

APPLICABLE CODES AND STANDARDS

- 2023 FLORIDA BUILDING CODE, BUILDING
- 2023 FLORIDA BUILDING CODE, RESIDENTIAL
- ASCE 7-22: MINIMUM DESIGN LOADS ON BUILDINGS AND OTHER STRUCTURES
- AISC STEEL CONSTRUCTION MANUAL (15TH EDITION)
- ACI 318-19: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- TMS 402-16: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
- AWS D1.1: STRUCTURAL WELDING

DESIGN LOADS

- DEAD LOAD = 1.5 PSF
 - ROOF LIVE LOAD = 12 PSF
 - WIND LOAD
- A. RISK CATEGORY = I
- B. WIND EXPOSURE CATEGORY = C
- C. ULTIMATE WIND SPEED = 110 MPH
- NOMINAL WIND SPEED = 86 MPH

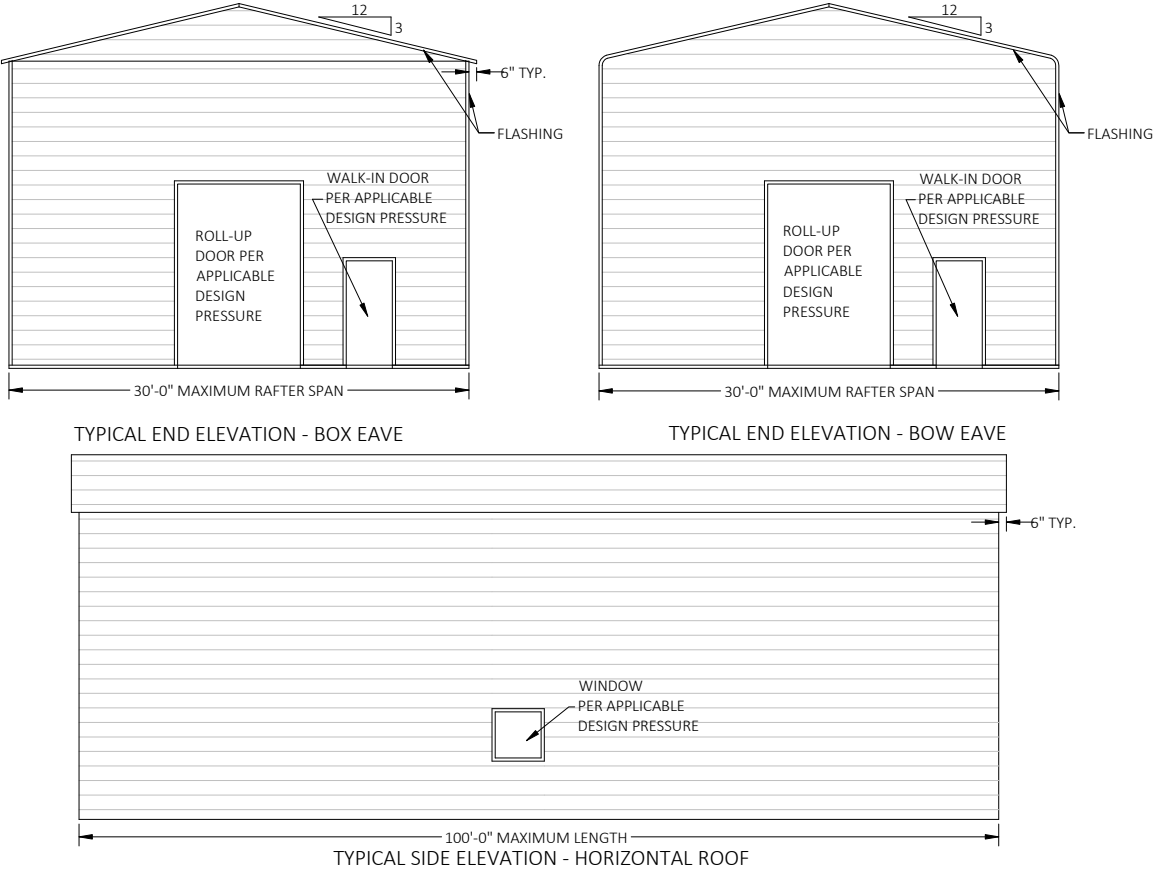
INSTALLATION NOTES AND SPECIFICATIONS

- 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 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 BUILDING CODE APPROVED PRODUCT LIST, AND NOT PROVIDED AND INSTALLED BY THE CONTRACTOR, WHICH CAUSE ADDITIONAL LOADS ON THE STRUCTURE SHALL BE AT THE OWNER'S RISK. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR FAILURE OR STRUCTURAL DAMAGE DUE TO THE EXTRA LOAD.
- ALL STEEL TUBING SHALL BE 50 KSI GALVANIZED STEEL. ALL FASTENERS SHALL BE ZINC COATED HARDWARE.
- END WALL COLUMNS (POST) AND SIDE WALL COLUMNS ARE EQUIVALENT IN SIZE AND SPACING U.N.O.
- 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.
- AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9" AND END = 6" MAX.
- 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 14° (3:12 PITCH) OR LESS. SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
- 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 REBARS WITH WELDED NUT X 36" 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.
- RAFTER SPACING IS 5'-0" MAX.
- PURLIN SPACING IS 4'-0" MAX.
- WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:
SOIL SITE CLASS = D
RISK CATEGORY I
 $R = 3.25$ $I_e = 1.0$ $S_{ds} = 0.087 g$ $V = CsW$ $S_{di} = 0.084 g$
- 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

PAGE NO.	DESCRIPTION
1	TITLE PAGE WITH INDEX
2	TRUSS DESIGN FOR RAFTER SPAN
3	CONNECTION DETAILS (1-2)
4	BASE RAIL AND FOUNDATION ANCHORAGE
5	RAFTER END WALL, SIDE WALL AND OPENING FRAMING
6	CONNECTION DETAILS (4-14)
7	BOX EAVE RAFTER LEAN-TO OPTIONS
8	CONNECTION DETAILS (16-18)
9	BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION
10	OPTIONAL HELICAL ANCHORING ON GRADE DETAIL
11	OPTIONAL CONCRETE STRIP FOOTING
12	OPTIONAL HELICAL ANCHORING ON TIMBER BEAM DETAIL

ENCLOSED METAL BUILDING DESIGN
MAXIMUM 30'-0" WIDE X 100'-0" LONG X 20'-0" HIGH (EAVE)
BOX EAVE FRAME / BOW EAVE FRAME



ADJUSTED C & C WIND PRESSURES (ROOF, ASD, PSF)				ADJUSTED C & C WIND PRESSURES (WALL, ASD, PSF)						
EFFECTIVE WIND AREA (SQ. FT) :	10.00	EFFECTIVE WIND AREA (SQ. FT) :	200.00	EFFECTIVE WIND AREA (SQ. FT) :	10.00					
ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	NA	ALL ZONES (POSITIVE) =	22.6					
ZONE 1' (NEGATIVE) =	NA	ZONE 1' (NEGATIVE) =	NA	ZONE 4 (NEGATIVE) =	-24.0					
ZONE 1' (OVERHANG) =	NA	ZONE 1' (OVERHANG) =	NA	ZONE 5 (NEGATIVE) =	-28.4					
ZONE 1 (NEGATIVE) =	-37.1	ZONE 1 (NEGATIVE) =	-17.9	EFFECTIVE WIND AREA (SQ. FT) :	20.00					
ZONE 1 (OVERHANG) =	-51.6	ZONE 1 (OVERHANG) =	-29.1							
ZONE 2 (NEGATIVE) =	-47.3	ZONE 2 (NEGATIVE) =	-22.6							
ZONE 2 (OVERHANG) =	-61.8	ZONE 2 (OVERHANG) =	-33.8							
ZONE 3 (NEGATIVE) =	-60.3	ZONE 3 (NEGATIVE) =	-34.2							
ZONE 3 (OVERHANG) =	-74.9	ZONE 3 (OVERHANG) =	-45.4	ZONE 5 (NEGATIVE) =	-26.9					
EFFECTIVE WIND AREA (SQ. FT) :	20.00	EFFECTIVE WIND AREA (SQ. FT) :	300.00	EFFECTIVE WIND AREA (SQ. FT) :	50.00					
				ALL ZONES (POSITIVE) =	20.8					
				ZONE 4 (NEGATIVE) =	-22.2					
				ZONE 5 (NEGATIVE) =	-24.8					
				EFFECTIVE WIND AREA (SQ. FT) :	100.00					
						ALL ZONES (POSITIVE) =	20.0			
						ZONE 4 (NEGATIVE) =	-21.5			
						ZONE 5 (NEGATIVE) =	-23.3			
						EFFECTIVE WIND AREA (SQ. FT) :	200.00			
				ALL ZONES (POSITIVE) =	19.2					
ZONE 4 (NEGATIVE) =	-20.7									
EFFECTIVE WIND AREA (SQ. FT) :	50.00	EFFECTIVE WIND AREA (SQ. FT) :	500.00	ZONE 5 (NEGATIVE) =	-21.7					
				EFFECTIVE WIND AREA (SQ. FT) :	300.00					
						ALL ZONES (POSITIVE) =	18.8			
						ZONE 4 (NEGATIVE) =	-20.3			
						ZONE 5 (NEGATIVE) =	-20.8			
						EFFECTIVE WIND AREA (SQ. FT) :	500.00			
				ALL ZONES (POSITIVE) =	18.2					
				ZONE 4 (NEGATIVE) =	-19.7					
				EFFECTIVE WIND AREA (SQ. FT) :	100.00	EFFECTIVE WIND AREA (SQ. FT) :	1000.00	ZONE 5 (NEGATIVE) =	-19.7	
								EFFECTIVE WIND AREA (SQ. FT) :	1000.00	
ALL ZONES (POSITIVE) =	18.2									
ZONE 4 (NEGATIVE) =	-19.7									
ZONE 5 (NEGATIVE) =	-19.7									
EFFECTIVE WIND AREA (SQ. FT) :	100.00	EFFECTIVE WIND AREA (SQ. FT) :	1000.00							CONTRACTOR TO PROVIDE BUILDING CODE APPROVED PRODUCTS TO MEET OR EXCEED THE DESIGN PRESSURES AS TABULATED.
								ALL ZONES (POSITIVE) =	NA	
								ZONE 1' (NEGATIVE) =	NA	
								ZONE 1' (OVERHANG) =	NA	
								ZONE 1 (NEGATIVE) =	-22.4	
				ZONE 1 (OVERHANG) =	-34.3					
				ZONE 2 (NEGATIVE) =	-28.3					
				ZONE 2 (OVERHANG) =	-40.2					
				ZONE 3 (NEGATIVE) =	-34.2					
				ZONE 3 (OVERHANG) =	-46.2					
EFFECTIVE WIND AREA (SQ. FT) :	100.00	EFFECTIVE WIND AREA (SQ. FT) :	1000.00	CONTRACTOR TO PROVIDE BUILDING CODE APPROVED PRODUCTS TO MEET OR EXCEED THE DESIGN PRESSURES AS TABULATED.						
					ALL ZONES (POSITIVE) =	NA				
					ZONE 1' (NEGATIVE) =	NA				
					ZONE 1' (OVERHANG) =	NA				
					ZONE 1 (NEGATIVE) =	-15.3				
					ZONE 1 (OVERHANG) =	-25.5				
					ZONE 2 (NEGATIVE) =	-22.6				
					ZONE 2 (OVERHANG) =	-32.7				
					ZONE 3 (NEGATIVE) =	-34.2				
					ZONE 3 (OVERHANG) =	-44.4				

- MEMBER LEGEND:
- 1. SIDEWALL TS COLUMN = 2.5X2.5X14 GA U.N.O.
 - 2. SIDEWALL TS DOUBLE COLUMN = (2)2.5X2.5X14 GA U.N.O.
 - 3. TRUSS MEMBERS = 2.5X2.5X14 GA U.N.O.
 - 4. KNEE-BRACE = 2.5"X2"X18GA CHANNEL
 - 5. PURLIN = 1.125"X18GA HAT CHANNEL
 - 6. U-BRACE = 2.5"X2"X16GA CHANNEL
 - 7. ENDWALL COLUMN:

MAX. EAVE HEIGHT	END WALL COLUMN DIMENSIONS
20'	(2) 2.5X2.5X14 GA
14'	2.5X2.5X14 GA

TRUSS LAYOUT- BOX EAVE

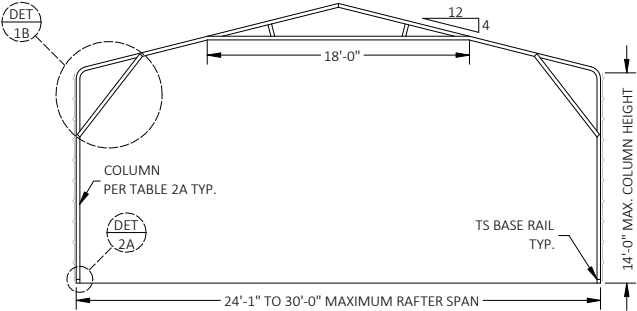
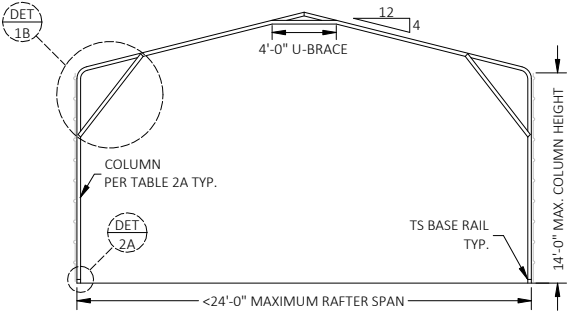
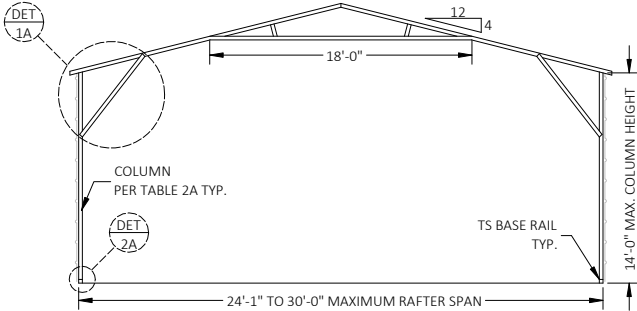
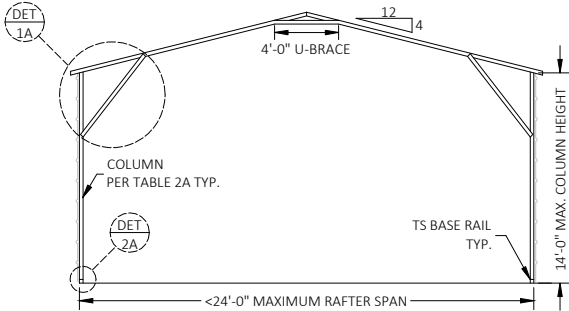
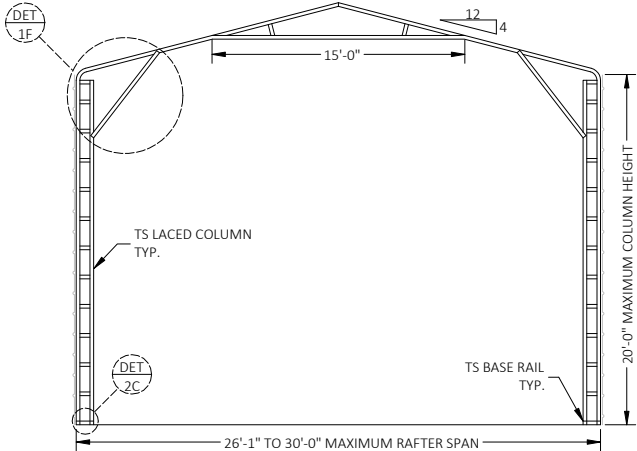
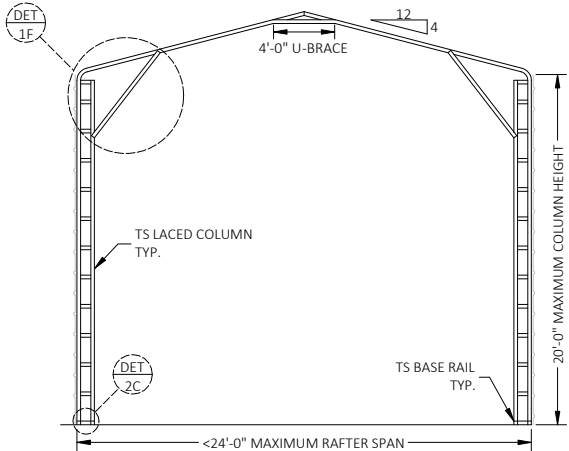
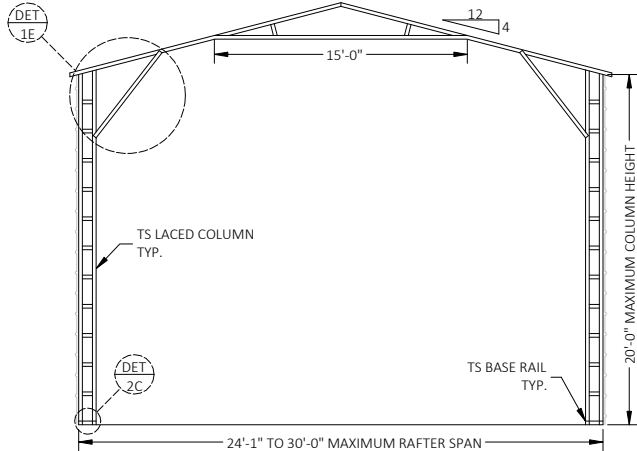
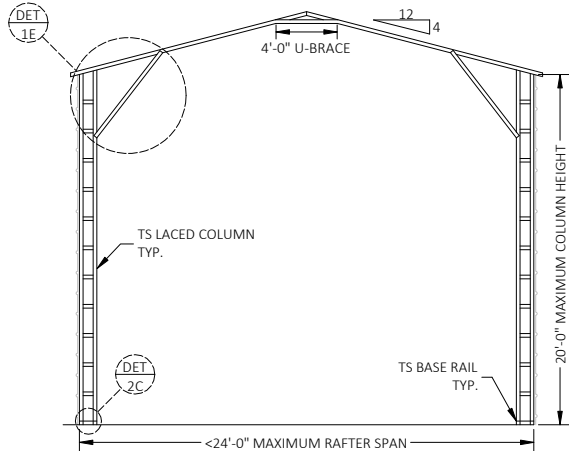
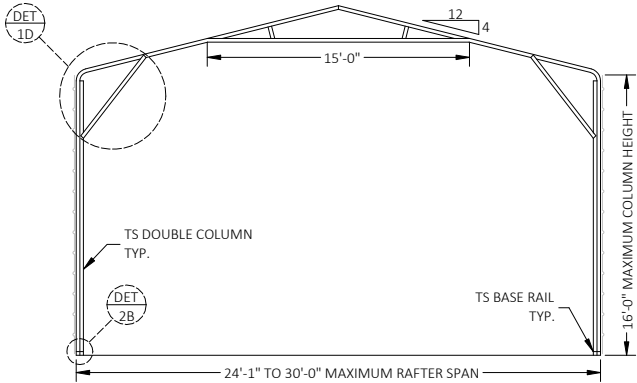
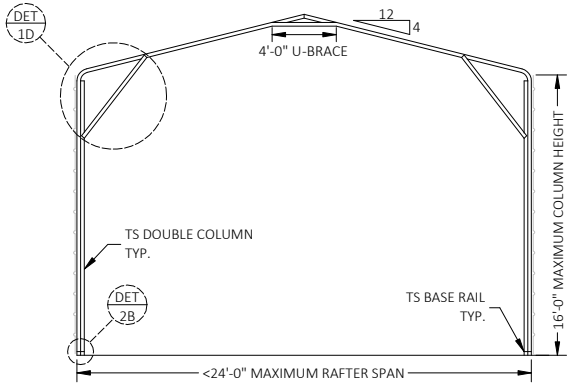
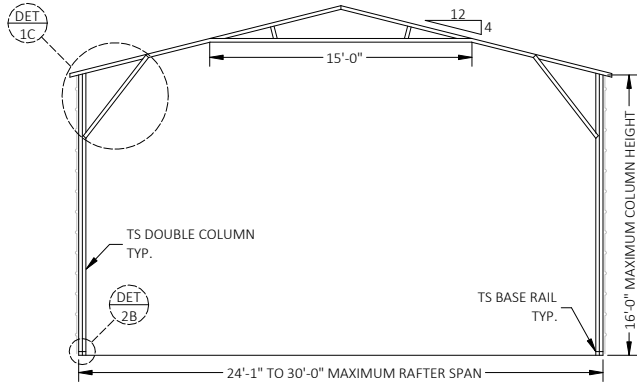
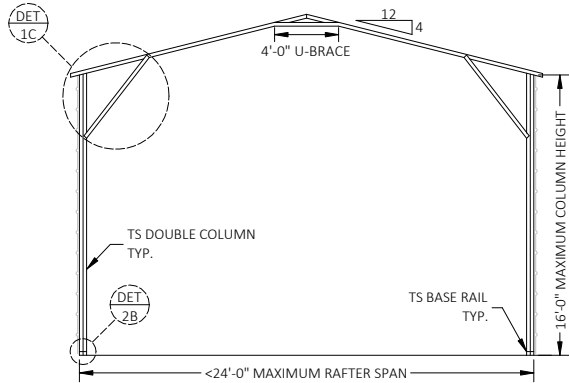


TABLE 2A:

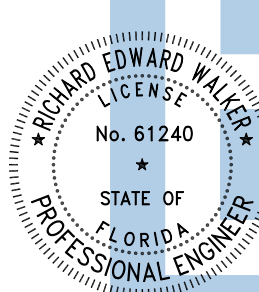
FOR COLUMN HEIGHT OF MAX. 14'-0"	
BUILDING LENGTH	COLUMN DIMENSIONS
<= 60'-0"	ALL COLUMNS TO BE 2.5X2.5X14 GA
60'-1" TO 100'-0"	(N-10) CENTRAL COLUMNS TO BE (2)2.5X2.5X14 GA REST 2.5X2.5X14 GA

*N = NO. OF COLUMNS PER SIDE ELEVATION



TRUSS LAYOUT- BOW EAVE

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.



Digitally signed
by Richard E Walker
Date:
2025.03.07
14:26:50-05'00'

FLORIDA ENGINEERING LLC

4161 TAMiami TRAIL, UNIT 101

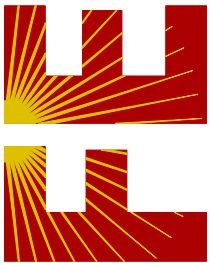
PORT CHARLOTTE, FLORIDA 33952

(941) 391-5980

FLeng.com

Orders@FLeng.com

CA CERT. #30782



PROJECT NO. 2506347

CONTRACTOR:

STEEL BUILDINGS AND
STRUCTURES INC.
800PIEDMONT TRIAD WEST DR.,
MOUNT AIRY, NC 27030

PROJECT ADDRESS:

DAUGHTRY
4345 SW COUNTY ROAD 240,
LAKE CITY, FLORIDA, 32024

DESIGN DATE: 03/06/2025

REVISION 1: DATE

REVISION 2: DATE

DRAWN BY: JS

SCALE: NTS

SHEET:

2 OF 12

A circular professional engineer license seal for the State of Florida. The outer ring contains the text "RICHARD EDWARD WALKER" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. The inner circle contains the text "LICENSE" at the top, "No. 61240" in the center, and "STATE OF FLORIDA" at the bottom, also separated by two stars. The seal is set against a background of blue and white squares.

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
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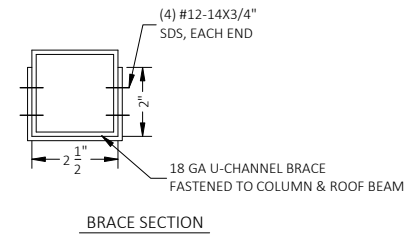
LAKE CITY, FLORIDA, 32024

STEEL BUILDINGS AND
STRUCTURES INC.
800PIEDMONT TRIAD WEST DR.,
MOUNT AIRY, NC 27030

DAUGHTRY
4345 SW COUNTY ROAD 240,
LAKE CITY, FLORIDA, 32024

DRAWN BY:	JS	
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3 OF 12



GENERAL NOTES:
CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF 2500 PSF.

- CONCRETE:
1. CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
 2. ALL OPEN AREAS OF CONCRETE OUTSIDE OF THE PROPOSED STRUCTURE SHALL BE DESIGNED TO SLOPE AWAY FROM THE STRUCTURE.
 3. WHERE CONCRETE SPECIFICATIONS ARE REQUIRED, BY ONE OR MORE REGULATORY AGENCY, THE FOLLOWING SPECIFICATIONS ARE APPLICABLE:
 - a. CONCRETE SHALL CONFORM TO ASTM C94 FOR THE FOLLOWING COMPONENTS:
 - i. PORTLAND CEMENT TYPE 1 - ASTM C 150
 - ii. AGGREGATES - LARGE AGGREGATE 3/4 MAX. - ASTM C 33
 - iii. AIR ENTRAINING +/- 1 % - ASTM C 260
 - iv. WATER REDUCING AGENT - ASTM C 494
 - v. CLEAN POTABLE WATER
 - vi. OTHER ADMIXTURES NOT PERMITTED
 - b. CONCRETE SLUMP AT DISCHARGE CHUTE NOT LESS THAN 3" OR MORE THAN 5". WATER ADDED AFTER BATCHING IS NOT PERMITTED.
 - c. PREPARE & PLACE CONCRETE PER AMERICAN CONCRETE INSTITUTE MANUAL OF STANDARD PRACTICE, PART 1, 2, & 3 INCLUDING HOT WEATHER RECOMMENDATIONS.
 - d. MOIST CURE OR POLYETHYLENE CURING PERMITTED.
 - e. PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE BUILDING CODE (FOR RISK CATEGORY II, III, & IV STRUCTURES ONLY).
 - f. CONCRETE SLAB SHALL BE PLACED OVER A MIN. 6 MIL POLYETHYLENE VAPOR BARRIER (SLAB ONLY).
 4. CONTROL JOINTS SHALL BE PROVIDED AT EVERY 12' O.C. OR 18' O.C. FOR 4" THICK OR 6" THICK CONCRETE SLAB RESPECTIVELY.

- REINFORCING STEEL:
1. THE REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.
 2. REINFORCEMENT MAY BE BENT IN THE FIELD OR SHOP AS LONG AS:
 - a. IT IS BENT COLD;
 - b. REINFRCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT;
 - c. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.
 3. 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.

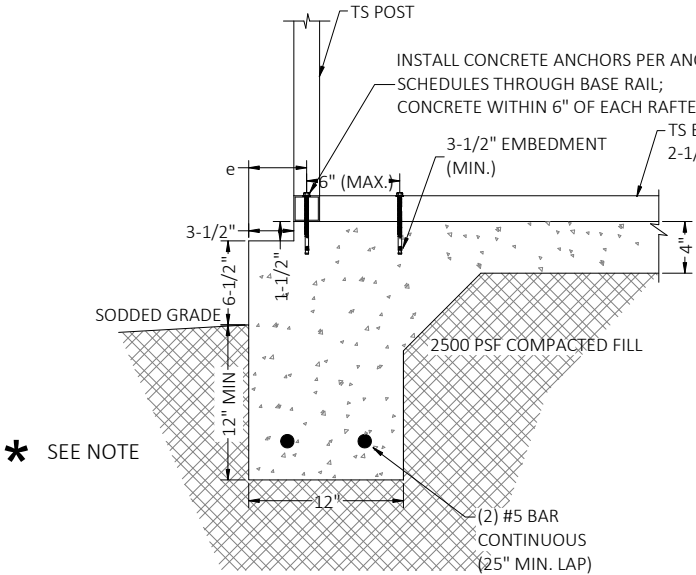
- FROST PROTECTION:
1. FOUNDATION SHALL BE PROTECTED AGAINST FROST USING RIGID FOAM INSULATION (EPS OR EQUIVALENT). FOR NO FROST PROTECTION OPTION, COORDINATE WITH LOCAL BUILDING CODE AND/OR BUILDING OFFICIAL REGARDING REQUIRED FOOTING DEPTH BASED ON FROST LINE DEPTH.

- 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, MEDIUM TO VERY LOOSE DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING.
 2. THE UPLIFT/BEARING CAPACITY OF HELICAL ANCHOR MUST BE EQUAL TO OR GREATER THAN 8.5 KIPS FOR ANCHORS INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING.
 3. THE UPLIFT/BEARING CAPACITY OF HELICAL ANCHORS MUST BE AS SHOWN IN TABLE A FOR ANCHORS PROVIDED AT THE JAMBS OF DOOR OPENINGS. THE INCREASE IN HELICAL ANCHOR CAPACITY MAY BE ACHIEVED BY INCREASING THE DIAMETER AND/OR THE EMBEDMENT OF THE ANCHORS, OR BY USING DIFFERENT ANCHORS DEPENDING ON THE MANUFACTURER'S SPECIFICATIONS.

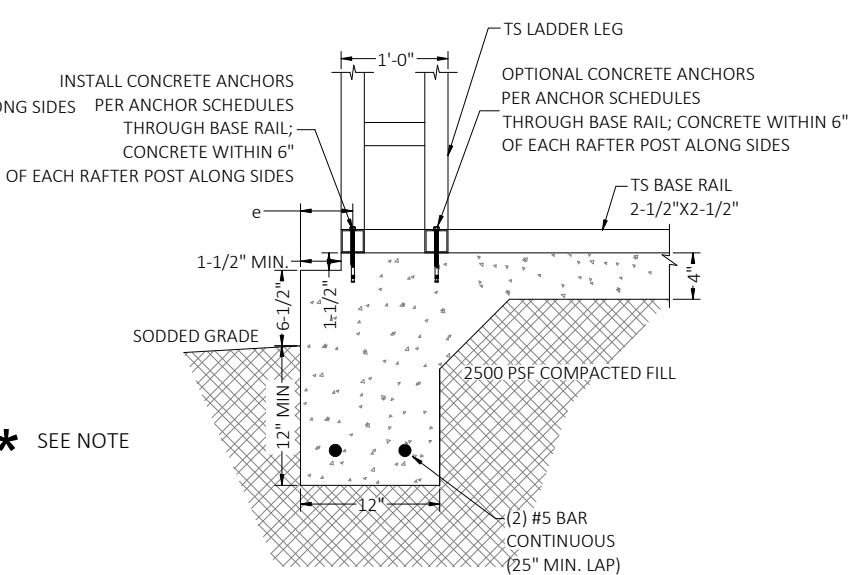
- HP 9 BARBED DRIVE ANCHOR NOTES:
1. ANCHOR TO BE 3/4" DIA (A529 GRADE 50) WITH 30" MIN. EMBEDMENT & (4) MIN. BARBS AS SHOWN IN DETAIL 3C.
 2. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, CORALS, MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS AND CLAYS, MEDIUM TO VERY LOOSE DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, ANCHOR SHALL BE INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING.
 3. THE UPLIFT/BEARING CAPACITY OF EACH ANCHOR MUST BE EQUAL TO OR GREATER THAN 8.5 KIPS FOR ANCHORS INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING.
 4. THE UPLIFT/BEARING CAPACITY OF THE ANCHORS MUST BE AS SHOWN IN TABLE A FOR ANCHORS PROVIDED AT THE JAMBS OF DOOR OPENINGS. THE INCREASE IN ANCHOR CAPACITY MAY BE ACHIEVED BY INCREASING THE DIAMETER AND/OR THE EMBEDMENT OF THE ANCHORS, OR BY USING DIFFERENT ANCHORS DEPENDING ON THE MANUFACTURER'S SPECIFICATIONS.

TABLE A

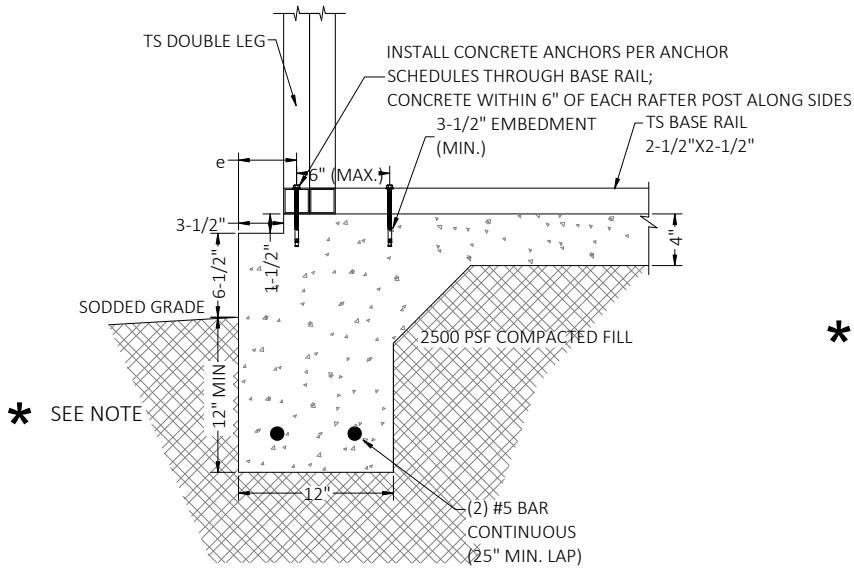
REQUIRED UPLIFT / BEARING CAPACITY OF HELICAL ANCHORS		RAFTER SPACING (FT.)	
OPENING WIDTH (FT.)	6	4	5
	8	11.0	9.5
	10	13.0	11.5
	12	15.0	13.0
	14	17.0	14.5
	16	19.5	16.5
	18	21.5	18.0
	20	23.5	20.0
		25.5	21.5



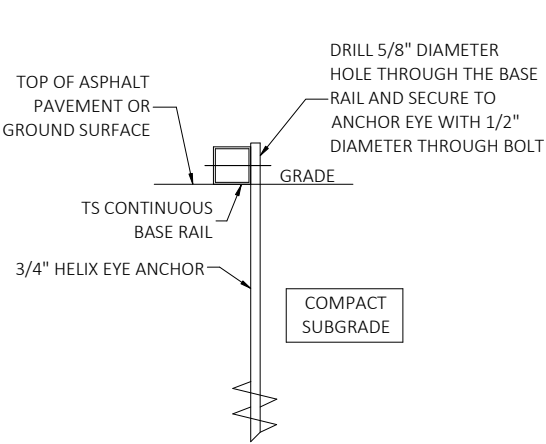
DETAIL 3A-I
CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE



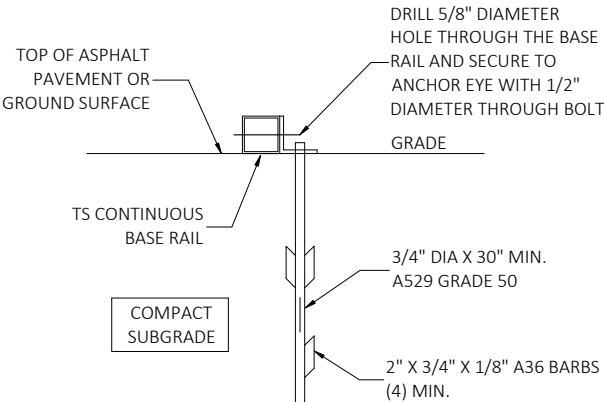
DETAIL 3A-III
CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE



DETAIL 3A-II
CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE



DETAIL 3B
GROUND BASE HELIX ANCHORAGE

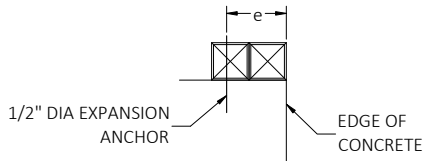


DETAIL 3C
ASPHALT BASE ANCHORAGE
(HP 9 BARBED DRIVE ANCHOR)

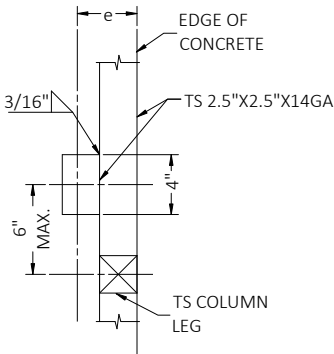
ANCHOR SCHDULES:

ANCHOR TYPE #1	1/2" DIA WEDGE ANCHOR WITH 5" MIN. EMBEDMENT INTO 3KSI MIN. CONCRETE; 4" MIN. EDGE DISTANCE (e)
ANCHOR TYPE #2	1/2" DIA HILTI KWIK HUS ANCHOR WITH 4.5" MIN. EMBEDMENT INTO 3KSI MIN. CONCRETE; 2.75" MIN. EDGE DISTANCE (e)

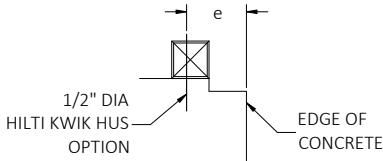
- * COORDINATE WITH LOCAL CODES AND/OR BUILDING OFFICIAL REGARDING MINIMUM REQUIRED FOOTING DEPTH BASED ON FROST LINE DEPTH.



SECTION
(OPTION-1)



TOP VIEW
(OPTION-1)

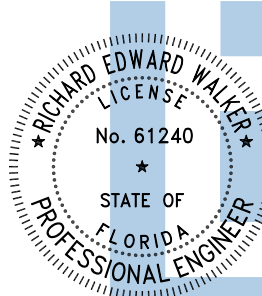


SECTION
(OPTION-2)

TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE

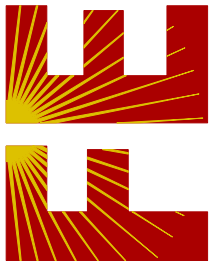
BASE RAIL ANCHORAGE OPTION

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PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com



CA CERT. #30782

PROJECT NO. 2506347

CONTRACTOR:
STEEL BUILDINGS AND STRUCTURES INC.
800PIEDMONT TRIAD WEST DR.,
MOUNT AIRY, NC 27030

PROJECT ADDRESS:
DAUGHTRY
4345 SW COUNTY ROAD 240,
LAKE CITY, FLORIDA, 32024

DESIGN DATE: 03/06/2025

REVISION 1: DATE

REVISION 2: DATE

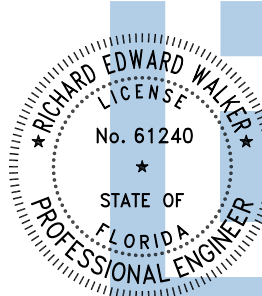
DRAWN BY: JS

SCALE: NTS

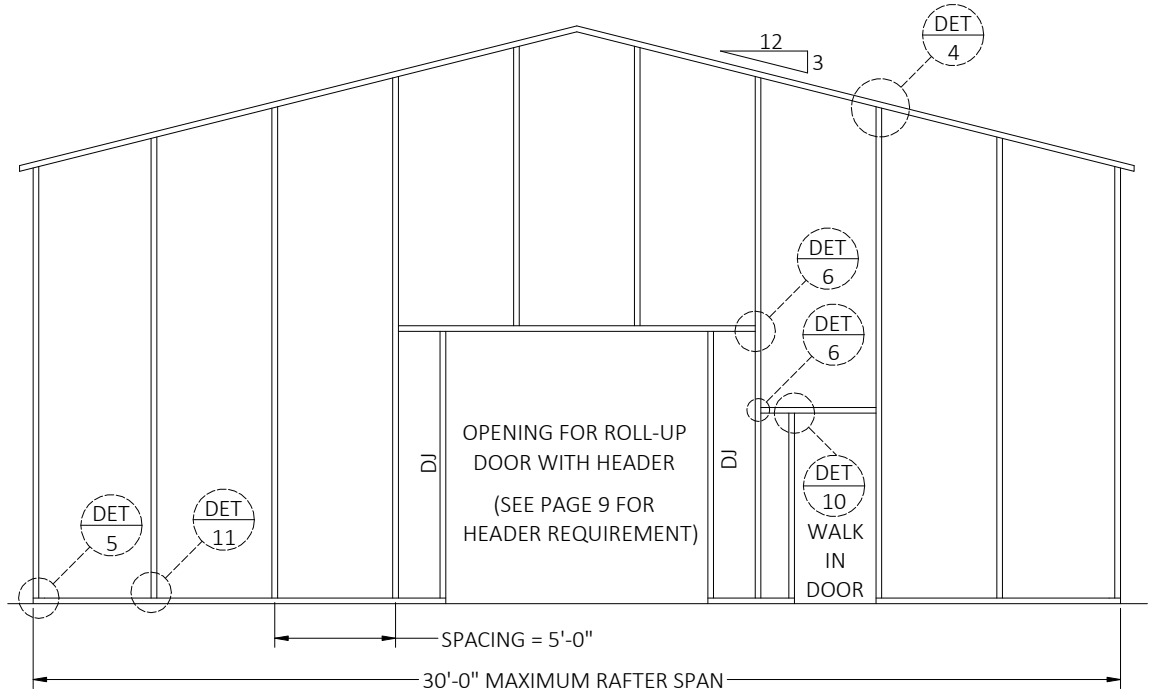
SHEET:

4 OF 12

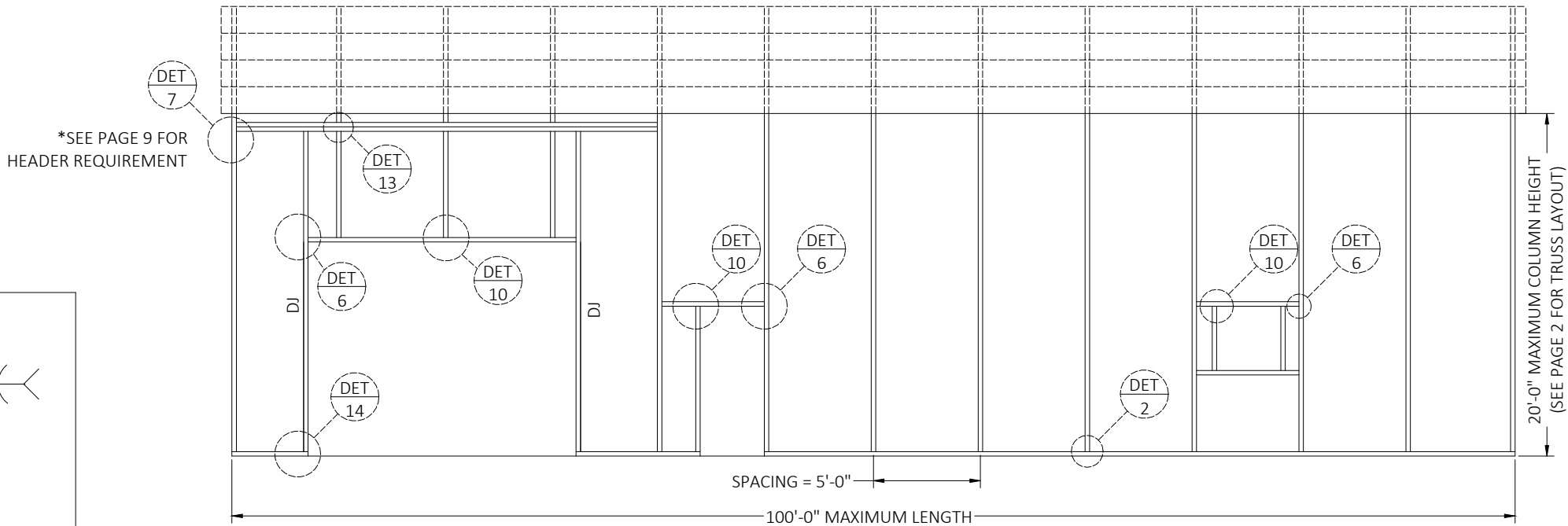
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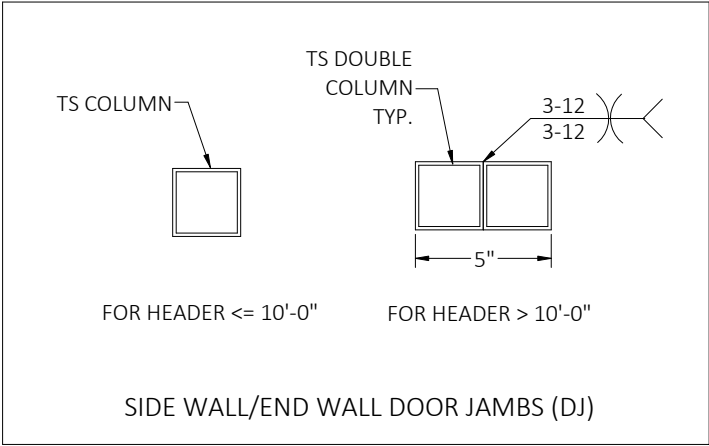
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by Richard E Walker
Date:
2025.03.07
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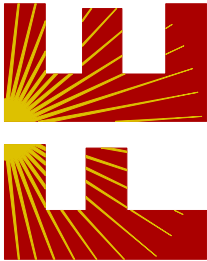


TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION



TYPICAL BOX EAVE RAFTER SIDE WALL FRAMING SECTION



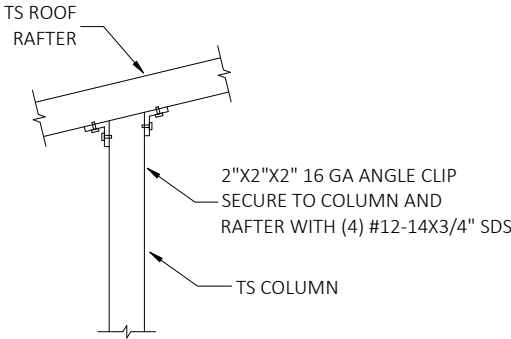


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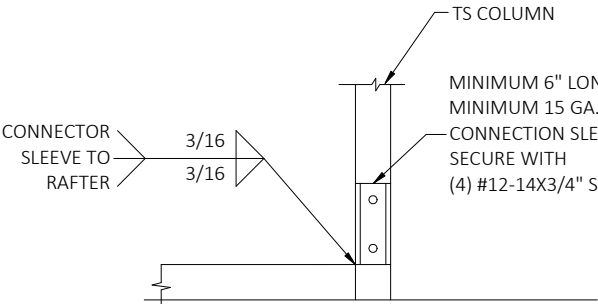
CA CERT. #30782

CONTRACTOR: STEEL BUILDINGS AND STRUCTURES INC. 800PIEDMONT TRIAD WEST DR., MOUNT AIRY, NC 27030	PROJECT ADDRESS: DAUGHTRY 4345 SW COUNTY ROAD 240, LAKE CITY, FLORIDA, 32024	
	DESIGN DATE:	03/06/2025
	REVISION 1:	DATE
	REVISION 2:	DATE
	DRAWN BY:	JS
SCALE:	NTS	SHEET: 5 OF 12

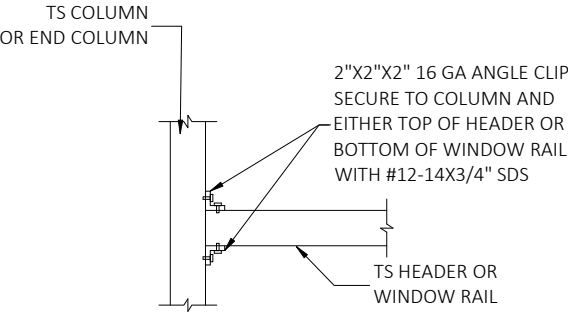
CONNECTION DETAILS



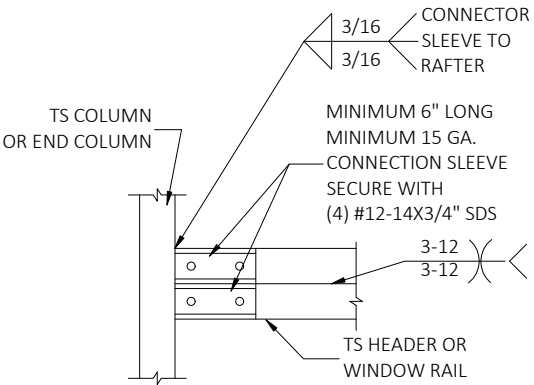
DETAIL 4
END COLUMN/RAFTER CONNECTION



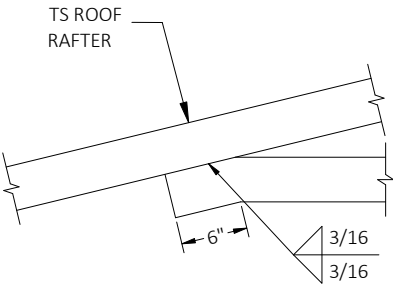
DETAIL 5
END POST/BASE RAIL CONNECTION



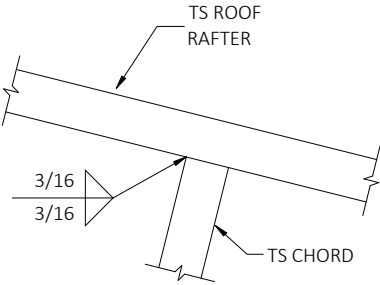
DETAIL 6
HEADER TO COLUMN CONNECTION



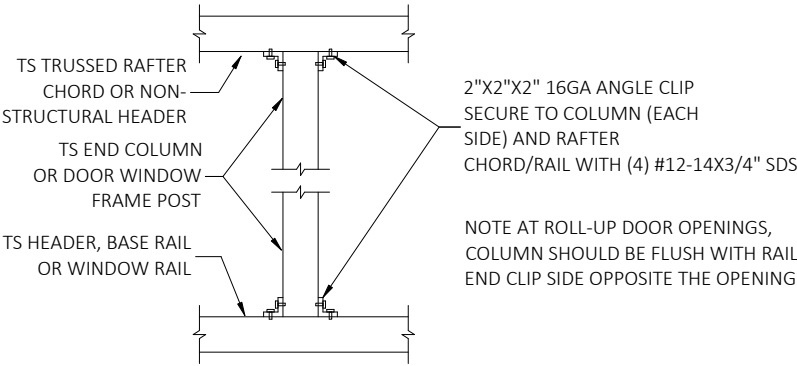
DETAIL 7
DOUBLE HEADER TO COLUMN CONNECTION



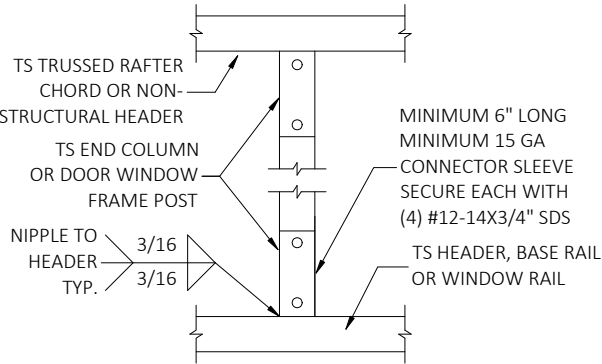
DETAIL 8
COLLAR TIE CONNECTION



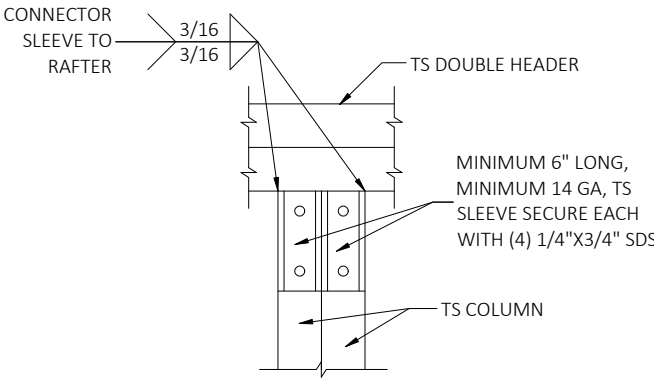
DETAIL 9
RAFTER TO CHORD CONNECTION



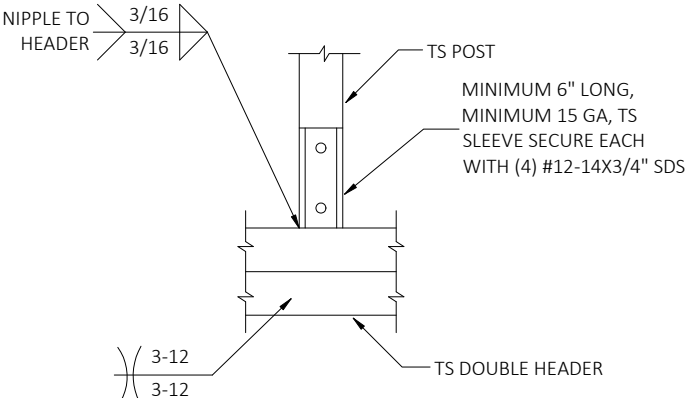
DETAIL 10
POST TO HEADER, BASE RAIL OR WINDOW RAIL CONNECTION
(OPTION-1)



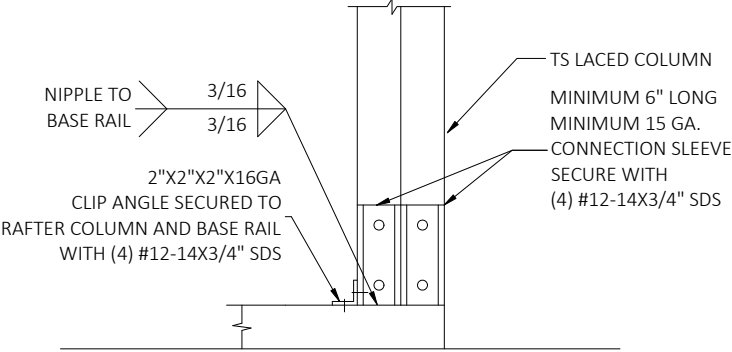
DETAIL 11
POST TO HEADER, BASE RAIL CONNECTION
(OPTION-2)



DETAIL 12
DOUBLE HEADER TO COLUMN CONNECTION

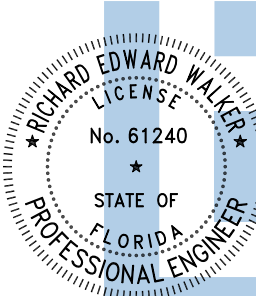


DETAIL 13
POST/DOUBLE HEADER CONNECTION



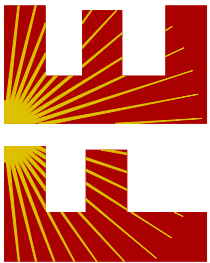
DETAIL 14
POST/BASE RAIL CONNECTION

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Orders@FLEng.com

CA CERT. #30782

PROJECT NO. 2506347

CONTRACTOR:
STEEL BUILDINGS AND
STRUCTURES INC.
800PIEDMONT TRIAD WEST DR.,
MOUNT AIRY, NC 27030

PROJECT ADDRESS:
DAUGHTRY
4345 SW COUNTY ROAD 240,
LAKE CITY, FLORIDA, 32024

DESIGN DATE: 03/06/2025

REVISION 1: DATE

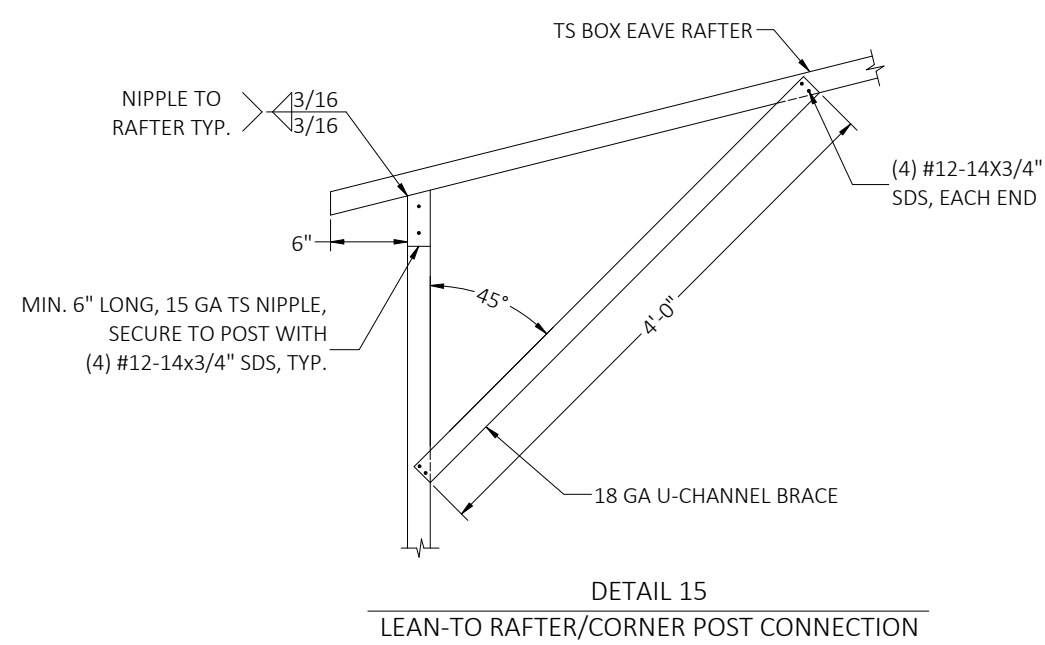
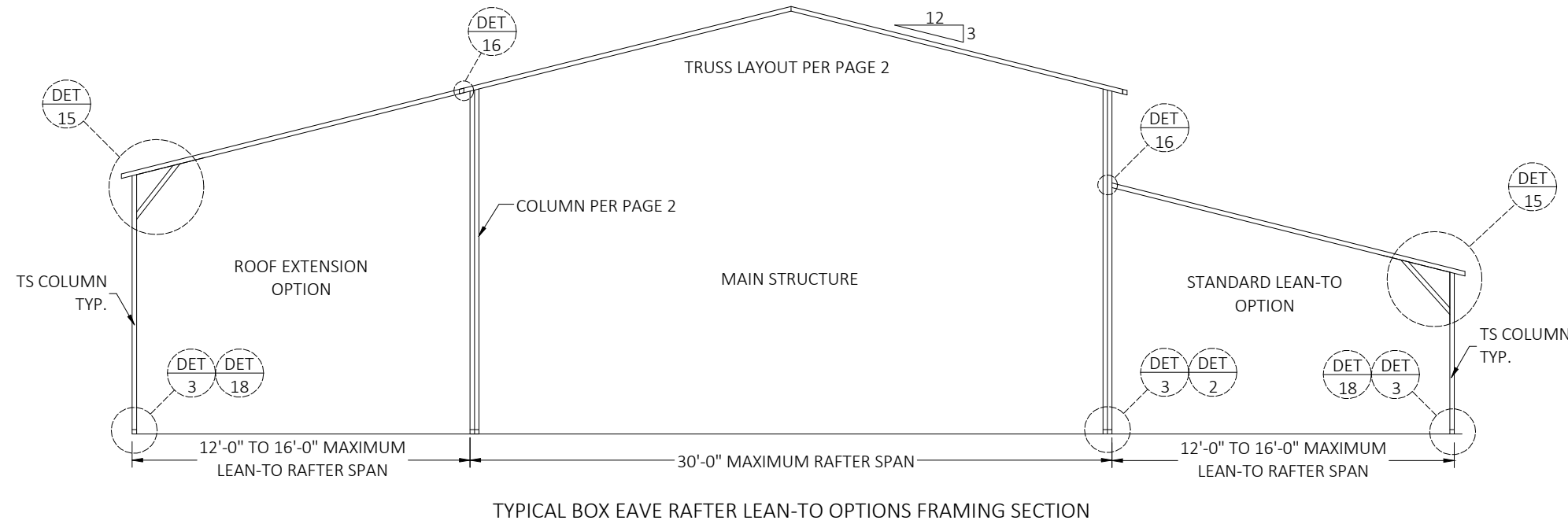
REVISION 2: DATE

DRAWN BY: JS

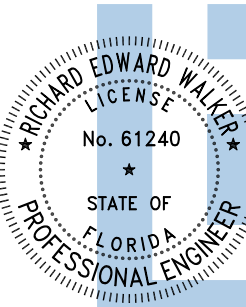
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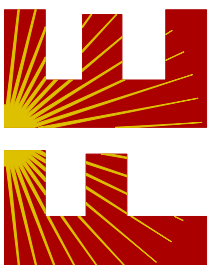
6 OF 12



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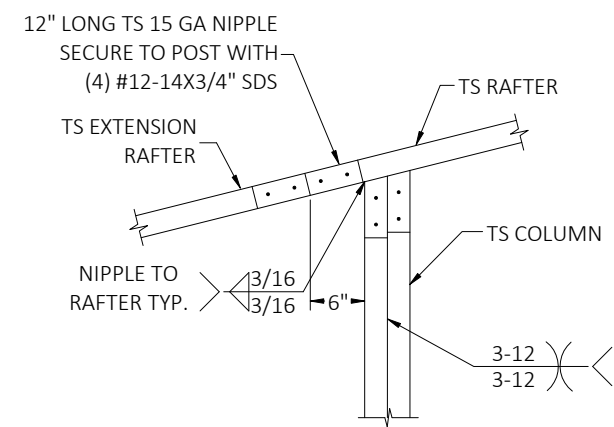
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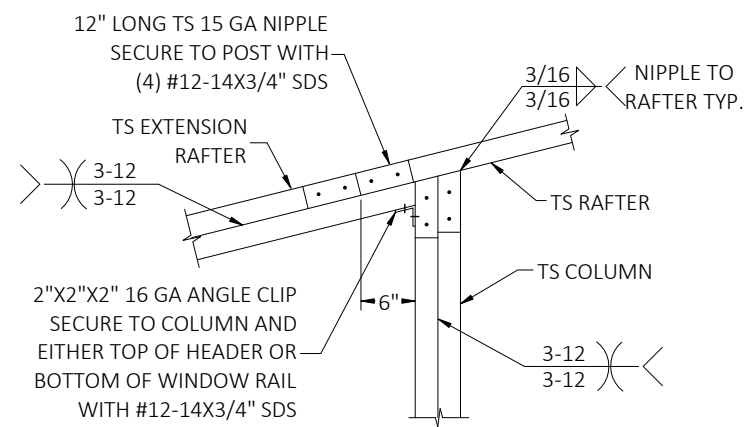
PROJECT NO. 2506347

CONTRACTOR: STEEL BUILDINGS AND STRUCTURES INC. 800PIEDMONT TRIAD WEST DR., MOUNT AIRY, NC 27030	PROJECT ADDRESS: DAUGHTRY 4345 SW COUNTY ROAD 240, LAKE CITY, FLORIDA, 32024	
	DESIGN DATE:	03/06/2025
	REVISION 1:	DATE
	REVISION 2:	DATE
	DRAWN BY:	JS
SCALE:	NTS	
		SHEET: 7 OF 12

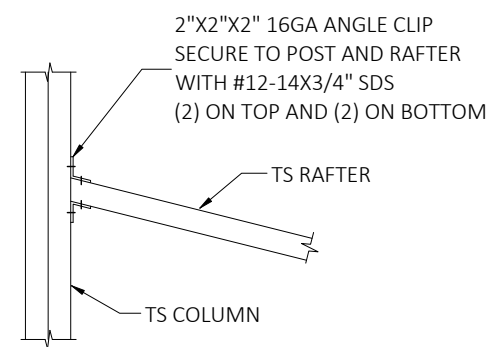
CONNECTION DETAILS



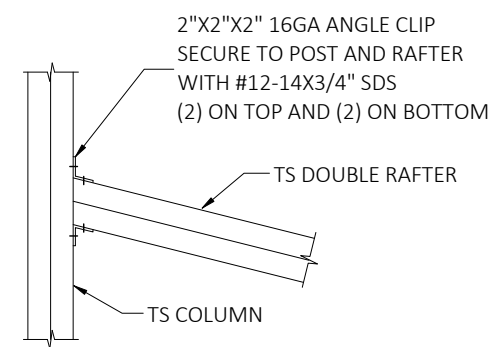
DETAIL 16A
SIDE EXTENSION RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS LESS THAN 12'-0"



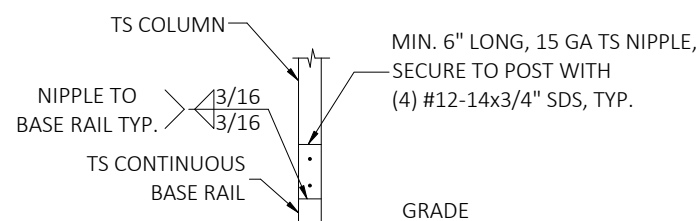
DETAIL 16B
SIDE EXTENSION RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS BETWEEN 12'-0" AND 16'-0"



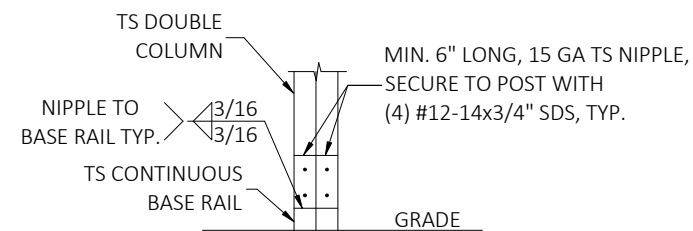
DETAIL 17A
LEAN TO RAFTER/COLUMN CONNECTION
FOR RAFTER SPANS LESS THAN 12'-0"



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

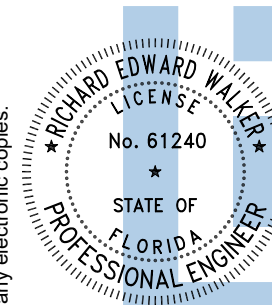


DETAIL 18A
LEAN-TO POST CONNECTION



DETAIL 18B
LEAN-TO DOUBLE POST CONNECTION

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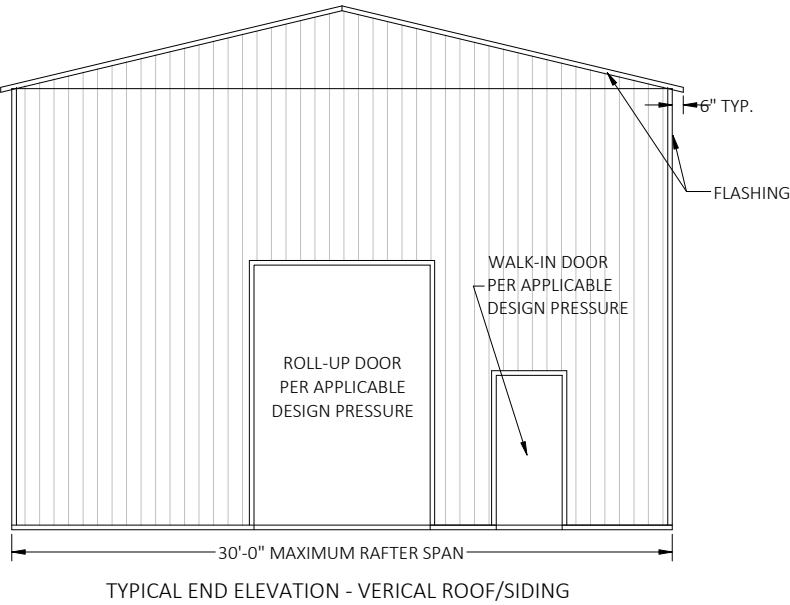
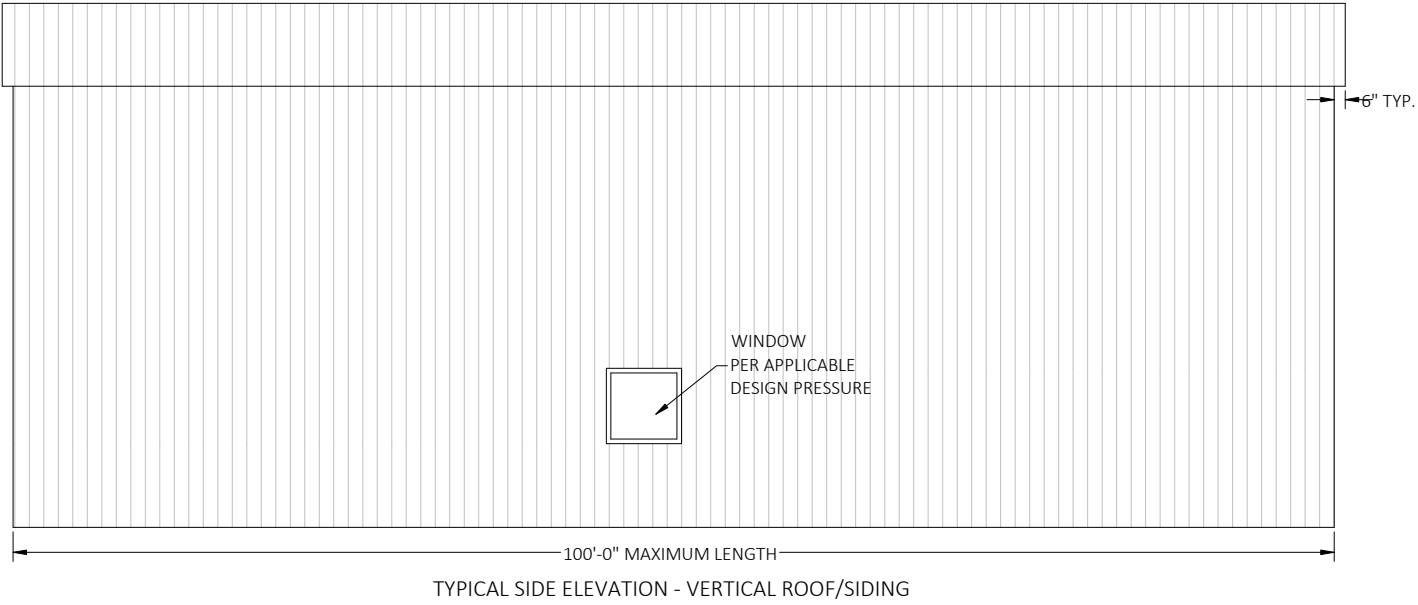
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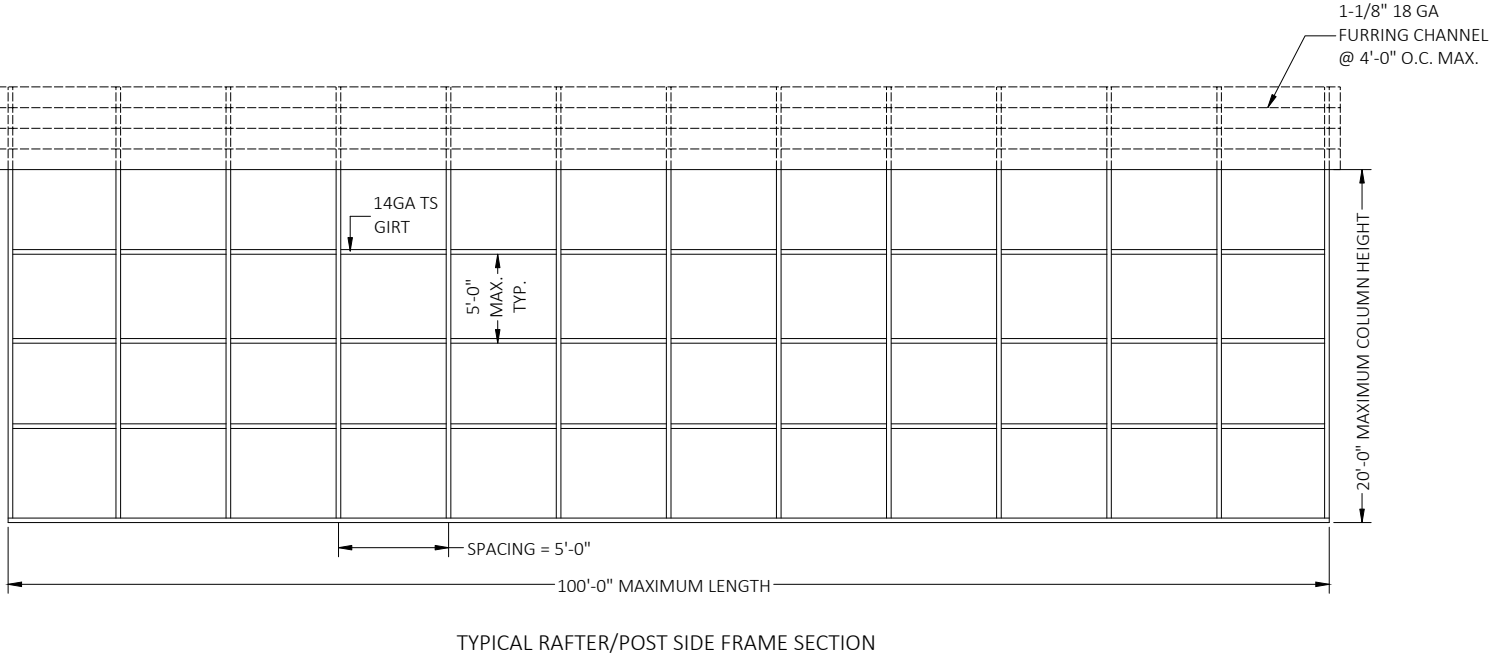
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PROJECT NO. 2506347

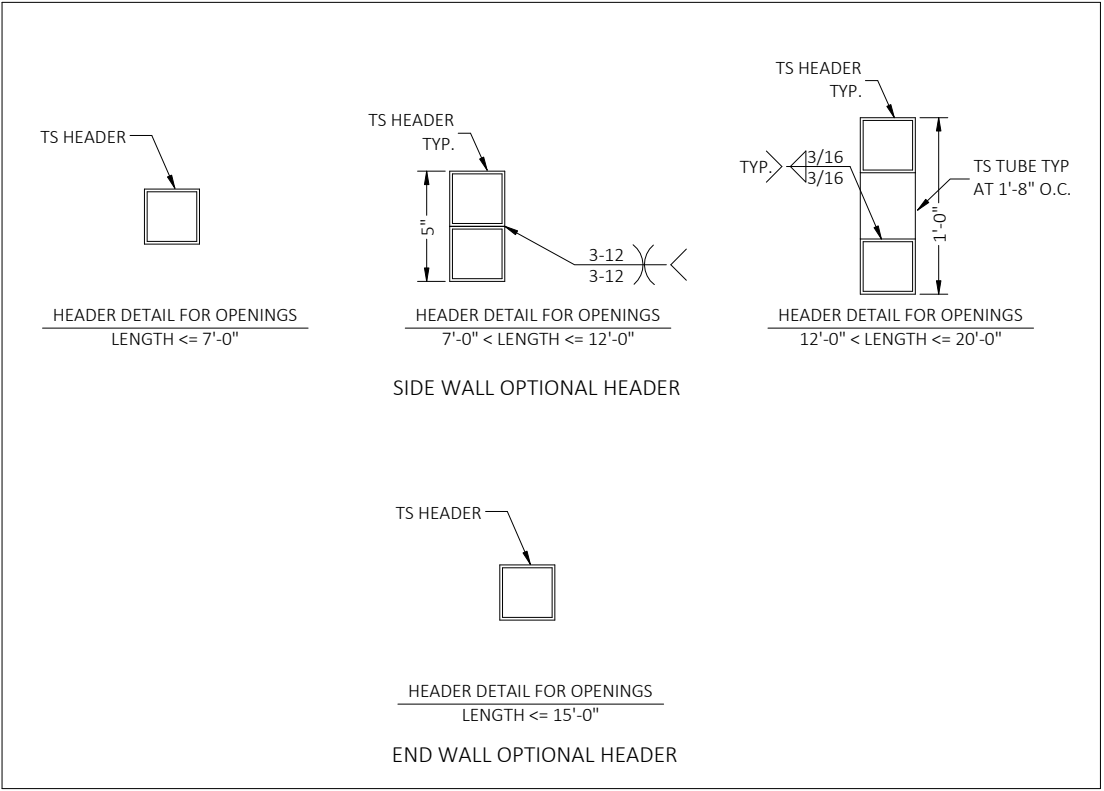
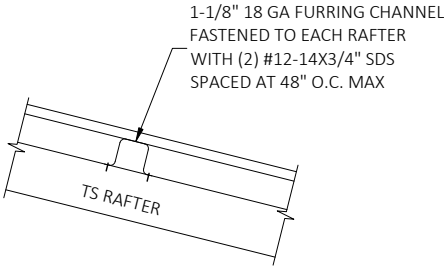
CONTRACTOR: STEEL BUILDINGS AND STRUCTURES INC. 800PIEDMONT TRIAD WEST DR., MOUNT AIRY, NC 27030	PROJECT ADDRESS: DAUGHTRY 4345 SW COUNTY ROAD 240, LAKE CITY, FLORIDA, 32024	
	DESIGN DATE:	03/06/2025
REVISION 1:		DATE
REVISION 2:	DATE	SHEET:
DRAWN BY:	JS	
SCALE:	NTS	8 OF 12



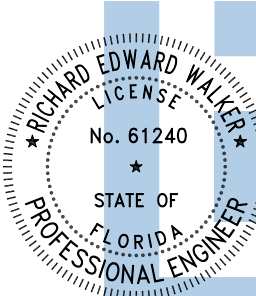
BOX EAVE FRAME RAFTER ENCLOSED BUILDING



PANEL ATTACHMENT
(ALTERNATE FOR VERTICAL ROOF PANELS)



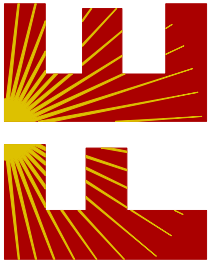
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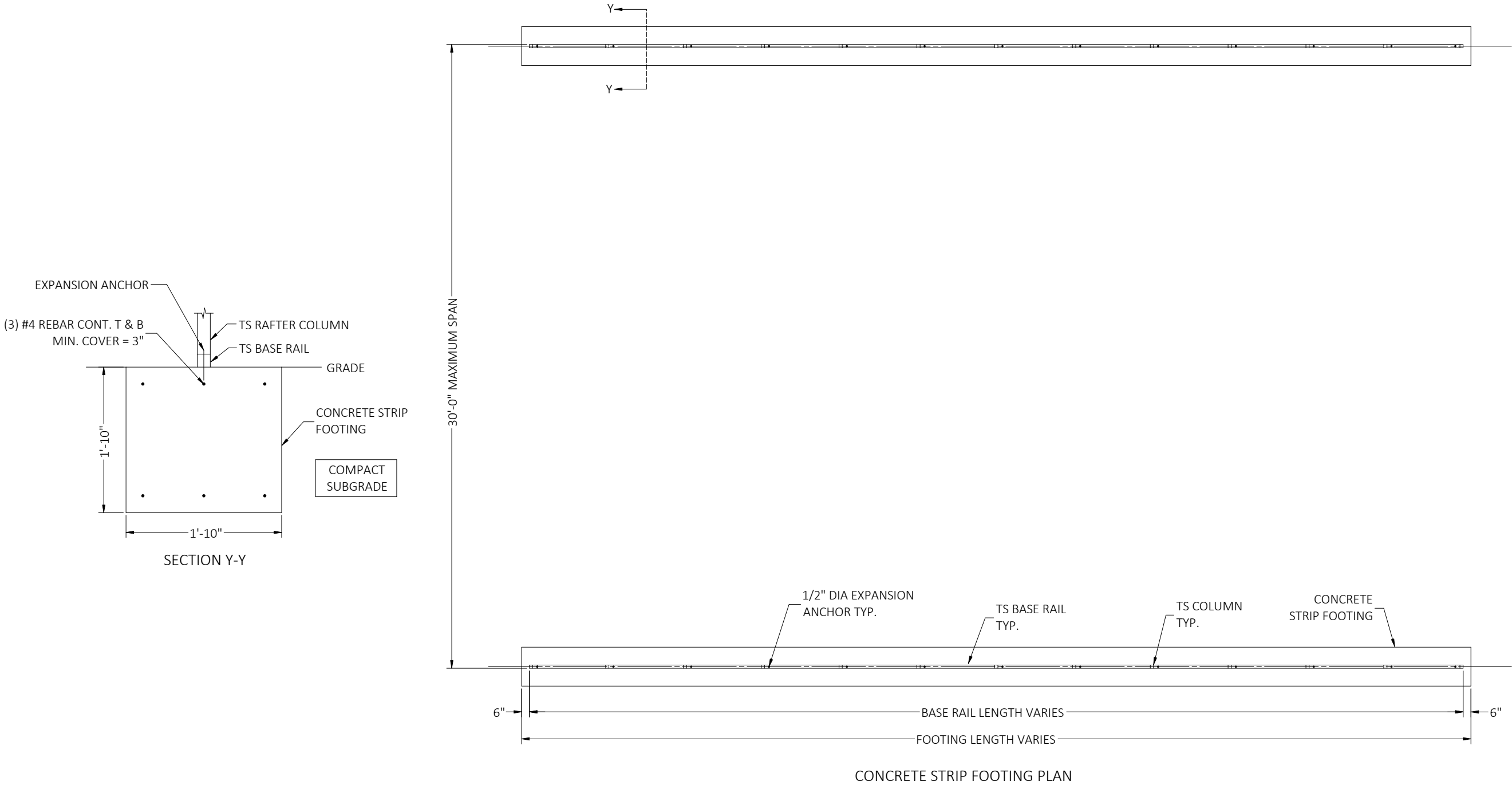
CONTRACTOR: STEEL BUILDINGS AND STRUCTURES INC. 800PIEDMONT TRIAD WEST DR., MOUNT AIRY, NC 27030	PROJECT ADDRESS: DAUGHTRY 4345 SW COUNTY ROAD 240, LAKE CITY, FLORIDA, 32024	
	DESIGN DATE:	03/06/2025
REVISION 1:		DATE
REVISION 2:	DATE	SHEET:
DRAWN BY:	JS	
SCALE:	NTS	9 OF 12

GENERAL NOTES
CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF 2500 PSF.

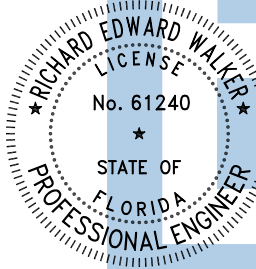
CONCRETE
MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

- 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.

OPTIONAL CONCRETE STRIP FOOTING



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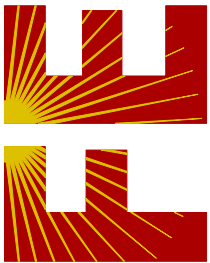
4161 TAMIAM I TRAIL, UNIT 101
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PROJECT NO. 2506347

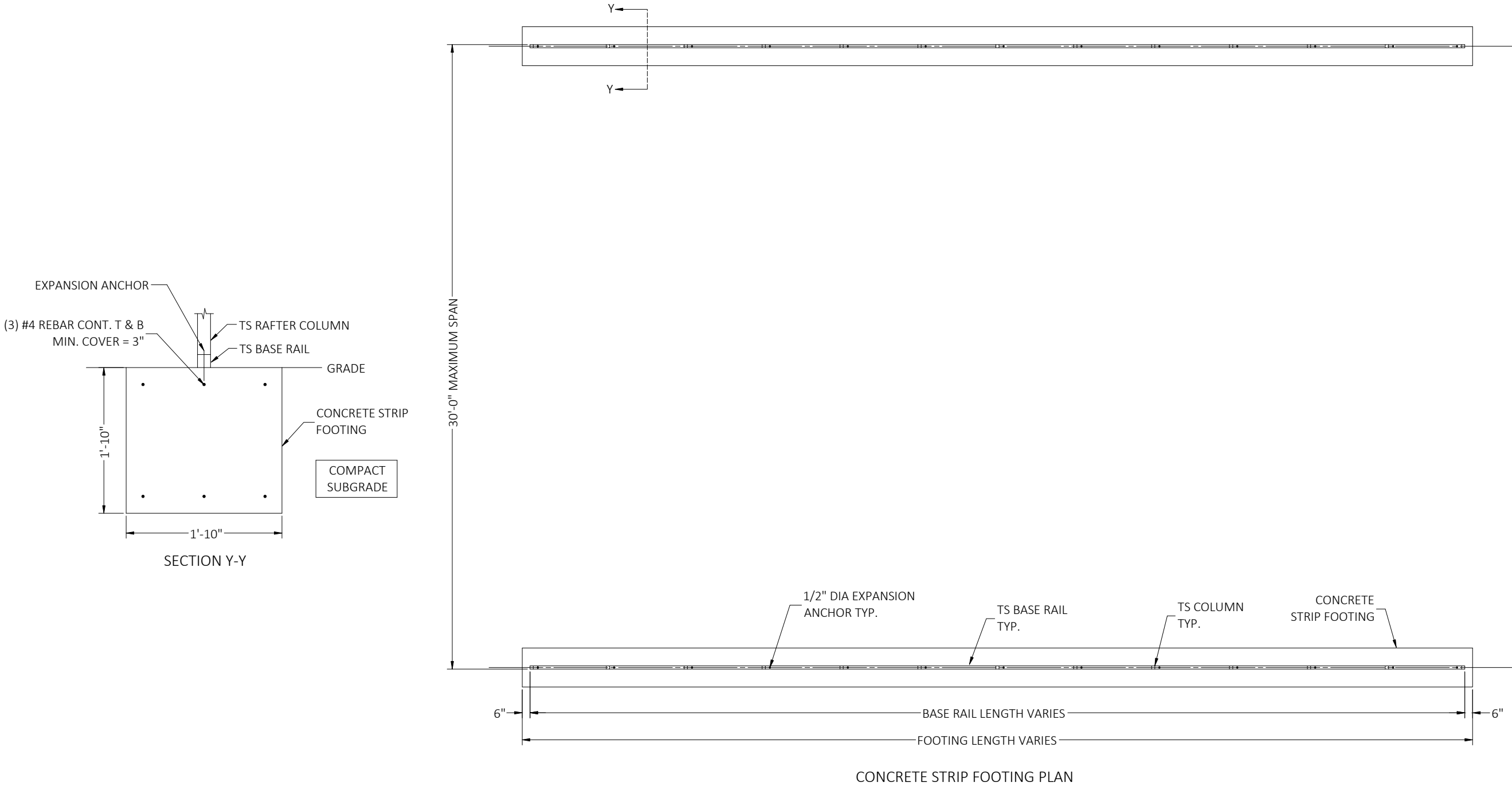
CONTRACTOR: STEEL BUILDINGS AND STRUCTURES INC. 800PIEDMONT TRIAD WEST DR., MOUNT AIRY, NC 27030		PROJECT ADDRESS: DAUGHTRY 4345 SW COUNTY ROAD 240, LAKE CITY, FLORIDA, 32024	
DESIGN DATE:		03/06/2025	
REVISION 1:		DATE	
REVISION 2:		DATE	SHEET: 10 OF 12
DRAWN BY:		JS	
SCALE:		NTS	

GENERAL NOTES
CONCRETE MONOLITHIC SLAB DESIGN IS BASED ON A MINIMUM SOIL BEARING CAPACITY OF 2500 PSF.

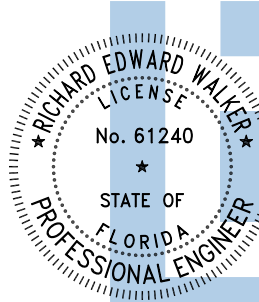
CONCRETE
MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH = 3000 PSI

- REINFORCING STEEL
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 6. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.

OPTIONAL CONCRETE STRIP FOOTING



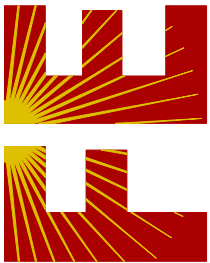
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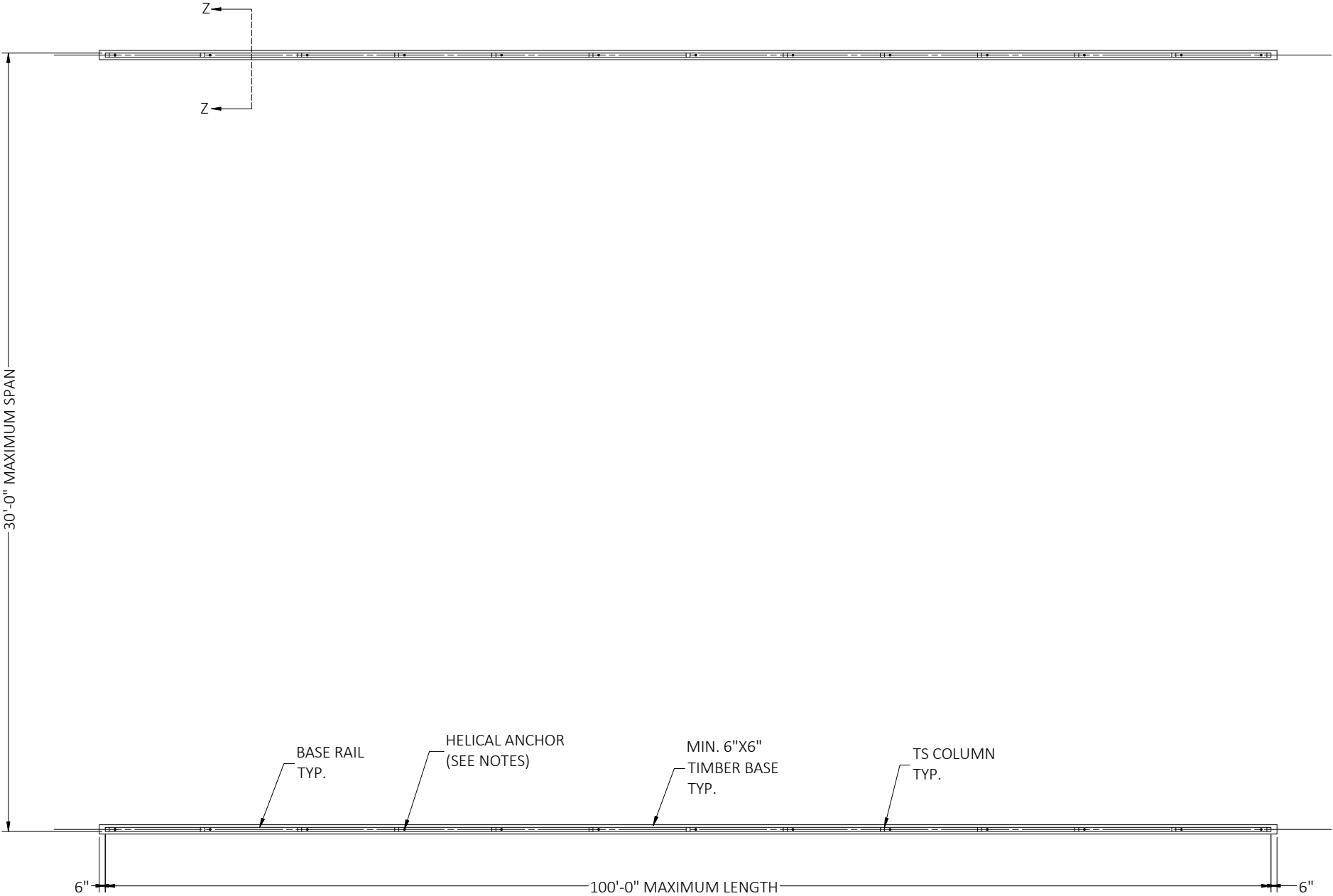
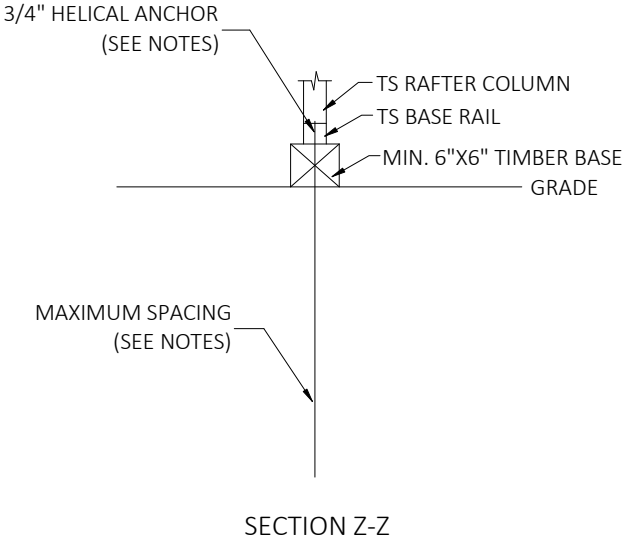
PROJECT NO. 2506347

CONTRACTOR: STEEL BUILDINGS AND STRUCTURES INC. 800PIEDMONT TRIAD WEST DR., MOUNT AIRY, NC 27030		PROJECT ADDRESS: DAUGHTRY 4345 SW COUNTY ROAD 240, LAKE CITY, FLORIDA, 32024	
DESIGN DATE:		03/06/2025	
REVISION 1:		DATE	
REVISION 2:		DATE	SHEET: 11 OF 12
DRAWN BY:		JS	
SCALE:		NTS	

TIMBER NOTES:
1. TIMBER BASE TO BE NO. 2 SYP PT OR EQUIVALENT.

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, MEDIUM TO VERY LOOSE DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING.
2. THE UPLIFT/BEARING CAPACITY OF HELICAL ANCHOR MUST BE EQUAL TO OR GREATER THAN 8.5 KIPS FOR ANCHORS INSTALLED AT EVERY POST (LEG) / MAX. RAFTER SPACING.
3. THE UPLIFT/BEARING CAPACITY OF HELICAL ANCHORS MUST BE AS SHOWN IN TABLE A FOR ANCHORS PROVIDED AT THE JAMBS OF DOOR OPENINGS. THE INCREASE IN HELICAL ANCHOR CAPACITY MAY BE ACHIEVED BY INCREASING THE DIAMETER AND/OR THE EMBEDMENT OF THE ANCHORS, OR BY USING DIFFERENT ANCHORS DEPENDING ON THE MANUFACTURER'S SPECIFICATIONS.

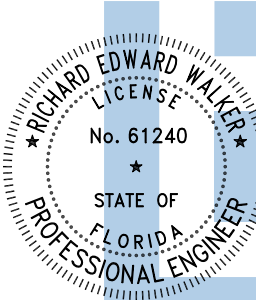
TABLE A			
REQUIRED UPLIFT / BEARING CAPACITY OF HELICAL ANCHORS		RAFTER SPACING (FT.)	
OPENING WIDTH (FT.)	6	4	5
	8	11.0	9.5
	10	13.0	11.5
	12	15.0	13.0
	14	17.0	14.5
	16	19.5	16.5
	18	21.5	18.0
	20	23.5	20.0
	20	25.5	21.5



BASE RAIL PLAN

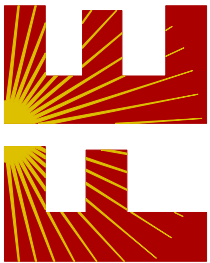
OPTIONAL HELICAL ANCHORING ON TIMBER BEAM DETAIL

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.



Digitally signed
by Richard E Walker
Date:
2025.03.07
14:26:54-05'00'

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CA CERT. #30782

PROJECT NO. 2506347

CONTRACTOR:
STEEL BUILDINGS AND
STRUCTURES INC.
800PIEDMONT TRIAD WEST DR.,
MOUNT AIRY, NC 27030

PROJECT ADDRESS:
DAUGHTRY
4345 SW COUNTY ROAD 240,
LAKE CITY, FLORIDA, 32024

DESIGN DATE: 03/06/2025

REVISION 1: DATE

REVISION 2: DATE

DRAWN BY: JS

SCALE: NTS

SHEET:

12 OF 12