



## **STRUCTURAL DESIGN**

# **FULLY OPEN (CARPORT) BUILDING**

**MAXIMUM 30'-0" WIDE X 14'- 0" EAVE HEIGHT-  
BOX EAVE FRAME AND BOW FRAME**

**14 January 2021  
Revision 0  
M&A Project No. 20320S**

**Prepared for:**

**CarportsNSheds, LLC  
158 Gatehouse Ln.  
Dobson, NC 27017**

**Prepared by:**

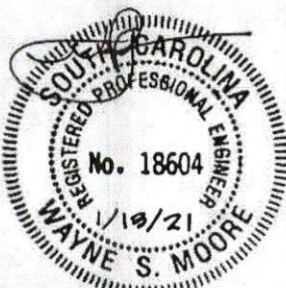


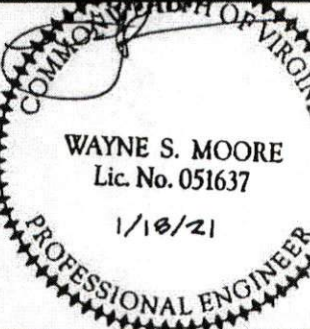
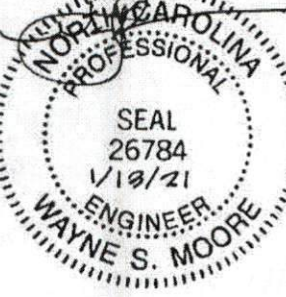
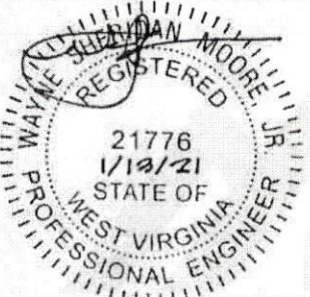


**Moore and Associates Engineering and Consulting, Inc.  
1009 East Avenue  
North Augusta, SC 29841**

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





Buckly Underwood  
 5843 cokesbury Rd,  
 Fuquay Varina, NC 27526

|   |  |  |  |
|---|--|--|--|
|    |   |  |  |
|    |   |  |  |
|   |  |  |  |
|  |  |  |  |
|  |  |  |  |

MOORE AND ASSOCIATES  
 ENGINEERING AND CONSULTING, INC.

DRAWN BY: LT  
 CHECKED BY: PDH  
 PROJECT MGR: VSM  
 CLIENT: CARPORTSNSHEDS

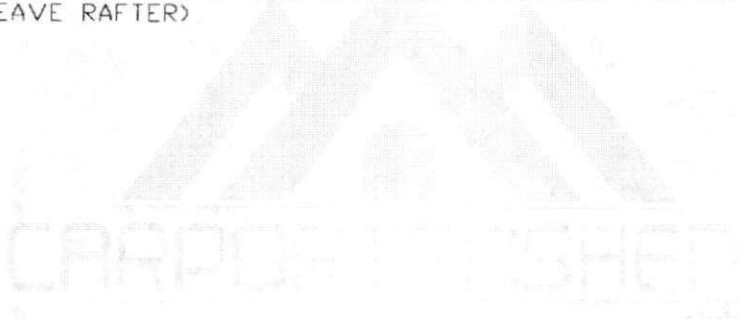
CARPORTSNSHEDS, LLC  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017  
 30'-0" x 14'-0" FULLY OPEN STRUCTURE  
 DATE: 1-14-21  
 SCALE: NTS  
 SHT. 1  
 DVG. NO: SK-1  
 JOB NO: 20320S  
 REV: 0

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

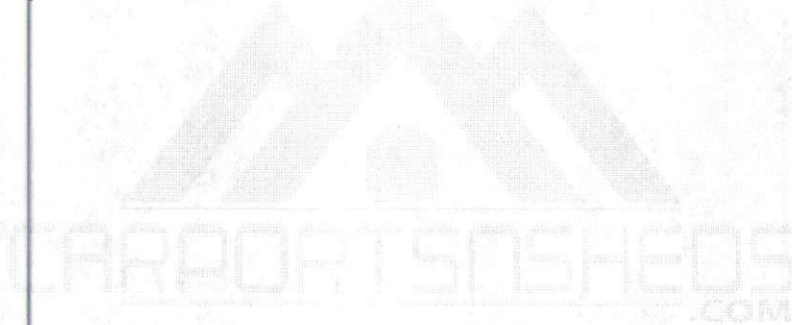
|          |   |
|----------|---|
| SHEET 1  | PE SEAL COVER SHEET   |
| SHEET 2  | DRAWING INDEX   |
| SHEET 3  | INSTALLATION NOTES AND SPECIFICATIONS                                     |
| SHEET 4  | TYPICAL SIDE AND END ELEVATIONS   |
| SHEET 5  | TYPICAL RAFTER/COLUMN FRAME AND SIDE FRAMING SECTION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



|   |                        |  |               |                |
|---|------------------------|--|---------------|----------------|
| <b>MOORE AND ASSOCIATES<br/>ENGINEERING AND CONSULTING, INC.</b>  | DRAWN BY: LT           | CARPORTS SHEDS, LLC<br>158 GATEHOUSE LN.<br>DOBSON, NC 27017 |               |                |
|   | CHECKED BY: PDH        | 30'-0" x 14'-0" FULLY OPEN 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: 1-14-21  | SCALE: NTS    | JOB NO: 20320S |
|   | CLIENT: CARPORTS SHEDS | SHT. 2   | DWG. NO: SK-1 | REV. 0         |

### INSTALLATION NOTES AND SPECIFICATIONS

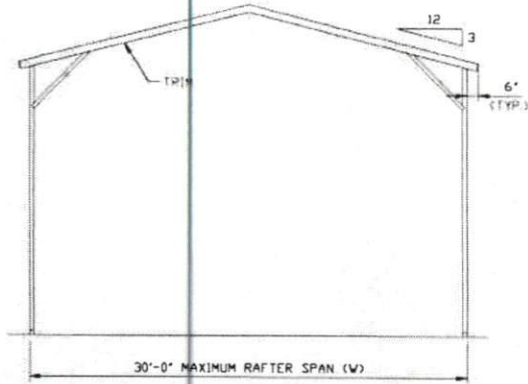
1. DESIGN IS FOR MAXIMUM 30'-0" WIDE x 14'-0" EAVE HEIGHT OPEN CARPORT STRUCTURES
2. DESIGN WAS DONE IN ACCORDANCE WITH THE 2018 NORTH CAROLINA BUILDING CODE, 2018 INTERNATIONAL BUILDING CODE (IBC), 2015 IBC AND 2012 IBC.
3. DESIGN LOADS ARE AS FOLLOWS:
  - A) DEAD LOAD = 15 PSF
  - B) LIVE LOAD = 12 PSF
  - C) GROUND SNOW LOAD = 35 PSF ( $\leq 24'-0"$ ), 35 PSF ( $24'-0" < W \leq 30'-0"$ )
 NOTE: UNBALANCED SNOW LOAD DUE TO DRIFTING HAS NOT BEEN EVALUATED
4. 3-SECOND GUST ULTIMATE WIND SPEED ( $V_{ULT}$ ) =  $\leq 140$  MPH (NOMINAL WIND SPEED =  $\leq 108$  MPH).
5. MAXIMUM RAFTER/COLUMN AND END COLUMN SPACING = 5.0 FEET (UNLESS NOTED OTHERWISE).
6. ENDWALL COLUMNS (POSTS) AND SIDE WALL COLUMNS ARE EQUIVALENT 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) 2 1/4" x 2 1/4" - 12 GAUGE TS MAY BE USED AS OPTIONAL FRAMING MEMBERS.
10. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR HAT CHANNELS, AND COLUMNS (INTERIOR OR END) = 10 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. ROOF SLOPES LESS THAN 3:12 REQUIRE USE OF JOINT SEALANT
12. 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 AND MAY ONLY BE USED IN CONJUNCTION WITH OTHER (OPTIONAL) ANCHOR DEVICES AND ONLY IN SUITABLE SOILS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS AS NOTED. COORDINATE WITH LOCAL CODES/ORDINANCES REGARDING MINIMUM LENGTH FOR FROST DEPTH PROTECTION.
14. WIND FORCES GOVERN OVER SEISMIC FORCES SEISMIC PARAMETERS ANALYZED ARE:
  - SOIL SITE CLASS = D
  - RISK CATEGORY I
  - R = 3.25  $I_E = 1.0$
  - $S_{DS} = 2.039 g$   $V = C_s W$
  - $S_{01} = 1.258 g$



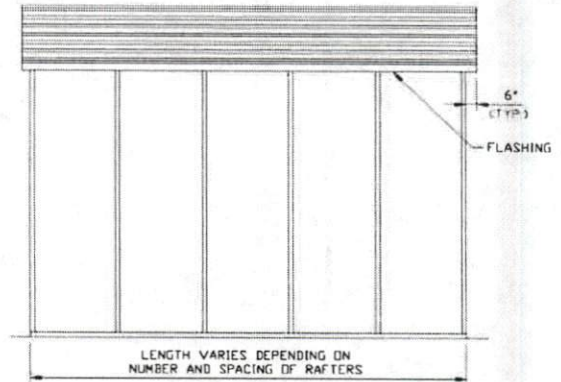
|   |                        |  |               |                          |
|---|------------------------|--|---------------|--------------------------|
| <b>MOORE AND ASSOCIATES<br/>ENGINEERING AND CONSULTING, INC.</b>  | DRAWN BY: LT           | CARPORTSNSHEDS, LLC<br>158 GATEHOUSE LN.<br>DOBSON, NC 27017<br>30'-0"x14'-0" FULLY OPEN STRUCTURE |               |                          |
|   | CHECKED BY: PDH        | PROJECT MGR: WSM   | DATE: 1-14-21 | SCALE: NTS               |
| 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. | CLIENT: CARPORTSNSHEDS | SHT. 3   | DWG. NO: SK-1 | JOB NO: 203205<br>REV: 0 |



**BOX EAVE FRAME RAFTER STRUCTURE**

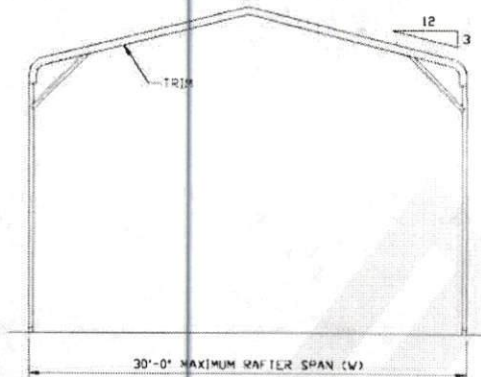


**TYPICAL END ELEVATION**  
 SCALE: NTS

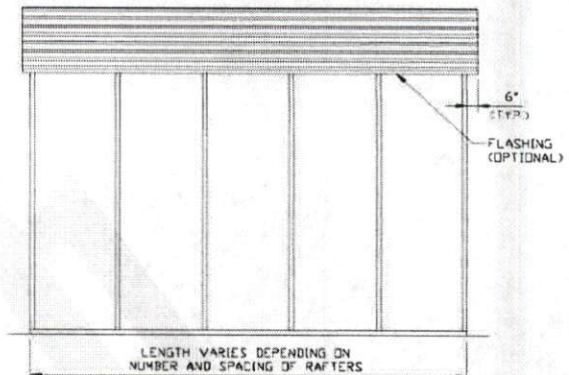


**TYPICAL SIDE ELEVATION**  
 SCALE: NTS

**BOW EAVE FRAME RAFTER STRUCTURE**



**TYPICAL END ELEVATION**  
 SCALE: NTS



**TYPICAL SIDE ELEVATION**  
 SCALE: NTS

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

**DRAWN BY: LT**  
**CHECKED BY: PDH**

**CARPORTSNSHEDS, LLC**  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017  
 30'-0" x 14'-0" FULLY OPEN STRUCTURE

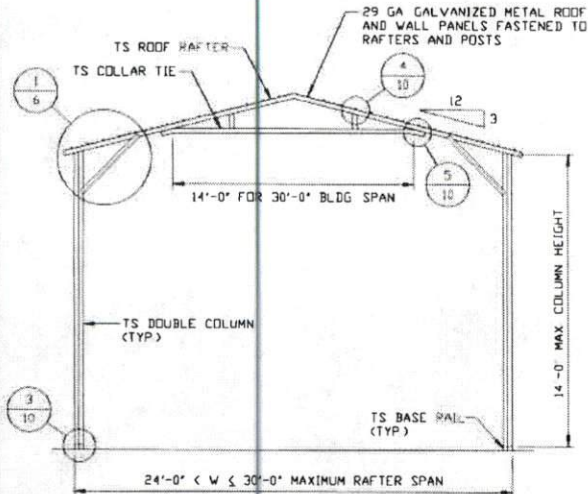
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

**PROJECT MGR: WSM**  
**CLIENT: CARPORTSNSHEDS**

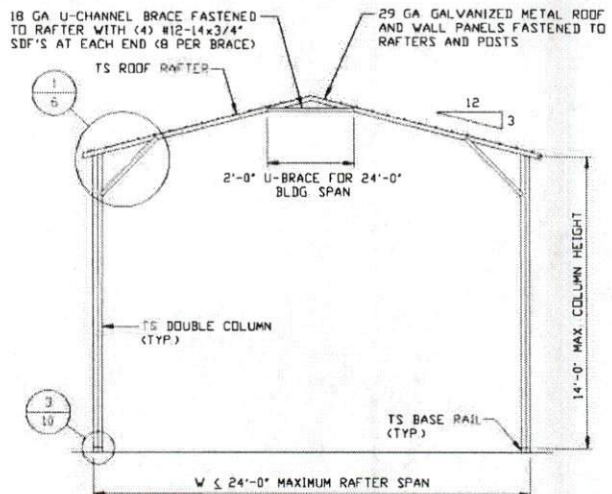
**DATE: 1-14-21**  
**SHT. 4**

**SCALE: NTS**  
**DWG. NO: SK-1**

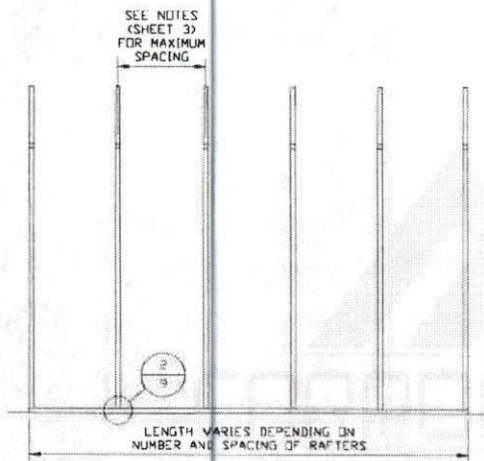
**JOB NO: 20320S**  
**REV: 0**



**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: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CARPORTSNSHEDS

CARPORTSNSHEDS, LLC  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017  
 30'-0" x 14'-0" FULLY OPEN STRUCTURE

DATE: 1-14-21

SCALE: NTS

JOB NO: 20320S

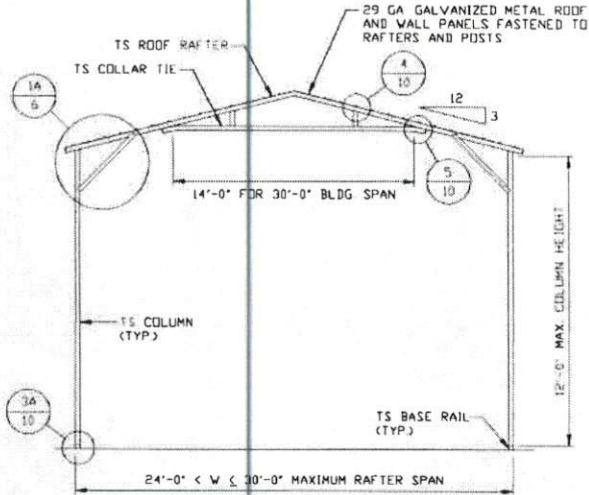
SHT. 5

DWG. NO SK-1

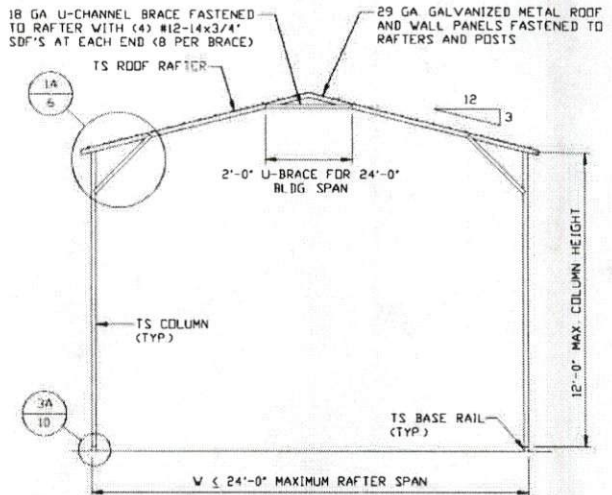
REV: 0

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.

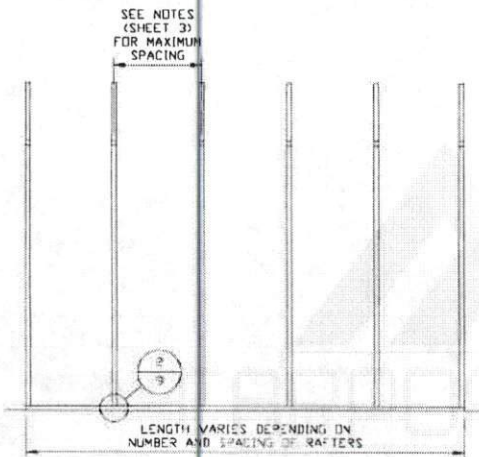




**TYPICAL RAFTER/COLUMN FRAME SECTION**  
 SCALE: NTS



**TYPICAL RAFTER/COLUMN FRAME SECTION**  
 SCALE: NTS



**TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION**  
 SCALE: NTS

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

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: VSM**

**CLIENT: CARPORTSNSHEDS**

CARPORTSNSHEDS, LLC  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017  
 30'-0"x14'-0" FULLY OPEN STRUCTURE

**DATE: 1-14-21**

**SCALE: NTS**

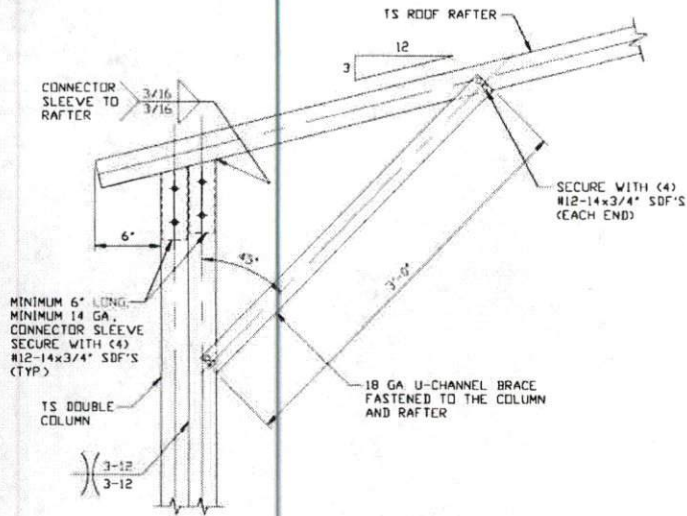
**JOB NO: 20320S**

**SHT. 5A**

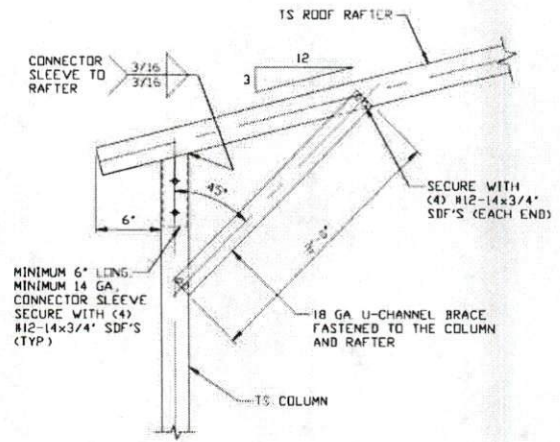
**DWG. NO: SK-1**

**REV: 0**

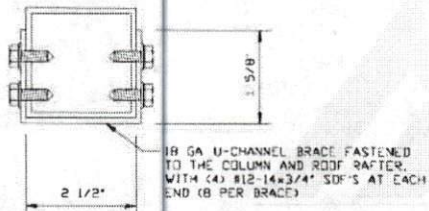
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.



**1**  
**BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL**  
**FOR HEIGHTS 12'-0" < TO ≤ 14'-0"**  
 SCALE: NTS



**1A**  
**BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL**  
**FOR HEIGHTS ≤ 12'-0"**  
 SCALE: NTS

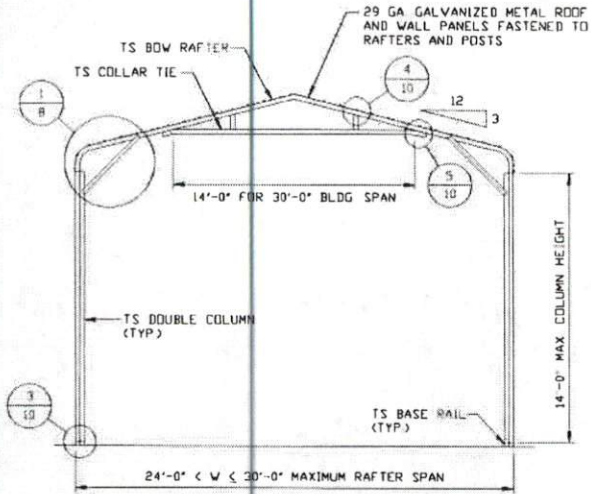


**BRACE SECTION**  
 SCALE: NTS

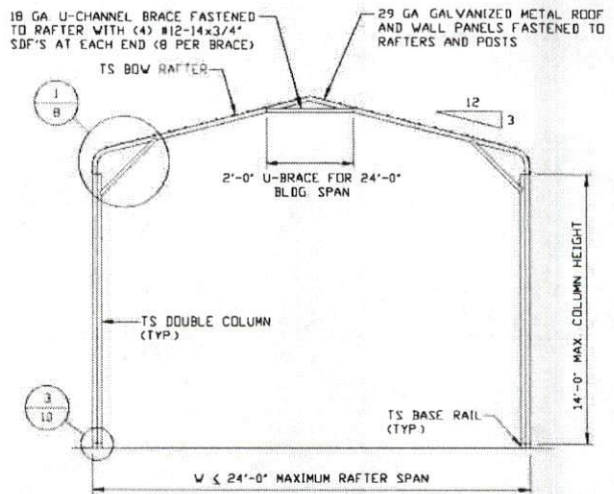
REPORTS@SHEDS.COM

|   |                        |  |               |                          |
|---|------------------------|--|---------------|--------------------------|
| <b>MOORE AND ASSOCIATES<br/>                 ENGINEERING AND CONSULTING, INC.</b>   | DRAWN BY: LT           | CARPORTSNSHEDS, LLC<br>158 GATEHOUSE LN.<br>DOBSON, NC 27017<br>30'-0" x 14'-0" FULLY OPEN STRUCTURE |               |                          |
|   | CHECKED BY: PDH        | PROJECT MGR: WSM   | DATE: 1-14-21 | SCALE: NTS               |
| 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. | CLIENT: CARPORTSNSHEDS | SHT. 6   | DWG. NO: SK-1 | JOB NO: 20320S<br>REV: 0 |

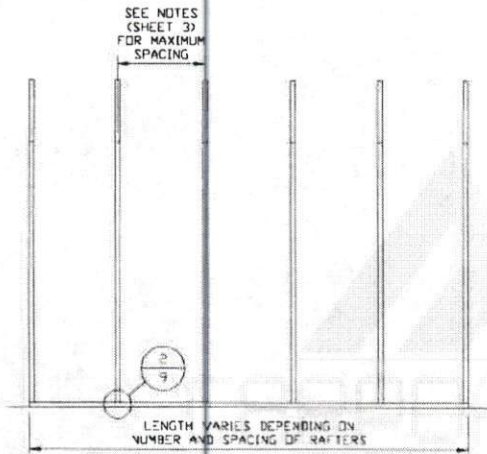




**TYPICAL RAFTER/COLUMN FRAME SECTION**  
 SCALE: NTS



**TYPICAL RAFTER/COLUMN FRAME SECTION**  
 SCALE: NTS



**TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION**  
 SCALE: NTS

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

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: WSM**

**CLIENT: CARPORTSNSHEDS**

**CARPORTSNSHEDS, LLC**  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017  
 30'-0" x 14'-0" FULLY OPEN STRUCTURE

**DATE: 1-14-21**

**SCALE: NTS**

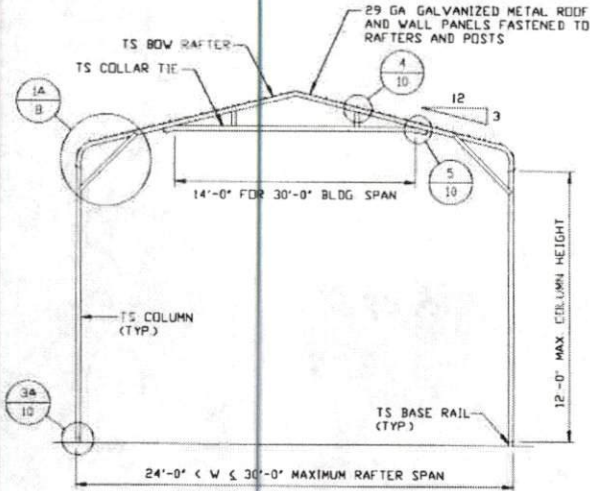
**JOB NO: 20320S**

**SHT. 7**

**DWG. NO: SK-1**

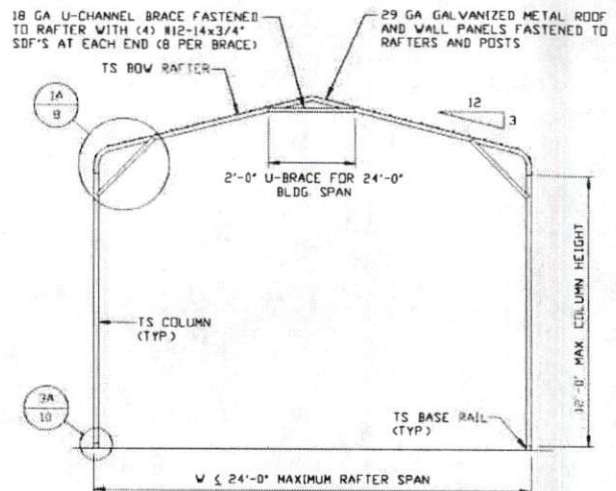
**REV: 0**

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.



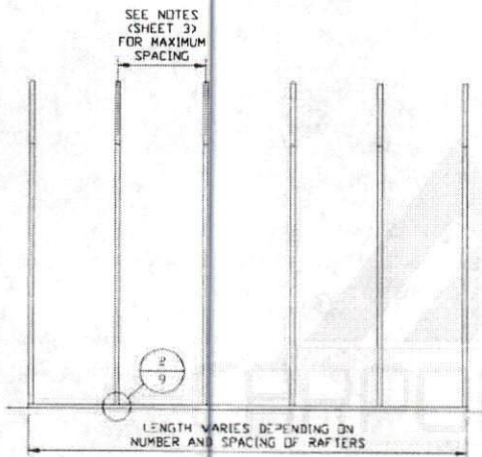
**TYPICAL RAFTER/COLUMN FRAME SECTION**

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: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CARPORTSNSHEDS

CARPORTSNSHEDS, LLC  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017  
 30'-0" x 14'-0" FULLY OPEN STRUCTURE

DATE: 1-14-21

SCALE: NTS

JOB NO: 20320S

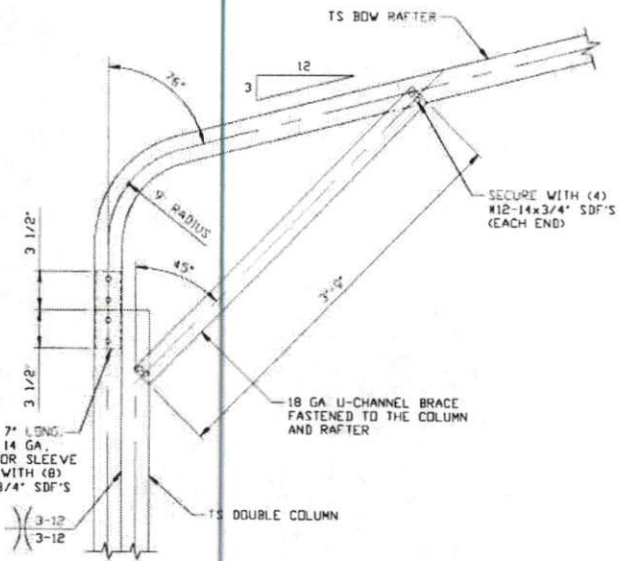
SHT. 7A

DWG. NO: SK-1

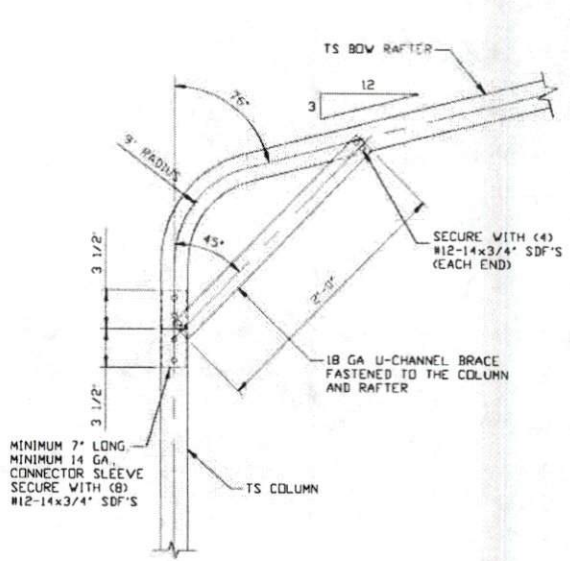
REV: 0

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.

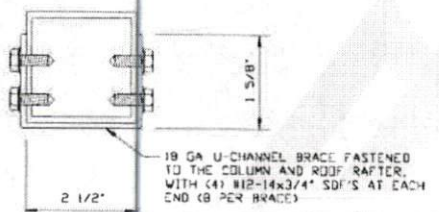




**1**  
**BOW EAVE RAFTER/CORNER POST CONNECTION DETAIL**  
**FOR HEIGHTS 12'-0" < TO < 14'-0"**  
 SCALE: NTS



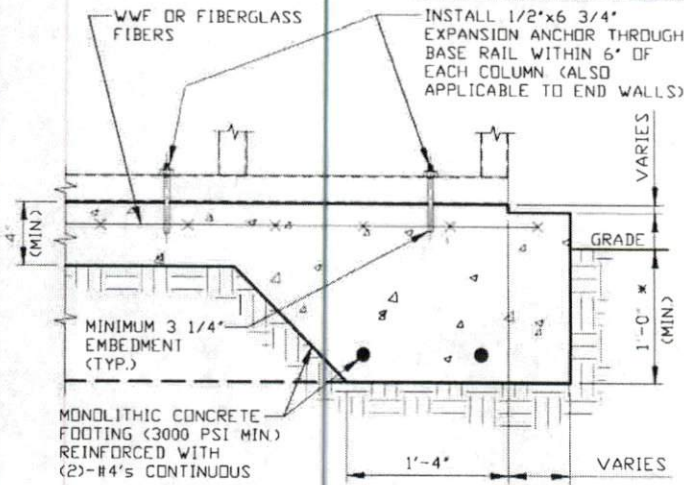
**1A**  
**BOW EAVE RAFTER/CORNER POST CONNECTION DETAIL**  
**FOR HEIGHTS < 12'-0"**  
 SCALE: NTS



**BRACE SECTION**  
 SCALE: NTS

|   |                        |  |              |                |
|---|------------------------|--|--------------|----------------|
| <b>MOORE AND ASSOCIATES<br/>         ENGINEERING AND CONSULTING, INC.</b>   | DRAWN BY: LT           | CARPORTSNSHEDS, LLC<br>158 GATEHOUSE LN.<br>DOBSON, NC 27017<br>30'-0" x 14'-0" FULLY OPEN STRUCTURE |              |                |
|   | CHECKED BY: PDH        |  |              |                |
| 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: 1-14-21  | SCALE: NTS   | JOB NO: 20320S |
|   | CLIENT: CARPORTSNSHEDS | SHT. 8   | DWG. NO SK-1 | REV: 0         |

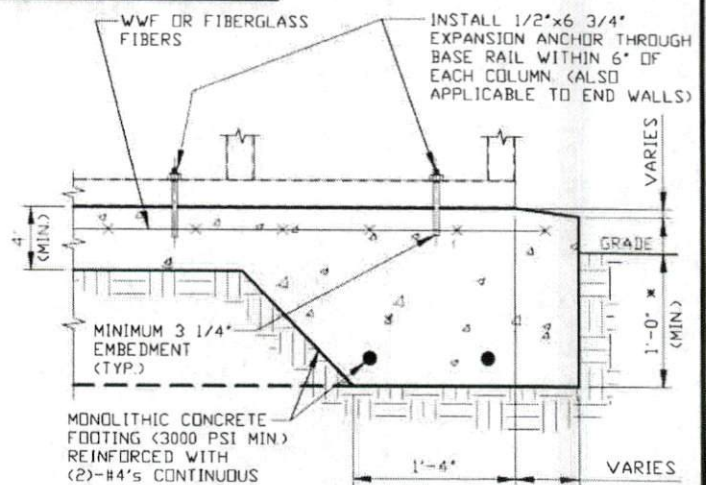
## BASE RAIL ANCHORAGE OPTIONS



2

### CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: NTS  
MINIMUM ANCHOR EDGE DISTANCE IS 4"  
\* COORDINATE WITH LOCAL CODES/ORD.  
REGARDING MINIMUM FROST DEPTH REQ



2A

### CONCRETE SLAB BASE RAIL ANCHORAGE

SCALE: NTS  
MINIMUM ANCHOR EDGE DISTANCE IS 4"  
\* COORDINATE WITH LOCAL CODES/ORD.  
REGARDING MINIMUM FROST DEPTH REQ

## 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:

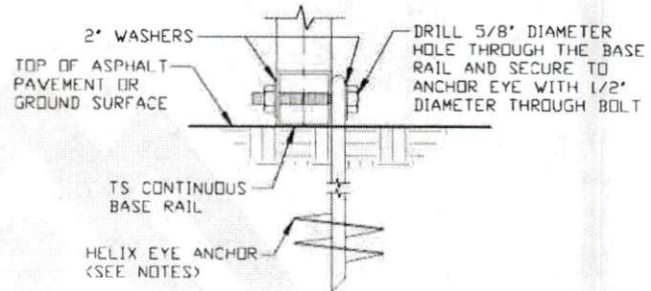
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 50 THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT

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



2B

### GROUND BASE HELIX ANCHORAGE

SCALE: NTS  
(CAN BE USED FOR ASPHALT)  
\* COORDINATE WITH LOCAL CODES/ORD.  
REGARDING MINIMUM FROST DEPTH REQ

MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CARPORTSNSHEDS

CARPORTSNSHEDS, LLC  
158 GATEHOUSE LN.  
DOBSON, NC 27017  
30'-0" x 14'-0" FULLY OPEN STRUCTURE

DATE: 1-14-21

SCALE: NTS

JOB NO: 20320S

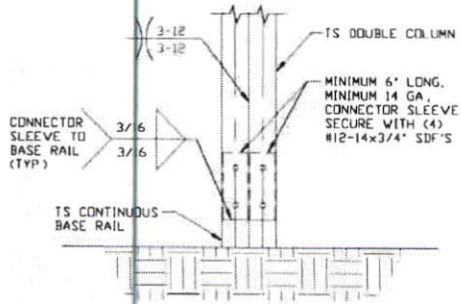
DWG. NO: SK-1

REV: 0

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.



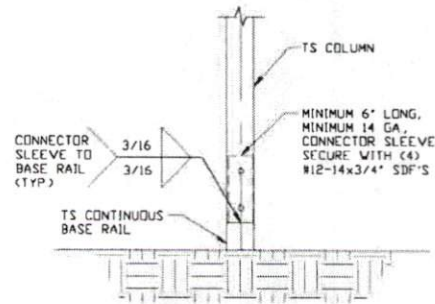
### CONNECTION DETAILS



3

**POST/BASE RAIL CONNECTION DETAIL**

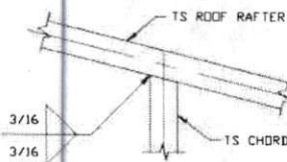
SCALE: NTS



3A

**POST/BASE RAIL CONNECTION DETAIL**

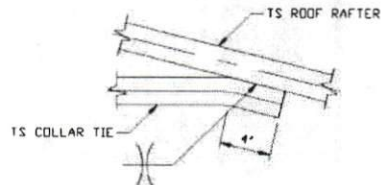
SCALE: NTS



4

**RAFTER TO CHORD CONNECTION DETAIL**

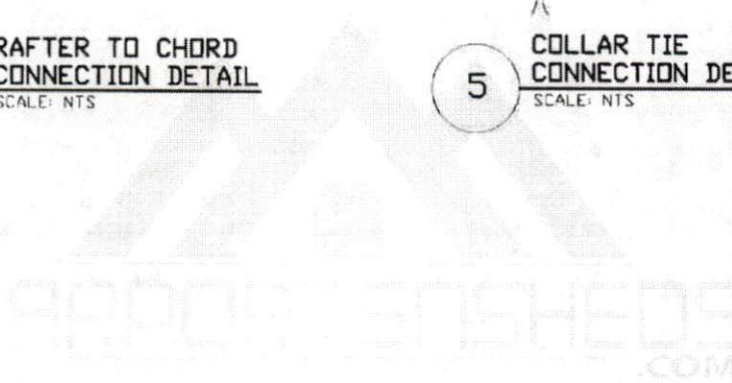
SCALE: NTS



5

**COLLAR TIE CONNECTION DETAIL**

SCALE: NTS



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

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CARPORTSNSHEDS

CARPORTSNSHEDS, LLC  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017  
 30'-0" x 14'-0" FULLY OPEN STRUCTURE

DATE: 1-14-21

SCALE: NTS

JOB NO: 20320S

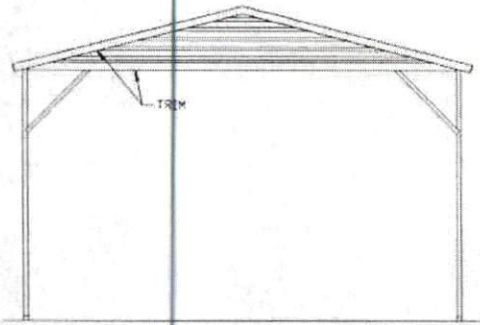
SHT. 10

DWG. NO: SK-1

REV: 0

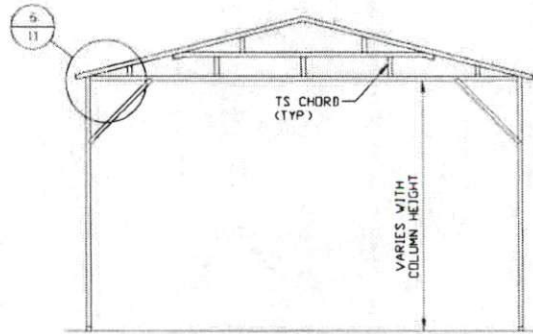
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

**BOX EAVE RAFTER GABLE END OPTION**



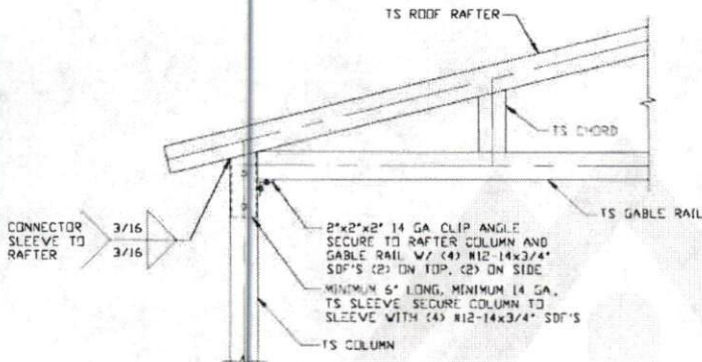
**TYPICAL BOX EAVE RAFTER GABLE END ELEVATION**

SCALE: NTS



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

SCALE: NTS



**BOX EAVE RAFTER GABLE RAIL TO RAFTER COLUMN CONNECTION DETAIL**

SCALE: NTS

NOTE: KNEE BRACE NOT SHOWN FOR CLARITY

6

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

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CARPORTSNSHEDS

CARPORTSNSHEDS, LLC  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017  
 30'-0" x 14'-0" FULLY OPEN STRUCTURE

DATE: 1-14-21

SCALE: NTS

JOB NO: 20320S

SHT. 11

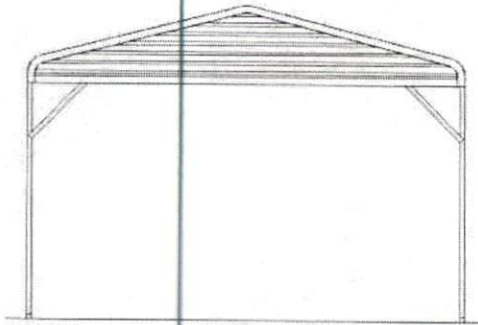
DWG. NO: SK-1

REV: 0

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.

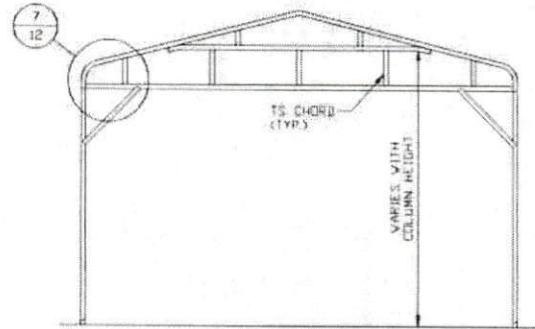


**BOW EAVE RAFTER GABLE END OPTION**



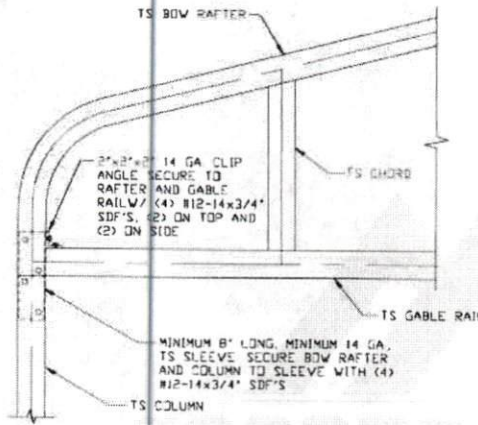
**TYPICAL BOX EAVE RAFTER GABLE END ELEVATION**

SCALE: NTS



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

SCALE: NTS



**BOX EAVE RAFTER GABLE RAIL TO RAFTER COLUMN CONNECTION DETAIL**

SCALE: NTS

NOTE: KNEE BRACE NOT SHOWN FOR CLARITY

7

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

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CARPORTSNSHEDS

CARPORTSNSHEDS, LLC  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017  
 30'-0" x 14'-0" FULLY OPEN STRUCTURE

DATE: 1-14-21

SCALE: NTS

JOB NO: 20320S

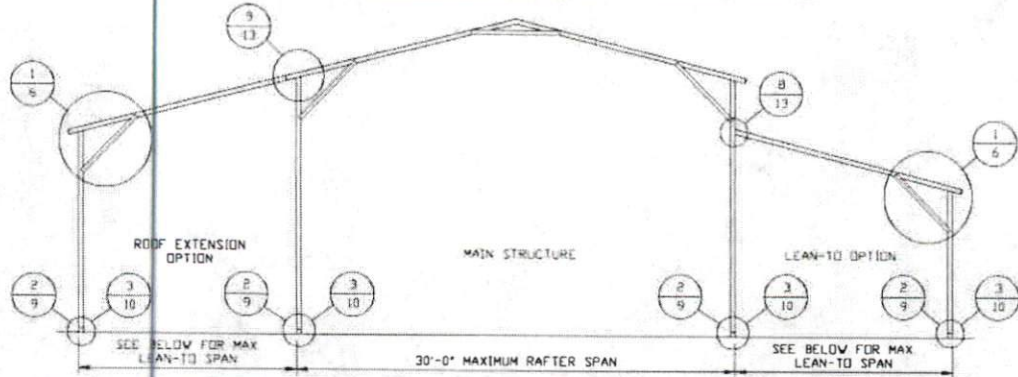
SHT. 12

DWG. NO SK-1

REV: 0

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)**

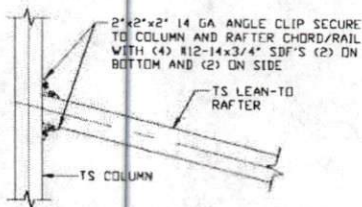
SCALE: NTS

MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR

EAVE HEIGHTS 12'-0" < TO < 14'-0"

MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR

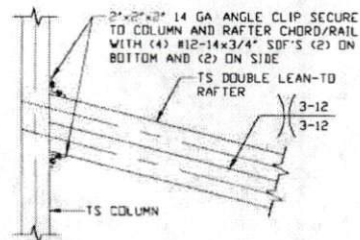
EAVE HEIGHTS < 12'-0"



**LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS <= 12'-0"**

8

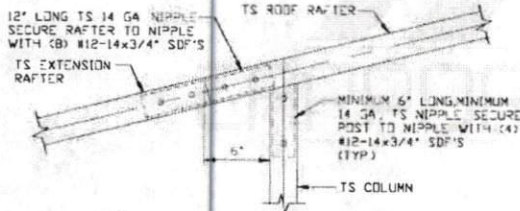
SCALE: NTS



**LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR SPAN 12'-0" < L <= 15'-0"**

8A

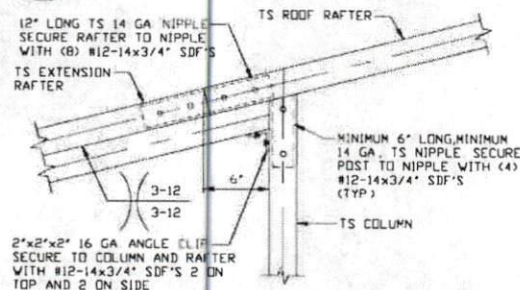
SCALE: NTS



**SIDE EXTENSION RAFTER/COLUMN DETAIL FOR SPANS <= 12'-0"**

9

SCALE: NTS



**SIDE EXTENSION RAFTER/COLUMN DETAIL FOR SPAN 12'-0" < L <= 15'-0"**

9A

SCALE: NTS

MOORE AND ASSOCIATES  
ENGINEERING AND CONSULTING, INC.

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CARPORTSNSHEDS

CARPORTSNSHEDS, LLC

158 GATEHOUSE LN.

DOBSON, NC 27017

30'-0"x14'-0" FULLY OPEN STRUCTURE

DATE: 1-14-21

SCALE: NTS

JOB NO: 20320S

SHT. 13

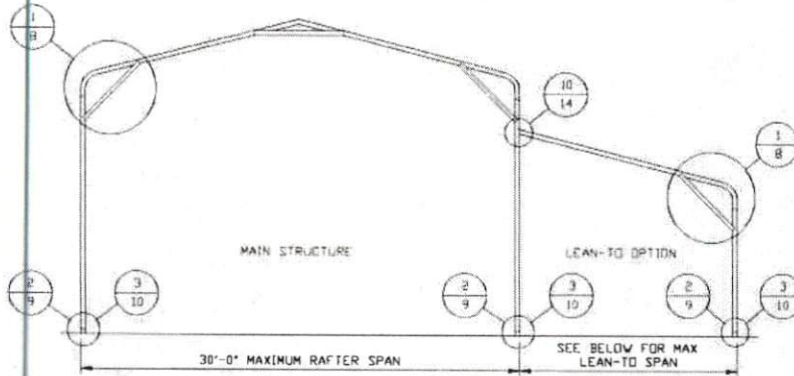
DWG. NO: SK-1

REV: 0

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.

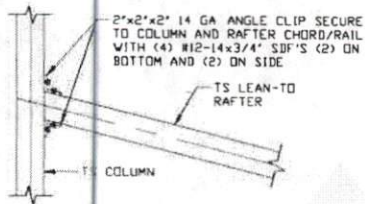


**BOW EAVE RAFTER LEAN-TO OPTIONS**



**TYPICAL BOW EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION**

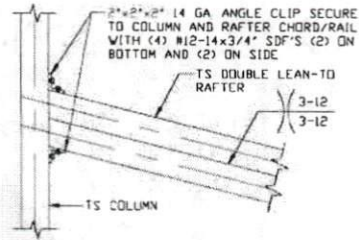
SCALE: NTS  
 MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR EAVE HEIGHTS 12'-0" < TO ≤ 14'-0".  
 MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS ≤ 12'-0".



10

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

SCALE: NTS



10A

**LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR SPAN 12'-0" < L ≤ 15'-0"**

SCALE: NTS

CARPORTRNSHEDS.COM

MOORE AND ASSOCIATES  
 ENGINEERING AND CONSULTING, INC.

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CARPORTSNHEDS

CARPORTSNHEDS, LLC  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017  
 30'-0"x14'-0" FULLY OPEN STRUCTURE

DATE: 1-14-21

SCALE: NTS

JOB NO: 20320S

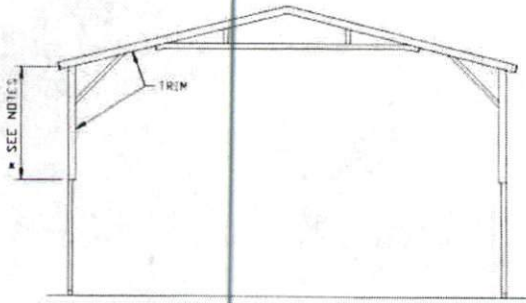
SHT. 14

DWG. NO: SK-1

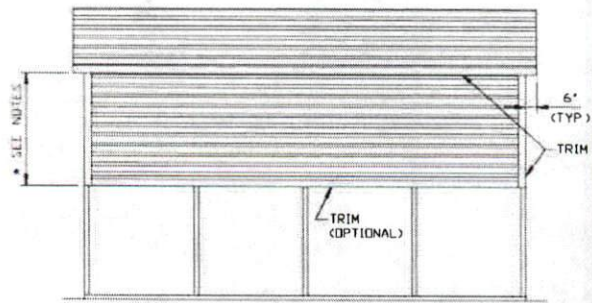
REV: 0

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.

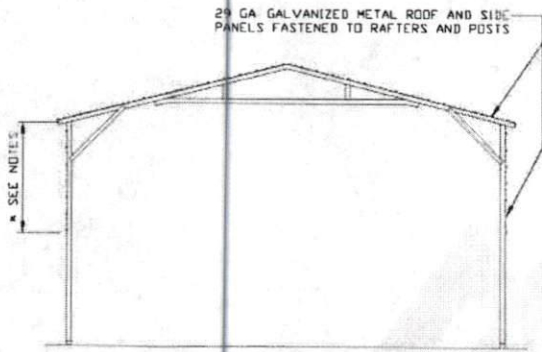
**BOX EAVE RAFTER EXTRA SIDE PANEL OPTION**



**TYPICAL END ELEVATION  
 EXTRA SIDE PANELS**  
 SCALE: NTS



**TYPICAL SIDE ELEVATION  
 EXTRA SIDE PANELS**  
 SCALE: NTS



**TYPICAL RAFTER/COLUMN FRAME  
 SECTION - EXTRA SIDE PANELS**  
 SCALE: NTS

NOTES:

- \* 12'-0" PANEL FOR EAVE HEIGHT 12'-0" < TO < 14'-0"
- \* 9'-0" PANEL FOR EAVE HEIGHT < 12'-0"

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

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CARPORTSNSHEDS

CARPORTSNSHEDS, LLC

158 GATEHOUSE LN.

DOBSON, NC 27017

30'-0" x 14'-0" FULLY OPEN STRUCTURE

DATE: 1-14-21

SCALE: NTS

JOB NO: 20320S

SHT. 15

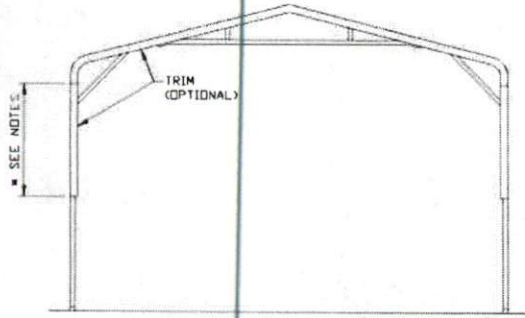
DWG. NO: SK-1

REV: 0

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.



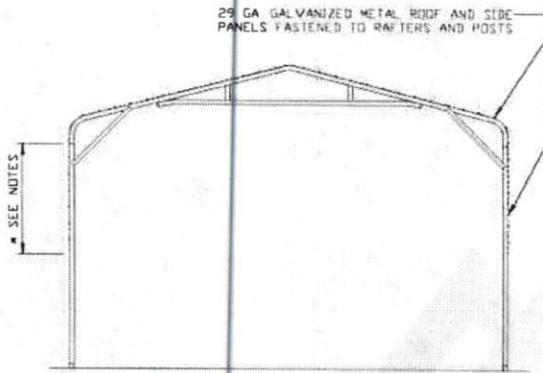
**BOW EAVE RAFTER EXTRA SIDE PANEL OPTION**



**TYPICAL END ELEVATION  
 EXTRA SIDE PANELS**  
 SCALE: NTS



**TYPICAL SIDE ELEVATION  
 EXTRA SIDE PANELS**  
 SCALE: NTS



**TYPICAL RAFTER/COLUMN FRAME  
 SECTION - EXTRA SIDE PANELS**  
 SCALE: NTS

- NOTES:  
 \* 12'-0" PANEL FOR EAVE HEIGHT 12'-0" < TO < 14'-0"  
 \* 9'-0" PANEL FOR EAVE HEIGHT < 12'-0"

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

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: CARPORTSNSHEDS

CARPORTSNSHEDS, LLC  
 158 GATEHOUSE LN.  
 DOBSON, NC 27017

30'-0" x 14'-0" FULLY OPEN STRUCTURE

DATE: 1-14-21

SCALE: NTS

JOB NO: 20320S

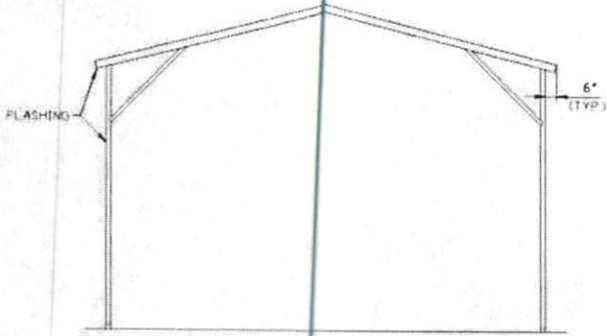
SHT. 16

DWG. NO: SK-1

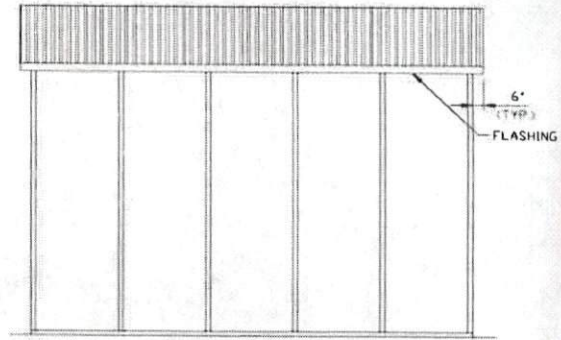
REV: 0

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.

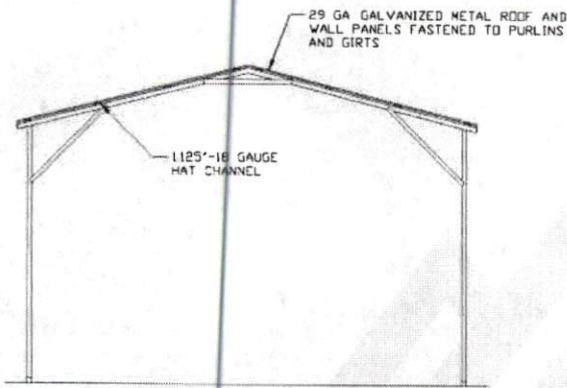
## BOX EAVE RAFTER VERTICAL ROOF OPTION



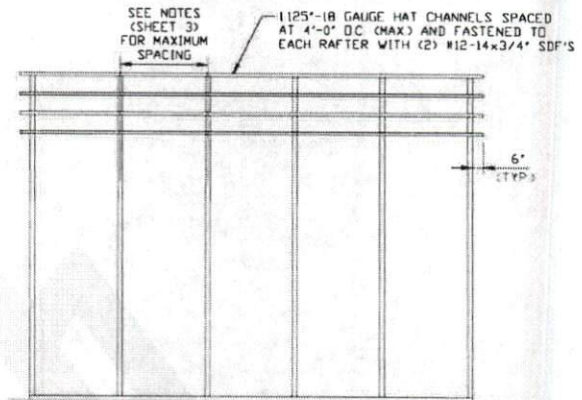
**TYPICAL END ELEVATION  
 VERTICAL ROOF/SIDING**  
 SCALE: NTS



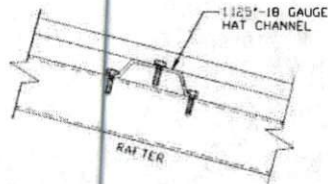
**TYPICAL SIDE ELEVATION  
 VERTICAL ROOF/SIDING**  
 SCALE: NTS



**TYPICAL SECTION VERTICAL  
 ROOF/SIDING OPTION**  
 SCALE: NTS



**TYPICAL FRAMING SECTION  
 VERTICAL ROOF OPTION**  
 SCALE: NTS



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

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

**DRAWN BY: LT**

**CHECKED BY: PDH**

**PROJECT MGR: WSM**

**CLIENT: CARPORTSNSHEDS**

**CARPORTSNSHEDS, LLC**

158 GATEHOUSE LN.

DOBSON, NC 27017

30'-0" x 14'-0" FULLY OPEN STRUCTURE

**DATE: 1-14-21**

**SCALE: NTS**

**JOB NO: 20320S**

**SHT. 17**

**DWG. NO: SK-1**

**REV: 0**

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.