

FOUNDATION SYSTEM FOR CLEARSPAN STRUCTURE

CLEARSPAN ORDER NO. 7008885
 FOUNDATION FOR 65'X120' CLEARSPAN
 STRUCTURE

LOCATION:

850 WARREN C. COLEMAN BLVD.
 CONCORD, NC 28025
 CABARRUS COUNTY

PRELIMINARY

DRAWING INDEX

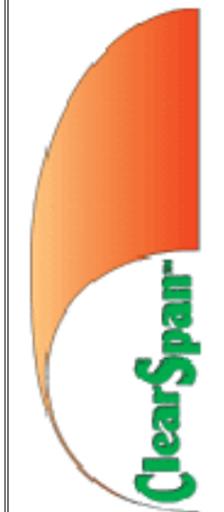
- T1 TITLE SHEET
- N1 GENERAL NOTES
- S1 FOUNDATION PLAN
- S2 DETAILS
- S3 STRUCTURE REACTIONS



9138 S. State St., Suite 101 (801) 990-1775
 Sandy, UT 84070 (801) 990-1776 FAX
 www.vectorse.com
 FIRM LICENSE #: COAP0742

DATE: 9/22/15 DESIGNED: TPH DRAFTER: TPH

REVISIONS	
DATE	DESCRIPTION



A Division of Engineering Services & Products Co.
 1440 18th Ave. SW
 Dyersville, IA 52040
 www.esapco.com

TITLE SHEET

FOUNDATION SYSTEM FOR
 CLEARSPAN STRUCTURE

FOUNDATION FOR 65'X120'
 CLEARSPAN STRUCTURE
 850 WARREN C. COLEMAN BLVD., CONCORD, NC 28025
 CABARRUS COUNTY

U1382-319-151

T1

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GENERAL DESIGN NOTES

GENERAL DESIGN NOTES:

STRUCTURAL DESIGN IS BASED ON THE NORTH CAROLINA STATE BUILDING CODE, 2012 EDITION (2009 IBC) AND THE ASCE 7 STANDARD

DESIGN LOADS:

BASIC WIND SPEED: 90 MPH (3-SEC GUST)
 IMPORTANCE FACTOR: .87
 INTERNAL PRESSURE COEFFICIENT: ±0.18
 EXPOSURE: C

GROUND SNOW LOAD = 10 PSF
 SNOW EXPOSURE FACTOR = 0.9
 THERMAL FACTOR = 1.2
 SNOW IMPORTANCE FACTOR = 0.8
 FLAT ROOF SNOW LOAD = 6.0 PSF

STEEL MATERIAL NOTES:

1. ALL STEEL SHAPES & PLATES SHALL CONFORM w/ ASTM A36, U.N.O.
2. ALL BOLTS FOR STEEL-TO-STEEL CONNECTIONS SHALL CONFORM w/ ASTM A325N, U.N.O.
3. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE w/ THE LATEST VERSION OF THE AMERICAN WELDING SOCIETY AWS D1.1.
4. ALL BOLTED CONNECTIONS SHALL BE TIGHTENED TO "SNUG-TIGHT" CONDITION AS DEFINED BY THE AISC MANUAL.
5. ALL STEEL SHAPES, PLATES, AND HARDWARE EXPOSED TO WEATHER OR CORROSIVE MATERIAL (SALT) SHALL BE GALVANIZED, STAINLESS STEEL, OR OTHERWISE PROTECTED FROM WEATHER.

REINFORCING STEEL NOTES:

1. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615 GRADE 60.
2. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
3. MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 INCHES OR ONE FULL MESH AND ONE HALF, WHICH EVER IS GREATER.
4. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
5. REBAR SPLICES ARE TO BE: CLASS "B".
6. REINFORCING SPLICES SHALL BE MADE ONLY WHERE INDICATED ON THE DRAWINGS.
7. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY.

CONCRETE:

1. ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318 LATEST APPROVED EDITION) WITH MODIFICATIONS AS NOTED IN THE DRAWINGS AND SPECIFICATIONS.
2. REINFORCED CONCRETE DESIGN IS BY THE "ULTIMATE STRENGTH DESIGN METHOD", ACI 318-(LATEST EDITION). DESIGN OF ANCHORAGE TO CONCRETE IS BASED ON ACI 318 APPENDIX D.
3. ALL STRUCTURAL CONCRETE SHALL HAVE A MIN. 28-DAY STRENGTH OF 4500 PSI.
4. CONCRETE MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL WITH THE FOLLOWING REQUIREMENTS:
 - 4.1. COMPRESSIVE STRENGTH AT AGE 28 DAYS AS SPECIFIED ABOVE.
 - 4.2. LARGE AGGREGATE-HARDROCK, 3/4" MAXIMUM SIZE CONFORMING TO ASTM C-33.
 - 4.3. CEMENT-ASTM C-150, TYPE V PORTLAND CEMENT.
 - 4.4. MAXIMUM SLUMP: 5-INCHES
 - 4.5. MAX WATER CEMENT RATIO: 0.45
 - 4.6. NO ADMIXTURES, EXCEPT FOR ENTRAINED AIR, AND AS APPROVED BY THE ENGINEER.
5. CONCRETE MIXING OPERATIONS, ETC, SHALL CONFORM TO ASTM C-94.
6. PLACEMENT OF CONCRETE SHALL CONFORM TO ACI STANDARD 614 AND PROJECT SPECIFICATIONS
7. CLEAR COVERAGE OF CONCRETE OVER OUTER REINFORCING BARS SHALL BE AS FOLLOWS: CONCRETE POURED DIRECTLY AGAINST EARTH - 3 INCHES CLEAR STRUCTURAL SLABS - 3/4 INCHES CLEAR (TOP AND BOTTOM) FORMED CONCRETE WITH EARTH BACK FILL - 2 INCHES CLEAR
8. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS (AS APPLICABLE) SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
9. MODULUS OF ELASTICITY OF CONCRETE, WHEN TESTED IN ACCORDANCE WITH ASTM C-460, SHALL BE AT LEAST THE VALUE GIVEN BY THE EQUATIONS IN SECTION 8.5.1. OF ACI 318 FOR THE SPECIFIED 28-DAY STRENGTH.
10. SHRINKAGE OF CONCRETE, WHEN TESTED IN ACCORDANCE WITH ASTM C-157, SHALL NOT EXCEED 0.00040 INCHES/INCH.

FOUNDATION NOTES:

1. FOOTINGS ARE DESIGN BASED ON AN ALLOWABLE SOIL PRESSURE OF 2000 PSF AND LATERAL BEARING AND FRICTION PARAMETERS BASED ON THE REPORT LISTED BELOW:
 COMPANY: CITY OF CONCORD TRANSPORTATION DEPARTMENT
 REPORT: 2015-023
 DATE: AUGUST 13, 2015
 UPDATE: SEPTEMBER 18, 2015
2. CONTRACTOR SHALL PROVIDE FOR PROPER DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER, SEEPAGE, ETC.
3. FOOTINGS SHALL BE PLACED ACCORDING TO DEPTHS SHOWN ON THE DRAWINGS.
4. THE TOP OF FOUNDATION SHALL BE LEVEL AND NON-SLOPING, U.N.O.
5. ALL DIMENSIONS SHALL BE VERIFIED BY THE FOUNDATION CONTRACTOR PRIOR TO CONSTRUCTION.

SPECIAL INSPECTIONS / QUALITY ASSURANCE:

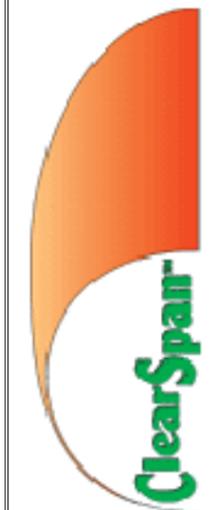
1. SPECIAL INSPECTIONS SHALL BE REQUIRED FOR:
 - CONCRETE MIX DESIGN & STRENGTH
 - REINFORCEMENT TYPE & PLACEMENT
 - FOUNDATION EXCAVATION
 - SOIL BEARING STRENGTH
 - ANCHORAGE TYPE & PLACEMENT
 - ALL POST-INSTALLED ANCHORAGE TO CONCRETE
- a. THE OWNERS SHALL EMPLOY SPECIAL INSPECTORS WHO SHALL PROVIDE ADDITIONAL INSPECTIONS DURING CONSTRUCTION IN ACCORDANCE WITH IBC SECTION 17.
- b. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT CERTIFIED INSPECTOR FROM AN ESTABLISHED TESTING AGENCY, LICENSED AND APPROVED BY THE BUILDING DEPARTMENT
- c. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO VECTOR STRUCTURAL ENGINEERS AND ALL INTERESTED PARTIES.
2. ALL REPORTS SHALL BE DISTRIBUTED ON A MONTHLY BASIS TO THE ENGINEER OF RECORD, OWNER, CONTRACTOR, AND TO THE BUILDING OFFICIAL.
3. NO STRUCTURAL OBSERVATION IS REQUIRED. HOWEVER, THE ENGINEER OF RECORD RESERVES THE RIGHT TO MAKE FIELD OBSERVATIONS.



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GENERAL NOTES

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 850 WARREN C. COLEMAN BLVD., CONCORD, NC 28025
 CABARRUS COUNTY

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FOUNDATION PLAN

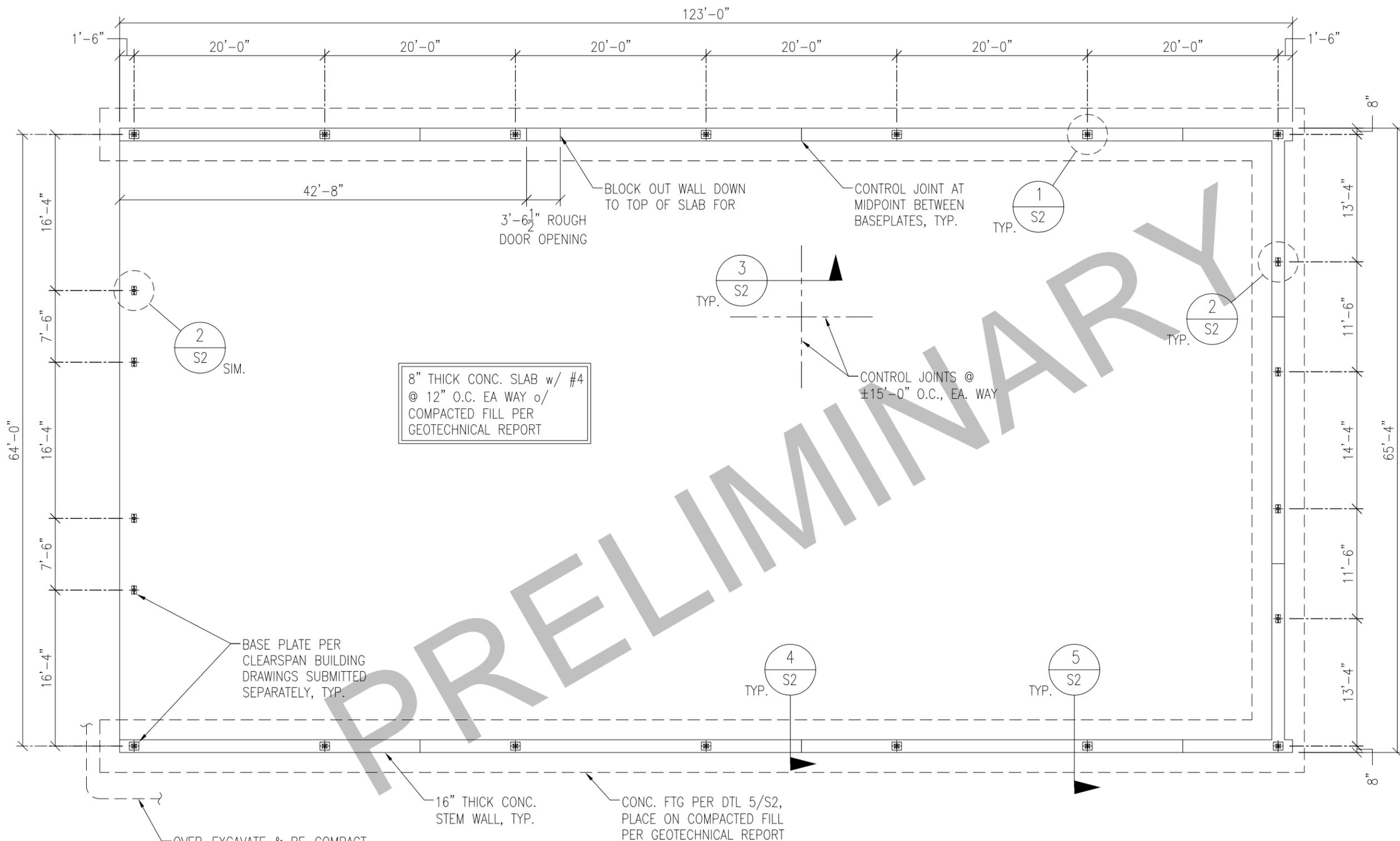
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 CABARRUS COUNTY

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S1

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8" THICK CONC. SLAB w/ #4
 @ 12" O.C. EA WAY o/
 COMPACTED FILL PER
 GEOTECHNICAL REPORT

- FOUNDATION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND TOP OF FOUNDATION ELEVATIONS WITH STEEL BUILDING DRAWINGS PRIOR TO CONSTRUCTION.
 2. SEE STEEL BUILDING DRAWINGS FOR ALL INFORMATION PERTAINING TO STEEL BUILDING.
 3. PROVIDE FOUNDATION WALL CONTROL JOINTS (C.J.) AT THE APPROXIMATE LOCATIONS SPECIFIED PER PLAN (±40' O.C.). SEE DETAIL 4/S2 FOR CONTROL JOINT SPECIFICATIONS.

FOUNDATION PLAN

N.T.S. **1**

DATE: 9/22/15	DESIGNED: TPH	DRAFTER: TPH
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DETAILS

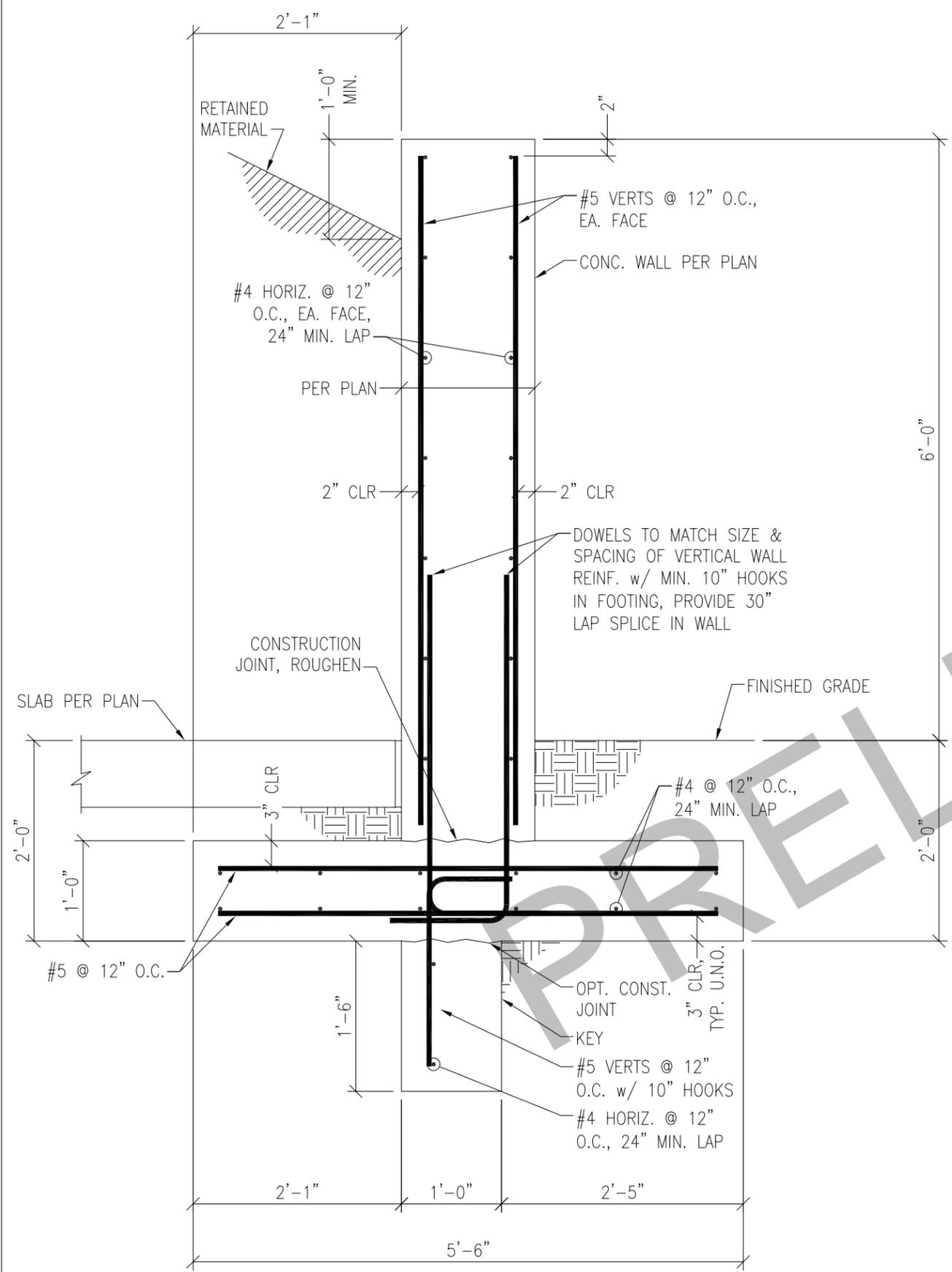
FOUNDATION SYSTEM FOR CLEARSPAN STRUCTURE

FOUNDATION FOR 65'X120' CLEARSPAN STRUCTURE

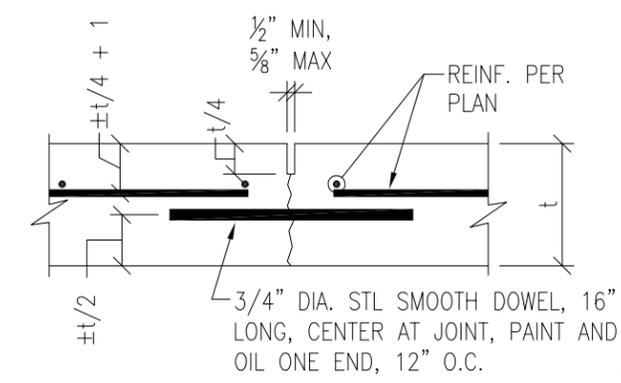
850 WARREN C. COLEMAN BLVD., CONCORD, NC 28025
 CABARRUS COUNTY

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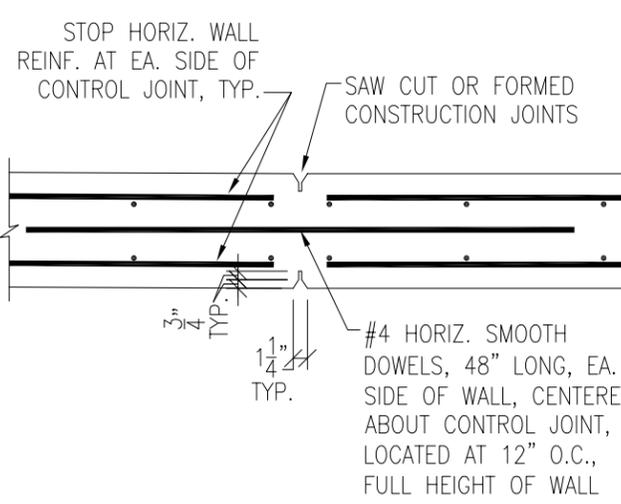
S2 REV 0



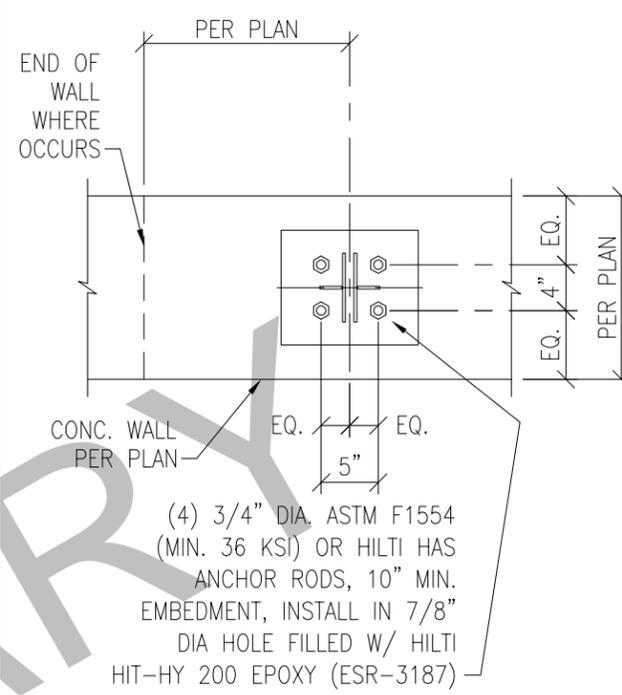
SECTION AT SIDE WALL PEDESTAL N.T.S. **5**



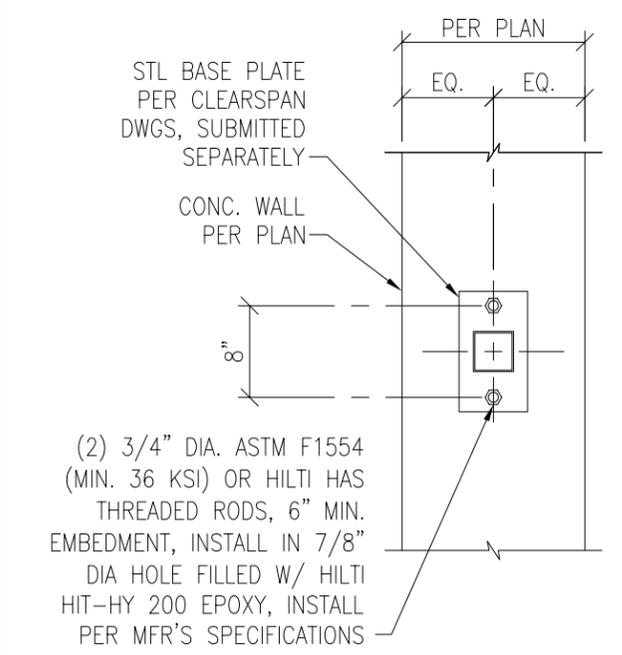
TYP. SLAB CONTROL JOINT N.T.S. **3**



TYP. WALL CONTROL JOINT N.T.S. **4**



TYP. TRUSS BASE ANCHORAGE N.T.S. **1**

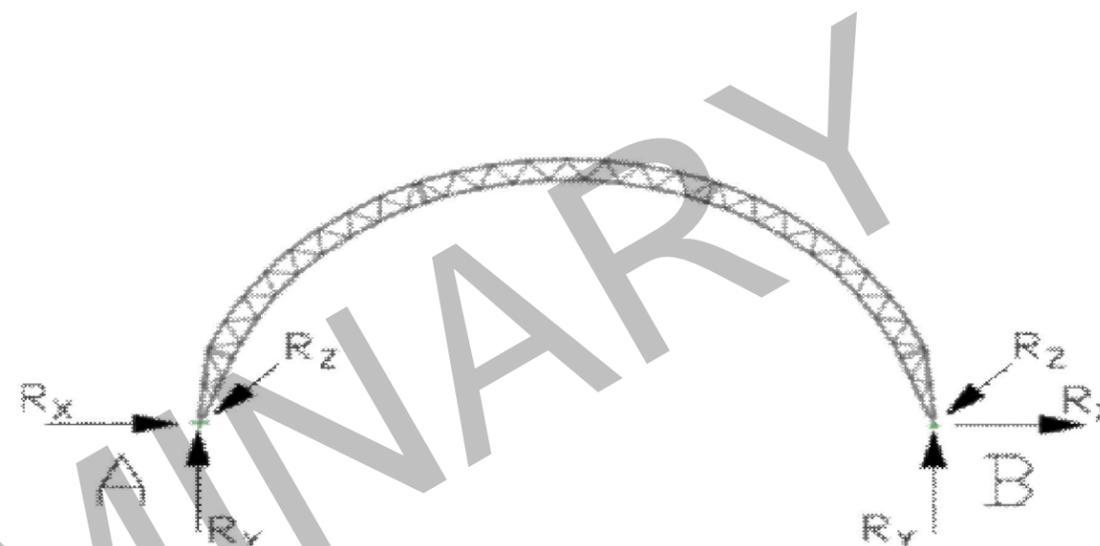


TYP. ENDWALL COLUMN BASE ANCHORAGE N.T.S. **2**

REVISIONS	
DATE	DESCRIPTION

**See notes below*

Load Case		UNFACTORED BASE REACTIONS TO CONSIDER AT TYPICAL BASES			
		Side A		Side B	
		Rx (kip)	Ry (kip)	Rx (kip)	Ry (kip)
Dead Load, Self Weight	DL	0.39	1.08	-0.39	1.08
Dead Load, Collateral	EL	0.08	0.15	-0.08	0.15
Snow Load, Balanced	S	1.53	2.52	-1.53	2.52
Snow Load, Unbalanced	Su	0.98	0.98	-0.98	2.55
Wind Load	Wx	-5.95	-6.81	0.91	-7.04
Wind Load	Wx2	-5.57	-3.49	0.52	-3.72
Wind Load	Wz	-0.41	-8.81	2.16	-8.60
Wind Load	Wz2	-0.06	-5.46	1.77	-5.26
Roof Live Load	Lr	1.58	3.21	-1.58	3.21
0	0	0.00	0.00	0.00	0.00



CONTROLLING ASD COMBINATIONS TO CONSIDER AT TYPICAL BASES

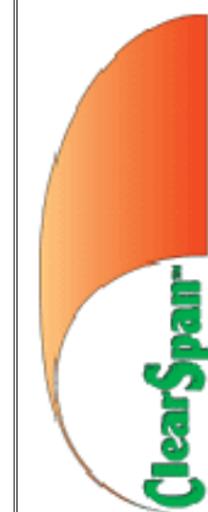
Max Gravity (kip)	4.43	DL + EL + Lr	
Max Uplift (kip)	-8.16	0.6DL + Wz	
Max Inward Lateral (kip)	-5.71	0.6DL + Wx	
Max Outward Lateral (kip)	2.05	DL + EL + Lr	

**See notes below*

Load Case		ADDITIONAL UNFACTORED BASE REACTIONS TO CONSIDER AT BASES WITH CABLE ATTACHED					
		Side A			Side B		
		Rx (kip)	Ry (kip)	Rz (kip)	Rx (kip)	Ry (kip)	Rz (kip)
Wind Load	Wz	-1.59	-8.45	-2.64	2.24	-8.21	-2.45
Dead Load, Cable (Wz)	DL	0.02	0.05		-0.02	0.05	
Wind Load	Wz2	1.74	1.97	0.11	-1.31	1.86	0.06
Dead Load, Cable (Wz2)	DL	0.02	0.05		-0.02	0.05	

ADDITIONAL CONTROLLING ASD COMBINATIONS TO CONSIDER AT BASES WITH CABLE ATTACHED

Max Gravity (kip)	4.48	DL + EL + Lr	
Max Uplift (kip)	-7.77	0.6DL + Wz	
Max Inward Lateral (kip)	-5.70	0.6DL + Wx	
Max Outward Lateral (kip)	2.39	DL + EL + 0.75Lr + 0.75Wz2	



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STRUCTURE REACTIONS

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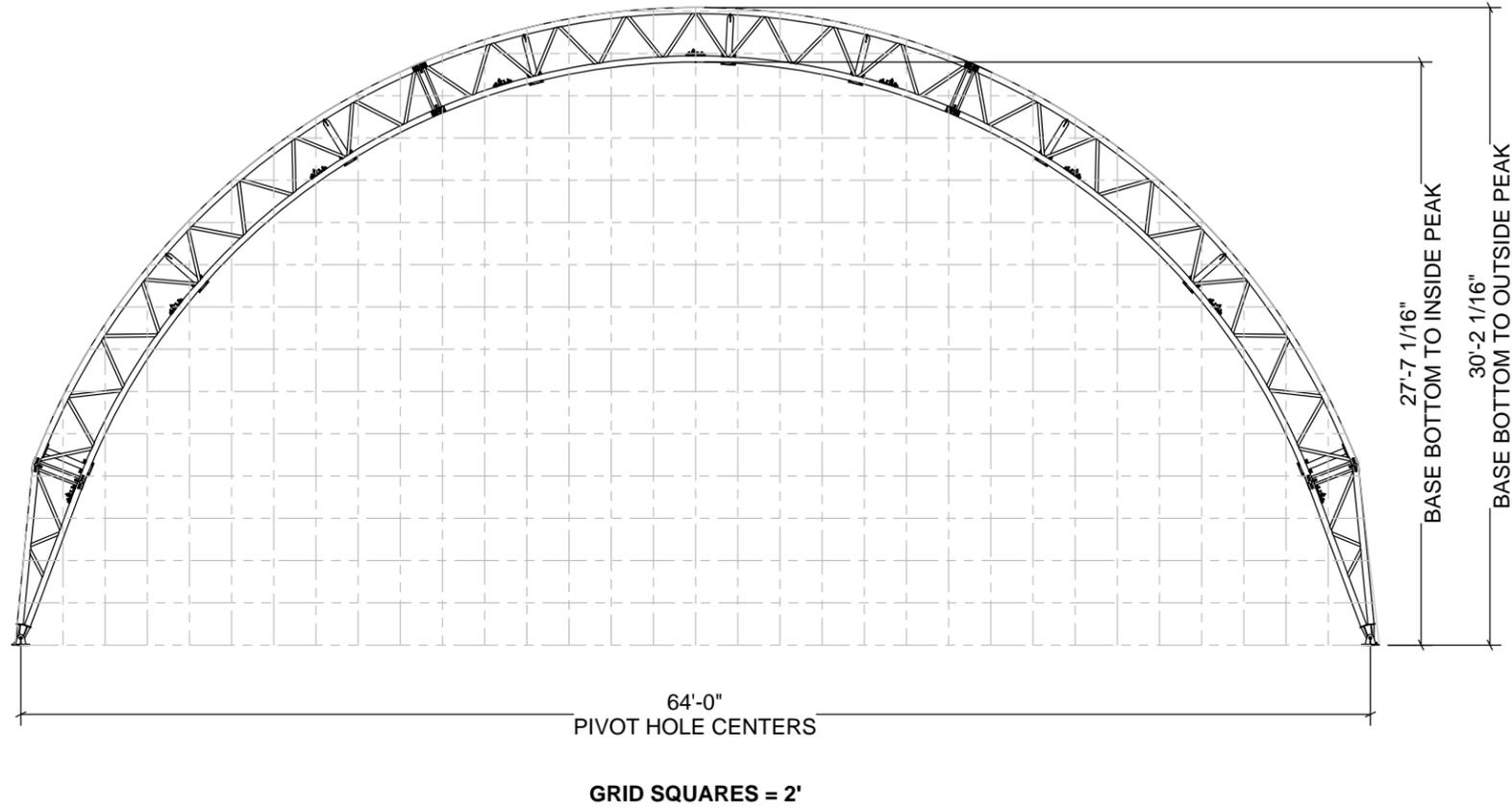
U1382-319-151

ADDITIONAL INFORMATION

THESE PRINTS IDENTIFY AND SHOW THE MAIN COMPONENTS AND CONNECTIONS FOR THIS BUILDING. LENGTH, WIDTH, AND OTHER IMPORTANT DIMENSIONS ARE ALSO PRESENT.

TO BEST UNDERSTAND HOW TO CONSTRUCT THIS BUILDING, THE INFORMATION CONTAINED WITHIN THESE SHEETS SHALL BE USED WITH THE INSTRUCTION MANUAL SHIPPED WITH THE BUILDING.

THE INSTRUCTIONS INCLUDE DETAILS NEEDED DURING CONSTRUCTION.



T065RKM F010120

65x120 RKM TRUSS FRAME



ORDER #: **7008885**

CUSTOMER #: **6054202**

BUILDING CONTENT GUIDE:

- [A1] COVER SHEET
- [B1] GENERAL NOTES
- [C1] BUILDING PLAN VIEW
- [D1] MATERIAL SPECIFICATIONS
- [E1] RAFTER PROFILES
- [F1] SIDE PROFILES
- [G1] DETAIL LOCATIONS & BASE DETAILS
- [G2] GENERAL CONNECTION DETAILS
- [G3] CABLE LAYOUT & DETAILS
- [H1] BASE PLATE LAYOUT & DETAILS
- [I] OMITTED
- [J1] BUILDING REACTION DATA
- [K] OMITTED
- [L1 - L2] FRONT ENDWALL: EW065RKF0161D
- [M1 - M2] BACK ENDWALL: EW065RKF0170D

CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	SHEET TITLE: COVER SHEET
STRUCTURE SKU #: T065RKM F010120	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65x120 RKM TRUSS FRAME

DRAWING DETAILS		
DRAWN BY: SMN	CREATION DATE: 9/10/2015	
REVISIONS:		
NO.	BY:	REVISION DATE:
1	SEK	9/22/2015
2	DK	10/1/2015
3		
4		
NOT TO SCALE		SHEET SIZE: 11X17

SHEET: **A1**

SITE LOCATION AND BUILDING DESCRIPTION:

SITE LOCATION: 850 WARREN C. COLEMAN BLVD
CONCORD, NC 28025
CABARRUS COUNTY

BUILDING SIZE: 65' X 120': 7,800 SQUARE FEET
BUILDING TYPE: PRE-ENGINEERED FABRIC STRUCTURE
CONSTRUCTION TYPE: IIB
FABRIC: FIRE-RATED (PER NFPA 701)

GENERAL NOTES:

1. DESIGNED IN CONFORMANCE WITH THE STRUCTURAL PROVISIONS OF THE NORTH CAROLINA STATE BUILDING CODE, 2012 EDITION.

2. DESIGN LOADS:

- A. FLOOR LIVE LOAD: N/A
- B. ROOF LIVE LOAD: 5 PSF (FABRIC ROOF)
- C. ROOF SNOW LOADS:

Pg (GROUND SNOW LOAD) = 10 PSF
Ce (SNOW EXPOSURE FACTOR) = 0.9 (FULLY EXPOSED TERRAIN CATEGORY C)
Ct (THERMAL FACTOR) = 1.2 (COLD ROOF)
Is (SNOW IMPORTANCE FACTOR) = 0.8 (CATEGORY I)
Pf (FLAT ROOF SNOW LOAD) = 6.0 PSF
Ps (SLOPED ROOF SNOW LOAD) = Cs Pf
Cs (SLOPE FACTOR) = AS DETERMINED FOR GABLE OR ARCHED ROOF PER ASCE 7 (BALANCED AND UNBALANCED LOADING CONDITIONS CONSIDERED)

SNOW DRIFTING FROM ADJACENT BUILDINGS, STRUCTURES, OR ANY OTHER HORIZONTAL SURFACES HAS NOT BEEN CONSIDERED.

D. WIND DESIGN DATA: (METHOD 2, ANALYTICAL PROCEDURE)

V (BASIC WIND SPEED) = 90 MPH
Kd (WIND DIRECTIONALITY FACTOR) = 0.85
Kzt (WIND TOPOGRAPHIC FACTOR) = 1.0 (ASSUMED)
Iw (WIND IMPORTANCE FACTOR) = 0.87 (CATEGORY I)
EXP (EXPOSURE CATEGORY) = C
GCpi (INT. PRES. COEFF.) = +/-0.18 (ENCLOSED)
Cp (EXT. PRES. COEFF.) = AS DETERMINED FOR GABLE OR ARCHED ROOF: PER ASCE 7

COMPONENTS AND CLADDING WIND PRESSURE: PER ASCE 7

E. EARTHQUAKE DESIGN DATA: WIND LOAD CONTROLS DESIGN.

3. THE TRUSSES ARE DESIGNED TO ACCOMMODATE LIMITED ADDITIONAL WEIGHT. ADDITIONAL LOADS, SUCH AS FOR LIGHTING, HEATING, AND VENTILATING EQUIPMENT, SHALL NOT EXCEED 300 LBS. PER ASSEMBLED TRUSS, WITHOUT THE WRITTEN APPROVAL OF THE DESIGN ENGINEER. LOADS SHALL BE APPLIED AT PANEL POINTS (POINTS OF CONTACT BETWEEN TRUSS WEB AND CHORD), AND SHALL BE DISTRIBUTED SO THAT NO MORE THAN 150 LBS. IS SUSPENDED FROM ANY SINGLE LOCATION.

FOUNDATION:

1. REFER TO FOUNDATION DRAWINGS BY VECTOR ENGINEERS.

GENERAL ABBREVIATIONS:

TOS TOP OF STEEL / **TSL** TOP OF SLAB / **GALV.** GALVANIZED / **FND** FOUNDATION / **EL** ELEVATION / **RND.** ROUND / **GA** GAUGE / **DIA.** DIAMETER / **TYP.** TYPICAL / **LBS.** POUNDS / **CL** CENTERLINE

SITE CONDITIONS:

1. NEITHER CLEARSPAN NOR THE BUILDING ENGINEER HAVE VISITED THIS JOBSITE. INFORMATION CONTAINED HEREIN IS BASED ON CLIENT SUPPLIED DATA AND MEASUREMENTS. THE DESIGN AND DEPICTED FABRICATION, ERECTION, AND FOUNDATION DRAWINGS ARE ONLY VALID FOR THE EXACT DESIGN PARAMETERS AND COMBINATIONS OF PARAMETERS DOCUMENTED. NEITHER CLEARSPAN NOR THE BUILDING ENGINEER SHALL BE HELD RESPONSIBLE OR LIABLE IN ANY WAY FOR ERRONEOUS OR INACCURATE DATA OR MEASUREMENTS. WORK SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CLEARSPAN AND/OR THE BUILDING ENGINEER SHALL BE NOTIFIED AND GIVEN AN OPPORTUNITY TO RE-EVALUATE THEIR WORK UPON DISCOVERY OF ANY INACCURATE INFORMATION PRIOR TO MODIFICATION OF EXISTING FIELD CONDITIONS AND FABRICATION AND INSTALLATION OF MATERIALS.

STEEL:

- UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL TUBING SHALL BE GALVANIZED, MIN. YIELD STRENGTH 50 KSI, AND SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM A500.
- UNLESS OTHERWISE NOTED, STEEL PLATES SHALL COMPLY WITH ASTM A572 GRADE 50 OR EQUAL FOR 3/16" OR GREATER THICKNESS AND ASTM A1011 GRADE 50 OR ASTM A653 GRADE 50 OR EQUAL FOR LESS THAN 3/16" THICKNESS.
- UNLESS OTHERWISE NOTED, ALL BOLTED CONNECTIONS SHALL USE GRADE 2 OR A307 OR BETTER BOLTS WITH COMPATIBLE WASHERS AND NUTS OF DIAMETERS INDICATED ON PLANS. BOLTS NEED ONLY BE TIGHTENED TO THE SNUG-TIGHT CONDITION. THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH, OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH.
- ALL STRUCTURAL STEEL IS TO BE FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."

CABLES AND HARDWARE:

- ALL CABLE SHALL BE GALVANIZED STEEL, MULTIPURPOSE, 7X19 (UP TO 3/8" DIA.) OR 6X26 (1/2" DIA.) CLASS STRAND CORE COMMERCIAL GRADE, OF DIAMETER INDICATED.
- CABLE SLEEVES SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- USE THIMBLES WITH CABLE SLEEVES IN ALL LOOP-END APPLICATIONS.
- TENSION CABLES AT TURNBUCKLE TO TAUT CONDITION (STRAIGHT AND NOT SLACK OR LOOSE).
- TIGHTEN CABLES SEQUENTIALLY TO AVOID TWISTING OR DEFORMING STRUCTURAL ELEMENTS DURING ERECTION. RECHECK PREVIOUSLY TIGHTENED CABLES UNTIL ALL CABLES ACHIEVE TAUT CONDITION.

WELDING:

- ALL WELDING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AWS D1.1 AND D1.3.
- REFER TO AWS PUBLICATION D19.0-72: WELDING ZINC-COATED STEEL AND "WELDING GUIDELINES" PUBLISHED BY ALLIED TUBE AND CONDUIT-HARVEY ILLINOIS, FOR RECOMMENDED PROCESSES AND PRACTICES FOR WELDING GALVANIZED STEEL.
- ALL SHOP WELDING IS TO BE PERFORMED BY CERTIFIED WELDERS.

PAINTING AND TOUCH-UP:

- AFTER SHOP FABRICATION, PAINT ALL BARE STEEL, WELDS, AND ABRADED AREAS WITH COLD GALVANIZING COMPOUND CONSISTENT WITH GALVANIZED TUBE MANUFACTURER'S RECOMMENDATIONS FOR COLOR AND COMPOSITION. PRIOR TO TOUCH-UP, CLEAN WELDED AND ABRADED AREAS WITH A WIRE BRUSH. SURFACES MUST BE CLEAN AND OIL FREE.
- AFTER FIELD INSTALLATION, TOUCH-UP ANY FIELD WELDS AND DAMAGED AREAS WITH COLD GALVANIZING COMPOUND.

ERECTION AND FIELD QUALITY CONTROL:

- THE ERECTOR IS RESPONSIBLE FOR DESIGNING AND FURNISHING ALL TEMPORARY BRACING, SHORING, AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF ERECTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE STRUCTURAL ENGINEER ASSUMES NO LIABILITY FOR THE STRUCTURE DURING ERECTION.
- NO MODIFICATIONS OR ALTERATIONS (OTHER THAN THOSE SHOWN ON THE DRAWINGS) SHALL BE MADE IN ANY STRUCTURAL MEMBER OR CONNECTION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN ENGINEER.

BOX BOLT HOLE SIZES & INSTALLATION TORQUE ¹		
BOX BOLT DIA.	HOLE DIA.	INSTALLATION TORQUE
1/4"	1/2"	14 FT-LB
5/16"	5/8"	18 FT-LB
3/8"	3/4"	33 FT-LB
1/2"	13/16"	59 FT-LB
5/8"	1-1/8"	140 FT-LB
3/4"	1-3/8"	221 FT-LB

1. REFER TO BOX BOLT TECHNICAL DATA FOR MORE INFORMATION IF USING BOX BOLTS



ORDER #: **7008885**
CUSTOMER #: **6054202**

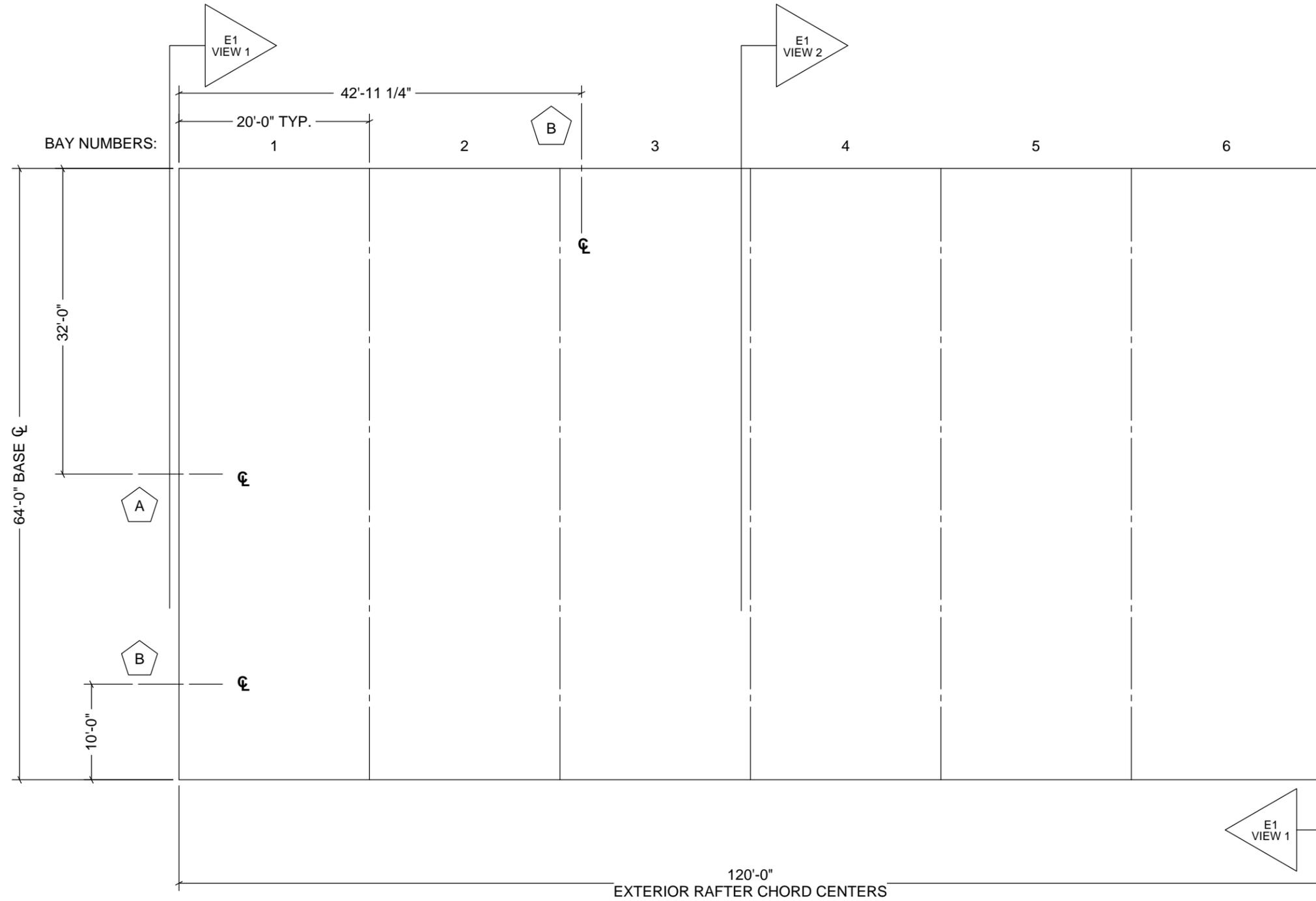
STRUCTURE SKU # T065RKMIF010120	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65x120 RKM TRUSS FRAME
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	CUSTOMER CONTACT: RICK BLAT
		SHEET TITLE: GENERAL NOTES

DRAWING DETAILS	
DRAWN BY: SMN	CREATION DATE: 9/10/2015
REVISIONS:	
NO. BY:	REVISION DATE:
1 SEK	9/22/2015
2 DK	10/1/2015
3	
4	
NOT TO SCALE	SHEET SIZE: 11X17
SHEET: B1	

NOTE: MAN DOOR LOCATIONS ARE APPROXIMATE AND CAN BE FIELD ADJUSTED AS NEEDED.

DOOR CALL-OUT	DOOR SIZE
A	16'-0" X 16'-0" ROLL-UP DOOR
B	3'-0" X 6'-8" MAN DOOR

LEFT SIDE - SEE SHEET [F1] FOR ELEVATION VIEW



FRONT ENDWALL: EW065RKF0161D
SEE SHEET [L1] FOR ELEVATION VIEW

BACK ENDWALL: EW065RKF0170D
SEE SHEET [M1] FOR ELEVATION VIEW

RIGHT SIDE - SEE SHEET [F1] FOR ELEVATION VIEW



ORDER #: 7008885

CUSTOMER #: 6054202

CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	STRUCTURE SKU #: T065RKMIF010120	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65x120 RKM TRUSS FRAME
	CUSTOMER CONTACT: RICK BLAT	CONTACT PHONE: 704-920-5403	SHEET TITLE: BUILDING PLAN VIEW

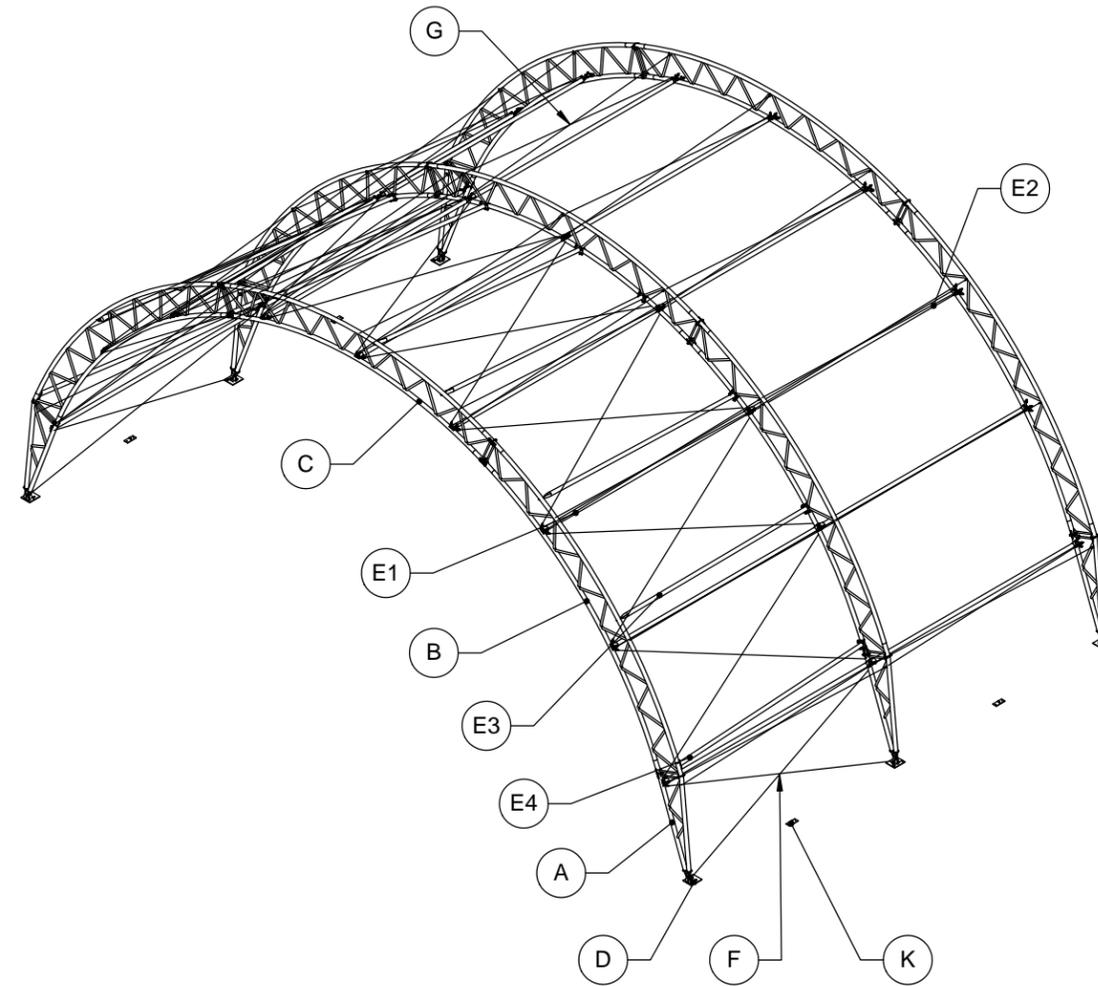
DRAWING DETAILS		
DRAWN BY: SMN	CREATION DATE: 9/10/2015	
REVISIONS:		
NO.	BY:	REVISION DATE:
1	SEK	9/22/2015
2	DK	10/1/2015
3		
4		

NOT TO SCALE SHEET SIZE: 11X17

SHEET:

C1

ITEM	DESCRIPTION	MATERIAL
A	SUPPORT BASE	
	OUTER CHORD	GALV. RND. STEEL TUBE - ϕ 3.5" - 14 GA
	INNER CHORD	GALV. RND. STEEL TUBE - ϕ 3.5" - 11 GA
	WEB (STRAIGHT)	GALV. RND. STEEL TUBE - ϕ 1.25" - 14 GA
	WEB (ANGLED)	GALV. RND. STEEL TUBE - ϕ 1.66" - 14 GA
	CONNECTION PLATES	STEEL PLATE, 1/2" THICK
	GUSSETS	STEEL PLATE, 3/8" THICK
	PIVOT PLATE (CHORD)	STEEL PLATE, 3/8" THICK
	PIVOT PLATE (ROUND)	STEEL PLATE, 1/2" THICK
B&C	SEGMENT	
	OUTER CHORD	GALV. RND. STEEL TUBE - ϕ 3.5" - 11 GA
	INNER CHORD	GALV. RND. STEEL TUBE - ϕ 3.5" - 11 GA
	WEB (STRAIGHT)	GALV. RND. STEEL TUBE - ϕ 1.25" - 14 GA
	WEB (ANGLED)	GALV. RND. STEEL TUBE - ϕ 1.66" - 14 GA
	CONNECTION PLATES	STEEL PLATE, 1/2" THICK
D	BASES	
	HORIZONTAL	STEEL PLATE, 1/2" THICK
	VERTICAL (ROUNDED)	STEEL PLATE, 3/8" THICK
	THREADED STUD	CFL FULLY THREADED STUD - 1/2"-13 x 1"
	GUSSETS	STEEL PLATE, 3/8" THICK
E	BRACING	
	E1 LATERAL BRACING (END)	GALV. RND. STEEL TUBE, ϕ 4.0" - 12 GA
	E2 LATERAL BRACING (MID)	GALV. RND. STEEL TUBE, ϕ 3.5" - 14 GA
	E3 ANGLED BRACING	GALV. RND. STEEL TUBE, ϕ 4.0" - 12 GA
	E4 BOTTOM ANGLED BRACE	GALV. RND. STEEL TUBE, ϕ 4.0" - 12 GA
F	CABLE ASSEMBLY	SEE SHEET G3
	CABLE CONNECTION PLATE	STEEL PLATE, 5/16" THICK
G	SWAY CABLE ASSEMBLY	SEE SHEET G3
	CABLE CONNECTION PLATE	STEEL PLATE, 1/8" THICK
H	BRACE PLATES	
	SUPPORT BASE TO SEGMENT	STEEL PLATE, 1/8" THICK
J	WINCH ASSEMBLY	
	WINCH	2" LASHING WINCH (10,000 LBS. STRENGTH)
	STRAP	2" STRAP (10,000 LBS. STRENGTH)
K	WINCH PLATE	
	HORIZONTAL	STEEL PLATE, 1/2" THICK
	THREADED STUDS	CFL FULLY THREADED STUD - 1/2"-13 x 1"

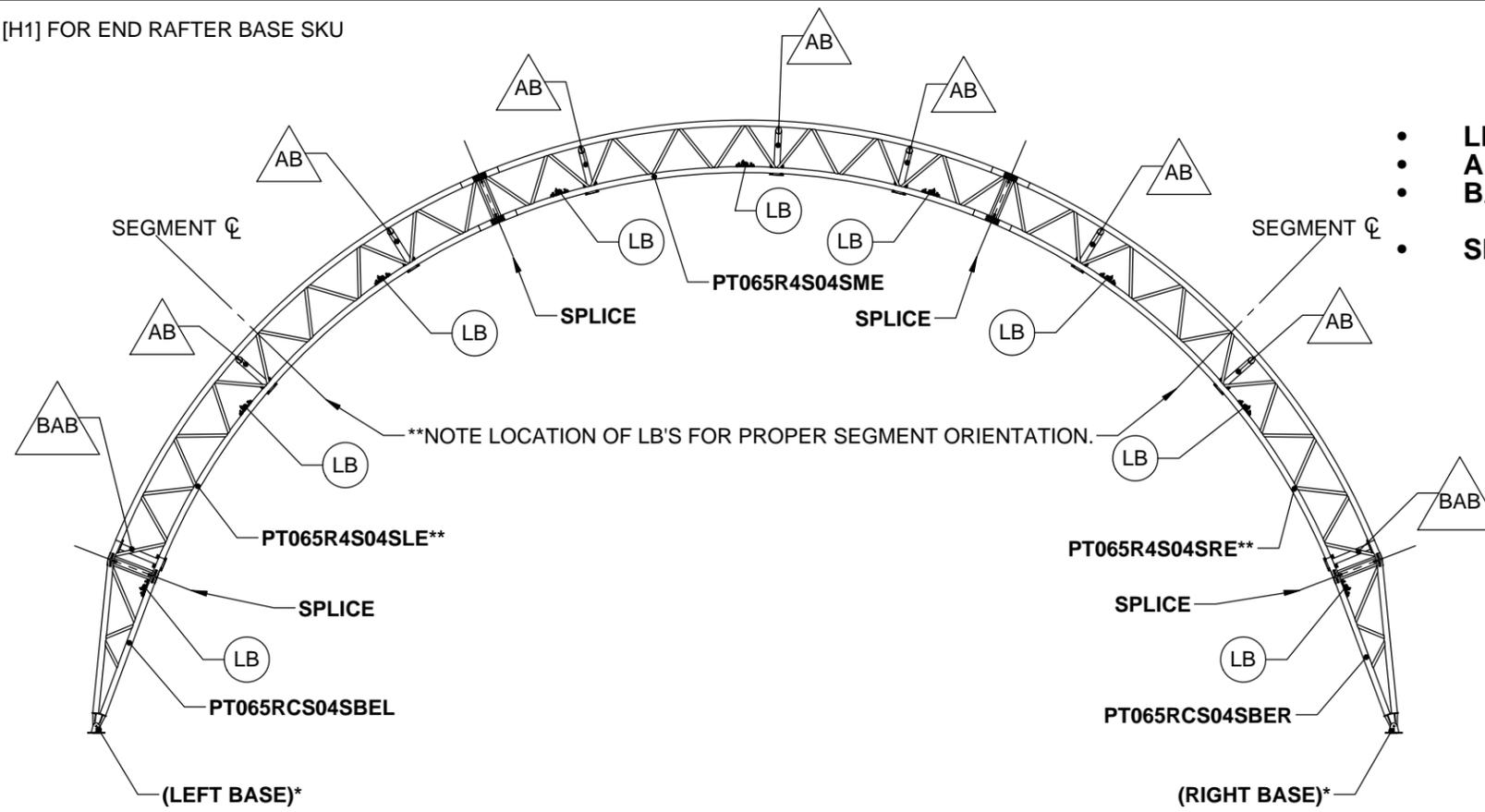


NOTE: THIS VIEW IS GENERIC TO ILLUSTRATE LOCATIONS OF ITEMS IN THE TABLE ONLY. CABLE PATTERN AND/OR OTHER DETAILS MAY NOT FULLY MATCH THE SPECIFICS FOR THIS PROJECT. SEE OTHER SHEETS FOR ORDER-SPECIFIC DETAILS.

STRUCTURE SKU # T065RKMIF010120	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65x120 RKM TRUSS FRAME
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	CUSTOMER CONTACT: RICK BLAT
SHEET TITLE: MATERIAL SPECIFICATIONS		

DRAWING DETAILS	
DRAWN BY: SMN	CREATION DATE: 9/10/2015
REVISIONS:	
NO.	REVISION DATE:
1	SEK 9/22/2015
2	DK 10/1/2015
3	
4	
NOT TO SCALE	SHEET SIZE: 11X17

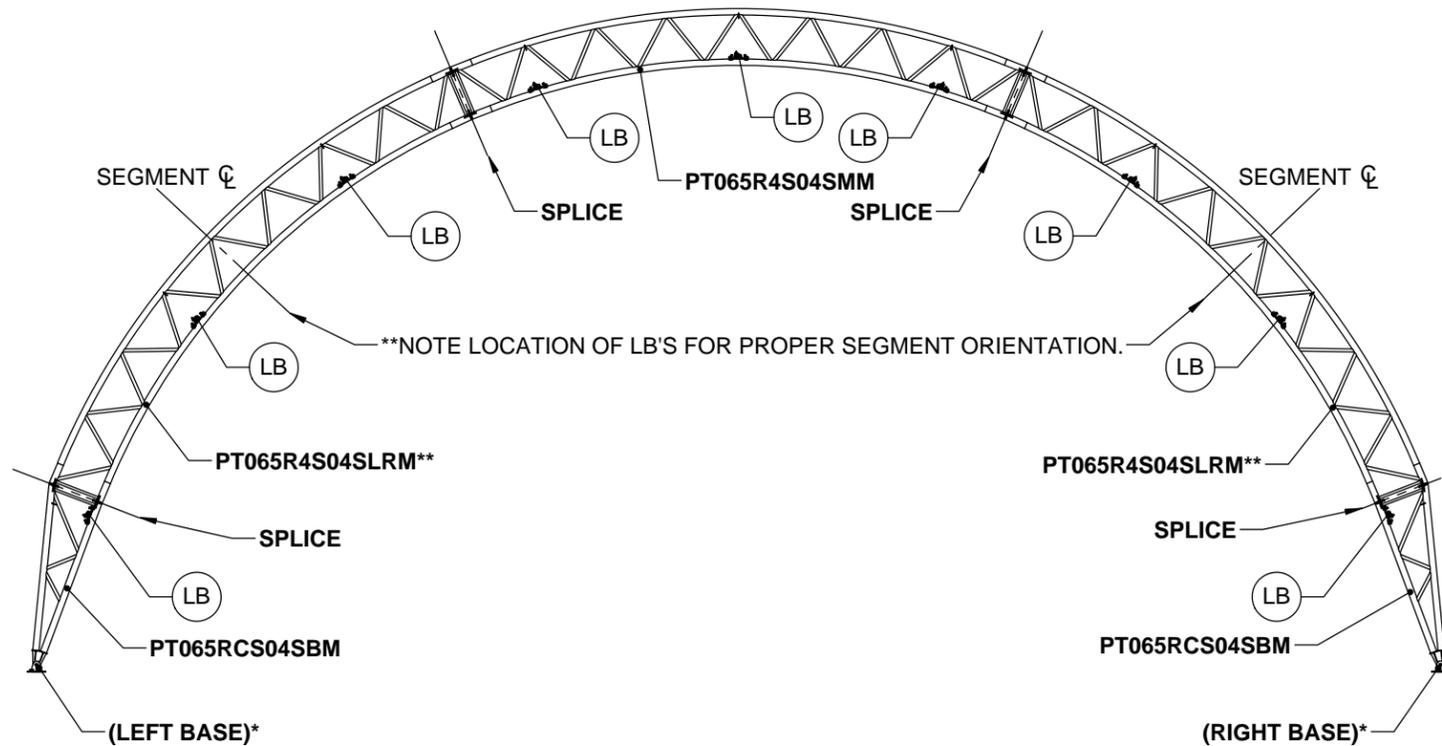
*NOTE: REFER TO SHEET [H1] FOR END RAFTER BASE SKU



[E1] VIEW 1 - FRONT PROFILE (END RAFTER)

- **LB = LATERAL BRACE (SKU: LB40G12STL240)**
- **AB = ANGLED BRACE (SKU: AB40G12SRL240)**
- **BAB = BOTTOM ANGLED BRACE (SKU: AB40G12AEL240)**
- **SPLICE: SEE DETAIL SHEET [G2]**

*NOTE: REFER TO SHEET [H1] FOR MID RAFTER BASE SKU



[E1] VIEW 2 - FRONT PROFILE (MID RAFTER)

- **LB = LATERAL BRACE (SKU: LB35G14STL240)**
- **SPLICE: SEE DETAIL SHEET [G2]**

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 F: 563.875.2317
 WWW.ESAPCO.COM

ORDER #: **7008885**
 CUSTOMER #: **6054202**

STRUCTURE SKU #: T065RKMIF010120	STRUCTURE SIZE: 65' X120'	STRUCTURE DESCRIPTION: 65x120 RKM TRUSS FRAME
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	CUSTOMER CONTACT: RICK BLAT
SHEET TITLE: RAFTER PROFILES		

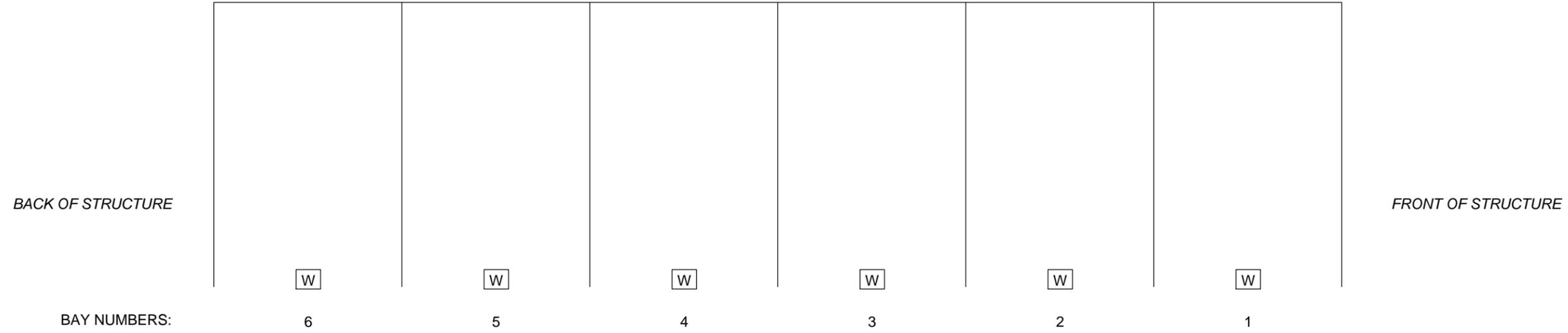
DRAWING DETAILS		
DRAWN BY:	CREATION DATE:	
SMN	9/10/2015	
REVISIONS:		
NO.	BY:	REVISION DATE:
1	SEK	9/22/2015
2	DK	10/1/2015
3		
4		
NOT TO SCALE		SHEET SIZE: 11X17

SHEET:

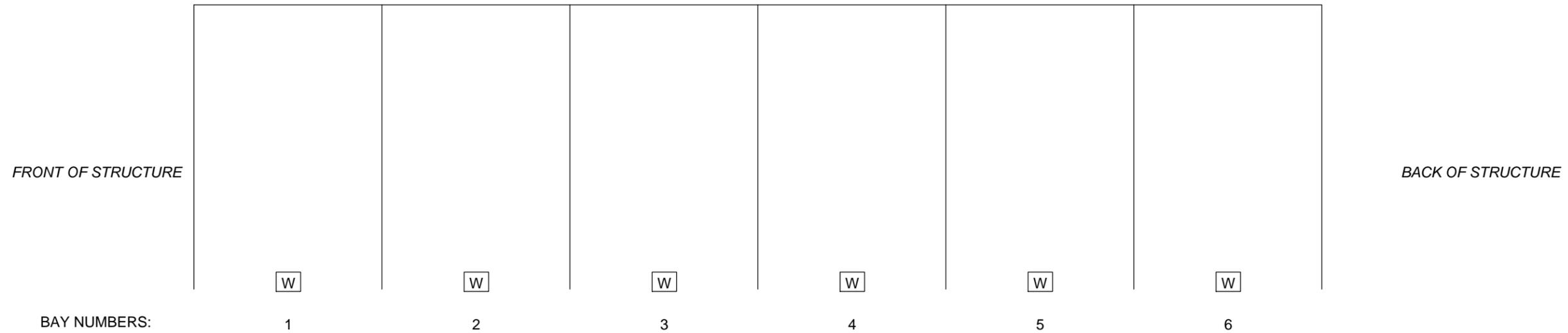
E1

NOTE: REFER TO SHEET [E1] FOR FRONT PROFILE OF BRACE LOCATIONS & SHEET [C1] FOR PLAN VIEW OF DOOR LOCATIONS (IF APPLICABLE).

ORDER #:
7008885
 CUSTOMER #:
6054202



LEFT SIDE VIEW



RIGHT SIDE VIEW

W = WINCH PLATE LOCATION

NOTE: WINCH PLATES (IF APPLICABLE) TO BE CENTERED BETWEEN RAFTERS, UNLESS NOTED OTHERWISE.

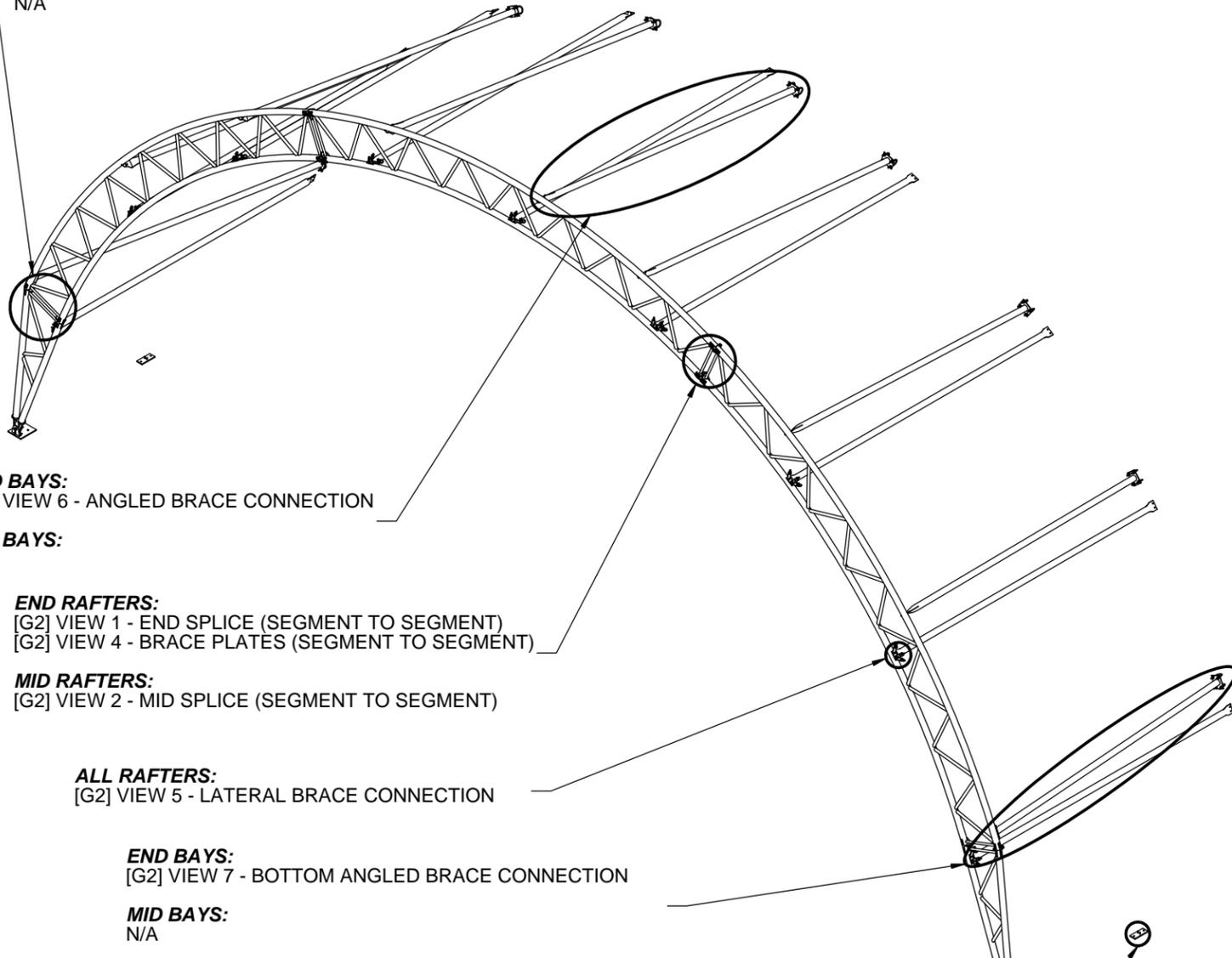
STRUCTURE SKU # T065RKMIF010120		STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65x120 RKM TRUSS FRAME
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010		CONTACT PHONE: 704-920-5403	CUSTOMER CONTACT: RICK BLAT
SHEET TITLE: SIDE PROFILES			

DRAWING DETAILS		
DRAWN BY: SMN	CREATION DATE: 9/10/2015	
REVISIONS:		
NO.	BY:	REVISION DATE:
1	SEK	9/22/2015
2	DK	10/1/2015
3		
4		
NOT TO SCALE		SHEET SIZE: 11X17
SHEET:		
F1		

DETAIL LOCATION CALL-OUTS

END RAFTERS:
[G2] VIEW 3 - BRACE PLATES (SUPPORT BASE TO SEGMENT)

MID RAFTERS:
N/A



END BAYS:
[G2] VIEW 6 - ANGLED BRACE CONNECTION

MID BAYS:
N/A

END RAFTERS:
[G2] VIEW 1 - END SPLICE (SEGMENT TO SEGMENT)
[G2] VIEW 4 - BRACE PLATES (SEGMENT TO SEGMENT)

MID RAFTERS:
[G2] VIEW 2 - MID SPLICE (SEGMENT TO SEGMENT)

ALL RAFTERS:
[G2] VIEW 5 - LATERAL BRACE CONNECTION

END BAYS:
[G2] VIEW 7 - BOTTOM ANGLED BRACE CONNECTION

MID BAYS:
N/A

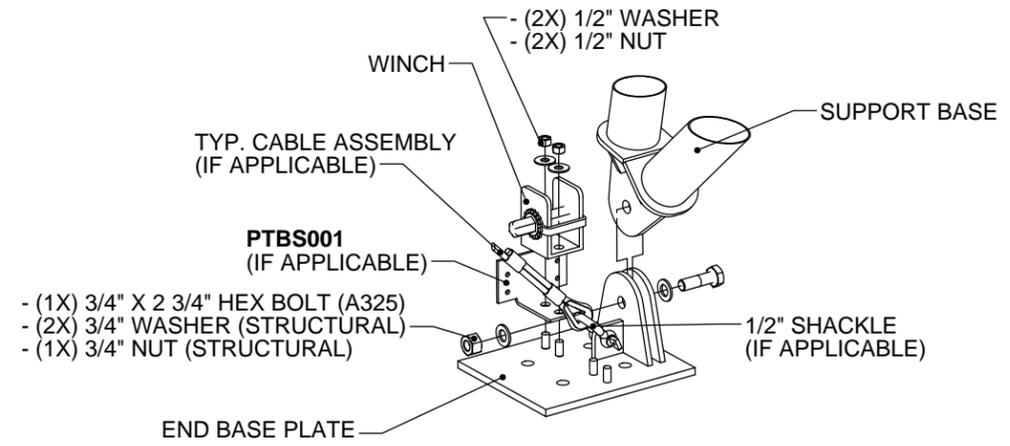
END RAFTERS:
[G1] VIEW 1 - BASE TO SUPPORT BASE CONNECTION (END) (IF APPLICABLE)

MID RAFTERS:
[G1] VIEW 2 - BASE TO SUPPORT BASE CONNECTION (MID)

ALL BAYS:
[G1] VIEW 3 - WINCH PLATE CONNECTION (IF APPLICABLE)

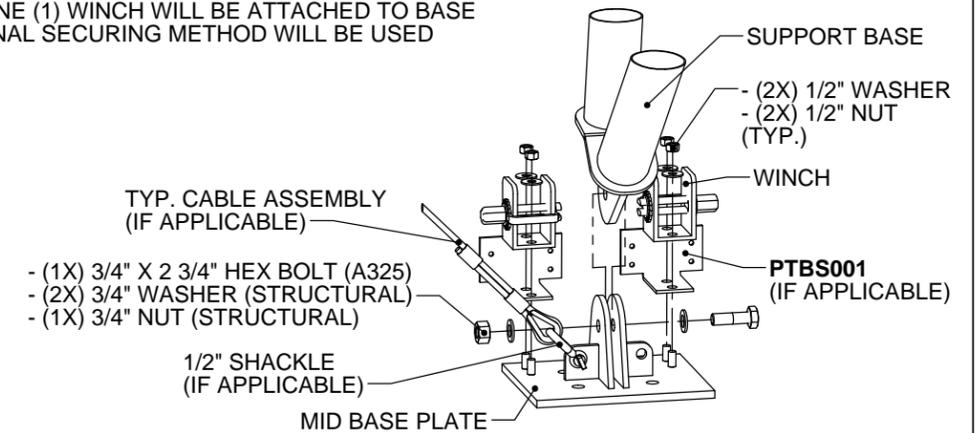
DETAILS WITH LOCATION CALL-OUTS NOT SHOWN ON THIS SHEET:

- [G2] VIEW 8 - U-BOLT BRACE CONNECTION (IF APPLICABLE)
- [G2] VIEW 9 - SIDE DOOR DETAIL (IF APPLICABLE)
- [G3] VIEW 1 - CABLE SKU PER SPAN
- [G3] VIEW 2 - TYPICAL CABLE CONNECTION DETAIL
- [G3] VIEW 3 - TYPICAL CABLE ASSEMBLY
- [G3] VIEW 4 - SWAY CABLE LOCATIONS
- [G3] VIEW 5 - SWAY CABLE DETAILS
- [G3] VIEW 6 - TYPICAL SWAY CABLE ASSEMBLY

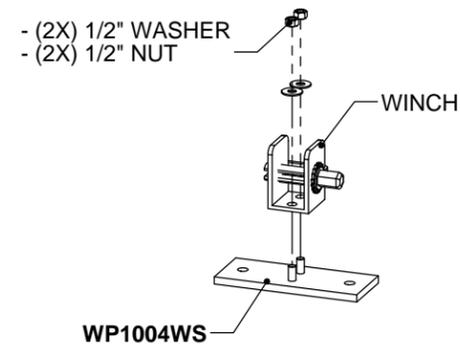


[G1] VIEW 1 - BASE TO SUPPORT BASE CONNECTION (END) (IF APPLICABLE)

NOTE: IF COVER IS TO BE INSTALLED USING ONLY THE POCKET ABOVE THE BASE FOR TENSIONING, TWO (2) WINCHES WILL BE USED AS SHOWN. IF COVER IS TO BE INSTALLED USING BOTH THE POCKET ABOVE AND THE POCKET BELOW THE BASE FOR TENSIONING, ONLY ONE (1) WINCH WILL BE ATTACHED TO BASE AND ONE (1) ADDITIONAL SECURING METHOD WILL BE USED BELOW BASE.



[G1] VIEW 2 - BASE TO SUPPORT BASE CONNECTION (MID)



[G1] VIEW 3 - WINCH PLATE CONNECTION (IF APPLICABLE)

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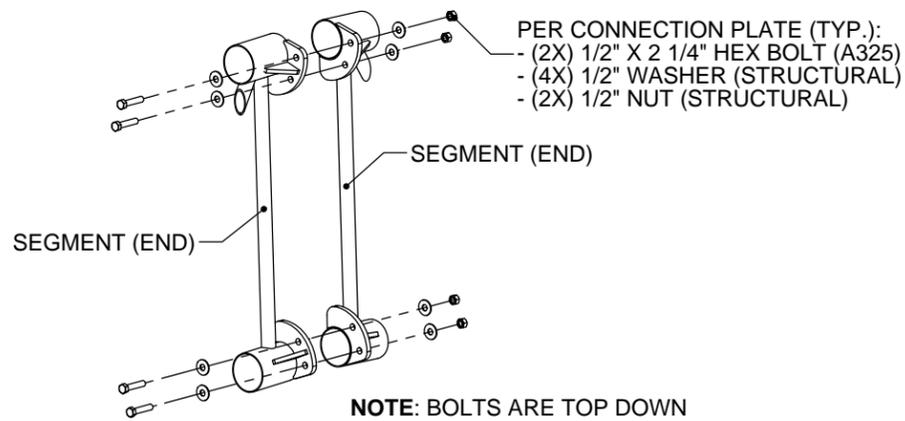
 A DIVISION OF
ENGINEERING SERVICES & PRODUCTS CO.
 1440 18TH AVENUE SW
 DYERSVILLE, IA 52040
 P: 563.875.6113
 F: 563.875.2317
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ORDER #:
7008885

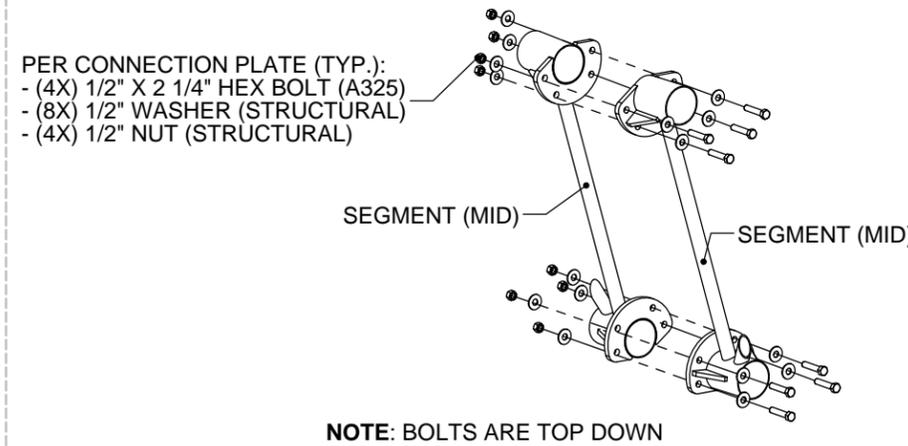
CUSTOMER #:
6054202

STRUCTURE SKU #: T065RKMIF010120	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65x120 RKM TRUSS FRAME
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	CUSTOMER CONTACT: RICK BLAT
SHEET TITLE: DETAIL LOCATIONS & BASE DETAILS		

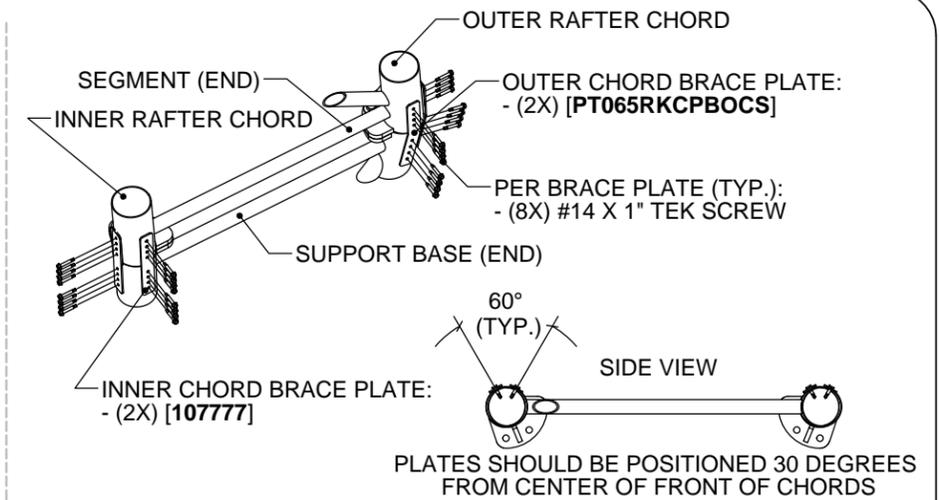
DRAWING DETAILS	
DRAWN BY: SMN	CREATION DATE: 9/10/2015
REVISIONS:	
NO.	BY: REVISION DATE:
1	SEK 9/22/2015
2	DK 10/1/2015
3	
4	
NOT TO SCALE SHEET SIZE: 11X17	
SHEET:	
G1	



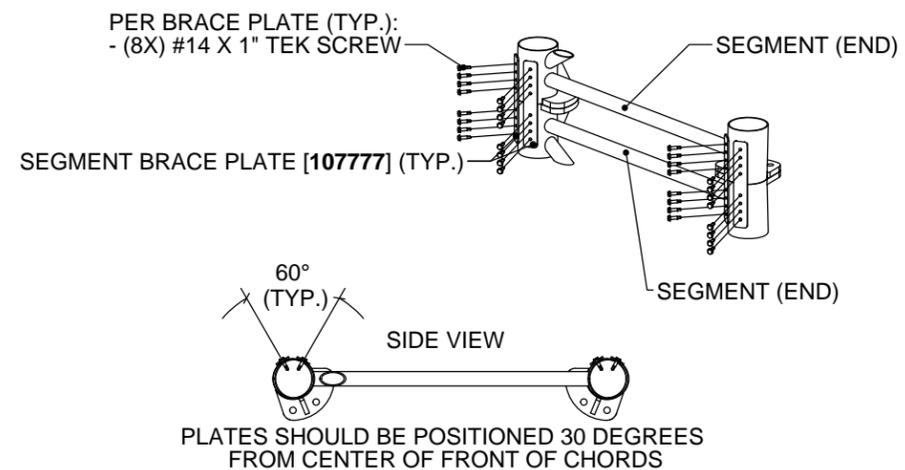
**[G2] VIEW 1 - END SPLICE
(SEGMENT TO SEGMENT)**



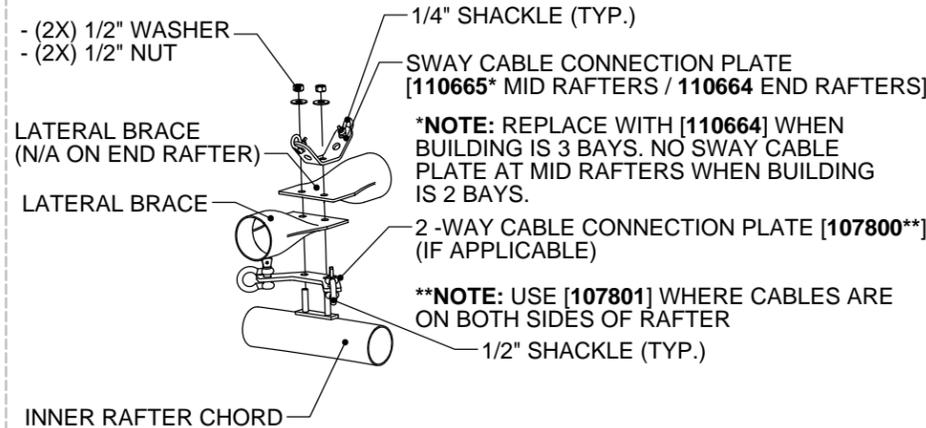
**[G2] VIEW 2 - MID SPLICE
(SEGMENT TO SEGMENT)**



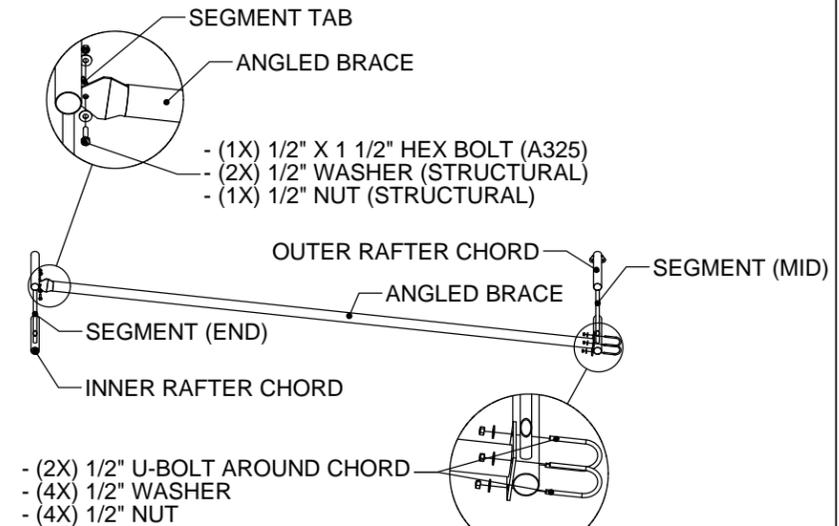
**[G2] VIEW 3 - BRACE PLATES
(SUPPORT BASE TO SEGMENT)**



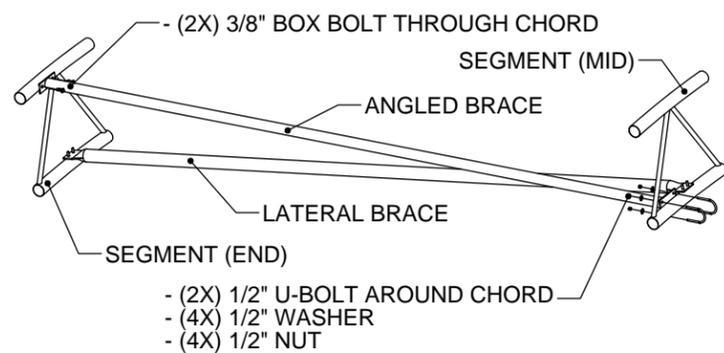
**[G2] VIEW 4 - BRACE PLATES
(SEGMENT TO SEGMENT)**



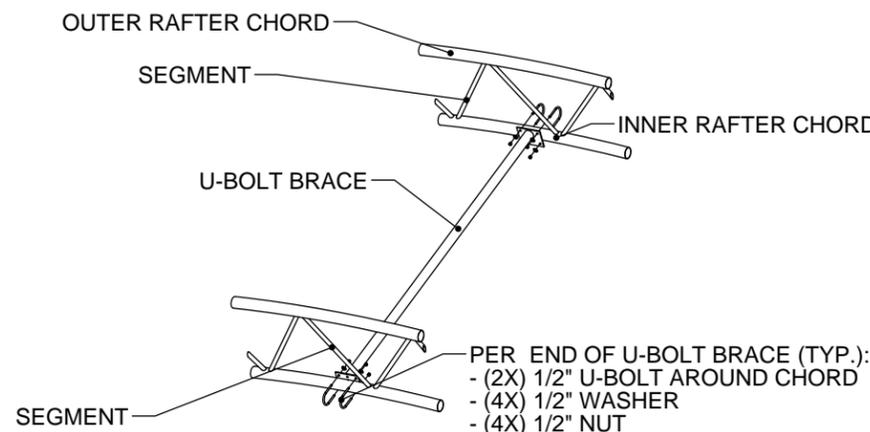
[G2] VIEW 5 - LATERAL BRACE CONNECTION



[G2] VIEW 6 - ANGLED BRACE CONNECTION

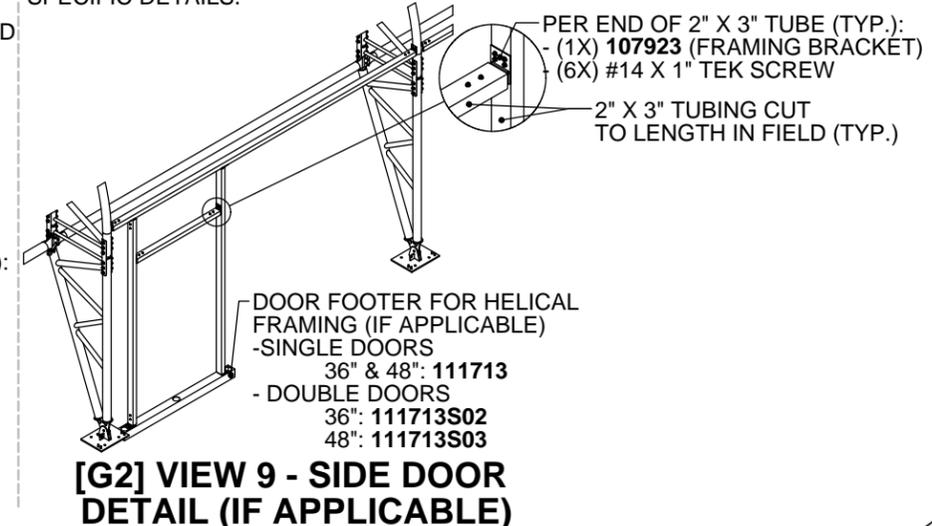


[G2] VIEW 7 - BOTTOM ANGLED BRACE CONNECTION



[G2] VIEW 8 - U-BOLT BRACE CONNECTION (IF APPLICABLE)

NOTE: VERIFY ROUGH OPENING PRIOR TO CUTTING TUBE.
 NOTE: THIS VIEW IS GENERIC TO ILLUSTRATE MAN DOOR FRAMING CONNECTIONS. RAFTER STYLE AND/OR OTHER DETAILS MAY NOT FULLY MATCH THE SPECIFICS FOR THIS PROJECT. SEE OTHER SHEETS FOR ORDER SPECIFIC DETAILS.



[G2] VIEW 9 - SIDE DOOR DETAIL (IF APPLICABLE)

STRUCTURE SKU # T065RKMIF010120	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65x120 RKM TRUSS FRAME
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	SHEET TITLE: GENERAL CONNECTION DETAILS

DRAWING DETAILS	
DRAWN BY: SMN	CREATION DATE: 9/10/2015
REVISIONS:	
NO.	BY: REVISION DATE:
1	SEK 9/22/2015
2	DK 10/1/2015
3	
4	
NOT TO SCALE SHEET SIZE: 11X17	

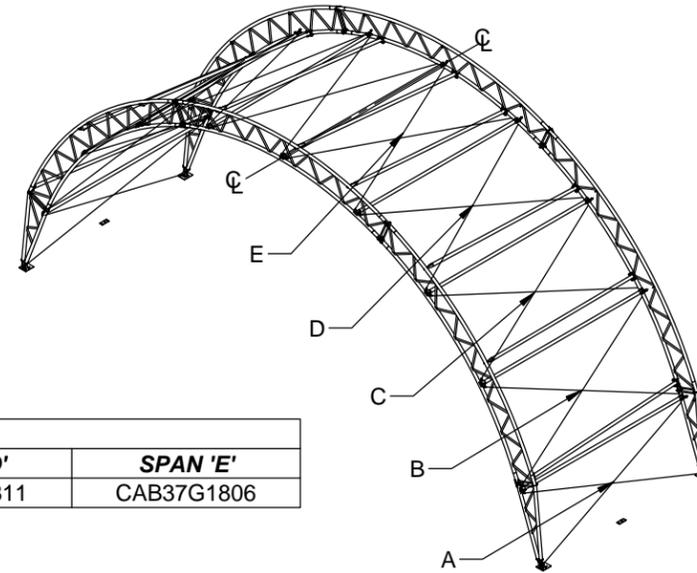
NOTES:

- RAFTER VIEW SHOWN REPRESENTS TYPICAL CABLE SPAN LABELS TO ILLUSTRATE LOCATIONS OF SPANS IN THE TABLE. THE CABLE PATTERN SHOWN MAY NOT FULLY MATCH THE SPECIFICS FOR THIS PROJECT.
- CABLE PATTERN REPEATS ON OPPOSITE SIDE OF ϕ UNLESS NOTED OTHERWISE.
- CABLE IS NOT PRESENT IN BAY NUMBERS NOT LISTED IN TABLE.

CABLE ATTACHMENT COMPONENTS	
TURNBUCKLE	1/2" X 12" GALV E-E
SHACKLE	1/2" GALV
CABLE	3/8" 7 X 19 GALV

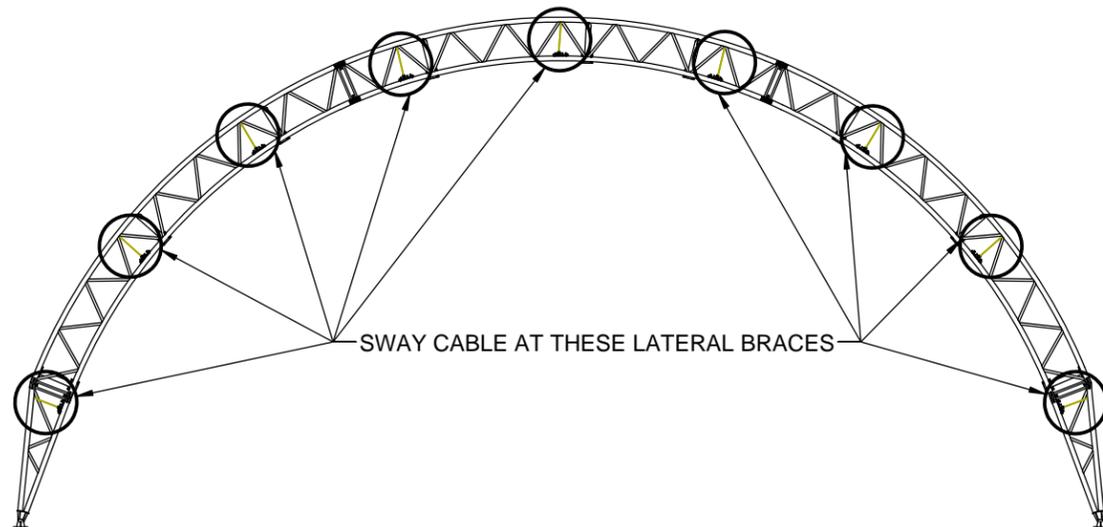
*REFER TO SHEET [C1] FOR BAY NUMBERING

CABLE ASSEMBLY SKU'S					
BAY NUMBER*	SPAN 'A'	SPAN 'B'	SPAN 'C'	SPAN 'D'	SPAN 'E'
1 and 6	CAB37G1800	CAB37G1811	CAB37G1806	CAB37G1811	CAB37G1806



[G3] VIEW 1 - CABLE SKU PER SPAN

SWAY CABLE REPEATS DOWN LENGTH OF BUILDING AT LOCATIONS SHOWN BELOW

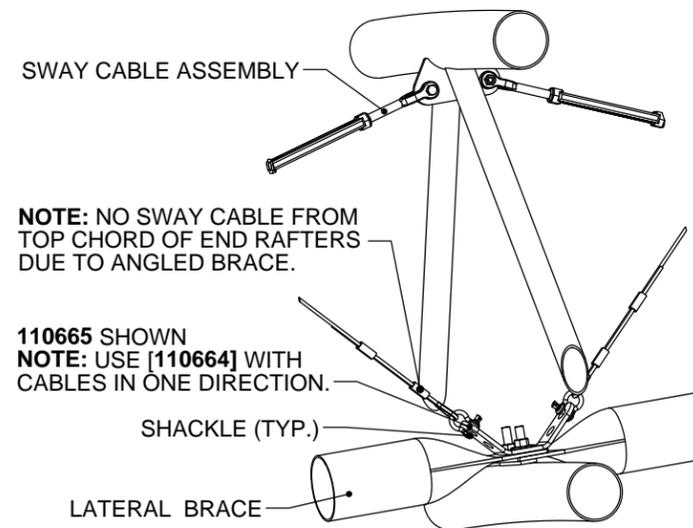


CABLE ATTACHMENT COMPONENTS	
TURNBUCKLE	1/2" X 6" GALV J-J
SHACKLE	1/4" GALV
CABLE	3/16" 7 X 19 GALV

SWAY CABLE ASSEMBLY SKU'S	
BAY NUMBER*	SWAY CABLE SKU
1 - 6	CAB18G1803

*REFER TO SHEET [C1] FOR BAY NUMBERING

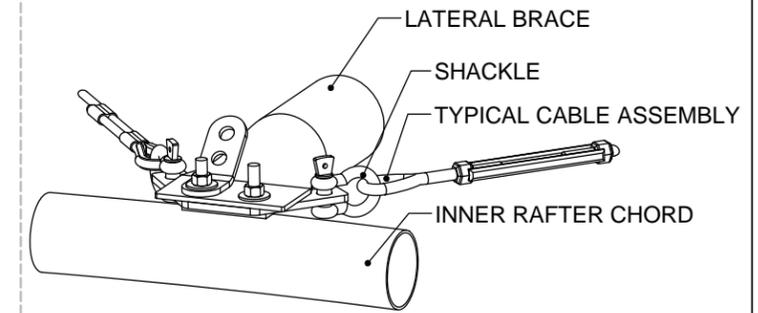
[G3] VIEW 4 - SWAY CABLE LOCATIONS



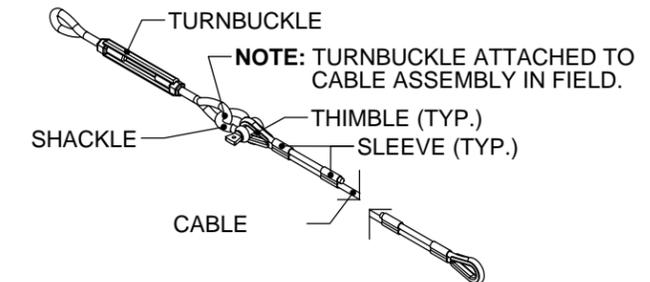
NOTE: NO SWAY CABLE FROM TOP CHORD OF END RAFTERS DUE TO ANGLED BRACE.

110665 SHOWN
NOTE: USE [110664] WITH CABLES IN ONE DIRECTION.

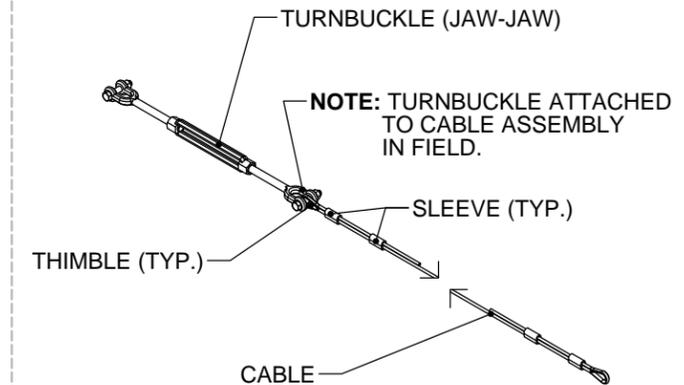
[G3] VIEW 5 - SWAY CABLE DETAILS



[G3] VIEW 2 - TYPICAL CABLE CONNECTION DETAIL



[G3] VIEW 3 - TYPICAL CABLE ASSEMBLY



[G3] VIEW 6 - TYPICAL SWAY CABLE ASSEMBLY

STRUCTURE SKU #:
T065RKMIF010120

STRUCTURE SIZE:
65' X120'

STRUCTURE DESCRIPTION:
65x120 RKM TRUSS FRAME

CUSTOMER INFORMATION:
CITY OF CONCORD
26 UNION ST. S
CONCORD, NC 28025-5010

CUSTOMER CONTACT:
RICK BLAT

CONTACT PHONE:
704-920-5403

SHEET TITLE:
CABLE LAYOUT & DETAILS

DRAWING DETAILS

DRAWN BY:
SMN

CREATION DATE:
9/10/2015

REVISIONS:

NO.	BY:	REVISION DATE:
1	SEK	9/22/2015
2	DK	10/1/2015
3		
4		

NOT TO SCALE SHEET SIZE: 11X17

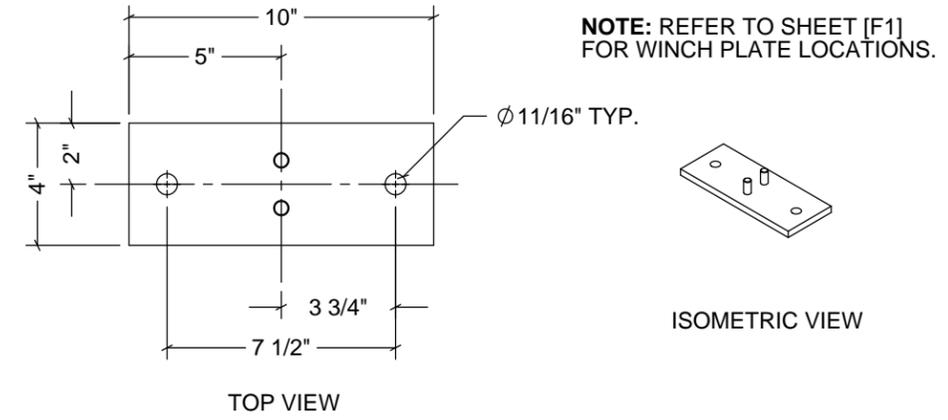
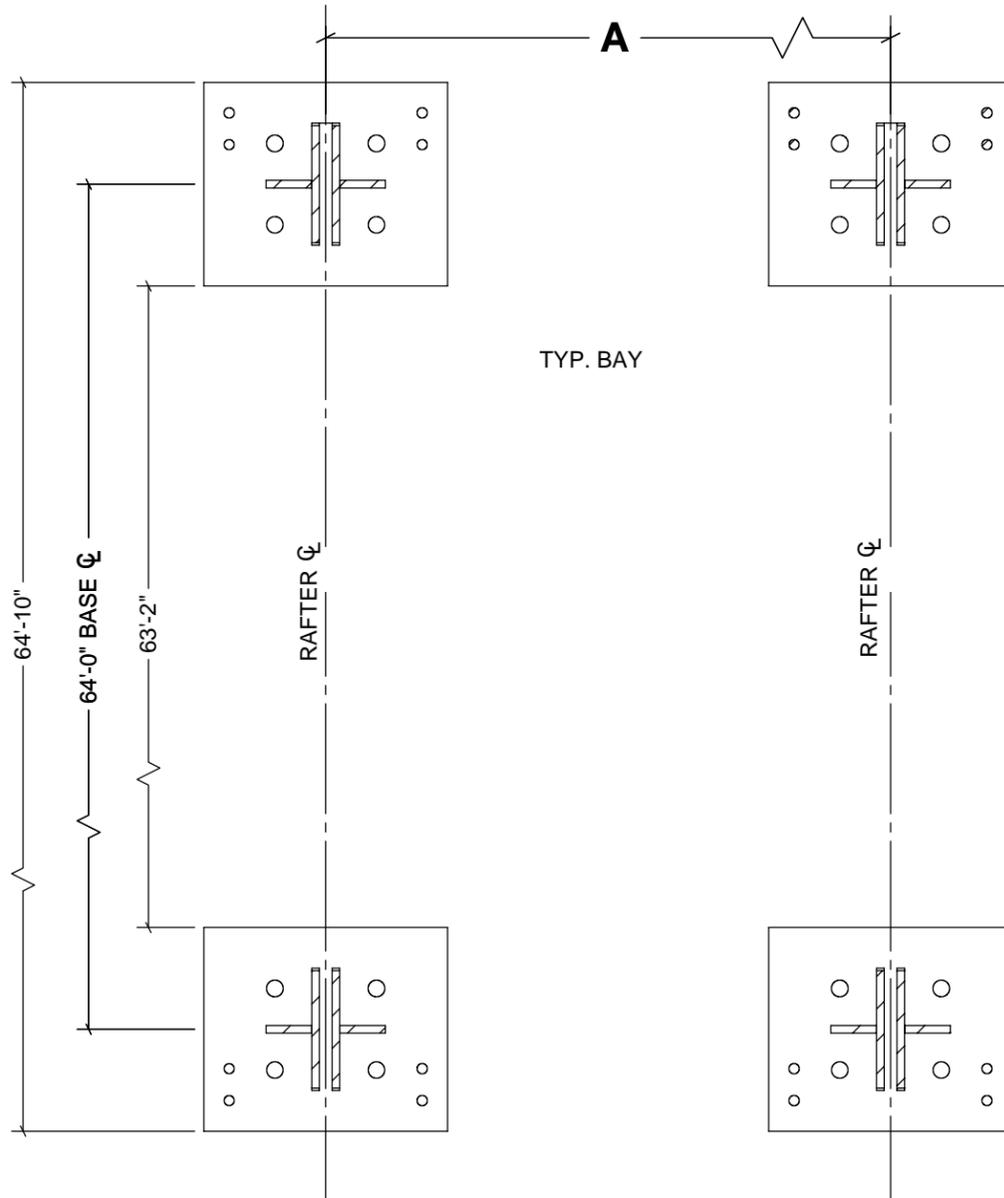
SHEET:

*REFER TO SHEET [C1] FOR BAY NUMBERING

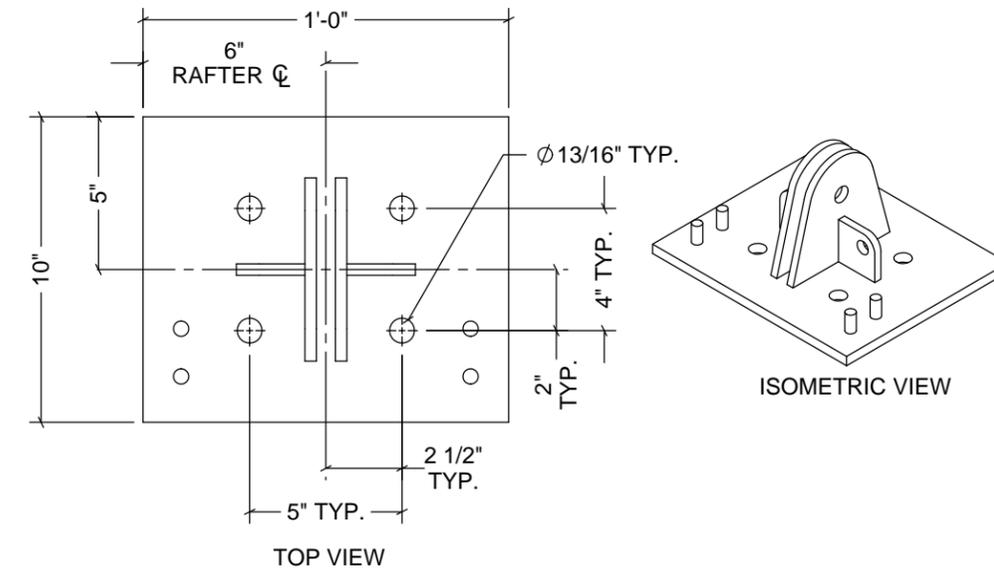
BAY NUMBER*	A (RAFTER SPACING)
1 - 6	20'-0"

**REFER TO SHEET [E1] FOR BASE LOCATIONS

RAFTER TYPE	LEFT BASE SKU**	RIGHT BASE SKU**
END	BP061M	BP061M
MID	BP061M	BP061M



WP1004WS DETAILS (IF APPLICABLE)



BP061M DETAILS

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ORDER #:
7008885

CUSTOMER #:
6054202

STRUCTURE SKU #: T065RKMIF010120	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65x120 RKM TRUSS FRAME
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	SHEET TITLE: BASE PLATE LAYOUT & DETAILS
RICK BLAT CUSTOMER CONTACT:		

DRAWING DETAILS	
DRAWN BY: SMN	CREATION DATE: 9/10/2015
REVISIONS:	
NO.	REVISION DATE:
1	SEK 9/22/2015
2	DK 10/1/2015
3	
4	
NOT TO SCALE SHEET SIZE: 11X17	

SHEET:
H1

NOTES:

- ALL DIMENSIONS ARE FROM CENTER TO CENTER UNLESS OTHERWISE NOTED.
- FRAMING FOR WALK DOORS, VENTS, AND ADDITIONAL FRAMING, IF REQUIRED, WILL BE CUT IN FIELD USING 2" X 3" RECTANGULAR TUBING & 107923 OR 110356ALT/110356BALT INSERTS.
- DIMENSIONS FOR TELESCOPING PURLIN LOCATIONS ARE APPROXIMATE. LOCATIONS CAN BE FIELD ADJUSTED +/- 12" FROM WHAT IS SHOWN.
- FOUNDATION ELEMENTS ARE NOT SHOWN.

LINE STYLES:

- COLUMN: _____
- HEADER: - - - - -
- TELESCOPING PURLIN: - · - · - · -
- 2" X 3" TUBING: ······

FRAME-OUT SCHEDULE

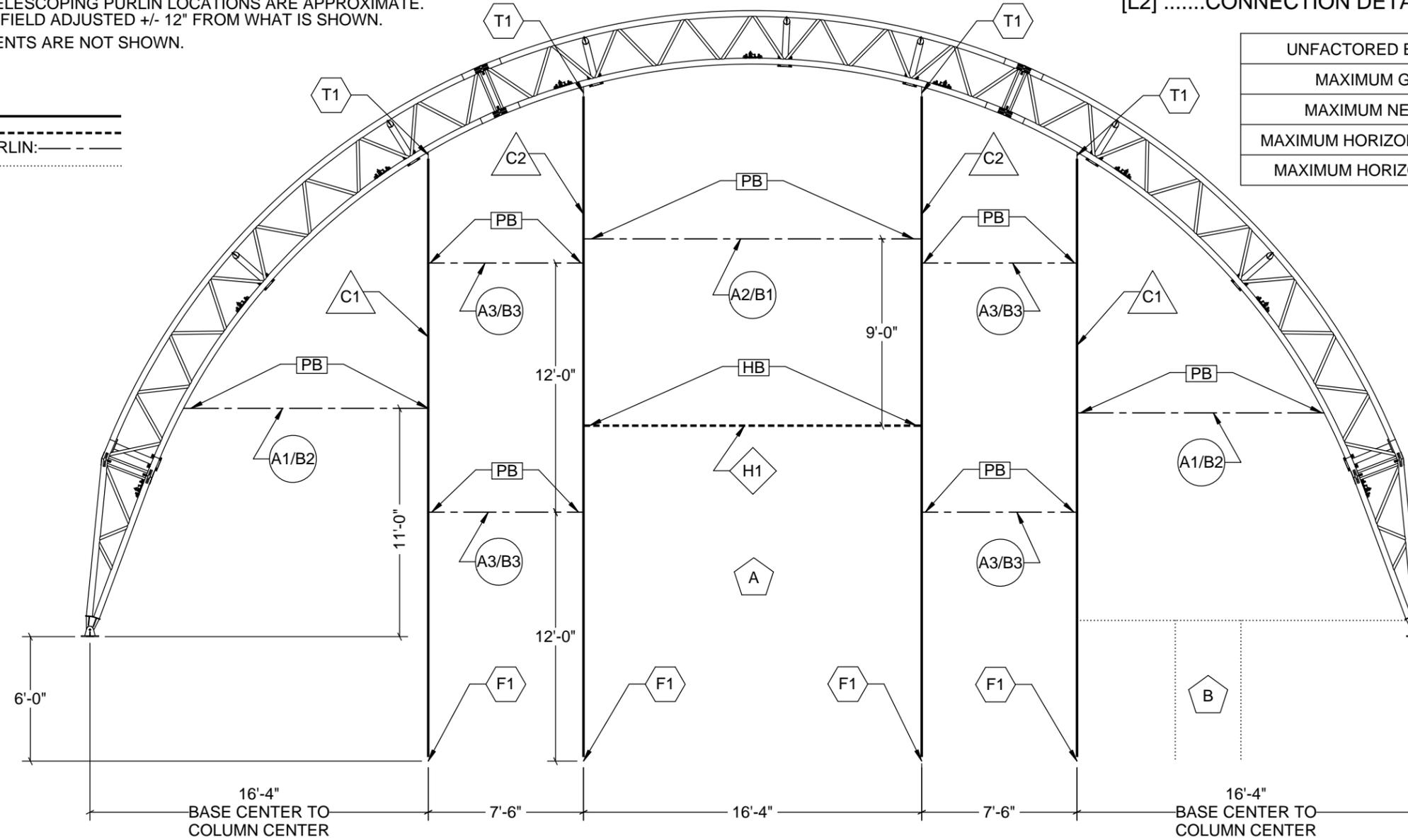
CALL-OUT	DESCRIPTION	ROUGH OPENING
A	16'-0" X 16'-0" ROLL-UP DOOR	16'-0" X 16'-0"
B	3'-0" X 6'-8" MAN DOOR	38-1/16" X 81-3/8"

EW065RK0161D
65RK END WL 16X-C/MN-R DRCOL+6'

ENDWALL CONTENT GUIDE:

- [L1]COVER SHEET/PART LOCATIONS/LAYOUT
- [L2]CONNECTION DETAILS

UNFACTORED ENDWALL COLUMN REACTIONS	
MAXIMUM GRAVITY	690 LBS
MAXIMUM NET UPLIFT	300 LBS
MAXIMUM HORIZONTAL {MWFRS}	1790 LBS
MAXIMUM HORIZONTAL {C&C}	2830 LBS



△ COLUMNS
4" X 4", 8 GA, 2-PLY SQUARE TUBE

◇ HEADERS
4" X 4", 8 GA, 2-PLY SQUARE TUBE

○ TELESCOPING PURLINS
2.0" OD, 11 GA ROUND PIPE

⬡ INSERTS
TOP COLUMN INSERTS
(3.5" SQ. TUBE / 3/16" STEEL PLATE)

□ BRACKETS
PURLIN BRACKET (1/8" STEEL PLATE)

C1: EWC2P346G08
C2: EWC2P382G08

H1: EWH2P19075G08

A1: 200TP052
A2: 200TP078
A3: 200TP060

T1: 107456

PB: 106755

2.375" OD, 14 GA ROUND PIPE

BOTTOM COLUMN INSERTS
(3.5" SQ. TUBE / 3/8" STEEL PLATE)

HEADER BRACKET (3/16" STEEL PLATE)

B1: 2375TP138
B2: 2375TP120
B3: 2375TP050

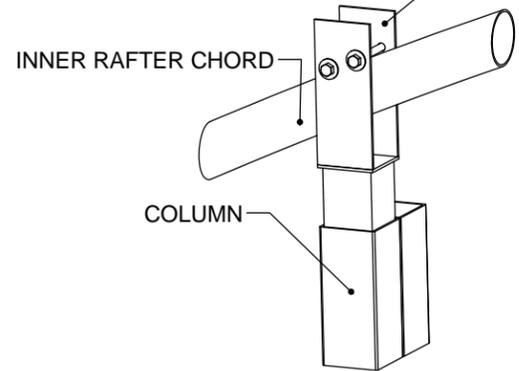
F1: 111700

HB: EWHB2P

STRUCTURE SKU # EW065RK0161D	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65RK END WL 16X-C/MN-R DRCOL+6'
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	CUSTOMER CONTACT: RICK BLAT
SHEET TITLE: COVER SHEET/PART LOCATIONS/LAYOUT		

DRAWING DETAILS	
DRAWN BY: SMN	CREATION DATE: 9/10/2015
REVISIONS:	
NO.	REVISION DATE:
1	SEK 9/22/2015
2	DK 10/1/2015
3	
4	
NOT TO SCALE	SHEET SIZE: 11X17

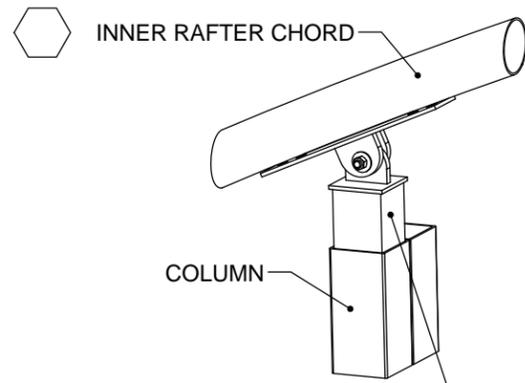
- TOP COLUMN INSERT**
 - (2X) *1/2" X (SEE CHART) HEX BOLT
 - (4X) *1/2" WASHER
 - (2X) *1/2" HEX NUT



HEX BOLT LENGTH BASED ON CHORD DIA.	
CHORD DIA.	HEX BOLT LENGTH
2.375"	3 1/2"
2.875", 3.50"	4 1/2"
4.0"	5 1/2"
*5.0"	6 1/2"

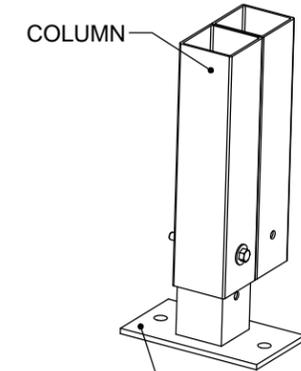
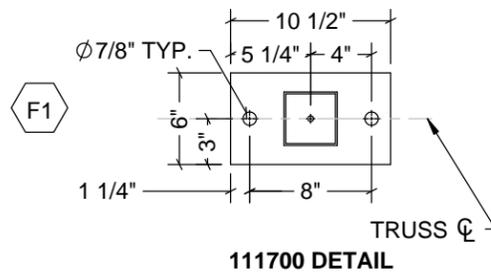
* 5.0" CHORDS WILL REQUIRE 3/4" HARDWARE

VIEW 1: TOP COLUMN INSERT DETAIL
(IF APPLICABLE)



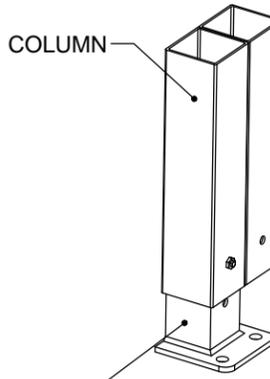
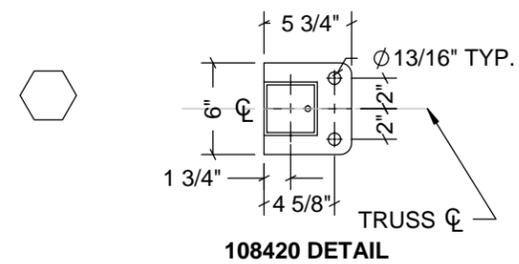
- ADJUSTABLE TOP COLUMN INSERT**
 - (1X) 1/2" X 2 1/2" HEX BOLT (HINGE BOLT)
 - (2X) 1/2" WASHER
 - (1X) 1/2" HEX NUT
 - (2X) 3/8" BOX BOLT (THRU CHORD)

VIEW 2: ADJUSTABLE TOP COLUMN INSERT DETAIL
(IF APPLICABLE)



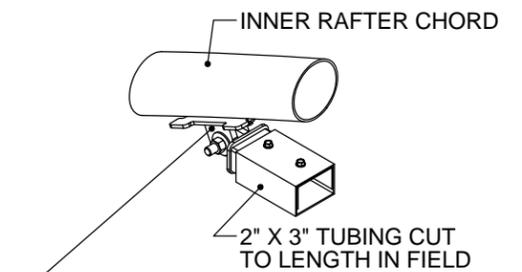
- BOTTOM COLUMN INSERT**
 - (1X) 1/2" X 5 1/2" HEX BOLT
 - (2X) 1/2" WASHER
 - (1X) 1/2" HEX NUT

VIEW 3: BOTTOM COLUMN INSERT DETAIL
(IF APPLICABLE)

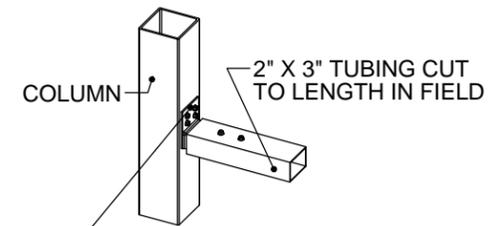


- FLUSH MOUNT COLUMN INSERT**
 - (1X) 1/4" BOX BOLT (THRU COLUMN)

VIEW 4: FLUSH MOUNT BOTTOM COLUMN INSERT DETAIL
(IF APPLICABLE)

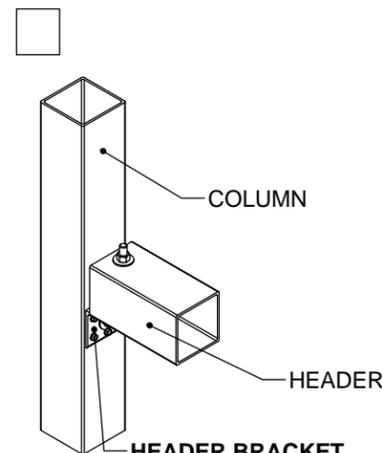


- ADJUSTABLE 2" X 3" INSERT**
 [110356ALT/110356BALT]
 - (1X) 1/2" X 2 1/2" HEX BOLT (HINGE BOLT)
 - (2X) 1/2" WASHER
 - (1X) 1/2" HEX NUT
 - (2X) 1/4" BOX BOLT (THRU CHORD)
 - (2X) #14 X 1" TEK SCREW



- 2" X 3" FRAMING BRACKET** [107923]
 - (6X) #14 X 1" TEK SCREW

VIEW 5: 2" X 3" INSERT DETAILS
(IF APPLICABLE)

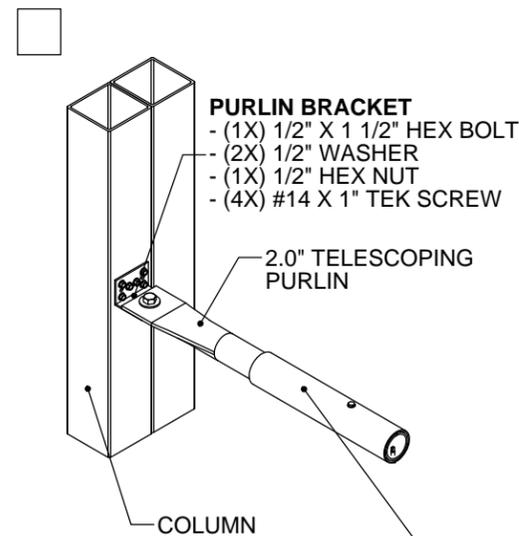


- HEADER BRACKET**
 - (SEE CHART) 1/2" X 5 1/2" HEX BOLT
 - (SEE NOTE) 1/2" WASHER
 - (SEE NOTE) 1/2" HEX NUT
 - (SEE CHART) #14 X 1" TEK SCREW

NOTE: EVERY BOLT WILL GET (2) WASHERS AND (1) HEX NUT. SEE CHART FOR # OF BOLTS.

BRACKET SKU	# OF BOLTS	# OF TEK SCREWS
EWHB1P	2	4
EWHB2P	4	8
EWHB3P	6	8

VIEW 6: HEADER BRACKET DETAIL
(IF APPLICABLE)



- PURLIN BRACKET**
 - (1X) 1/2" X 1 1/2" HEX BOLT
 - (2X) 1/2" WASHER
 - (1X) 1/2" HEX NUT
 - (4X) #14 X 1" TEK SCREW

- 2.375" TELESCOPING PURLIN**
 - (2X) #14 X 1" TEK SCREW*

*1X EACH ON OPPOSING FACE FROM THE OTHER

VIEW 7: PURLIN BRACKET DETAIL
(IF APPLICABLE)

BOX BOLT HOLE SIZES & INSTALLATION TORQUE 1		
BOX BOLT DIA.	HOLE DIA.	INSTALLATION TORQUE
1/4"	1/2"	14 FT-LB
5/16"	5/8"	18 FT-LB
3/8"	3/4"	33 FT-LB
1/2"	13/16"	59 FT-LB
5/8"	1 1/8"	140 FT-LB
3/4"	1 3/8"	221 FT-LB

1. REFER TO BOX BOLT TECHNICAL DATA FOR MORE INFORMATION IF USING BOX BOLTS

STRUCTURE SKU # EW065RKF0161D	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65RK END WL 16X-CMN-R DRCOL+6'
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	CUSTOMER CONTACT: RICK BLAT
SHEET TITLE: CONNECTION DETAILS		

DRAWING DETAILS	
DRAWN BY: SMN	CREATION DATE: 9/10/2015
REVISIONS:	
NO. BY:	REVISION DATE:
1 SEK	9/22/2015
2 DK	10/1/2015
3	
4	
NOT TO SCALE	SHEET SIZE: 11X17

FOUNDATION NOTES:

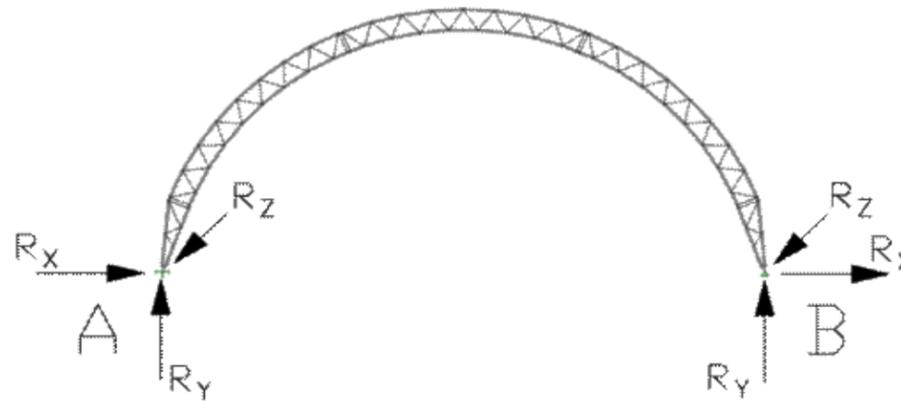
- REFER TO FOUNDATION DRAWINGS BY VECTOR ENGINEERS.
- FOUNDATION MUST MEET THE BUILDING REACTION DATA SHOWN BELOW.
- SEE ENDWALL DRAWINGS FOR ENDWALL REACTIONS (IF APPLICABLE).

*See notes below		UNFACTORED BASE REACTIONS TO CONSIDER AT TYPICAL BASES			
Load Case		Side A		Side B	
		Rx (kip)	Ry (kip)	Rx (kip)	Ry (kip)
Dead Load, Self Weight	DL	0.39	1.08	-0.39	1.08
Dead Load, Collateral	EL	0.08	0.15	-0.08	0.15
Snow Load, Balanced	S	1.53	2.52	-1.53	2.52
Snow Load, Unbalanced	Su	0.98	0.98	-0.98	2.55
Wind Load	Wx	-5.95	-6.81	0.91	-7.04
Wind Load	Wx2	-5.57	-3.49	0.52	-3.72
Wind Load	Wz	-0.41	-8.81	2.16	-8.60
Wind Load	Wz2	-0.06	-5.46	1.77	-5.26
Roof Live Load	Lr	1.58	3.21	-1.58	3.21
0	0	0.00	0.00	0.00	0.00

*See notes below		ADDITIONAL UNFACTORED BASE REACTIONS TO CONSIDER AT BASES WITH CABLE ATTACHED					
Load Case		Side A			Side B		
		Rx (kip)	Ry (kip)	Rz (kip)	Rx (kip)	Ry (kip)	Rz (kip)
Wind Load	Wz	-1.59	-8.45	-2.64	2.24	-8.21	-2.45
Dead Load, Cable (Wz)	DL	0.02	0.05		-0.02	0.05	
Wind Load	Wz2	1.74	1.97	0.11	-1.31	1.86	0.06
Dead Load, Cable (Wz2)	DL	0.02	0.05		-0.02	0.05	

Notes:

- The above Reaction Data should be combined as required by the Load Combinations from IBC or other applicable code.
- The Reaction Data is for a building that represents a low hazard to human life in the event of a failure. Examples of such are agricultural buildings, unoccupied private buildings, unoccupied storage buildings, or temporary buildings. A building is considered "unoccupied" when employees are typically in the building only to move materials in and out (no permanent workstations) and it is not open to the public.
- The Reaction Data is for a building that has both endwalls closed or has the same area of openings in each endwall.



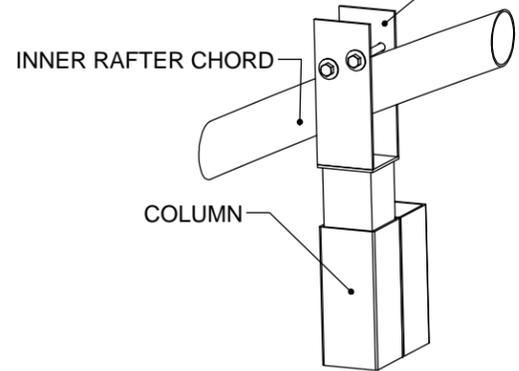
CONTROLLING ASD COMBINATIONS TO CONSIDER AT TYPICAL BASES			
Max Gravity (kip)	4.43	DL + EL + Lr	
Max Uplift (kip)	-8.16	0.6DL + Wz	
Max Inward Lateral (kip)	-5.71	0.6DL + Wx	
Max Outward Lateral (kip)	2.05	DL + EL + Lr	

ADDITIONAL CONTROLLING ASD COMBINATIONS TO CONSIDER AT BASES WITH CABLE ATTACHED			
Max Gravity (kip)	4.48	DL + EL + Lr	
Max Uplift (kip)	-7.77	0.6DL + Wz	
Max Inward Lateral (kip)	-5.70	0.6DL + Wx	
Max Outward Lateral (kip)	2.39	DL + EL + 0.75Lr + 0.75Wz2	

STRUCTURE SKU # T065RKMIF010120	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65x120 RKM TRUSS FRAME
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	CUSTOMER CONTACT: RICK BLAT
SHEET TITLE: BUILDING REACTION DATA		

DRAWING DETAILS	
DRAWN BY: SMN	CREATION DATE: 9/10/2015
REVISIONS:	
NO.	REVISION DATE:
1	SEK 9/22/2015
2	DK 10/1/2015
3	
4	
NOT TO SCALE SHEET SIZE: 11X17	
SHEET:	
J1	

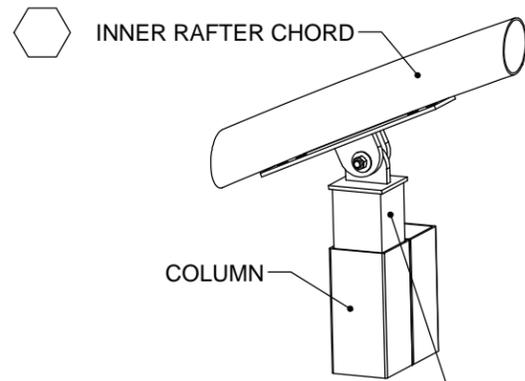
- TOP COLUMN INSERT**
 - (2X) *1/2" X (SEE CHART) HEX BOLT
 - (4X) *1/2" WASHER
 - (2X) *1/2" HEX NUT



HEX BOLT LENGTH BASED ON CHORD DIA.	
CHORD DIA.	HEX BOLT LENGTH
2.375"	3 1/2"
2.875", 3.50"	4 1/2"
4.0"	5 1/2"
*5.0"	6 1/2"

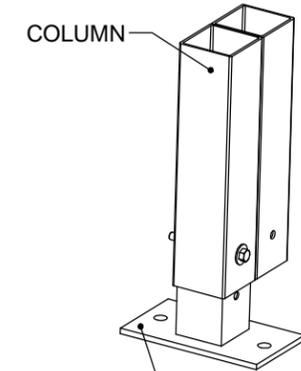
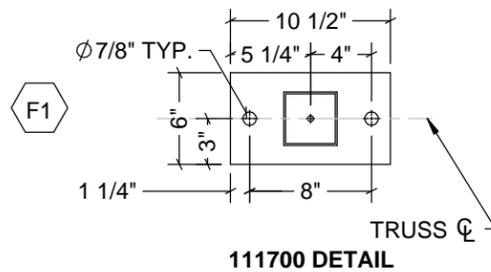
* 5.0" CHORDS WILL REQUIRE 3/4" HARDWARE

VIEW 1: TOP COLUMN INSERT DETAIL
(IF APPLICABLE)



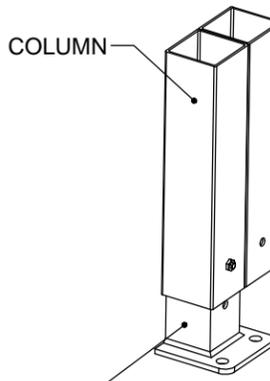
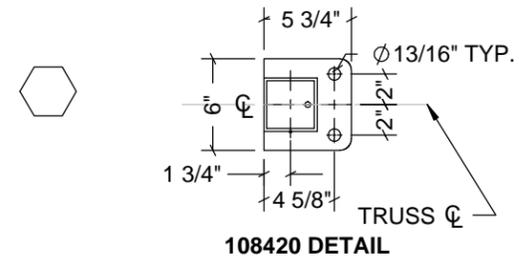
- ADJUSTABLE TOP COLUMN INSERT**
 - (1X) 1/2" X 2 1/2" HEX BOLT (HINGE BOLT)
 - (2X) 1/2" WASHER
 - (1X) 1/2" HEX NUT
 - (2X) 3/8" BOX BOLT (THRU CHORD)

VIEW 2: ADJUSTABLE TOP COLUMN INSERT DETAIL
(IF APPLICABLE)



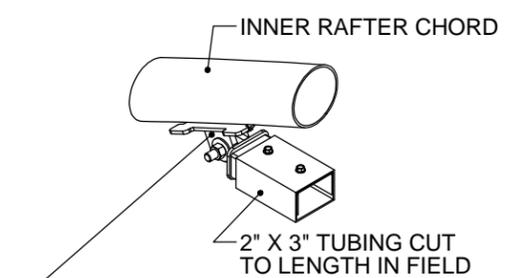
- BOTTOM COLUMN INSERT**
 - (1X) 1/2" X 5 1/2" HEX BOLT
 - (2X) 1/2" WASHER
 - (1X) 1/2" HEX NUT

VIEW 3: BOTTOM COLUMN INSERT DETAIL
(IF APPLICABLE)

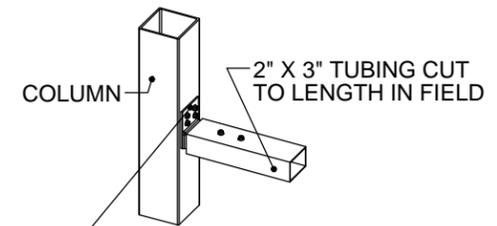


- FLUSH MOUNT COLUMN INSERT**
 - (1X) 1/4" BOX BOLT (THRU COLUMN)

VIEW 4: FLUSH MOUNT BOTTOM COLUMN INSERT DETAIL
(IF APPLICABLE)

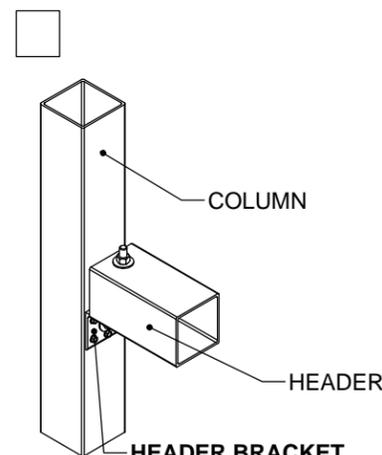


- ADJUSTABLE 2" X 3" INSERT**
 [110356ALT/110356BALT]
 - (1X) 1/2" X 2 1/2" HEX BOLT (HINGE BOLT)
 - (2X) 1/2" WASHER
 - (1X) 1/2" HEX NUT
 - (2X) 1/4" BOX BOLT (THRU CHORD)
 - (2X) #14 X 1" TEK SCREW



- 2" X 3" FRAMING BRACKET** [107923]
 - (6X) #14 X 1" TEK SCREW

VIEW 5: 2" X 3" INSERT DETAILS
(IF APPLICABLE)

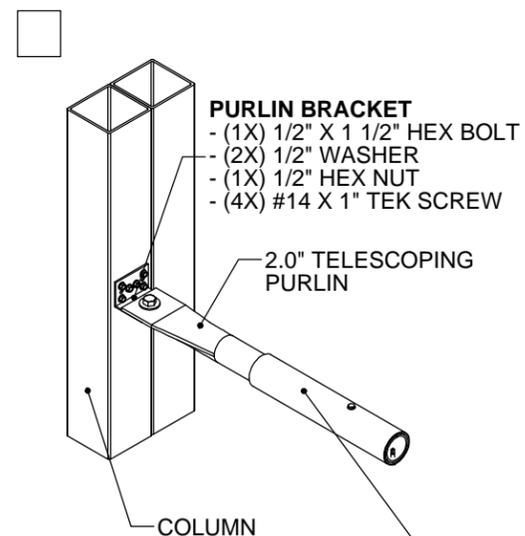


- HEADER BRACKET**
 - (SEE CHART) 1/2" X 5 1/2" HEX BOLT
 - (SEE NOTE) 1/2" WASHER
 - (SEE NOTE) 1/2" HEX NUT
 - (SEE CHART) #14 X 1" TEK SCREW

NOTE: EVERY BOLT WILL GET (2) WASHERS AND (1) HEX NUT. SEE CHART FOR # OF BOLTS.

BRACKET SKU	# OF BOLTS	# OF TEK SCREWS
EWHB1P	2	4
EWHB2P	4	8
EWHB3P	6	8

VIEW 6: HEADER BRACKET DETAIL
(IF APPLICABLE)



- PURLIN BRACKET**
 - (1X) 1/2" X 1 1/2" HEX BOLT
 - (2X) 1/2" WASHER
 - (1X) 1/2" HEX NUT
 - (4X) #14 X 1" TEK SCREW

- 2.375" TELESCOPING PURLIN**
 - (2X) #14 X 1" TEK SCREW*

*1X EACH ON OPPOSING FACE FROM THE OTHER

VIEW 7: PURLIN BRACKET DETAIL
(IF APPLICABLE)

BOX BOLT HOLE SIZES & INSTALLATION TORQUE		
BOX BOLT DIA.	HOLE DIA.	INSTALLATION TORQUE
1/4"	1/2"	14 FT-LB
5/16"	5/8"	18 FT-LB
3/8"	3/4"	33 FT-LB
1/2"	13/16"	59 FT-LB
5/8"	1 1/8"	140 FT-LB
3/4"	1 3/8"	221 FT-LB

1. REFER TO BOX BOLT TECHNICAL DATA FOR MORE INFORMATION IF USING BOX BOLTS

STRUCTURE SKU # EW065RKF0170D	STRUCTURE SIZE: 65' X 120'	STRUCTURE DESCRIPTION: 65RK SOLID END WL
CUSTOMER INFORMATION: CITY OF CONCORD 26 UNION ST S CONCORD, NC 28025-5010	CONTACT PHONE: 704-920-5403	CUSTOMER CONTACT: RICK BLAT
SHEET TITLE: CONNECTION DETAILS		

DRAWING DETAILS		
DRAWN BY:	CREATION DATE:	
SMN	9/11/2015	
REVISIONS:		
NO.	BY:	REVISION DATE:
1		
2		
3		
4		
NOT TO SCALE		SHEET SIZE: 11X17
SHEET:		M2