

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 = 15 PSF
2. LIVE LOAD = 20 PSF
3. WIND LOAD (SEE TABLE 1)
- A. RISK CATEGORY = II
- B. WIND EXPOSURE CATEGORY = C
- C. ULTIMATE WIND SPEED = 120 MPH
- NOMINAL WIND SPEED = 93 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, AND ROOF SLOPES OF 19° (4:12 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.
7. RAFTER SPACING IS 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH AND 4'-0" FOR WIND SPEEDS BETWEEN 140 MPH AND 180 MPH.

DRAWING INDEX

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5	BOX EAVE RAFTER END WALL, SIDE WALL AND OPENING FRAMING
6	CONNECTION DETAILS (4-10)
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9	CONNECTION DETAILS (16-18)
10	BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION
11	OPTIONAL CONCRETE STRIP FOOTING
12	OPTIONAL HELICAL ANCHORING DETAIL

ENCLOSED METAL BUILDING DESIGN

60'-0" LONG X 60'-0" WIDE X 16'-0" HIGH (EAVE)

BOX EAVE FRAME

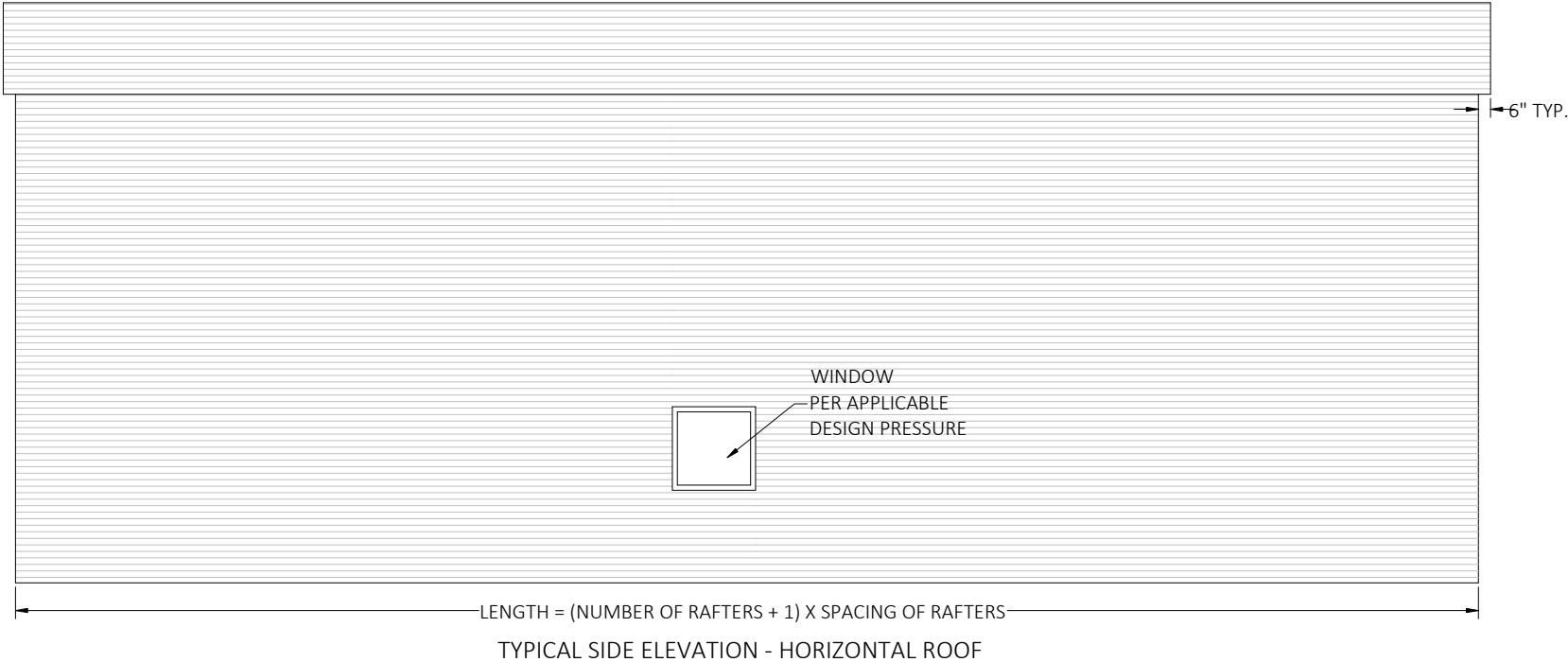
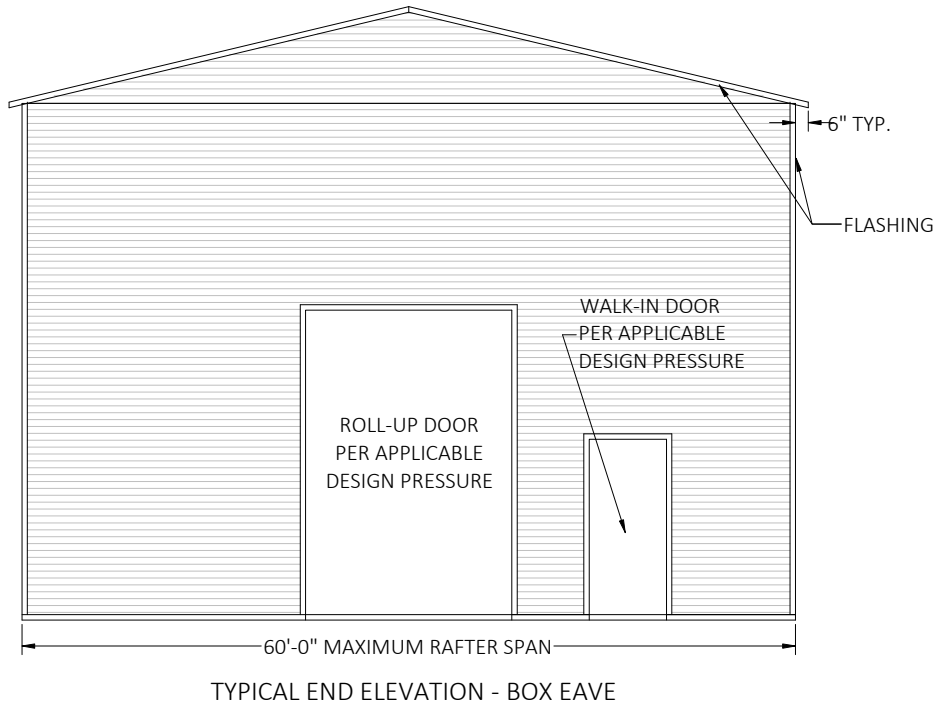


TABLE 1		
MEMBER	PRODUCT APPROVAL NUMBER	WIND DESIGN PRESSURES
ROOF PANELS	FL39466	+12.9 PSF / -33.7 PSF
WALL PANELS	FL39594	+17.3 PSF / -21.4 PSF
GARAGE DOOR	CTP	CTP
WALK-IN DOOR	CTP	CTP

DESIGN WIND PRESSURES	120 MPH
ZONE 1	+12.9 PSF / -11.6 PSF
ZONE 2	+12.9 PSF / -29.4 PSF
ZONE 3	+12.9 PSF / -33.7 PSF
ZONE 4	+17.3 PSF / -19.0 PSF
ZONE 5	+17.3 PSF / -21.4 PSF

CTP = CONTRACTOR TO PROVIDE  
2020 FBC APPROVED PRODUCTS  
THAT MEET OR EXCEED DESIGN  
PRESSURES AS TABULATED

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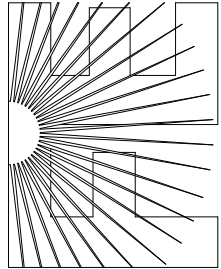
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PORT CHARLOTTE, FLORIDA 33952

(941) 391-5980

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CONTRACTOR:

ELITE METAL MANUFACTURING

10121 88TH TRACE,

LIVE OAK, FL 32060

PROJECT ADDRESS:

RDH TRUCKING

2291 SE SR 100,

LAKE CITY FL 32025

DESIGN DATE: 08/04/2022

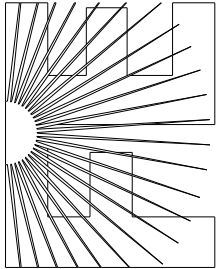
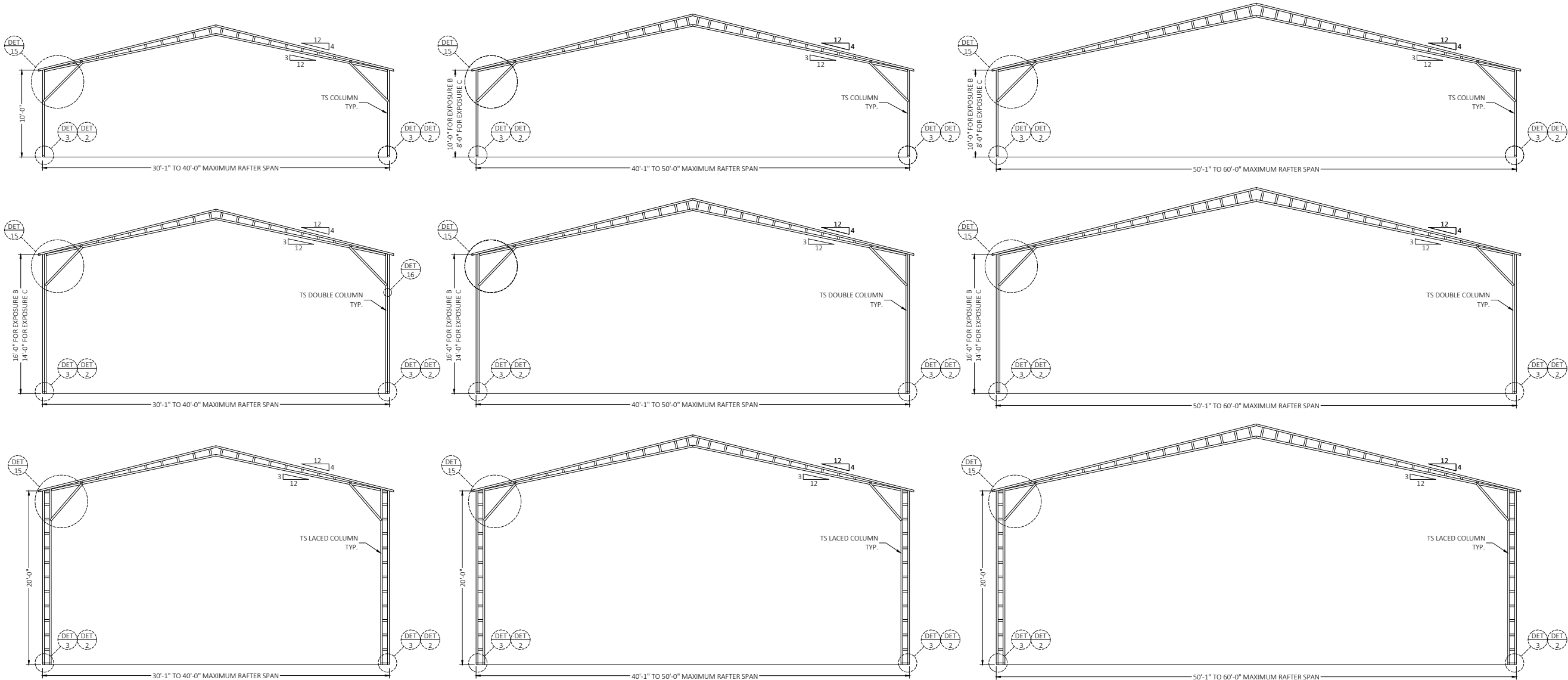
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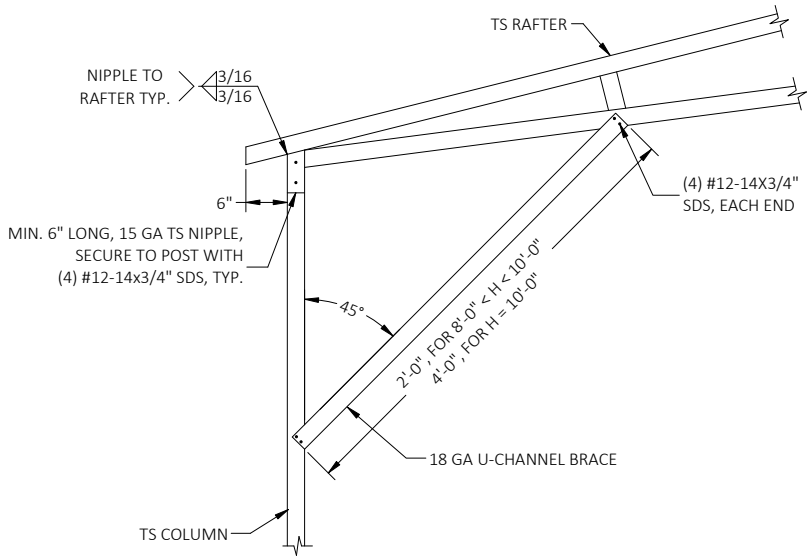
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PROJECT NO. 2221439

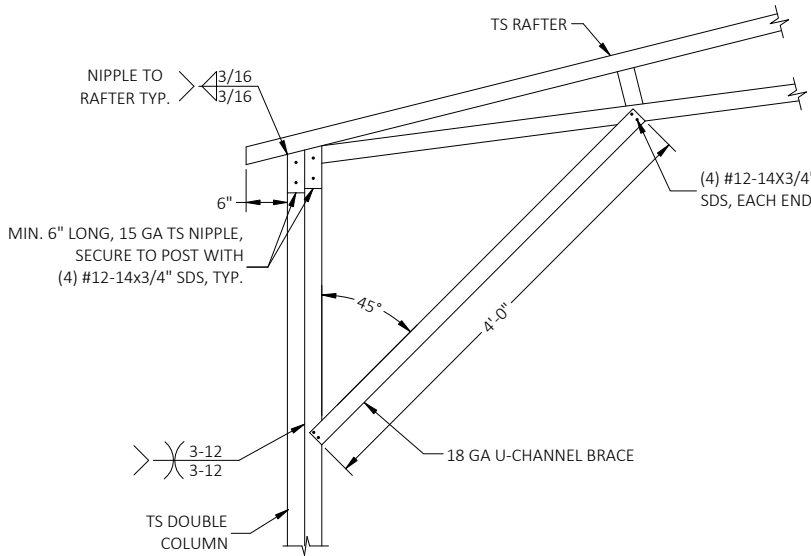
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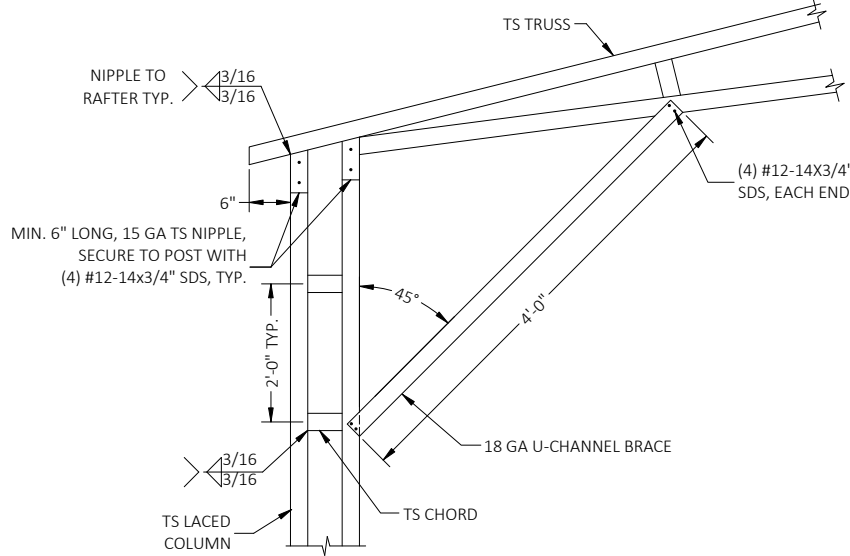
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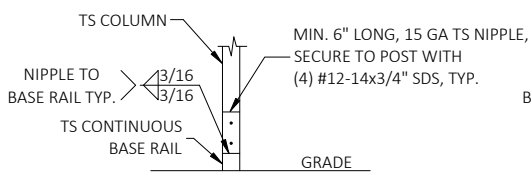
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BOX EAVE RAFTER/CORNER POST CONNECTION  
30'(MAX.)W X 12'H



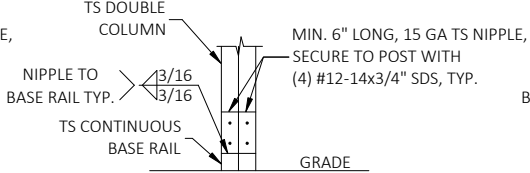
DETAIL 1C  
BOX EAVE RAFTER/CORNER POST CONNECTION  
30'(MAX.)W X 16'H



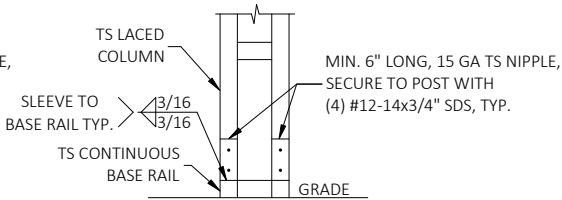
DETAIL 1E  
BOX EAVE RAFTER/CORNER POST CONNECTION  
30'(MAX.)W X 20'H



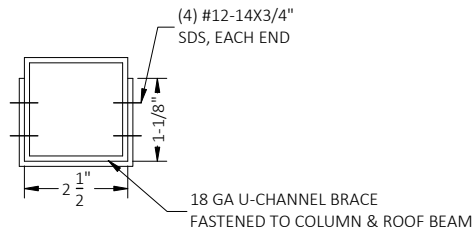
DETAIL 2A  
POST/BASE RAIL CONNECTION



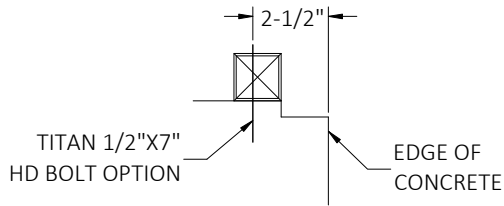
DETAIL 2B  
POST/BASE RAIL CONNECTION



DETAIL 2C  
POST/BASE RAIL CONNECTION

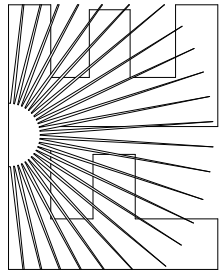


BRACE SECTION



SECTION  
(OPTION-2)

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

MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

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.

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.
2. FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 6" HELICES WITH MINIMUM 50" EMBEDMENT.
3. FOR VERY LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT.

INSTALL  $\frac{1}{2}$ " X  $\frac{3}{4}$ " EXPANSION

ANCHORS THROUGH BASE RAIL  
WITHIN 6" OF EACH POST (ALSO  
APPLICABLE TO END WALLS)

WWF OR FIBERGLASS  
FIBERS

4"

MIN. EMBED. =  $3\frac{1}{4}$ "

MIN. EDGE DISTANCE = 4"

MONOLITHIC CONCRETE  
FOOTING (3000 PSI MIN.)

REINFORCED WITH (n) #4 TYP.

VARIES

VARIES

GRADE

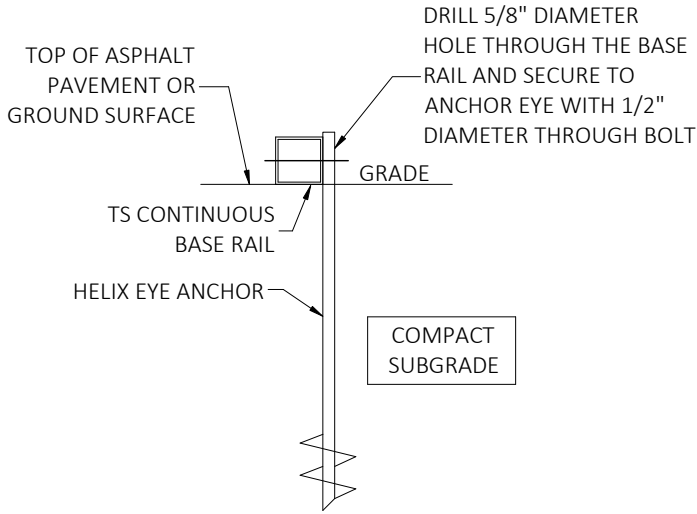
X

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

DETAIL 3A

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CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

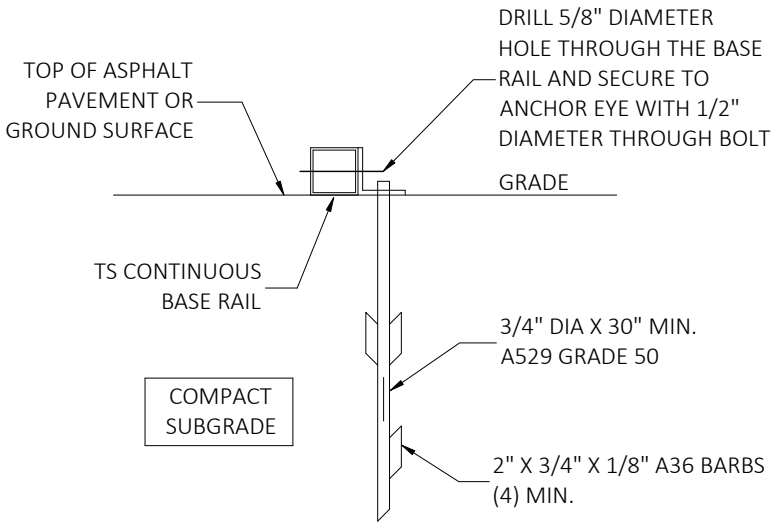


DETAIL 3B

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GROUND BASE HELIX ANCHORAGE

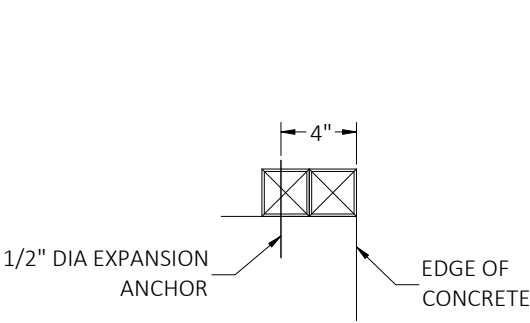
## BASE RAIL ANCHORAGE OPTIONS



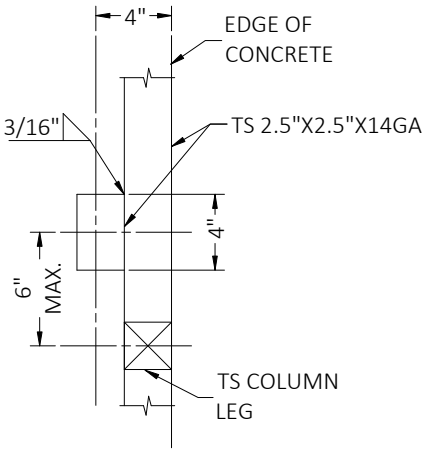
DETAIL 3C

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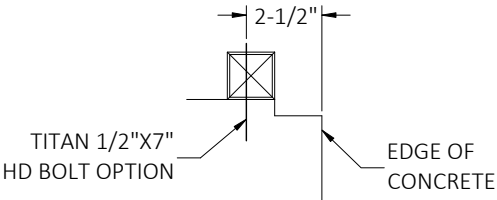
ASPHALT BASE ANCHORAGE  
(HP 9 BARBED DRIVE ANCHOR)



SECTION  
(OPTION-1)



TOP VIEW  
(OPTION-1)



SECTION  
(OPTION-2)

TYPICAL ANCHOR DETAIL WHEN BASE  
RAIL IS NEAR EDGE OF CONCRETE

## BASE RAIL ANCHORAGE OPTION

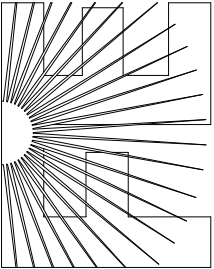
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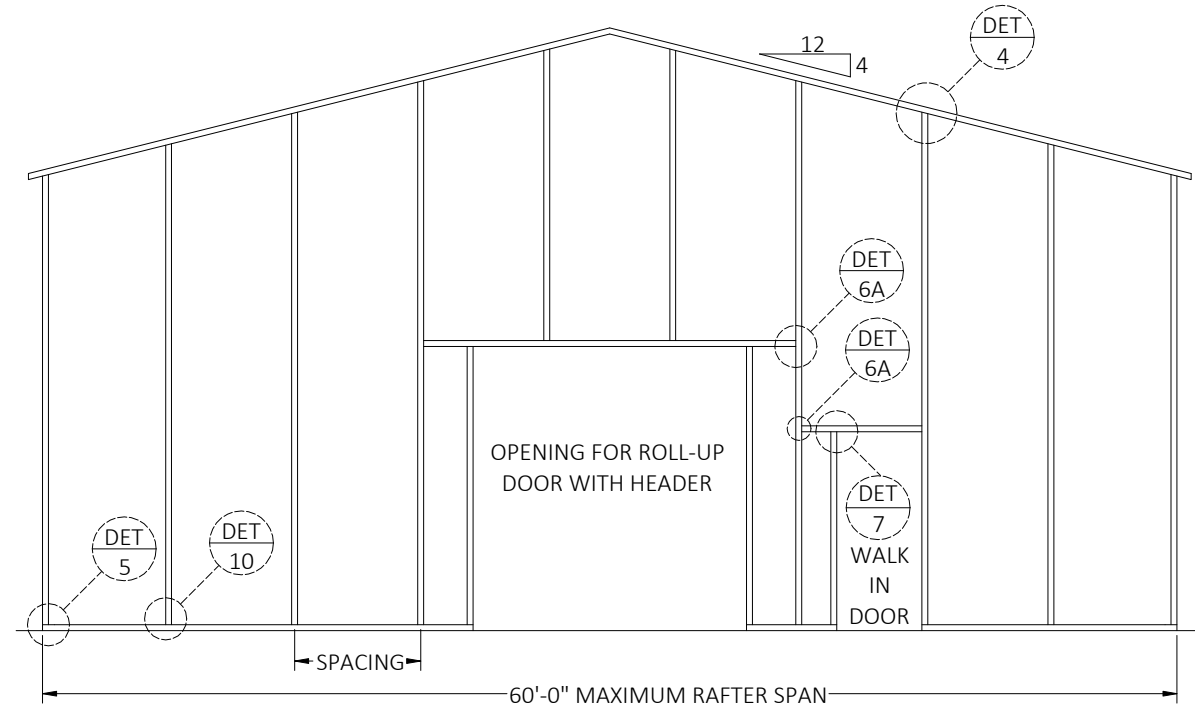
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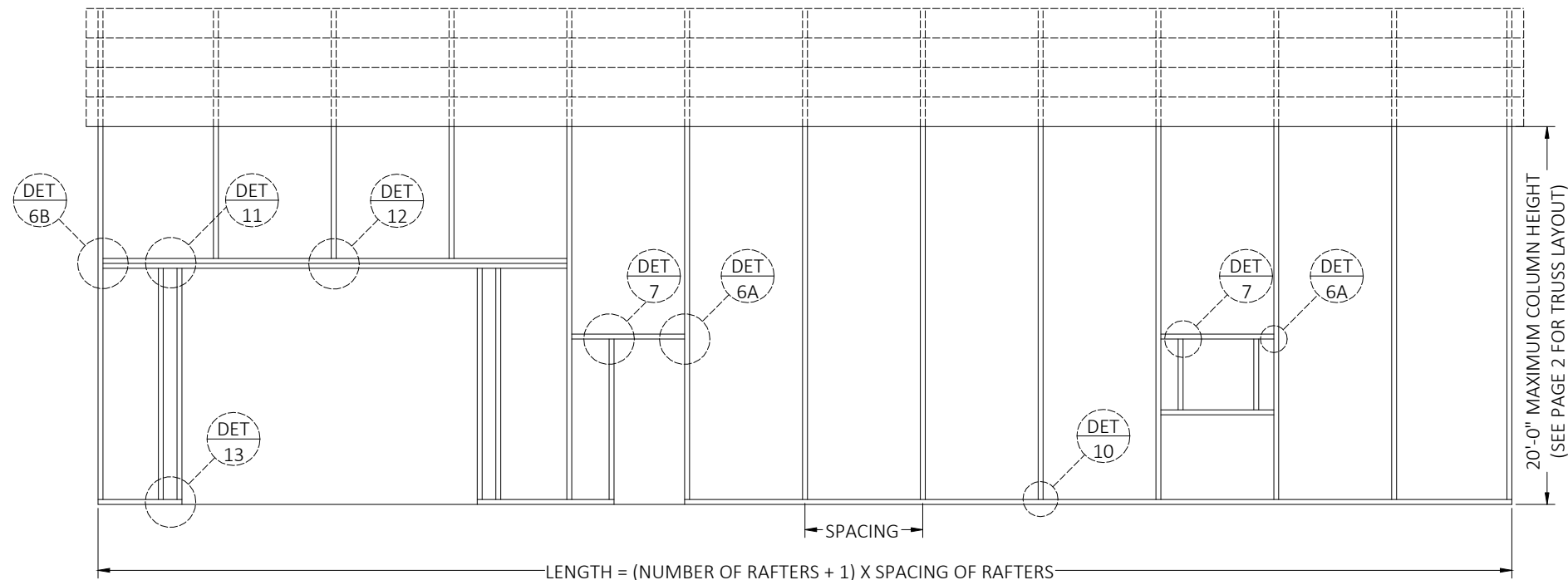
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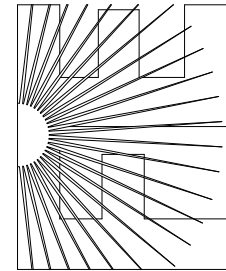
SPACING = 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH  
SPACING = 4'-0" FOR WIND SPEEDS BETWEEN 140 MPH AND 180 MPH

TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION



SPACING = 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH  
SPACING = 4'-0" FOR WIND SPEEDS BETWEEN 140 MPH AND 180 MPH

TYPICAL BOX EAVE RAFTER SIDE WALL FRAMING SECTION



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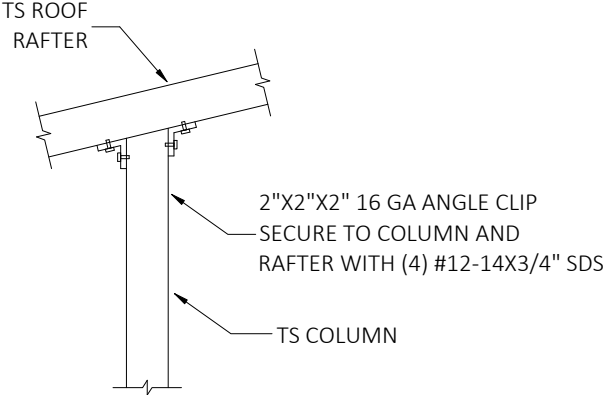
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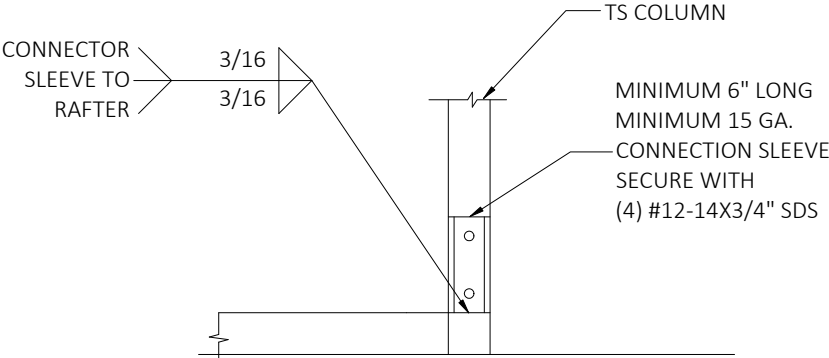
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## CONNECTION DETAILS



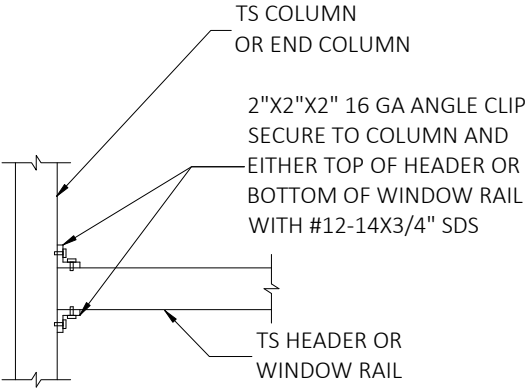
DETAIL 4  
END COLUMN/RAFTER CONNECTION



DETAIL 5

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END POST/BASE RAIL CONNECTION

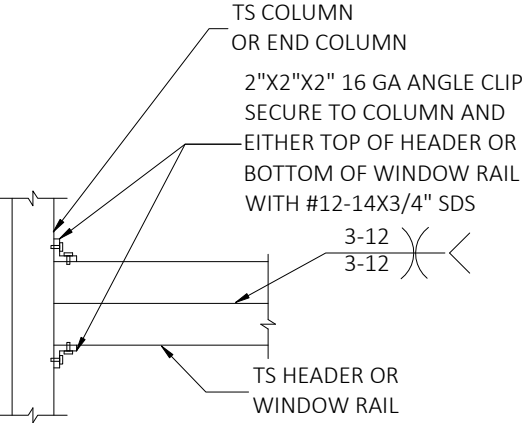


DETAIL 6A

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HEADER TO COLUMN CONNECTION

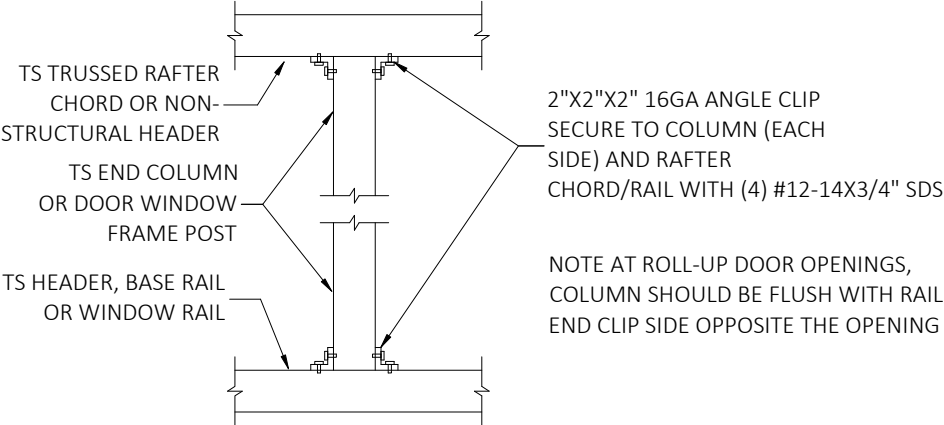
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DETAIL 6B

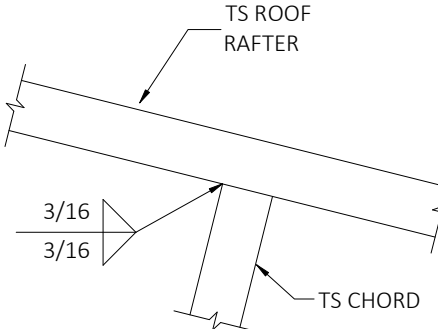
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DOUBLE HEADER TO COLUMN CONNECTION



DETAIL 7

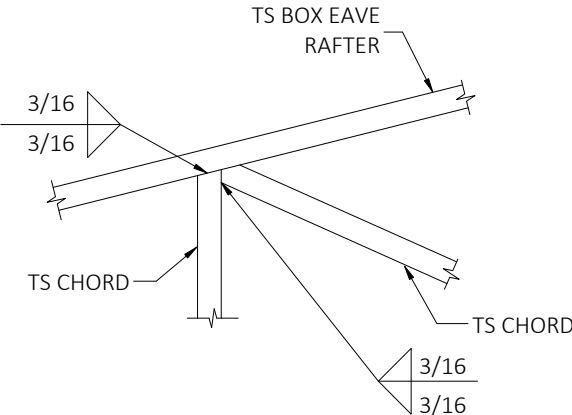
POST TO HEADER, BASE RAIL OR WINDOW RAIL CONNECTION



DETAIL 8

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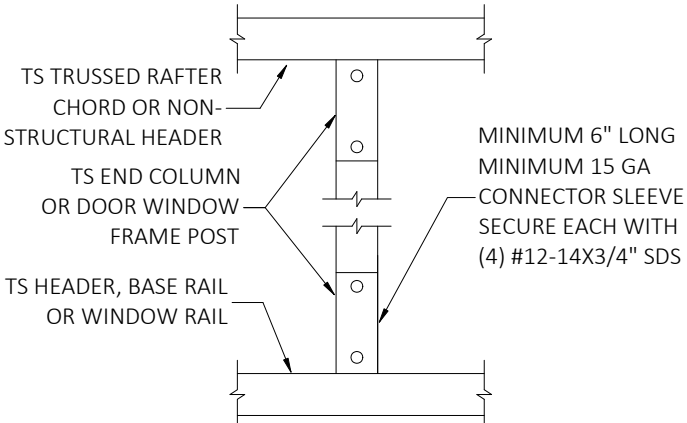
RAFTER TO CHORD CONNECTION



DETAIL 9

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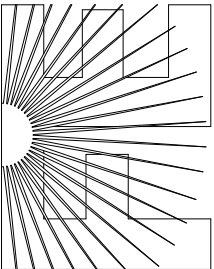
TRUSS POST AND CHORD TO RAFTER CONNECTION



DETAIL 10

---

POST TO HEADER, BASE RAIL CONNECTION



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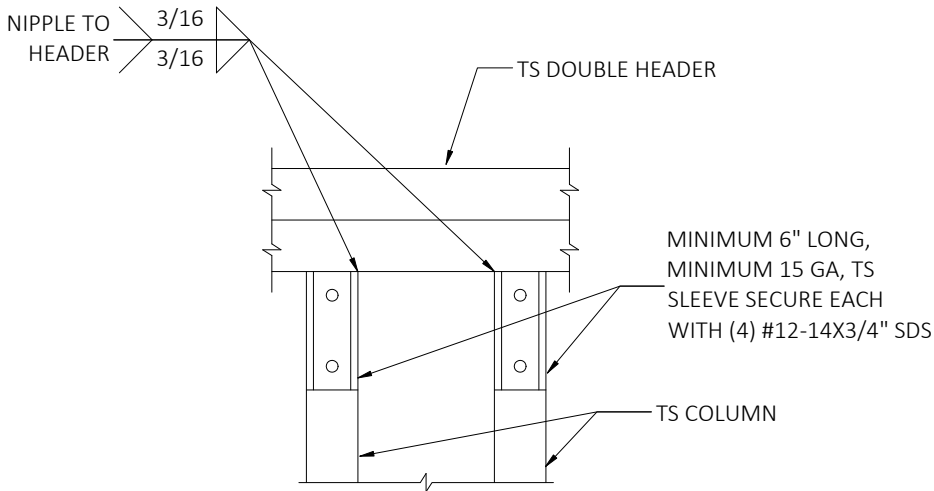
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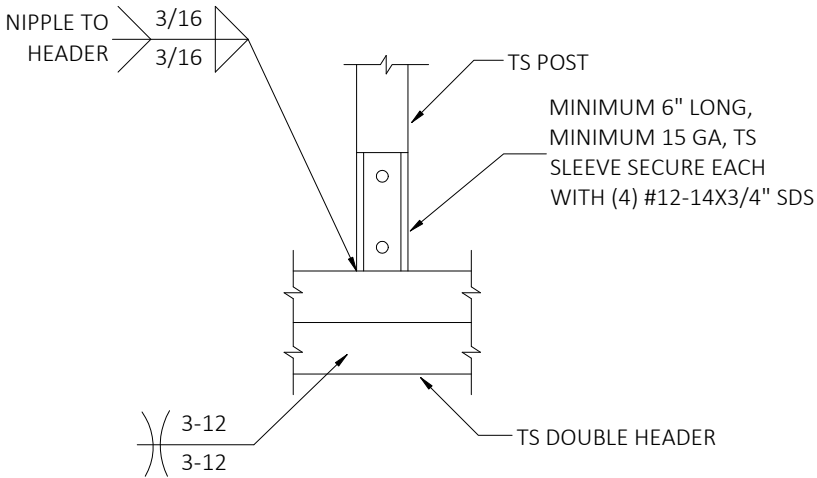
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CONNECTION DETAILS

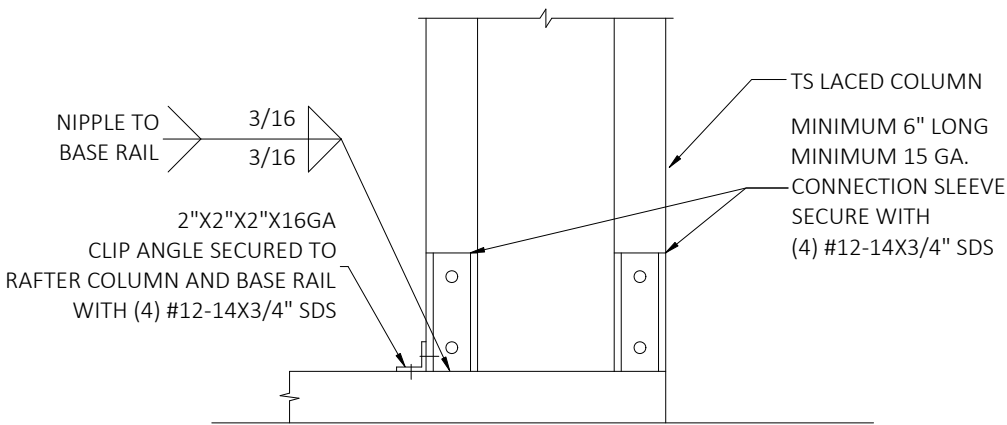
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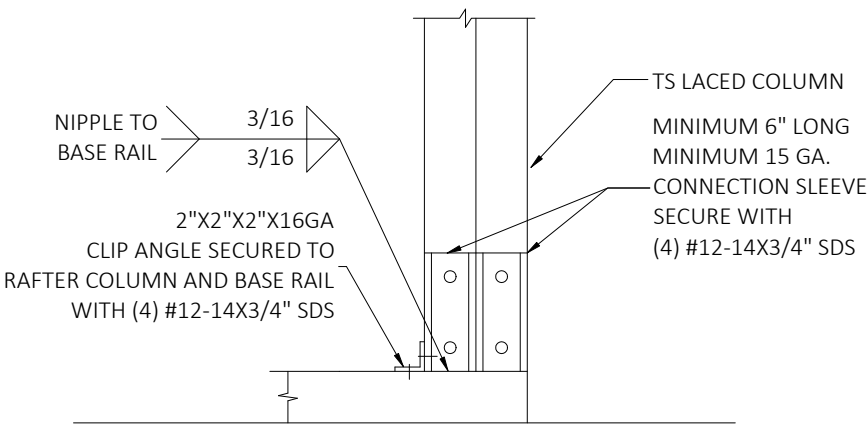
DETAIL 11  
DOUBLE HEADER TO POST CONNECTION



DETAIL 12  
POST/DOUBLE HEADER CONNECTION

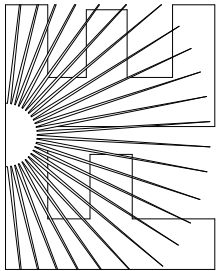


DETAIL 13A  
POST/BASE RAIL CONNECTION



DETAIL 13B  
POST/BASE RAIL CONNECTION

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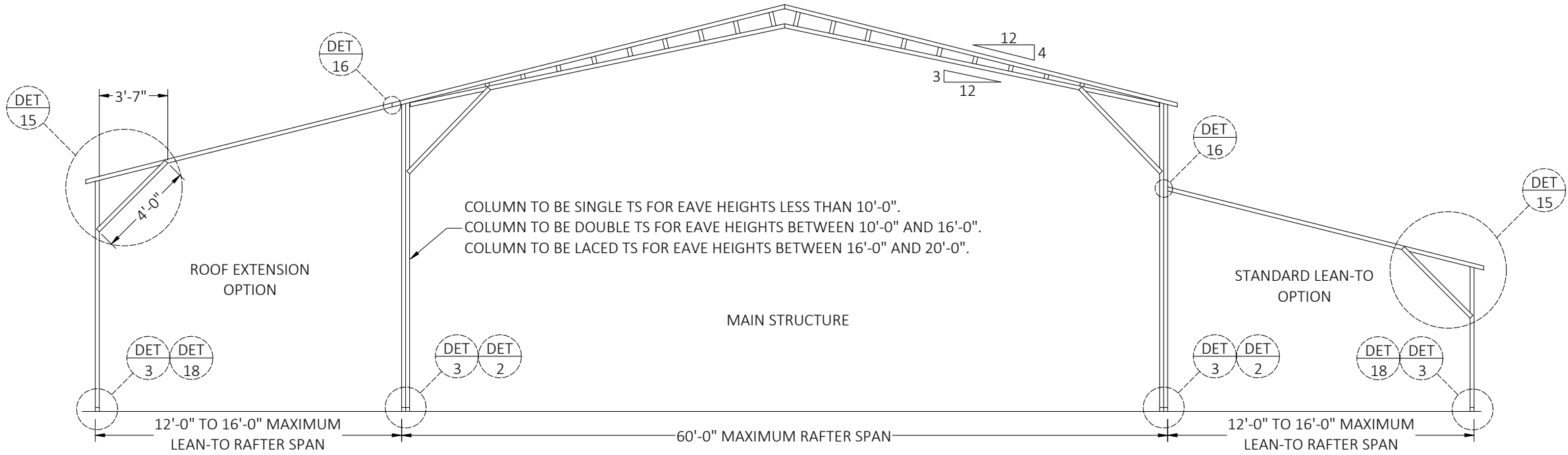
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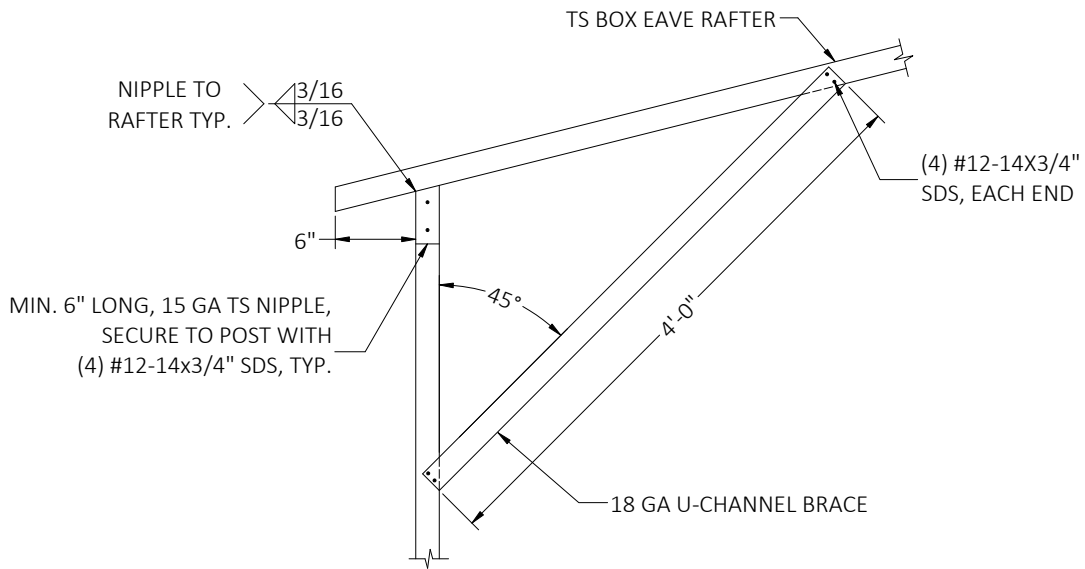
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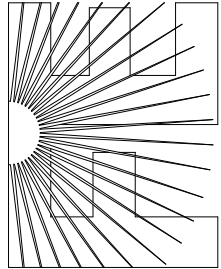


TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION



DETAIL 15  
LEAN-TO RAFTER/CORNER POST CONNECTION

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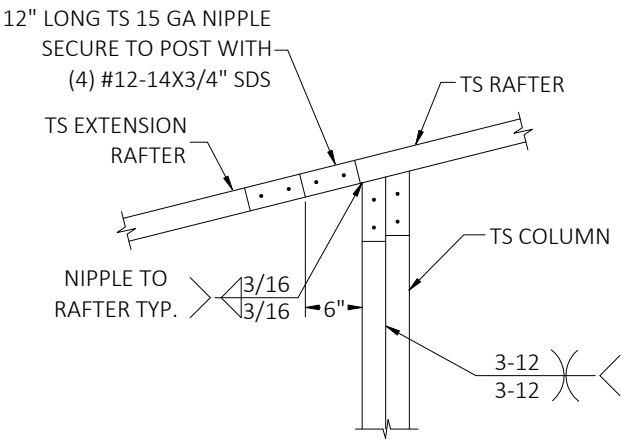
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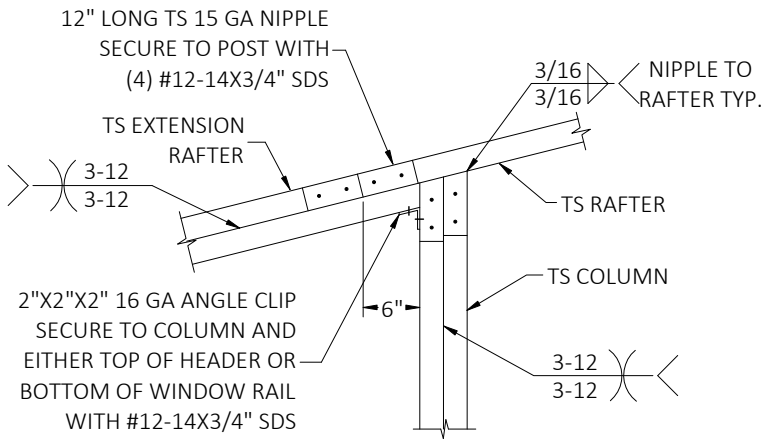
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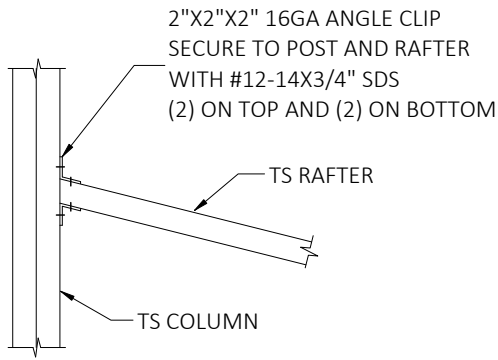
CONNECTION DETAILS



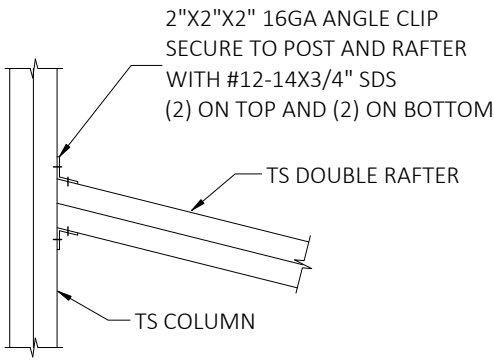
DETAIL 16A  
SIDE EXTENSION RAFTER/COLUMN CONNECTION  
FOR RAFTER SPANS LESS THAN 12'-0"



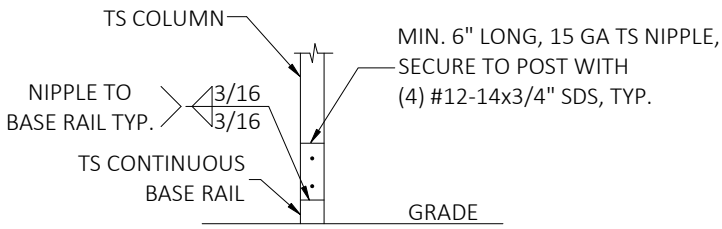
DETAIL 16B  
SIDE EXTENSION RAFTER/COLUMN CONNECTION  
FOR RAFTER SPANS BETWEEN 12'-0" AND 16'-0"



DETAIL 17A  
LEAN TO RAFTER/COLUMN CONNECTION  
FOR RAFTER SPANS LESS THAN 12'-0"



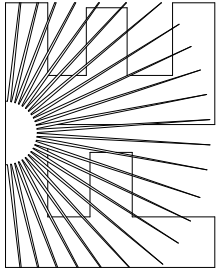
DETAIL 17B  
LEAN TO RAFTER/COLUMN CONNECTION  
FOR RAFTER SPANS BETWEEN 12'-0" AND 16'-0"



DETAIL 18  
LEAN-TO POST CONNECTION

COLUMN TO BE SINGLE TS FOR EAVE HEIGHTS LESS THAN 10'-0".  
COLUMN TO BE DOUBLE TS FOR EAVE HEIGHTS BETWEEN 10'-0" AND 16'-0".  
COLUMN TO BE LACED TS FOR EAVE HEIGHTS BETWEEN 16'-0" AND 20'-0".

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PORT CHARLOTTE, FLORIDA 33952  
(941) 391-5980  
www.flengineeringllc.com

PROJECT NO. 2221439

CA CERT. #30782

CONTRACTOR:  
ELITE METAL MANUFACTURING  
10121 88TH TRACE,  
LIVE OAK, FL 32060

PROJECT ADDRESS:  
RDH TRUCKING  
2291 SE SR 100,  
LAKE CITY FL 32025

DESIGN DATE: 08/04/2022

REVISION 1: DATE

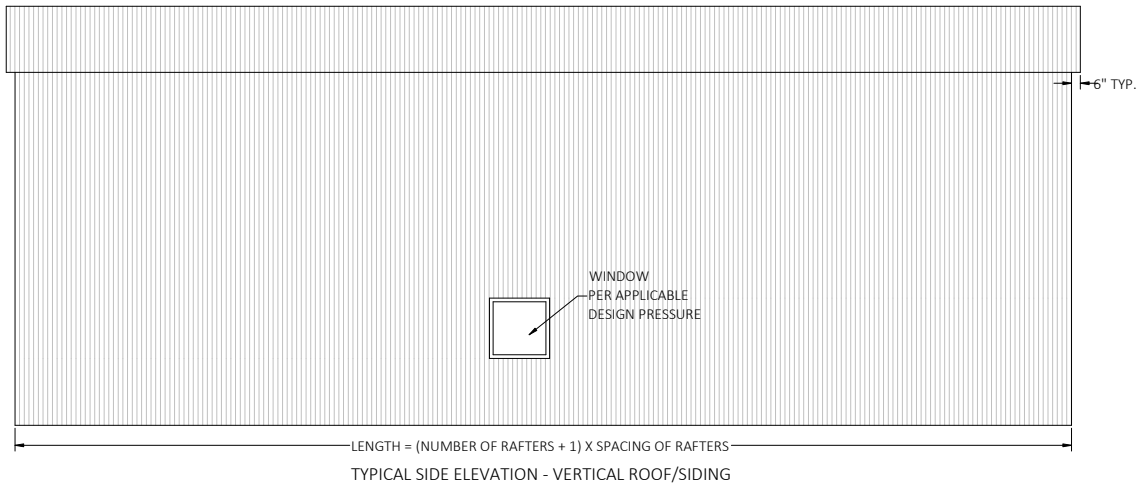
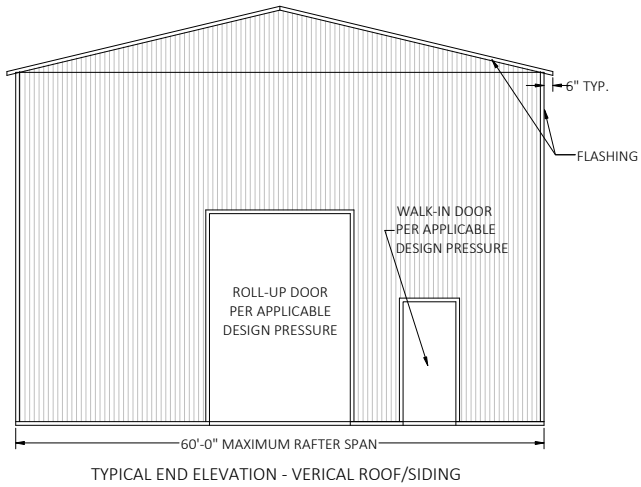
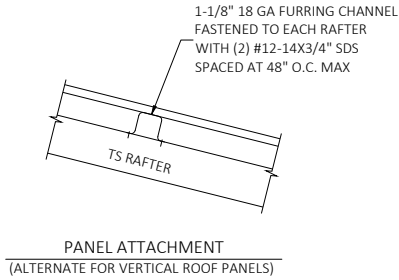
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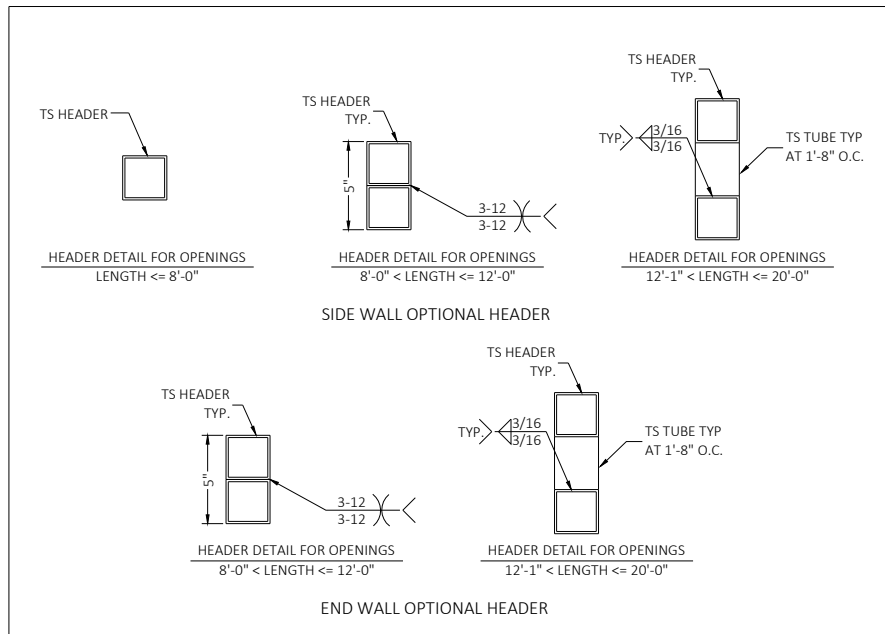
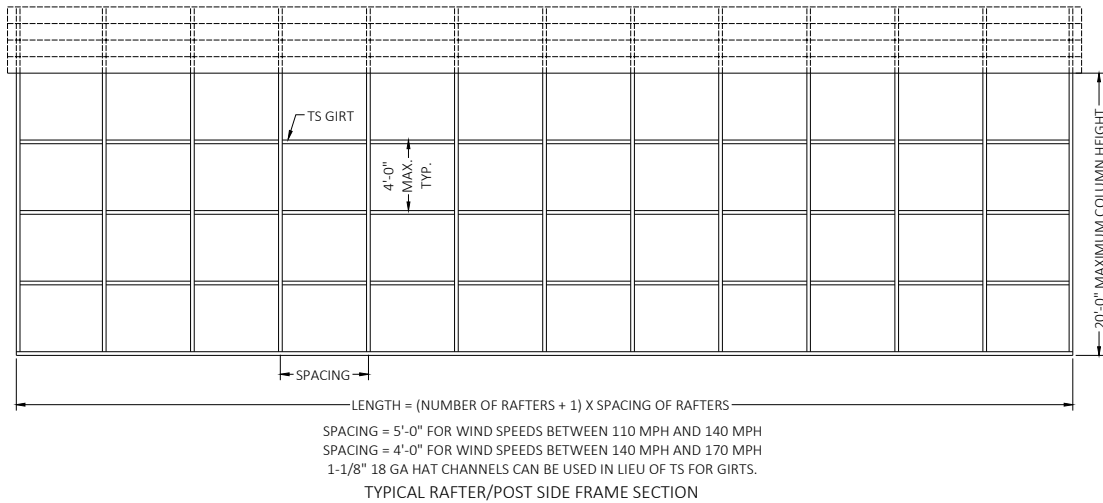
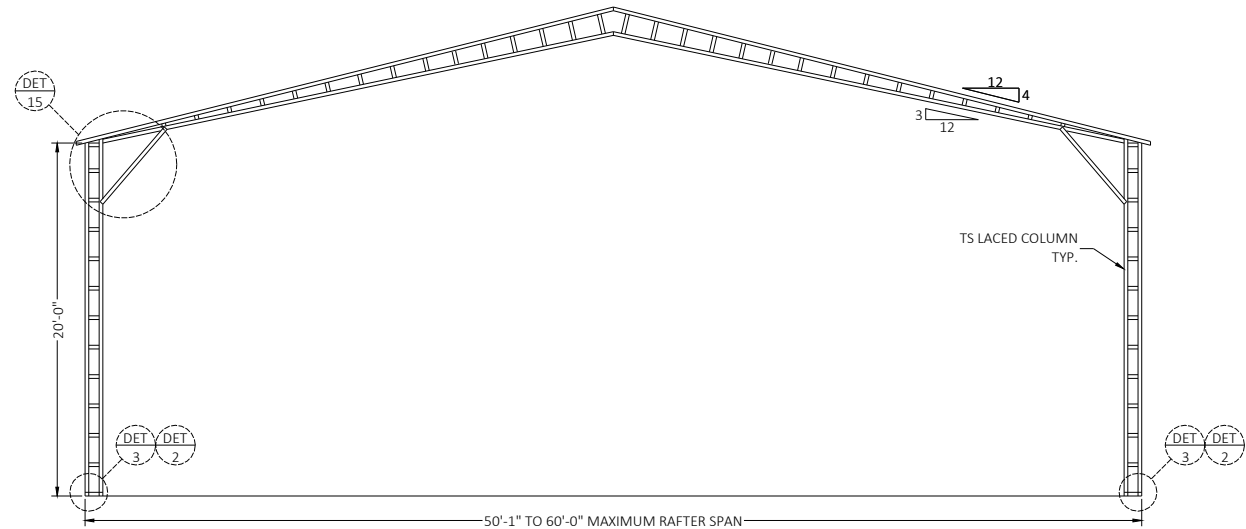
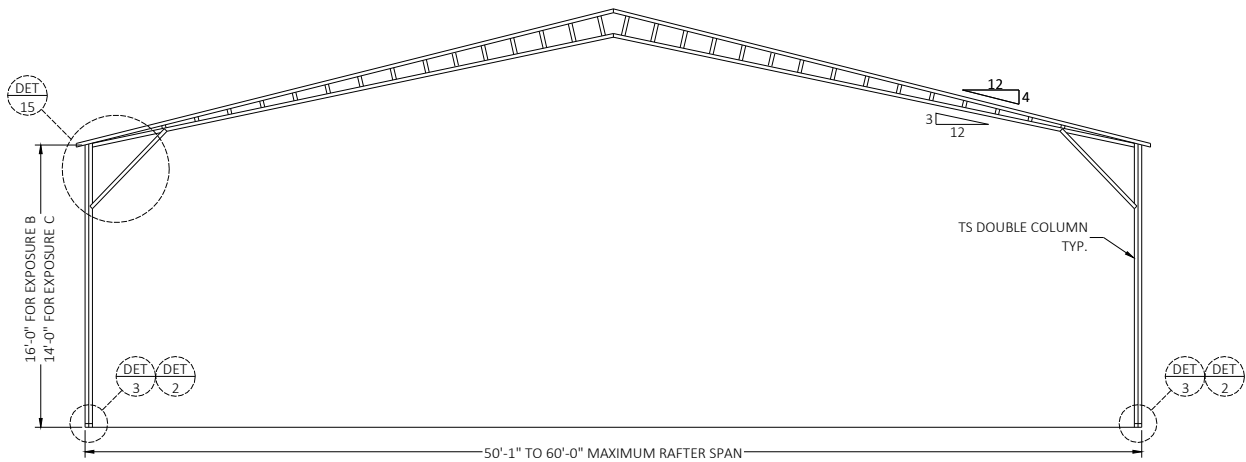
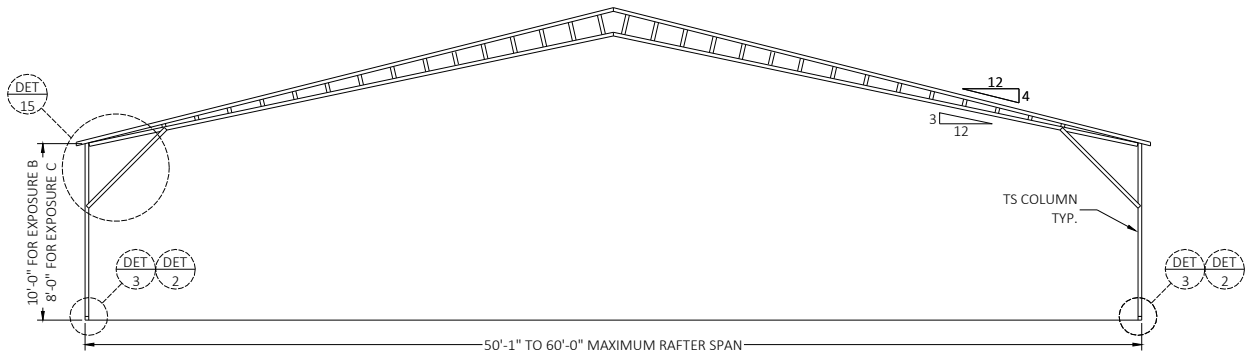
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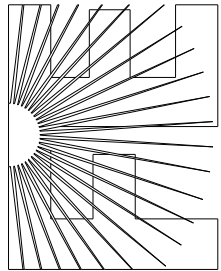


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BOX EAVE FRAME RAFTER ENCLOSED BUILDING



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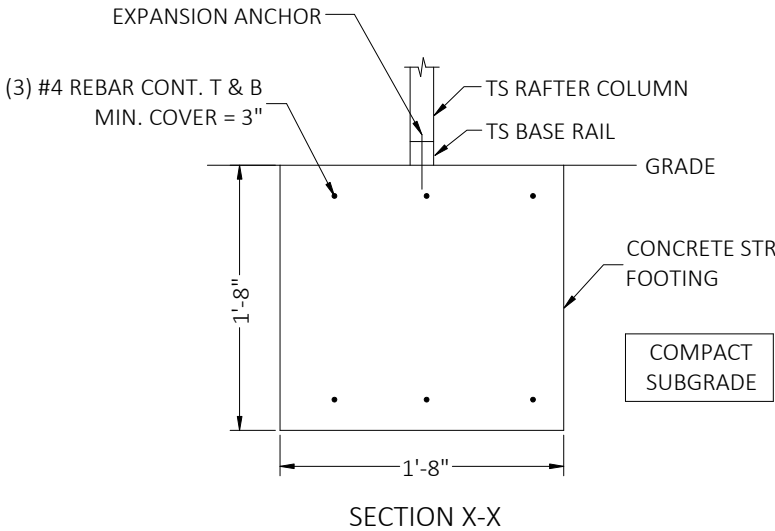
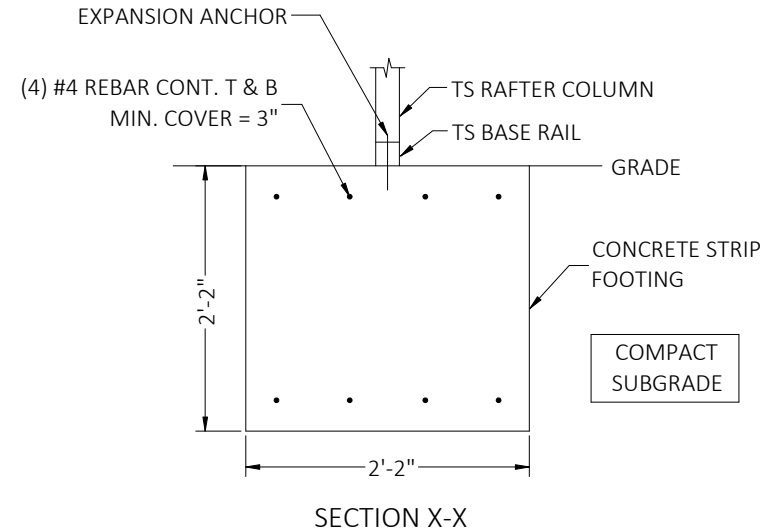
CONTRACTOR:		ELITE METAL MANUFACTURING 10121 88TH TRACE, LIVE OAK, FL 32060		PROJECT ADDRESS:  RDH TRUCKING 2291 SE SR 100, LAKE CITY FL 32025	
DESIGN DATE:		08/04/2022			
REVISION 1:		DATE			
REVISION 2:		DATE		PAGE :	
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GENERAL NOTES  
CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF 1500 PSF.

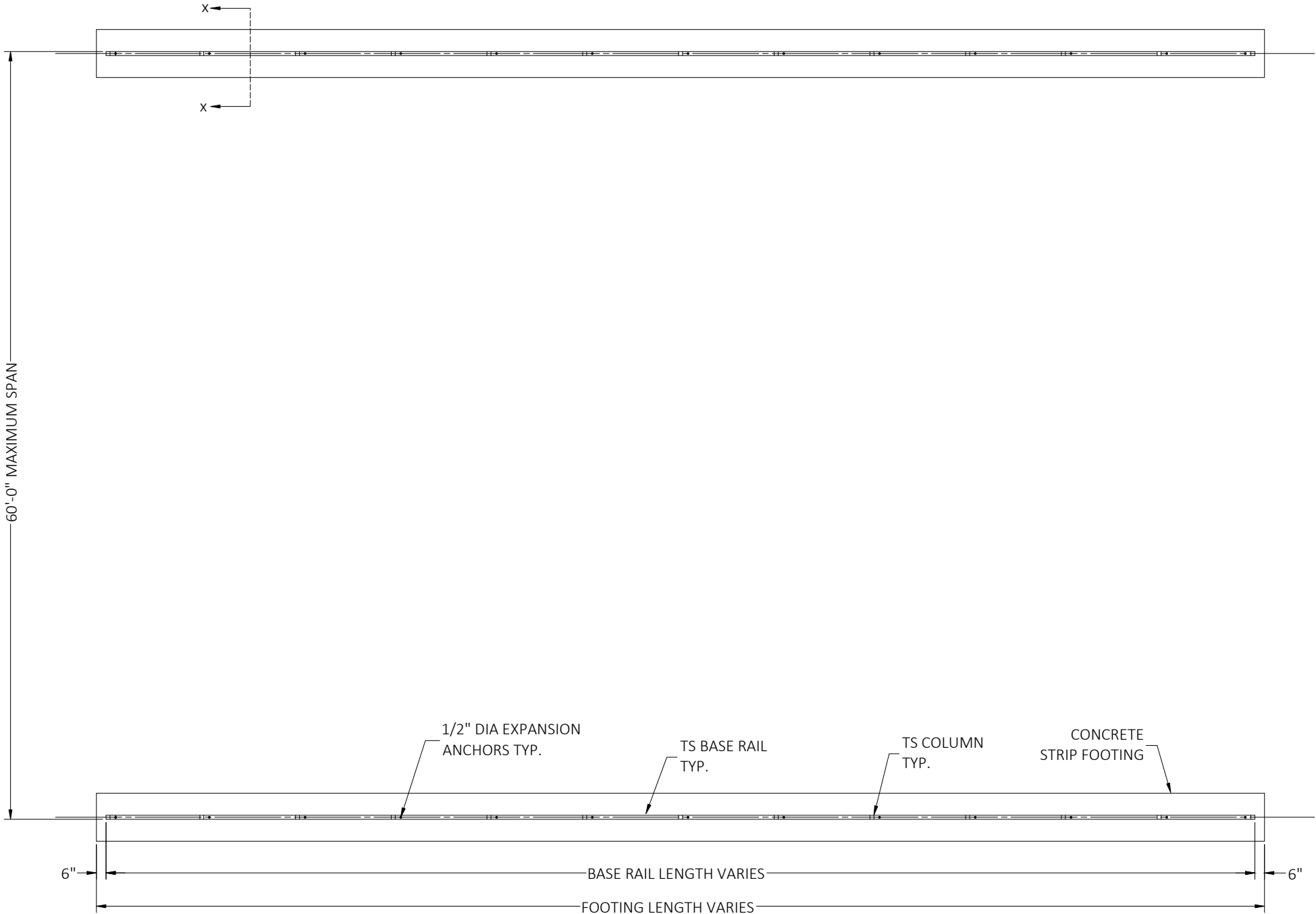
CONCRETE  
MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

- 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 PERMENTLY 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.

STRIP FOOTER SIZE	
110 C - 140 C	20"X20"
ABOVE 140 C	26"X26"

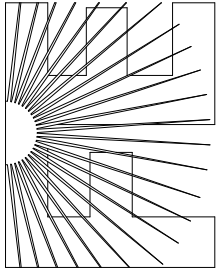


OPTIONAL CONCRETE STRIP FOOTING



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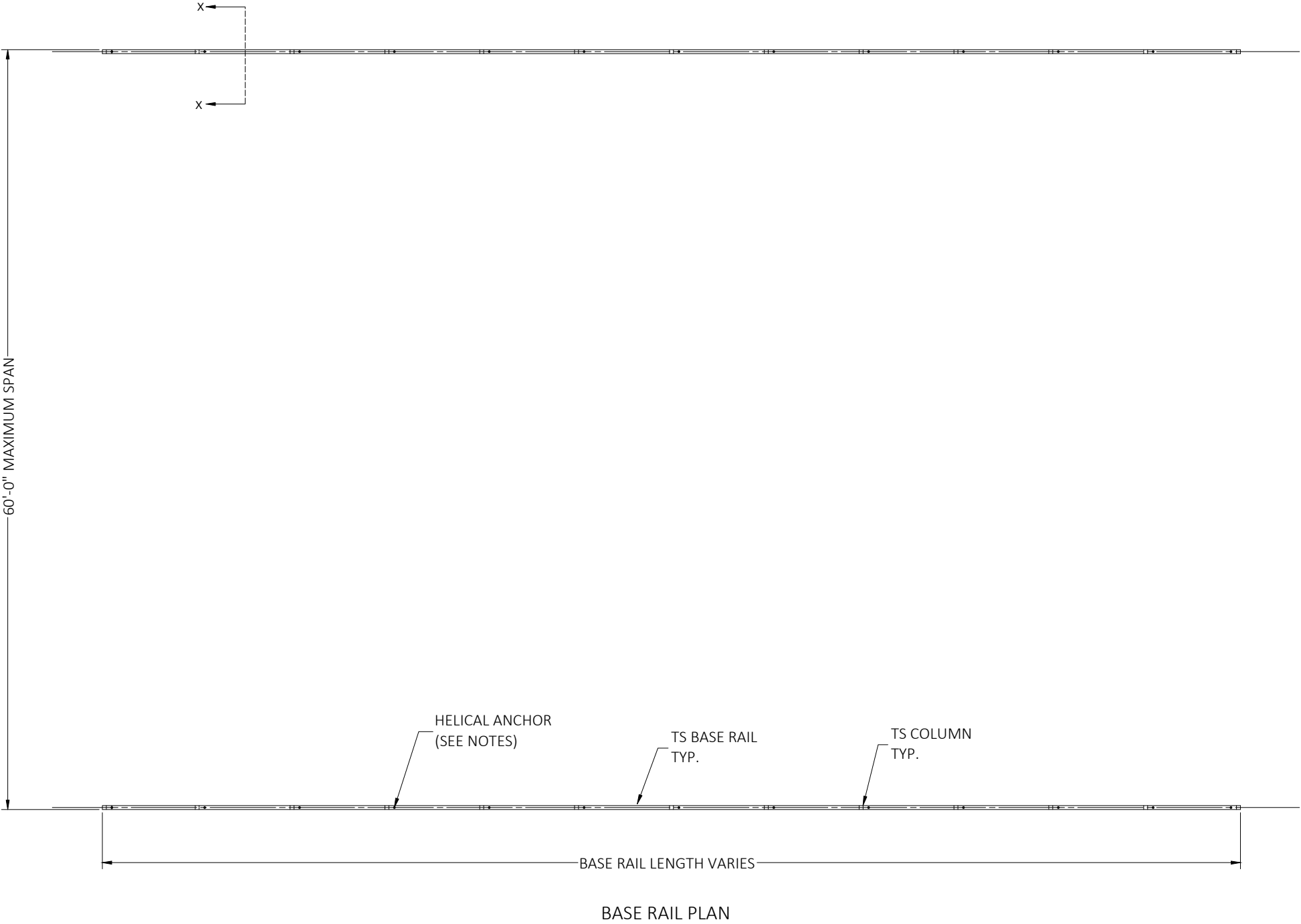
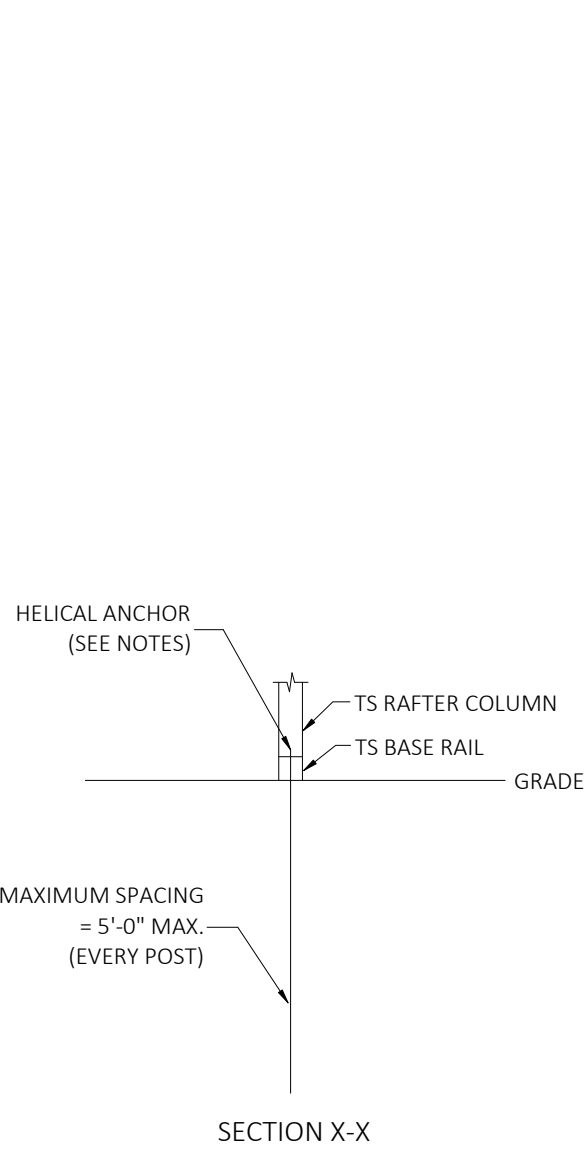
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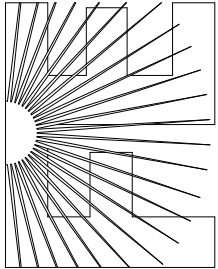
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- HELIX ANCHOR NOTES
1. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, CORALS, MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS AND CLAYS, USE MINIMUM (2) 4” HELICES WITH MINIMUM 30” EMBEDMENT.
  2. FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 6” HELICES WITH MINIMUM 50” EMBEDMENT.
  3. FOR VERY LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 8” HELICES WITH MINIMUM 60” EMBEDMENT.



OPTIONAL HELICAL ANCHORING DETAIL

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