

NOTICE TO CONTRACTOR
All construction shall comply with the applicable Building Code
and shall be in accordance with the applicable code.
APPROVED
I hereby approve the plans for
the building and structure for
the location and use shown.
01/25/2021

Harnett
COUNTY
NORTH CAROLINA

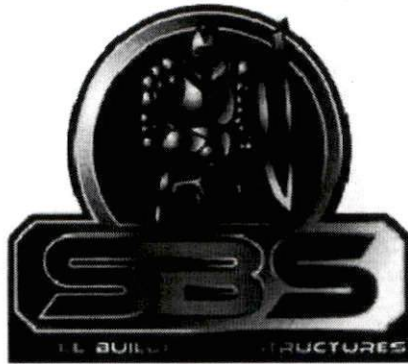


Steel Buildings and Structures Inc.

PO Box 1287
Mt. Airy, NC 27030
877-272-8276 Ext: 122
fgarcia@sbsihq.com

Enclosed are the certified plans for the building that you have purchased. Please let our office know if you plan on pulling a permit for the building to be installed. If you decide not to pull a permit you are taking full and complete responsibility of any fines that can be enforced by the city, county, or town within which you live for not obtaining any necessary permits. Please let me know if you have any questions, or if you need any help during the permitting process. Also, please be aware that some pages in the packet may not pertain to your building, as these are generic drawings and not site specific. Please do not remove any pages from this packet as some counties will consider them as being tampered with and may not accept them. If you have any questions please contact me. Thank you for choosing Steel Buildings and Structures Inc. Have a great day!

Sincerely,
Frances Garcia



STRUCTURAL DESIGN
PARTIALLY OPEN (UTILITY) BUILDING

**MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT-
BOX EAVE FRAME AND BOW FRAME**

14 February 2020

Revision 8

M&A Project No. 16062S/16155S/16207S/17155S/17200S/18068S/18156S/18290S/20019S

Prepared for:

Steel Buildings and Structures, Inc.

P.O. Box 1287

Mt. Airy, NC 27030

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


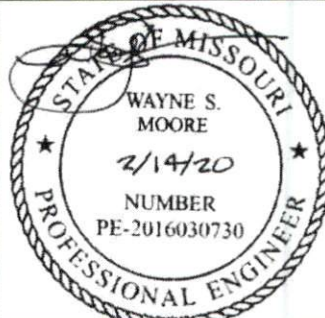
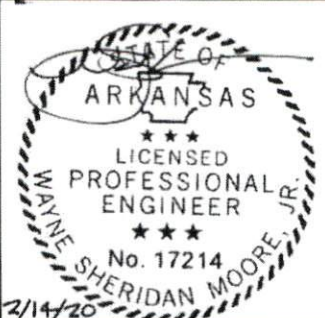



		I HAVE RESEARCHED THIS CHAPTER AND THE LOUISIANA STATE UNIFORM CONSTRUCTION CODE AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, THESE DRAWINGS ARE IN COMPLIANCE THEREWITH. I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS.	

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

DRAWN BY: LT
CHECKED BY: PDH
PROJECT MGR: WSM
CLIENT: SBSI

STEEL BUILDINGS AND STRUCTURES, INC.
P.O. BOX 1287,
MOUNT AIRY, NC 27030
30'-0" x 20'-0" UTILITY STRUCTURE
DATE: 2-14-20
SHT. 1
SCALE: NTS
DWG. NO: SK-2
JOB NO: 18068S
18156S/18290S/20019S
REV: 8

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	<p>Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 49744, Expiration Date <u>2/14/20</u></p>		
			
			
			
			

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CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: SBSI

STEEL BUILDINGS AND STRUCTURES, INC.
P.O. BOX 1287,
MOUNT AIRY, NC 27030
30'-0" x 20'-0" UTILITY STRUCTURE

DATE: 2-14-20

SCALE: NTS

SHT. 1A

DWG. NO: SK-2

JOB NO: 18068S
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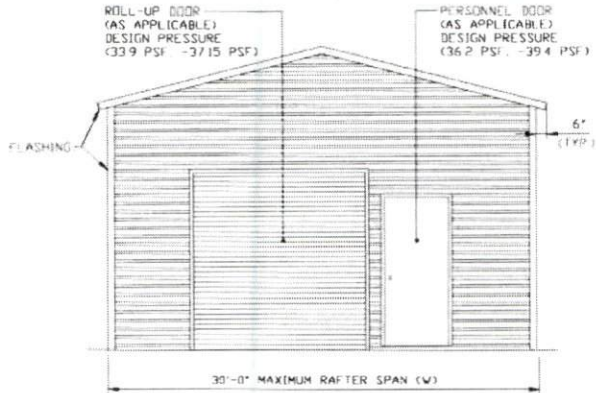
MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT	STEEL BUILDINGS AND STRUCTURES, INC. P.O. BOX 1287, MOUNT AIRY, NC 27030 30'-0" x 20'-0" UTILITY STRUCTURE			
	CHECKED BY: PDH				
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	CLIENT: SBST	SHT. 2	DWG. NO: SK-2	REV: 8	

INSTALLATION NOTES AND SPECIFICATIONS

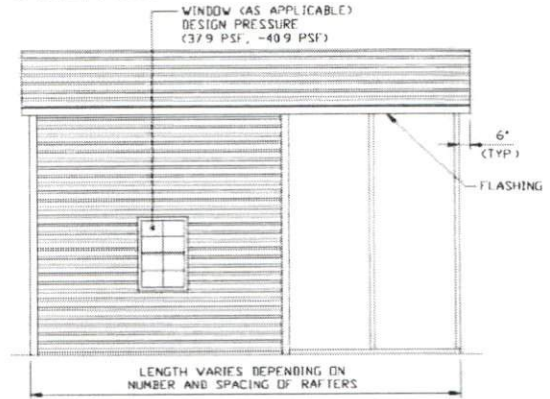
1. DESIGN IS FOR MAXIMUM 30'-0" WIDE x 20'-0" EAVE HEIGHT UTILITY STRUCTURES
2. DESIGN WAS DONE IN ACCORDANCE WITH THE 2017 FLORIDA BUILDING CODE (FBC) 6TH EDITION, 2018 NORTH CAROLINA BUILDING CODE, 2006 INTERNATIONAL BUILDING CODE (IBC), 2009 IBC, 2012 IBC, 2015 IBC AND 2018 IBC.
3. DESIGN LOADS ARE AS FOLLOWS:
 - A) DEAD LOAD = 1.5 PSF
 - B) LIVE LOAD = 12 PSF
 - C) GROUND SNOW LOAD = 30 PSF ($\leq 26'-0"$), 35 PSF ($26'-0" < W \leq 30'-0"$)
 NOTE: (UNBALANCED SNOW LOADS DUE TO DRIFTING HAVE NOT BEEN EVALUATED)
4. 3-SECOND GUST ULTIMATE 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) ARE EQUIVALENT TO SIDE WALL POSTS 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 1/4"x3/4" SELF-DRILLING FASTENER (SDF), 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. ROOF SLOPES LESS THAN 3:12 REQUIRE USE OF LAP JOINT SEALANT
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 36" LONG AND MAY BE USED IN SUITABLE SOILS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS AS NOTED.
14. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:
 SOIL SITE CLASS = D
 RISK CATEGORY I
 $R = 3.25$ $I_e = 10$
 $S_{DS} = 2.039 g$ $V = C_s W$
 $S_{D1} = 1.258 g$
15. WINDOW AND DOOR DESIGN PRESSURES ARE APPLICABLE TO THE STATE OF FLORIDA ONLY

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	CLIENT: SBSI	SHT. 3	DWG. NO: SK-2	REV: 8

BOX EAVE FRAME RAFTER STRUCTURE

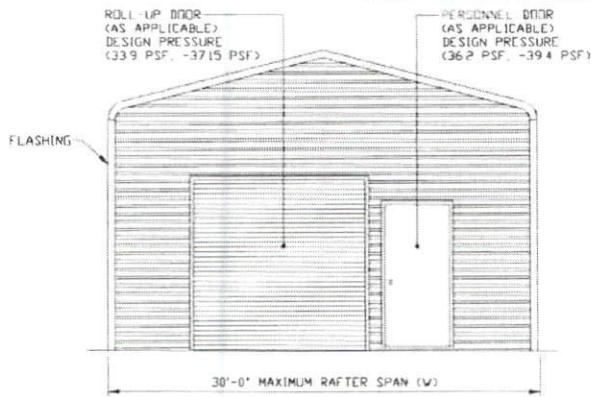


TYPICAL END ELEVATION
SCALE: NTS

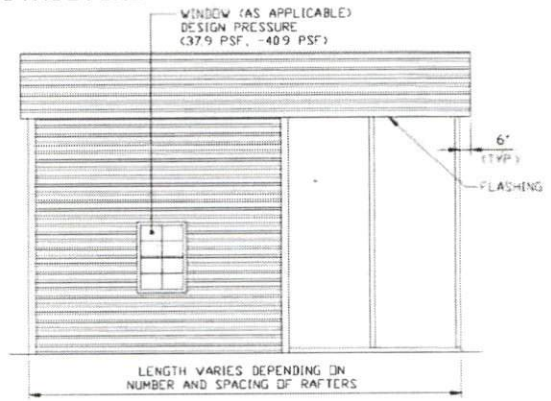


TYPICAL SIDE ELEVATION
SCALE: NTS

BOX EAVE FRAME RAFTER STRUCTURE



TYPICAL END ELEVATION
SCALE: NTS



TYPICAL SIDE ELEVATION
SCALE: NTS

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SHT. 4

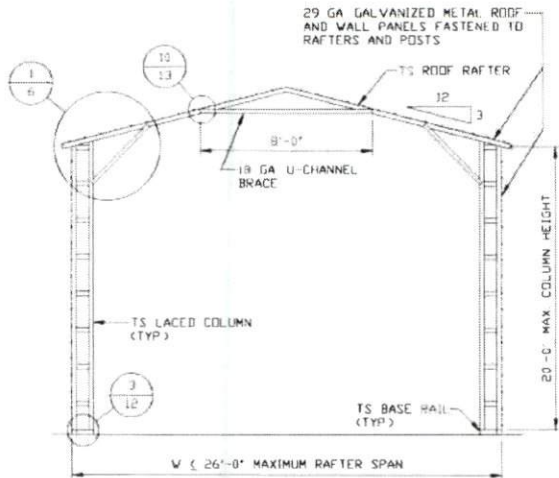
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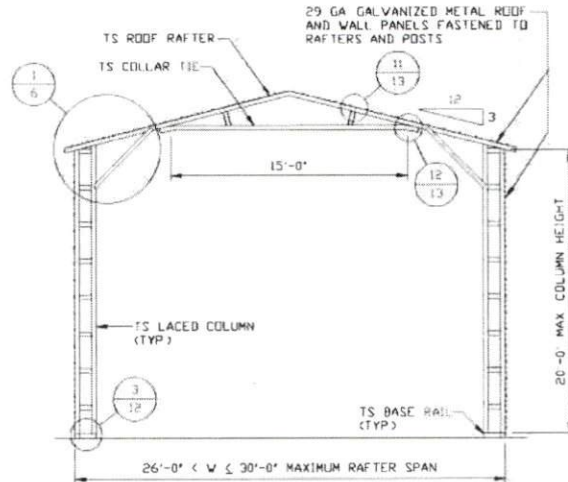
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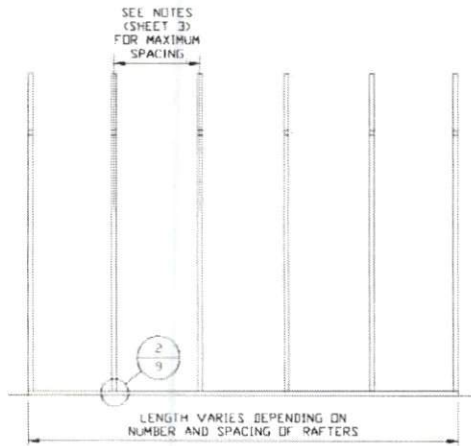
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TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
SCALE: NTS

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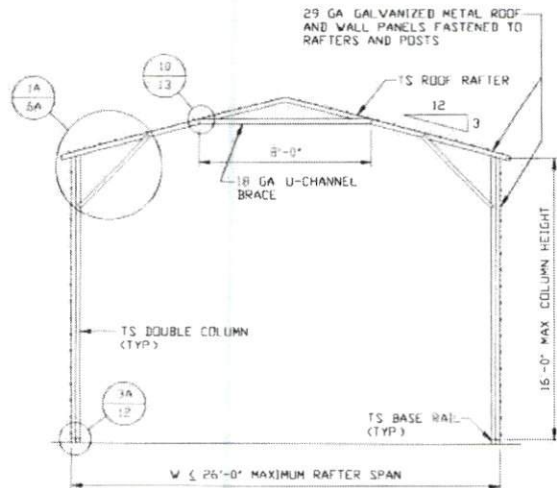
JOB NO: 18060S
18156S/18290S/20019S

SHT. 5

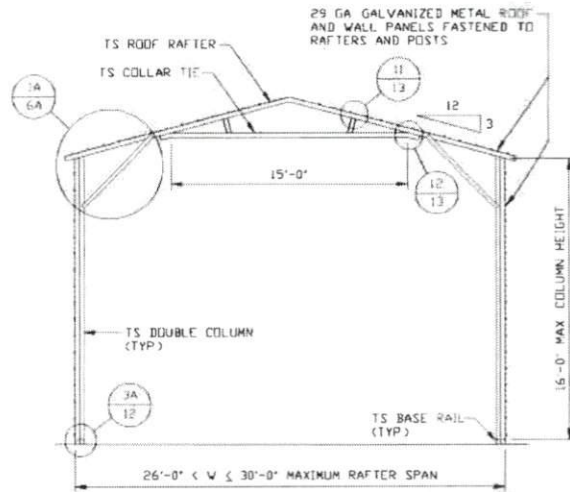
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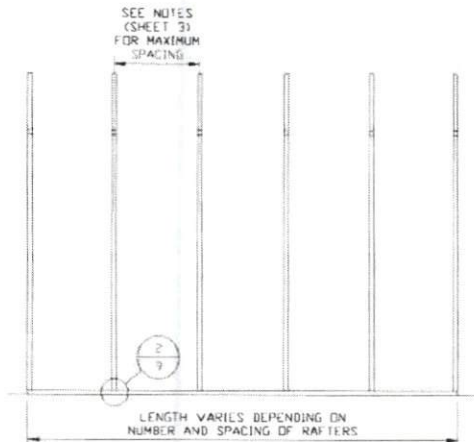
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TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
SCALE: NTS

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STEEL BUILDINGS AND STRUCTURES, INC.

P.O. BOX 1287,
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30'-0" x 20'-0" UTILITY STRUCTURE

DATE: 2-14-20

SHT. 5A

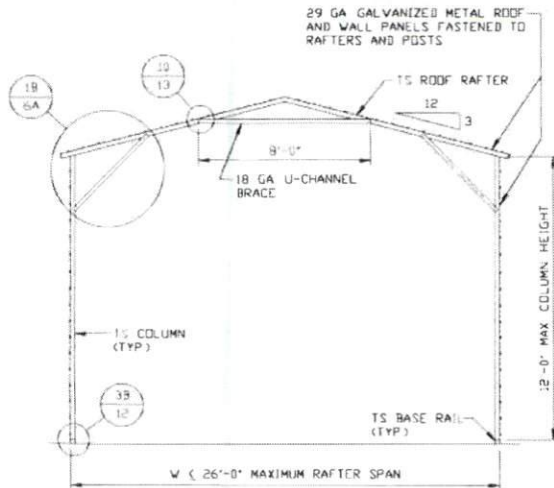
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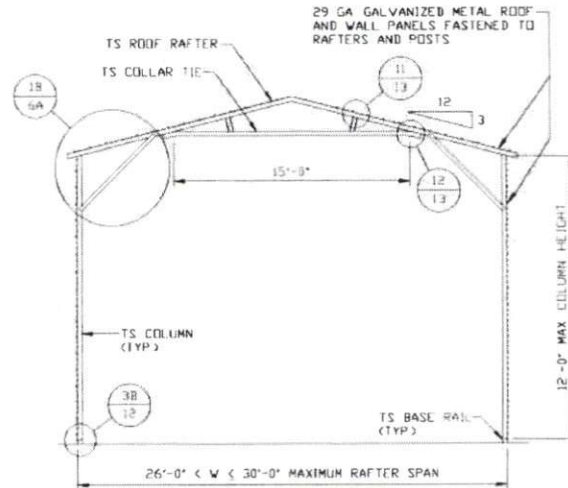
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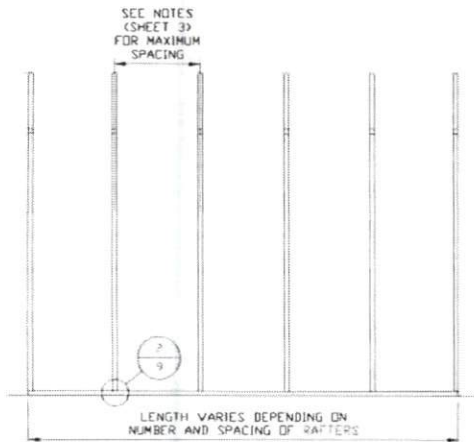
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TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
SCALE: NTS

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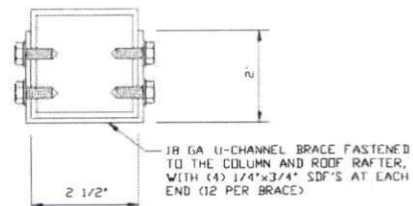
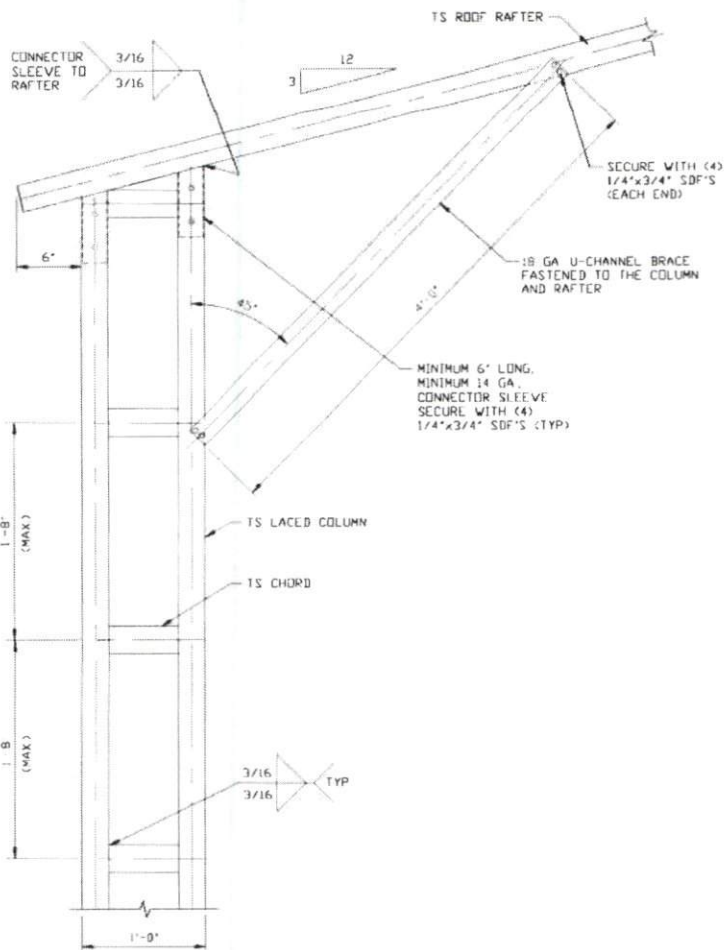
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BRACE SECTION
SCALE: NTS

**BOX EAVE RAFTER/CORNER POST
CONNECTION DETAIL
FOR HEIGHTS 16'-0" < TO ≤ 20'-0"**

1

SCALE: NTS

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30'-0"x20'-0" UTILITY STRUCTURE

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SCALE: NTS

SHT. 6

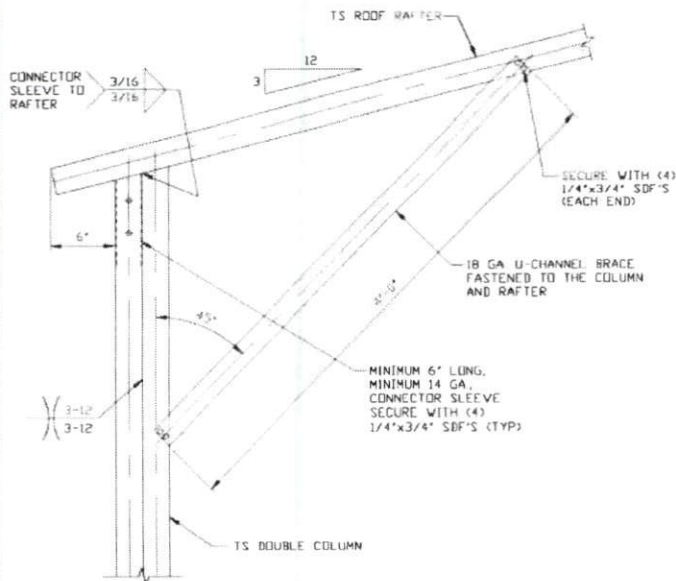
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JOB NO: 18068S

18156S/18290S/20019S

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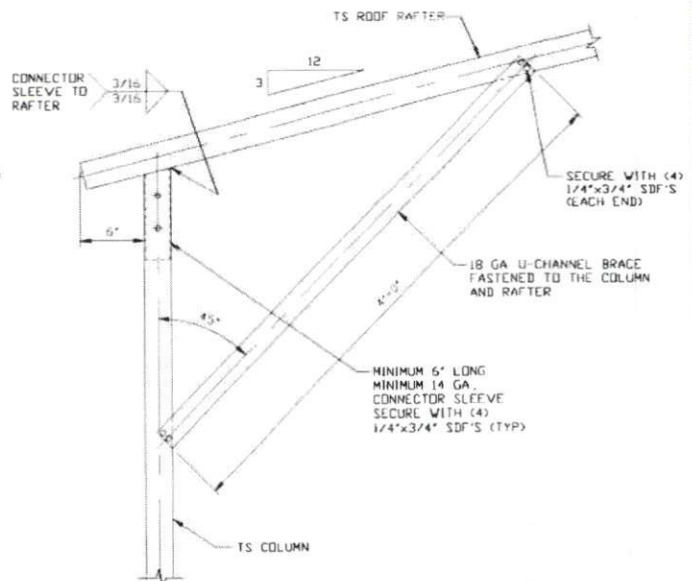
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BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO ≤ 16'-0"

1A

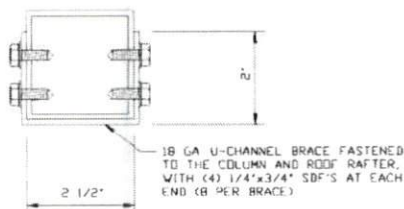
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BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS ≤ 12'-0"

1B

SCALE: NTS



BRACE SECTION

SCALE: NTS

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CLIENT: SBST

STEEL BUILDINGS AND STRUCTURES, INC.
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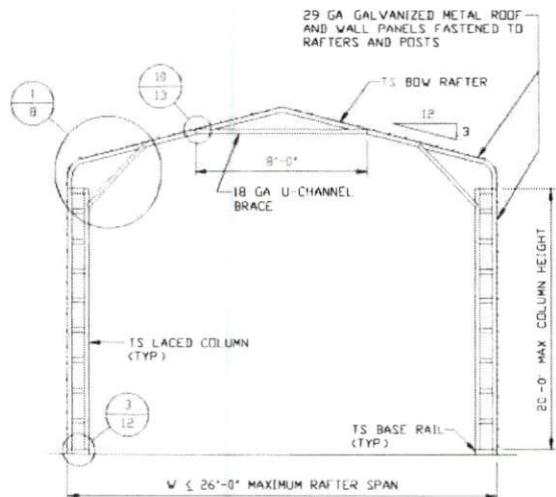
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18156S/18290S/20019S

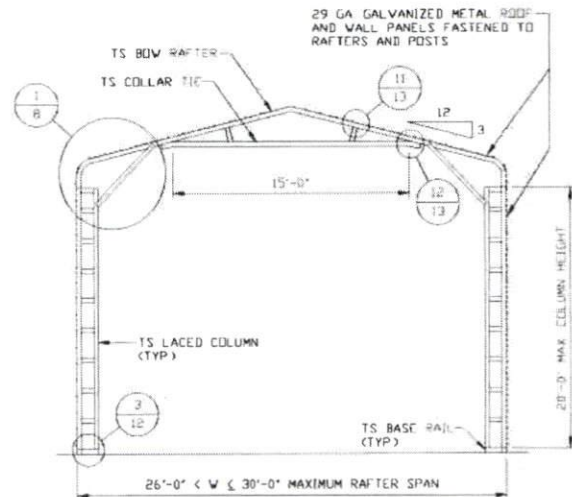
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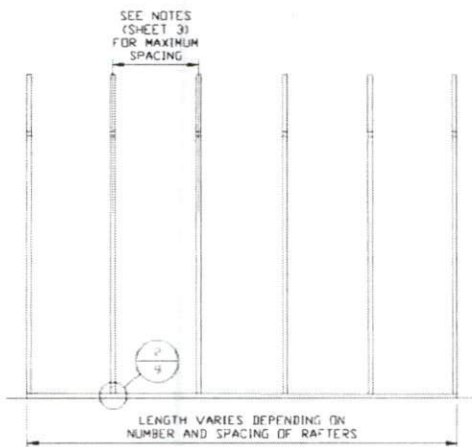
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TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
SCALE: NTS

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SHT. 7

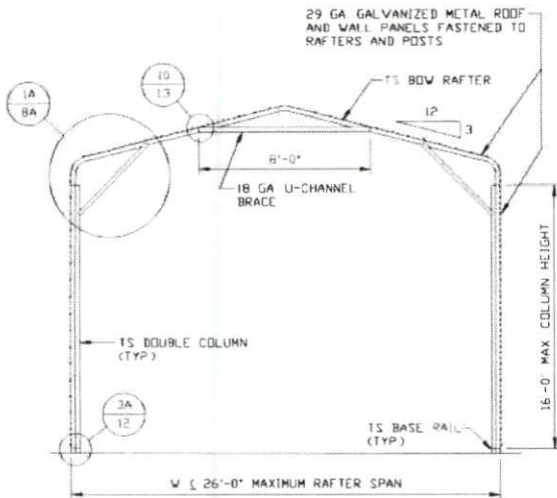
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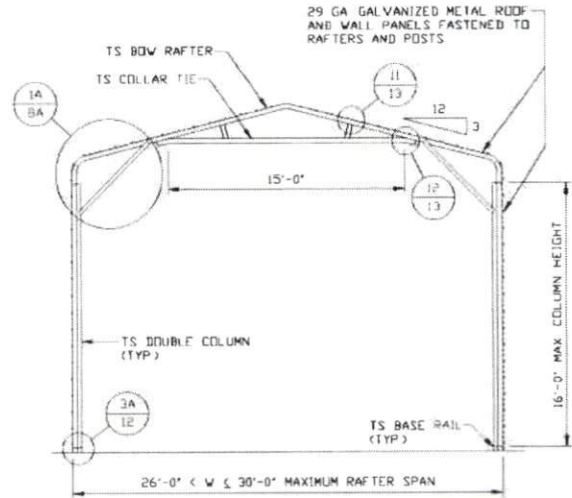
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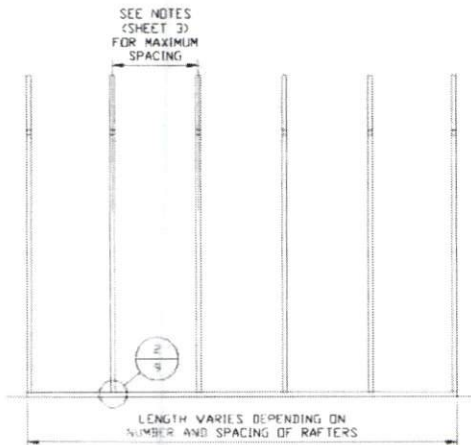
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TYPICAL RAFTER/COLUMN FRAME SECTION
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TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
SCALE: NTS

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SHT. 7A

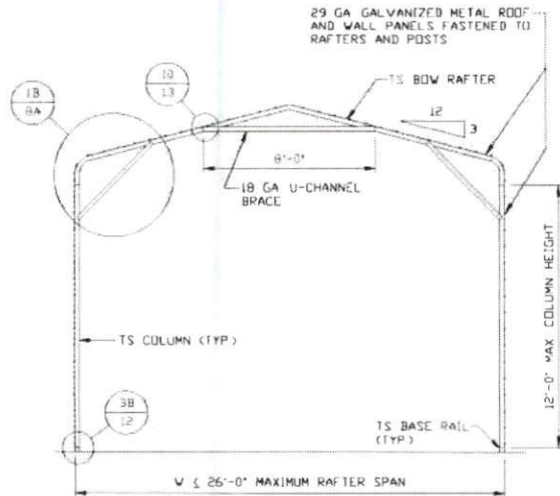
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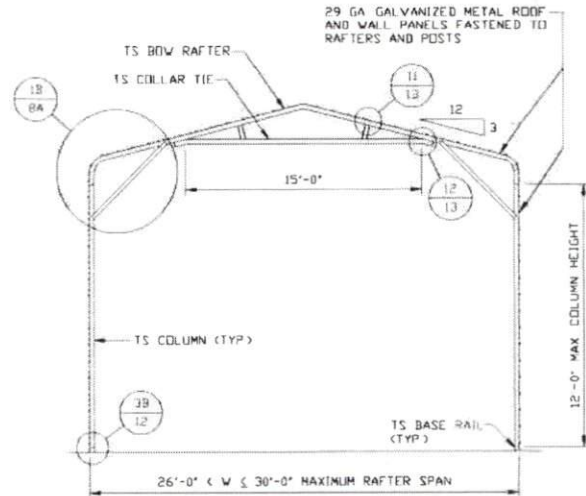
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18156S/18290S/20019S

REV: B

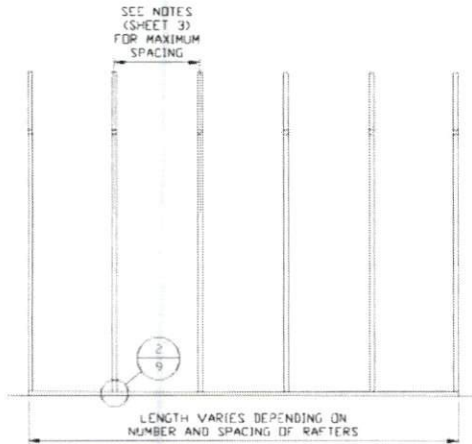
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TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
SCALE: NTS

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ENGINEERING AND CONSULTING, INC.**

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: SBSI

STEEL BUILDINGS AND STRUCTURES, INC.
P.O. BOX 1287,
MOUNT AIRY, NC 27030
30'-0" x 20'-0" UTILITY STRUCTURE

DATE: 2-14-20

SHT. 7B

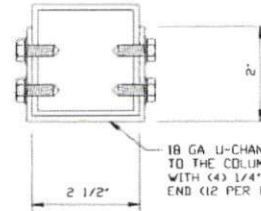
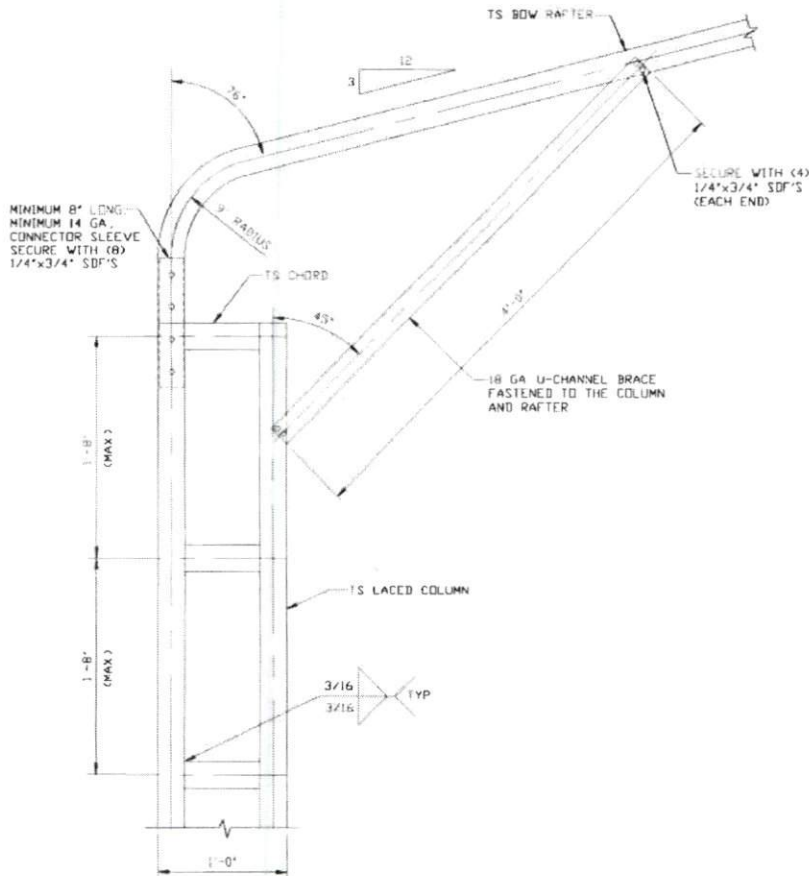
SCALE: NTS

DWG. NO: SK-2

JOB NO: 18068S
18156S/18290S/20019S

REV: 8

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BRACE SECTION

SCALE: NTS

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

BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS 16'-0" < TO ≤ 20'-0"

1

SCALE: NTS

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ENGINEERING AND CONSULTING, INC.**

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: SBST

STEEL BUILDINGS AND STRUCTURES, INC.
P.O. BOX 1287,
MOUNT AIRY, NC 27030
30'-0" x 20'-0" UTILITY STRUCTURE

DATE: 2-14-20

SCALE: NTS

SHT. 8

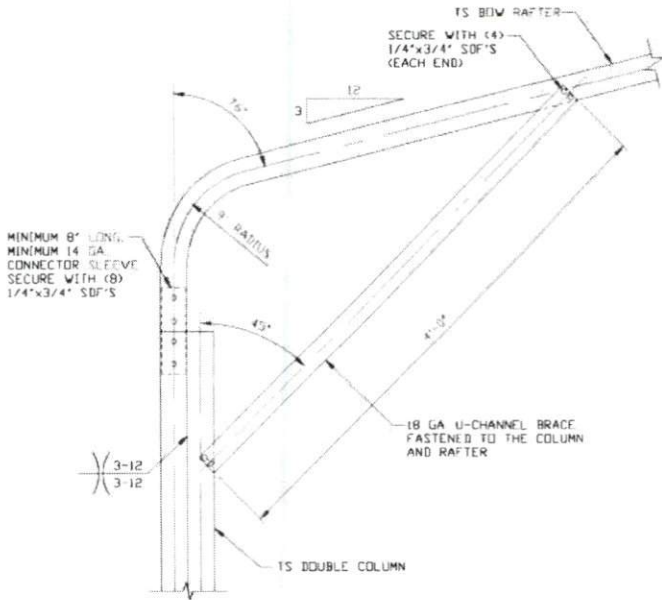
DWG. NO: SK-2

JOB NO: 18068S

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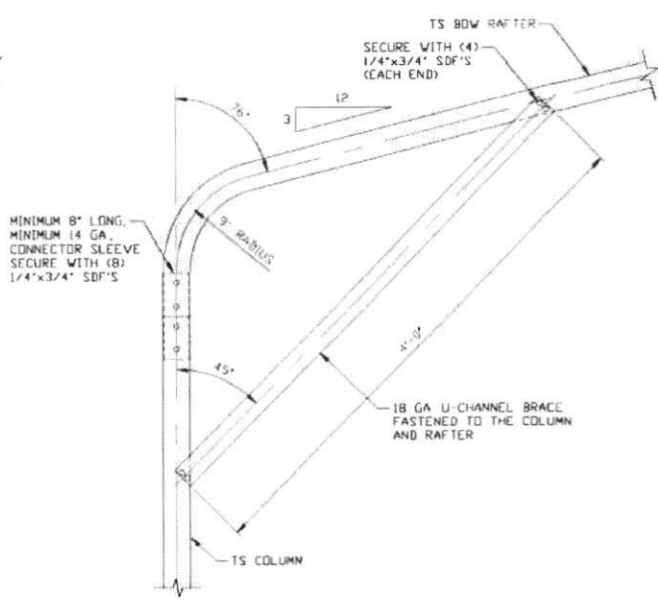
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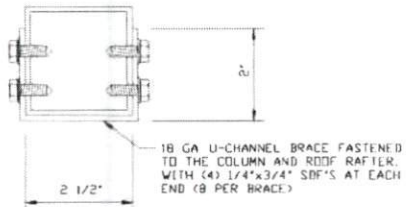
1A

BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO ≤ 16'-0"
SCALE: NTS



1B

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



BRACE SECTION
SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

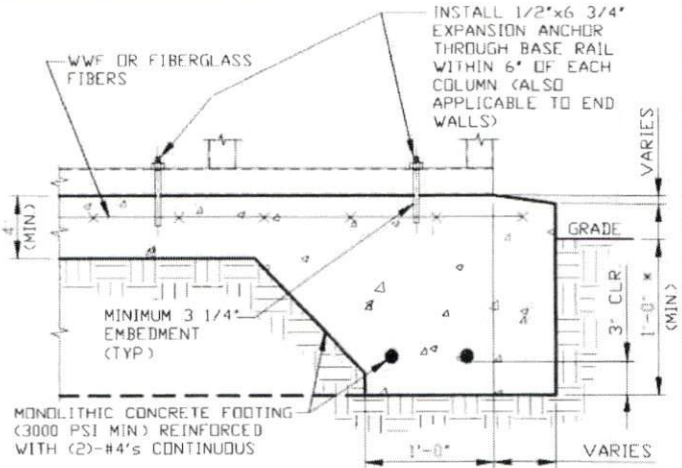
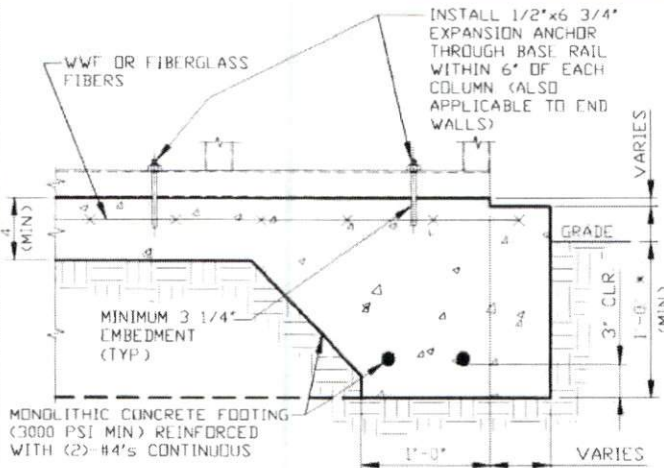
DRAWN BY: LT
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PROJECT MGR: WSM
CLIENT: SBSI

STEEL BUILDINGS AND STRUCTURES, INC.
P.O. BOX 1287,
MOUNT AIRY, NC 27030
30'-0" x 20'-0" UTILITY STRUCTURE
DATE: 2-14-20
SCALE: NTS
SHT. 8A
DWG. NO: SK-2
REV: 8

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BASE RAIL ANCHORAGE OPTIONS



2

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

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

2A

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:

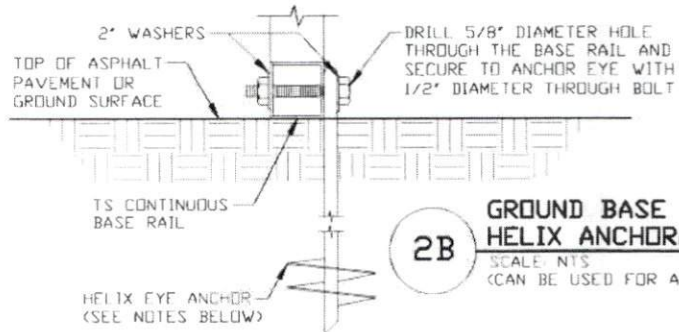
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT

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



2B

GROUND BASE HELIX ANCHORAGE

SCALE: NTS
(CAN BE USED FOR ASPHALT)

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STEEL BUILDINGS AND STRUCTURES, INC.
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30'-0" x 20'-0" UTILITY STRUCTURE

DATE: 2-14-20

SHT. 9

SCALE: NTS

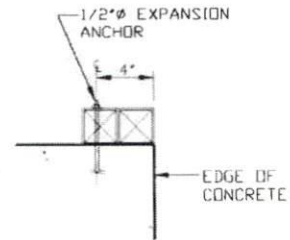
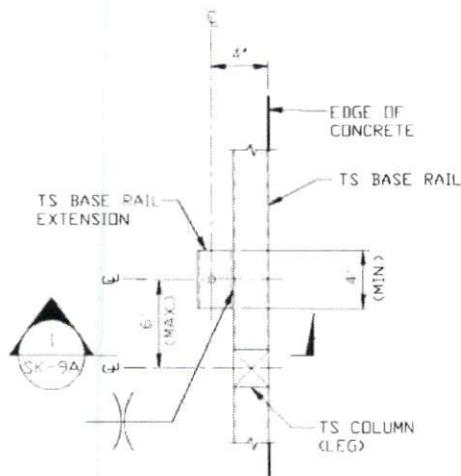
DWG. NO: SK-2

JOB NO: 18068S
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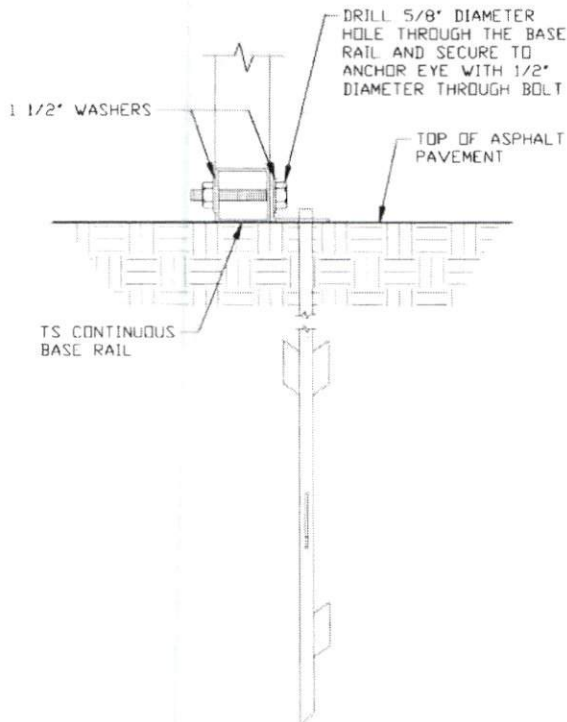
ADDITIONAL BASE RAIL ANCHORAGE OPTION



SECTION 1
SCALE: NTS

TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE

SCALE: NTS



2C

ASPHALT BASE ANCHORAGE

SCALE: NTS

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SCALE: NTS

SHT. 9A

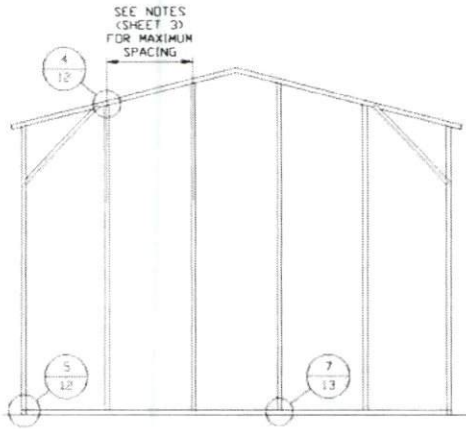
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JOB NO: 18068S
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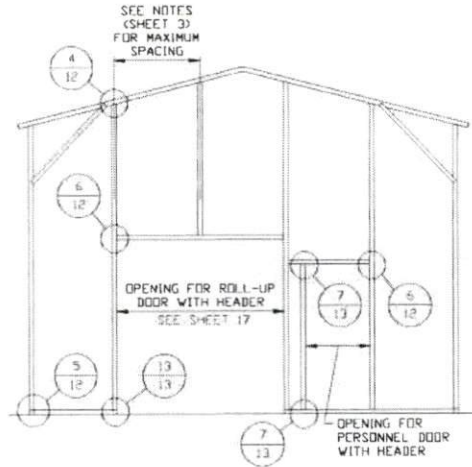
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BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



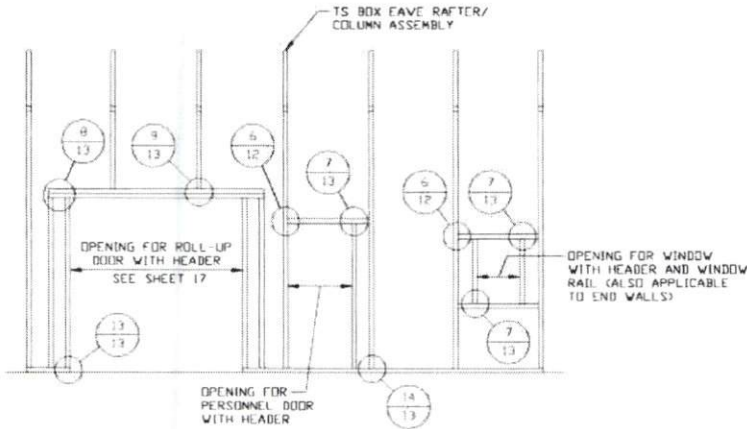
**TYPICAL BOX EAVE RAFTER
END WALL FRAMING SECTION**

SCALE: NTS



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

SCALE: NTS



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

SCALE: NTS

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30'-0" x 20'-0" UTILITY STRUCTURE

DATE: 2-14-20

SHT. 10

SCALE: NTS

DWG. NO: SK-2

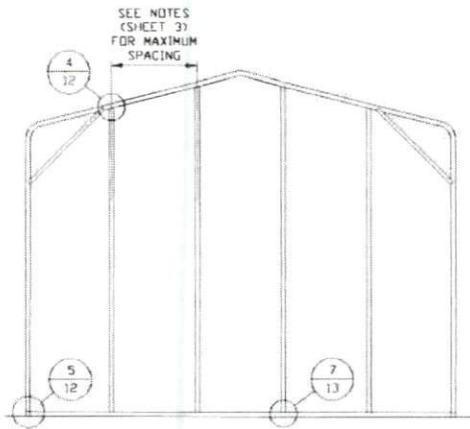
JOB NO: 18068S

18156S/18290S/20019S

REV: 8

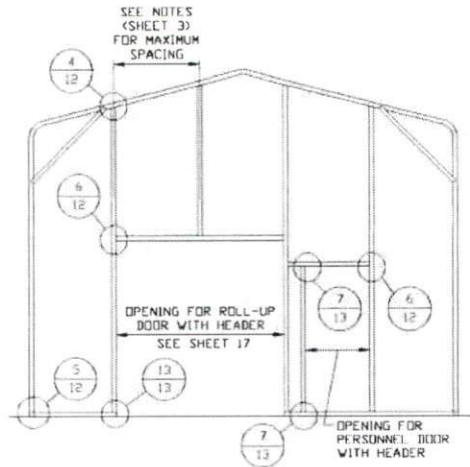
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BOW EAVE RAFTER END WALL AND SIDE WALL OPENINGS



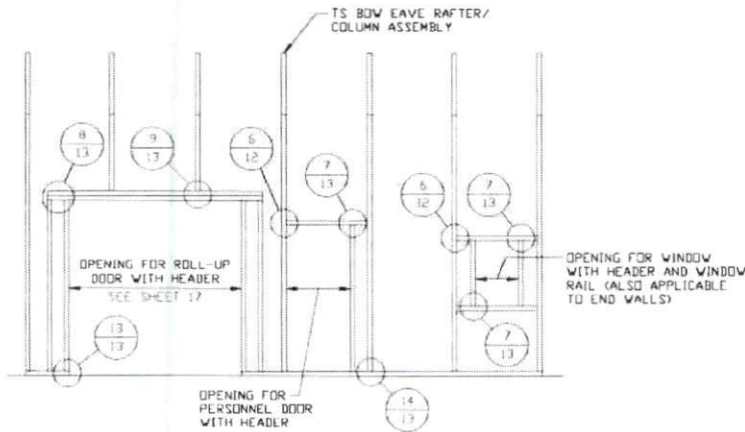
**TYPICAL BOX EAVE RAFTER
END WALL FRAMING SECTION**

SCALE: NTS



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

SCALE: NTS



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

SCALE: NTS

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30'-0" x 20'-0" UTILITY STRUCTURE

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SCALE: NTS

SHT. 11

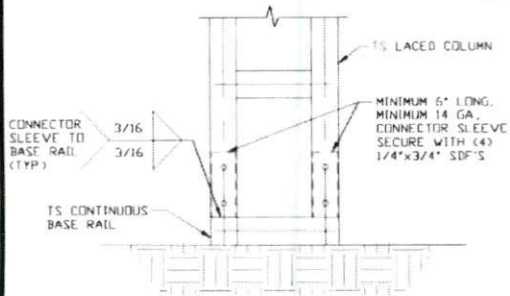
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JOB NO: 18068S
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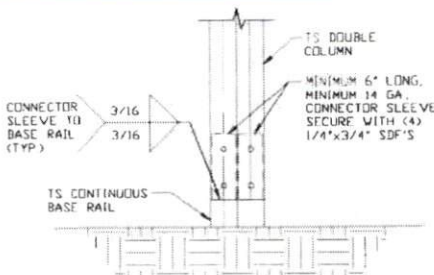
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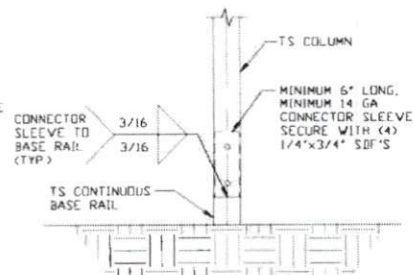
CONNECTION DETAILS



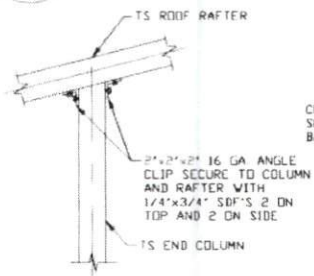
3 POST/BASE RAIL CONNECTION DETAIL
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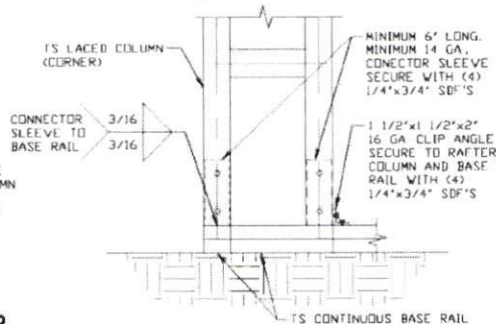
3A POST/BASE RAIL CONNECTION DETAIL
SCALE: NTS



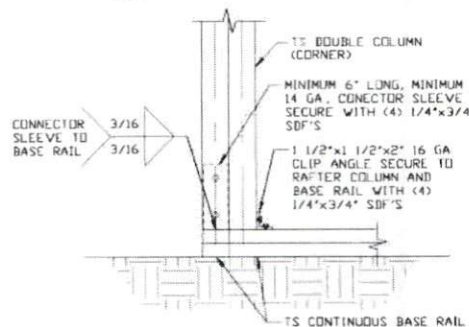
3B POST/BASE RAIL CONNECTION DETAIL
SCALE: NTS



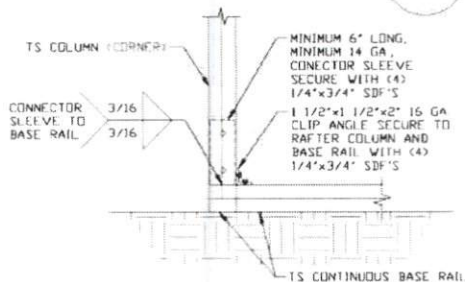
4 END COLUMN/RAFTER CONNECTION DETAIL
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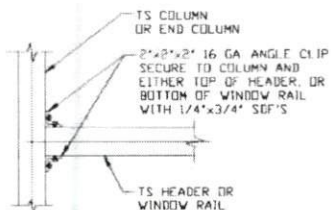
5 END COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS



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



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



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

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30'-0" x 20'-0" UTILITY STRUCTURE

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SHT. 12

SCALE: NTS

DWG. NO: SK-2

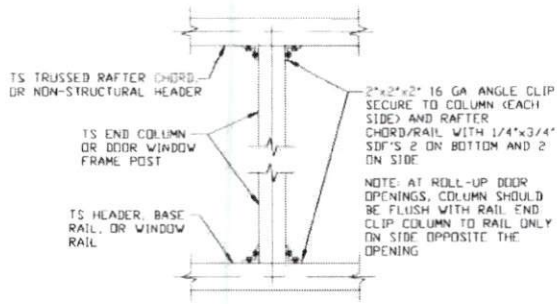
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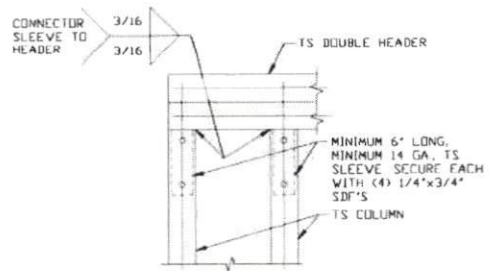
CONNECTION DETAILS



7

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

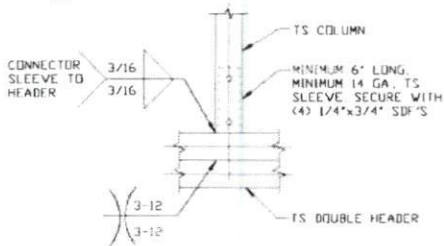
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8

DOUBLE HEADER/COLUMN CONNECTION DETAIL

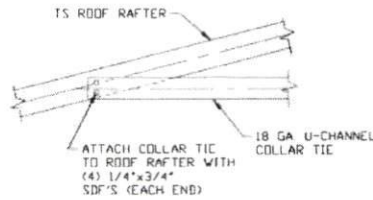
SCALE: NTS



9

COLUMN/DOUBLE HEADER CONNECTION DETAIL

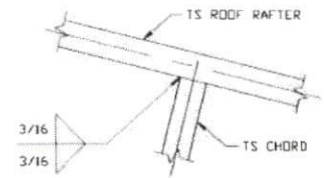
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10

COLLAR TIE CONNECTION DETAIL

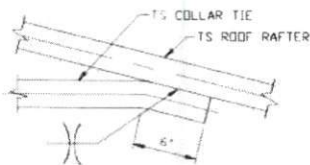
SCALE: NTS



11

RAFTER TO CHORD CONNECTION DETAIL

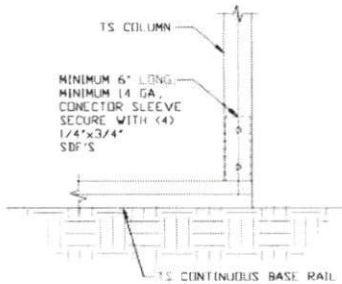
SCALE: NTS



12

COLLAR TIE CONNECTION DETAIL

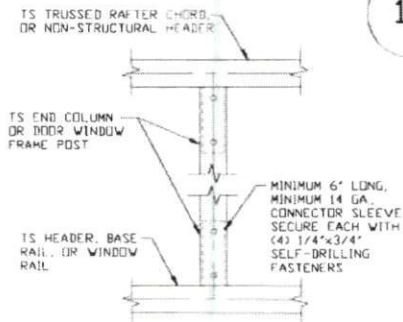
SCALE: NTS



13

COLUMN/BASE RAIL CONNECTION DETAIL

SCALE: NTS



14

COLUMN TO HEADER OR BASE RAIL CONNECTION DETAIL

SCALE: NTS

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SHT. 13

SCALE: NTS

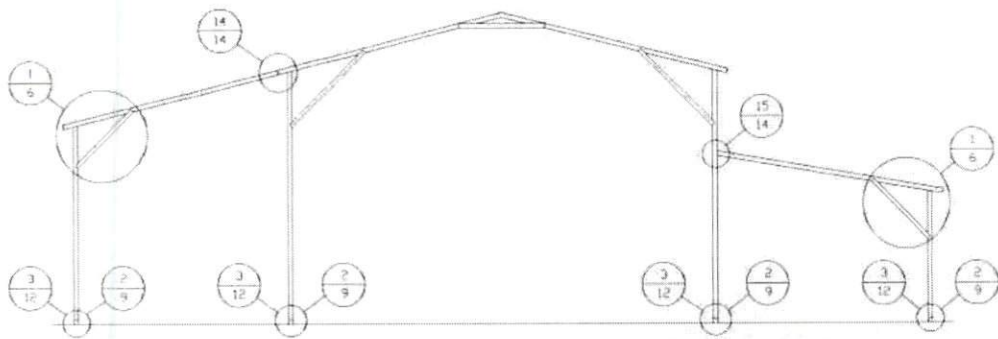
DWG. NO: SK-2

JOB NO: 18068S
18156S/18290S/20019S

REV: 8

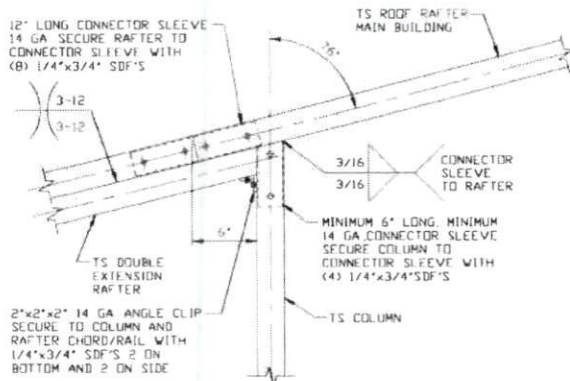
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BOX EAVE RAFTER LEAN-TO OPTIONS



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

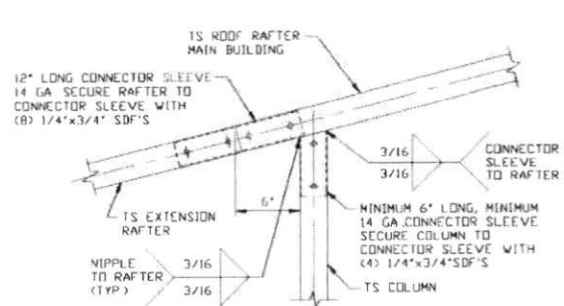
SCALE: NTS
 MAXIMUM WIDTH OF SINGLE MEMBER (RAFTER) ROOF EXTENSION LEAN-TO IS 12'-0"
 MAXIMUM WIDTH OF DOUBLE MEMBER RAFTER ROOF EXTENSION LEAN-TO IS 16'-0"
 FOR SHARED COLUMN HEIGHTS REFERENCE RAFTER COLUMN CONNECTION DETAILS FOR APPROPRIATE COLUMN HEIGHT AND TUBING SPECIFICATIONS



14

**SIDE EXTENSION RAFTER/
COLUMN DETAIL FOR RAFTER
SPANS 12'-0' < TO < 16'-0'**

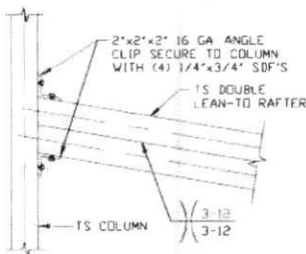
SCALE: NTS



14A

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

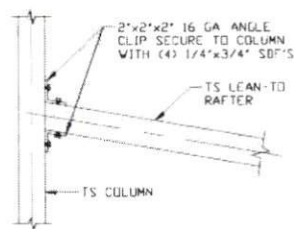
SCALE: NTS



15

**LEAN-TO RAFTER
TO RAFTER POST
CONNECTION DETAIL
FOR WIDTHS
12'-0' < TO < 16'-0'**

SCALE: NTS



15A

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

SCALE: NTS

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ENGINEERING AND CONSULTING, INC.**

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CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: SBST

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30'-0" x 20'-0" UTILITY STRUCTURE

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SHT. 14

SCALE: NTS

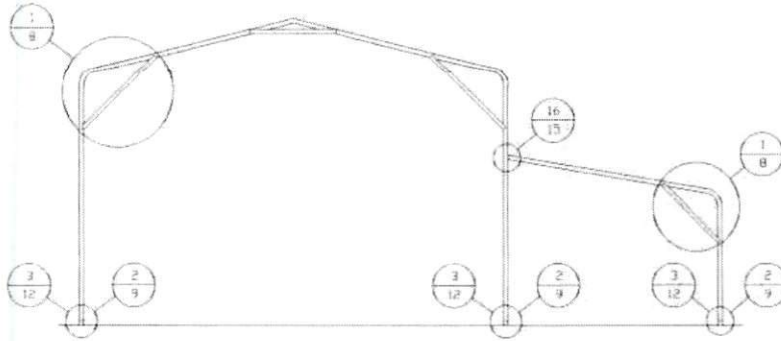
DWG. NO: SK-2

JOB NO: 18068S
18156S/18290S/20019S

REV: 8

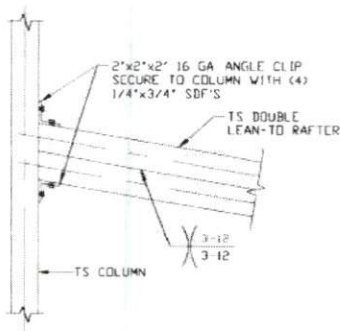
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BOW EAVE RAFTER LEAN-TO OPTIONS



TYPICAL BOW EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION

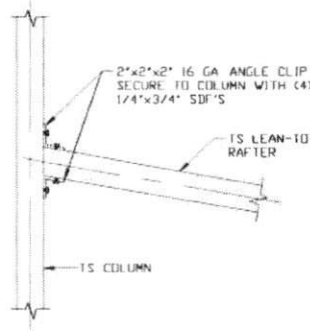
SCALE: NTS
 MAXIMUM WIDTH OF SINGLE MEMBER (RAFTER) ROOF EXTENSION LEAN-TO IS 12'-0"
 MAXIMUM WIDTH OF DOUBLE MEMBER RAFTER ROOF EXTENSION LEAN-TO IS 16'-0"
 FOR SHARED COLUMN HEIGHTS REFERENCE RAFTER COLUMN CONNECTION DETAILS FOR APPROPRIATE COLUMN HEIGHT AND TUBING SPECIFICATIONS



**LEAN-TO RAFTER TO RAFTER POST CONNECTION
 DETAIL FOR WIDTHS
 12'-0" < TO ≤ 16'-0"**

16

SCALE: NTS



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

16A

SCALE: NTS

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

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: WSM

CLIENT: SBST

STEEL BUILDINGS AND STRUCTURES, INC.
 P.O. BOX 1287,
 MOUNT AIRY, NC 27030
 30'-0"x20'-0" UTILITY STRUCTURE

DATE: 2-14-20

SCALE: NTS

SHT. 15

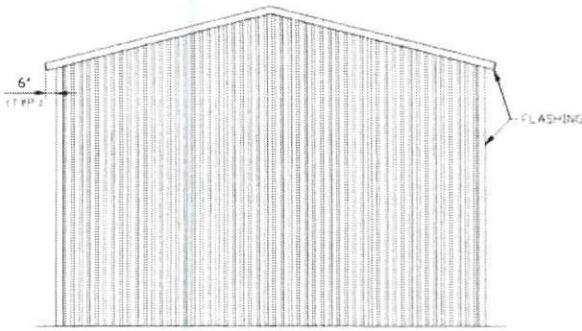
DWG. NO: SK-2

JOB NO: 18068S
 18156S/18290S/20019S

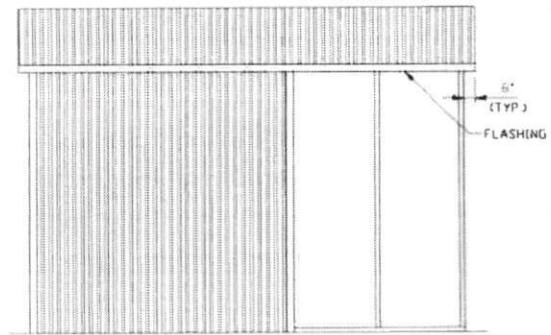
REV: 8

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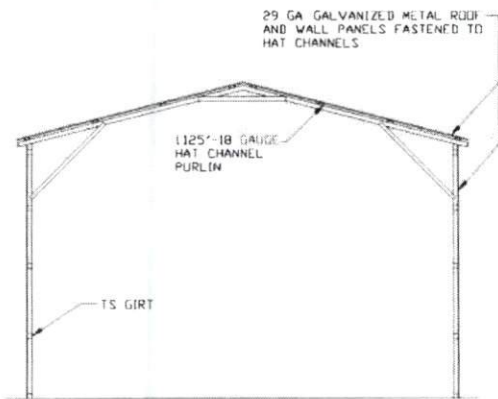
BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



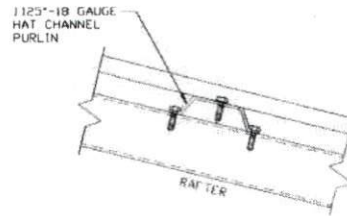
**TYPICAL END ELEVATION
VERTICAL ROOF/SIDING**
SCALE: NTS



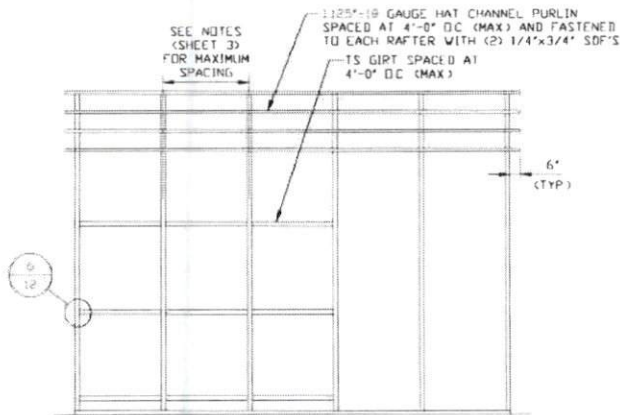
**TYPICAL SIDE ELEVATION
VERTICAL ROOF/SIDING**
SCALE: NTS



**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

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ENGINEERING AND CONSULTING, INC.**

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PROJECT MGR: WSM

CLIENT: SBST

STEEL BUILDINGS AND STRUCTURES, INC.
P.O. BOX 1287,
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30'-0" x 20'-0" UTILITY STRUCTURE

DATE: 2-14-20

SCALE: NTS

SHT. 16

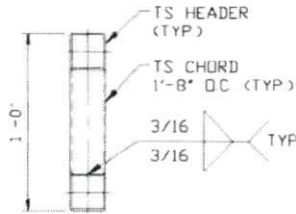
DWG. NO: SK-2

**JOB NO: 18068S
18156S/18290S/20019S**

REV: 8

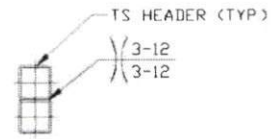
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SIDE WALL HEADER OPTIONS



**LACED HEADER DETAIL FOR DOOR
OPENINGS 12'-0" < LENGTH < 20'-0"**

SCALE: NTS



**DOUBLE HEADER DETAIL FOR DOOR
OPENINGS 7'-0" < LENGTH < 12'-0"**

SCALE: NTS



**SINGLE HEADER DETAIL FOR
DOOR OPENINGS LENGTH < 7'-0"**

SCALE: NTS

END WALL HEADER OPTIONS



**SINGLE HEADER DETAIL FOR
DOOR OPENINGS LENGTH < 12'-0"**

SCALE: NTS

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CLIENT: SBSI

STEEL BUILDINGS AND STRUCTURES, INC.

P.O. BOX 1287,

MOUNT AIRY, NC 27030

30'-0" x 20'-0" UTILITY STRUCTURE

DATE: 2-14-20

SHT. 17

SCALE: NTS

DWG. NO: SK-2

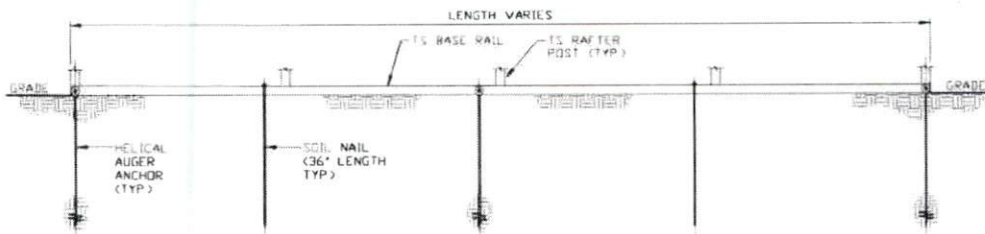
JOB NO: 18068S

18156S/18290S/20019S

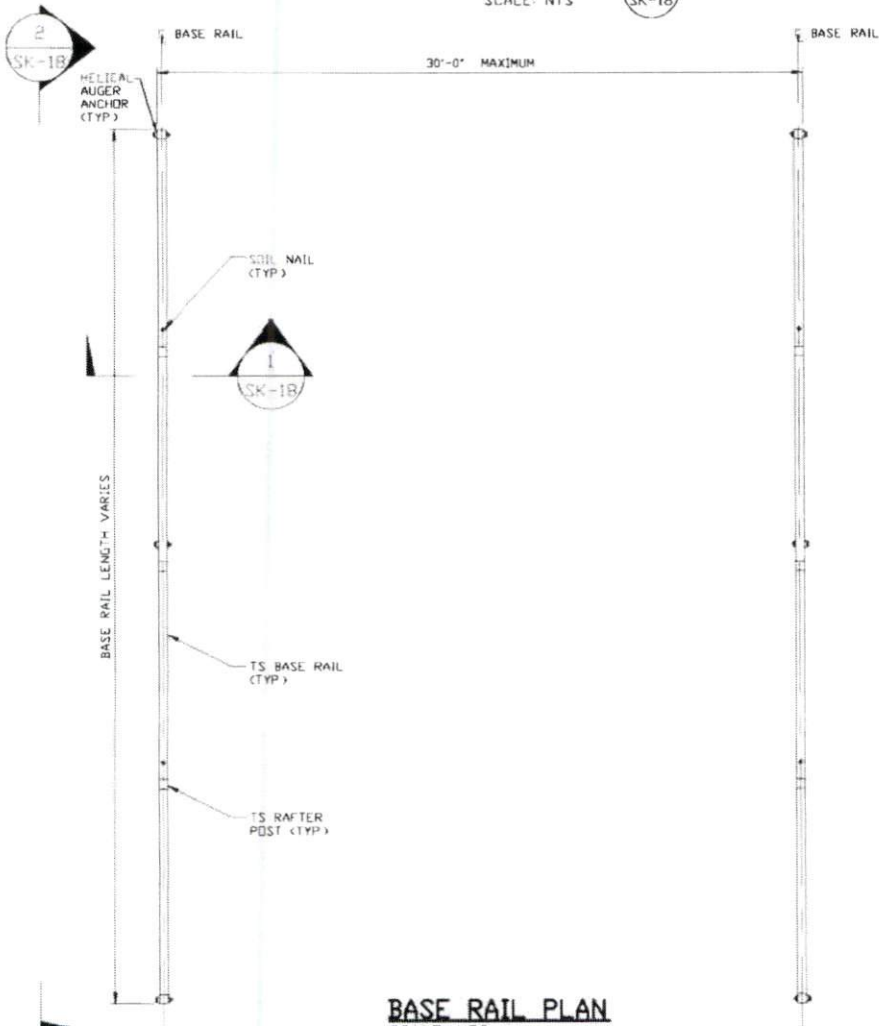
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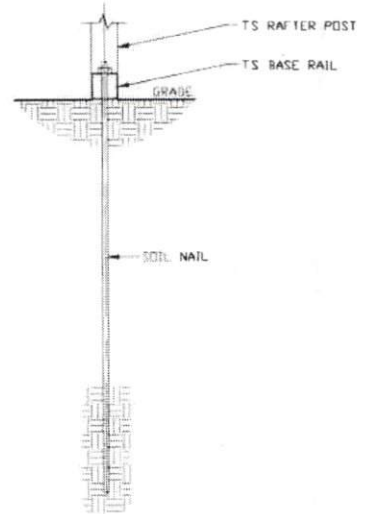
OPTIONAL BASE RAIL ON GRADE APPLICATION



SECTION 2
SCALE: NTS



BASE RAIL PLAN
SCALE: NTS



SECTION 1
SCALE: NTS

HELIX ANCHOR	
SIDE LENGTH	MAXIMUM SPACING
VARIES	10'-0" (EVERY OTHER POST)

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ENGINEERING AND CONSULTING, INC.**

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STEEL BUILDINGS AND STRUCTURES, INC.
P.O. BOX 1287,
MOUNT AIRY, NC 27030
30'-0" x 20'-0" UTILITY STRUCTURE

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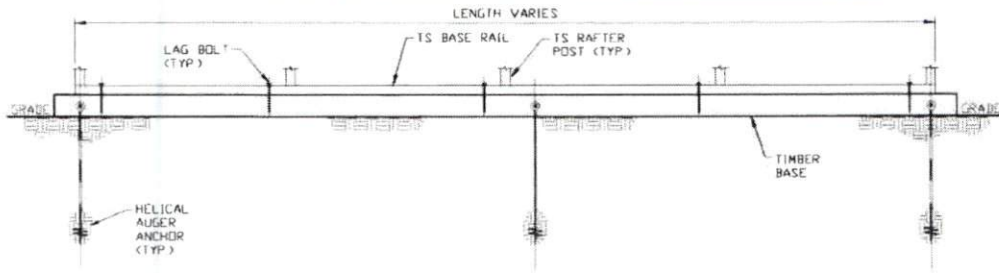
PROJECT MGR: WSM
CLIENT: SBSI

DATE: 2-14-20
SHT. 18

SCALE: NTS
DWG. NO SK-2

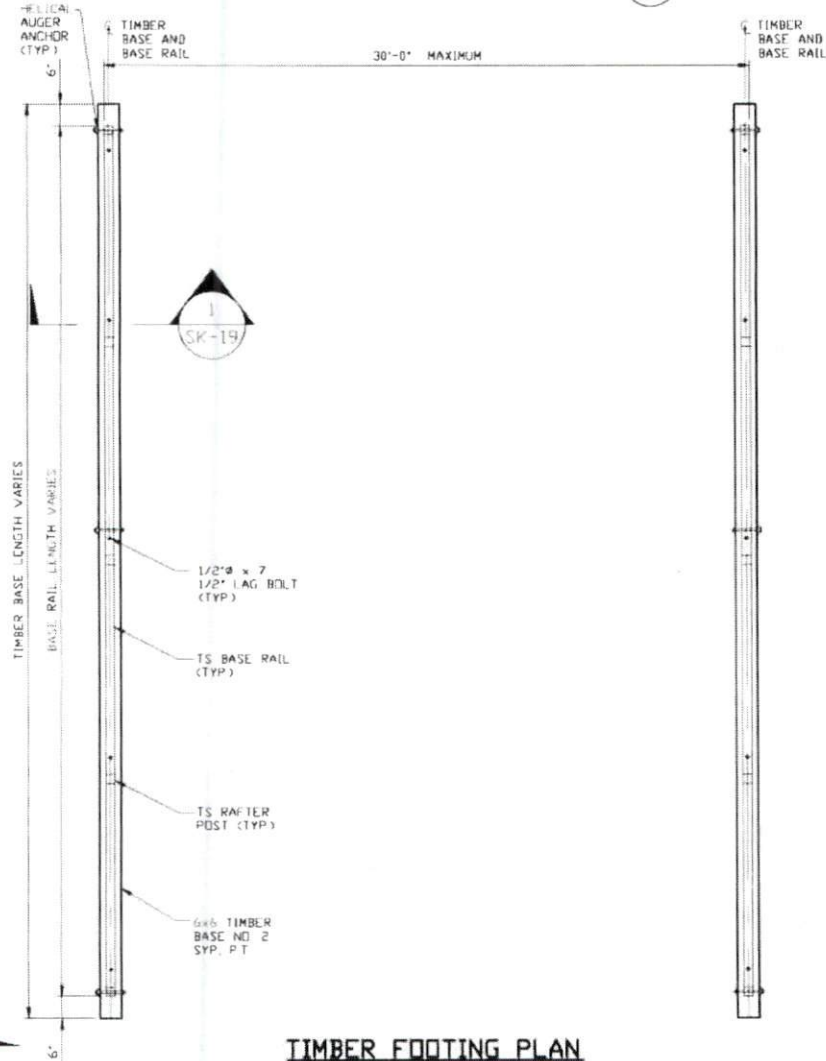
JOB NO: 18068S
18156S/18290S/20019S
REV: 0

OPTIONAL BASE RAIL ON TIMBER BEAM

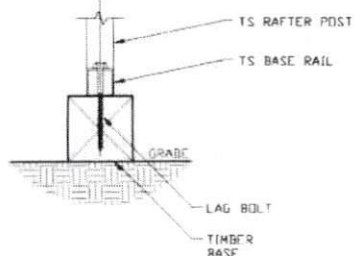


SECTION 2
SCALE: NTS

2
SK-19



TIMBER FOOTING PLAN
SCALE: NTS



SECTION 1
SCALE: NTS

HELIX ANCHOR	
SIDE LENGTH	MAXIMUM SPACING
VARIES	10'-0" (EVERY OTHER POST)

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ENGINEERING AND CONSULTING, INC.**

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PROJECT MGR: WSM
CLIENT: SBSI

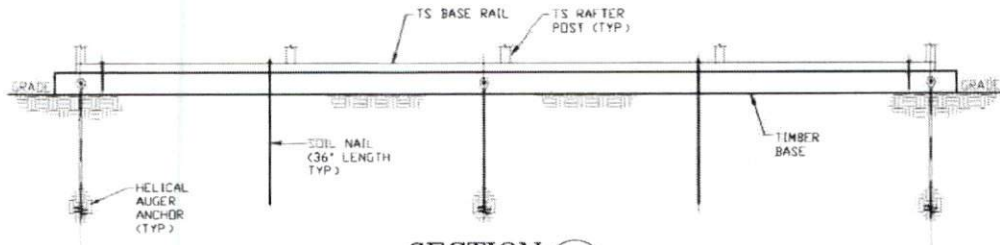
STEEL BUILDINGS AND STRUCTURES, INC.
P.O. BOX 1287,
MOUNT AIRY, NC 27030
30'-0" x 20'-0" UTILITY STRUCTURE

DATE: 2-14-20 **SCALE:** NTS **JOB NO:** 18068S
18156S/18290S/20019S

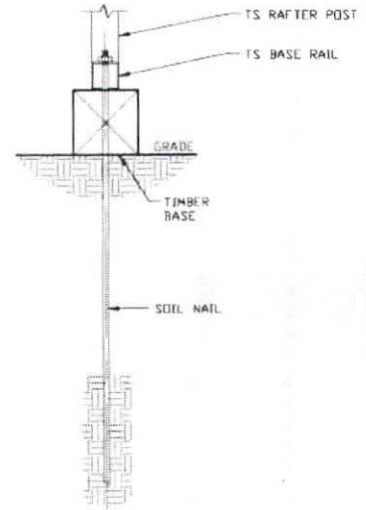
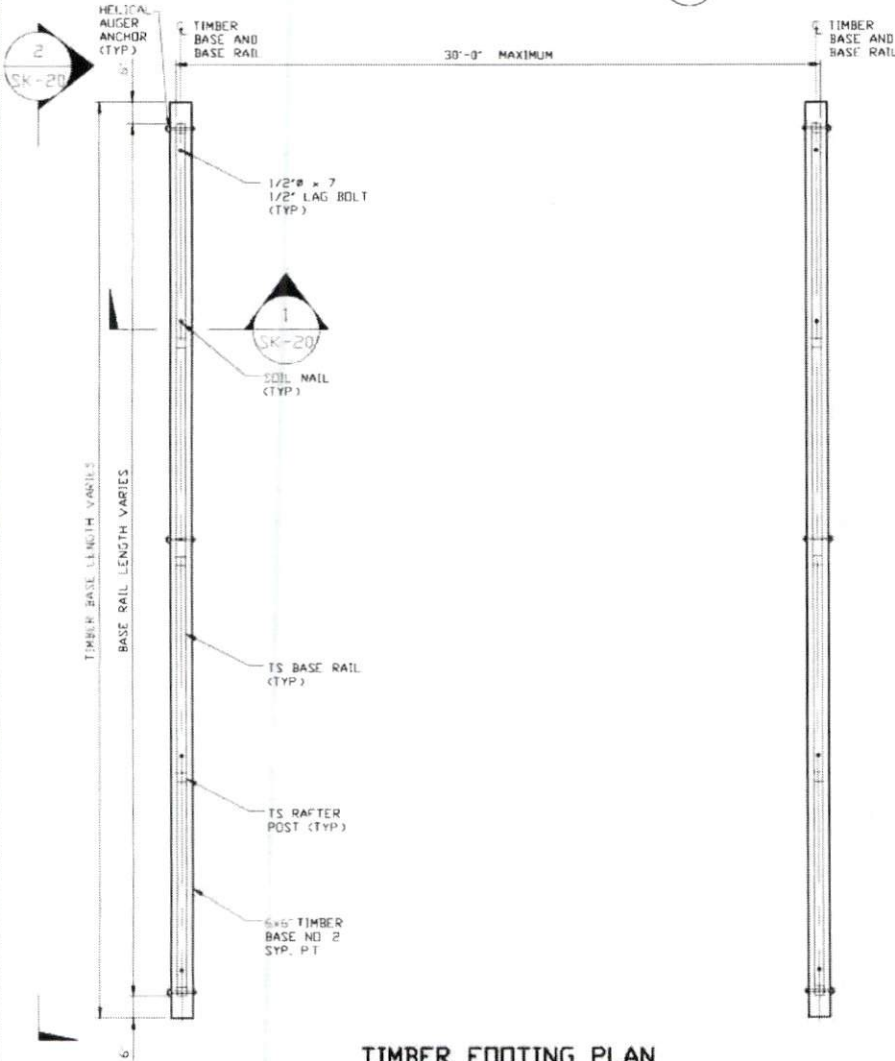
SHT. 19 **DWG. NO:** SK-2 **REV:** 8

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OPTIONAL BASE RAIL ON TIMBER BEAM WITH SOIL NAIL



SECTION 2
SCALE: NTS



SECTION 1
SCALE: NTS

TIMBER FOOTING PLAN
SCALE: NTS

HELIX ANCHOR	
SIDE LENGTH	MAXIMUM SPACING
VARIES	10'-0" (EVERY OTHER POST)

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

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STEEL BUILDINGS AND STRUCTURES, INC.
P.O. BOX 1287,
MOUNT AIRY, NC 27030
30'-0" x 20'-0" UTILITY STRUCTURE

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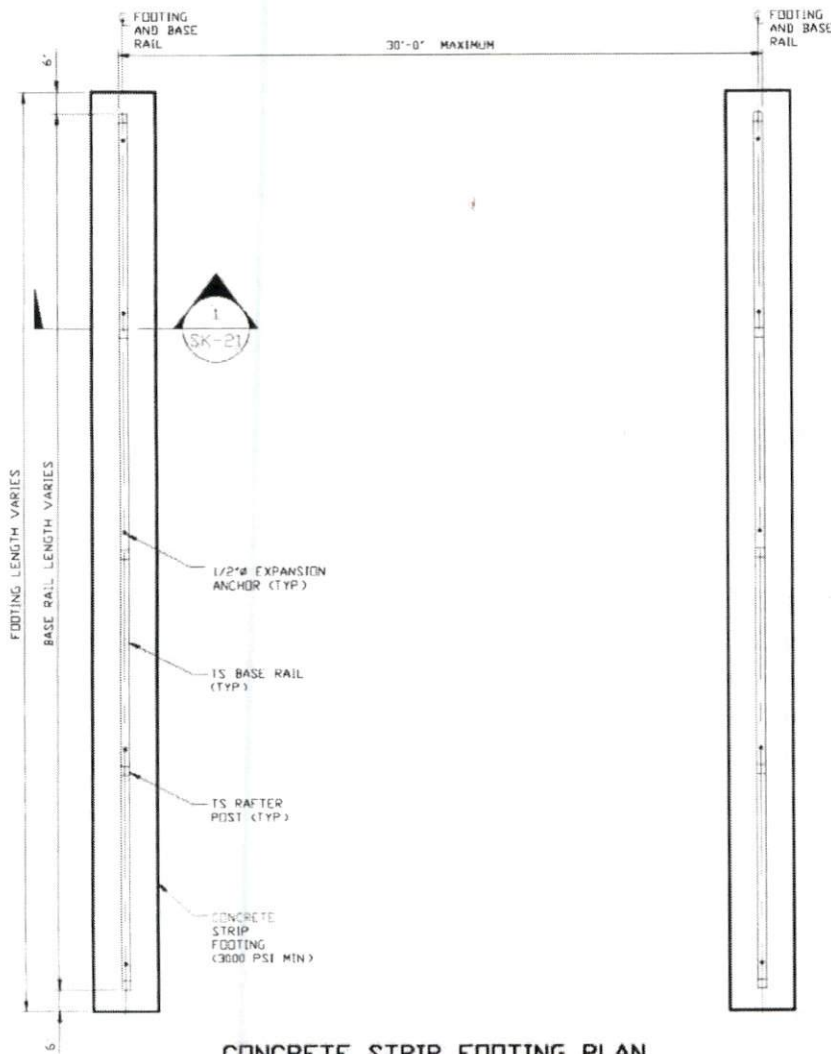
PROJECT MGR: WSM
CLIENT: SBSI

DATE: 2-14-20
SHT. 20

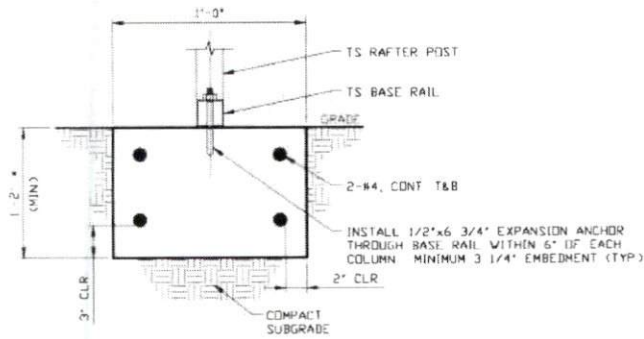
SCALE: NTS
DWG. NO: SK-2

JOB NO: 18068S
18156S/18290S/20019S
REV: 8

OPTIONAL CONCRETE STRIP FOOTING



CONCRETE STRIP FOOTING PLAN
SCALE: NTS



SECTION 1
SCALE: NTS

* COORDINATE WITH LOCAL CODES/DRD

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ENGINEERING AND CONSULTING, INC.**

DRAWN BY: LT

CHECKED BY: PDH

PROJECT MGR: VSM

CLIENT: SBST

STEEL BUILDINGS AND STRUCTURES, INC.
P.O. BOX 1287,
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30'-0" x 20'-0" UTILITY STRUCTURE

DATE: 2-14-20

SCALE: NTS

SHT. 21

DWG. NO: SK-2

**JOB NO: 18068S
18156S/18290S/20019S**

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