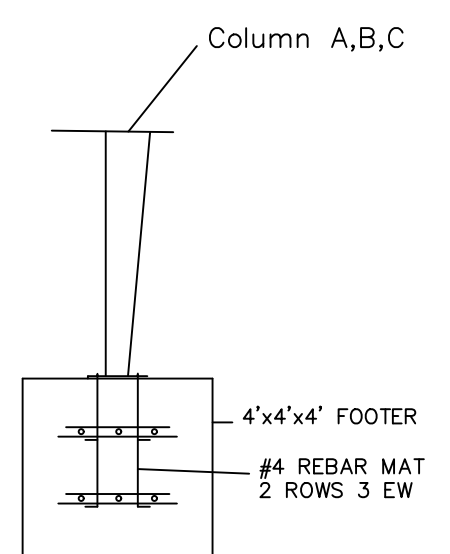


FOUNDATION PLAN



1/4"=1'-0"



NOTICE TO CONTRACTOR
 All construction must comply with current NC Building Codes and is subject to field inspection and verification.

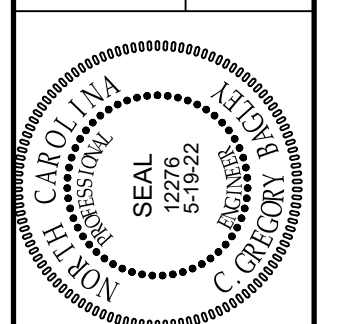
Reviewed for Code Compliance

08/26/2024

REVISIONS	BY

GREG BAGLEY ENGINEER
 Engineering / Planning / Surveying
 805 COKEBURY ROAD
 FUQUAY VARINA, NC 27526
 Office: (919) 609-0300
 Email: gdb.greg@gmail.com



FLOOR PLAN

FOOD LION DISTRIBUTION CENTER
 DEVELOPED FOR
MARK DAVIS
HARNETT COUNTY N.C.

DUNN

DATE	2-7-2018
SCALE	1/4"=1'-0"
DESIGNED BY	CGB
DRAWN BY	
SHEET	001 FP1

Builder/Contractor Responsibilities

Drawing Validity- These drawings, supporting structural calculations and design certification are based on the order documents as of the date of these drawings. These documents describe the material supplied by the manufacturer as of the date of these drawings. Any changes to the order documents after the date on these drawings may void these drawings, supporting structural calculations and design certification. The Builder/Contractor is responsible for notifying the building authority of all changes to the order documents which result in changes to the drawings, supporting structural calculations and design certification.

Builder Acceptance of Drawings- Approval of the manufacturer's drawings and design data affirms that the manufacturer has correctly interpreted and applied the requirements of the order documents and constitutes Builder/Contractor acceptance of the manufacturer's interpretations of the order documents and standard product specifications, including its design, fabrication and quality criteria standards and tolerances. (AISC code of standard practice Sept 86 Section 4.2.1) (Mar 05 Section 4.4.1)

Code Official Approval- It is the responsibility of the Builder/Contractor to ensure that all project plans and specifications comply with the applicable requirements of any governing building authority. The Builder/Contractor is responsible for securing all required approvals and permits from the appropriate agency as required.

Building Erection - The Builder/Contractor is responsible for all erection of the steel and associated work in compliance with the Metal Building Manufacturers drawings. Temporary supports, such as temporary guys, braces, false work or other elements required for erection will be determined, furnished and installed by the erector (AISC Code of Standard Practice Sept 86 Section 7.9.1) (Mar 05 Section 7.10.3) (CSA/S16-09 Section 29).

Discrepancies - Where discrepancies exist between the Metal Building plans and plans for other trades, the Metal Building plans will govern. (AISC Code of Standard Practice Sept 86 Section 3.3) (Mar 05 Section 3.3)

Materials by Others - All interface and compatibility of any materials not furnished by the manufacturer are the responsibility of and to be coordinated by the Builder/Contractor or A/E firm. Unless specific design criteria concerning any interface between materials if furnished as a part of the order documents, the manufacturers assumptions will govern.

Modification of the Metal Building from Plans - The Metal Building supplied by the manufacturer has been designed according to the Building Code and specifications and the loads shown on this drawing. Modification of the building configuration, such as removing wall panels or braces, from that shown on these plans could affect the structural integrity of the building. The Metal Building Manufacturer or a Licensed Structural Engineer should be consulted prior to making any changes to the building configuration shown on these drawings. The Metal Building Manufacturer will assume no responsibility for any loads applied to the building not indicated on these drawings.

Foundation Design- The Metal Building Manufacturer is not responsible for the design, materials and workmanship of the foundation. Anchor rod plans prepared by the manufacturer are intended to show only location, diameter and projection of the anchor rods required to attach the Metal Building System to the foundation. It is the responsibility of the end customer to ensure that adequate provisions are made for specifying rod embedment, bearing values, tie rods and or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. (MBMA 06 Sections 3.2.2 and A3)

Shimming - In accordance with Section 6.10 of Chapter 4 Common Industry Practices in the Metal Building Systems Manual, shimming is a normal part of erection and is not subject to claim.

Building Descriptions			
Building ID	Width	Length	Height
Building A	65'-0"	35'-0"	18'-0"



Download panel installation manuals from:
www.CBBmanuals.com

Descargue los manuales de instalacion del panel desde:
www.CBBmanuals.com

For questions or assistance
Concerning Erection call or Email:
1-844-840-4603
Monday - Friday 7:30am to 5:00pm
FIELD.SERVICES@CORNERSTONE-BB.COM

PROJECT NOTES

Material properties of steel bar, plate, and sheet used in the fabrication of built-up structural framing members conform to ASTM A529, ASTM A572, or ASTM A1011 with 55 ksi min. yield, except flanges wider than 12' and thicker than 3/8', all flanges thicker than 1", and all webs thicker than 3/8' are 50 ksi min. yield. Rod X-bracing conforms to ASTM A529 or ASTM A572 with 50 ksi min. yield. Cable X-bracing conforms to ASTM A475 7 Strand Extra High-Strength grade. Hot rolled structural shapes conform to ASTM A992, ASTM A529, or ASTM A572 with 50 ksi min. yield. Hot rolled angles, other than flange braces, conform to ASTM A36 minimum. Round and rectangular HSS conforms to ASTM A500 Grade B. Cold-formed steel secondary framing Members conform to ASTM A1011 or ASTM A653 Grade 55 with 55 ksi min. yield. For Canada, material properties conform to CAN/CSA G40.20/G40.21 or equivalent.

Unless otherwise noted, special inspection of fabricated items is not required. Per IBC section 1704.2.5.1, fabricator is approved to perform such work without special inspection through maintenance of IAS AC 472 certification MB-136.

All bolted joints with A325 Type 1 bolts are specified as snug-tightened joints in accordance with the most recent edition of the RCSC Specification for Structural Joints Using ASTM A325 or A490 Bolts. Pre-tensioning methods, including turn-of-nut, calibrated wrench, twist-off-type tension-control bolts or direct-tension-indicator are NOT required. Installation inspection requirements for Snug Tight Bolts (Specification for Structural Joints Section 9.1) is suggested.

Design criteria as noted is as given within order documents and is applied in general accordance with the applicable provisions of the model code and/or specification indicated. Neither the metal building manufacturer nor the certifying engineer declares or attests that the loads as designated are proper for local provisions that may apply or for site specific parameters. The design criteria is supplied by the builder, project owner, or an Architect and/or Engineer of Record for the overall construction project.

The use of the structure is limited to Occupancy Category I for structures representing a low hazard to humans; including agricultural facilities, temporary facilities and/or minor storage facilities. The resulting reduction in applied loads would explicitly exclude most industrial or commercial applications, high human occupancy or post disaster uses. Future use for any category other than Occupancy Category I will require investigation of the structure by a qualified design professional in order to determine any reinforcement that may be required.

This metal building system is designed as a Partially Open Building. Exterior and/or operable components including, but not limited to, doors, windows, vents, etc. ('Components') must be designed to withstand the required component and cladding wind pressures specified by the building code. In order to maintain the metal building system's Enclosed Building condition, all Components shall be closed when wind velocities reach half the designed wind load for the metal building system as shown on the drawings and design criteria documentation. Failure to maintain the metal building system's Enclosed Building condition will violate and void all warranties and certifications applicable to the material supplied by the metal building manufacturer.

The framing at building A, gridlines 1, 3 is designed to receive a future addition with a maximum bay spacing of 17.5 feet between centerline of the existing endwall frame to the centerline of the future frame. Additional frame braces shall be installed at the expandable frame opposite the braces provided and shall match the existing braces in sizes and attachment.

Framed openings, walk doors, and open areas shall be located in the bay and elevation as shown in the erection drawings. The cutting or removal of girts shown on the erection drawings due to the addition of framed openings, walk doors, or open areas not shown may void the design certifications supplied by the metal building manufacturer.

The roof and wall panel, not by metal building manufacturer, shall be structurally sufficient to sustain the minimum specified design loads. The roof and wall panel shall be attached to purlins and girts at a maximum spacing of 1'-0".

The roof material, not by metal building manufacturer, attaching to the roof system provided by manufacturer, shall have a maximum weight of 0.94 psf. Attachment of roof material shall be structurally sufficient to sustain the minimum specified design loads.

ENGINEERING DESIGN CRITERIA

Building Code 2015 IBC
Building Risk Category Agricultural (Risk Category I)
Roof Dead Load
Superimposed 2.19 psf
Collateral 0.50 psf
(0.50 psf Other)
Roof Live Load 20.00 psf no reduction
Snow
Ground Snow Load (Pg) 10.00 psf
Snow Importance Factor (I) 0.80
Snow Exposure Factor (Ce) 1.00
Thermal Factor (Ct) 1.20
Sloped Roof Snow (Ps) 6.72 psf
Minimum Roof Snow Load (Pm) : 8.00 psf

Wind
Ultimate Wind Speed (Vult) : 110 mph
Nominal Wind Speed (Vasd) : 85 mph (IBC section 1609.3.1)
Serviceability Wind Speed : 76 mph
Wind Exposure Category : C
Internal Pressure Coef (GCp1): 0.18/-0.18
Wall Loads for components not provided by building manufacturer
Corner Areas (within 3.50' of corner) : 25.08 psf pressure -33.44 psf suction
Other Areas : 25.08 psf pressure -27.17 psf suction
These values are the maximum values required based on a 10 sq ft area.
Components with larger areas may have lower wind loads.

Seismic
Seismic Importance Factor (Ie): 1.00
Seismic Design Category : C
Soil Site Class : D Stiff Soil
Ss 0.246 g Sds 0.262 g
S1 0.090 g Sd1 0.144 g
Analysis Procedure Equivalent Lateral Force
Column Line All
Basic Force Resisting System H
Response Modification Coefficient (R) : 3.00
Seismic Response Coefficient (Cs) : 0.09
Design Base Shear in kips (V) : 1.67
Basic Structural System (from ASCE 7-10 Table 12.2-1)
H - Steel System not Specifically Detailed for Seismic Resistance

DEFLECTION CRITERIA

following minimum deflection criteria. The actual deflection may be less depending on actual load and actual member length.

BUILDING DEFLECTION LIMITS BLDG-A

Roof Limits			
	Rafters	Purlins	Panels
Live: L/	180	150	60
Snow: L/	180	180	60
Serviceability Wind: L/	180	180	60
Total Gravity: L/	120	120	60
Total Uplift: L/	N/A	N/A	60
Frame Limits			
	Sidesway	Portal Frame	Sidesway
Live: H/	60		
Snow: H/	60		
Serviceability Wind: H/	60		
Seismic Drift: H/	40	40	
Portal Serviceability Wind: H/	N/A	60	
Total Gravity: H/	60		
Service Seismic: H/	40	40	
Wall Limits			
	Limit		
Total Wind Panels: L/	60		
Total Wind Girts: L/	90		
Total Wind EW Columns: L/	120		

The Service Seismic limit as shown here is at service level loads.

Drawing Index		Ck'd	By	Date	Revision
Page	Description				
F1	Anchor Rod Setting Plan				
F2	Anchor Rod Details				
F3	Reactions				
E1	Cover Sheet				
E2	Primary Steel				
E3	Roof Framing				
E4	Sidewall SWA				
E5	Sidewall SWC				
E6	Endwall EWB				
E7	Endwall EWD				
E8	Cross Section at Frame Line 1				
E9	Cross Section at Frame Line 2				
E10	Cross Section at Frame Line 3				
E11	Portal Frame Cross Section SWA				
E12	Portal Frame Cross Section SWC				
E13	Connection Detail				
R1-R3	Erection Guides				
R4-R5	Construction Drawings				

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Ramseyer and Associates, PLLC
1000 E. 10th St., Oklahoma City, OK 73154
(405) 466-2330

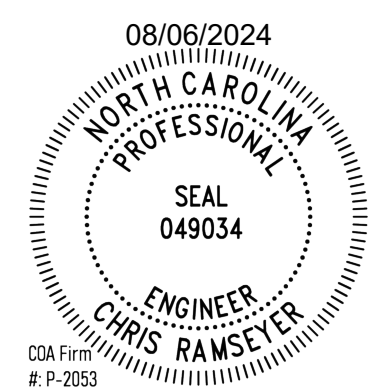
Project Name & Location:
DANIEL VINCANNON
DUNN, NC

Customer:
VINCANNON CONTRACTING
LLC
FUQUAY VARINA, NC

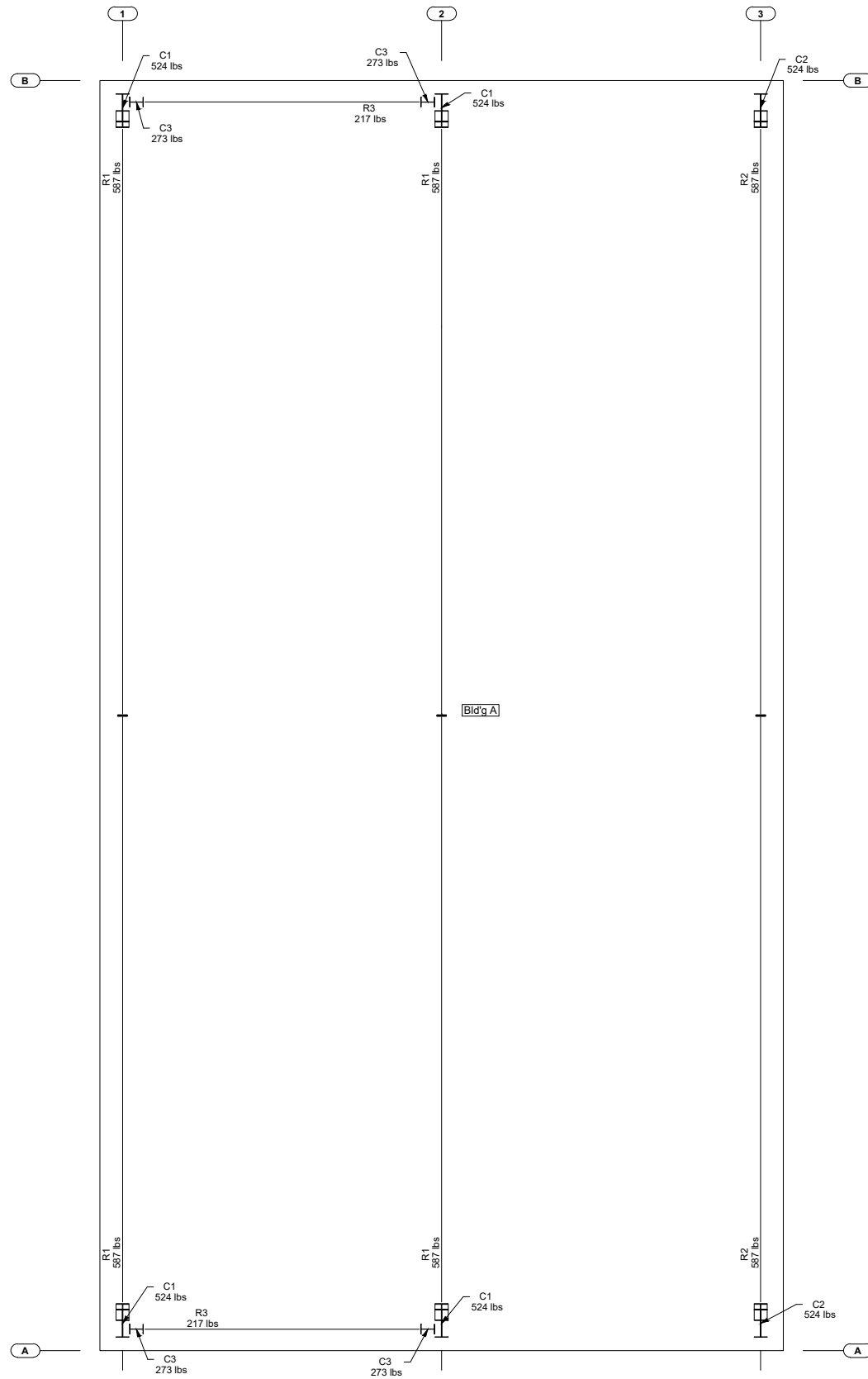
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Project Engineer: DE
Job Number: 19-B-69158
Sheet Number: E1 of 13

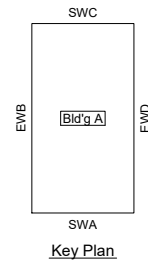
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1/2" DIA. A325 BOLT GRIP TABLE		BOLT LENGTH	NOTE: FULL THREAD ENGAGEMENT IS DEEMED TO HAVE BEEN MET WHEN THE END OF THE BOLT IS FLUSH WITH THE FACE OF THE NUT.
GRIP	LENGTH		
0 TO 9/16"	1 1/4" F.T.		
Over 9/16" TO 1 1/16"	1 3/4" F.T.		
Over 1 1/16" TO 1 5/16"	2"		
Over 1 5/16" TO 1 9/16"	2 1/4"		
Over 1 9/16" TO 1 13/16"	2 1/2"		
Over 1 13/16" TO 2 1/16"	2 3/4"		
LOCATIONS OF BOLTS LONGER THAN 2 3/4" NOTED ON ERECTION DRAWINGS		WASHER REQUIRED ONLY WHEN SPECIFIED. WASHER MAY BE LOCATED UNDER HEAD OF BOLT, UNDER NUT, OR AT BOTH AT LOCATIONS NOTED ON ERECTION DRAWINGS. ADD 5/32" FOR EACH WASHER TO MATERIAL THICKNESS TO DETERMINE GRIP.	
F.T. DENOTES FULLY THREADED			



Primary Steel



Key Plan

Revision	Date	Description	By	Ck'd

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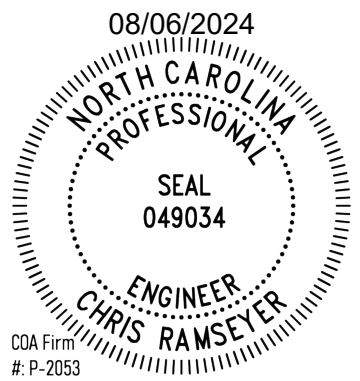
Customer: VUNCANNON CONTRACTING LLC
 FUGUAY VARINA, NC

Project Name & Location: DANIEL VUNCANNON
 DUNN, NC

Drawing Status: Issued For Approval (Not For Construction) Issued For Construction Issued For Permit

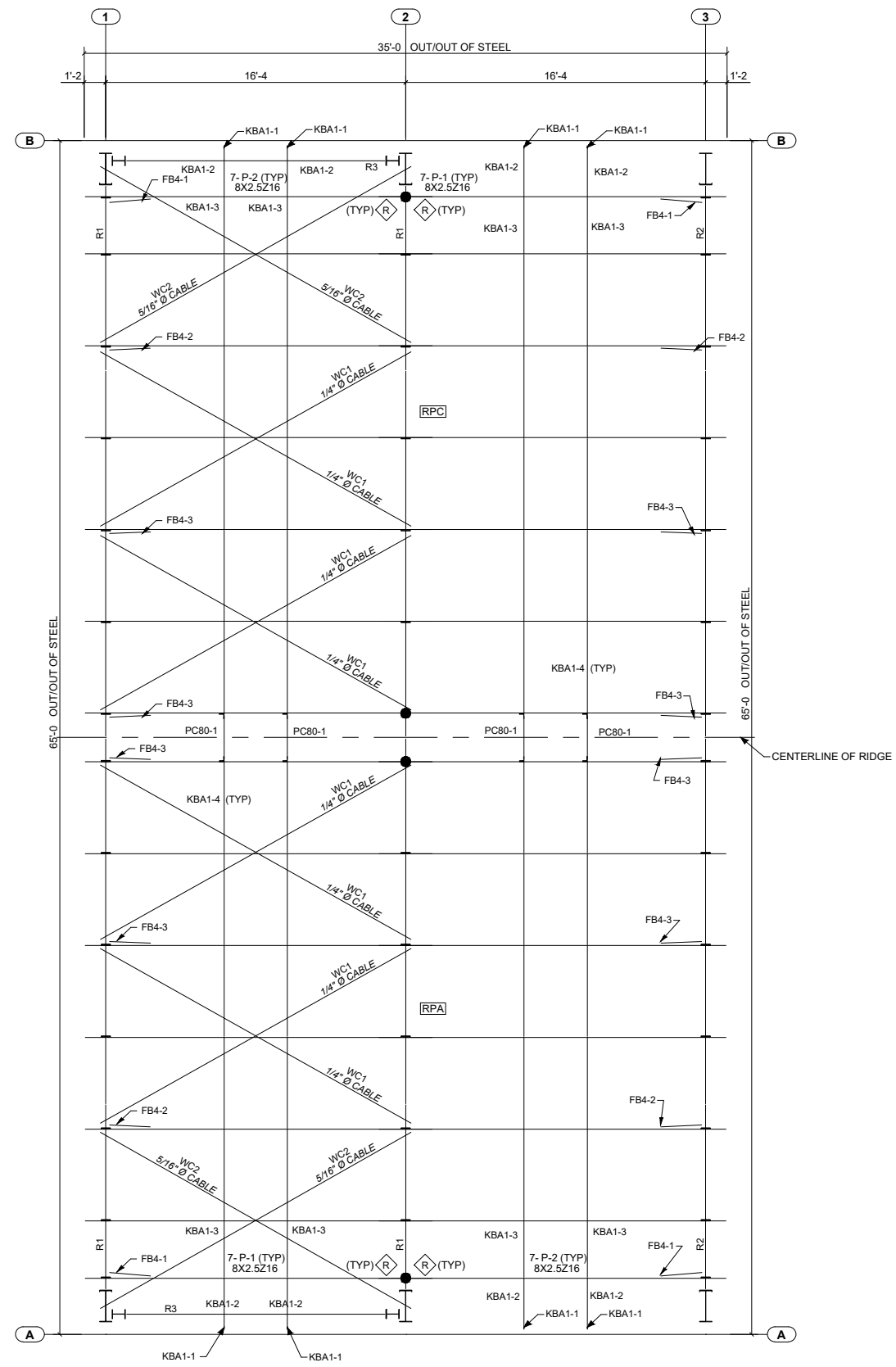
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 Job Number: 19-B-69158
 Sheet Number: E2 of 13

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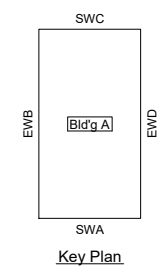
COA Firm # P-2053

● — DENOTES: CLIP LOCATION
 SC90 AT 8" PURLINS
 SC92 AT 10" PURLINS
 SC94 AT 12" PURLINS



Roof Framing

ZEE SECTION LAP TABLE			
SYMBOL	LAP LENGTH	SYMBOL	LAP LENGTH
	0'-0 1/4"		2'-5 3/4"
	0'-3 3/4"		3'-1 3/4"
	1'-5 3/4"	REFER TO CF01122	



Revision	Date	Description	By	Ch'd

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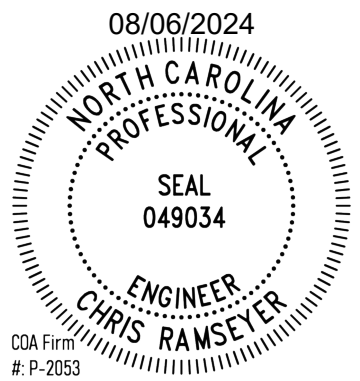
Customer: VUNCANNON CONTRACTING LLC
 FUGUAY VARINA, NC

Project Name & Location: DANIEL VUNCANNON DUNN, NC

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 Project Engineer: DE
 Job Number: 19-B-69158
 Sheet Number: E3 of 13

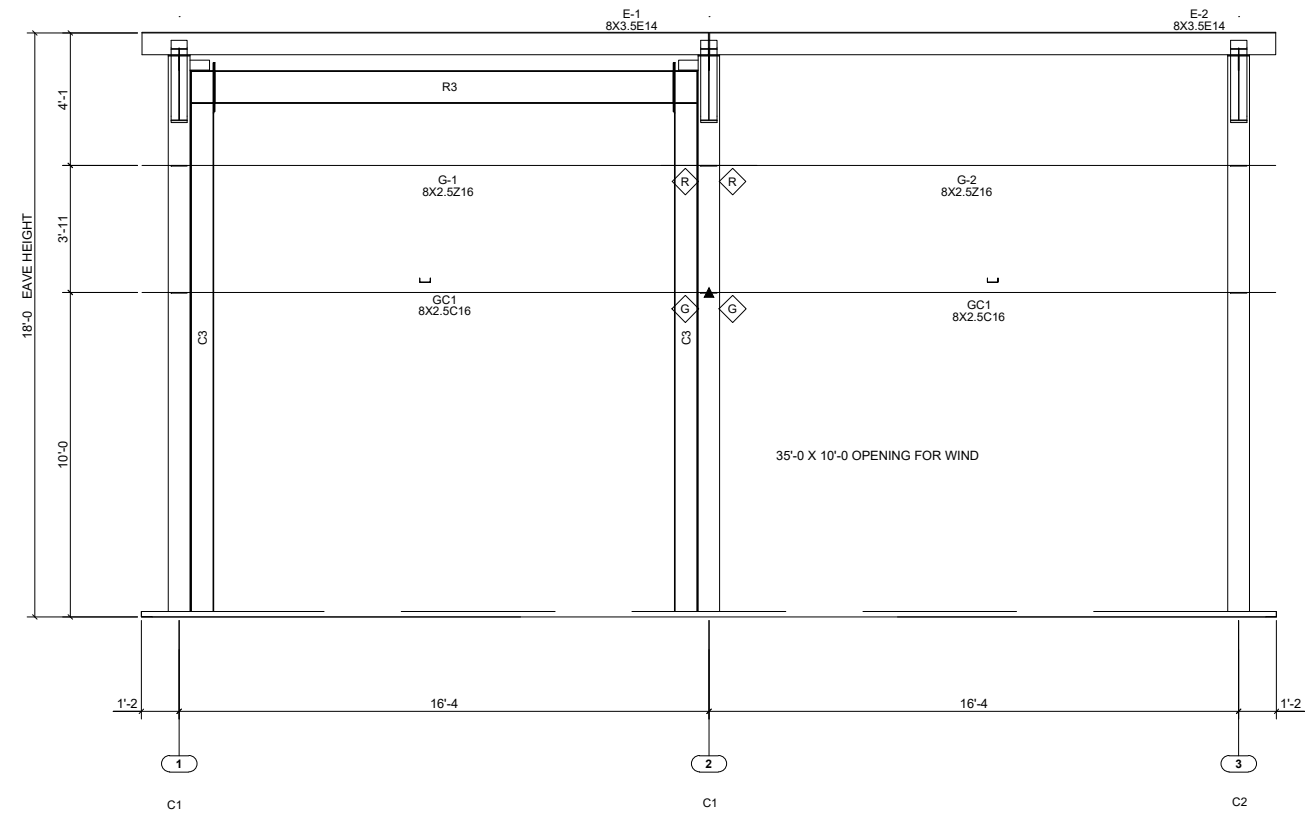
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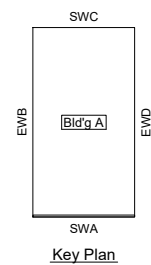
▲ — DENOTES (4) 1/2"Ø BOLTS AT PURLIN OR GIRT CONNECTION TO CLIP. REFER TO CF01122

NOTE: ROOF PANELS, WALL PANELS AND ALL TRIM ARE NOT BY THE BUILDING MANUFACTURER.



Sidewall Framing SWA at Grid Line A

ZEE SECTION LAP TABLE			
SYMBOL	LAP LENGTH	SYMBOL	LAP LENGTH
	0'-0 1/4"		2'-5 3/4"
	0'-3 3/4"		3'-1 3/4"
	1'-5 3/4"	REFER TO CF01122	



Revision	Date	Description	By	Ck'd

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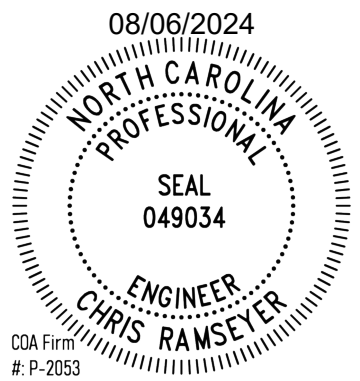
Customer: VUNCANNON CONTRACTING LLC
 FUGUAY VARINA, NC

Project Name & Location: DANIEL VUNCANNON DUNN, NC

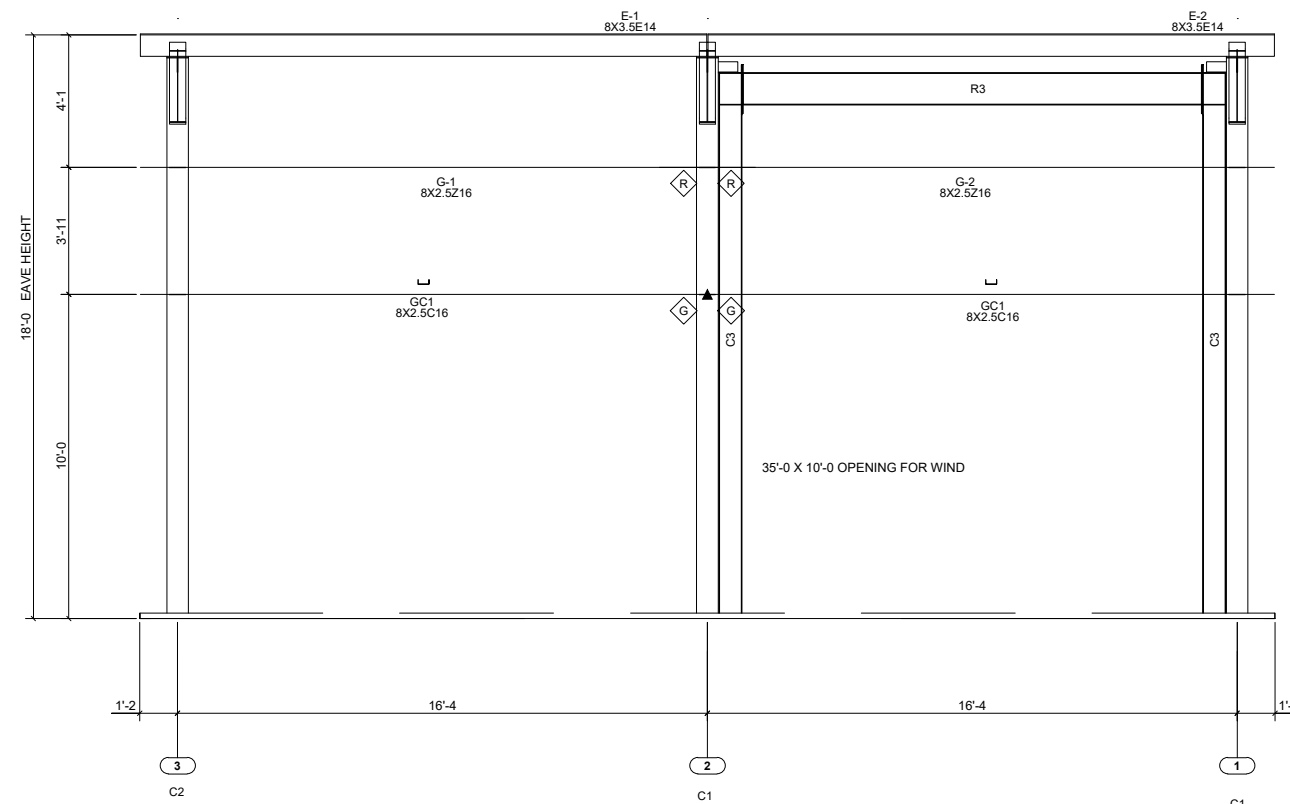
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 Sheet Number: E4 of 13

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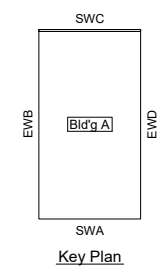


▲ — DENOTES (4) 1/2"Ø BOLTS AT PURLIN OR GIRT CONNECTION TO CLIP. REFER TO CF01122



Sidewall Framing SWC at Grid Line B

ZEE SECTION LAP TABLE			
SYMBOL	LAP LENGTH	SYMBOL	LAP LENGTH
	0'-0 1/4"		2'-5 3/4"
	0'-3 3/4"		3'-1 3/4"
	1'-5 3/4"	REFER TO CF01122	



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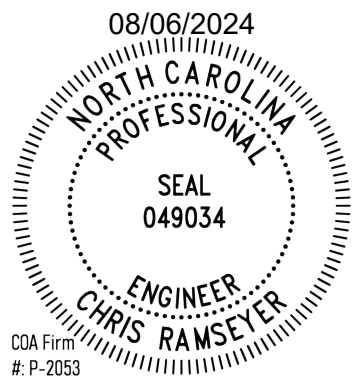
Customer: VUNCANNON CONTRACTING LLC
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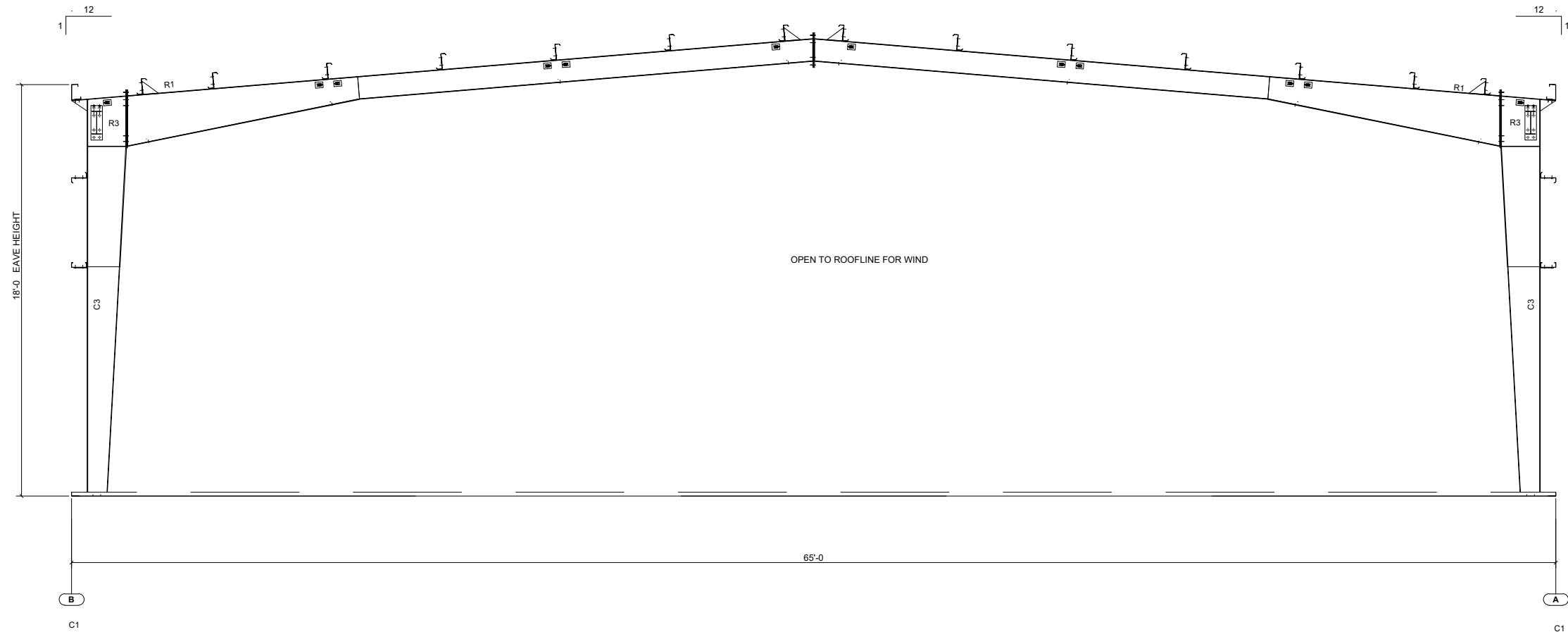
Project Name & Location: DANIEL VUNCANNON DUNN, NC

Drawing Status: Issued For Approval (Not For Construction) Issued For Construction Issued For Permit

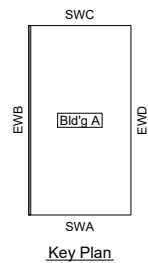
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 Project Engineer: DE
 Job Number: 19-B-69158
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Endwall Framing EWB at Grid Line 1



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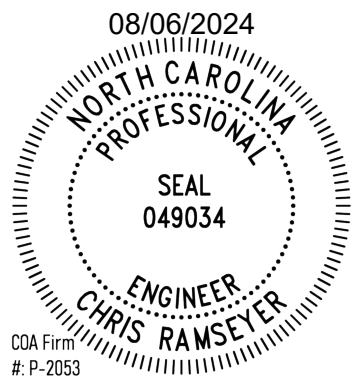
Customer: VUNCANNON CONTRACTING LLC
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Project Name & Location: DANIEL VUNCANNON DUNN, NC

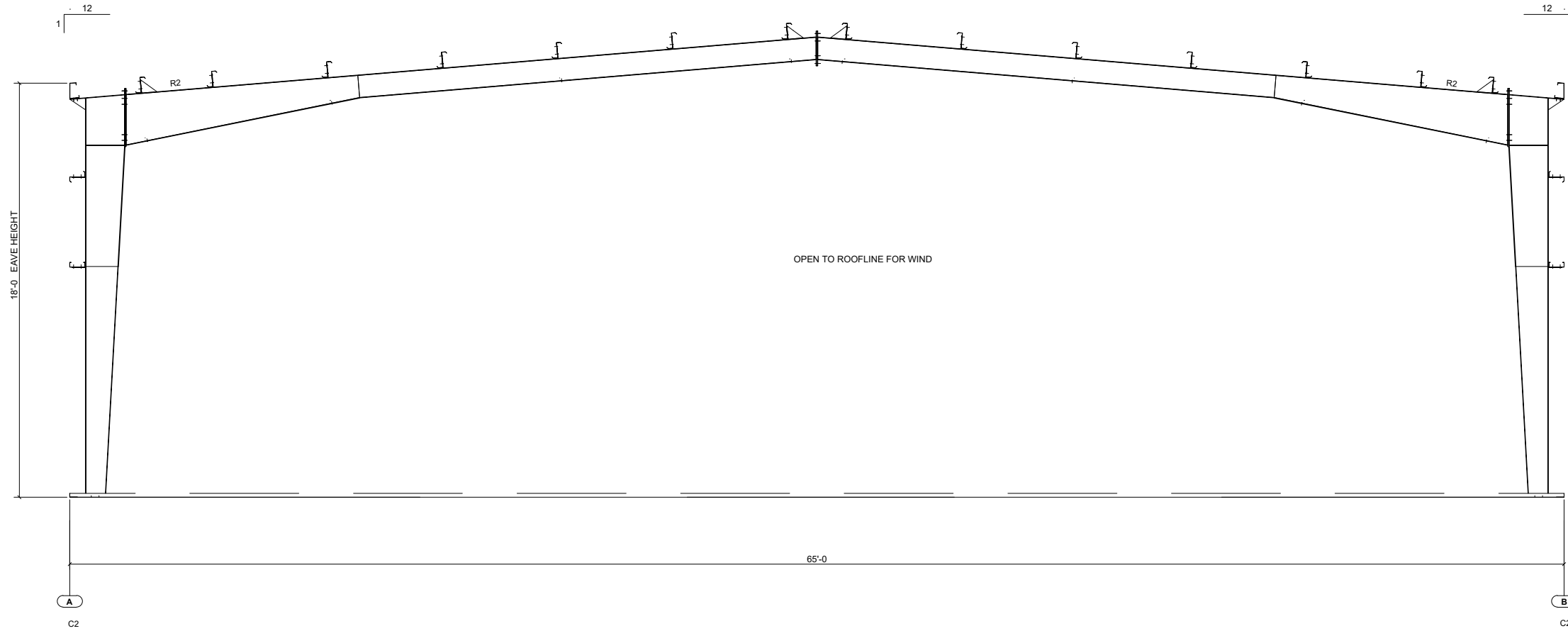
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 Checked by: MVM 7/26/24
 Project Engineer: DE
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 Sheet Number: E6 of 13

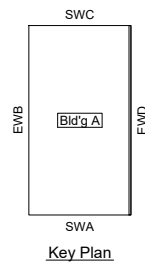
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Endwall Framing EWD at Grid Line 3



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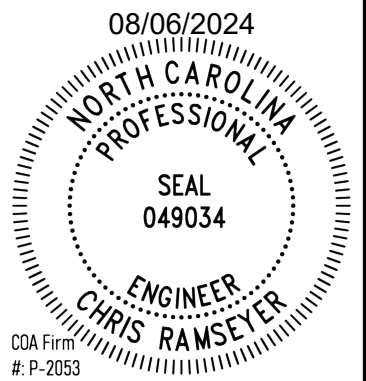
Customer:
 VUNCANNON CONTRACTING
 LLC
 FUGUAY VARINA, NC

Project Name & Location:
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 DUNN, NC

Drawing Status:
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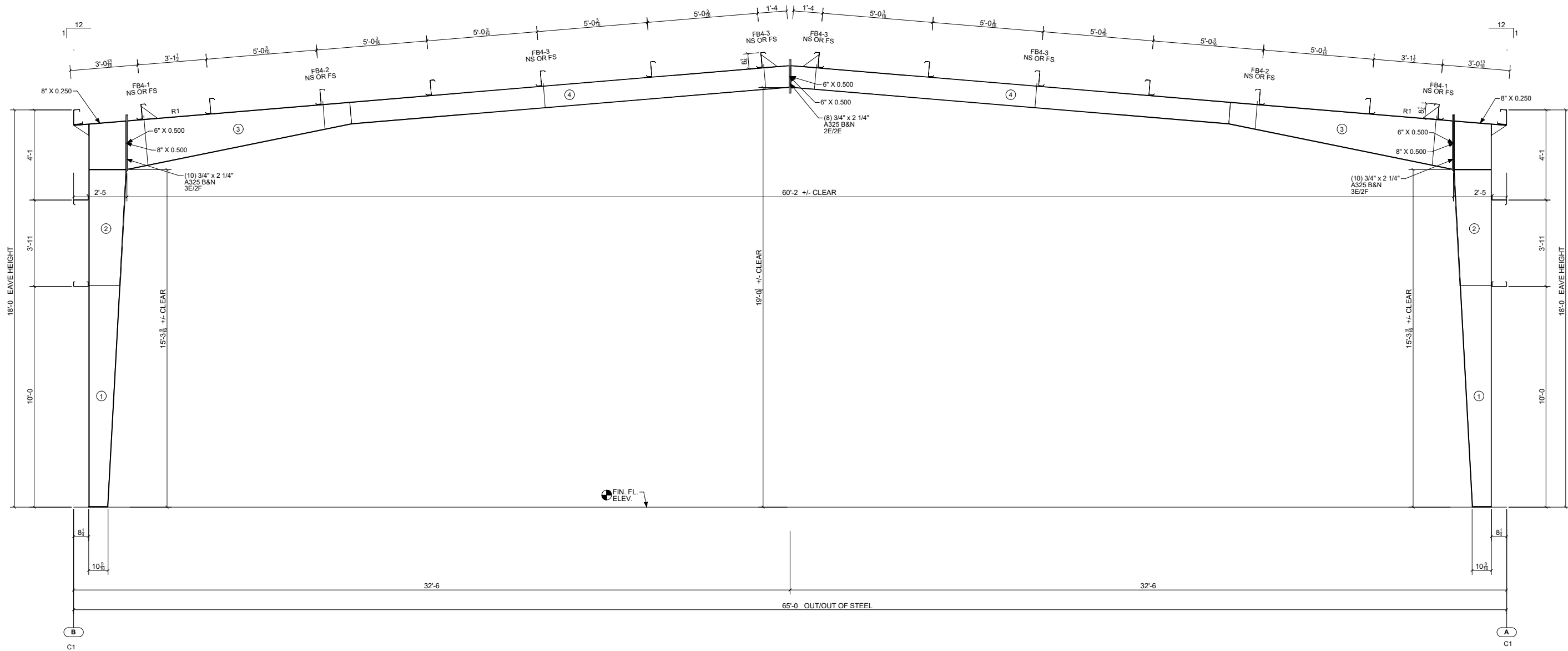
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 Checked by: MVM 7/26/24
 Project Engineer: DE
 Job Number: 19-B-69158
 Sheet Number: E7 of 13

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GENERAL NOTES
 FRAME CLEARANCES SHOWN ARE APPROXIMATE AND
 MAY VARY DUE TO CONDITIONS (DEFLECTION).
 VERTICAL CLEARANCE DIMENSIONS ARE FROM
 FINISHED FLOOR REFERENCE ELEVATION.

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R1	586
C1	524



Cross Section at Frame Line 1

PRIMARY BUILT-UP MEMBER SIZES						
MARK	OUTSIDE FLG THICK	OUTSIDE FLG WIDTH	INSIDE FLG THICK	INSIDE FLG WIDTH	WEB THICK	WEB START DEPTH / END DEPTH
①	0.2500	8"	0.3125	8"	0.1560	10.0000 / 16.5918
②	0.2500	8"	0.3750	8"	0.2500	16.5918 / 20.0000
③	0.2500	6"	0.3125	6"	0.1560	26.0000 / 11.5000
④	0.2500	6"	0.2500	6"	0.1340	11.5000 / 11.5000

By	Description	Date	Revision

Manufactured By: STAR BUILDING SYSTEMS
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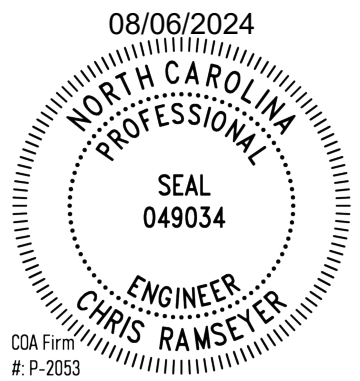
Customer: VUNCANNON CONTRACTING LLC
 FOUQUAY VARINA, NC

Project Name & Location: DANIEL VUNCANNON DUNN, NC

Drawing Status: Issued For Approval (Not For Construction) Issued For Construction Issued For Permit

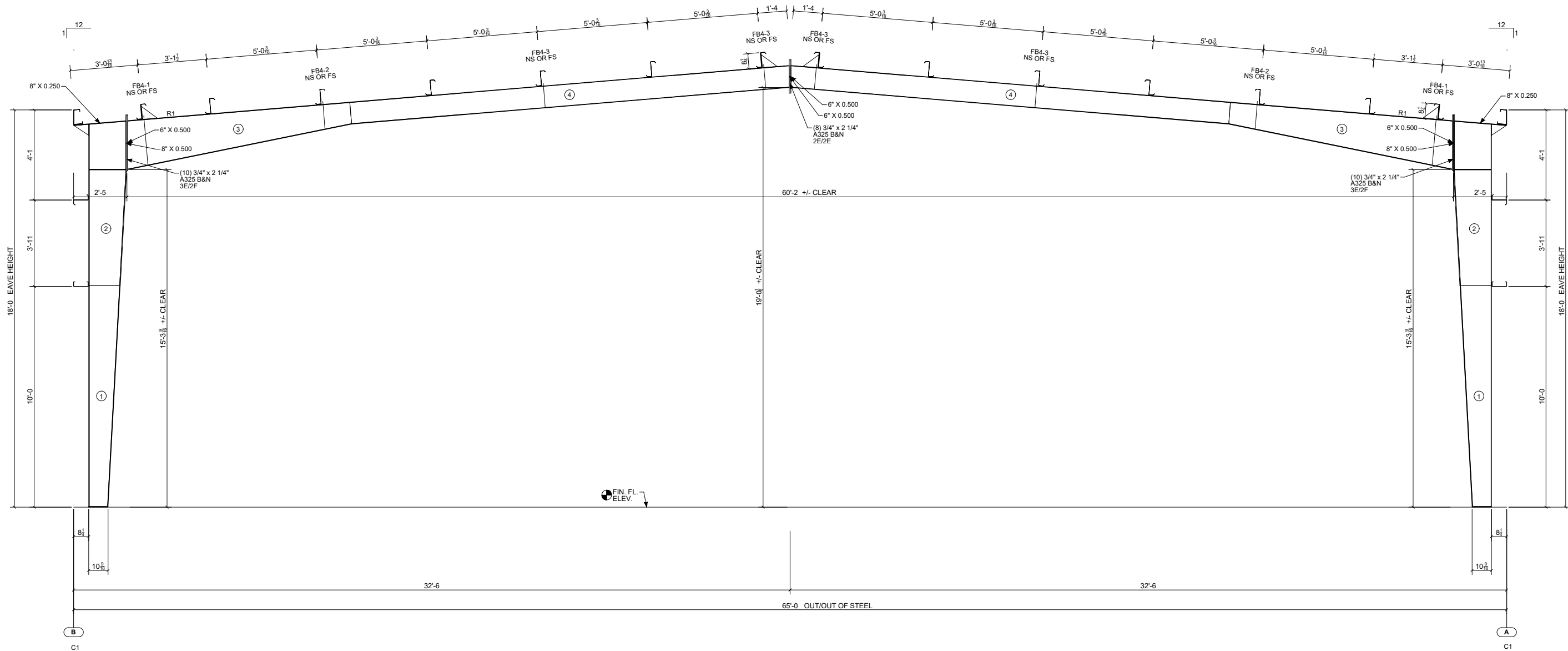
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 Drawn by: LTH 7/23/24
 Checked by: MVM 7/26/24
 Project Engineer: DE
 Job Number: 19-B-69158
 Sheet Number: E8 of 13

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 FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).
 VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R1	586
C1	524



Cross Section at Frame Line 2

PRIMARY BUILT-UP MEMBER SIZES							
MARK	OUTSIDE FLG THICK	OUTSIDE FLG WIDTH	INSIDE FLG THICK	INSIDE FLG WIDTH	WEB THICK	WEB START DEPTH	WEB END DEPTH
①	0.2500	8"	0.3125	8"	0.1560	10.0000	16.5918
②	0.2500	8"	0.3750	8"	0.2500	16.5918	20.0000
③	0.2500	6"	0.3125	6"	0.1560	26.0000	11.5000
④	0.2500	6"	0.2500	6"	0.1340	11.5000	11.5000

By	Description	Date	Revision

Manufactured By: STAR BUILDING SYSTEMS
Ramseyer and Associates, PLLC
 1000 E. 10th St., Oklahoma City, OK 73154
 (405) 468-2330

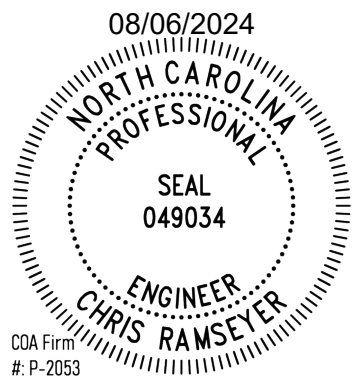
Customer: VUNCANNON CONTRACTING LLC
 FOUQUAY VARINA, NC

Project Name & Location: DANIEL VUNCANNON DUNN, NC

Drawing Status: Issued For Approval (Not For Construction) Issued For Construction Issued For Permit

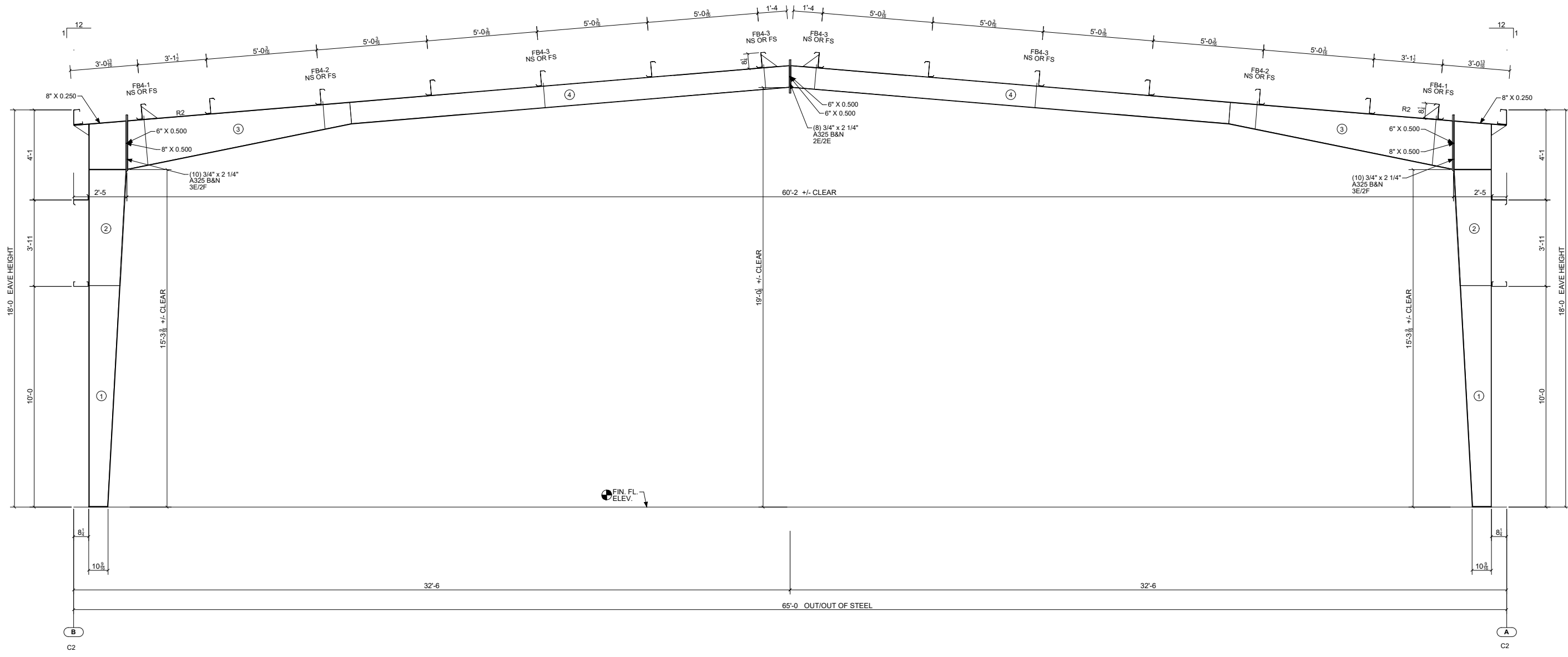
Scale: NOT TO SCALE
 Drawn by: LTH 7/23/24
 Checked by: MVM 7/26/24
 Project Engineer: DE
 Job Number: 19-B-69158
 Sheet Number: E9 of 13

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GENERAL NOTES
 FRAME CLEARANCES SHOWN ARE APPROXIMATE AND
 MAY VARY DUE TO CONDITIONS (DEFLECTION).
 VERTICAL CLEARANCE DIMENSIONS ARE FROM
 FINISHED FLOOR REFERENCE ELEVATION.

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R2	586
C2	524



Cross Section at Frame Line 3

PRIMARY BUILT-UP MEMBER SIZES						
MARK	OUTSIDE FLG THICK	OUTSIDE FLG WIDTH	INSIDE FLG THICK	INSIDE FLG WIDTH	WEB THICK	WEB START DEPTH / END DEPTH
①	0.2500	8"	0.3125	8"	0.1560	10.0000 / 16.5918
②	0.2500	8"	0.3750	8"	0.2500	16.5918 / 20.0000
③	0.2500	6"	0.3125	6"	0.1560	26.0000 / 11.5000
④	0.2500	6"	0.2500	6"	0.1340	11.5000 / 11.5000

By	Description	Date	Revision

Manufactured By: STAR BUILDING SYSTEMS
Ramseyer and Associates, PLLC
 100 E. 10th St., Oklahoma City, OK 73104
 (405) 468-2330

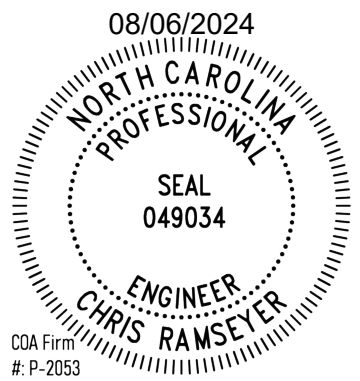
Customer: VUNCANNON CONTRACTING LLC
 FUGUAY VARINA, NC

Project Name & Location: DANIEL VUNCANNON DUNN, NC

Drawing Status: Issued For Approval (Not For Construction) Issued For Construction Issued For Permit

Scale: NOT TO SCALE
 Drawn by: LTH 7/23/24
 Checked by: MVM 7/26/24
 Project Engineer: DE
 Job Number: 19-B-69158
 Sheet Number: E10 of 13

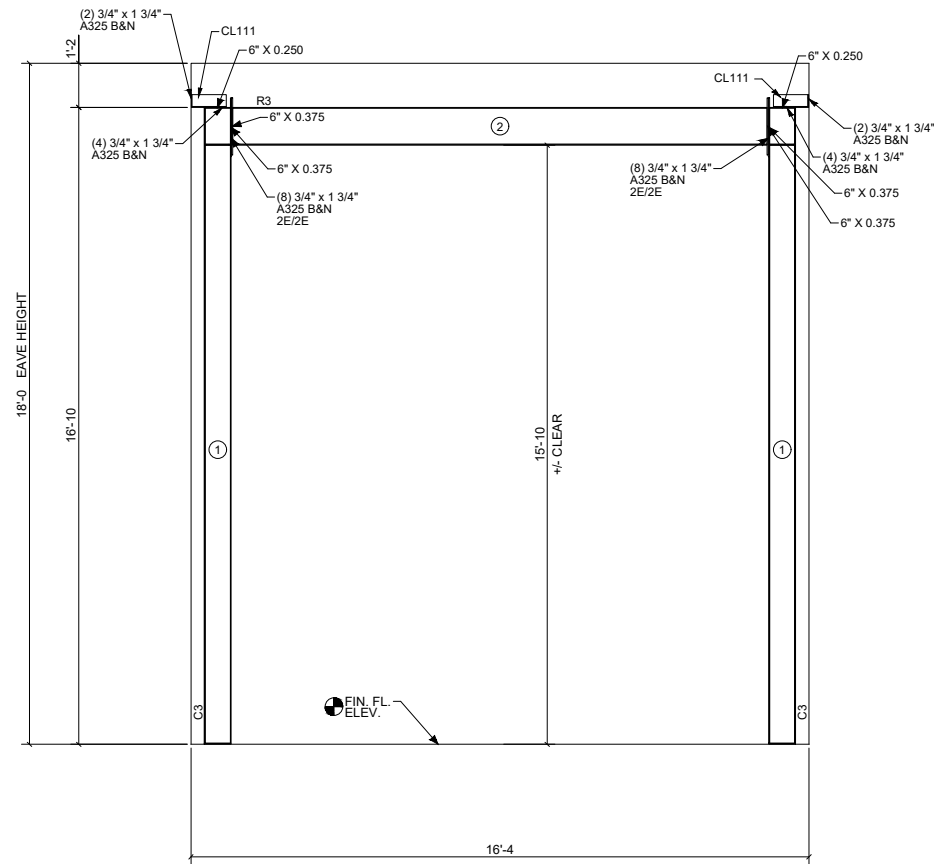
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GENERAL NOTES
 FRAME CLEARANCES SHOWN ARE APPROXIMATE AND
 MAY VARY DUE TO CONDITIONS (DEFLECTION).
 VERTICAL CLEARANCE DIMENSIONS ARE FROM
 FINISHED FLOOR REFERENCE ELEVATION.

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R3	216
C3	273

By	Ck'd	Description	Date	Revision



Portal Frame Cross Section SWC at Grid Line B

Manufactured By: STAR BUILDING SYSTEMS
Ramseyer and Associates, PLLC
 Oklahoma City, OK 73154
 (405) 468-2330

Customer: VUNCANNON CONTRACTING LLC
 FUGUAY VARINA, NC

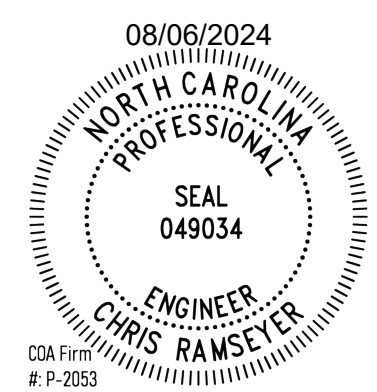
Project Name & Location: DANIEL VUNCANNON DUNN, NC

Drawing Status: Issued For Approval (Not For Construction) Issued For Construction Issued For Permit

Scale: NOT TO SCALE
 Drawn by: LTH 7/23/24
 Checked by: MVM 7/26/24
 Project Engineer: DE
 Job Number: 19-B-69158
 Sheet Number: E12 of 13

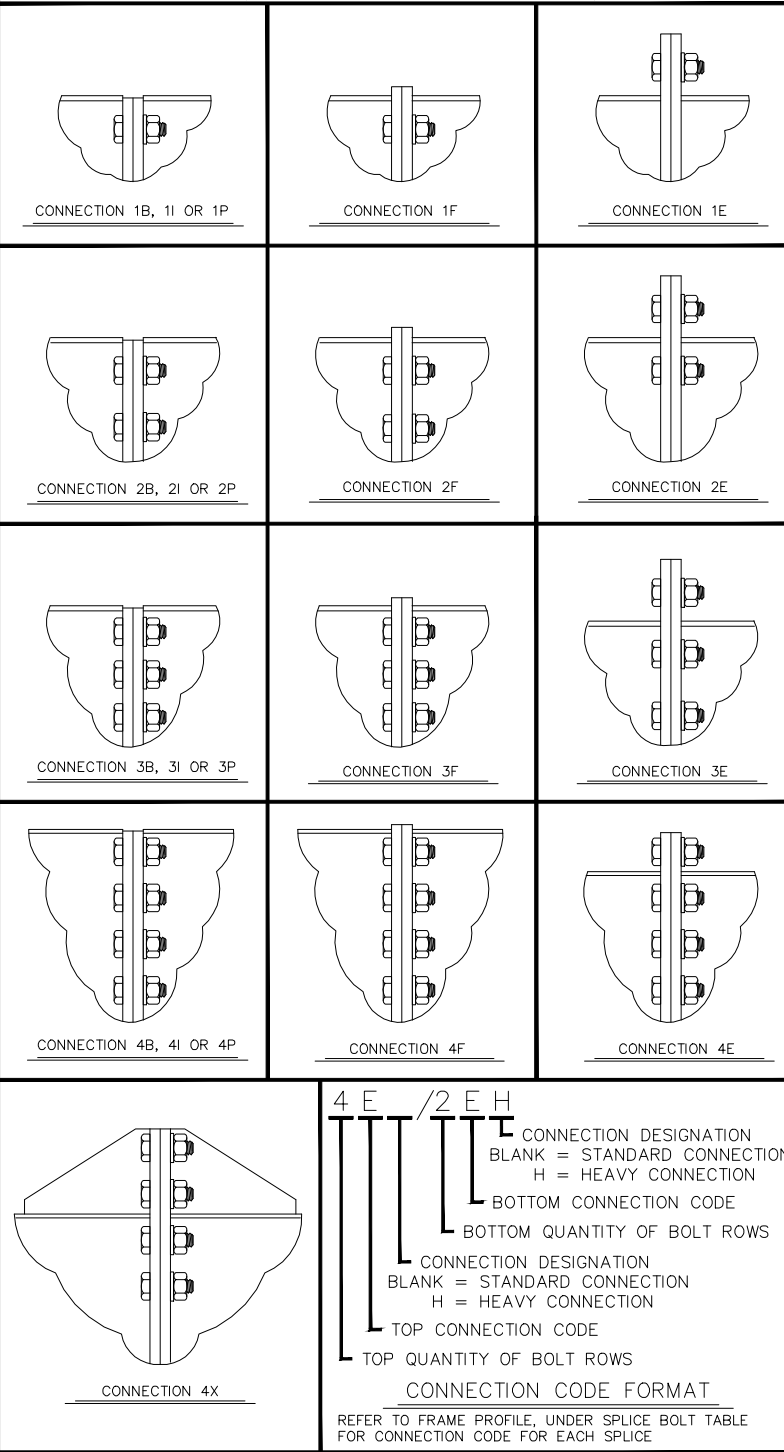
This document was produced by and/or under my direct supervision.

PRIMARY BUILT-UP MEMBER SIZES						
MARK	OUTSIDE FLG THICK.	WIDTH	INSIDE FLG THICK.	WIDTH	WEB THICK.	START DEPTH
○	0.2500	6"	0.2500	6"	0.1850	8.0000
○	0.2500	5"	0.2500	5"	0.1340	11.5000



COA Firm # P-2053

CONNECTION CODES
(FOR TOP AND BOTTOM BOLT PATTERN)



CONNECTION DESIGNATION
 BLANK = STANDARD CONNECTION
 H = HEAVY CONNECTION
 BOTTOM CONNECTION CODE
 BOTTOM QUANTITY OF BOLT ROWS

CONNECTION DESIGNATION
 BLANK = STANDARD CONNECTION
 H = HEAVY CONNECTION
 TOP CONNECTION CODE
 TOP QUANTITY OF BOLT ROWS

CONNECTION CODE FORMAT
 REFER TO FRAME PROFILE, UNDER SPLICE BOLT TABLE FOR CONNECTION CODE FOR EACH SPLICE

CONNECTION CODE DESCRIPTION

B = THIS DESCRIPTION CODE IS USED TO DEFINE SHEAR CONNECTIONS. BOLTS ARE LOCATED INSIDE THE TOP FLANGE AND CONNECTION PLATE IS RECESSED 1/8" BELOW THE TOP FLANGE. CONNECTION PLATE LENGTH MUST BE A MINIMUM OF HALF THE RAFTER WEB DEPTH AND SHALL NOT EXCEED THE RAFTER TOTAL DEPTH.

E = THIS DESCRIPTION CODE IS USED TO DEFINE MOMENT CONNECTIONS. BOLTS ARE LOCATED WITH ONE SET OUTSIDE THE TOP OR BOTTOM FLANGE AND THE REMAINING SETS ARE LOCATED INSIDE THE TOP OR BOTTOM FLANGE.

F = THIS DESCRIPTION CODE IS USED TO DEFINE MOMENT CONNECTIONS. BOLTS ARE LOCATED INSIDE THE TOP OR BOTTOM FLANGE AND CONNECTION PLATE PROJECTS 1/2" BEYOND THE TOP OR BOTTOM FLANGE.

I = THIS DESCRIPTION CODE IS USED TO DEFINE MOMENT CONNECTIONS. BOLTS ARE LOCATED INSIDE THE TOP OR BOTTOM FLANGE AND CONNECTION PLATE IS RECESSED 1/8" BELOW THE TOP OR BOTTOM FLANGE.

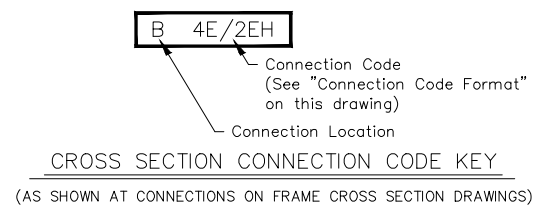
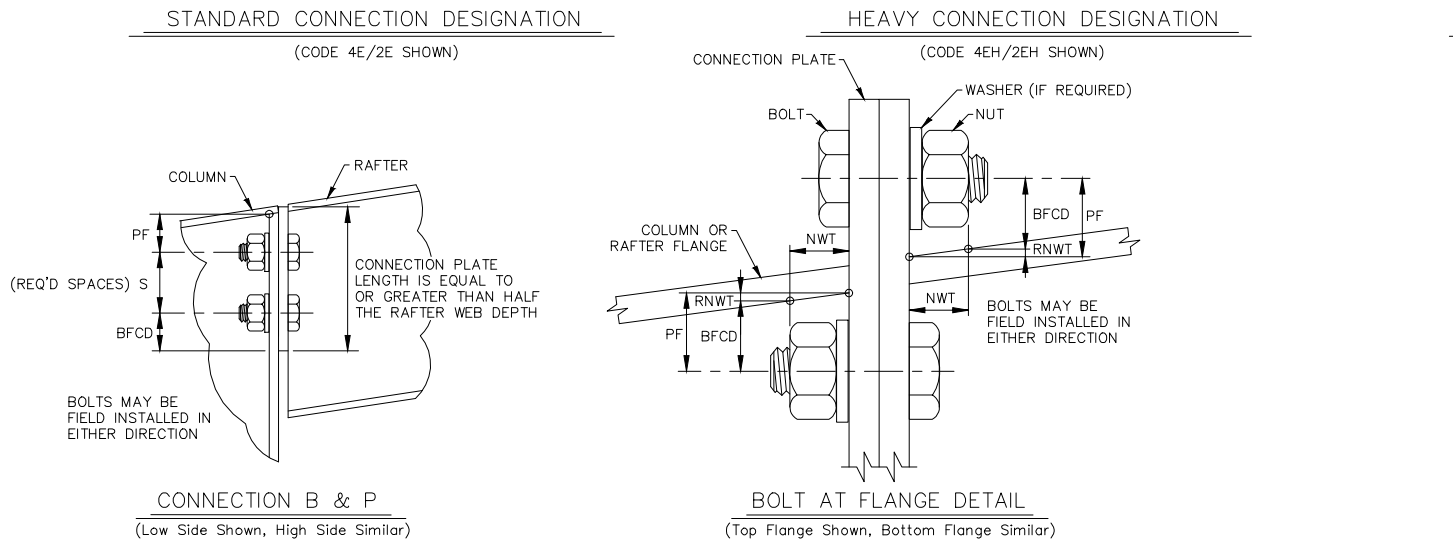
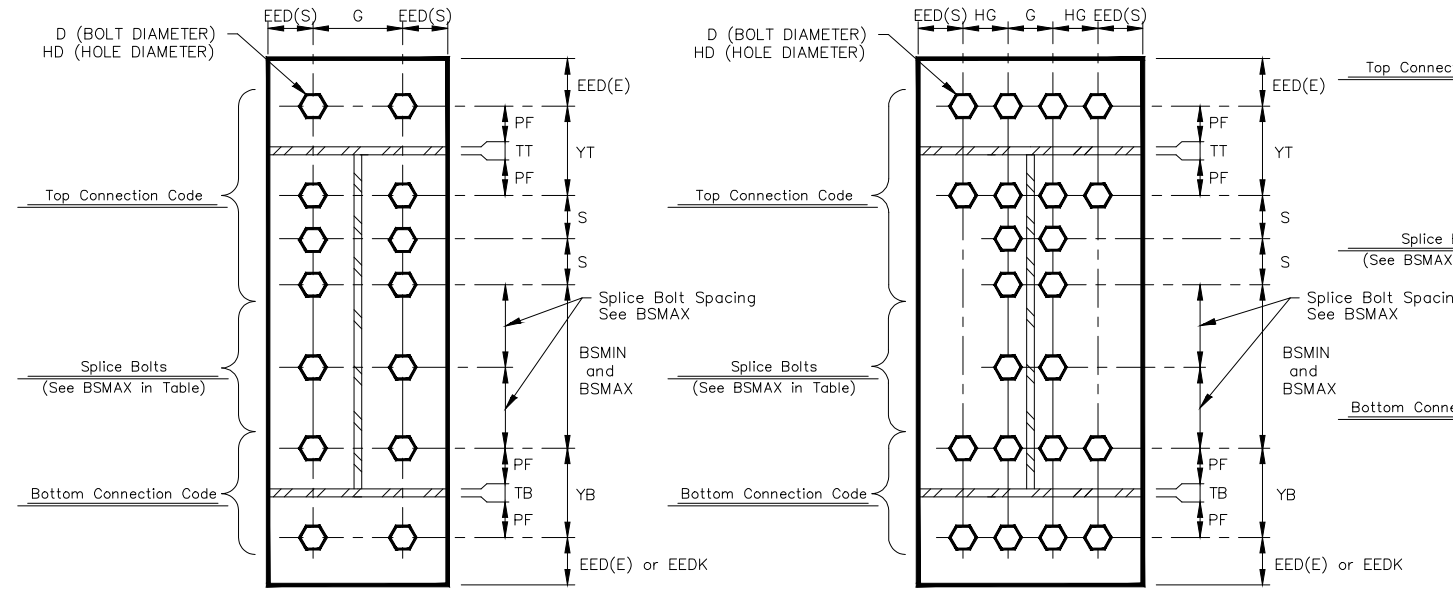
P = THIS DESCRIPTION CODE IS USED TO DEFINE SHEAR CONNECTIONS. BOLTS ARE LOCATED INSIDE THE TOP FLANGE AND CONNECTION PLATE IS RECESSED 1/8" BELOW THE TOP FLANGE. CONNECTION PLATE LENGTH MUST BE A MINIMUM OF HALF THE RAFTER WEB DEPTH AND SHALL NOT EXCEED THE RAFTER TOTAL DEPTH.

4X = THIS DESCRIPTION CODE IS USED TO DEFINE MOMENT CONNECTIONS. BOLTS ARE LOCATED WITH TWO SETS EACH SIDE OF THE TOP OR BOTTOM FLANGE WITH A GUSSET PLATE OUTSIDE THE TOP AND BOTTOM FLANGE OR COLUMN CAP PLATE.

GUSSET PLATE SIZE AND THICKNESS DETERMINED BY "EDS" OR DESIGN ENGINEER AND LISTED ON FRAME PROFILE. (SEE PAGE 13-05-17 AND 10-30-22)

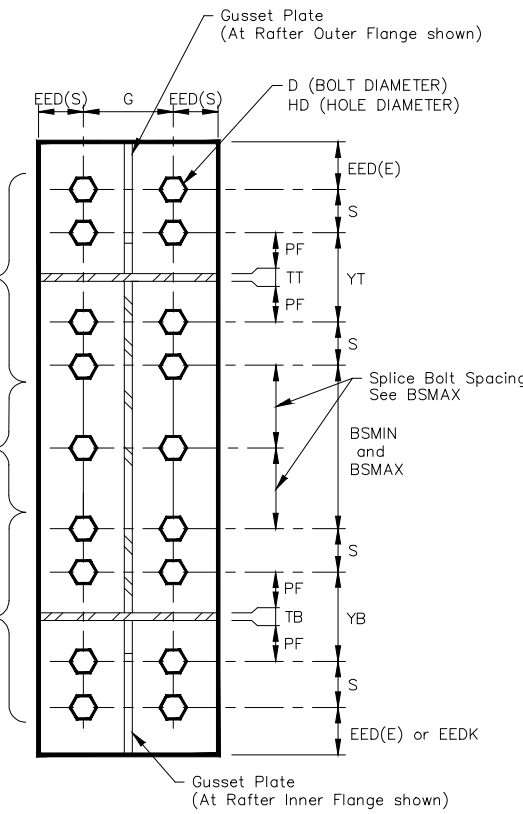
NAME	DESCRIPTION FOR A325 BOLT DIMENSIONS	A325 CONNECTION BOLT DIMENSIONS						
		1/2"	3/4"	7/8"	1"	1 1/4"	1 1/2"	
D	DIAMETER OF THE BOLT	1/2"	3/4"	7/8"	1"	1 1/4"	1 1/2"	
HD	BOLT HOLE DIAMETER	9/16"	13/16"	15/16"	1 1/16"	1 5/16"	1 9/16"	
G	BOLT GAUGE	2 1/2"	3"	4"	3 1/2"	4"	5 1/2"	
	MAX. WEB THICKNESS (Max. 5/16" Fillet Weld) WITHOUT WASHER	1"	1 1/8"	1 7/8"	1 1/4"	1 3/8"	2 1/8"	
	MAX. WEB THICKNESS (Max. 5/16" Fillet Weld) WITH WASHER	3/4"	7/8"	1 5/8"	7/8"	7/8"	1 7/8"	
HG	HEAVY CONN. BOLT GAUGE	N/A	2 1/4"	2 5/8"	3"	3 3/4"	4"	
S	NORMAL BOLT SPACING	2 1/2"	3"	3 1/4"	3 1/2"	4"	4 1/2"	
BSMIN	MINIMUM SPACING BETWEEN TOP & BOTTOM SETS OF BOLTS	1 1/2"	2 1/4"	2 5/8"	3"	3 3/4"	4"	
BSMAX	MAXIMUM BOLT SPACING BETWEEN TOP AND BOTTOM SETS OF BOLTS ON CONNECTION PLATES	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	
BSCD	MINIMUM BOLT-TO-FLANGE CLEARANCE AT OUT OF NUT SEE BOLT AT FLANGE DETAIL	1 1/2"	1 3/4"	1 7/8"	2 1/4"	2 1/2"	2 3/4"	
PF	MINIMUM BOLT-TO-FLANGE CLEARANCE AT CONNECTION PLATE SEE BOLT AT FLANGE DETAIL	(BSCD + RNWT) PF INSIDE OF FLANGE IS INCREASED BASED ON THE YT & YB VALUE. PF FOR CONNECTION B, F, I AND P ARE THE SAME AS USED ON CONNECTION E						
NWT	NUT AND WASHER THICKNESS	SEE BOLT AT FLANGE DETAIL. NUT THICKNESS IS EQUAL TO THE BOLT DIAMETER AND .15625" WASHER THICKNESS IS USED EVEN IF A WASHER IS NOT REQUIRED.						
RNWT	RISE ON NUT AND WASHER THICKNESS	REFER TO FRAME CROSS SECTION DRAWING FOR LARGEST FLANGE THICKNESS EITHER SIDE OF THE CONNECTION.						
TT	THICKNESS TOP FLANGE							
TB	THICKNESS BOTTOM FLANGE							
YT	BOLT SPACING TOP (ROUND UP TO NEXT 1/2", MIN = S)	3" + TT	3 1/2" + TT	3 3/4" + TT	4 1/2" + TT	5" + TT	5 1/2" + TT	
YB	BOLT SPACING BOTTOM (ROUND UP TO NEXT 1/2", MIN = S)	or TB Sloped	or TB Sloped	or TB Sloped	or TB Sloped	or TB Sloped	or TB Sloped	
EED(E)	MINIMUM END EDGE DIMENSION	1 1/4"	1 1/4"	1 1/2"	1 3/4"	2 1/4"	2 5/8"	
EED(S)	MINIMUM SIDE EDGE DIMENSION	3/4"	1"	1 1/8"	1 1/4"	1 5/8"	2 1/4"	
EEDK	END EDGE DIMENSION AT KNEE CONNECTION	1 3/8"	1 3/8"	1 5/8"	1 7/8"	2 3/8"	2 3/4"	
BCWM	MINIMUM BOLT CLEARANCE FROM A FLANGE OR WEB WELD	WITHOUT WASHER	7/16"	5/8"	3/4"	13/16"	1"	1 3/8"
		WITH HARDENED WASHER	9/16"	3/4"	7/8"	1"	1 1/4"	1 1/2"
WCSM	MINIMUM WIDTH OF CONNECTION PLATE (Standard Connection)	5"	6"	8"	8"	10"	12"	
WCHM	MINIMUM WIDTH OF CONNECTION PLATE (Heavy Connection)	N/A	10"	12"	12"	16"	18"	
TCMIN	MINIMUM THICKNESS OF CONNECTION PLATE	1/4"	3/8"	7/16"	1/2"	5/8"	1"	

CONNECTION BOLT DATA
REFER TO 05-12-11 & 05-12-12 FOR BOLT LENGTH



Flange Brace Material Schedule

Part Mark	Material
FB4_	L 2" x 2" x 14 Ga.
FB5_	L 2" x 2" x 14 Ga.
FB6_	L 2" x 2" x 3/8"
FB7_	L 2 1/2" x 2 1/2" x 3/16"



NOTE:
THIS PAGE PROVIDED AS GENERAL INFORMATION, REFER TO 10-30-18 THRU 10-30-38 FOR THE EXACT CALCULATIONS OF THE CONNECTION DIMENSIONS.
REFER TO FRAME PROFILE, UNDER SPLICE BOLT TABLE FOR CONNECTION CODE FOR EACH SPLICE.

By: _____
Date: _____
Revision: _____

Project Name & Location:
DANIEL VINCANNON
DUNN, NC

Customer:
VINCANNON CONTRACTING
FUQUAY VARINA, NC

Manufactured By: STAR BUILDING SYSTEMS
Ramseyer and Associates, PLLC
1000 S. Main St., P.O. Box 1000
Oklahoma City, OK 73154
(405) 468-2330

Drawing Status: Issued For Approval (Not For Construction) Issued For Construction

Scale: NOT TO SCALE
Drawn by: LTH 7/23/24
Checked by: MVM 7/26/24
Project Engineer: DE
Job Number: 19-B-69158
Sheet Number: E13 of 13

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