

# STRUCTURAL DESIGN ENCLOSED BUILDING

# MAXIMUM 30'- 0" WIDE X 16'- 0" HEIGHT-BOX EAVE FRAME AND BOW FRAME

27 April 2023 Revision 1 M&A Project No. 22337S

Prepared for:

NC Steel Buildings, Inc. P.O. Box 6604 Mount Airy, NC 27030

Prepared by:

Moore and Associates Engineering and Consulting, Inc.

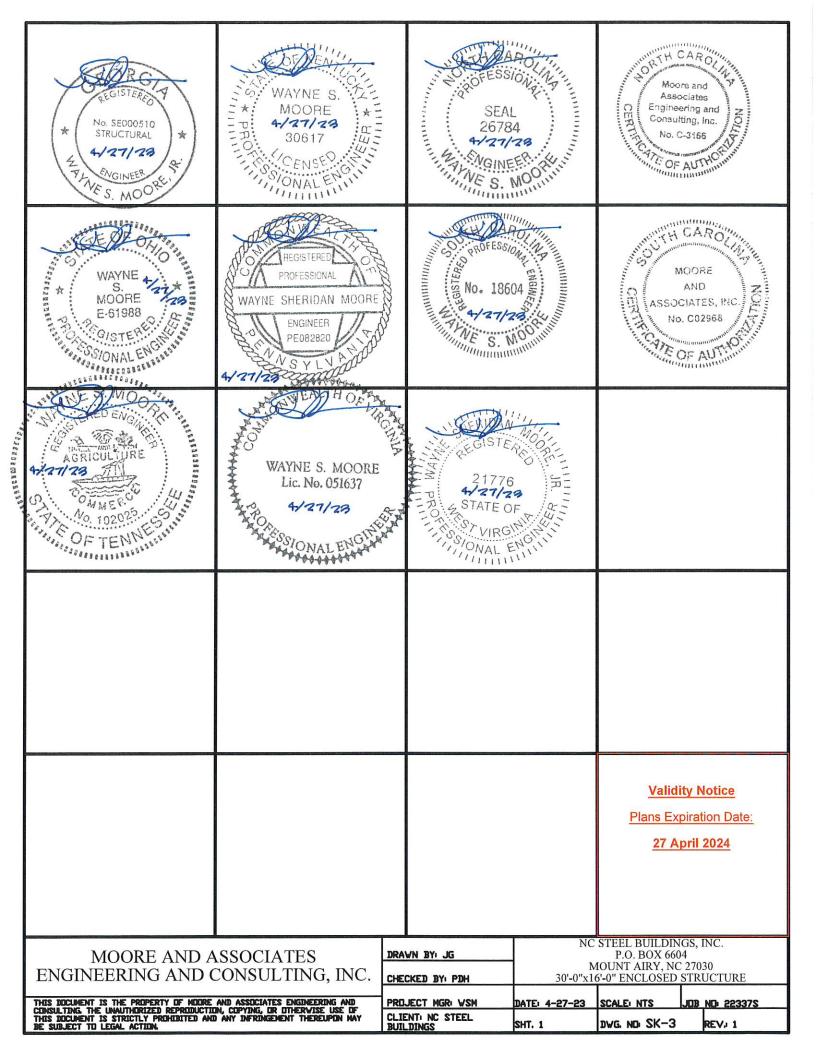
1009 East Avenue North Augusta, SC 29841

401 S. Main Street, Suite 200 Mount Airy, NC 27030



Validity Notice
Plans Expiration Date: 27 April 2024
Plans are valid for one year from issuance date

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DRAWN BY: JG	140
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CHECKED BY: PDH	30'-0"x1

NC STEEL BUILDINGS, INC. P.O. BOX 6604 MOUNT AIRY, NC 27030 0'-0"x16'-0" ENCLOSED STRUCTURE

AND SE OF N MAY	PROJECT MGR: VSM
	CLIENT: NC STEEL BUILDINGS

DATE: 4-27-23 SCALE: NTS
SHT. 2 DWG. ND: SK-3

JOB NO 22337S

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### INSTALLATION NOTES AND SPECIFICATIONS

- 1. DESIGN IS FOR MAXIMUM 30'-0' WIDE x 16'-0' EAVE HEIGHT ENCLOSED STRUCTURES.
- 2. DESIGN WAS DONE IN ACCORDANCE WITH ALL THE APPLICABLE BUILDING CODES LISTED ON SHEET 3A
- 3. DESIGN LOADS ARE AS FOLLOWS:

A> ROOF DEAD LOADS:

SELF-WEIGHT = 1.5 PSF

MEP = 0 PSF

COLLATERAL = 0 PSF B) ROOF LIVE LOAD

= 12 PSF

- C) FLOOR LIVE LOAD = 100 PSF (4" CONCRETE SLAB/FOOTING)
- = 35 PSF WITH WELDED RAFTER TIE (W ≤ 30'-0") D) GROUND SNOW LOAD = 20 PSF WITH U-CHANNEL PEAK BRACE (W & 16'-0")

NOTE: UNBALANCED LOADING DUE TO SNOW DRIFT/SLIDING FROM AN ADJACENT TALLER STRUCTURE HAS NOT BEEN EVALUATED. DROP-DOWN LEAN-TO'S (THOSE CAUSING A HEIGHT DIFFERENTIAL FROM THE MAIN STRUCTURE) SHALL BE LIMITED TO GROUND SNOW LOADS & 15 PSF.

- 5. MAXIMUM RAFTER/COLUMN AND END COLUMN SPACING = 5.0 FEET, 4.0 FEET FOR GROUND SNOW LOADS > 30 PSF (UNLESS NOTED OTHERWISE).
- 6. END WALL COLUMNS (POSTS) ARE EQUIVALENT TO SIDE WALL COLUMNS IN SIZE AND SPACING (UNLESS NOTED OTHERWISE),
- 7. RISK CATEGORY I (NOT FOR HUMAN OCCUPANCY).
- 8. WIND EXPOSURE CATEGORY B.
- 9. STRUCTURAL ANALYSIS/DESIGN IS BASED ON 2 1/2'x2 1/2'-14 GA. TUBE STEEL (TS) MEETING THE REQUIREMENTS OF ASTM A653 GRADE 50 WITH MINIMUM YIELD STRENGTH (Fy) DF 54 KSI AND GALVANIZING MEETING THE MINIMUM REQUIREMENTS DF G60.
- 10. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2"x2 1/2"-14 GAUGE TS FRAMING MEMBERS (UNLESS NOTED OTHERWISE).
- 11. CONNECTOR SLEEVES ARE MINIMUM 6" LONG, TS 2 1/4"x2 1/4"-14 GAUGE FOR 2 1/2"x2 1/2"-14 GAUGE FRAMING MEMBERS (UNLESS NOTED OTHERWISE).
- 12. AVERAGE PANEL FASTENER SPACING DN-CENTERS = 9" INCHES
- 13. FASTENERS CONSIST OF #12-14×3/4° SELF-DRILLING FASTENER (SDF), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 22 FEET OR LESS, AND ROOF SLOPES OF 14° (3:12 PITCH) OR LESS SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY. ROOF SLOPES LESS THAN 3:12 REQUIRE USE OF LAP JOINT SEALANT.
- 14. ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6' OF EACH COLUMN (LEG).
- 15. STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR W/ WELDED NUT x 36" LONG AND MAY BE USED IN SUITABLE SOIL CONDITIONS OPTIONAL HELIX ANCHORS MUST BE USED IN UNSUITABLE SOIL CONDITIONS, COORDINATE WITH LOCAL BUILDING CODE AND/OR BUILDING OFFICIAL REGARDING FROST DEPTH (LENGTH) OF ANCHORS.
- 16. CONTRACTOR TO PROVIDE ADEQUATE BRACING FOR STRUCTURE SO THAT IT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THE STRUCTURE AND FOUNDATIONS ARE DESIGNED FOR A COMPLETED CONDITION ONLY AND, THEREFORE, REQUIRE ADDITIONAL SUPPORT TO MAINTAIN STABILITY BEFORE COMPLETION.
- 17. WIND FORCES GOVERN OVER SEISMIC FORCES, SEISMIC PARAMETERS ANALYZED ARE:

SOIL SITE CLASS = DRISK CATEGORY I

R = 3.25

 $I_E = 1.0$ 

 $V = C_S W$  $S_{DS} = 2.625 g$ 

 $S_{D1} = 2.13 g$ 

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27 April 2024

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DRAWN BY: JG

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NC STEEL BUILDINGS, INC. P.O. BOX 6604 MOUNT AIRY, NC 27030 30'-0"x16'-0" ENCLOSED STRUCTURE

DATE: 4-27-23 PROJECT MGR: WSM SCALE: NTS JOB NO 22337S CLIENTI NC STEEL SHT. 3 DWG. NO SK-3 REV. 1 BUILDINGS

### LIST OF APPLICABLE BUILDING CODES

2018 INTERNATIONAL BUILDING CODE (IBC 2018)

2015 INTERNATIONAL BUILDING CODE (IBC 2015)

2012 INTERNATIONAL BUILDING CODE (IBC 2012)

GEORGIA STATE MINIMUM STANDARD BUILDING CODE (ADOPTS THE IBC 2018 WITH AMENDMENTS)

2018 KENTUCKY BUILDING CODE (ADOPTS THE IBC 2015 WITH AMENDMENTS)

2018 NORTH CAROLINA BUILDING CODE (ADOPTS THE IBC 2015 WITH AMENDMENTS)

OHIO BUILDING CODE 2017 (ADOPTS THE IBC 2015 WITH AMENDMENTS)

BUILDING CODE 2018 OF PENNSYLVANIA (ADOPTS THE IBC 2018 WITH AMENDMENTS) PHILADELPHIA BUILDING CODE (ADOPTS THE IBC 2018 WITH AMENDMENTS)

2021 SOUTH CAROLINA BUILDING CODE (ADOPTS THE IBC 2021 WITH AMENDMENTS)

BUILDING CODE 2012 OF TENNESSEE
(ADOPTS THE IBC 2012 WITH AMENDMENTS)
BUILDING CODE OF THE CITY OF KNOXVILLE
(ADOPTS THE IBC 2018 WITH AMENDMENTS)
BUILDING CODE 2018 OF NASHVILLE AND DAVIDSON
COUNTY (ADOPTS THE IBC 2018 WITH AMENDMENTS)

2018 VIRGINIA CONSTRUCTION CODE (ADOPTS THE IBC 2018 WITH AMENDMENTS)

BUILDING CODE 2018 OF WEST VIRGINIA (ADOPTS THE IBC 2018 WITH AMENDMENTS)

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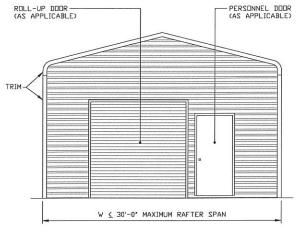
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CHECKED BY: PDH	30'-0"x16'-0" ENCLOSED STRUCTURE				
PROJECT MGR: VSM	DATE: 4-27-23	SCALE: NTS	JOB	ND: 22337S	
CLIENT: NC STEEL BUILDINGS	SHT. 3A	DVG. NO SK-3		REV. 1	

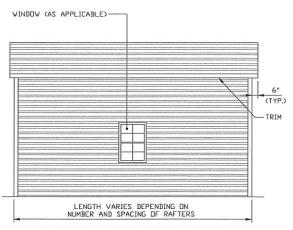
# BOX EAVE FRAME RAFTER STRUCTURE RDLL-UP DDDR (AS APPLICABLE) RTH (AS APPLICABLE) (AS APPLICABLE) W © 30'-0' MAXIMUM RAFTER SPAN

TYPICAL END ELEVATION
SCALE: NTS

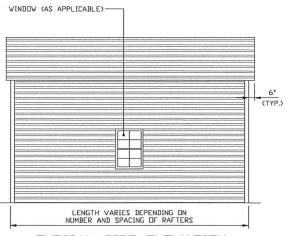
### BOW EAVE FRAME RAFTER STRUCTURE



TYPICAL END ELEVATION SCALE: NTS



TYPICAL SIDE ELEVATION SCALE: NTS

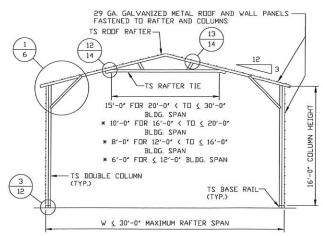


TYPICAL SIDE ELEVATION SCALE: NTS

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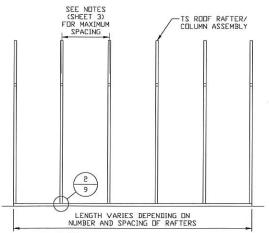
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CLIENT: NC STEEL BUILDINGS	SHT. 4	DVG. ND: SK-3	<u>JOB NO: 22337S</u> REV.: 1



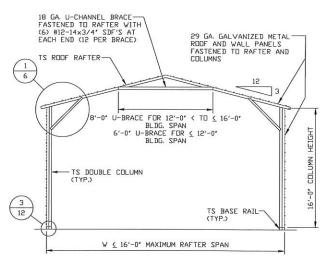
SCALE: NTS

\* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS.



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS



# TYPICAL INTERIOR RAFTER/COLUMN FRAMING SECTION

SCALE: NTS

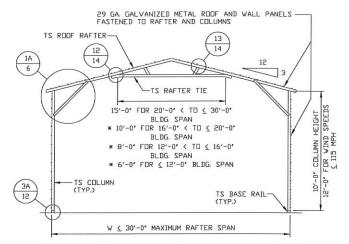
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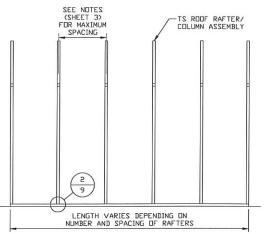
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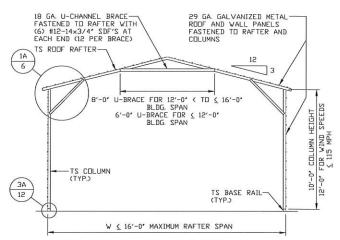
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TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS



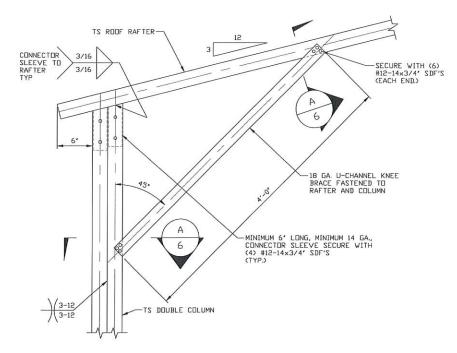
# TYPICAL INTERIOR RAFTER/COLUMN FRAMING SECTION

SCALE: NTS

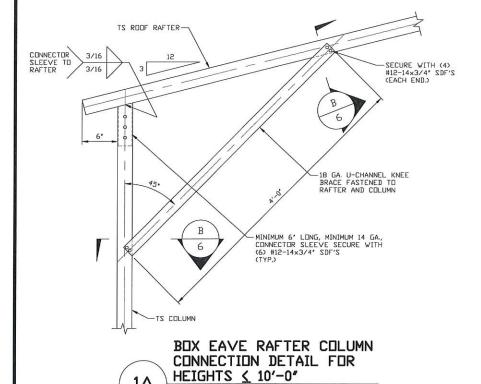
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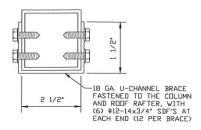
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-	PROJECT MGR: WSM	DATE: 4-27-23	SCALE: NTS JOS	ND: 22337S			
	CLIENT: NC STEEL BUILDINGS	SHT. 5A	DVG. ND: SK-3	REV. 1			



BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0" < TO < 16'-0"

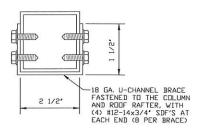


NDTE: MAXIMUM COLUMN HEIGHT IS 12'-0" FOR WIND SPEEDS ≤ 115 MPH.



A BRACE SECTION
SCALE: NTS

NOTE: DOUBLE COLUMN NOT SHOWN FOR CLARITY.



BRACE SECTION
SCALE: NTS

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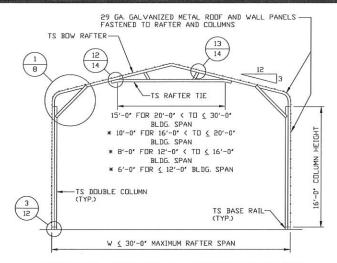
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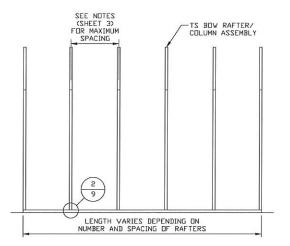
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DRAWN BY: JG	l NC	P.O. BOX 6604				



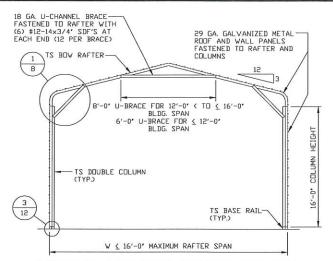
SCALE: NTS

\* NOTE: VERTICAL STRUTS NOT REQUIRED FOR THESE TIE LENGTHS.



# TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS



# TYPICAL INTERIOR RAFTER/COLUMN FRAMING SECTION

SCALE: NTS

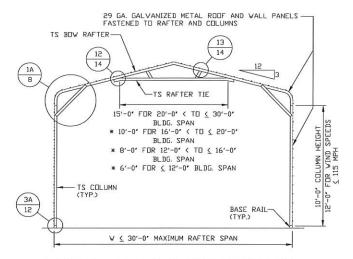
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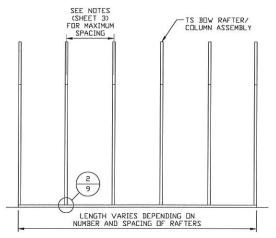
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DRAWN BY: JG	NO	NC STEEL BUILDINGS, INC. P.O. BOX 6604				



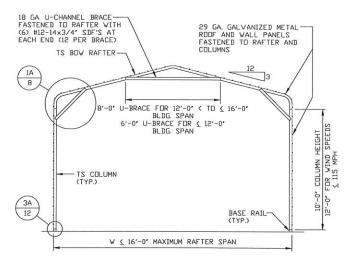
SCALE: NTS

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# TYPICAL INTERIOR RAFTER/COLUMN FRAMING SECTION

SCALE: NTS



# TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

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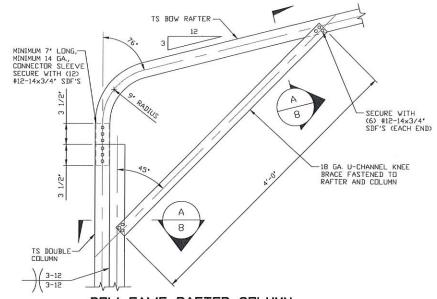
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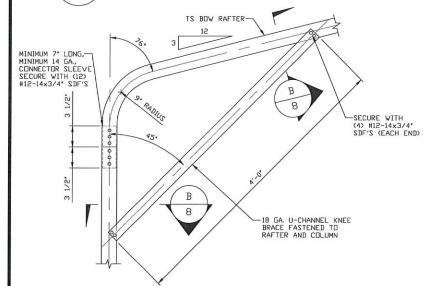
CLIENT: NC STEEL BUILDINGS	SHT. 7A	DWG. ND: SK-3 REV.		REV. 1	
PROJECT MGR: WSM	DATE: 4-27-23	SCALE: NTS	JOB	ND 22337S	
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DRAWN BY: JG	NC STEEL BUILDINGS, INC. P.O. BOX 6604 MOUNT AIRY, NC 27030				



BOW EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0" < T□ ≤ 16'-0"

SCALE: NTS

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BOW EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS ≤ 10'-0"

SCALE: NTS NOTE: MAXIMUM COLUMN HEIGHT IS 12'-0" FOR WIND SPEEDS ≤ 115 MPH

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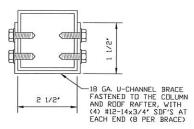
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1/2, -18 GA. U-CHANNEL BRACE FASTENED TO THE COLUMN AND ROOF RAFTER, WITH (6) #12-14×3/4' SDF'S AT EACH END (12 PER BRACE) 2 1/2"

BRACE SECTION

SCALE: NTS
NDTE: DOUBLE COLUMN NOT
SHOWN FOR CLARITY.



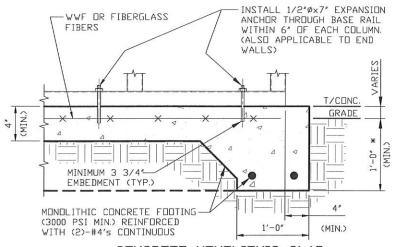
BRACE SECTION SCALE: NTS

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	DRAWN BY: JG	NC STEEL BUILDINGS, INC. P.O. BOX 6604		

### BASE RAIL ANCHORAGE OPTIONS



### CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: NTS MINIMUM ANCHOR EDGE DISTANCE IS 4". \* COORDINATE WITH LOCAL BUILDING CODE AND/OR BUILDING OFFICIAL REGARDING REQUIRED FOOTING DEPTH.

### GENERAL NOTES

NOTE: CONCRETE MONOLITHIC SLAB DESIGN BASED ON MINIMUM SOIL BEARING CAPACITY OF 1,500 PSF.

### CONCRETE

CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.

### COVER OVER REINFORCING STEEL:

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318:

3" IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND 1 1/2" ELSEWHERE.

### REINFORCING STEEL:

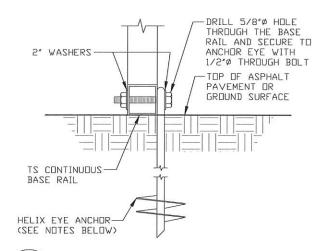
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

### REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED:

- 1. REINFORCEMENT IS BENT COLD.
- THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.
- 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, USE MINIMUM (2) 4' HELICES WITH MINIMUM 30' EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT
- 2. FOR CORAL USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT.
- 3. FOR MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS, AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT.
- 4. FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLUVIAL FILL, USE MINIMUM (2) 6" HELICES WITH MINIMUM 50" EMBEDMENT.
- 5. FOR VERY LOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT.



### GROUND BASE HELIX ANCHORAGE

SCALE: NTS (CAN BE USED FOR ASPHALT) \* COORDINATE WITH LOCAL BUILDING CODE AND/OR BUILDING OFFICIAL REGARDING REQUIRED ANCHORAGE DEPTH.

Validity Notice

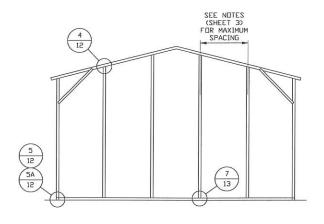
Plans Expiration Date:

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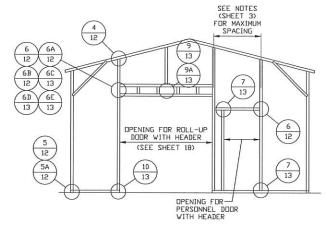
DRAWN BY: JG	NC	NC STEEL BUILDINGS, INC. P.O. BOX 6604		
		MOUNT AIRY, NC 27030		
CHECKED BY: PDH	30'-0"x16'-0" ENCLOSED STRUCTURE			
PROJECT MGR: WSM	DATE: 4-27-23	SCALE: NTS	JOB	ND: 22337S
CLIENT: NC STEEL BUILDINGS	SHT. 9	DAC NO 2K-3		REV: 1

## BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



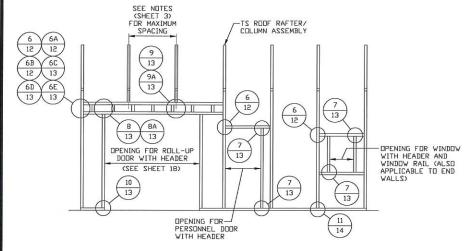
# TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION

SCALE: NTS



# TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE: NTS



# TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE: NTS

Validity Notice

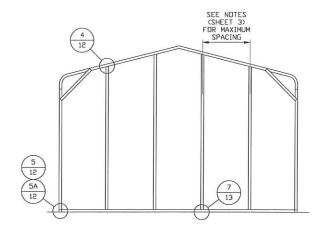
Plans Expiration Date:

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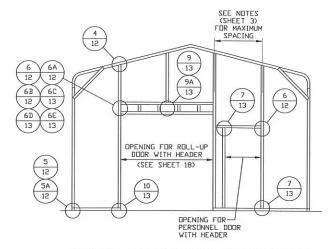
DRAWN BY: JG		6604	INC.		
	MOUNT AIRY, NC 27030				
CHECKED BY: PDH	30'-0"x16'-0" ENCLOSED STRUCTURE				
PREJECT MGR: VSM	DATE: 4-27-23	SCALE: NTS	JOB	ND: 22337S	
CLIENT: NC STEEL	SHT. 10	DVG. NO. SK-	-3	REV. 1	

## BOW EAVE RAFTER END WALL AND SIDE WALL OPENINGS



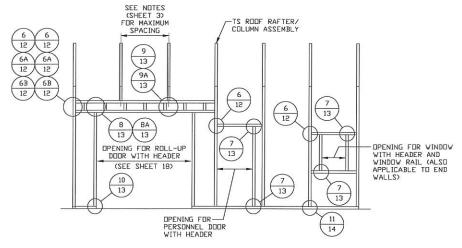
# TYPICAL BOW EAVE RAFTER END WALL FRAMING SECTION

SCALE: NTS



# TYPICAL BOW EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE: NTS



# TYPICAL BOW EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE: NTS

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Plans Expiration Date:

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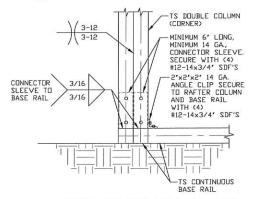
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	NC STEEL BUILDINGS, INC.			
DRAWN BY: JG	P.O. BOX 6604			
	MOUNT AIRY, NC 27030			
CHECKED BY: PDH	30'-0"x16'-0" ENCLOSED STRUCTURE			

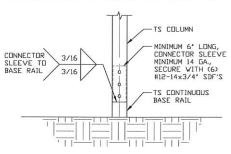
PROJECT MGR: VSM	DATE: 4-27-23	SCALE: NTS JOE	ND 22337S
CLIENT: NC STEEL BUILDINGS	SHT. 11	DWG. NO SK-3	REV. 1

# TS DOUBLE COLUMN MINIMUM 6' LONG, CONNECTOR SLEEVE MINIMUM 14 GA., SECURE WITH (4) #12-14x3/4' SDF'S CONNECTOR SLEEVE TO BASE RAIL 3/16 3/16 CONTINUOUS BASE RAIL (TYP.)

### RAFTER COLUMN/ BASE RAIL CONNECTION DETAIL 3 SCALE: NTS

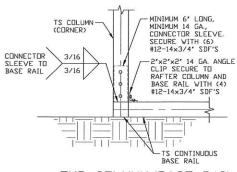


### END COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS

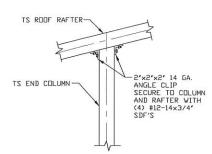


**CONNECTION DETAILS** 

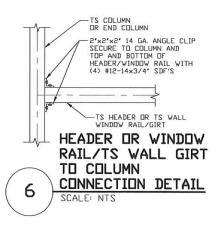
RAFTER COLUMN/ BASE RAIL CONNECTION DETAIL **3A** SCALE: NTS

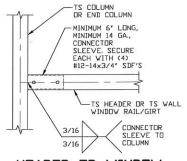


END COLUMN/BASE RAIL CONNECTION DETAIL



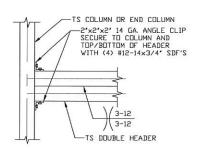
END COLUMN/RAFTER CONNECTION DETAIL 4





HEADER OR WINDOW RAIL/TS WALL GIRT TO COLUMN CONNECTION DETAIL SCALE: NTS

6A



DOUBLE HEADER/COLUMN CONNECTION DETAIL 6B SCALE: NTS

BUILDINGS

**Validity Notice** 

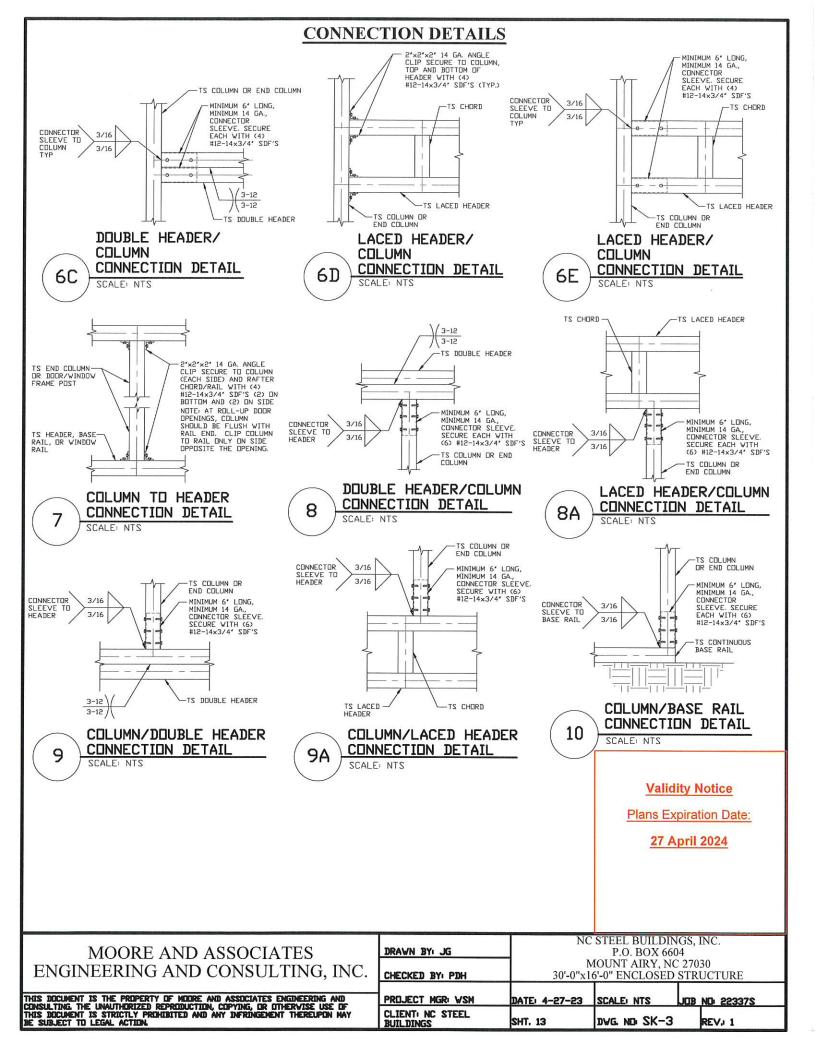
Plans Expiration Date:

27 April 2024

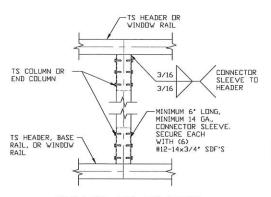
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NC STEEL BUILDINGS, INC. DRAWN BY: JG P.O. BOX 6604 MOUNT AIRY, NC 27030 CHECKED BY: PDH 30'-0"x16'-0" ENCLOSED STRUCTURE PROJECT MGR: VSM IOB NO 22337S DATE: 4-27-23 SCALE: NTS CLIENT: NC STEEL SHT. 12 DWG. NO SK-3 REV. 1



# **CONNECTION DETAILS**



TS RODF RAFTER

6'

TS RAFTER

TIE

3/16

TS ROOF RAFTER

TS RAFTER
CHORD

(12)

TS RAFTER TIE CONNECTION DETAIL
SCALE: NTS

RAFTER TO CHORD CONNECTION DETAIL

SCALE: NTS

COLUMN TO HEADER OR BASE RAIL CONNECTION DETAIL

SCALE: NTS

11

Validity Notice

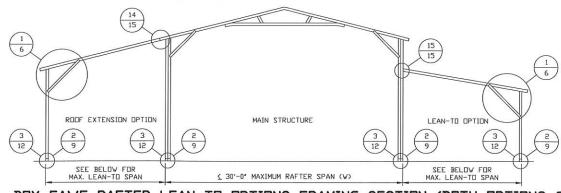
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DRAWN BY: JG CHECKED BY: PDH		NC STEEL BUILDINGS, INC. P.O. BOX 6604 MOUNT AIRY, NC 27030 30'-0"x16'-0" ENCLOSED STRUCTURE		30
PROJECT MGR: WSM CLIENT: NC STEEL BUILDINGS	DATE: 4-27-23 SHT. 14	SCALE: NTS	COLOR O	ND: 22337\$ REV.: 1

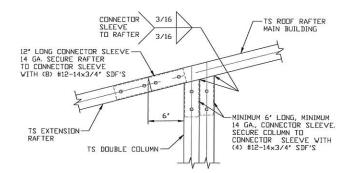
# **BOX EAVE RAFTER LEAN-TO OPTIONS**



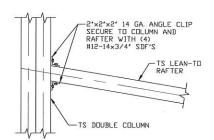
### TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

SCALE: NTS

REFERENCE RAFTER COLUMN CONNECTION DETAILS FOR APPROPRIATE COLUMN HEIGHT AND TUBING SPECIFICATIONS.



SIDE EXTENSION RAFTER/
COLUMN DETAIL FOR
RAFTER SPANS & 12'-0'

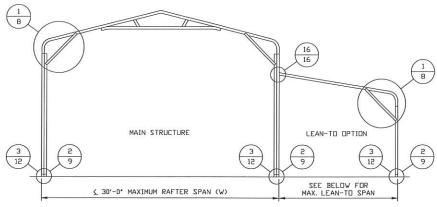


LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS & 12'-0'

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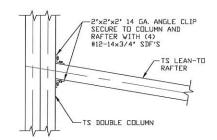
CLIENT: NC STEEL BUILDINGS	SHT. 15	DVG. ND: SK-	No. Co.	ND: 22337S REV.: 1		
 PROJECT MGR: VSM	DATE: 4-27-23	SCALE, NES	100	NE 000070		
CHECKED BY: PDH		MOUNT AIRY, 6'-0" ENCLOSE				
DRAWN BY: JG	NO	NC STEEL BUILDINGS, INC. P.O. BOX 6604				

# **BOW EAVE RAFTER LEAN-TO OPTIONS**



### TYPICAL BOW RAFTER LEAN-TO OPTION FRAMING SECTION

SCALE: NTS
REFERENCE RAFTER COLUMN CONNECTION DETAILS FOR APPROPRIATE COLUMN HEIGHT
AND TUBING SPECIFICATIONS.

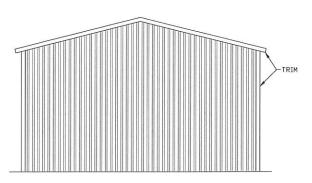


LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS & 12'-0"

16 SCALE: NTS

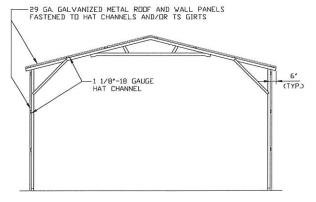
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH	ELECTRONISM OF	MOUNT AIRY, No 6'-0" ENCLOSED 		
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND	PROJECT MGR: WSM	DATE: 4-27-23	SCALE: NTS	JOB N	ND: 22337S
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## **BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION**



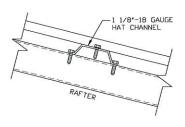
# TYPICAL END ELEVATION VERTICAL ROOF/SIDING

SCALE: NTS



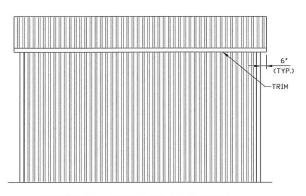
# TYPICAL SECTION VERTICAL ROOF/SIDING OPTION

SCALE: NTS



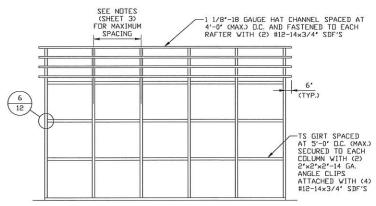
### PANEL ATTACHMENT

(ALTERNATE FOR VERTICAL ROOF AND WALL PANELS) SCALE: NTS



# TYPICAL SIDE ELEVATION VERTICAL ROOF/SIDING

SCALE: NTS



# TYPICAL FRAMING SECTION VERTICAL ROOF/SIDING OPTION

SCALE: NTS

NOTE: HAT CHANNELS MAY ALSO BE USED FOR WALL GIRTS AND ARE SPACED AT 5'-0" D.C. (MAX.) SECURED TO EACH COLUMN WITH (2) #12-14 × 3/4" SDF'S

**Validity Notice** 

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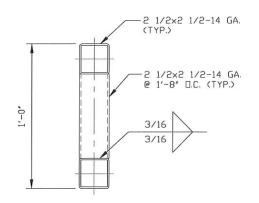
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CLIENT: NC STEEL BUILDINGS	SHT. 17	DWG. ND: SK-3	REV. 1	
 PROJECT MGR: VSM	DATE: 4-27-23	SCALE: NTS JOI	ND 22337S	
CHECKED BY: PDH		IOUNT AIRY, NC 27 5'-0" ENCLOSED ST		
DRAWN BY: JG		STEEL BUILDINGS P.O. BOX 6604	expension of the second of the	

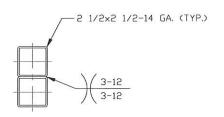
## SIDE WALL HEADER OPTIONS

NOTE: HEADER DESIGN DOES NOT TAKE IN TO ACCOUNT ADDITIONAL ROOF LOADING FROM ATTACHED LEAN-TO STRUCTURES,

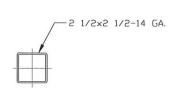


HEADER DETAIL FOR SPANS 10'-0" < T□ < 16'-0"

SCALE: NTS



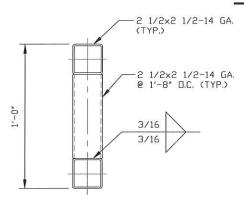
HEADER DETAIL FOR SPANS 6'-0" < T□ < 10'-0"



HEADER DETAIL FOR SPANS < 6'-0"

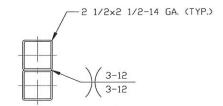
SCALE: NTS

### END WALL HEADER OPTIONS



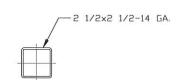
HEADER DETAIL FOR SPANS 15'-0" < TO ≤ 16'-0"

SCALE: NTS



HEADER DETAIL FOR SPANS 8'-0" < T□ < 15'-0"

SCALE: NTS



HEADER DETAIL FOR SPANS < 8'-0"

SCALE: NTS

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DRAWN BY: JG	_	STEEL BUILDIN P.O. BOX 66 MOUNT AIRY, NO 16'-0" ENCLOSED	04 C 27030
PROJECT MGR: WSM	DATE: 4-27-23		JOB NO 22337S
CLIENT: NC STEEL BUILDINGS	SHT. 18	DVG. ND: SK-3	