

### STRUCTURAL DESIGN

# ENCLOSED BUILDING EXPOSURE B

## MAXIMUM 40'-0" WIDE X 20'-0" EAVE HEIGHT- BOX EAVE FRAME

29 July 2021 Revision 6 M&A Project No. 16022S/16072S/16073S/17301S/20352S

#### Prepared for:

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

#### Prepared by:

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

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

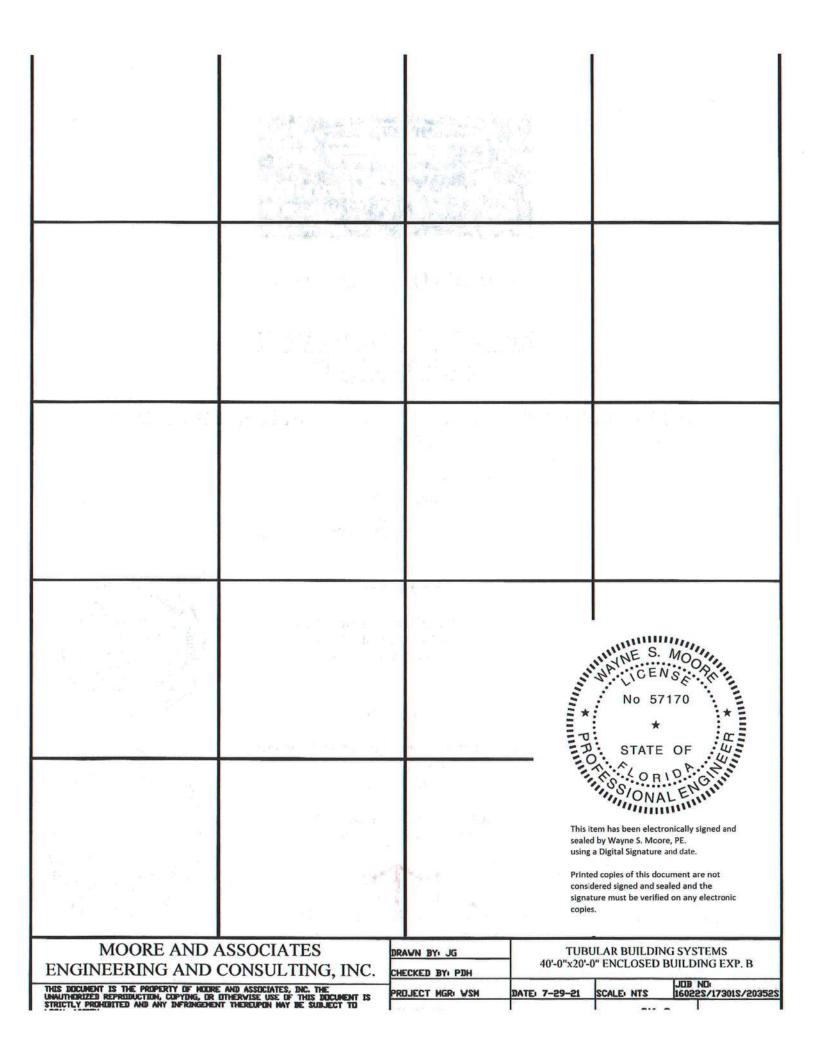
Wayne S Moore Date: 2021.10.21 08:51:17 -04'00'





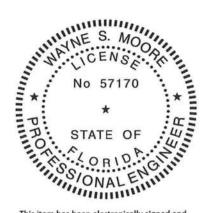


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.



## DRAWING INDEX

SHEET	1	PE SEAL COVER SHEET
SHEET	2	DRAWING INDEX
SHEET	3	INSTALLATION NOTES AND SPECIFICATIONS
SHEET	4	TYPICAL END ELEVATIONS
SHEET	4.4	TYPICAL SIDE ELEVATIONS
SHEET	5	TYPICAL RAFTER/POST FRAME AND SIDE FRAMING SECTION
SHEET	5A	TYPICAL RAFTER/POST FRAME AND SIDE FRAMING SECTION
SHEET	6	TYPICAL RAFTER/POST CONNECTION DETAILS
SHEET	6A	TYPICAL RAFTER/POST CONNECTION DETAILS
SHEET	7	BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED
SHEET	7A	OPTIONAL FOUNDATION ANCHORAGE FOR LOW AND HIGH WIND SPEED
SHEET	7B	BASE RAIL ANCHORAGE OPTION
SHEET	8	BOX EAVE RAFTER END WALL AND WALL OPENINGS
SHEET	8A	BOX EAVE RAFTER END WALL AND WALL OPENINGS
		BOX EAVE RAFTER SIDE WALL AND WALL OPENINGS
SHEET	10	CONNECTION DETAILS
SHEET	11	CLININE CLILING THE LATES
SHEET	12	BOX EAVE RAFTER LEAN-TO OPTIONS
SHEET	12A	BUX FAVE RAFTER LEAN-IN UPITIONS
SHEET	13	BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION
SHEET	13A	BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION
SHEET	14	SIDE WALL AND END WALL OPTIONAL HEADERS
SHEET	15	FLOOD VENT DETAIL
SHEET	16	STAND-ALDNE STEM WALL DETAIL
SHEET	17	VERTICAL SLIDING WINDOW DETAIL
SHEET	18	STRIP FOOTING OPTION



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.

11000	MOORE AND ASSOCIATES
E	ENGINEERING AND CONSULTING, INC.

	DRAWN BYI JG				
3.	CHECKED	BY	PDH		

TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STREETLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

PROJECT MGR: WSM DATE: 7-29-

SCALE: NTS 160225/173015/203525

#### INSTALLATION NOTES AND SPECIFICATIONS

- 1 DESIGN IS FOR A MAXIMUM 40'-0" WIDE x 20'-0" EAVE HEIGHT ENCLOSED STRUCTURES
- 2 DESIGN WAS DONE IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE (FBC) 7TH EDITION, 2018 INTERNATIONAL BUILDING CODE (IBC), 2015 IBC AND 2012 IBC
- 3 DESIGN LOADS ARE AS FOLLOWS:

A) DEAD LOAD = 15 PSF
B) LIVE LOAD = 12 PSF
C) GROUND SNOW LOAD = 13 PSF

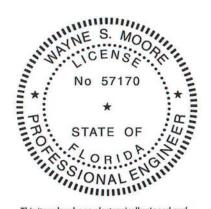
NOTE: UNBALANCED SNOW LOAD DUE TO DRIFTING HAS NOT BEEN EVALUATED

- 4 LOW ULTIMATE WIND SPEED 135 TO 143 MPM (NOMINAL WIND SPEED BI TO 108 MPM): MAXIMUM RAFTER/POST AND END POST SPACING = 50 FEET
- 5 HIGH ULTIMATE WIND SPEED 141 TO 170 MPH (NOMINAL WIND SPEED 109 TO 132 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 40 FEET
- 6 END WALL COLUMNS (POSTS) AND SIDE WALL COLUMNS ARE EQUIVALENT IN SIZE AND SPACING (UNLESS NOTED OTHERWISE)
- 7 RISK CATEGORY I
- 8 WIND EXPUSURE 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 (UNID)
- 10 AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS. INTERIOR = 9° AND 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
- 12 ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH RAFTER COLUMN ALONG SIDES AND ENDS
- 13 STANDARD GROUND ANCHORS (SDIL NAILS) CONSIST OF #4 REBAR W/ WELDED NUT × 30° LONG AND MAY BE USED IN SUITABLE SDILS
  OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SDILS AND MUST BE USED IN UNSUITABLE SDILS AS NOTED SDIL NAILS MAY BE USED FOR
  WIND SPEEDS & 145 MPH 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 I

R = 325  $I_E = 10$  $S_{0S} = 2039 \text{ g}$   $V = C_S W$ 

 $S_{D1} = 1258 g$ 



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

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

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

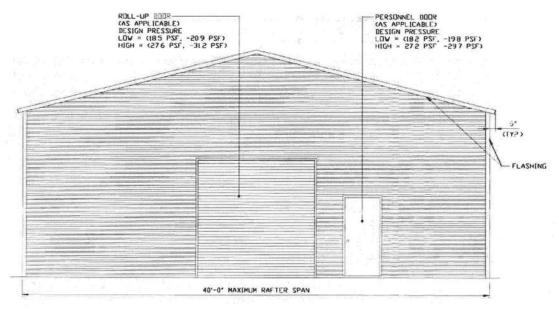
DRAWN BY: JG CHECKED BY: PDH TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

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

PRELIECT MGRI WSM DATE: 7-29-21 SCALE: NTS

JDB ND: 16022S/17301S/20352

#### BOX EAVE FRAME RAFTER ENCLOSED BUILDING



#### TYPICAL END ELEVATION-HORIZONTAL ROOF

SCALE: 1/8" = 1'-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, INC.

- W	DRAWN BY: JG				
INC.	CHECKED BY: PDH				

TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

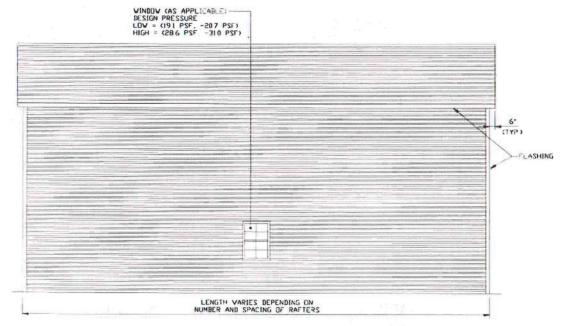
PROJECT MGR: VSM DATE: 7-29-21

SCALE: NTS

JOB NO: 160225/173015/20352

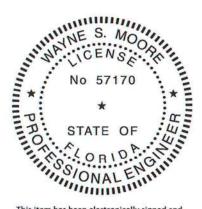
THIS DOCUMENT IS THE PROPERTY OF HOUSE AND ASSOCIATES, INC. THE UNAUTHERIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRUCTLY PROHOBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

#### BOX EAVE FRAME RAFTER ENCLOSED BUILDING



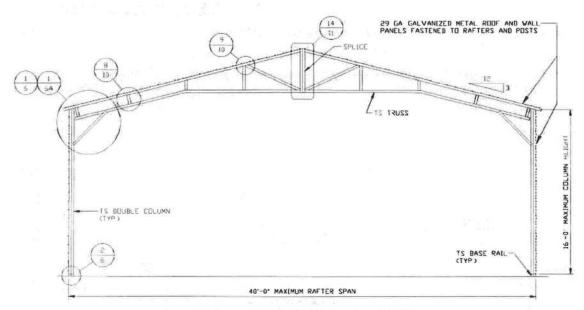
#### TYPICAL SIDE ELEVATION-HORIZONTAL ROOF

SCALE: 1/8" = 1'-0"

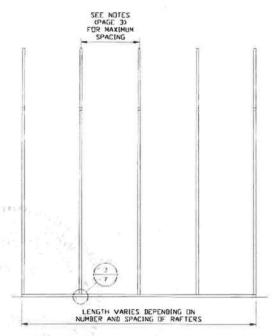


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	DRAWN BY: JG	USS RESPONDED TO THE PERSON OF	BULAR BUILDI	
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH	BUILDING EXP. B		
THIS DOCUMENT IS THE PROPERTY OF HOURE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS BOCUMENT IS	PROJECT MGR. WSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 160225/173015/203525
STRICTLY PROMOBITED AND ANY DIFRINGEMENT THEREUPEN MAY BE SUBJECT TO		COLUMN THE STATE OF	The second	



### TYPICAL RAFTER/POST FRAME SECTION SCALE: 1/8" = 1'-0"



## TYPICAL RAFTER/POST SIDE FRAMING SECTION SCALE: 1/8" = 1'-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, INC	3.

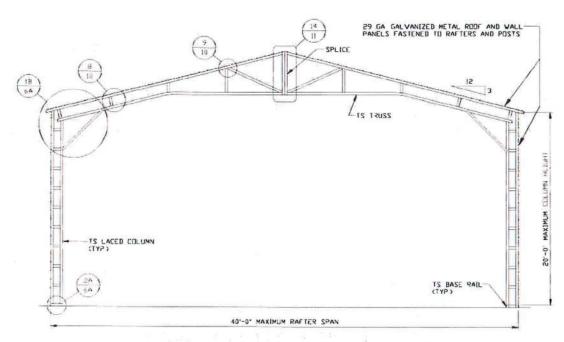
VC. CHECKED BY PDH

TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

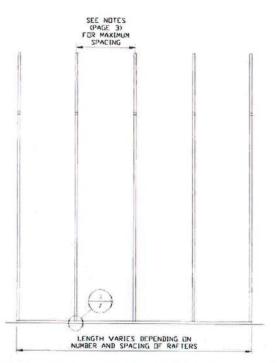
THIS DOCUMENT IS THE PROPERTY OF MOURE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

PROJECT MGR: WSM DATE: 7-29-21

JOB NO:



TYPICAL RAFTER/POST FRAME SECTION
SCALE 1/8' = 1'-0'

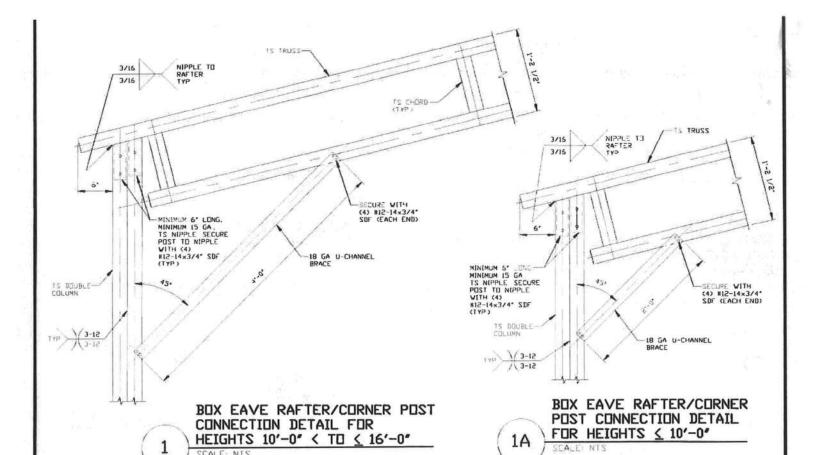


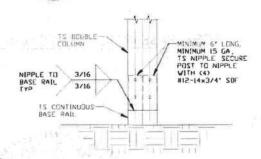
TYPICAL RAFTER/POST SIDE FRAMING SECTION
SCALE: 1/8' = 1'-0'



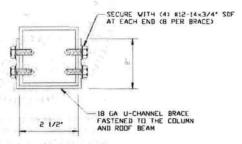
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	DRAWN BY: JG	TUE	BULAR BUILDI	NG SYSTEMS
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH	40'-0"x20'-0" ENCLOSED BUILDING EXP. B		
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, DIC, THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS	PROJECT MGR: WSM	DATE: 7-29-21	SCALE NTS	JOB NO: 160225/173015/203525
STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO				e i Richard de la la la





2 POST/BASE RAIL CONNECTION DETAIL



BRACE SECTION

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

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

## MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

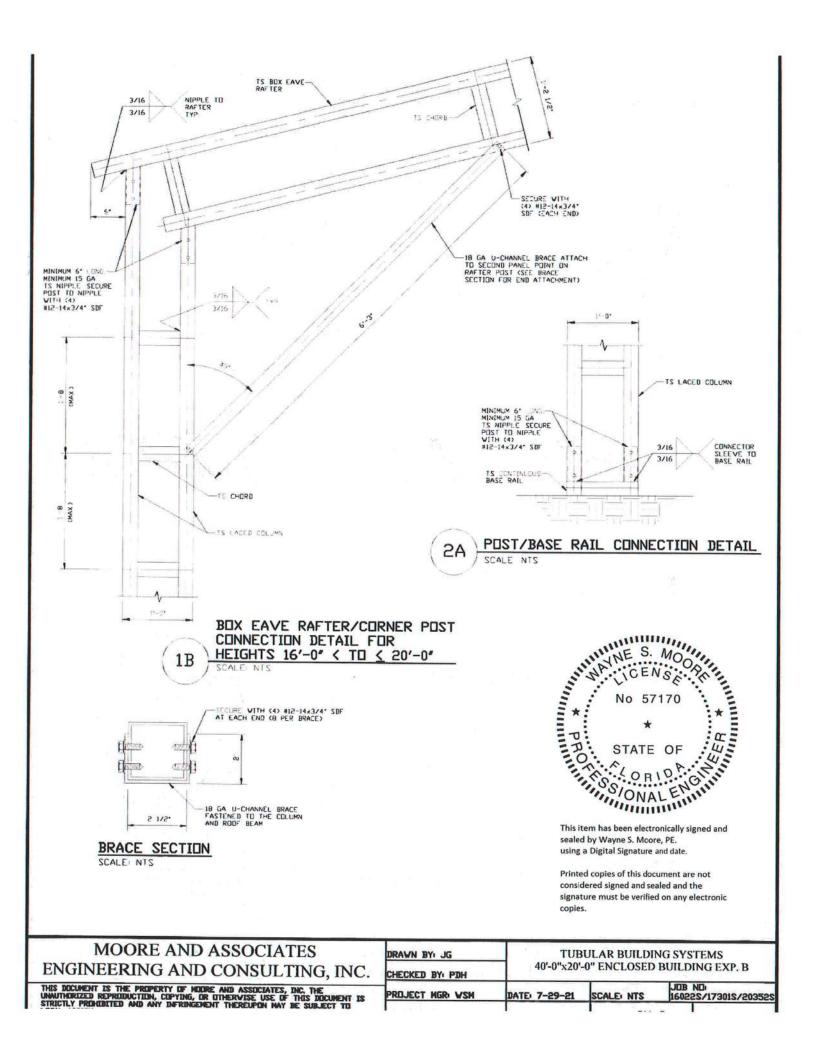
DRAWN BY: JG CHECKED BY: PDH TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

NT IS PROJECT MGR: VSM

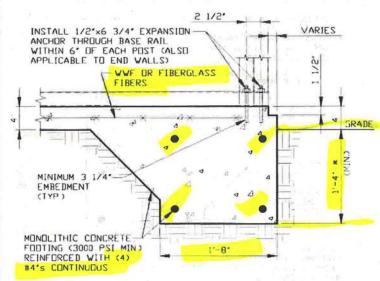
DATE: 7-29-21

JDB ND: 16022\$/17301\$/20352

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, DIC. THE UNAUTHORIZED REPRIDUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO



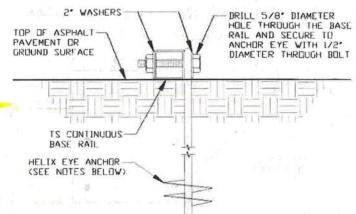
#### BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED





#### CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

(MINIMUM ANCHOR EDGE DISTANCE IS 4") \* COORDINATE WITH LUCAL CODES/ORD



#### GROUND BASE HELIX ANCHORAGE

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

#### GENERAL NOTES

NOTE: CONCRETE MONOLITHIC SLAB DESIGN BASED ON MINIMUM SOIL BEARING CAPACITY OF 1,500 PSF

CONCRETE 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 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 I/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
  3 REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT

BE FIELD BENT

#### HELIX ANCHOR NOTES

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

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

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

DRAWN BY: JG CHECKED BY: PDH

TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

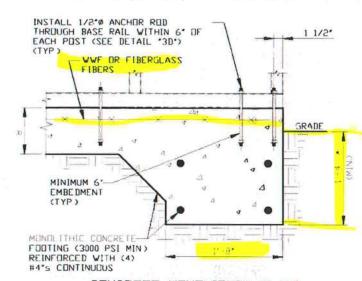
SCALE: NTS

PROJECT MGR: WSM

JOB NO 160225/173015/203525

THIS DOCUMENT IS THE PROPERTY OF MOURE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROMIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

#### **UPITUNAL FUUNDATION ANCHURAGE FUR LUW AND HIGH WIND SPEED**

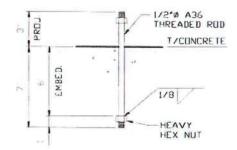


3B CONCRETE MONDLITHIC SLAB
BASE RAIL ANCHORAGE

SCALE NTS

(MINIMUM ANCHOR EDGE DISTANCE IS 1 1/2')

\* 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:

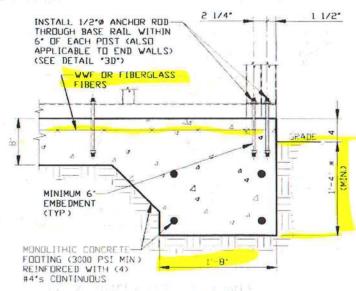
FOR FOUNDATIONS MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318:
3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND 1 1/2 INCHES ELSEWHERE

#### REINFORCING STEEL

THE TURNDOWN REINFORCING STEEL SHALL BE ASTM 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



3C SCALE: NTS

(MINIMUM ANCHOR EDGE DISTANCE IS 1 1/2")

COURDINATE WITH LOCAL CODES/ORD

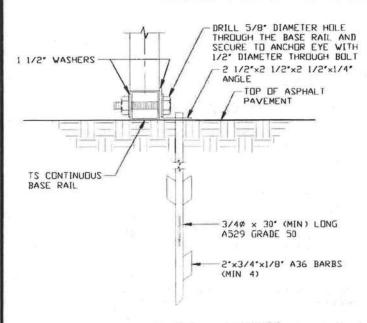


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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 MODER AND ASSOCIATES, DIC. THE
UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS
STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

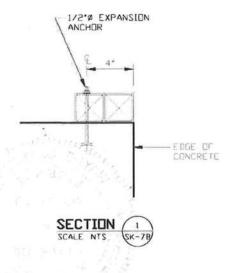
#### BASE RAIL ANCHORAGE OPTION

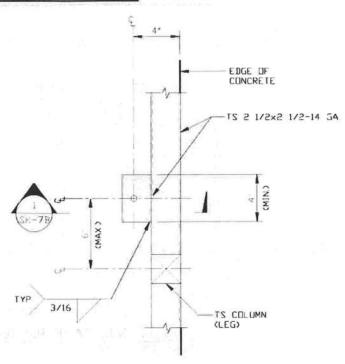


ASPHALT BASE ANCHURAGE (HP 9 BARBED DRIVE ANCHUR)

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

3E





TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE



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.

(4)	MOORE	AND	ASSOCIA	ATES	1. 7
ENGIN	VEERING	AND	<b>CONSUI</b>	TING,	INC.

ENGINEERING AND CONSULTING, INC.
THIS BUCINENT IS THE PROPERTY OF NUIRE AND ASSUCIATES, INC. THE
UNMUTHERIZED REPRODUCTION, COPYING, OR UTHERVISE USE OF THIS DUCLMENT IS
STRUCTLY PRODUCTED AND ANY INFRINGEMENT THEREIPON MAY BE SUBJECT TO

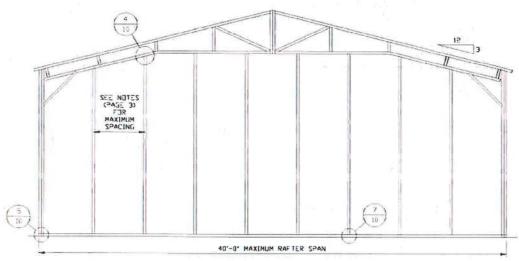
DRAWN BY: JG CHECKED BY: PDH TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

PROJECT MGR: WSM DATE: 7-29-21 S

SCALE: NTS

JOB NO: 16022\$/17301\$/20352\$

### **BOX EAVE RAFTER END WALL AND WALL OPENINGS**



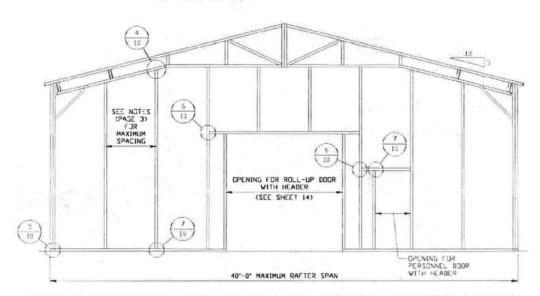
TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION
SCALE: 1/8' = 1'-0'



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

MOORE AND ASSOCIATES	DRAVN BY: JG	TUBULAR BUILDING SYSTEMS			
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH	40'-0"x20'-0" ENCLOSED BUILDING EXP. B			
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JDB NO: 16022S/17301S/20352S	
STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO	La	7 1 2 2 1 2 1 3 4	A 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	ASSESSMENT OF THE PARTY OF THE	

#### **BOX EAVE RAFTER END WALL AND WALL OPENINGS**



TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION SCALE 1/8' = 1'-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.

DRAWN BY: JG

CHECKED BY: PDH

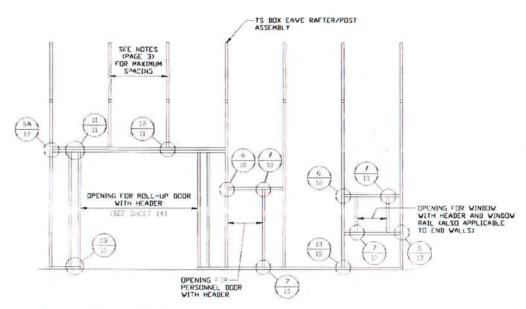
TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

THIS DOCUMENT IS THE PROPERTY OF MIXIRE AND ASSOCIATES, INC. THE UNMUTHERIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

PROJECT MGR: VSM DATE: 7-29-2

CALE: NTS 16022S/17301S/20352S

#### BOX EAVE RAFTER SIDE WALL AND WALL OPENINGS



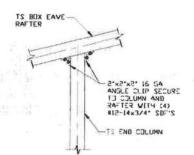
TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION
SCALE 1/8' = 1'-0'



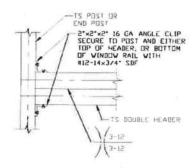
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	DRAWN BY: JG	TUBULAR BUILDING SYSTEMS			
ENGINEERING AND CONSULTING, INC.	CHECKED BY PDH	40'-0"x20'-0" ENCLOSED BUILDING EXP. B			
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHOBITED AND ANY INFERIORMENT THERETHIPM MAY BE SIDE FOR THE	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO 160225/173015/203525	

#### **CONNECTION DETAILS**



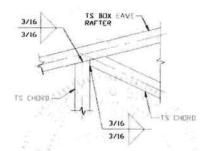
# 4 END POST/RAFTER CONNECTION DETAIL SCALE NTS



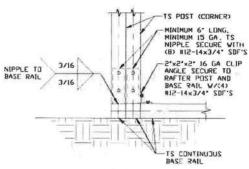
DOUBLE HEADER
TO COLUMN
CONNECTION DETAIL

6A

9



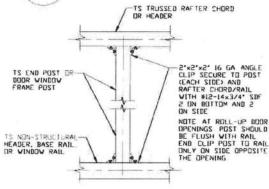
TRUSS POST AND CORD TO RAFTER CONNECTION DETAIL
SCALE: NTS



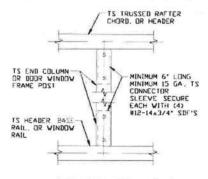
5 END POST/BASE RAIL

CONNECTION DETAIL

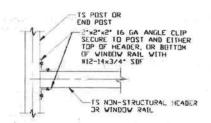
SCALE NTS



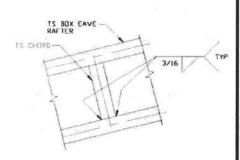
POST TO HEADER, BASE RAIL OR WINDOW RAIL CONNECTION DETAIL



10 COLUMN TO HEADER/
BASE RAIL
CONNECTION DETAIL
SCALE: NTS



HEADER OR WINDOW
RAIL TO POST
CONNECTION DETAIL
SCALE: NTS



8 CHORD/RAFTER CONNECTION DETAIL



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: PDH

TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

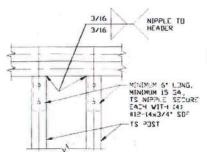
PROJECT MGR: VSM DATE: 7-29-21

SCALE: NTS

JOB NO 160225/173015/20352:

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROMIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

#### **CONNECTION DETAILS**



NIPPLE TO 3/16

MINIMUM 6' LONG, MINIMUM 15 GA, TS NIPPLE SCURE VITH (4) SECURE VITH (4) SI2-14x3/4' SDF

TS DOUBLE HEADER

NIPPLE TO 3/16

BASE RAIL

3/16

TS POST

MINIMUM 6' LONG
MINIMUM 15 GA.
TS NIPPLE

SECURE EACH
VITH (4)

BIZ-14x3/4' SDF

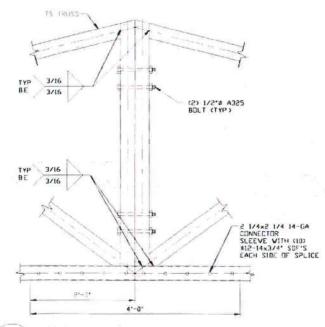
TS CONTINUOUS

BASE RAIL

11 DOUBLE HEADER/POST CONNECTION DETAIL
SCALE: NTS

12 POST/DOUBLE HEADER
CONNECTION DETAIL
SCALE NTS

13 POST/BASE RAIL
CONNECTION DETAIL



14 SPLICE CONNECTION DETAIL



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 MOURE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHOBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

DRAWN B	Yı JG
CHECKED	BY: PDH

TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

SCALE: NTS

PROJECT MGR: VSM

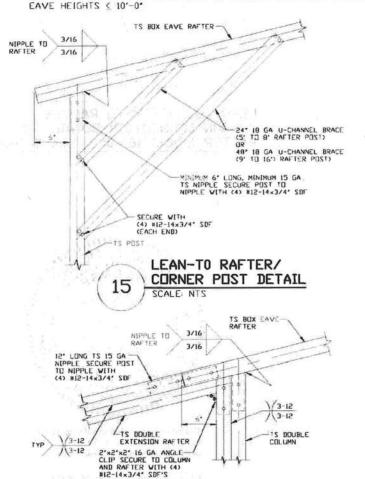
DATE: 7-29-21

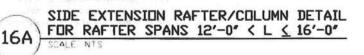
JDB ND: 160225/173015/203525

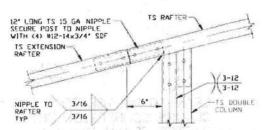
## 

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

SCALE: NTS
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE LACED COLUMNS FOR
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 11'-0' < TO < 16'-0'
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR







SIDE EXTENSION RAFTER/COLUMN
DETAIL FOR RAFTER SPANS & 12'-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,	INC.

	DRAWN BY: JG
INC.	CHECKED BY: PDH

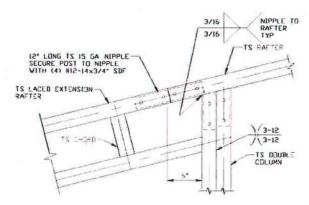
TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR DITHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBERTOR AND ANY DEFENDENT THEREIGHD MAY WE SIZE FIT TO

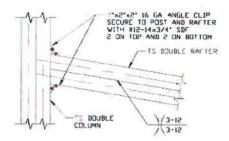
PROJECT MGR: WSM DATE: 7-29-21

JOB NO: 160225/173015/2035

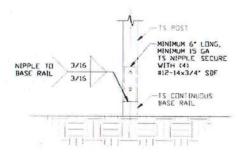
#### BOX EAVE RAFTER LEAN-TO OPTIONS



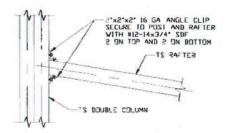
SIDE EXTENSION RAFTER/COLUMN DETAIL FOR RAFTER SPANS 16'-0" < L < 24'-0"



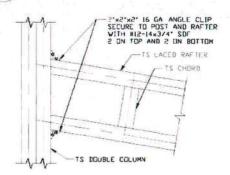
LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 12'-0" < L < 16'-0"



LEAN-TO POST CONNECTION DETAIL 18 SCALE NTS



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 12'-0" SCALE NTS



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 16'-0" < L ≤ 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, INC.	

DRAWN BY: JG CHECKED BY: PDH

TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

PROJECT MGR: WSM

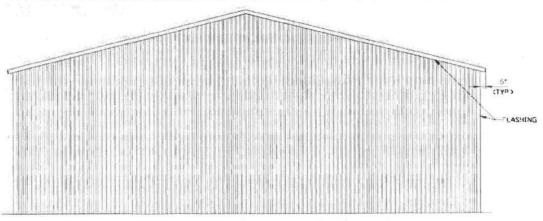
DATE: 7-29-21

JOB NO SCALE: NTS

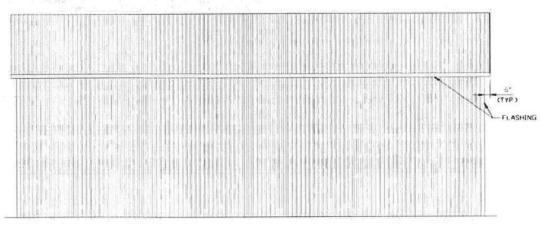
THIS DOCUMENT IS THE PROPERTY OF MOURE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRUCTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

160225/173015/203525

#### BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



## TYPICAL END ELEVATION VERTICAL ROOF/SIDING SCALE 1/8" = 1'-0"



## TYPICAL SIDE ELEVATION VERTICAL ROOF/SIDING SCALE: 1/8' = 1'-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 A	ND ASS	OCIATES	10, 3
<b>ENGINEERING A</b>	ND CON	SULTING,	INC.

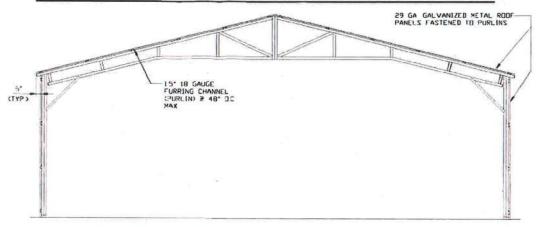
DRAWN BY: JG
CHECKED BY: PDH

ROJECT MGR: WSM

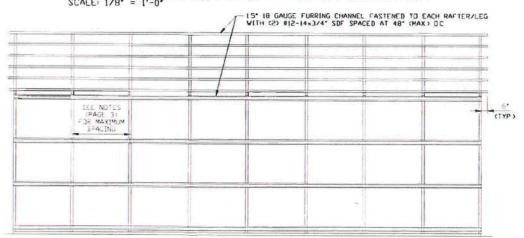
160225/173015/20352

SCALE: NTS

#### DUA LAVE KAFIEK VEKTICAL KUUP/SIDING UPTIUN



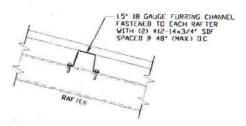
### TYPICAL SECTION VERTICAL ROOF/SIDING OPTION SCALE: 1/8' = 1'-0'



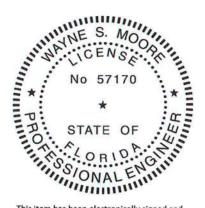
#### TYPICAL FRAMING SECTION VERTICAL ROOF/SIDING OPTION

SCALE 1/8" = 1'-0"

NDTE: TS 2 1/2"x2 1/2"-14 GA WALL GIRTS CAN BE USED AS AN OPTION IN PLACE OF HAT CHANNELS. TS GIRTS MUST BE SPACED AT 4'-0" (MAX) OC



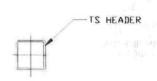
PANEL ATTACHMENT
(ALTERNATE FOR VERTICAL ROOF PANELS)



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	TUBULAR BUILDING SYSTEMS		
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH	40'-0"x20'-0" ENCLOSED BUILDING EXP. B		BUILDING EXP. B
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRIDUCTION, COPYING, OR UTHERVISE USE OF THIS DOCUMENT IS	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JUB NU: 16022S/17301S/20352S
STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO	The second second		11 1 K 1 K 1 K K	184 A. C.

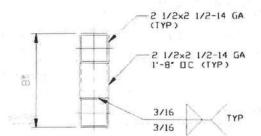
#### SIDE WALL OPTIONAL HEADER



## 3-12 (TYP) 3-12

## HEADER DETAIL FOR OPENINGS LENGTH & 8'-0'

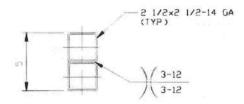
HEADER DETAIL FOR OPENINGS
8'-0" < LENGTH \( \leq \) 10'-0"



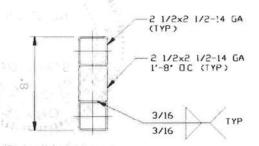
#### HEADER DETAIL FOR OPENINGS 10'-0" < LENGTH \( \leq \) 15'-0"

SCALE NTS

#### END WALL OPTIONAL HEADER



## HEADER DETAIL FOR OPENINGS LENGTH & 10'-0"



HEADER DETAIL FOR OPENINGS

10'-0" < LENGTH \( \) 15'-0"

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Mcore, 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	IC.

ATES	DRAWN BY: JG				
TING, INC.	CHECKED BY: PDH				
S. INC. THE					

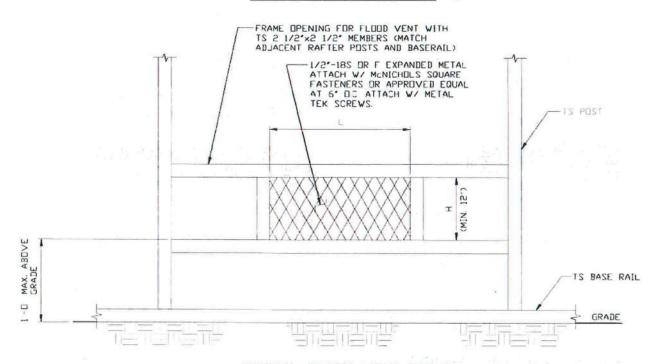
TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

PROJECT MGR: WSM DATE: 7-29-21

SCALE: NTS 160225/173015/203525

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROMOBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

#### FLOOD VENT DETAIL



### TYPICAL FLOOD VENT DETAIL SCALE NTS

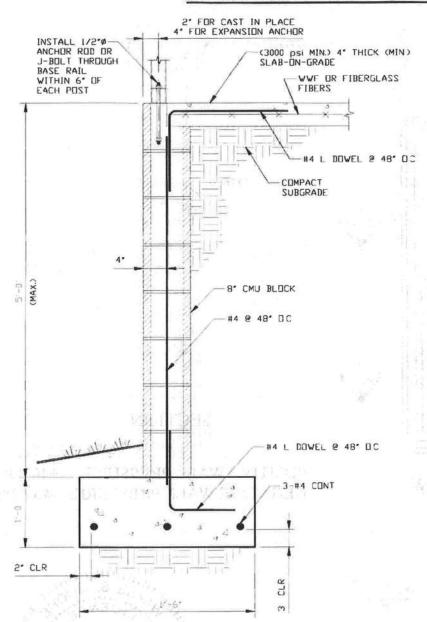
- 1 MINIMUM VENT SPACE REQUIRED = 1 SQ INCH OF OPEN VENT AREA PER SQ FOOT OF BUILDING AREA
- 2 THERE SHALL BE A MINIMUM OF TWO OPENINGS ON DIFFERENT SIDES FOR EACH ENCLOSED BUILDING
- 3 APPLY 13 FACTOR WHEN CALCULATING TOTAL OPEN AREA WHEN USING 1/2'-18GA S OR F EXPANDED METAL
- 4 TOTAL OPEN AREA OF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



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	TUBULAR BUILDING SYSTEMS			
ENGINEERING AND CONSULTING, INC.  THIS DOCUMENT IS THE PROPERTY OF MODINE AND ASSOCIATES, INC. THE LINAUTHORIZED REPRODUCTION, CUPYING, OR UTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO	CHECKED BY: PDH 40'-0"x20'-0" ENCLOSED BUILDING			NG EXP. B	
	PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	160552 708 M	Di \$/17301\$/20352\$
	1,3	The Property of	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Harris I and F	

#### STAND -ALONE STEM WALL DETAIL



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



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.	

	The second secon	A STATE OF THE PARTY OF THE PAR	
THIS DOCUMENT IS THUNAUTHORIZED REPRO			
STRICTLY PROHUBITED	AND ANY INFRINGER	KENT THEREUPON MAY	BE SUBJECT TO

DRAWN	BY: JG	-
CHECKE	D BY PDH	

TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

ECKED DI FUIT

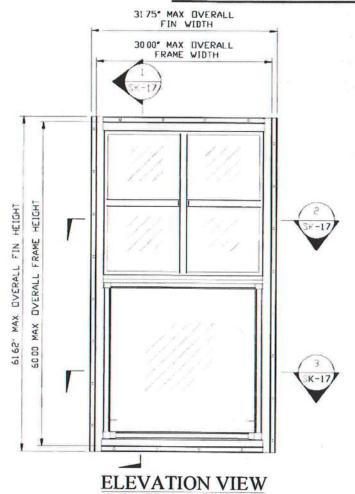
ROJECT MGR: WSM

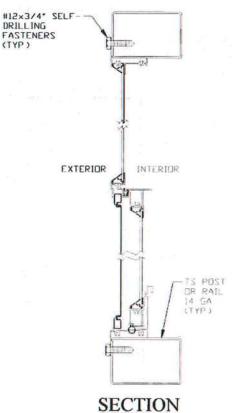
ATE: 7-29-21

ALC: NTS 16022271

JOB NO: 160225/173015/203525

#### VERTICAL SLIDING WINDOW DETAIL

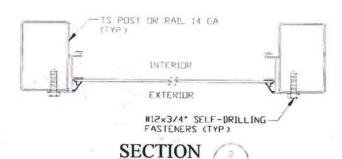


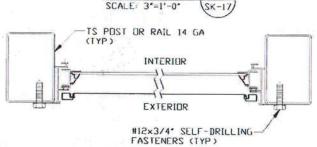


SECTION SCALE: 3'=1'-0'

NDTE KINRO SERIES 18000-R VS OR EQUIVALENT WINDOW IS REQUIRED

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.

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC. THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRIDUCTION, COPYING, OR OTHERVISE USE OF THIS BOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

CHECKED BY PDH ROJECT MGR: WSM

DRAWN BY: JG

TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

IUB NO DATE: 7-29-21 SCALE: NTS 160225/173015/203525

## **UPTIONAL CONCRETE STRIP FOUTING** FOOTING FOOTING AND BASE RAIL 40'-0" MAXIMUM VARIE TODING LENGTH VARIES L'MANTH I/2"# EXPANSION ANCHOR (TYP) HAN TS BASE RAIL TS RAFTER COLUMN CONCRETE STRIP CONCRETE STRIP FOOTING PLAN SCALE: NTS

#### **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 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

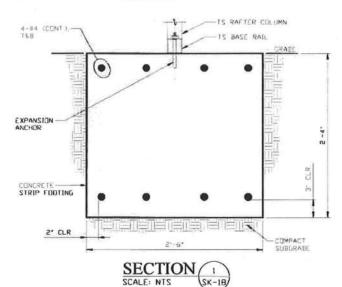
THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT

### 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



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.

\* COORDINATE WITH LOCAL CODES/ORD

INC.	CHECKED	BY:	PDH
MENT IS	PROJECT	MGR	WSI
T TO			

DRAWN BY JG

TUBULAR BUILDING SYSTEMS 40'-0"x20'-0" ENCLOSED BUILDING EXP. B

SCALE: NTS ROJECT MGR: WSM DATE: 7-29-21

JOB NO: 160225/173015/203525

THIS BOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES, INC. THE UNAUTHORIZED REPRIDUCTION, COPYING, OR OTHERWISE USE OF THIS BOCUMENT STREETLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO

with a secretarial property of matter