

STRUCTURAL DESIGN

PARTIALLY ENCLOSED (UTILITY) BUILDING EXPOSURE B

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

29 July 2021 Revision 3 M&A Project No. 16154S/17300S/20352S

Prepared for:

Tubular Building Systems, LLC 631 SE Industrial Circle Lake City, Florida 32025

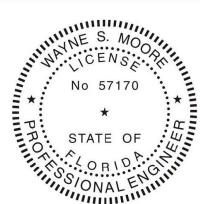
Prepared by:

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

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

Wayne Digitally signed by Wayne S Moore Date: 2021.10.21 08:33:08 -04'00'





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

)			
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<i>u</i> .
				Thum *	WAYNE S. MC	ORKINA
				***	• No 57170 ★	VEER *
				PROMIN	STATE OF	IN THE
					em has been electronical	ly signed and
				sealed using a	by Wayne S. Moore, PE. a Digital Signature and da	ite.
				consid	ered signed and sealed a ure must be verified on a	nd the
MOORE AND A			VN BY: JG	30' - 0"x20'	JLAR BUILDING S' -0" UTILITY BUILI E SEAL COVER SH	DING EXP. B
ENGINEERING AND C THIS DOCUMENT IS THE PROPERTY OF HOUSE CONSULTING THE UNAUTHORIZED REPRODUCTION THIS DOCUMENT IS STRICTLY PROHIBITED AND BE SUBJECT TO LEGAL ACTION.			KED BY: PDH	DATE: 7-29-21	J	IDB NO: 16154S/ 7300S/20352S
BE SUBJECT TO LEGAL ACTION	PRIT IN KINGEMENT THEKEUPON MAY	CLIE	NT: TBS	SHT. 1	DWG. NO: SK-2	REV. 3

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 END AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 5A	TYPICAL RAFTER COLUMN END AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 5B	TYPICAL RAFTER COLUMN END AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 6	TYPICAL RAFTER COLUMN CONNECTION DETAILS (LACED COLUMN)
SHEET 6A	TYPICAL RAFTER COLUMN CONNECTION DETAILS (DOUBLE COLUMN)
SHEET 6B	TYPICAL RAFTER COLUMN CONNECTION DETAILS (SINGLE COLUMN)
SHEET 7	TYPICAL RAFTER COLUMN END AND SIDE FRAMING SECTIONS (BOW RAFTER)
SHEET 7A	TYPICAL RAFTER COLUMN END AND SIDE FRAMING SECTIONS (BOW RAFTER)
SHEET 8	TYPICAL RAFTER COLUMN CONNECTION DETAILS (DOUBLE COLUMN)
SHEET 8A	TYPICAL RAFTER COLUMN CONNECTION DETAILS (SINGLE COLUMN)
SHEET 9	BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED
SHEET 9A	OPTIONAL FOUNDATION ANCHORAGE FOR LOW AND HIGH WIND SPEED
SHEET 9B	BASE RAIL ANCHORAGE OPTION
SHEET 90	BASE RAIL ANCHORAGE OPTIONS
SHEET 10	BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS
SHEET 11	BOW RAFTER END WALL AND SIDE WALL OPENINGS
SHEET 12	CONNECTION DETAILS
SHEET 13	CONNECTION DETAILS
SHEET 14	BOX EAVE RAFTER LEAN-TO OPTIONS
SHEET 14A	BOX EAVE RAFTER LEAN-TO OPTIONS
SHEET 15	BOW RAFTER LEAN-TO OPTIONS
SHEET 16	VERTICAL ROOF/SIDING OPTION
SHEET 17	EPTIONAL DOOR HEADER FLOOD VENT DETAIL THE S. MOON IN THE S. MOO
SHEET 18	FLOOD VENT DETAIL
SHEET 19	STAND-ALONE STEM WALL DETAIL No 57170 :
SHEET 20	VERTICAL SLIDING WINDOW DETAIL
SHEET 21	VERTICAL ROOF/SIDING OPTION OPTIONAL DOOR HEADER FLOOD VENT DETAIL STAND-ALONE STEM WALL DETAIL VERTICAL SLIDING WINDOW DETAIL STRIP FOOTING OPTION
	Z'V · CTATE AE · UIZ



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

MOORE AND ASSOCIATES	DRAWN BY: JG	631	JLAR BUILDING SE INDUSTRIAL KE CITY, FLORII	. CIRCLE
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		-0" UTILITY BUI	
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND	PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16154S/ 17300S/20352S
CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THE SOCUMENT IS STRICTLY PRODUCTION AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TRS	SHT. 2	DWG, NO: SK-2	REV. 3

INSTALLATION NOTES AND SPECIFICATIONS

- 1 DESIGN IS FOR A MAXIMUM 30'-0" WIDE x 20'-0" EAVE HEIGHT PARTIALLY ENCLOSED UTILITY STRUCTURES
- 2 DESIGN WAS DONE IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE (FBC) 7TH EDITION, 2012 INTERNATIONAL BUILDING CODE (IBC). 2015 IBC, AND 2018 IBC
- 3 DESIGN LOADS ARE AS FOLLOWS A) DEAD LOAD = 15 PSF B) LIVE LOAD = 12 PSF C) GROUND SNOW LOAD = 10 PSF
- 4 LOW ULTIMATE WIND SPEED 105 TO 140 MPH (NOMINAL WIND SPEED 81 TO 108 MPH); MAMIXAM MUMIXAM MUMIXAM TO 108 MPH; MAMIXAM TO 109 MPH; MAMIXAM TO 10
- 5 HIGH ULTIMATE WIND SPEED 141 TO 170 MPH (NOMINAL WIND SPEED 109 TO 132 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 4.0 FEET
- 5 END WALL COLUMNS (POSTS) AND SIDE WALL COLUMNS ARE EQUIVALENT IN SIZE AND SPACING (UNLESS NOTED OTHERWISE)
- 7 RISK CATEGORY L
- 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 FOR VERTICAL PANELS, 29 GAUGE METAL PANELS SHALL BE FASTENED TO 18 GAUGE HAT CHANNELS (UNLESS OTHERWISE NOTED)
- 10 AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9° OR END = 6°, (MAX)
- 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 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 JOINT SEALANT
- 12 STANDARD 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 IN SUITABLE SOIL CONDITIONS MAY BE USED FOR LOW (≤ 108 MPH NOMINAL) WIND SPEEDS ONLY 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:

SDIL SITE CLASS = D

RISK CATEGORY [

R = 325 $I_E = 1.0$ $V = C_S W$

2_{DC}= 0839 g



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

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC.	

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASS	MOTATED ENGINEERING AND
THE PROPERTY OF PLUME AND MASS	POCTATES ENGINEERING WAT
CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPY	ING. OR OTHERVISE USE OF
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY IN	FRINGEMENT THERETON MAY
BE SUB ECT TO LEGAL ACTION	THE PERSON NAMED IN THE PE

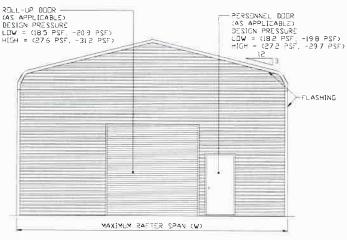
	DRAWN BY: JG		JLAR BUILDING SE INDUSTRIAL			Ī
	CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B				
-	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 16154S/ 00S/20352S	
	CLIENT: TRC	SHT. 3	DVG. NO: SK-2		REV. 3	Ī

BOX EAVE FRAME RAFTER ENCLOSED BUILDING ROLL-UP DOOR (AS APPLICABLE) DESIGN PRESSURE LOW = (185 PSF, -209 PSF) HIGH = (276 PSF -312 PSF) MAXIMUM RAFTER SPAN (W)

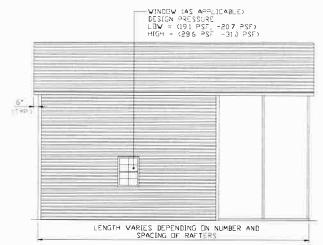
TYPICAL END ELEVATION

SCALE NTS

BOW FRAME RAFTER ENCLOSED BUILDING



TYPICAL END ELEVATION



TYPICAL SIDE ELEVATION

WINDOW (AS APPLICABLE)
DESIGN PRESSURE
LOW = (191 PSF - 207 PSF)
HIGH = (286 PSF -310 PSF)

5.
(TYP)

LENGTH VARIES DEPENDING ON NUMBER AND
SPACING OF RAFFERS

TYPICAL SIDE ELEVATION

SCALE: NTS

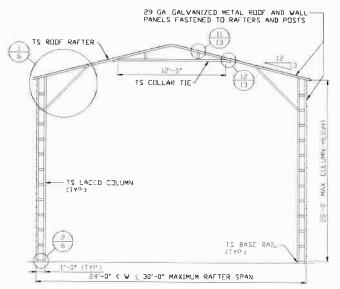


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC.	

THIS DOCUMENT IS THE PROPERTY OF MODRE 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: TBS	SHT. 4	DWG. NO SK-2	REV. 3	
-	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JDB ND: 16154S/ 17300S/20352S	
	CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B			
	DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE			



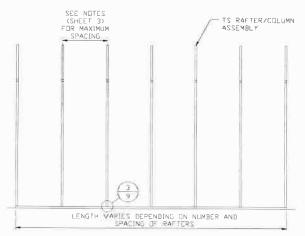
TS ROOF RAFTER
PANELS FASTENED TO RAFTERS AND POSTS

24' 18 GA U-CHANNEL
BRACE FASTENED TO
RAFTER WITH (4)
182-14-33-4' SDF'S AT
EACH END (8 PER BRACE)

15 BASE RAIL
1'-0' (TYP)

V 24'-0' MAXIMUM RAFTER SPAN

TYPICAL RAFTER/COLUMN END FRAME SECTION



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

20ALE MIZ

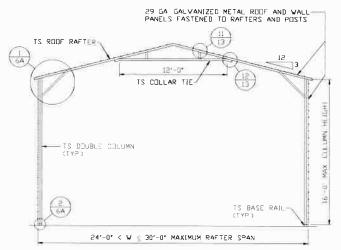


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

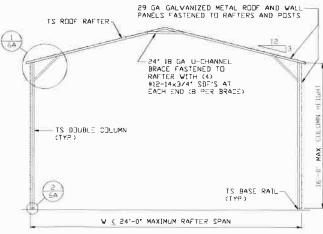
MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC.	

	,
THIS DOCUMENT IS THE PROPERTY OF MODIRE AND ASSOCIATES ENGIN	NEERING AND
CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHER	VISE USE OF
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT TO BE SUBJECT TO LEGAL ACTION.	HEREUPON HAY

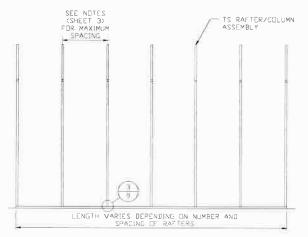
	DRAWN BY: JG		SE INDUSTRIAL	
			KE CITY, FLORID	• • • • • • • • • • • • • • • • • • • •
	CHECKED BY: PDH	30'-0"x20'	-0" UTILITY BUII	LDING EXP. B
-	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO 16154S/ 17300S/20352S
	CLIENT: TBS	SHT. 5	DWG, NO: SK-2	REV. 3



SCALE NTS



TYPICAL RAFTER/COLUMN END FRAME SECTION



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE NTS



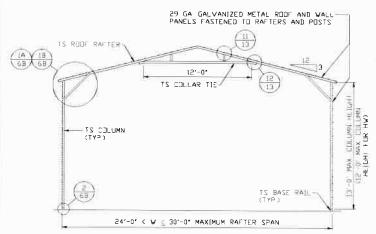
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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

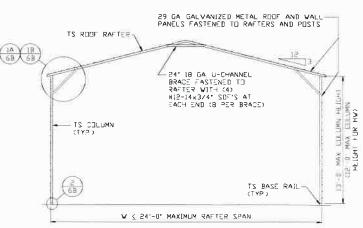
MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MODRE 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.

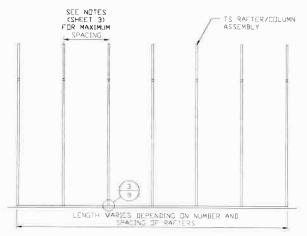
		TUBULAR BUILDING SYSTEMS			
	DRAWN BY: JG	631 SE INDUSTRIAL CIRCLE			
1		LAKE CITY, FLORIDA 32025			
	CHECKED BY: PDH	30'-0"x20'-0" UTILITY BUILDING EXP. B			NG EXP. B
_					ND: 16154S/
-	PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	173	005/203525
	CLIENT: TBS	SHT. 5A	DWG. ND: SK-2		REV. 3



SCALE NTS



TYPICAL RAFTER/COLUMN END FRAME SECTION



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE NTS

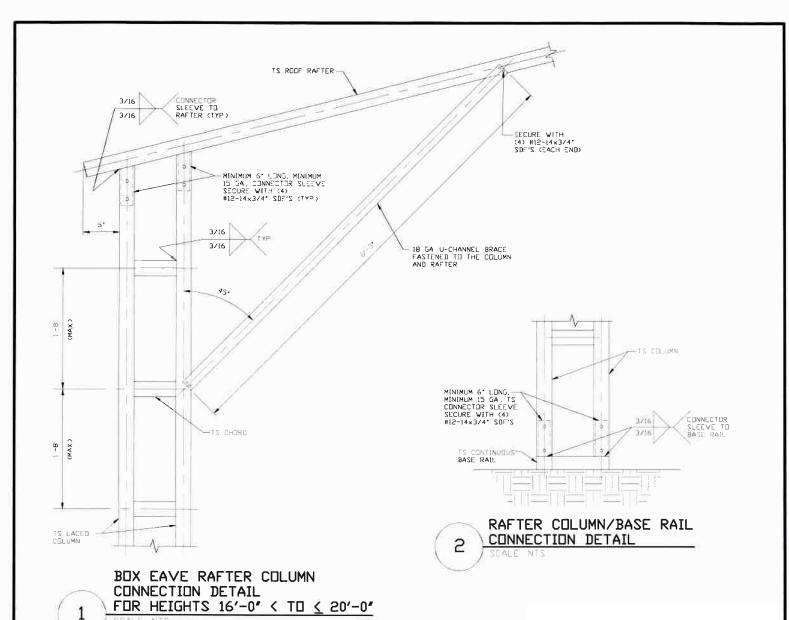


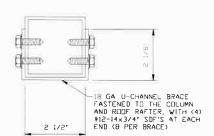
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC	٦.

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND	_
CONTROL TO SERVICE OF THE PROPERTY AND ASSOCIATES ENGINEERING AND	
CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE O	E .
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON M	AV
BE SUBJECT TO LEGAL ACTION	••

CLIENT: TBS	DATE: 7-29-21 SHT. 5B	DVG. ND: SK-2		00S/20352S REV.: 3	
				ND: 16154S/	
CHECKED BY: PDH		LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B			
DRAWN BY: JG	63	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE			



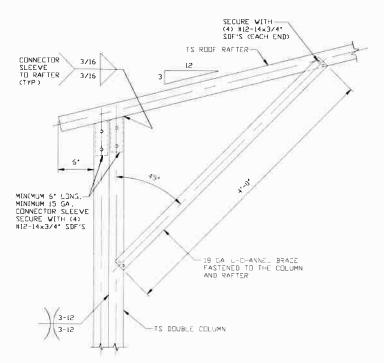


BRACE SECTION



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

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B		
THIS DOCUMENT IS THE PROPERTY OF HOURE 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.			SCALE: NTS	JOB NO: 16154S/ 17300S/20352S

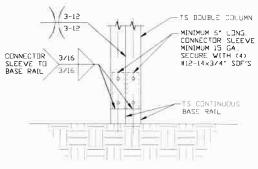


BOX EAVE RAFTER COLUMN
CONNECTION DETAIL
FOR HEIGHTS 13'-0' < TO < 16'-0'

NOTE: COLUMN HEIGHTS 12'-0" < TO < 16'-0" FOR HIGH WIND

18 GA U-CHANNEL BRACE
FASTENED TO THE COLUMN
AND RODE RAFTER WITH (4)
#12-14x3/4" SDF'S AT EACH
END (8 PER BRACE)

BRACE SECTION
SCALE NTS



RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE NTS



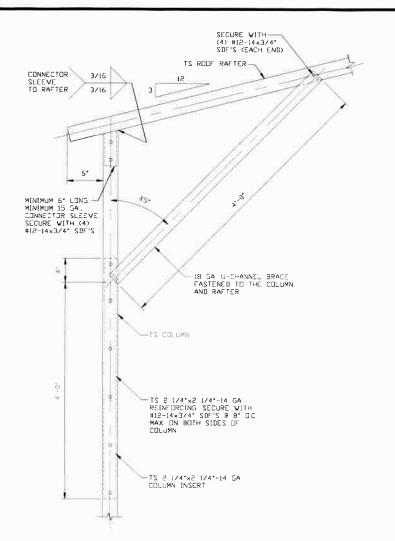
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

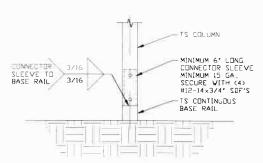
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES EN	CINCEDING AND
COLUMN THE THE PROPERTY OF THE PARTY OF THE	GTACELING MAD
CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTH	ERVISE USE OF
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT	THEREUPON MAY
RE SUBJECT TO LEGAL ACTION.	(PUNITYCE-0077), (2007)

CLIENT: TBS	SHT. 6A	DWG. NO: SK-2	REV. 3		
PROJECT MGR: WS	M DATE: 7-29-21	SCALE: NTS	JDB ND: 16154S/ 17300S/20352S		
CHECKED BY: PDH		LAKE CITY, FLORIDA 30'-0"x20'-0" UTILITY BUILD			
DRAWN BY: JG	63	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE			



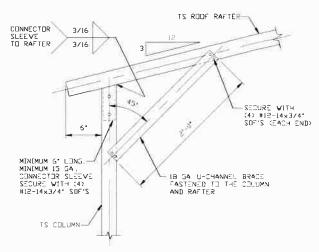
BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0' < TO < 13'-0"

SCALE NTS
NOTE MAXIMUM COLUMN HEIGHT IS 12'-0' FOR HIGH WIND

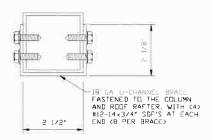


1A

2 RAFTER COLUMN/BASE RAIL CONNECTION DETAIL
SCALE NTS



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



BRACE SECTION



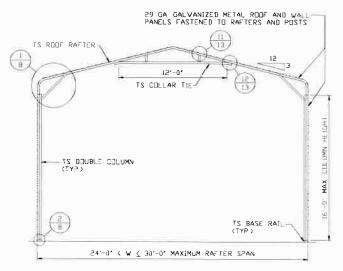
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

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

	DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B			
	CHECKED BY: PDH				
_	PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	JDB ND: 16154S/ 17300S/20352S	
	CLIENT: TBS	SHT. 6B	DWG. ND: SK-2	REV.i 3	



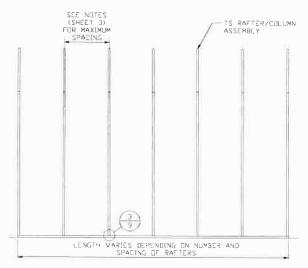
TS ROOF RAFTER 24' 18 GA U-CHANNEL BRACE FASTENED TO RAFTER WITH (4) H12-14×3/4' SDF'S AT EACH END (8 PER BRACE) TS BOUBLE COLUMN TS BASE RAIL (TYP) V 24'-0' MAXIMUM RAFTER SPAN

29 GA GALVANIZED METAL ROOF AND WALL PANELS FASTENED TO RAFTERS AND POSTS

TYPICAL RAFTER/COLUMN END FRAME SECTION

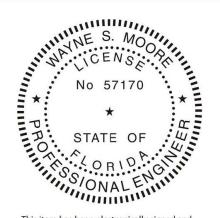
TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE: NTS

SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE NTS

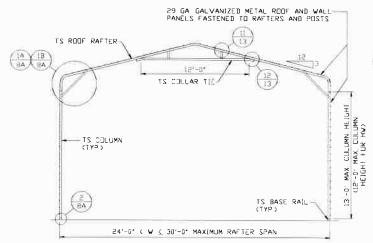


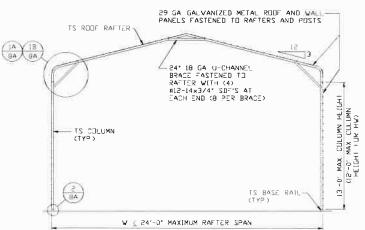
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC.	

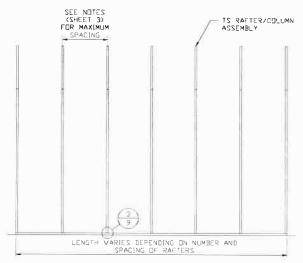
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND
CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF
CONSOCIONE THE CONTRACTED REPRODUCTION, COPYING, OR DIFFERENCE USE OF
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY
BE SUBJECT TO LEGAL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

	DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE				
	DENWIN DI JU	LAKE CITY, FLORIDA 32025				
	CHECKED BY: PDH	30'-0"x20'-0" UTILITY BUILDING EXP. B				
_	PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		ND: 16154S/ 00S/20352S	
	CLIENT: TBS	SHT. 7	DVG. ND: SK-2		REV. 3	





TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE, NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION



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

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

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

INC.	CHECKED	BY: F	PDH
G AND	PROJECT	MGR	MSM
COL WAY			

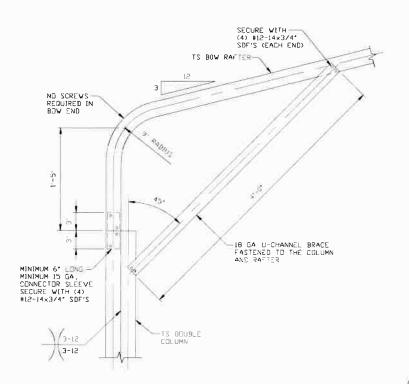
DRAWN BY: JG

TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE
LAKE CITY, FLORIDA 32025
30'-0"x20'-0" UTILITY BUILDING EXP.

	PROJECT	MGI
MAY	CLIENT:	TBS

DATE: 7-29-21 SCALE: NTS SHT. 7A DWG. NO SK-2 JOB NO 16154S/ 17300S/20352S REV. 3

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



3-12

GONNECTOR SLEEVE TO BASE RAIL

3-12

TS DDUBLE COLUMN

MINIMUM 6' LONG.
CONNECTOR SLEEVE

MINIMUM 15 GA

SECURE WITH (4)

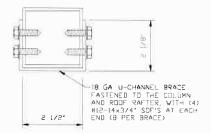
\$12-14x3/4' SDF'S

TS CONTINUOUS

BASE RAIL

BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 13'-0" < TO < 16'-0"

SCALE NTS NOTE COLUMN HEIGHTS 12'-0" < TO < 16'-0" FOR HIGH WIND 2 RAFTER COLUMN/BASE RAIL CONNECTION DETAIL
SCALE NTS



BRACE SECTION

1

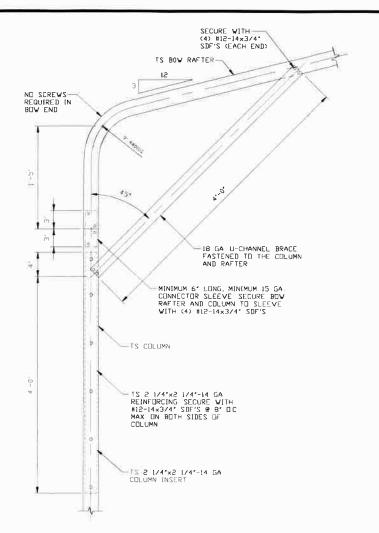


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

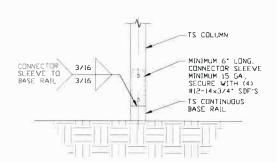
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AN	
CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE I	
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON I	AY
BE SUBJECT TO LEGAL ACTION.	

DRAWN BYI JG		JLAR BUILDING SE INDUSTRIAL		
DICHWIN DIT GO		KE CITY, FLORIE	-	
CHECKED BY: PDH	30'-0"x20'	-0" UTILITY BUI	LDI	NG EXP. B
PROJECT MGRI WSM	DATE: 7-29-21	SCALE: NTS		ND: 16154S/ 00S/20352S
CLIENT: TBS	SHT. 8	DVG. NO: SK-2		REV. 3



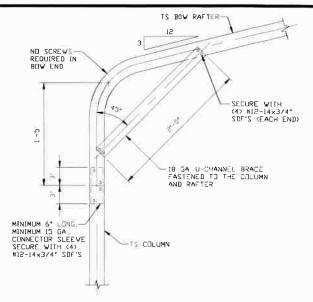
BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0' < TO < 13'-0'

SCALE NTS NOTE MAXIMUM COLUMN HEIGHT IS 12'-0' FOR HIGH WIND



1A

2 RAFTER COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS

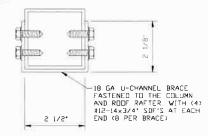


BOX EAVE RAFTER COLUMN CONNECTION DETAIL

FOR HEIGHTS

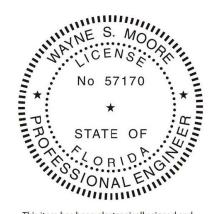
10'-0'

SCALE: NTS



BRACE SECTION

SCALE: NTS



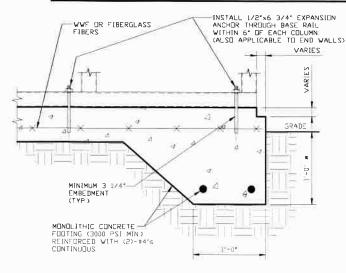
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

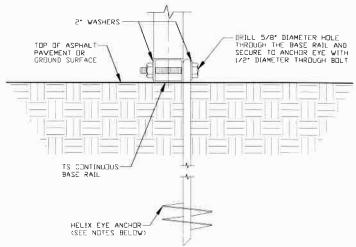
MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

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

	CLIENT: TBS		DVG. ND: SK-2	17300S/20352S REV.: 3	
_	PROJECT MGR: VSM	DATE: 7 00 01	COAL E. NEC	JDB ND: 16154S/	
	CHECKED BY: PDH		KE CITY, FLORIL -0" UTILITY BUI		
	DRAWN BY: JG	631	JLAR BÜILDING SE INDUSTRIAL	CIRCLE	

BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED







CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

MINIMUM ANCHOR EDGE DISTANCE IS 4*

* COORDINATE WITH LOCAL CODES/ORD
REGARDING MINIMUM FROST DEPTH REQ

GENERAL NOTES

NOTE: CONCRETE MONOLITHIC SLAB DESIGN 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 ACT-318:
3 INCHES 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 INCHES ELSEWHERE

REINFORCING STEEL:

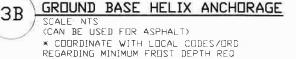
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM AGIS GRADE 50 THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

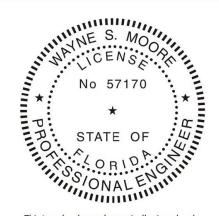
REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED:

- I 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 INCH EMBEDMENT.
- 2 FOR CORAL USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT
- 3 FOR MEDIUM DENSE COARSE SANDS, SANDY GRAVELS VERY STIFF SILTS, AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT.
- 4 FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLUVIAL FILL USE MINIMUM (2) 6' HELICES WITH MINIMUM 50 INCH 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 INCH EMBEDMENT.





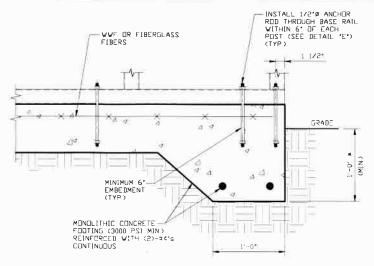
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC.	

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

CLIENT: TBS SHT. 9 DWG. (ND: SK-2 REV.: 3			
PROJECT MGR: WSM DATE: 7-29-21 SCALE	JDB ND 16154S/ 17300S/20352S			
	TLITY BUILDING EXP. B			
DRAWN BY: JG 631 SE IN	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025			

OPTIONAL FOUNDATION ANCHORAGE FOR LOW AND HIGH WIND SPEED



30

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

MINIMUM ANCHOR EDGE DISTANCE IS 1 1/2' * COURDINATE WITH LOCAL CODES/ORD REGARDING MINIMUM FROST DEPTH REQ

GENERAL NOTES

NOTE: CONCRETE MONOLITHIC SLAB DESIGN 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:

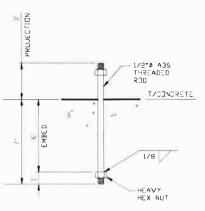
FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACT-318
3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND I 1/2 INCHES ELSEWHERE

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

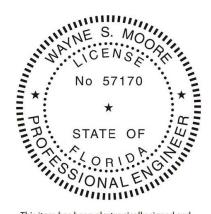
REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED:

- 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
- REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT



ANCHOR ROD THROUGH BASE RAIL DETAIL

3D



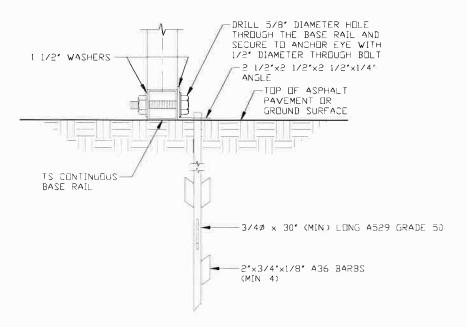
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, IN	IC.

THIS DOCUMENT IS THE PROPERTY OF MODRE AND	ACCOUNTATES ENGINEEDING AND
CONSULTING. THE UNAUTHORIZED REPRODUCTION, CI	DPYING, OR OTHERWISE USE OF
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY	INFKINGEMENT THEREUPUN MAY
BE SUBJECT TO LEGAL ACTION.	

	DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE				
	CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B				
	PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		NO: 16154S/ 00S/20352S	
3	CLIENT: TBS	SHT. 9A	DVG. ND: SK-2		REV. 3	

BASE RAIL ANCHORAGE OPTION



ASPHALT BASE ANCHORAGE (HP 9 BARBED DRIVE ANCHOR)

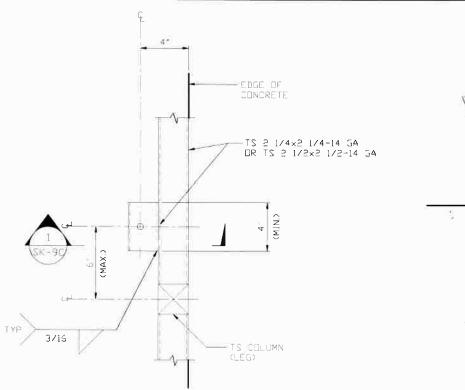
SCALE NTS
(CAN BE USED FOR ASPHALT)
* COORDINATE WITH LOCAL CODES/ORD
REGARDING MIN!MUM FROST DEPTH REO

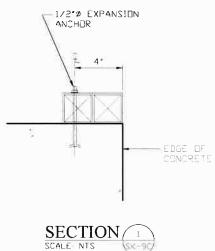


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRUCTLY PROHOBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 9B	DWG. NO: SK-2	REV. 3
THIS DOCUMENT IS THE PROPERTY OF MODIFE AND ASSOCIATES ENGINEERING AND	PROJECT MGR: WSM	DATE: 7-29-21		JOB NO: 16154S/ 17300S/20352S
ENGINEEDING AND CONCULTING INC	CHECKED BY: PDH		LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B	
MOORE AND ASSOCIATES	DRAWN BY: JG		JLAR BUILDING S SE INDUSTRIAL (

BASE RAIL ANCHORAGE OPTIONS





TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE

SCALE NTS



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

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

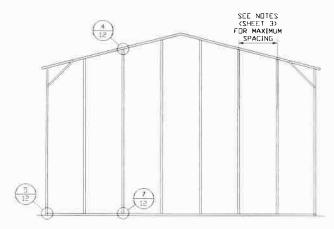
TUBULAR BUILDING SYSTEMS

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC.	

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

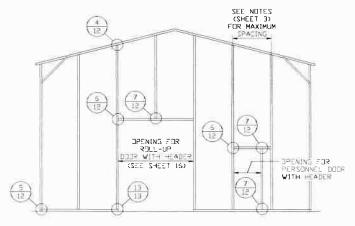
CLIENT: TBS	SHT. 9C	DWG. NO: SK-2		REV.i 3	
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		ND: 16154S/ 00S/20352S	
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B				
DRAWN BY: JG	631 SE INDUSTRIAL CIRCLE				

BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



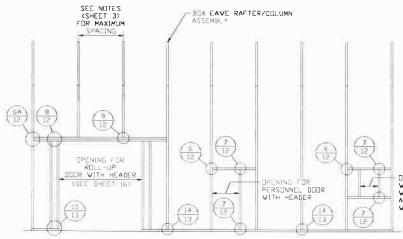
TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION

SCALE: NTS



TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE: NTS



OPENING FOR WINDOW WITH HEADER AND WINDOW RAIL (ALSO APPLICABLE TO END WALLS)

TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE NTS



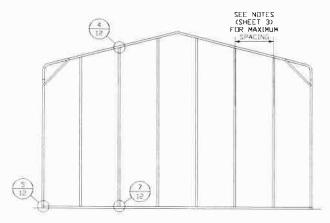
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC.	

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND
THIS DOCUMENT IS THE PROPERTY OF MUDICE NEW ASSOCIATES ENGINEERING INCOME.
CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF
THE DOCUMENT IS STREET & DOCUMENTED AND ANY PARTY THE THE PARTY TH
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY
BE SUBJECT TILLEGAL ACTION

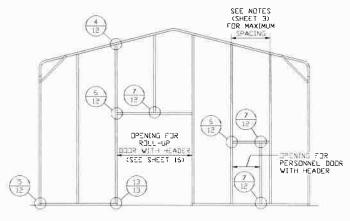
CL	JENT: TBS	SHT. 10	DWG. NO: SK-2	REV. 3	
PR	ROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	JDB ND: 16154S/ 17300S/20352S	
CH	ECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B			
DR	RAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE			

BOW RAFTER END WALL AND SIDE WALL OPENINGS



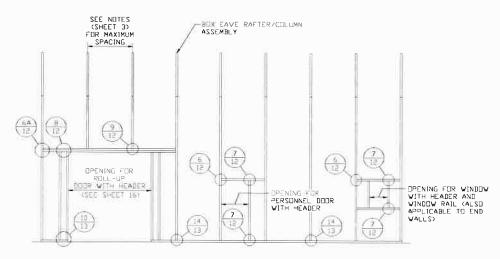
TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION

SCALE: NTS



TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE NTS



TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE NTS



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

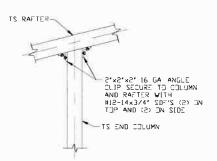
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

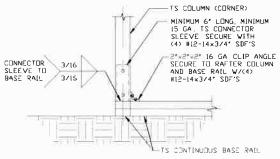
MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

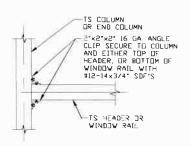
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

	CLIENT: TBS	SHT. 11	DVG. NO SK-2	REV. 3			
+	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JDB ND: 16154S/ 17300S/20352S			
	CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B					
	DRAWN BY: JG		631 SE INDUSTRIAL CIRCLE				

CONNECTION DETAILS





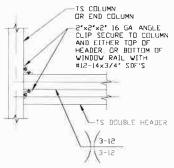


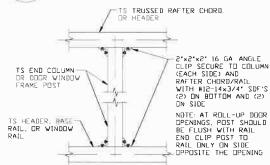
END COLUMN/RAFTER CONNECTION DETAIL 4

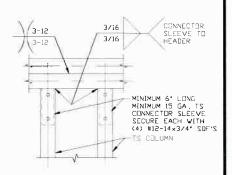
END COLUMN/BASE RAIL CONNECTION DETAIL 5

HEADER OR WINDOW RAIL TO COLUMN CONNECTION DETAIL

6



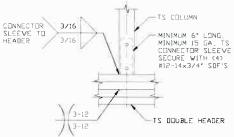




DOUBLE HEADER TO COLUMN CONNECTION DETAIL SCALE NTS

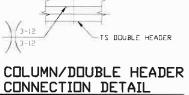
COLUMN TO HEADER, BASE RAIL, OR WINDOW RAIL CONNECTION DETAIL

DOUBLE HEADER/COLUMN CONNECTION DETAIL 8



6A

9





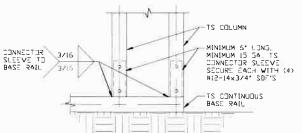
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

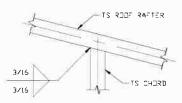
MOORE AND ASSOCIATES
MOOKE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

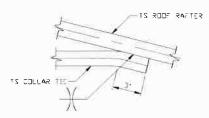
CONCIL THE THE INITIALITY CONTROL OF THE CONTROL OF THE	GINEERING AND
CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTH THE DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT BE SUBJECT TO LEGAL ACTION.	

CLIENT: TBS	SHT. 12	DVG. NO SK-2		REV. 3			
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 16154S/ 00S/20352S			
CHECKED BY: PDH		2025 NG EXP. B					
DRAWN BY: JG	631	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025					

CONNECTION DETAILS





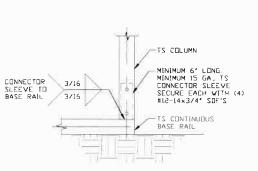


10 COLUMN/BASE RAIL CONNECTION DETAIL

RAFTER TO CHORD CONNECTION DETAIL

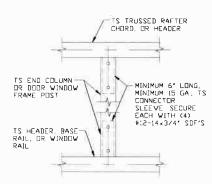
SCALE: NTS

12 COLLAR TIE CONNECTION DETAIL
SCALE: NTS



COLUMN/BASE RAIL CONNECTION DETAIL

13



COLUMN TO HEADER, BASE RAIL CONNECTION DETAIL

SCALE: NTS



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

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

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

C. CHECKED BY PDH

PROJECT MGR VSM

TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE
LAKE CITY, FLORIDA 32025
30'-0"x20'-0" UTILITY BUILDING EXP. B

JDB ND 16154S/

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

CLIENT: TBS

DATE: 7-29-21 | SCALE: NTS SHT. 13 | DWG. ND: SK-2

REV. 3

BOX EAVE RAFTER LEAN-TO OPTIONS 6 16 14A ROOF EXTENSION MAIN STRUCTURE STANDARD OPTION LEAN-TO OPTION

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

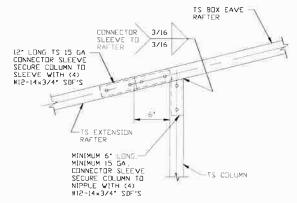
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE LACED COLUMNS FOR EAVE HEIGHTS 16'-0' < TO < 20'-0'

EAVE HEIGHTS 16'-0' < TO < 20'-0' MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR EAVE HEIGHTS 13'-0' (12'-0' FOR HIGH WIND) < TO < 16'-0' MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS 10'-0' < TO < 13'-0' (12'-0' FOR HIGH WIND) (WITH 4'-4' INSERT)

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

EAVE HEIGHTS < 10'-0"

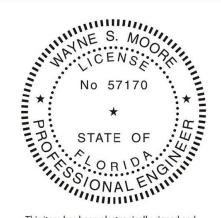
KNEE BRACES MUST BE 4'-0' (5'-0' FOR HIGH WIND) WHEN LEAN-TO'S ARE ADDED



SIDE EXTENSION RAFTER/COLUMN DETAIL FOR RAFTER SPANS < 15'-0"

TS BOX EAVE RAFTER CONNECTOR SLEEVE TO 3/16 3/16 12" LONG TS 15 GA CONNECTOR SLEEVE SLEEVE WITH (4) #12-14×3/4' SDF'S MINIMUM 6' LONG, MINIMUM 15 GA, CONNECTOR SLEEVE SECURE COLUMN TO NIPPLE WITH (4) #12-14×3/4" SDF'S TS DOUBLE EXTENSION RAFTER 2'x2'x2' 14 GA ANGLI CLIP SECURE TO COLUMN AND RAFTER CHORD/RAIL WITH (4) #12-14x3/4' SDF'S TS COLUMN

SIDE EXTENSION RAFTER/COLUMN DETAIL FOR RAFTER SPANS 15'-0" < TO < 24'-0"



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

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

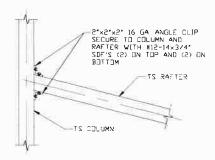
MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, IN	C.

15A

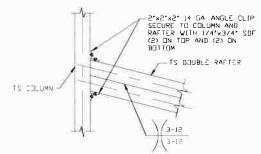
ZIHT	DOC: MENT	IS THE	PROPERTY	DE MOC	DE AND	ACCOUNTA	TEC EN	THEFPING	AND
CONCI	TIME TH	LINIALE	CHOOTEE	DCDDOWN N	CTIPPI C	MOSILUM.	TES ENG	THEFT WAS	MID
CLINSU	TOTAL IT	LUMMU	HORIZED	KELKUUU	LILLIN, L	LE TING,	THE THE	KATZE OZ	E LIF
THIS	DUCUMENT	IZ ZIK	ICTLY PRO	HIBITED	AND AN	y infrin	GEHENT	THEREUPO	N MAY
BE SU	BJECT TO	LEGAL	ACTION.						

DRAWN BY: JG		ULAR BUILDING SE INDUSTRIAL		
DRAWN BTI JU		2025		
CHECKED BY: PDH	30'-0"x20	NG EXP. B		
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		NO: 16154S/ 00S/20352S
CLIENT: TRS	SHT. 14	DWG. ND: SK-2		REV.i 3

BOX EAVE RAFTER LEAN-TO OPTIONS



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS & 15'-0"



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 15'-0" < TO ≤ 24'-0"

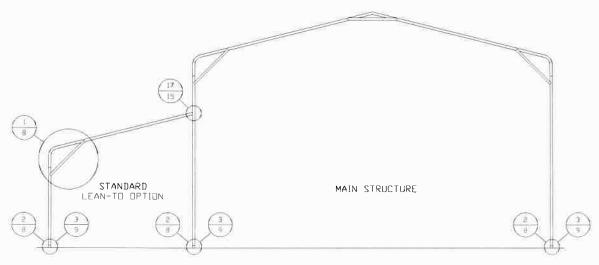
16A) SCALE NTS



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

MOORE AND ASSOCIATES	DRAWN BY: JG		JLAR BUILDING SE INDUSTRIAI	
ENCRIEEDING AND CONGULTING DIG	CHECKED BY: PDH		KE CITY, FLORI. '-0" UTILITY BU	
THIS DOCUMENT IS THE PROPERTY OF HOURE AND ASSOCIATES ENGINEERING AND	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JDB ND: 16154S/ 17300S/20352S
CONSULTING THE UNANTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHOBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 14A	DVG. NO: SK-2	REV. 3

BOW RAFTER LEAN-TO OPTIONS



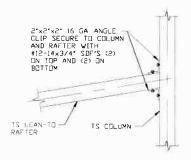
TYPICAL BOW RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR EAVE HEIGHTS 13'-0" (12'-0" FOR HIGH WIND) < TO < 15'-0"

MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS 10'-0' < TO & 13'-0' (12'-0' FOR HIGH WIND) (WITH 4'-4' INSERT)
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR

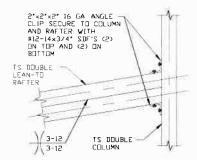
EAVE HEIGHTS C 107-07

KNEE BRACES MUST BE 4'-0' (5'-0" FOR HIGH WIND) WHEN LEAN-TO'S ARE ADDED



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS < 15'-0"

17



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 15'-0" < T□ <u><</u> 24'-0"

17A

SCALE: NTS



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

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

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MODIFE AND ASSOCIATES ENGINEE CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVIS THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THER BE SUBJECT TO LEGAL ACTION.	E USE OF

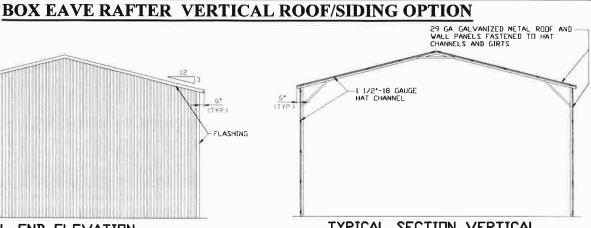
DRAWN BY: JG	63	631 SE INDUSTRIAL CIRCLE					
CHECKED BY: PDH		LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. B					
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		8 NO: 16154S/ 00S/20352S			
CLIENT: TBS	SHT. 15	DWG. NO: SK-2		REV. 3			

FLASHING

TYPICAL END ELEVATION VERTICAL ROOF/SIDING OPTION



TYPICAL SIDE ELEVATION VERTICAL ROOF/SIDING OPTION

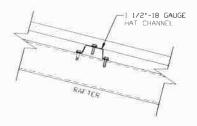


TYPICAL SECTION VERTICAL ROOF/SIDING OPTION

SCALE: NTS SEE NOTES (SHEET 3) FOR MAXIMUM -1 1/2'-18 GAUGE HAT CHANNEL SPACED AT 4'-0' D.C AND FASTENED TO EACH RAFTER WITH (2) #12-14x3/4' SDF'S

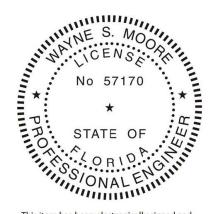
TYPICAL FRAMING SECTION VERTICAL ROOF/SIDING OPTION

NOTE: TS WALL GIRTS CAN BE USED AS AN OPTION IN PLACE OF HAT CHANNELS TS GIRTS MUST BE SPACE AT 4'-0' (MAX) D.C



ROOF PANEL ATTACHMENT

(ALTERNATE FOR VERTICAL ROOF PANELS) SCALE: NTS



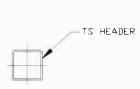
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MODIFIE AND ASSOCIATES ENGINEERING AND
CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF
THIS DUCLMENT IS STRUCTLY PROHIBITED AND ANY INFRINGEMENT THERELPON MAY
BE SUBJECT TO LEGAL ACTION

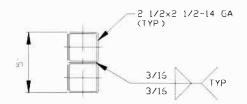
CLIENT: TBS	SHT. 16	DWG. NO: SK-2		REV. 3	
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 16154S/ 00S/20352S	
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" UTILITY BUILDING EXP. I				
DRAWN BYI JG	631 SE INDUSTRIAL CIRCLE				

SIDE WALL HEADER OPTIONS



HEADER DETAIL FOR DOOR □PENINGS ≤ 10'-0"

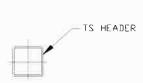
SCALE NTS



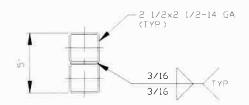
HEADER DETAIL FOR DOOR □PENINGS 10'-0' < LENGTH ≤ 15'-0'</pre>

END WALL HEADER OPTIONS

CLIENT: TBS

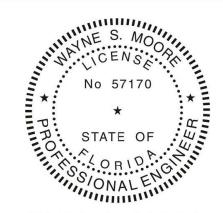


HEADER DETAIL FOR DOOR □PENINGS < 12'-0"



HEADER DETAIL FOR DOOR □PENINGS 12'-0' < LENGTH ≤ 15'-0'</pre>

SCALE NTS



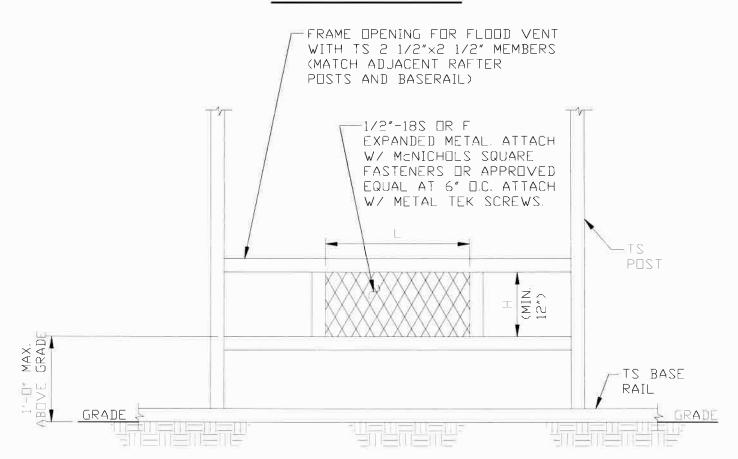
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC	7

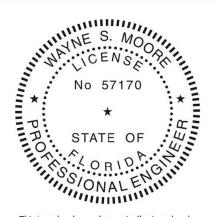
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND
CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF
THIS DOCUMENT IS STRICTLY PRINTED AND ANY DIFRINGEMENT THEREUPON MAY
THIS DECOMENT IS STREET PRINTED FOR ANY DEPENDENT INCREMENT AND
BE SUBJECT TO LEGAL ACTION.

DRAWN BY: JG		SE INDUSTRIAL		
DRAWN BIT SQ		KE CITY, FLORIE		
CHECKED BY: PDH	30'-0"x20'-0" UTILITY BUILDING EXP. B			
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16154S/ 17300S/20352S	
CLIENT: TBS	SHT. 17	DWG. NO: SK-2	REV. 3	

FLOOD VENT DETAIL



- TYPICAL FLOOD VENT DETAIL
 SCALE NTS
- 1 MINIMUM VENT SPACE REQUIRED = 1 SQ INCH OF OPEN VENT AREA PER SQ. FOOT OF BUILDING AREA
- 2 THERE SHALL BE A MINIMUM OF TWO OPENINGS ON DIFFERENT SIDES FOR EACH ENCLOSED BUILDING
- 3 APPLY 13 FACTOR WHEN CALCULATING TOTAL OPEN AREA WHEN USING 1/2''-18GA S OR F EXPANDED METAL.
- 4 TOTAL OPEN AREA OF VENT = LxH(MIN 12")
- 5 FLOOD VENT DETAIL COMPLIES WITH FEMA/NFIP
- 6 PREFABRICATED FLOOD VENTS MEETING THE REQUIREMENTS OF FEMA/NIFIP MAY BE USED



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

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

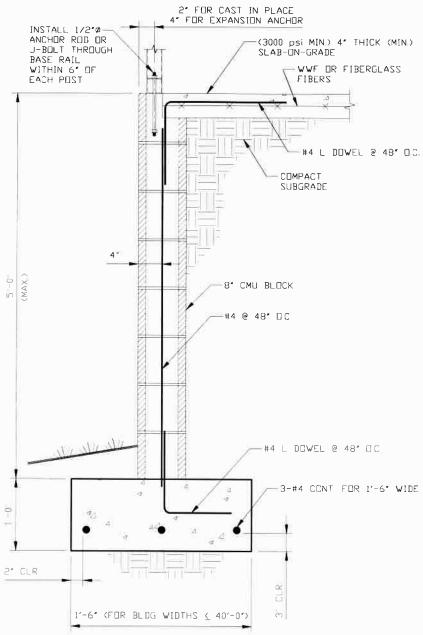
THRUIT AD DUIT DING SYSTEMS

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC.	

			CE DIDLICEDIAL	
	DRAWN BY: JG	631	SE INDUSTRIAL	CIRCLE
		LAI	KE CITY, FLORII	OA 32025
2	CHECKED BY: PDH	30'-0"x20'	-0" UTILITY BUI	LDING EXP. B
	PROJECT MGRI WSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16154S/ 17300S/20352S
	CLIENT: TBS	SHT. 18	DVG. ND: SK-2	REV. 3

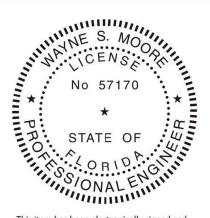
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

STAND -ALONE STEM WALL DETAIL



STAND-ALONE CONCRETE MASONRY UNIT (CMU) FOUNDATION STEM WALL DETAIL

SCALE, NITS

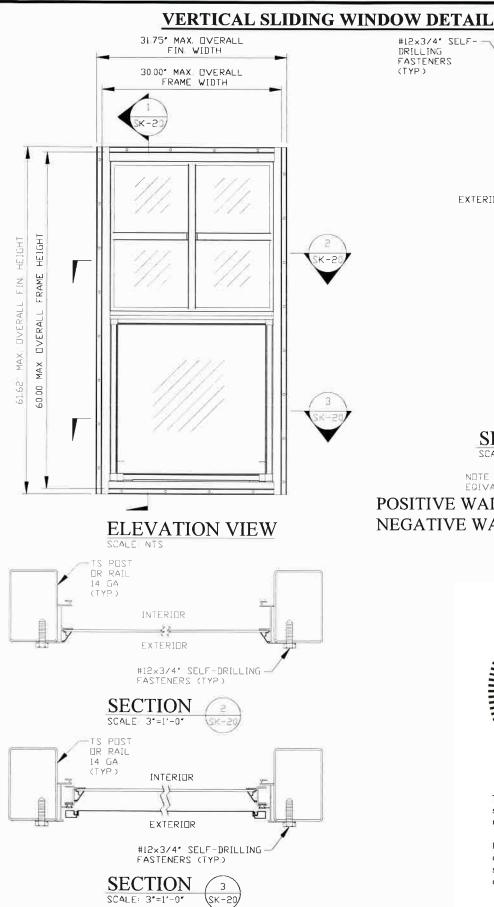


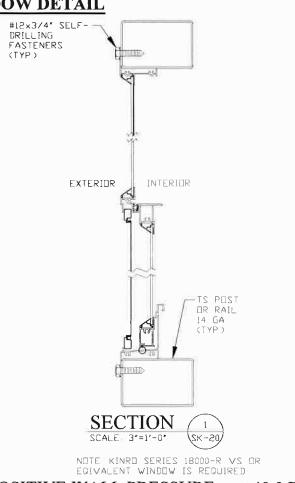
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC.	

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND	-
CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHOBITED AND ANY INFRINGEMENT THEREUPON MAY	
BE SUBJECT TO LEGAL ACTION	

	TUBL	JLAR BUILDING	SYS	TEMS	_
DRAWN BY: JG	631	SE INDUSTRIAL	CIR	CLE	
	LAI	KE CITY, FLORII	OA 3	2025	
 CHECKED BY: PDH	30'-0"x20'-0" UTILITY BUILDING EXP. B				
			JOB	ND: 16154S/	
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		005/203525	
	SUT 10	71.45 AID. 0K 0		DE3.4. 0	
CLIENT, TRC	SHT. 19	DWG. NO: SK-2		IKEV. 3	





POSITIVE WALL PRESSURE: +40.0 PSF NEGATIVE WALL PRESSURE: -40.0 PSF



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

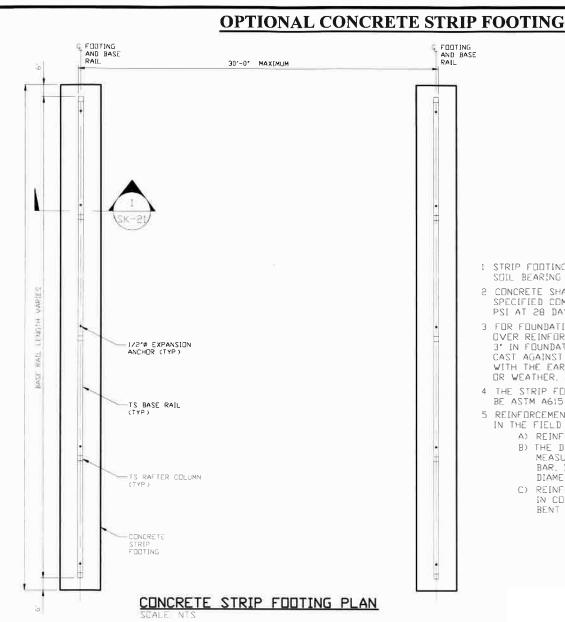
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

TUBULAR BUILDING SYSTEMS

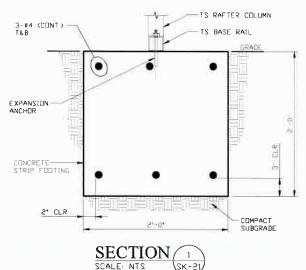
MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MODRE 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.

DC 11 D NAWA	0.3	LAKE CITY, FLORIDA 32025		
	LA			
CHECKED BY: PDH	30'-0"x20	0'-0" UTILITY BUI	ILDING EXP. B	
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	JOB ND: 16154S/ 17300S/20352S	
CI ICHT. TRO	SHT. 20	DVG NU SK-2	REV. 3	



- 1 STRIP FOOTING DESIGN BASED ON MINIMUM SOIL BEARING CAPACITY OF 1,500 PSF
- 2 CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS
- 3 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 I 1/2' ELSEWHERE
- 4 THE STRIP FOOTING REINFORCING STEEL SHALL BE ASTM A615 GRADE 60
- 5 REINFORCEMENT MAY BE BENT IN THE SHOP OR IN THE FIELD PROVIDED:
 - A) REINFORCEMENT IS BENT COLD
 - B) THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS
 - C) REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT



* COORDINATE WITH LOCAL CODES/ORD

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

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

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

		TUBULAR BUILDING SYSTEMS			
DRAWN BY: JG	631 SE INDUSTRIAL CIRCLE				
	LA	LAKE CITY, FLORIDA 32025			
CHECKED BY: PDH	30'-0"x20'-0" UTILITY BUILDING EXP. B				
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	JOB NO 16154S/ 17300S/20352S		
CLIENT: TBS	SHT. 21	DWG. ND: SK-2	REV. 3		