APPLICABLE CODES AND STANDARDS

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

INSTALLATION NOTES AND SPECIFICATIONS

- ROOF PITCH SHALL NOT BE GREATER THAN 12H:4V
- 2. END WALL COLUMNS (POST) AND SIDE WALL COLUMNS ARE THE SAME U.N.O.
- 3. 29 GA METAL PANELS SHALL BE FASTENED DIRECTLY TO 2.5" x 2.5" x 14 GA TUBE STEEL (TS) FRAMING MEMBERS FOR VERTICAL PANELS.
- 3.1. 29 GA METAL PANELS SHALL BE FASTENED DIRECTLY TO 18 GA HAT CHANNELS U.N.O.
- 4. FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS SHALL BE:
- 4.2.
- 5. FASTENERS SHALL BE #12-14 x 3/4" SELF-DRILLING SCREWS (SDS), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. APPLICABLE ONLY FOR:
- MEAN ROOF HEIGHT OF 20'-0" OR LESS
- ROOF SLOPES OF 18° (4:12 PITCH) OR LESS
- SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
- 6. ANCHORS SHALL BE INSTALLED THROUGH THE BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES AND ENDS.
- STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR WITH WELDED NUT x 30" LONG AND MAY BE USED IN SUITABLE SOILS.
- 7.1. 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

BOW/RAFTER FRAME, END POST, GROUND ANCHOR AND PANEL FASTENER SPACING SPECIFICATIONS

		-	NOMINAL	MAXIMUM DAFTED (DOW)	FASTENER SPACING O.C FOR RAFTERS/PURLINS, & POSTS (INCHES)			
RISK CATEGORY	WIND EXPOSURE CATEGORY	SPEED (MPH)	//IND LIND I		INTERIOR BOWS/RAFTERS	END BOWS/RAFTERS		
I, II, III, or IV	B, C, or D	115 - 150	89 - 116	5.0	6	6		
		151 - 180	117 - 139	4.0	6	6		

NO JES:

1. SPECIFICATIONS APPLICABLE TO 26 OR 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 12 OR 14 GAUGE STEEL TUBE BOW FRAMES.

2. FASTENTERS CONSIST OF 1/4"-14X1" SELF-DRILLING SCREWS WITH CONTROL SEAL WASHER.

3. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20 FEET OR LESS, AND ROOF SLOPES OF 14"(3:12 PITCH).

- SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
- 4. GROUND ANCHOR REQUIREMENTS ARE 1 @ EACH CORNER AND ONE EVERY OTHER INTERIOR BOWRAFTER POST LOCATION, AT MAXIMUM OF 10' O.C., AND BOTH SIDES OF OPENINGS WHERE BASE RAIL IS ABSENT.

 5. GROUND ANCHORS ARE NOT REQUIRED WITH CONCRETE SLAB CONSTRUCTION.

DESIGN LOADS

- DEAD LOAD = 15 PSF
- LIVE LOAD = 20 PSF
- 3. WIND LOAD (SEE TABLE 1)

ENCLOSED METAL BUILDING DESIGN 30 FT WIDE X 35 FT LONG X 12 FT EAVE WITH

12 FT WIDE X 35 FT LONG X 10 FT EAVE HT. LEAN-TO



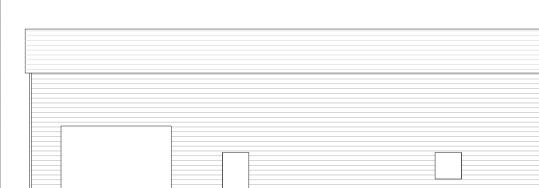
OPENING FOR ROLL-UI WALK DOOR -30'-0" MAXIMUM RAFTER SPAN

TYPICAL ELEVATION - BOX EAVE

SCALE: NTS

TYPICAL ELEVATION - BOW EAVE

SCALE: NTS



-LENGTH = (NUMBER OF RAFTERS + 1) x SPACING OF RAFTERS TYPICAL SIDE ELEVATION

SCALE: NTS

TARIF 1

	IADLE I	
MEMBER	PRODUCT APPROVAL NUMBER	WIND DESIGN PRESSURES
ROOF PANELS	FL39466	+41.6 PSF / -31.2 PSF
WALL PANELS	FL39594	+55.4 PSF / -41.6 PSF
GARAGE DOOR	СТР	CTP
WALK-IN DOOR	СТР	CTP



12558 BASS ROAD, LIVE OAK, FLORIDA 32060 P:386.320.7400 F: 850.807.7309 WWW.COLLINSENG.COM CERTIFICATE OF AUTHORIZATION: 31728

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DRAWING INDEX DESCRIPTION

PAGE NO.	DESCRIPTION
S-1	NOTES AND SPECIFICATIONS
S-2	BOX-BOW EAVE FRAME RAFTER ENCLOSED BUILDING
S-3	CONNECTION DETAILS (1 OF 4)
S-4	BASE RAIL AND ANCHORAGE DETAILS
S-5	BOX EAVE RAFTER END WALL, SIDE WALL AND OPENING FRAMING
S-6	CONNECTION DETAILS (2 OF 4)
S-7	CONNECTION DETAILS (3 OF 4)
S-8	BOX EAVE RAFTER LEAN-TO OPTIONS
S-9	CONNECTION DETAILS (4 OF 4)
S-10	BOX EAVE RAFTER VERTICAL ROOF-SIDING OPTION
S-11	OPTIONAL CONCRETE STRIP FOOTING
S-12	OPTIONAL HELICAL ANCHORING DETAIL

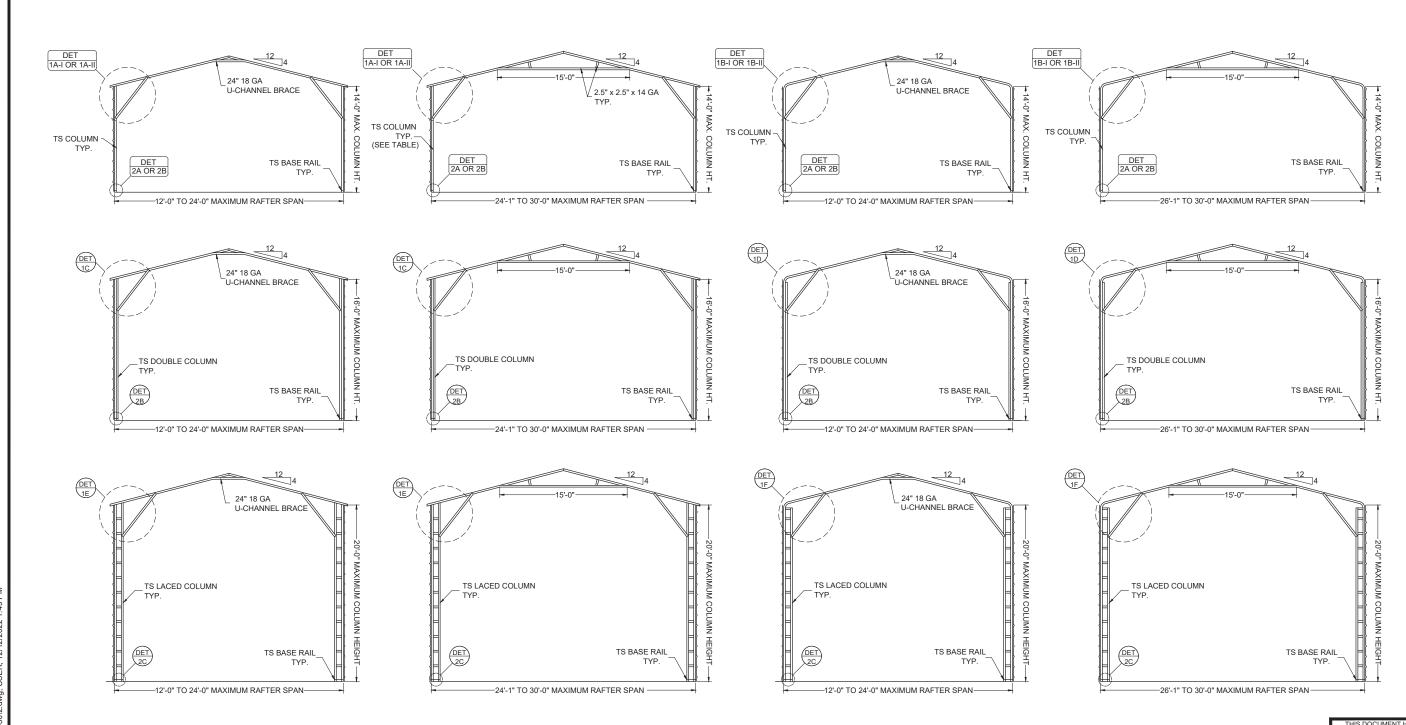
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Ī			CHECKED	ATC			ENGINEERING INC.
			JOB No.	22047			CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

ELITE METAL MANUFACTURING 10121 88TH TRACE

NOTES AND SPECIFICATIONS

Rachel Hernandez 183 NW Heritage Drive. Lake City FL, 32055

S-1 SCALE AS-SHOWN



BOX EAVE FRAME

SCALE: NTS

BOW EAVE FRAME

SCALE: NTS

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			CHECKED	ATC			ENGINEERING INC.	10121 88TH TRACE
			JOB No.	22047			CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM	

BOX-BOW EAVE FRAME RAFTER ENCLOSED BUILDING Rachel Hernandez 183 NW Heritage Drive. Lake City FL, 32055

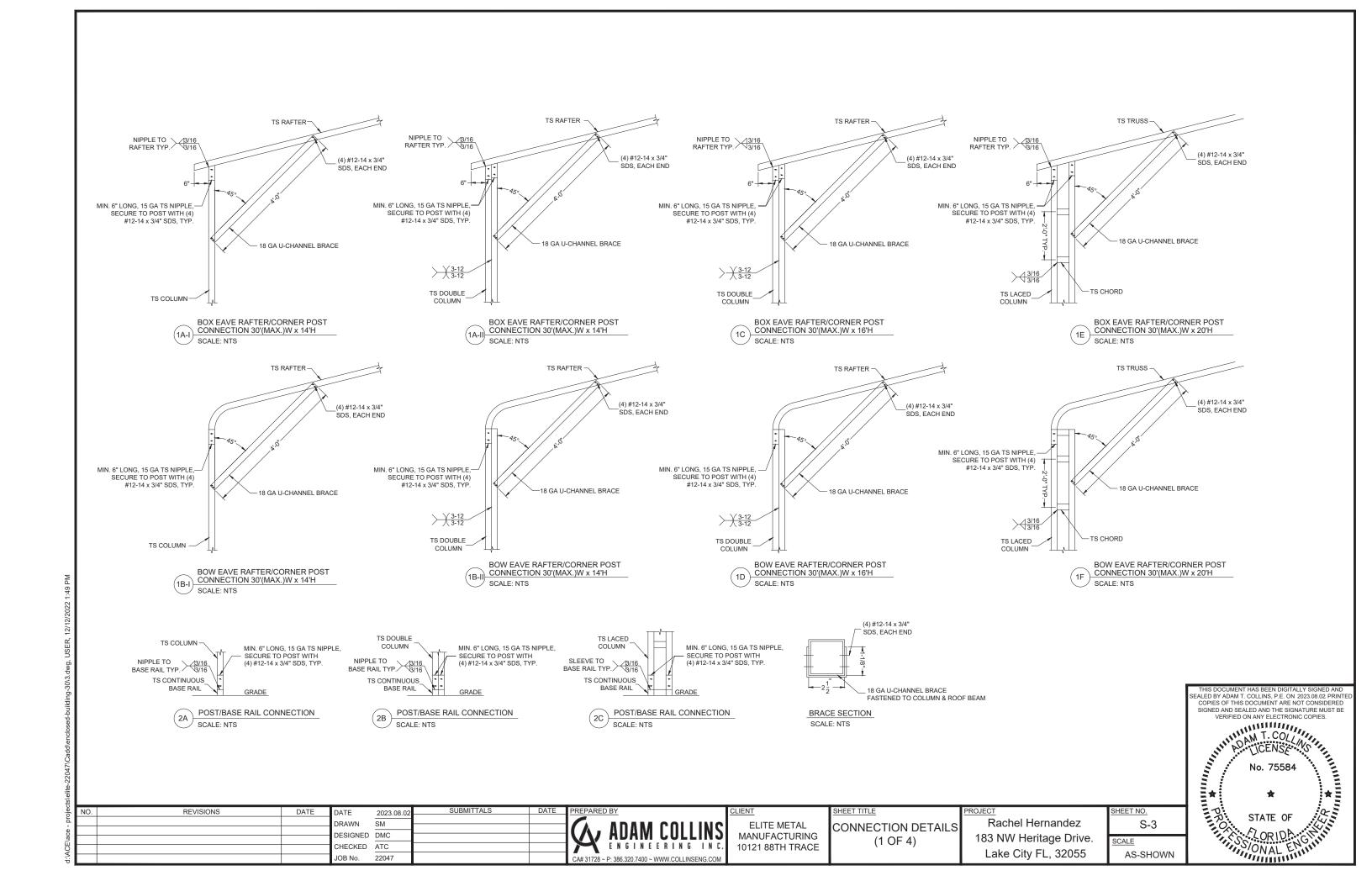
SHEET NO.
S-2
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GENERAL NOTES

MINIMUM SOIL BEARING CAPACITY: 1500 PSF. CONCRETE STRENGTH: 3000 PSI @ 28 DAYS

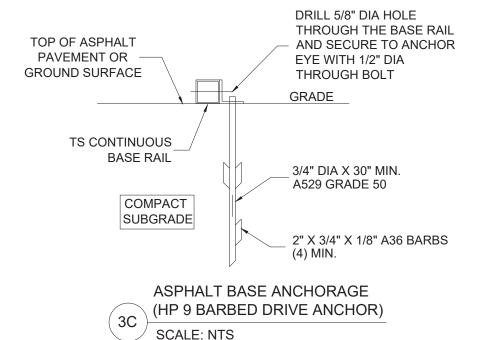
MONOLITHIC FOOTER SIZE 110 C - 140 C 8" x 12" - (2) #4 ABOVE 140 C 12" x 16" - (2) #4

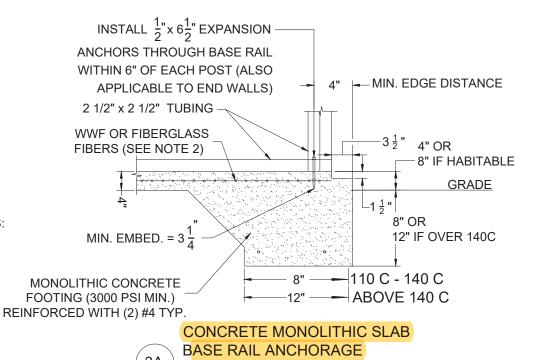
REINFORCING STEEL

- 1. REBAR SHALL BE ASTM A615 GRADE 60
- SLAB REINFORCEMENT = WELDED WIRE FABRIC PER ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT
- CONCRETE COVER SHALL BE
- 3.1. 3" WHERE EXPOSED TO SOIL OR WATER.
- 3.2. 2" EVERYWHERE ELSE.
- 4. REBAR SHALL BE BENT WITHOUT HEATING.
- 5. MINIMUM BEND = 6 X BAR DIAMETER
- 6. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.

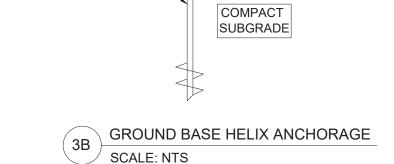
HELIX ANCHOR NOTES

- 1. USE MINIMUM (2) 4" HELICES WITH 30" EMBEDMENT FOR THE FOLLOWING SOILS:
- 1.1. VERY DENSE AND/OR CEMENTED SANDS
- 1.2. COARSE GRAVEL AND COBBLES
- 1.3. CALICHE
- 1.4. PRELOADED SILTS AND CLAYS
- 1.5. CORALS
- 1.6. MEDIUM DENSE COARSE SANDS
- 1.7. SANDY GRAVEL
- 1.8. VERY STIFF SILTS AND CLAYS
- 2. USE MINIMUM (2) 6" HELICES WITH MINIMUM 48" EMBEDMENT FOR
- 2.1. LOOSE TO MEDIUM DENSE SANDS
- 2.2. FIRM TO STIFF CLAYS AND SILTS
- 2.3. ALLUVIAL FILL
- 3. USE MINIMUM (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT.
- 3.1. FOR VERY LOOSE TO MEDIUM DENSE SANDS
- 3.2. FIRM TO STIFFER CLAYS AND SILTS
- 3.3. ALLUVIAL FILL,





SCALE: NTS



GRADE

TOP OF ASPHALT

GROUND SURFACE

PAVEMENT OR

TS CONTINUOUS/

BASE RAIL

HELIX EYE ANCHOR

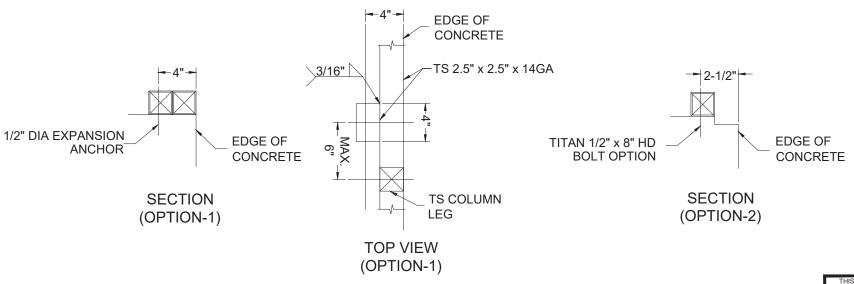
DRILL 5/8" DIA HOLE

EYE WITH 1/2" DIA

THROUGH BOLT

THROUGH THE BASE RAIL

AND SECURE TO ANCHOR



TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE SCALE: NTS

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ADAM COLLING

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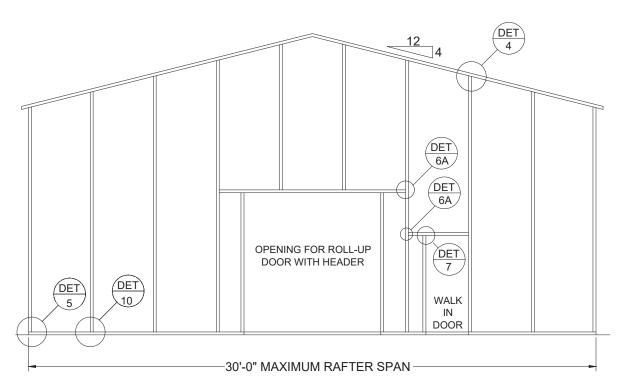
ELITE METAL
MANUFACTURING
10121 88TH TRACE

BASE RAIL AND ANCHORAGE DETAILS Rachel Hernandez 183 NW Heritage Drive. Lake City FL, 32055

S-4

SCALE

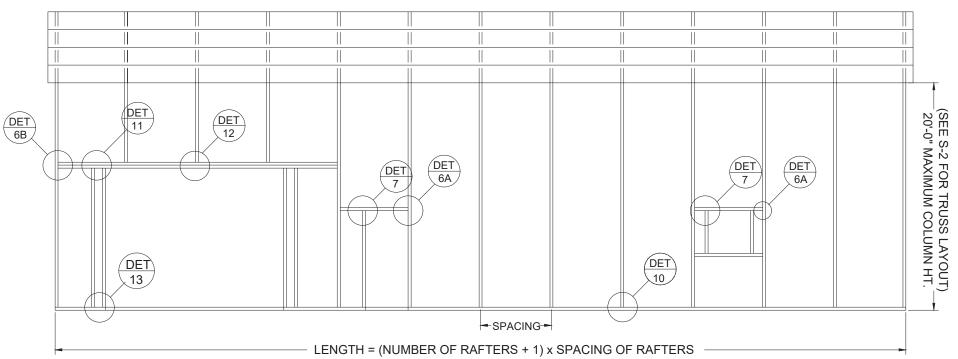
AS-SHOWN



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

SCALE: NTS



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 FRAMING SECTION

SCALE: NTS

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			JOB No.	22047			CA# 31728 ~ P: 386 320 7400 ~ WWW COLLINSENG COM

ELITE METAL MANUFACTURING 10121 88TH TRACE

BOX EAVE RAFTER END
WALL, SIDE WALL AND
OPENING FRAMING

Rachel Hernandez 183 NW Heritage Drive. Lake City FL, 32055 SHEET NO.
S-5

SCALE
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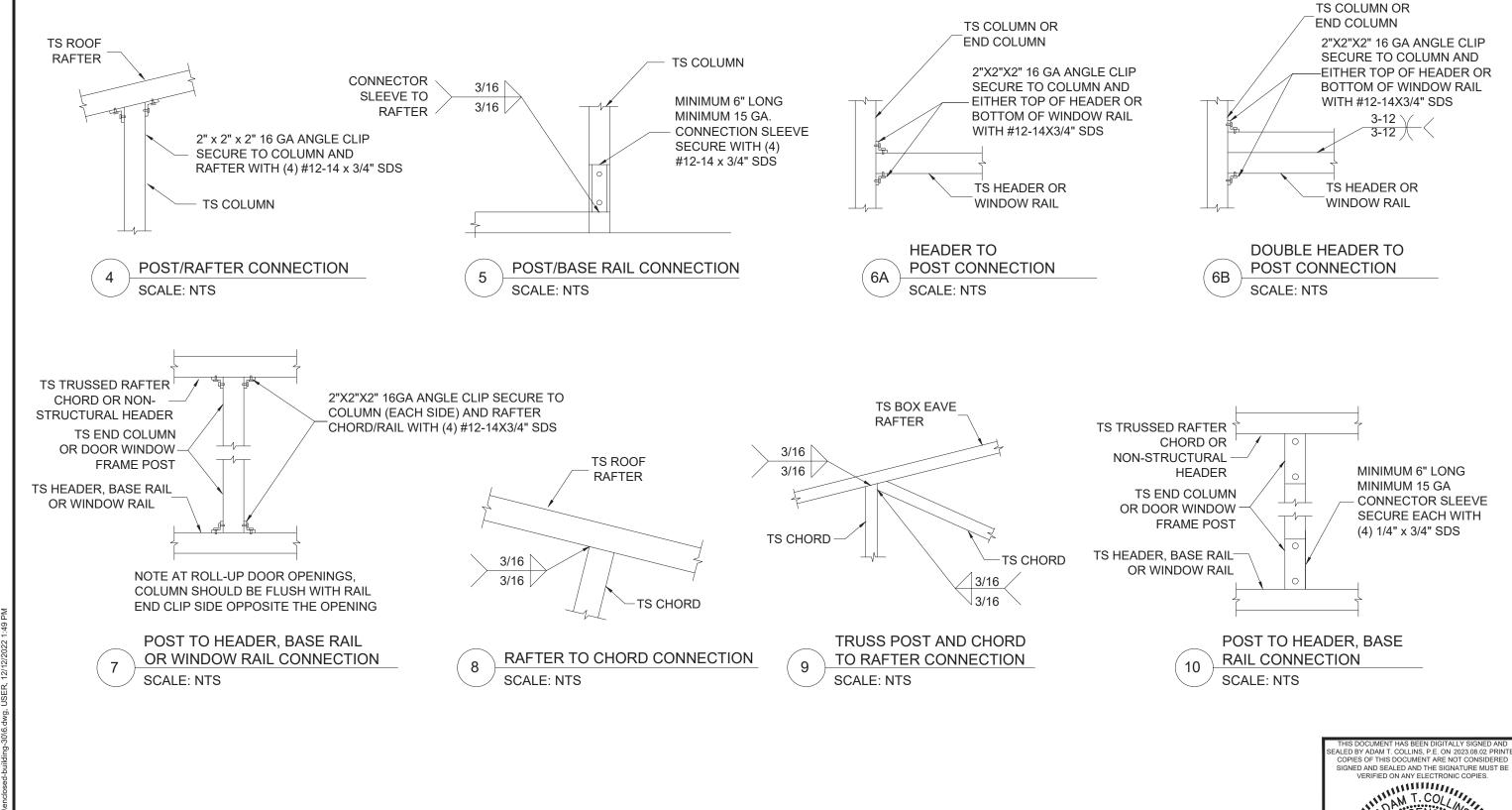
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ELITE METAL MANUFACTURING 10121 88TH TRACE CONNECTION DETAILS (2 OF 4)

SHEET TITLE

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S-6

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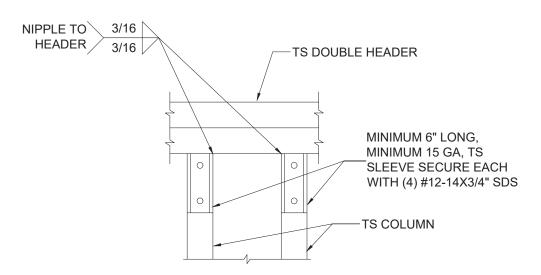
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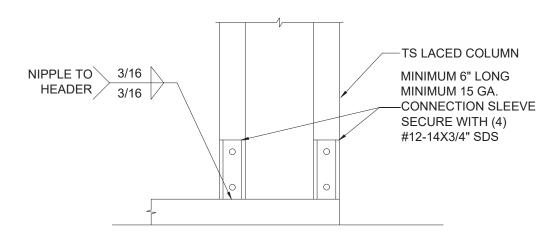
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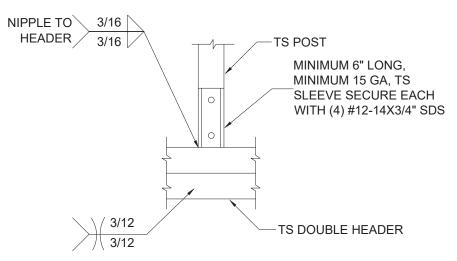
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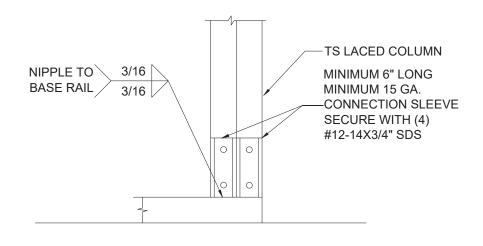
DOUBLE HEADER TO POST CONNECTION SCALE: NTS



POST/BASE RAIL CONNECTION (13A SCALE: NTS



POST/DOUBLE HEADER CONNECTION 12 SCALE: NTS



POST/BASE RAIL CONNECTION (13B SCALE: NTS

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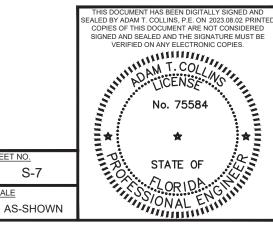
ELITE METAL MANUFACTURING 10121 88TH TRACE

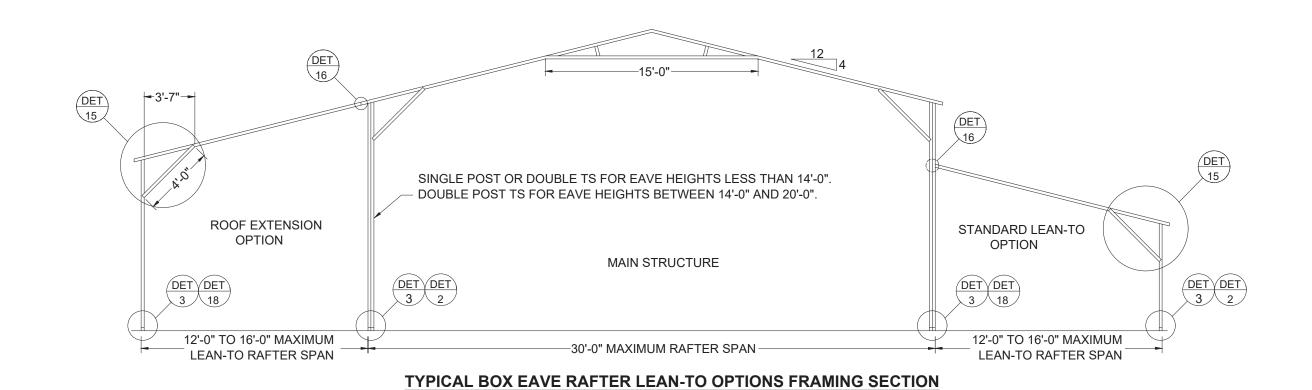
SHEET TITLE CONNECTION DETAILS (3 OF 4)

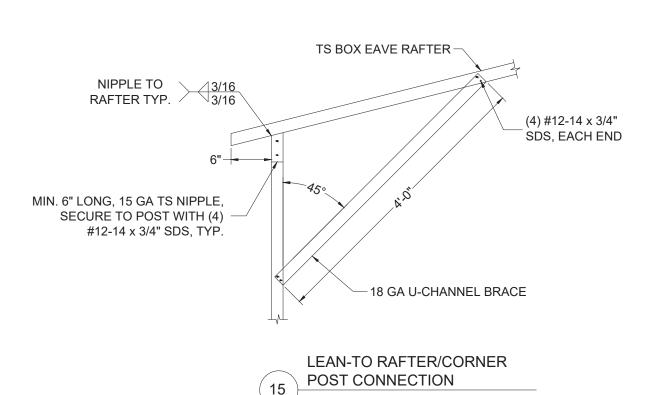
Rachel Hernandez 183 NW Heritage Drive. Lake City FL, 32055

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S-7







SCALE: NTS

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S-8

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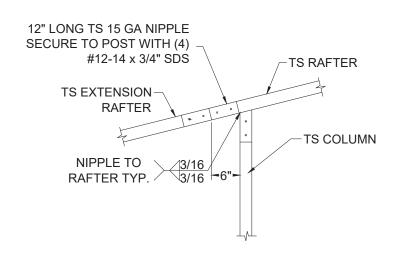
ELITE METAL MANUFACTURING 10121 88TH TRACE

BOX EAVE RAFTER LEAN TO OPTIONS

HEET TITLE

Rachel Hernandez 183 NW Heritage Drive. Lake City FL, 32055

SCALE AS-SHOWN



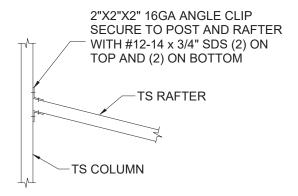
12" LONG TS 15 GA NIPPLE SECURE TO POST WITH (4) / NIPPLE TO #12-14 x 3/4" SDS RAFTER TYP. TS EXTENSION **RAFTER** 3-12 TS RAFTER TS COLUMN 2" x 2" x 2" 16 GA ANGLE CLIP -6"-SECURE TO COLUMN AND EITHER TOP OF HEADER OR-**BOTTOM OF WINDOW RAIL** WITH #12-14 x 3/4" SDS

SIDE EXTENSION RAFTER/POST CONNECTION RAFTER SPAN LESS THAN 12'-0" 16A

SCALE: NTS

SCALE: NTS

SIDE EXTENSION RAFTER/POST CONNECTION RAFTER SPAN BETWEEN 12'-0" AND 16'-0" 16B SCALE: NTS



2"X2"X2" 16GA ANGLE CLIP SECURE TO POST AND RAFTER WITH #12-14 x 3/4" SDS (2) ON TOP AND (2) ON BOTTOM TS DOUBLE RAFTER TS COLUMN

LEAN TO RAFTER/COLUMN CONNECTION RAFTER SPANLESS THAN 12'-0" 17B

LEAN TO RAFTER/COLUMN CONNECTION RAFTER SPAN BETWEEN 12'-0" AND 16'-0" 17B SCALE: NTS

TS COLUMN MIN. 6" LONG, 15 GA TS NIPPLE, SECURE TO POST WITH (4) NIPPLE TO 3/16 BASE RAIL TYP. 3/16 #12-14 x 3/4" SDS, TYP. TS CONTINUOUS-BASE RAIL GRADE

> LEAN-TO POST CONNECTION 18 SCALE: NTS

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HEET TITLE ELITE METAL MANUFACTURING 10121 88TH TRACE

CONNECTION DETAILS (4 OF 4)

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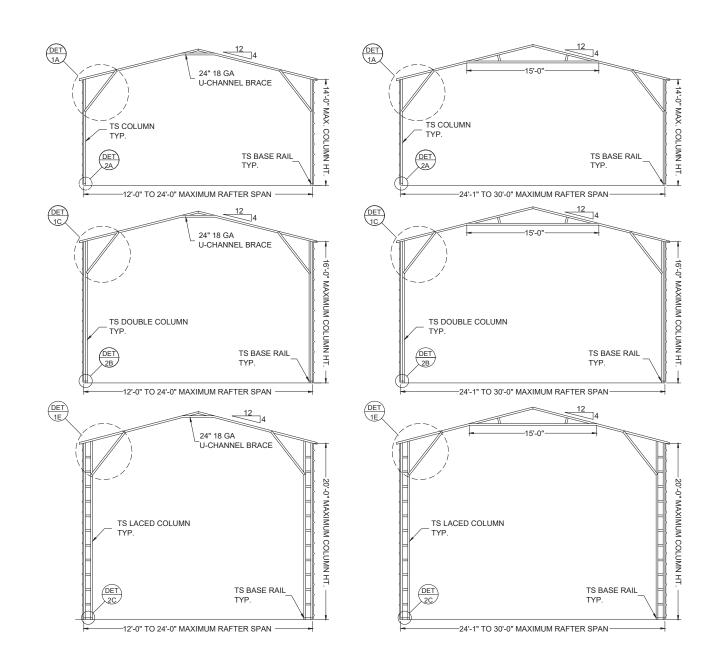
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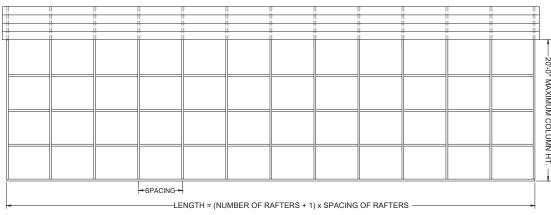
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CORIDA: S-9 AS-SHOWN

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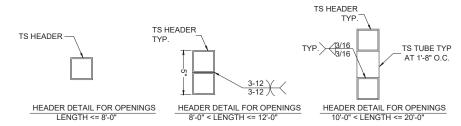




SPACING = 5'-0" FOR WIND SPEEDS BETWEEN 110 MPH AND 140 MPH SPACING = 4'-0" FOR WIND SPEEDS BETWEEN 140 MPH AND 180 MPH 1.125" 18 GA HAT CHANNELS CAN BE USED IN LIEU OF TS FOR GIRTS.

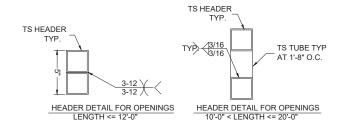
TYPICAL SIDE FRAME SECTION

SCALE: NTS



SIDE WALL OPTION HEADER

SCALE: NTS



END WALL OPTION HEADER

SCALE: NTS

BOX EAVE FRAME

1.125" 18 GA FURRING CHANNEL FASTENED TO EACH RAFTER WITH (2) #12-14 x 3/4" SDS SPACED AT 48" O.C. MAX

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

REVISIONS 2023.08.0 **BOX EAVE RAFTER** Rachel Hernandez S-10 ORAWN SM **ELITE METAL** VERTICAL MANUFACTURING DESIGNED DMC 183 NW Heritage Drive. SCALE CHECKED ATC 10121 88TH TRACE **ROOF-SIDING OPTION** Lake City FL, 32055 AS-SHOWN 22047 CA# 31728 ~ P: 386.320.7400 ~ WWW.COLLINSENG.COM

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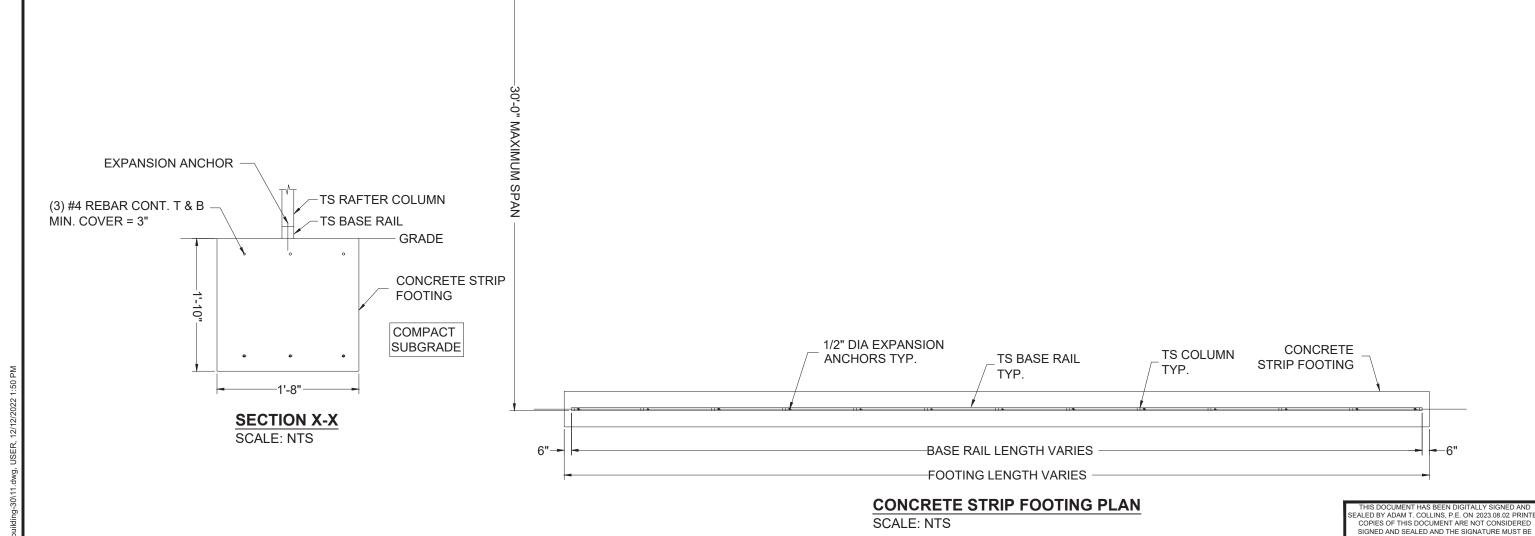
ORIDA



MINIMUM SOIL BEARING CAPACITY: 1500 PSF. CONCRETE STRENGTH: 3000 PSI @ 28 DAYS

REINFORCING STEEL

- 1. REBAR SHALL BE ASTM A615 GRADE 60
- 2. SLAB REINFORCEMENT = WELDED WIRE FABRIC PER ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT
- CONCRETE COVER SHALL BE
- 3.1. 3" WHERE EXPOSED TO SOIL OR WATER.
- 3.2. 2" EVERYWHERE ELSE.
- 4. REBAR SHALL BE BENT WITHOUT HEATING.
- MINIMUM BEND = 6 X BAR DIAMETER
- REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.



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ELITE METAL MANUFACTURING 10121 88TH TRACE OPTIONAL CONCRETE STRIP FOOTING

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Rachel Hernandez 183 NW Heritage Drive. Lake City FL, 32055

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