



## STRUCTURAL DESIGN

### ENCLOSED BUILDING

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

**2 May 2019**

**Revision 1**

**M&A Project No. 17270S/19118S**

**Prepared for:**

**GA Southern Steel Buildings Inc.  
1086 Gene McQueen Road  
Moultrie, GA 31788**

**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**

Digitally signed  
by Wayne S  
Moore  
Date: 2020.06.03  
15:16:57 -04'00'



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



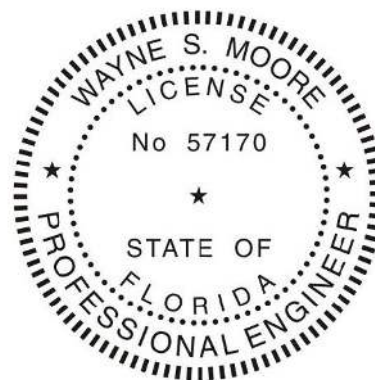

This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.  <small>THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.</small>	DRAWN BY: SH	GA SOUTHERN STEEL BUILDINGS, INC 30'-0"x16'-0" ENCLOSED STRUCTURE PE SEAL COVER SHEET		
	CHECKED BY: JM			
	PROJECT MGR: WSM	DATE: 5-2-19	SCALE: NTS	JOB NO: 17270S/19118S
	CLIENT: GA SOUTHERN	SHT. 1	DWG. NO: SK-3	REV: 1

# DRAWING INDEX

SHEET 1	PE SEAL COVER SHEET
SHEET 2	DRAWING INDEX
SHEET 3	INSTALLATION NOTES
SHEET 4	SPECIFICATIONS AND TYPICAL SIDE AND END ELEVATIONS
SHEET 5	TYPICAL RAFTER/COLUMN FRAME AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 6	COLUMN CONNECTION DETAILS (BOX EAVE RAFTER)
SHEET 7	TYPICAL RAFTER/COLUMN FRAME AND SIDE FRAMING SECTIONS (BOW RAFTER)
SHEET 8	COLUMN CONNECTION DETAILS (BOW RAFTER)
SHEET 9	OPTIONAL BASE RAIL ANCHORAGE
SHEET 10	TYPICAL END WALL AND SIDE WALL FRAMING SECTIONS (BOX EAVE)
SHEET 11	TYPICAL END WALL AND SIDE WALL FRAMING SECTIONS (BOW RAFTER)
SHEET 12	WALL OPENING DETAILS
SHEET 13	WALL OPENING DETAILS
SHEET 14	WALL OPENING DETAILS
SHEET 15	LEAN-TO OPTIONS (BOX EAVE RAFTER)
SHEET 16	LEAN-TO OPTIONS (BOW RAFTER)
SHEET 17	VERTICAL ROOF/SIDING OPTION END AND SIDE ELEVATION AND SECTION



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

**GA SOUTHERN STEEL BUILDINGS, INC.**  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SCALE: NTS**

**SHT. 2**

**DWG. NO: SK-3**

**JOB NO:  
17270S/19118S**

**REV: 1**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

## 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 THE 2017 FLORIDA BUILDING CODE (FBC) 6TH EDITION, 2012 INTERNATIONAL BUILDING CODE (IBC) AND 2015 IBC.
3. DESIGN LOADS ARE AS FOLLOWS:
  - A) DEAD LOAD = 1.5 PSF
  - B) LIVE LOAD = 12 PSF
  - C) GROUND SNOW LOAD = 15 PSF (< 24'-0" WITH U-CHANNEL RAFTER TIE)
 NOTE: UNBALANCED SNOW LOADING DUE TO DRIFTING HAS NOT BEEN ANALYZED.
4. ULTIMATE LOW WIND SPEED (LW) 105 TO 140 MPH (NOMINAL WIND SPEED 81 TO 108 MPH).  
MAXIMUM RAFTER/POST AND END POST SPACING = 5.0 FEET (UNLESS NOTED OTHERWISE).
5. ULTIMATE HIGH WIND SPEED (HW) 141 TO 170 MPH (NOMINAL WIND SPEED 109 TO 132 MPH).  
MAXIMUM RAFTER/POST AND END POST SPACING = 4.0 FEET (UNLESS NOTED OTHERWISE).
6. RISK CATEGORY I.
7. WIND EXPOSURE CATEGORY B.
8. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" x 2 1/2" - 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS FOR LOW WIND OR 2 1/4" x 2 1/4" - 12 GAUGE TUBE STEEL (TS) FOR HIGH WIND (UNLESS NOTED OTHERWISE)
9. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR HAT CHANNELS, AND COLUMNS (INTERIOR OR END) = 8" O.C. (MAX.) FOR (LW), 6" O.C. (MAX.) FOR (HW).
10. FASTENERS CONSIST OF #12-14x3/4" SELF-DRILLING FASTENER (SDF) FOR LOW WIND OR 1/4"x3/4" SELF DRILLING FASTENER (SDF) FOR HIGH WIND, USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20 FEET OR LESS, AND ROOF SLOPES OF 14" (3:12 PITCH) OR LESS SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY.
11. GROUND ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6' OF EACH RAFTER COLUMN ALONG SIDES AND ENDS.
12. GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR W/ WELDED NUT x 30" LONG MAY BE USED IN SUITABLE SOIL CONDITIONS. FOR WIND V ≤ 145 MPH, OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS AND FOR WIND V > 145 MPH.
13. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:  
 SOIL SITE CLASS = D  
 RISK CATEGORY I/II/III  
 R= 3.25                      I<sub>E</sub>= 1.0  
 S<sub>DS</sub>= 2.039 g              V= C<sub>S</sub>W  
 S<sub>DI</sub>= 1.258 g



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JH**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SCALE: NTS**

**JOB NO:  
17270S/19118S**

**SHT. 3**

**DWG. NO: SK-3**

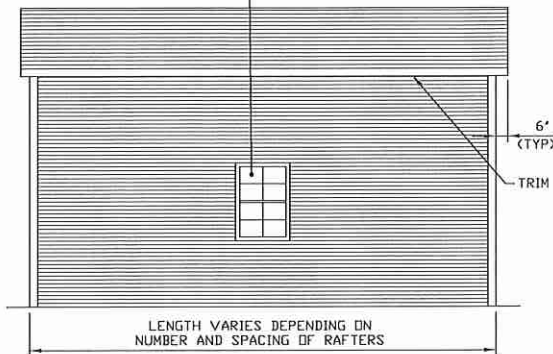
**REV: 1**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



# BOX EAVE FRAME RAFTER STRUCTURE (Sheets 4, 5, 6, 10, 15, AND 17)

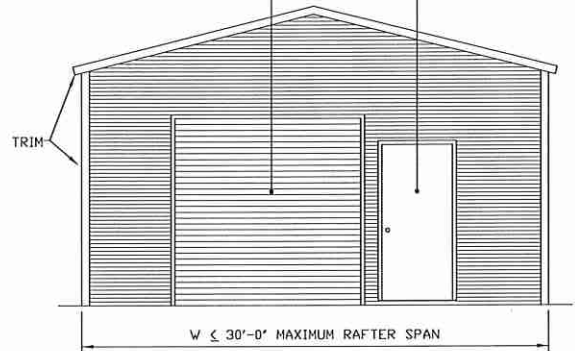
WINDOW (AS APPLICABLE)  
DESIGN PRESSURE  
LOW = (21.8 PSF, -23.6 PSF)  
HIGH = (33.1 PSF, -35.6 PSF)



**TYPICAL SIDE ELEVATION-HORIZONTAL ROOF**  
SCALE: NTS

ROLL-UP DOOR  
(AS APPLICABLE)  
DESIGN PRESSURE  
LOW = (18.5 PSF, -20.4 PSF)  
HIGH = (27.95 PSF, -30.7 PSF)

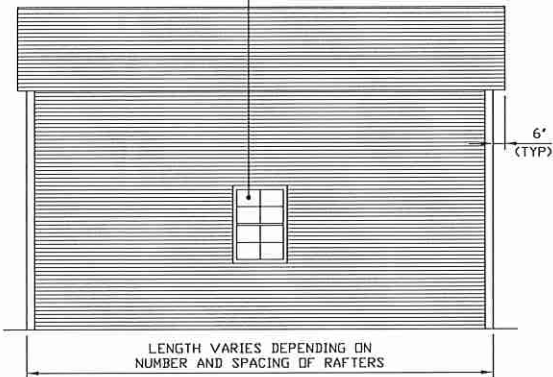
PERSONNEL DOOR  
(AS APPLICABLE)  
DESIGN PRESSURE  
LOW = (20.8 PSF, -22.6 PSF)  
HIGH = (31.35 PSF, -34.15 PSF)



**TYPICAL END ELEVATION-HORIZONTAL ROOF**  
SCALE: NTS

## BOW FRAME RAFTER STRUCTURE (Sheets 4, 7, 8, 11, AND 16)

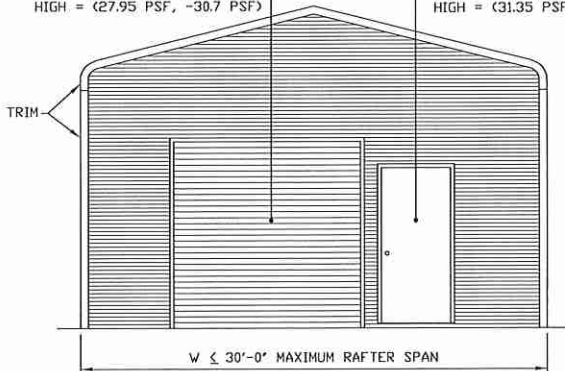
WINDOW (AS APPLICABLE)  
DESIGN PRESSURE  
LOW = (21.8 PSF, -23.6 PSF)  
HIGH = (33.1 PSF, -35.6 PSF)



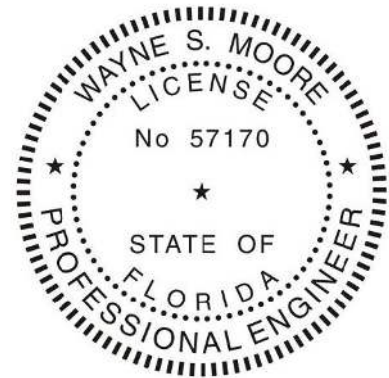
**TYPICAL SIDE ELEVATION**  
SCALE: NTS

ROLL-UP DOOR  
(AS APPLICABLE)  
DESIGN PRESSURE  
LOW = (18.5 PSF, -20.4 PSF)  
HIGH = (27.95 PSF, -30.7 PSF)

PERSONNEL DOOR  
(AS APPLICABLE)  
DESIGN PRESSURE  
LOW = (20.8 PSF, -22.6 PSF)  
HIGH = (31.35 PSF, -34.15 PSF)



**TYPICAL END ELEVATION**  
SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

**GA SOUTHERN STEEL BUILDINGS, INC.**  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0" x 16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SHT. 4**

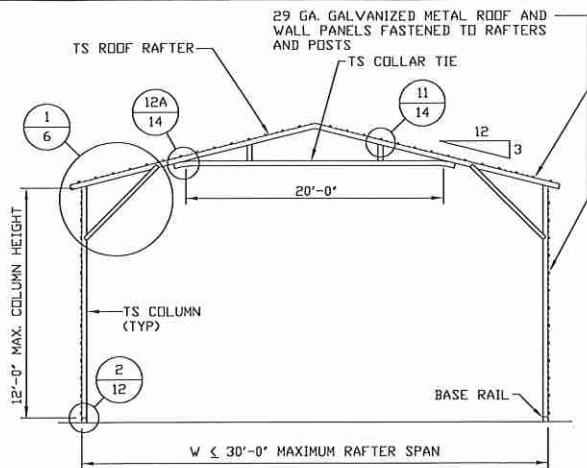
**SCALE: NTS**

**DWG. NO: SK-3**

**JOB NO:  
17270S/19118S**

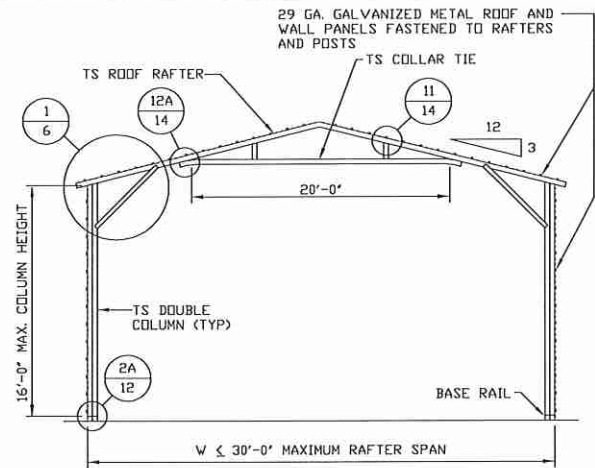
**REV: 1**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



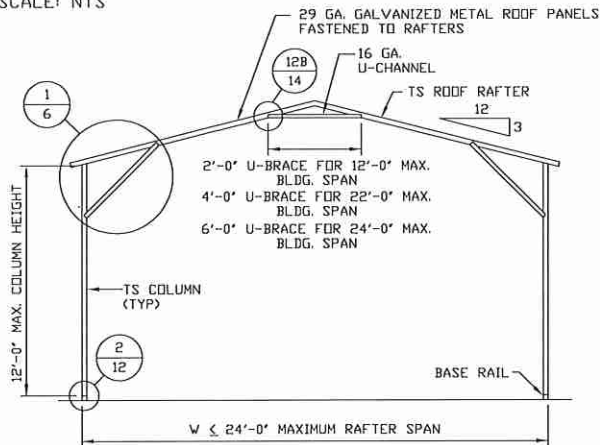
**TYPICAL RAFTER/COLUMN FRAME SECTION**

SCALE: NTS



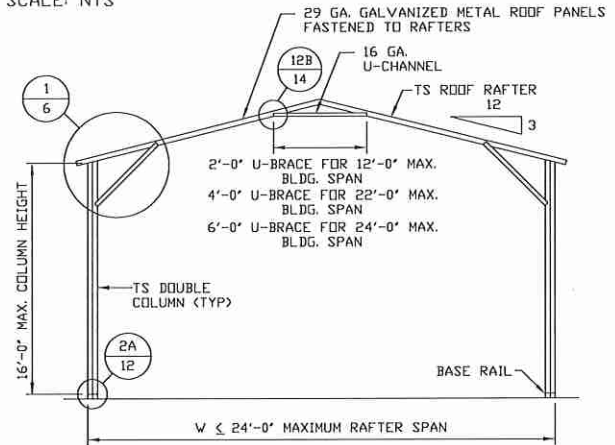
**TYPICAL RAFTER/COLUMN FRAME SECTION**

SCALE: NTS



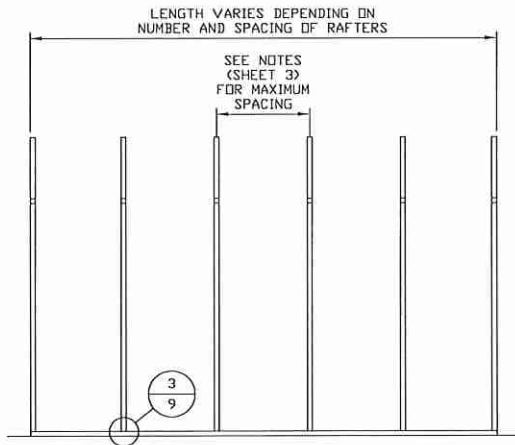
**TYPICAL RAFTER/COLUMN FRAME SECTION**

SCALE: NTS



**TYPICAL RAFTER/COLUMN FRAME SECTION**

SCALE: NTS



**TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION**

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

**GA SOUTHERN STEEL BUILDINGS, INC.**  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SHT. 5**

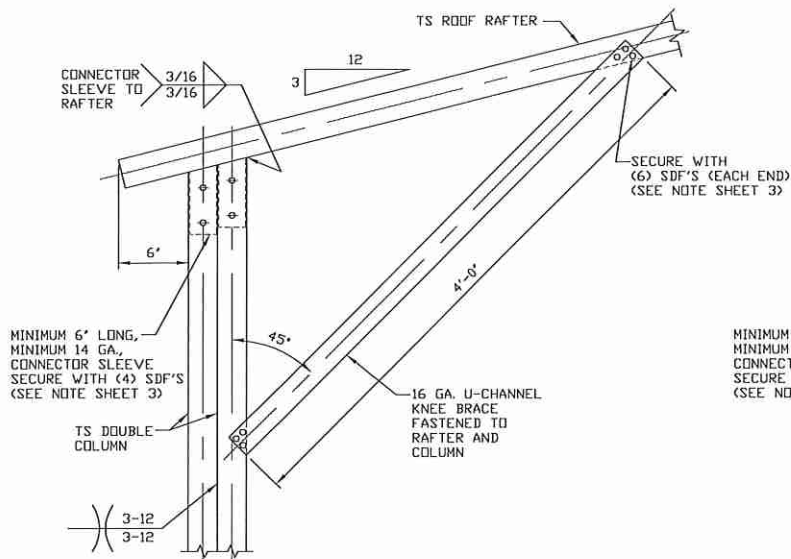
**SCALE: NTS**

**DWG. NO: SK-3**

**JOB NO:  
17270S/19118S**

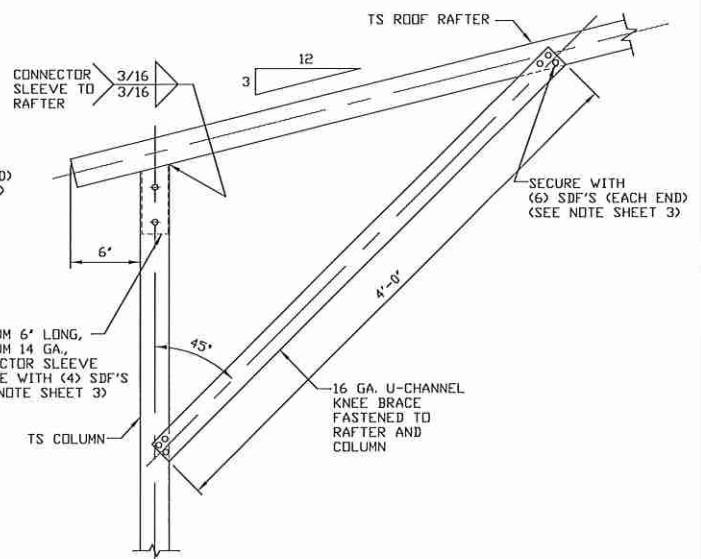
**REV: 1**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



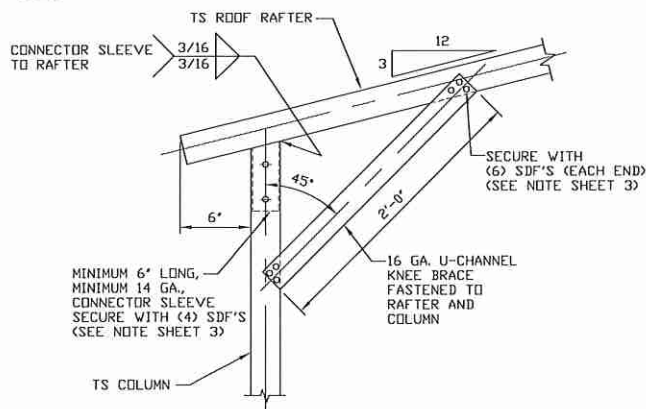
1A

**BOX EAVE RAFTER COLUMN  
CONNECTION DETAIL FOR  
HEIGHTS 12'-0" < TO ≤ 16'-0" (HW & LW)**  
SCALE: NTS



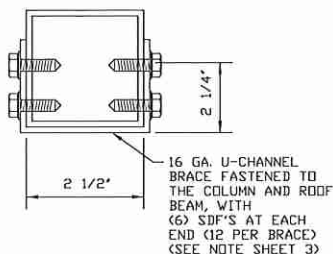
1B

**BOX EAVE RAFTER COLUMN  
CONNECTION DETAIL FOR HEIGHTS  
10'-0" < TO ≤ 12'-0" (HW & LW)**  
SCALE: NTS

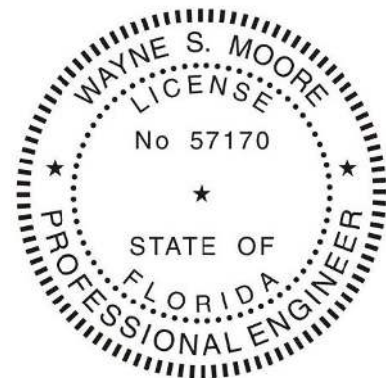


1C

**BOX EAVE RAFTER COLUMN  
CONNECTION DETAIL FOR  
HEIGHTS ≤ 10'-0" (HW & LW)**  
SCALE: NTS



**BRACE SECTION**  
SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

**GA SOUTHERN STEEL BUILDINGS, INC.**  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SHT. 6**

**SCALE: NTS**

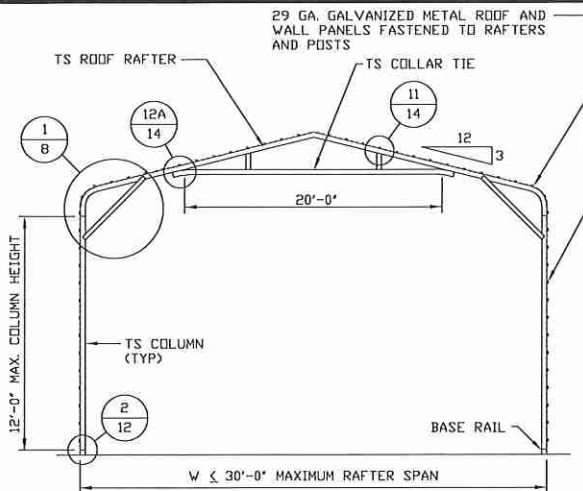
**DWG. NO: SK-3**

**JOB NO:  
17270S/19118S**

**REV: 1**

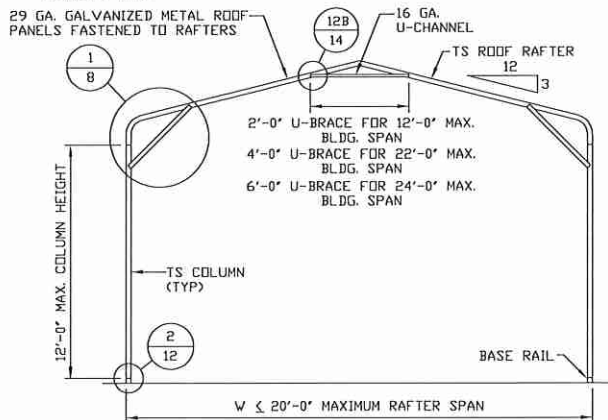
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.





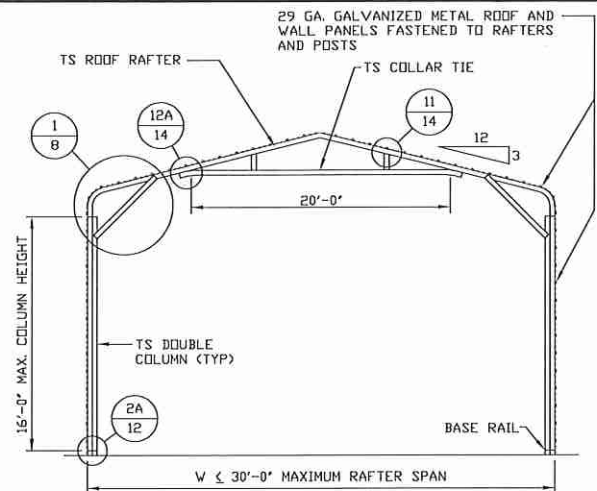
**TYPICAL RAFTER/COLUMN FRAME SECTION**

SCALE: NTS



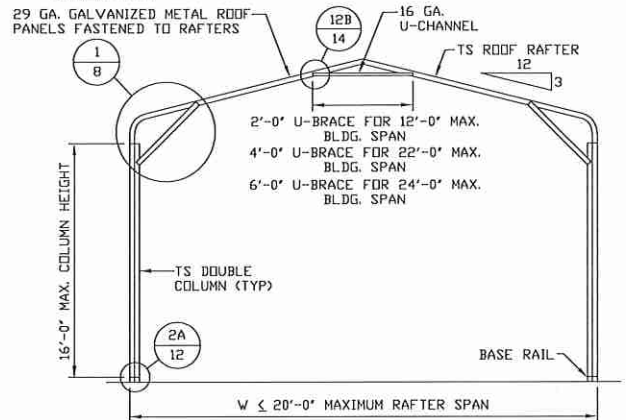
**TYPICAL RAFTER/COLUMN FRAME SECTION**

SCALE: NTS



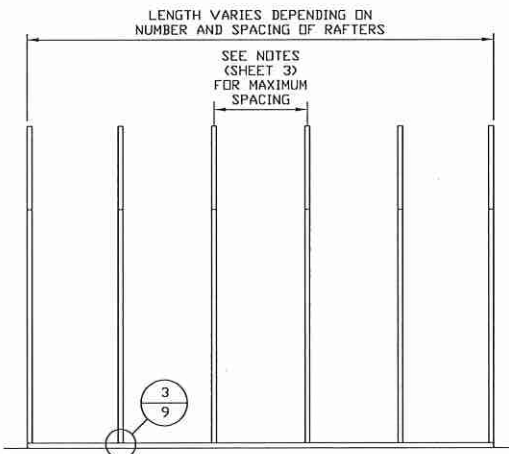
**TYPICAL RAFTER/COLUMN FRAME SECTION**

SCALE: NTS



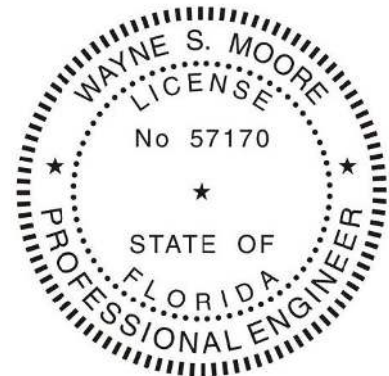
**TYPICAL RAFTER/COLUMN FRAME SECTION**

SCALE: NTS



**TYPICAL RAFTER/COLUMN FRAMING SIDE SECTION**

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

DRAWN BY: SH

CHECKED BY: JM

PROJECT MGR: WSH

CLIENT: GA SOUTHERN

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

DATE: 5-2-19

SHT. 7

SCALE: NTS

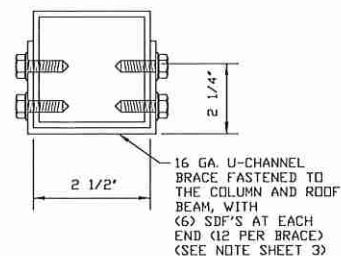
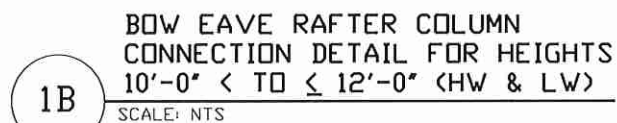
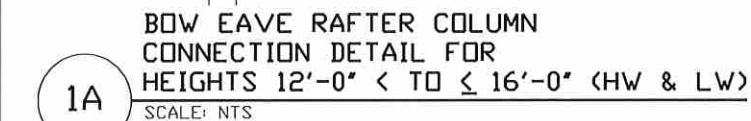
DWG. NO: SK-3

JOB NO:  
17270S/19118S

REV: 1

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.





**BRACE SECTION**  
SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE.  
using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

DRAWN BY: SH

CHECKED BY: JM

PROJECT MGR: VSM

CLIENT: GA SOUTHERN

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

DATE: 5-2-19

SHT. 8

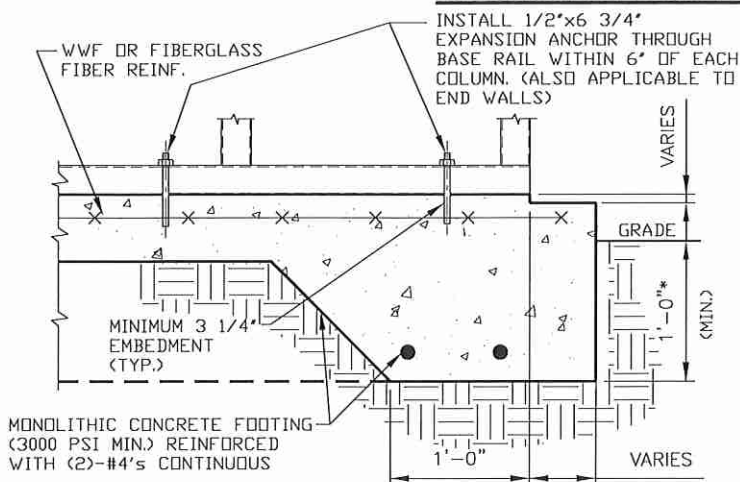
SCALE: NTS

DWG. NO: SK-3

JOB NO:  
17270S/19118S

REV.: 1

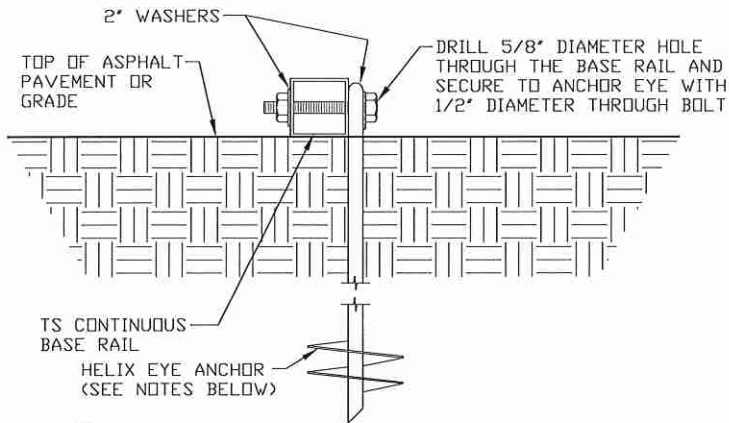
## OPTIONAL BASE RAIL ANCHORAGE



3A

### CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: NTS  
(MINIMUM ANCHOR EDGE DISTANCE IS 4")  
\* COORDINATE WITH LOCAL CODES/ORD.



3C

### GROUND BASE HELIX ANCHORAGE

SCALE: NTS (CAN BE USED FOR ASPHALT)

## GENERAL NOTES

### 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:

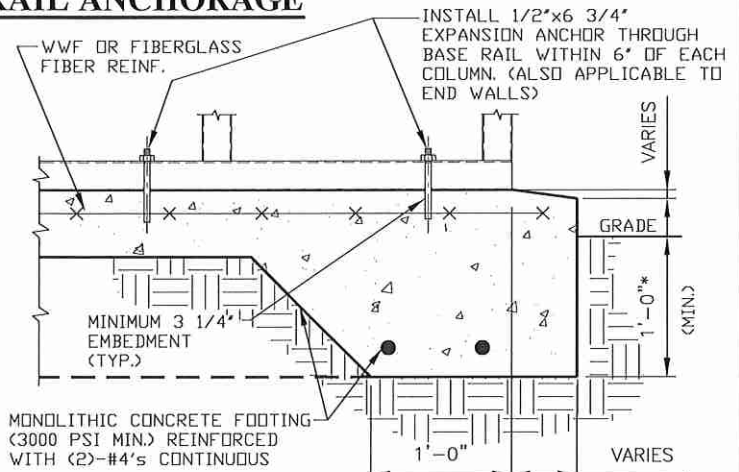
3" IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND 1 1/2" ELSEWHERE.

### 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.
2. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.
3. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.



3B

### CONCRETE SLAB BASE RAIL ANCHORAGE

SCALE: NTS  
(MINIMUM ANCHOR EDGE DISTANCE IS 4")  
\* COORDINATE WITH LOCAL CODES/ORD.

### 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.



This item has been electronically signed and sealed by Wayne S. Moore, PE.  
using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.

DRAWN BY: SH

CHECKED BY: JM

PROJECT MGR: WSM

CLIENT: GA SOUTHERN

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

DATE: 5-2-19

SHT. 9

SCALE: NTS

DWG. NO: SK-3

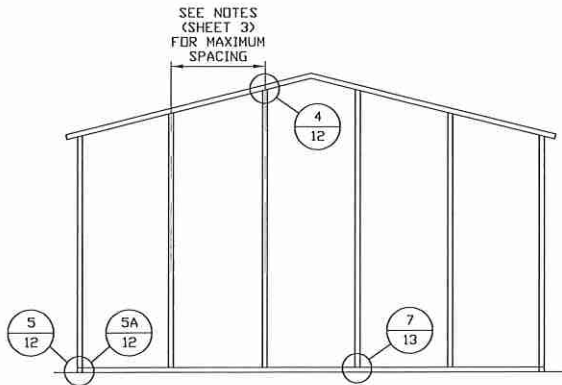
JOB NO:  
17270S/19118S

REV: 1

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

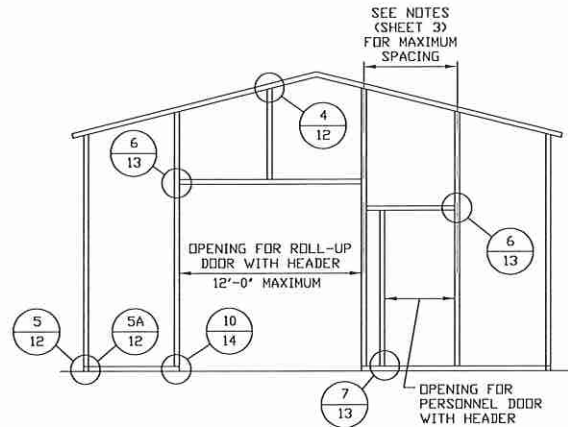


## BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



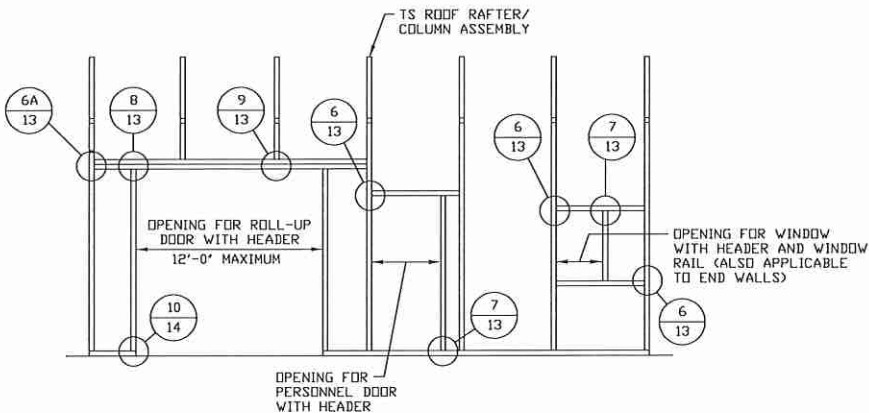
**TYPICAL BOX EAVE RAFTER  
END WALL FRAMING SECTION**

SCALE: NTS



**TYPICAL BOX EAVE RAFTER END  
WALL OPENINGS FRAMING SECTION**

SCALE: NTS



**TYPICAL BOX EAVE RAFTER  
SIDE WALL OPENINGS FRAMING SECTION**

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SHT. 10**

**SCALE: NTS**

**DWG. NO: SK-3**

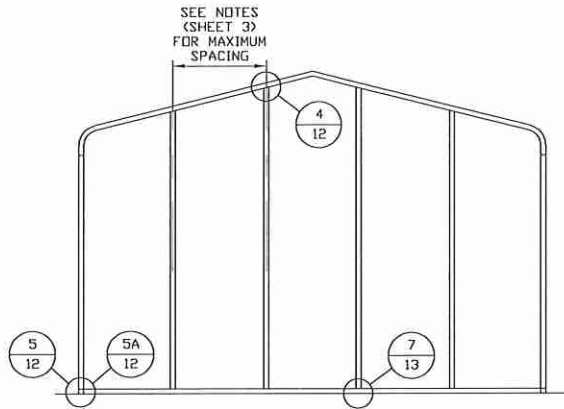
**JOB NO:  
17270S/19118S**

**REV: 1**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

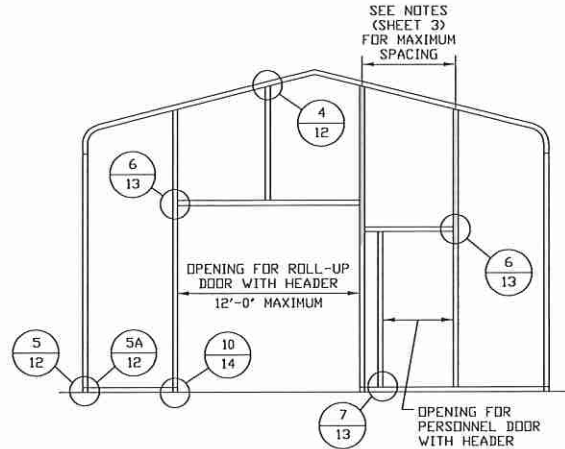


## BOW RAFTER END WALL AND SIDE WALL OPENINGS



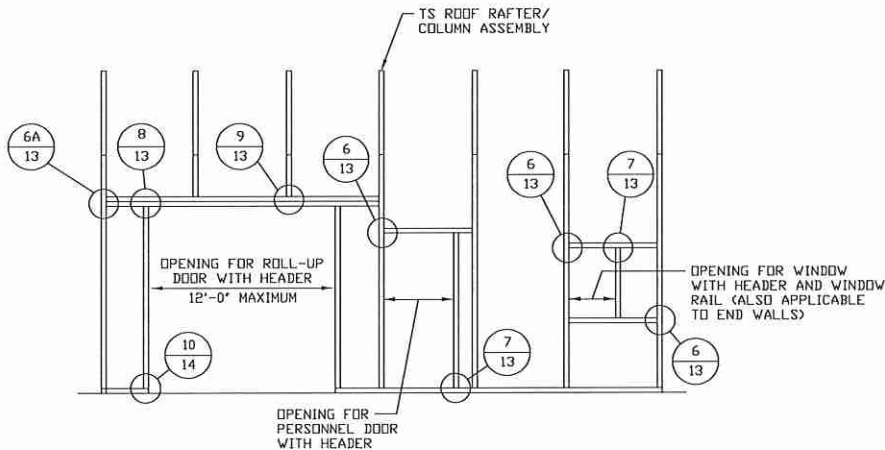
**TYPICAL BOW RAFTER  
END WALL FRAMING SECTION**

SCALE: NTS



**TYPICAL BOW RAFTER END  
WALL OPENINGS FRAMING SECTION**

SCALE: NTS



**TYPICAL BOW RAFTER SIDE  
WALL OPENINGS FRAMING SECTION**

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SHT. 11**

**SCALE: NTS**

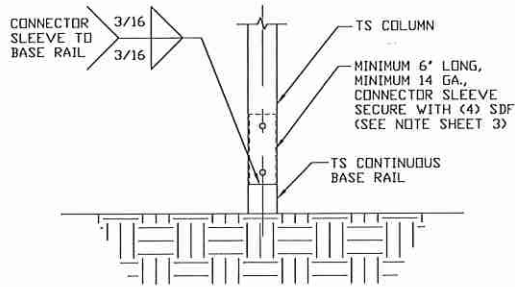
**DWG. NO: SK-3**

**JOB NO:  
17270S/19118S**

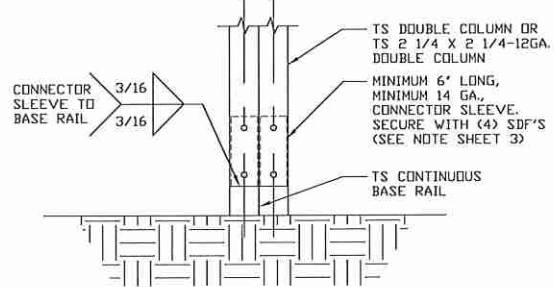
**REV: 1**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

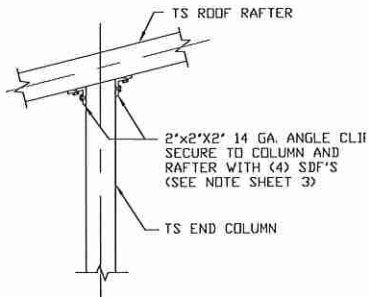
## BOW AND BOX EAVE RAFTER WALL OPENING DETAILS



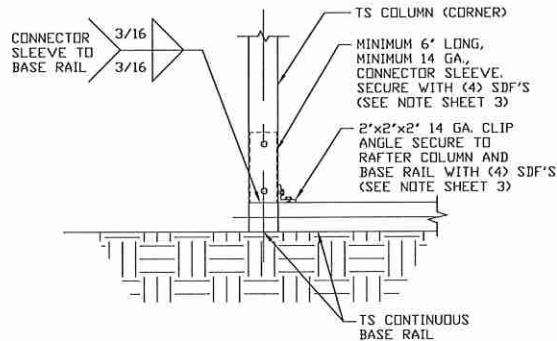
**2** RAFTER COLUMN/BASE RAIL  
CONNECTION DETAIL  
SCALE: NTS



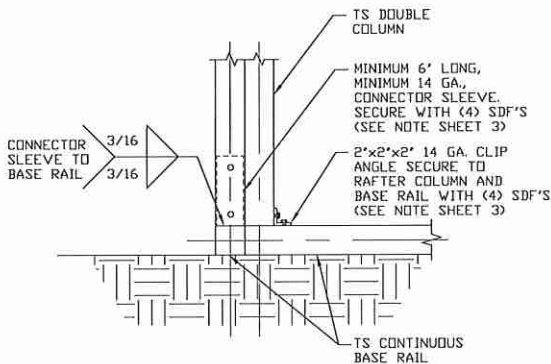
**2A** RAFTER COLUMN/BASE RAIL  
CONNECTION DETAIL  
SCALE: NTS



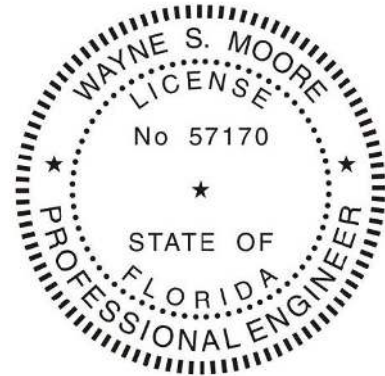
**4** END COLUMN/RAFTER  
CONNECTION DETAIL  
SCALE: NTS



**5** END COLUMN/BASE RAIL  
CONNECTION DETAIL  
SCALE: NTS



**5A** END COLUMN/BASE RAIL  
CONNECTION DETAIL  
SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SHT. 12**

**SCALE: NTS**

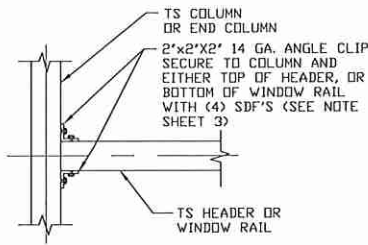
**DWG. NO: SK-3**

**JOB NO:  
17270S/19118S**

**REV: 1**

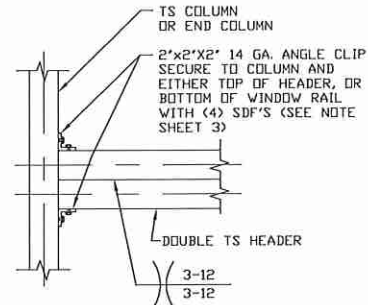
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

## BOW AND BOX EAVE RAFTER WALL OPENING DETAILS



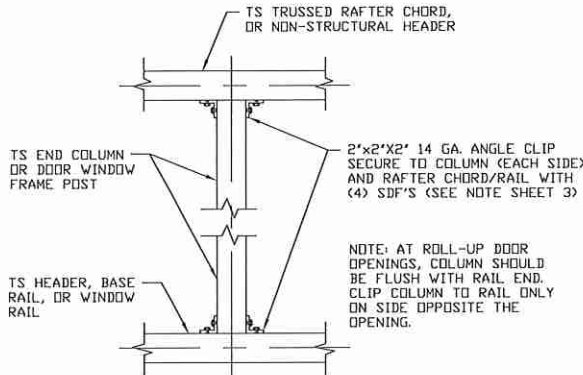
**6**  
**COLUMN OR WINDOW  
RAIL TO POST  
CONNECTION DETAIL**

SCALE: NTS



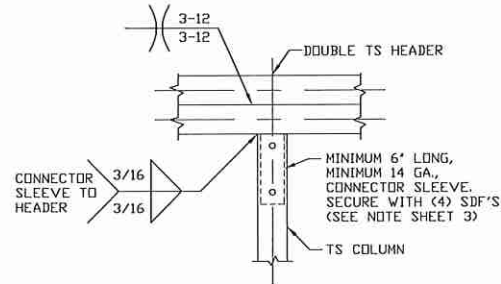
**6A**  
**COLUMN OR WINDOW  
RAIL TO POST  
CONNECTION DETAIL**

SCALE: NTS



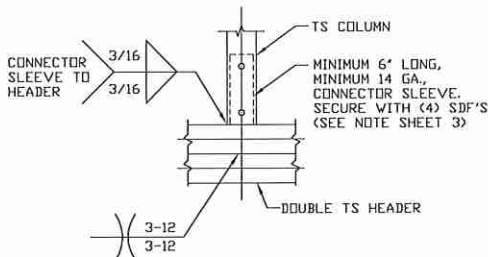
**7**  
**COLUMN TO HEADER, BASE  
RAIL OR WINDOW RAIL  
CONNECTION DETAIL**

SCALE: NTS



**8**  
**HEADER/COLUMN  
CONNECTION DETAIL**

SCALE: NTS



**9**  
**HEADER/COLUMN  
CONNECTION DETAIL**

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SHT. 13**

**SCALE: NTS**

**DWG. NO: SK-3**

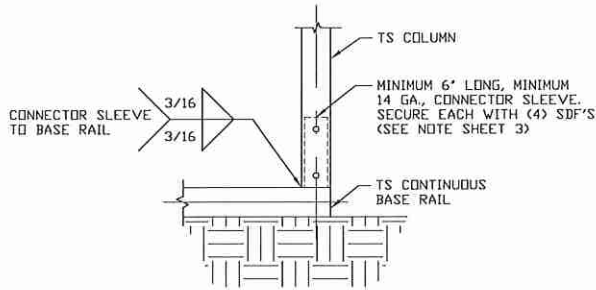
**JOB NO:  
17270S/19118S**

**REV: 1**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



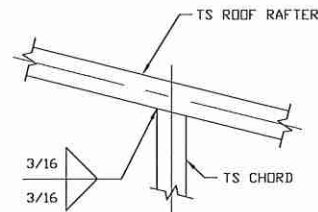
## BOW AND BOX EAVE RAFTER WALL OPENING DETAILS



10

### COLUMN/BASE RAIL CONNECTION DETAIL

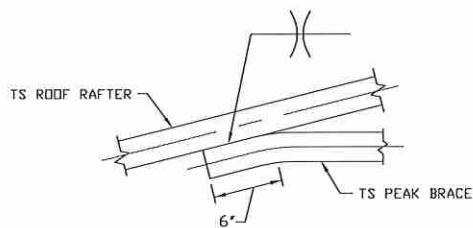
SCALE: NTS



11

### RAFTER TO CHORD CONNECTION DETAIL

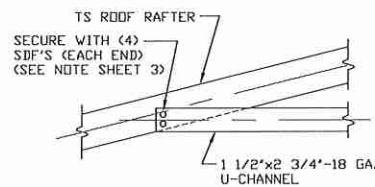
SCALE: NTS



12A

### PEAK BRACE CONNECTION DETAIL

SCALE: NTS



12B

### ROOF RAFTER TIE CONNECTION DETAIL

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SHT. 14**

**SCALE: NTS**

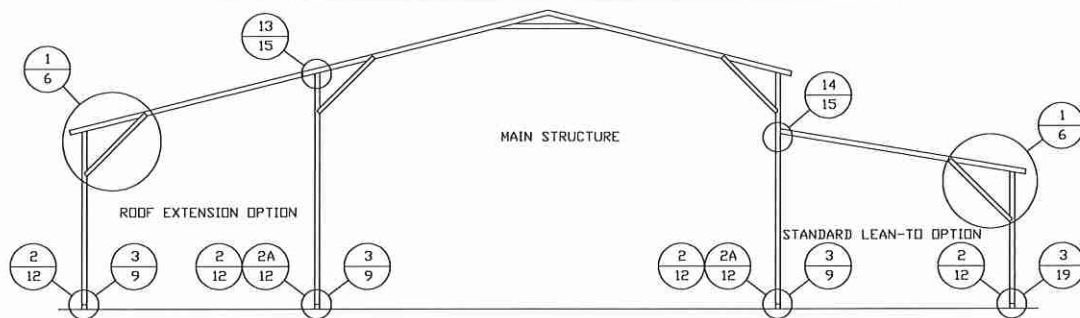
**DWG. NO: SK-3**

**JOB NO:  
17270S/19118S**

**REV: 1**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

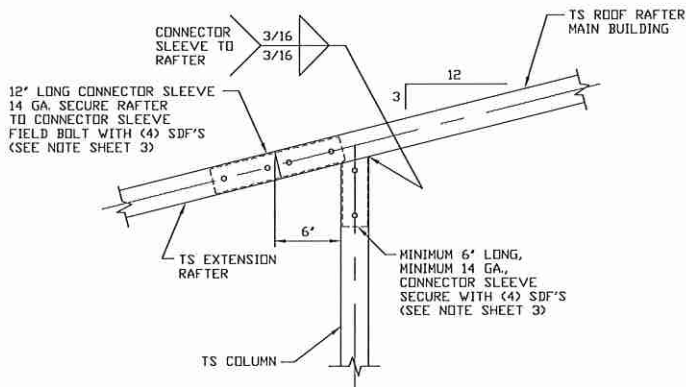
# BOX EAVE RAFTER LEAN-TO OPTIONS



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

SCALE: NTS

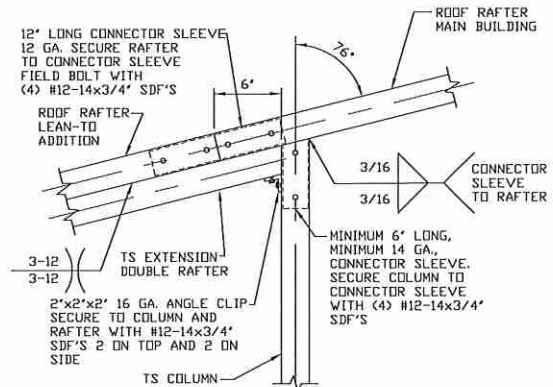
MAXIMUM STANDARD LEAN-TO WIDTH FOR SINGLE RAFTER IS 12'-0"  
MAXIMUM STANDARD LEAN-TO WIDTH FOR DOUBLE RAFTER IS 24'-0"



### SIDE EXTENSION RAFTER/ COLUMN DETAIL FOR RAFTER SPANS $\leq 12'-0"$

13

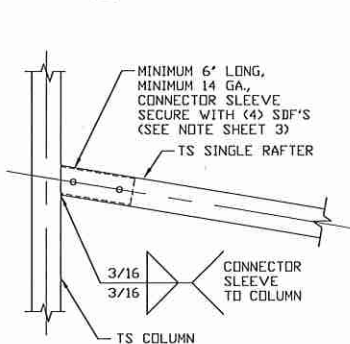
SCALE: NTS



### SIDE EXTENSION RAFTER/ COLUMN DETAIL FOR RAFTER SPANS $12'-0" < TO \leq 24'-0"$

13A

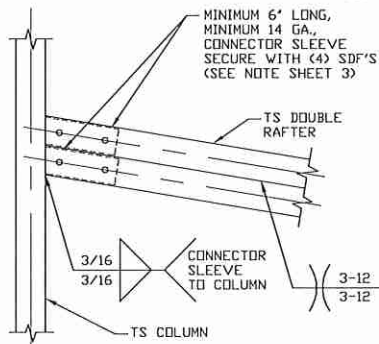
SCALE: NTS



### LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $\leq 12'-0"$

14

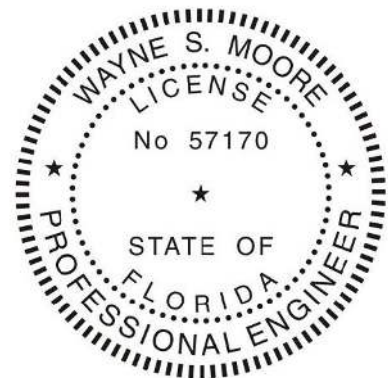
SCALE: NTS



### LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $12'-0" < TO \leq 24'-0"$

14A

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.

DRAWN BY: SH

CHECKED BY: JM

PROJECT MGR: WSM

CLIENT: GA SOUTHERN

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

DATE: 5-2-19

SHT. 15

SCALE: NTS

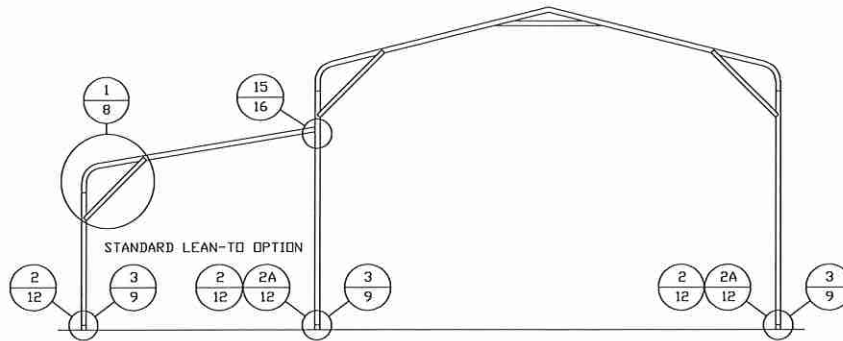
DWG. NO: SK-3

JOB NO:  
17270S/1918S

REV: 1

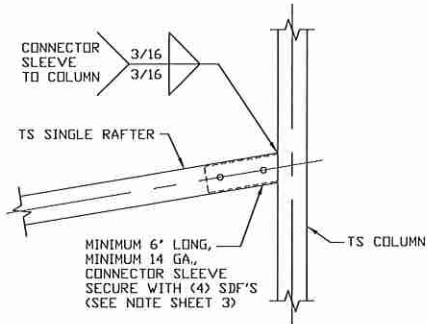
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

## BOW RAFTER LEAN-TO OPTION



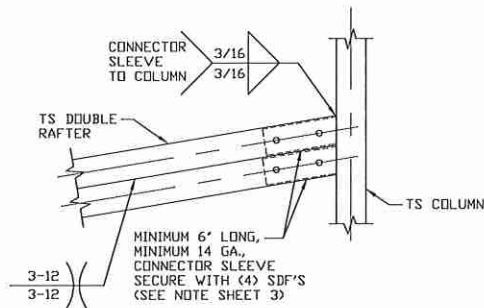
### TYPICAL BOW RAFTER LEAN-TO OPTION FRAMING SECTION

SCALE: NTS      MAXIMUM STANDARD LEAN-TO WIDTH FOR SINGLE RAFTER IS 12'-0"  
MAXIMUM STANDARD LEAN-TO WIDTH FOR DOUBLE RAFTER IS 24'-0"



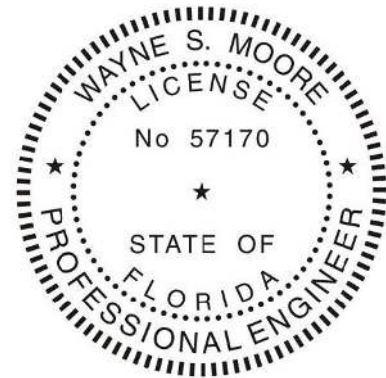
#### 15 LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $\leq 12'-0"$

SCALE: NTS



#### 15A LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS $12'-0" < \text{TO} \leq 24'-0"$

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSH**

**CLIENT: GA SOUTHERN**

GA SOUTHERN STEEL BUILDINGS, INC.  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SHT. 16**

**SCALE: NTS**

**DWG. NO: SK-3**

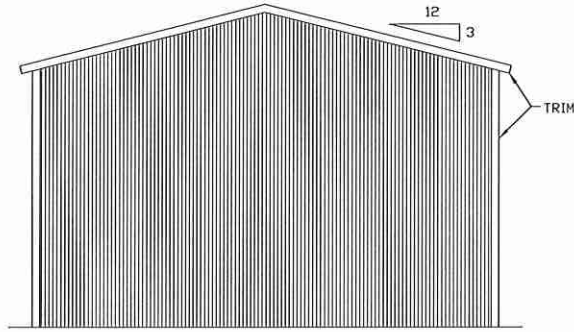
**JOB NO:  
17270S/19118S**

**REV: 1**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

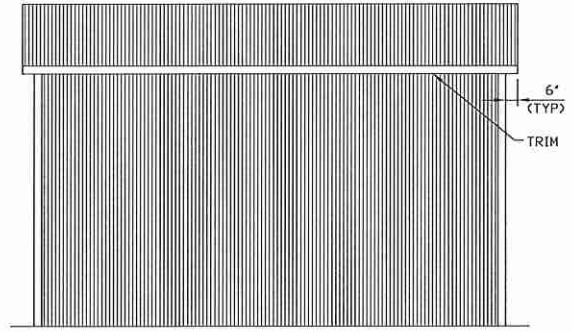


## BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



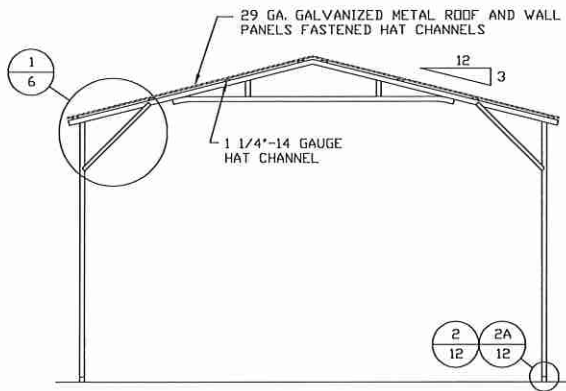
**TYPICAL END ELEVATION  
VERTICAL ROOF/SIDING**

SCALE: NTS



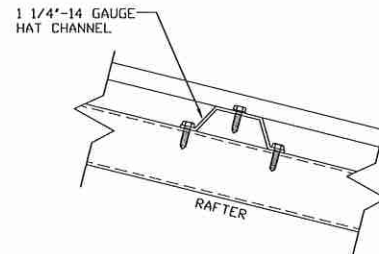
**TYPICAL SIDE ELEVATION  
VERTICAL ROOF/SIDING**

SCALE: NTS



**TYPICAL SECTION  
VERTICAL ROOF/SIDING OPTION**

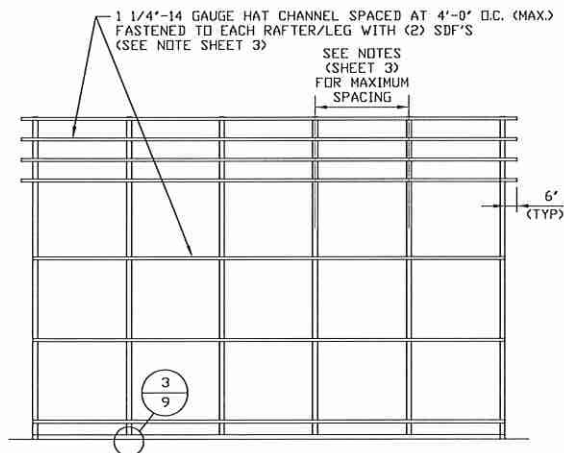
SCALE: NTS



**PANEL ATTACHMENT**

(ALTERNATE FOR VERTICAL ROOF PANELS)

SCALE: NTS



**TYPICAL FRAMING SECTION  
VERTICAL ROOF/SIDING OPTION**

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.**

**DRAWN BY: SH**

**CHECKED BY: JM**

**PROJECT MGR: WSM**

**CLIENT: GA SOUTHERN**

**GA SOUTHERN STEEL BUILDINGS, INC.**  
1086 GENE McQUEEN ROAD  
MOULTRIE, GA 31788  
30'-0"x16'-0" ENCLOSED STRUCTURE

**DATE: 5-2-19**

**SHT. 17**

**SCALE: NTS**

**DWG. NO: SK-3**

**JOB NO:  
17270S/19118S**

**REV: 1**

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.