ENCLOSED METAL BUILDING DESIGN
MAXIMUM 40'-0" WIDE X 20'-0" EAVE HEIGHT
BOX EAVE FRAME

APPLICABLE CODES AND STANDARDS

1. 2020 FLORIDA BUILDING CODE (7TH EDITION)
2. 2018 INTERNATIONAL BUILDING CODE
3. ASCE 7-16: MINIMUM DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES
4. AISC STEEL CONSTRUCTION MANUAL (15TH EDITION)
5. ACI 318-14: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
6. TMS 402-16: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
7. AWS D1.1: STRUCTURAL WELDING

DESIGN LOADS

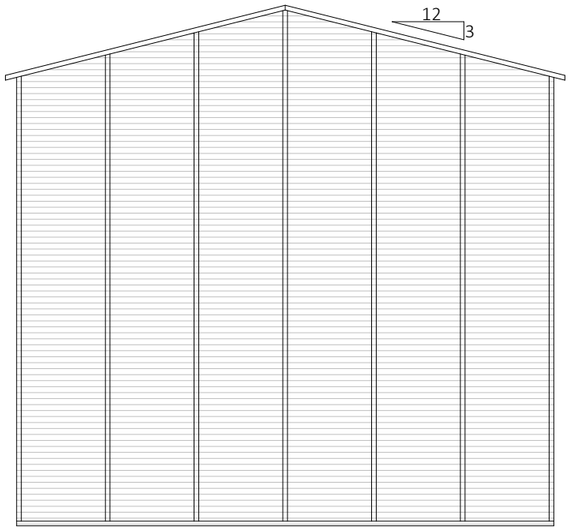
1. DEAD LOAD = 5 PSF
2. LIVE LOAD = 10 PSF
3. WIND LOAD

A. RISK CATEGORY = I
B. WIND EXPOSURE CATEGORY = C
C. ULTIMATE WIND SPEED = 110 MPH
NOMINAL WIND SPEED = 86 MPH

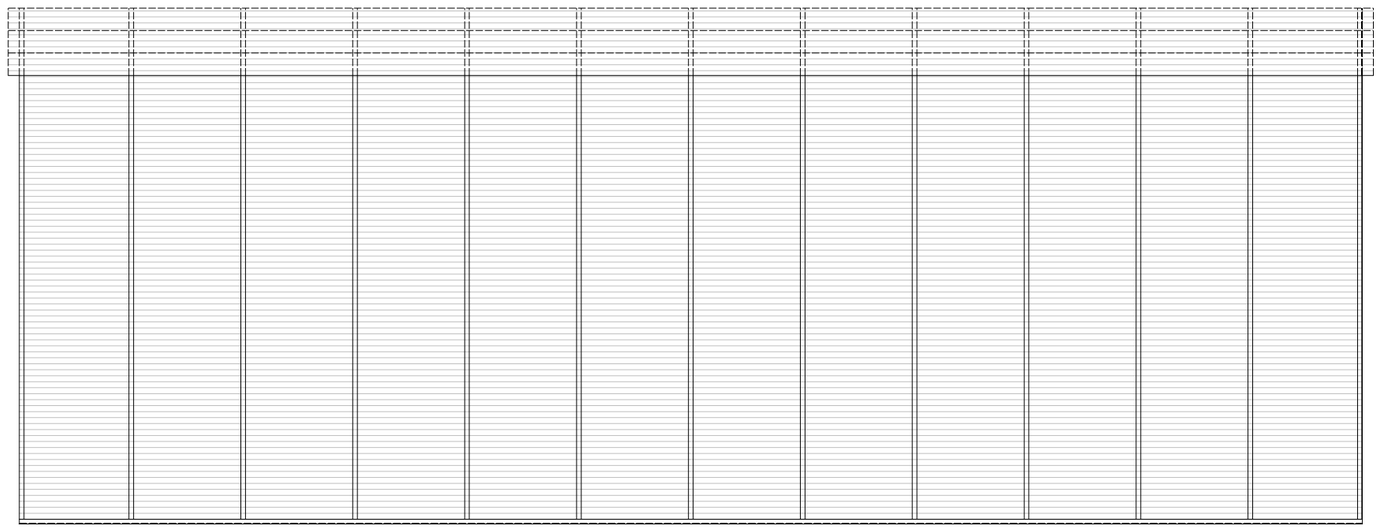
INSTALLATION NOTES AND SPECIFICATIONS

1. END WALL COLUMNS (POST) AND SIDE WALL COLUMNS ARE EQUIVALENT IN SIZE AND SPACING U.N.O.
2. SPECIFICATIONS APPLICABLE TO 29 GA METAL PANELS FASTENED DIRECTLY TO 2.5”X2.5”X14 GA TUBE STEEL (TS) FRAMING MEMBERS FOR VERTICAL PANELS. 29 GA METAL PANELS SHALL BE FASTENED DIRECTLY TO 18 GA HAT CHANNELS U.N.O.
3. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9” AND END = 6” MAX.
4. FASTENERS CONSIST OF #12-14X3/4” SELF-DRILLING SCREWS (SDS), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20’-0” OR LESS, ANF ROOF SLOPES OF 14° (3:12 PITCH) OR LESS. SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
5. ANCHORS SHALL BE INSTALLED THROUGH THE BASE RAIL WITHIN 6” OF EACH RAFTER COLUMN ALONG SIDES AND ENDS.
6. STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBARS WITH WELDED NUT X 30” LONG AND MAY BE USED IN SUITABLE SOILS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS AS NOTED. SOIL NAILS MAY BE USED FOR WIND SPEEDS LESS THAN OR EQUAL TO 145 MPH.

DRAWING INDEX



BOX EAVE END WALL - ELEVATION



LOAD-BEARING WALL - ELEVATION

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Columbia County Building Department — Plans Reviewed for Code Compliance — State of Florida

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. 2323368

CONTRACTOR: ALL METAL BUILDINGS

PROJECT ADDRESS: SMITH
222 SW BEACON WAY
LAKE CITY FL 32025

DESIGN DATE:	08/22/2023
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REVISION 2:	DATE
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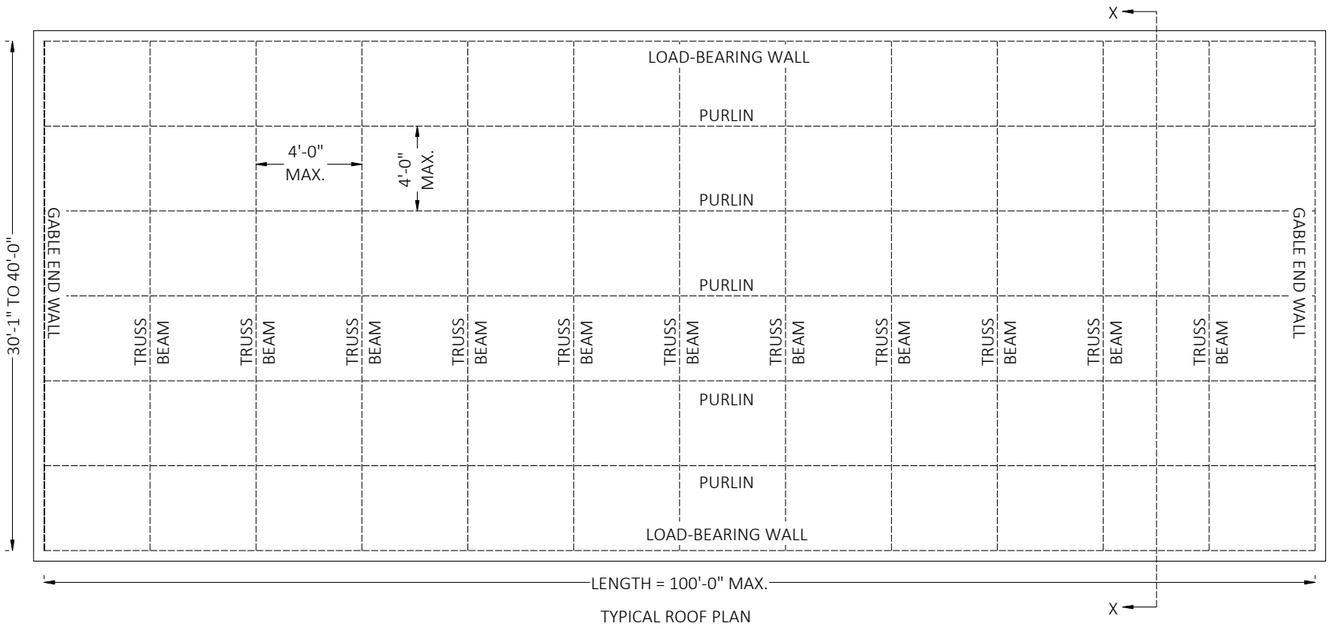
SCALE:	NTS



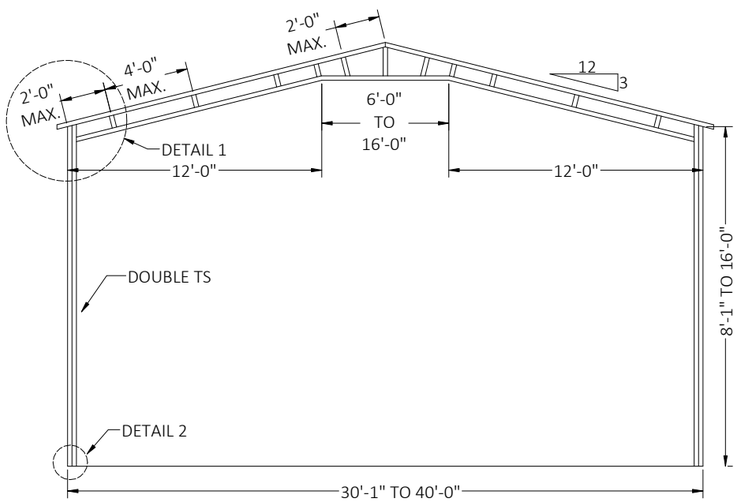
TYPICAL ROOF PLAN

MEMBER LEGEND:
1. ALL GABLE WALL MEMBERS = 2.5"X2.5"X14GA TUBE
2. ALL NON-GABLE WALL POSTS = PER TRUSS SECTIONS SHOWN
3. PURLIN = 1.5"X18GA HAT CHANNEL
4. TRUSS BEAMS = 2.5"X2.5"X14GA TUBE
5. TS-BRACE = 2.5"X2.5"X14GA TUBE

NOTE:
EXTERIOR WINDOWS AND GLASS DOORS SHALL BEAR AN APPROVED LABEL IDENTIFYING THE MANUFACTURER, PERFORMANCE CHARACTERISTICS AND APPROVED PRODUCT EVALUATION ENTITY TO INDICATE COMPLIANCE WITH THE FOLLOWING TABLE.
TABLE 1 LISTS THE TYPICAL PRODUCT PREFERENCES FOR THE ENCLOSED BUILDINGS AS SHOWN. APPLICABILITY OF THESE PRODUCTS TO A SPECIFIC BUILDING LAYOUT IS SUBJECT TO THE DESIGN PRESSURES IN TABLE 2.

TABLE 1

MANUFACTURER	PRODUCT	MODEL/SERIES	APPROVAL NO.
USA STEEL BUILDINGS, INC.	ROOF DECKING	36-R PANEL	FL 13364.1-R5
ASTA INDUSTRIES, INC.	ROLL-UP DOOR	MODEL 203	FL 8888.1-R5
ELIXAR DOOR AND METAL CO.	WALK-IN DOOR	SERIES 2500	FL 17996.5-R2
ASSURA WINDOWS AND DOORS	WINDOWS	SERIES 407	FL 21857.2-R4
JANUS INTERNATIONAL CORP.	ROLL-UP DOOR	750 SERIES	FL 12765-R6
CRAWL SPACE DOOR SYSTEMS, INC.	FLOOD VENTS	CSBA816	FL 29622.1-R1
POCAHONTAS ALUMINUM COMPANY, INC.	WALK-IN DOOR	DD 100	FL 12903.1-R5
POCAHONTAS ALUMINUM COMPANY, INC.	WINDOWS	100 VS	FL 12940.1-R6



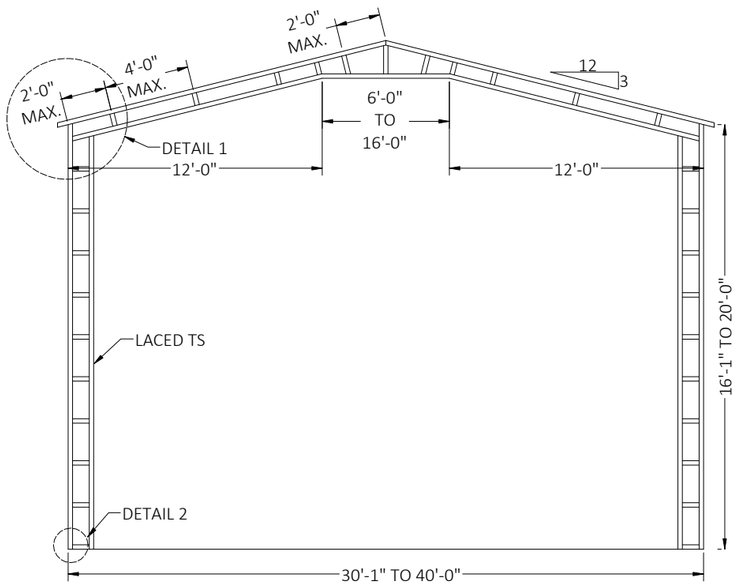


TABLE 2

ROOF PRESSURES IN EXPOSURE B		ROOF PRESSURES IN EXPOSURE C	
WIND SPEED (MPH)	PSF	WIND SPEED (MPH)	PSF
110	18.65	110	21.11
120	19.25	120	21.95
130	20.38	130	23.53
140	21.65	140	25.31
150	23.00	150	27.20
160	24.43	160	29.20
170	26.00	170	31.40
WALL PRESSURES IN EXPOSURE B		WALL PRESSURES IN EXPOSURE C	
WIND SPEED (MPH)	PSF	WIND SPEED (MPH)	PSF
110	23.60	110	28.04
120	24.58	120	29.41
130	26.75	130	32.45
140	29.00	140	35.60
150	31.40	150	38.96
160	34.03	160	42.64
170	36.80	170	46.52

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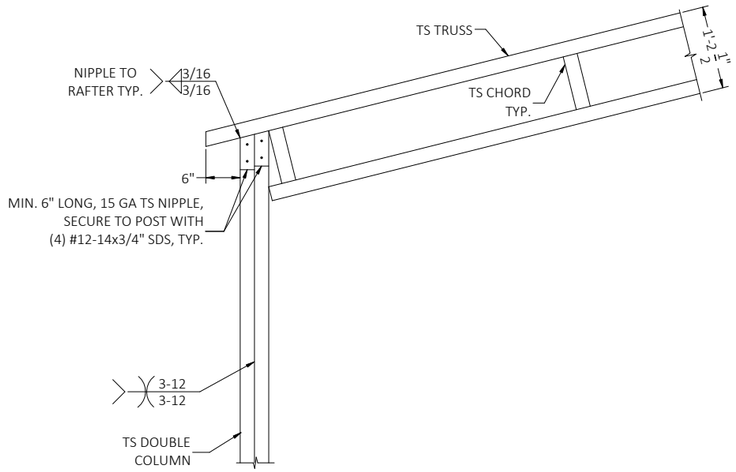
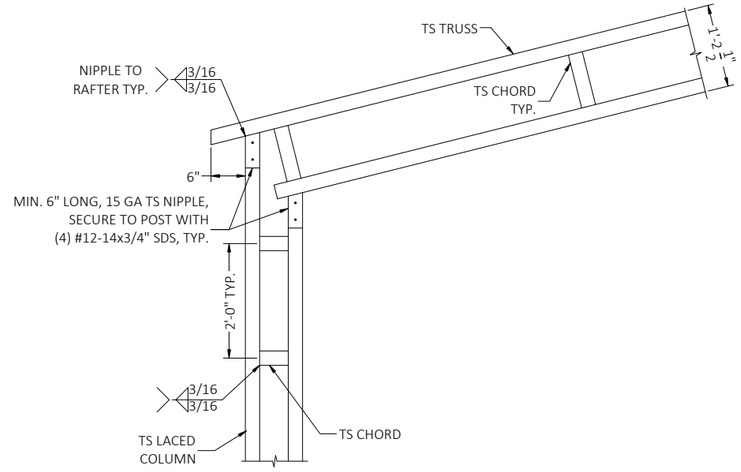
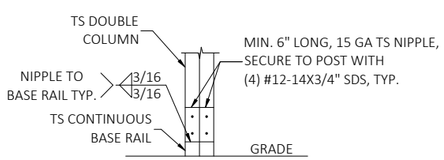


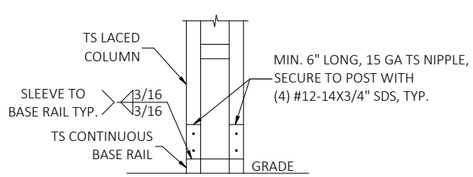
DETAIL 1A
BOX EAVE RAFTER/CORNER POST CONNECTION



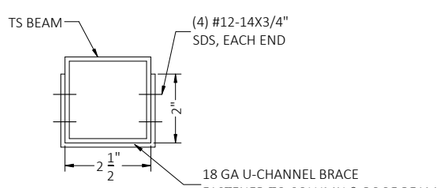
DETAIL 1B
BOX EAVE RAFTER/CORNER POST CONNECTION



DETAIL 2A
POST/BASE RAIL CONNECTION



DETAIL 2B
POST/BASE RAIL CONNECTION



DETAIL 3
U-BRACE CONNECTION DETAIL

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(941) 391-5980
FLEng.com
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GENERAL NOTES

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

CONCRETE

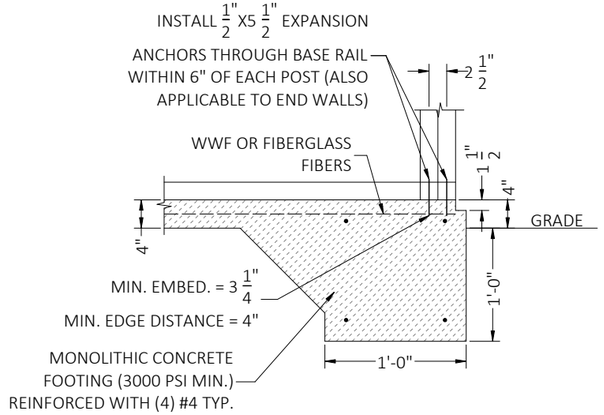
MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

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.

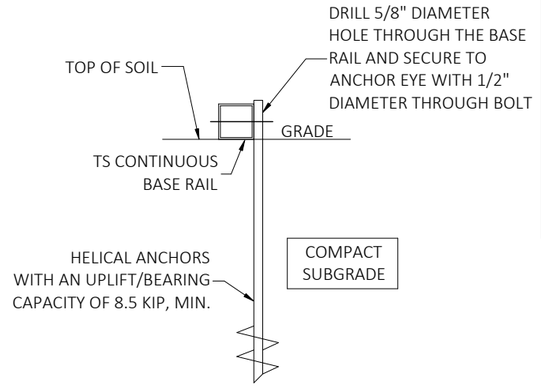
HELIX ANCHOR NOTES

1. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, CORALS, MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS AND CLAYS, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT EVERY 10'.
2. FOR MEDIUM TO VERY LOOSE DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT EVERY 5' OR EVERY POST (LEG).
3. THE UPLIFT/BEARING CAPACITY OF EACH ANCHOR MUST BE EQUAL TO OR GREATER THAN 8.5 KIPS.



DETAIL 4A

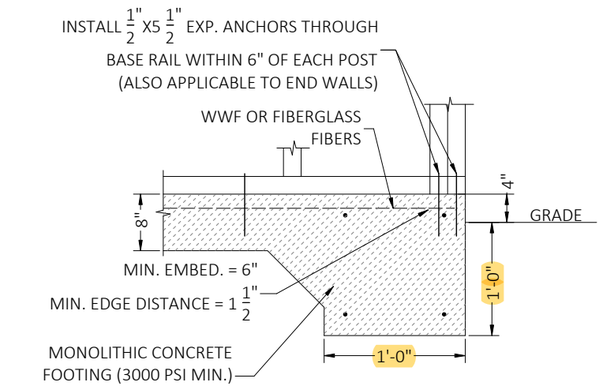
CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE



DETAIL 4B

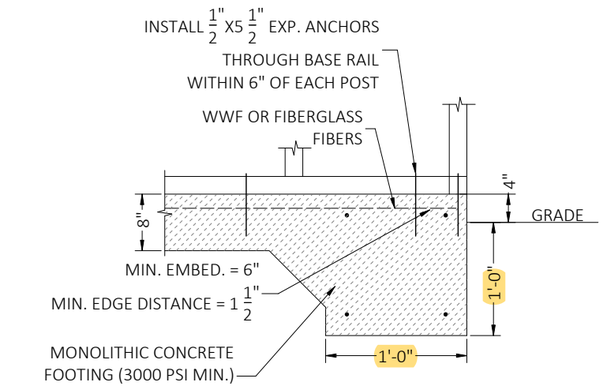
GROUND BASE HELIX ANCHORAGE

BASE RAIL ANCHORAGE OPTIONS



DETAIL 4D

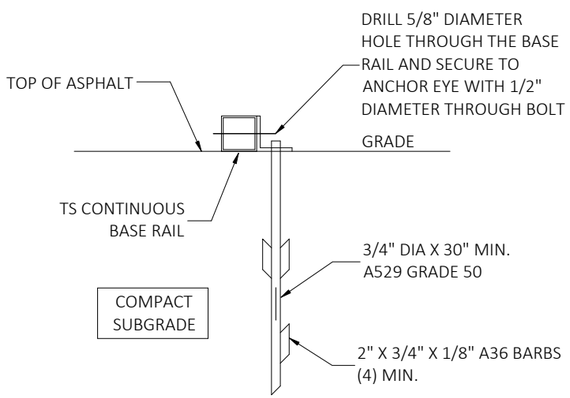
CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE



DETAIL 4C

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

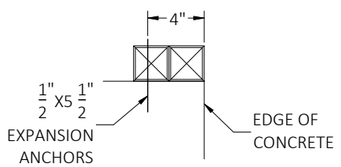
OPTIONAL FOUNDATION ANCHORAGE



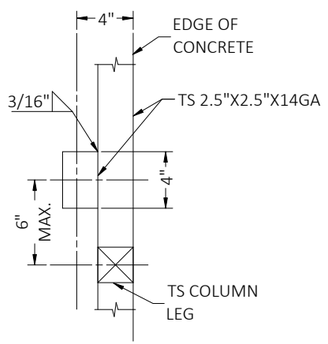
DETAIL 4F

ASPHALT BASE ANCHORAGE

(HP 9 BARBED DRIVE ANCHOR)



SECTION



TOP VIEW

TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE

BASE RAIL ANCHORAGE OPTION

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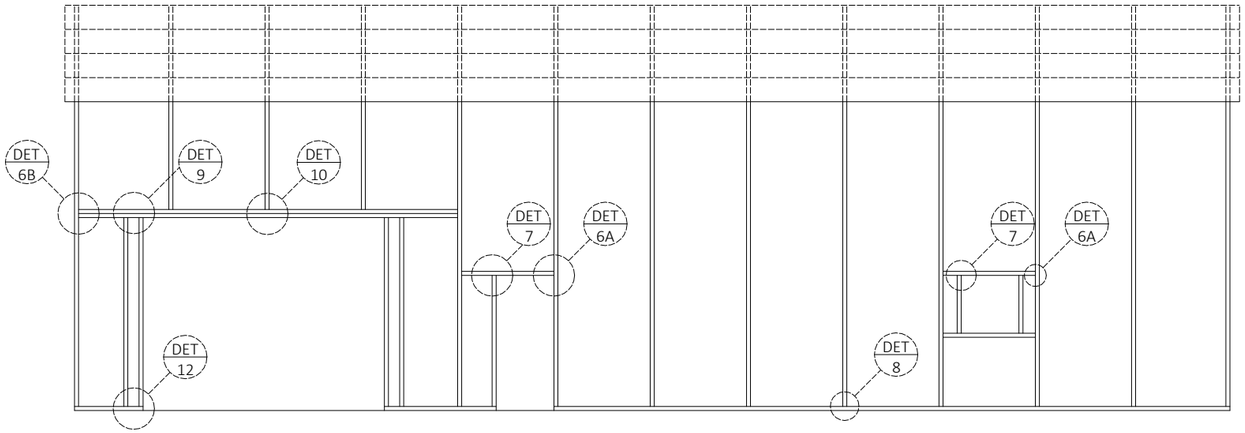
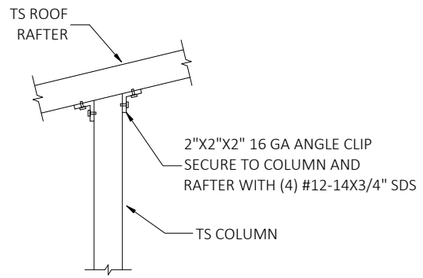
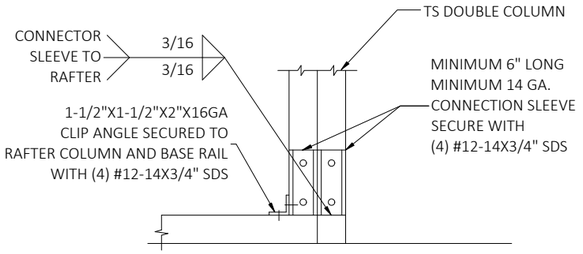


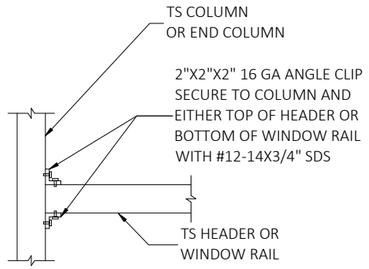
TYPICAL BOX EAVE RAFTER SIDE WALL FRAMING SECTION



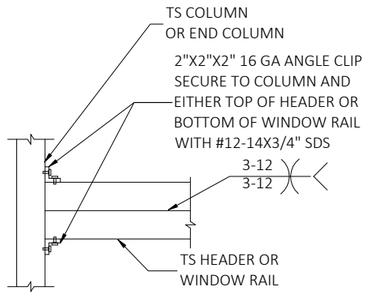
DETAIL 5A
END COLUMN/RAFTER CONNECTION



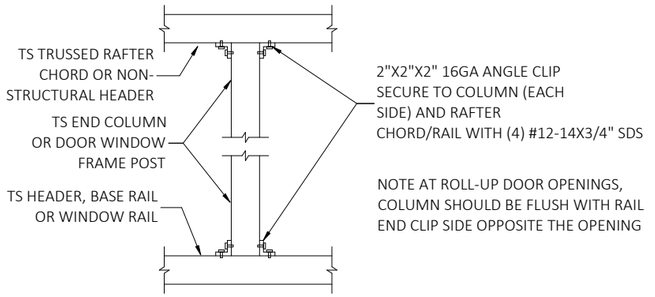
DETAIL 5B
END POST/BASE RAIL CONNECTION



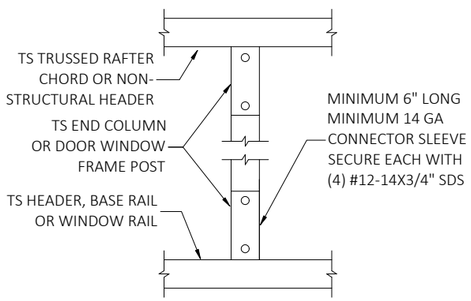
DETAIL 6A
HEADER TO COLUMN CONNECTION



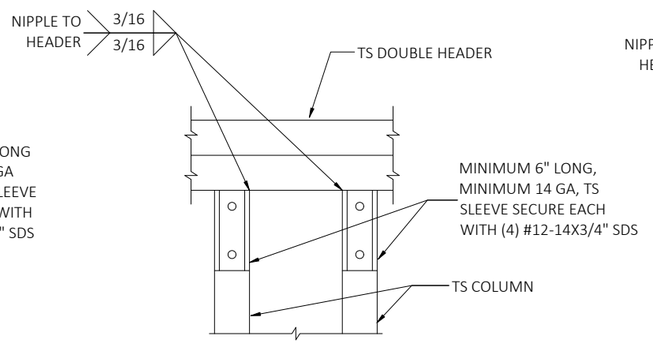
DETAIL 6B
DOUBLE HEADER TO COLUMN CONNECTION



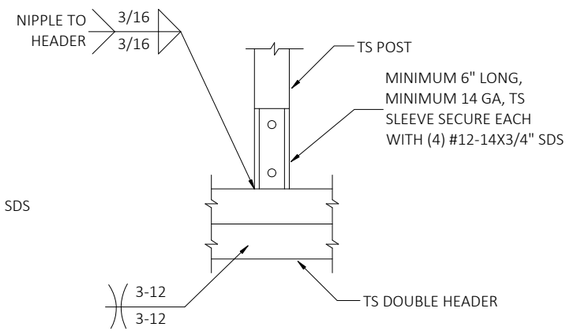
DETAIL 7
POST TO HEADER, BASE RAIL OR WINDOW RAIL CONNECTION



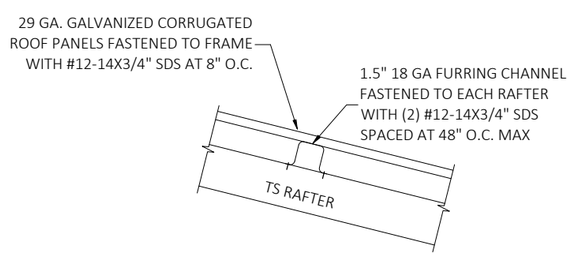
DETAIL 8
POST TO HEADER, BASE RAIL CONNECTION



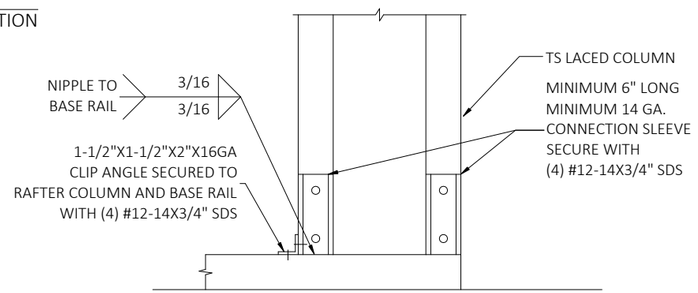
DETAIL 9
DOUBLE HEADER TO POST CONNECTION



DETAIL 10
POST/DOUBLE HEADER CONNECTION



DETAIL 11
ROOF PANEL ATTACHMENT



DETAIL 12
POST/BASE RAIL CONNECTION

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FLEng.com
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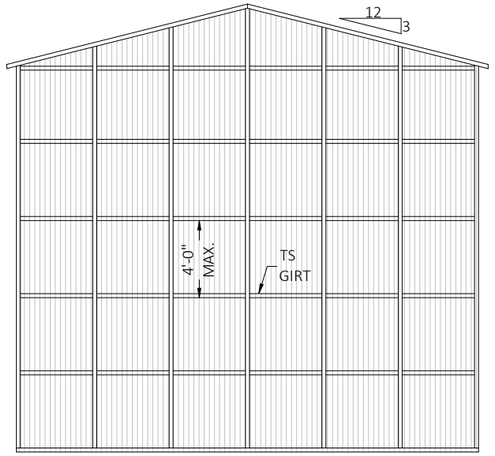
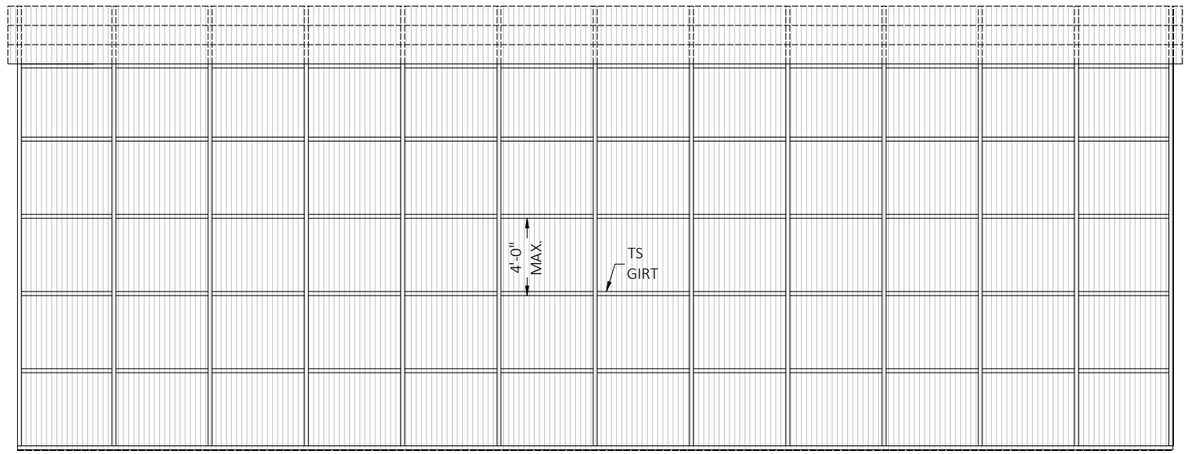
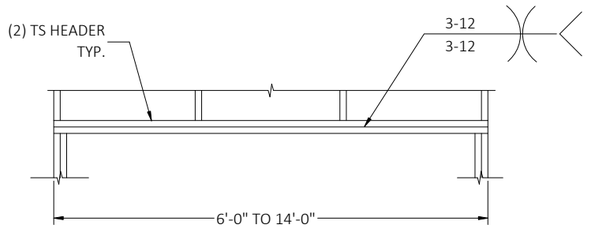
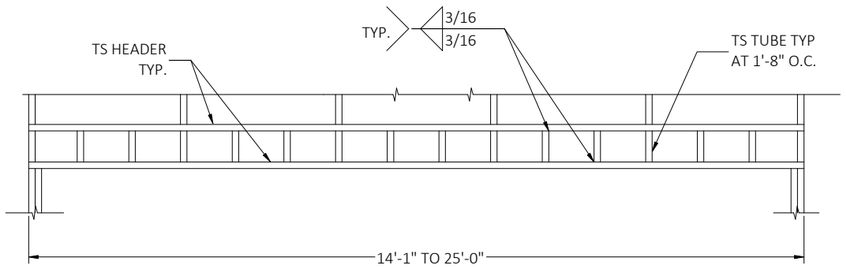


BOX EAVE END WALL - ELEVATION

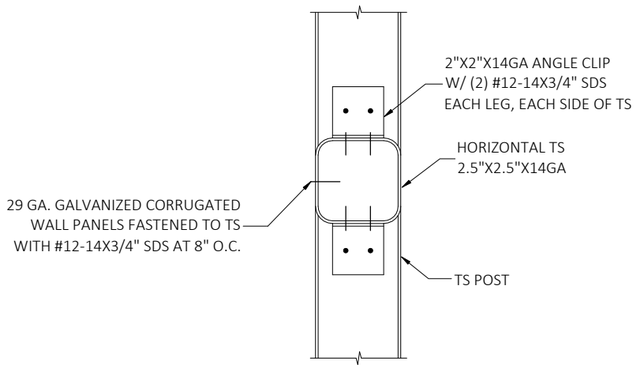


LOAD-BEARING WALL - ELEVATION

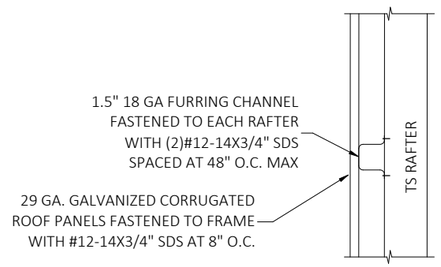




OPENING HEADER OPTIONS



FLUSH TS HORIZONTAL OPTION



FURRING CHANNEL OPTION

DETAIL 13
VERTICAL PANEL WALL ATTACHMENT

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. 2323368

CONTRACTOR: ALL METAL BUILDINGS

PROJECT ADDRESS: SMITH
222 SW BEACON WAY
LAKE CITY FL 32025

DESIGN DATE:	08/22/2023
REVISION 1:	DATE
REVISION 2:	DATE
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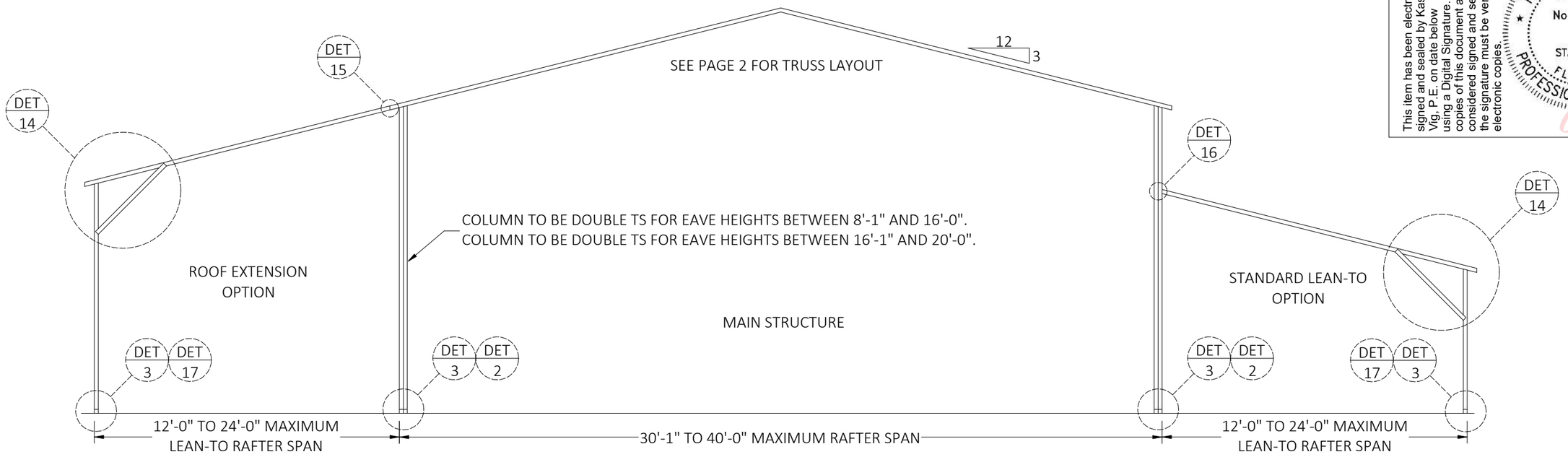
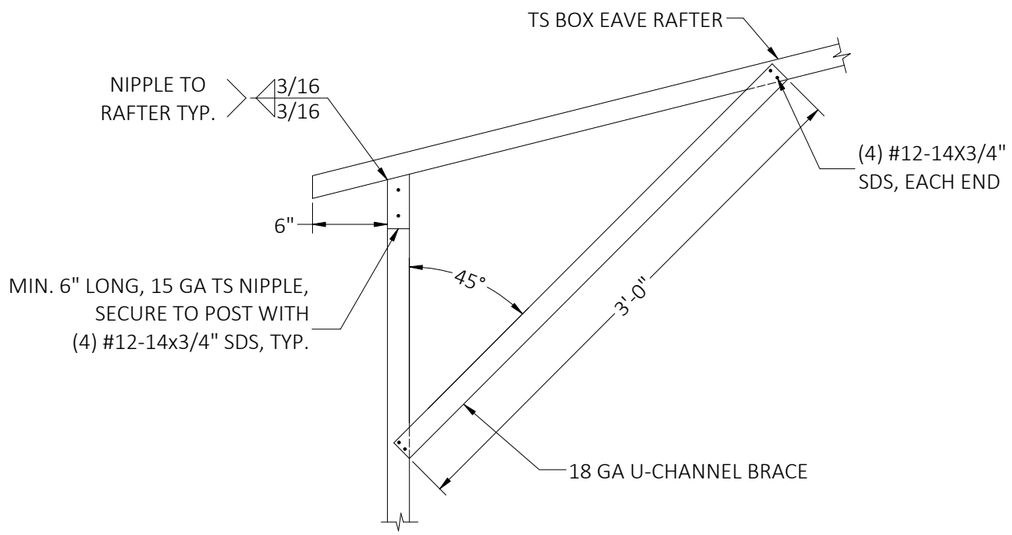
SCALE:	NTS



TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION



DETAIL 14

LEAN-TO RAFTER/CORNER POST CONNECTION

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KASHISH HARISH VIG LICENSE No. 93529 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Kashish Harish Vig
Date: 2023.08.22 14:22:16 -04'00'

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PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
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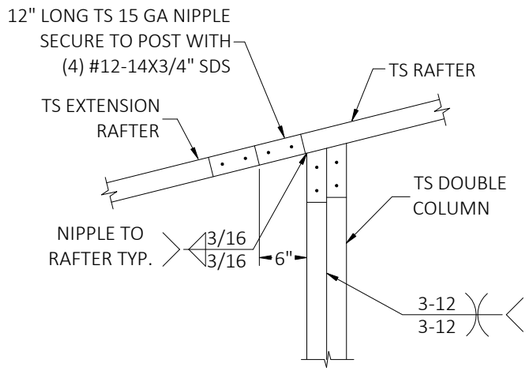
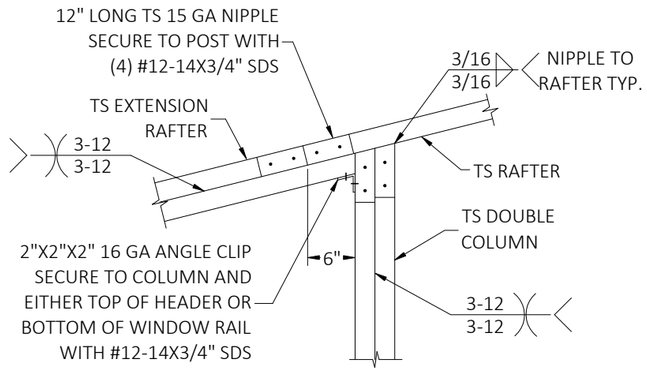


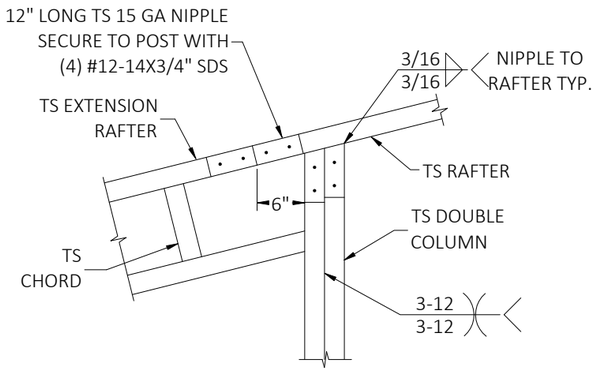
DETAIL 15A

SIDE EXTENSION RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS LESS THAN OR EQUAL TO 12'-0"



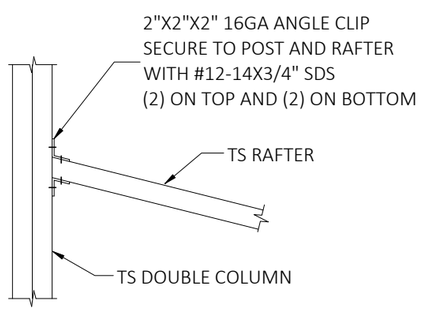
DETAIL 15B

SIDE EXTENSION RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS BETWEEN 12'-0" AND 22'-0"



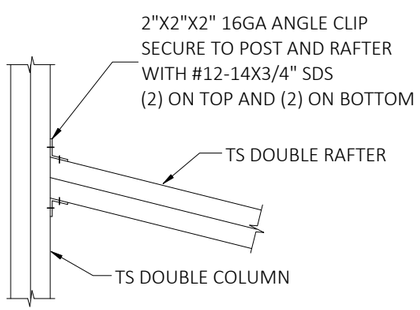
DETAIL 15C

SIDE EXTENSION RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS BETWEEN 22'-0" AND 24'-0"



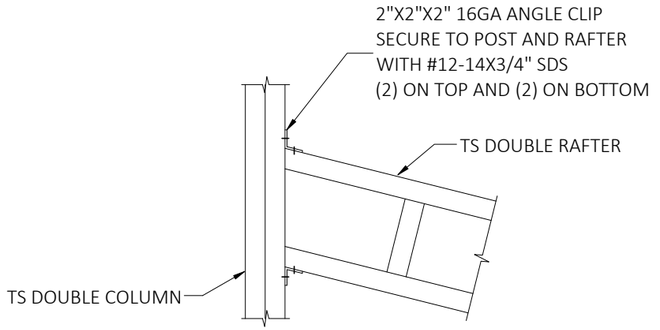
DETAIL 16A

LEAN TO RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS LESS THAN OR EQUAL TO 12'-0"



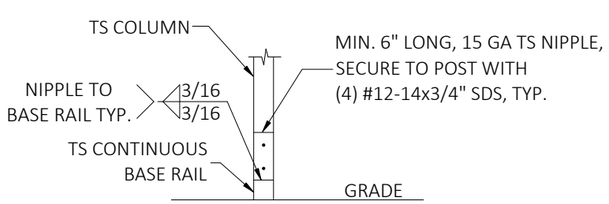
DETAIL 16B

LEAN TO RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS BETWEEN 12'-0" AND 18'-0"



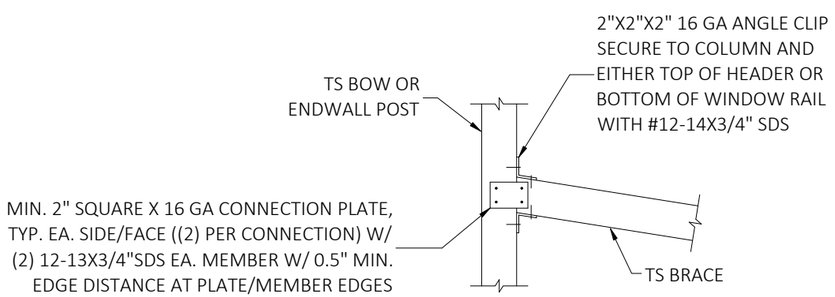
DETAIL 16C

LEAN TO RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS BETWEEN 18'-0" AND 24'-0"



DETAIL 17

LEAN-TO POST CONNECTION



DETAIL 18

BRACE CONNECTION

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KASHISH HARISH VIG LICENSE No. 93529 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Kashish Harish Vig
Date: 2023.08.22 14:22:21 -04'00'

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PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
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PROJECT ADDRESS: SMITH
222 SW BEACON WAY
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