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PERMIT TO PRACTICE  
ECLIPSE ENGINEERING, P.C.


RM SIGNATURE: 


RM APEGA ID #: 133874

DATE: 20 AUG 2024

PERMIT NUMBER: P012999

The Association of Professional Engineers and Geoscientists of Alberta (APEGA)





NORSEMAN

STRUCTURES

Fiercely Reliable™

DEALER:  
NORSEMAN STRUCTURES  
SASKATOON, SK

CUSTOMER:  
CENOVUS ENERGY  
FOSTER CREEK, AB

PROJECT:  
ARCH 22' x 60' @ 12'  
PASSENGER DEPOT

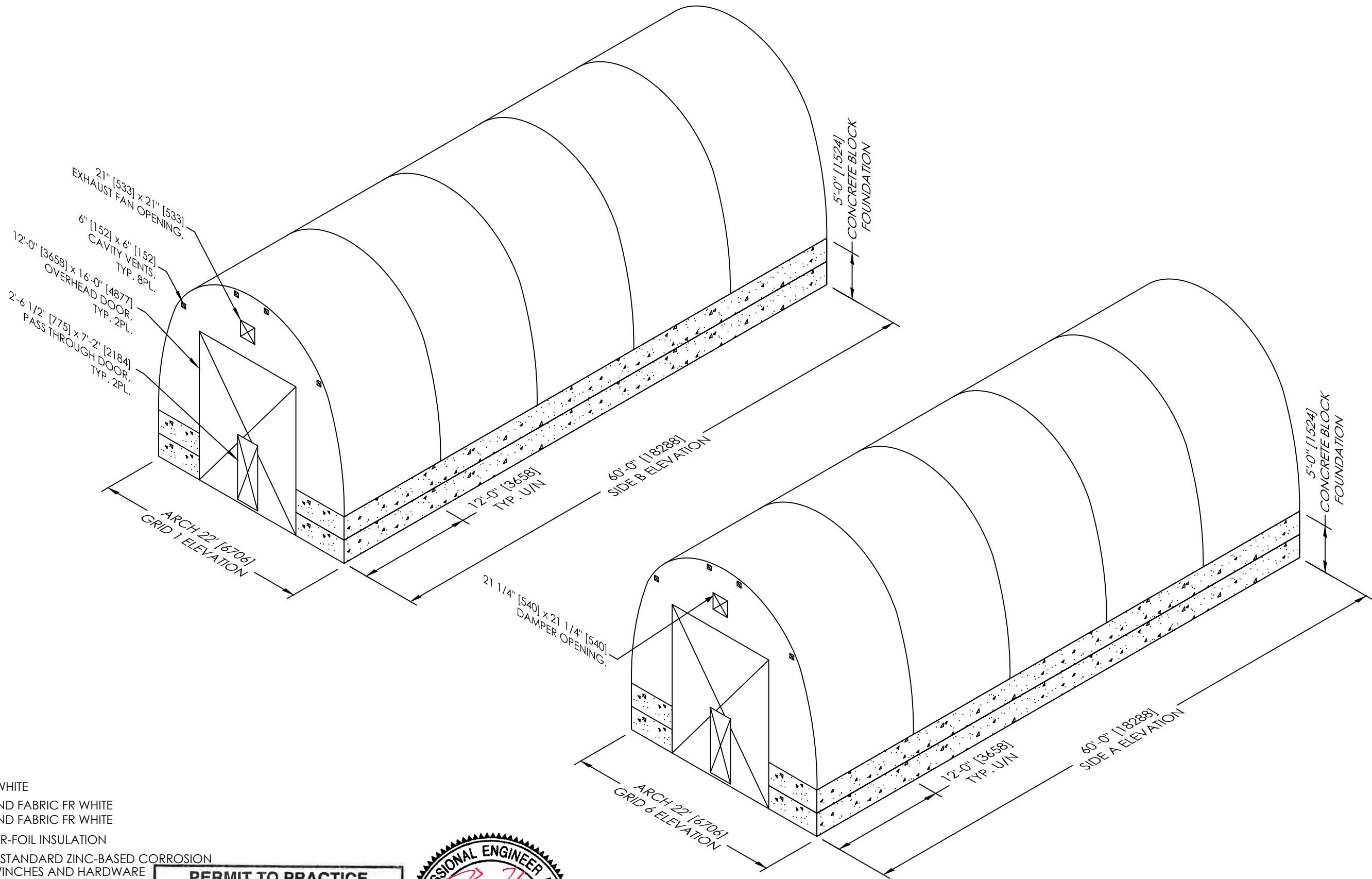
3815 Wanuskewin Road  
Saskatoon, SK, Canada S7P 1A4  
Phone: 306.385.2888  
Fax: 306.385.2717  
www.norsemanstructures.com

DRAWING TITLE:  
DRAWING SCHEDULE

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DWG REV	REVISED BY: DESCRIPTION	DATE
0	EW: ISSUED FOR CONSTRUCTION	19 AUG 24

PROJECT ID: 20002459	ORDER ID: SO18798	DRAWING: 1.0	REV: 0
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ROOF COVER: FR WHITE  
ENDWALL 1: HSS AND FABRIC FR WHITE  
ENDWALL 2: HSS AND FABRIC FR WHITE  
THIS BUILDING HAS R-FOIL INSULATION  
THIS BUILDING HAS STANDARD ZINC-BASED CORROSION  
PROTECTION ON WINCHES AND HARDWARE  
PLEASE REFER TO FOLLOWING DRAWINGS  
FOR EXACT BUILDING DIMENSIONS

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This project has been designed and fabricated in accordance with the following:

1. DESCRIPTION

Owner's Name and Address:	Cenovus Corporate Brookfield Place, 225 6 Avenue SW Calgary, AB T2P 1N2
Building Supplier's Name and Address:	Norseman Structures 3815 Wanuskewin Rd. Saskatoon, SK
Manufacturer's Name and Address:	Norseman Structures 3815 Wanuskewin Rd. Saskatoon, SK
Site Location:	Cenovus Foster Creek Site, AB
Building Size:	22'-0 1/2" (6.72m) x 60'-7 1/4" (18.47m)
Truss Spacing:	12'-0" (3.66m)
Applicable Building Code:	National Building Code of Canada - 2023 Edition (NBC-AE2023)
Fabric Type:	FR

2. DESIGN STANDARDS

National Building Code of Canada - 2020 (NBC 2020), Division B, Part 4: Structural Design  
CAN/CSA S16, Design of Steel Structures  
CAN/CSA S367, Air-, Cable, and Frame-supported Membrane Structures

3. MANUFACTURING STANDARDS

Fabrication in accordance with CAN/CSA S16 and CAN/CSA S136 as applicable as well as CAN/CSA S367  
Welding in accordance with CSA W59 and CAN/CSA-S136, as applicable  
Norseman Structures is certified in accordance with CSA W47.1 Division 2  
Welders have been qualified in accordance with CSA W47.1

4. DESIGN CRITERIA

Importance Category: Normal

A) DEAD LOADS

- I) Self-weight of building components  
II) Collateral load, not to exceed 3.6 psf (0.171 kPa) as an allowance for mechanical, electrical, ceiling, insulation, sprinklers, etc., or any combination thereof

B) LIVE LOADS

Live loads determined in accordance with 4.1.5 of NBC-AE2023  
Roof live load 20.9 psf (1.0 kPa)  
Importance Factor, I<sub>L</sub> 1.0  
Reduction Factor 0.92  
Reduced Roof Live Load 19.20 psf (0.92 kPa)

C) SNOW LOADS

Snow loads determined in accordance with 4.1.6 of NBC-AE2023

Importance Factor, I<sub>s</sub> 1.0  
Ground Snow Load, S<sub>s</sub> (1/50) 35.5 psf (1.70 kPa)  
Associated Rain Load, S<sub>r</sub> (1/50) 2.1 psf (0.10 kPa)  
Basic Roof Snow Load Factor, C<sub>b</sub> 0.8  
Wind Exposure Factor, C<sub>w</sub> 1.00  
Flat Roof Snow Load 30.49 psf (1.46 kPa)  
Drift Load Considered? No

D) WIND LOADS

Wind loads determined in accordance with 4.1.7 of NBC-AE2023  
Reference Wind Pressure, q (1/50) 7.94 psf (0.38 kPa)  
Importance Factor, I<sub>w</sub> 1.0  
Open Terrain, C<sub>e</sub> 0.90  
Building Enclosure Fully Enclosed  
Building Internal Pressure Category: 2

E) EARTHQUAKE LOAD

Earthquake loads determined in accordance with 4.1.8 of NBC-AE2023  
S<sub>a</sub>(0.2) 0.106 S<sub>a</sub>(0.5) 0.101 S<sub>a</sub>(1.0) 0.055 S<sub>a</sub>(2.0) 0.023  
Snow and wind loads govern over seismic by a wide margin

F) LOAD COMBINATIONS

Load combinations determined in accordance with section 4.1.3 of NBC-AE2023

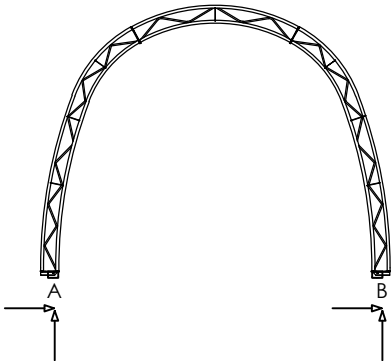
5. FOUNDATION LOADS

The maximum forces at the foundation/supports due to the site loads listed are as follows:  
Foundation loads listed below are unfactored and have not been combined with any other load case.  
Foundation designer to combine and factor as necessary.

Load Case	Side A				Side B			
	Vertical kip	kN	Horizontal kip	kN	Vertical kip	kN	Horizontal kip	kN
Dead	-0.23	-1.04	-0.03	-0.13	-0.23	-1.04	0.03	0.13
Collateral	-0.35	-1.56	-0.10	-0.43	-0.35	-1.56	0.10	0.43
Roof Balanced Live Load	-1.88	-8.36	-0.52	-2.30	-1.88	-8.36	0.52	2.30
Roof Unbalanced Live Load Left	-1.32	-5.89	-0.26	-1.15	-0.56	-2.48	0.26	1.15
Roof Unbalanced Live Load Right	-0.56	-2.48	-0.26	-1.15	-1.32	-5.89	0.26	1.15
Balanced Snow Load	-2.07	-9.22	-0.61	-2.71	-2.07	-9.22	0.61	2.71
Unbalanced Snow Load Left	-2.18	-9.70	-0.45	-1.98	-0.99	-4.41	0.45	1.98
Unbalanced Snow Load Right	-1.00	-4.46	-0.45	-2.00	-2.26	-10.04	0.45	2.01
Wind Perpendicular to Ridge at 0 Degrees Right to Left	1.88	8.35	-0.70	-3.13	3.12	13.87	-2.44	-10.87
Wind Perpendicular to Ridge at 0 Degrees Left to Right	3.12	13.87	2.44	10.87	1.88	8.35	0.70	3.13
Wind Perpendicular to Ridge at 30 Degrees Right to Left	1.88	8.35	-0.70	-3.13	3.12	13.87	-2.44	-10.87
Wind Perpendicular to Ridge at 30 Degrees Left to Right	3.12	13.87	2.44	10.87	1.88	8.35	0.70	3.13
Wind Parallel to Ridge	1.22	5.42	-0.12	-0.54	1.22	5.42	0.12	0.54
Wind Internal Pressure	0.55	2.45	-0.26	-1.14	0.55	2.45	0.26	1.14
Wind Internal Suction	-0.83	-3.68	0.39	1.72	-0.83	-3.68	-0.39	-1.72

\* Add ±0.66 kip (±2.93 kN) vertical and ±0.87 kip (±3.85 kN) longitudinal to all parallel wind load cases at cross brace locations at gridlines (1, 2, 5 & 6)

At Endwall Column Base  
Load Case Horizontal Longitudinal (into Page)  
All Wind Load Cases 0.40 kip (1.79 kN) 1.15 kip (5.10 kN)



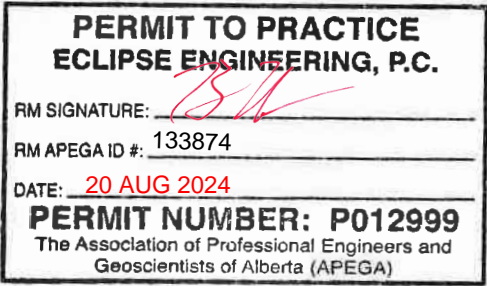
ARROWS INDICATE DIRECTION OF POSITIVE LOAD

6. GENERAL REVIEW DURING CONSTRUCTION

The manufacturer does not provide general review during construction for regulatory purposes

7. The installation sequencing information is contained in the product erection manual

8. Manufacturer's Certificate No. under CSA A660: NOSTR0



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19 AUG 24

PROJECT ID:20002459

ORDER ID: SO18798

DRAWING: 1.2

REV: 0



GENERAL  
THESE DRAWINGS INCLUDING INFORMATION HEREON, REMAINS THE PROPERTY OF NORSEMAN STRUCTURES. IT IS PROVIDED SOLELY FOR ERECTING THE BUILDING DESCRIBED IN THE SALES ORDER AND SHALL NOT BE MODIFIED, REPRODUCED OR USED FOR ANY OTHER PURPOSE WITHOUT PRIOR WRITTEN APPROVAL OF NORSEMAN STRUCTURES.

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THIS CERTIFICATION AND ENGINEERING SEAL APPLIES ONLY TO PRODUCTS DESIGNED AND FABRICATED BY NORSEMAN STRUCTURES FOR THE LOADING CONDITIONS DESIGNATED ON THESE DRAWINGS. CONCRETE FOUNDATIONS, STEEL COMPONENTS BY OTHERS AND ERECTION SUPERVISION ARE NOT THE RESPONSIBILITIES OF NORSEMAN STRUCTURES OR THE CERTIFYING ENGINEER. ALL DOORS, WINDOWS AND ROLL-UP CURTAINS MUST BE DESIGNED TO SUPPORT THE SITE WIND LOADING AND ARE RELIED ON TO BE CLOSED IN THE EVENT OF HIGH WINDS.

HOLES REQUIRED IN FRAMING MEMBERS FOR OPENINGS, INCLUDING BUT NOT LIMITED TO DOORS AND WINDOWS, MAY REQUIRE FIELD DRILLING.

FOUNDATION  
ANCHOR BOLT DIAMETERS ARE DETERMINED IN ACCORDANCE WITH CSA STANDARD CAN/CSA-S16.1 USING Fy = 36 KSI (248 MPa). ANCHOR BOLT LOAD TRANSFER TO THE FOUNDATION ARE TO BE DETERMINED BY OTHERS.

ANCHOR BOLT PROJECTIONS BASED ON NO GROUT ARE AS FOLLOWS: MIN. 2" UNLESS NOTED

FOUNDATION MUST BE LEVEL, SQUARE AND SMOOTH. ANCHOR BOLTS MUST BE ACCURATELY PLACED AS SHOWN ON THE DRAWINGS.

FINISHED FLOOR ELEVATIONS AND UNDERSIDE OF BASE PLATE IS 100'-0" (30.48m) UNLESS NOTED.

ERECTION  
THE ERECTOR MUST PROVIDE SAFE WORKING CONDITIONS AND PRACTICES CONFORMING TO ALL SAFETY REGULATIONS. ALL LIFTING DEVICES ARE TO BE SPECIFICALLY DESIGNED TO LIFT THE VARIOUS BUILDING COMPONENTS. SLINGS AND SPREADER BARS TO BE USED TO PREVENT PERMANENT DEFORMATION OF ALL STRUCTURAL COMPONENTS.

ERECTION SHOULD START AT A BRACED BAY. ERECT AND TEMPORARILY SUPPORT TRUSSES. USE TEMPORARY BRACING AS REQUIRED TO ENSURE STABILITY OF THE FRAMES. INSTALL PURLINS AND CROSS BRACING. PLUMB AND SQUARE TRUSSES IN ACCORDANCE WITH CAN/CSA-S16.1 AND OSHA 29 CFR PART 1926 - SAFETY STANDARD FOR STEEL ERECTION.

STRUCTURAL FRAMING MEMBERS ARE CONSIDERED PLUMB, LEVEL AND ALIGNED WHEN VARIANCE DOES NOT EXCEED 1:500.

BASEPLATES SHALL BE WITHIN THE FOLLOWING TOLERANCES:  
ELEVATION ±1" OVERALL WITH MAX DEVIATION OF ±1/2" BETWEEN ADJACENT GRIDS  
HORIZONTAL ALIGNMENT IN BOTH DIRECTIONS ±1/2"

FASTENERS  
CONNECTIONS WITH SAE J429 GRADE 5 OR EQUIVALENT BOLTS WITH SAE 995 ANSI/ASME B18.2.2 - GRADE 5 HEX NUTS OR NYLOC NUTS SHALL BE SNUG TIGHT.

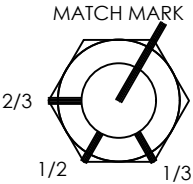
SNUG TIGHT IS THE CONDITION THAT RESULTS FROM THE FULL EFFORT OF A TYPICAL PERSON USING AN ORDINARY SPUD WRENCH. AN IMPACT WRENCH MAY ALSO BE USED BUT ONCE A CONNECTION IS TIGHTENED IT SHOULD BE CHECKED TO ENSURE THAT NO FURTHER ROTATION CAN BE ACHIEVED BY FULL MANUAL EFFORT ON A SPUD WRENCH. IT SHOULD ALSO BE CONFIRMED THAT ALL PLIES IN CONNECTION HAVE BEEN PULLED INTO FIRM CONTACT.

CAN/CSA S16 REQUIRES PRE-TENSIONED HIGH-STRENGTH BOLTS (ASTM A325 BOLTS WITH ASTM A563 NUTS AND ASTM F436 FLAT WASHERS) SHALL BE USED IN THE FOLLOWING CONNECTIONS:  
- SLIP-CRITICAL CONNECTIONS WHERE SLIPPAGE CANNOT BE TOLERATED  
- SHEAR CONNECTIONS PROPORTIONED IN ACCORDANCE WITH SEISMIC REQUIREMENTS  
- CONNECTIONS SUBJECT TO IMPACT OR CYCLIC LOADING  
- CONNECTIONS WHERE THE BOLTS ARE SUBJECT TO TENSILE LOADING  
- CONNECTIONS USING OVERSIZE OR SLOTTED HOLES UNLESS SPECIFICALLY DESIGNED TO ACCOMMODATE MOVEMENT.

THESE CONNECTIONS SHALL BE PRE-TENSIONED USING THE TURN OF NUT METHOD, AND ARE NOTED IN THE DETAILS OF THESE DRAWINGS.

CAN/CSA S16 TURN OF NUT METHOD:  
AFTER THE SNUG TIGHTENING PROCEDURE IS COMPLETED, EACH BOLT IN THE CONNECTION MUST BE PRE-TENSIONED ADDITIONALLY BY THE APPLICABLE AMOUNT OF RELATIVE ROTATION AS GIVEN IN TABLE A. DURING THIS OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH UNLESS THE BOLT AND NUT ARE MATCH-MARKED TO ENABLE THE AMOUNT OF RELATIVE ROTATION TO BE DETERMINED.

TABLE A - NUT ROTATION FROM SNUG TIGHT CONDITION	
BOLT LENGTH	TURN
UP TO AND INCLUDING 4 DIAMETERS	1/3
OVER 4 DIAMETERS BUT NOT EXCEEDING 8 DIAMETERS OR 8"	1/2
EXCEEDING 8 DIAMETERS OR 8"	2/3



ALL BOLTS SHALL BE PLATED OR GALVANIZED TO PROVIDE CORROSION RESISTANCE.

SELF DRILLING SCREWS SHALL CONFORM TO SAE J78.

MATERIAL SPECIFICATIONS  
STRUCTURAL STEEL CONFORMS TO THE FOLLOWING SPECIFICATIONS:

PLATES - CSA G40.21 44W  
HSS - CSA G40.21 50W OR ASTM A500C  
W-FLANGE - ASTM A572 OR A992 GR50  
ANGLES - CSA G40.21 44W  
CHANNELS - CSA G40.21 44W

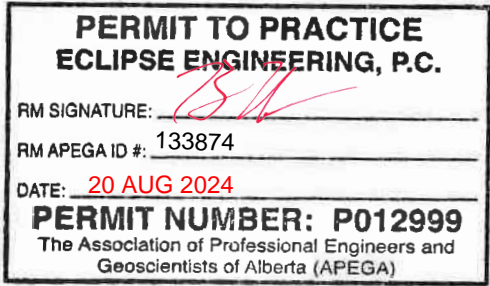
STRUCTURAL CABLES CONFORM TO THE FOLLOWING SPECIFICATIONS:

THIMBLE - FEDERAL SPECIFICATION (USA) FF-T-276B  
TURNBUCKLE - FEDERAL SPECIFICATION (USA) FF-T-791B  
GALVANIZED CARBON STEEL CABLE - FEDERAL SPECIFICATION (USA) RR-W410D

COATINGS  
HSS <3/16" IS IN LINE GALVANIZED TO A NOMINAL ZINC WEIGHT OF 0.6oz/sq ft (180g/m2) OR A THICKNESS OF 1.0 mil. CHROMATE CONVERSION COATING IS APPLIED OVER GALVANIZED SURFACE TO PROVIDE ADDITIONAL CORROSION PROTECTION. RECONDITIONING OF TRUSSES COMPRISED OF IN LINE GALVANIZED ELEMENTS PER SSPC-SP5 WHITE METAL BLAST CLEANING / NACE #1 AND THERMAL ZINC SPRAY AS PER SSPC-CS 23.00 / AWS C2.23 / NACE #12, SPECIFICATION FOR APPLICATION OF THERMAL SPRAY COATINGS.

HSS >3/16" AND SMALL PARTS CONSISTING OF PLATES AND ANGLES ARE HOT-DIPPED GALVANIZED TO A NOMINAL ZINC WEIGHT OF 2.0oz/sq ft (600g/m2) OR A THICKNESS OF 3.4mils ACCORDING TO ASTM A123.

INSERT STYLE TRUSS COUPLERS ARE FABRICATED AND PUT THROUGH AN ELECTRODEPOSITED ZINC COATING PROCESS THAT CONFORMS TO ASTM B633 "ELECTRODEPOSITED COATINGS OF ZINC ON IRON AND STEEL".



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**FABRIC NOTES**  
REMOVAL OF FABRIC OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED. ALL TEARS MUST BE PATCHED IMMEDIATELY TO AVOID WARRANTY PROBLEMS.

EXTERIOR FABRIC WILL DEFLECT UNDER LOAD, THEREFORE ALL BUILDING ACCESSORIES (LIGHTING, HVAC, SPRINKLERS, ETC) MUST BE LOCATED BENEATH THE INNER CHORD OF THE TRUSS. ANYTHING ABOVE THIS MUST BE REVIEWED AND APPROVED IN WRITING BY NORSEMAN STRUCTURES. SEVERE DAMAGE TO THE BUILDING AND ACCESSORIES MAY RESULT FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.

**FABRIC SPECIFICATIONS**  
ALL POLYETHYLENE MEMBRANES WILL POSSESS THE FOLLOWING MINIMUM SPECIFICATIONS:

<b>PHYSICAL</b> BASE SCRIM	<b>PROPERTIES</b> WOVEN HIGH DENSITY POLYETHYLENE SCRIM WITH UV/FR INHIBITORS
COATING THICKNESS	MIN 4 mil (94 g/m2) EXTERIOR COATING EACH SIDE
SURFACE TYPE	MODIFIED LOW DENSITY POLYETHYLENE COATING WITH UV/FR INHIBITORS


TOTAL FABRIC WEIGHT 12.4 oz/sq yd (421 g/m2) ±5%

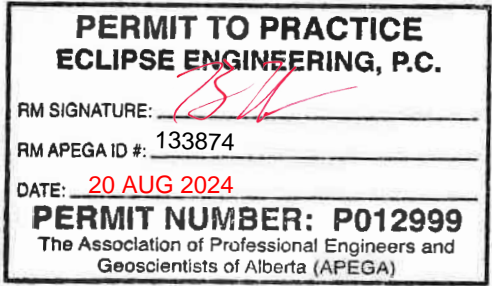
<b>STRENGTH</b> THICKNESS	<b>VALUE</b> 23 mils (0.59mm)	<b>TEST STANDARD</b> ASTM D-1777
GRAB TENSILE STRENGTH	360 lb (1598 N) / 350 lb (1555 N)	ASTM D-5034
TONGUE TEAR STRENGTH	120 lb (533 N) / 110 lb (488 N)	ASTM D-2261
STRIP TENSILE STRENGTH	262 lb/in (2326 N/5cm) / 248 lb/in (2202 N/5cm)	ASTM D-4851
MULLEN BURST	675 psi (4650 kPa)	ASTM D-3786
LOW TEMPERATURE CRACK	PASS -60°C	ASTM D-2136
% LIGHT TRANSMISSION	DW-11.4% WHITE/WHITE	ASTM E-903
UV & WEATHERING	>90% STRENGTH AFTER 2000HRS	ASTM G-151
WATER VAPOR TRANSMISSION	0.038grains/h/fts <sup>2</sup> /inHg (perms) (2.16ng/Pa/s/msq)	ASTM E-96
<b>FIRE</b> SCALE FLAME SPREAD	<b>VALUE</b> FSCI: 10 SD: 117	<b>TEST STANDARD</b> CAN/ULC S-102
SMALL SCALE FLAME TEST	CHAR: 115mm AV. DRIP: NO	CAN/ULC S-109
LARGE SCALE FLAME TEST	CHAR: 109mm AV DRIP: NO	CAN/ULC S-109
SCALE FLAME SPREAD	FSI: 10 SD: 110	ASTM E84

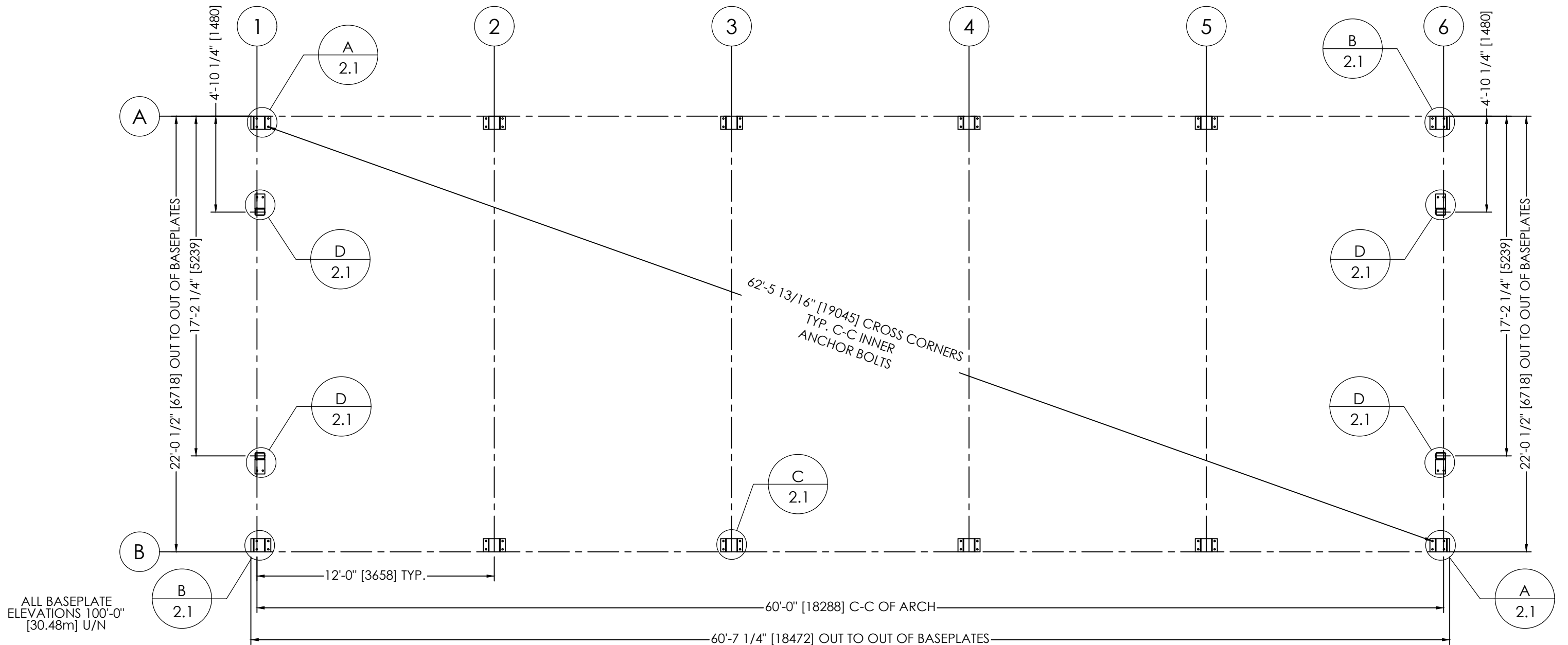
**MATERIAL STORAGE**  
GALVANIZED, ALUMINIZED, AND COLORED MATERIALS ARE SUBJECT TO CORROSION AND DISCOLORATION IF THEY ARE IMPROPERLY STORED. SHORT TERM JOB SITE STORAGE OF STEEL COMPONENTS MAY BE TOLERATED, PROVIDED CARE IS TAKEN TO KEEP MATERIALS DRY AT ALL TIMES. WHEN TRUSSES ARE TO BE STORED OUTDOORS, THEY SHOULD BE PLACED AT AN ANGLE SUFFICIENT TO PROMOTE GOOD DRAINAGE. IN ADDITION, SEVERAL INCHES OF CLEARANCE MUST BE PROVIDED BETWEEN THE LOWER END AND THE GROUND TO ALLOW VENTILATION. NORSEMAN STRUCTURES WILL NOT BE HELD RESPONSIBLE FOR MATERIALS WHICH ARE IMPROPERLY PROTECTED AFTER DELIVERY.

**INSULATION SPECIFICATIONS**  
R-FOIL REFLECTIVE INSULATION - DOUBLE LAYER OF POLYETHYLENE BUBBLES

<b>PROPERTIES</b>	<b>TEST STANDARD</b>
NOMINAL THICKNESS	5/16" (8mm)
WEIGHT PER UNIT/AREA	0.75oz/sq. ft / 228.87 g/sq. m
FIRE RATING	CLASS A
	FLAME SPREAD = 0
	SMOKE DEVELOPMENT = 10
EMISSION	0.04
REFLECTIVITY	0.96
WATER VAPOUR PERMEABILITY	0.02 PERMS
PLIABILITY	NO CRACKING
CORROSIVITY (200°F (93°C) - 7 DAYS)	PASS
RESISTANCE TO FUNGI AND BACTERIA	DOES NOT PROMOTE GROWTH

 <b>NORSEMAN<sup>TM</sup></b> <b>STRUCTURES</b> <i>Fiercely Reliable<sup>TM</sup></i>		3815 Wanuskewin Road Saskatoon, SK, Canada S7P 1A4 Phone: 306.385.2888 Fax: 306.385.2717 www.norsemanstructures.com		DRAWING TITLE:		DWG REV		REVISED BY: DESCRIPTION		DATE					
				SPECIFICATIONS 2 OF 2		0		EW: ISSUED FOR CONSTRUCTION		19 AUG 24					
				This drawing and the proprietary design is property of Norseman Structures any reproduction in whole or in part without the expressed written consent of Norseman Structures is prohibited											
DEALER: NORSEMAN STRUCTURES SASKATOON, SK		CUSTOMER: CENOVUS ENERGY FOSTER CREEK, AB		PROJECT: ARCH 22' x 60' @ 12' PASSENGER DEPOT		This drawing is not to scale unless otherwise noted.		PROJECT ID: 20002459		ORDER ID: SO18798		DRAWING: 1.4		REV: 0	





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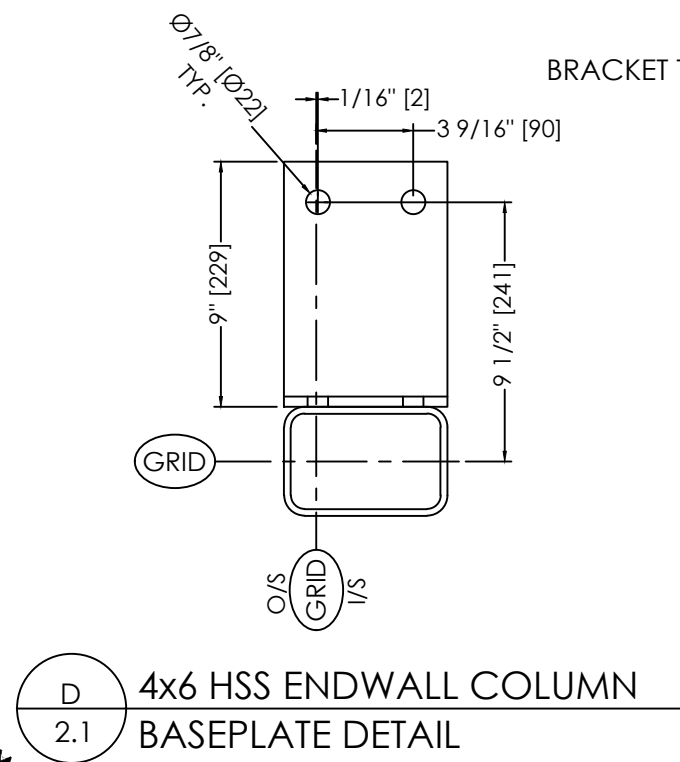
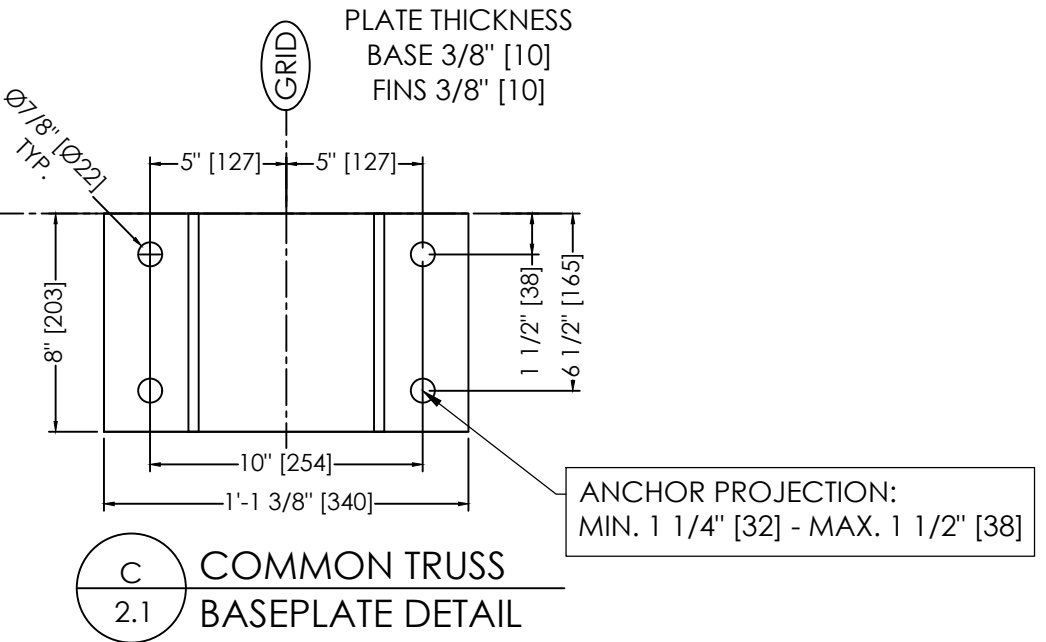
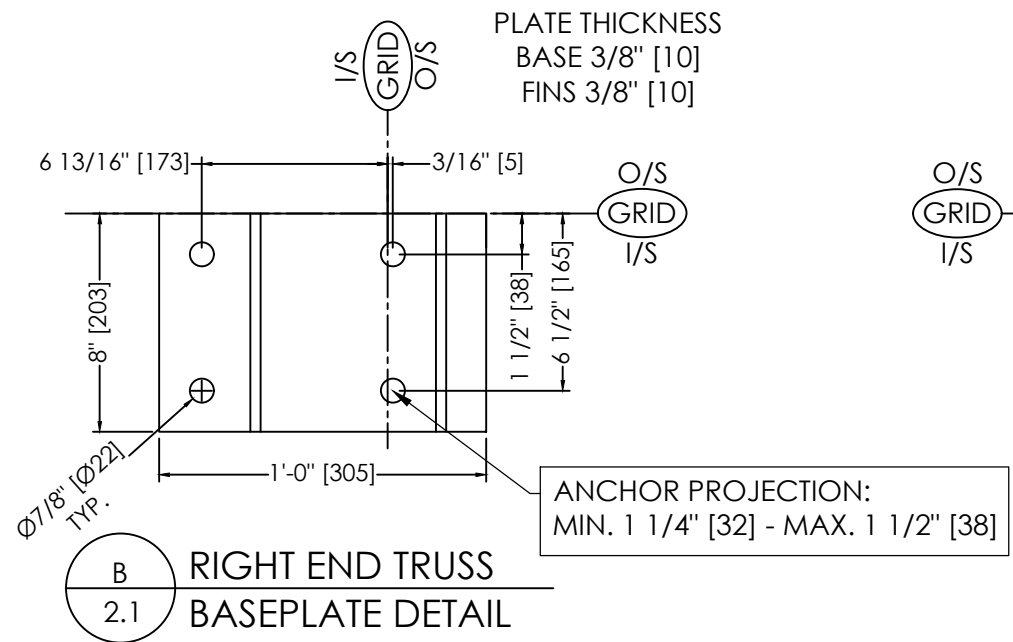
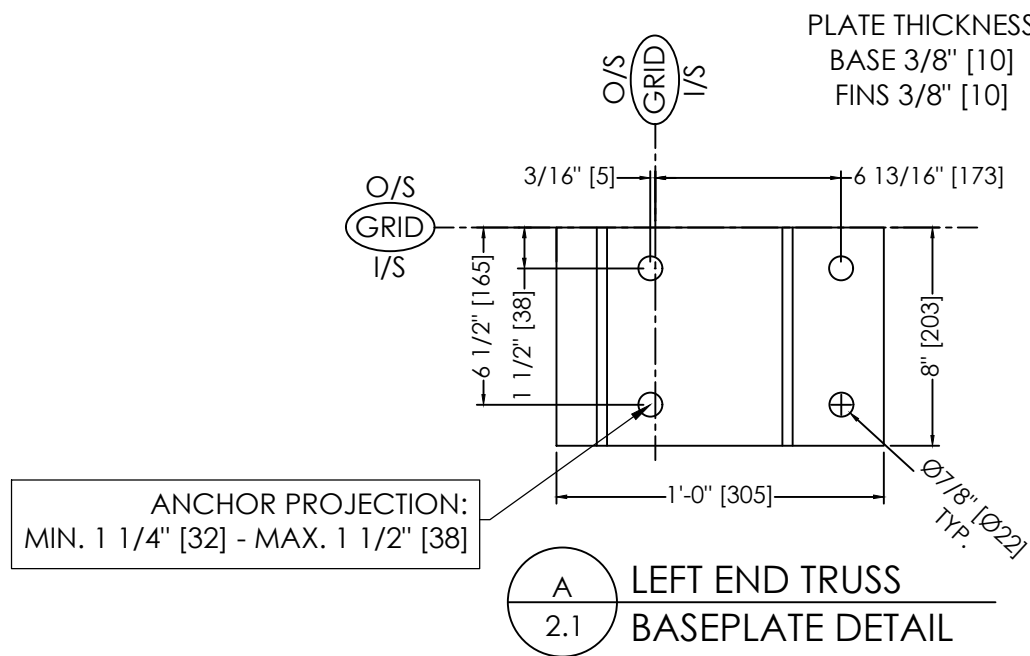
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DRAWING TITLE:  
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0	EW: ISSUED FOR CONSTRUCTION	19 AUG 24
PROJECT ID: 20002459	ORDER ID: SO18798	DRAWING: 2.0 REV: 0



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**PROFESSIONAL ENGINEER ALBERTA**  
*[Signature]*  
**BRIAN HANSON**  
 20 AUG 2024  
 P.Eng.#133874  
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0	EW: ISSUED FOR CONSTRUCTION	19 AUG 24
PROJECT ID: 20002459	ORDER ID: SO18798	DRAWING: 2.1 REV: 0



	ITEM#	QTY	OC	IC	WEB	COUPLER	KINGPINS	WEIGHT
T1	697823	1	Ø2 3/8"-12GA	Ø2 3/8"-12GA	Ø1"-14GA	3/8" PLATE	1/4" PLATE	81
L1	698177	1	Ø2 3/8"-12GA	Ø2 3/8"-12GA	Ø1"-14GA	3/8" PLATE	1/4" PLATE	127
L2	698178	1	Ø2 3/8"-12GA	Ø2 3/8"-12GA	Ø1"-14GA	3/8" PLATE	1/4" PLATE	127
S1	31203365	2	-	-	-	-	-	11
B1	E34203375	2	-	-	-	-	-	19

**SECTION A-A**

LASHING WINCH  
SEE DETAIL F/3.3

CROSS BRACE BRACKET  
TOWARDS BRACED BAY  
SEE DETAIL F/3.3

END FLAP WINCH

4)  $\varnothing 1/2"$  x 2"  
HEX BOLT  
W/ NYLOC NUT  
(NUTS ON TOP)

END TRUSS  
COUPLER

OUTSIDE

D-RING TAB FOR FLAP  
COATED CABLE  
INSTALL D-RING  
FACING OUTSIDE  
50005090

1)  $\varnothing 5/8"$  x 9"  
HEX BOLT W/ NYLOC  
NUT & 2) WASHERS  
SEE H/5.1 FOR  
LASHING WINCH  
CONNECTION

SWIVEL TUBE END  
31203365

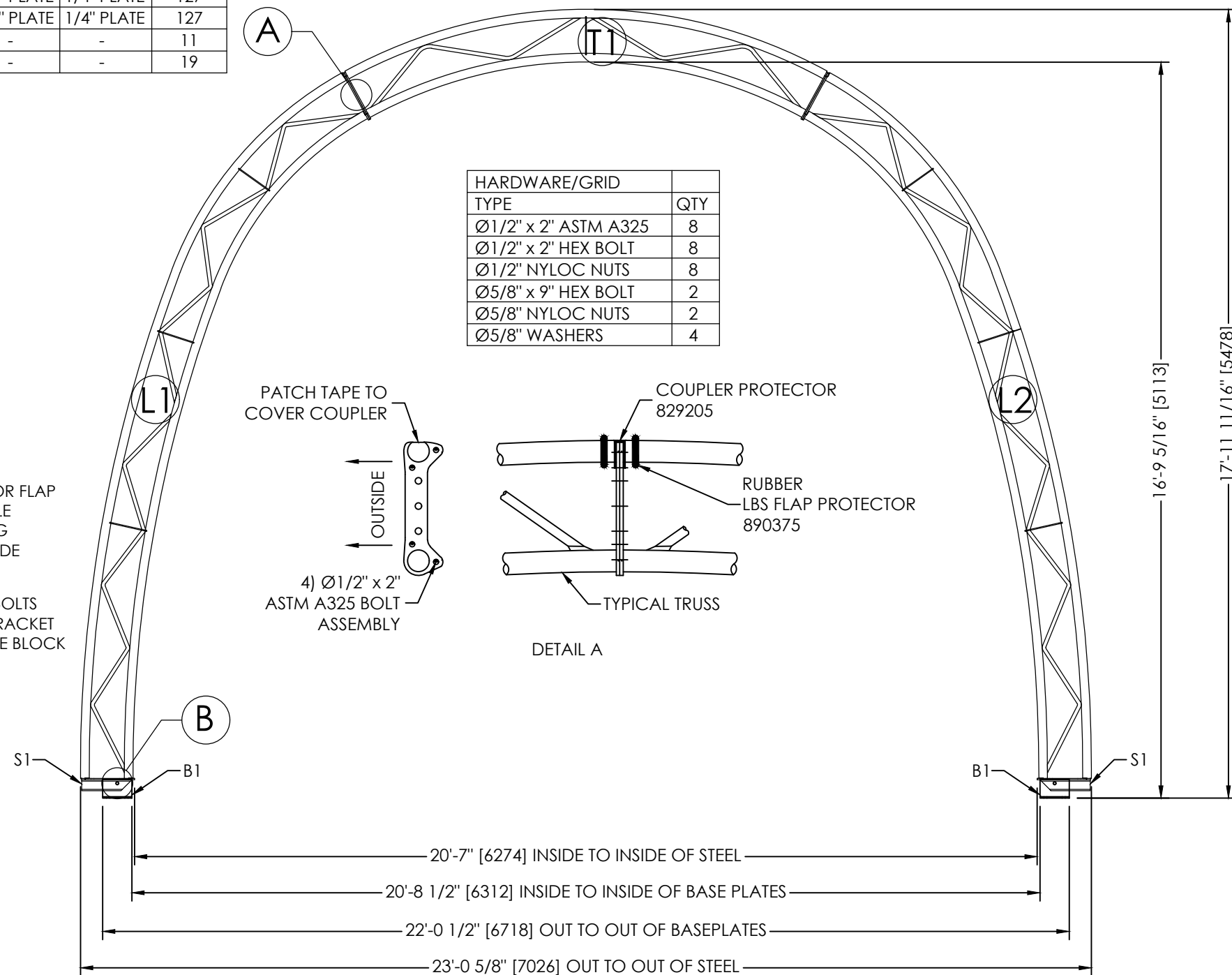
4) ANCHOR BOLTS  
TO SECURE BRACKET  
TO CONCRETE BLOCK  
FOUNDATION

E34203375  
SEE A/2.1 FOR  
ORIENTATION


CONCRETE BLOCK  
FOUNDATION

**DETAIL B**

HARDWARE/GRID	
TYPE	QTY
Ø1/2" x 2" ASTM A325	8
Ø1/2" x 2" HEX BOLT	8
Ø1/2" NYLOC NUTS	8
Ø5/8" x 9" HEX BOLT	2
Ø5/8" NYLOC NUTS	2
Ø5/8" WASHERS	4



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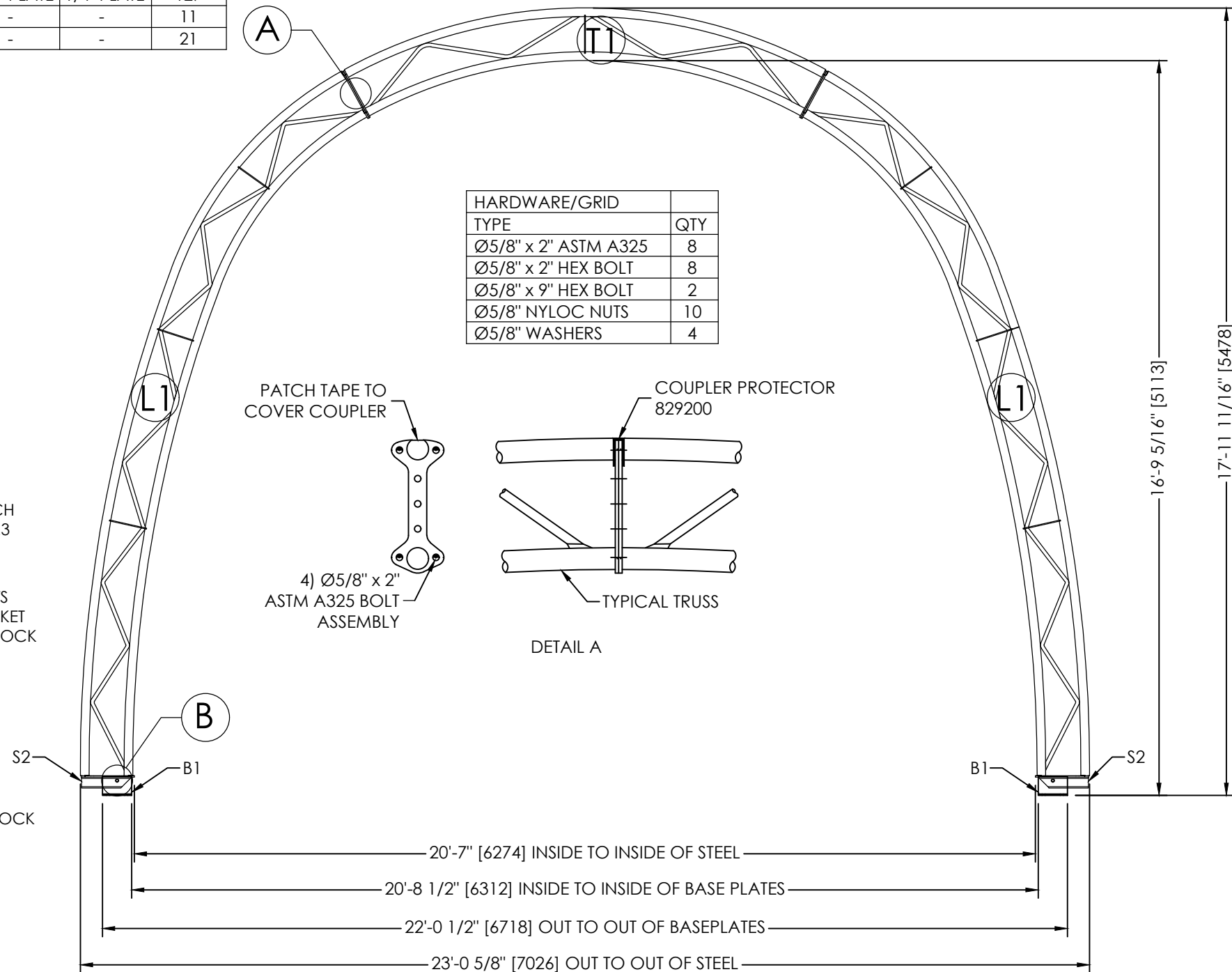
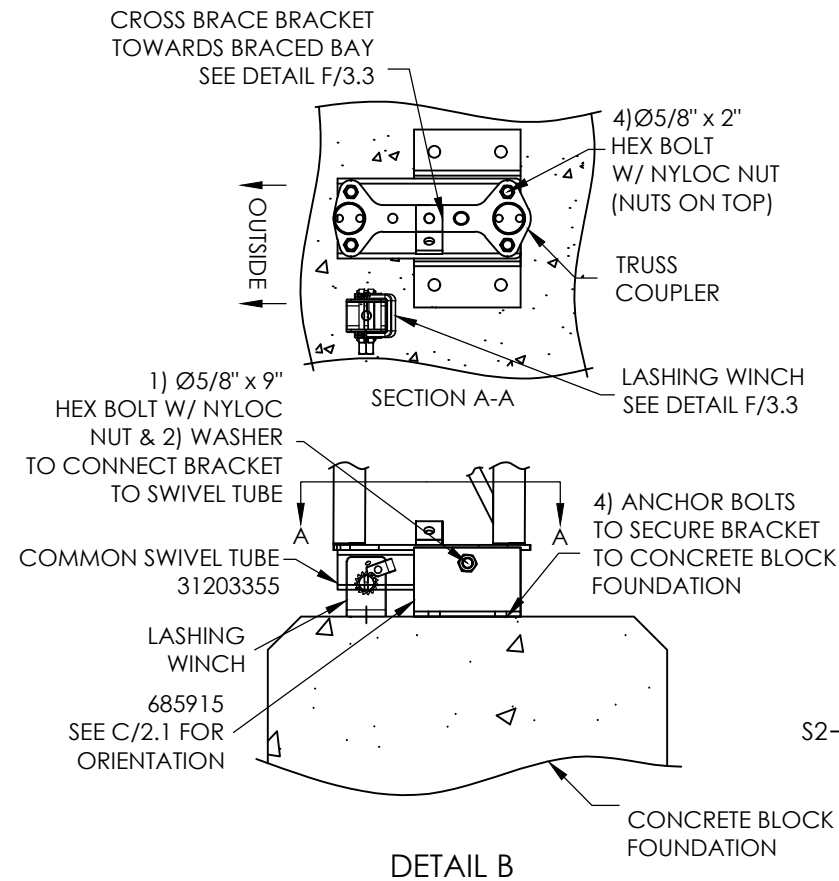
4	DRAWING TITLE:
	<p>END BUILDING PROFILE</p> <p>This drawing and the proprietary design is property of Norseman Structures any reproduction in whole or in part without the expressed written consent of Norseman Structures is prohibited</p> <p>This drawing is not to scale unless otherwise noted.</p>

DWG REV	REVISED BY: DESCRIPTION	DATE
0	EW: ISSUED FOR CONSTRUCTION	19 AUG 24
PROJECT ID: 20002459		ORDER ID: SO18798
DRAWING: 3.0		REV: 0


	ITEM#	QTY	OC	IC	WEB	COUPLER	KINGPINS	WEIGHT
T1	697822	1	Ø2 3/8"-12GA	Ø2 3/8"-12GA	Ø1"-14GA	3/8" PLATE	1/4" PLATE	81
L1	698176	2	Ø2 3/8"-12GA	Ø2 3/8"-12GA	Ø1"-14GA	3/8" PLATE	1/4" PLATE	127
S2	31203355	2	-	-	-	-	-	11
B1	685915	2	-	-	-	-	-	21

APPROX. WEIGHT  
OF TRUSS ARCH AND SWIVEL TUBES  
W/ BOLTS = 440LB

HARDWARE/GRID	
TYPE	QTY
Ø5/8" x 2" ASTM A325	8
Ø5/8" x 2" HEX BOLT	8
Ø5/8" x 9" HEX BOLT	2
Ø5/8" NYLOC NUTS	10
Ø5/8" WASHERS	4



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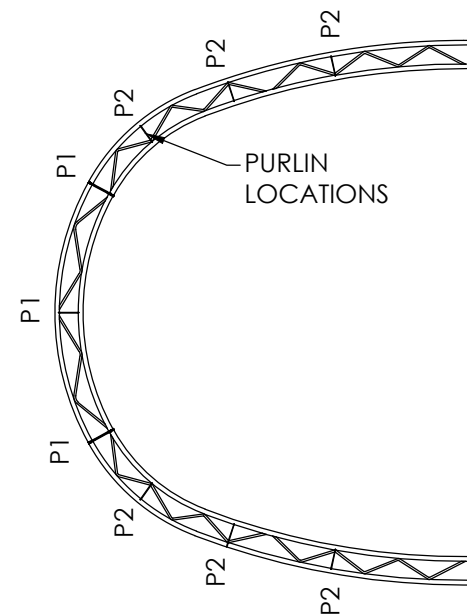
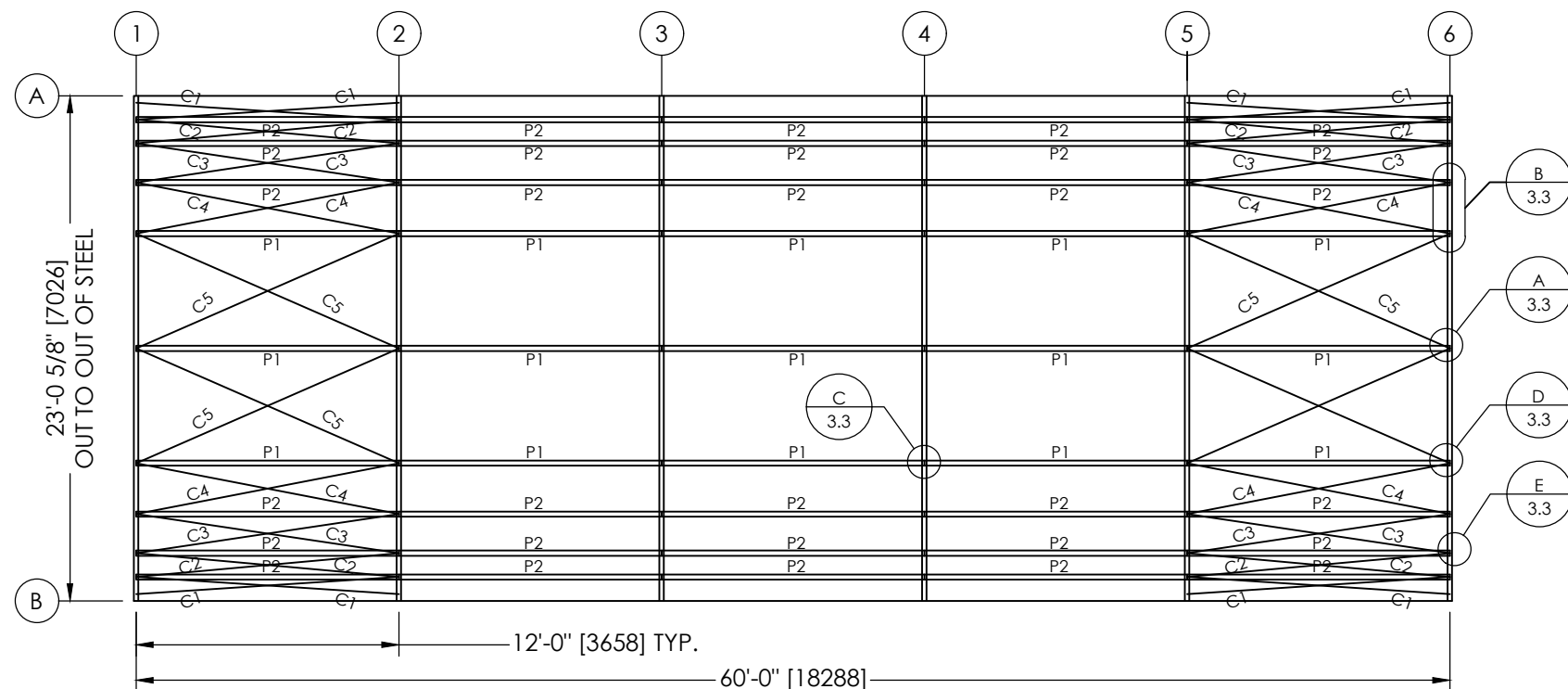
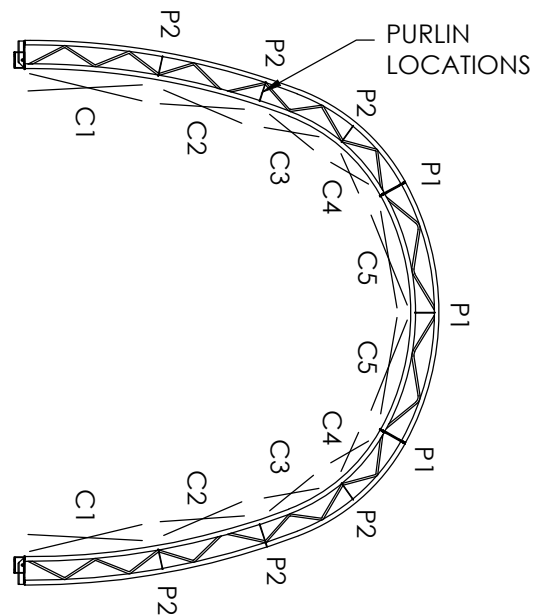
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DRAWING TITLE:	COMMON BUILDING PROFILE
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0	EW: ISSUED FOR CONSTRUCTION			19 AUG 24	
PROJECT ID:20002459		ORDER ID: SO18798	DRAWING: 3.1	REV: 0	

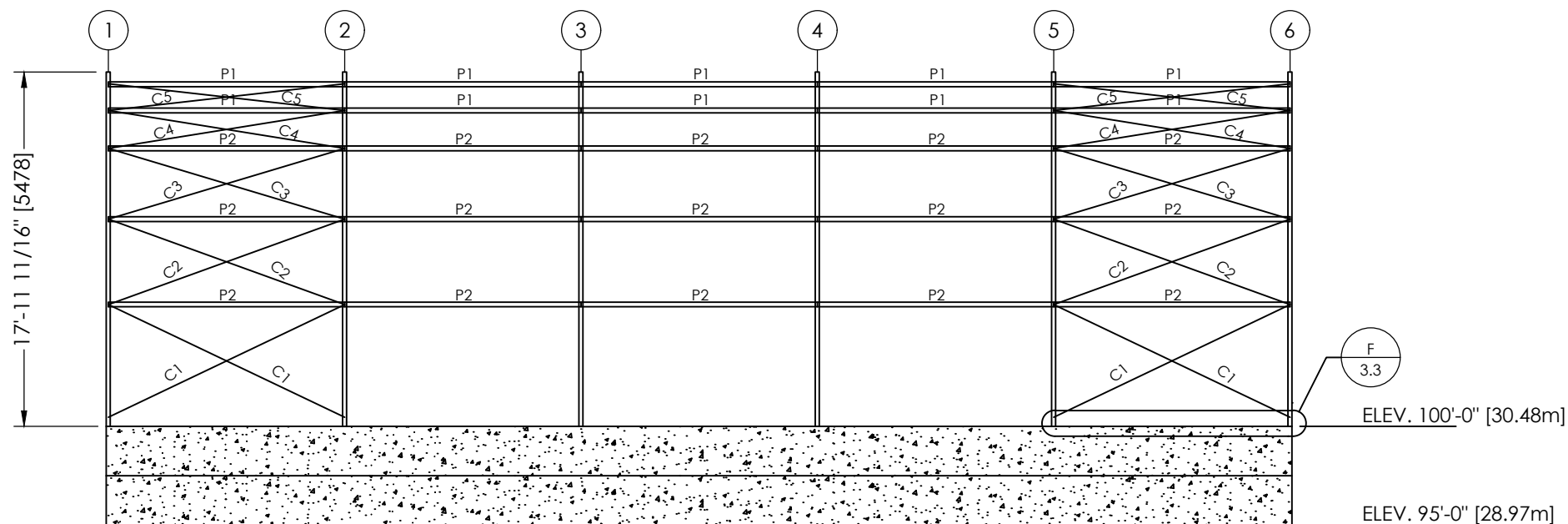


MARK#	PART #	DESCRIPTION/MATERIAL
P1	PA3.5-XXS	Ø3-1/2" x 14ga
P2	PA2.875-XXS	Ø2-7/8" x 14ga


\* "XX" IS GRIDLINE SPACING (FT)

ARCH 22	12' SPACING
C1	862162-9
C2	862156-9
C3	862154-9
C4	862151-9
C5	862160-9

\*ALL CROSS CABLES (C1/C2/C3/C4/C5) ARE Ø3/8" CONNECTED TO TRUSSES USING 1/2" SHACKLE AND CABLE TAB 32200055 AS PART OF CABLE ASSEMBLY\*



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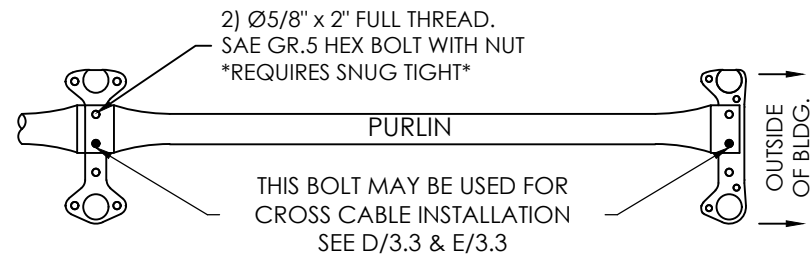


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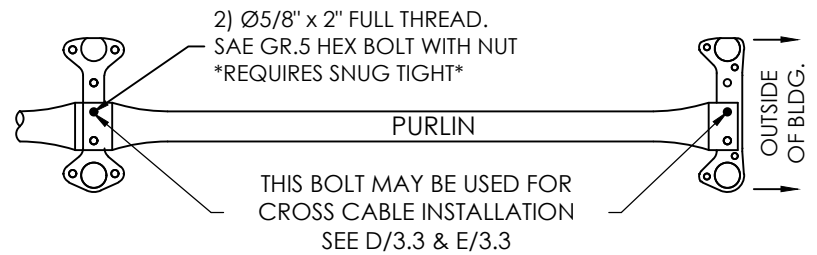
4	DRAWING TITLE:
	BRACING LAYOUT
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0	EW: ISSUED FOR CONSTRUCTION			19 AUG 24	
PROJECT ID: 20002459		ORDER ID: SO18798	DRAWING: 3.2	REV: 0	

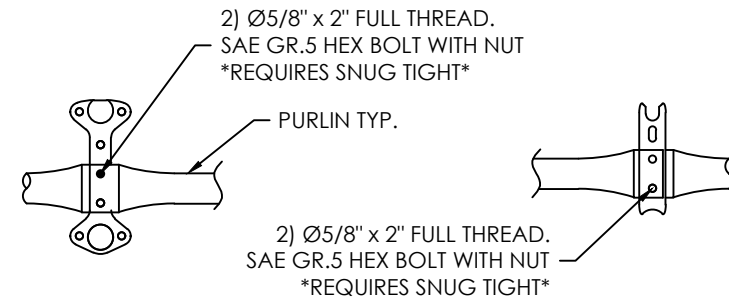




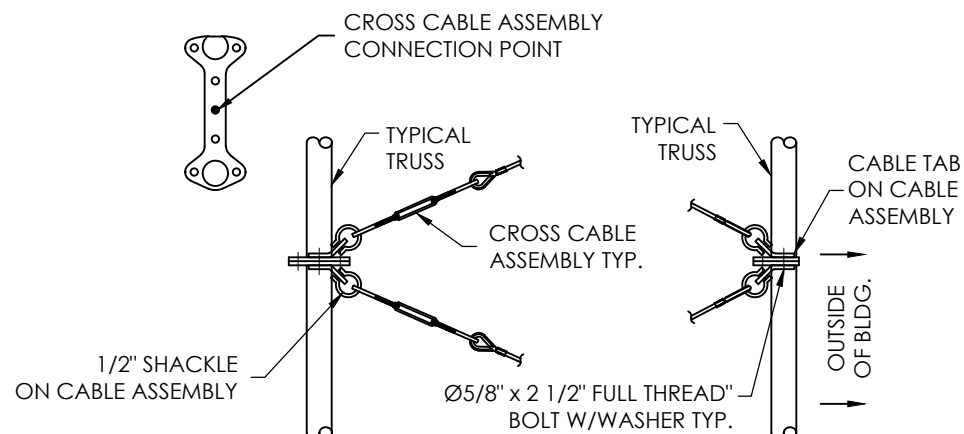
**A**  
3.3 RIDGE PURLIN  
CONNECTION



**B**  
3.3 PURLIN CONNECTION  
AT BRACED BAY

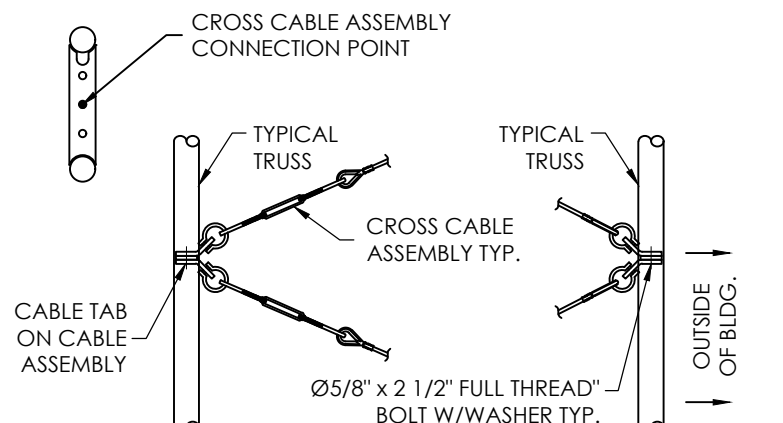


**C**  
3.3 PURLIN CONNECTION  
AT UNBRACED BAY



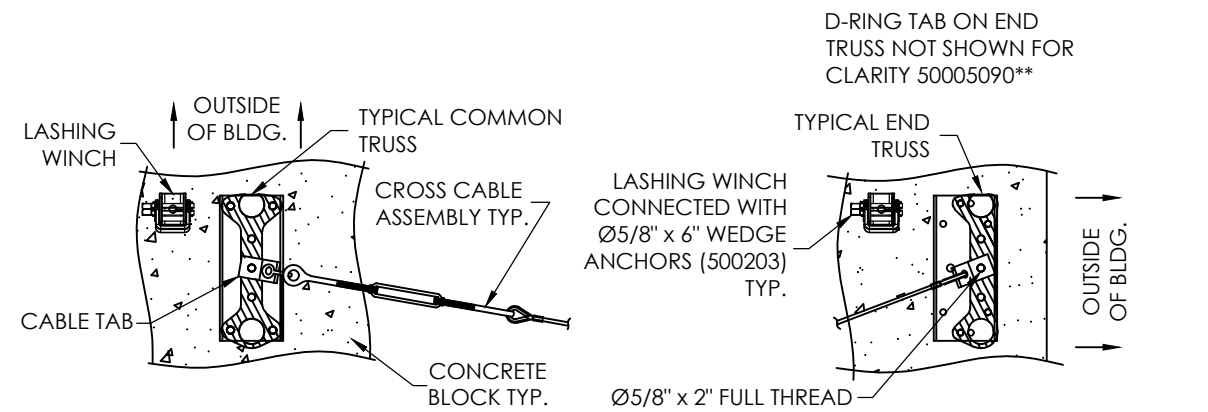
NOTE:  
-INSTALL ALL TURNBUCKLES AT ONE END FOR EASE OF INSTALLATION.  
-PURLINS REMOVED FOR CLARITY.

**D**  
3.3 CROSS CABLE AT COUPLER  
CONNECTION



NOTE:  
-INSTALL ALL TURNBUCKLES AT ONE END FOR EASE OF INSTALLATION.  
-PURLINS REMOVED FOR CLARITY.

**E**  
3.3 CROSS CABLE AT MID TRUSS  
CONNECTION



SINGLE BRACED BAY

END BRACED BAY  
END FLAP WINCH NOT SHOWN FOR CLARITY

**F**  
3.3 CROSS CABLE TAB AND WINCH  
CONNECTIONS TO SWIVEL TUBES CONCRETE BLOCK

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DATE: 20 AUG 2024  
**PERMIT NUMBER: P012999**  
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**PROFESSIONAL ENGINEER ALBERTA**  
*[Signature]*  
**BRIAN HANSON**  
20 AUG 2024  
P.Eng.#133874  
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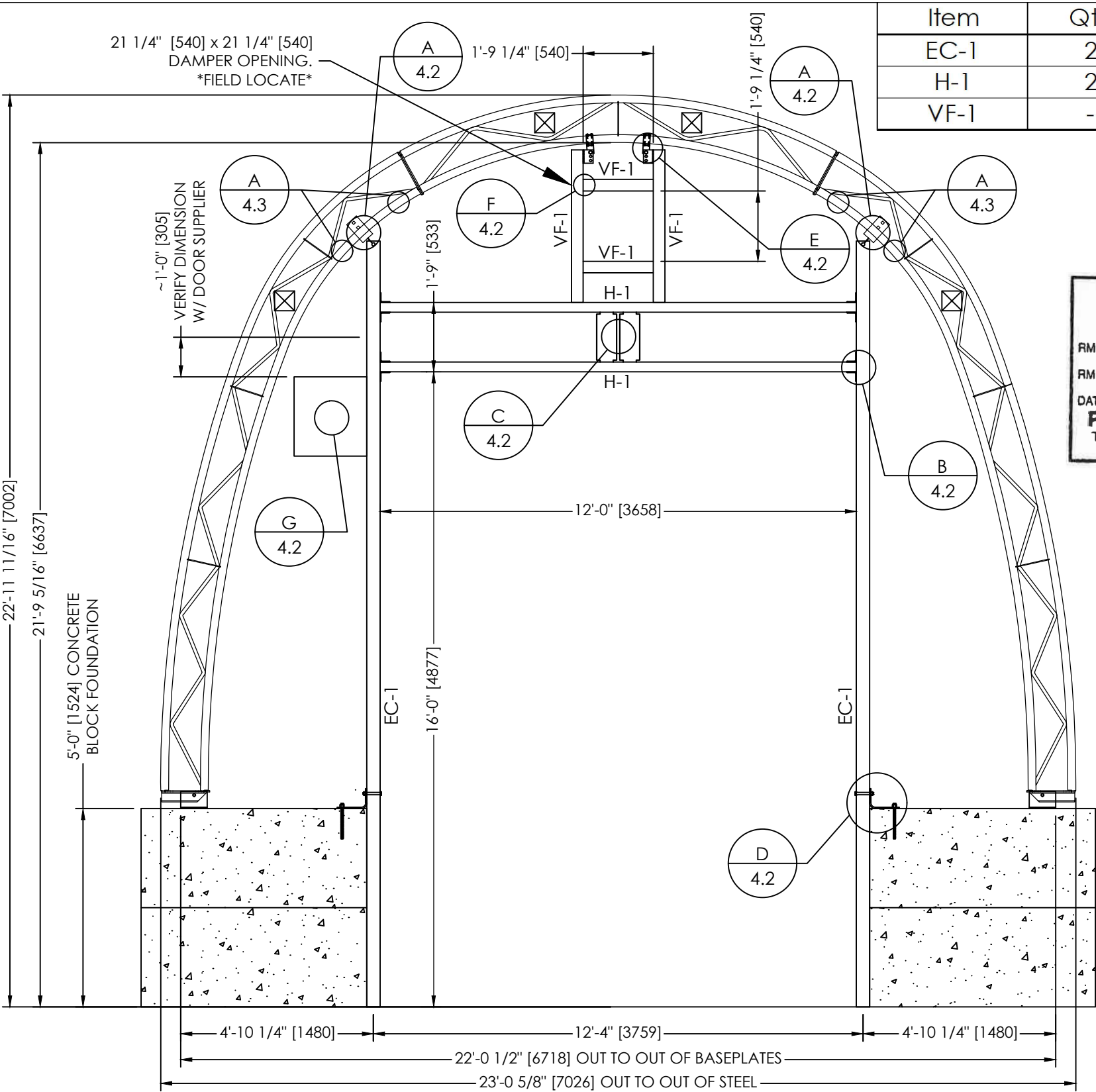
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PROJECT:  
ARCH 22' x 60' @ 12'  
PASSENGER DEPOT

DRAWING TITLE:  
BRACING DETAILS  
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PROJECT ID: 20002459	ORDER ID: SO18798	DRAWING: 3.3 REV: 0





Item	Qty	Description	Weight
EC-1	2	HSS 4x6x1/4x231 9/16\" (685912)	301
H-1	2	HSS 3x6x3/16x144\"	128
VF-1	-	6C14	-

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ENDWALL 2 (GRID 6) - LOOKING FROM OUTSIDE

NOTE: OPERATOR PAD ELEVATION TO BE CONFIRMED WITH DOOR SUPPLIER PRIOR TO INSTALLATION



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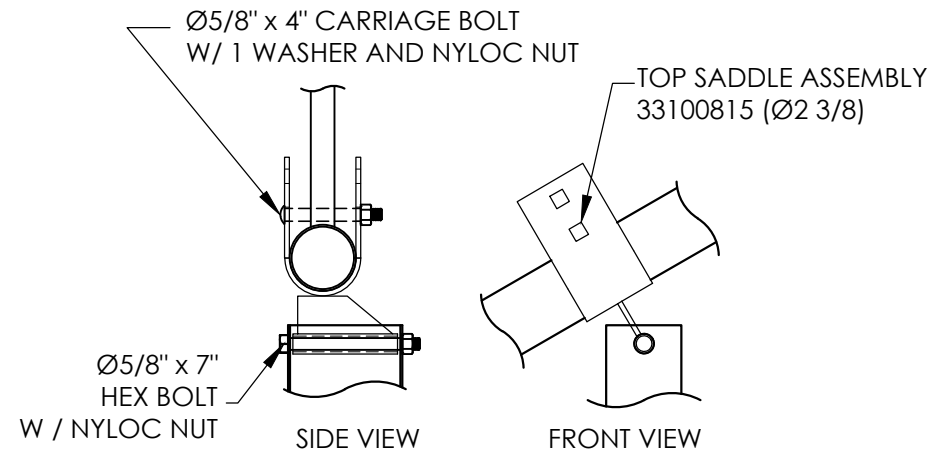
PROJECT:  
ARCH 22' x 60' @ 12'  
PASSENGER DEPOT

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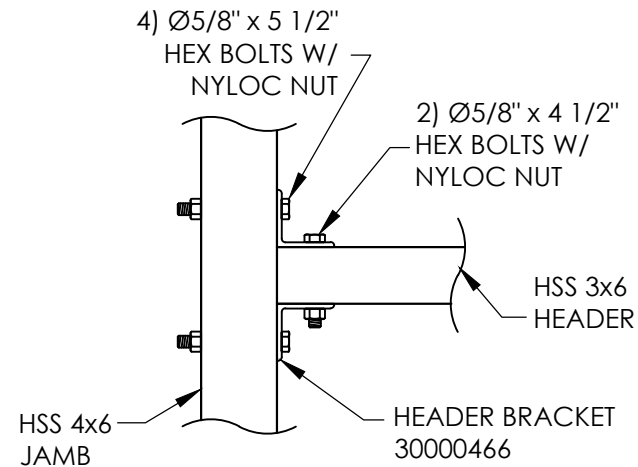
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0	EW: ISSUED FOR CONSTRUCTION	19 AUG 24
PROJECT ID:20002459	ORDER ID: SO18798	DRAWING: 4.1
		REV: 0

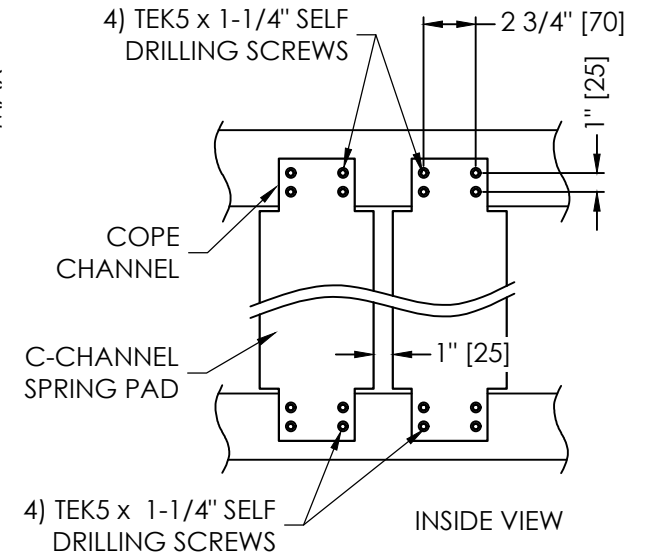
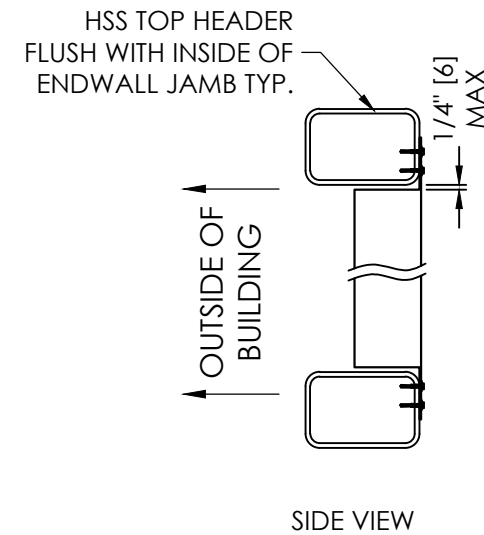




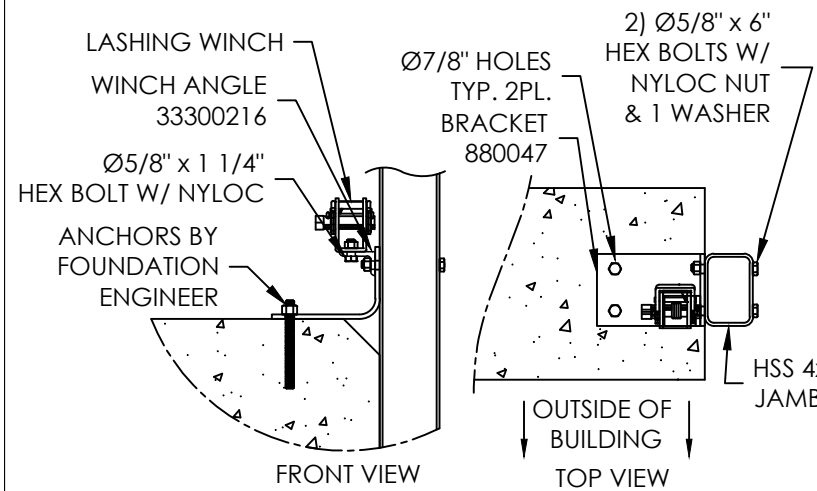
**A**  
4.2 4x6 HSS WINDPOST  
TOP CONNECTION



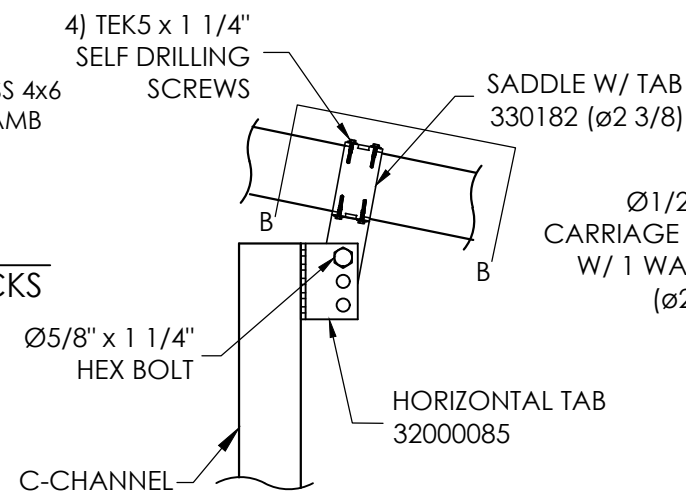
**B**  
4.2 3"x6" HSS HEADER  
TO 4"x6" HSS JAMB



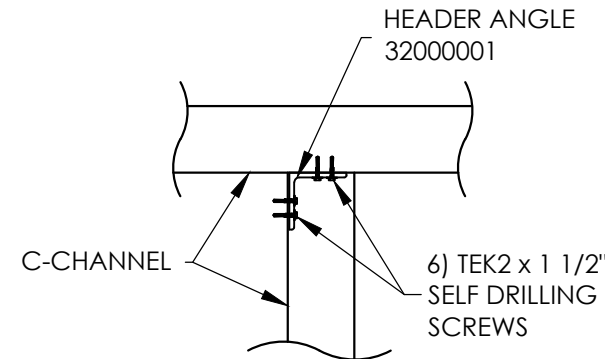
**C**  
4.2 OHD C-CHANNEL SPRING PAD  
CONNECTION TO HSS HEADER



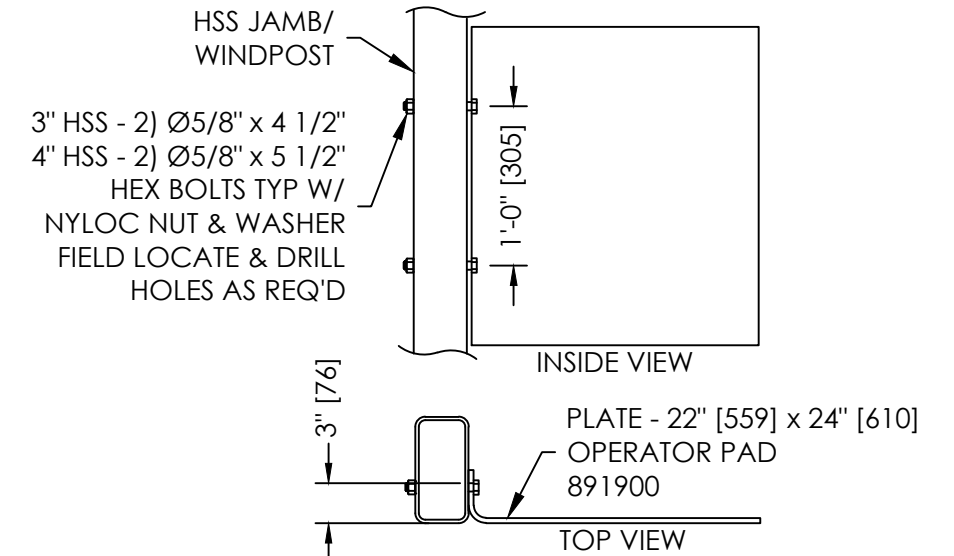
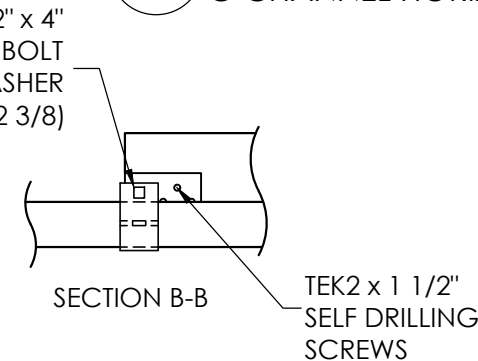
**D**  
4.2 4"x6" HSS COLUMN  
BASE CONNECTION TO BLOCKS



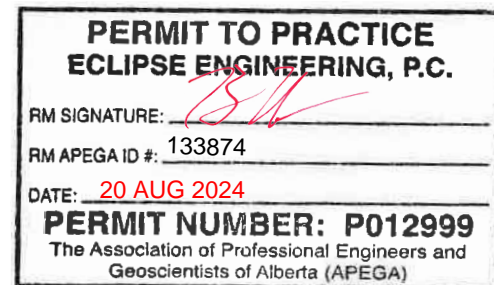
**E**  
4.2 C-CHANNEL CONNECTION  
TO TRUSS



**F**  
4.2 C-CHANNEL VERTICAL  
C-CHANNEL HORIZONTAL



**G**  
4.2 MOTOR MOUNT CONNECTION  
TO HSS WINDPOST



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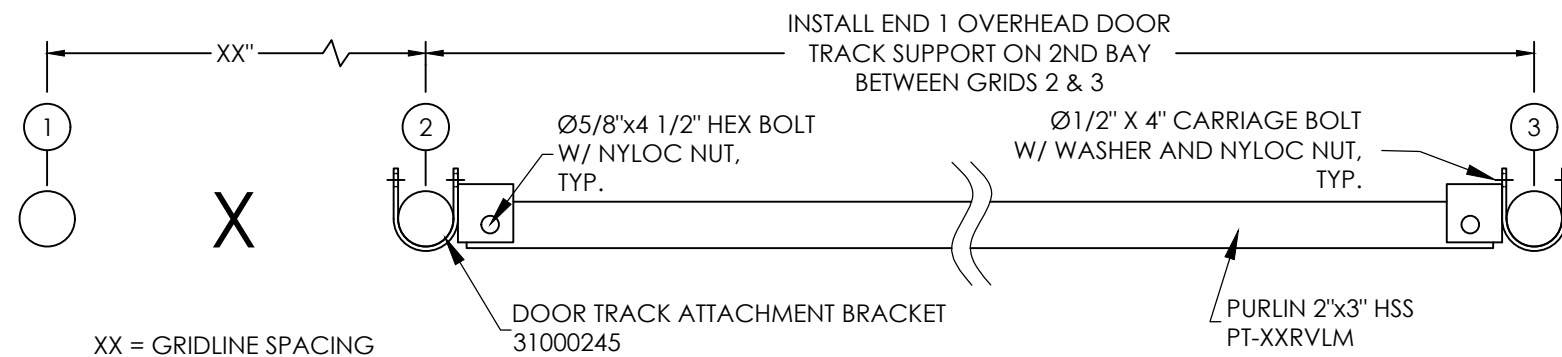
PROJECT:  
ARCH 22' x 60' @ 12'  
PASSENGER DEPOT

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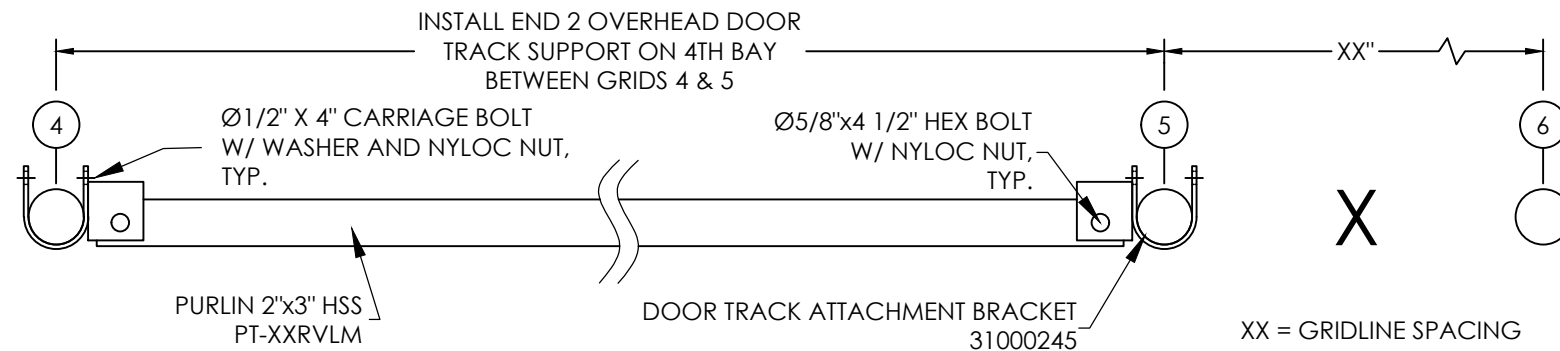
DRAWING TITLE:  
ENDWALL DETAILS 1

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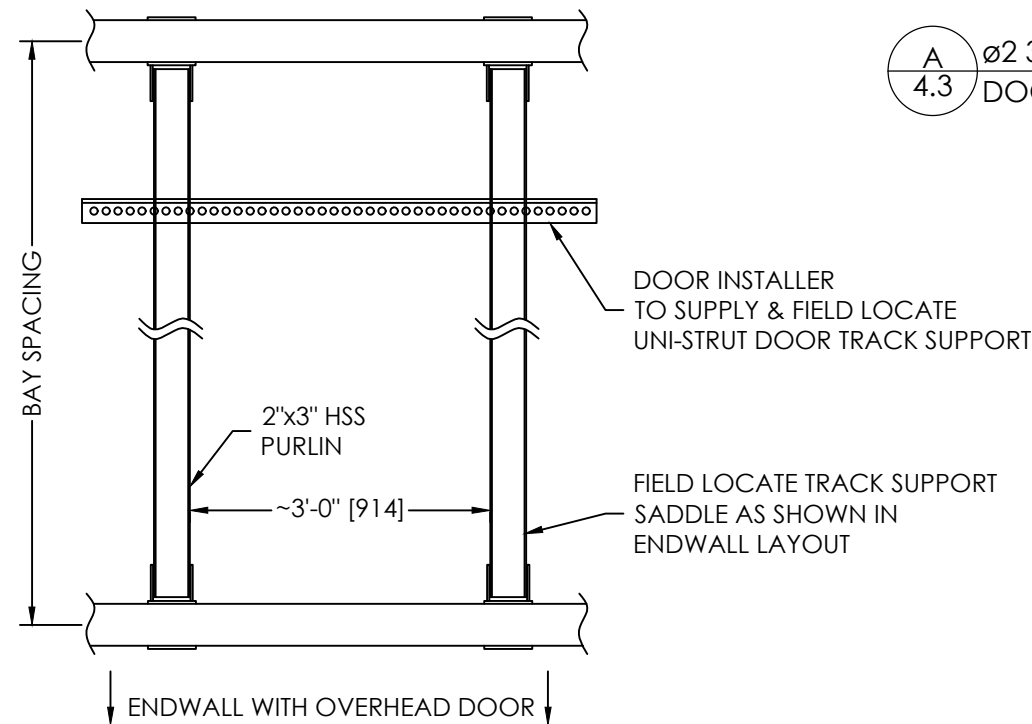


ENDWALL 1 DOOR TRACK SUPPORT

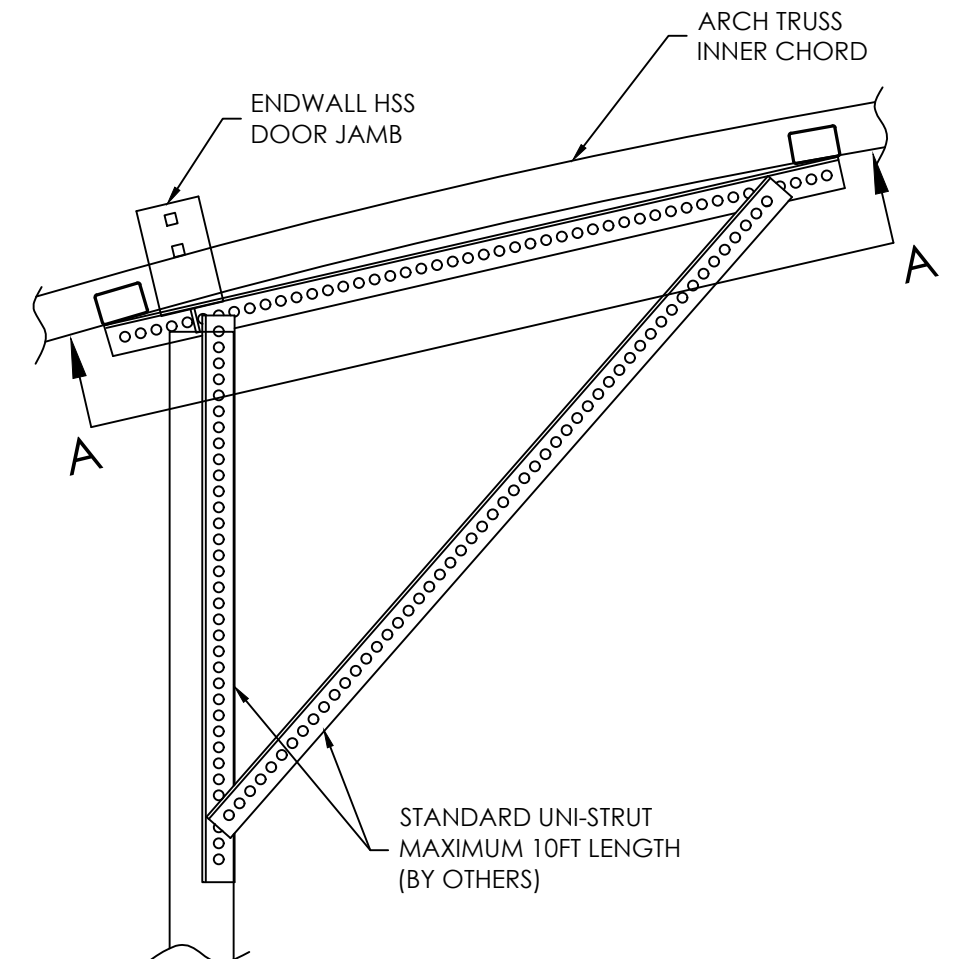


ENDWALL 2 DOOR TRACK SUPPORT

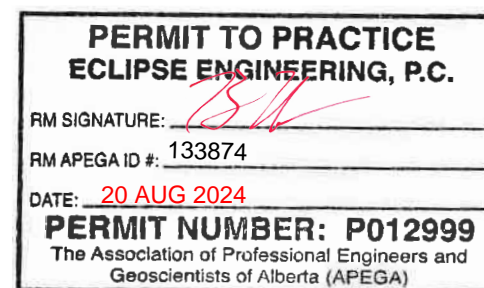
A  
4.3 Ø2 3/8" ARCH BUILDING  
DOOR TRACK SUPPORT



SECTION A-A



DETAIL VIEW  
DOOR TRACK SUPPORT



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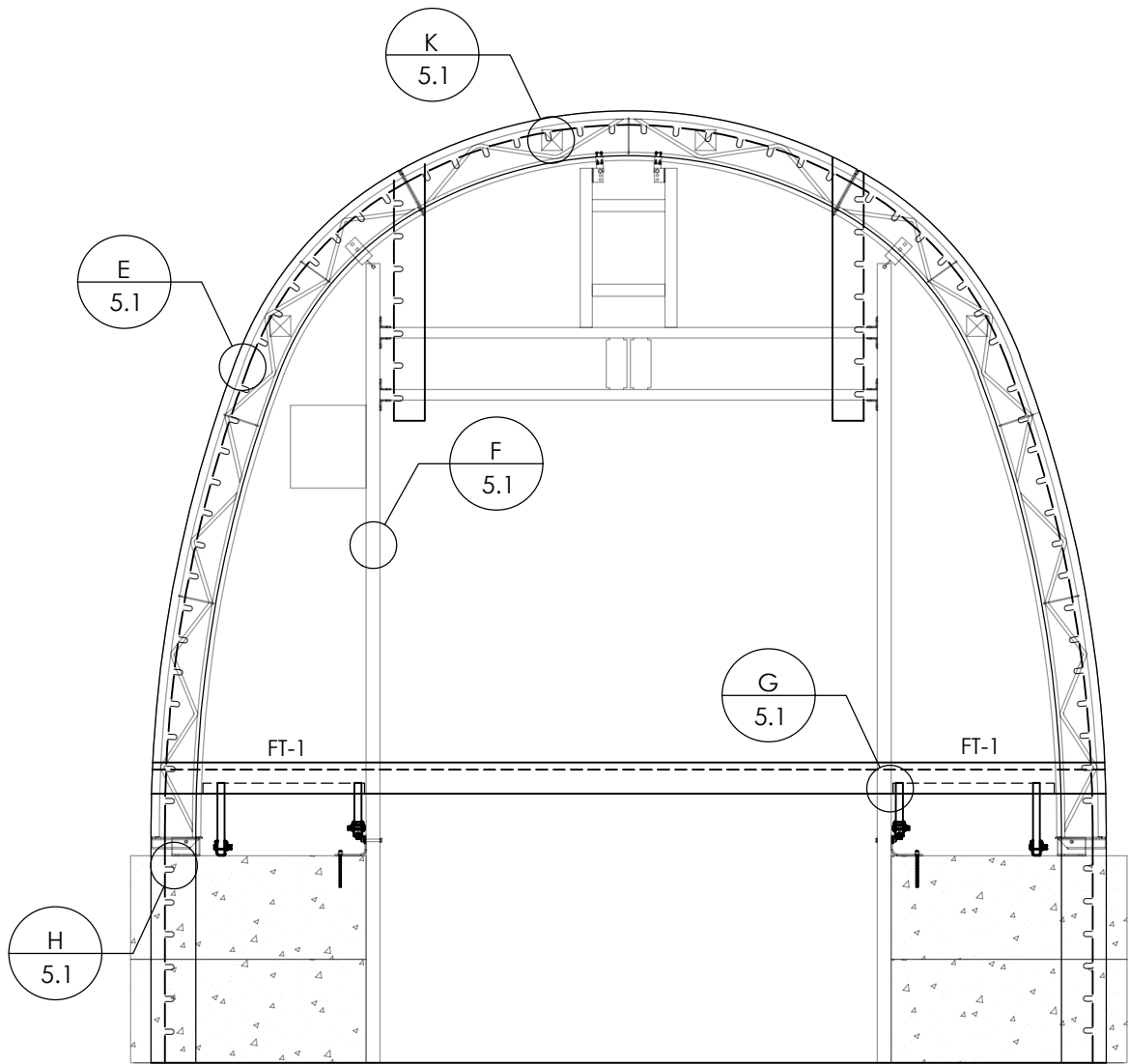
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DRAWING TITLE:  
OVERHEAD DOOR TRACK  
DETAILS

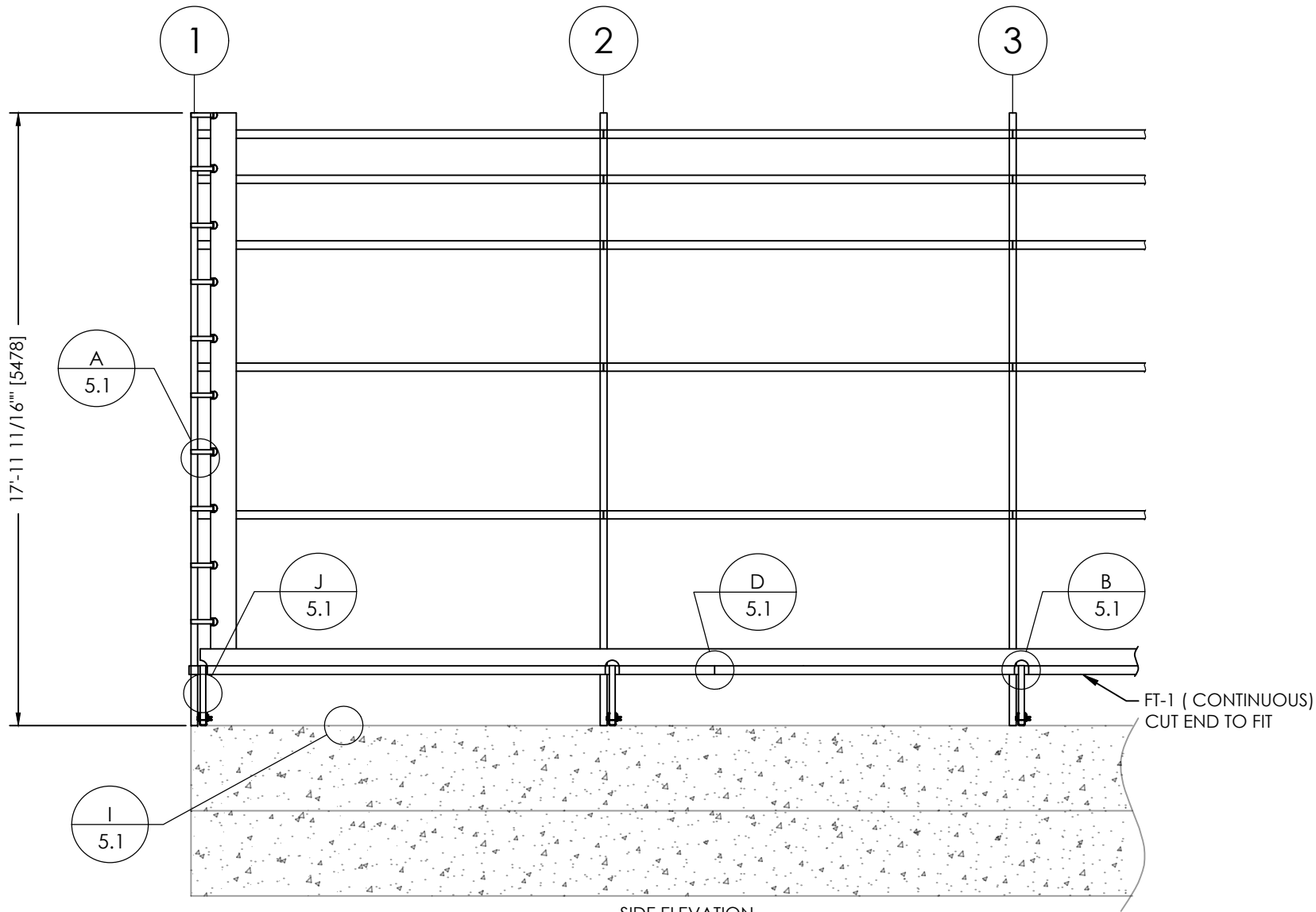
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PROJECT ID: 20002459	ORDER ID: SO18798	DRAWING: 4.3 REV: 0

Item	Qty	Description	Weight
FT-1	-	FT2x3x14GA CUT TO FIT	-

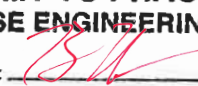


ENDWALL 1  
VIEW FROM OUTSIDE



SIDE ELEVATION

**PERMIT TO PRACTICE**  
**ECLIPSE ENGINEERING, P.C.**

RM SIGNATURE: 

RM APEGA ID #: 133874

DATE: 20 AUG 2024

**PERMIT NUMBER: P012999**  
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA



**BRIAN HANSON**  
20 AUG 2024  
P.Eng.#133874

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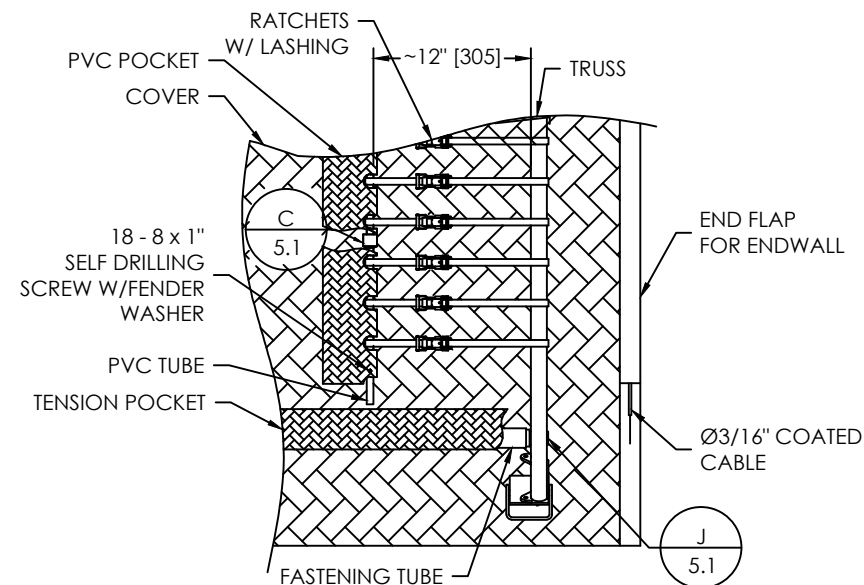
PROJECT:  
ARCH 22' x 60' @ 12'  
PASSENGER DEPOT

3815 Wanuskewin Road  
Saskatoon, SK, Canada S7P 1A4  
Phone: 306.385.2888  
Fax: 306.385.2717  
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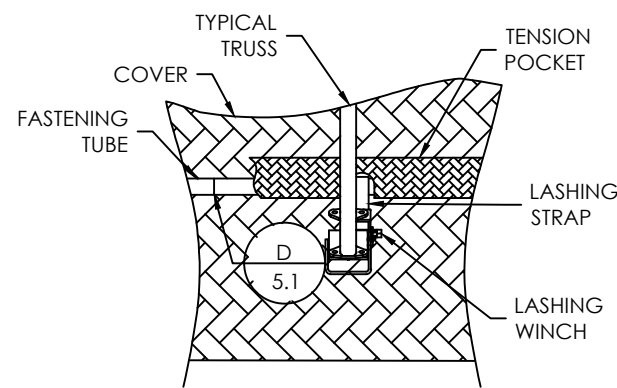
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FABRIC LAYOUT  
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0	EW: ISSUED FOR CONSTRUCTION	19 AUG 24
PROJECT ID: 20002459	ORDER ID: SO18798	DRAWING: 5.0 REV: 0

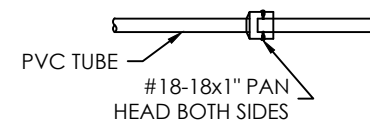




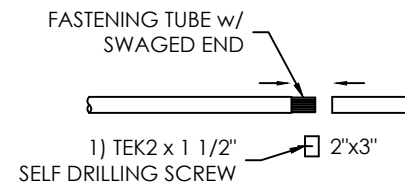
**A**  
5.1  
PVC TUBE CONNECTION  
TO BUILDING



**B**  
5.1  
FASTENING TUBE  
CONNECTION TO BUILDING

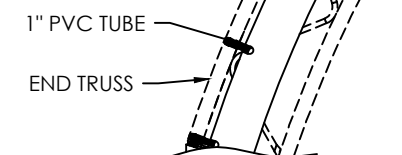


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5.1  
PVC TUBE SPLICE  
CONNECTION

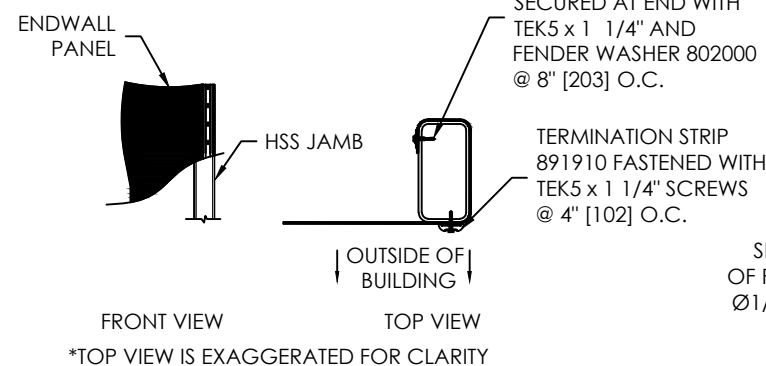


**D**  
5.1  
FASTENING TUBE SPLICE  
CONNECTION

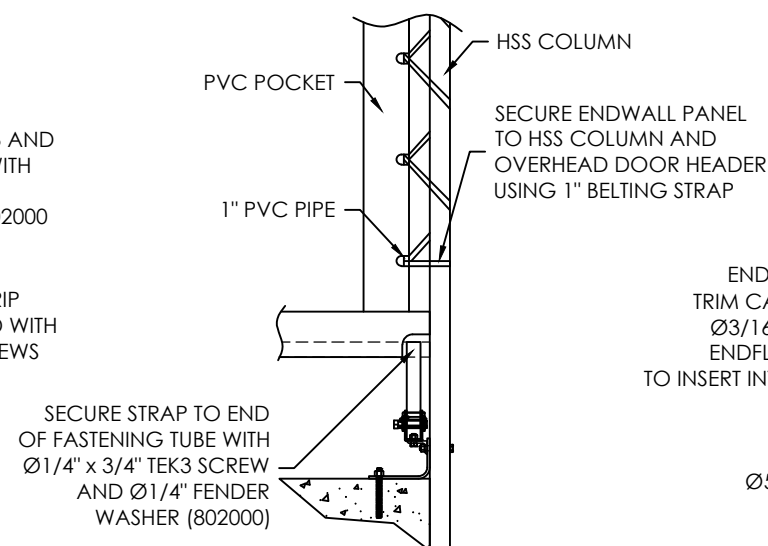
SECURE ENDWALL PANEL  
TO OUTER CHORD USING  
1\"/>



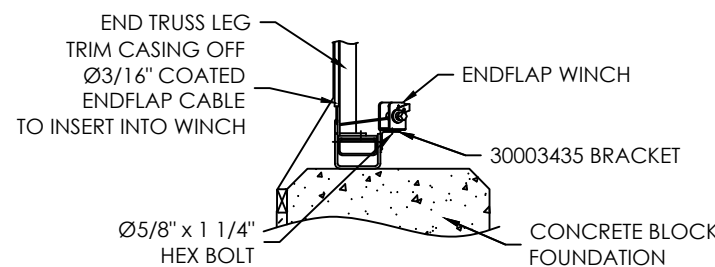
**E**  
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ENDWALL FABRIC TO  
CHORD CONNECTION



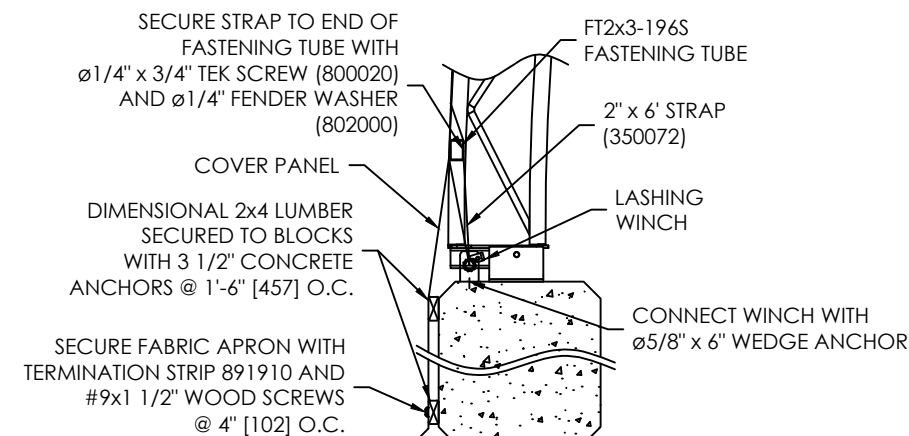
**F**  
5.1  
END WALL FABRIC TERMINATION  
TO HSS JAMB



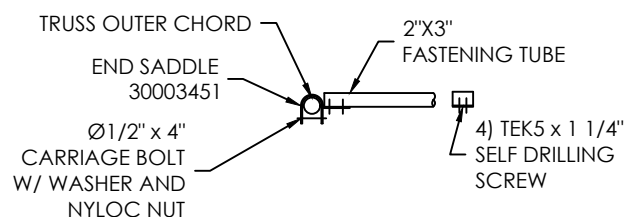
**G**  
5.1  
ENDWALL FABRIC TO  
HSS CONNECTION



**H**  
5.1  
COVER END FLAP  
TENSIONING CONNECTION

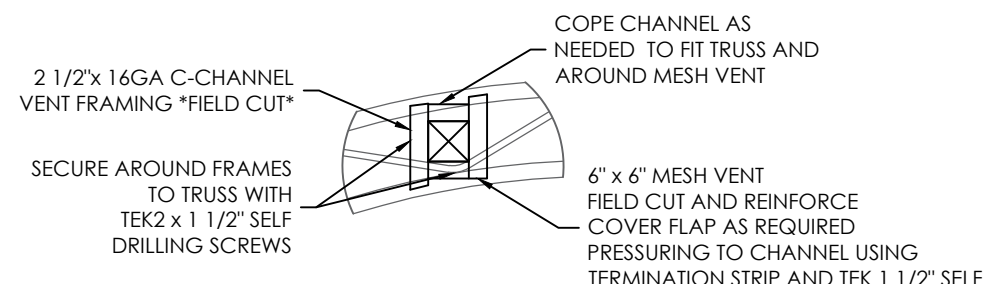


**I**  
5.1  
COVER PANEL TERMINATION  
TO CONCRETE BLOCKS

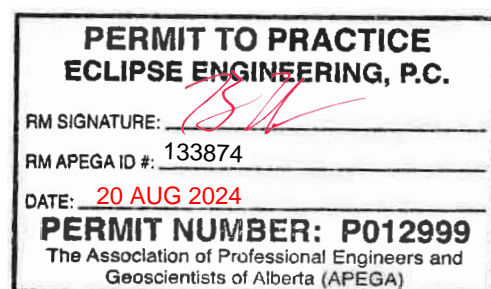


NOTES: CUT OFF SWAGED END IF REQ'D

**J**  
5.1  
FASTENING TUBE  
END SADDLE BRACKET



**K**  
5.1  
CAVITY VENT FRAMING  
CONNECTION DETAIL



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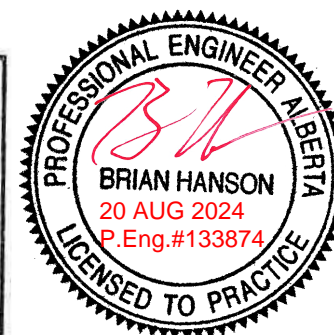
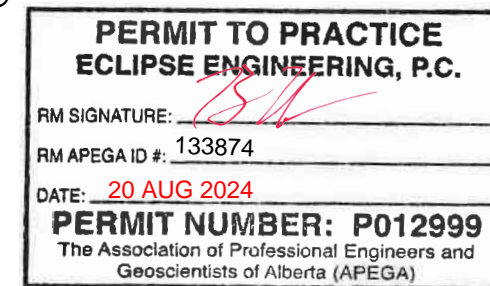
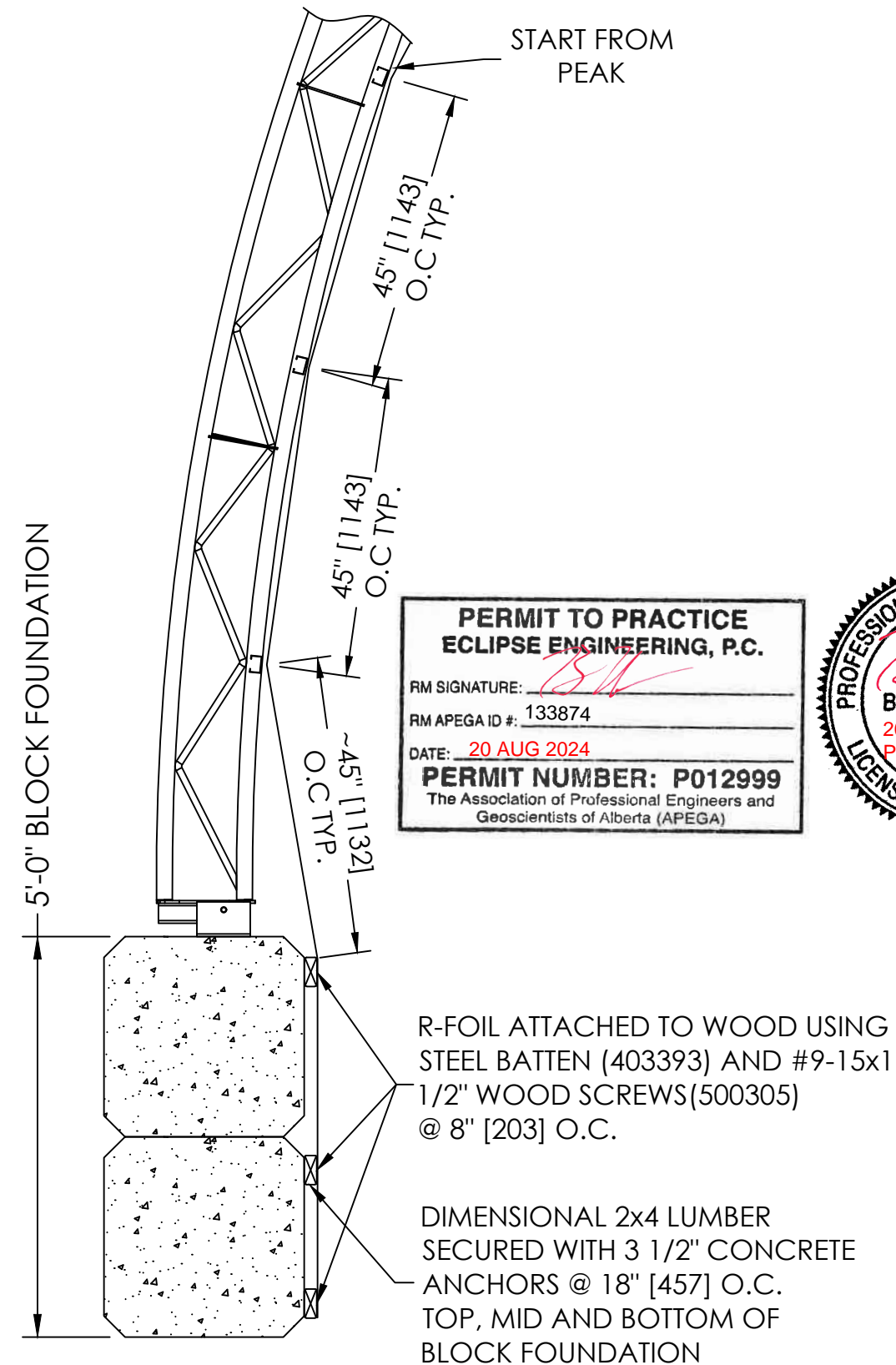
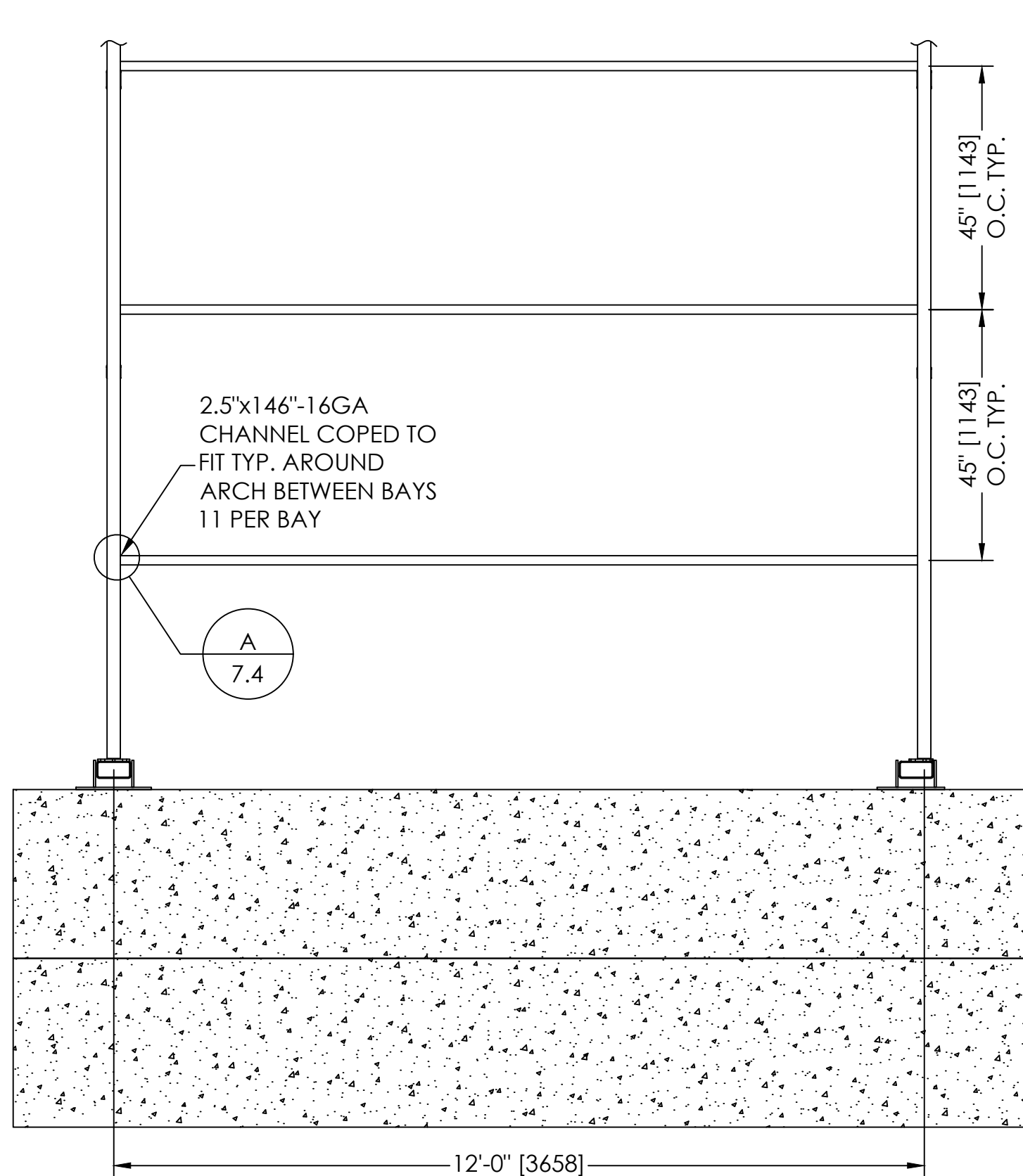
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PROJECT:  
ARCH 22' x 60' @ 12'  
PASSENGER DEPOT

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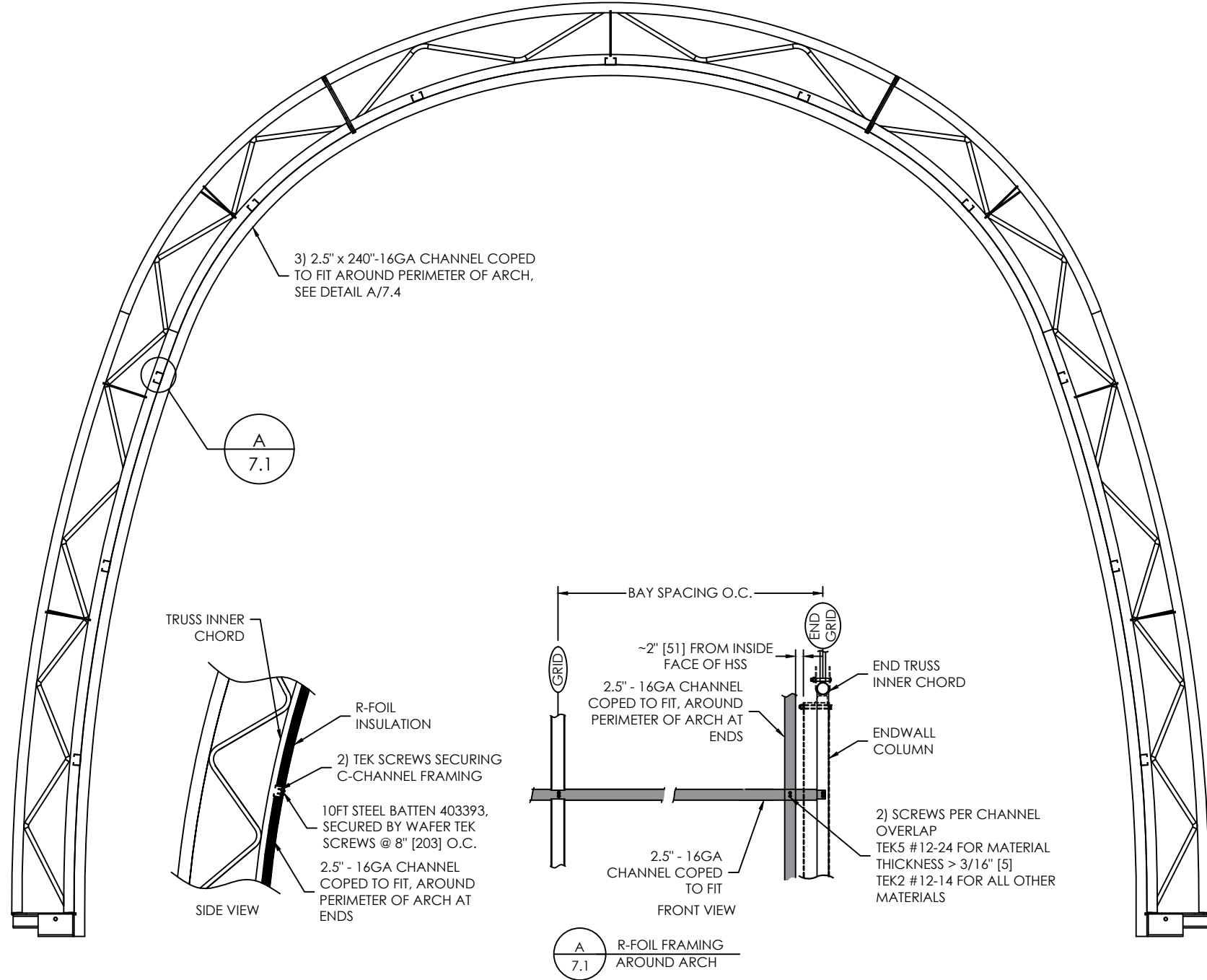
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ARCH 22' x 60' @ 12'  
PASSENGER DEPOT

DRAWING TITLE:

COVER INSULATION

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PROJECT ID: 20002459	ORDER ID: SO18798	DRAWING: 7.0 REV: 0



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RM SIGNATURE: *[Signature]*

RM APEGA ID #: 133874

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**PROFESSIONAL ENGINEER ALBERTA**

*[Signature]*

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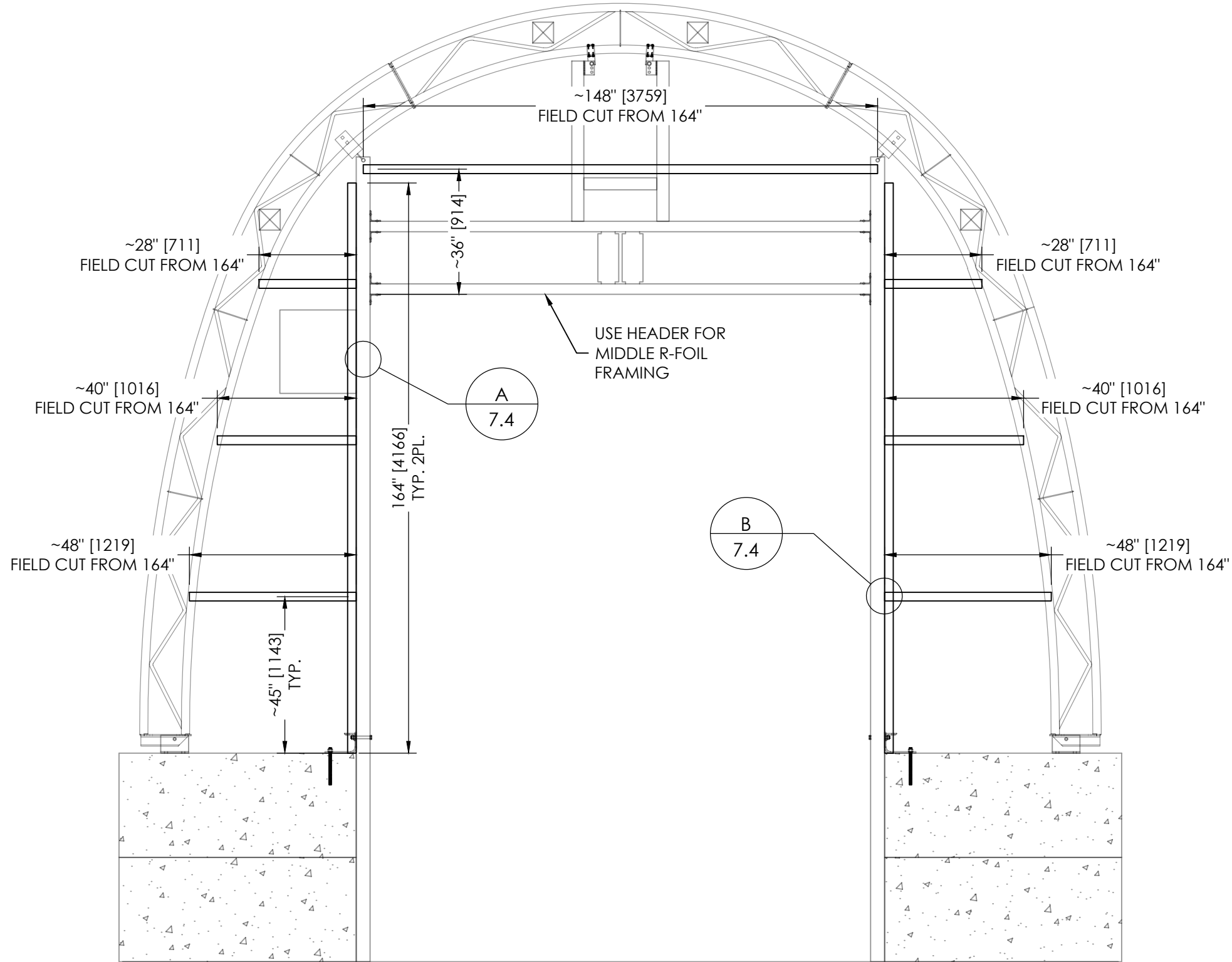
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DRAWING TITLE:  
INSULATION SUPPORT AT ENDS

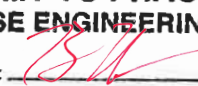
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ENDWALL 1  
LOOKING FROM OUTSIDE

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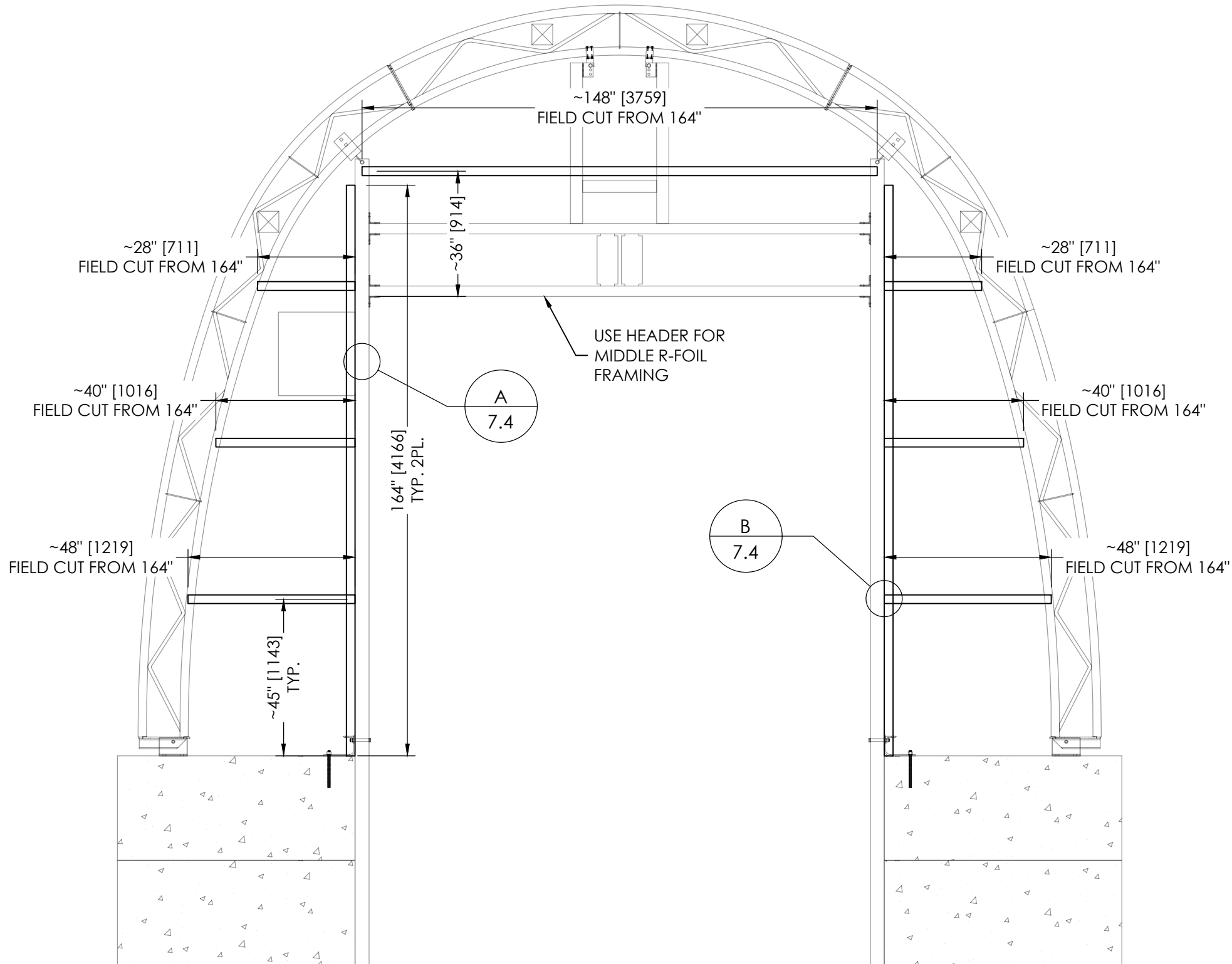
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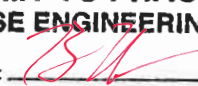
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PROJECT ID: 20002459	ORDER ID: SO18798	DRAWING: 7.2 REV: 0





ENDWALL 2  
LOOKING FROM OUTSIDE

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RM APEGA ID #: 133874

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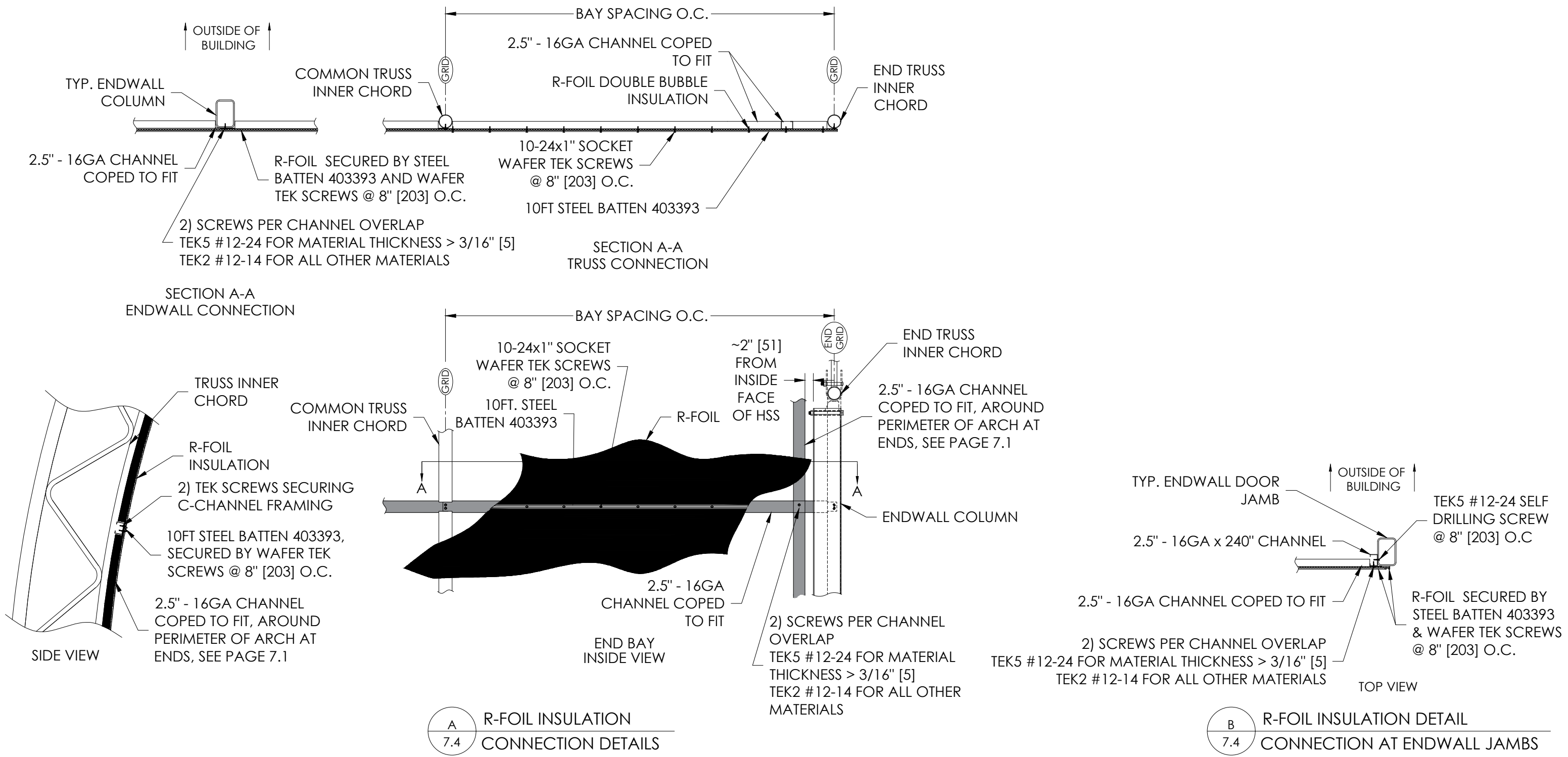
CUSTOMER:  
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FOSTER CREEK, AB

PROJECT:  
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PASSENGER DEPOT

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DRAWING: 7.3		REV: 0



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RM SIGNATURE: *[Signature]*

RM APEGA ID #: 133874

DATE: 20 AUG 2024

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DEALER: NORSEMAN STRUCTURES SASKATOON, SK	CUSTOMER: CENOVUS ENERGY FOSTER CREEK, AB	PROJECT: ARCH 22' x 60' @ 12' PASSENGER DEPOT	3815 Wanuskewin Road Saskatoon, SK, Canada S7P 1A4 Phone: 306.385.2888 Fax: 306.385.2717 www.norsemanstructures.com	DRAWING TITLE: R-FOIL INSULATION DETAILS This drawing and the proprietary design is property of Norseman Structures any reproduction in whole or in part without the expressed written consent of Norseman Structures is prohibited. This drawing is not to scale unless otherwise noted.	DWG REV 0	REVISED BY: DESCRIPTION EW: ISSUED FOR CONSTRUCTION	DATE 19 AUG 24
PROJECT ID: 20002459				ORDER ID: SO18798	DRAWING: 7.4	REV: 0	