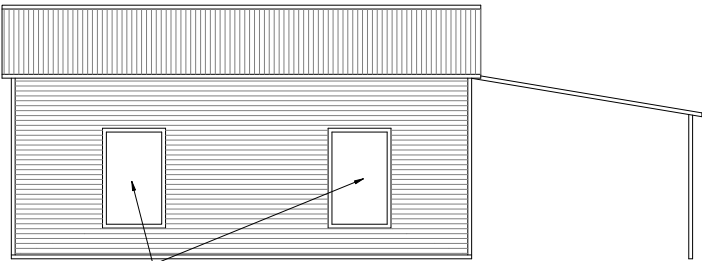
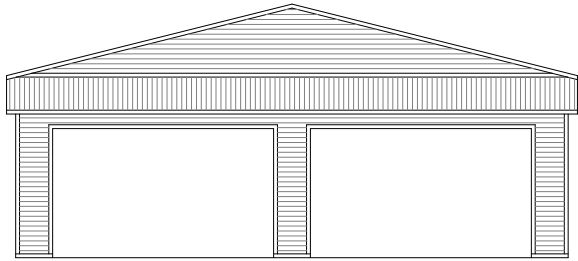


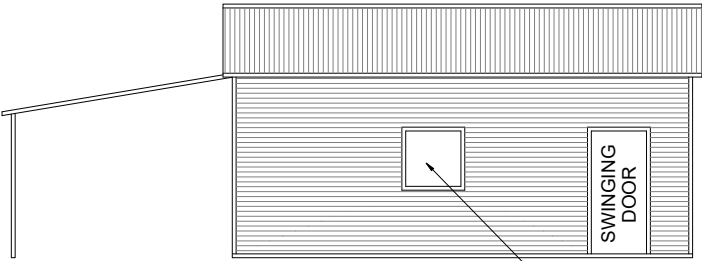
REAR ELEVATION WINDOW



WINDOW LEFT SIDE ELEVATION



FRONT ELEVATION

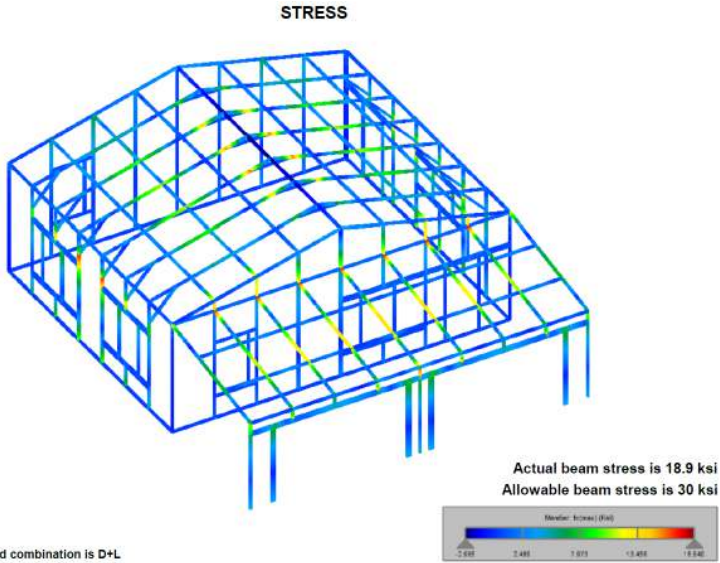


RIGHT SIDE ELEVATION WINDOW SWINGING DOOR

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.



3-D FINITE ELEMENT ANALYSIS PERFORMED  
STRUCTURE COMPLIES w/ FBC 2020 7th EDITION

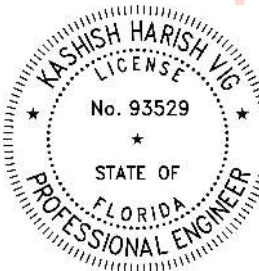


The most dangerous load combination is D+L

GENERAL NOTES

- APPLICABLE CODES, REGULATIONS, & STANDARDS
  - THE 2020 FLORIDA BUILDING CODE, 7TH EDITION
  - ASCE 7-16 & SEI 7
  - ACI318 CONCRETE REFERENCE MANUAL
- 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.
- THESE STRUCTURES ARE ENGINEERED AS (RISK CATEGORY 2) 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.
- 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.
- 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.
- ALL STEEL TUBING SHALL BE 50 KSI GALVANIZED STEEL. ALL FASTENERS SHALL BE ZINC COATED HARDWARE.
- 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, 29 GAUGE METAL PANELS SHALL BE FASTENED TO 18 GAUGE HAT CHANNELS (UNLESS OTHERWISE NOTED).
- 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.).
- 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
- 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. FOR RISK CATEGORY II, III, & IV STRUCTURES ONLY.
- ALL OPEN AREAS OF CONCRETE OUTSIDE OF THE PROPOSED STRUCTURE SHALL BE DESIGNED TO SLOPE AWAY FROM THE STRUCTURE.
- 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.

This item has been electronically signed and sealed by Kashish H. Vig, P.E. on date below using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Digitally signed  
by Kashish  
Harish Vig  
Date:  
2023.01.03  
16:49:17 -05'00'

RISK CATEGORY:	II
MAXIMUM DISPLACEMENT :	L/240
ULTIMATE WIND SPEED (MPH):	120
NOMINAL DESIGN WIND SPEED (MPH):	93
WIND EXPOSURE CATEGORY:	C
BUILDING ENCLOSURE TYPE:	ENCLOSED
ROOF ANGLE (DEGREES):	14.0
MEAN ROOF HEIGHT (FEET):	11.875
DEAD LOAD	5.8 PSF
LIVE LOAD	20.0 PSF
DESIGN PRESSURES (PSF):	
MAIN BUILDING:	
ROOF:	
ZONE 1:	+10.9 / -17.2
ZONE 2:	+10.9 / -30.0
ZONE 3:	+10.9 / -44.4
DESIGN ROOF PRESSURES:	+10.9 / -25.4
WALLS:	
ZONE 4:	+18.8 / -20.4
ZONE 5:	+18.8 / -25.2
DESIGN WALL PRESSURES:	+18.8 / -21.6
SWINGING DOOR:	+18.1 / -19.6
WINDOW:	+18.8 / -20.4
OPEN LEAN TO:	
ROOF:	
CLEAR WIND FLOW:	
ZONE 1:	+24.5 / -25.8
ZONE 2:	+36.7 / -39.4
ZONE 3:	+36.7 / -39.4
DESIGN ROOF PRESSURES:	+36.7 / -39.4
OBSTRUCTED WIND FLOW:	
ZONE 1:	+16.3 / -28.5
ZONE 2:	+24.5 / -43.5
ZONE 3:	+24.5 / -43.5
DESIGN ROOF PRESSURES:	+24.5 / -43.5

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. 2235037

CONTRACTOR:  
TUBULAR BUILDING SYSTEMS

PROJECT ADDRESS:

STEVENS  
235 SILKY CT  
HIGH SPRINGS, FL 32643

DESIGN DATE: 12/20/2022

REVISION 1: DATE

REVISION 2: DATE

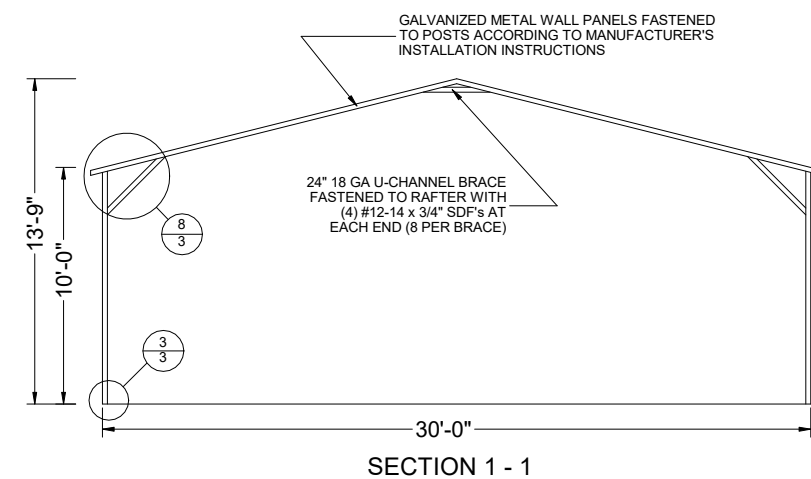
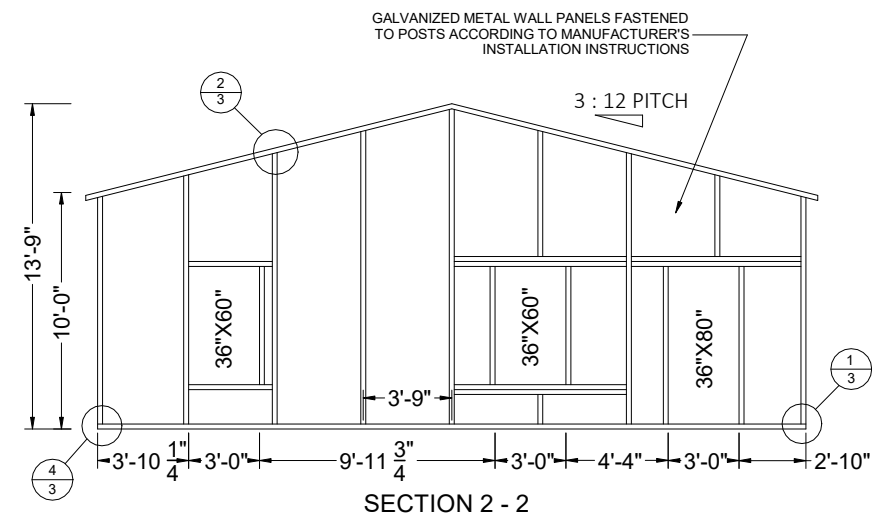
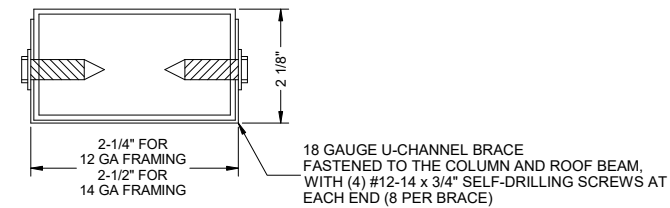
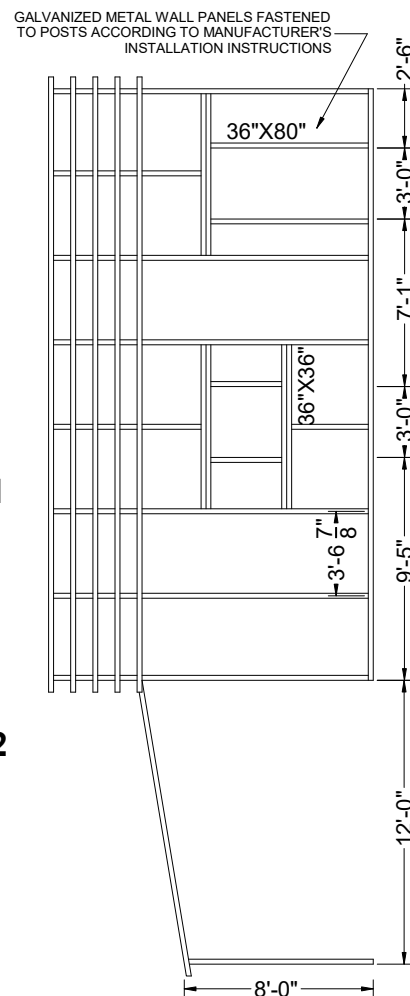
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SCALE: NTS

SHEET:

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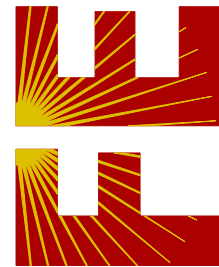
CTP = CONTRACTOR TO PROVIDE APPROVED PRODUCTS THAT MEET OR EXCEED WIND DESIGN PRESSURES.



A circular professional engineer seal for KASHISH HARISH VIG, License No. 93529, State of Florida. The seal features the text "KASHISH HARISH VIG" at the top, "LICENSE" below it, "No. 93529" in the center, "STATE OF FLORIDA" below the center, and "PROFESSIONAL ENGINEER" at the bottom. The seal is surrounded by a decorative border of small dots.

Digitally signed  
by Kashish  
Harish Vig  
Date:  
2023.01.03  
16:49:21 -05'00'

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## TRACTOR: TUBULAR BUILDING SYSTEMS

PROJECT ADDRESS:

STEVENS  
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HIGH SPRINGS, FL 32643

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DRAWN BY: TCP

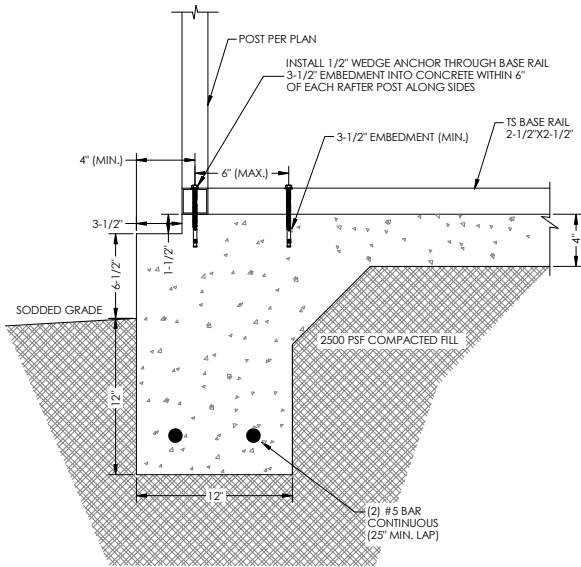
SHEET:

02

This item has been electronically signed and sealed by Kashish H. Vig, P.E. on date below using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Digitally signed  
by Kashish  
Harish Vig  
Date:  
2023.01.03  
16:49:25 -05'00'



1 12'x12' MONO. FOOTER BASE RAIL ANCHORAGE  
SCALE: NTS

GENERAL NOTES

CONCRETE:

CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.

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.

CONCRETE NOTE:

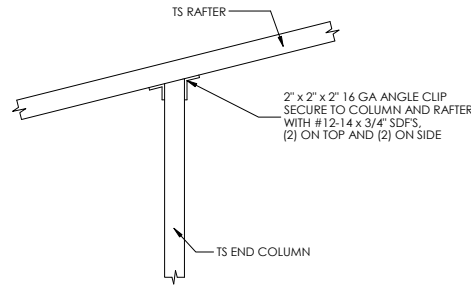
ALL OPEN AREAS OF CONCRETE OUTSIDE OF THE PROPOSED STRUCTURE SHALL BE DESIGNED TO SLOPE AWAY FROM THE STRUCTURE

REINFORCING STEEL:

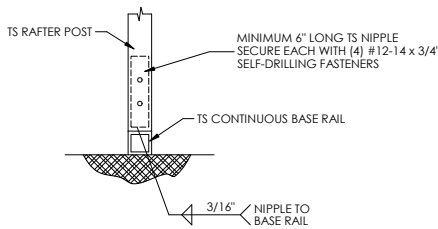
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60.  
THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

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

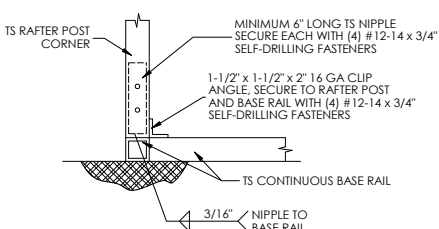
1. IT IS BENT COLD;
2. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT;
3. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.



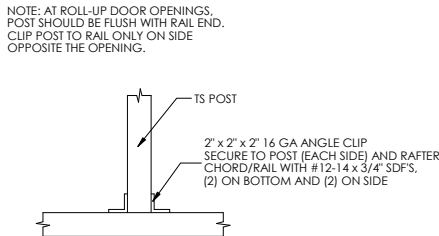
2 END POST/RAFTER  
CONNECTION DETAIL  
SCALE: NTS



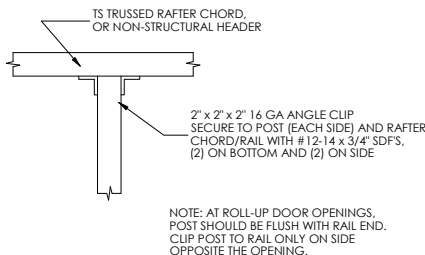
3 RAFTER POST/BASE RAIL  
CONNECTION DETAIL  
SCALE: NTS



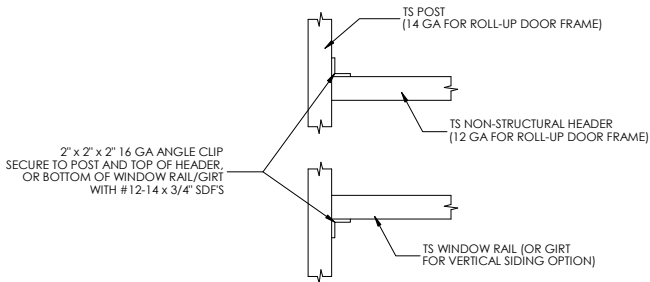
4 END POST/BASE RAIL  
CONNECTION DETAIL  
SCALE: NTS



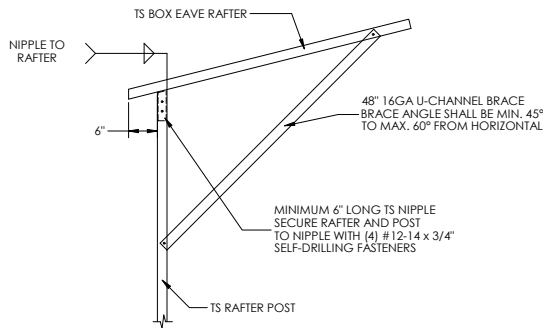
5 POST TO NON-STRUCTURAL HEADER, BASE,  
RAIL OR WINDOW RAIL CONNECTION DETAIL  
SCALE: NTS



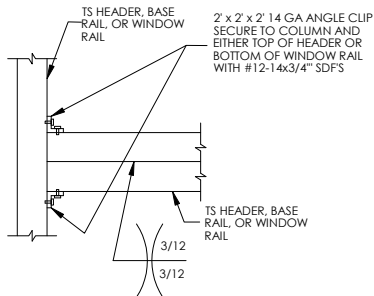
6 POST TO NON-STRUCTURAL HEADER, BASE,  
RAIL OR WINDOW RAIL CONNECTION DETAIL  
SCALE: NTS



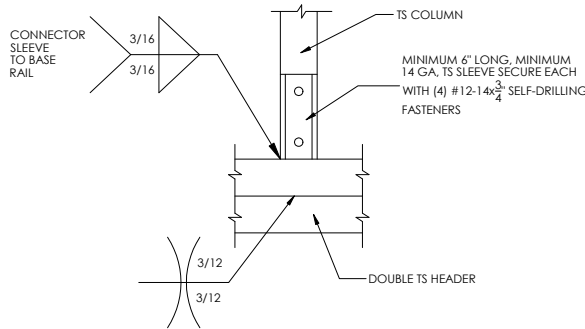
7 NON-STRUCTURAL HEADER OR WINDOW RAIL  
TO POST CONNECTION DETAIL  
SCALE: NTS



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



9 COLUMN OR WINDOW  
RAIL TO POST CONNECTION DETAIL  
SCALE: NTS



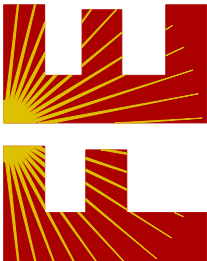
10 COLUMN/DOUBLE HEADER  
CONNECTION DETAIL  
SCALE: NTS

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