B SIDE EXTENSION RAFTER/COLUMN DETAIL
FOR EXTENSION RAFTER SPANS 12'-0"<W'<=16'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2.
FOR EXTENSION RAFTER SPANS 13'-0"<W'<=18'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/2.
FOR EXTENSION RAFTER SPANS 15'-0"<W'<=19'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/2.
SCALE: NTS



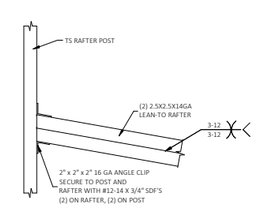
6B LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL
FOR LEAN-TO RAFTER SPANS 12'-0"<W'<=16'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/2 OR 1.2/3.
FOR LEAN-TO RAFTER SPANS 13'-0"<W'<=18'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/2 OR 1.1/3.
FOR LEAN-TO RAFTER SPANS 15'-0"<W'<=19'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/2 OR 1/3.
SCALE: NTS



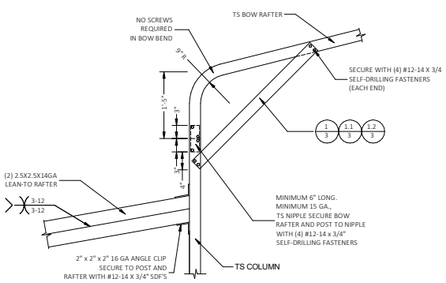
7B SIDE EXTENSION RAFTER/COLUMN DETAIL
FOR EXTENSION RAFTER SPANS 12'-0"<W'<=16'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.2/3.
FOR EXTENSION RAFTER SPANS 13'-0"<W'<=18'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1.1/3.
FOR EXTENSION RAFTER SPANS 15'-0"<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



6C LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL
FOR LEAN-TO RAFTER SPANS 16'-0"<W'<=24'-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 18'-0"<W'<=24'-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 19'-0"<W'<=24'-0", IF THE KNEE BRACE ON THE OTHER END OF THE RAFTER IS PER DETAIL 1/2 OR 1/3.
SCALE: NTS



7C 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 1.2/3.
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

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Orders@FLEng.com
CA CERT. #30782

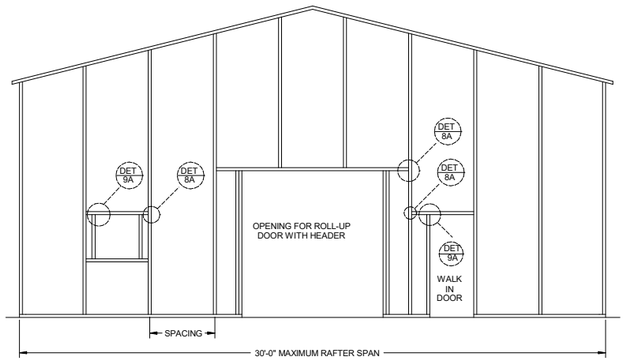
PROJECT NO. 250421-30-E

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

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

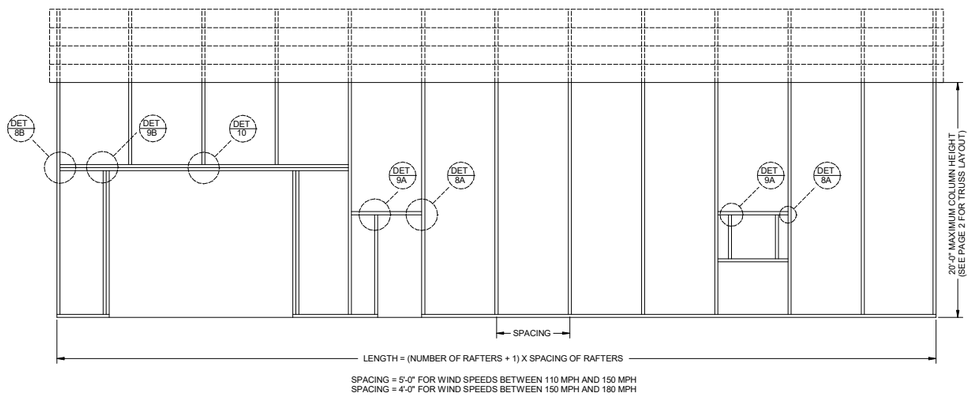
DESIGN DATE: 03/27/2025
REVISION 1: DATE
REVISION 2: DATE
SCALE: NTS

PAGE : 6



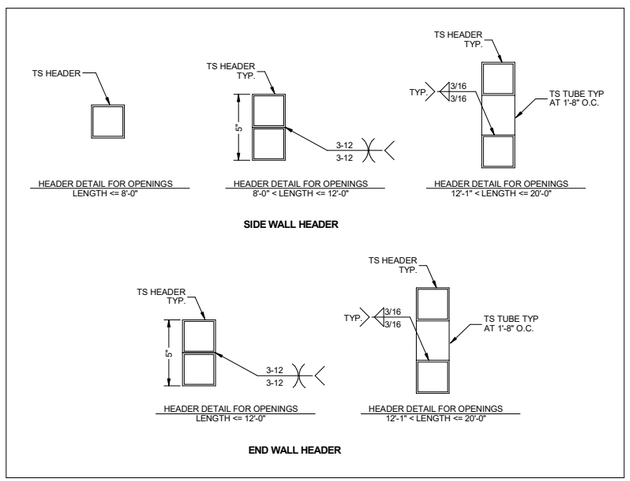
SPACING = 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 150 MPH
SPACING = 4'-0" FOR WIND SPEEDS BETWEEN 150 MPH AND 180 MPH

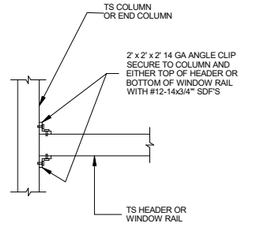
TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION



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 SIDE WALL FRAMING SECTION





8A NON-STRUCTURAL HEADER OR WINDOW RAIL TO POST CONNECTION DETAIL
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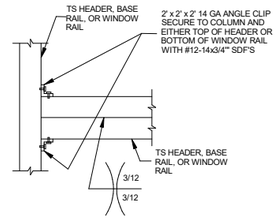
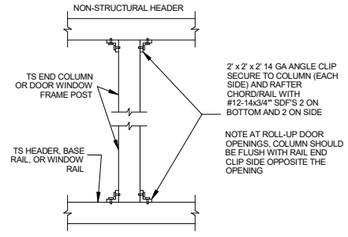
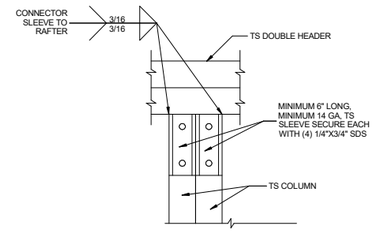


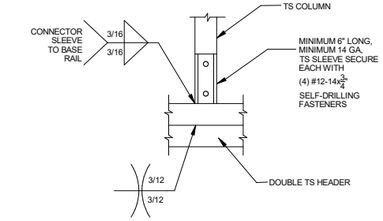
8B DOUBLE HEADER OR WINDOW RAIL TO POST CONNECTION DETAIL
SCALE: NTS



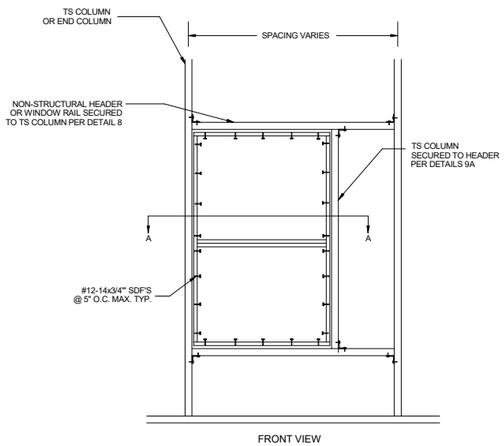
9A POST TO NON-STRUCTURAL HEADER, BASE, RAIL OR WINDOW RAIL CONNECTION DETAIL
SCALE: NTS



9B DOUBLE HEADER/COLUMN CONNECTION
SCALE : N.T.S.



10 POST TO DOUBLE HEADER, BASE, RAIL OR WINDOW RAIL CONNECTION DETAIL
SCALE: NTS



11 WINDOW INSTALLATION DETAILS
N.T.S.

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CA CERT. #30782

PROJECT NO. 2504211-30-E

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

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

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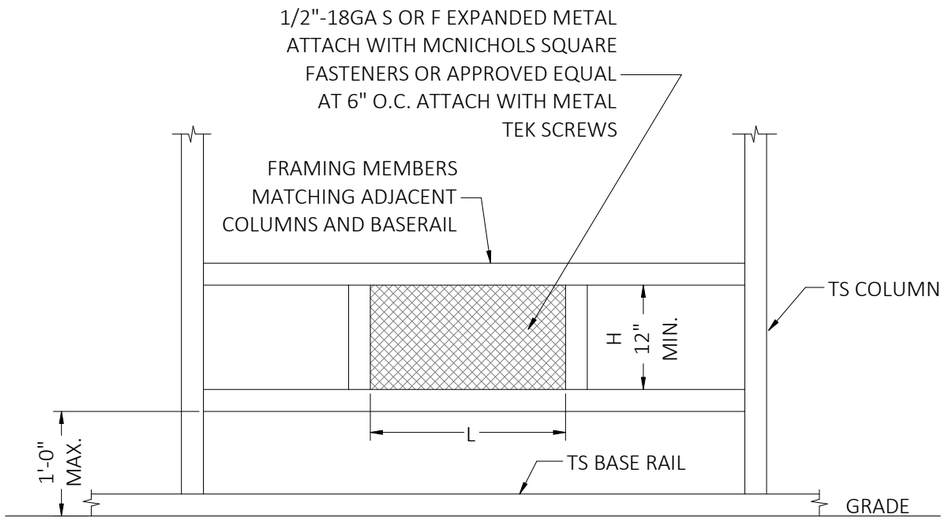


TYPICAL FLOOD VENT DETAIL

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"

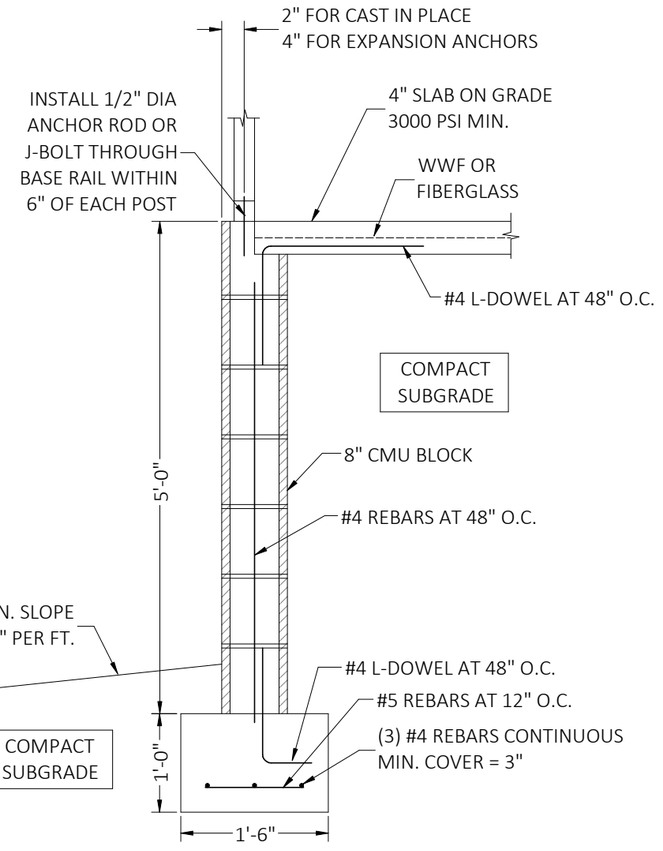
II) DFE (DESIGN FLOOD ELEVATION)

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

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OPTIONAL CONCRETE STRIP FOOTING

GENERAL NOTES

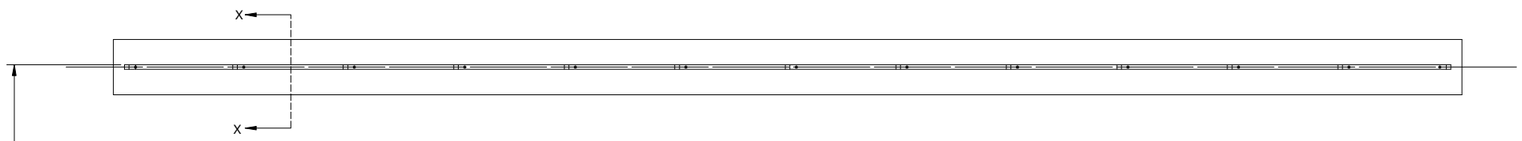
CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF 1500 PSF.

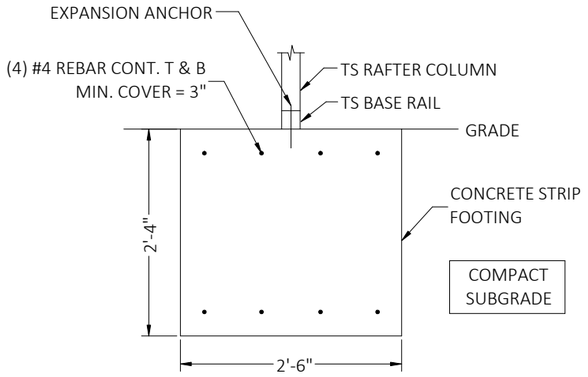
CONCRETE

MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

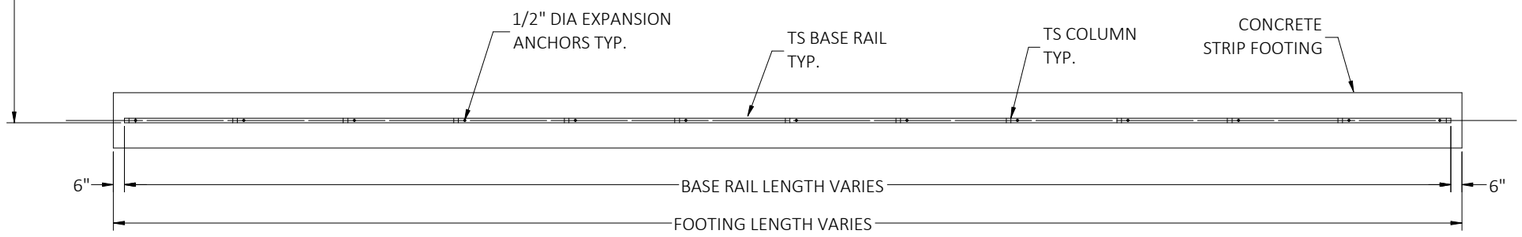
REINFORCING STEEL

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.





SECTION X-X



CONCRETE STRIP FOOTING PLAN

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