



Buildings & Garages

Pilot Mountain, North Carolina

**STRUCTURAL DESIGN
ENCLOSED BUILDING**

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

21 May 2019

Revision 2

M&A Project No. 18184S/18348S/19129S

Prepared for:

**JR Buildings and Garages
316 Nelson Street
Pilot Mountain, NC 27041**

Prepared by:

**Moore and Associates Engineering
and Consulting, Inc.**

**1009 East Avenue
North Augusta, SC 29841**

**401 S. Main St., Suite 200
Mt. Airy, NC 27030**



**MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING**

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES

316 NELSON STREET

PILOT MOUNTAIN, NC 27041

30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SHT. 1

SCALE: NTS

DWG. NO: SK-3

JOB NO: 10104S/
19129S

REV: 2

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.

DRAWING INDEX

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

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: AM	JR BUILDINGS & GARAGES 316 NELSON STREET PILOT MOUNTAIN, NC 27041		
	CHECKED BY: PH	30'-0" x 16'-0" ENCLOSED STRUCTURE		
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.	PROJECT MGR: WSM	DATE: 5-21-19	SCALE: NTS	JOB NO: 18184S/ 18348S/19129S
	CLIENT: JR BUILDINGS	SHT. 2	DWG. NO: SK-3	REV: 2

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 2012 NORTH CAROLINA BUILDING CODE, 2009 INTERNATIONAL BUILDING CODE (IBC), 2012 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 = 35 PSF
= 30 PSF (W < 24'-0" WITH U-CHANNEL COLLAR TIE)
4. ULTIMATE 3-SECOND GUST WIND SPEED (V_{ULT}) 105 TO 145 MPH (NOMINAL WIND SPEED 82 TO 112 MPH)
5. MAXIMUM RAFTER/COLUMN AND END COLUMN SPACING = 50 FEET (UNLESS NOTED OTHERWISE)
6. END WALL COLUMNS/POSTS AND SIDEWALL COLUMNS/POSTS AND ARE SIMILAR IN SIZE AND SPACING (UNLESS NOTED OTHERWISE)
7. RISK CATEGORY I
8. WIND EXPOSURE CATEGORY B
9. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" x 2 1/2" - 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS (UNLESS NOTED OTHERWISE)
10. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR HAT CHANNELS, AND COLUMNS (INTERIOR OR END) = 8 INCHES
11. FASTENERS CONSIST OF #12-14x3/4" SELF-DRILLING FASTENER (SDF), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 16 FEET OR LESS, AND ROOF SLOPES OF 14° (3:12 PITCH) OR LESS SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY
12. GROUND ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH COLUMN.
13. STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR W/ WELDED NUT x 30" LONG SOIL NAILS MAY BE USED FOR WIND SPEEDS < 145 MPH AND IN SUITABLE SOIL CONDITIONS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED FOR WIND SPEEDS > 145 MPH AND/OR IN UNSUITABLE SOILS AS NOTED
14. WIND FORCES GOVERN OVER SEISMIC FORCES SEISMIC PARAMETERS ANALYZED ARE:
 SOIL SITE CLASS = D
 RISK CATEGORY I/II/III
 $R = 3.25$ $I_E = 10$
 $S_{DS} = 1.522$ $V = C_S W$
 $S_{D1} = 0.839$

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSH

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SCALE: NTS

SHT. 3A

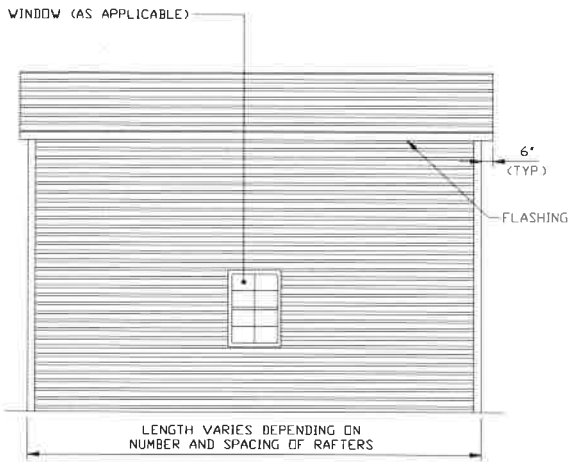
**JOB NO: 18184S/
18348S/19129S**

DWG. NO: SK-3

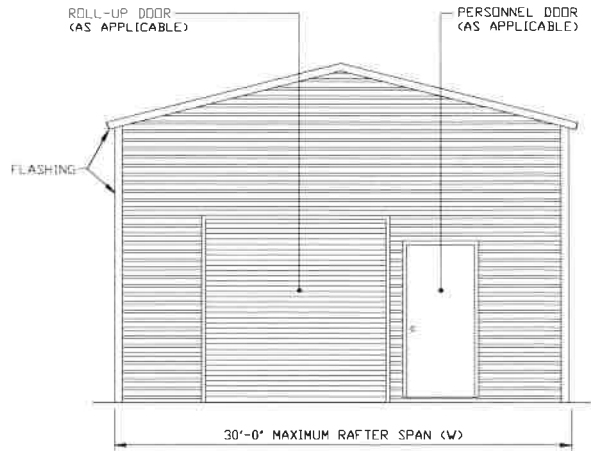
REV: 2

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



TYPICAL SIDE ELEVATION
SCALE: NTS



TYPICAL END ELEVATION
SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SHT. 3B

SCALE: NTS

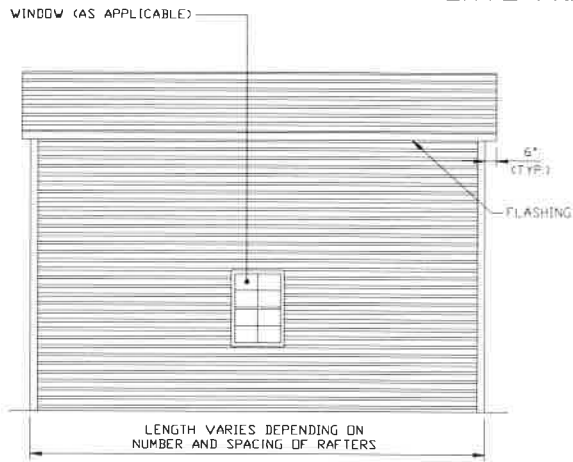
DWG. NO: SK-3

**JOB NO: 18184S/
18348S/19129S**

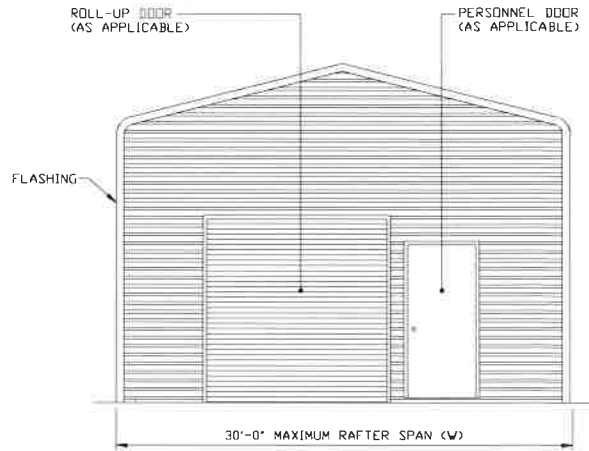
REV: 2

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 EAVE FRAME RAFTER STRUCTURE



TYPICAL SIDE ELEVATION
SCALE: NTS



TYPICAL END ELEVATION
SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SCALE: NTS

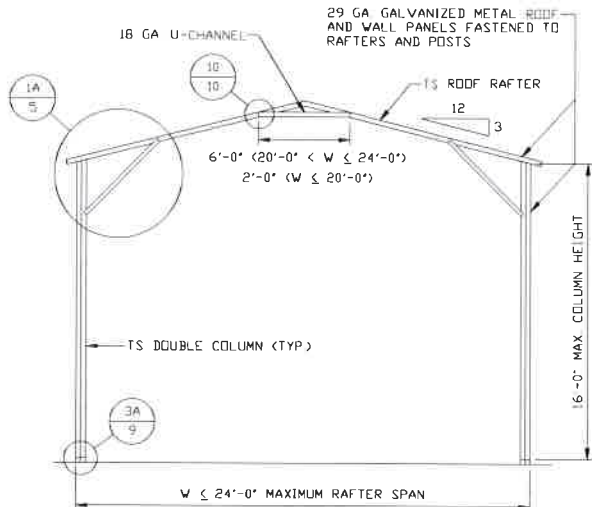
DWG. NO: SK-3

**JOB NO: 18184S/
18348S/19129S**

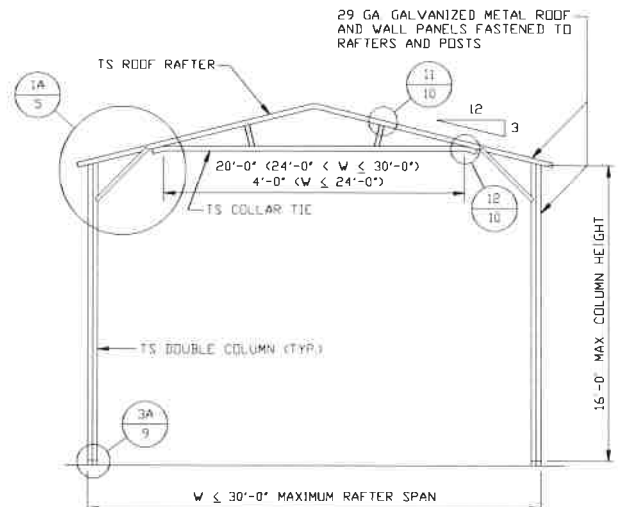
SHT. 3C

REV: 2

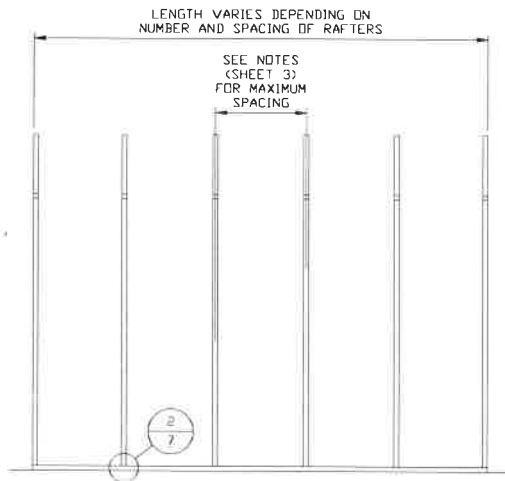
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES

316 NELSON STREET

PILOT MOUNTAIN, NC 27041

30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SCALE: NTS

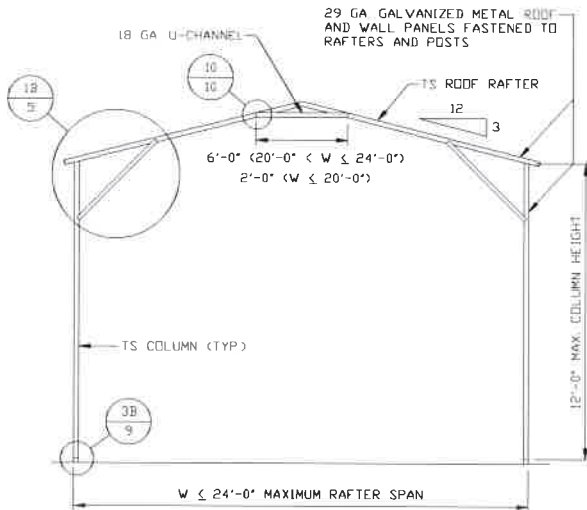
DWG. NO: SK-3

**JOB NO: 18184S/
18348S/19129S**

SHT. 4

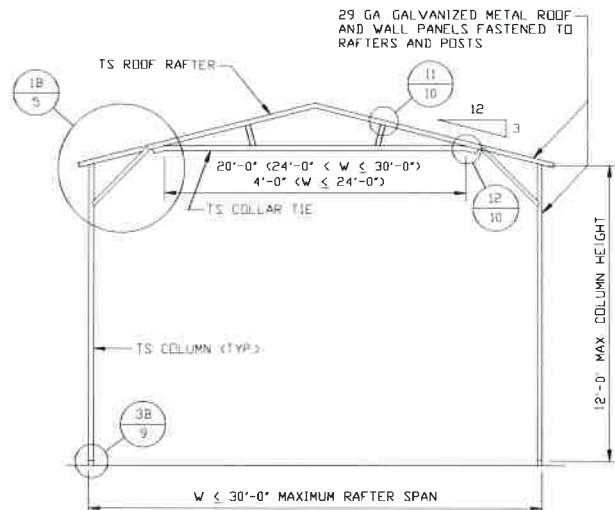
REV. 2

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.



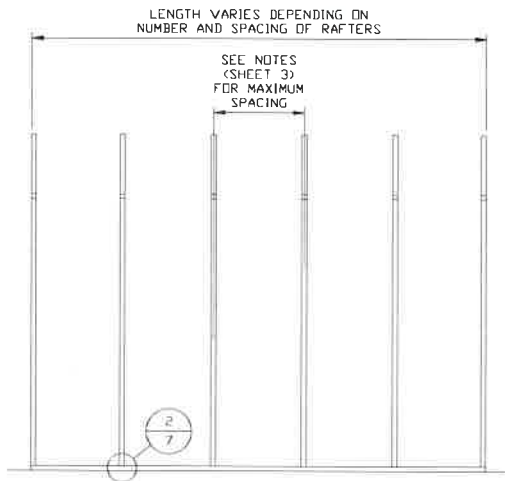
TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS



TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: VSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

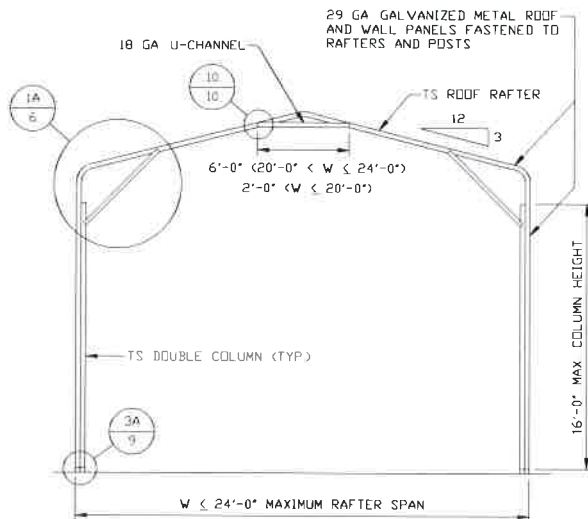
SCALE: NTS

DWG. NO: SK-3

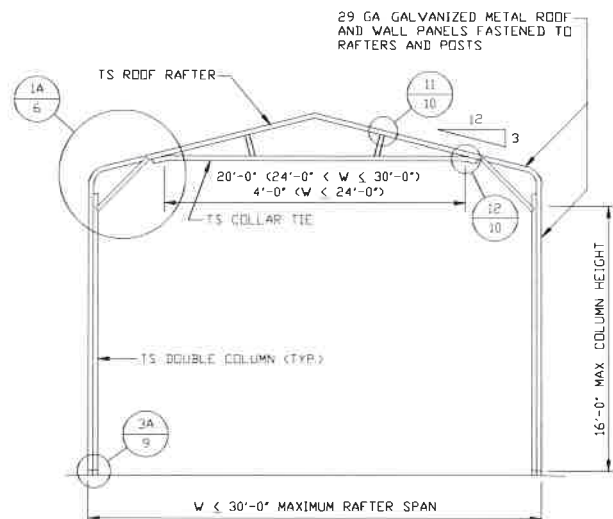
**JOB NO: 18184S/
18348S/19129S**

REV: 2

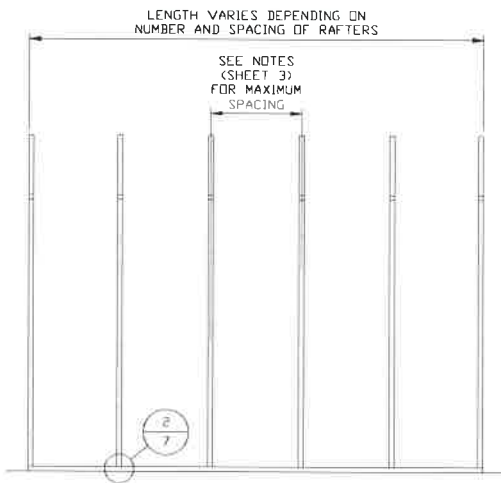
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
SCALE: NTS

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

DRAWN BY: AN

CHECKED BY: PH

PROJECT MGR: VSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

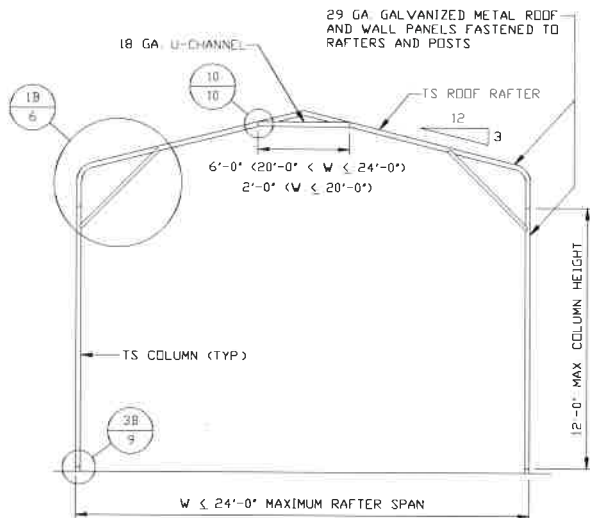
SCALE: NTS

DWG. NO: SK-3

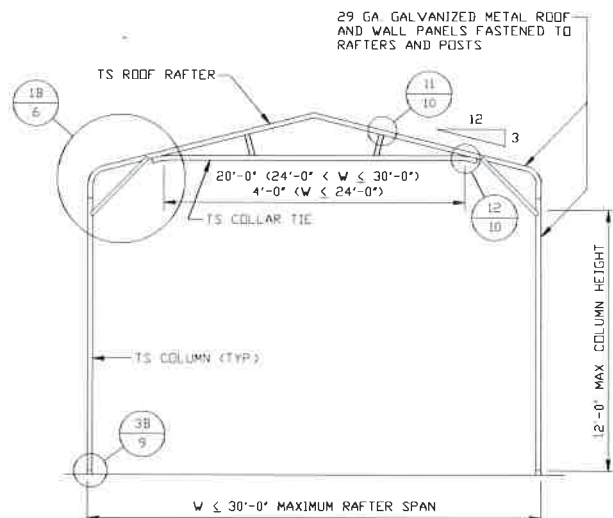
JOB NO: 18184S/
18348S/19129S

REV: 2

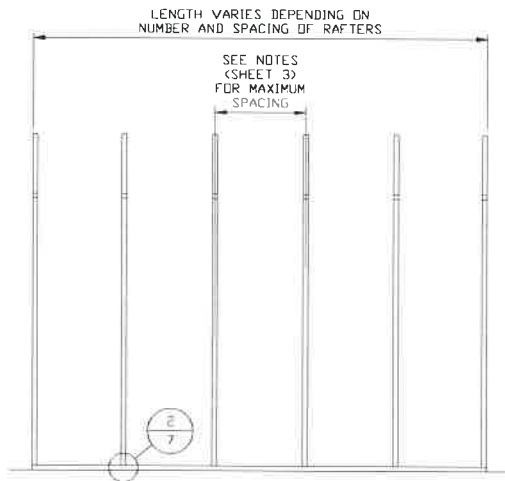
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: VSM

CLIENT: JR BUILDINGS

**JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0" x 16'-0" ENCLOSED STRUCTURE**

DATE: 5-21-19

SCALE: NTS

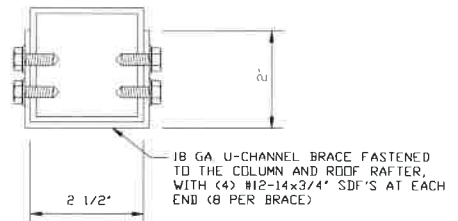
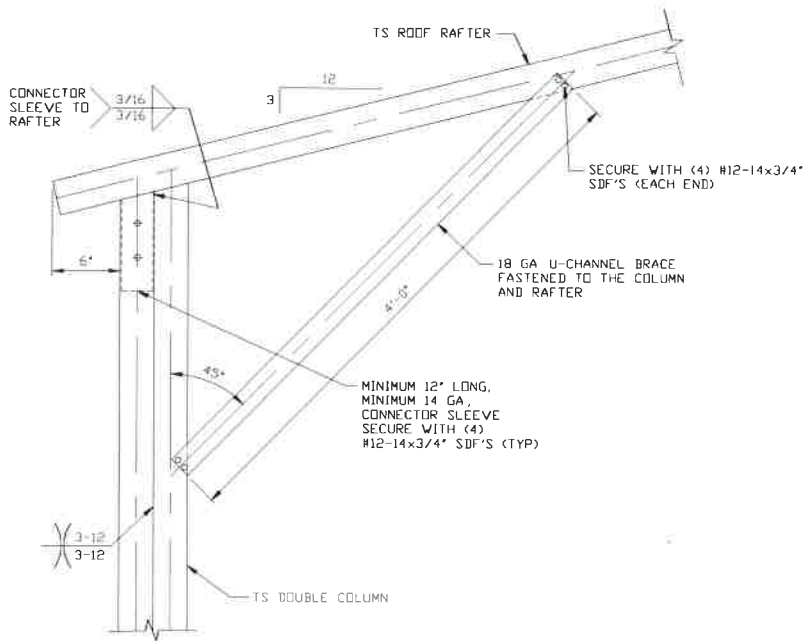
DWG. NO: SK-3

**JOB NO: 18184S/
18348S/19129S**

SHT. 4C

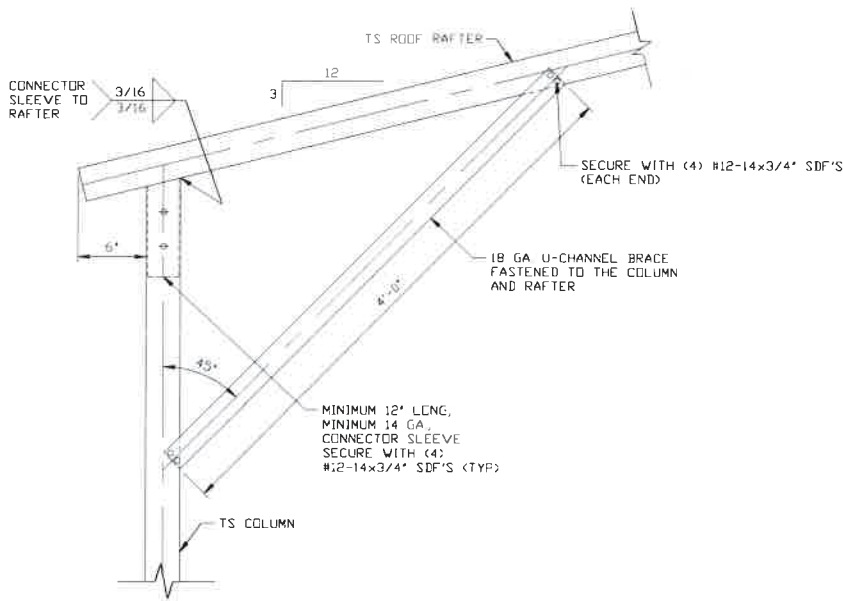
REV: 2

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

1A
BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL
FOR HEIGHTS 12'-0" < TO ≤ 16'-0"
SCALE: NTS
NOTE: 2'-0" KNEE BRACE MAY BE USED FOR BUILDING WIDTHS ≤ 24'-0"



1B
BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL
FOR HEIGHTS ≤ 12'-0"
SCALE: NTS
NOTE: 2'-0" KNEE BRACE MAY BE USED FOR BUILDING WIDTHS ≤ 24'-0"

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: VSN

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0"x16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SCALE: NTS

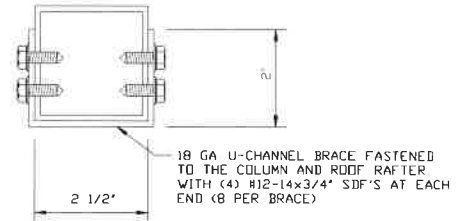
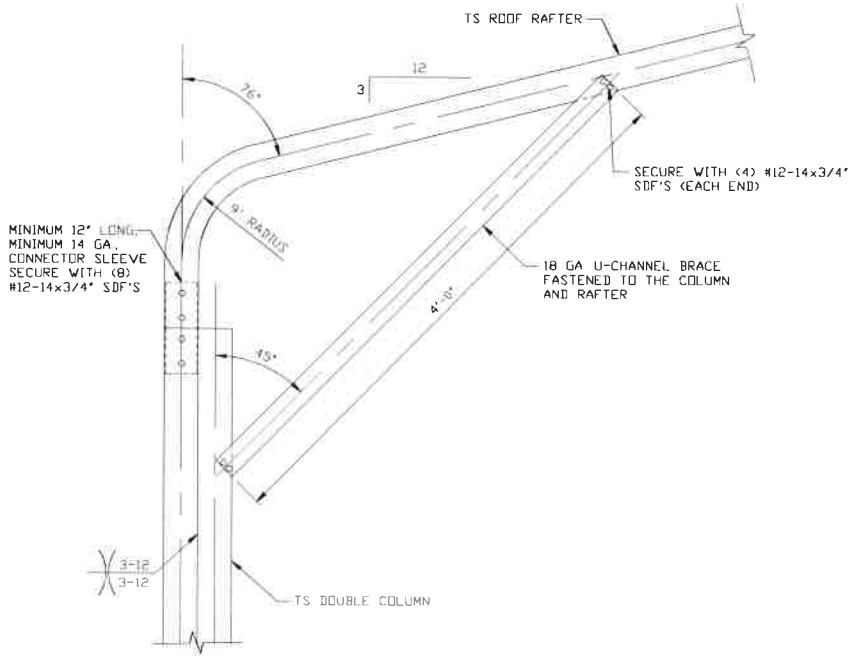
DWG. NO: SK-3

**JOB NO: 18184S/
18348S/19129S**

SHT. 5

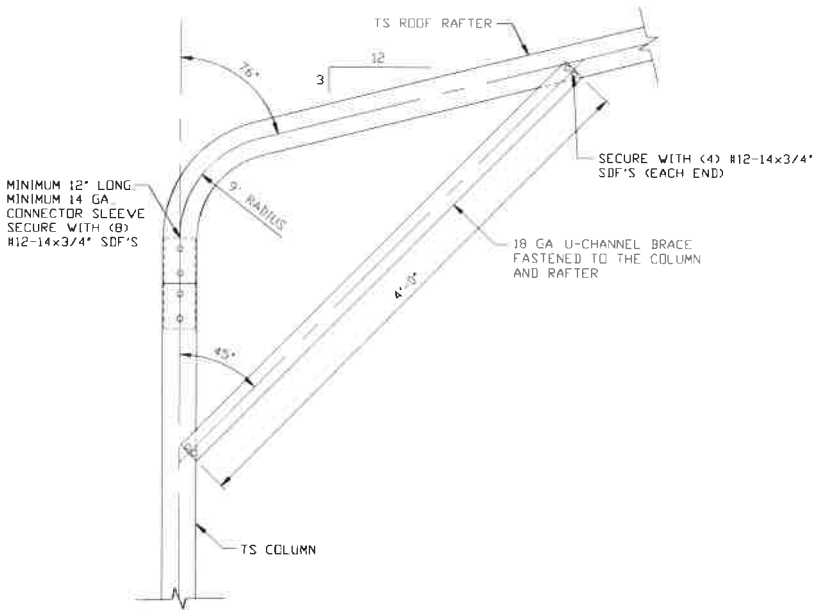
REV: 2

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

1A
BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL
FOR HEIGHTS 12'-0" < TO <= 16'-0"
SCALE: NTS
NOTE: 2'-0" KNEE BRACE MAY BE USED FOR BUILDING WIDTHS < 24'-0"



1B
BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL
FOR HEIGHTS <= 12'-0"
SCALE: NTS
NOTE: 2'-0" KNEE BRACE MAY BE USED FOR BUILDING WIDTHS < 24'-0"

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: VSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0"x16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SHT. 6

SCALE: NTS

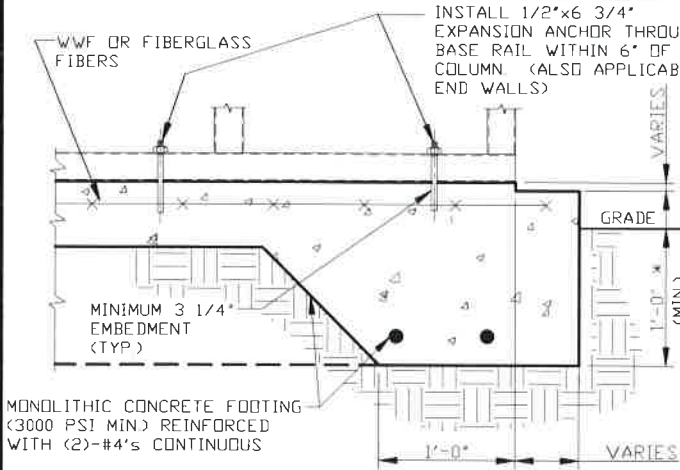
DWG. NO: SK-3

**JOB NO: 18184S/
18348S/19129S**

REV: 2

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.

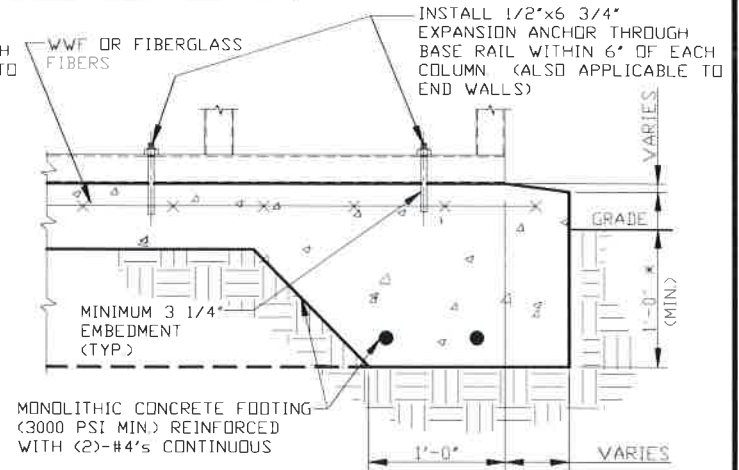
BASE RAIL ANCHORAGE OPTIONS



2A

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

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



2B

CONCRETE SLAB BASE RAIL ANCHORAGE

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

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:

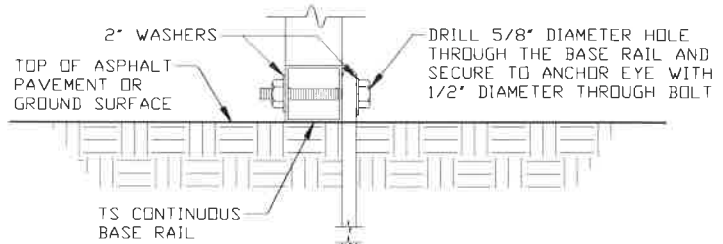
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

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

1. REINFORCEMENT IS BENT COLD.
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.

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



HELIX EYE ANCHOR (SEE NOTES BELOW)

2C

GROUND BASE HELIX ANCHORAGE

SCALE: NTS
(CAN BE USED FOR ASPHALT)

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSN

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES

316 NELSON STREET

PILOT MOUNTAIN, NC 27041

30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SHT. 7

SCALE: NTS

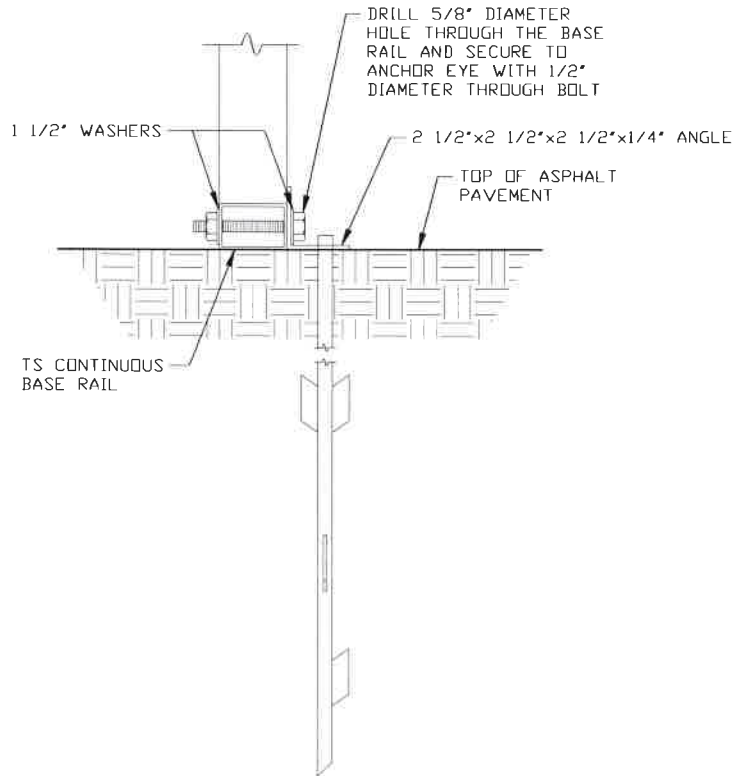
DWG. NO: SK-3

JOB NO: 18184S/
18348S/19129S

REV: 2

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.

BASE RAIL ANCHORAGE OPTIONS



2D

ASPHALT BASE ANCHORAGE
 SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SHT. 7A

SCALE: NTS

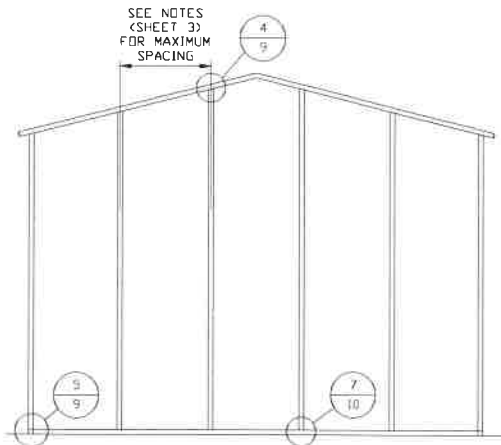
DWG. NO: SK-3

JOB NO: 18184S/
18348S/19129S

REV.: 2

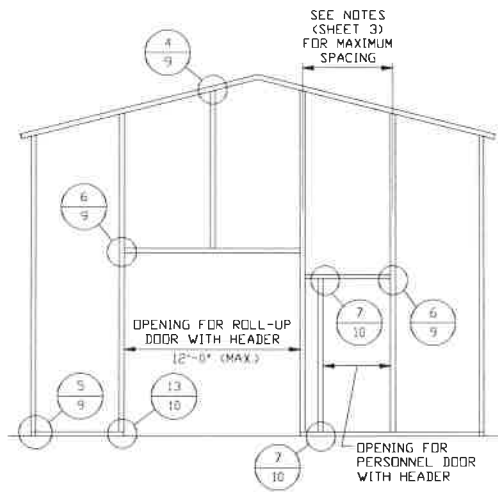
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



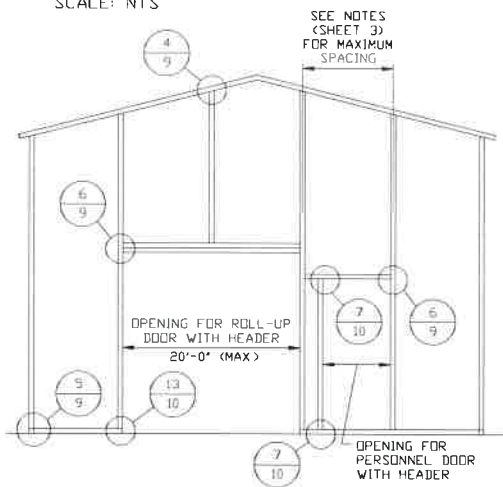
**TYPICAL BOX EAVE RAFTER
END WALL FRAMING SECTION**

SCALE: NTS



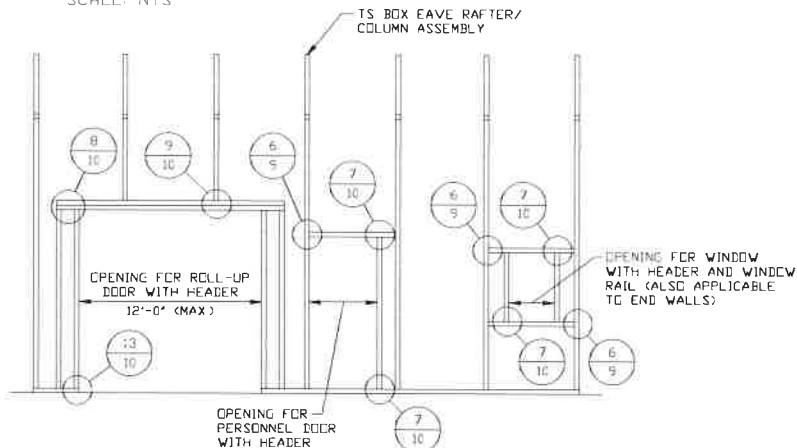
**TYPICAL BOX EAVE RAFTER END
WALL OPENINGS FRAMING SECTION**

SCALE: NTS



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

SCALE: NTS



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

SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSN

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES

316 NELSON STREET

PILOT MOUNTAIN, NC 27041

30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SCALE: NTS

DWG. NO: SK-3

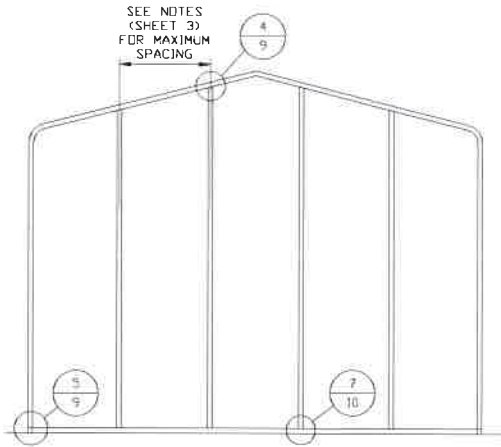
**JOB NO: 18184S/
18348S/19129S**

SHT. 8

REV: 2

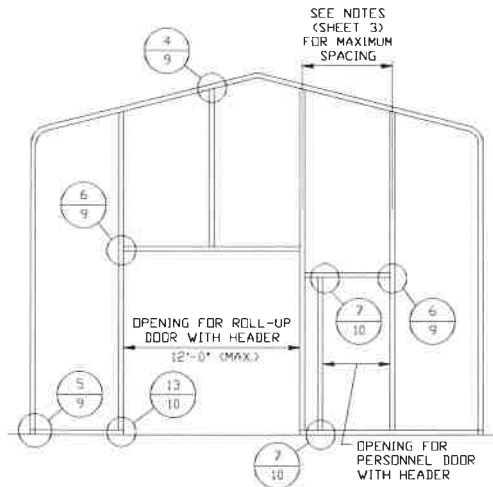
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



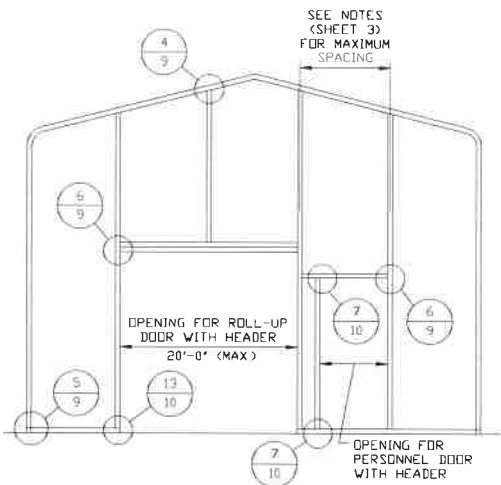
**TYPICAL BOX EAVE RAFTER
END WALL FRAMING SECTION**

SCALE: NTS



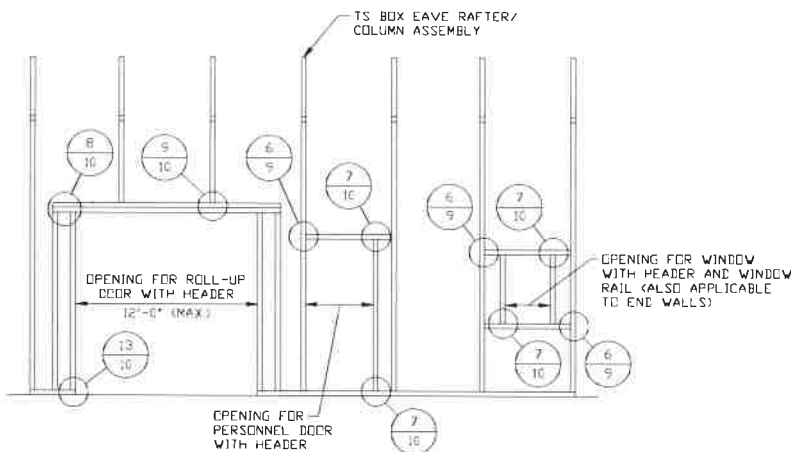
**TYPICAL BOX EAVE RAFTER END
WALL OPENINGS FRAMING SECTION**

SCALE: NTS



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

SCALE: NTS



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

SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSN

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES

316 NELSON STREET

PILOT MOUNTAIN, NC 27041

30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SHT. 8A

SCALE: NTS

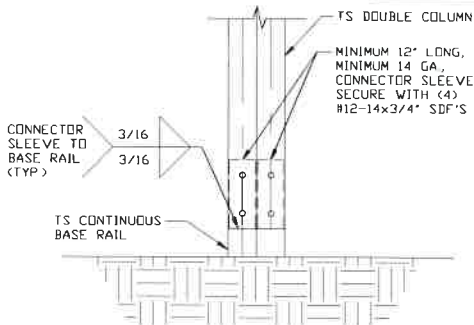
DWG. NO: SK-3

**JOB NO: 18184S/
18348S/19129S**

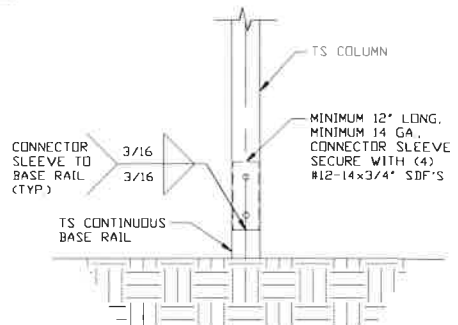
REV: 2

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.

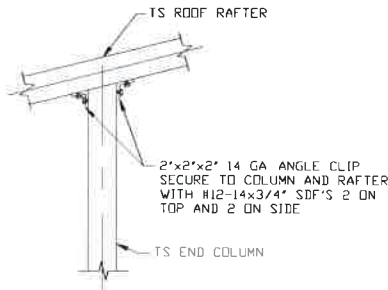
CONNECTION DETAILS



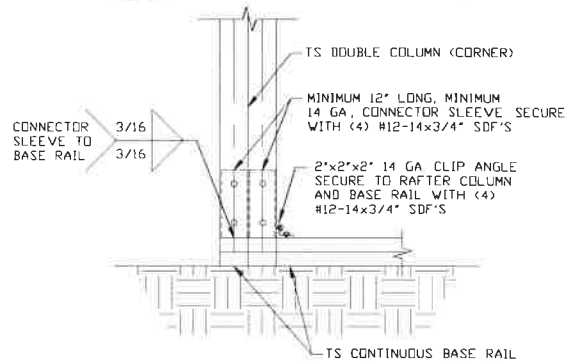
3A POST/BASE RAIL CONNECTION DETAIL
SCALE: NTS



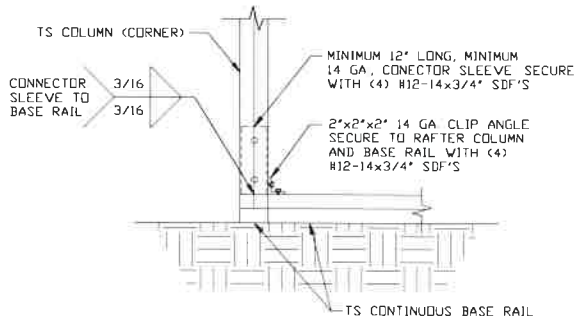
3B POST/BASE RAIL CONNECTION DETAIL
SCALE: NTS



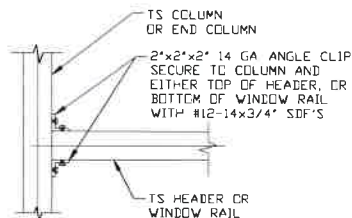
4 END COLUMN/RAFTER CONNECTION DETAIL
SCALE: NTS



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



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



6 COLUMN OR WINDOW RAIL TO POST CONNECTION DETAIL
SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES

316 NELSON STREET

PILOT MOUNTAIN, NC 27041

30'-0\"/>

DATE: 5-21-19

SHT. 9

SCALE: NTS

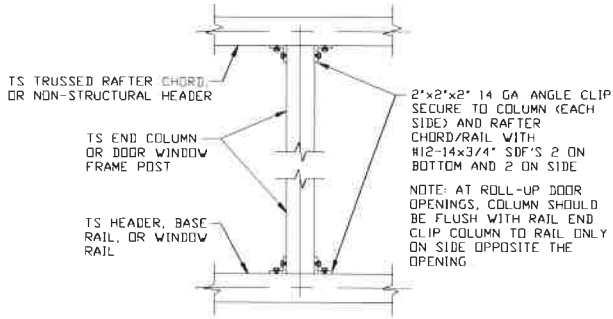
DWG. NO: SK-3

**JOB NO: 18184S/
18348S/19129S**

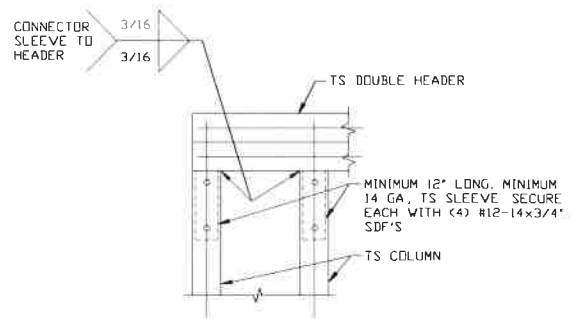
REV: 2

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.

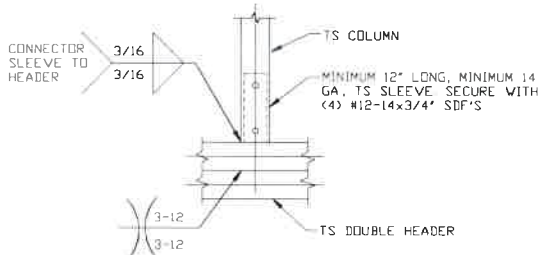
CONNECTION DETAILS



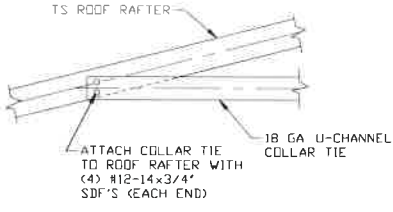
7 COLUMN TO HEADER, BASE RAIL, OR WINDOW RAIL CONNECTION DETAIL
SCALE: NTS



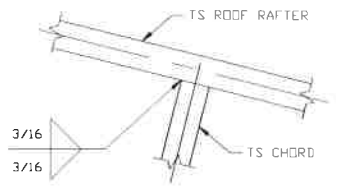
8 DOUBLE HEADER/COLUMN CONNECTION DETAIL
SCALE: NTS



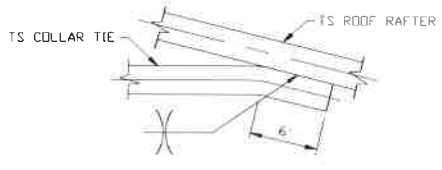
9 COLUMN/DOUBLE HEADER CONNECTION DETAIL
SCALE: NTS



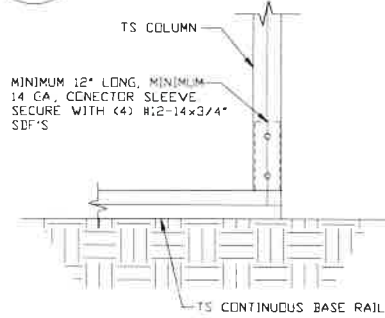
10 COLLAR TIE CONNECTION DETAIL
SCALE: NTS



11 RAFTER TO CHORD CONNECTION DETAIL
SCALE: NTS



12 COLLAR TIE CONNECTION DETAIL
SCALE: NTS



13 COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES

316 NELSON STREET

PILOT MOUNTAIN, NC 27041

30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SHT. 10

SCALE: NTS

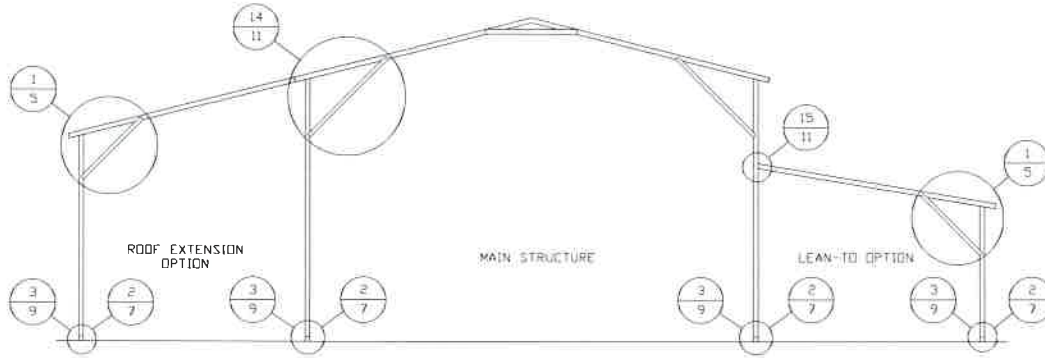
DWG. NO: SK-3

JOB NO: 18184S/
18348S/19129S

REV: 2

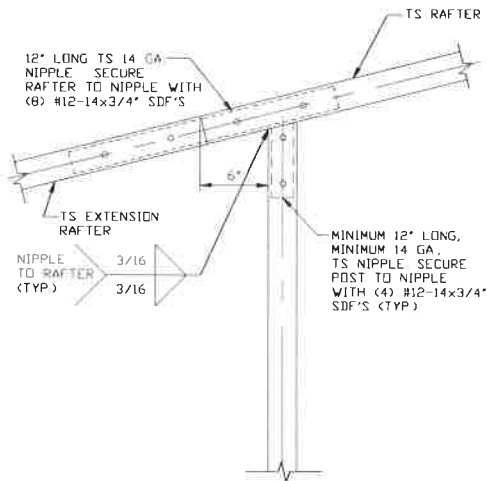
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER LEAN-TO OPTIONS



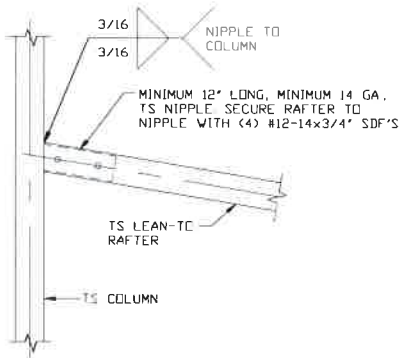
TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

SCALE: NTS
 MAXIMUM WIDTH OF ROOF EXTENSION AND LEAN-TO OPTION IS 12'-0"



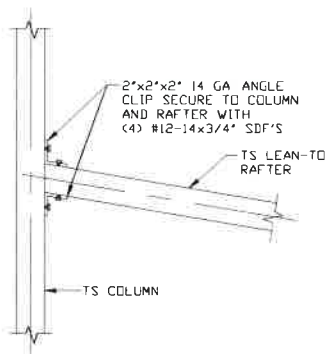
14 ROOF EXTENSION RAFTER/CORNER POST DETAIL FOR WIDTHS \leq 12'-0"

SCALE: NTS



15A LEAN-TO RAFTER TO RAFTER POST CONNECTION DETAIL FOR WIDTHS \leq 12'-0"

SCALE: NTS



15B LEAN-TO RAFTER TO RAFTER POST CONNECTION DETAIL FOR WIDTHS \leq 12'-0"

SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES

316 NELSON STREET

PILOT MOUNTAIN, NC 27041

30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SHT. 11

SCALE: NTS

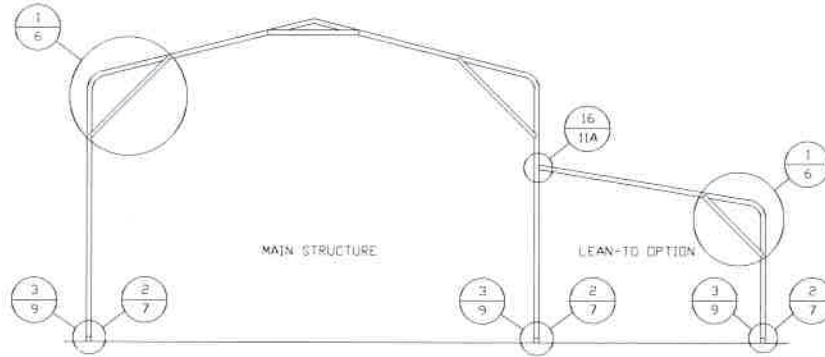
DWG. NO: SK-3

**JOB NO: 18184S/
 18348S/19129S**

REV: 2

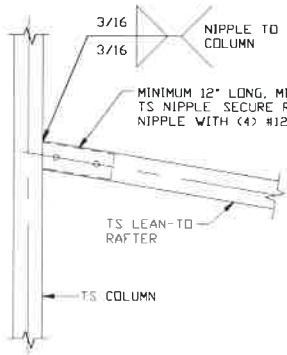
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOW EAVE RAFTER LEAN-TO OPTIONS



TYPICAL BOW EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION

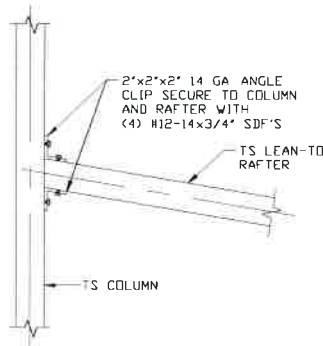
SCALE: NTS
 MAXIMUM WIDTH OF LEAN-TO OPTION IS 12'-0"



16A

**LEAN-TO RAFTER TO
 RAFTER POST
 CONNECTION DETAIL
 FOR WIDTHS ≤ 12'-0"**

SCALE: NTS



16B

**LEAN-TO RAFTER
 TO RAFTER POST
 CONNECTION DETAIL
 FOR WIDTHS ≤ 12'-0"**

SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: VSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES

316 NELSON STREET

PILOT MOUNTAIN, NC 27041

30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SHT. 11A

SCALE: NTS

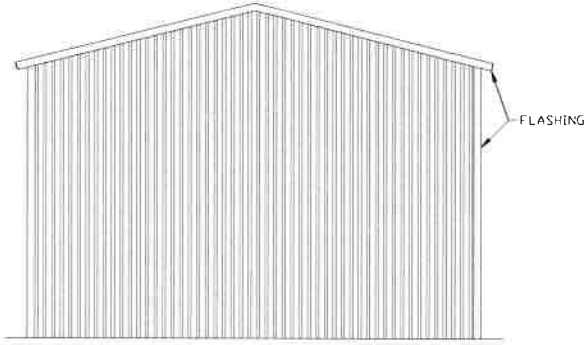
DWG. NO: SK-3

JOB NO: 18184S/
 18348S/19129S

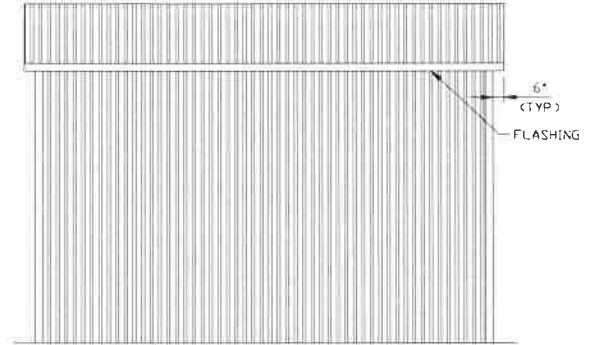
REV: 2

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.

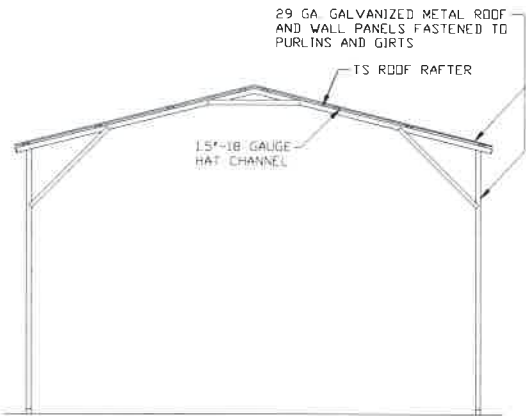
BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



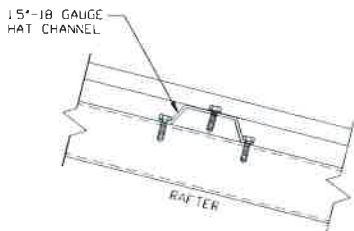
**TYPICAL END ELEVATION
VERTICAL ROOF/SIDING**
SCALE: NTS



**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

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSM

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SHT. 12

SCALE: NTS

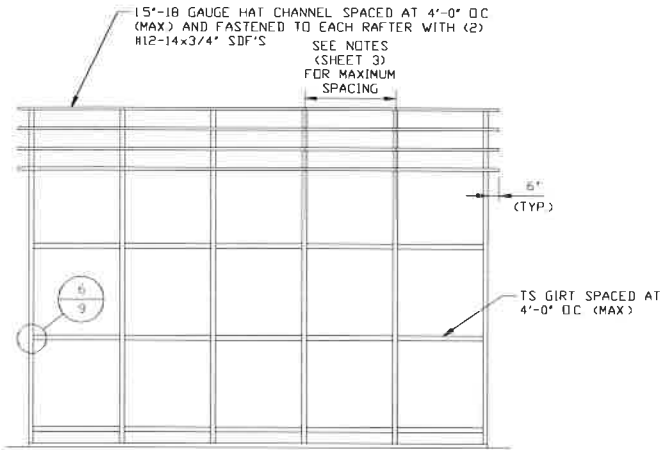
DWG. NO: SK-3

**JOB NO: 18184S/
18348S/19129S**

REV: 2

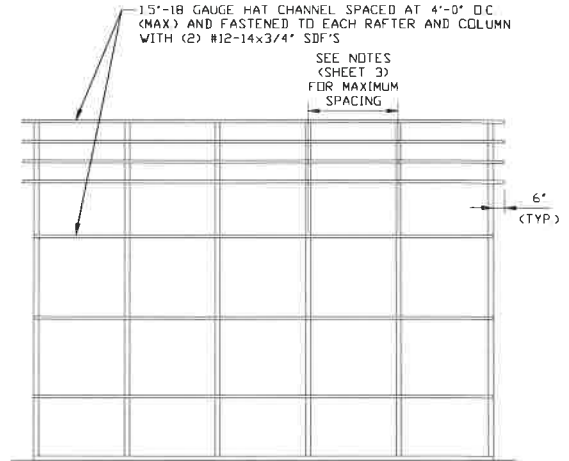
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



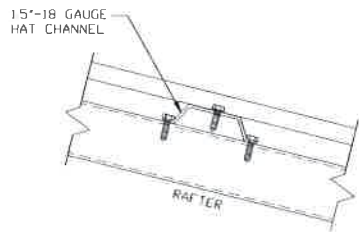
**TYPICAL FRAMING SECTION
VERTICAL ROOF/SIDING OPTION
WITH TS GIRTS**

SCALE: NTS



**TYPICAL FRAMING SECTION
VERTICAL ROOF/SIDING OPTION
WITH HAT CHANNEL GIRTS**

SCALE: NTS



PANEL ATTACHMENT

(ALTERNATE FOR VERTICAL ROOF PANELS)
SCALE: NTS

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

DRAWN BY: AM

CHECKED BY: PH

PROJECT MGR: WSN

CLIENT: JR BUILDINGS

JR BUILDINGS & GARAGES
316 NELSON STREET
PILOT MOUNTAIN, NC 27041
30'-0" x 16'-0" ENCLOSED STRUCTURE

DATE: 5-21-19

SCALE: NTS

DWG. NO: SK-3

**JOB NO: 18184S/
18348S/19129S**

REV: 2

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.