

"Quality & Service are our #1 Priority"

# STRUCTURAL PLANS

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Customer: Kristen Emmons

Address: 415 Misty Cove LN Spring Lake NC 28390

#### **Prepared For:**

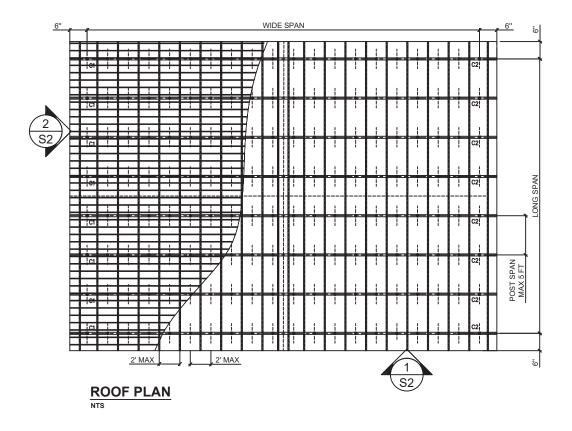
SUPERIOR METAL STRUCTURES & CONCRETE, LLC

#### **Prepared By:**



250 SHIPWASH DR, GARNER, NC 27529

THESE STRUCTURAL ENGINEERED PLANS ARE TO BE INCLUDED IN YOUR PERMIT APPLICATION AND STRUCTURE IS TO BE BUILT BY SUPERIOR METAL STRUCTURES & CONCRETE, LLC



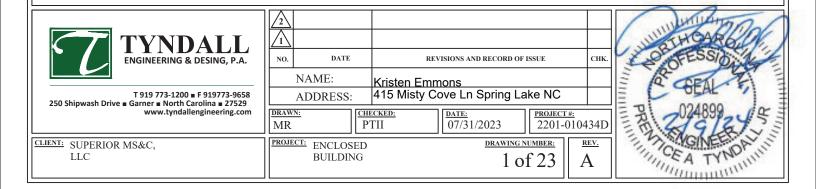
#### **GENERAL NOTES**

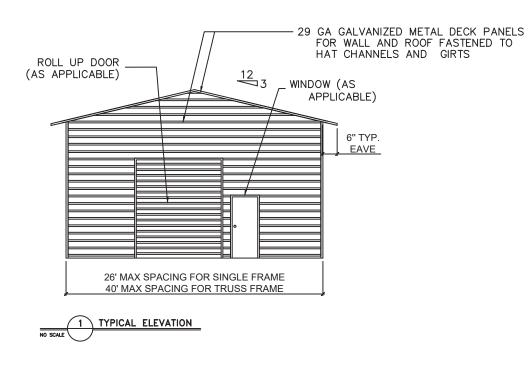
- ALL STRUCTURAL STEEL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH NOTES AND DETAILS ON THESE DRAWINGS; DETAILING, FABRICATION, AND ERECTION OF STRUCTURAL CONFORM IN ACCORDANCE WITH THE VIRGINIA BUILDING CODE 2021, INTERNATIONAL BUILDING CODE (IBC) 2021, AND NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2016 (REAFFIRMED 2020).
- ALLOWABLE SOIL PRESSURE 2000 PSF
- WELDED WIRE FABRIC SHALL BE NEW BILLET STEEL, COLD DRAWN CONFORMING A815 AND SHALL BE SUPPLIED IN SHEET
- ALL WELDING SHALL BE ACCOMPLISHED USING E-70XX LOW-HYDROGEN ELECTRODES AND AWS CERTIFIED WELDERS IN COMPLIANCE WITH CURRENT AWS STANDARDS.
- ALL WELDS SHALL BE COATED WITH GALVANIZE PRIMER & PAINT AFTER WELDING
- 5) ALL WELDS SHALL BE COATED WITH GALVANIZE PRIMER & PAINT AFTER WELDING
  6) THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION AND ANY
  DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD.
  7) GALVANIZED STRUCTURAL TUBING STEEL SHALL CONFORM TO ASTM A123 AND/OR A153
  8) THE MINIMUM YIELD STRENGTH OF THE TUBE STEEL SHALL BE (Fy. 80,000 PSI)
  9) THE MINIMUM YIELD STRENGTH OF METAL DECK SHALL BE (Fy. 80,000 PSI)
  10) THE TUBE STEEL FOR COLUMNS SHALL BE 2 1/4" SQUARE GAUGE 14 FOR COLUMNS UP TO 10 FT TALL AND GAUGE 12 FOR

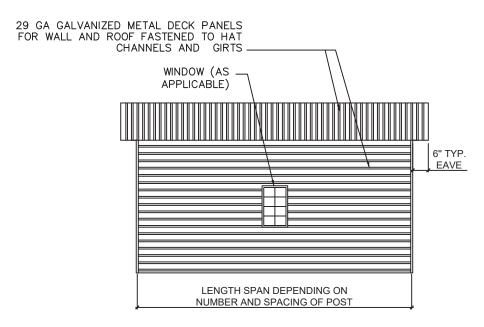
- 12' AND ABOVE, TYPICAL UNLESS NOTED OTHERWISE.
- 11) AT 150 MPH THE STRUCTURE SHALL BE BUILD WITH DOUBLE COLUMN SUPPORT, TYPICAL UNLESS NOTED OTHERWISE.

  12) ALL TUBE STEEL CONNECTIONS SHALL BE BEARING TYPE USING #12X14X3/4" SELF DRILLING METAL SCREWS
- 12) DECKING SHALL BE GALVANIZED STEEL SHEET METAL STANDARD GA 29 FASTENED WITH (2) #12X14X3/4" SELF DRILLING METAL SCREWS WITH NEOPRENE WASHER, FOR RAFTER, HAT CHANNEL AND POST CONNECTION

  14) THE CONCRETE DECK SHALL BE 3000 PSI CAPACITY AT 28 DAYS, AND THE SURFACE MUST BE LEVEL.CONTRACTOR
- RESPONSIBLE FOR MEETING THIS REQUIREMENT
- BASE RAIL ANCHORAGE TO CONCRETE SHALL BE BEARING 1/2" Ø WEDGE ANCHORS ASTM A325 OR SIMILAR HIGH STRENGTH BOLTS, UNLESS INDICATED OTHERWISE ON THE DRAWINGS







TYPICAL SIDE ELEVATION

### **ELEVATION PLAN**



T 919 773-1200 **=** F 919773-9658 250 Shipwash Drive **=** Garner **=** North Carolina **=** 27529 www.tyndallengineering.com

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NO.	DATE		REV	VISIONS AND RECORD OF	ISSUE	снк.
	NAME:		Kristen Emm	nons		
	ADDRESS:		415 Misty Co	ove Ln Spring La	ake NC	
MR			CCKED: FII	DATE: 07/31/2023	PROJECT #: 2201-0104	34D

CLIENT: SUPERIOR MS&C, LLC PROJECT: ENCLOSED BUILDING

7/31/2023 | 2201-0 DRAWING NUMBER: 2 of 23

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#### **2018 APPENDIX B**

#### **BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS**

#### STRUCTURAL DESIGN

DESIGN LOADS:
IMPORTANCE FACTORS: WIND (Iw) 1.00
SNOW (Is) <u>1.00</u>
SEISMIC ( Ie) 1.00
DEAD LOADS: ROOF 10 PSF
LIVE LOADS: ROOF 20 PSF
GROUND SNOW LOAD: 20 PSF
GROUND LOAD: BASIC WIND SPEED 150 mph (ASCE 7-16) *DRIFT LOAD HAS NOT BEEN CALCULATE
EXPOSURE CATEGORY B
SEISMIC DESIGN CATEGORY: B
PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
OCCUPANCY CATEGORY 1
SPECTRAL RESPONSE ACCELERATION Ss 20.0 %g S1 8.2 %g
SITE CLASSIFICATION D FIELD TEST PRESUMPTIVE HISTORICAL DATA
BASIC STRUCTURAL SYSTEM (CHECK ONE)
BEARING WALL DUAL W/ SPECTRAL MOMENT FRAME
X BUILDING FRAME DUAL W/ INTERMEDIATE R/C OR SPECIAL STEEL
MOMENT FRAME INVERTED PENDULUM
ANALYSIS PROCEDURE SIMPLIFIEDX EQUIVALENT LATERAL FORCE MODAL
LATERAL DESIGN CONTROL EARTHQUAKEX WIND
SOIL BEARING CAPACITIES:
PRESUMPTIVE BEARING CAPACITIES: 2,000 PSF
GENERAL NOTES: SEE PAGE 1
OLIVLIAL NOTES. SELTAGE I



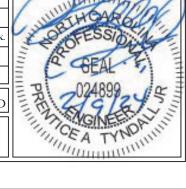
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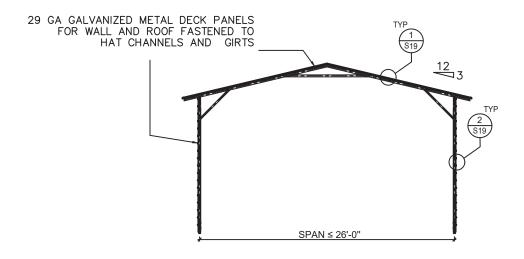
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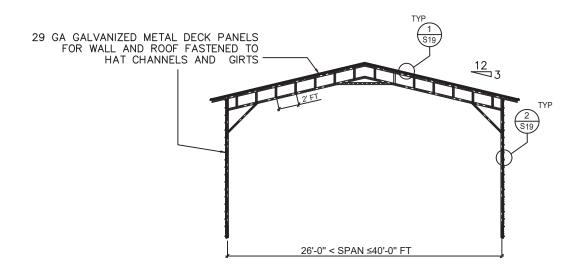
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1 TYPICAL TRUSS FRAME ELEVATION BOSCALE B

### ELEVATION PLAN



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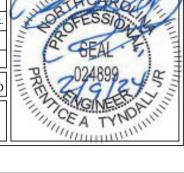
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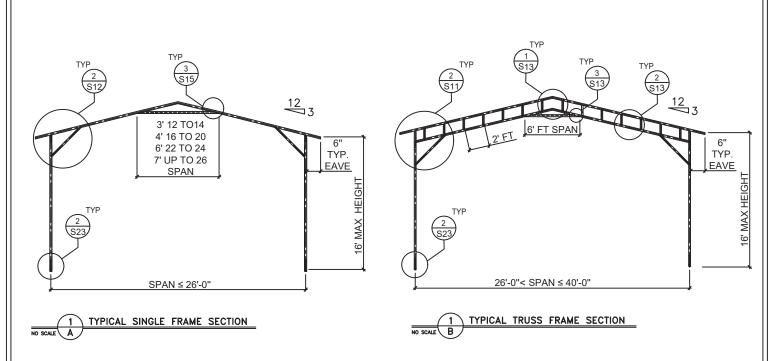
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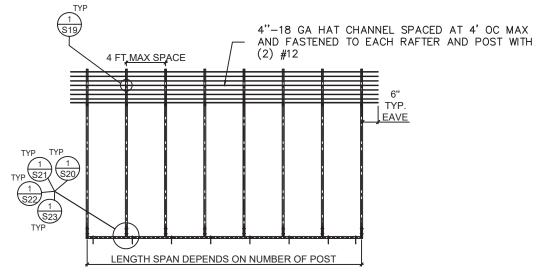
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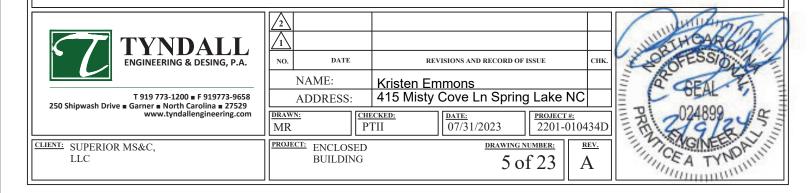


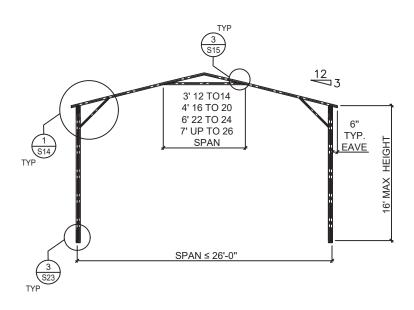




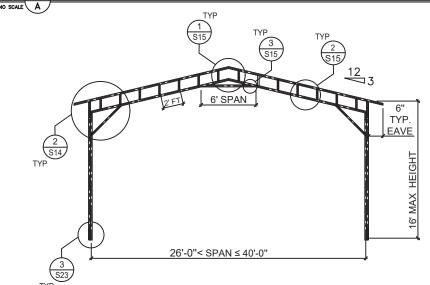


### ELEVATION PLAN





1 TYPICAL SINGLE FRAME DOUBLE SECTION FOR WIND SPEED 105<TO≤150 MPH



1 TYPICAL TRUSS FRAME DOUBLE SECTION FOR WIND SPEED 105<TO≤150 MPH

### **ELEVATION PLAN**



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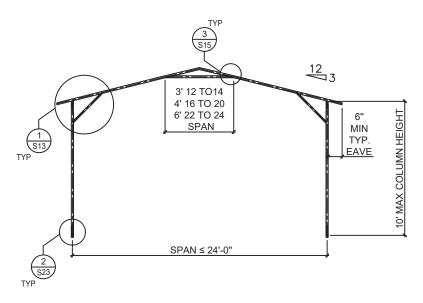
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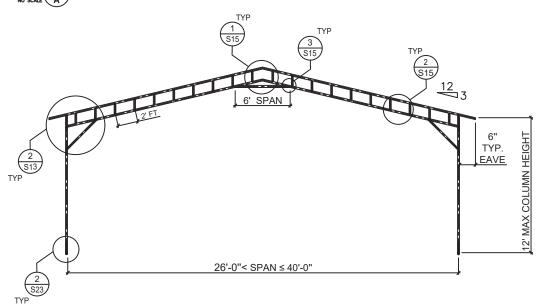
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1 TYPICAL SINGLE FRAME SINGLE SECTION FOR WIND SPEED UP TO 130 MPH



1 TYPICAL TRUSS FRAME SINGLE SECTION FOR WIND SPEED 130 MPH TO 150 MPH

### **ELEVATION PLAN**



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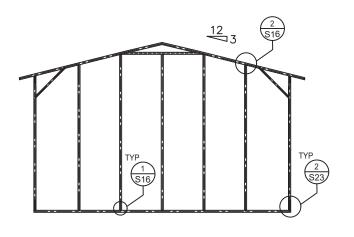
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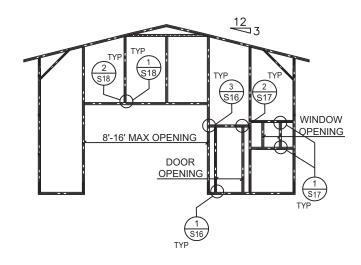
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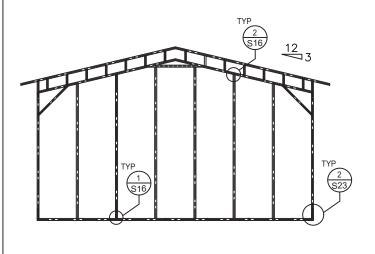
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1 TYPICAL SINGLE FRAME ELEVATION

1 FRAME ELEVATION W/ GARAGE DOOR, DOOR AND WINDOW FRAME



2 TYPICAL TRUSS FRAME ELEVATION

2 FRAME ELEVATION W/ GARAGE DOOR, DOOR AND WINDOW FRAME
NO SCALE B

# ELEVATION PLAN NTS



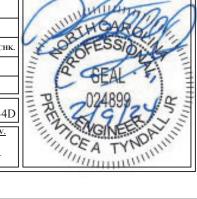
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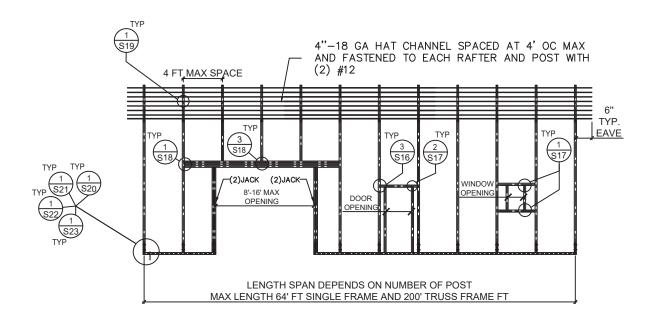
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CLIENT: SUPERIOR MS&C, LLC PROJECT: ENCLOSED BUILDING

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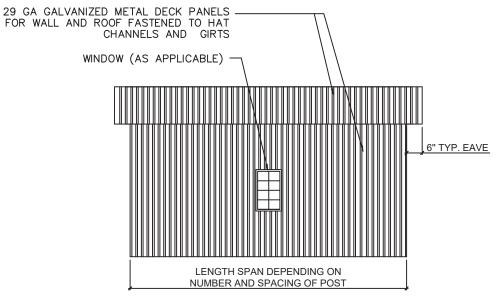




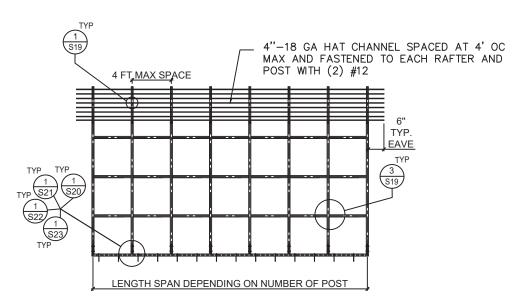
1 FRAME SIDE ELEVATION W/ GARAGE DOOR, DOOR AND WINDOW FRAME

### ELEVATION PLAN



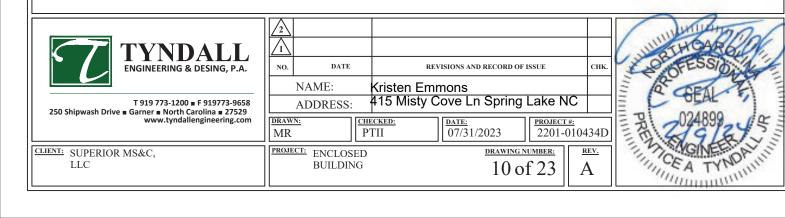


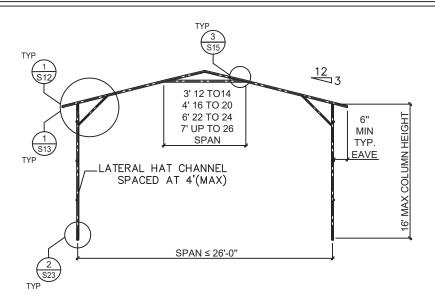
TYPICAL SIDE ELEVATION FOR VERTICAL PANEL DECK



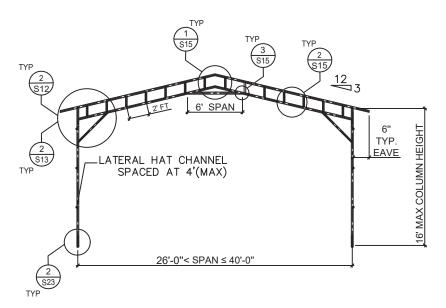
2 TYPICAL SIDE ELEVATION FOR VERTICAL METAL PANEL DECK

### ELEVATION PLAN





### TYPICAL SINGLE FRAME SECTION FOR VERTICAL PANEL DECK



TYPICAL TRUSS FRAME SECTION FOR VERTICAL PANEL DECK

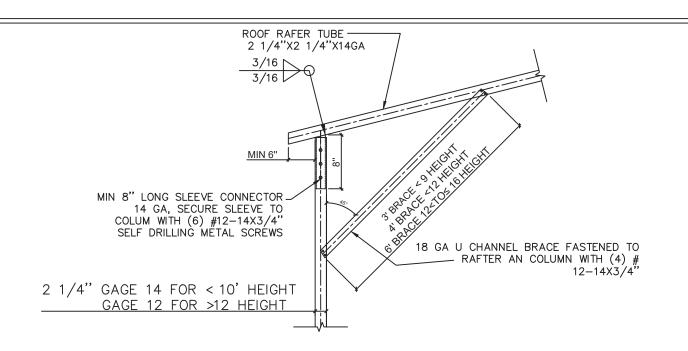
### **ELEVATION PLAN**



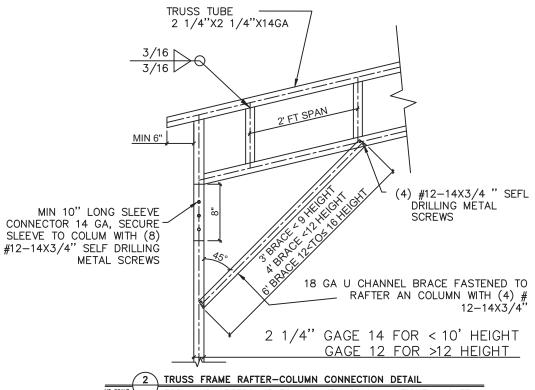
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CLIENT: SUPERIOR MS&C, LLC



#### SINGLE FRAME RAFTER-COLUMN CONNECTION DETAIL FOR WIND SPEEDS UP TO 120 MPH COLUMN HEIGHT ≤16 FT



**DETAILS** 

FOR WIND SPEEDS UP TO 120 MPH COLUMN HEIGHT ≤16 FT



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NO.	DATE		REV	ISIONS AND RECORD OF	ISSUE	СНК.
	NAME:		Kristen Em	mons		
	ADDRESS:		415 Misty (	Cove Ln Spring	Lake NC	
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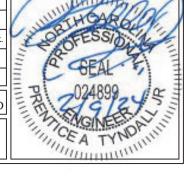
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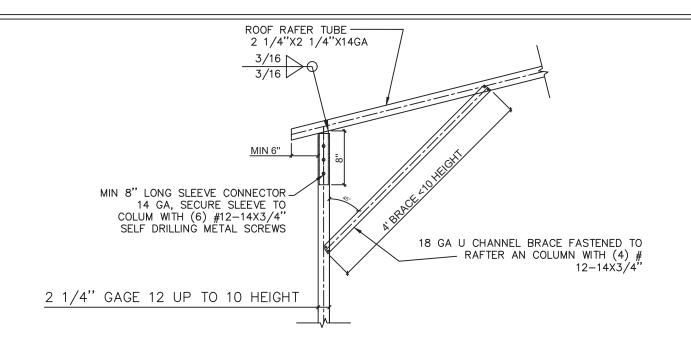
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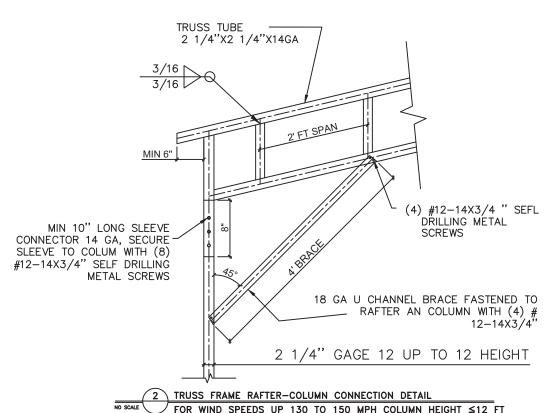
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# 1 SINGLE FRAME RAFTER-COLUMN CONNECTION DETAIL FOR WIND SPEEDS UP TO 130 MPH COLUMN HEIGHT ≤10 FT



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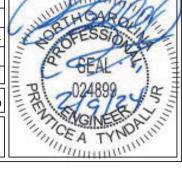
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250 Shipwash Drive **Garner** North Carolina **27**7529
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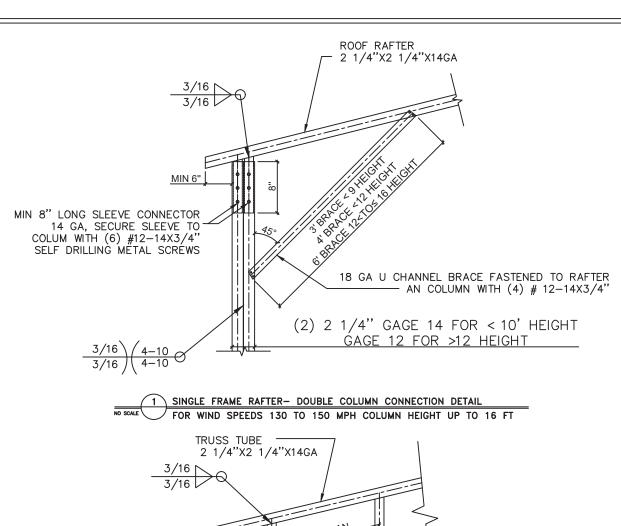
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		NAME:	Kristen Emmons	
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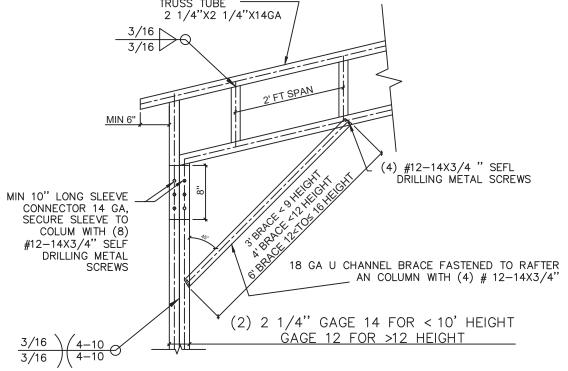
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**DETAILS** 

2 TRUSS FRAME RAFTER-DOUBLE COLUMN CONNECTION DETAIL

FOR WIND SPEEDS 130 TO 150 MPH COLUMN HEIGHT UP TO 16 FT



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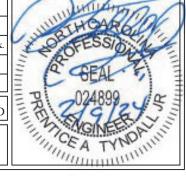
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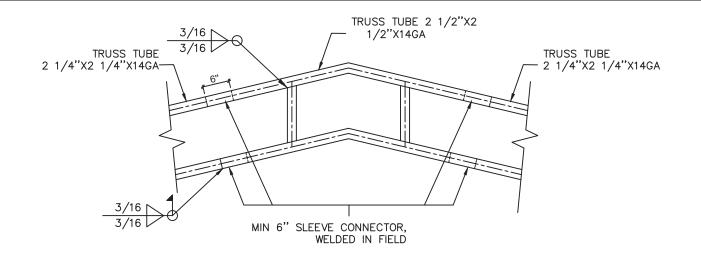
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PROJECT: ENCLOSED BUILDING

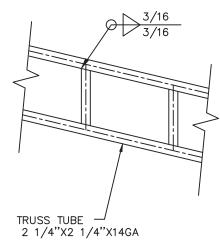
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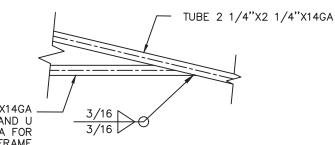




### TRUSS-TRUSS CONNECTION DETAIL







TUBE 2 1/4"X2 1/4"X14GA FOR TRUSS FRAME AND U CHANNEL 18 GA FOR SINGLE FRAME **DETAILS** 

SINGLE FRAME WELD DETAIL



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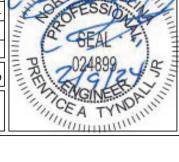
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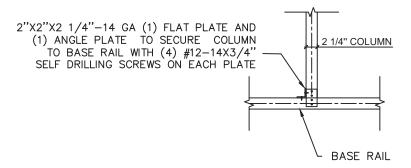
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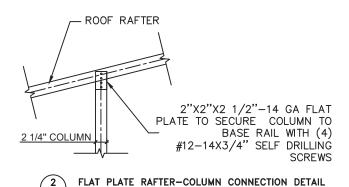
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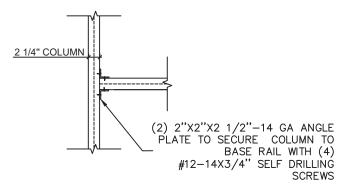
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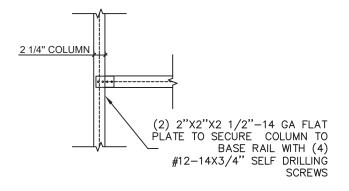




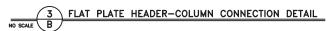
## 1 FLAT PLATE CONNECTION COLUMN TO BASE RAIL











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#### **DETAILS**

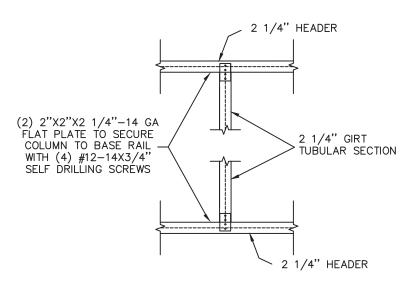


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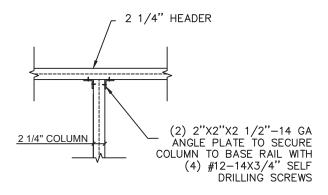
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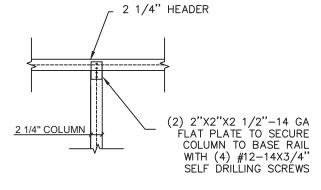
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1 FLAT PLATE HEADER CONNECTION FOR WINDOW DETAIL





2 ANGLE PLATE DOOR COLUMN-HEADER CONNECTION DETAIL

2 FLAT PLATE DOOR COLUMN-HEADER CONNECTION DETAIL

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#### DETAILS NTS



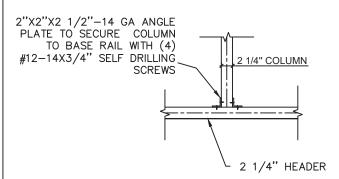
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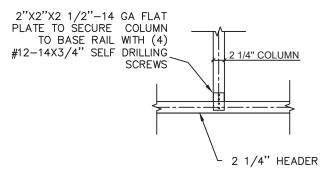
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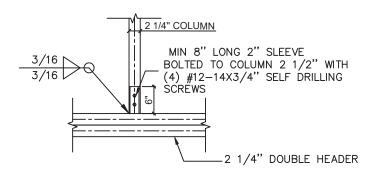
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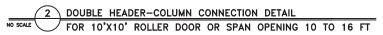


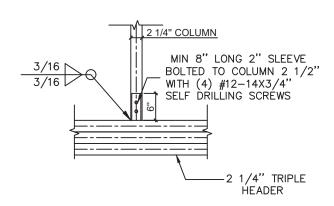






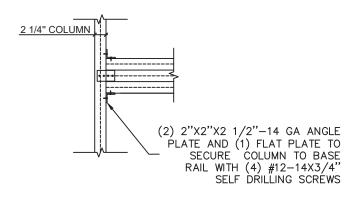






3 DOUBLE HEADER-COLUMN CONNECTION DETAIL

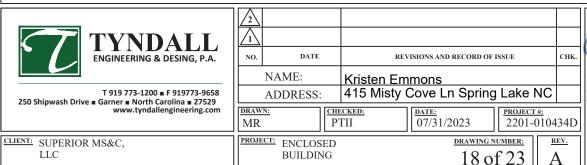
FOR SIDE ROLLER DOOR OPENING



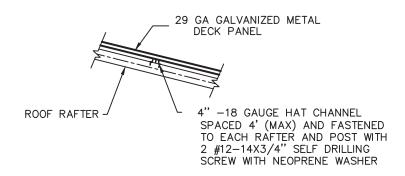
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4 ANGLE PLATE TRIPLE HEADER-COLUMN CONNECTION DETAIL

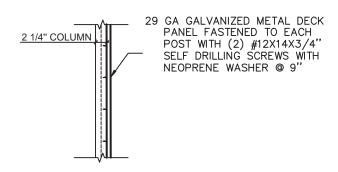
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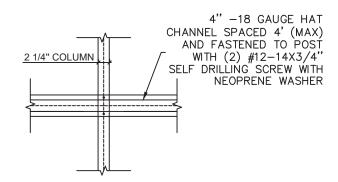
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# 1 SINGLE FRAME RAFTER-COLUMN CONNECTION DETAIL







HAT-COLUMN CONNECTION DETAIL FOR VERTICAL DECKING



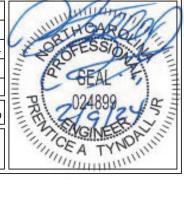
T 919 773-1200 ■ F 919773-9658
250 Shipwash Drive ■ Garner ■ North Carolina ■ 27529
www.tyndallengineering.com

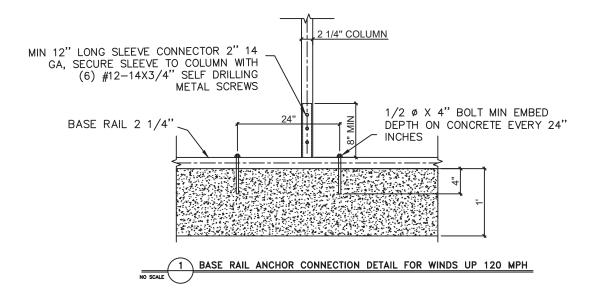
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	$\Lambda$			
	NO.	DATE	REVISIONS AND RECORD OF ISSUE	СНК.
		NAME:	Kristen Emmons	
	ADDRESS:		415 Misty Cove Ln Spring Lake NC	
	DRAW MR	<u>N:</u>	HECKED: DATE: PTH 07/31/2023 PROJECT #: 2201-0104	134D

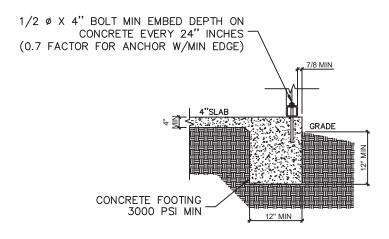
CLIENT: SUPERIOR MS&C, LLC PROJECT: ENCLOSED BUILDING

DRAWING NUMBER: 19 of 23

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1 BASE RAIL ANCHOR LATERAL VIEW FOR WINDS UP 120 MPH

#### DETAILS NTS

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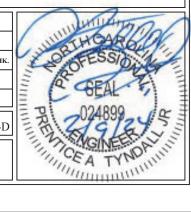
www.tyndallengineering.com

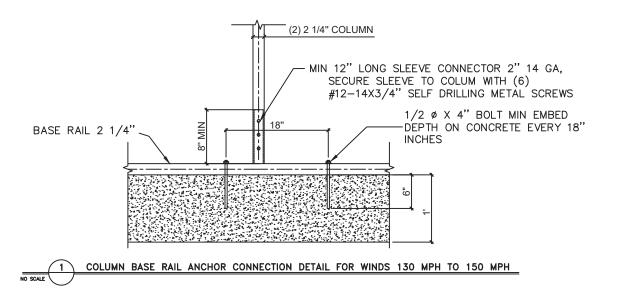
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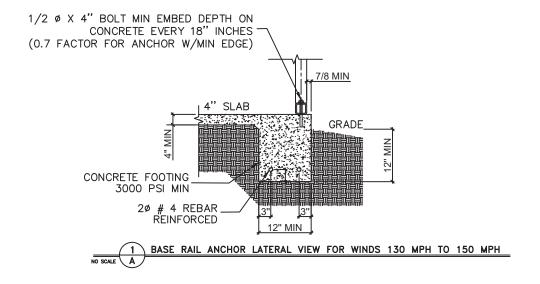
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	NO.	DATE	REVISIONS AND RECORD OF ISSUE	СНК.
		NAME:	Kristen Emmons	
IL		ADDRESS:	415 Misty Cove Ln Spring Lake NC	
11-	raw MR	N: CHI P'	DATE: 07/31/2023   PROJECT #: 2201-0104	34D

PROJECT: ENCLOSED
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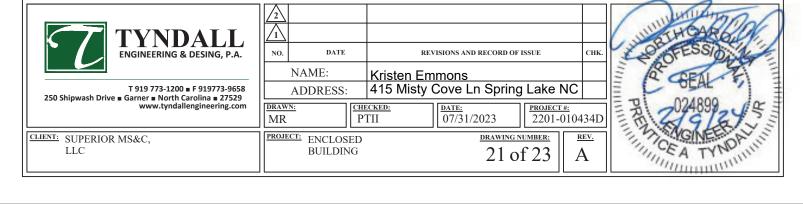
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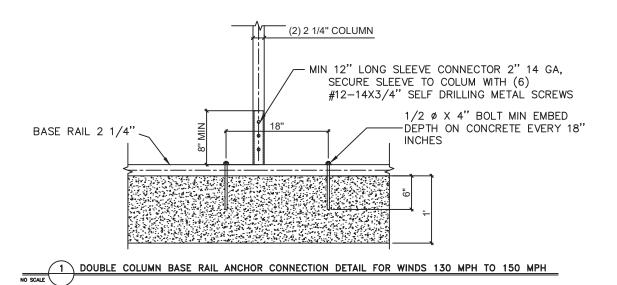


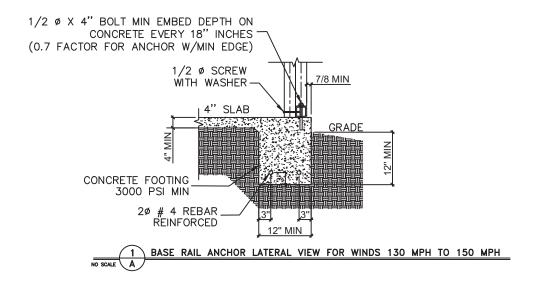




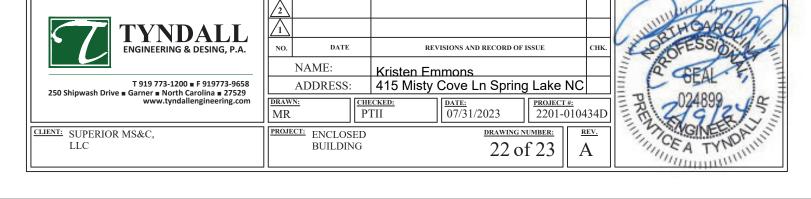
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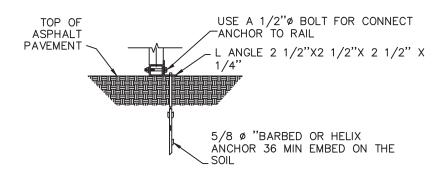




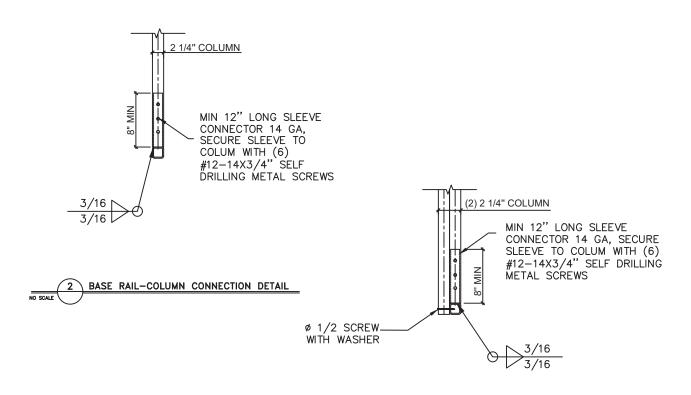


#### DETAILS NTS





# 1 BASE RAIL ANCHORAGE WITH BARBED OR HELIX ANCHOR







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NO.	DATE	RE	VISIONS AND RECORD OF	ISSUE	СНК.
NAME:		Kristen En			
ADDRESS:		415 Misty	Cove Ln Spring	g Lake NC	
DRAV MR	VN:	CHECKED: PTII	DATE: 07/31/2023	PROJECT #: 2201-0104	34D

CLIENT: SUPERIOR MS&C, LLC PROJECT: ENCLOSED BUILDING

12023 | 2201-0 DRAWING NUMBER: 23 of 23

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