



# Building Permit Application

Howard County Maryland  
 Department of Inspections, Licenses and Permits  
 3430 Court House Drive  
 Permits: 410-313-2455  
 www.howardcountymd.gov

Date Received: \_\_\_\_\_

Permit No.: B16003214

Building Address: 4301 ROUTE 32  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Suite/Apt. # \_\_\_\_\_ SDP/WP/BA #: \_\_\_\_\_  
 Census Tract: \_\_\_\_\_ Subdivision: \_\_\_\_\_  
 Section: \_\_\_\_\_ Area: \_\_\_\_\_ Lot: \_\_\_\_\_  
 Tax Map: \_\_\_\_\_ Parcel: \_\_\_\_\_ Grid: \_\_\_\_\_  
 Zoning: \_\_\_\_\_ Map Coordinates: \_\_\_\_\_ Lot Size: \_\_\_\_\_

Existing Use: \_\_\_\_\_  
 Proposed Use: \_\_\_\_\_  
 Estimated Construction Cost: \$ \_\_\_\_\_  
 Description of Work: \_\_\_\_\_  
 Occupant or Tenant: \_\_\_\_\_  
 Was tenant space previously occupied?  Yes  No  
 Contact Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

Property Owner's Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

**Applicant's Name & Mailing Address, (If other than stated herein)**  
 Applicant's Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

Contractor Company: \_\_\_\_\_  
 Contact Person: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 License No.: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

Engineer/Architect Company: \_\_\_\_\_  
 Responsible Design Prof.: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

Commercial Building Characteristics	Residential Building Characteristics	
Height:	<input type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories:	<b>Depth</b>	<b>Width</b>
Gross area, sq. ft./floor:	1 <sup>st</sup> floor:	
	2 <sup>nd</sup> floor:	
Area of construction (sq. ft.):	Basement:	
	<input type="checkbox"/> Finished Basement	
Use group:	<input type="checkbox"/> Unfinished Basement	
	<input type="checkbox"/> Crawl Space	
<b>Construction type:</b>	<input type="checkbox"/> Slab on Grade	
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms:	
<input type="checkbox"/> Structural Steel	<b>Multi-family Dwelling</b>	
<input type="checkbox"/> Masonry	No. of efficiency units:	
<input type="checkbox"/> Wood Frame	No. of 1 BR units:	
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:	
	No. of 3 BR units:	
	Other Structure:	
	Dimensions:	
<input checked="" type="checkbox"/> <b>Roadside Tree Project Permit</b>	Footings:	
<input type="checkbox"/> Yes <input type="checkbox"/> No	Roof:	
<b>Roadside Tree Project Permit #</b>	<input type="checkbox"/> State Certified Modular	
	<input type="checkbox"/> Manufactured Home	

Utilities	
<b>Water Supply</b>	
<input type="checkbox"/> Public	
<input type="checkbox"/> Private	
<b>Sewage Disposal</b>	
<input type="checkbox"/> Public	
<input type="checkbox"/> Private	
Electric: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Gas: <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Heating System</b>	
<input type="checkbox"/> Electric <input type="checkbox"/> Oil	
<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas	
<input type="checkbox"/> Other:	
<b>Sprinkler System:</b>	
<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Grading Permit Number:</b>	
<b>Building Shell Permit Number:</b>	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

**Applicant's Signature** \_\_\_\_\_  
**Email Address** \_\_\_\_\_  
**Title/Company** \_\_\_\_\_

**Print Name** \_\_\_\_\_  
**Date** \_\_\_\_\_

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY  
 \*\*PLEASE WRITE NEATLY & LEGIBLY\*\*  
 -FOR OFFICE USE ONLY-

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA ( Zoning )		
PSZA ( Engineering )		
Health	8/1/16	H. Oswald

Is Sediment Control approval required for issuance?  Yes  No  
 CONTINGENCY CONSTRUCTION START

DPZ SETBACK INFORMATION
Front:
Rear:
Side:
Side St.:
All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:
SDP/Red-line approval date:

Filing Fee	\$
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$
Add'l per Fee	\$
Total Fees	\$
Sub-Total Paid	\$
Balance Due	\$
Check	#

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA

COMM NEW CITY E. FRANKS



Interactive Map

Map Layers    Map Legend    Search

All Layers

- Base Maps & Aerial Photos
- Annotation Layers
- HoCo Base Map Layers
  - Contours 2004
  - County Boundary
  - Stream Centerline Buffer 75ft
  - Building Permits (New)
  - Scanned PDF Drawings Intern
  - Address Points
  - Street Centerline
  - Metro Property
  - Property Boundaries
- Additional Layers
- Sewer Infrastructure
- Water Infrastructure
- Study Areas
- Layer Overlays
  - Green Infrastructure - Hubs

Map Tools    4231    4219    4228    4229    4226    4227    4228    4229    4230    4231    4232    4233    4234    4235    4236    4237    4238    4239    4240    4241    4242    4243    4244    4245    4246    4247    4248    4249    4250    4251    4252    4253    4254    4255    4256    4257    4258    4259    4260    4261    4262    4263    4264    4265    4266    4267    4268    4269    4270    4271    4272    4273    4274    4275    4276    4277    4278    4279    4280    4281    4282    4283    4284    4285    4286    4287    4288    4289    4290    4291    4292    4293    4294    4295    4296    4297    4298    4299    4300    4301    4302    4303    4304    4305    4306    4307    4308    4309    4310    4311    4312    4313    4314    4315    4316    4317    4318    4319    4320    4321    4322    4323    4324    4325    4326    4327    4328    4329    4330    4331    4332    4333    4334    4335    4336    4337    4338    4339    4340    4341    4342    4343    4344    4345    4346    4347    4348    4349    4350    4351    4352    4353    4354    4355    4356    4357    4358    4359    4360    4361    4362    4363    4364    4365    4366    4367    4368    4369    4370    4371    4372    4373    4374    4375    4376    4377    4378    4379    4380    4381    4382    4383    4384    4385    4386    4387    4388    4389    4390    4391    4392    4393    4394    4395    4396    4397    4398    4399    4400    4401    4402    4403    4404    4405    4406    4407    4408    4409    4410    4411    4412    4413    4414    4415    4416    4417    4418    4419    4420    4421    4422    4423    4424    4425    4426    4427    4428    4429    4430    4431    4432    4433    4434    4435    4436    4437    4438    4439    4440    4441    4442    4443    4444    4445    4446    4447    4448    4449    4450    4451    4452    4453    4454    4455    4456    4457    4458    4459    4460    4461    4462    4463    4464    4465    4466    4467    4468    4469    4470    4471    4472    4473    4474    4475    4476    4477    4478    4479    4480    4481    4482    4483    4484    4485    4486    4487    4488    4489    4490    4491    4492    4493    4494    4495    4496    4497    4498    4499    4500

Map Tools: Navigation, Measure, Annotations, Print/Export, Help, Print

Scale: 100 m / 300 ft

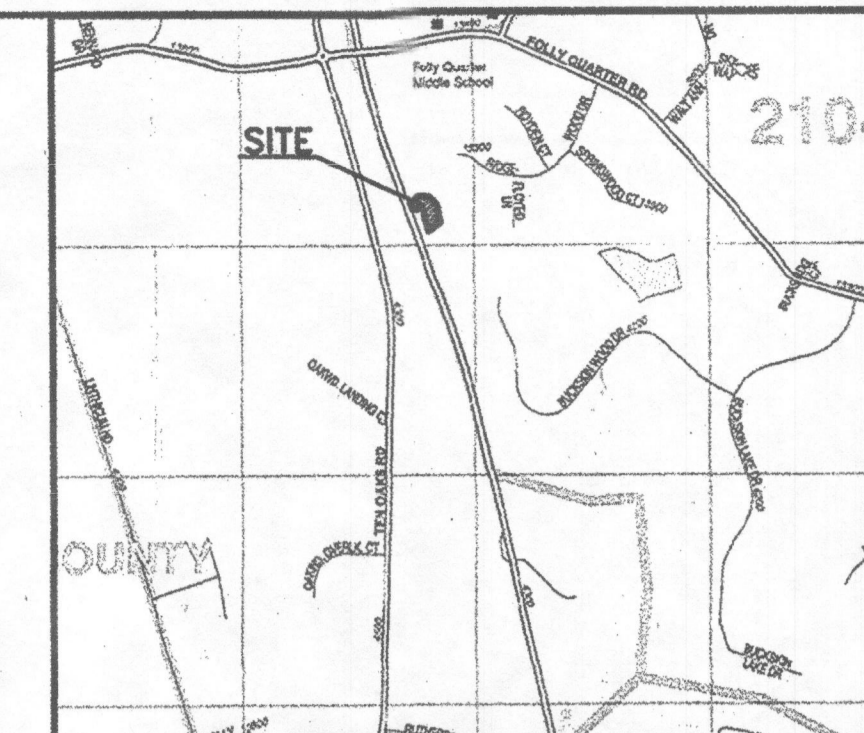
Coordinates: -76.97065, 39.86169

4215 Buckskin Wood Dr.  
4246 Buckskin Lake Dr.

4301 Guilford  
Sykesville  
West Friendship

**GENERAL NOTES**

- All construction shall be performed in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications if applicable or as specified.
- The Contractor shall notify the Department of Public Works / Bureau of Engineering/ Construction Inspection Division at (410) 313-1800 at least five (5) working days prior to the start of work.
- The contractor shall notify Miss Utility at 1-800-291-7777 at least 48 hours prior to any excavation work being done, and shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1800 at least five (5) working days prior to the start of work.
- The contractor shall test pit existing utilities at least five (5) days before starting work shown on these drawings to verify their location and elevation. The contractor shall notify the engineer immediately if location of utilities is other than shown.
- Approximate locations of existing utilities are based solely on available records and field surveys. Contractor shall verify the locations of any utilities which may be impacted by the work. The contractor shall take all necessary precautions to protect the existing utilities and maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- Any damage caused by the Contractor, any subcontractors, or any vendor to the existing public right-of-way, or any existing paving, curb & gutter, utilities, sidewalks, trees, shrubs, lawns, or any other existing conditions (not indicated to be demolished), or any newly installed proposed improvement, shall be repaired or replaced, to owner's satisfaction, at Contractor's sole cost and expense.
- All fill areas shall be compacted to a minimum of 95% of the maximum dry density as determined and verified in accordance with AASHTO T-99.
- The project site is located outside the Metropolitan District.
- Zoning: RR-OEO
- Area of Site: 9.455 Ac.
- Area of Site Plan: 4,900 SF. (Limit of Disturbance)
- This project is exempt from APFO because it does not generate any new traffic / trips.
- Since disturbance is less than 5000 SF, the standard sediment control plan shall apply.
- Topography shown is from Howard County.
- Deed Reference: L 1075 F. 210 dated 10/26/01  
L 1152 F. 646 dated 2/2/03

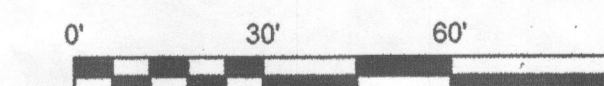


Vicinity Map - Scale: 1" = 2000'  
ADC Map 24-D1  
ADC The Map People - Permitted Use # 20612205

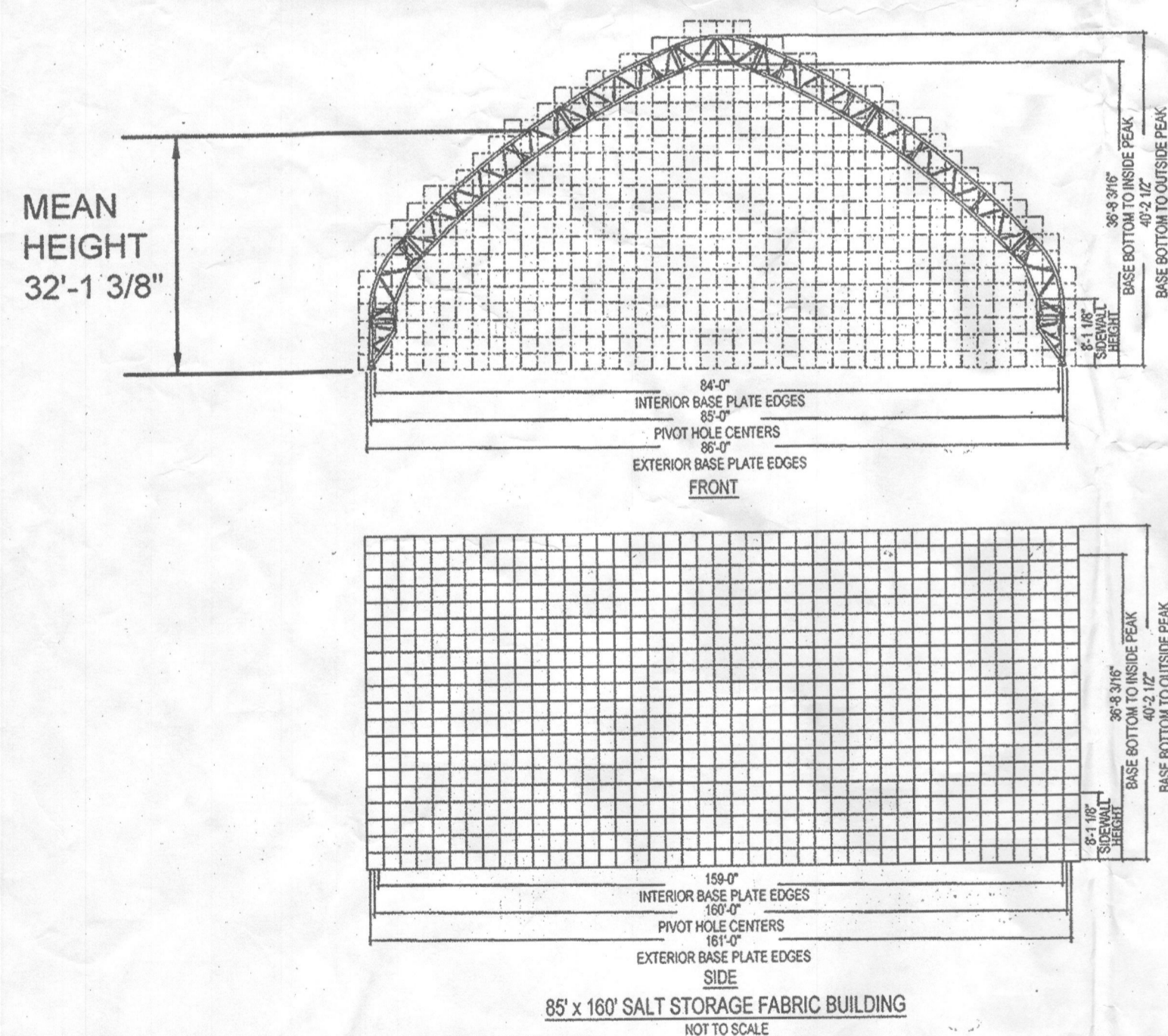
**APPROVED**  
WALK-THRU BUILDING PERMIT  
BP# B16003214 A#  
APP. SAN H. Oswald DATE: 8/1/15  
DESC. OF WORK: Construct new salt barn

**LEGEND**

- Boundary: Dashed line
- Contour: Dashed line with elevation (e.g., -570)
- Treeline: Wavy line
- Road: Solid line with parallel lines
- Limit of Disturbance: Dotted line



NOTE: DISTURBED AREA IS FOR FOUNDATION INSTALLATION ONLY AND IS LESS THAN 5000 SF RUNOFF FROM SALT BARN ROOF SHALL BE DIRECTED TO EXISTING SWM FACILITY.



85' x 160' SALT STORAGE FABRIC BUILDING  
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

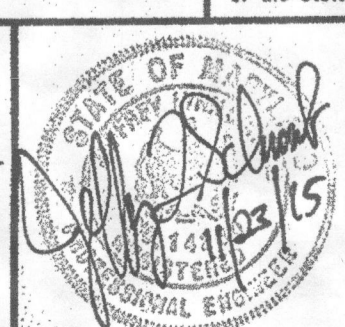
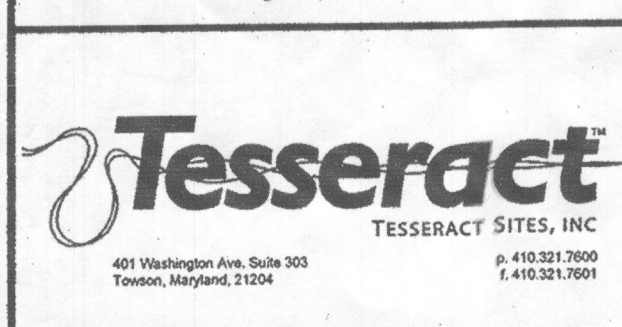
*Chad Anderson* 12-7-15  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Walt Rowland* 12-9-15  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Walter Jaffee* 12-9-15  
DIRECTOR DATE

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14230, Expiration Date: 12/09/16.

LIMIT OF DISTURBANCE: 4,900 SF.



DES:	TSI	1	ADDED SHEET 9 FOR NEW SALT BARN, RENUMBERED SHEETS	11/15
DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

**OWNER:**  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
3430 COURTHOUSE DRIVE  
ELLCOTT CITY, MD 21043  
PHONE: 410-313-4401

**DEVELOPER:**  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
4301 STATE ROUTE 32  
DAYTON, MARYLAND 21036  
PHONE: 410-313-7450

**HOWARD CO. CENTRAL MAINT. FACILITY**  
REVISED SITE DEVELOPMENT PLAN

PROPOSED SALT BARN

SHEET 9 OF 9

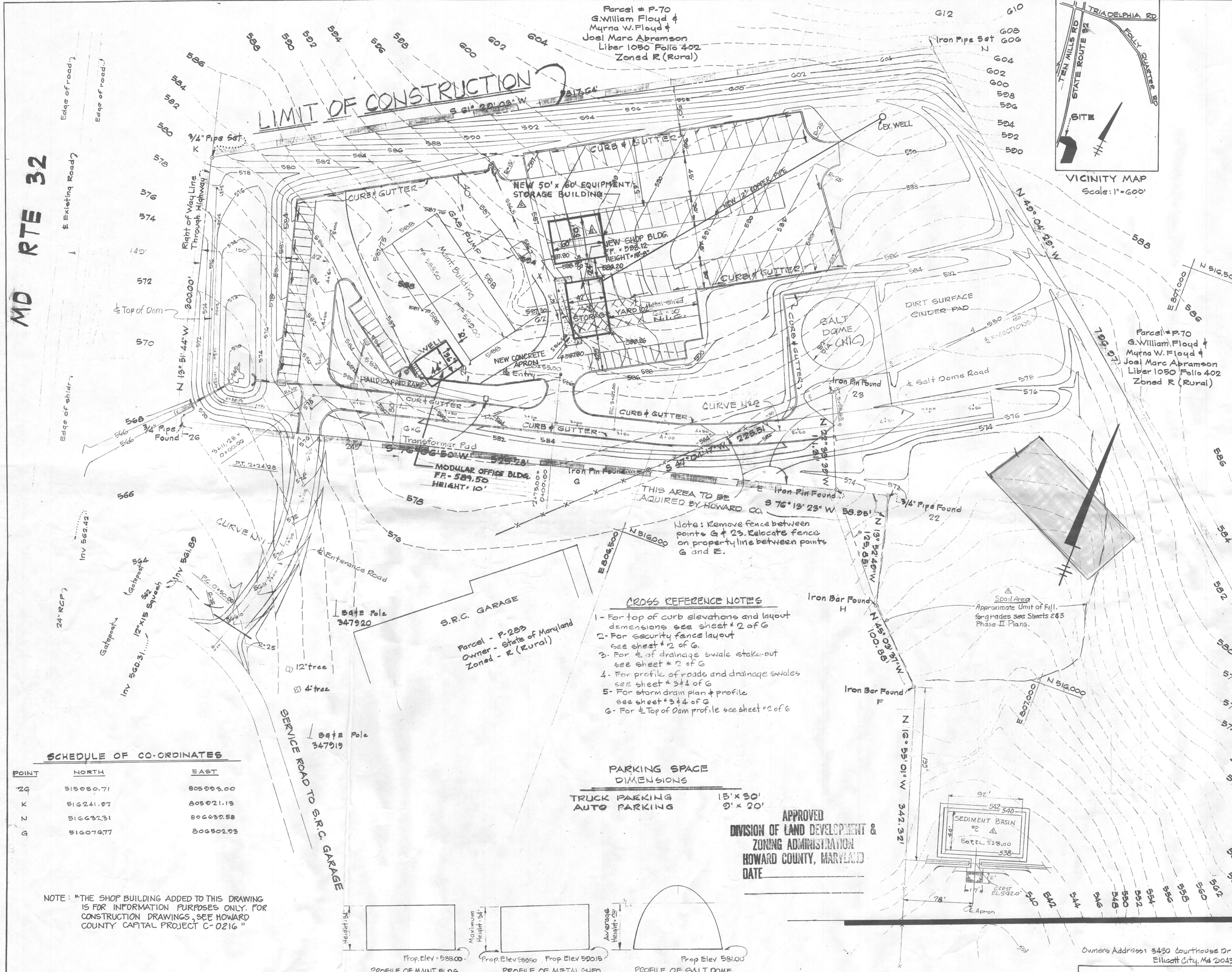
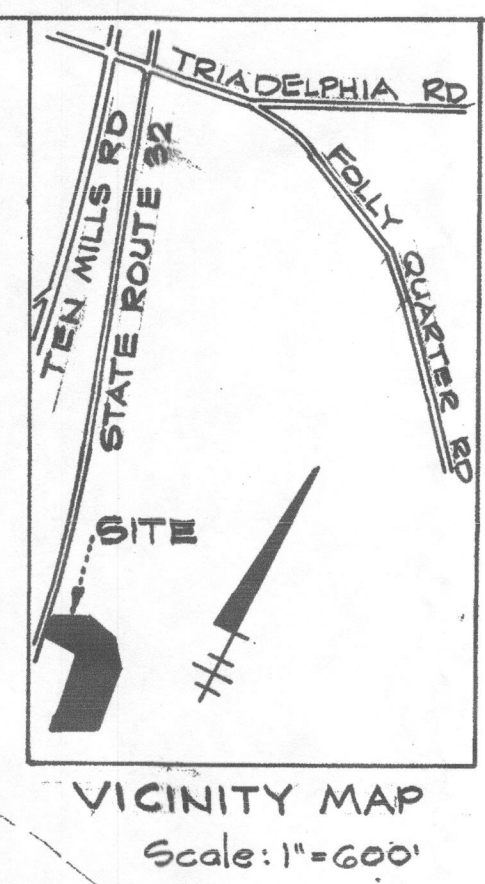
SDP-82-087

MD RTE 32

Parcel # P-70  
G. William Floyd &  
Myrna W. Floyd &  
Joel Marc Abramson  
Liber 1050 Folio 402  
Zoned R (Rural)

**GENERAL NOTES**

- Area of parcel to be developed with this plan 9.445 Acres Tax map # 28 Parcel # P.10 P.73
- Present zoning R district (Rural).
- Property is recorded in the Howard County land records, Liber 1075 Folio 270
- Parking requirements:
  - A- Use: Office  
Floor area office space = 886 SF  
Parking spaces req'd @ 15 spaces per 200 SF = 5
  - B- Use: Garage  
Floor area garage space = 8714 SF  
Parking spaces req'd @ 1 space per 500 SF = 17
- Number of parking spaces provided = 45
- Building Coverage:
  - A- Maintenance building area = 2600 SF
  - B- Salt storage area = 5281 SF
  - C- Storage shed area = 1020 SF
  - D- Total building coverage = 16,801 SF or 0.386 Acres or 4.89% of site.
- All paving and storm drains shall be constructed in accordance with the latest editions of the M.S.H.A. Specifications and the Howard County "Storm Drain Design Manual" and "Details For Construction"
- Types of structures are those given in the standard storm drain details of Howard County.
- The contractor shall notify Miss Utility at 550-0100 three days prior to the beginning of construction.
- The contractor shall notify the Howard County Construction Inspection/Survey Division at 992-2418 twenty four hours prior to the beginning of construction.
- Bench marks: 3/4" Pipe \* 2G top elev = 563.00  
3/4" Pipe \* N top elev = 606.01
- METAL SHED AND SALT DOME STRUCTURES ARE NOT IN CONTRACT. GRADING AND PAVING ARE TO BE DONE AS IF STRUCTURES ARE SHOWN.



**CROSS REFERENCE NOTES**

- For top of curb elevations and layout dimensions see sheet # 2 of G
- For security fence layout see sheet # 2 of G.
- For E. of drainage swale stake-out see sheet # 2 of G
- For profile of roads and drainage swales see sheet # 3#4 of G
- For storm drain plan & profile see sheet # 3#4 of G
- For E. Top of Dam profile see sheet # 2 of G

**PARKING SPACE DIMENSIONS**

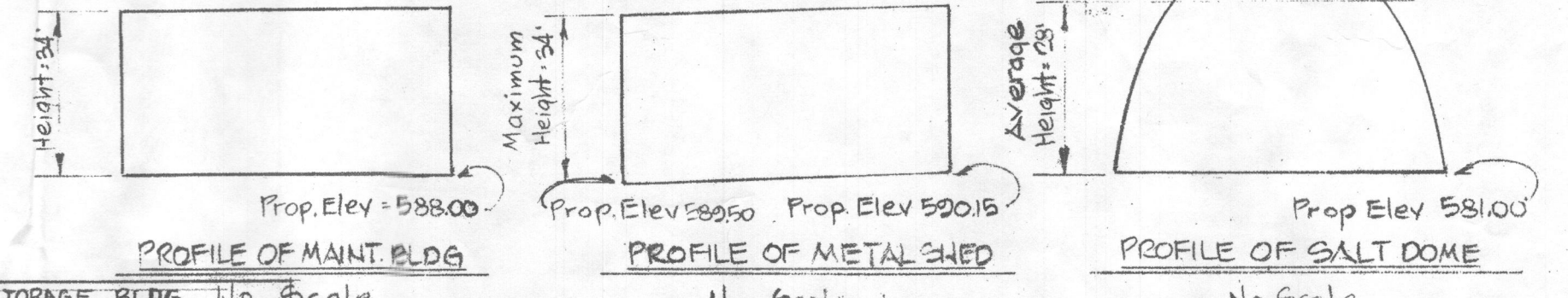
TRUCK PARKING 15' x 30'  
AUTO PARKING 9' x 20'

APPROVED  
DIVISION OF LAND DEVELOPMENT &  
ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE

**SCHEDULE OF CO-ORDINATES**

POINT	NORTH	EAST
2G	515050.71	805003.00
K	516241.97	805021.13
N	516632.31	806630.58
G	516076.77	806502.93

NOTE: "THE SHOP BUILDING ADDED TO THIS DRAWING IS FOR INFORMATION PURPOSES ONLY. FOR CONSTRUCTION DRAWINGS, SEE HOWARD COUNTY CAPITAL PROJECT C-0216"



DATE	BY	REVISIONS
9-28-81	A	ADDED NEW EQUIPMENT/STORAGE BLDG. No Scale
7-6-81	A	ADDED NEW OFFICE BLDG., BY BUR. OF HWYS
10-17-80	A	ADDED NEW SHOP BLDG., BY WBCM
5-21-82	A	Added Spoil Area & Loc. Sed. Basin #2

TITLE: GRADING PLAN

AREA:

PROJECT: HOWARD CO. CENTRAL MAINT. FACILITY

OWNER/DEVELOPER:  
HOWARD COUNTY  
DEPT. OF PUBLIC WORKS  
GENERAL PROJECTS DIVISION PHONE # 557-3200

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPT.  
*[Signature]* 8-19-82  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*[Signature]* 3-2-82  
PLANNING DIRECTOR DATE  
*[Signature]* 2-5-82  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: FOR STORM DRAINAGE SYSTEMS AND PRIVATE ROADS

HOWARD COUNTY DEPT. OF PUBLIC WORKS  
*[Signature]* 2-5-82  
DIRECTOR DATE

*[Signature]* 2-11-82  
CHIEF, BUREAU OF ENGINEERING DATE

WITZ & ASSOCIATES INC.  
ENGINEERS & SURVEYORS  
7222 KENNEDY RD  
BALTIMORE, MARYLAND 21207

DATE: 2-2-82  
SDP-82-87  
DESIGNED BY: E.M.P.  
DRAWN BY: C.B.T.  
PROJECT NO: C-0114  
DATE: Jan 19, 1982  
SCALE: 1" = 50'  
DRAWING NO. OF G.  
PROFESSIONAL ENGINEER NO. 5255

# FOUNDATION SYSTEM FOR CLEARSPAN STRUCTURE

CONC. FND. FOR 85'X160' CLEARSPAN  
STRUCTURE

CLEARSPAN ORDER NO. 7032939

LOCATION:

4301 ST. RT. 32  
DAYTON, MD 21036  
HOWARD COUNTY

## DRAWING INDEX

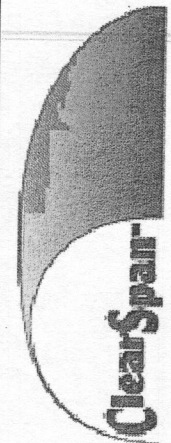
- T1 TITLE SHEET
- N1 GENERAL NOTES
- S1 FOUNDATION PLAN
- S2 ELEVATION VIEWS
- S3 DETAILS
- S4 DETAILS
- S5 STRUCTURE REACTIONS



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

DATE: 3/14/2016 DESIGNED: KGS DRAFTER: KGS

REVISIONS	
DATE	DESCRIPTION
7/1/2016	REVISED AS SHOWN
7/19/2016	ADDED ELEVATION VIEWS



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

TITLE SHEET

FOUNDATION SYSTEM FOR  
CLEARSPAN STRUCTURE

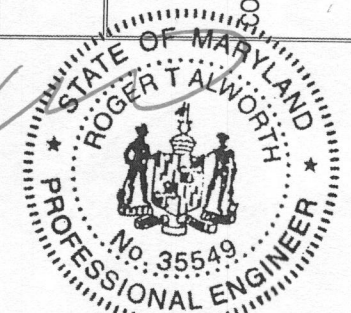
CONC. FND. FOR 85'X160' CLEARSPAN STRUCTURE  
4301 ST. RT. 32  
DAYTON, MD 21036  
HOWARD COUNTY  
CLEARSPAN ORDER NUMBER: 7032939

**COPY**

**RECEIVED**

JUL 26 2016

LICENSES & PERMITS  
DIVISION



Jul 20, 2016

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 35549, Expiration Date: 3-Apr-2018

U1382-351-151

T1

REV  
2

# GENERAL DESIGN NOTES

**GENERAL DESIGN NOTES:**

STRUCTURAL DESIGN IS BASED ON THE INTERNATIONAL BUILDING CODE, 2015 EDITION AND THE ASCE 7-10 STANDARD

**DESIGN LOADS:**

**WIND:**

ULTIMATE WIND SPEED: 115 MPH (3-SEC GUST BASIC WIND SPEED)  
RISK CATEGORY: II  
EXPOSURE: C

GROUND SNOW LOAD = 25 PSF  
SNOW EXPOSURE FACTOR = 0.9  
THERMAL FACTOR = 1.2  
SNOW IMPORTANCE FACTOR = 1.0

ROOF LIVE LOAD = 30 PSF (NON-REDUCIBLE)

**SEISMIC:**

SEISMIC DESIGN CATEGORY: B  
RISK CATEGORY: II  
SEISMIC IMPORTANCE FACTOR: 1.0  
 $S_s = 0.123$       $S_1 = 0.051$   
SITE CLASS: "D"  
 $S_{0.5} = 0.131$       $S_{0.1} = 0.081$

**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 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).
3. ALL STRUCTURAL CONCRETE SHALL HAVE A MIN. 28-DAY STRENGTH OF 4000 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 II PORTLAND CEMENT.
  - 4.4. MAXIMUM SLUMP 5-INCHES MAX WATER CEMENT RATIO 0.50
  - 4.5. 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 DESIGNED BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 4000 PSF PER THE PROJECT SOILS REPORT:
 

GEOTECHNICAL ENGINEER: GEOTECH ENGINEERS, INC.  
REPORT DATE: DECEMBER 10, 2015  
JOB NO: 352197  
ADDENDUM NO. 1: MARCH 8, 2016
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.
6. SOILS TO BE PREPARED PER THE GEOTECHNICAL REPORT PRIOR TO CONSTRUCTION. CLEAR, OVEREXCAVATE, SCARIFY, INSPECT, & RECOMPACT PER GEOTECHNICAL REPORT.
7. STRUCTURAL FILL SHALL BE PREPARED AND INSTALLED PER THE REFERENCED GEOTECHNICAL REPORT.

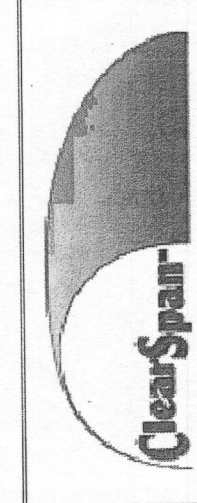
**SPECIAL INSPECTIONS / QUALITY ASSURANCE:**

1. SPECIAL INSPECTIONS SHALL BE REQUIRED FOR:
  - CONCRETE MIX DESIGN & STRENGTH
  - FORMWORK SHAPE, LOCATION, & DIMENSIONS
  - REINFORCEMENT TYPE & PLACEMENT
  - FOUNDATION EXCAVATION
  - ANCHORAGE TYPE & PLACEMENT
  - PERIODIC INSPECTION OF ALL POST-INSTALLED ANCHORAGE TO CONCRETE
- a. THE OWNERS SHALL EMPLOY SPECIAL INSPECTORS WHO SHALL PROVIDE ADDITIONAL INSPECTIONS DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 17 OF THE CODE.
- 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 ENGINEERING 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 DURING CONSTRUCTION APPROXIMATELY ONCE PER WEEK.



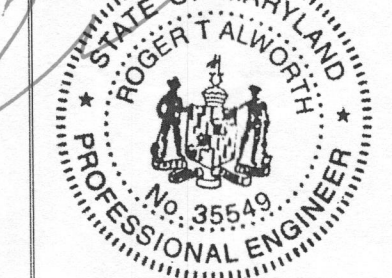
9138 S. State St., Suite 101 (801) 990-1775  
Sandy, UT 84070 (801) 990-1776 FAX  
www.vectorse.com

DATE: 3/14/2016	DESIGNED: KGS	DRAFTER: KGS
REVISIONS		
DATE	DESCRIPTION	
7/1/2016	REVISED AS SHOWN	
7/19/2016	ADDED ELEVATION VIEWS	



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

GENERAL NOTES  
FOUNDATION SYSTEM FOR  
CLEARSPAN STRUCTURE  
CONC. FND. FOR 85'X160' CLEARSPAN STRUCTURE  
4301 ST. RT. 32  
DAYTON, MD 21036  
HOWARD COUNTY  
CLEARSPAN ORDER NUMBER: 703299



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Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 35549, Expiration Date: 3-Apr-2018

U1382-351-151

<b>N1</b>	REV <b>2</b>
-----------	-----------------

- FOUNDATION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH STEEL BUILDING DRAWINGS PRIOR TO CONSTRUCTION.
  2. SEE STEEL BUILDING DRAWINGS FOR ALL INFORMATION PERTAINING TO THE STEEL BUILDING.
  3. ALL FOUNDATION PEDESTALS AND FOOTINGS SHALL BE CENTERED BELOW THE TRUSS BASE PLATES, U.N.O.
  4. WALL CONTROL JOINTS (C.J.) TO BE LOCATED AT APPROXIMATELY 30' O.C. CONTROL JOINTS TO BE INSTALLED PER DTL 5/S4.
  5. ELEVATION MARKERS REFERENCE NOMINAL ELEVATIONS. REFER TO CIVIL PLAN FOR ACTUAL ELEVATIONS.

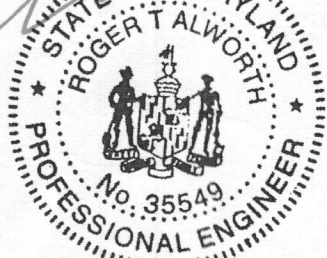
DATE: 3/14/2016 DESIGNED: KGS DRAFTER: KGS

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DATE	DESCRIPTION
7/1/2016	REVISED AS SHOWN
7/19/2016	ADDED ELEVATION VIEWS



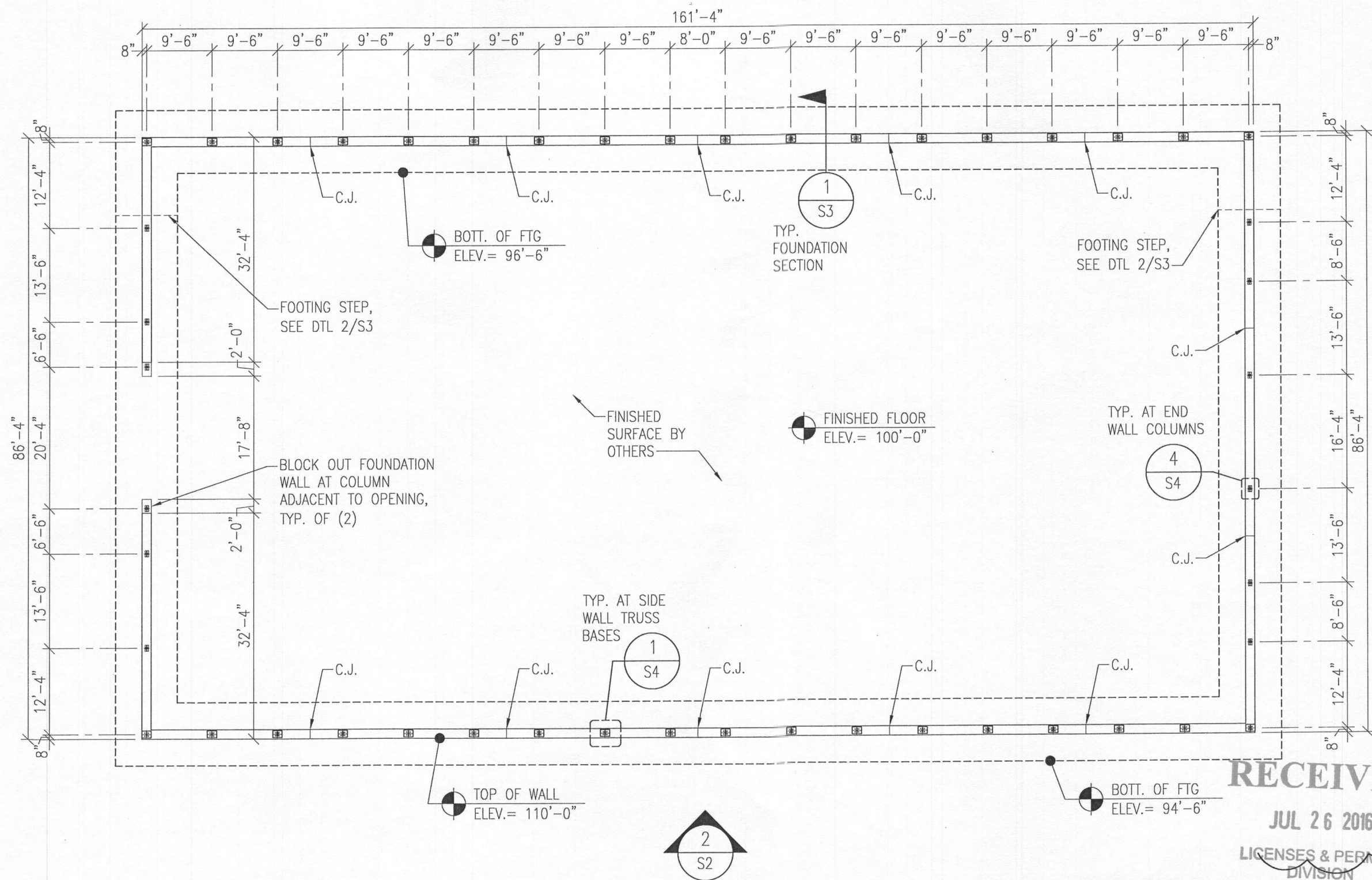
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 Dyersville, IA 52040  
 www.esapco.com

**FOUNDATION PLAN**  
 FOUNDATION SYSTEM FOR  
 CLEARSPAN STRUCTURE  
 CONCR. FND. FOR 85'X160' CLEARSPAN STRUCTURE  
 4301 ST. RT. 32  
 DAYTON, MD 21036  
 HOWARD COUNTY  
 CLEARSPAN ORDER NUMBER: 7022939



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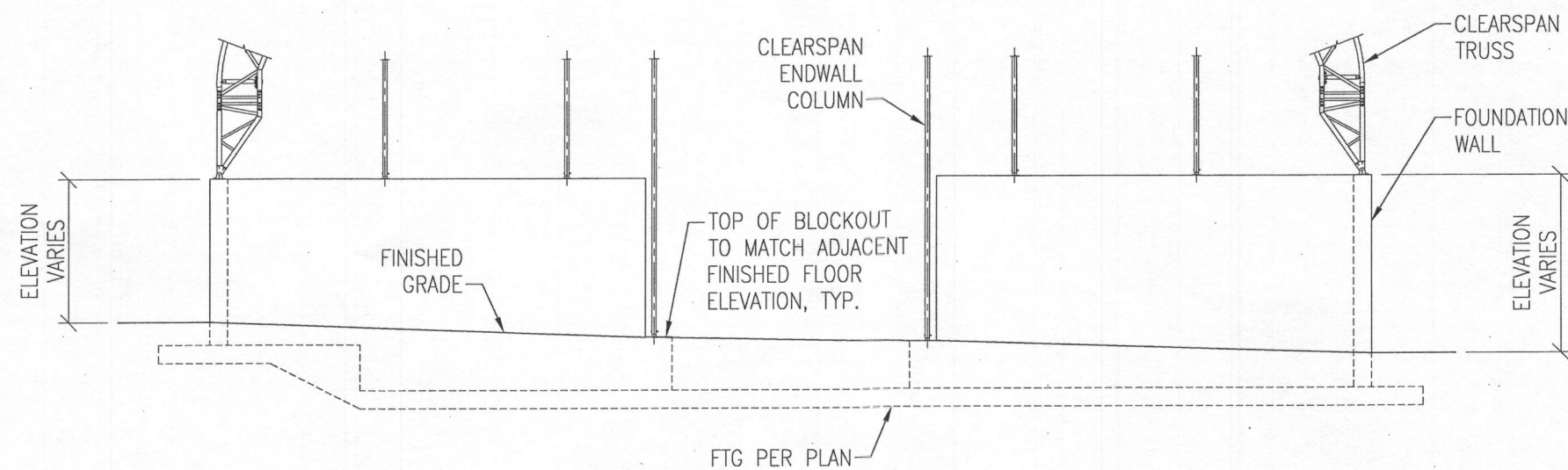
U1382-351-151  
**S1**  
 REV 2



**FOUNDATION PLAN**  
 3/32'-1'-0" 1

DATE: 3/14/2016 DESIGNED: KGS DRAFTER: KGS

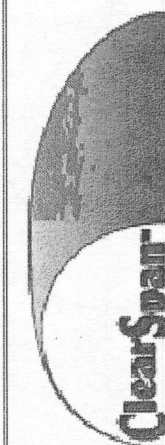
REVISIONS	
DATE	DESCRIPTION
7/11/2016	REVISED AS SHOWN
7/19/2016	ADDED ELEVATION VIEWS



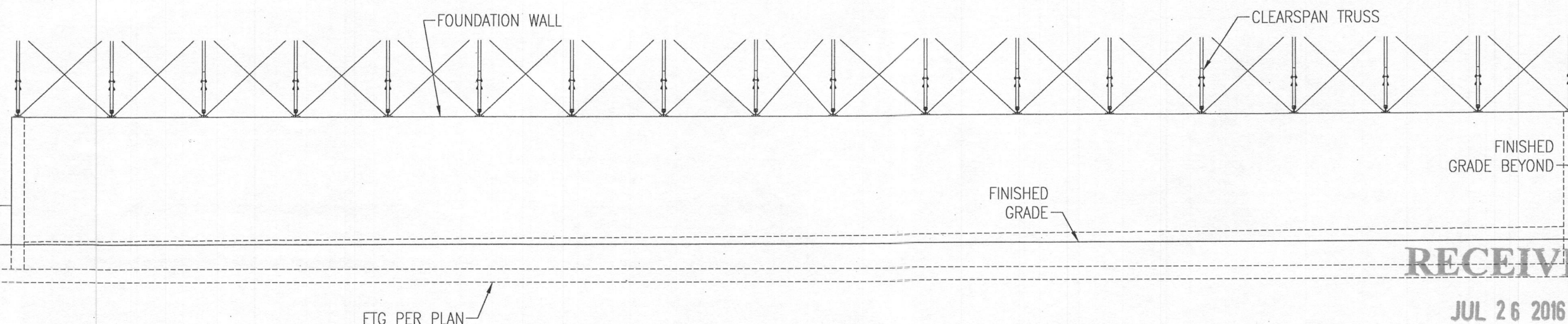
**FRONT ENDWALL ELEVATION**

N.T.S.

1



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**SIDEWALL ELEVATION**

N.T.S.

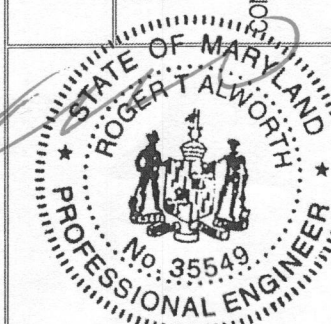
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ELEVATION VIEWS

FOUNDATION SYSTEM FOR  
CLEARSPAN STRUCTURE

CONC. FND. FOR 85'X160' CLEARSPAN STRUCTURE

4301 ST. RT. 32  
DAYTON, MD 21036  
HOWARD COUNTY  
CLEARSPAN ORDER NUMBER: 7032939



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S2

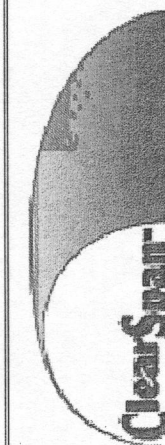
REV  
2

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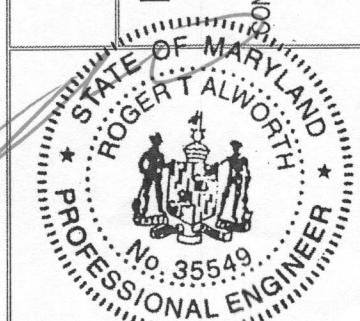
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DIVISION

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DATE	DESCRIPTION
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**DETAILS**  
FOUNDATION SYSTEM FOR  
CLEARSPAN STRUCTURE  
CONC. FND. FOR 85X160' CLEARSPAN STRUCTURE  
4301 ST. RT. 32  
DAYTON, MD 21036  
HOWARD COUNTY  
CLEARSPAN ORDER NUMBER: 702939

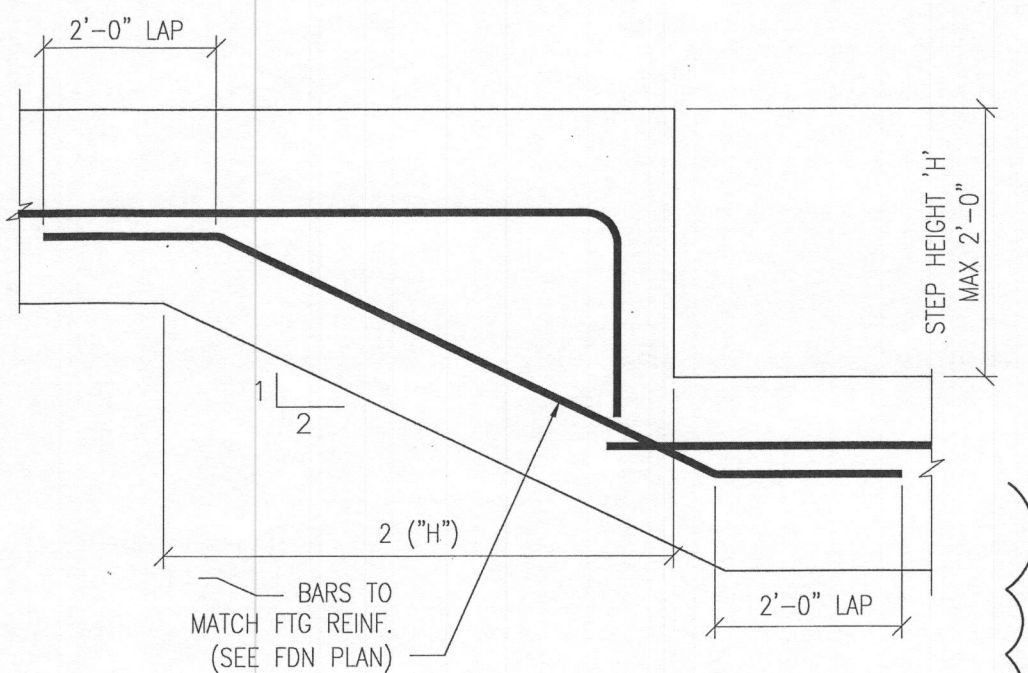


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**S3** REV 2

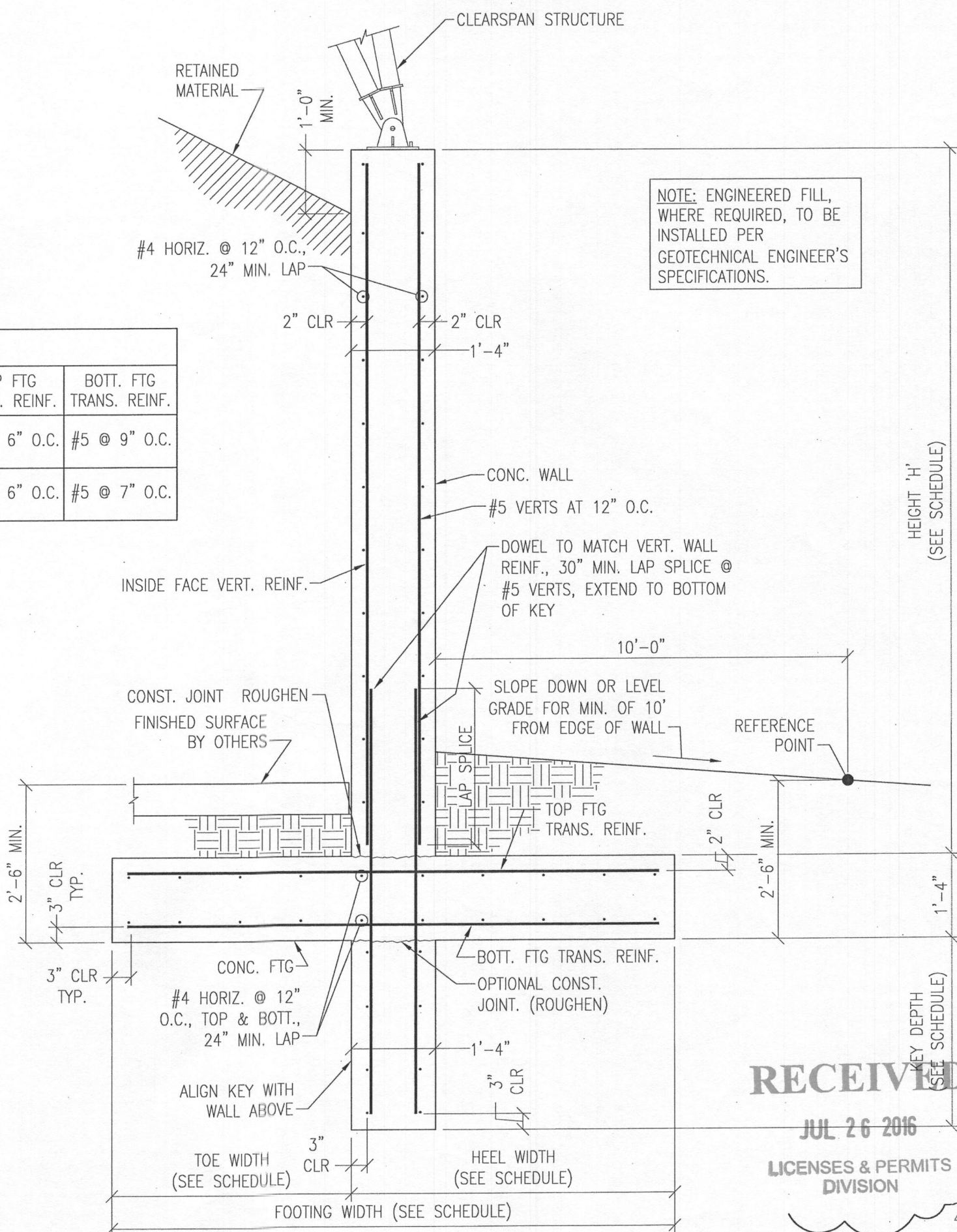
FOUNDATION WALL SCHEDULE							
HEIGHT 'H'	TOE WIDTH	HEEL WIDTH	FTG WIDTH	KEY DEPTH	INSIDE FACE VERTICAL REINF.	TOP FTG TRANS. REINF.	BOTT. FTG TRANS. REINF.
12'-2"	3'-10"	5'-2"	9'-0"	3'-0"	#5 @ 6" O.C.	#5 @ 6" O.C.	#5 @ 9" O.C.
14'-2"	4'-1"	5'-5"	9'-6"	3'-8"	#5 @ 4" O.C.	#5 @ 6" O.C.	#5 @ 7" O.C.



NOTE: SEE FDN PLAN FOR FTG STEP LOCATION

**FOOTING STEP**

N.T.S. 2



NOTE: ENGINEERED FILL, WHERE REQUIRED, TO BE INSTALLED PER GEOTECHNICAL ENGINEER'S SPECIFICATIONS.

**TYPICAL FOUNDATION SECTION @ SIDE WALLS**

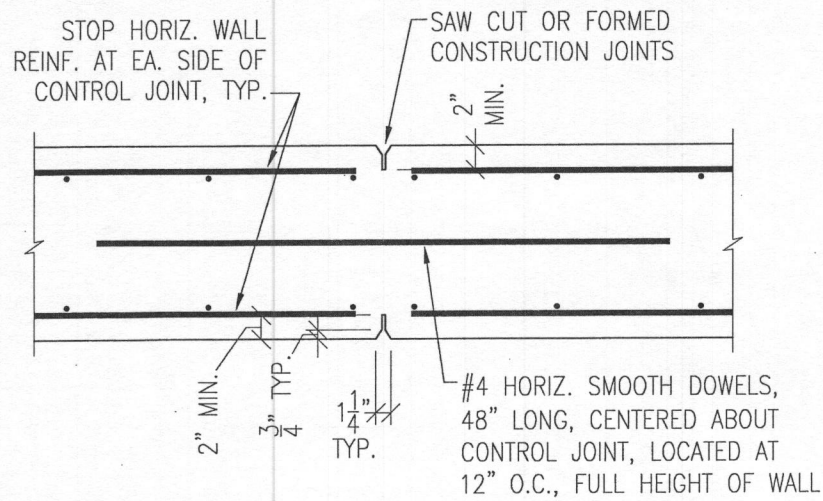
N.T.S. 1

DATE: 3/14/2016 DESIGNED: KGS DRAFTER: KGS

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DATE	DESCRIPTION
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7/19/2016	ADDED ELEVATION VIEWS

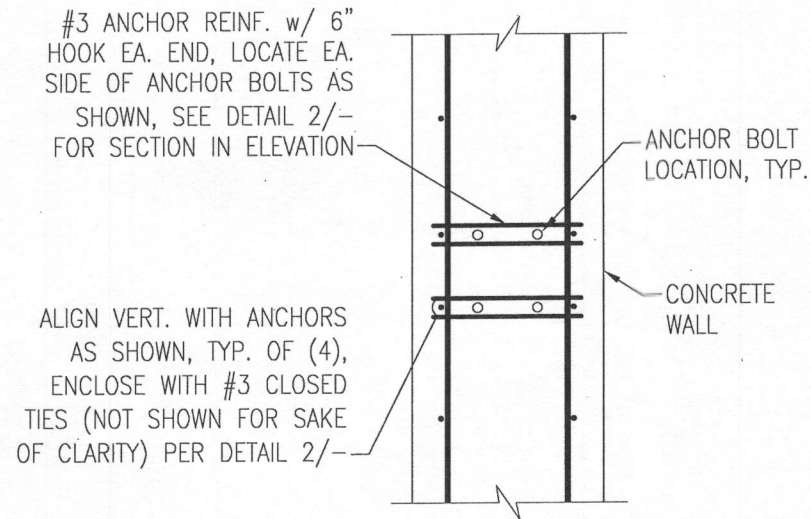


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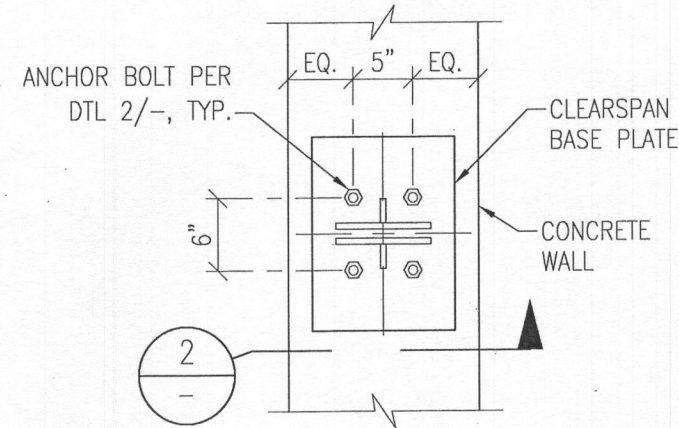
**WALL CONTROL JOINT**

N.T.S. **5**



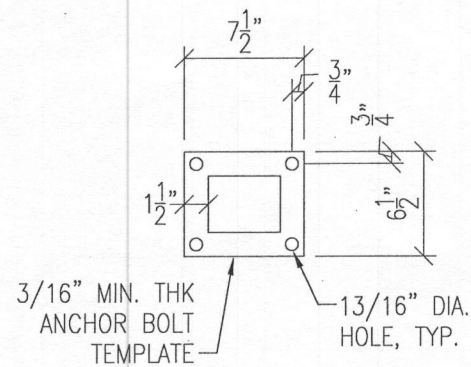
**ANCHORAGE REINFORCEMENT (PLAN VIEW)**

N.T.S. **3**



**TRUSS BASE ANCHORAGE**

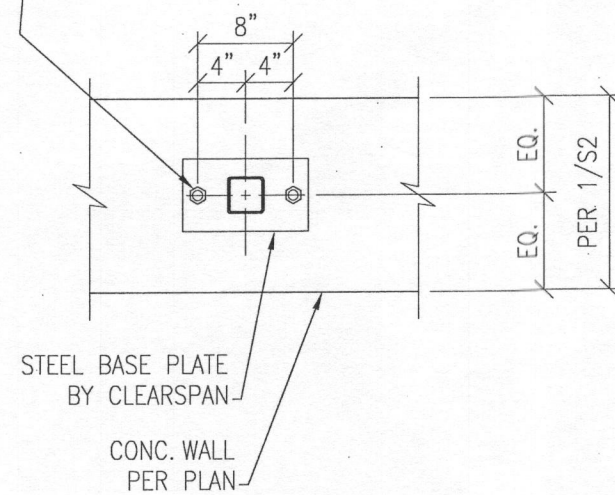
N.T.S. **1**



**ANCHOR BOLT TEMPLATE**

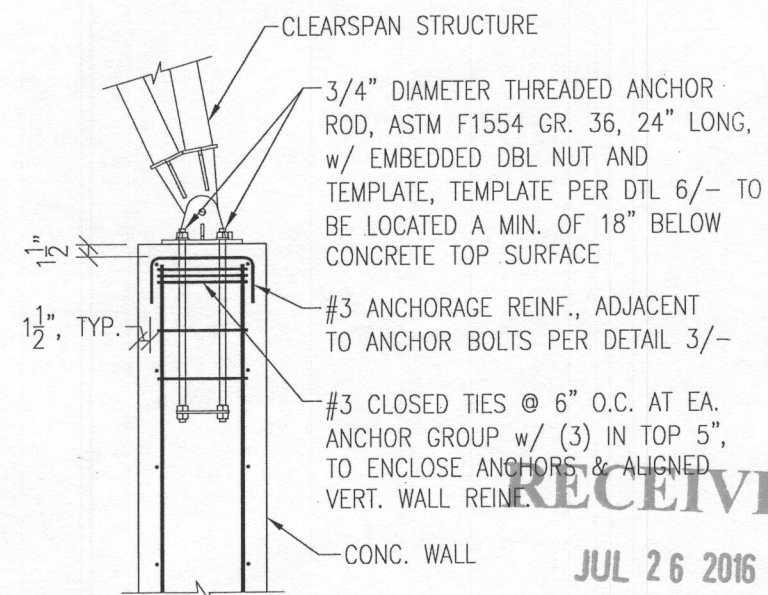
N.T.S. **6**

(2) 3/4" DIA. ASTM F1554 (36 KSI) OR HILTI 'HAS' THREADED ANCHOR RODS, 12" MIN. EMBEDMENT, INSTALL IN 7/8" DIAMETER HOLE FILLED WITH HILTI HIT-HY 200 EPOXY, INSTALL PER MFR'S SPECIFICATIONS



**COLUMN BASE ANCHORAGE @ END WALL**

N.T.S. **4**



**SECTION AT TRUSS BASE ANCHORAGE**

N.T.S. **2**

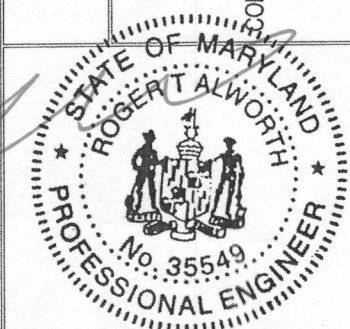
**DETAILS**

FOUNDATION SYSTEM FOR  
 CLEARSPAN STRUCTURE

CONC. FND. FOR 65X160' CLEARSPAN STRUCTURE

4801 ST. RT. 32  
 DAYTON, MD 21036  
 HOWARD COUNTY

CLEARSPAN ORDER NUMBER: 7032939



Jul 20, 2016

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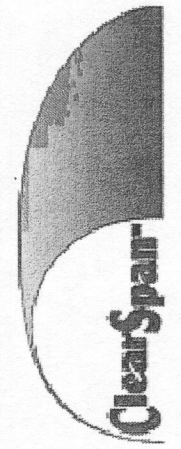
U1382-351-151

**S4**

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**2**

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REVISIONS		
DATE	DESCRIPTION	
7/1/2016	REVISED AS SHOWN	
7/19/2016	ADDED ELEVATION VIEWS	

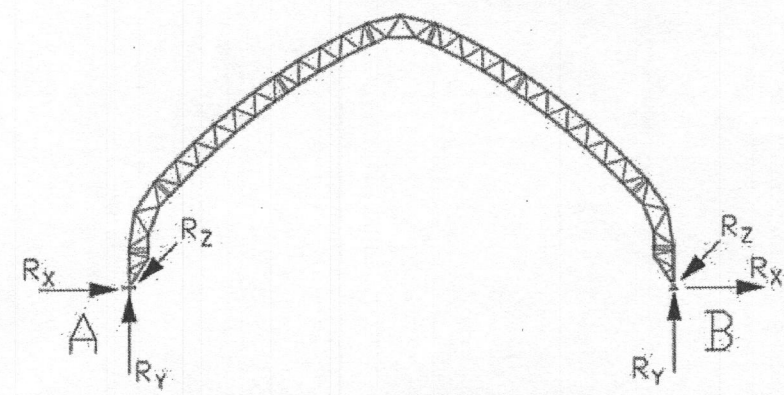


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 Dyersville, IA 52040  
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*See notes below		UNFACTORED BASE REACTIONS TO CONSIDER AT TYPICAL BASES			
Load Case		Side A		Side B	
		Rx (kip)	Ry (kip)	Rx (kip)	Ry (kip)
Dead Load, Self Weight	DL	0.55	1.34	-0.55	1.34
Dead Load, Collateral	EL	0.29	0.50	-0.29	0.50
Snow Load, Balanced	S	3.03	5.08	-3.03	5.08
Snow Load, Unbalanced	Su	2.55	3.09	-2.55	4.94
Wind Load	Wx	-7.31	-7.97	-2.97	-8.56
Wind Load	Wx2	-4.77	5.50	-5.51	4.91
Wind Load	Wz2	-2.55	-16.31	4.26	-15.67
Wind Load	Wz2	-0.02	-2.83	1.72	-2.20
Roof Live Load	Lr	6.66	12.11	-6.66	12.11
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	-3.72	-17.67	1.21	5.18	-16.76	1.12
Dead Load, Cable (Wz)	DL	0.02	0.09		-0.02	0.09	
Wind Load	Wz2	-3.43	6.78	0.02	-4.32	3.94	0.01
Dead Load, Cable (Wz2)	DL	0.05	0.14		-0.05	0.14	

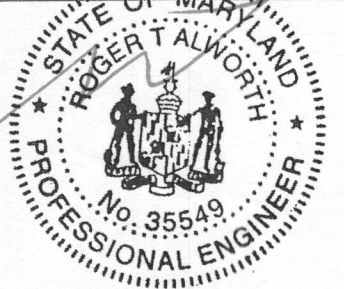
V2.4



CONTROLLING ASD COMBINATIONS TO CONSIDER AT TYPICAL BASES			
Max Gravity (kip)	13.96	DL + EL + Lr	
Max Uplift (kip)	-8.98	0.6DL + 0.6Wz	
Max Inward Lateral (kip)	-4.05	0.6DL + 0.6Wx	
Max Outward Lateral (kip)	-8.32	DL + EL + 0.75Lr + 0.45Wx2	

ADDITIONAL CONTROLLING ASD COMBINATIONS TO CONSIDER AT BASES WITH CABLE ATTACHED			
Max Gravity (kip)	14.12	DL + EL + 0.75Lr + 0.45Wz2	
Max Uplift (kip)	-9.74	0.6DL + 0.6Wz	
Max Inward Lateral (kip)	-4.04	0.6DL + 0.6Wx	
Max Outward Lateral (kip)	-8.34	DL + EL + 0.75Lr + 0.45Wx2	

**STRUCTURE REACTIONS**  
 FOUNDATION SYSTEM FOR  
 CLEARSPAN STRUCTURE  
 CONC. FND. FOR 85X160' CLEARSPAN STRUCTURE  
 4301 ST. RT. 32  
 DAYTON, MD 21086  
 HOWARD COUNTY  
 CLEARSPAN ORDER NUMBER: 7032839



Professional Engineer  
 No. 35549  
 Jul 20, 2016  
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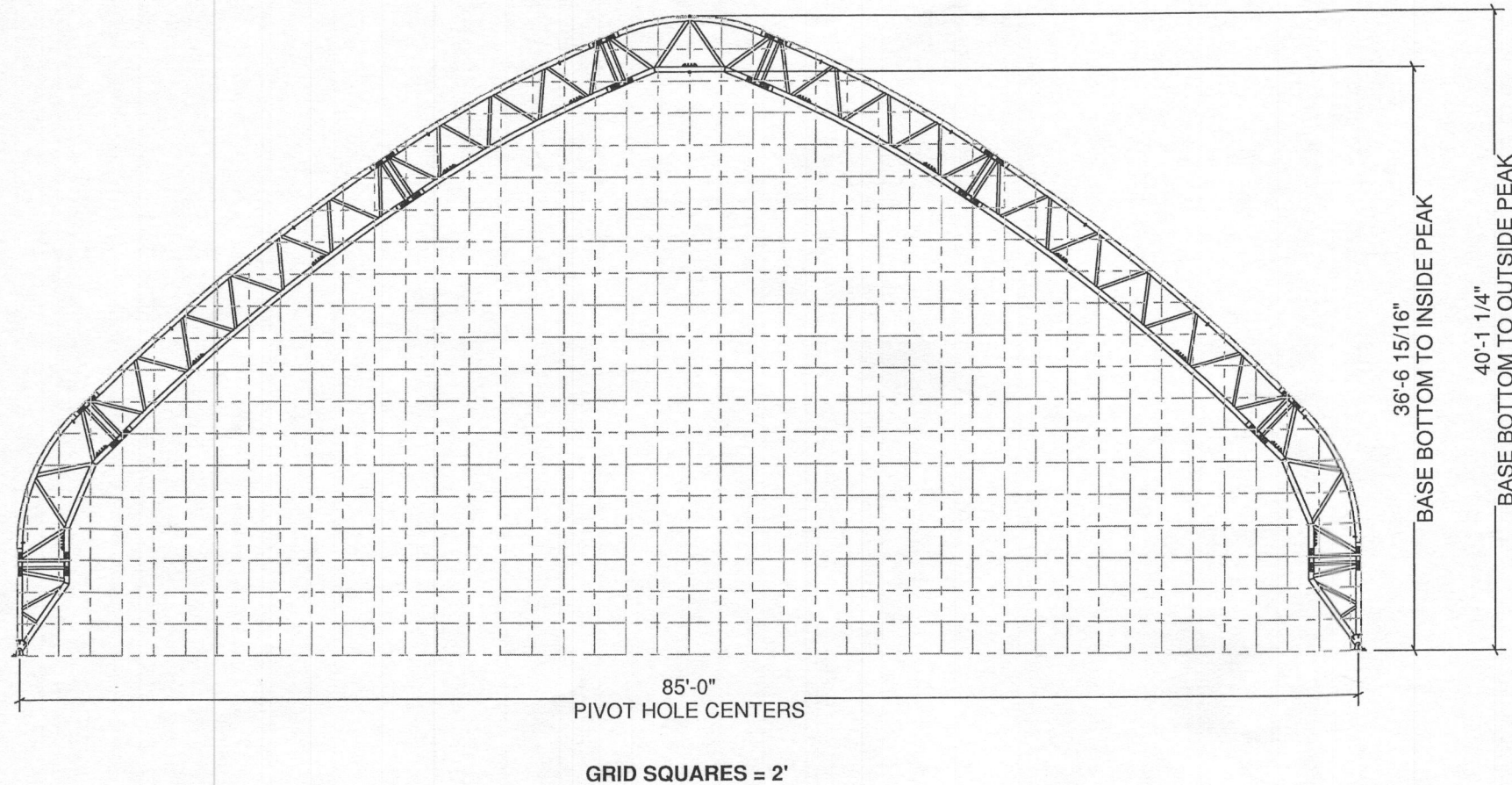
U1382-351-151

**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.



**T085GBMF021160**

85x160 GBM TRUSS FRAME

DEVELOPED BY  
  
 A DIVISION OF  
 ENGINEERING SERVICES & PRODUCTS CO.  
 1440 18TH AVENUE SW  
 OYERSVILLE, IA 52040  
 P: 563.875.8113  
 F: 563.875.2317  
 WWW.ESAPCO.COM

ORDER #:  
**7032939**

CUSTOMER #:  
**6764428**

**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 - L3] .....FRONT ENDWALL: EW085GBF0531D
- [M1 - M2].....BACK ENDWALL: EW085GBF0480D

**VECTOR**  
 ENGINEERS

9138 S. STATE STREET, SUITE 101 (801) 990-1775  
 SANDY, UTAH 84070 (801) 990-1776 FAX

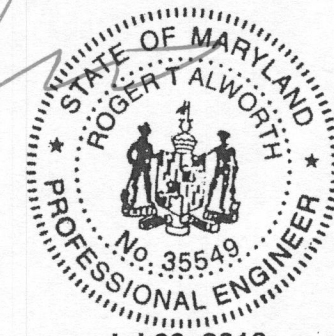
PROJECT NUMBER: U1382-351-162

CUSTOMER INFORMATION: DEPARTMENT OF PUBLIC WORKS 8250 BENDIX RD COLUMBIA, MD 21045-1832	STRUCTURE SKU #: <b>T085GBMF021160</b>	STRUCTURE SIZE: <b>85' X 160'</b>	STRUCTURE DESCRIPTION: <b>85X160 GBM TRUSS FRAME</b>
	CONTACT PHONE: <b>410-382-7098</b>	CUSTOMER CONTACT: <b>JOHN CAPPELLETTI</b>	SHEET TITLE: <b>COVER SHEET</b>

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DRAWING DETAILS			
DRAWN BY: BHB	CREATION DATE: 2/18/2016	REVISIONS:	
NO.	BY:	REVISION DATE:	
1	SMN	6/24/2016	
2			
3			
4			
NOT TO SCALE		SHEET SIZE: 11X17	
SHEET: <b>A1</b>			

**SITE LOCATION AND BUILDING DESCRIPTION:**

**SITE LOCATION:** 4301 ST. RT. 32  
DAYTON, MD 21036  
HOWARD COUNTY

**BUILDING SIZE:** 85' X 160': 13,600 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 INTERNATIONAL BUILDING CODE, 2015 EDITION.

2. DESIGN LOADS:

- A. FLOOR LIVE LOAD: N/A
- B. ROOF LIVE LOAD: 30 PSF (NON-REDUCIBLE)
- C. ROOF SNOW LOADS:

**Pg** (GROUND SNOW LOAD) = 25 PSF  
**Ce** (SNOW EXPOSURE FACTOR) = 0.9 (FULLY EXPOSED TERRAIN CATEGORY C)  
**Ct** (THERMAL FACTOR) = 1.2 (COLD ROOF)  
**Is** (SNOW IMPORTANCE FACTOR) = 1.0 (RISK CATEGORY II)  
**Pf** (FLAT ROOF SNOW LOAD) = 18.9 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: (MAIN WIND FORCE RESISTING SYSTEM)

**V** (ULTIMATE WIND SPEED) = 115 MPH  
**Kd** (WIND DIRECTIONALITY FACTOR) = 0.85  
**Kzt** (WIND TOPOGRAPHIC FACTOR) = 1.0 (ASSUMED)  
**EXP** (EXPOSURE CATEGORY) = C  
**GCpi** (INT. PRES. COEFF.) = +/-0.55 (PARTIALLY 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: (EQUIV. LATERAL FORCE METHOD)  
SEISMIC DESIGN CATEGORY = B  
RISK CATEGORY = II, SEISMIC IMPORTANCE FACTOR = 1.0  
Ss = 0.123 g, Si = 0.051 g, SITE CLASS: D  
Sds = 0.131 g, Sd1 = 0.081 g  
Cs = 0.044, R = 3, SEISMIC BASE SHEAR = 2.72 KIPS  
BASIC SEISMIC-FORCE-RESISTING SYSTEM = STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE.

3. THE TRUSSES ARE DESIGNED TO ACCOMMODATE LIMITED ADDITIONAL WEIGHT. ADDITIONAL LOADS, SUCH AS FOR LIGHTING, HEATING, AND VENTILATING EQUIPMENT, SHALL NOT EXCEED 1,000 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.
- 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."

**BOLTS:**

1. 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.

**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.

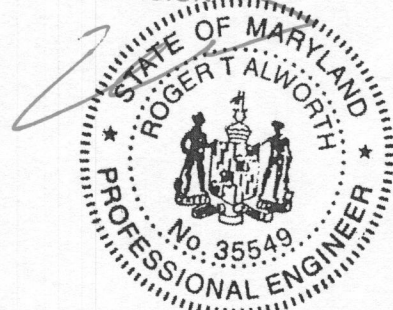
BOX BOLT DIA.	HOLE DIA.	INSTALLATION TORQUE
1/4"	1/2"	14 FT-LB
5/16"	5/8"	18 FT-LB
3/8"	3/4"	33 FT-LB
1/2"	13/16"	59 FT-LB
5/8"	1-1/8"	140 FT-LB
3/4"	1-3/8"	221 FT-LB

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

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ORDER #: 7032939

CUSTOMER #: 6764428

**VECTOR** ENGINEERS

9138 S. STATE STREET, SUITE 101 (801) 990-1775  
SANDY, UTAH 84070 (801) 990-1776 FAX

PROJECT NUMBER: U1382-351-162

STRUCTURE SKU #: T085GBMF021160	STRUCTURE SIZE: 85' X 160'	STRUCTURE DESCRIPTION: 85X160 GBM TRUSS FRAME
CUSTOMER INFORMATION: DEPARTMENT OF PUBLIC WORKS 9250 BENDIX RD. COLUMBIA, MD 21045-1832	CONTACT PHONE: 410-382-7098	CUSTOMER CONTACT: JOHN CAPPELLETTI
SHEET TITLE: GENERAL NOTES		

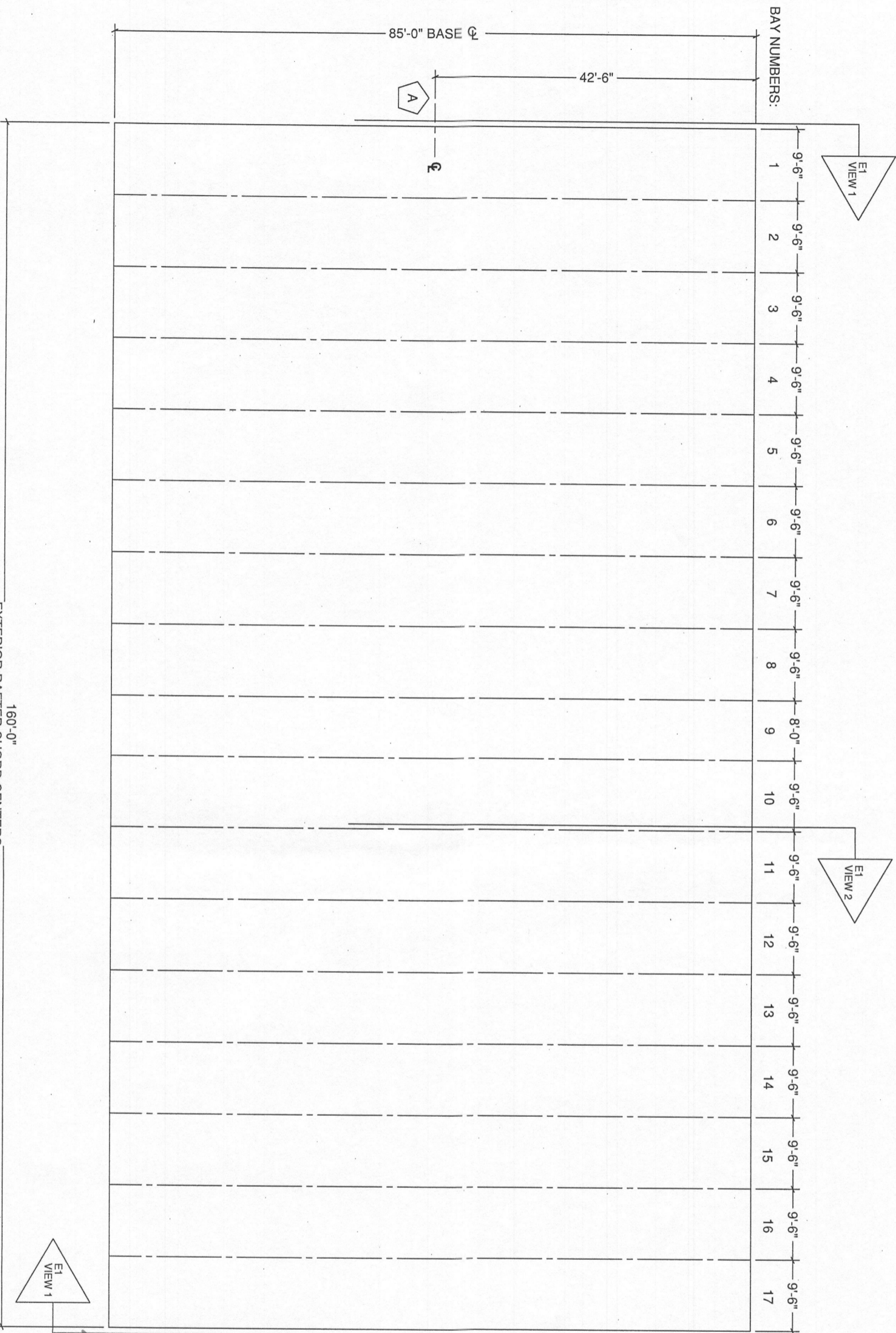
DRAWING DETAILS			
DRAWN BY: BHB	CREATION DATE: 2/18/2016		
REVISIONS:			
NO.	BY:	REVISION DATE:	
1	SMN	6/24/2016	
2			
3			
4			
NOT TO SCALE		SHEET SIZE: 11X17	
SHEET: B1			

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

DOOR CALL-OUT	DOOR SIZE
A	20'-0" X 20'-0" OPENING

LEFT SIDE - SEE SHEET [F1] FOR ELEVATION VIEW

FRONT ENDWALL: EW085GBF0531D  
SEE SHEET [L1] FOR ELEVATION VIEW



RIGHT SIDE - SEE SHEET [F1] FOR ELEVATION VIEW

EXTERIOR RAFTER CHORD CENTERS

160'-0"

BACK ENDWALL: EW085GBF0480D  
SEE SHEET [M1] FOR ELEVATION VIEW

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4	
NOT TO SCALE	
SHEET SIZE: 11X17	
SHEET:	
C1	

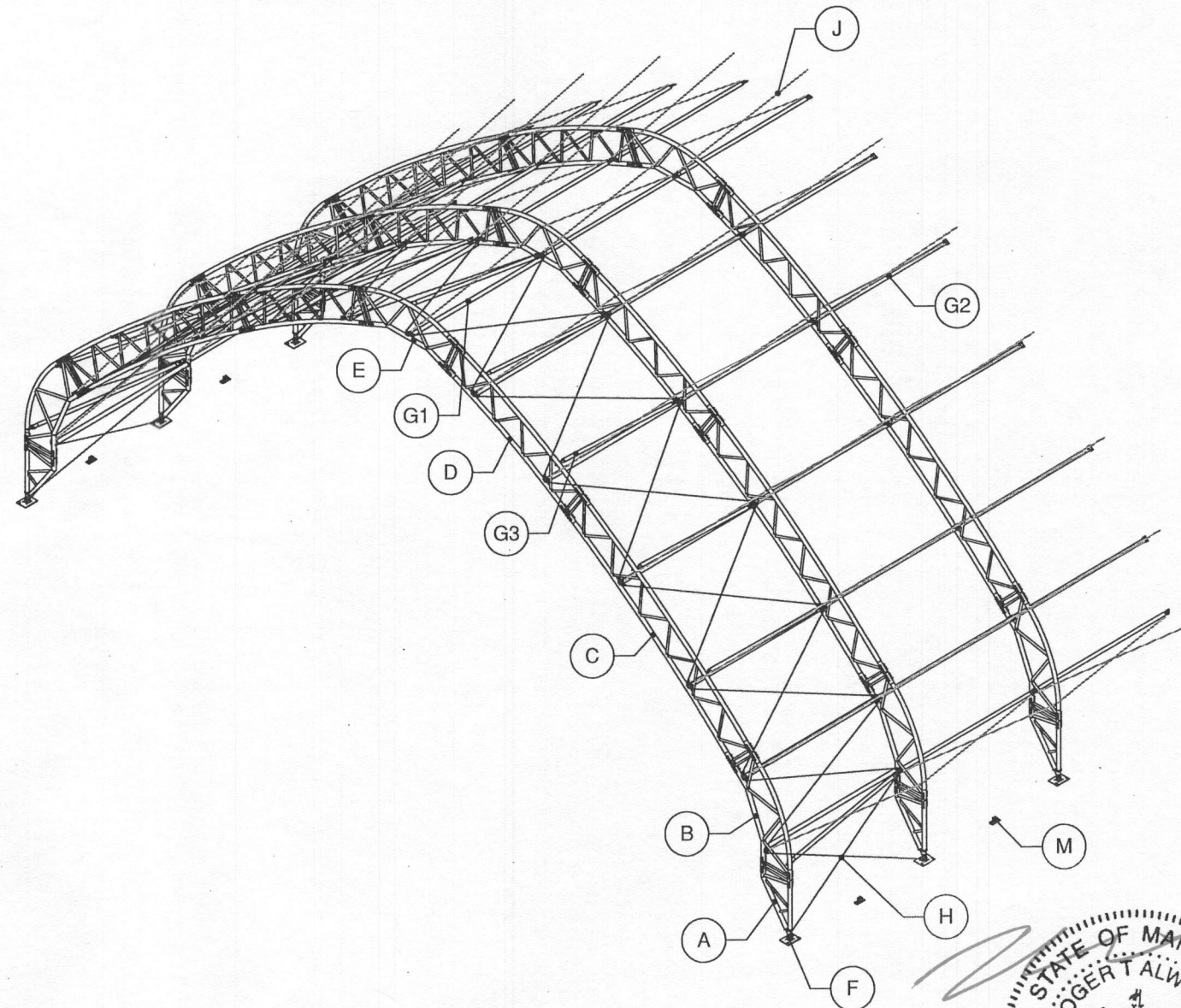
CUSTOMER INFORMATION: DEPARTMENT OF PUBLIC WORKS 9250 BENDIX RD COLUMBIA, MD 21045-1832		STRUCTURE SKU #: T085GBMF021160
CUSTOMER CONTACT: JOHN CAPPELLETTI	CONTACT PHONE: 410-382-7098	STRUCTURE SIZE: 85' X 160'
SHEET TITLE: BUILDING PLAN VIEW		STRUCTURE DESCRIPTION: 85x160 GBM TRUSS FRAME

**VECTOR ENGINEERS**  
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SANDY, UTAH 84070 (801) 990-1776 FAX  
PROJECT NUMBER: U1382-351-162

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ORDER #: 70322939  
CUSTOMER #: 6764428

ITEM	DESCRIPTION	MATERIAL
A	SUPPORT BASE	
	OUTER CHORD	GALV. RND. STEEL TUBE - $\phi$ 4.0" - 7 GA
	INNER CHORD	GALV. RND. STEEL TUBE - $\phi$ 4.0" - 7 GA
	WEB (STRAIGHT)	GALV. RND. STEEL TUBE - $\phi$ 1.90" - 14 GA
	WEB (ANGLED)	GALV. RND. STEEL TUBE - $\phi$ 1.9", 2.375" - 14 GA
	PIVOT PLATE (CHORD)	STEEL PLATE, 1/2" THICK
	PIVOT PLATE (ROUND)	STEEL PLATE, 1/2" THICK
B&E	SEGMENT	
	OUTER CHORD	GALV. RND. STEEL TUBE - $\phi$ 4.0" - 7 GA
	INNER CHORD	GALV. RND. STEEL TUBE - $\phi$ 4.0" - 7 GA
	WEB (STRAIGHT)	GALV. RND. STEEL TUBE - $\phi$ 1.90" - 14 GA
	WEB (ANGLED)	GALV. RND. STEEL TUBE - $\phi$ 2.375" - 14 GA
C&D	SEGMENT	
	OUTER CHORD	GALV. RND. STEEL TUBE - $\phi$ 4.0" - 10 GA
	INNER CHORD	GALV. RND. STEEL TUBE - $\phi$ 4.0" - 10 GA
	WEB (STRAIGHT)	GALV. RND. STEEL TUBE - $\phi$ 1.90" - 14 GA
	WEB (ANGLED)	GALV. RND. STEEL TUBE - $\phi$ 1.90" - 14 GA
F	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
G	BRACING	
G1	LATERAL BRACING (END)	GALV. RND. STEEL TUBE - $\phi$ 3.5" - 14 GA
G2	LATERAL BRACING (MID)	GALV. RND. STEEL TUBE - $\phi$ 2.875" - 14 GA
G3	ANGLED BRACE	GALV. RND. STEEL TUBE - $\phi$ 3.5" - 14 GA
	THREADED STUD PLATE	1/4" PLATE W/ 1/2" X 2" STUDS
	AB CONNECTION PLATE	STEEL PLATE, 1/4" THICK
H	CABLE ASSEMBLY	SEE SHEET G3
	CABLE CONNECTION PLATE	STEEL PLATE, 5/16" THICK
J	SWAY CABLE ASSEMBLY	SEE SHEET G3
	CABLE CONNECTION PLATE	STEEL PLATE, 1/8" THICK
K	SPLICE	
	SPLICE OUTSERTS	FORMED STEEL BAR, 5/16" THICK
L	WINCH ASSEMBLY	
	WINCH	2" LASHING WINCH (10,000 LBS. STRENGTH)
	STRAP	2" STRAP (10,000 LBS. STRENGTH)
M	WINCH PLATE	
	HORIZONTAL	STEEL PLATE, 1/2" THICK
	THREADED STUDS	CFL FULLY THREADED STUD - 1/2"-13 x 1"

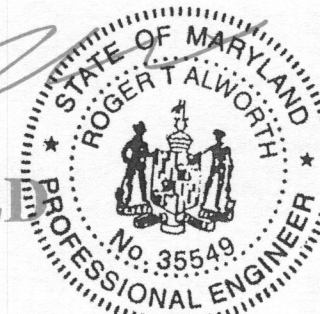


NOTE: THIS VIEW IS GENERIC TO ILLUSTRATE LOCATIONS OF ITEMS IN THE TABLE ONLY. CABLE PATTERN AND/OR OTHER DETAILS MAY NOT FULLY MATCH THE SPECIFICS FOR THIS ORDER. SEE OTHER SHEETS FOR ORDER-SPECIFIC DETAILS.

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ORDER #:  
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CUSTOMER #:  
**6764428**

**VECTOR**  
ENGINEERS

9138 S. STATE STREET, SUITE 101 (801) 990-1775  
SANDY, UTAH 84070 (801) 990-1776 FAX

PROJECT NUMBER: U1382-351-162

STRUCTURE SKU #: <b>T085GBMF021160</b>	STRUCTURE SIZE: <b>85' X 160'</b>	STRUCTURE DESCRIPTION: <b>85x160 GBM TRUSS FRAME</b>
CUSTOMER INFORMATION: DEPARTMENT OF PUBLIC WORKS 8950 BENDIX RD COLLUMBIA, MD 21045-1832	CONTACT PHONE: <b>410-382-7098</b>	CUSTOMER CONTACT: <b>JOHN CAPPALLETTI</b>
SHEET TITLE: <b>MATERIAL SPECIFICATIONS</b>		

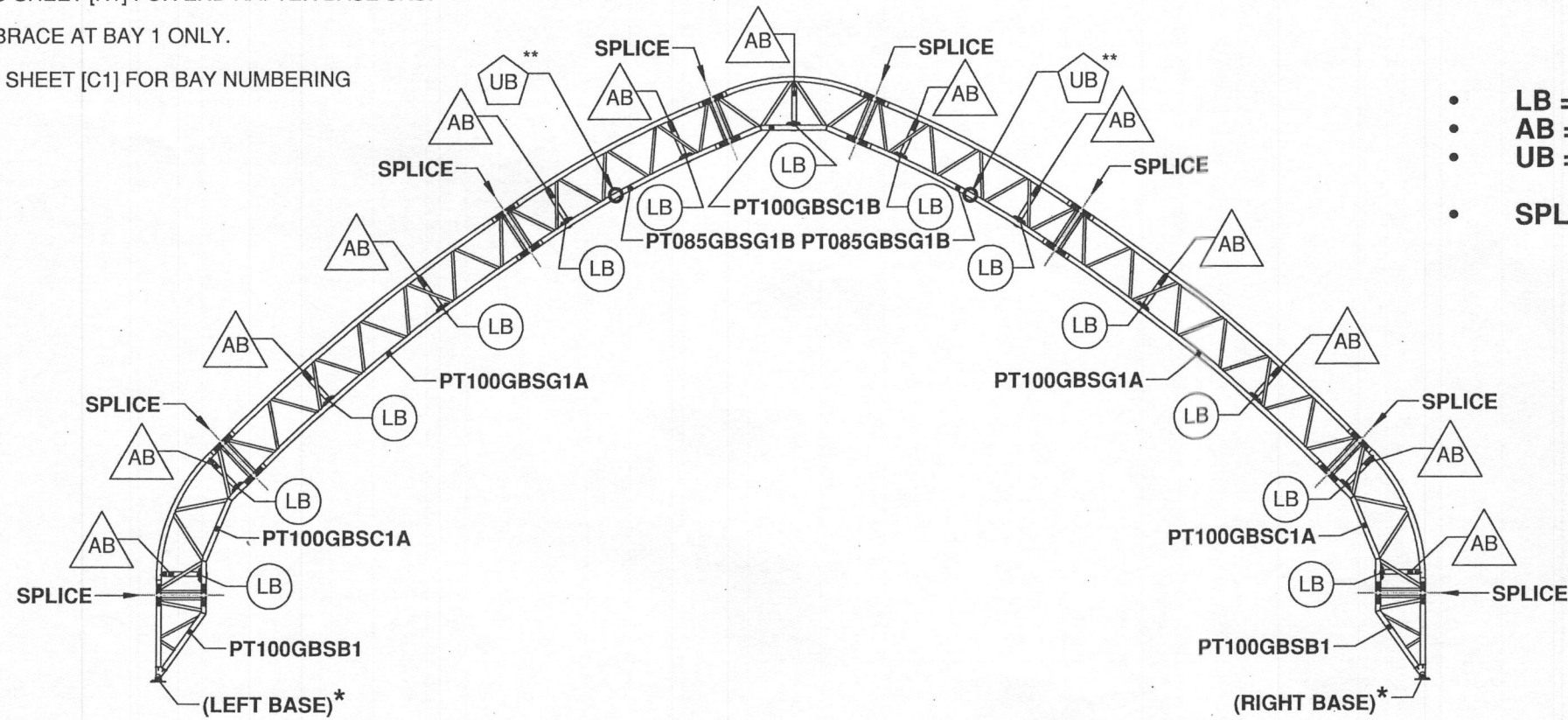
DRAWING DETAILS

DRAWN BY: BHB	CREATION DATE: 2/18/2016
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1 SMN	6/24/2016
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4	
NOT TO SCALE	SHEET SIZE: 11X17
SHEET: <b>D1</b>	

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

\*\*NOTE: U-BOLT BRACE AT BAY 1 ONLY.

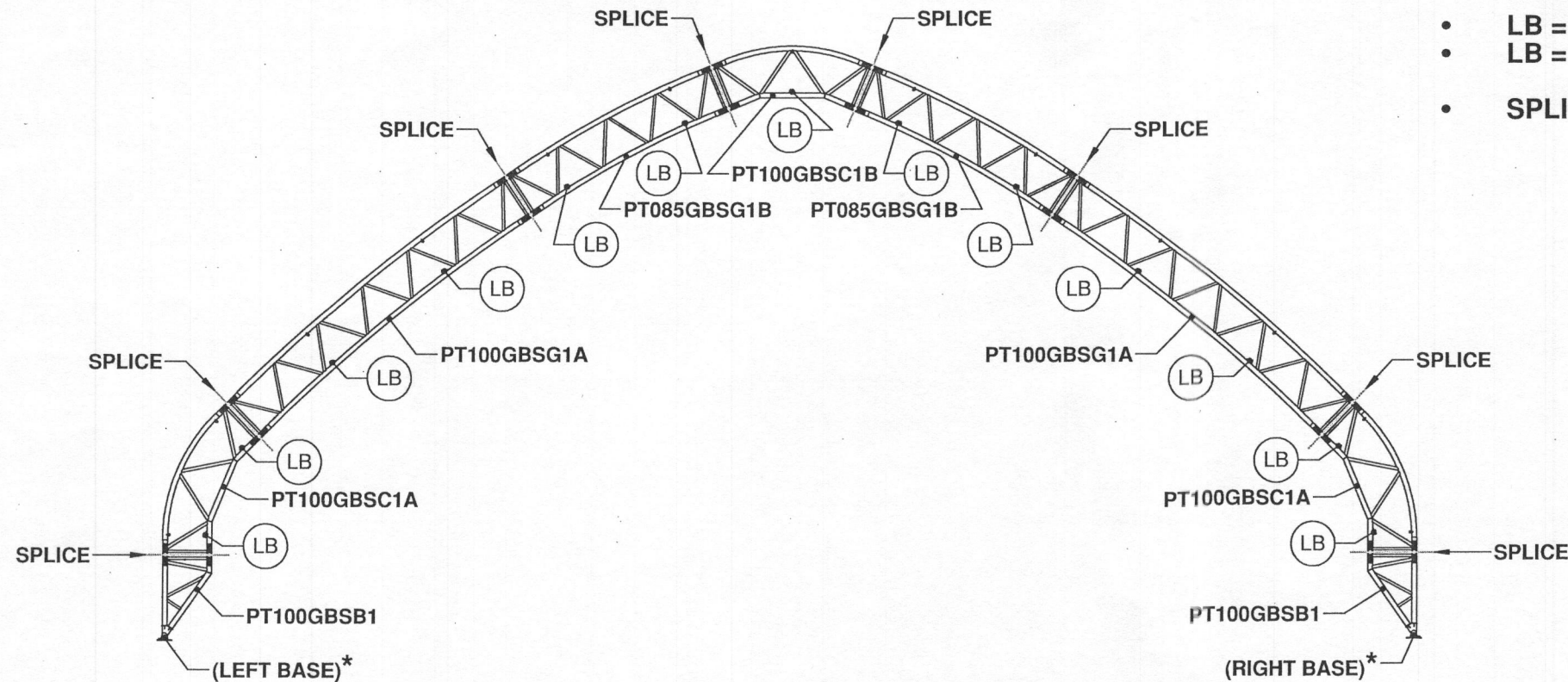
NOTE: REFER TO SHEET [C1] FOR BAY NUMBERING



- LB = LATERAL BRACE (SKU: LBC35G14UBL114)
- AB = ANGLED BRACE (SKU: LB35G14SL10918)
- UB = ANGLED BRACE (SKU: UB28G14L114C40)
- SPLICE: SEE DETAIL SHEET [G2]

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

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



- LB = LATERAL BRACE @ 9'-6" BAYS (SKU: LB28G14STL114)
- LB = LATERAL BRACE @ 8'-0" BAY (SKU: LB28G14STL096)
- SPLICE: SEE DETAIL SHEET [G2]

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

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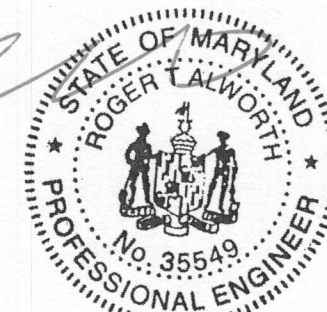
PROJECT NUMBER: U1382-351-162

STRUCTURE SKU #: <b>T085GBMF021160</b>	STRUCTURE SIZE: <b>85' X 160'</b>	STRUCTURE DESCRIPTION: <b>85X160 GBM TRUSS FRAME</b>
CUSTOMER INFORMATION: <b>DEPARTMENT OF PUBLIC WORKS</b> 9250 BENDIX RD COLUMBIA, MD 21045-1832	CONTACT PHONE: <b>410-362-7098</b>	CUSTOMER CONTACT: <b>JOHN CAPPELLETTI</b>
SHEET TITLE: <b>RAFTER PROFILES</b>		

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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).

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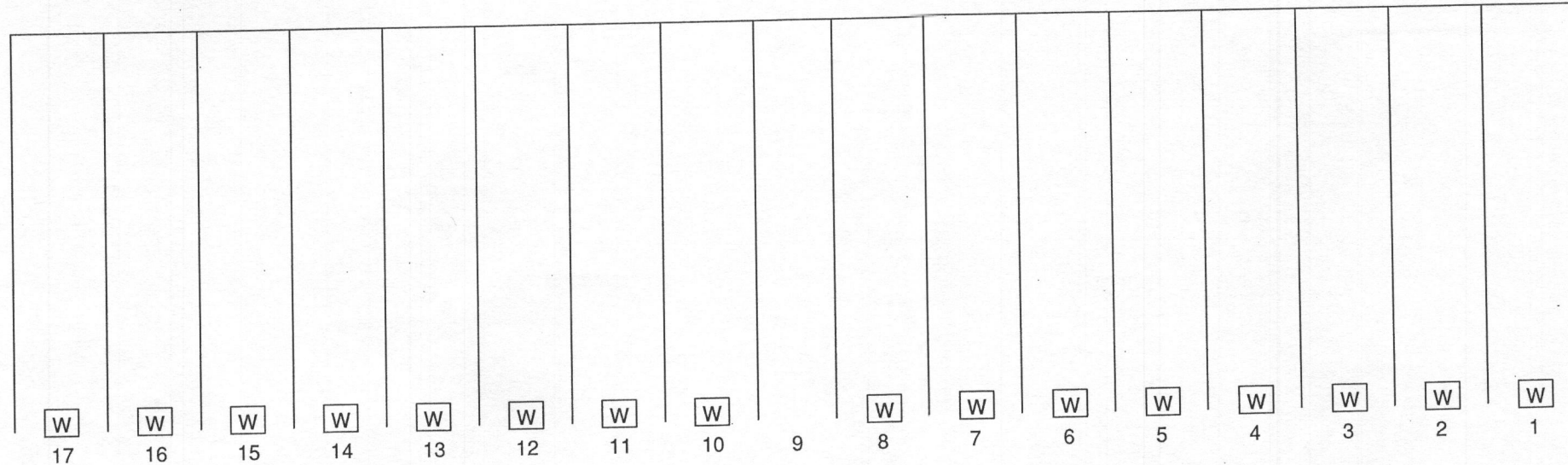
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 PROJECT NUMBER: U1382-351-162

BACK OF STRUCTURE

FRONT OF STRUCTURE

BAY NUMBERS:

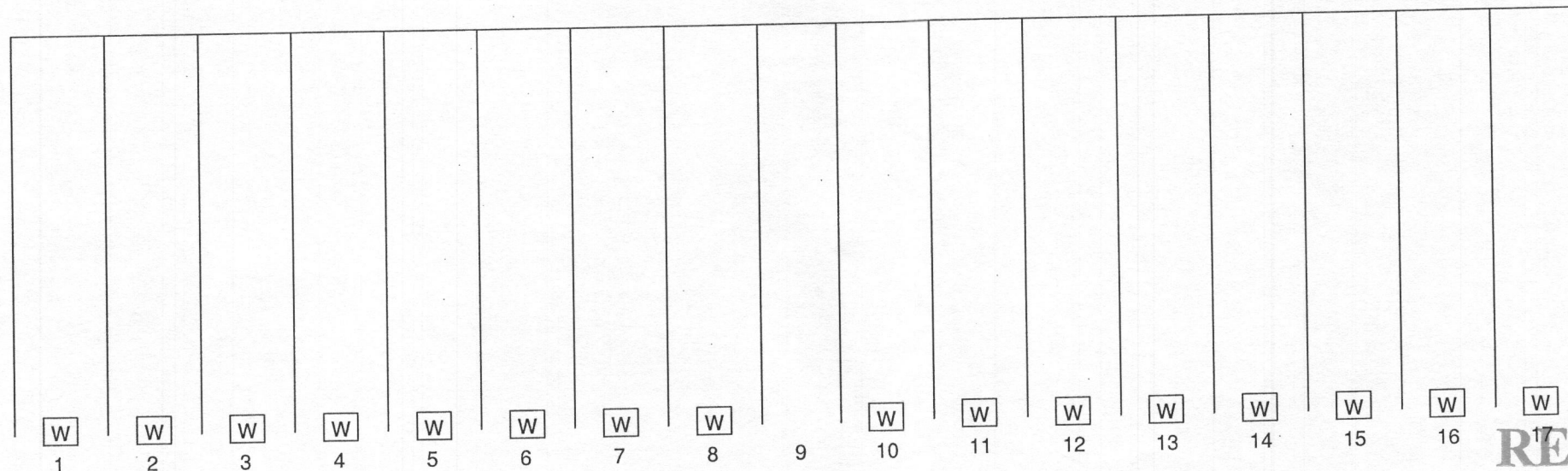


LEFT SIDE VIEW

FRONT OF STRUCTURE

BACK OF STRUCTURE

BAY NUMBERS:



RIGHT SIDE VIEW

**W** = WINCH PLATE LOCATION

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

STRUCTURE SKU #: <b>T085GBMF021160</b>	STRUCTURE SIZE: <b>85' X 160'</b>	STRUCTURE DESCRIPTION: <b>85X160 GBM TRUSS FRAME</b>
CUSTOMER INFORMATION: DEPARTMENT OF PUBLIC WORKS 9250 BENDIX RD. COLUMBIA, MD 21045-1832	CONTACT PHONE: <b>410-382-7098</b>	CUSTOMER CONTACT: <b>JOHN CAPPELLETTI</b>
SHEET TITLE: <b>SIDE PROFILES</b>		

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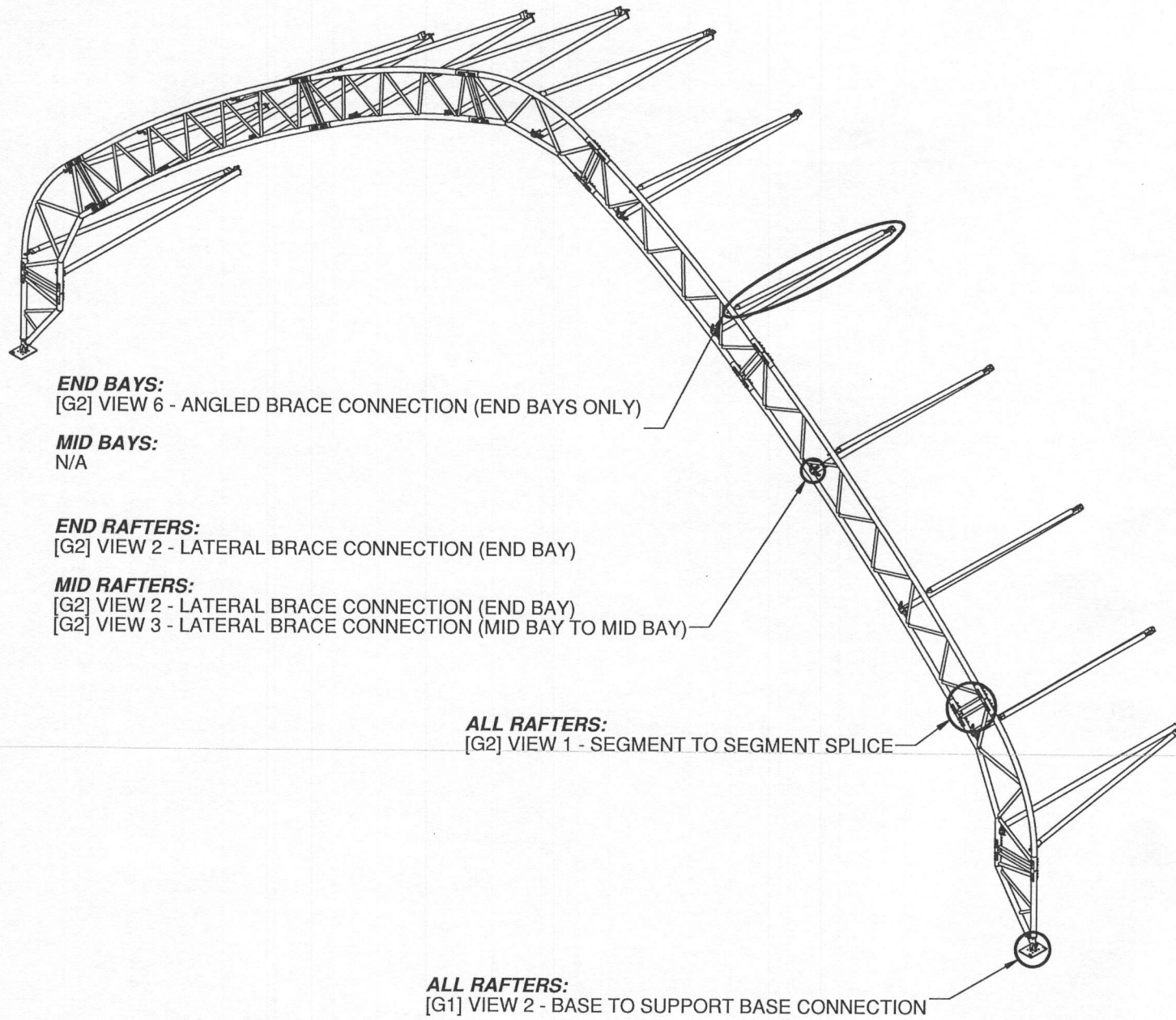
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SHEET:		<b>F1</b>

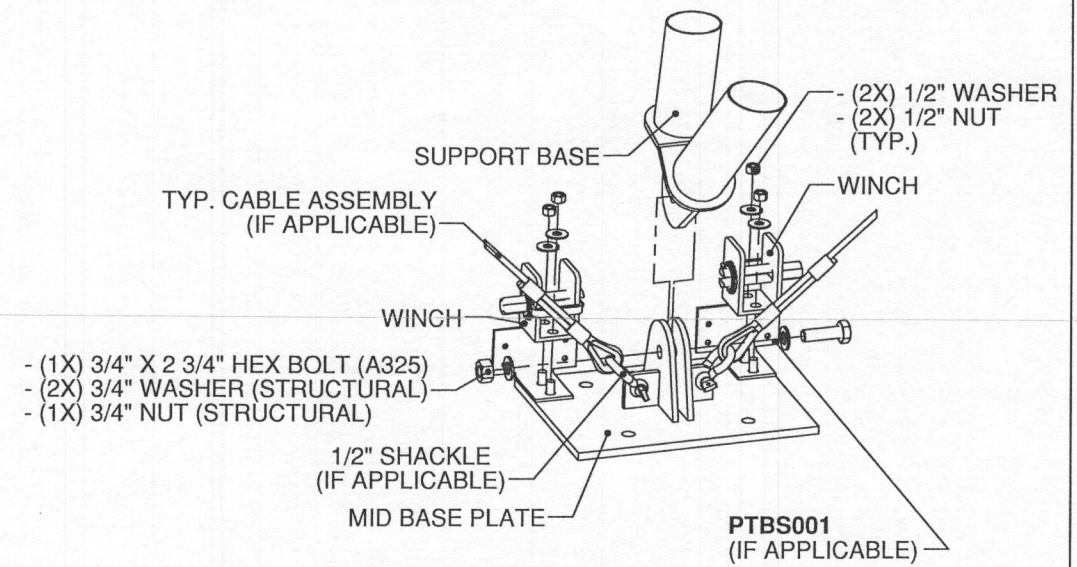
**DETAIL LOCATION CALL-OUTS**



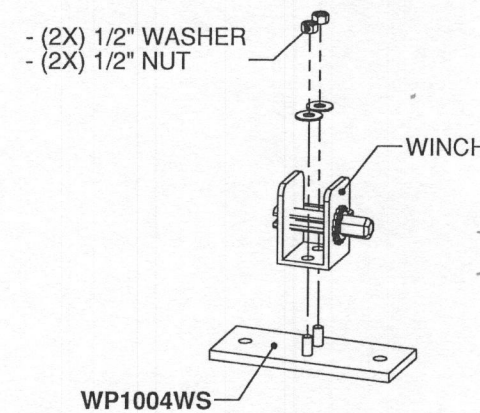
**DETAILS WITH LOCATION CALL-OUTS NOT SHOWN ON THIS SHEET:**

- [G1] VIEW 3 - WINCH PLATE CONNECTION (IF APPLICABLE)
- [G2] VIEW 4 - SIDE DOOR DETAIL (IF APPLICABLE)
- [G2] VIEW 5 - U-BOLT BRACE CONNECTION (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 CONNECTION (END BAY)
- [G3] VIEW 6 - SWAY CABLE CONNECTION (MID BAY TO MID BAY)
- [G3] VIEW 7 - TYPICAL SWAY CABLE ASSEMBLY

**[G1] VIEW 1 - NOT USED**



**[G1] VIEW 2 - BASE TO SUPPORT BASE CONNECTION**

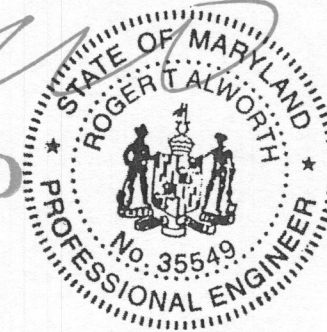


**[G1] VIEW 3 - WINCH PLATE CONNECTION (IF APPLICABLE)**

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CUSTOMER #:  
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 ENGINEERS  
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 SANDY, UTAH 84070 (801) 990-1776 FAX  
 PROJECT NUMBER: U1382-351-162

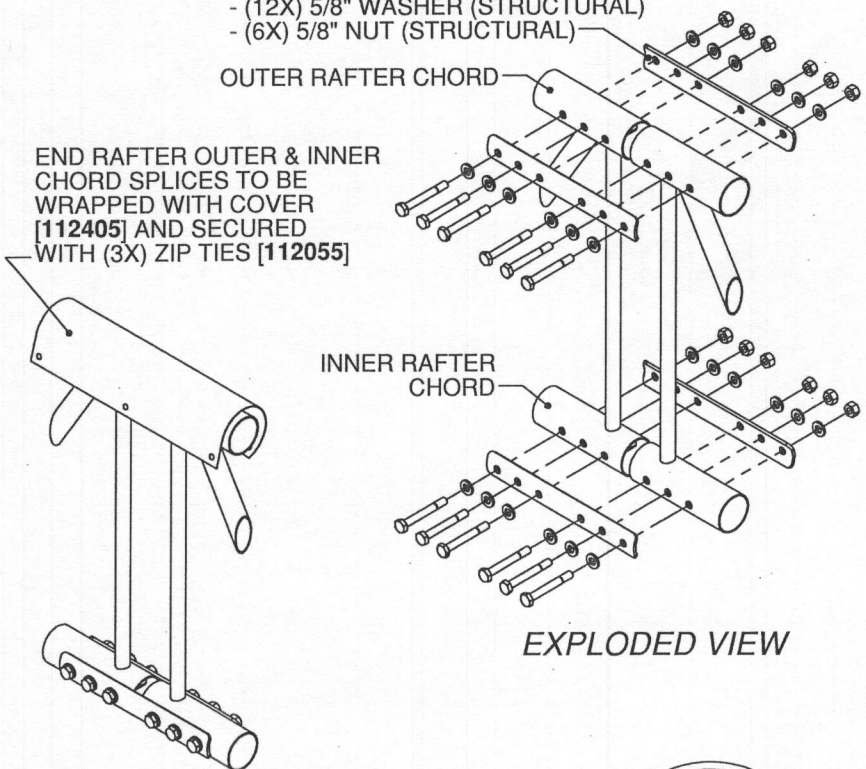
STRUCTURE SKU #: <b>T085GBMF021160</b>	STRUCTURE SIZE: <b>85' X 160'</b>	STRUCTURE DESCRIPTION: <b>85x160 GBM TRUSS FRAME</b>
CUSTOMER INFORMATION: <b>DEPARTMENT OF PUBLIC WORKS</b> 8250 BENDIX RD COLUMBIA, MD 21045-1882	CONTACT PHONE: <b>410-382-7096</b>	CUSTOMER CONTACT: <b>JOHN CAPPELLETTI</b>
SHEET TITLE: <b>DETAIL LOCATIONS &amp; BASE DETAILS</b>		

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DRAWN BY: BHB	CREATION DATE: 2/18/2016	
REVISIONS:		
NO.	BY:	REVISION DATE:
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NOT TO SCALE		SHEET SIZE: 11X17
SHEET:		<b>G1</b>

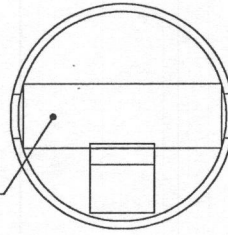
**NOTES:**

- END RAFTER BOLT HEADS TO BE LOCATED AT EXTERIOR OF STRUCTURE REFER TO SHEET [E1] FOR SPLICE LOCATIONS.

- (2X) SPLICE OUTSERT [SPL0UT40S001]
- (6X) 5/8" X 6" HEX BOLT (A325)
- (12X) 5/8" WASHER (STRUCTURAL)
- (6X) 5/8" NUT (STRUCTURAL)



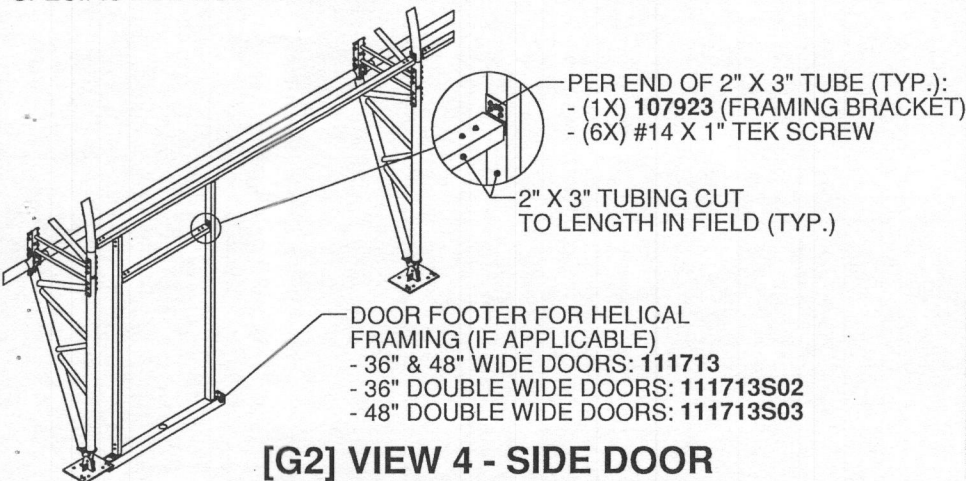
ASSEMBLED VIEW



SEGMENT CHORDS TO BE MANUFACTURED WITH SLEEVES AT EACH SPLICE BOLT LOCATION.

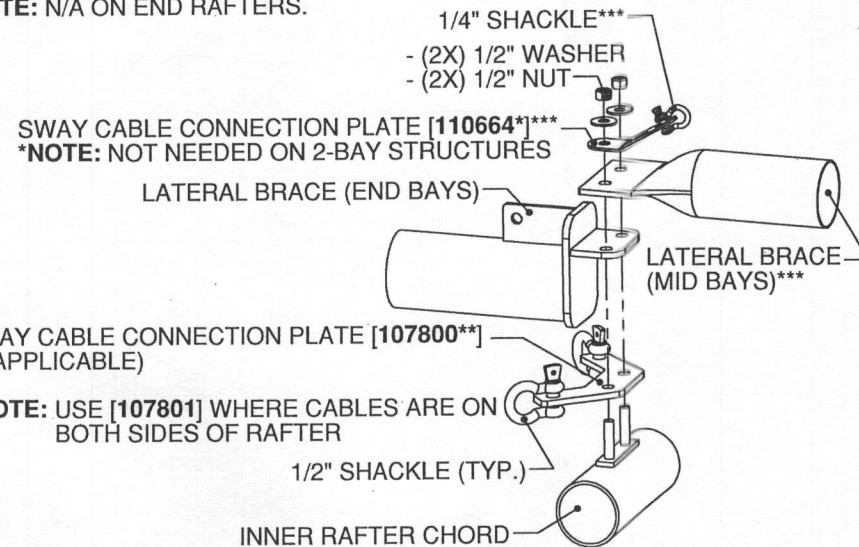
**[G2] VIEW 1 - SEGMENT TO SEGMENT SPLICE**

**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.

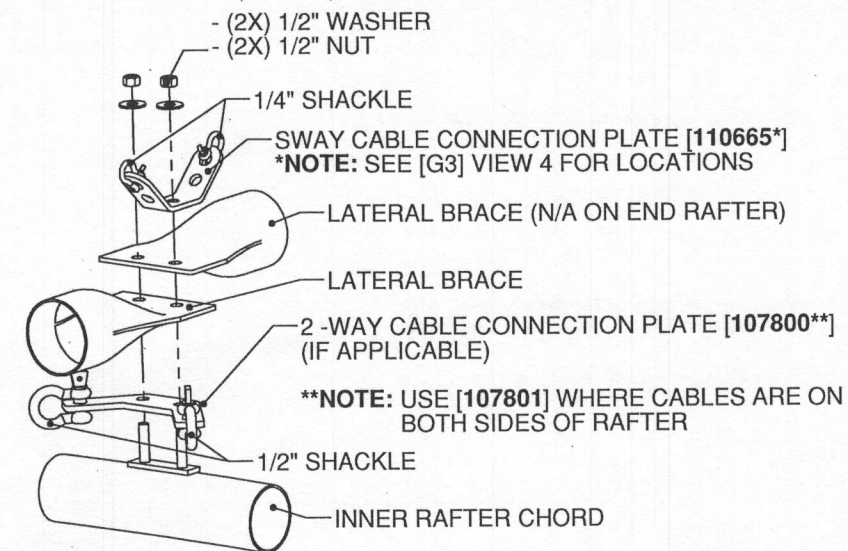


**[G2] VIEW 4 - SIDE DOOR DETAIL (IF APPLICABLE)**

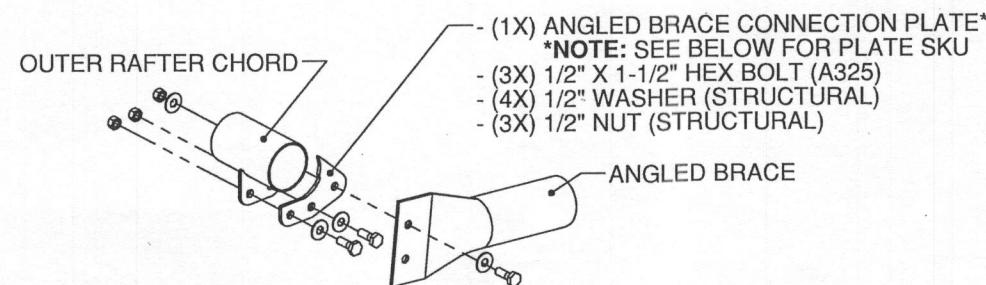
**\*\*\*NOTE:** N/A ON END RAFTERS.



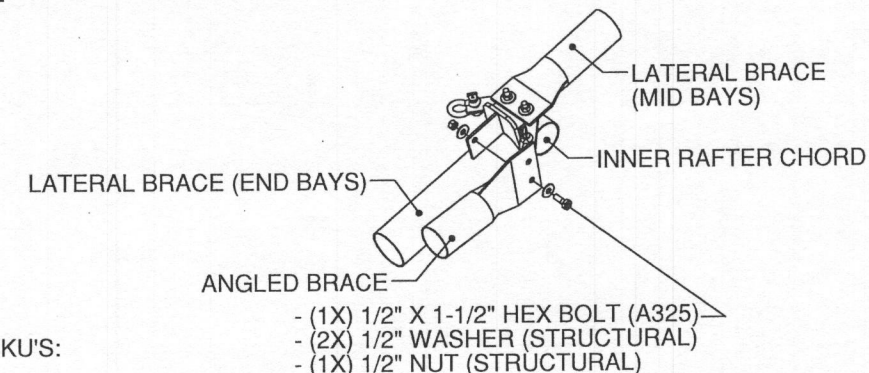
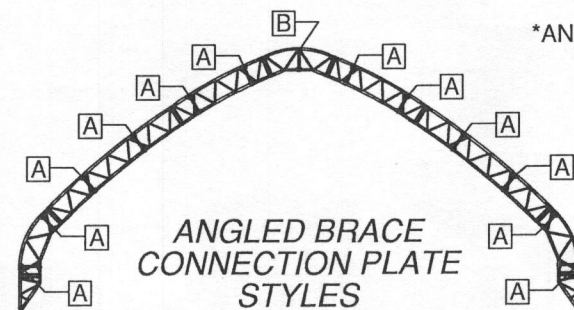
**[G2] VIEW 2 - LATERAL BRACE CONNECTION (END BAY)**



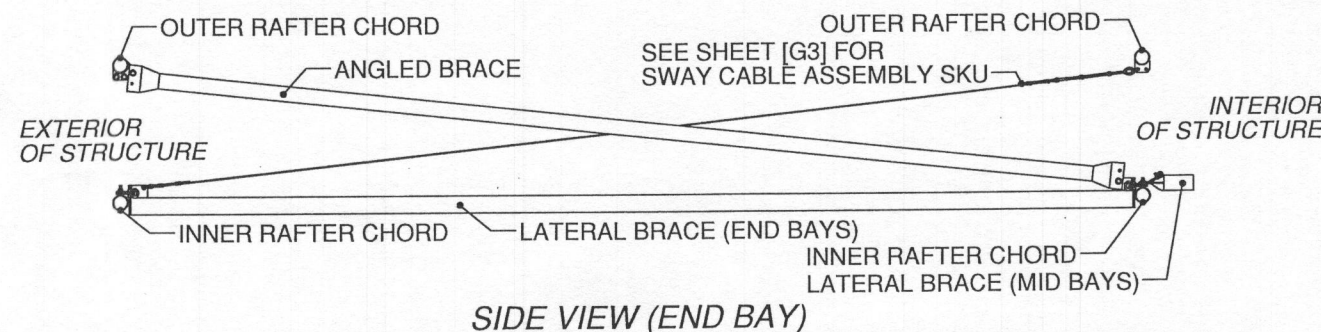
**[G2] VIEW 3 - LATERAL BRACE CONNECTION (MID BAY TO MID BAY)**



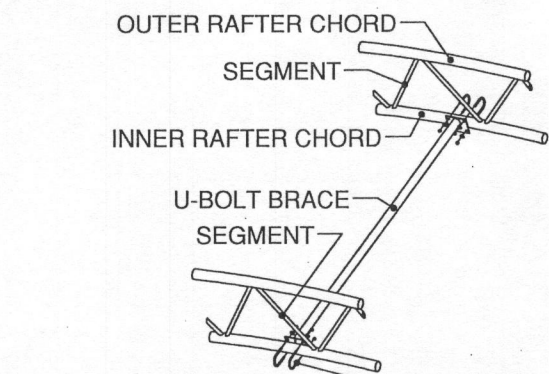
**ANGLED BRACE CONNECTION TO OUTER RAFTER CHORD**



**ANGLED BRACE CONNECTION TO END LATERAL BRACE**



**[G2] VIEW 6 - ANGLED BRACE CONNECTION (END BAYS ONLY)**



PER END OF U-BOLT BRACE (TYP.):

- (2X) 1/2" U-BOLT AROUND CHORD
- (4X) 1/2" WASHER
- (4X) 1/2" NUT

**[G2] VIEW 5 - U-BOLT BRACE CONNECTION (IF APPLICABLE)**

DEVELOPED BY

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1440 18TH AVENUE SW  
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 F: 663.875.2317  
 WWW.CLEARSPAN.COM

ORDER #: **7032939**

CUSTOMER #: **6764428**

**VECTOR**  
 ENGINEERS

9136 S. STATE STREET, SUITE 101 (801) 990-1775  
 SANDY, UTAH 84070 (801) 990-1776 FAX

PROJECT NUMBER: U1382-351-162

STRUCTURE SKU #: T085GBMF021160	STRUCTURE SIZE: 85' X 160'	STRUCTURE DESCRIPTION: 85x160 GBM TRUSS FRAME
CUSTOMER INFORMATION: DEPARTMENT OF PUBLIC WORKS, 8260 BENDIX BL, COLUMBIA, MD 21045-1832	CONTACT PHONE: 410-382-7098	CUSTOMER CONTACT: JOHN CAPPELLETTI
SHEET TITLE: GENERAL CONNECTION DETAILS		

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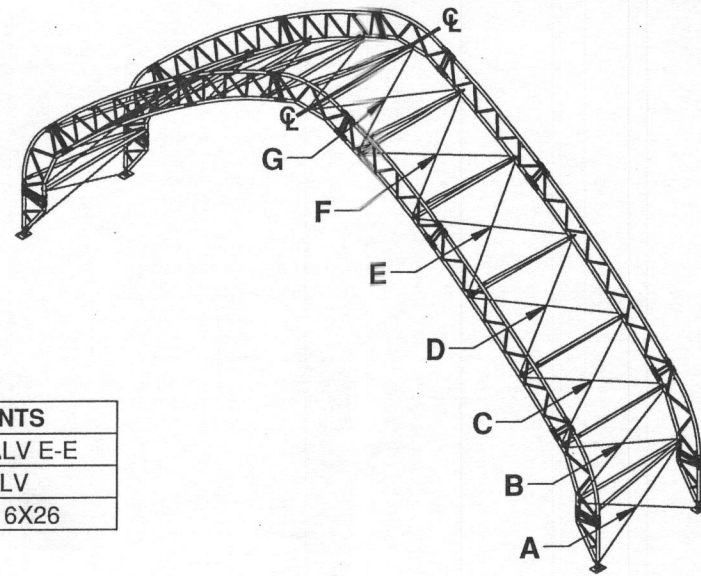
Jul 20, 2016

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 35549, Expiration Date: 3-Apr-2018

DRAWING DETAILS	
DRAWN BY: BHB	CREATION DATE: 2/18/2016
REVISIONS:	
NO.	BY: REVISION DATE:
1	SMN 6/24/2016
2	
3	
4	
NOT TO SCALE SHEET SIZE: 11X17	
SHEET: <b>G2</b>	

**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  $\phi$  UNLESS NOTED OTHERWISE.
- CABLE IS NOT PRESENT IN BAY NUMBERS NOT LISTED IN TABLE.



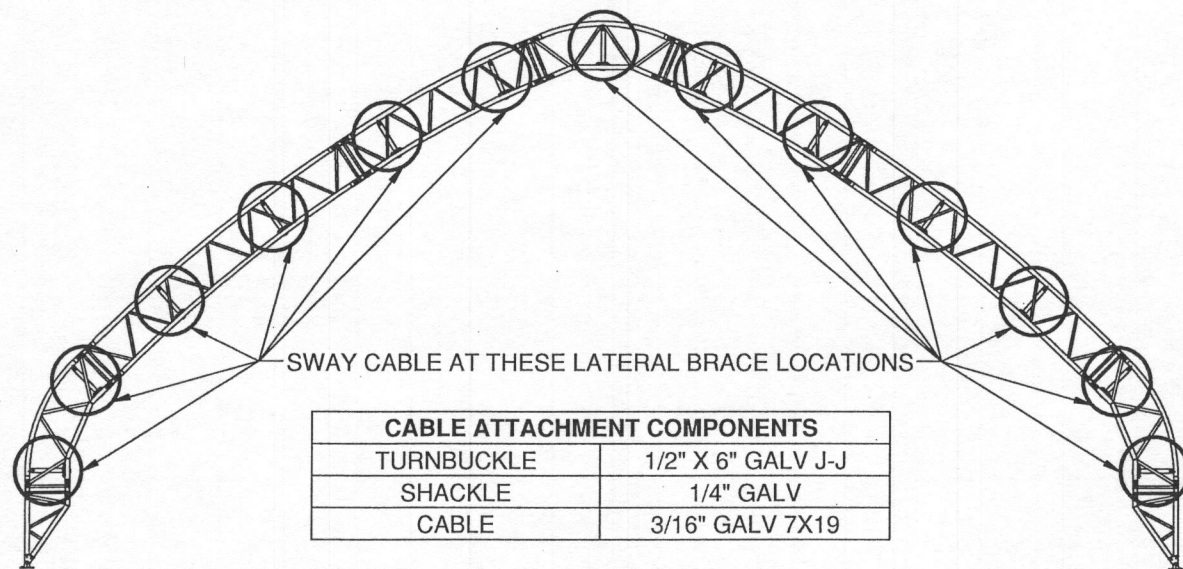
CABLE ATTACHMENT COMPONENTS	
TURNBUCKLE	3/4" X 9" GALV E-E
SHACKLE	1/2" GALV
CABLE	1/2" GALV 6X26

\*REFER TO SHEET [C1] FOR BAY NUMBERING

CABLE ASSEMBLY SKU'S							
BAY NUMBER*	SPAN 'A'	SPAN 'B'	SPAN 'C'	SPAN 'D'	SPAN 'E'	SPAN 'F'	SPAN 'G'
1 & 17	CAB50G0811	CAB50G0800	CAB50G0903	CAB50G1005	CAB50G1005	CAB50G0909	CAB50G0811
2 & 16	CAB50G0811	CAB50G0800	CAB50G0903	CAB50G1005	CAB50G1005	N/A	N/A
3, 8, 10 & 15	CAB50G0811	CAB50G0800	CAB50G0903	CAB50G1005	N/A	N/A	N/A
4, 7, 11 & 14	CAB50G0811	CAB50G0800	CAB50G0903	N/A	N/A	N/A	N/A
5, 6, 12 & 13	CAB50G0811	CAB50G0800	N/A	N/A	N/A	N/A	N/A
9	CAB50G0709	CAB50G0610	CAB50G0802	CAB50G0905	CAB50G0905	CAB50G0808	CAB50G0709

**[G3] VIEW 1 - CABLE SKU PER SPAN**

SWAY CABLE REPEATS DOWN LENGTH OF BUILDING AT LOCATIONS SHOWN BELOW

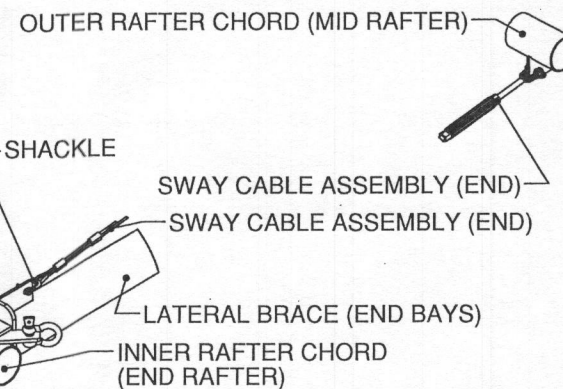


CABLE ATTACHMENT COMPONENTS	
TURNBUCKLE	1/2" X 6" GALV J-J
SHACKLE	1/4" GALV
CABLE	3/16" GALV 7X19

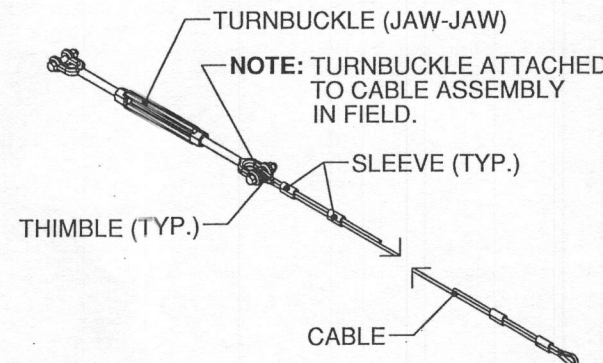
\*REFER TO SHEET [C1] FOR BAY NUMBERING

SWAY CABLE ASSEMBLY SKU'S	
BAY NUMBER*	SWAY CABLE SKU
1 & 17	CAB18G0710
2 - 8 & 10 - 16	CAB18G0801
9	CAB18G0607

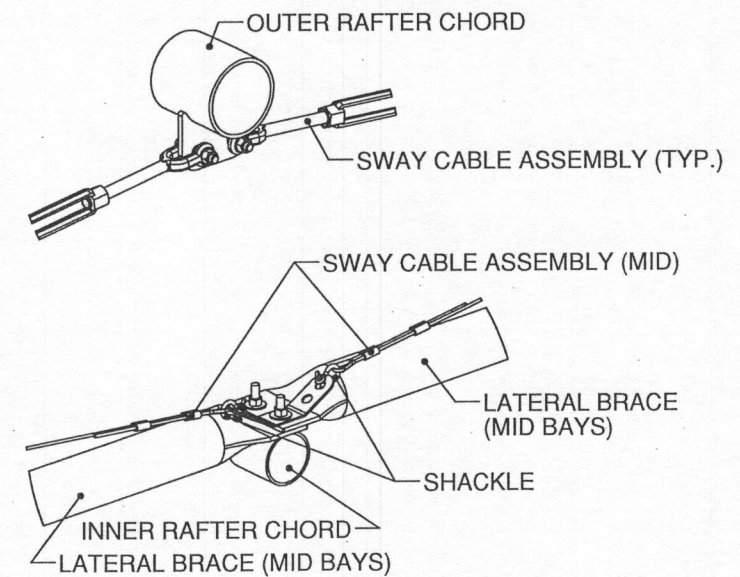
**[G3] VIEW 4 - SWAY CABLE LOCATIONS**



**[G3] VIEW 5 - SWAY CABLE CONNECTION (END BAY)**

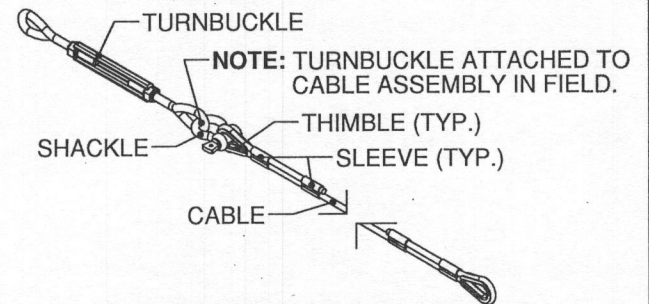


**[G3] VIEW 7 - TYPICAL SWAY CABLE ASSEMBLY**

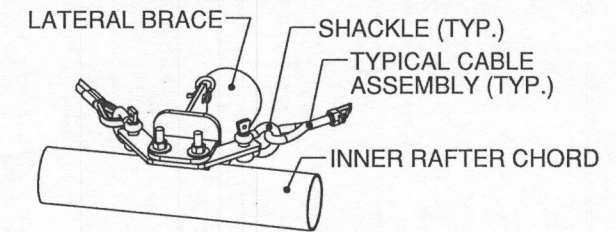


**[G3] VIEW 6 - SWAY CABLE CONNECTION (MID BAY TO MID BAY)**

**[G3] VIEW 2 - TYPICAL CABLE CONNECTION DETAIL**



**[G3] VIEW 3 - TYPICAL CABLE ASSEMBLY**



**VECTOR**  
ENGINEERS

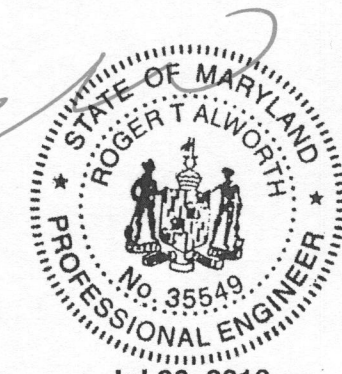
9138 S. STATE STREET, SUITE 101 (801) 990-1775  
SANDY, UTAH 84070 (801) 990-1776 FAX  
PROJECT NUMBER: U1385-351-182

DEVELOPED BY  
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1440 18TH AVENUE SW  
DYERSVILLE, IA 52040  
P: 563.875.6113  
F: 563.875.2317  
WWW.ESAPCO.COM

ORDER #: 7032939  
CUSTOMER #: 6764428

STRUCTURE SKU #: T085GBMF021160  
STRUCTURE SIZE: 85' X 160'  
STRUCTURE DESCRIPTION: 85X160 GBM TRUSS FRAME  
CUSTOMER INFORMATION: DEPARTMENT OF PUBLIC WORKS  
9255 BENDIX RD. COLUMBIA, MD 21045-1832  
CONTACT PHONE: 410-382-7098  
CUSTOMER CONTACT: JOHN CAPPELLETTI  
SHEET TITLE: CABLE LAYOUT & DETAILS

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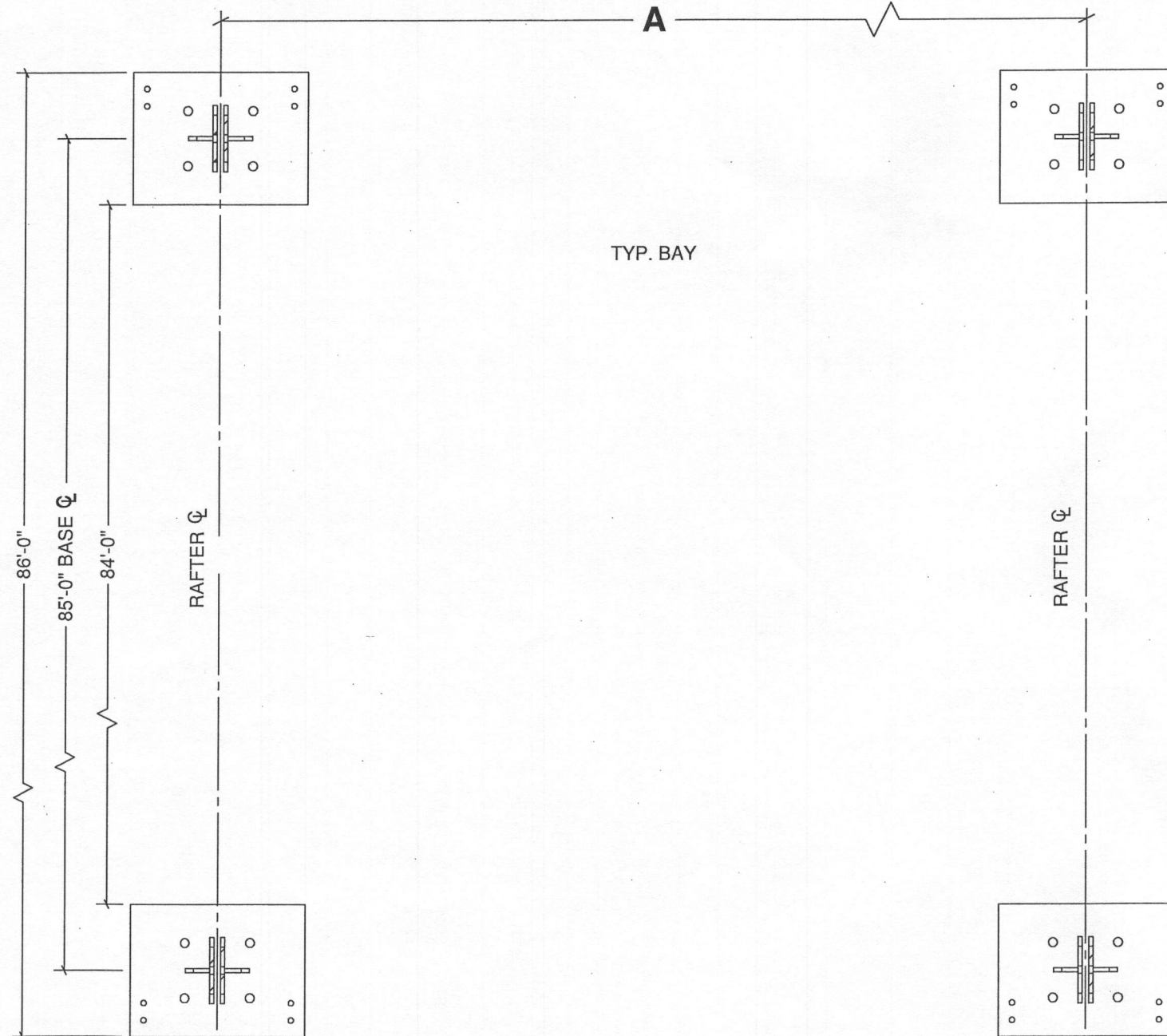
DRAWING DETAILS	
DRAWN BY: BHB	CREATION DATE: 2/18/2016
REVISIONS:	
NO.	BY: REVISION DATE:
1	SMN 6/24/2016
2	
3	
4	
NOT TO SCALE SHEET SIZE: 11X17	
SHEET: <b>G3</b>	

\*REFER TO SHEET [C1] FOR BAY NUMBERING

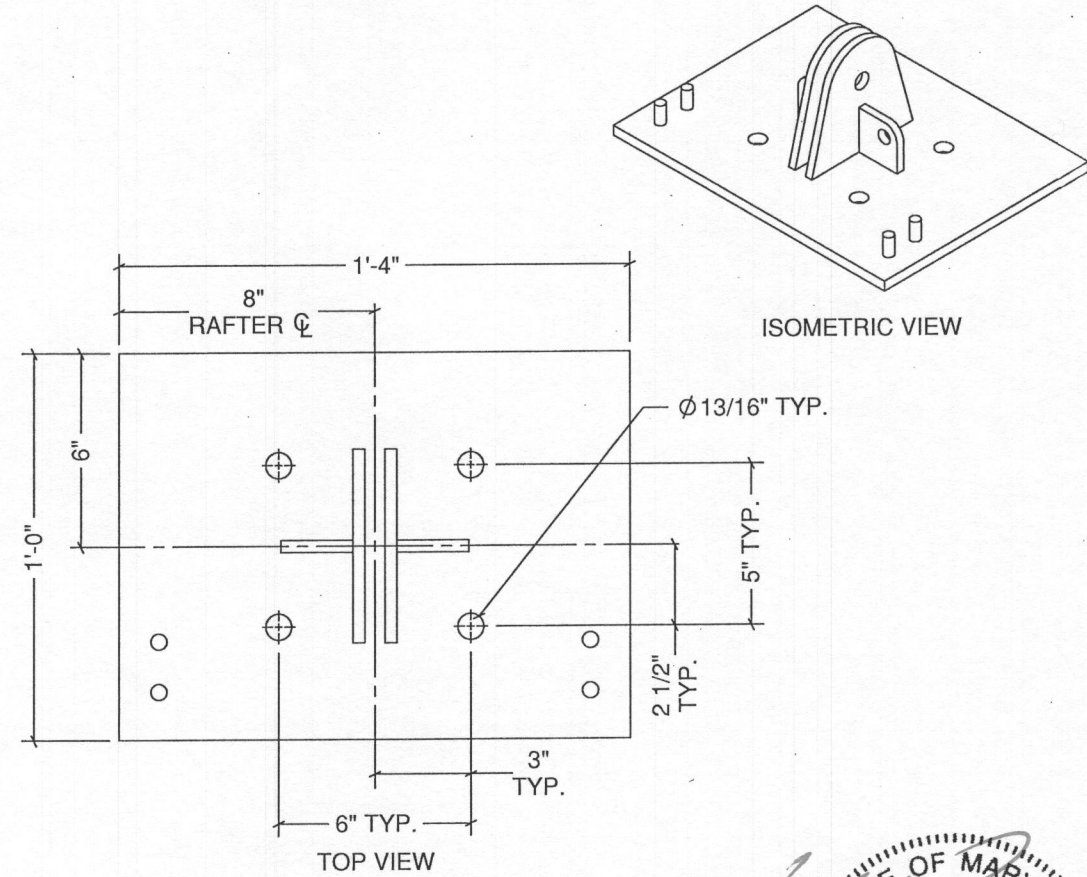
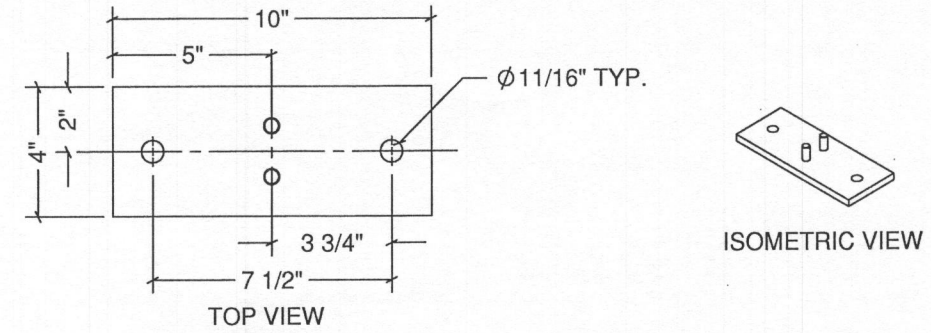
BAY NUMBER*	A (RAFTER SPACING)
1 - 8 & 10 - 17	9'-6"
9	8'-0"

\*\*REFER TO SHEET [E1] FOR BASE LOCATIONS

RAFTER TYPE	LEFT BASE SKU**	RIGHT BASE SKU**
END	BP061GBM	BP061GBM
MID	BP061GBM	BP061GBM



NOTE: REFER TO SHEET [F1] FOR WINCH PLATE LOCATIONS.

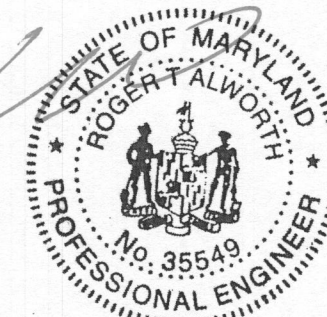


BP061GBM DETAILS

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WWW.CLEARSPAN.COM

ORDER #:

7032939

CUSTOMER #:

6764428

**VECTOR**  
ENGINEERS  
9138 S. STATE STREET, SUITE 101 (801) 990-1775  
SANDY, UTAH 84070 (801) 990-1776 FAX  
PROJECT NUMBER: U1382-351-162

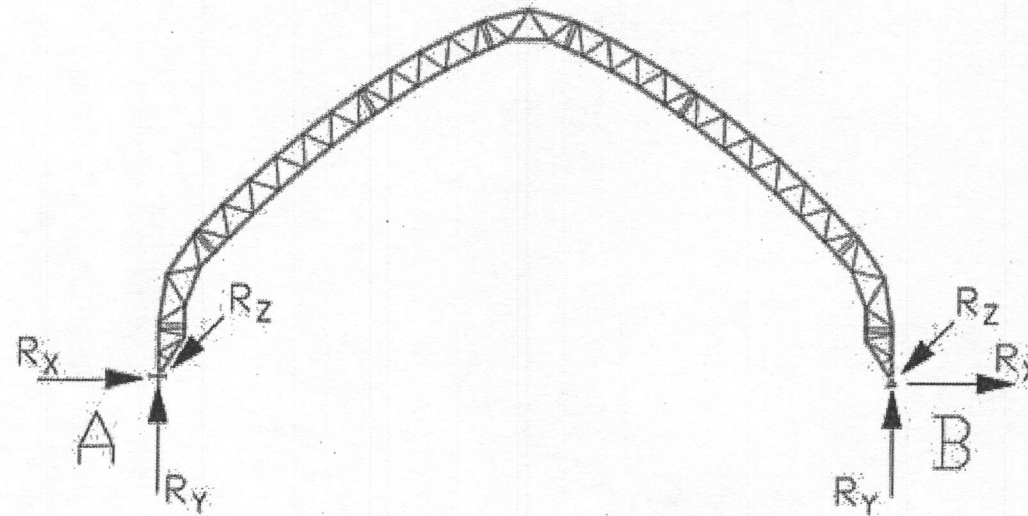
STRUCTURE SKU #: T085GBMF021160	STRUCTURE SIZE: 85' X 160'	STRUCTURE DESCRIPTION: 85X160 GBM TRUSS FRAME
CUSTOMER INFORMATION: DEPARTMENT OF PUBLIC WORKS 9250 BENDIX RD COLUMBIA, MD 21045-1832	CONTACT PHONE: 410-382-7098	SHEET TITLE: BASE PLATE LAYOUT & DETAILS

DRAWING DETAILS	
DRAWN BY: BHB	CREATION DATE: 2/18/2016
REVISIONS:	
NO.	BY: REVISION DATE:
1	SMN 6/24/2016
2	
3	
4	
NOT TO SCALE SHEET SIZE: 11X17	
SHEET: H1	

**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	0.55	1.34	-0.55	1.34
Dead Load, Collateral	EL	0.29	0.50	-0.29	0.50
Snow Load, Balanced	S	3.03	5.08	-3.03	5.08
Snow Load, Unbalanced	Su	2.55	3.09	-2.55	4.94
Wind Load	Wx	-7.31	-7.97	-2.97	-8.56
Wind Load	Wx2	-4.77	5.50	-5.51	4.91
Wind Load	Wz2	-2.55	-16.31	4.26	-15.67
Wind Load	Wz2	-0.02	-2.83	1.72	-2.20
Roof Live Load	Lr	6.66	12.11	-6.66	12.11
0	0	0.00	0.00	0.00	0.00



CONTROLLING ASD COMBINATIONS TO CONSIDER AT TYPICAL BASES			
Max Gravity (kip)	13.96	DL + EL + Lr	
Max Uplift (kip)	-8.98	0.6DL + 0.6Wz	
Max Inward Lateral (kip)	-4.05	0.6DL + 0.6Wx	
Max Outward Lateral (kip)	-8.32	DL + EL + 0.75Lr + 0.45Wx2	

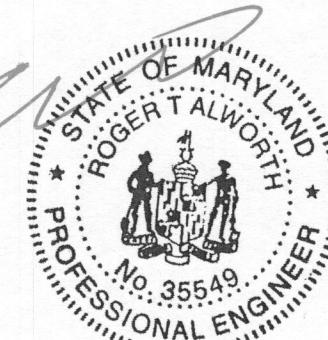
*See notes below		ADDITIONAL UNFACTORED BASE REACTIONS TO CONSIDER AT BASES WITH CABLE ATTACHED					
Load Case		Side A			Side B		
		Rx (kip)	Ry (kip)	Rz (kip)	Rx (kip)	Ry (kip)	Rz (kip)
Wind Load	Wz	-3.72	-17.67	1.21	5.18	-16.76	1.12
Dead Load, Cable (Wz)	DL	0.02	0.09		-0.02	0.09	
Wind Load	Wz2	-3.43	6.78	0.02	-4.32	3.94	0.01
Dead Load, Cable (Wz2)	DL	0.05	0.14		-0.05	0.14	

ADDITIONAL CONTROLLING ASD COMBINATIONS TO CONSIDER AT BASES WITH CABLE ATTACHED			
Max Gravity (kip)	14.12	DL + EL + 0.75Lr + 0.45Wz2	
Max Uplift (kip)	-9.74	0.6DL + 0.6Wz	
Max Inward Lateral (kip)	-4.04	0.6DL + 0.6Wx	
Max Outward Lateral (kip)	-8.34	DL + EL + 0.75Lr + 0.45Wx2	

V2.4

Notes:

- The above Reaction Data should be combined as required by the Load Combinations from IBC or other applicable code.



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ORDER #: **7032939**  
 CUSTOMER #: **6764428**

**VECTOR** ENGINEERS  
 9138 S. STATE STREET, SUITE 101 (801) 990-1775  
 SANDY, UTAH 84070 (801) 990-1776 FAX  
 PROJECT NUMBER: U1382-351-162

STRUCTURE SKU #: **T085GBMF021160**  
 STRUCTURE SIZE: **85' X 160'**  
 STRUCTURE DESCRIPTION: **85X160 GBM TRUSS FRAME**

CUSTOMER INFORMATION:  
 DEPARTMENT OF PUBLIC WORKS  
 9250 BENDIX RD  
 COLUMBIA, MD 21045-1832

CUSTOMER CONTACT:  
 JOHN CAPPELLETTI  
 CONTACT PHONE: **410-382-7098**

SHEET TITLE:  
**BUILDING REACTION DATA**

**DRAWING DETAILS**

DRAWN BY: **BHB** CREATION DATE: **2/18/2016**

REVISIONS:

NO.	BY:	REVISION DATE:
1	SMN	5/24/2016
2		
3		
4		

NOT TO SCALE SHEET SIZE: 11X17

**SHEET: J1**

**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**

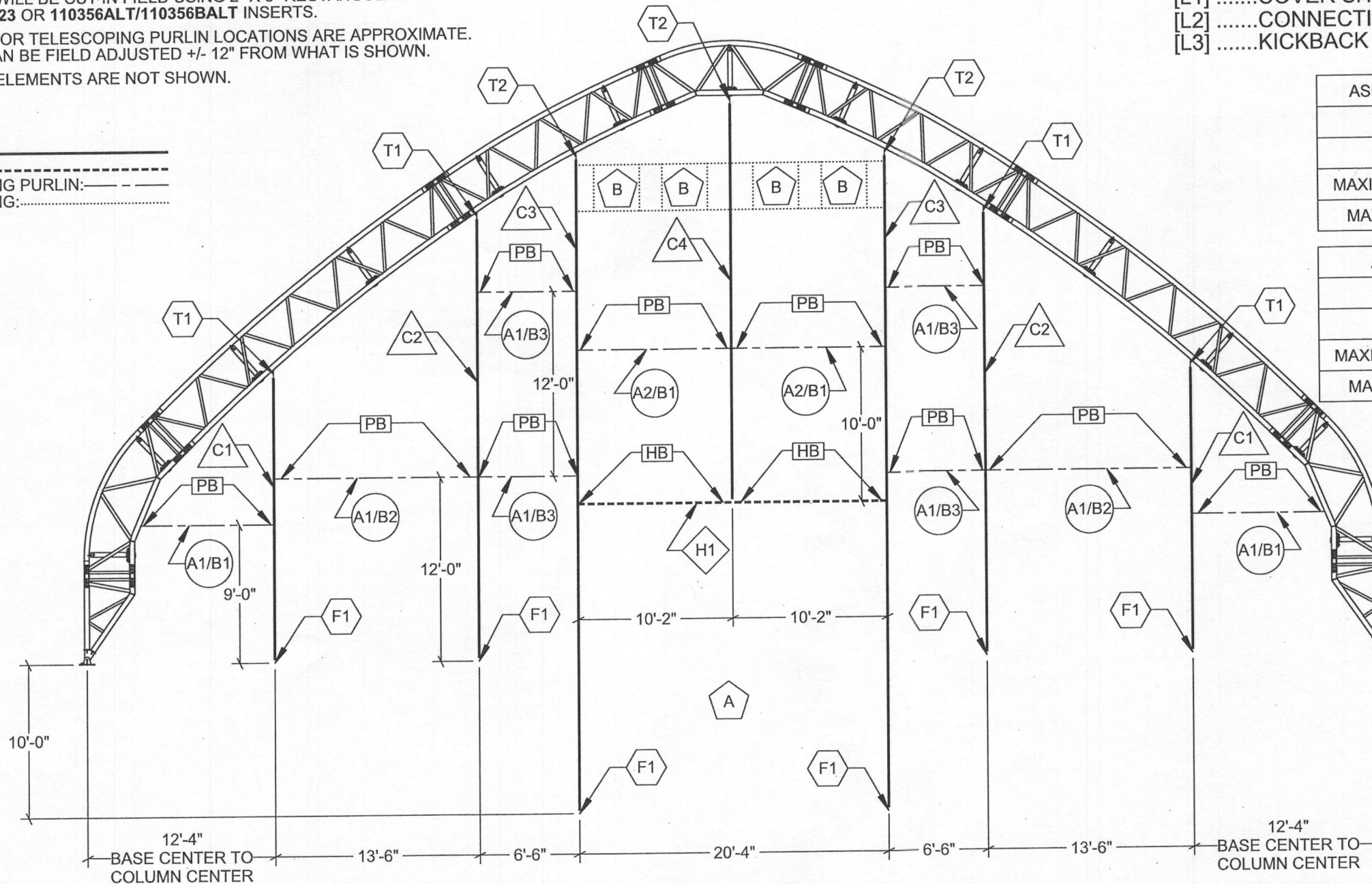
CALL-OUT	DESCRIPTION	ROUGH OPENING
A	20'-0" X 20'-0" OPENING	20'-0" X 20'-0"
B	3'-0" X 3'-0" LOUVER	VERIFY

**EW085GBF0531D**

85GB END WL 20X-C/(4)36"VNTS DRCOL+10'

**ENDWALL CONTENT GUIDE:**

- [L1] .....COVER SHEET/PART LOCATIONS/LAYOUT
- [L2] .....CONNECTION DETAILS
- [L3] .....KICKBACK CONNECTION DETAILS



REACTION TYPE	VALUE
MAXIMUM GRAVITY	740 LBS
MAXIMUM NET UPLIFT	450 LBS
MAXIMUM HORIZONTAL {0.6 * MWFRS}	2640 LBS
MAXIMUM HORIZONTAL {0.6 * C&C}	3680 LBS

REACTION TYPE	VALUE
MAXIMUM GRAVITY	7950 LBS
MAXIMUM NET UPLIFT	6760 LBS
MAXIMUM HORIZONTAL {0.6 * MWFRS}	870 LBS
MAXIMUM HORIZONTAL {0.6 * C&C}	1140 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: EWC2P220G08  
4" X 4", 8 GA, 3-PLY SQUARE TUBE

H1: EWH2P23875G08

A1: 200TP050  
A2: 200TP060

T1: 106757  
T2: 108151SA/108151SB

PB: 106755

C2: EWC3P342G08  
C3: EWC3P508G08  
4" X 4", 8 GA, 2-PLY SQUARE TUBE

2.375" OD, 14 GA ROUND PIPE

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

HEADER BRACKET (3/16" STEEL PLATE)

C4: EWM2P308G08

B1: 2375TP085  
B2: 2375TP138  
B3: 2375TP050

F1: 111700

HB: EWHB2P

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ORDER #: **7032939**  
CUSTOMER #: **6764428**

**VECTOR**  
ENGINEERS  
9198 S. STATE STREET, SUITE 101 (801) 990-1775  
SANDY, UTAH 84070 (801) 990-1776 FAX  
PROJECT NUMBER: U1382-351-162

STRUCTURE SKU #: **EW085GBF0531D**  
STRUCTURE SIZE: **85' X 160'**  
STRUCTURE DESCRIPTION: **85GB END WL 20X-C/(4)36"VNTS DRCOL+10'**

CUSTOMER INFORMATION:  
DEPARTMENT OF PUBLIC WORKS  
9250 BENDIX RD  
COLUMBIA, MD 21045-1832

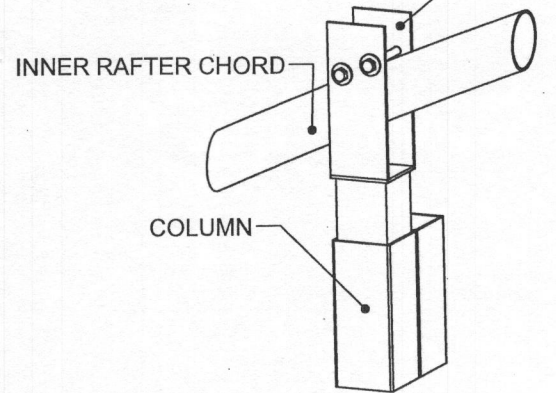
CONTACT PHONE:  
410-382-7098

CUSTOMER CONTACT:  
JOHN CAPPELLETTI

SHEET TITLE:  
COVER SHEET/PART LOCATIONS/LAYOUT

DRAWN BY: SMN	CREATION DATE: 6/21/2016	
REVISIONS:		
NO.	BY:	REVISION DATE:
1		
2		
3		
4		
NOT TO SCALE		SHEET SIZE: 11X17
SHEET: <b>L1</b>		

- T1**
- TOP COLUMN INSERT**
- (2X) 1/2" X (SEE CHART) HEX BOLT
  - (4X) 1/2" WASHER
  - (2X) 1/2" HEX NUT

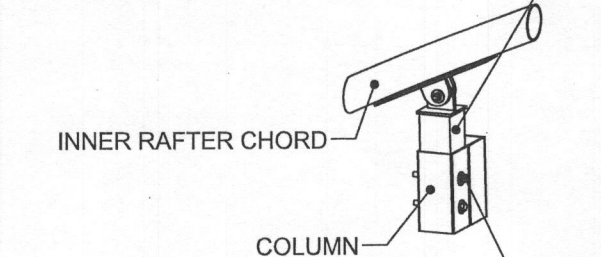


HEX BOLT LENGTH BASED ON CHORD DIA.	
CHORD DIA.	HEX BOLT LENGTH
2.375"	3 1/2"
2.875", 3.50"	4 1/2"
4.0"	5 1/2"
*5.0"	6 1/2"

\* 5.0" CHORDS WILL REQUIRE 3/4" HARDWARE

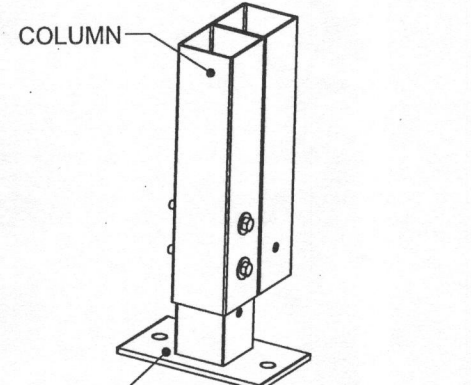
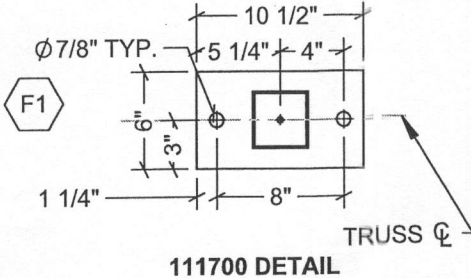
**VIEW 1: TOP COLUMN INSERT DETAIL (IF APPLICABLE)**

- T2**
- ADJUSTABLE TOP COLUMN INSERT**
- (1X) 1/2" X 2 1/2" HEX BOLT (HINGE BOLT) (A325)
  - (2X) 1/2" WASHER (STRUCTURAL)
  - (1X) 1/2" HEX NUT (STRUCTURAL)
  - (SEE NOTE) 3/8" BOX BOLT (THRU CHORD)
- NOTE:**
- COLUMN C3 USE (4X) 3/8" BOX BOLT
  - COLUMN C4 USE (2X) 3/8" BOX BOLT



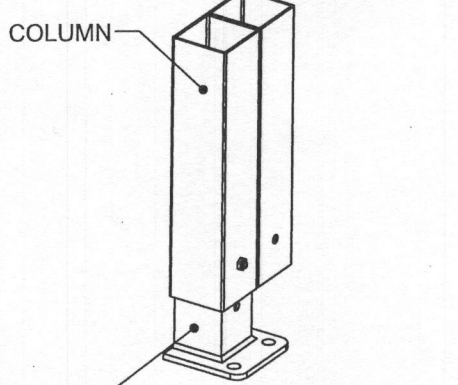
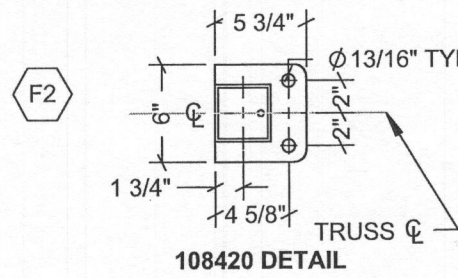
- (SEE NOTE) 1/2" X 5 1/2" HEX BOLT
  - (2X) 1/2" WASHER
  - (1X) 1/2" HEX NUT
- NOTE:**
- COLUMN C3 USE (2X) 1/2" BOLT
  - COLUMN C4 USE (1X) 1/2" BOLT

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



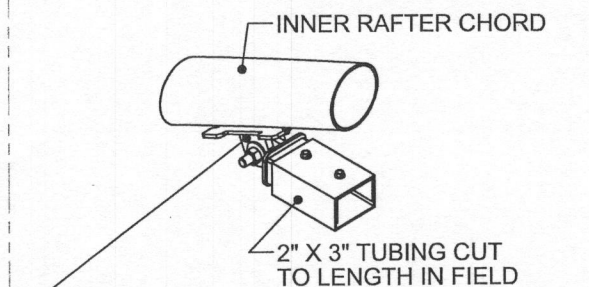
- (SEE NOTE) 1/2" X 5 1/2" HEX BOLT
  - (2X) 1/2" WASHER
  - (1X) 1/2" HEX NUT
- NOTE:**
- COLUMN C3 USE (2X) 1/2" BOLT
  - COLUMNS C1 & C2 USE (1X) 1/2" BOLT

**VIEW 3: BOTTOM COLUMN INSERT DETAIL (IF APPLICABLE)**

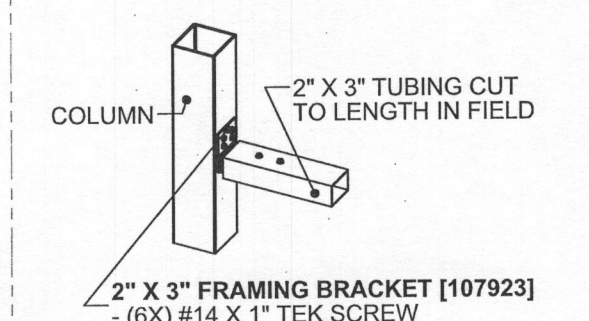


- (1X) 1/4" BOX BOLT (THRU COLUMN)

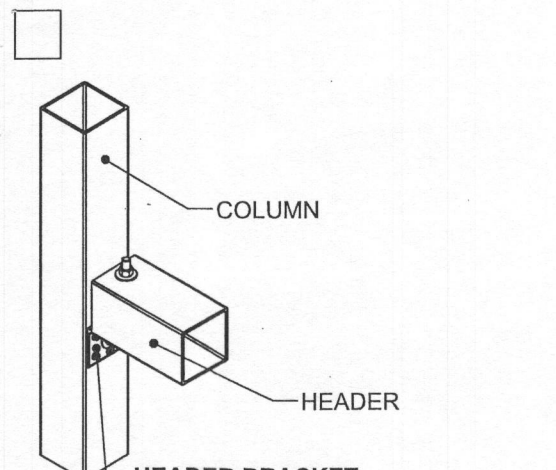
**VIEW 4: FLUSH MOUNT BOTTOM COLUMN INSERT DETAIL (IF APPLICABLE)**



- ADJUSTABLE 2" X 3" INSERT [110356ALT/110356BALT]**
- (1X) 1/2" X 2 1/2" HEX BOLT (HINGE BOLT) (A325)
  - (2X) 1/2" WASHER (STRUCTURAL)
  - (1X) 1/2" HEX NUT (STRUCTURAL)
  - (2X) 1/4" BOX BOLT (THRU CHORD)
  - (2X) #14 X 1" TEK SCREW



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

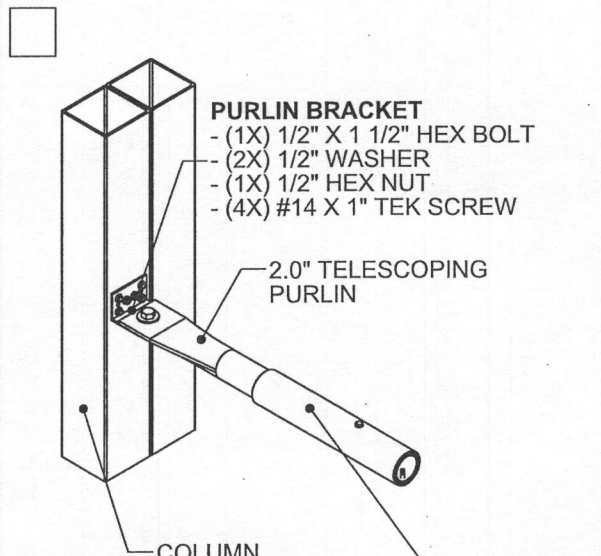


- HEADER BRACKET**
- (SEE CHART) 1/2" X 5 1/2" HEX BOLT
  - (SEE NOTE) 1/2" WASHER
  - (SEE NOTE) 1/2" HEX NUT
  - (SEE CHART) #14 X 1" TEK SCREW

**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)**



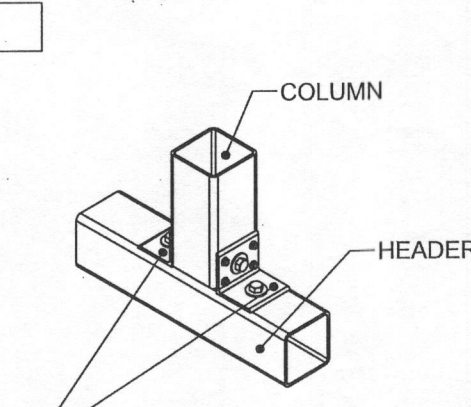
- PURLIN BRACKET**
- (1X) 1/2" X 1 1/2" HEX BOLT
  - (2X) 1/2" WASHER
  - (1X) 1/2" HEX NUT
  - (4X) #14 X 1" TEK SCREW

**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)**



- (2X) PARTIAL ENDWALL 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	3	8
EWHB2P	6	16
EWHB3P	9	16

**VIEW 8: PARTIAL ENDWALL COLUMN 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

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STATE OF MARYLAND  
ROBERT ALWORTH  
No. 35549  
PROFESSIONAL ENGINEER

Jul 20, 2016

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 35549, Expiration Date: 3-Apr-2018

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ORDER #: **7032939**

CUSTOMER #: **6764428**

**VECTOR**  
ENGINEERS

9138 S. STATE STREET, SUITE 101 (801) 990-1775  
SANDY, UTAH 84070 (801) 990-1776 FAX

PROJECT NUMBER: U1385-351-162

STRUCTURE SKU #: **EW085GBF0531D**

STRUCTURE SIZE: **85' X 160'**

STRUCTURE DESCRIPTION: **85GB END WL- 20X-C/(4)36-VNTS DRCOL-F+10'**

CUSTOMER INFORMATION:  
DEPARTMENT OF PUBLIC WORKS  
9250 BENDIX RD  
COLUMBIA, MD 21045-1832

CONTACT PHONE: **410-382-7098**

CUSTOMER CONTACT: **JOHN CAPPELLETTI**

SHEET TITLE: **CONNECTION DETAILS**

**DRAWING DETAILS**

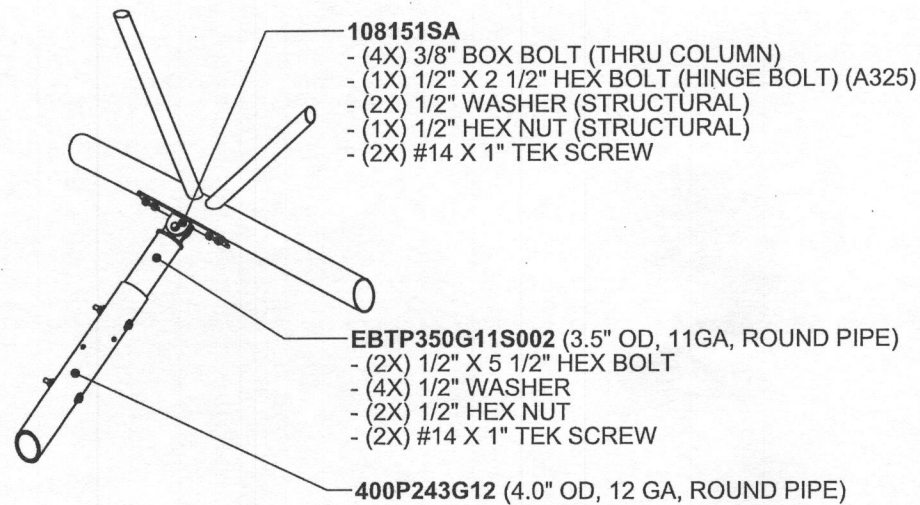
DRAWN BY: **SMN** CREATION DATE: **6/21/2016**

REVISIONS:

NO.	BY:	REVISION DATE:
1		
2		
3		
4		

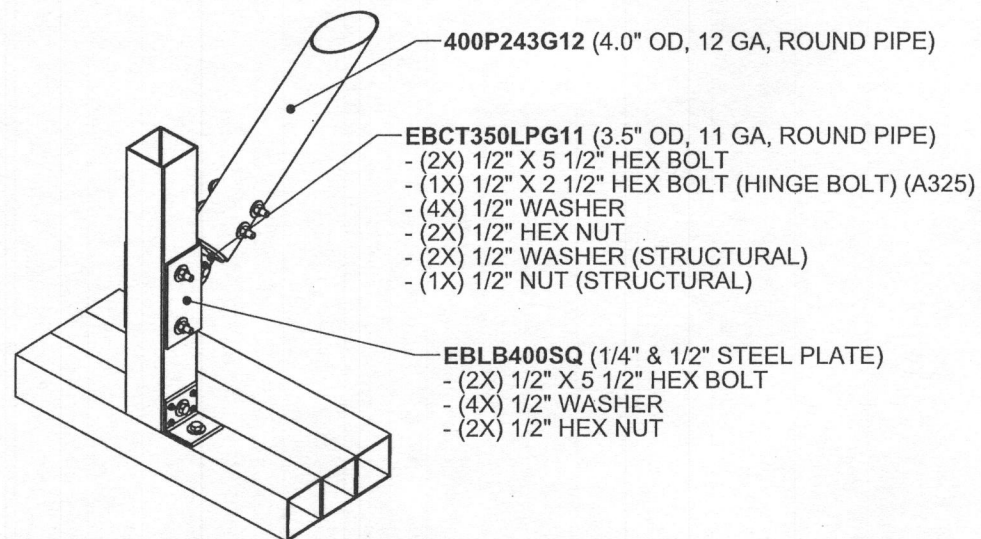
NOT TO SCALE SHEET SIZE: 11X17

SHEET: **L2**

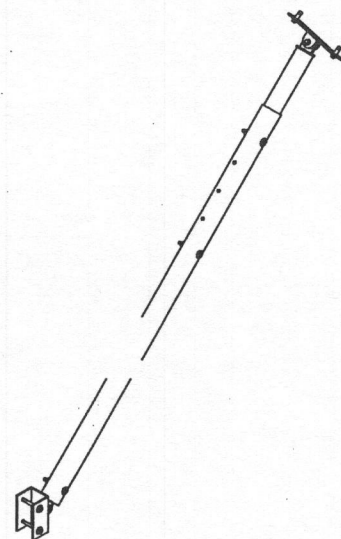


NOTE: USE (2X) #14 X 1\"/>

VIEW 1: KICKBACK CONNECTION DETAILS AT INTERIOR TRUSS

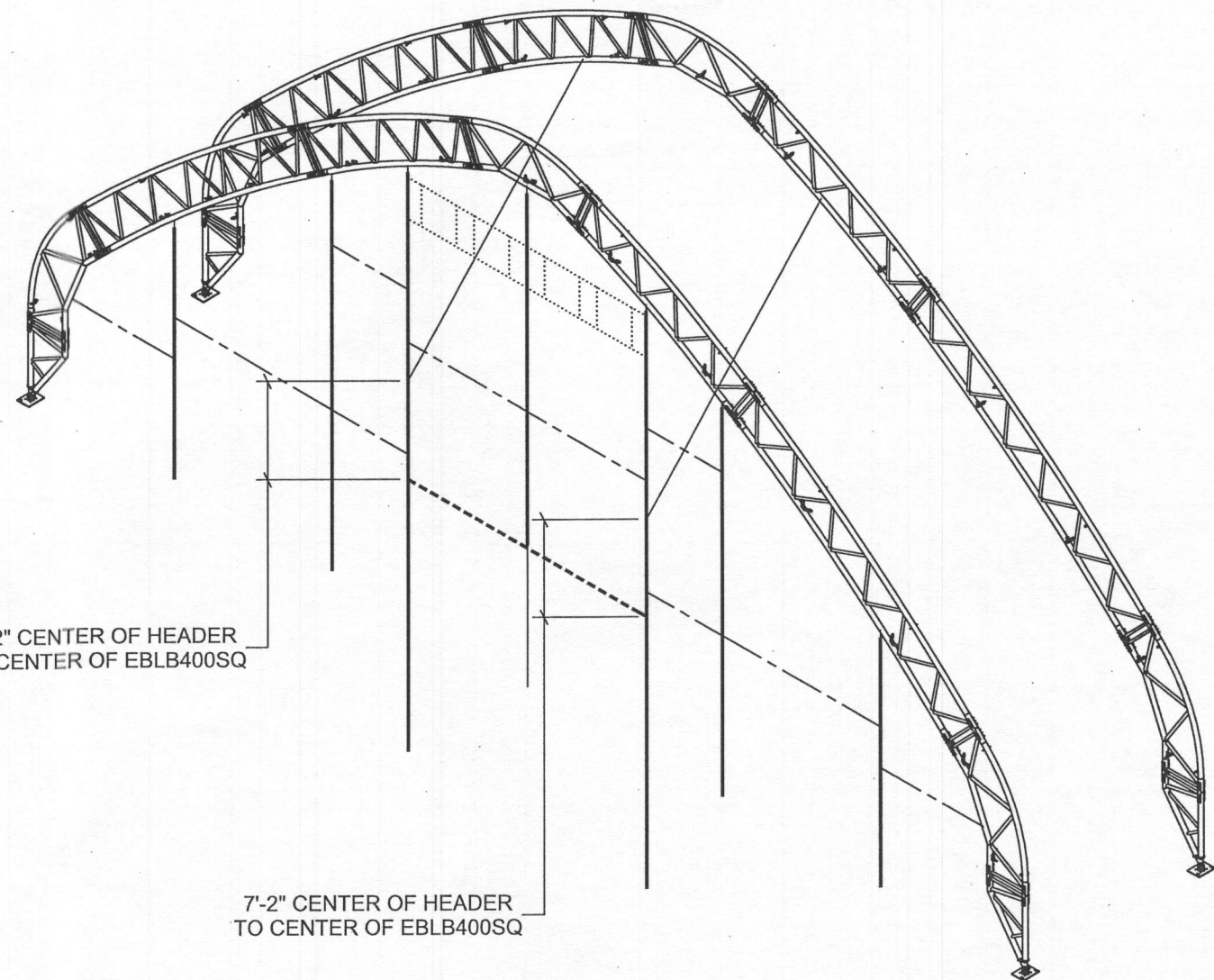


VIEW 2: KICKBACK CONNECTION DETAILS AT COLUMN



VIEW 3: TYPICAL KICKBACK ASSEMBLY

NOTE: LATERAL AND ANGLED BRACES NOT SHOWN FOR CLARITY.



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CUSTOMER #:  
**6764428**

**VECTOR**  
 ENGINEERS

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 SANDY, UTAH 84070 (801) 990-1776 FAX

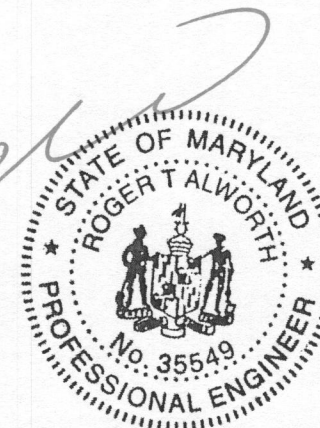
PROJECT NUMBER: U1385-351-162

STRUCTURE SKU #: <b>EW085GBF0531D</b>	STRUCTURE SIZE: <b>85' X 160'</b>	STRUCTURE DESCRIPTION: <b>85GB END WL 20X-C(4)36"VNTS DRCOL+10'</b>
CUSTOMER INFORMATION: DEPARTMENT OF PUBLIC WORKS 026 REGIONAL OFFICE COLUMBIA, MD 21045-1832	CONTACT PHONE: <b>410-382-7098</b>	CUSTOMER CONTACT: <b>JOHN CAPPALLETTI</b>
SHEET TITLE: <b>KICKBACK CONNECTION DETAILS</b>		

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DRAWING DETAILS

DRAWN BY: SMN	CREATION DATE: 6/21/2016	
REVISIONS:		
NO.	BY:	REVISION DATE:
1		
2		
3		
4		

NOT TO SCALE SHEET SIZE: 11X17

SHEET:  
**L3**

**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**

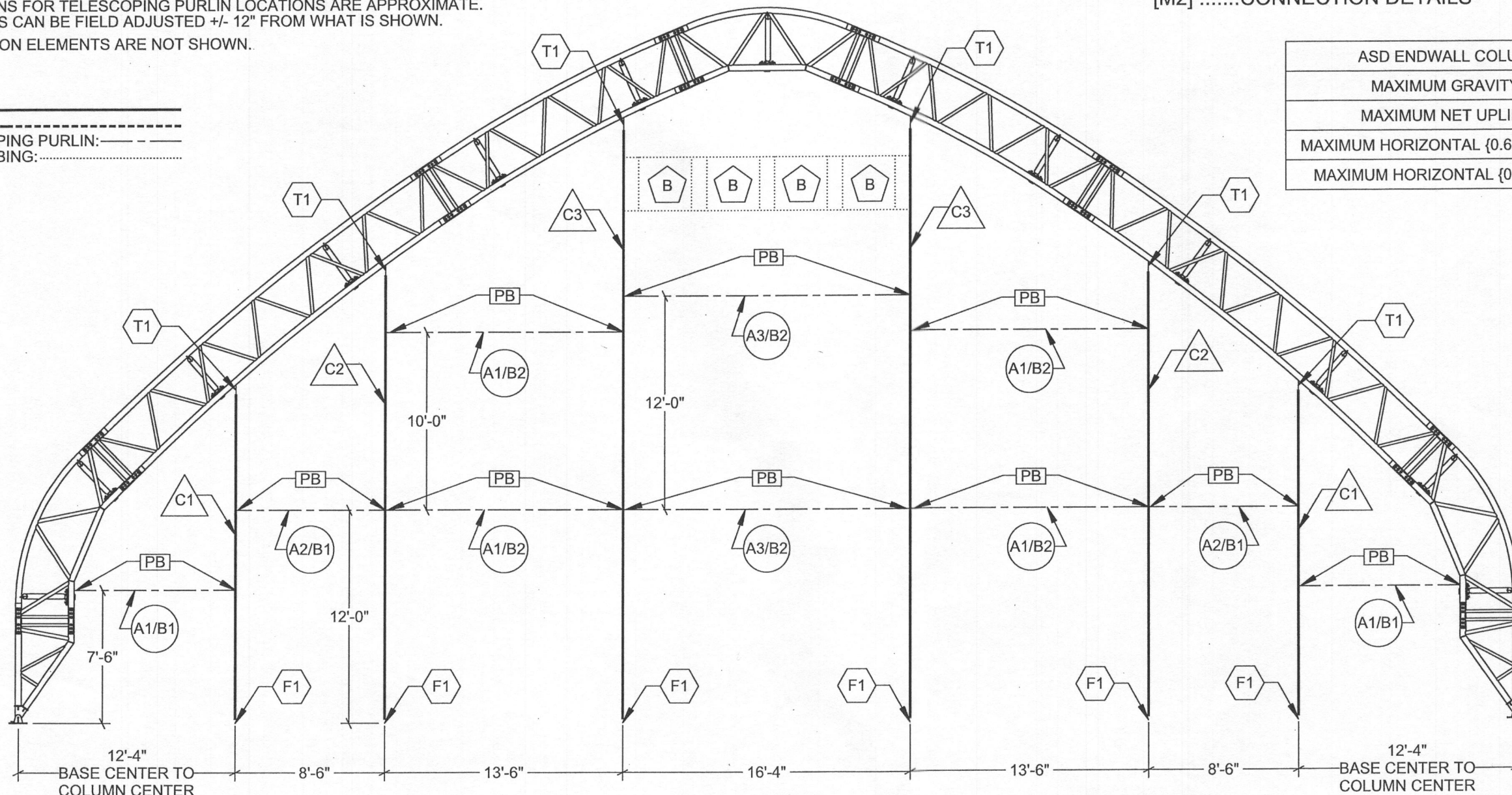
CALL-OUT	DESCRIPTION	ROUGH OPENING
B	3'-0" X 3'-0" LOUVER	VERIFY

**EW085GBF0480D**  
85GB SOLID END WL

**ENDWALL CONTENT GUIDE:**

- [M1] .....COVER SHEET/PART LOCATIONS/LAYOUT
- [M2] .....CONNECTION DETAILS

ASD ENDWALL COLUMN REACTIONS	
MAXIMUM GRAVITY	880 LBS
MAXIMUM NET UPLIFT	330 LBS
MAXIMUM HORIZONTAL {0.6 * MWFRS}	4710 LBS
MAXIMUM HORIZONTAL {0.6 * C&C}	6150 LBS



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

C1: EWC2P220G08  
C2: EWC2P300G08

4" X 4", 8 GA, 3-PLY SQUARE TUBE

C3: EWC3P397G08

**○ TELESCOPING PURLINS**  
2.0" OD, 11 GA ROUND PIPE

A1: 200TP050  
A2: 200TP036  
A3: 200TP078

2.375" OD, 14 GA ROUND PIPE

B1: 2375TP085  
B2: 2375TP138

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

T1: 106757

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

F1: 111700

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

PB: 106755

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ORDER #:  
**7032939**

CUSTOMER #:  
**6764428**

**VECTOR**  
ENGINEERS

9138 S. STATE STREET, SUITE 101 (801) 990-1775  
SANDY, UTAH 84070 (801) 990-1776 FAX

PROJECT NUMBER: U1382-351-162

STRUCTURE SKU #: <b>EW085GBF0480D</b>	STRUCTURE SIZE: <b>85' X 160'</b>	STRUCTURE DESCRIPTION: 85GB SOLID END WL
CUSTOMER INFORMATION: DEPARTMENT OF PUBLIC WORKS 9250 BENDIX RD. COLUMBIA, MD 21045-1832	CONTACT PHONE: 410-382-7098	CUSTOMER CONTACT: JOHN CAPPELLETTI
SHEET TITLE: COVER SHEET/PART LOCATIONS/LAYOUT		

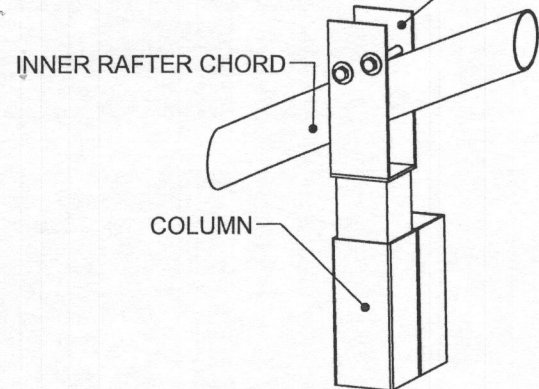
**DRAWING DETAILS**

DRAWN BY: BHB	CREATION DATE: 2/17/2016
REVISIONS:	
NO. BY:	REVISION DATE:
1 JJE	6/24/2016
2	
3	
4	

NOT TO SCALE SHEET SIZE: 11X17

SHEET:  
**M1**

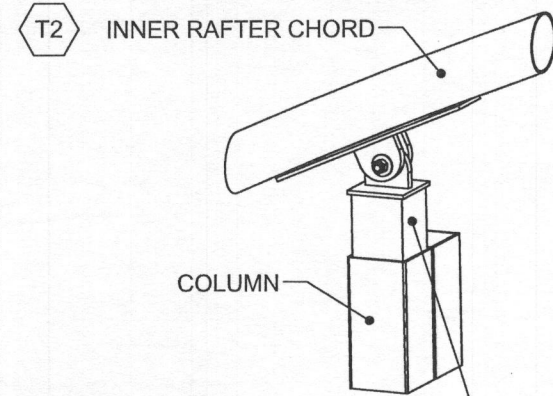
- T1**
- TOP COLUMN INSERT**
- (2X) \*1/2" X (SEE CHART) HEX BOLT
  - (4X) \*1/2" WASHER
  - (2X) \*1/2" HEX NUT



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"

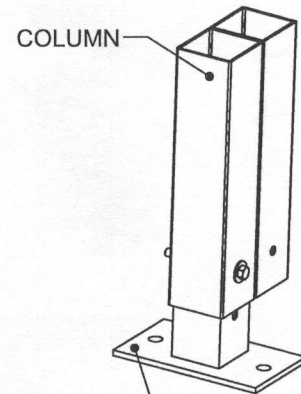
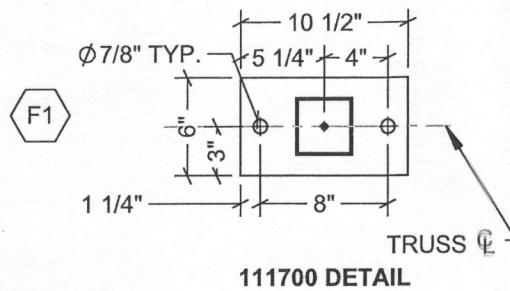
\* 5.0" CHORDS WILL REQUIRE 3/4" HARDWARE

**VIEW 1: TOP COLUMN INSERT DETAIL**  
(IF APPLICABLE)



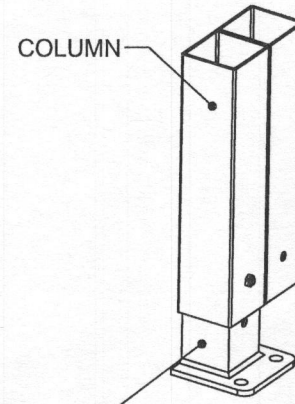
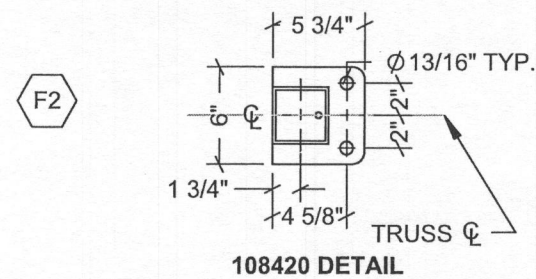
- ADJUSTABLE TOP COLUMN INSERT**
- (1X) 1/2" X 2 1/2" HEX BOLT (HINGE BOLT)
  - (2X) 1/2" WASHER
  - (1X) 1/2" HEX NUT
  - (2X) 3/8" BOX BOLT (THRU CHORD)

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



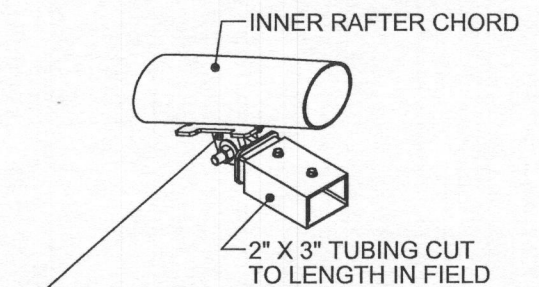
- BOTTOM COLUMN INSERT**
- (1X) 1/2" X 5 1/2" HEX BOLT
  - (2X) 1/2" WASHER
  - (1X) 1/2" HEX NUT

**VIEW 3: BOTTOM COLUMN INSERT DETAIL**  
(IF APPLICABLE)

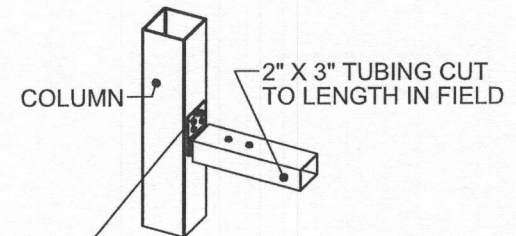


- FLUSH MOUNT COLUMN INSERT**
- (1X) 1/4" BOX BOLT (THRU COLUMN)

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

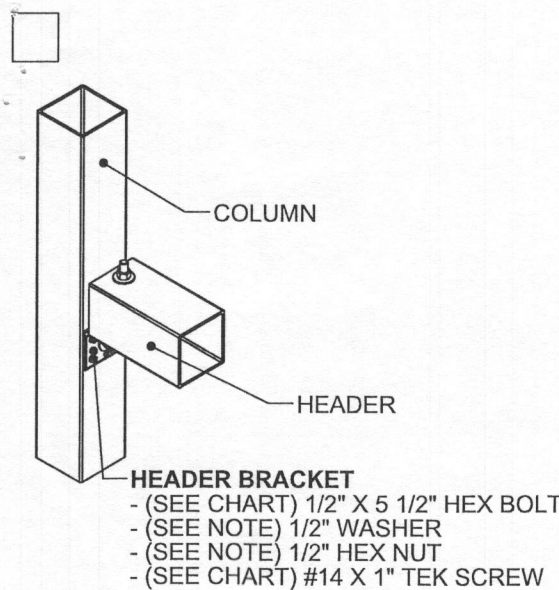


- ADJUSTABLE 2" X 3" INSERT**  
[110356ALT/110356BALT]
- (1X) 1/2" X 2 1/2" HEX BOLT (HINGE BOLT)
  - (2X) 1/2" WASHER
  - (1X) 1/2" HEX NUT
  - (2X) 1/4" BOX BOLT (THRU CHORD)
  - (2X) #14 X 1" TEK SCREW



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

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

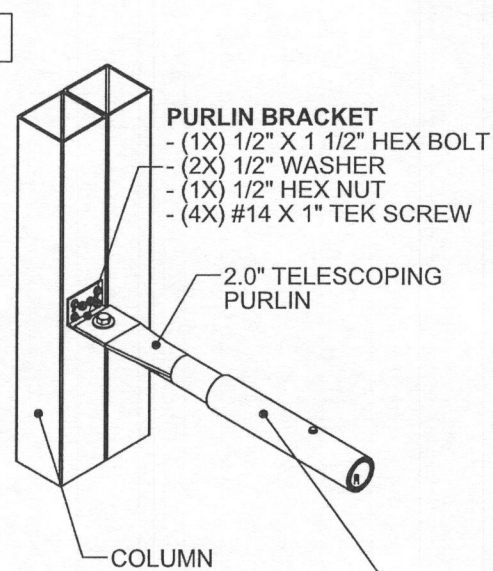


- HEADER BRACKET**
- (SEE CHART) 1/2" X 5 1/2" HEX BOLT
  - (SEE NOTE) 1/2" WASHER
  - (SEE NOTE) 1/2" HEX NUT
  - (SEE CHART) #14 X 1" TEK SCREW

**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

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Jul 20, 2016

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**VECTOR**  
ENGINEERS

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SANDY, UTAH 84070 (801) 990-1776 FAX

PROJECT NUMBER: U1382-351-162

STRUCTURE SKU #: **EW085GBF0480D**

STRUCTURE SIZE: **85' X 160'**

STRUCTURE DESCRIPTION: **85GB SOLID END WL**

CUSTOMER INFORMATION:  
**DEPARTMENT OF PUBLIC WORKS**  
9250 BENDIX RD  
COLUMBIA, MD 21045-1832

CONTACT PHONE: **410-382-7098**

CUSTOMER CONTACT:  
**JOHN CAPPELLETTI**

SHEET TITLE:  
**CONNECTION DETAILS**

**DRAWING DETAILS**

DRAWN BY: BHB	CREATION DATE: 2/17/2016
REVISIONS:	
NO. BY:	REVISION DATE:
1 JJE	6/24/2016
2	
3	
4	

NOT TO SCALE SHEET SIZE: 11X17

**SHEET: M2**