Transcend Wireless

10 Industrial Avenue,
Suite 3
Mahwah, NJ 07430

Phone: 201.684.0055
Fax: 201.684.0066

July 30, 2019

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Notice of Exempt Modification
1 Ecology Drive (77 Town Farm Road) Enfield CT
Latitude: 41.96586944
Longitude: -72.55265278
T-Mobile site: CT11534A /L600

Dear Ms. Bachman:

T-Mobile currently maintains (9) antennas at the 140 foot level of the existing 150 -foot monopole located at 1 Ecology Drive (77 Town Farm Rd) in Enfield CT. The monopole is owned by American Tower and the property is owned by The Town of Enfield. T-Mobile now intends to replace (6) of its existing antennas with (3) 600/700 MHz antennas and (3) 1900 MHz / 2100 MHz antennas. The new antennas would be installed at the 140 foot level of the tower with proposed mount modifications as per the attached mount analysis.

Planned Modifications:

Remove
(6) 1-5/8" coax

Remove and Replace:
Antennas/RRUs:
(3) LNX-6515DS-A1M (REMOVE) – Add (3) APXVAARR24_43-U-NA20 (REPLACE) - 600 MHz / 700 MHz
(3) AIR B2P B4A (REMOVE) – Add (3) AIR 32 B2A/B66Aa (REPLACE) - 1900 MHz / 2100 MHz
(3) Ericsson RRUS 11 B12 (REMOVE) – (3) Ericsson Radio 4449 B12, B71 (REPLACE)

Existing to Remain:
Antennas/TMAs/RRUs/coax:
(3) AIR B2A B4P
(3) KRY 112 144/1
(6) 1-5/8" coax
(1) 1-1/4" hybrid

Install New:
Antennas/TMAs/RRUs/coax:
(2) 1-5/8" hybrid

This facility was approved by the Council as Docket 51 on September 26, 1985 with no known conditions that would restrict exempt modifications. A copy of the original decision is attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies§ 16- SOj-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.SA. § 16-SOj-73, a copy of this letter is being sent to The Honorable Michael Ludwick, Mayor and Councilor at Large, Property Owner, and Raquel Ocasio, Assistant Town Planner.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S;A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, T-Mobile respectfully submits that the proposed modifications to the above referenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Elizabeth Jamieson

Elizabeth Jamieson
Transcend Wireless
10 Industrial Ave., Suite 3
Mahwah, New Jersey 07430
860-605-7808
EJamieson@TranscendWireless.com

cc:
The Honorable Michael Ludwick, Mayor and Councilor at Large, Property Owner
Raquel Ocasio, Assistant Town Planner
American Tower, Tower Owner

Exhibit A

Original Facility Approval

DOCKET NO. 51

AN APPLICATION SUBMITTED BY THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF FACILITIES TO PROVIDE CELLULAR SERVICE IN HARTFORD AND MIDDLESEX COUNTIES.	:	CONNECTICUT SITING COUNCIL
	:	September 26, 1985

D E C I S I O N A N D O R D E R

Pursuant to the foregoing opinion, the Council hereby directs that a certificate of environmental compatibility and public need as required by section 16-50k of the General Statutes of Connecticut be issued to Southern New England Telephone Company (SNET) for the construction, operation, and maintenance of a telecommunications tower and associated equipment building to provide cellular service at sites in Old Saybrook and Enfield, Connecticut.

The facilities shall be constructed, operated, and maintained as specified in this matter, and subject to the following conditions:

1. The towers shall be no taller than necessary to provide the proposed service, and in no event shall exceed
   a) 150' at the Old Saybrook site; and
   b) 150' at the Enfield site;
2. A fence not lower than eight feet shall surround each tower and its associated equipment building;
3. The applicant or its successor shall notify the Council if and when directional antennas or any other equipment is added to any of these facilities;
4. The applicant or its sucessor shall permit, in accordance with representations made by it during the proceeding, public or private entities to share space on the facilities, for due

consideration received, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing;

5. The facilities shall be constructed in accordance with all applicable federal, state, and municipal laws and regulations;
6. The applicant shall submit a development and management plan (D&M) for the Old Saybrook site pursuant to sections 16-50j-75 through 16-50j-77 of the regulations of state agencies, except that irrelevant items in section 16-50j-76 need only be identified as such. The D&M plan shall include erosion control measures, reseeding plans, and tree removal plans. The applicant shall comply with the reporting requirements of section 16-50j-77 for both sites;
7. Construction activities shall take place during daylight working hours;
8. This decision and order shall be void and the towers and associated equipment approved herein shall be dismantled and removed, or reapplication for any new use shall be made to the Connecticut Siting Council before any such new use is made, if the towers do not provide or permanently cease to provide cellular service following completion of construction;
9. This decision and order shall be void if all construction authorized is not completed within three years of the issuance of this decision.

Pursuant to section 16-50p of the General Statutes, we hereby direct that a copy of the opinion and decision and order be served on each person listed below. A notice of the issuance shall be published in the

Hartford Courant, the Middletown Press, and the Old Saybrook Pictorial.

The parties to this proceeding are

Southern New England Telephone Company (Applicant)
227 Church Street
New Haven, Connecticut 06506
Attn: Peter J. Tyrrell
Senior Attorney
Room 314

C E R T I F I C A T I O N

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut, this 26th day of September, 1985.

Council Members	Vote Cast
Gloria Dibble Pond Chairperson	Yes
Commissioner John Downey Designee: Commissioner Peter G. Boucher	Absent
Commissioner Stanley Pac Designee: Christopher Cooper	Yes
Owen L. Clark	Yes
Mortimer A. Gelston	Yes
James G. Horsfall	Yes
Pamela B. Katz	Yes
William H. Smith	Yes
Colin C. Tait	Absent

STATE OF CONNECTICUT)
: ss. New Britain, September 26, 1985
COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the decision and order issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:

Christopher S. Wood, Executive Director
Connecticut Siting Council

Exhibit B

Property card

77 TOWN FARM RD

Location	77 TOWN FARM RD	**Mblu**	071/ / 0003/ /
Acct#	002800010010	**Owner**	ENFIELD TOWN OF
Assessment	$1,329,970	**Appraisal**	$1,899,950
PID	4350	**Building Count**	1
Fire District	1		

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$802,530	$1,097,420	$1,899,950
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$561,770	$768,200	$1,329,970

Owner of Record

Owner	ENFIELD TOWN OF	**Sale Price**	$0
Co-Owner	REFUSE AREA (DUMP)	**Certificate**	1
Address	820 ENFIELD ST ENFIELD, CT 06082	**Book & Page**	0/ 0
		Sale Date	

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
ENFIELD TOWN OF	$0	1	0/ 0	

Building Information

Building 1 : Section 1

Year Built:	1970
Living Area:	160
Replacement Cost:	$7,069
Building Percent Good:	56
Replacement Cost Less Depreciation:	$3,960

Building Attributes

Field	Description
STYLE	Job Shop
MODEL	Ind/Comm
Grade	Minimum
Stories:	1
Occupancy	1
Exterior Wall 1	Pre-finsh Metl
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Minimum/Plywd
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Electr Basebrd
AC Type	None
Bldg Use	Exempt Comm
Total Rooms	
Total Bedrms	
Total Baths	
Total H Bths	
Extra Fixtures	
1st Floor Use:	
Heat/AC	
Frame Type	Steel
Baths/Plumbing	None
Ceiling/Wall	Ceil Walls
Rooms/Prtns	Average
Wall Height	7
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos2/EnfieldCTPhotos//\00\01\68/96

Building Layout

(http://images.vgsi.com/photos2/EnfieldCTPhotos//Sketches/435

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	160	160
		160	160

Building 1 : Section 1

Year Built: 1970
Living Area: 0
Replacement Cost: $7,069
Building Percent Good: 56
Replacement Cost Less Depreciation: $3,960

Building Attributes	
Field	Description

Style	Outbuildings
Model	
Grade:	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Full Bthrms:	
Half Baths:	
Extra Fixtures	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Extra Kitchens	
Fireplace(s)	
Extra Opening(s)	
Gas Fireplace(s)	
Blocked FPL(s)	
Bsmt Garage(s)	
Fin Bsmt	
FBM Quality	
Whirlpool(s)	
Sauna	
Walk Out	
Solar	

Building Photo

(http://images.vgsi.com/photos2/EnfieldCTPhotos//default.jpg)

Building Layout

Building Layout
(http://images.vgsi.com/photos2/EnfieldCTPhotos//Sketches/435

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	930
Description	Exempt Ind
Zone	R88
Neighborhood	C500
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	173.6
Frontage	1513
Depth	
Assessed Value	$768,200
Appraised Value	$1,097,420

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
SHD1	Shed	MS	Masonry	100 S.F.	$820	1
SCL2	SCALES-ELECT			60 TONS	$23,100	1
TWR2	Cell Twr 2 Carriers			1 UNITS	$206,250	1
SHD1	Shed	MS	Masonry	140 S.F.	$1,760	1
TWR4	Cell Twr4 Carriers			1 UNITS	$562,500	1
FN3	FENCE-8' CHAIN			256 L.F.	$4,140	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
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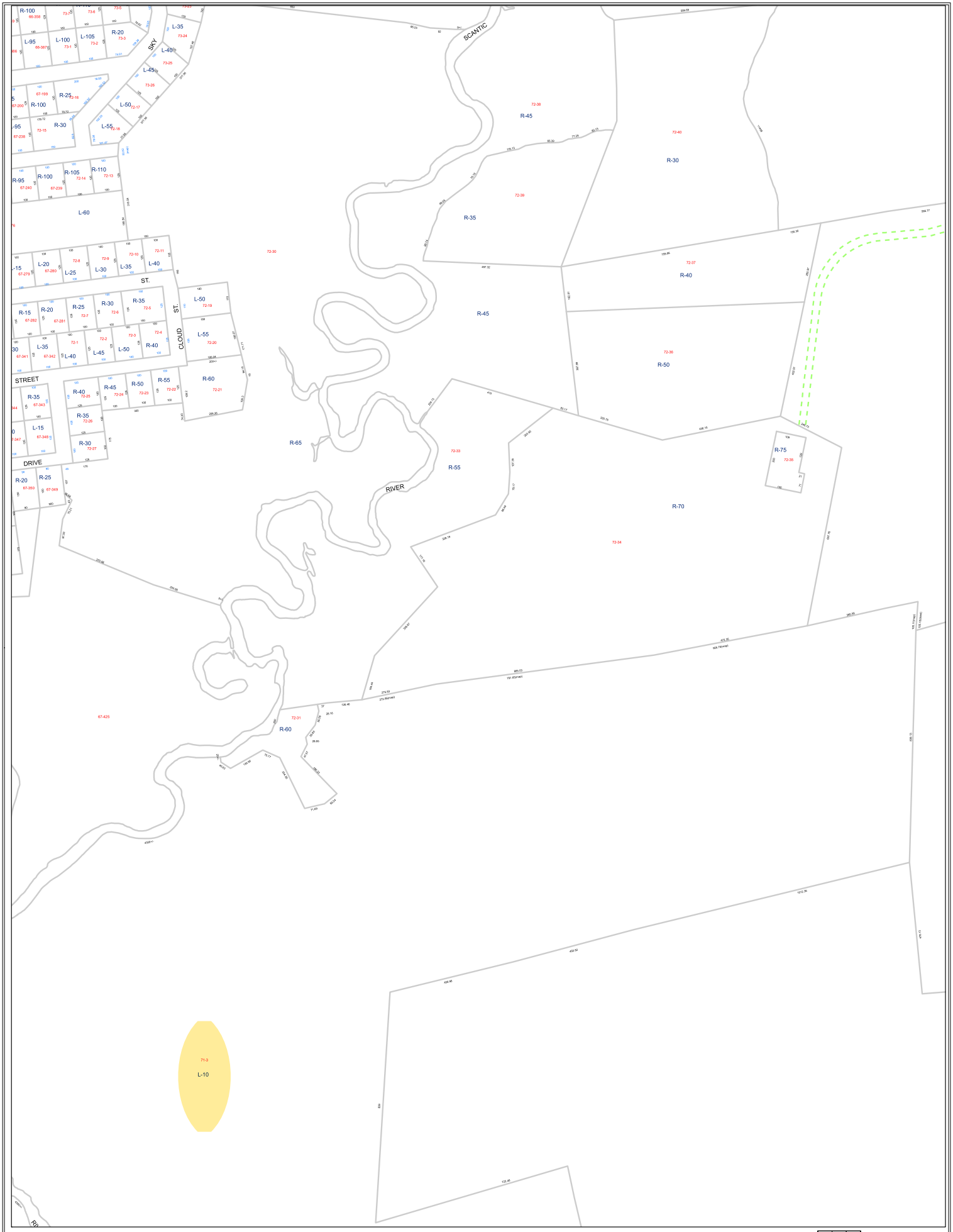

THESE MAPS ARE NOT LEGAL DOCUMENTS

Information presented is provided "as is." The Town of Enfield disclaims all representations or warranties regarding GIS information, including but not limited to, all express or implied warranties, representations or conditions of merchantability, fitness for a particular purpose, non-infringement of intellectual property, non-infringement of third party rights, or warranties of any other nature. The user agrees that the Town of Enfield shall be held harmless from all actions, claims, damages or judgments arising out of the use of GIS maps. GIS maps are representative only.

Legend

- Property Line
- Water Body
- Easements
- 67-9 Map-Lot Number
- L-25 Parcel ID

N W E S

Town of Enfield

Property Map Atlas

0 100 200 400 Feet

Scale: 1"=200'

68	73	84
67	72	85
68	71	86

72

77 TOWN FARM RD

Location	77 TOWN FARM RD	**Mblu**	071/ / 0003/ /
Acct#	002800010010	**Owner**	ENFIELD TOWN OF
Assessment	$1,329,970	**Appraisal**	$1,899,950
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Current Value

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Replacement Cost Less Depreciation: $3,960

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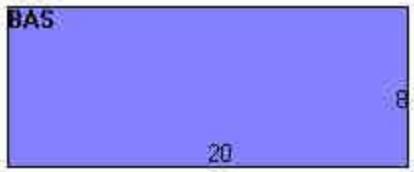
Field	**Description**
STYLE	Job Shop
MODEL	Ind/Comm
Grade	Minimum
Stories:	1
Occupancy	1
Exterior Wall 1	Pre-finsh Metl
Exterior Wall 2	
Roof Structure	Flat

Building Photo

(http://images.vgsi.com/photos2/EnfieldCTPhotos//\00\01\68/96

Roof Cover	Metal/Tin
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Minimum/Plywd
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Electr Basebrd
AC Type	None
Bldg Use	Exempt Comm
Total Rooms	
Total Bedrms	
Total Baths	
Total H Bths	
Extra Fixtures	
1st Floor Use:	
Heat/AC	
Frame Type	Steel
Baths/Plumbing	None
Ceiling/Wall	Ceil Walls
Rooms/Prtns	Average
Wall Height	7
% Comn Wall	

Building Layout



(http://images.vgsi.com/photos2/EnfieldCTPhotos//Sketches/435

Building Sub-Areas (sq ft)			Legend
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Building Attributes	
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Grade:	
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Occupancy	
Exterior Wall 1	
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Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Full Bthrms:	
Half Baths:	

Building Photo

(http://images.vgsi.com/photos2/EnfieldCTPhotos//default.jpg)

Building Layout

Building Layout
(http://images.vgsi.com/photos2/EnfieldCTPhotos//Sketches/435

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Fixtures	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Extra Kitchens	
Fireplace(s)	
Extra Opening(s)	
Gas Fireplace(s)	
Blocked FPL(s)	
Bsmt Garage(s)	
Fin Bsmt	
FBM Quality	
Whirlpool(s)	
Walk Out	
Solar	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Land Line Valuation

Use Code	930	**Size (Acres)**	173.6
Description	Exempt Ind	**Frontage**	1513
Zone	R88	**Depth**	
Neighborhood	C500	**Assessed Value**	$768,200
Alt Land Appr	No	**Appraised Value**	$1,097,420
Category			

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Outbuildings						Legend
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SCL2	SCALES-ELECT			60 TONS	$23,100	1
TWR2	Cell Twr 2 Carriers			1 UNITS	$206,250	1
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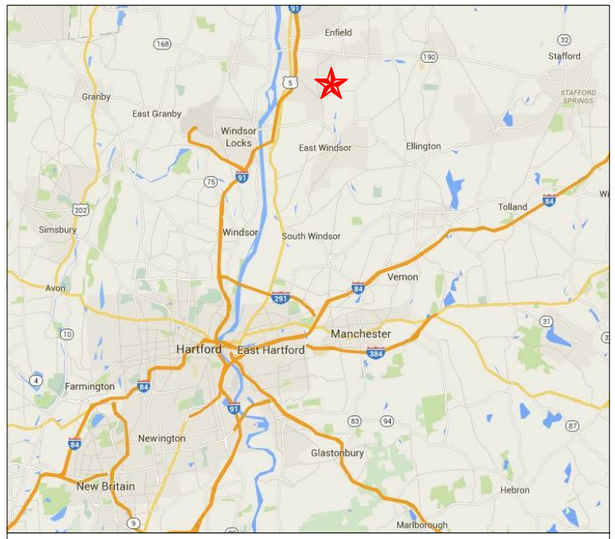
Exhibit C

Construction Drawings

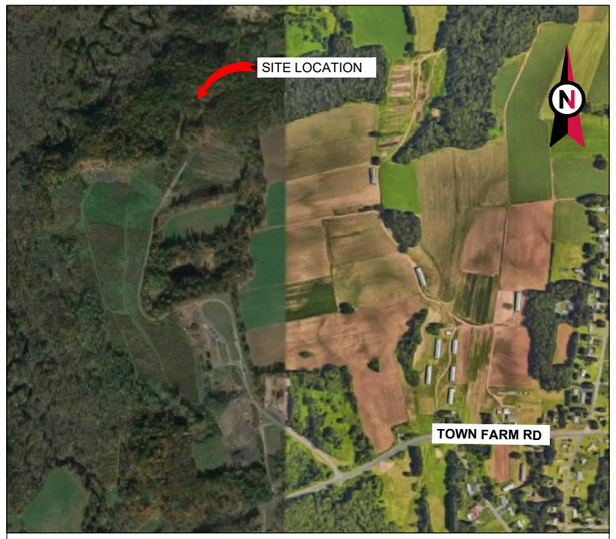


VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: ENFD - ENFIELD
ATC SITE NUMBER: 302489
T-MOBILE SITE ID: CT11534A
SITE ADDRESS: TOWN FARM ROAD ENFIELD, CT 06082

T-MOBILE L600 ANTENNA AMENDMENT
67D92DB CONFIGURATION



LOCATION MAP

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: EVERSOURCE
PHONE: (877) 659-6326

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 376-6843

811 Know what's below. Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

TOWN FARM ROAD
ENFIELD, CT 06082
COUNTY: HARTFORD

1A CERTIFICATE SUMMARY:

LATITUDE: 41° 57' 57.25" N

LONGITUDE: 72° 33' 09.69" W

GROUND ELEVATION: 159' AMSL

TOWER HEIGHT: 152.2' AGL

HIGHEST APPURTENANCE: 168.6' AGL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:

ATC TOWER SERVICES, LLC
3500 REGENCY PKWY STE 100
CARY, NC 27518

PROPERTY OWNER:

TOWN OF ENFIELD CT
820 ENFIELD ST
ENFIELD, CT 06082

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

REMOVE (6) PANELS, (3) RRUs, AND (6) 1-5/8" COAX CABLES

INSTALL (6) NEW PANELS, (3) RRUs, (2) 1-5/8" HYBRID CABLES, AND MOUNT MODIFICATIONS

EXISTING (3) PANELS, (3) TTAs, (1) 1-1/4" HYBRID CABLE, AND (6) 1-5/8" COAX CABLES TO REMAIN

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.

PROJECT LOCATION DIRECTIONS

FROM HARTFORD, CT:

I-91 N. TO EXIT 46. TURN RIGHT OFF EXIT ONTO RT 5 N. TURN RIGHT ONTO POST OFFICE ROAD. THIS WILL TURN INTO TOWNE FARM ROAD. LOOK FOR TOWN TRANSFER STATION ON LEFT. ACCESS TO SITE IS GAINED BY ENTERING THE TOWN TRANSFER STATION AT ATTENDANT SHACK. FOLLOW ROAD AROUND BEHIND TRANSFER STATION TO TOWER. NOTE: GATE AT ENTRANCE IS LOCKED WHEN THE STATION IS CLOSED.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	1	07/25/19	LR
G-002	GENERAL NOTES	0	05/29/19	LR
C-101	DETAILED SITE PLAN & TOWER ELEVATION	1	07/25/19	LR
C-501	ANTENNA INFORMATION & SCHEDULE	1	07/25/19	LR
E-501	GROUNDING DETAILS	0	05/29/19	LR
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LR	05/29/19
1	MA UPDATE	LR	07/25/19

ATC SITE NUMBER:
302489

ATC SITE NAME:
ENFD - ENFIELD

SITE ADDRESS:
TOWN FARM ROAD
ENFIELD, CT 06082

SEAL:

Authorized by "EOR"
Jul 25 2019 5:23 PM

T-Mobile design

DRAWN BY:	LR
APPROVED BY:	PPB
DATE DRAWN:	05/29/19
ATC JOB NO:	12951817

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	1

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC MASTER SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE WIRELESS REP PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE WIRELESS REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE WIRELESS REP IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH T-MOBILE WIRELESS WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
19. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE WIRELESS REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE WIRELESS SPECIFICATIONS AND REQUIREMENTS.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
25. CONTRACTOR SHALL NOTIFY T-MOBILE WIRELESS REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
27. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
28. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE WIRELESS REP. ANY WORK FOUND BY THE T-MOBILE WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
29. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
   - A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
   - B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
   - C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
   - D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
   - E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
   - A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
   - B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
   - C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
   - D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
   - E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
   - F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
   - G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

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COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LR	05/29/19

ATC SITE NUMBER:
302489

ATC SITE NAME:
ENFD - ENFIELD

SITE ADDRESS:
TOWN FARM ROAD
ENFIELD, CT 06082

SEAL:

Authorized by "EOR"
Jul 25 2019 5:23 PM

T-Mobile design

DRAWN BY:	LR
APPROVED BY:	PPB
DATE DRAWN:	05/29/19
ATC JOB NO:	12951817

GENERAL NOTES

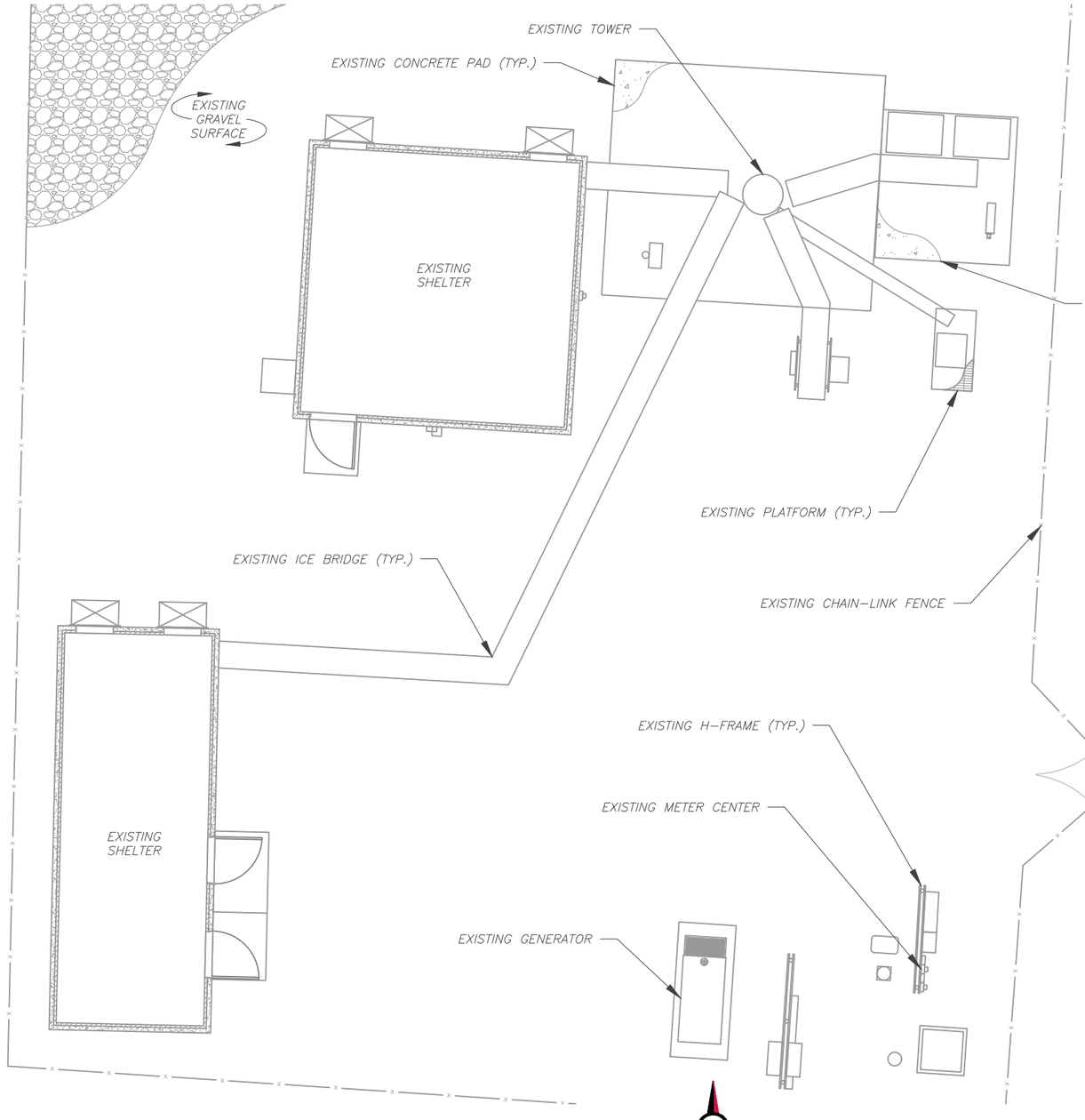
SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

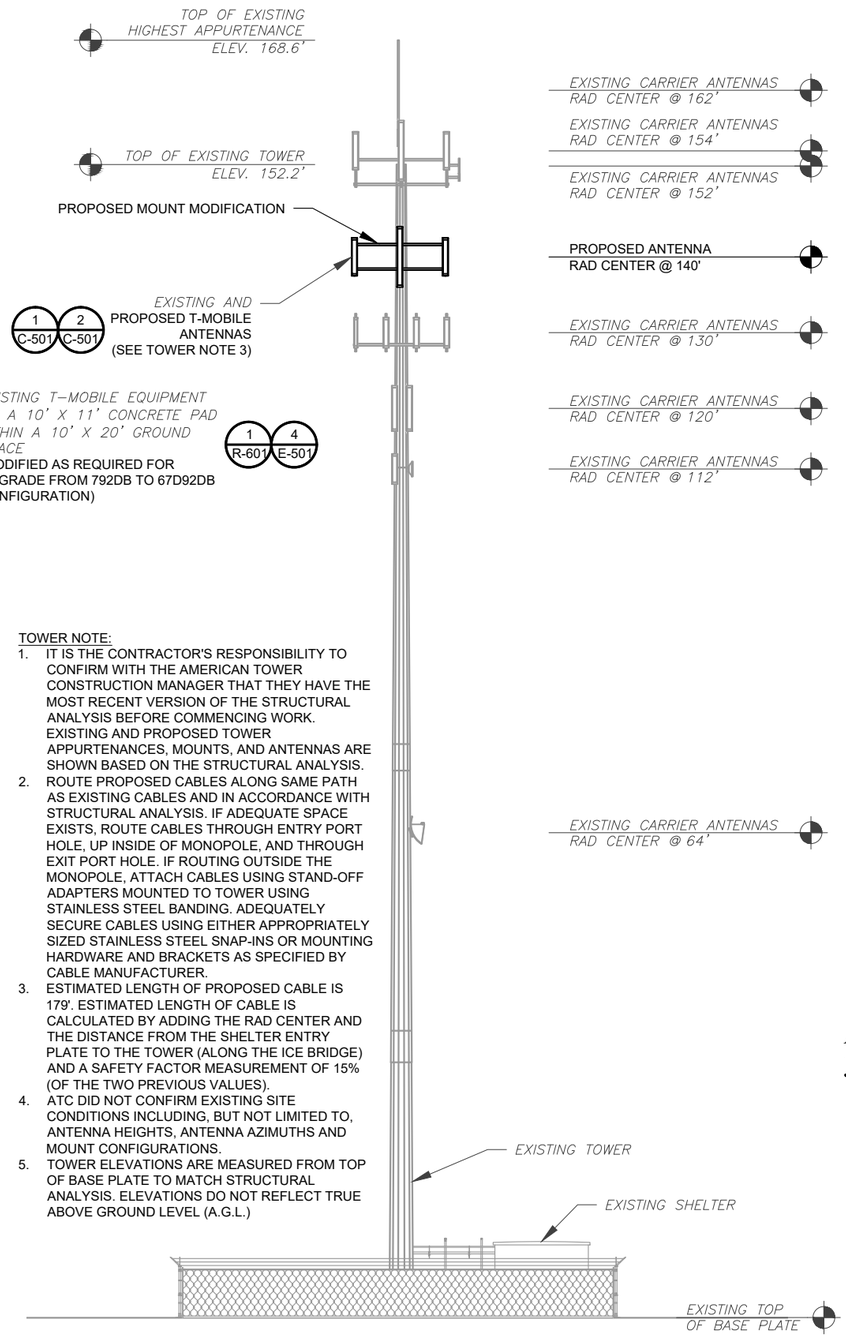
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.



1 DETAILED SITE PLAN

SCALE: 1"=10' (11X17)
1"=5' (22X34)

PER MOUNT ANALYSIS COMPLETED BY CLS ENGINEERING, DATED 07-08-19, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
3. ESTIMATED LENGTH OF PROPOSED CABLE IS 179'. ESTIMATED LENGTH OF CABLE IS CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES).
4. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA HEIGHTS, ANTENNA AZIMUTHS AND MOUNT CONFIGURATIONS.
5. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

2 TOWER ELEVATION

SCALE: NOT TO SCALE

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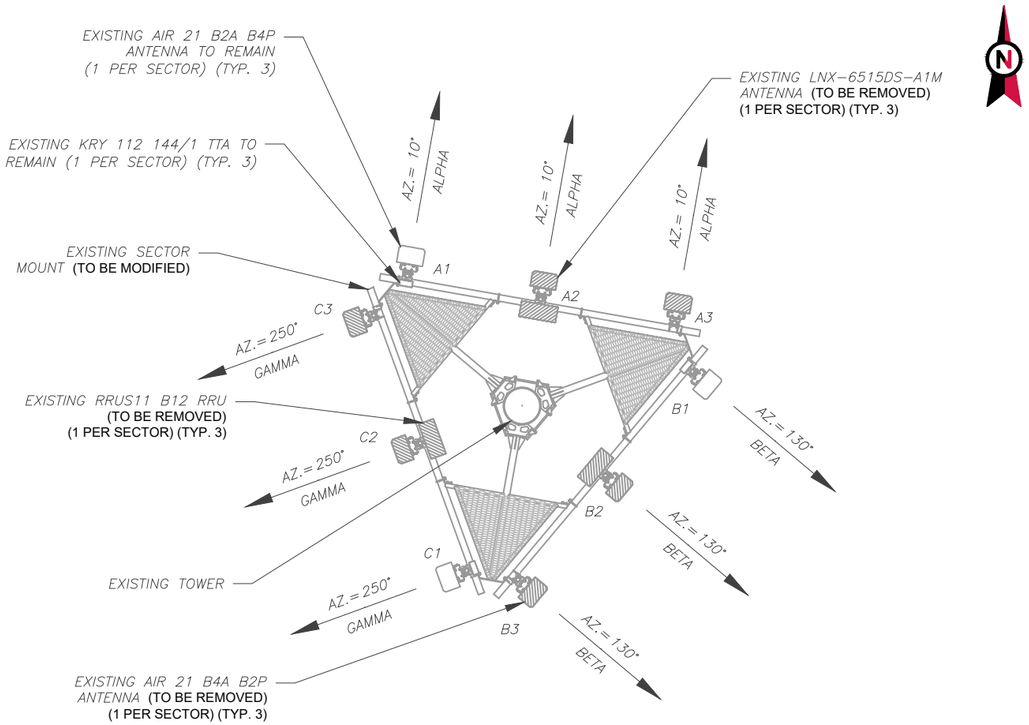
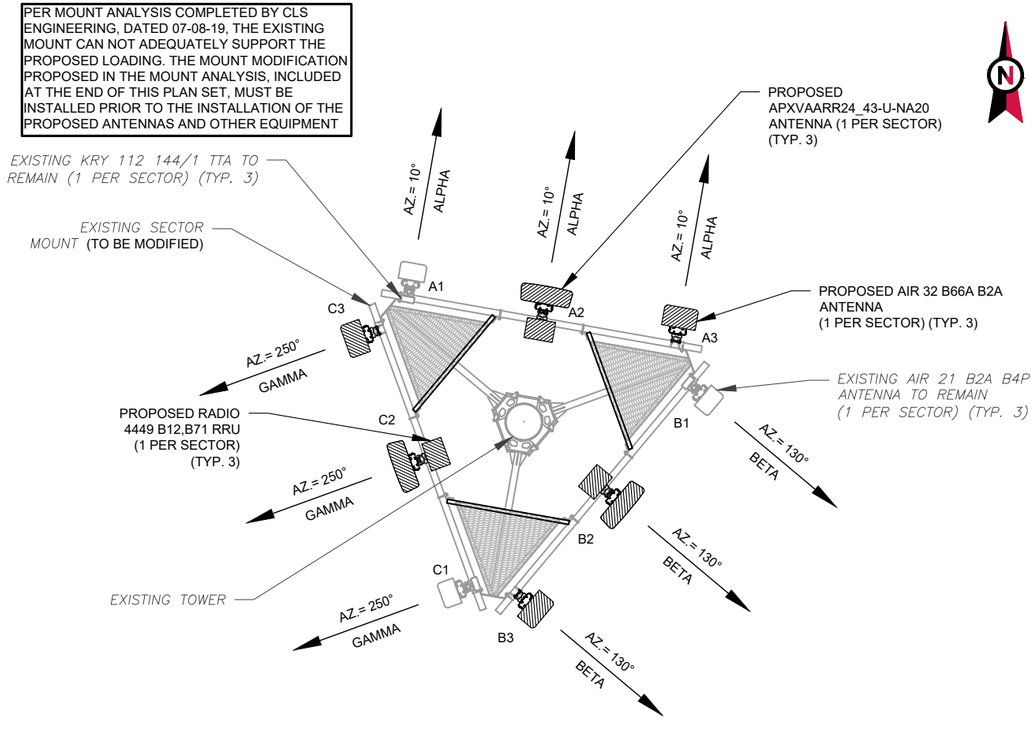
DETAILED SITE PLAN & TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-101	1



1 EXISTING ANTENNA PLAN

PER MOUNT ANALYSIS COMPLETED BY CLS ENGINEERING, DATED 07-08-19, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 FINAL ANTENNA PLAN

EXISTING ANTENNA / EQUIPMENT SCHEDULE

SECTOR	ANT.	MANUFACTURER (MODEL #)	RAD CENTER	AZIMUTH (TN)	MECH. D-TILT	ELEC. D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	A1	AIR 21 B2A B4P	140'-0"	10°	0°	2°	KRY 112 144/1
ALPHA	A2	LNX-6515DS-A1M	140'-0"	10°	0°	2°	RRUS11 B12
ALPHA	A3	AIR 21 B4A B2P	140'-0"	10°	0°	2°	–
BETA	B1	AIR 21 B2A B4P	140'-0"	130°	0°	2°	KRY 112 144/1
BETA	B2	LNX-6515DS-A1M	140'-0"	130°	0°	2°	RRUS11 B12
BETA	B3	AIR 21 B4A B2P	140'-0"	130°	0°	2°	–
GAMMA	C1	AIR 21 B2A B4P	140'-0"	250°	0°	2°	KRY 112 144/1
GAMMA	C2	LNX-6515DS-A1M	140'-0"	250°	0°	2°	RRUS11 B12
GAMMA	C3	AIR 21 B4A B2P	140'-0"	250°	0°	2°	–

NOTES

1. BASED ON APPROVED ATC APPLICATION 12927170, DATED 04/02/19. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. ATC HAS NOT YET VERIFIED ANY EXISTING ANTENNA CONFIG OR MOUNT CONFIG. CONTRACTOR TO VERIFY MOUNT CONFIG HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (EQUIP) (I.E. CLEARANCES, MOUNT PIPE, SUFFICIENT LENGTH, ETC.) ATC DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.
3. ALL PROPOSED EQUIP INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH ATC'S CM.
4. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
5. POSITIONS START WITH FIRST PIPE ON THE LEFT SIDE (AS VIEWED FROM BEHIND THE MOUNT).

FINAL ANTENNA / EQUIPMENT SCHEDULE

SECTOR	ANT.	MANUFACTURER (MODEL #)	RAD CENTER	AZIMUTH (TN)	MECH. D-TILT	ELEC. D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	A1	AIR 21 B2A B4P	140'-0"	10°	0°	2°	KRY 112 144/1
ALPHA	A2	APXVAARR24_43-U-NA20	140'-0"	10°	0°	2°	RADIO 4449 B12,B71
ALPHA	A3	AIR 32 B66A B2A	140'-0"	10°	0°	2°	-
BETA	B1	AIR 21 B2A B4P	140'-0"	130°	0°	2°	KRY 112 144/1
BETA	B2	APXVAARR24_43-U-NA20	140'-0"	130°	0°	2°	RADIO 4449 B12,B71
BETA	B3	AIR 32 B66A B2A	140'-0"	130°	0°	2°	-
GAMMA	C1	AIR 21 B2A B4P	140'-0"	250°	0°	2°	KRY 112 144/1
GAMMA	C2	APXVAARR24_43-U-NA20	140'-0"	250°	0°	2°	RADIO 4449 B12,B71
GAMMA	C3	AIR 32 B66A B2A	140'-0"	250°	0°	2°	-

CURRENT FIBER DISTRIBUTION/OVP BOX		CURRENT CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
–	–	(6) 1-5/8"	(1) 1-1/4"	RMN
–	–	(6) 1-5/8"	-	RMV

STATUS ABBREVIATIONS
RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
DSC: TO BE DISCONNECTED & REMAIN
ADD: TO BE ADDED

3 ANTENNA SCHEDULE

CABLE LENGTHS FOR JUMPERS
FIBER DISTRIBUTION/OVP TO RRU: 15'
RRU TO COMBINER: 10'
COMBINER TO ANTENNA: 10'

PROPOSED FIBER DISTRIBUTION/OVP BOX		PROPOSED CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(6) 1-5/8"	(1) 1-1/4"	RMN
-	-	-	(2) 1-5/8"	ADD

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ENFIELD, CT 06082

SEAL:

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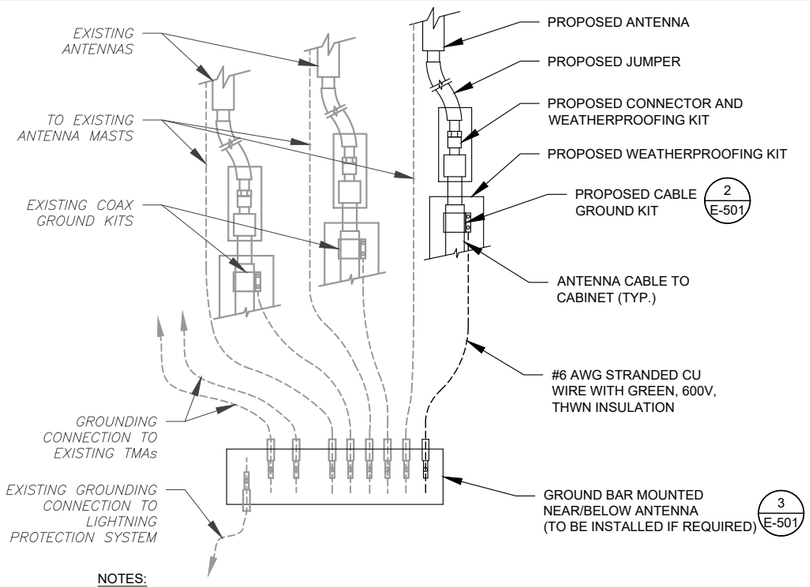
APPROVED BY:	PPB
DATE DRAWN:	05/29/19
ATC JOB NO:	12951817

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-501	1

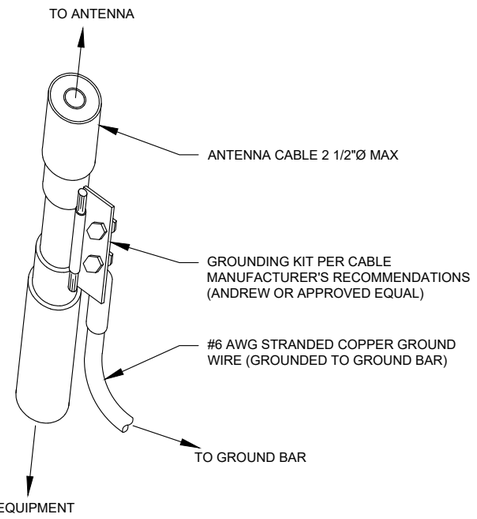


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: NOT TO SCALE

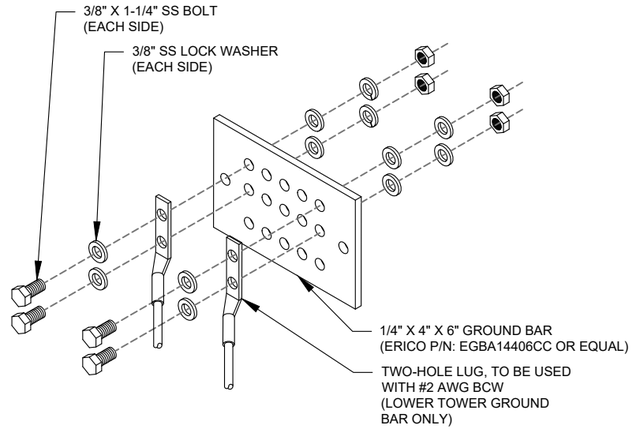


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: NOT TO SCALE



GROUND BAR NOTES:

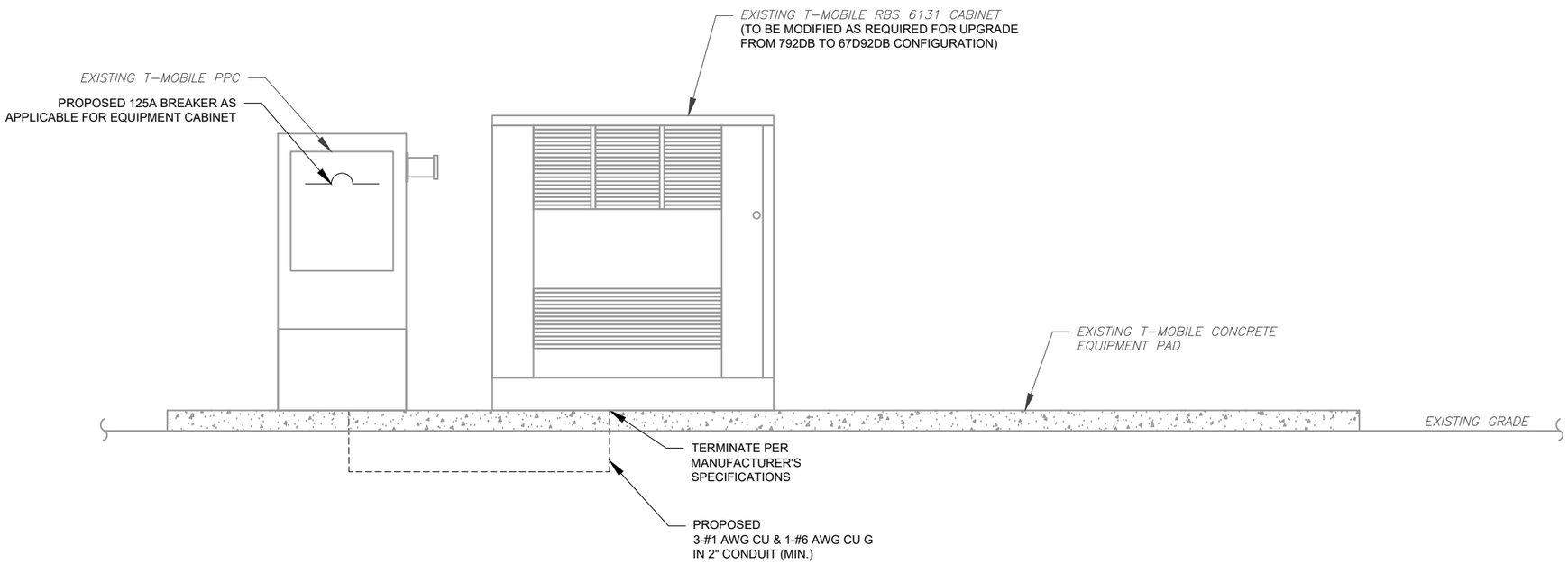
1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: NOT TO SCALE

ELECTRICAL NOTES:

1. THIS DIAGRAM REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
3. ATC HAS NOT YET VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER.



4 ELECTRICAL UPGRADE DIAGRAM

SCALE: NOT TO SCALE

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DRAWN BY:	LR
APPROVED BY:	PPB
DATE DRAWN:	05/29/19
ATC JOB NO:	12951817

GROUNDING DETAILS

SHEET NUMBER: E-501

REVISION: 0

RAN Template:	A&L Template:	Power System Template:
67D92DB Outdoor	67D92DB_2xAIR+1OP	Custom

CT11534A_L600_4.1_draft

Section 5 - RAN Equipment

Existing RAN Equipment		
Template: 792DB Outdoor		
Enclosure	1	2
Enclosure Type	RBS 6131	S8000 Outdoor
Baseband	DUW30 (U2100), DUW30, DUG20 (G1900), DUS41 (L2100, L1900, L700)	
Hybrid Cable System	Ericsson 9x18 HCS *Select Length*	
Multiplexer	XMU (L2100, L1900, L700)	
Radio	RU22 (x 6) (U2100)	

Proposed RAN Equipment		
Template: 67D92DB Outdoor		
Enclosure	1	2
Enclosure Type	RBS 6131	S8000 Outdoor
Baseband	DUW30 (U2100), DUW30, DUG20 (G1900), BB 6630 (L2100, L1900, L700, L600), BB 6630 (N600 (DARK))	
Hybrid Cable System	Ericsson 9x18 HCS *Select Length* Ericsson 6x12 HCS *Select Length & AWG* (x 2)	
Radio	RU22 (x 6) (U2100)	

RAN Scope of Work:

Replace (1) DUS41 with (1) BB6630 for L2100, L1900, L700, and L600.
Add (1) BB6630 for future 5G N600.
Remove XMU.

Add (2) 6X12 HCS, Length and AWG will decide by Dev.

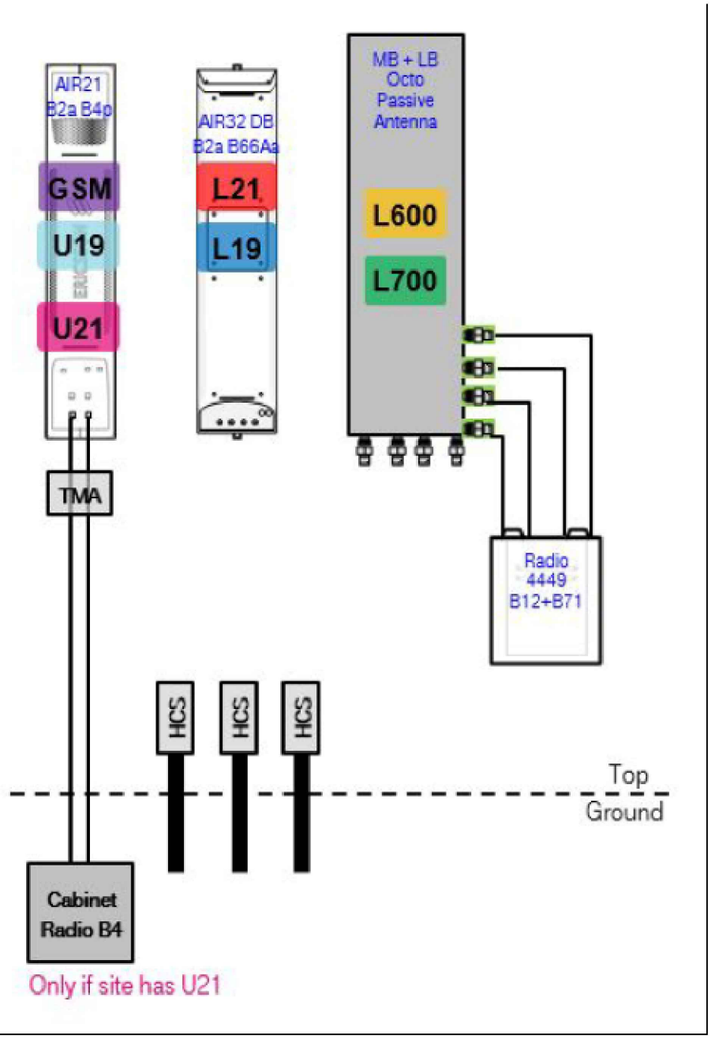
Swap (3) LNX 6515 Antennas with (3) 8' Octoport antennas @ P2. Swap (3) RRUS11 B12 with (3) Radios 4449.

Existing: (12) Coaxial Lines for T-Mobile.

1 CABINET CONFIGURATION
SCALE: NOT TO SCALE

Section 3 - Proposed Template Images

67D92DB_2xAIR+1OP.JPG



Notes:

2 ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	0

Mount Analysis of Existing Platform w/ Support Rails for American Tower on behalf of T-Mobile
302489 - Enfd - Enfield
Project #: 12927170

T-Mobile Site ID: CT11534A
Program: L600

CLS Engineering PLLC Project #41124-12927170-01-MA-R1
July 8, 2019

MOUNT DESCRIPTION	Existing Platform w/ Support Rails at 139 ft AGL
ANTENNA ELEVATION	Nominal Rad. Elevation of 140 ft AGL (Eccentricity of ~1 ft)
SITE DESCRIPTION	150 ft Monopole
SITE ADDRESS	Town Farm Road, Enfield, CT 06082, Hartford County
GPS COORDINATES	41.965900, -72.552700
ANALYSIS STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
LOADING CRITERIA	125 mph, V_{ult} / 96.8 mph, V_{asd} (3-Second Gust) w/o ice & 50 mph (3-Second Gust) w/ 1" Ice

■ **ANALYSIS RESULT:** **Pass (Conditional)**

MEMBER USAGE	*103%*	*Acceptable*
COLLAR USAGE	93%	Pass

Usages up to 105% are considered acceptable.

Modifications are proposed to bring mounts into compliance; see conclusion for details.

Prepared by:
Sean Rock, E.I.

Reviewed and Approved by:
Tyler M. Barker, P.E.

STATE OF CONNECTICUT · TYLER M BARKER · No. 32402 · LICENSED PROFESSIONAL ENGINEER

Tyler M. Barker
CLS Engineering, PLLC
Director of Engineering
PE # 32402 Exp. 1/31/2020
COA # PEC.001833 Exp. 8/14/2019

IdenTrust part of HID Global
Digitally signed by Tyler Barker
DN: c=US, o=Telamon Corporation, ou=A01427E0000016A4525ADF800001D17, cn=Tyler Barker
Date: 2019.07.08 17:27:04 -04'00'

■ CONCLUSION AND RECOMMENDATIONS

According to our structural analysis, the mounts have been found to **CONDITIONALLY PASS.** The mounting configuration considered in this analysis will be capable of supporting the referenced loading pursuant to referenced standards once the following scope is executed:

- **Install (3) 6'-6" long Pipe 2 STD, A53 Gr. B, support rail bracing pipes at the existing platform mount. Connect to existing support rail pipes with Site Pro 1 PUCK or equal, as shown in the following sketches.**
- **Remove (6) existing pipe kickers from below platform.**
- **Install (1) proposed Site Pro 1 PRK-1245L. Connect to offset angles using 1/2"ø A325 bolts with proposed Site Pro 1 X-253992 T-bracket included in the kit. Field-Cut proposed angles as required. Maintain minimum bolt edge distances.**
- **Connect offset angles to each other as Show in the following sketches.**
- **All hardware for Site Pro 1 PUCK connection to the existing support rails should be installed with "turn of the nut" method per the following table:**

BOLT TIGHTENING PROCEDURE

1. TIGHTEN BOLTS BY AISC "TURN OF THE NUT" METHOD USING THE CHART BELOW:

   BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS:
   +1/3 TURN BEYOND SNUG TIGHT

   BOLT LENGTHS OVER FOUR AND UP TO EIGHT DIAMETERS:
   +1/2 TURN BEYOND SNUG TIGHT

   BOLT LENGTHS OVER EIGHT AND UP TO TWELVE DIAMETERS:
   +2/3 TURN BEYOND SNUG TIGHT

2. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8(d)(1) OF THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS AS FOLLOWS:

   "FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND BE TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8(d)(1) THROUGH 8(d)(4).

   8(d)(1) TURN-OF-THE-NUT TIGHTENING.
   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION. SNUG TIGHT IS DEFINED AS THE TIGHTNESS THAT EXISTS WHEN THE PLIES OF A JOINT ARE IN FIRM CONTACT. THIS MAY BE OBTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH. SNUG TIGHTENING SHALL PROGRESS SYSTEMATICALLY...UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION, ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION, THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

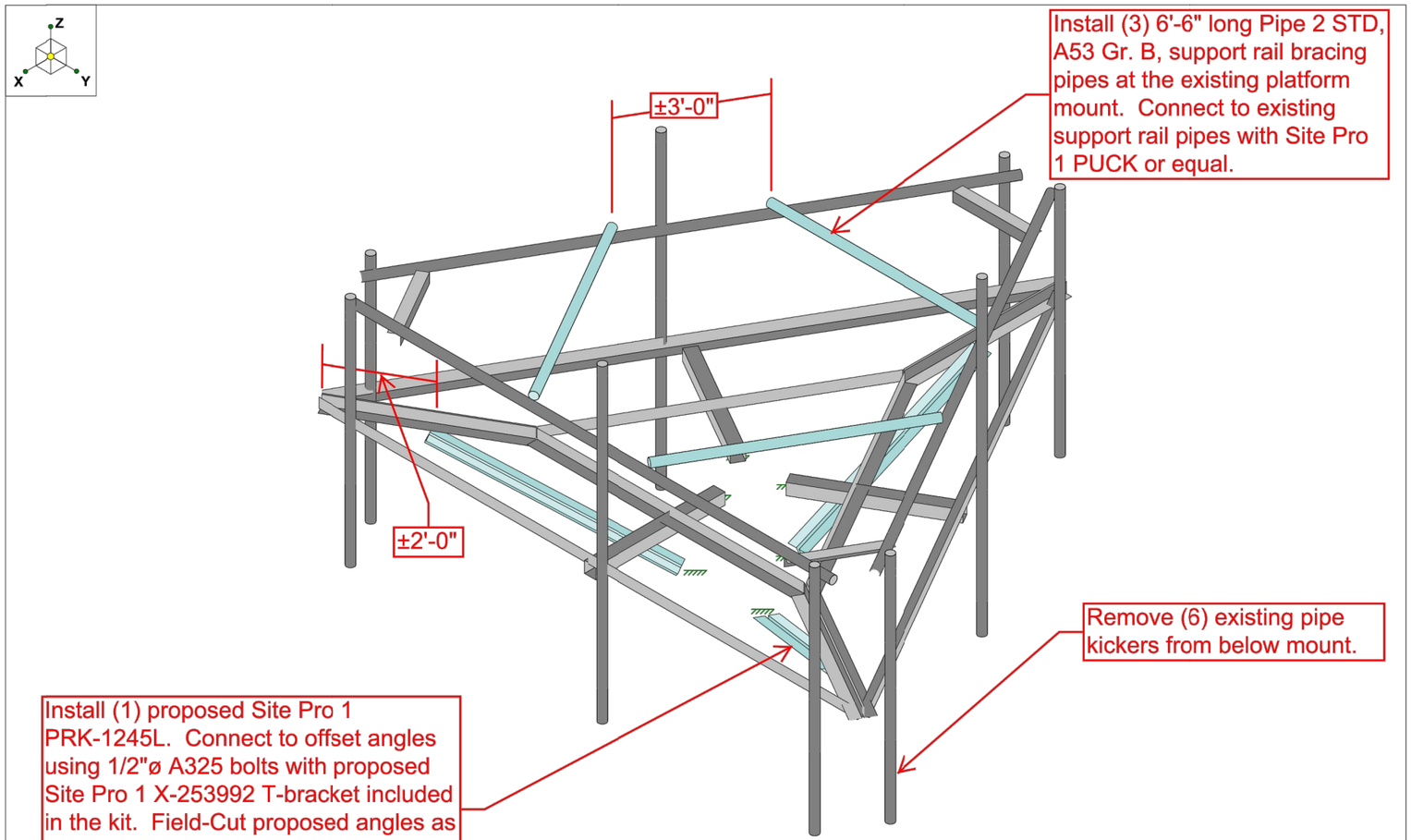
See following sketches and Site Pro 1 assembly drawings for additional details.

1 MOUNT ANALYSIS
SCALE: NOT TO SCALE

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: R-602
REVISION: 0



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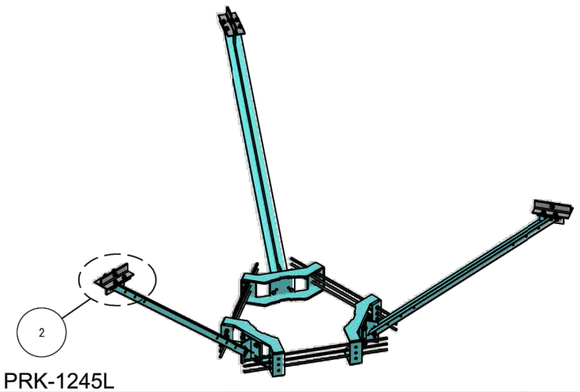
JLK		Apr 12, 2019 at 2:15 PM
41124-12927170-01-MA	Modifications	41124-12927170-01-MA.r3d

1 MOUNT ANALYSIS
SCALE: NOT TO SCALE

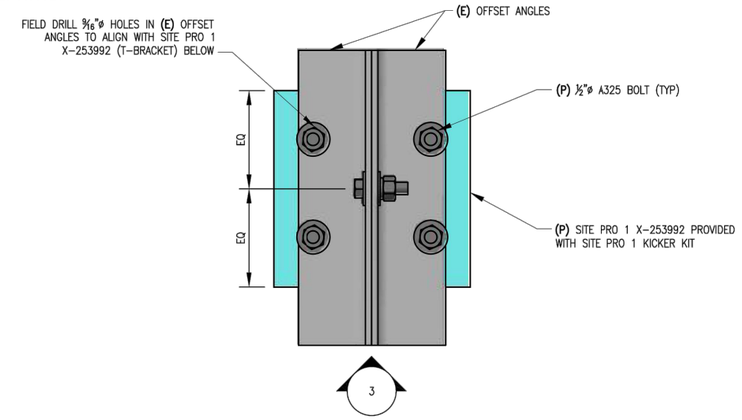
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

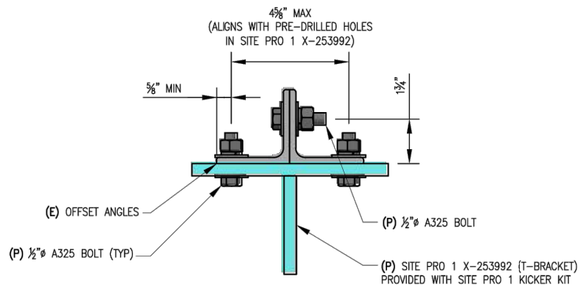
SHEET NUMBER:	REVISION:
R-603	0



1 SITE PRO 1 PRK-1245L
SCALE: N.T.S.



2 SITE PRO 1 KICKER CONNECTION PLAN VIEW
SCALE: N.T.S.



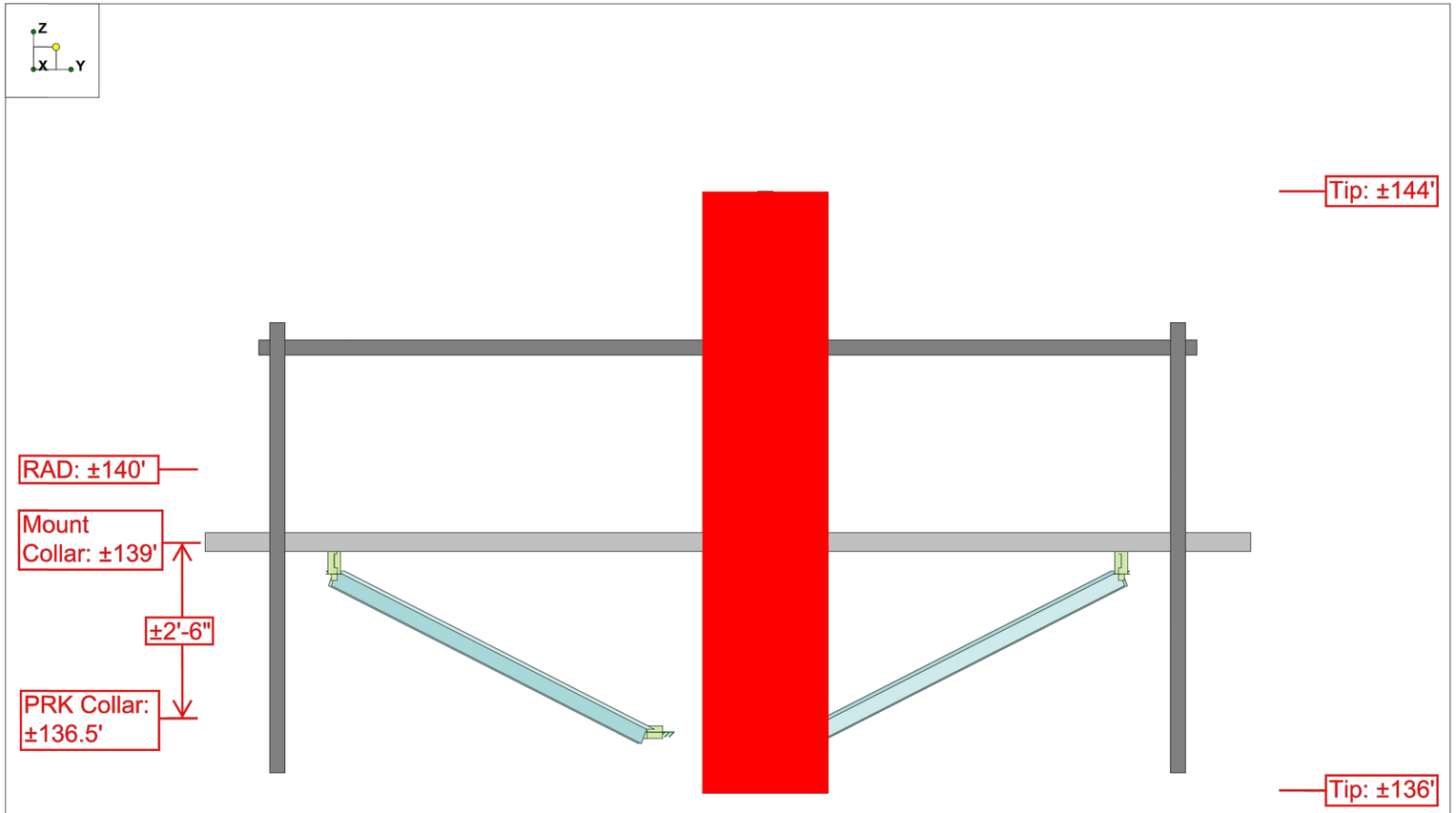
3 SITE PRO 1 KICKER CONNECTION FRONT ELEVATION
SCALE: N.T.S.

1 MOUNT ANALYSIS
SCALE: NOT TO SCALE

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-604	0



CLS	41124-12927170-Enfd - Enfield	MOD - 2
JLK		Apr 12, 2019 at 2:27 PM
41124-12927170-01-MA	Mount and Antenna Elevations	41124-12927170-01-MA.r3d

1 MOUNT ANALYSIS

SCALE: NOT TO SCALE

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-605	0

Exhibit D

Structural Analysis Report

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**150 ft Monopole**
ATC Site Name	:	**Enfd - Enfield, CT**
ATC Site Number	:	**302489**
Engineering Number	:	**12927170_C3_02**
Proposed Carrier	:	**T-MOBILE**
Carrier Site Name	:	**CT534/Spectrasite Enfield**
Carrier Site Number	:	**CT11534A**
Site Location	:	**77 Town Farm Road** **Enfield, CT 06082-5152** **41.965900,-72.552700**
County	:	**Hartford**
Date	:	**July 24, 2019**
Max Usage	:	**88%**
Result	:	**Pass**

Prepared By:
Adam Pittman
Structural Engineer II

Adam S Pittman

Reviewed By:

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32593
LICENSED
PROFESSIONAL ENGINEER

Authorized by "EOR"
Jul 24 2019 5:14 PM
cosign

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 150 ft monopole to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower Drawings	Smith Cullum Acquisition #CT-0025, dated May 14, 2001 ITT Meyer Specification #AT-8935, Type B, dated April 13, 1984
Foundation Drawing	Southern New England Telephone, dated June 6, 1985
Geotechnical Report	MB & A Project #011107, dated June 16, 2001
Modifications	ATC Job #40071639, dated December 6, 2007 ATC Job #48982632, dated April 25, 2012 ATC Job #613768312, dated February 2, 2016
Mount Analysis	CLS Project12927170, dated July 8, 2019

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B*
Topographic Category:	3*
Crest Height:	27 ft*
Spectral Response:	Ss = 0.18, S_1 = 0.06
Site Class:	D - Stiff Soil

***Wind pressures have been determined per the site-specific climatic study in accordance with ASCE 7-10 Section 26.5.3, IBC Section 1609.3, and TIA-222-G Section 2.6.6.2.5.**

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
162.0	1	Decibel DB809KE-SY	Stand-Off	(1) 1 5/8" Coax	SPOK HOLDINGS, INC.
154.0	3	Kaelus DBC0061F1V51-2	Platform with Handrails	(4) 0.78" (19.7mm) 8 AWG 6 (11) 1 5/8" Coax (1) 2" conduit (2) 3" conduit	AT&T MOBILITY
	3	Powerwave Allgon 7770.00			
	3	Ericsson Radio 8843			
	3	Ericsson RRUS-12 B2			
	3	Ericsson RRUS-11 (19.7”)			
	3	Powerwave Allgon LGP21401			
	2	Raycap DC6-48-60-18-8F ("Squid")			
	3	Ericsson RRUS A2 B2			
	3	Ericsson RRUS 11 (Band 12) (55 lb)			
	3	Ericsson RRUS 32 B30			
152.0	2	Diamond X50A	Stand-Off	(2) 1/2" Coax	ENERTRAC, INC.
151.0	3	CCI TPA-65R-LCUUUU-H8	Platform with Handrails	(2) 0.39" (10mm) Fiber Trunk (1) 3" conduit	AT&T MOBILITY
	3	CCI OPA-65R-LCUU-H8			
140.0	3	Ericsson KRY 112 144/1	Platform with Handrails	(6) 1 5/8" Coax	T-MOBILE
	3	Ericsson AIR 21, 1.3 M, B2A B4P			
130.0	6	RFS FD9R6004/2C-3L	Flush	(12) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Nokia AirScale RRH 4T4R B5 160W AHCA			
	6	Commscope JAHH-65B-R3B			
	3	Amphenol Antel BXA-80080-6CF-EDIN-X			
	2	RFS DB-T1-6Z-8AB-0Z			
	3	Antel BXA-70063/4CF			
	3	Alcatel-Lucent B66A RRH 4x45			
	3	Alcatel-Lucent B13 RRH4x30-4R 700U			
	3	Alcatel-Lucent B25 RRH4x30			
120.0	3	Generic 76" x 6" Panel	Flush	(6) 1 5/8" Coax	METRO PCS INC
111.0	6	Alcatel-Lucent RRH2x50-08	Side Arm	(4) 1 1/4" Hybriflex Cable (4) 1/2" Coax (2) 2" conduit	CLEARWIRE CORPORATION
	2	DragonWave Horizon Compact			
	3	Commscope NNVV-65B-R4			
	3	Nokia FZHN Flexi RRH 8TR 2600 9*20W			
	3	Alcatel-Lucent 1900MHz RRH (65MHz) w/ solar shield			
	3	RFS APXVTM14-ALU-I20			
	2	DragonWave A-ANT-11G-2-C			
108.0	1	Generic 24" x 24" Junction Box			
64.0	1	Channel Master Type 120	Side Arm	(1) 0.28" (7mm) RG-6	SPOK HOLDINGS, INC.
40.0	1	Generic Blank Exhibit	Flush	-	

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
140.0	3	Ericsson RRUS-11 (50 lbs.)	-	(1) 1 1/4" Hybriflex Cable (6) 1 5/8" Coax	T-MOBILE
	3	Andrew LNX-6515DS-VTM			
	3	Ericsson AIR 21, 1.3M, B4A B2P			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
140.0	3	Ericsson Radio 4449 B12,B71	Platform with Handrails	(1) 1 1/4" Fiber (2) 1 5/8" Fiber	T-MOBILE
	3	Ericsson AIR32 B66Aa/B2a			
	3	RFS APXVAARR24_43-U-NA20			

[1] Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	72%	Pass
Shaft	85%	Pass
Base Plate	49%	Pass
Reinforcement	88%	Pass
Flanges	52%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	3,583.8	86%
Axial (Kips)	122.1	44%
Shear (Kips)	35.2	59%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
140.0	Ericsson Radio 4449 B12,B71	T-MOBILE	2.016	1.810
	Ericsson AIR32 B66Aa/B2a			
	RFS APXVAARR24_43-U-NA20			
111.0	DragonWave A-ANT-11G-2-C	CLEARWIRE CORPORATIO	1.231	1.357
64.0	Channel Master Type 120	SPOK HOLDINGS, INC.	0.392	0.678

***Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G**

Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

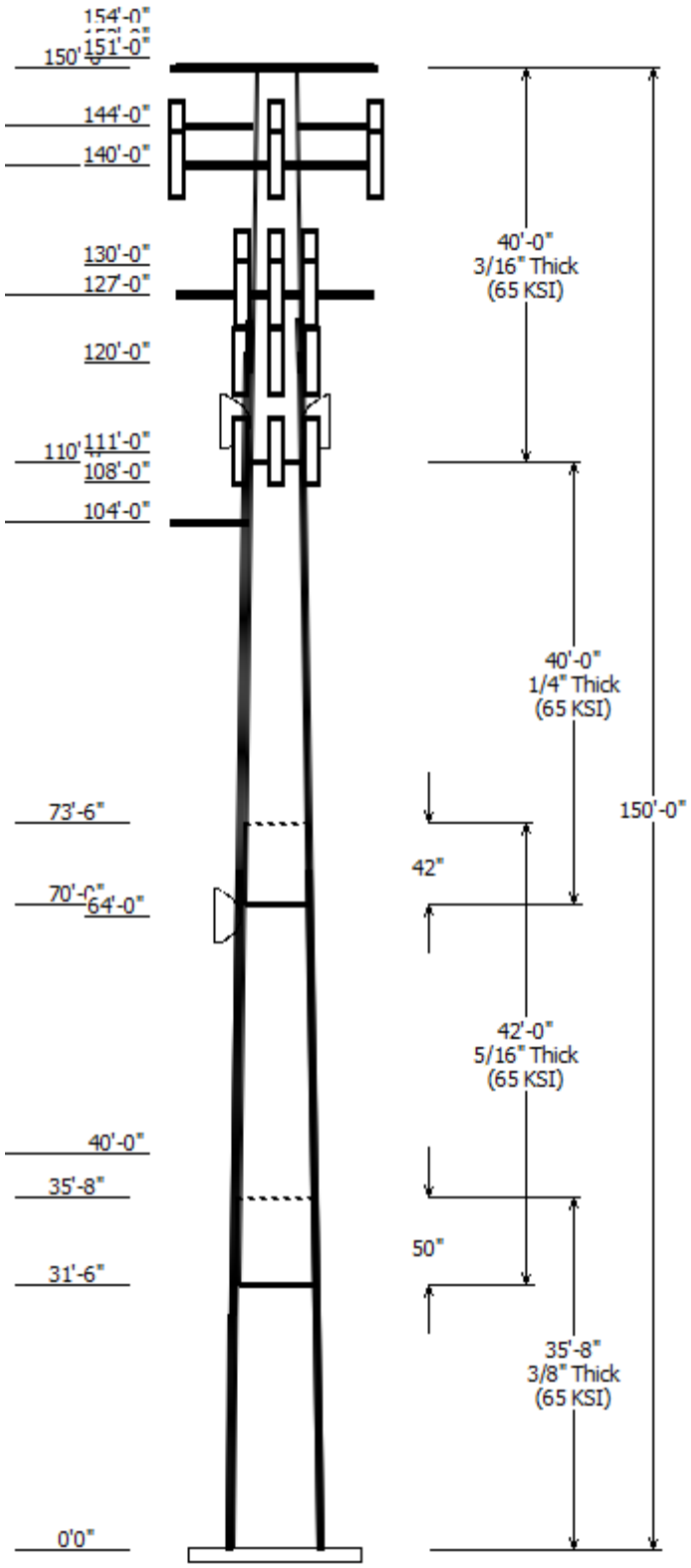
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Job Information

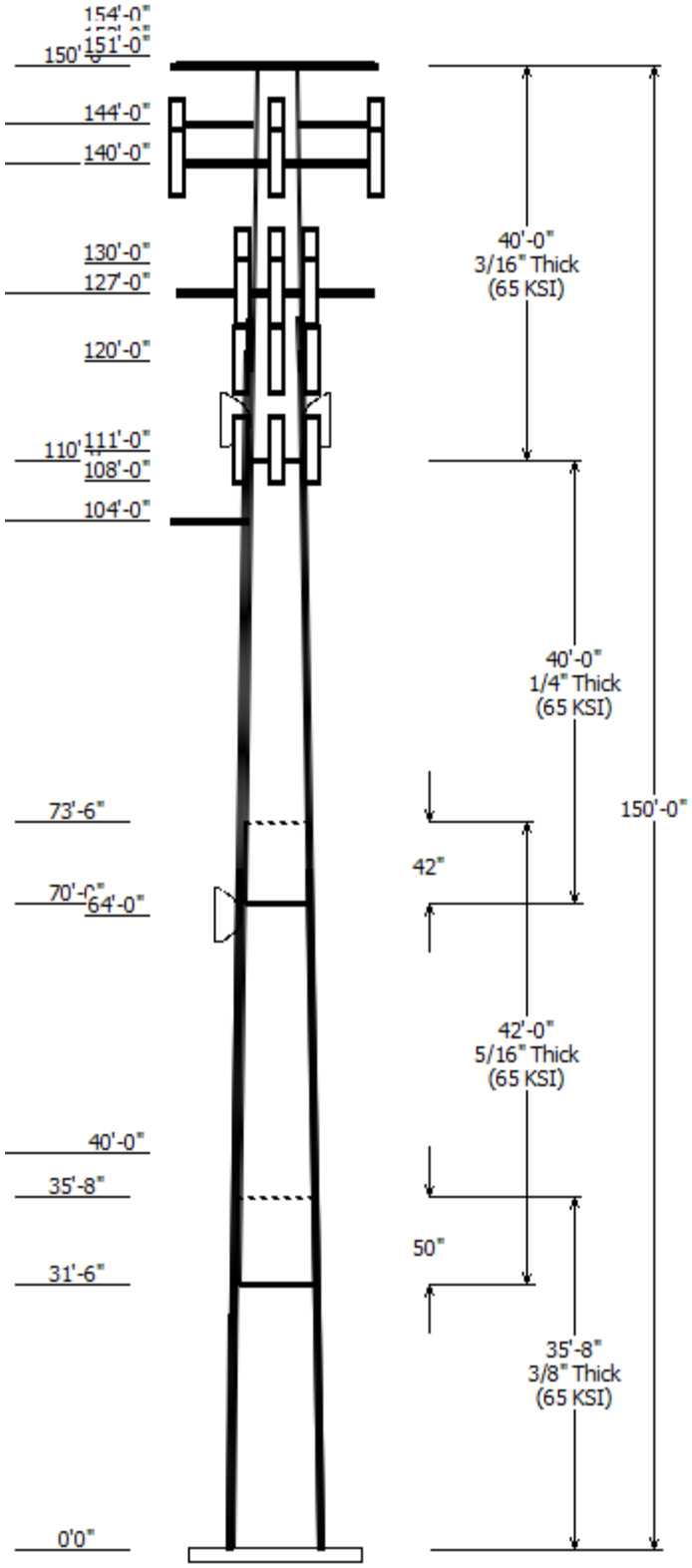
Pole :	302489	Code:	ANSI/TIA-222-G
Location :	Enfd - Enfield, CT		
Description :			
Client :	T-MOBILE	Struct Class :	II
Shape :	12 Sides	Exposure :	B
Height :	150.00 (ft)	Topo :	3
Base Elev (ft):	0.00		
Taper:	0.156700 (in/ft)		

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	35.667	31.79	37.38	0.375		0.000	12 Sides	65
2	42.000	26.48	33.06	0.313	Slip Joint	50.000	12 Sides	65
3	40.000	21.26	27.53	0.250	Slip Joint	42.000	12 Sides	65
4	40.000	15.00	21.26	0.188	Butt Joint	0.000	12 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
162.000	162.000	1	Decibel DB809KE-SY
154.000	154.000	3	Powerwave Allgon 7770.00
154.000	154.000	3	Ericsson Radio 8843
154.000	154.000	3	Ericsson RRUS-12 B2
154.000	154.000	3	Ericsson RRUS-11 (19.7")
154.000	154.000	3	Ericsson RRUS 32 B30
154.000	154.000	3	Ericsson RRUS 11 (Band 12) (55
154.000	154.000	3	Ericsson RRUS A2 B2
154.000	154.000	2	Raycap DC6-48-60-18-8F
154.000	154.000	3	Powerwave Allgon LGP21401
154.000	154.000	3	Kaelus DBC0061F1V51-2
152.000	152.000	2	Diamond X50A
151.000	151.000	3	CCI TPA-65R-LCUUUU-H8
151.000	151.000	3	CCI OPA-65R-LCUU-H8
150.000	150.000	3	Round Side Arm
150.000	150.000	1	Platform w/ Handrails
144.000	144.000	2	Stand-Off
140.000	140.000	1	Platform w/ Handrails
140.000	140.000	3	RFS APXVAARR24_43-U-NA20
140.000	140.000	3	Ericsson AIR32 B66Aa/B2a
140.000	142.000	3	Ericsson AIR 21, 1.3 M, B2A B4
140.000	140.000	3	Ericsson Radio 4449 B12,B71
140.000	142.000	3	Ericsson KRY 112 144/1
130.000	128.000	6	Commscope JAHH-65B-R3B
130.000	130.000	3	Amphenol Antel BXA-80080-
130.000	129.000	2	RFS DB-T1-6Z-8AB-0Z
130.000	128.000	3	Antel BXA-70063/4CF
130.000	129.000	3	Alcatel-Lucent B66A RRH 4x45
130.000	130.000	3	Alcatel-Lucent B13 RRH4x30-
130.000	129.000	3	Alcatel-Lucent B25 RRH4x30
130.000	129.000	3	Nokia AirScale RRH 4T4R B5 160
130.000	129.000	6	RFS FD9R6004/2C-3L
127.000	127.000	1	Round Low Profile Platform
120.000	120.000	3	Generic 76" x 6" Panel
111.000	111.000	3	Commscope NNVV-65B-R4
111.000	111.000	3	RFS APXVTM14-ALU-I20
111.000	112.000	2	DragonWave A-ANT-11G-2-C
111.000	111.000	3	Alcatel-Lucent 1900MHz RRH
111.000	111.000	3	Nokia FZHN Flexi RRH 8TR 2600
111.000	111.000	6	Alcatel-Lucent RRH2x50-08
111.000	112.000	2	DragonWave Horizon Compact
108.000	112.000	1	Generic 24" x 24" Junction Box
104.000	104.000	1	Side Arms
64.000	64.000	1	Channel Master Type 120



40.000	40.000	1	Generic Blank Exhibit

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
140.0	150.0	1 5/8" Coax	Yes
140.0	151.0	0.39" (10mm)	Yes
114.0	129.0	#20 Dywidag bars	Yes
114.0	129.0	#20 Dywidag bars	Yes
114.0	129.0	#20 Dywidag bars	Yes
114.0	129.0	#20 Dywidag bars	Yes
31.000	76.700	#20 Dywidag bars	Yes
31.000	76.700	#20 Dywidag bars	Yes
31.000	76.700	#20 Dywidag bars	Yes
31.000	76.700	#20 Dywidag bars	Yes
10.000	108.0	2" conduit	Yes
10.000	130.0	1 5/8" Coax	Yes
10.000	130.0	1 5/8" Hybriflex	Yes
10.000	154.0	0.78" (19.7mm) 8	No
10.000	154.0	2" conduit	No
10.000	140.0	1 5/8" Coax	No
10.000	150.0	1 5/8" Coax	No
10.000	111.0	1 1/4" Hybriflex	Yes
0.000	120.0	1 5/8" Coax	No
0.000	125.0	#20 Dywidag bars	Yes
0.000	125.0	#20 Dywidag bars	Yes
0.000	125.0	#20 Dywidag bars	Yes
0.000	125.0	#20 Dywidag bars	Yes
0.000	151.0	3" conduit	No
0.000	162.0	1 5/8" Coax	No
0.000	152.0	1/2" Coax	No
0.000	154.0	1 5/8" Coax	No
0.000	154.0	3" conduit	No
0.000	140.0	1 1/4" (1.25"-	No
0.000	140.0	1 5/8" (1.63"-	No
0.000	111.0	1/2" Coax	No
0.000	31.000	#20 Dywidag bars	Yes
0.000	31.000	#20 Dywidag bars	Yes
0.000	31.000	#20 Dywidag bars	Yes
0.000	31.000	#20 Dywidag bars	Yes
0.000	64.000	0.28" (7mm) RG-6	No

Load Cases

1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

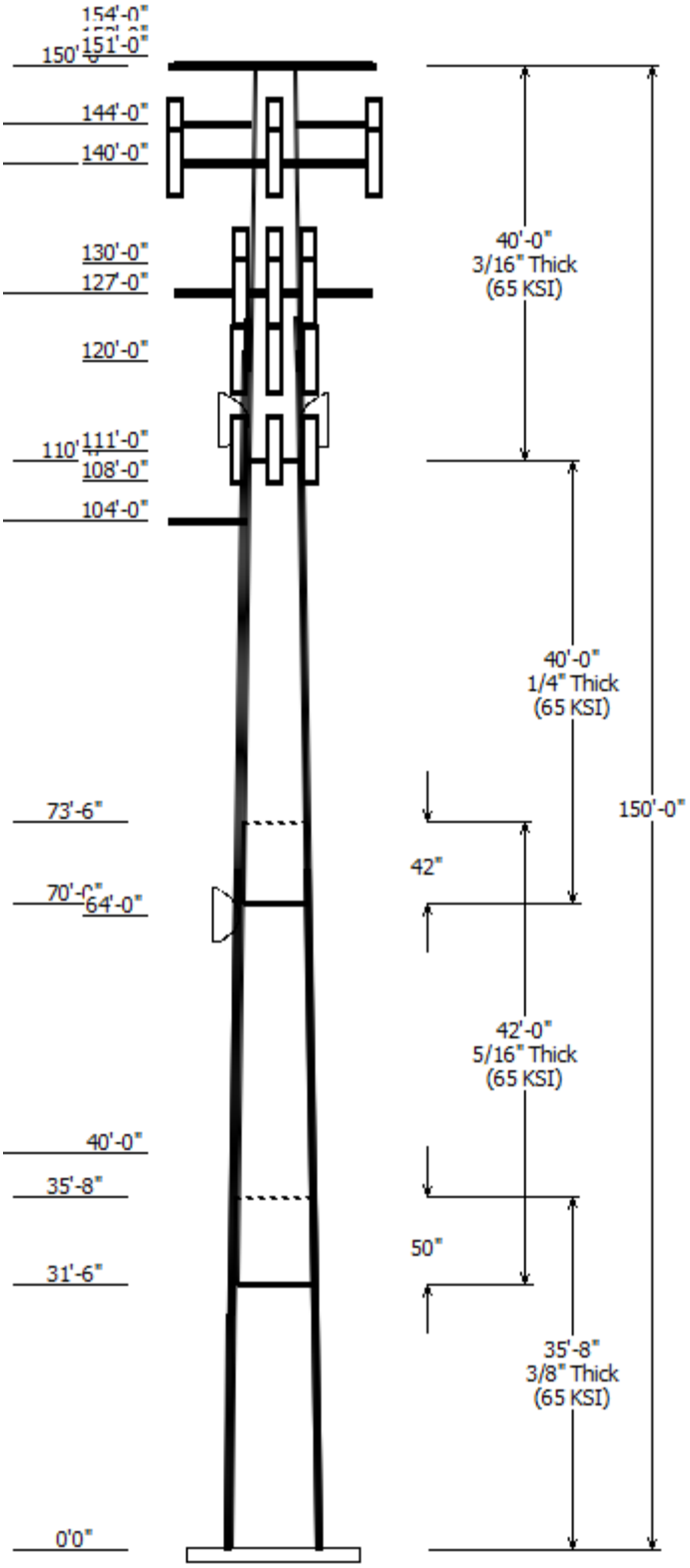
Reactions

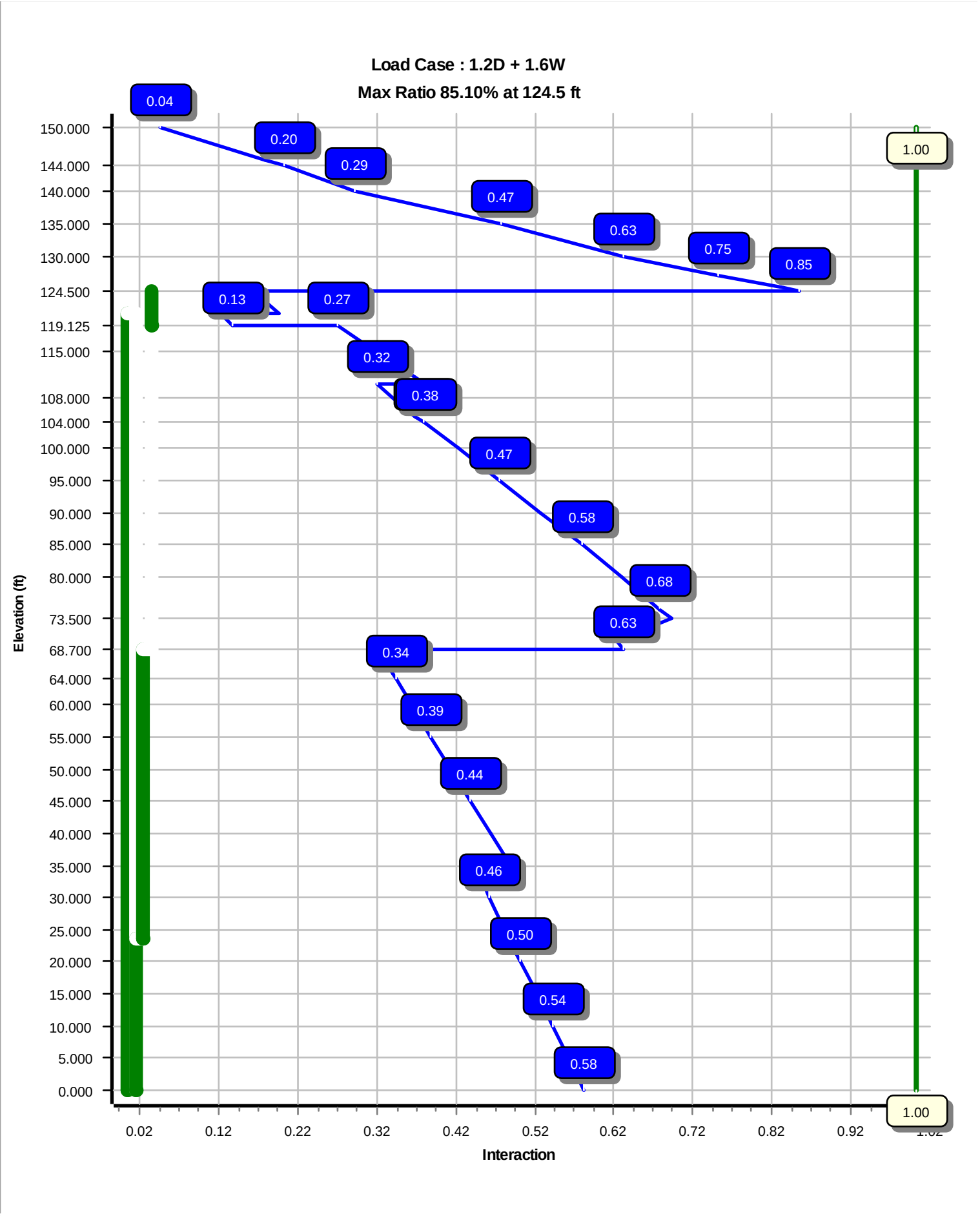
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	3583.80	35.23	76.55
0.9D + 1.6W	3516.41	35.19	57.40
1.2D + 1.0Di + 1.0Wi	1195.69	11.10	122.09
(1.2 + 0.2Sds) * DL + E ELFM	274.93	2.28	73.98
(1.2 + 0.2Sds) * DL + E EMAM	315.80	2.97	73.98
(0.9 - 0.2Sds) * DL + E ELFM	269.23	2.28	51.47

(0.9 - 0.2Sds) * DL + E EMAM	308.79	2.97	51.47
1.0D + 1.0W	850.78	8.45	63.85

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	64.00	4.701	0.678
1.0D + 1.0W	111.00	14.767	1.357




Load Case : 1.2D + 1.6W
Max Ratio 85.10% at 124.5 ft
0.04
0.20
0.29
0.47
0.63
0.75
0.85
0.13
0.27
0.32
0.38
0.47
0.58
0.68
0.63
0.34
0.39
0.44
0.46
0.50
0.54
0.58
1.00
1.00
150.000
144.000
140.000
135.000
130.000
124.500
119.125
115.000
108.000
104.000
100.000
95.000
90.000
85.000
80.000
73.500
68.700
64.000
60.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
Elevation (ft)
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Site Number: 302489 Code: ANSI/TIA-222-G

Site Name: Enfd - Enfield, CT Engineering Number:12927170_C3_02 7/24/2019 4:07:01 PM

Customer: T-MOBILE

Analysis Parameters

Location :	Hartford County, CT	Height (ft) :	150
Code :	ANSI/TIA-222-G	Base Diameter (in) :	37.38
Shape :	12 Sides	Top Diameter (in) :	15.00
Pole Type :	Taper	Taper (in/ft) :	0.157
Pole Manfacturer :	ITT Meyer	Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	97 mph
Exposure Category:	B	Design Wind Speed With Ice:	50 mph
Topographic Category:	3	Operational Wind Speed:	60 mph
Crest Height:	27 ft	Design Ice Thickness:	1.00 in

Seismic Parameters

Analysis Method: Equivalent Modal Analysis & Equivalent Lateral Force Methods

Site Class: D - Stiff Soil

Period Based on Rayleigh Method (sec): 2.94

T_L (sec):	6	p:	1.3	C_s:	0.030
S_s:	0.180	S_1:	0.060	C_s Max:	0.030
F_a:	1.600	F_v:	2.400	C_s Min:	0.030
S_{ds}:	0.192	S_{d1}:	0.096		

Load Cases

1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2Sds) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302489 Code: ANSI/TIA-222-G

Site Name: Enfd - Enfield, CT Engineering Number:12927170_C3_02 7/24/2019 4:07:01 PM

Customer: T-MOBILE

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-12	35.667	0.3750	65		0.00	5,014	37.38	0.00	44.68	7810.1	24.03	99.68	31.79	35.67	37.93	4778.9	20.04	84.78	0.156700
2-12	42.000	0.3125	65	Slip	50.00	4,237	33.06	31.50	32.96	4514.2	25.68	105.82	26.48	73.50	26.34	2303.3	20.03	84.76	0.156700
3-12	40.000	0.2500	65	Slip	42.00	2,646	27.53	70.00	21.97	2087.4	26.83	110.14	21.26	110.00	16.92	954.0	20.12	85.07	0.156700
4-12	40.000	0.1875	65	Butt	0.00	1,475	21.26	110.00	12.73	721.9	27.71	113.43	15.00	150.00	8.94	250.5	18.76	80.00	0.156700
				Shaft Weight		13,372													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
162.00	Decibel DB809KE-SY	1	0.75	0.000	26.00	3.400	0.90	140.47	8.821	0.90
154.00	Kaelus DBC0061F1V51-2	3	0.75	0.000	25.50	0.430	0.50	50.14	1.025	0.50
154.00	Powerwave Allgon LGP21401	3	0.75	0.000	14.10	1.100	0.50	47.38	2.049	0.50
154.00	Raycap DC6-48-60-18-8F	2	0.75	0.000	31.80	1.470	0.67	114.09	2.402	0.67
154.00	Ericsson RRUS A2 B2	3	0.75	0.000	22.00	2.060	0.50	80.81	3.316	0.50
154.00	Ericsson RRUS 11 (Band 12) (55	3	0.75	0.000	55.00	2.520	0.50	144.74	3.906	0.50
154.00	Ericsson RRUS 32 B30	3	0.75	0.000	60.00	2.740	0.50	158.13	4.298	0.50
154.00	Ericsson RRUS-11 (19.7”)	3	0.75	0.000	51.00	2.790	0.50	152.51	4.250	0.50
154.00	Ericsson RRUS-12 B2	3	0.75	0.000	58.00	3.150	0.62	165.90	4.698	0.62
154.00	Ericsson Radio 8843	3	0.75	0.000	85.00	3.500	0.50	221.09	5.204	0.50
154.00	Powerwave Allgon 7770.00	3	0.75	0.000	35.00	5.510	0.65	228.70	6.949	0.65
152.00	Diamond X50A	2	0.90	0.000	2.30	1.120	0.90	4.23	3.505	0.90
151.00	CCI OPA-65R-LCUU-H8	3	0.75	0.000	88.00	12.980	0.67	430.79	17.756	0.67
151.00	CCI TPA-65R-LCUUUU-H8	3	0.75	0.000	81.60	13.300	0.69	450.79	18.281	0.69
150.00	Round Side Arm	3	0.75	0.000	150.00	5.200	0.67	247.57	8.824	0.67
150.00	Platform w/ Handrails	1	1.00	0.000	2,000.00	25.000	1.00	3,895.62	41.494	1.00
144.00	Stand-Off	2	0.90	0.000	75.00	2.500	0.90	123.60	3.796	0.90
140.00	Ericsson KRY 112 144/1	3	0.75	2.000	11.00	0.350	0.50	25.25	0.886	0.50
140.00	Ericsson Radio 4449 B12,B71	3	0.75	0.000	74.00	1.640	0.50	148.15	2.758	0.50
140.00	Ericsson AIR 21, 1.3 M, B2A B4P	3	0.75	2.000	83.00	6.050	0.50	276.30	8.914	0.50
140.00	Ericsson AIR32 B66Aa/B2a	3	0.75	0.000	132.20	6.510	0.50	343.60	9.411	0.50
140.00	RFS APXVAARR24_43-U-NA20	3	0.75	0.000	127.90	20.240	0.63	647.88	25.152	0.63
140.00	Platform w/ Handrails	1	1.00	0.000	2,000.00	30.000	1.00	3,882.37	49.654	1.00
130.00	RFS FD9R6004/2C-3L	6	0.80	-1.000	2.60	0.310	0.50	13.14	0.811	0.50
130.00	Nokia AirScale RRH 4T4R B5	3	0.80	-1.000	35.30	1.290	0.50	87.03	2.283	0.50
130.00	Alcatel-Lucent B25 RRH4x30	3	0.80	-1.000	53.00	2.120	0.50	132.42	3.426	0.50
130.00	Alcatel-Lucent B13 RRH4x30-4R	3	0.80	0.000	57.20	2.170	0.50	147.58	3.495	0.50
130.00	Alcatel-Lucent B66A RRH 4x45	3	0.80	-1.000	67.00	2.580	0.50	160.58	4.065	0.50
130.00	Antel BXA-70063/4CF	3	0.80	-2.000	9.90	4.710	0.65	141.85	7.132	0.65
130.00	RFS DB-T1-6Z-8AB-0Z	2	0.80	-1.000	44.00	4.800	0.72	209.58	6.670	0.72
130.00	Amphenol Antel BXA-80080-6CF-	3	0.80	0.000	18.00	5.760	0.73	184.33	8.875	0.73
130.00	Commscope JAHH-65B-R3B	6	0.80	-2.000	60.60	9.110	0.69	326.75	12.759	0.69
127.00	Round Low Profile Platform	1	1.00	0.000	1,350.00	20.000	1.00	2,115.62	43.234	1.00
120.00	Generic 76" x 6" Panel	3	1.00	0.000	40.00	5.030	0.69	156.18	8.248	0.69
111.00	DragonWave Horizon Compact	2	0.80	1.000	10.60	0.720	0.50	39.74	1.457	0.50
111.00	Alcatel-Lucent RRH2x50-08	6	0.80	0.000	52.90	1.700	0.50	129.70	2.817	0.50
111.00	Nokia FZHN Flexi RRH 8TR 2600	3	0.80	0.000	44.10	2.020	0.50	107.53	3.231	0.50
111.00	Alcatel-Lucent 1900MHz RRH	3	0.80	0.000	60.00	2.580	0.50	179.50	4.022	0.50
111.00	DragonWave A-ANT-11G-2-C	2	0.80	1.000	27.00	4.690	0.90	153.30	6.341	0.90
111.00	RFS APXVTM14-ALU-I20	3	0.80	0.000	56.20	6.340	0.66	234.65	9.162	0.66
111.00	Commscope NNVV-65B-R4	3	0.80	0.000	77.40	12.270	0.64	403.04	15.904	0.64
108.00	Generic 24" x 24" Junction Box	1	0.80	4.000	20.00	4.800	0.50	168.25	6.635	0.50
104.00	Side Arms	1	1.00	0.000	560.00	8.500	1.00	1,161.93	17.636	1.00
64.00	Channel Master Type 120	1	1.00	0.000	126.00	20.190	1.00	378.40	23.884	1.00
40.00	Generic Blank Exhibit	1	1.00	0.000	0.00	0.010	1.00	0.00	0.010	1.00

Totals Num Loadings:45 122 12,174.20 33,112.58

Linear Appurtenance Properties

Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax / Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	162.00	1	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	SPOK HOLDINGS,
0.00	154.00	11	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	154.00	2	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
10.00	154.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
10.00	154.00	1	2" conduit	2.38	3.65	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	152.00	2	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	ENERTRAC, INC.
0.00	151.00	1	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
140.00	151.00	2	0.39" (10mm) Fiber	0.39	0.06	N	2	0.00	0.00	230	0.00	Y	AT&T MOBILITY
10.00	150.00	3	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	AT&T Mobility
140.00	150.00	8	1 5/8" Coax	1.98	0.82	N	4	0.00	0.00	210	0.00	Y	AT&T Mobility
0.00	140.00	1	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	140.00	2	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0	0.00	0.00	0	0.00	N	T-MOBILE
10.00	140.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	T-MOBILE
10.00	130.00	12	1 5/8" Coax	1.98	0.82	N	6	0.00	0.00	45	0.00	Y	VERIZON WIRELESS
10.00	130.00	2	1 5/8" Hybriflex	1.98	1.30	N	2	0.00	0.00	60	0.00	Y	VERIZON WIRELESS
114.00	129.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	270	8.28	Y	--
114.00	129.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	180	8.28	Y	--
114.00	129.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	90	8.28	Y	--
114.00	129.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	0	8.28	Y	--
0.00	125.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	23	8.28	Y	--
0.00	125.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	113	8.28	Y	--
0.00	125.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	203	8.28	Y	--
0.00	125.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	293	8.28	Y	--
0.00	120.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	METRO PCS INC
0.00	111.00	4	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	CLEARWIRE
10.00	111.00	4	1 1/4" Hybriflex Cable	1.54	1.00	N	4	0.00	0.00	70	0.00	Y	CLEARWIRE
10.00	108.00	2	2" conduit	2.38	3.65	N	2	0.00	0.00	80	0.00	Y	CLEARWIRE
31.00	76.70	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	270	8.28	Y	--
31.00	76.70	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	180	8.28	Y	--
31.00	76.70	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	90	8.28	Y	--
31.00	76.70	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	0	8.28	Y	--
0.00	64.00	1	0.28" (7mm) RG-6	0.28	0.03	N	0	0.00	0.00	0	0.00	N	SPOK HOLDINGS,
0.00	31.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	270	8.28	Y	--
0.00	31.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	180	8.28	Y	--
0.00	31.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	90	8.28	Y	--
0.00	31.00	1	#20 Dywidag bars	2.50	16.70	N	1	0.00	0.00	0	8.28	Y	--

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Intermediate Connections Description	Spacing (in)	Len (in)	Connectors	Continuation?
0.00	121.0	4	SOL #20 All Thread	75	2.19	6" Angle Bracket	27.0	3.31	5/8" A36 U-Bolt	Yes

0.00	23.60	4	SOL	#20 All Thread	80	8.28	6" T Bracket	27.0	3.31	5/8" A36 U-Bolt	Yes
23.60	68.70	4	SOL	#20 All Thread	80	8.28	6" T Bracket	30.0	3.31	5/8" A36 U-Bolt	Yes
119.1	124.5	3	SOL	#20 (15 deg	80	8.28	6" T Bracket	30.0	3.31	5/8" A36 U-Bolt	No

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)	Additional Reinforcing Area (in^2)	Additional Reinforcing Ix (in^4)	Additional Reinforcing Weight (lb)
0.00		0.3750	37.380	44.684	7,810.1	24.03	99.68	78.5	403.6	0.0	0.0	39.28	12,96	0.0
5.00		0.3750	36.597	43.737	7,324.4	23.47	97.59	79.1	386.6	0.0	752.2	39.28	12,56	668.0
10.00		0.3750	35.813	42.791	6,859.3	22.91	95.50	79.7	370.0	0.0	736.1	39.28	12,16	668.0
15.00		0.3750	35.029	41.845	6,414.3	22.35	93.41	80.3	353.7	0.0	720.0	39.28	11,77	668.0
20.00		0.3750	34.246	40.899	5,989.0	21.79	91.32	80.9	337.8	0.0	703.9	39.28	11,39	668.0
23.60	Reinf. Top Reinf	0.3750	33.682	40.218	5,694.8	21.39	89.82	81.4	326.6	0.0	496.8	39.28	11,12	481.0
25.00		0.3750	33.462	39.953	5,583.0	21.23	89.23	81.6	322.3	0.0	191.0	39.28	11,01	187.0
30.00		0.3750	32.679	39.007	5,195.7	20.67	87.14	81.9	307.1	0.0	671.7	39.28	10,64	668.0
31.50	Bot - Section 2	0.3750	32.444	38.723	5,083.1	20.50	86.52	81.9	302.7	0.0	198.4	39.28	10,53	200.4
35.00		0.3750	31.895	38.061	4,826.7	20.11	85.05	81.9	292.3	0.0	846.5	39.28	10,57	467.6
35.67	Top - Section 1	0.3125	32.416	32.304	4,249.6	25.12	103.73	77.3	253.3	0.0	159.6	39.28	10,52	89.1
40.00		0.3125	31.737	31.621	3,985.6	24.53	101.56	78.0	242.6	0.0	471.3	39.28	10,20	578.9
45.00		0.3125	30.953	30.833	3,694.9	23.86	99.05	78.7	230.6	0.0	531.3	39.28	9,853	668.0
50.00		0.3125	30.170	30.044	3,418.6	23.19	96.54	79.4	218.9	0.0	517.9	39.28	9,503	668.0
55.00		0.3125	29.386	29.256	3,156.5	22.52	94.04	80.2	207.5	0.0	504.5	39.28	9,159	668.0
60.00		0.3125	28.603	28.467	2,908.1	21.85	91.53	80.9	196.4	0.0	491.0	39.28	8,822	668.0
64.00		0.3125	27.976	27.837	2,719.1	21.31	89.52	81.5	187.8	0.0	383.2	39.28	8,557	534.4
65.00		0.3125	27.819	27.679	2,673.1	21.17	89.02	81.6	185.6	0.0	94.5	39.28	8,491	133.6
68.70	Reinf. Top	0.3125	27.240	27.096	2,507.6	20.68	87.17	81.9	177.8	0.0	344.8	39.28	8,251	494.3
70.00	Bot - Section 3	0.3125	27.036	26.891	2,451.2	20.50	86.52	81.9	175.1	0.0	119.4	19.64	2,879	86.8
73.50	Top - Section 2	0.2500	26.988	21.524	1,964.0	26.25	107.95	76.1	140.6	0.0	575.9	19.64	2,870	233.8
75.00		0.2500	26.752	21.335	1,912.7	25.99	107.01	76.4	138.1	0.0	109.4	19.64	2,830	100.2
80.00		0.2500	25.969	20.704	1,748.0	25.15	103.88	77.3	130.0	0.0	357.6	19.64	2,696	334.0
85.00		0.2500	25.185	20.073	1,593.1	24.31	100.74	78.2	122.2	0.0	346.9	19.64	2,566	334.0
90.00		0.2500	24.402	19.442	1,447.6	23.47	97.61	79.1	114.6	0.0	336.2	19.64	2,439	334.0
95.00		0.2500	23.618	18.812	1,311.2	22.63	94.47	80.0	107.2	0.0	325.4	19.64	2,315	334.0
100.0		0.2500	22.835	18.181	1,183.7	21.79	91.34	80.9	100.1	0.0	314.7	19.64	2,195	334.0
104.0		0.2500	22.208	17.676	1,087.9	21.12	88.83	81.7	94.6	0.0	244.0	19.64	2,101	267.2
105.0		0.2500	22.051	17.550	1,064.7	20.96	88.21	81.9	93.3	0.0	59.9	19.64	2,078	66.8
108.0		0.2500	21.581	17.172	997.3	20.45	86.33	81.9	89.3	0.0	177.2	19.64	2,009	200.4
110.0	Top - Section 3	0.2500	21.268	16.919	954.0	20.12	85.07	81.9	86.7	0.0	116.0	19.64	1,963	133.6
110.0	Bot - Section 4	0.1875	21.268	12.727	721.9	27.71	113.43	74.5	65.6	0.0		19.64	1,963	
111.0		0.1875	21.111	12.633	705.9	27.49	112.59	74.7	64.6	0.0	43.1	19.64	1,941	66.8
115.0		0.1875	20.484	12.254	644.4	26.59	109.25	75.7	60.8	0.0	169.4	19.64	1,853	267.2
119.1	Reinf Bottom	0.1875	19.838	11.864	584.8	25.67	105.80	76.7	56.9	0.0	169.3	19.64	1,764	275.5
120.0		0.1875	19.701	11.781	572.6	25.47	105.07	76.9	56.1	0.0	35.2	32.45	4,143	102.3
121.0	Reinf. Top	0.1875	19.544	11.687	558.9	25.25	104.24	77.2	55.2	0.0	39.9	32.45	4,231	317.3
124.5	Reinf. Top	0.1875	18.996	11.356	512.7	24.47	101.31	78.0	52.1	0.0	137.2	12.81	2,308	175.4
125.0		0.1875	18.917	11.308	506.4	24.35	100.89	78.2	51.7	0.0	19.3			
127.0		0.1875	18.604	11.119	481.4	23.91	99.22	78.6	50.0	0.0	76.3			
130.0		0.1875	18.134	10.835	445.4	23.24	96.71	79.4	47.5	0.0	112.1			
135.0		0.1875	17.350	10.362	389.6	22.12	92.54	80.6	43.4	0.0	180.3			
140.0		0.1875	16.567	9.889	338.6	21.00	88.36	81.8	39.5	0.0	172.3			
144.0		0.1875	15.940	9.511	301.2	20.10	85.01	81.9	36.5	0.0	132.0			
145.0		0.1875	15.783	9.416	292.3	19.88	84.18	81.9	35.8	0.0	32.2			
150.0		0.1875	15.000	8.943	250.5	18.76	80.00	81.9	32.3	0.0	156.2			
											13,372.1			13,141.

Site Number: 302489 Code: ANSI/TIA-222-G

Site Name: Enfd - Enfield, CT Engineering Number:12927170_C3_02 7/24/2019 4:07:01 PM

Customer: T-MOBILE

Load Case: 1.2D + 1.6W 97 mph with No Ice 25 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		524.3	0.0					0.0	0.0	524.3	0.0	0.0	0.0
5.00		951.3	902.6					261.8	1,859.4	1,213.1	2,762.0	0.0	0.0
10.00		791.1	883.3					216.3	1,859.4	1,007.4	2,742.7	0.0	0.0
15.00		685.9	864.0					232.0	2,082.2	917.9	2,946.2	0.0	0.0
20.00		535.0	844.7					208.7	2,082.2	743.6	2,926.9	0.0	0.0
23.60	Reinf. Top Reinf	292.7	596.2					140.3	1,499.2	433.0	2,095.4	0.0	0.0
25.00		350.8	229.2					52.8	583.0	403.7	812.2	0.0	0.0
30.00		350.0	806.1					182.4	2,082.2	532.4	2,888.2	0.0	0.0
31.50	Bot - Section 2	265.0	238.1					53.6	624.7	318.6	862.7	0.0	0.0
35.00		221.6	1,015.8					125.5	1,457.5	347.2	2,473.3	0.0	0.0
35.67	Top - Section 1	264.2	191.5					24.0	277.6	288.2	469.1	0.0	0.0
40.00	Appurtenance(s)	491.2	565.6					157.6	1,804.5	649.1	2,370.1	0.0	0.0
45.00		523.2	637.5					184.0	2,082.2	707.1	2,719.7	0.0	0.0
50.00		520.0	621.4					186.6	2,082.2	706.6	2,703.6	0.0	0.0
55.00		516.7	605.4					189.3	2,082.2	706.1	2,687.5	0.0	0.0
60.00		462.1	589.3					192.1	2,082.2	654.2	2,671.4	0.0	0.0
64.00	Appurtenance(s)	255.5	459.8	710.7	0.0	0.0	151.2	155.7	1,665.7	1,121.9	2,276.8	0.0	0.0
65.00		238.6	113.3					39.2	416.4	277.8	529.7	0.0	0.0
68.70	Reinf. Top	253.2	413.8					146.0	1,540.7	399.2	1,954.4	0.0	0.0
70.00	Bot - Section 3	244.6	143.3					51.6	437.1	296.2	580.4	0.0	0.0
73.50	Top - Section 2	255.3	691.1					139.9	1,176.8	395.1	1,868.0	0.0	0.0
75.00		328.6	131.3					60.5	504.4	389.1	635.6	0.0	0.0
80.00		501.3	429.1					203.4	1,416.7	704.7	1,845.8	0.0	0.0
85.00		494.3	416.3					137.6	1,280.4	632.0	1,696.7	0.0	0.0
90.00		486.6	403.4					140.0	1,280.4	626.5	1,683.8	0.0	0.0
95.00		478.1	390.5					142.3	1,280.4	620.4	1,670.9	0.0	0.0
100.00		422.9	377.6					146.4	1,280.4	569.3	1,658.0	0.0	0.0
104.00	Appurtenance(s)	232.1	292.8	341.0	0.0	0.0	672.0	120.1	1,024.3	693.2	1,989.2	0.0	0.0
105.00		182.9	71.9					30.4	256.1	213.3	328.0	0.0	0.0
108.00	Appurtenance(s)	227.0	212.7	78.7	0.0	314.7	24.0	92.2	768.2	397.9	1,004.9	0.0	0.0
110.00	Top - Section 3	134.9	139.2					62.3	494.6	197.2	633.8	0.0	0.0
111.00	Appurtenance(s)	221.6	51.8	1,873.2	0.0	300.3	1,326.8	31.4	247.3	2,126.2	1,625.9	0.0	0.0
115.00		355.5	203.2					180.1	1,047.4	535.6	1,250.6	0.0	0.0
119.13	Reinf Bottom	216.0	203.1					188.1	1,328.1	404.1	1,531.2	0.0	0.0
120.00	Appurtenance(s)	79.9	42.2	435.0	0.0	0.0	144.0	40.2	334.3	555.1	520.6	0.0	0.0
121.00	Reinf. Top	189.3	47.9					46.1	616.7	235.4	664.6	0.0	0.0
124.50	Reinf. Top	167.5	164.7					162.3	1,036.1	329.8	1,200.7	0.0	0.0
125.00		103.0	23.1					23.3	117.9	126.3	141.1	0.0	0.0
127.00	Appurtenance(s)	203.8	91.6	849.2	0.0	0.0	1,620.0	67.6	311.5	1,120.7	2,023.1	0.0	0.0
130.00	Appurtenance(s)	286.0	134.5	2,713.6	0.0	-3,767.6	1,426.1	102.6	387.0	3,102.2	1,947.6	0.0	0.0
135.00		323.3	216.4					0.0	303.2	323.3	519.6	0.0	0.0
140.00	Appurtenance(s)	281.8	206.7	3,278.2	0.0	631.2	3,941.2	0.0	303.2	3,560.1	4,451.1	0.0	0.0
144.00	Appurtenance(s)	153.1	158.4	178.2	0.0	0.0	180.0	0.0	230.5	331.3	569.0	0.0	0.0
145.00		177.3	38.6					0.0	57.6	177.3	96.3	0.0	0.0
150.00	Appurtenance(s)	147.1	187.4	1,462.2	0.0	0.0	2,940.0	0.0	288.2	1,609.3	3,415.6	0.0	0.0
									Totals:	32,223.1	74,444.1	0.00	0.00

Site Number: 302489 Code: ANSI/TIA-222-G

Site Name: Enfd - Enfield, CT Engineering Number:12927170_C3_02 7/24/2019 4:07:11 PM

Customer: T-MOBILE

Load Case: 1.2D + 1.6W 97 mph with No Ice 25 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-76.55	-35.23	0.00	-3,583.80	0.00	3,583.80	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.580
5.00	-73.65	-34.32	0.00	-3,407.65	0.00	3,407.65	3,114.35	1,557.18	4,645.51	2,294.24	0.13	-0.24	0.560
10.00	-70.78	-33.59	0.00	-3,236.06	0.00	3,236.06	3,070.50	1,535.25	4,480.02	2,212.51	0.51	-0.48	0.540
15.00	-67.71	-32.92	0.00	-3,068.13	0.00	3,068.13	3,025.61	1,512.81	4,315.90	2,131.46	1.14	-0.71	0.520
20.00	-64.68	-32.36	0.00	-2,903.55	0.00	2,903.55	2,979.68	1,489.84	4,153.25	2,051.14	2.01	-0.95	0.499
23.60	-62.52	-32.01	0.00	-2,787.07	0.00	2,787.07	2,945.97	1,472.98	4,037.12	1,993.78	2.79	-1.11	0.485
23.60	-62.52	-32.01	0.00	-2,787.07	0.00	2,787.07	2,945.97	1,472.98	4,037.12	1,993.78	2.79	-1.11	0.485
25.00	-61.64	-31.75	0.00	-2,742.26	0.00	2,742.26	2,932.71	1,466.36	3,992.19	1,971.59	3.13	-1.18	0.479
30.00	-58.68	-31.31	0.00	-2,583.50	0.00	2,583.50	2,875.21	1,437.61	3,820.20	1,886.65	4.48	-1.41	0.460
31.50	-57.77	-31.08	0.00	-2,536.55	0.00	2,536.55	2,854.29	1,427.15	3,764.49	1,859.14	4.94	-1.48	0.455
35.00	-55.25	-30.76	0.00	-2,427.77	0.00	2,427.77	2,805.48	1,402.74	3,636.10	1,795.73	6.08	-1.63	0.434
35.67	-54.74	-30.56	0.00	-2,407.26	0.00	2,407.26	2,248.07	1,124.03	2,973.91	1,468.70	6.31	-1.66	0.483
40.00	-52.28	-30.03	0.00	-2,274.84	0.00	2,274.84	2,218.59	1,109.29	2,872.23	1,418.49	7.91	-1.85	0.462
45.00	-49.47	-29.41	0.00	-2,124.72	0.00	2,124.72	2,183.60	1,091.80	2,755.77	1,360.97	9.97	-2.07	0.436
50.00	-46.69	-28.78	0.00	-1,977.66	0.00	1,977.66	2,147.58	1,073.79	2,640.30	1,303.95	12.26	-2.29	0.411
55.00	-43.94	-28.12	0.00	-1,833.77	0.00	1,833.77	2,110.52	1,055.26	2,525.94	1,247.47	14.77	-2.50	0.386
60.00	-41.21	-27.47	0.00	-1,693.18	0.00	1,693.18	2,072.42	1,036.21	2,412.79	1,191.58	17.50	-2.70	0.361
64.00	-38.95	-26.31	0.00	-1,583.29	0.00	1,583.29	2,041.18	1,020.59	2,323.20	1,147.34	19.83	-2.86	0.341
65.00	-38.39	-26.07	0.00	-1,556.98	0.00	1,556.98	2,033.27	1,016.64	2,300.94	1,136.35	20.44	-2.90	0.337
68.70	-36.41	-25.63	0.00	-1,460.53	0.00	1,460.53	1,997.21	998.60	2,211.95	1,092.40	22.74	-3.04	0.320
68.70	-36.41	-25.63	0.00	-1,460.53	0.00	1,460.53	1,997.21	998.60	2,211.95	1,092.40	22.74	-3.04	0.630
70.00	-35.78	-25.40	0.00	-1,427.21	0.00	1,427.21	1,982.10	991.05	2,178.42	1,075.84	23.58	-3.09	0.621
73.50	-33.86	-25.01	0.00	-1,338.33	0.00	1,338.33	1,473.96	736.98	1,624.57	802.32	25.94	-3.35	0.691
75.00	-33.14	-24.72	0.00	-1,300.82	0.00	1,300.82	1,466.28	733.14	1,601.77	791.05	27.01	-3.46	0.676
80.00	-31.19	-24.10	0.00	-1,177.22	0.00	1,177.22	1,440.00	720.00	1,526.12	753.69	30.83	-3.83	0.627
85.00	-29.40	-23.53	0.00	-1,056.72	0.00	1,056.72	1,412.68	706.34	1,451.11	716.65	35.04	-4.19	0.576
90.00	-27.64	-22.94	0.00	-939.08	0.00	939.08	1,384.32	692.16	1,376.86	679.98	39.61	-4.53	0.525
95.00	-25.90	-22.32	0.00	-824.39	0.00	824.39	1,354.92	677.46	1,303.45	643.72	44.52	-4.85	0.473
100.00	-24.20	-21.72	0.00	-712.78	0.00	712.78	1,324.47	662.24	1,230.99	607.94	49.77	-5.15	0.421
104.00	-22.24	-20.90	0.00	-625.89	0.00	625.89	1,299.37	649.69	1,173.78	579.69	54.18	-5.38	0.377
105.00	-21.89	-20.70	0.00	-604.99	0.00	604.99	1,292.99	646.50	1,159.59	572.68	55.31	-5.43	0.367
108.00	-20.88	-20.25	0.00	-542.57	0.00	542.57	1,265.73	632.87	1,110.38	548.38	58.77	-5.59	0.337
110.00	-20.25	-20.02	0.00	-502.06	0.00	502.06	1,247.14	623.57	1,077.81	532.29	61.13	-5.69	0.317
110.00	-20.25	-20.02	0.00	-502.06	0.00	502.06	853.24	426.62	741.79	366.34	61.13	-5.69	0.380
111.00	-18.80	-17.78	0.00	-481.74	0.00	481.74	849.67	424.84	733.15	362.07	62.33	-5.74	0.365
115.00	-17.56	-17.18	0.00	-410.60	0.00	410.60	834.99	417.50	698.71	345.06	67.21	-5.93	0.317
119.13	-16.05	-16.65	0.00	-339.73	0.00	339.73	819.16	409.58	663.43	327.64	72.41	-6.11	0.267
120.00	-15.58	-16.05	0.00	-325.17	0.00	325.17	815.71	407.86	655.98	323.96	73.53	-6.14	0.128
121.00	-14.94	-15.75	0.00	-309.12	0.00	309.12	811.73	405.86	647.49	319.77	74.82	-6.16	0.119
121.00	-14.94	-15.75	0.00	-309.12	0.00	309.12	811.73	405.86	647.49	319.77	74.82	-6.16	0.194
124.50	-13.77	-15.30	0.00	-253.99	0.00	253.99	797.47	398.73	617.91	305.16	79.35	-6.22	0.161
124.50	-13.77	-15.30	0.00	-253.99	0.00	253.99	797.47	398.73	617.91	305.16	79.35	-6.22	0.851
125.00	-13.60	-15.20	0.00	-246.34	0.00	246.34	795.39	397.69	613.71	303.09	80.00	-6.23	0.831
127.00	-11.64	-13.92	0.00	-215.95	0.00	215.95	786.97	393.48	596.95	294.81	82.66	-6.49	0.749
130.00	-9.99	-10.68	0.00	-174.19	0.00	174.19	774.02	387.01	572.00	282.49	86.85	-6.84	0.630
135.00	-9.44	-10.37	0.00	-120.77	0.00	120.77	751.62	375.81	530.94	262.21	94.25	-7.31	0.474
140.00	-5.47	-6.28	0.00	-68.30	0.00	68.30	728.18	364.09	490.64	242.31	102.08	-7.65	0.290
144.00	-4.94	-5.89	0.00	-43.17	0.00	43.17	701.03	350.52	454.07	224.25	108.56	-7.84	0.200
145.00	-4.86	-5.70	0.00	-37.29	0.00	37.29	694.06	347.03	445.03	219.78	110.20	-7.88	0.177
150.00	0.00	-4.98	0.00	-8.77	0.00	8.77	659.19	329.60	401.19	198.13	118.50	-7.99	0.044

Site Number: 302489 Code: ANSI/TIA-222-G

Site Name: Enfd - Enfield, CT Engineering Number:12927170_C3_02 7/24/2019 4:07:11 PM

Customer: T-MOBILE

Load Case: 0.9D + 1.6W 97 mph with No Ice (Reduced DL) 25 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		524.3	0.0					0.0	0.0	524.3	0.0	0.0	0.0
5.00		951.3	677.0					261.8	1,394.5	1,213.1	2,071.5	0.0	0.0
10.00		791.1	662.5					216.3	1,394.5	1,007.4	2,057.0	0.0	0.0
15.00		685.9	648.0					232.0	1,561.6	917.9	2,209.6	0.0	0.0
20.00		535.0	633.5					208.7	1,561.6	743.6	2,195.1	0.0	0.0
23.60	Reinf. Top Reinf	292.7	447.2					140.3	1,124.4	433.0	1,571.5	0.0	0.0
25.00		350.8	171.9					52.8	437.3	403.7	609.1	0.0	0.0
30.00		350.0	604.5					182.4	1,561.6	532.4	2,166.2	0.0	0.0
31.50	Bot - Section 2	265.0	178.5					53.6	468.5	318.6	647.0	0.0	0.0
35.00		221.6	761.9					125.5	1,093.1	347.2	1,855.0	0.0	0.0
35.67	Top - Section 1	264.2	143.6					24.0	208.2	288.2	351.9	0.0	0.0
40.00	Appurtenance(s)	491.2	424.2					157.6	1,353.4	649.1	1,777.6	0.0	0.0
45.00		523.2	478.2					184.0	1,561.6	707.1	2,039.8	0.0	0.0
50.00		520.0	466.1					186.6	1,561.6	706.6	2,027.7	0.0	0.0
55.00		516.7	454.0					189.3	1,561.6	706.1	2,015.6	0.0	0.0
60.00		462.1	441.9					192.1	1,561.6	654.2	2,003.6	0.0	0.0
64.00	Appurtenance(s)	255.5	344.9	710.7	0.0	0.0	113.4	155.7	1,249.3	1,121.9	1,707.6	0.0	0.0
65.00		238.6	85.0					39.2	312.3	277.8	397.3	0.0	0.0
68.70	Reinf. Top	253.2	310.3					146.0	1,155.5	399.2	1,465.8	0.0	0.0
70.00	Bot - Section 3	244.6	107.5					51.6	327.8	296.2	435.3	0.0	0.0
73.50	Top - Section 2	255.3	518.3					139.9	882.6	395.1	1,401.0	0.0	0.0
75.00		328.6	98.4					60.5	378.3	389.1	476.7	0.0	0.0
80.00		501.3	321.9					203.4	1,062.5	704.7	1,384.4	0.0	0.0
85.00		494.3	312.2					137.6	960.3	632.0	1,272.5	0.0	0.0
90.00		486.6	302.5					140.0	960.3	626.5	1,262.8	0.0	0.0
95.00		478.1	292.9					142.3	960.3	620.4	1,253.2	0.0	0.0
100.00		422.9	283.2					146.4	960.3	569.3	1,243.5	0.0	0.0
104.00	Appurtenance(s)	232.1	219.6	341.0	0.0	0.0	504.0	120.1	768.2	693.2	1,491.9	0.0	0.0
105.00		182.9	53.9					30.4	192.1	213.3	246.0	0.0	0.0
108.00	Appurtenance(s)	227.0	159.5	78.7	0.0	314.7	18.0	92.2	576.2	397.9	753.7	0.0	0.0
110.00	Top - Section 3	134.9	104.4					62.3	371.0	197.2	475.4	0.0	0.0
111.00	Appurtenance(s)	221.6	38.8	1,873.2	0.0	300.3	995.1	31.4	185.5	2,126.2	1,219.5	0.0	0.0
115.00		355.5	152.4					180.1	785.5	535.6	938.0	0.0	0.0
119.13	Reinf Bottom	216.0	152.3					188.1	996.1	404.1	1,148.4	0.0	0.0
120.00	Appurtenance(s)	79.9	31.7	435.0	0.0	0.0	108.0	40.2	250.7	555.1	390.4	0.0	0.0
121.00	Reinf. Top	189.3	35.9					46.1	462.5	235.4	498.4	0.0	0.0
124.50	Reinf. Top	167.5	123.5					162.3	777.0	329.8	900.5	0.0	0.0
125.00		103.0	17.4					23.3	88.5	126.3	105.8	0.0	0.0
127.00	Appurtenance(s)	203.8	68.7	849.2	0.0	0.0	1,215.0	67.6	233.6	1,120.7	1,517.3	0.0	0.0
130.00	Appurtenance(s)	286.0	100.9	2,713.6	0.0	-3,767.6	1,069.6	102.6	290.3	3,102.2	1,460.7	0.0	0.0
135.00		323.3	162.3					0.0	227.4	323.3	389.7	0.0	0.0
140.00	Appurtenance(s)	281.8	155.0	3,278.2	0.0	631.2	2,955.9	0.0	227.4	3,560.1	3,338.3	0.0	0.0
144.00	Appurtenance(s)	153.1	118.8	178.2	0.0	0.0	135.0	0.0	172.9	331.3	426.7	0.0	0.0
145.00		177.3	29.0					0.0	43.2	177.3	72.2	0.0	0.0
150.00	Appurtenance(s)	147.1	140.6	1,462.2	0.0	0.0	2,205.0	0.0	216.1	1,609.3	2,561.7	0.0	0.0
									Totals:	32,223.1	55,833.0	0.00	0.00

Site Number: 302489 Code: ANSI/TIA-222-G

Site Name: Enfd - Enfield, CT Engineering Number:12927170_C3_02 7/24/2019 4:07:21 PM

Customer: T-MOBILE

Load Case: 0.9D + 1.6W 97 mph with No Ice (Reduced DL) 25 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-57.40	-35.19	0.00	-3,516.41	0.00	3,516.41	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.566
5.00	-55.19	-34.20	0.00	-3,340.47	0.00	3,340.47	3,114.35	1,557.18	4,645.51	2,294.24	0.13	-0.23	0.546
10.00	-53.00	-33.39	0.00	-3,169.49	0.00	3,169.49	3,070.50	1,535.25	4,480.02	2,212.51	0.50	-0.47	0.526
15.00	-50.67	-32.65	0.00	-3,002.54	0.00	3,002.54	3,025.61	1,512.81	4,315.90	2,131.46	1.11	-0.70	0.506
20.00	-48.38	-32.04	0.00	-2,839.28	0.00	2,839.28	2,979.68	1,489.84	4,153.25	2,051.14	1.97	-0.93	0.486
23.60	-46.75	-31.68	0.00	-2,723.92	0.00	2,723.92	2,945.97	1,472.98	4,037.12	1,993.78	2.73	-1.09	0.471
23.60	-46.75	-31.68	0.00	-2,723.92	0.00	2,723.92	2,945.97	1,472.98	4,037.12	1,993.78	2.73	-1.09	0.471
25.00	-46.07	-31.38	0.00	-2,679.57	0.00	2,679.57	2,932.71	1,466.36	3,992.19	1,971.59	3.06	-1.15	0.465
30.00	-43.84	-30.91	0.00	-2,522.69	0.00	2,522.69	2,875.21	1,437.61	3,820.20	1,886.65	4.39	-1.38	0.447
31.50	-43.14	-30.66	0.00	-2,476.33	0.00	2,476.33	2,854.29	1,427.15	3,764.49	1,859.14	4.84	-1.44	0.441
35.00	-41.25	-30.33	0.00	-2,369.04	0.00	2,369.04	2,805.48	1,402.74	3,636.10	1,795.73	5.95	-1.60	0.421
35.67	-40.85	-30.10	0.00	-2,348.82	0.00	2,348.82	2,248.07	1,124.03	2,973.91	1,468.70	6.18	-1.63	0.469
40.00	-38.99	-29.54	0.00	-2,218.37	0.00	2,218.37	2,218.59	1,109.29	2,872.23	1,418.49	7.74	-1.81	0.448
45.00	-36.87	-28.90	0.00	-2,070.68	0.00	2,070.68	2,183.60	1,091.80	2,755.77	1,360.97	9.76	-2.03	0.423
50.00	-34.77	-28.24	0.00	-1,926.19	0.00	1,926.19	2,147.58	1,073.79	2,640.30	1,303.95	12.00	-2.24	0.399
55.00	-32.68	-27.57	0.00	-1,784.97	0.00	1,784.97	2,110.52	1,055.26	2,525.94	1,247.47	14.45	-2.44	0.374
60.00	-30.63	-26.92	0.00	-1,647.11	0.00	1,647.11	2,072.42	1,036.21	2,412.79	1,191.58	17.12	-2.64	0.350
64.00	-28.93	-25.77	0.00	-1,539.42	0.00	1,539.42	2,041.18	1,020.59	2,323.20	1,147.34	19.39	-2.79	0.330
65.00	-28.51	-25.52	0.00	-1,513.65	0.00	1,513.65	2,033.27	1,016.64	2,300.94	1,136.35	19.98	-2.83	0.325
68.70	-27.03	-25.09	0.00	-1,419.24	0.00	1,419.24	1,997.21	998.60	2,211.95	1,092.40	22.24	-2.97	0.309
68.70	-27.03	-25.09	0.00	-1,419.24	0.00	1,419.24	1,997.21	998.60	2,211.95	1,092.40	22.24	-2.97	0.609
70.00	-26.54	-24.84	0.00	-1,386.63	0.00	1,386.63	1,982.10	991.05	2,178.42	1,075.84	23.05	-3.02	0.601
73.50	-25.09	-24.45	0.00	-1,299.69	0.00	1,299.69	1,473.96	736.98	1,624.57	802.32	25.36	-3.27	0.668
75.00	-24.54	-24.13	0.00	-1,263.03	0.00	1,263.03	1,466.28	733.14	1,601.77	791.05	26.40	-3.38	0.654
80.00	-23.05	-23.48	0.00	-1,142.37	0.00	1,142.37	1,440.00	720.00	1,526.12	753.69	30.13	-3.74	0.605
85.00	-21.69	-22.90	0.00	-1,024.96	0.00	1,024.96	1,412.68	706.34	1,451.11	716.65	34.23	-4.08	0.557
90.00	-20.35	-22.29	0.00	-910.48	0.00	910.48	1,384.32	692.16	1,376.86	679.98	38.68	-4.41	0.507
95.00	-19.04	-21.67	0.00	-799.02	0.00	799.02	1,354.92	677.46	1,303.45	643.72	43.47	-4.73	0.457
100.00	-17.76	-21.08	0.00	-690.65	0.00	690.65	1,324.47	662.24	1,230.99	607.94	48.58	-5.02	0.405
104.00	-16.29	-20.29	0.00	-606.33	0.00	606.33	1,299.37	649.69	1,173.78	579.69	52.88	-5.24	0.364
105.00	-16.02	-20.09	0.00	-586.04	0.00	586.04	1,292.99	646.50	1,159.59	572.68	53.98	-5.29	0.354
108.00	-15.27	-19.65	0.00	-525.46	0.00	525.46	1,265.73	632.87	1,110.38	548.38	57.35	-5.44	0.324
110.00	-14.79	-19.43	0.00	-486.15	0.00	486.15	1,247.14	623.57	1,077.81	532.29	59.65	-5.54	0.305
110.00	-14.79	-19.43	0.00	-486.15	0.00	486.15	853.24	426.62	741.79	366.34	59.65	-5.54	0.366
111.00	-13.75	-17.22	0.00	-466.42	0.00	466.42	849.67	424.84	733.15	362.07	60.81	-5.58	0.351
115.00	-12.82	-16.64	0.00	-397.52	0.00	397.52	834.99	417.50	698.71	345.06	65.56	-5.77	0.305
119.13	-11.69	-16.14	0.00	-328.89	0.00	328.89	819.16	409.58	663.43	327.64	70.62	-5.94	0.257
120.00	-11.35	-15.55	0.00	-314.77	0.00	314.77	815.71	407.86	655.98	323.96	71.71	-5.97	0.123
121.00	-10.87	-15.27	0.00	-299.21	0.00	299.21	811.73	405.86	647.49	319.77	72.96	-5.99	0.114
121.00	-10.87	-15.27	0.00	-299.21	0.00	299.21	811.73	405.86	647.49	319.77	72.96	-5.99	0.186
124.50	-10.00	-14.86	0.00	-245.75	0.00	245.75	797.47	398.73	617.91	305.16	77.37	-6.05	0.154
124.50	-10.00	-14.86	0.00	-245.75	0.00	245.75	797.47	398.73	617.91	305.16	77.37	-6.05	0.819
125.00	-9.87	-14.74	0.00	-238.33	0.00	238.33	795.39	397.69	613.71	303.09	78.01	-6.06	0.800
127.00	-8.41	-13.51	0.00	-208.84	0.00	208.84	786.97	393.48	596.95	294.81	80.60	-6.31	0.720
130.00	-7.24	-10.31	0.00	-168.31	0.00	168.31	774.02	387.01	572.00	282.49	84.67	-6.65	0.606
135.00	-6.82	-9.99	0.00	-116.75	0.00	116.75	751.62	375.81	530.94	262.21	91.87	-7.10	0.455
140.00	-3.94	-6.06	0.00	-66.15	0.00	66.15	728.18	364.09	490.64	242.31	99.48	-7.44	0.279
144.00	-3.55	-5.68	0.00	-41.93	0.00	41.93	701.03	350.52	454.07	224.25	105.77	-7.62	0.192
145.00	-3.49	-5.50	0.00	-36.25	0.00	36.25	694.06	347.03	445.03	219.78	107.37	-7.66	0.170
150.00	0.00	-4.98	0.00	-8.77	0.00	8.77	659.19	329.60	401.19	198.13	115.43	-7.77	0.044

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 1.00 in Radial Ice — 25 Iterations

Gust Response Factor :1.10 | Ice Dead Load Factor :1.00 | Wind Importance Factor :1.00
Dead Load Factor :1.20 | Ice Importance Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		96.3	0.0					0.0	0.0	96.3	0.0	0.0	0.0
5.00		175.2	1,389.5					116.9	2,284.1	292.1	3,673.6	0.0	0.0
10.00		146.4	1,383.7					100.0	2,312.9	246.4	3,696.6	0.0	0.0
15.00		127.2	1,355.5					167.7	2,819.7	294.9	4,175.1	0.0	0.0
20.00		99.4	1,324.9					152.4	2,818.0	251.8	4,142.9	0.0	0.0
23.60	Reinf. Top Reinf	54.5	936.4					103.5	2,028.7	157.9	2,965.1	0.0	0.0
25.00		65.4	360.7					39.2	789.1	104.6	1,149.8	0.0	0.0
30.00		65.3	1,266.3					136.4	2,819.6	201.8	4,085.9	0.0	0.0
31.50	Bot - Section 2	49.5	375.5					40.5	846.6	90.0	1,222.1	0.0	0.0
35.00		41.4	1,338.1					95.5	1,976.9	136.9	3,314.9	0.0	0.0
35.67	Top - Section 1	49.5	252.9					18.4	376.8	67.9	629.7	0.0	0.0
40.00	Appurtenance(s)	92.2	957.6					120.4	2,451.8	212.7	3,409.4	0.0	0.0
45.00		98.6	1,082.1					142.7	2,834.9	241.3	3,917.0	0.0	0.0
50.00		98.3	1,058.6					147.1	2,841.7	245.4	3,900.2	0.0	0.0
55.00		98.1	1,035.0					151.7	2,848.8	249.8	3,883.8	0.0	0.0
60.00		88.1	1,011.3					156.5	2,855.9	244.6	3,867.3	0.0	0.0
64.00	Appurtenance(s)	48.8	792.8	140.1	0.0	0.0	338.6	128.7	2,289.9	317.6	3,421.2	0.0	0.0
65.00		45.7	196.5					32.7	573.1	78.4	769.6	0.0	0.0
68.70	Reinf. Top	48.6	716.3					122.5	2,123.1	171.1	2,839.4	0.0	0.0
70.00	Bot - Section 3	47.0	249.2					43.7	642.6	90.7	891.9	0.0	0.0
73.50	Top - Section 2	49.1	976.8					119.2	1,732.5	168.3	2,709.3	0.0	0.0
75.00		63.5	253.1					51.6	743.5	115.1	996.6	0.0	0.0
80.00		97.2	826.0					147.3	2,053.5	244.4	2,879.5	0.0	0.0
85.00		96.3	804.5					136.8	1,836.6	233.1	2,641.1	0.0	0.0
90.00		95.3	782.8					140.6	1,840.7	235.9	2,623.5	0.0	0.0
95.00		94.2	760.9					144.4	1,844.6	238.6	2,605.5	0.0	0.0
100.00		83.8	738.7					148.1	1,848.4	231.9	2,587.2	0.0	0.0
104.00	Appurtenance(s)	46.1	575.8	117.9	0.0	0.0	1,161.9	121.8	1,481.4	285.8	3,219.1	0.0	0.0
105.00		36.5	142.4					31.0	370.7	67.5	513.1	0.0	0.0
108.00	Appurtenance(s)	45.4	420.4	18.1	0.0	72.5	139.3	94.3	1,112.9	157.8	1,672.6	0.0	0.0
110.00	Top - Section 3	27.1	276.2					52.4	698.6	79.5	974.9	0.0	0.0
111.00	Appurtenance(s)	44.7	119.9	440.9	0.0	70.3	3,532.2	26.5	349.5	512.0	4,001.6	0.0	0.0
115.00		71.9	469.2					97.4	1,458.3	169.3	1,927.5	0.0	0.0
119.13	Reinf Bottom	43.9	470.6					133.6	1,917.6	177.5	2,388.1	0.0	0.0
120.00	Appurtenance(s)	16.3	98.8	118.9	0.0	0.0	415.9	28.8	459.7	164.0	974.4	0.0	0.0
121.00	Reinf. Top	38.7	112.1					33.1	760.1	71.8	872.2	0.0	0.0
124.50	Reinf. Top	34.3	384.0					117.5	1,539.5	151.8	1,923.5	0.0	0.0
125.00		21.2	54.4					17.0	190.0	38.2	244.4	0.0	0.0
127.00	Appurtenance(s)	42.1	215.0	306.0	0.0	0.0	2,115.6	44.7	493.2	392.8	2,823.8	0.0	0.0
130.00	Appurtenance(s)	66.3	315.8	671.1	0.0	-909.1	4,421.4	57.8	606.7	795.2	5,343.9	0.0	0.0
135.00		81.2	507.9					0.0	303.2	81.2	811.2	0.0	0.0
140.00	Appurtenance(s)	71.5	487.8	800.9	0.0	161.1	7,804.5	0.0	303.2	872.4	8,595.5	0.0	0.0
144.00	Appurtenance(s)	39.1	376.6	45.1	0.0	0.0	247.2	168.1	337.1	252.3	960.8	0.0	0.0
145.00		45.7	92.8					41.6	84.3	87.3	177.1	0.0	0.0
150.00	Appurtenance(s)	38.0	447.1	406.6	0.0	0.0	4,638.3	205.2	422.0	649.9	5,507.4	0.0	0.0
								Totals:		10,266.0	115,929.	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 1.00 in Radial Ice 25 Iterations

Gust Response Factor :1.10 Ice Dead Load Factor :1.00 Wind Importance Factor :1.00
Dead Load Factor :1.20 Ice Importance Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-122.09	-11.10	0.00	-1,195.69	0.00	1,195.69	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.210
5.00	-118.40	-10.97	0.00	-1,140.19	0.00	1,140.19	3,114.35	1,557.18	4,645.51	2,294.24	0.04	-0.08	0.203
10.00	-114.69	-10.87	0.00	-1,085.35	0.00	1,085.35	3,070.50	1,535.25	4,480.02	2,212.51	0.17	-0.16	0.196
15.00	-110.50	-10.72	0.00	-1,030.98	0.00	1,030.98	3,025.61	1,512.81	4,315.90	2,131.46	0.38	-0.24	0.189
20.00	-106.35	-10.57	0.00	-977.39	0.00	977.39	2,979.68	1,489.84	4,153.25	2,051.14	0.67	-0.32	0.182
23.60	-103.38	-10.46	0.00	-939.34	0.00	939.34	2,945.97	1,472.98	4,037.12	1,993.78	0.93	-0.37	0.177
23.60	-103.38	-10.46	0.00	-939.34	0.00	939.34	2,945.97	1,472.98	4,037.12	1,993.78	0.93	-0.37	0.177
25.00	-102.22	-10.44	0.00	-924.69	0.00	924.69	2,932.71	1,466.36	3,992.19	1,971.59	1.05	-0.40	0.175
30.00	-98.12	-10.29	0.00	-872.49	0.00	872.49	2,875.21	1,437.61	3,820.20	1,886.65	1.50	-0.47	0.169
31.50	-96.90	-10.26	0.00	-857.05	0.00	857.05	2,854.29	1,427.15	3,764.49	1,859.14	1.66	-0.50	0.167
35.00	-93.58	-10.14	0.00	-821.14	0.00	821.14	2,805.48	1,402.74	3,636.10	1,795.73	2.04	-0.55	0.160
35.67	-92.94	-10.13	0.00	-814.38	0.00	814.38	2,248.07	1,124.03	2,973.91	1,468.70	2.12	-0.56	0.178
40.00	-89.52	-9.99	0.00	-770.49	0.00	770.49	2,218.59	1,109.29	2,872.23	1,418.49	2.66	-0.62	0.171
45.00	-85.60	-9.81	0.00	-720.54	0.00	720.54	2,183.60	1,091.80	2,755.77	1,360.97	3.35	-0.70	0.162
50.00	-81.69	-9.62	0.00	-671.47	0.00	671.47	2,147.58	1,073.79	2,640.30	1,303.95	4.12	-0.77	0.153
55.00	-77.80	-9.41	0.00	-623.36	0.00	623.36	2,110.52	1,055.26	2,525.94	1,247.47	4.97	-0.84	0.144
60.00	-73.92	-9.19	0.00	-576.30	0.00	576.30	2,072.42	1,036.21	2,412.79	1,191.58	5.89	-0.91	0.135
64.00	-70.50	-8.86	0.00	-539.55	0.00	539.55	2,041.18	1,020.59	2,323.20	1,147.34	6.67	-0.97	0.128
65.00	-69.73	-8.80	0.00	-530.69	0.00	530.69	2,033.27	1,016.64	2,300.94	1,136.35	6.88	-0.98	0.126
68.70	-66.89	-8.62	0.00	-498.12	0.00	498.12	1,997.21	998.60	2,211.95	1,092.40	7.66	-1.03	0.120
68.70	-66.89	-8.62	0.00	-498.12	0.00	498.12	1,997.21	998.60	2,211.95	1,092.40	7.66	-1.03	0.230
70.00	-65.99	-8.57	0.00	-486.92	0.00	486.92	1,982.10	991.05	2,178.42	1,075.84	7.94	-1.04	0.227
73.50	-63.28	-8.42	0.00	-456.91	0.00	456.91	1,473.96	736.98	1,624.57	802.32	8.74	-1.13	0.254
75.00	-62.27	-8.38	0.00	-444.28	0.00	444.28	1,466.28	733.14	1,601.77	791.05	9.10	-1.17	0.249
80.00	-59.38	-8.20	0.00	-402.39	0.00	402.39	1,440.00	720.00	1,526.12	753.69	10.40	-1.30	0.231
85.00	-56.73	-8.02	0.00	-361.39	0.00	361.39	1,412.68	706.34	1,451.11	716.65	11.82	-1.42	0.214
90.00	-54.09	-7.83	0.00	-321.28	0.00	321.28	1,384.32	692.16	1,376.86	679.98	13.37	-1.54	0.196
95.00	-51.48	-7.61	0.00	-282.14	0.00	282.14	1,354.92	677.46	1,303.45	643.72	15.04	-1.65	0.177
100.00	-48.89	-7.38	0.00	-244.08	0.00	244.08	1,324.47	662.24	1,230.99	607.94	16.82	-1.75	0.159
104.00	-45.68	-7.03	0.00	-214.57	0.00	214.57	1,299.37	649.69	1,173.78	579.69	18.32	-1.83	0.143
105.00	-45.16	-6.98	0.00	-207.53	0.00	207.53	1,292.99	646.50	1,159.59	572.68	18.71	-1.85	0.139
108.00	-43.49	-6.80	0.00	-186.53	0.00	186.53	1,265.73	632.87	1,110.38	548.38	19.88	-1.90	0.129
110.00	-42.52	-6.70	0.00	-172.94	0.00	172.94	1,247.14	623.57	1,077.81	532.29	20.69	-1.93	0.122
110.00	-42.52	-6.70	0.00	-172.94	0.00	172.94	853.24	426.62	741.79	366.34	20.69	-1.93	0.147
111.00	-38.53	-6.08	0.00	-166.17	0.00	166.17	849.67	424.84	733.15	362.07	21.09	-1.95	0.140
115.00	-36.60	-5.89	0.00	-141.83	0.00	141.83	834.99	417.50	698.71	345.06	22.76	-2.02	0.123
119.13	-34.22	-5.65	0.00	-117.53	0.00	117.53	819.16	409.58	663.43	327.64	24.53	-2.08	0.105
120.00	-33.25	-5.45	0.00	-112.59	0.00	112.59	815.71	407.86	655.98	323.96	24.91	-2.09	0.053
121.00	-32.38	-5.36	0.00	-107.14	0.00	107.14	811.73	405.86	647.49	319.77	25.35	-2.10	0.050
121.00	-32.38	-5.36	0.00	-107.14	0.00	107.14	811.73	405.86	647.49	319.77	25.35	-2.10	0.083
124.50	-30.46	-5.14	0.00	-88.39	0.00	88.39	797.47	398.73	617.91	305.16	26.89	-2.12	0.071
124.50	-30.46	-5.14	0.00	-88.39	0.00	88.39	797.47	398.73	617.91	305.16	26.89	-2.12	0.328
125.00	-30.22	-5.12	0.00	-85.81	0.00	85.81	795.39	397.69	613.71	303.09	27.11	-2.12	0.321
127.00	-27.40	-4.67	0.00	-75.57	0.00	75.57	786.97	393.48	596.95	294.81	28.02	-2.21	0.291
130.00	-22.08	-3.72	0.00	-61.56	0.00	61.56	774.02	387.01	572.00	282.49	29.45	-2.33	0.247
135.00	-21.27	-3.66	0.00	-42.95	0.00	42.95	751.62	375.81	530.94	262.21	31.99	-2.50	0.192
140.00	-12.71	-2.42	0.00	-24.48	0.00	24.48	728.18	364.09	490.64	242.31	34.68	-2.62	0.119
144.00	-11.76	-2.14	0.00	-14.78	0.00	14.78	701.03	350.52	454.07	224.25	36.90	-2.69	0.083
145.00	-11.59	-2.05	0.00	-12.65	0.00	12.65	694.06	347.03	445.03	219.78	37.47	-2.70	0.074
150.00	0.00	-1.49	0.00	-2.42	0.00	2.42	659.19	329.60	401.19	198.13	40.32	-2.74	0.012

Load Case: 1.0D + 1.0W Serviceability 60 mph 24 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		125.8	0.0					0.0	0.0	125.8	0.0	0.0	0.0
5.00		228.3	752.2					62.8	1,549.5	291.2	2,301.7	0.0	0.0
10.00		189.9	736.1					51.9	1,549.5	241.8	2,285.6	0.0	0.0
15.00		164.6	720.0					55.7	1,735.1	220.3	2,455.1	0.0	0.0
20.00		128.4	703.9					50.1	1,735.1	178.5	2,439.0	0.0	0.0
23.60	Reinf. Top Reinf	70.2	496.8					33.7	1,249.3	103.9	1,746.1	0.0	0.0
25.00		84.2	191.0					12.7	485.8	96.9	676.8	0.0	0.0
30.00		84.0	671.7					43.8	1,735.1	127.8	2,406.9	0.0	0.0
31.50	Bot - Section 2	63.6	198.4					12.9	520.5	76.5	718.9	0.0	0.0
35.00		53.2	846.5					30.1	1,214.6	83.3	2,061.1	0.0	0.0
35.67	Top - Section 1	63.4	159.6					5.8	231.4	69.2	391.0	0.0	0.0
40.00	Appurtenance(s)	117.9	471.3					37.8	1,503.8	155.8	1,975.1	0.0	0.0
45.00		125.6	531.3					44.2	1,735.1	169.7	2,266.4	0.0	0.0
50.00		124.8	517.9					44.8	1,735.1	169.6	2,253.0	0.0	0.0
55.00		124.0	504.5					45.4	1,735.1	169.5	2,239.6	0.0	0.0
60.00		110.9	491.0					46.1	1,735.1	157.0	2,226.2	0.0	0.0
64.00	Appurtenance(s)	61.3	383.2	170.6	0.0	0.0	126.0	37.4	1,388.1	269.3	1,897.3	0.0	0.0
65.00		57.3	94.5					9.4	347.0	66.7	441.5	0.0	0.0
68.70	Reinf. Top	60.8	344.8					35.0	1,283.9	95.8	1,628.7	0.0	0.0
70.00	Bot - Section 3	58.7	119.4					12.4	364.3	71.1	483.7	0.0	0.0
73.50	Top - Section 2	61.3	575.9					33.6	980.7	94.8	1,556.6	0.0	0.0
75.00		78.9	109.4					14.5	420.3	93.4	529.7	0.0	0.0
80.00		120.3	357.6					48.8	1,180.6	169.1	1,538.2	0.0	0.0
85.00		118.6	346.9					33.0	1,067.0	151.7	1,413.9	0.0	0.0
90.00		116.8	336.2					33.6	1,067.0	150.4	1,403.2	0.0	0.0
95.00		114.7	325.4					34.2	1,067.0	148.9	1,392.4	0.0	0.0
100.00		101.5	314.7					35.1	1,067.0	136.6	1,381.7	0.0	0.0
104.00	Appurtenance(s)	55.7	244.0	81.8	0.0	0.0	560.0	28.8	853.6	166.4	1,657.6	0.0	0.0
105.00		43.9	59.9					7.3	213.4	51.2	273.3	0.0	0.0
108.00	Appurtenance(s)	54.5	177.2	18.9	0.0	75.5	20.0	22.1	640.2	95.5	837.4	0.0	0.0
110.00	Top - Section 3	32.4	116.0					14.9	412.2	47.3	528.2	0.0	0.0
111.00	Appurtenance(s)	53.2	43.1	449.6	0.0	72.1	1,105.7	7.5	206.1	510.3	1,354.9	0.0	0.0
115.00		85.3	169.4					43.2	872.8	128.6	1,042.2	0.0	0.0
119.13	Reinf Bottom	51.8	169.3					45.1	1,106.7	97.0	1,276.0	0.0	0.0
120.00	Appurtenance(s)	19.2	35.2	104.4	0.0	0.0	120.0	9.6	278.6	133.2	433.8	0.0	0.0
121.00	Reinf. Top	45.4	39.9					11.1	513.9	56.5	553.8	0.0	0.0
124.50	Reinf. Top	40.2	137.2					38.9	863.4	79.2	1,000.6	0.0	0.0
125.00		24.7	19.3					5.6	98.3	30.3	117.6	0.0	0.0
127.00	Appurtenance(s)	48.9	76.3	203.8	0.0	0.0	1,350.0	16.2	259.6	269.0	1,685.9	0.0	0.0
130.00	Appurtenance(s)	68.6	112.1	651.3	0.0	-904.2	1,188.4	24.6	322.5	744.5	1,623.0	0.0	0.0
135.00		77.6	180.3					0.0	252.7	77.6	433.0	0.0	0.0
140.00	Appurtenance(s)	67.6	172.3	786.8	0.0	151.5	3,284.3	0.0	252.7	854.4	3,709.3	0.0	0.0
144.00	Appurtenance(s)	36.7	132.0	42.8	0.0	0.0	150.0	0.0	192.1	79.5	474.1	0.0	0.0
145.00		42.5	32.2					0.0	48.0	42.5	80.2	0.0	0.0
150.00	Appurtenance(s)	35.3	156.2	350.9	0.0	0.0	2,450.0	0.0	240.2	386.2	2,846.3	0.0	0.0
									Totals:	7,733.55	62,036.7	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 24 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-63.85	-8.45	0.00	-850.78	0.00	850.78	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.145
5.00	-61.54	-8.22	0.00	-808.54	0.00	808.54	3,114.35	1,557.18	4,645.51	2,294.24	0.03	-0.06	0.140
10.00	-59.25	-8.03	0.00	-767.46	0.00	767.46	3,070.50	1,535.25	4,480.02	2,212.51	0.12	-0.11	0.135
15.00	-56.79	-7.86	0.00	-727.31	0.00	727.31	3,025.61	1,512.81	4,315.90	2,131.46	0.27	-0.17	0.130
20.00	-54.34	-7.72	0.00	-688.02	0.00	688.02	2,979.68	1,489.84	4,153.25	2,051.14	0.48	-0.22	0.125
23.60	-52.59	-7.63	0.00	-660.25	0.00	660.25	2,945.97	1,472.98	4,037.12	1,993.78	0.66	-0.26	0.121
23.60	-52.59	-7.63	0.00	-660.25	0.00	660.25	2,945.97	1,472.98	4,037.12	1,993.78	0.66	-0.26	0.121
25.00	-51.91	-7.56	0.00	-649.56	0.00	649.56	2,932.71	1,466.36	3,992.19	1,971.59	0.74	-0.28	0.120
30.00	-49.50	-7.45	0.00	-611.76	0.00	611.76	2,875.21	1,437.61	3,820.20	1,886.65	1.06	-0.33	0.115
31.50	-48.78	-7.39	0.00	-600.58	0.00	600.58	2,854.29	1,427.15	3,764.49	1,859.14	1.17	-0.35	0.114
35.00	-46.72	-7.31	0.00	-574.70	0.00	574.70	2,805.48	1,402.74	3,636.10	1,795.73	1.44	-0.39	0.109
35.67	-46.32	-7.26	0.00	-569.83	0.00	569.83	2,248.07	1,124.03	2,973.91	1,468.70	1.50	-0.39	0.121
40.00	-44.34	-7.13	0.00	-538.35	0.00	538.35	2,218.59	1,109.29	2,872.23	1,418.49	1.88	-0.44	0.116
45.00	-42.07	-6.98	0.00	-502.69	0.00	502.69	2,183.60	1,091.80	2,755.77	1,360.97	2.36	-0.49	0.109
50.00	-39.81	-6.83	0.00	-467.78	0.00	467.78	2,147.58	1,073.79	2,640.30	1,303.95	2.91	-0.54	0.103
55.00	-37.57	-6.67	0.00	-433.65	0.00	433.65	2,110.52	1,055.26	2,525.94	1,247.47	3.50	-0.59	0.097
60.00	-35.34	-6.51	0.00	-400.32	0.00	400.32	2,072.42	1,036.21	2,412.79	1,191.58	4.15	-0.64	0.090
64.00	-33.44	-6.23	0.00	-374.27	0.00	374.27	2,041.18	1,020.59	2,323.20	1,147.34	4.70	-0.68	0.085
65.00	-33.00	-6.18	0.00	-368.04	0.00	368.04	2,033.27	1,016.64	2,300.94	1,136.35	4.84	-0.69	0.084
68.70	-31.37	-6.07	0.00	-345.19	0.00	345.19	1,997.21	998.60	2,211.95	1,092.40	5.39	-0.72	0.080
68.70	-31.37	-6.07	0.00	-345.19	0.00	345.19	1,997.21	998.60	2,211.95	1,092.40	5.39	-0.72	0.155
70.00	-30.89	-6.01	0.00	-337.30	0.00	337.30	1,982.10	991.05	2,178.42	1,075.84	5.59	-0.73	0.153
73.50	-29.33	-5.92	0.00	-316.25	0.00	316.25	1,473.96	736.98	1,624.57	802.32	6.15	-0.79	0.171
75.00	-28.79	-5.85	0.00	-307.37	0.00	307.37	1,466.28	733.14	1,601.77	791.05	6.40	-0.82	0.167
80.00	-27.25	-5.70	0.00	-278.12	0.00	278.12	1,440.00	720.00	1,526.12	753.69	7.31	-0.91	0.155
85.00	-25.83	-5.56	0.00	-249.63	0.00	249.63	1,412.68	706.34	1,451.11	716.65	8.30	-0.99	0.143
90.00	-24.42	-5.42	0.00	-221.84	0.00	221.84	1,384.32	692.16	1,376.86	679.98	9.39	-1.07	0.130
95.00	-23.02	-5.27	0.00	-194.75	0.00	194.75	1,354.92	677.46	1,303.45	643.72	10.55	-1.15	0.118
100.00	-21.64	-5.13	0.00	-168.39	0.00	168.39	1,324.47	662.24	1,230.99	607.94	11.79	-1.22	0.105
104.00	-19.98	-4.94	0.00	-147.88	0.00	147.88	1,299.37	649.69	1,173.78	579.69	12.84	-1.27	0.094
105.00	-19.71	-4.89	0.00	-142.94	0.00	142.94	1,292.99	646.50	1,159.59	572.68	13.10	-1.29	0.092
108.00	-18.87	-4.79	0.00	-128.19	0.00	128.19	1,265.73	632.87	1,110.38	548.38	13.92	-1.32	0.085
110.00	-18.34	-4.73	0.00	-118.62	0.00	118.62	1,247.14	623.57	1,077.81	532.29	14.48	-1.35	0.080
110.00	-18.34	-4.73	0.00	-118.62	0.00	118.62	853.24	426.62	741.79	366.34	14.48	-1.35	0.096
111.00	-17.00	-4.20	0.00	-113.82	0.00	113.82	849.67	424.84	733.15	362.07	14.77	-1.36	0.092
115.00	-15.96	-4.06	0.00	-97.03	0.00	97.03	834.99	417.50	698.71	345.06	15.92	-1.40	0.080
119.13	-14.68	-3.93	0.00	-80.30	0.00	80.30	819.16	409.58	663.43	327.64	17.16	-1.44	0.068
120.00	-14.25	-3.79	0.00	-76.86	0.00	76.86	815.71	407.86	655.98	323.96	17.42	-1.45	0.034
121.00	-13.70	-3.72	0.00	-73.06	0.00	73.06	811.73	405.86	647.49	319.77	17.73	-1.46	0.031
121.00	-13.70	-3.72	0.00	-73.06	0.00	73.06	811.73	405.86	647.49	319.77	17.73	-1.46	0.052
124.50	-12.70	-3.62	0.00	-60.03	0.00	60.03	797.47	398.73	617.91	305.16	18.80	-1.47	0.043
124.50	-12.70	-3.62	0.00	-60.03	0.00	60.03	797.47	398.73	617.91	305.16	18.80	-1.47	0.213
125.00	-12.58	-3.59	0.00	-58.22	0.00	58.22	795.39	397.69	613.71	303.09	18.95	-1.47	0.208
127.00	-10.90	-3.29	0.00	-51.04	0.00	51.04	786.97	393.48	596.95	294.81	19.59	-1.54	0.187
130.00	-9.29	-2.52	0.00	-41.15	0.00	41.15	774.02	387.01	572.00	282.49	20.58	-1.62	0.158
135.00	-8.86	-2.45	0.00	-28.55	0.00	28.55	751.62	375.81	530.94	262.21	22.33	-1.73	0.121
140.00	-5.18	-1.48	0.00	-16.16	0.00	16.16	728.18	364.09	490.64	242.31	24.19	-1.81	0.074
144.00	-4.70	-1.39	0.00	-10.23	0.00	10.23	701.03	350.52	454.07	224.25	25.73	-1.85	0.052
145.00	-4.62	-1.35	0.00	-8.84	0.00	8.84	694.06	347.03	445.03	219.78	26.12	-1.86	0.047
150.00	0.00	-1.19	0.00	-2.10	0.00	2.10	659.19	329.60	401.19	198.13	28.08	-1.89	0.011

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.18	
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06	
Long-Period Transition Period (T_L):	6	
Importance Factor (I_E):	1.00	
Site Coefficient F_a:	1.60	
Site Coeffiecient F_v:	2.40	
Response Modification Coefficient (R):	1.50	
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19	
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10	
Seismic Response Coefficient (C_s):	0.03	
Upper Limit C_s	0.03	
Lower Limit C_s	0.03	
Period based on Rayleigh Method (sec):	2.94	
Redundancy Factor (p):	1.30	
Seismic Force Distribution Exponent (k):	2.00	
Total Unfactored Dead Load:	63.86	k
Seismic Base Shear (E):	2.49	k

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
44	147.50	396	8,623	0.018	44	491
43	144.50	80	1,675	0.003	9	99
42	142.00	324	6,536	0.013	34	401
41	137.50	425	8,035	0.017	41	526
40	132.50	433	7,602	0.016	39	536
39	128.50	435	7,176	0.015	37	538
38	126.00	336	5,332	0.011	27	416
37	124.75	118	1,830	0.004	9	146
36	122.75	1,001	15,076	0.031	77	1,239
35	120.50	554	8,041	0.017	41	686
34	119.56	314	4,486	0.009	23	389
33	117.06	1,276	17,486	0.036	90	1,580
32	113.00	1,042	13,307	0.027	68	1,291
31	110.50	249	3,043	0.006	16	309
30	109.00	528	6,276	0.013	32	654
29	106.50	817	9,271	0.019	48	1,012
28	104.50	273	2,985	0.006	15	338
27	102.00	1,098	11,420	0.024	59	1,359
26	97.50	1,382	13,135	0.027	67	1,711
25	92.50	1,392	11,914	0.025	61	1,724
24	87.50	1,403	10,743	0.022	55	1,738
23	82.50	1,414	9,623	0.020	49	1,751
22	77.50	1,538	9,239	0.019	47	1,905

21	74.25	530	2,920	0.006	15	656
20	71.75	1,557	8,014	0.017	41	1,928
19	69.35	484	2,326	0.005	12	599
18	66.85	1,629	7,279	0.015	37	2,017
17	64.50	441	1,837	0.004	9	547
16	62.00	1,771	6,809	0.014	35	2,194
15	57.50	2,226	7,360	0.015	38	2,757
14	52.50	2,240	6,173	0.013	32	2,774
13	47.50	2,253	5,083	0.010	26	2,790
12	42.50	2,266	4,094	0.008	21	2,807
11	37.83	1,975	2,827	0.006	15	2,446
10	35.33	391	488	0.001	3	484
9	33.25	2,061	2,279	0.005	12	2,552
8	30.75	719	680	0.001	3	890
7	27.50	2,407	1,820	0.004	9	2,981
6	24.30	677	400	0.001	2	838
5	21.80	1,746	830	0.002	4	2,162
4	17.50	2,439	747	0.002	4	3,021
3	12.50	2,455	384	0.001	2	3,040
2	7.50	2,286	129	0.000	1	2,830
1	2.50	2,302	14	0.000	0	2,850
Decibel DB809KE-SY	162.00	26	682	0.001	4	32
Kaelus DBC0061F1V51-	154.00	76	1,814	0.004	9	95
Powerwave Allgon LGP	154.00	42	1,003	0.002	5	52
Raycap DC6-48-60-18-	154.00	64	1,508	0.003	8	79
Ericsson RRUS A2 B2	154.00	66	1,565	0.003	8	82
Ericsson RRUS 11 (Ba	154.00	165	3,913	0.008	20	204
Ericsson RRUS 32 B30	154.00	180	4,269	0.009	22	223
Ericsson RRUS-11 (19	154.00	153	3,629	0.007	19	189
Ericsson RRUS-12 B2	154.00	174	4,127	0.009	21	215
Ericsson Radio 8843	154.00	255	6,048	0.012	31	316
Powerwave Allgon 777	154.00	105	2,490	0.005	13	130
Diamond X50A	152.00	5	106	0.000	1	6
CCI OPA-65R-LCUU-H8	151.00	264	6,019	0.012	31	327
CCI TPA-65R-LCUUUU-H	151.00	245	5,582	0.012	29	303
Round Side Arm	150.00	450	10,125	0.021	52	557
Platform w/ Handrail	150.00	2,000	45,000	0.093	231	2,477
Stand-Off	144.00	150	3,110	0.006	16	186
Ericsson KRY 112 144	140.00	33	647	0.001	3	41
Ericsson Radio 4449	140.00	222	4,351	0.009	22	275
Ericsson AIR 21, 1.3	140.00	249	4,880	0.010	25	308
Ericsson AIR32 B66Aa	140.00	397	7,773	0.016	40	491
RFS APXVAARR24_43-U-	140.00	384	7,521	0.016	39	475
Platform w/ Handrail	140.00	2,000	39,200	0.081	201	2,477
RFS FD9R6004/2C-3L	130.00	16	264	0.001	1	19
Nokia AirScale RRH 4	130.00	106	1,790	0.004	9	131
Alcatel-Lucent B25 R	130.00	159	2,687	0.006	14	197
Alcatel-Lucent B13 R	130.00	172	2,900	0.006	15	213
Alcatel-Lucent B66A	130.00	201	3,397	0.007	17	249
Antel BXA-70063/4CF	130.00	30	502	0.001	3	37
RFS DB-T1-6Z-8AB-0Z	130.00	88	1,487	0.003	8	109
Amphenol Antel BXA-8	130.00	54	913	0.002	5	67
Commscope JAHH-65B-R	130.00	364	6,145	0.013	32	450
Round Low Profile Pl	127.00	1,350	21,774	0.045	112	1,672
Generic 76" x 6" Pan	120.00	120	1,728	0.004	9	149
DragonWave Horizon C	111.00	21	261	0.001	1	26
Alcatel-Lucent RRH2x	111.00	317	3,911	0.008	20	393
Nokia FZHN Flexi RRH	111.00	132	1,630	0.003	8	164
Alcatel-Lucent 1900M	111.00	180	2,218	0.005	11	223
DragonWave A-ANT-11G	111.00	54	665	0.001	3	67
RFS APXVTM14-ALU-I20	111.00	169	2,077	0.004	11	209
Commscope NNVV-65B-R	111.00	232	2,861	0.006	15	288
Generic 24" x 24" Ju	108.00	20	233	0.000	1	25
Side Arms	104.00	560	6,057	0.012	31	694

Channel Master Type	64.00	126	516	0.001	3	156
Generic Blank Exhibi	40.00	0	0	0.000	0	0
		63,857	484,725	1.000	2,490	79,080

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
44	147.50	396	8,623	0.018	44	341
43	144.50	80	1,675	0.003	9	69
42	142.00	324	6,536	0.013	34	279
41	137.50	425	8,035	0.017	41	366
40	132.50	433	7,602	0.016	39	373
39	128.50	435	7,176	0.015	37	374
38	126.00	336	5,332	0.011	27	289
37	124.75	118	1,830	0.004	9	101
36	122.75	1,001	15,076	0.031	77	862
35	120.50	554	8,041	0.017	41	477
34	119.56	314	4,486	0.009	23	270
33	117.06	1,276	17,486	0.036	90	1,099
32	113.00	1,042	13,307	0.027	68	898
31	110.50	249	3,043	0.006	16	215
30	109.00	528	6,276	0.013	32	455
29	106.50	817	9,271	0.019	48	704
28	104.50	273	2,985	0.006	15	236
27	102.00	1,098	11,420	0.024	59	946
26	97.50	1,382	13,135	0.027	67	1,190
25	92.50	1,392	11,914	0.025	61	1,200
24	87.50	1,403	10,743	0.022	55	1,209
23	82.50	1,414	9,623	0.020	49	1,218
22	77.50	1,538	9,239	0.019	47	1,325
21	74.25	530	2,920	0.006	15	456
20	71.75	1,557	8,014	0.017	41	1,341
19	69.35	484	2,326	0.005	12	417
18	66.85	1,629	7,279	0.015	37	1,403
17	64.50	441	1,837	0.004	9	380
16	62.00	1,771	6,809	0.014	35	1,526
15	57.50	2,226	7,360	0.015	38	1,918
14	52.50	2,240	6,173	0.013	32	1,930
13	47.50	2,253	5,083	0.010	26	1,941
12	42.50	2,266	4,094	0.008	21	1,953
11	37.83	1,975	2,827	0.006	15	1,702
10	35.33	391	488	0.001	3	337
9	33.25	2,061	2,279	0.005	12	1,776
8	30.75	719	680	0.001	3	619
7	27.50	2,407	1,820	0.004	9	2,074
6	24.30	677	400	0.001	2	583
5	21.80	1,746	830	0.002	4	1,504
4	17.50	2,439	747	0.002	4	2,101
3	12.50	2,455	384	0.001	2	2,115
2	7.50	2,286	129	0.000	1	1,969
1	2.50	2,302	14	0.000	0	1,983
Decibel DB809KE-SY	162.00	26	682	0.001	4	22
Kaelus DBC0061F1V51-	154.00	76	1,814	0.004	9	66
Powerwave Allgon LGP	154.00	42	1,003	0.002	5	36
Raycap DC6-48-60-18-	154.00	64	1,508	0.003	8	55
Ericsson RRUS A2 B2	154.00	66	1,565	0.003	8	57
Ericsson RRUS 11 (Ba	154.00	165	3,913	0.008	20	142
Ericsson RRUS 32 B30	154.00	180	4,269	0.009	22	155
Ericsson RRUS-11 (19	154.00	153	3,629	0.007	19	132

Ericsson RRUS-12 B2	154.00	174	4,127	0.009	21	150
Ericsson Radio 8843	154.00	255	6,048	0.012	31	220
Powerwave Allgon 777	154.00	105	2,490	0.005	13	90
Diamond X50A	152.00	5	106	0.000	1	4
CCI OPA-65R-LCUU-H8	151.00	264	6,019	0.012	31	227
CCI TPA-65R-LCUUUU-H	151.00	245	5,582	0.012	29	211
Round Side Arm	150.00	450	10,125	0.021	52	388
Platform w/ Handrail	150.00	2,000	45,000	0.093	231	1,723
Stand-Off	144.00	150	3,110	0.006	16	129
Ericsson KRY 112 144	140.00	33	647	0.001	3	28
Ericsson Radio 4449	140.00	222	4,351	0.009	22	191
Ericsson AIR 21, 1.3	140.00	249	4,880	0.010	25	215
Ericsson AIR32 B66Aa	140.00	397	7,773	0.016	40	342
RFS APXVAARR24_43-U-	140.00	384	7,521	0.016	39	331
Platform w/ Handrail	140.00	2,000	39,200	0.081	201	1,723
RFS FD9R6004/2C-3L	130.00	16	264	0.001	1	13
Nokia AirScale RRH 4	130.00	106	1,790	0.004	9	91
Alcatel-Lucent B25 R	130.00	159	2,687	0.006	14	137
Alcatel-Lucent B13 R	130.00	172	2,900	0.006	15	148
Alcatel-Lucent B66A	130.00	201	3,397	0.007	17	173
Antel BXA-70063/4CF	130.00	30	502	0.001	3	26
RFS DB-T1-6Z-8AB-0Z	130.00	88	1,487	0.003	8	76
Amphenol Antel BXA-8	130.00	54	913	0.002	5	47
Commscope JAHH-65B-R	130.00	364	6,145	0.013	32	313
Round Low Profile Pl	127.00	1,350	21,774	0.045	112	1,163
Generic 76" x 6" Pan	120.00	120	1,728	0.004	9	103
DragonWave Horizon C	111.00	21	261	0.001	1	18
Alcatel-Lucent RRH2x	111.00	317	3,911	0.008	20	273
Nokia FZHN Flexi RRH	111.00	132	1,630	0.003	8	114
Alcatel-Lucent 1900M	111.00	180	2,218	0.005	11	155
DragonWave A-ANT-11G	111.00	54	665	0.001	3	47
RFS APXVTM14-ALU-I20	111.00	169	2,077	0.004	11	145
Commscope NNVV-65B-R	111.00	232	2,861	0.006	15	200
Generic 24" x 24" Ju	108.00	20	233	0.000	1	17
Side Arms	104.00	560	6,057	0.012	31	482
Channel Master Type	64.00	126	516	0.001	3	109
Generic Blank Exhibi	40.00	0	0	0.000	0	0
		63,857	484,725	1.000	2,490	55,019

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-73.98	-2.28	0.00	-274.93	0.00	274.93	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.056
5.00	-71.14	-2.30	0.00	-263.52	0.00	263.52	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.02	0.054
10.00	-68.10	-2.32	0.00	-252.00	0.00	252.00	3,070.50	1,535.25	4,480.02	2,212.51	0.04	-0.04	0.053
15.00	-65.08	-2.34	0.00	-240.39	0.00	240.39	3,025.61	1,512.81	4,315.90	2,131.46	0.09	-0.06	0.051
20.00	-62.92	-2.35	0.00	-228.70	0.00	228.70	2,979.68	1,489.84	4,153.25	2,051.14	0.16	-0.07	0.049
23.60	-62.08	-2.35	0.00	-220.25	0.00	220.25	2,945.97	1,472.98	4,037.12	1,993.78	0.22	-0.09	0.048
23.60	-62.08	-2.35	0.00	-220.25	0.00	220.25	2,945.97	1,472.98	4,037.12	1,993.78	0.22	-0.09	0.048
25.00	-59.10	-2.35	0.00	-216.96	0.00	216.96	2,932.71	1,466.36	3,992.19	1,971.59	0.24	-0.09	0.047
30.00	-58.21	-2.36	0.00	-205.19	0.00	205.19	2,875.21	1,437.61	3,820.20	1,886.65	0.35	-0.11	0.046
31.50	-55.66	-2.35	0.00	-201.66	0.00	201.66	2,854.29	1,427.15	3,764.49	1,859.14	0.38	-0.12	0.045
35.00	-55.17	-2.35	0.00	-193.43	0.00	193.43	2,805.48	1,402.74	3,636.10	1,795.73	0.47	-0.13	0.043
35.67	-52.72	-2.34	0.00	-191.86	0.00	191.86	2,248.07	1,124.03	2,973.91	1,468.70	0.49	-0.13	0.048
40.00	-49.92	-2.33	0.00	-181.71	0.00	181.71	2,218.59	1,109.29	2,872.23	1,418.49	0.62	-0.15	0.046
45.00	-47.13	-2.31	0.00	-170.06	0.00	170.06	2,183.60	1,091.80	2,755.77	1,360.97	0.78	-0.16	0.044
50.00	-44.35	-2.28	0.00	-158.51	0.00	158.51	2,147.58	1,073.79	2,640.30	1,303.95	0.96	-0.18	0.041
55.00	-41.60	-2.25	0.00	-147.09	0.00	147.09	2,110.52	1,055.26	2,525.94	1,247.47	1.16	-0.20	0.039
60.00	-39.40	-2.22	0.00	-135.85	0.00	135.85	2,072.42	1,036.21	2,412.79	1,191.58	1.37	-0.21	0.036
64.00	-38.70	-2.21	0.00	-126.99	0.00	126.99	2,041.18	1,020.59	2,323.20	1,147.34	1.56	-0.23	0.035
65.00	-36.68	-2.17	0.00	-124.79	0.00	124.79	2,033.27	1,016.64	2,300.94	1,136.35	1.61	-0.23	0.034
68.70	-36.08	-2.16	0.00	-116.77	0.00	116.77	1,997.21	998.60	2,211.95	1,092.40	1.79	-0.24	0.032
68.70	-36.08	-2.16	0.00	-116.77	0.00	116.77	1,997.21	998.60	2,211.95	1,092.40	1.79	-0.24	0.060
70.00	-34.15	-2.11	0.00	-113.97	0.00	113.97	1,982.10	991.05	2,178.42	1,075.84	1.85	-0.24	0.059
73.50	-33.50	-2.10	0.00	-106.57	0.00	106.57	1,473.96	736.98	1,624.57	802.32	2.04	-0.27	0.066
75.00	-31.59	-2.06	0.00	-103.42	0.00	103.42	1,466.28	733.14	1,601.77	791.05	2.13	-0.27	0.064
80.00	-29.84	-2.02	0.00	-93.13	0.00	93.13	1,440.00	720.00	1,526.12	753.69	2.43	-0.30	0.059
85.00	-28.10	-1.96	0.00	-83.05	0.00	83.05	1,412.68	706.34	1,451.11	716.65	2.76	-0.33	0.054
90.00	-26.38	-1.90	0.00	-73.23	0.00	73.23	1,384.32	692.16	1,376.86	679.98	3.13	-0.36	0.050
95.00	-24.67	-1.84	0.00	-63.71	0.00	63.71	1,354.92	677.46	1,303.45	643.72	3.52	-0.38	0.045
100.00	-23.31	-1.78	0.00	-54.53	0.00	54.53	1,324.47	662.24	1,230.99	607.94	3.93	-0.41	0.040
104.00	-22.27	-1.73	0.00	-47.43	0.00	47.43	1,299.37	649.69	1,173.78	579.69	4.28	-0.42	0.036
105.00	-21.26	-1.67	0.00	-45.70	0.00	45.70	1,292.99	646.50	1,159.59	572.68	4.37	-0.43	0.035
108.00	-20.58	-1.64	0.00	-40.68	0.00	40.68	1,265.73	632.87	1,110.38	548.38	4.64	-0.44	0.032
110.00	-20.27	-1.62	0.00	-37.40	0.00	37.40	1,247.14	623.57	1,077.81	532.29	4.83	-0.45	0.031
110.00	-20.27	-1.62	0.00	-37.40	0.00	37.40	853.24	426.62	741.79	366.34	4.83	-0.45	0.037
111.00	-17.62	-1.47	0.00	-35.78	0.00	35.78	849.67	424.84	733.15	362.07	4.92	-0.45	0.034
115.00	-16.04	-1.37	0.00	-29.91	0.00	29.91	834.99	417.50	698.71	345.06	5.30	-0.46	0.030
119.13	-15.65	-1.34	0.00	-24.27	0.00	24.27	819.16	409.58	663.43	327.64	5.71	-0.48	0.026
120.00	-14.81	-1.29	0.00	-23.09	0.00	23.09	815.71	407.86	655.98	323.96	5.80	-0.48	0.014
121.00	-13.57	-1.20	0.00	-21.80	0.00	21.80	811.73	405.86	647.49	319.77	5.90	-0.48	0.012
121.00	-13.57	-1.20	0.00	-21.80	0.00	21.80	811.73	405.86	647.49	319.77	5.90	-0.48	0.021
124.50	-13.43	-1.19	0.00	-17.61	0.00	17.61	797.47	398.73	617.91	305.16	6.26	-0.49	0.018
124.50	-13.43	-1.19	0.00	-17.61	0.00	17.61	797.47	398.73	617.91	305.16	6.26	-0.49	0.075
125.00	-13.01	-1.16	0.00	-17.01	0.00	17.01	795.39	397.69	613.71	303.09	6.31	-0.49	0.072
127.00	-10.80	-1.00	0.00	-14.69	0.00	14.69	786.97	393.48	596.95	294.81	6.51	-0.50	0.064
130.00	-8.80	-0.84	0.00	-11.70	0.00	11.70	774.02	387.01	572.00	282.49	6.84	-0.53	0.053
135.00	-8.27	-0.80	0.00	-7.49	0.00	7.49	751.62	375.81	530.94	262.21	7.41	-0.56	0.040
140.00	-3.81	-0.39	0.00	-3.50	0.00	3.50	728.18	364.09	490.64	242.31	8.01	-0.58	0.020
144.00	-3.52	-0.36	0.00	-1.94	0.00	1.94	701.03	350.52	454.07	224.25	8.50	-0.59	0.014
145.00	-3.03	-0.31	0.00	-1.57	0.00	1.57	694.06	347.03	445.03	219.78	8.62	-0.59	0.012
150.00	0.00	-0.28	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	9.24	-0.59	0.000

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-51.47	-2.28	0.00	-269.23	0.00	269.23	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.051
5.00	-49.50	-2.29	0.00	-257.84	0.00	257.84	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.02	0.050
10.00	-47.38	-2.30	0.00	-246.38	0.00	246.38	3,070.50	1,535.25	4,480.02	2,212.51	0.04	-0.04	0.048
15.00	-45.28	-2.31	0.00	-234.85	0.00	234.85	3,025.61	1,512.81	4,315.90	2,131.46	0.09	-0.05	0.047
20.00	-43.77	-2.32	0.00	-223.29	0.00	223.29	2,979.68	1,489.84	4,153.25	2,051.14	0.15	-0.07	0.045
23.60	-43.19	-2.32	0.00	-214.94	0.00	214.94	2,945.97	1,472.98	4,037.12	1,993.78	0.21	-0.08	0.044
23.60	-43.19	-2.32	0.00	-214.94	0.00	214.94	2,945.97	1,472.98	4,037.12	1,993.78	0.21	-0.08	0.044
25.00	-41.12	-2.32	0.00	-211.68	0.00	211.68	2,932.71	1,466.36	3,992.19	1,971.59	0.24	-0.09	0.043
30.00	-40.50	-2.32	0.00	-200.09	0.00	200.09	2,875.21	1,437.61	3,820.20	1,886.65	0.34	-0.11	0.042
31.50	-38.72	-2.31	0.00	-196.61	0.00	196.61	2,854.29	1,427.15	3,764.49	1,859.14	0.38	-0.11	0.041
35.00	-38.38	-2.31	0.00	-188.51	0.00	188.51	2,805.48	1,402.74	3,636.10	1,795.73	0.46	-0.13	0.040
35.67	-36.68	-2.30	0.00	-186.97	0.00	186.97	2,248.07	1,124.03	2,973.91	1,468.70	0.48	-0.13	0.044
40.00	-34.73	-2.29	0.00	-176.99	0.00	176.99	2,218.59	1,109.29	2,872.23	1,418.49	0.60	-0.14	0.042
45.00	-32.79	-2.26	0.00	-165.56	0.00	165.56	2,183.60	1,091.80	2,755.77	1,360.97	0.76	-0.16	0.040
50.00	-30.86	-2.24	0.00	-154.24	0.00	154.24	2,147.58	1,073.79	2,640.30	1,303.95	0.94	-0.18	0.038
55.00	-28.94	-2.20	0.00	-143.06	0.00	143.06	2,110.52	1,055.26	2,525.94	1,247.47	1.13	-0.19	0.035
60.00	-27.41	-2.17	0.00	-132.06	0.00	132.06	2,072.42	1,036.21	2,412.79	1,191.58	1.34	-0.21	0.033
64.00	-26.92	-2.16	0.00	-123.39	0.00	123.39	2,041.18	1,020.59	2,323.20	1,147.34	1.52	-0.22	0.031
65.00	-25.52	-2.12	0.00	-121.23	0.00	121.23	2,033.27	1,016.64	2,300.94	1,136.35	1.57	-0.22	0.031
68.70	-25.10	-2.11	0.00	-113.40	0.00	113.40	1,997.21	998.60	2,211.95	1,092.40	1.75	-0.23	0.029
68.70	-25.10	-2.11	0.00	-113.40	0.00	113.40	1,997.21	998.60	2,211.95	1,092.40	1.75	-0.23	0.055
70.00	-23.76	-2.06	0.00	-110.66	0.00	110.66	1,982.10	991.05	2,178.42	1,075.84	1.81	-0.24	0.054
73.50	-23.30	-2.05	0.00	-103.43	0.00	103.43	1,473.96	736.98	1,624.57	802.32	1.99	-0.26	0.061
75.00	-21.98	-2.01	0.00	-100.35	0.00	100.35	1,466.28	733.14	1,601.77	791.05	2.08	-0.27	0.059
80.00	-20.76	-1.96	0.00	-90.32	0.00	90.32	1,440.00	720.00	1,526.12	753.69	2.37	-0.30	0.055
85.00	-19.55	-1.91	0.00	-80.51	0.00	80.51	1,412.68	706.34	1,451.11	716.65	2.70	-0.32	0.050
90.00	-18.35	-1.85	0.00	-70.96	0.00	70.96	1,384.32	692.16	1,376.86	679.98	3.05	-0.35	0.045
95.00	-17.16	-1.78	0.00	-61.72	0.00	61.72	1,354.92	677.46	1,303.45	643.72	3.43	-0.37	0.041
100.00	-16.21	-1.72	0.00	-52.81	0.00	52.81	1,324.47	662.24	1,230.99	607.94	3.83	-0.40	0.036
104.00	-15.49	-1.67	0.00	-45.93	0.00	45.93	1,299.37	649.69	1,173.78	579.69	4.17	-0.41	0.033
105.00	-14.79	-1.62	0.00	-44.26	0.00	44.26	1,292.99	646.50	1,159.59	572.68	4.26	-0.42	0.032
108.00	-14.32	-1.59	0.00	-39.39	0.00	39.39	1,265.73	632.87	1,110.38	548.38	4.52	-0.43	0.029
110.00	-14.10	-1.57	0.00	-36.21	0.00	36.21	1,247.14	623.57	1,077.81	532.29	4.70	-0.43	0.027
110.00	-14.10	-1.57	0.00	-36.21	0.00	36.21	853.24	426.62	741.79	366.34	4.70	-0.43	0.033
111.00	-12.25	-1.42	0.00	-34.64	0.00	34.64	849.67	424.84	733.15	362.07	4.79	-0.44	0.031
115.00	-11.15	-1.33	0.00	-28.96	0.00	28.96	834.99	417.50	698.71	345.06	5.17	-0.45	0.027
119.13	-10.88	-1.30	0.00	-23.49	0.00	23.49	819.16	409.58	663.43	327.64	5.56	-0.46	0.023
120.00	-10.30	-1.25	0.00	-22.35	0.00	22.35	815.71	407.86	655.98	323.96	5.65	-0.47	0.012
121.00	-9.44	-1.16	0.00	-21.11	0.00	21.11	811.73	405.86	647.49	319.77	5.75	-0.47	0.011
121.00	-9.44	-1.16	0.00	-21.11	0.00	21.11	811.73	405.86	647.49	319.77	5.75	-0.47	0.018
124.50	-9.34	-1.15	0.00	-17.04	0.00	17.04	797.47	398.73	617.91	305.16	6.09	-0.47	0.016
124.50	-9.34	-1.15	0.00	-17.04	0.00	17.04	797.47	398.73	617.91	305.16	6.09	-0.47	0.068
125.00	-9.05	-1.12	0.00	-16.46	0.00	16.46	795.39	397.69	613.71	303.09	6.14	-0.47	0.066
127.00	-7.51	-0.97	0.00	-14.21	0.00	14.21	786.97	393.48	596.95	294.81	6.34	-0.49	0.058
130.00	-6.12	-0.81	0.00	-11.32	0.00	11.32	774.02	387.01	572.00	282.49	6.66	-0.51	0.048
135.00	-5.75	-0.77	0.00	-7.25	0.00	7.25	751.62	375.81	530.94	262.21	7.21	-0.54	0.035
140.00	-2.65	-0.38	0.00	-3.39	0.00	3.39	728.18	364.09	490.64	242.31	7.79	-0.56	0.018
144.00	-2.45	-0.35	0.00	-1.87	0.00	1.87	701.03	350.52	454.07	224.25	8.27	-0.57	0.012
145.00	-2.11	-0.30	0.00	-1.52	0.00	1.52	694.06	347.03	445.03	219.78	8.39	-0.57	0.010
150.00	0.00	-0.28	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	8.99	-0.58	0.000

Equivalent Modal Analysis Method

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.18
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	2.94
Redundancy Factor (p):	1.30

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
44	147.50	396	1.828	1.667	1.025	0.322	110	491
43	144.50	80	1.754	1.337	0.900	0.277	19	99
42	142.00	324	1.694	1.099	0.805	0.241	68	401
41	137.50	425	1.588	0.742	0.654	0.183	67	526
40	132.50	433	1.475	0.441	0.513	0.126	47	536
39	128.50	435	1.387	0.260	0.419	0.086	32	538
38	126.00	336	1.334	0.170	0.367	0.064	19	416
37	124.75	118	1.307	0.131	0.343	0.053	5	146
36	122.75	1,001	1.266	0.076	0.307	0.037	32	1,239
35	120.50	554	1.220	0.024	0.270	0.021	10	686
34	119.56	314	1.201	0.005	0.255	0.014	4	389
33	117.06	1,276	1.151	-0.037	0.220	-0.001	-1	1,580
32	113.00	1,042	1.073	-0.084	0.170	-0.023	-21	1,291
31	110.50	249	1.026	-0.103	0.144	-0.034	-7	309
30	109.00	528	0.998	-0.110	0.130	-0.039	-18	654
29	106.50	817	0.953	-0.119	0.109	-0.047	-33	1,012
28	104.50	273	0.917	-0.121	0.094	-0.052	-12	338
27	102.00	1,098	0.874	-0.121	0.078	-0.056	-54	1,359
26	97.50	1,382	0.799	-0.112	0.053	-0.059	-71	1,711
25	92.50	1,392	0.719	-0.092	0.034	-0.055	-66	1,724
24	87.50	1,403	0.643	-0.068	0.020	-0.043	-52	1,738
23	82.50	1,414	0.572	-0.043	0.012	-0.025	-30	1,751
22	77.50	1,538	0.505	-0.018	0.007	-0.003	-4	1,905
21	74.25	530	0.463	-0.003	0.006	0.011	5	656
20	71.75	1,557	0.432	0.008	0.006	0.021	28	1,928
19	69.35	484	0.404	0.017	0.006	0.029	12	599
18	66.85	1,629	0.375	0.026	0.007	0.037	52	2,017
17	64.50	441	0.349	0.033	0.009	0.043	16	547
16	62.00	1,771	0.323	0.040	0.010	0.048	73	2,194
15	57.50	2,226	0.278	0.050	0.014	0.054	104	2,757
14	52.50	2,240	0.232	0.058	0.019	0.057	110	2,774
13	47.50	2,253	0.190	0.064	0.025	0.058	113	2,790
12	42.50	2,266	0.152	0.068	0.030	0.057	112	2,807
11	37.83	1,975	0.120	0.070	0.034	0.056	96	2,446

10	35.33	391	0.105	0.071	0.037	0.055	19	484
9	33.25	2,061	0.093	0.071	0.038	0.055	98	2,552
8	30.75	719	0.079	0.072	0.040	0.054	34	890
7	27.50	2,407	0.064	0.072	0.041	0.053	111	2,981
6	24.30	677	0.050	0.071	0.042	0.052	31	838
5	21.80	1,746	0.040	0.070	0.042	0.052	78	2,162
4	17.50	2,439	0.026	0.067	0.040	0.049	105	3,021
3	12.50	2,455	0.013	0.059	0.034	0.045	96	3,040
2	7.50	2,286	0.005	0.044	0.025	0.036	72	2,830
1	2.50	2,302	0.001	0.018	0.010	0.018	35	2,850
Decibel DB809KE-SY	162.00	26	2.204	4.084	1.840	0.583	13	32
Kaelus DBC0061F1V51-	154.00	76	1.992	2.564	1.344	0.429	28	95
Powerwave Allgon LGP	154.00	42	1.992	2.564	1.344	0.429	16	52
Raycap DC6-48-60-18-	154.00	64	1.992	2.564	1.344	0.429	24	79
Ericsson RRUS A2 B2	154.00	66	1.992	2.564	1.344	0.429	25	82
Ericsson RRUS 11 (Ba	154.00	165	1.992	2.564	1.344	0.429	61	204
Ericsson RRUS 32 B30	154.00	180	1.992	2.564	1.344	0.429	67	223
Ericsson RRUS-11 (19	154.00	153	1.992	2.564	1.344	0.429	57	189
Ericsson RRUS-12 B2	154.00	174	1.992	2.564	1.344	0.429	65	215
Ericsson Radio 8843	154.00	255	1.992	2.564	1.344	0.429	95	316
Powerwave Allgon 777	154.00	105	1.992	2.564	1.344	0.429	39	130
Diamond X50A	152.00	5	1.941	2.259	1.239	0.395	2	6
CCI OPA-65R-LCUU-H8	151.00	264	1.915	2.116	1.189	0.378	86	327
CCI TPA-65R-LCUUUU-H	151.00	245	1.915	2.116	1.189	0.378	80	303
Round Side Arm	150.00	450	1.890	1.980	1.140	0.361	141	557
Platform w/ Handrail	150.00	2,000	1.890	1.980	1.140	0.361	626	2,477
Stand-Off	144.00	150	1.742	1.287	0.880	0.269	35	186
Ericsson KRY 112 144	140.00	33	1.646	0.929	0.735	0.215	6	41
Ericsson Radio 4449	140.00	222	1.646	0.929	0.735	0.215	41	275
Ericsson AIR 21, 1.3	140.00	249	1.646	0.929	0.735	0.215	46	308
Ericsson AIR32 B66Aa	140.00	397	1.646	0.929	0.735	0.215	74	491
RFS APXVAARR24_43-U-	140.00	384	1.646	0.929	0.735	0.215	71	475
Platform w/ Handrail	140.00	2,000	1.646	0.929	0.735	0.215	372	2,477
RFS FD9R6004/2C-3L	130.00	16	1.420	0.322	0.452	0.100	1	19
Nokia AirScale RRH 4	130.00	106	1.420	0.322	0.452	0.100	9	131
Alcatel-Lucent B25 R	130.00	159	1.420	0.322	0.452	0.100	14	197
Alcatel-Lucent B13 R	130.00	172	1.420	0.322	0.452	0.100	15	213
Alcatel-Lucent B66A	130.00	201	1.420	0.322	0.452	0.100	18	249
Antel BXA-70063/4CF	130.00	30	1.420	0.322	0.452	0.100	3	37
RFS DB-T1-6Z-8AB-0Z	130.00	88	1.420	0.322	0.452	0.100	8	109
Amphenol Antel BXA-8	130.00	54	1.420	0.322	0.452	0.100	5	67
Commscope JAHH-65B-	130.00	364	1.420	0.322	0.452	0.100	32	450
Round Low Profile Pl	127.00	1,350	1.355	0.204	0.387	0.072	85	1,672
Generic 76" x 6" Pan	120.00	120	1.210	0.014	0.262	0.017	2	149
DragonWave Horizon C	111.00	21	1.035	-0.099	0.149	-0.032	-1	26
Alcatel-Lucent RRH2x	111.00	317	1.035	-0.099	0.149	-0.032	-9	393
Nokia FZHN Flexi RRH	111.00	132	1.035	-0.099	0.149	-0.032	-4	164
Alcatel-Lucent 1900M	111.00	180	1.035	-0.099	0.149	-0.032	-5	223
DragonWave A-ANT-11G	111.00	54	1.035	-0.099	0.149	-0.032	-1	67
RFS APXVTM14-ALU-I20	111.00	169	1.035	-0.099	0.149	-0.032	-5	209
Commscope NNVV-	111.00	232	1.035	-0.099	0.149	-0.032	-6	288
Generic 24" x 24" Ju	108.00	20	0.980	-0.114	0.122	-0.043	-1	25
Side Arms	104.00	560	0.909	-0.122	0.091	-0.053	-26	694
Channel Master Type	64.00	126	0.344	0.034	0.009	0.044	5	156
Generic Blank Exhibi	40.00	0	0.134	0.069	0.032	0.057	0	0
		63,857	98.322	55.288	39.931	11.012	3,653	79,080

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
44	147.50	396	1.828	1.667	1.025	0.322	110	341
43	144.50	80	1.754	1.337	0.900	0.277	19	69
42	142.00	324	1.694	1.099	0.805	0.241	68	279
41	137.50	425	1.588	0.742	0.654	0.183	67	366
40	132.50	433	1.475	0.441	0.513	0.126	47	373
39	128.50	435	1.387	0.260	0.419	0.086	32	374
38	126.00	336	1.334	0.170	0.367	0.064	19	289
37	124.75	118	1.307	0.131	0.343	0.053	5	101
36	122.75	1,001	1.266	0.076	0.307	0.037	32	862
35	120.50	554	1.220	0.024	0.270	0.021	10	477
34	119.56	314	1.201	0.005	0.255	0.014	4	270
33	117.06	1,276	1.151	-0.037	0.220	-0.001	-1	1,099
32	113.00	1,042	1.073	-0.084	0.170	-0.023	-21	898
31	110.50	249	1.026	-0.103	0.144	-0.034	-7	215
30	109.00	528	0.998	-0.110	0.130	-0.039	-18	455
29	106.50	817	0.953	-0.119	0.109	-0.047	-33	704
28	104.50	273	0.917	-0.121	0.094	-0.052	-12	236
27	102.00	1,098	0.874	-0.121	0.078	-0.056	-54	946
26	97.50	1,382	0.799	-0.112	0.053	-0.059	-71	1,190
25	92.50	1,392	0.719	-0.092	0.034	-0.055	-66	1,200
24	87.50	1,403	0.643	-0.068	0.020	-0.043	-52	1,209
23	82.50	1,414	0.572	-0.043	0.012	-0.025	-30	1,218
22	77.50	1,538	0.505	-0.018	0.007	-0.003	-4	1,325
21	74.25	530	0.463	-0.003	0.006	0.011	5	456
20	71.75	1,557	0.432	0.008	0.006	0.021	28	1,341
19	69.35	484	0.404	0.017	0.006	0.029	12	417
18	66.85	1,629	0.375	0.026	0.007	0.037	52	1,403
17	64.50	441	0.349	0.033	0.009	0.043	16	380
16	62.00	1,771	0.323	0.040	0.010	0.048	73	1,526
15	57.50	2,226	0.278	0.050	0.014	0.054	104	1,918
14	52.50	2,240	0.232	0.058	0.019	0.057	110	1,930
13	47.50	2,253	0.190	0.064	0.025	0.058	113	1,941
12	42.50	2,266	0.152	0.068	0.030	0.057	112	1,953
11	37.83	1,975	0.120	0.070	0.034	0.056	96	1,702
10	35.33	391	0.105	0.071	0.037	0.055	19	337
9	33.25	2,061	0.093	0.071	0.038	0.055	98	1,776
8	30.75	719	0.079	0.072	0.040	0.054	34	619
7	27.50	2,407	0.064	0.072	0.041	0.053	111	2,074
6	24.30	677	0.050	0.071	0.042	0.052	31	583
5	21.80	1,746	0.040	0.070	0.042	0.052	78	1,504
4	17.50	2,439	0.026	0.067	0.040	0.049	105	2,101
3	12.50	2,455	0.013	0.059	0.034	0.045	96	2,115
2	7.50	2,286	0.005	0.044	0.025	0.036	72	1,969
1	2.50	2,302	0.001	0.018	0.010	0.018	35	1,983
Decibel DB809KE-SY	162.00	26	2.204	4.084	1.840	0.583	13	22
Kaelus DBC0061F1V51-	154.00	76	1.992	2.564	1.344	0.429	28	66
Powerwave Allgon LGP	154.00	42	1.992	2.564	1.344	0.429	16	36
Raycap DC6-48-60-18-	154.00	64	1.992	2.564	1.344	0.429	24	55
Ericsson RRUS A2 B2	154.00	66	1.992	2.564	1.344	0.429	25	57
Ericsson RRUS 11 (Ba	154.00	165	1.992	2.564	1.344	0.429	61	142
Ericsson RRUS 32 B30	154.00	180	1.992	2.564	1.344	0.429	67	155
Ericsson RRUS-11 (19	154.00	153	1.992	2.564	1.344	0.429	57	132
Ericsson RRUS-12 B2	154.00	174	1.992	2.564	1.344	0.429	65	150
Ericsson Radio 8843	154.00	255	1.992	2.564	1.344	0.429	95	220
Powerwave Allgon 777	154.00	105	1.992	2.564	1.344	0.429	39	90
Diamond X50A	152.00	5	1.941	2.259	1.239	0.395	2	4

CCI OPA-65R-LCUU-H8	151.00	264	1.915	2.116	1.189	0.378	86	227
CCI TPA-65R-LCUUUU-H	151.00	245	1.915	2.116	1.189	0.378	80	211
Round Side Arm	150.00	450	1.890	1.980	1.140	0.361	141	388
Platform w/ Handrail	150.00	2,000	1.890	1.980	1.140	0.361	626	1,723
Stand-Off	144.00	150	1.742	1.287	0.880	0.269	35	129
Ericsson KRY 112 144	140.00	33	1.646	0.929	0.735	0.215	6	28
Ericsson Radio 4449	140.00	222	1.646	0.929	0.735	0.215	41	191
Ericsson AIR 21, 1.3	140.00	249	1.646	0.929	0.735	0.215	46	215
Ericsson AIR32 B66Aa	140.00	397	1.646	0.929	0.735	0.215	74	342
RFS APXVAARR24_43-U-	140.00	384	1.646	0.929	0.735	0.215	71	331
Platform w/ Handrail	140.00	2,000	1.646	0.929	0.735	0.215	372	1,723
RFS FD9R6004/2C-3L	130.00	16	1.420	0.322	0.452	0.100	1	13
Nokia AirScale RRH 4	130.00	106	1.420	0.322	0.452	0.100	9	91
Alcatel-Lucent B25 R	130.00	159	1.420	0.322	0.452	0.100	14	137
Alcatel-Lucent B13 R	130.00	172	1.420	0.322	0.452	0.100	15	148
Alcatel-Lucent B66A	130.00	201	1.420	0.322	0.452	0.100	18	173
Antel BXA-70063/4CF	130.00	30	1.420	0.322	0.452	0.100	3	26
RFS DB-T1-6Z-8AB-0Z	130.00	88	1.420	0.322	0.452	0.100	8	76
Amphenol Antel BXA-8	130.00	54	1.420	0.322	0.452	0.100	5	47
Commscope JAHH-65B-	130.00	364	1.420	0.322	0.452	0.100	32	313
Round Low Profile Pl	127.00	1,350	1.355	0.204	0.387	0.072	85	1,163
Generic 76" x 6" Pan	120.00	120	1.210	0.014	0.262	0.017	2	103
DragonWave Horizon C	111.00	21	1.035	-0.099	0.149	-0.032	-1	18
Alcatel-Lucent RRH2x	111.00	317	1.035	-0.099	0.149	-0.032	-9	273
Nokia FZHN Flexi RRH	111.00	132	1.035	-0.099	0.149	-0.032	-4	114
Alcatel-Lucent 1900M	111.00	180	1.035	-0.099	0.149	-0.032	-5	155
DragonWave A-ANT-11G	111.00	54	1.035	-0.099	0.149	-0.032	-1	47
RFS APXVTM14-ALU-I20	111.00	169	1.035	-0.099	0.149	-0.032	-5	145
Commscope NNVV-	111.00	232	1.035	-0.099	0.149	-0.032	-6	200
Generic 24" x 24" Ju	108.00	20	0.980	-0.114	0.122	-0.043	-1	17
Side Arms	104.00	560	0.909	-0.122	0.091	-0.053	-26	482
Channel Master Type	64.00	126	0.344	0.034	0.009	0.044	5	109
Generic Blank Exhibi	40.00	0	0.134	0.069	0.032	0.057	0	0
		63,857	98.322	55.288	39.931	11.012	3,653	55,019

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-73.98	-2.97	0.00	-315.80	0.00	315.80	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.062
5.00	-71.14	-2.93	0.00	-300.94	0.00	300.94	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.02	0.060
10.00	-68.10	-2.85	0.00	-286.31	0.00	286.31	3,070.50	1,535.25	4,480.02	2,212.51	0.04	-0.04	0.058
15.00	-65.08	-2.77	0.00	-272.05	0.00	272.05	3,025.61	1,512.81	4,315.90	2,131.46	0.10	-0.06	0.056
20.00	-62.92	-2.71	0.00	-258.20	0.00	258.20	2,979.68	1,489.84	4,153.25	2,051.14	0.18	-0.08	0.054
23.60	-62.08	-2.69	0.00	-248.45	0.00	248.45	2,945.97	1,472.98	4,037.12	1,993.78	0.25	-0.10	0.053
23.60	-62.08	-2.69	0.00	-248.45	0.00	248.45	2,945.97	1,472.98	4,037.12	1,993.78	0.25	-0.10	0.053
25.00	-59.10	-2.58	0.00	-244.69	0.00	244.69	2,932.71	1,466.36	3,992.19	1,971.59	0.28	-0.10	0.052
30.00	-58.21	-2.56	0.00	-231.76	0.00	231.76	2,875.21	1,437.61	3,820.20	1,886.65	0.40	-0.12	0.050
31.50	-55.65	-2.47	0.00	-227.92	0.00	227.92	2,854.29	1,427.15	3,764.49	1,859.14	0.44	-0.13	0.050
35.00	-55.17	-2.46	0.00	-219.28	0.00	219.28	2,805.48	1,402.74	3,636.10	1,795.73	0.54	-0.15	0.048
35.67	-52.72	-2.36	0.00	-217.64	0.00	217.64	2,248.07	1,124.03	2,973.91	1,468.70	0.56	-0.15	0.053
40.00	-49.92	-2.26	0.00	-207.40	0.00	207.40	2,218.59	1,109.29	2,872.23	1,418.49	0.70	-0.17	0.051
45.00	-47.13	-2.16	0.00	-196.09	0.00	196.09	2,183.60	1,091.80	2,755.77	1,360.97	0.89	-0.19	0.049
50.00	-44.35	-2.05	0.00	-185.31	0.00	185.31	2,147.58	1,073.79	2,640.30	1,303.95	1.09	-0.21	0.047
55.00	-41.60	-1.95	0.00	-175.06	0.00	175.06	2,110.52	1,055.26	2,525.94	1,247.47	1.32	-0.23	0.044
60.00	-39.40	-1.88	0.00	-165.30	0.00	165.30	2,072.42	1,036.21	2,412.79	1,191.58	1.56	-0.24	0.042
64.00	-38.70	-1.86	0.00	-157.77	0.00	157.77	2,041.18	1,020.59	2,323.20	1,147.34	1.77	-0.26	0.041
65.00	-36.68	-1.81	0.00	-155.91	0.00	155.91	2,033.27	1,016.64	2,300.94	1,136.35	1.83	-0.26	0.040
68.70	-36.08	-1.80	0.00	-149.21	0.00	149.21	1,997.21	998.60	2,211.95	1,092.40	2.04	-0.28	0.039
68.70	-36.08	-1.80	0.00	-149.21	0.00	149.21	1,997.21	998.60	2,211.95	1,092.40	2.04	-0.28	0.074
70.00	-34.15	-1.77	0.00	-146.87	0.00	146.87	1,982.10	991.05	2,178.42	1,075.84	2.12	-0.28	0.073
73.50	-33.50	-1.78	0.00	-140.67	0.00	140.67	1,473.96	736.98	1,624.57	802.32	2.34	-0.31	0.083
75.00	-31.59	-1.78	0.00	-138.01	0.00	138.01	1,466.28	733.14	1,601.77	791.05	2.44	-0.32	0.082
80.00	-29.84	-1.82	0.00	-129.09	0.00	129.09	1,440.00	720.00	1,526.12	753.69	2.79	-0.36	0.078
85.00	-28.10	-1.88	0.00	-119.97	0.00	119.97	1,412.68	706.34	1,451.11	716.65	3.20	-0.40	0.074
90.00	-26.37	-1.96	0.00	-110.55	0.00	110.55	1,384.32	692.16	1,376.86	679.98	3.64	-0.44	0.070
95.00	-24.66	-2.03	0.00	-100.77	0.00	100.77	1,354.92	677.46	1,303.45	643.72	4.12	-0.48	0.066
100.00	-23.30	-2.08	0.00	-90.62	0.00	90.62	1,324.47	662.24	1,230.99	607.94	4.64	-0.52	0.061
104.00	-22.27	-2.12	0.00	-82.28	0.00	82.28	1,299.37	649.69	1,173.78	579.69	5.09	-0.55	0.057
105.00	-21.25	-2.15	0.00	-80.16	0.00	80.16	1,292.99	646.50	1,159.59	572.68	5.21	-0.55	0.055
108.00	-20.57	-2.17	0.00	-73.71	0.00	73.71	1,265.73	632.87	1,110.38	548.38	5.56	-0.58	0.052
110.00	-20.27	-2.17	0.00	-69.38	0.00	69.38	1,247.14	623.57	1,077.81	532.29	5.81	-0.59	0.050
110.00	-20.27	-2.17	0.00	-69.38	0.00	69.38	853.24	426.62	741.79	366.34	5.81	-0.59	0.060
111.00	-17.60	-2.20	0.00	-67.20	0.00	67.20	849.67	424.84	733.15	362.07	5.93	-0.60	0.058
115.00	-16.02	-2.20	0.00	-58.39	0.00	58.39	834.99	417.50	698.71	345.06	6.44	-0.62	0.051
119.13	-15.63	-2.19	0.00	-49.33	0.00	49.33	819.16	409.58	663.43	327.64	6.99	-0.65	0.045
120.00	-14.80	-2.17	0.00	-47.42	0.00	47.42	815.71	407.86	655.98	323.96	7.11	-0.65	0.023
121.00	-13.56	-2.13	0.00	-45.25	0.00	45.25	811.73	405.86	647.49	319.77	7.25	-0.66	0.021
121.00	-13.56	-2.13	0.00	-45.25	0.00	45.25	811.73	405.86	647.49	319.77	7.25	-0.66	0.035
124.50	-13.42	-2.12	0.00	-37.80	0.00	37.80	797.47	398.73	617.91	305.16	7.73	-0.66	0.030
124.50	-13.42	-2.12	0.00	-37.80	0.00	37.80	797.47	398.73	617.91	305.16	7.73	-0.66	0.141
125.00	-13.00	-2.10	0.00	-36.74	0.00	36.74	795.39	397.69	613.71	303.09	7.80	-0.67	0.138
127.00	-10.79	-1.97	0.00	-32.54	0.00	32.54	786.97	393.48	596.95	294.81	8.09	-0.70	0.124
130.00	-8.78	-1.80	0.00	-26.64	0.00	26.64	774.02	387.01	572.00	282.49	8.55	-0.76	0.106
135.00	-8.25	-1.73	0.00	-17.64	0.00	17.64	751.62	375.81	530.94	262.21	9.38	-0.83	0.078
140.00	-3.80	-0.99	0.00	-8.97	0.00	8.97	728.18	364.09	490.64	242.31	10.28	-0.88	0.042
144.00	-3.51	-0.93	0.00	-5.01	0.00	5.01	701.03	350.52	454.07	224.25	11.02	-0.90	0.027
145.00	-3.02	-0.82	0.00	-4.08	0.00	4.08	694.06	347.03	445.03	219.78	11.21	-0.90	0.023
150.00	0.00	-0.77	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	12.17	-0.91	0.000

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-51.47	-2.97	0.00	-308.79	0.00	308.79	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.058
5.00	-49.50	-2.91	0.00	-293.95	0.00	293.95	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.02	0.056
10.00	-47.38	-2.83	0.00	-279.38	0.00	279.38	3,070.50	1,535.25	4,480.02	2,212.51	0.04	-0.04	0.054
15.00	-45.28	-2.74	0.00	-265.22	0.00	265.22	3,025.61	1,512.81	4,315.90	2,131.46	0.10	-0.06	0.052
20.00	-43.77	-2.68	0.00	-251.50	0.00	251.50	2,979.68	1,489.84	4,153.25	2,051.14	0.17	-0.08	0.050
23.60	-43.19	-2.65	0.00	-241.87	0.00	241.87	2,945.97	1,472.98	4,037.12	1,993.78	0.24	-0.10	0.048
23.60	-43.19	-2.65	0.00	-241.87	0.00	241.87	2,945.97	1,472.98	4,037.12	1,993.78	0.24	-0.10	0.048
25.00	-41.12	-2.55	0.00	-238.16	0.00	238.16	2,932.71	1,466.36	3,992.19	1,971.59	0.27	-0.10	0.048
30.00	-40.50	-2.52	0.00	-225.42	0.00	225.42	2,875.21	1,437.61	3,820.20	1,886.65	0.39	-0.12	0.046
31.50	-38.72	-2.43	0.00	-221.64	0.00	221.64	2,854.29	1,427.15	3,764.49	1,859.14	0.43	-0.13	0.046
35.00	-38.38	-2.41	0.00	-213.15	0.00	213.15	2,805.48	1,402.74	3,636.10	1,795.73	0.53	-0.14	0.044
35.67	-36.68	-2.32	0.00	-211.54	0.00	211.54	2,248.07	1,124.03	2,973.91	1,468.70	0.55	-0.14	0.049
40.00	-34.73	-2.21	0.00	-201.50	0.00	201.50	2,218.59	1,109.29	2,872.23	1,418.49	0.68	-0.16	0.047
45.00	-32.79	-2.10	0.00	-190.44	0.00	190.44	2,183.60	1,091.80	2,755.77	1,360.97	0.86	-0.18	0.045
50.00	-30.86	-2.00	0.00	-179.92	0.00	179.92	2,147.58	1,073.79	2,640.30	1,303.95	1.06	-0.20	0.043
55.00	-28.94	-1.90	0.00	-169.94	0.00	169.94	2,110.52	1,055.26	2,525.94	1,247.47	1.28	-0.22	0.041
60.00	-27.41	-1.83	0.00	-160.45	0.00	160.45	2,072.42	1,036.21	2,412.79	1,191.58	1.52	-0.24	0.039
64.00	-26.92	-1.81	0.00	-153.15	0.00	153.15	2,041.18	1,020.59	2,323.20	1,147.34	1.73	-0.25	0.038
65.00	-25.52	-1.75	0.00	-151.34	0.00	151.34	2,033.27	1,016.64	2,300.94	1,136.35	1.78	-0.26	0.037
68.70	-25.10	-1.74	0.00	-144.85	0.00	144.85	1,997.21	998.60	2,211.95	1,092.40	1.99	-0.27	0.036
68.70	-25.10	-1.74	0.00	-144.85	0.00	144.85	1,997.21	998.60	2,211.95	1,092.40	1.99	-0.27	0.069
70.00	-23.76	-1.72	0.00	-142.59	0.00	142.59	1,982.10	991.05	2,178.42	1,075.84	2.06	-0.28	0.068
73.50	-23.30	-1.72	0.00	-136.58	0.00	136.58	1,473.96	736.98	1,624.57	802.32	2.27	-0.30	0.077
75.00	-21.98	-1.72	0.00	-134.01	0.00	134.01	1,466.28	733.14	1,601.77	791.05	2.37	-0.31	0.076
80.00	-20.76	-1.76	0.00	-125.40	0.00	125.40	1,440.00	720.00	1,526.12	753.69	2.72	-0.35	0.073
85.00	-19.55	-1.82	0.00	-116.60	0.00	116.60	1,412.68	706.34	1,451.11	716.65	3.11	-0.39	0.069
90.00	-18.35	-1.89	0.00	-107.51	0.00	107.51	1,384.32	692.16	1,376.86	679.98	3.54	-0.43	0.065
95.00	-17.15	-1.96	0.00	-98.08	0.00	98.08	1,354.92	677.46	1,303.45	643.72	4.01	-0.47	0.061
100.00	-16.21	-2.01	0.00	-88.28	0.00	88.28	1,324.47	662.24	1,230.99	607.94	4.52	-0.50	0.057
104.00	-15.49	-2.05	0.00	-80.22	0.00	80.22	1,299.37	649.69	1,173.78	579.69	4.95	-0.53	0.053
105.00	-14.78	-2.08	0.00	-78.17	0.00	78.17	1,292.99	646.50	1,159.59	572.68	5.07	-0.54	0.052
108.00	-14.31	-2.10	0.00	-71.92	0.00	71.92	1,265.73	632.87	1,110.38	548.38	5.41	-0.56	0.049
110.00	-14.09	-2.11	0.00	-67.72	0.00	67.72	1,247.14	623.57	1,077.81	532.29	5.65	-0.57	0.047
110.00	-14.09	-2.11	0.00	-67.72	0.00	67.72	853.24	426.62	741.79	366.34	5.65	-0.57	0.056
111.00	-12.24	-2.14	0.00	-65.62	0.00	65.62	849.67	424.84	733.15	362.07	5.77	-0.58	0.054
115.00	-11.14	-2.14	0.00	-57.05	0.00	57.05	834.99	417.50	698.71	345.06	6.27	-0.61	0.048
119.13	-10.87	-2.13	0.00	-48.23	0.00	48.23	819.16	409.58	663.43	327.64	6.80	-0.63	0.042
120.00	-10.29	-2.12	0.00	-46.36	0.00	46.36	815.71	407.86	655.98	323.96	6.92	-0.64	0.021
121.00	-9.43	-2.08	0.00	-44.24	0.00	44.24	811.73	405.86	647.49	319.77	7.05	-0.64	0.019
121.00	-9.43	-2.08	0.00	-44.24	0.00	44.24	811.73	405.86	647.49	319.77	7.05	-0.64	0.032
124.50	-9.33	-2.07	0.00	-36.98	0.00	36.98	797.47	398.73	617.91	305.16	7.52	-0.65	0.028
124.50	-9.33	-2.07	0.00	-36.98	0.00	36.98	797.47	398.73	617.91	305.16	7.52	-0.65	0.133
125.00	-9.04	-2.05	0.00	-35.94	0.00	35.94	795.39	397.69	613.71	303.09	7.59	-0.65	0.130
127.00	-7.50	-1.92	0.00	-31.84	0.00	31.84	786.97	393.48	596.95	294.81	7.87	-0.69	0.118
130.00	-6.10	-1.76	0.00	-26.07	0.00	26.07	774.02	387.01	572.00	282.49	8.32	-0.74	0.100
135.00	-5.74	-1.69	0.00	-17.27	0.00	17.27	751.62	375.81	530.94	262.21	9.13	-0.81	0.074
140.00	-2.64	-0.97	0.00	-8.80	0.00	8.80	728.18	364.09	490.64	242.31	10.00	-0.85	0.040
144.00	-2.44	-0.92	0.00	-4.91	0.00	4.91	701.03	350.52	454.07	224.25	10.73	-0.88	0.025
145.00	-2.10	-0.80	0.00	-4.00	0.00	4.00	694.06	347.03	445.03	219.78	10.92	-0.88	0.021
150.00	0.00	-0.77	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	11.85	-0.89	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	35.23	0.00	76.55	0.00	0.00	3583.80	124.50	0.85
0.9D + 1.6W	35.19	0.00	57.40	0.00	0.00	3516.41	124.50	0.82
1.2D + 1.0Di + 1.0Wi	11.10	0.00	122.09	0.00	0.00	1195.69	124.50	0.33
(1.2 + 0.2Sds) * DL + E ELFM	2.28	0.00	73.98	0.00	0.00	274.93	124.50	0.07
(1.2 + 0.2Sds) * DL + E EMAM	2.97	0.00	73.98	0.00	0.00	315.80	124.50	0.14
(0.9 - 0.2Sds) * DL + E ELFM	2.28	0.00	51.47	0.00	0.00	269.23	124.50	0.07
(0.9 - 0.2Sds) * DL + E EMAM	2.97	0.00	51.47	0.00	0.00	308.79	124.50	0.13
1.0D + 1.0W	8.45	0.00	63.85	0.00	0.00	850.78	124.50	0.21

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors VQ/I (lb/in)	Shear Applied (kips)	Shear phiVn (kips)	Ratio	Max Member Pu (kip)	phiPn (kip)	Ratio
0.00	121.00	(4) SOL-#20 All Thread Bar	475.5	12.8	16.8	0.764	277.9	314.9	0.883
0.00	23.60	(4) SOL-#20 All Thread Bar	248.9	6.7	16.8	0.400	294.6	334.7	0.880
23.60	68.70	(4) SOL-#20 All Thread Bar	276.0	8.3	16.8	0.493	263.9	330.5	0.799
119.13	124.50	(3) SOL-#20 (15 deg Offset)	440.9	13.2	16.8	0.787	106.4	284.5	0.374

Elev From (ft)	Elev To (ft)	Member	Upper Termination Connectors MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio	Lower Termination Connectors MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio
0.00	121.00	(4) SOL-#20 All Thread Bar	52.1	12.0	5	10	0.434	0.0	12.0	0	0	0.000
0.00	23.60	(4) SOL-#20 All Thread Bar	0.0	12.0	0	24	0.000	0.0	12.0	0	0	0.000
23.60	68.70	(4) SOL-#20 All Thread Bar	186.3	12.0	16	24	0.647	0.0	12.0	0	0	0.000
119.13	124.50	(3) SOL-#20 (15 deg Offset)	87.5	12.0	8	12	0.608	70.9	12.0	6	12	0.492

Base Plate & Anchor Rod Analysis

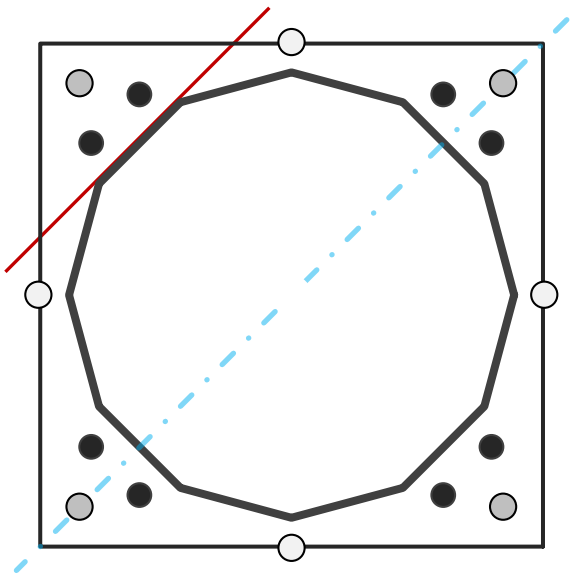
Pole Dimensions		
Number of Sides	12	-
Diameter	37.38	in
Thickness	0.375	in
Orientation Offset		°

Base Reactions		
Moment, Mu	3583.8	k-ft
Axial, Pu	76.6	k
Shear, Vu	35.2	k
Neutral Axis	45	°

Report Capacities		
Component	Capacity	Result
Base Plate	49%	Pass
Anchor Rods	72%	Pass
Dwyidag	71%	Pass

Base Plate		
Shape	Square	-
Width	44	in
Thickness	2 1/2	in
Grade	A572-60	-
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Clip	0	in
Orientation Offset		°
Anchor Rod Detail	d	η=0.5
Clear Distance	3	in
Applied Moment, Mu	1019.8	k
Bending Stress, ϕMn	2075.2	k

Original Anchor Rods		
Arrangement	Cluster	-
Quantity	8	-
Diameter, ø	2 1/4	in
Bolt Circle	44	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.0	in
Orientation Offset	0	°
Applied Force, Pu	171.1	k
Anchor Rods, ϕPn	259.8	k



Dywidag Reinforcement		
Quantity	4	-
Bar Size	#20	in
Diameter, ø	2.5	in
Bracket Type	Angle	-
Circle	44.26	in
Orientation Offset	0	°
Applied Force, Pu	278.4	k
Dywidag Bar, ϕPn	392.7	k

Additional Anchor Rods		
Quantity	4	-
Diameter, ø	2.5	in
Bolt Circle	52.4	in
Grade	Other	
Yield Strength, Fy	80	ksi
Tensile Strength, Fu	100	ksi
Bypass Base?	Yes	
Orientation Offset	45	°
Applied Force, Pu	216.7	k
Additional Rod, ϕPn	319.9	k

Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	35.2	1243.0	0.35
Anchor Rod Forces	35.2	1243.0	0.35
Additional Bolt (Grp1) Forces	0.0	925.6	0.26
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	1415.2	0.39
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	43.0992	3.5916	0.1692		7379.37
Bolt	3.9761	3.2477	0.8393	4.5	6294.24
Bolt1	4.9087	3.9988	1.2725	4	5495.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	4.9087	4.9087	1.9175		4815.65
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate

Shape	Square	-
Width, W	44	in
Thickness, t	2.5	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Base Plate Chord	23.211	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

External Base Plate

Chord Length AA	24.595	in
Additional AA	0.000	in
Section Modulus, Z	38.430	in^3
Applied Moment, Mu	1019.8	k-ft
Bending Capacity, ϕMn	2075.2	k-ft
Capacity, Mu/ϕMn	0.491	OK
Chord Length AB	23.268	in
Additional AB	0.000	in
Section Modulus, Z	36.356	in^3
Applied Moment, Mu	792.7	k-ft
Bending Capacity, ϕMn	1963.2	k-ft
Capacity, Mu/ϕMn	0.404	OK
Bend Line Length	0.000	in
Additional Bend Line	0.000	in
Section Modulus, Z	0.000	in^3
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Internal Base Plate

Arc Length	0.000	in
Section Modulus, Z	0.000	in^3
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Anchor Rods

Anchor Rod Quantity, N	8	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	44	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	171.1	k
Applied Shear, Vu	1.1	k
Compressive Capacity, ϕPn	259.8	k
Tensile Capacity, ϕRnt	0.658	OK
Interaction Capacity	0.667	OK

Additional Bolt Group 1

Bolt Quantity, N	4	-
Bolt Diameter, d	2.5	in
Bolt Circle, BC	52.4	in
Yield Strength, Fy	80	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	216.7	k
Applied Shear, Vu	0.0	k
Compressive Capacity, ϕPn	319.9	k
Compressive Capacity, ϕPn	0.677	OK
Interaction Capacity	0.723	OK

Additional Bolt Group 2

Bolt Quantity, N	0	-
Bolt Diameter, d	0	in
Bolt Circle, BC	0	in
Yield Strength, Fy	0	ksi
Tensile Strength, Fu	0	ksi
Applied Axial, Pu	0.0	k
Applied Shear, Vu	0.0	k
Compressive Capacity, ϕPn	0.0	k
Compressive Capacity, ϕPn		
Interaction Capacity		

Dywidag Reinforcement

Dywidag Quantity, N	4	-
Dywidag Diameter, d	2.5	in
Bolt Circle, BC	44.26	in
Yield Strength, Fy	80	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	278.4	k
Compressive Capacity, ϕPn	392.7	k
Capacity, Pu/ϕPn	0.709	OK

Base Plate Stiffeners

Applied Axial Force, Pu	0.0	k
Applied Horizontal Force, Vu	0.00	k

Vertical Weld

Vert.-to-Stiffener a=e_x/l	#DIV/0!	-
Spacing Ratio, k	#DIV/0!	-
Weld Coefficient, C	#DIV/0!	-
Compressive Capacity, ϕPn	#DIV/0!	k
Vert.-to-Plate a=e_x/l	#DIV/0!	-
Spacing Ratio, k	#DIV/0!	-
Weld Coefficient, C	#DIV/0!	-
Shear Capacity, ϕVn	#DIV/0!	k
$P_u/\phi_P P_n + V_u/\phi_V V_n$	-	

Horizontal Weld

Horz.-to-Stiffener a=e_x/l	#DIV/0!	-
Spacing Ratio, k	#DIV/0!	-
Weld Coefficient, C	#DIV/0!	-
Effective Fillet	0.000	in
Compressive Capacity, ϕPn	#DIV/0!	k
Horz.-to-Pole a=e_x/l	#DIV/0!	-
Spacing Ratio, k	#DIV/0!	-
Weld Coefficient, C	#DIV/0!	-
Shear Capacity, ϕVn	#DIV/0!	k
$P_u/\phi_P P_n + V_u/\phi_V V_n$	-	

Plate Tension

Gross Cross Section	0.000	in^2
Net Cross Section	0.000	in^2
Tensile Capacity, ϕTn	0.0	k
Capacity, Tu/ϕTn	-	

Plate Compression

Radius of Gyration	#DIV/0!	in^3
kl/r	#DIV/0!	-
4.71 √(E/Fy)	0.00	-
Buckling Stress(Fe)	0.0	-
Crit. Buckling Stress(Fcr)	0.0	ksi
Compressive Capacity, ϕPn	0.0	k
Capacity, Pu/ϕPn	-	

Base/Flange Plate	Plate Type	*Flange*	*@ 110.0 ft*
	Pole Diameter	21.25	in
	Pole Thickness	0.1875	in
	Plate Diameter	28.5	in
	Plate Thickness	1	in
	Plate Fy	60	ksi
	Weld Length	0.1875	in
	ϕ_s Resistance	96.45	k-in
	Applied	42.30	k-in
Stiffeners	#		

Bolts	#	*8*	
	Bolt Circle	25.75	in
	(R)adial / (S)quare	R	
	Diameter	1	in
	Hole Diameter	1.125	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	ϕ_s Resistance	54.52	k
	Applied	28.20	k
Reinforcement	#	*4*	
	DYW. Circle	28	in
	Offset Angle	24	°
	Type	#20	
	Diameter	2.5	in
	Fu	100	ksi
	ϕ_s Resistance	392.70	k
	Applied	144.37	k
Extra Bolts O	#	*0*	

Code Rev. ***G***

Moment 502.1 k-ft

Axial 20.0 k

Date 7/24/2019

Engineer adam.pittman

Site # 302489

Carrier T-MOBILE

Required Flange Thickness:

0.66 in OK

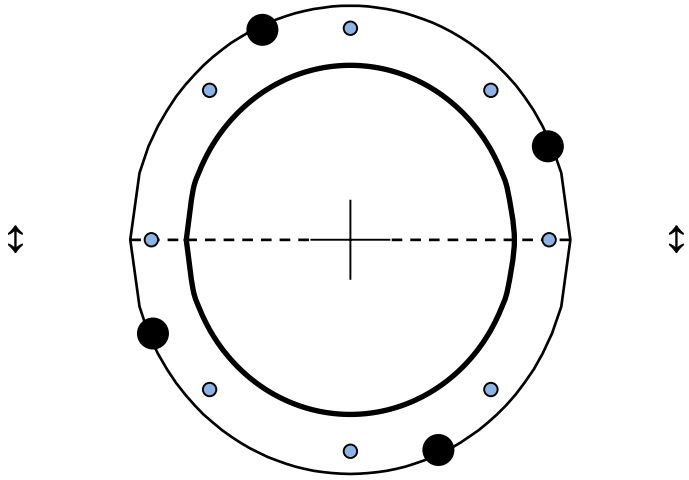


Plate Stress Ratio:

0.44 (Pass)

Bolt Stress Ratio:

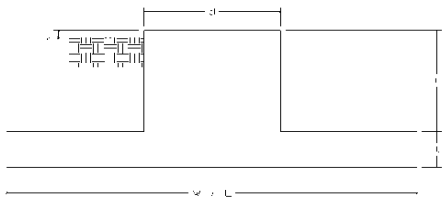
0.52 (Pass)

Reinforcement Stress Ratio:

0.37 (Pass)

Site Name:	Enfd-Enfield, CT
Site Number:	302489
Engineering Number:	OAA713357
Engineer:	ASP
Date:	07/24/19
Tower Type:	MP

Program Last Updated: *5/13/2014*



Design Loads (Factored) - Analysis per TIA-222-G Standards

Design / Analysis / Mapping:	Analysis				
Compression/Leg:	76.6	k	Concrete Strength (f'_c):	3000	psi
Uplift/Leg:	0.0	k	Pad Tension Steel Depth:	32.00	in
Total Shear:	35.2	k	ϕ_{Shear}:	0.75	
Moment:	3583.8	k-ft	$\phi_{Flexure\ /\ Tension}$:	0.90	
Tower + Appurtenance Weight:	221.4	k	$\phi_{Compression:}$	0.65	
Depth to Base of Foundation (l + t - h):	8.00	ft	β:	0.85	
Diameter of Pier (d):	5.64	ft	Bottom Pad Rebar Size #:	10	
Height of Pier above Ground (h):	0.50		# of Bottom Pad Rebar:	34	
Width of Pad (W):	18.00	ft	Pad Bottom Steel Area:	43.18	in^2
Length of Pad (L):	18.00	ft	Pad Steel F_y:	60000	psi
Thickness of Pad (t):	3.00	ft	Top Pad Rebar Size #:	10	
Tower Leg Center to Center:	0.00	ft	# of Top Pad Rebar:	34	
Number of Tower Legs:	1.0	(1 if MP or GT)	Pad Top Steel Area:	43.18	in^2
Tower Center from Mat Center:	0.00	ft	Pier Rebar Size #:	11	
Depth Below Ground Surface to Water Table:	99.00	ft	Pier Steel Area (Single Bar):	1.56	in^2
Unit Weight of Concrete:	150.0	pcf	# of Pier Rebar:	52	
Unit Weight of Soil Above Water Table:	115.0	pcf	Pier Steel F_y:	60000	psi
Unit Weight of Water:	62.4	pcf	Pier Cage Diameter:	59.7	in
Unit Weight of Soil Below Water Table:	52.6	pcf	Rebar Strain Limit:	0.008	
Friction Angle of Uplift:	15.0	Degrees	Steel Elastic Modulus:	29000	ksi
Ultimate Coefficient of Shear Friction:	0.30		Tie Rebar Size #:	4	
Ultimate Compressive Bearing Pressure:	24000.0	psf	Tie Steel Area (Single Bar):	0.20	in^2
Ultimate Passive Pressure on Pad Face:	0.0	psf	Tie Spacing:	12	in
$\phi_{Soil\ and\ Concrete\ Weight}$:	0.9		Tie Steel F_y:	60000	psi
ϕ_{Soil}:	0.75				

Overturning Moment Usage

Design OTM:	3883.3	k-ft
OTM Resistance:	4533.7	k-ft
Design OTM / OTM Resistance:	0.86	Result: OK

Soil Bearing Pressure Usage

Net Bearing Pressure:	7848	psf
Factored Nominal Bearing Pressure:	18000	psf
Net Bearing Pressure/Factored Nominal Bearing Pressure:	0.44	Result: OK
Load Direction Controling Design Bearing Pressure:	Diagonal to Pad Edge	

Sliding Factor of Safety

Total Factored Sliding Resistance:	117.6	k
Sliding Design / Sliding Resistance:	0.30	Result: OK

Mount Analysis of Existing Platform w/ Support Rails for American Tower on behalf of T-Mobile
302489 - Enfd - Enfield
Project #: 12927170

T-Mobile Site ID: CT11534A

Program: L600

CLS Engineering PLLC Project #41124-12927170-01-MA-R1

July 8, 2019

MOUNT DESCRIPTION	Existing Platform w/ Support Rails at 139 ft AGL
ANTENNA ELEVATION	Nominal Rad. Elevation of 140 ft AGL (Eccentricity of ~1 ft)
SITE DESCRIPTION	150 ft Monopole
SITE ADDRESS	Town Farm Road, Enfield, CT 06082, Hartford County
GPS COORDINATES	41.965900, -72.552700
ANALYSIS STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
LOADING CRITERIA	125 mph, V_{ult} / 96.8 mph, V_{asd} (3-Second Gust) w/o ice & 50 mph (3-Second Gust) w/ 1" Ice

■ **ANALYSIS RESULT:** **Pass (Conditional)**

MEMBER USAGE	*103%*	*Acceptable*
COLLAR USAGE	**93%**	**Pass**

Usages up to 105% are considered acceptable.

Modifications are proposed to bring mounts into compliance; see conclusion for details.

Prepared by:
Sean Rock, E.I.

Reviewed and Approved by:
Tyler M. Barker, P.E.

STATE OF CONNECTICUT
TYLER M BARKER
No. 32402
LICENSED PROFESSIONAL ENGINEER

Tyler M. Barker
CLS Engineering, PLLC
Director of Engineering
PE # 32402 Exp. 1/31/2020
COA # PEC.001833 Exp. 8/14/2019

IdenTrust part of HID Global
Digitally signed by Tyler Barker
DN: c=US, o=Telamon Corporation, ou=A01427E0000016A4525ADF800001D17, cn=Tyler Barker
Date: 2019.07.08 17:27:04 -04'00'

■ INTRODUCTION

The proposed equipment is to be mounted to the existing Platform w/ Support Rails. This proposed mounting configuration was analyzed using RISA-3D, a commercially available finite element analysis software package. A selection of input and output from our analysis is attached to the end of this report.

■ STRUCTURAL DOCUMENTS PROVIDED

STRUCTURAL DATA	Site Photos dated July 17, 2018 Site Pro 1 Drawings, Part #PRK-1245L, dated July 22, 2014 Site Pro 1 Drawings, Part #PUCK, dated August 30, 2010
PREVIOUS ANALYSES	Structural Analysis by American Tower Corporation, Engineering #OAA713357_C3_02, dated January 7, 2019
LOADING DATA	ATC Application, Project #12927170, dated April 2, 2019

■ ANALYSIS CRITERIA

STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
BASIC WIND SPEED	125 mph, V_{ult} / 96.8 mph, V_{asd} (3-Second Gust)
BASIC WIND SPEED W/ ICE	50 mph (3-Second Gust) w/ 1" Radial Ice (Escalating)
EXPOSURE CATEGORY	C
MAX. TOPOGRAPHIC FACTOR, K_{zt}	1.00
RISK CATEGORY	II
MAINTENANCE LIVE LOAD	L_M: 500 lb

■ FINAL EQUIPMENT

ELEVATION (ft)		ANTENNAS	
MOUNT	**RAD.**	**#**	**NAME**
139.0	140.0	3	Ericsson AIR 32 B66Aa/B2A
		3	Ericsson AIR 21, 1.3M, B2A/B4P
		3	Ericsson RADIO 4449 B12/B71
		3	Ericsson KRY 112 144/1
		3	RFS Celwave APXVAARR24_43-U-NA20

■ RESULTS SUMMARY

Existing Mount Usages:

COMPONENT	PEAK USAGE	RESULT
Collar Reactions	156%	Fail
Platform Base	117%	Fail
Stand-Off Horizontals	88%	Pass
Mount Pipes	69%	Pass

Mount Usages after Modification:

COMPONENT	PEAK USAGE	RESULT
Face Horizontals	*103%*	*Acceptable*
Collar Reactions	93%	Pass
Platform Base	85%	Pass
Stand-Off Horizontals	58%	Pass
Mount Pipes	52%	Pass
Support Rail	37%	Pass
Reinforcement Members	30%	Pass

Usages up to 105% are considered acceptable.

■ CONCLUSION AND RECOMMENDATIONS

According to our structural analysis, the mounts have been found to **CONDITIONALLY PASS**. The mounting configuration considered in this analysis will be capable of supporting the referenced loading pursuant to referenced standards once the following scope is executed:

- **Install (3) 6'-6" long Pipe 2 STD, A53 Gr. B, support rail bracing pipes at the existing platform mount. Connect to existing support rail pipes with Site Pro 1 PUCK or equal, as shown in the following sketches.**
- **Remove (6) existing pipe kickers from below platform.**
- **Install (1) proposed Site Pro 1 PRK-1245L. Connect to offset angles using 1/2"ø A325 bolts with proposed Site Pro 1 X-253992 T-bracket included in the kit. Field-Cut proposed angles as required. Maintain minimum bolt edge distances.**
- **Connect offset angles to each other as Show in the following sketches.**
- **All hardware for Site Pro 1 PUCK connection to the existing support rails should be installed with "turn of the nut" method per the following table:**

BOLT TIGHTENING PROCEDURE

1. TIGHTEN BOLTS BY AISC "TURN OF THE NUT" METHOD USING THE CHART BELOW:

   BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS:
   +1/3 TURN BEYOND SNUG TIGHT

   BOLT LENGTHS OVER FOUR AND UP TO EIGHT DIAMETERS:
   +1/2 TURN BEYOND SNUG TIGHT

   BOLT LENGTHS OVER EIGHT AND UP TO TWELVE DIAMETERS:
   +2/3 TURN BEYOND SNUG TIGHT

2. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8(d)(1) OF THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS AS FOLLOWS:

   "FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND BE TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8(d)(1) THROUGH 8(d)(4).

   8(d)(1) TURN-OF-THE-NUT TIGHTENING.
   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION. SNUG TIGHT IS DEFINED AS THE TIGHTNESS THAT EXISTS WHEN THE PLIES OF A JOINT ARE IN FIRM CONTACT. THIS MAY BE OBTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH. SNUG TIGHTENING SHALL PROGRESS SYSTEMATICALLY...UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION, ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION, THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

BEFORE ⅓ TURN AFTER ⅓ TURN

See following sketches and Site Pro 1 assembly drawings for additional details.

■ ASSUMPTIONS AND CONDITIONS

This analysis is inclusive of the antenna supporting frames/mounts and all recorded connections that will support the equipment listed in this report. It considers only the theoretical capacity of structural components and it is not a condition assessment. The validity of the analysis may be dependent on the accuracy of structural information supplied by others. The client is responsible for verifying this information. If any provided information is revised after completion of this analysis, CLS Engineering PLLC should be notified immediately to revise results.

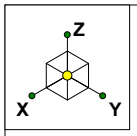
This analysis assumes the following:

1. The tower or other superstructure and mounts (if existing) were properly constructed as per the original design and have been properly maintained in accordance with applicable code standards.
2. Member sizes and strengths are accurate as supplied or are assumed as stated in the calculations.
3. In the absence of sufficient design information, all welds and connections are assumed to develop at least the capacity of the connected member, unless otherwise stated in this analysis.
4. All prior structural modifications, if any, are assumed to be correctly installed and fully effective.
5. The loading configuration is complete and accurate as supplied and/or as modeled in the previous analysis. All appurtenances are assumed to be properly installed and supported as per manufacturer requirements.
6. Some conservative assumptions may be used regarding appurtenances and their projected areas based on careful interpretation of data supplied, previous experience and standard industry practice.

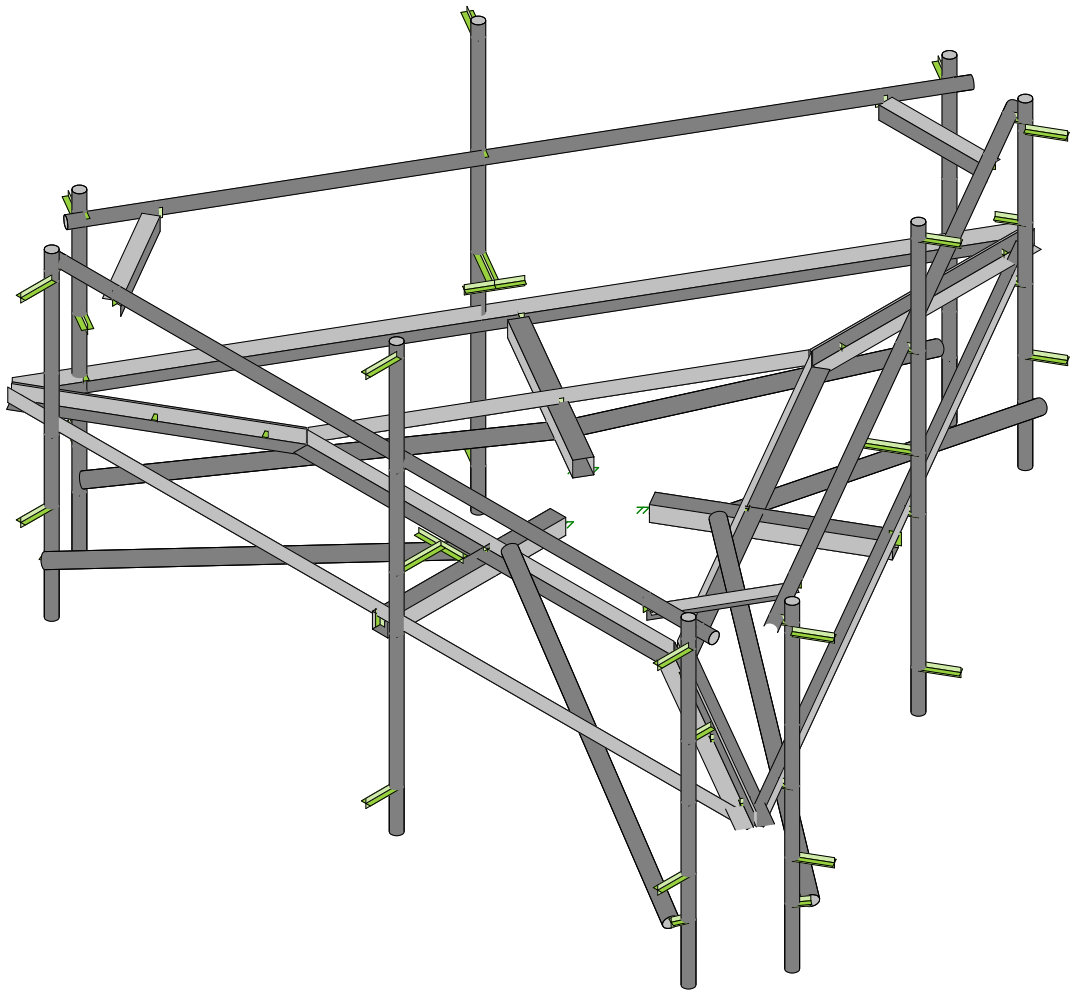
All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of the report. All opinions and conclusions contained herein are subject to revision based upon receipt of new or updated information. All services are provided exercising a level of care and diligence equivalent to the standard of our profession. No warranty or guarantee, either expressed or implied, is offered. All services are confidential in nature and this report will not be released to any other party without the client's consent. The use of this analysis is limited to the expressed purpose for which it was commissioned and it may not be reused, copied or disseminated for any other purpose without consent from CLS Engineering PLLC.

All services were performed, results obtained and recommendations made in accordance with generally accepted engineering principles and practices. CLS Engineering PLLC is not responsible for the conclusions, opinions or recommendations made by others based on the information supplied in this analysis.

It is not possible to have the fully detailed information necessary to perform a complete and thorough analysis of every structural sub-component of an existing structure. The structural analysis by CLS Engineering PLLC verifies the adequacy of the primary members of the structure. CLS Engineering PLLC provides a limited scope of service in that we cannot verify the adequacy of every weld, bolt, gusset, etc.



Existing Mount - To Be Modified



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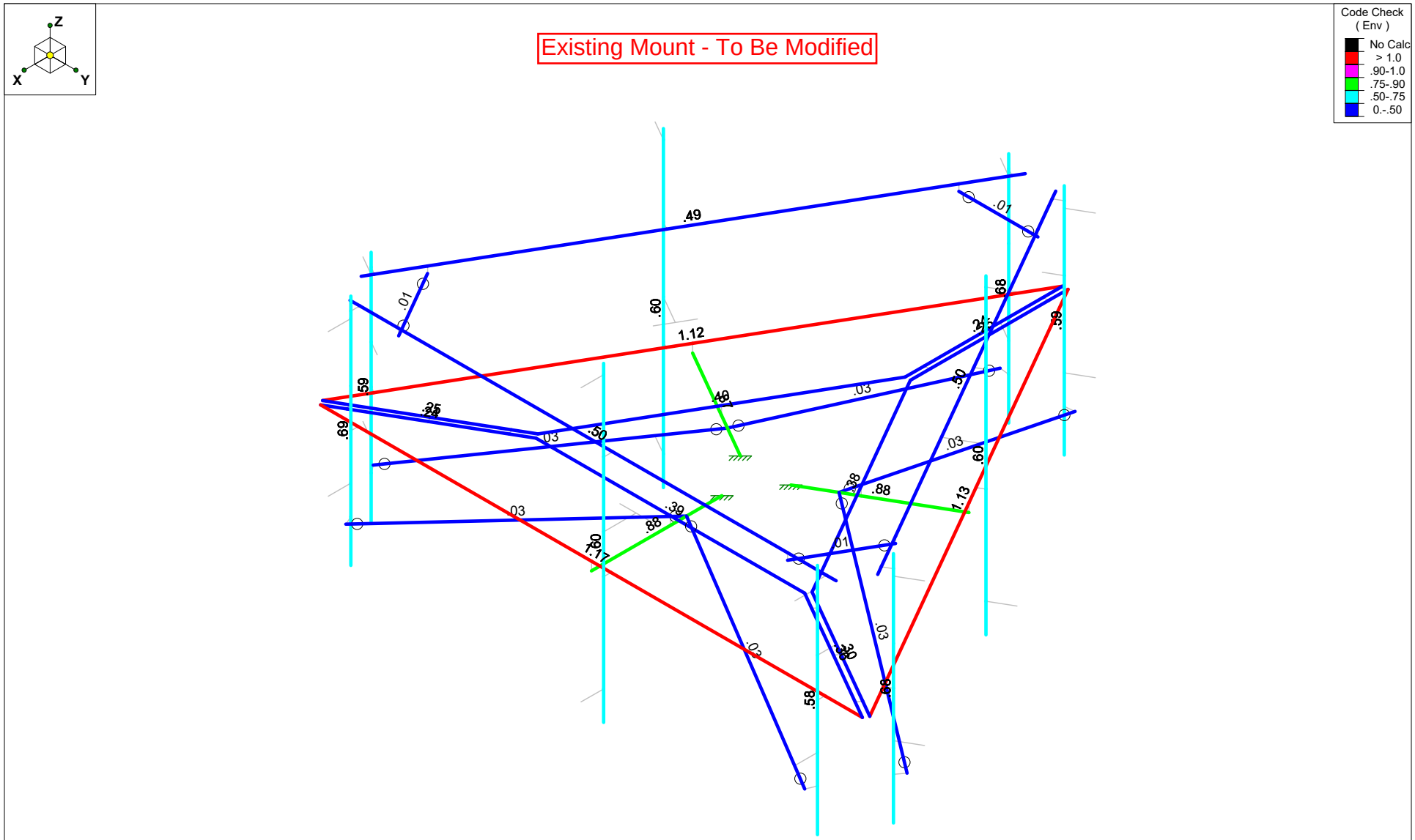

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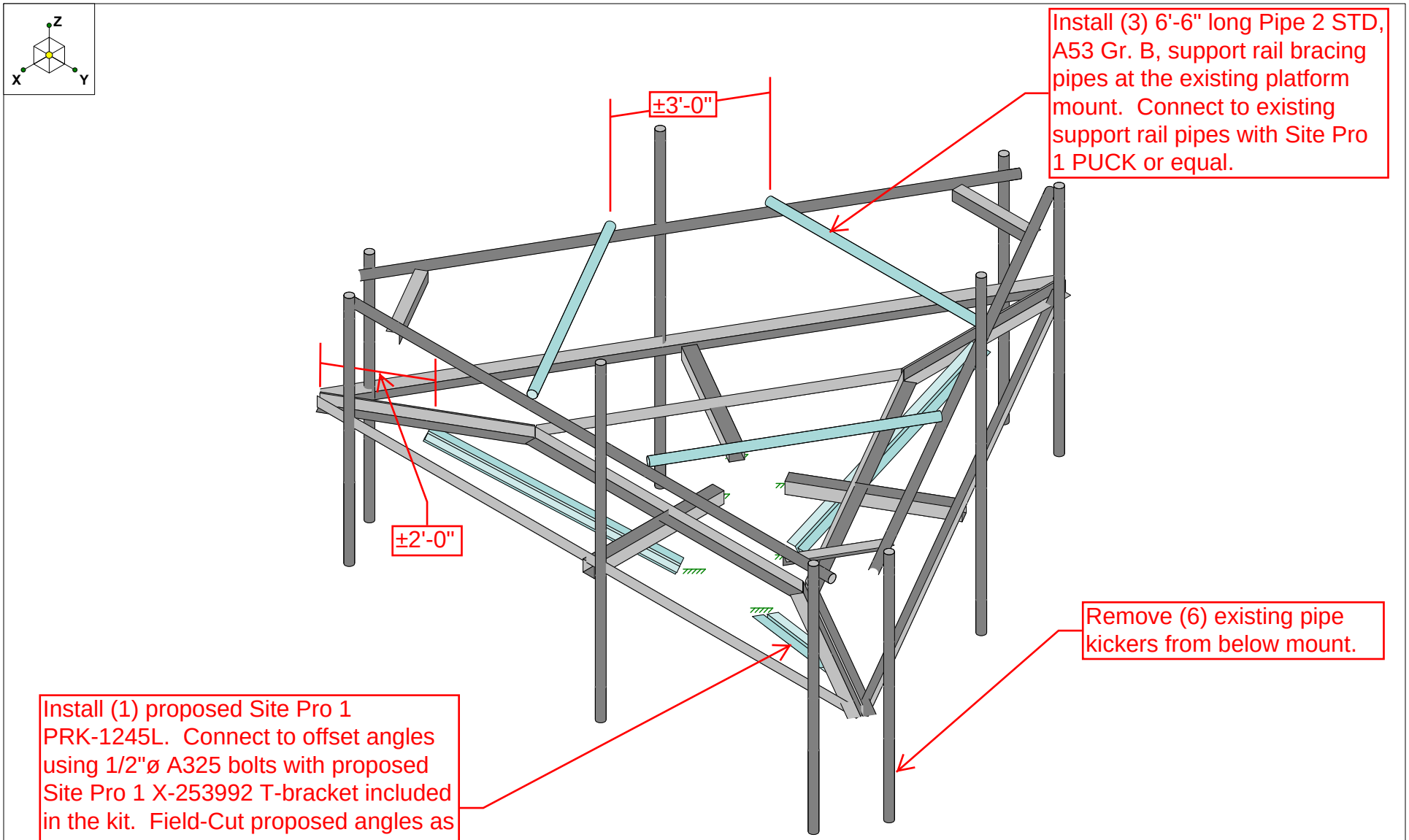

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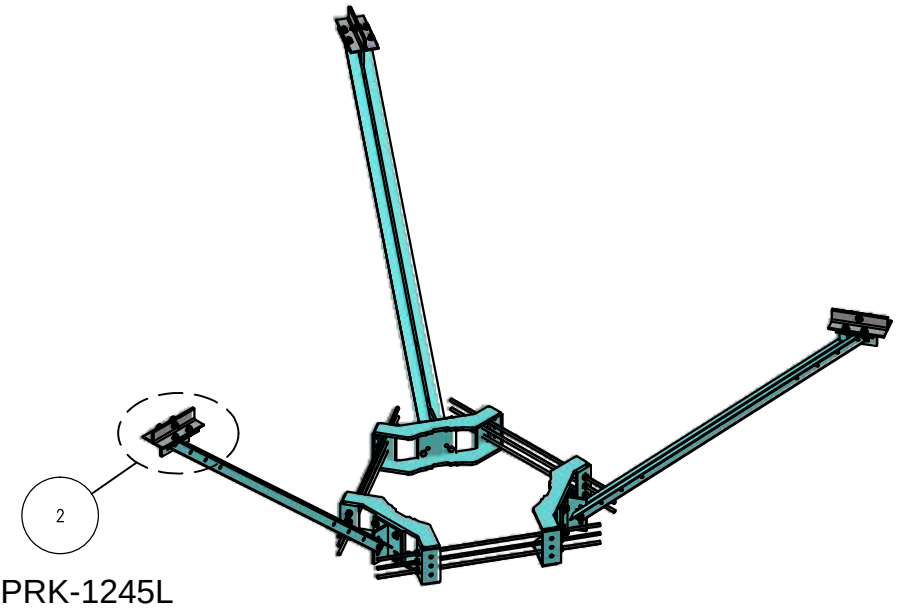
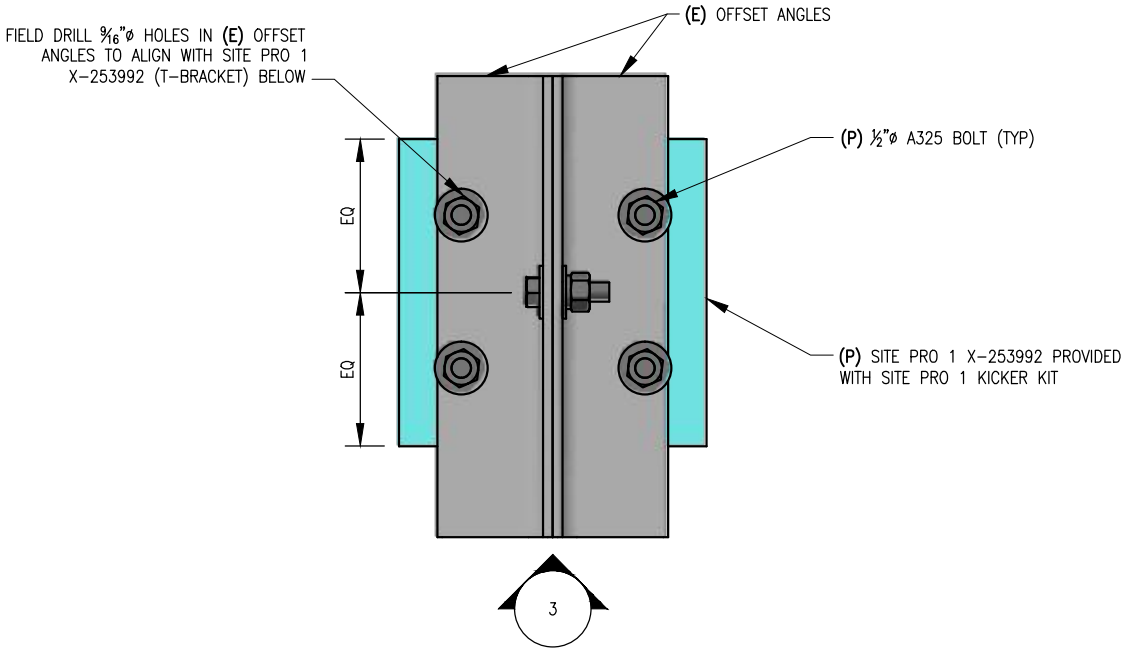


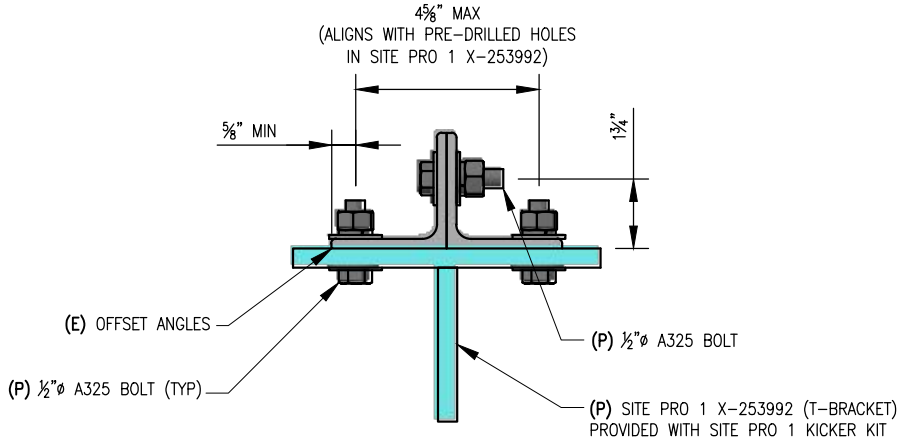
1 SITE PRO 1 PRK-1245L

SCALE: N.T.S.



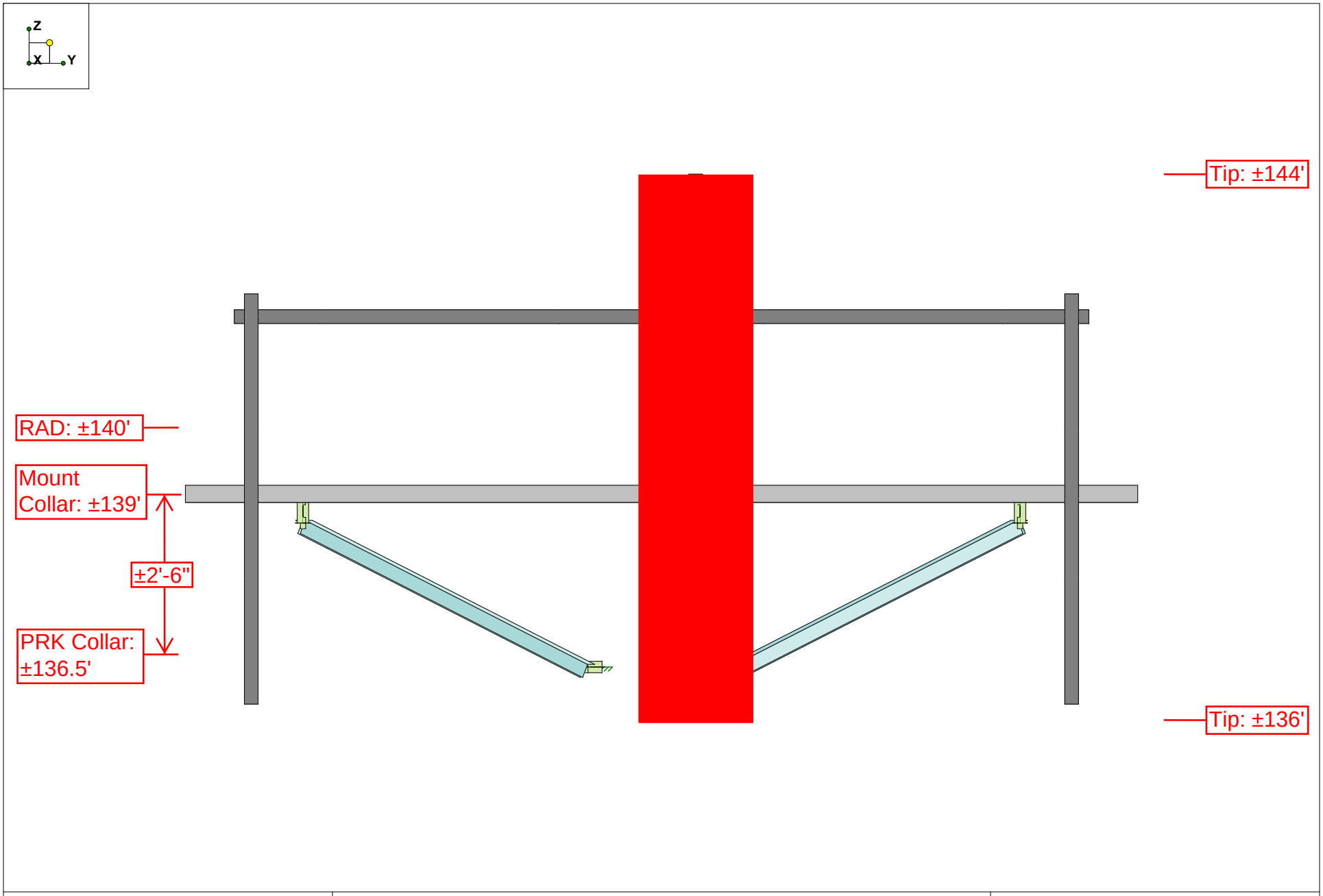
2 SITE PRO 1 KICKER CONNECTION PLAN VIEW

SCALE: N.T.S.



3 SITE PRO 1 KICKER CONNECTION FRONT ELEVATION

SCALE: N.T.S.



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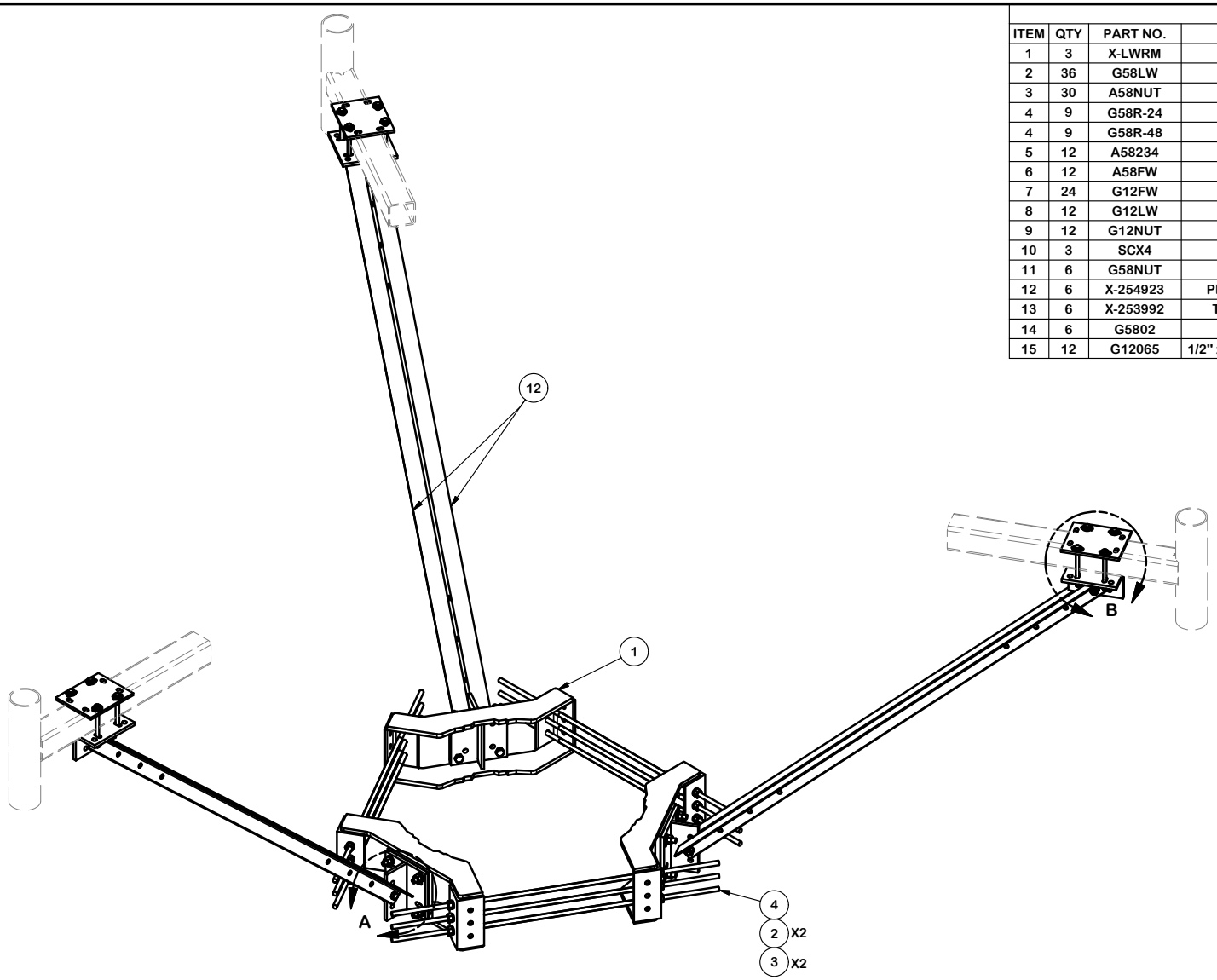
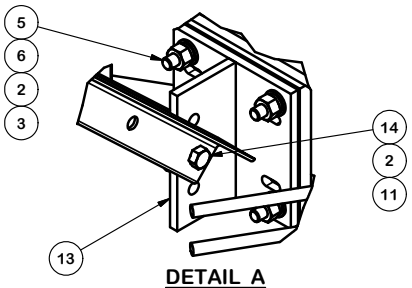
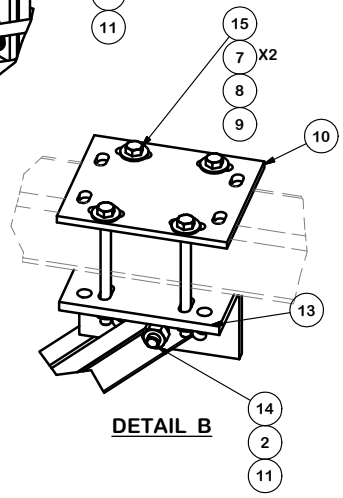




DETAIL A



DETAIL B

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-LWRM	RING MOUNT WELDMENT		68.81	206.42
2	36	G58LW	5/8" HDG LOCKWASHER		0.03	0.94
3	30	A58NUT	5/8" HDG A325 HEX NUT		0.13	3.90
4	9	G58R-24	5/8" x 24" THREADED ROD (HDG.)		0.55	4.94
4	9	G58R-48	5/8" x 48" THREADED ROD (HDG.)		0.55	4.94
5	12	A58234	5/8" x 2-3/4" HDG A325 HEX BOLT	2 3/4 in	0.36	4.27
6	12	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.41
7	24	G12FW	1/2" HDG USS FLATWASHER		0.03	0.82
8	12	G12LW	1/2" HDG LOCKWASHER		0.01	0.17
9	12	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.86
10	3	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	18.06
11	6	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	0.78
12	6	X-254923	PLATFORM REINFORCEMENT KIT ANGLE	84 in	22.83	137.00
13	6	X-253992	T-BRACKET FOR REINFORCEMENT KIT		13.55	81.27
14	6	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.62
15	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	4.91
					TOTAL WT. #	515.92

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

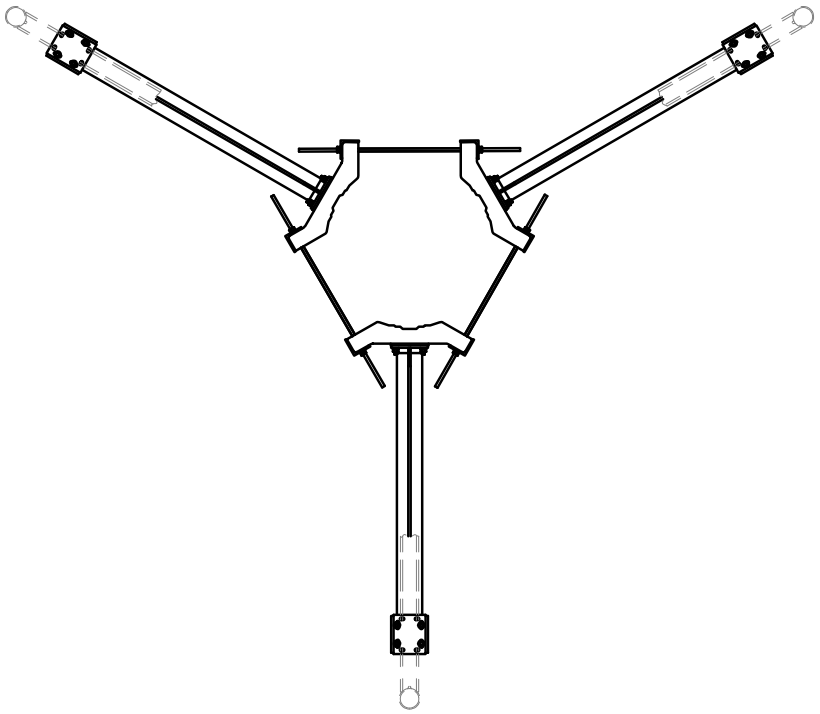
DESCRIPTION
PLATFORM REINFORCEMENT
ON A 12" T0 45" POLE
7' ANGLE

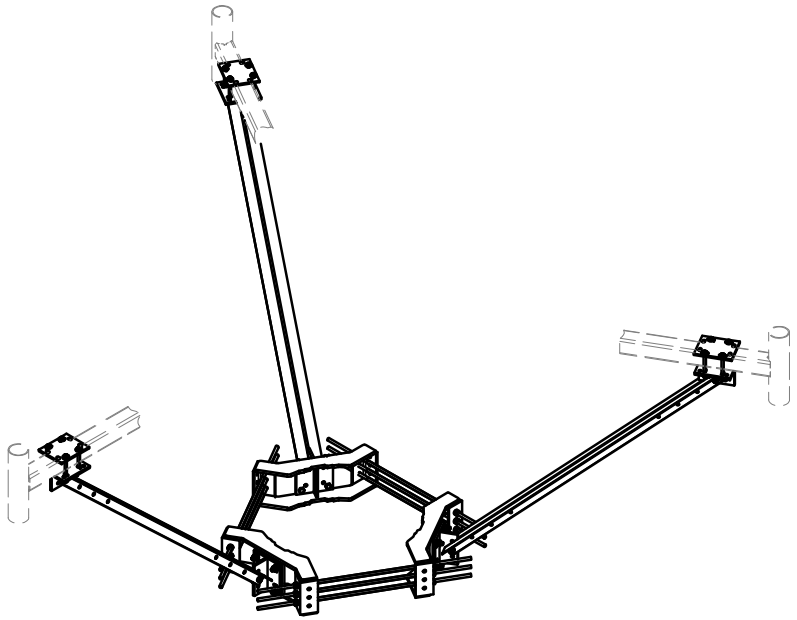
SITE PRO 1
A valmont COMPANY

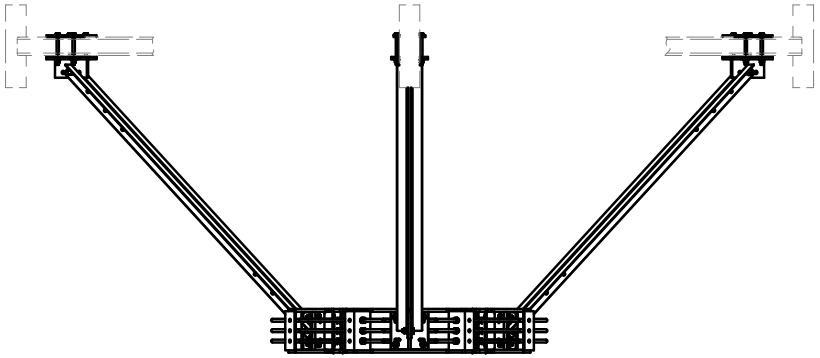
Engineering Support Team:
1-888-753-7446

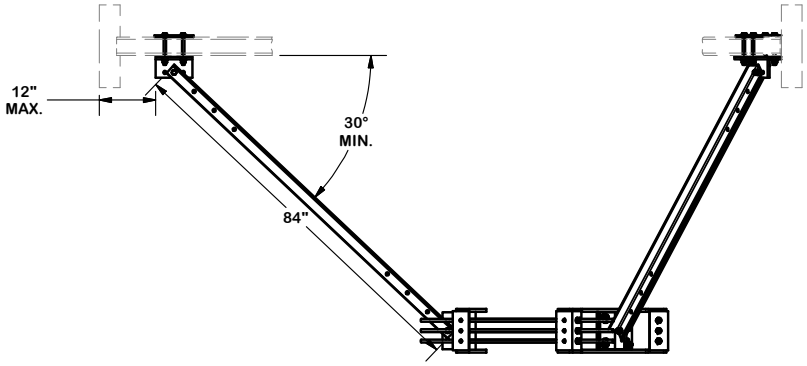
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	
4488	CEK 7/15/2014		PRK-1245L	PAGE 1 OF 2
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81 / 01	CUSTOMER	BMC 7/22/2014	PRK-1245L	









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DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
PLATFORM REINFORCEMENT
ON A 12" T0 45" POLE
7' ANGLE

SITE PRO 1 — A valmont COMPANY

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Locations:
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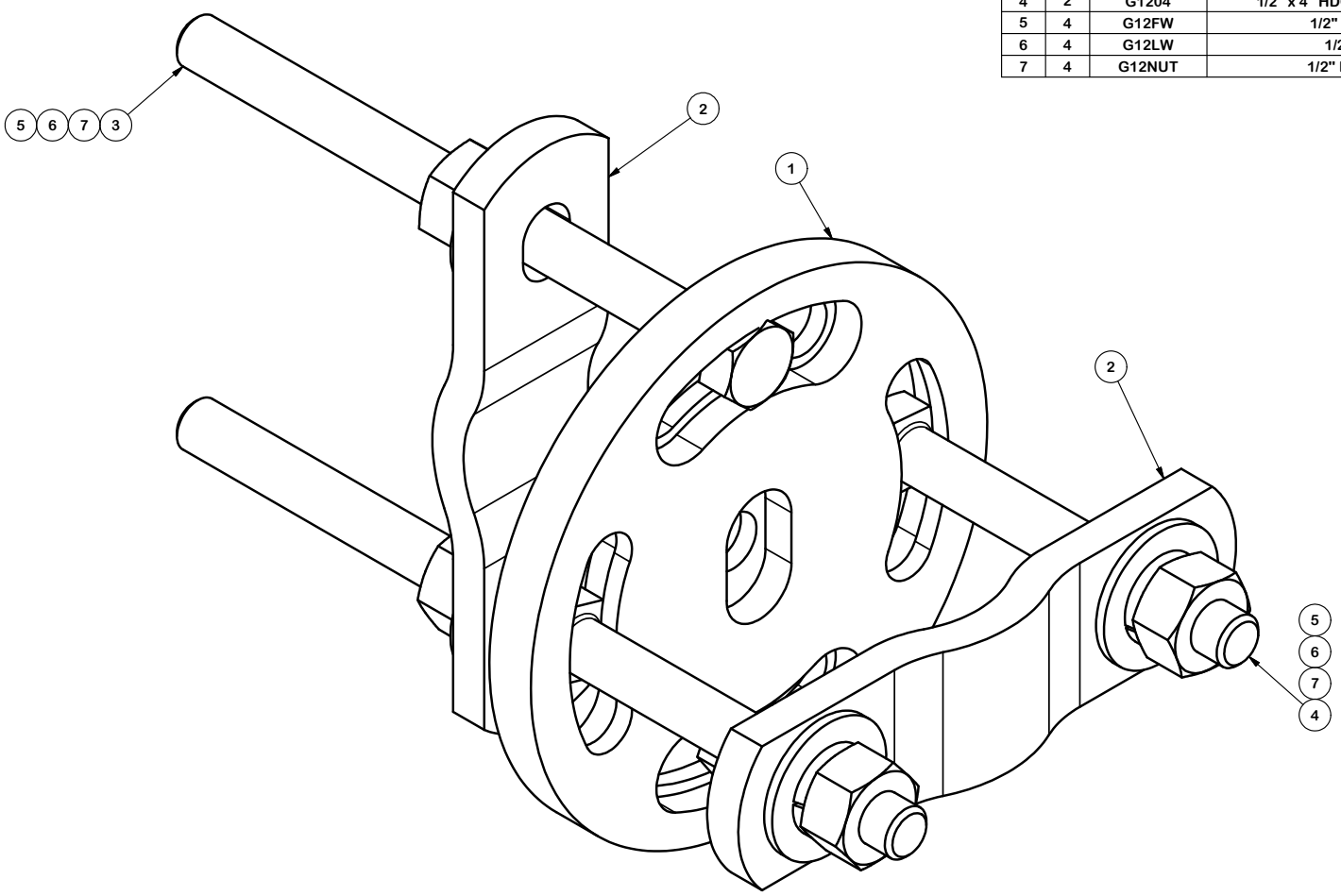
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
4488	CEK 7/15/2014		PRK-1245L

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 7/22/2014	PRK-1245L

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-127594	FLAT DISK CLAMP PLATE 4" CENTERS (GALVANIZED)		2.48	2.48
2	2	X-100064	CLAMP (S) (4" V-CLAMP) GALVANIZED		0.91	1.83
3	2	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	0.82
4	2	G1204	1/2" x 4" HDG HEX BOLT GR5 FULL THREAD	4 in	0.27	0.54
5	4	G12FW	1/2" HDG USS FLATWASHER		0.03	0.14
6	4	G12LW	1/2" HDG LOCKWASHER		0.01	0.06
7	4	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.29
					TOTAL WT. #	6.16



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: ADJUSTABLE CLAMP PLATE TIE-BACK ASSEMBLY

SITE PRO 1 — A valmont COMPANY

Engineering Support Team: 1-888-753-7446

Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 8/30/2010		PUCK

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 9/1/2010	PUCK

Wind & Ice Loading

Nominal Mount Elevation (AGL), z_{mount}	139 ft	K_a	0.90
Nominal Rad Elevation (AGL), z_{rad}	140 ft	K_d	0.95
Elevation AMSL (ft)	-	K_e	-
TIA Standard	G	K_z	1.36
Basic Wind Speed, V_{ult} (bare)	125 mph	K_{zt}	1.00
Basic Wind Speed, V (ice)	50 mph	K_s	-
Design Ice Thickness, t_i	1 in	t_{iz}	2.31 in
Exposure Category	C	G_h	1.00
Risk Category	II	q_z (bare)	51.5 psf
Seismic Response Coeff., C_s	-	q_z (ice)	8.2 psf

Live Loading

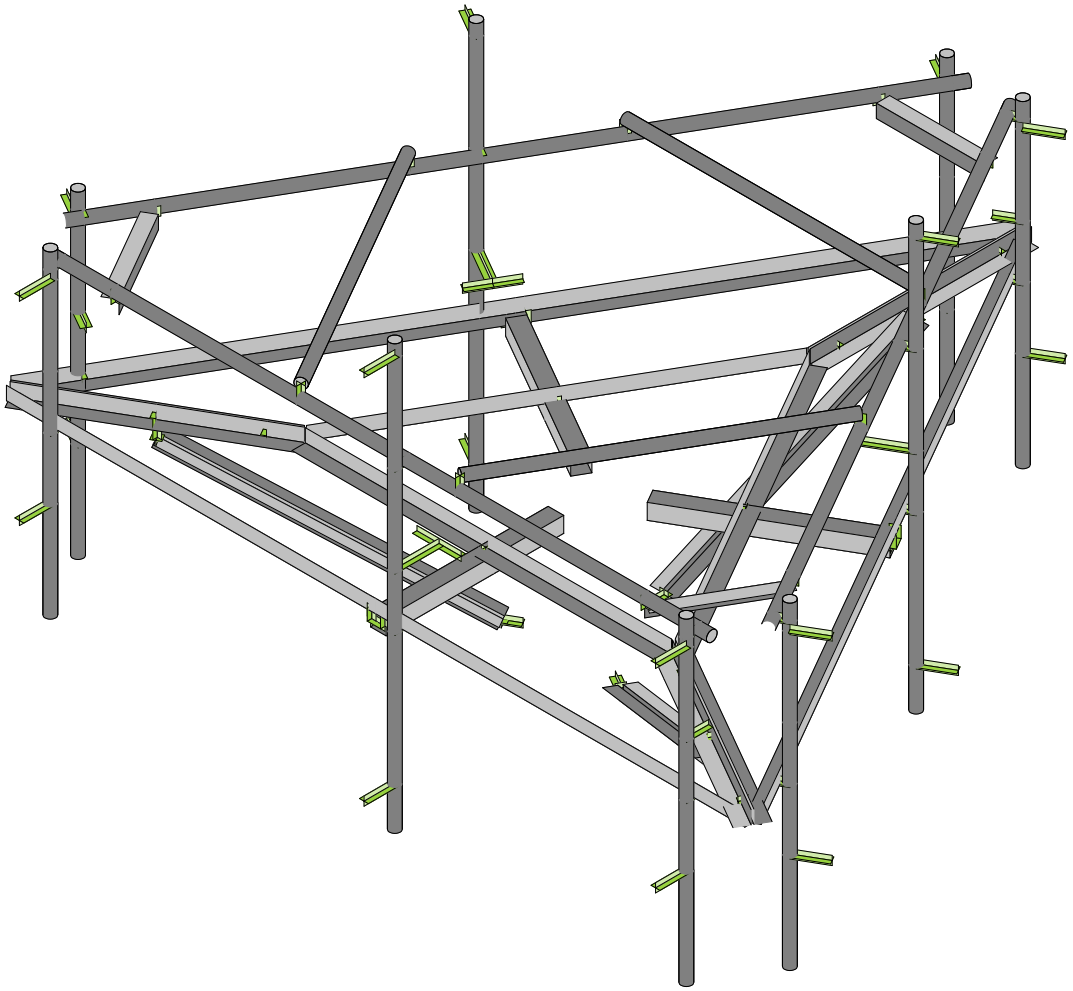
At Mount Pipes, L_M	500 lb
Joint Labels Considered	M1
	M2
	M4

Member Distributed Loading

Section Set Label	Shape Label	F_A (lb/ft)		Ice Wt. (lb/ft)
		Bare	Ice	
Grating Angle	L3X3X4	23.20	3.71	16.85
Standoff	HSS3.5X3.5X4	27.06	3.75	19.09
Mount Pipe	PIPE_2.0	11.02	5.19	13.22
Support Rail	PIPE_2.0	11.02	5.19	13.22
Support Rail Bracing	L3X3X4	23.20	3.71	16.85
MOD PRK	L2.5x2.5x3	19.33	3.66	15.05
MOD Support Rail Bracing	PIPE_2.0	11.02	5.19	13.22

Appurtenances

Appurtenance Model	Status	Azimuth Offset (°, ↻)	Rad Elev. Override (ft)	Swap Width & Depth	Area Factor		Qty. per Azimuth			Total Qty. Override	0° Joints		120° Joints		240° Joints		Height (in)	Width (in)	Depth (in)	Weight (Bare) (lb)	Shape	Weight of Ice (lb)	EPA_A (Bare) (ft^2)		EPA_A (Ice) (ft^2)		F_A (Bare) (lb)		F_A (Ice) (lb)	
					Front	Side	0°	120°	240°		1	2	1	2	1	2							N	T	N	T	N	T	N	T
AIR 21, 1.3M, B2A/B4P				☐			1	1	1		A1	A2	B1	B2	G1	G2	55	12	7.9	83	Flat	233.19	5.92	4.22	8.59	6.74	275.26	196.03	63.86	50.12
KRY 112 144/1				☐	0		1	1	1		A3		B3		G3		7	6	3	11	Flat	14.68	0.00	0.18	0.00	0.74	0.00	8.13	0.00	5.49
APXVAARR24_43-U-NA20				☐			1	1	1		A4	A5	B4	B5	G4	G5	0	0	0	153.3	Generic	520.38	14.67	5.32	18.18	8.42	681.59	247.17	135.17	62.57
RADIO 4449 B12/B71				☑	0.5		1	1	1		A6		B6		G6		15	13.2	10.4	75	Flat	79.52	0.65	1.65	1.23	2.91	30.20	76.66	9.13	21.66
AIR 32 B66Aa/B2A				☐			1	1	1		A7	A8	B7	B8	G7	G8	56.6	12.9	8.7	132.2	Flat	257.27	6.51	4.71	9.27	7.32	302.46	218.94	68.90	54.45



Envelope Only Solution

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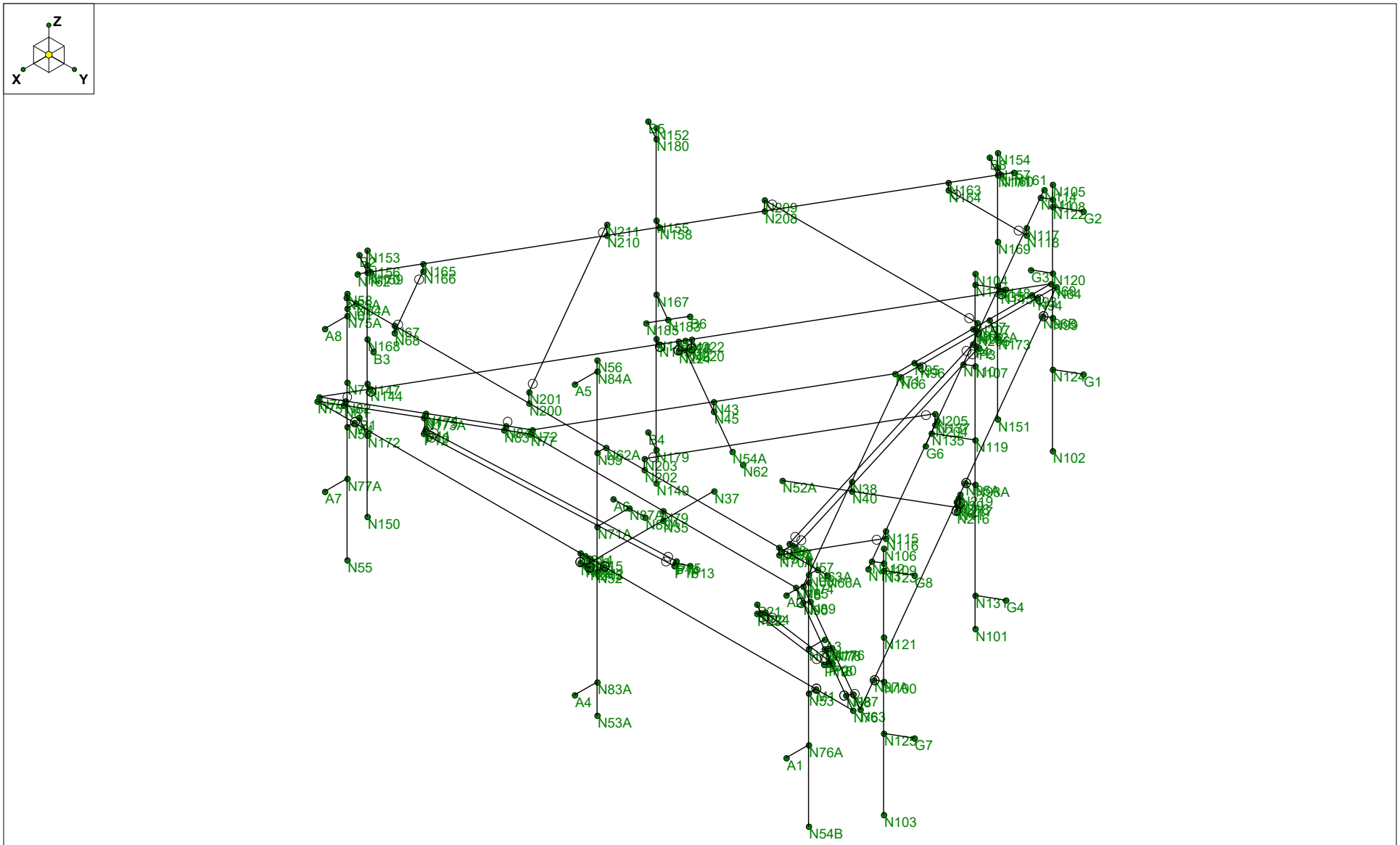
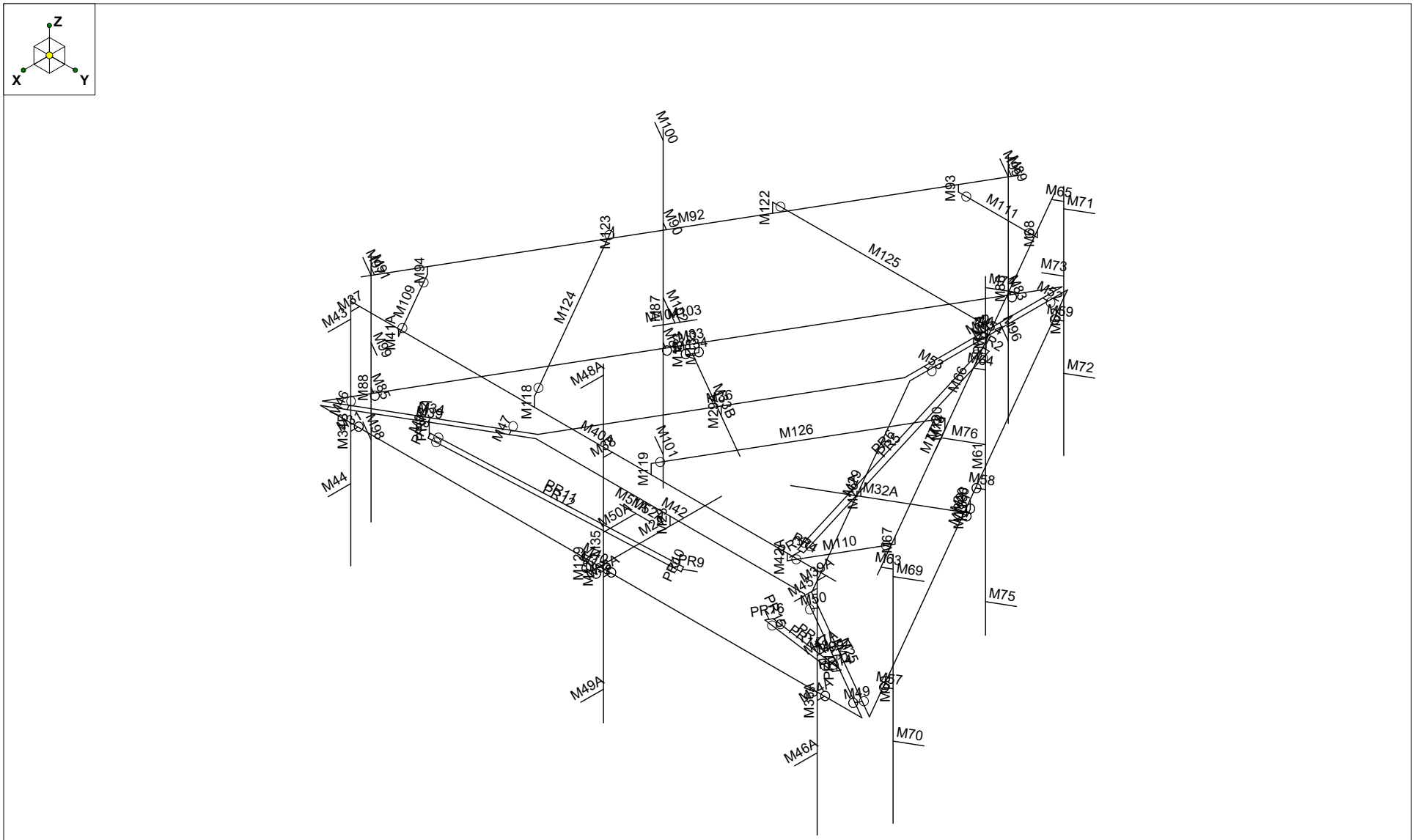
SMR		July 8, 2019 at 10:43 AM
41124-12927170-01-MA-R1	Rendered	41124-12927170-01-MA-R1.r3d



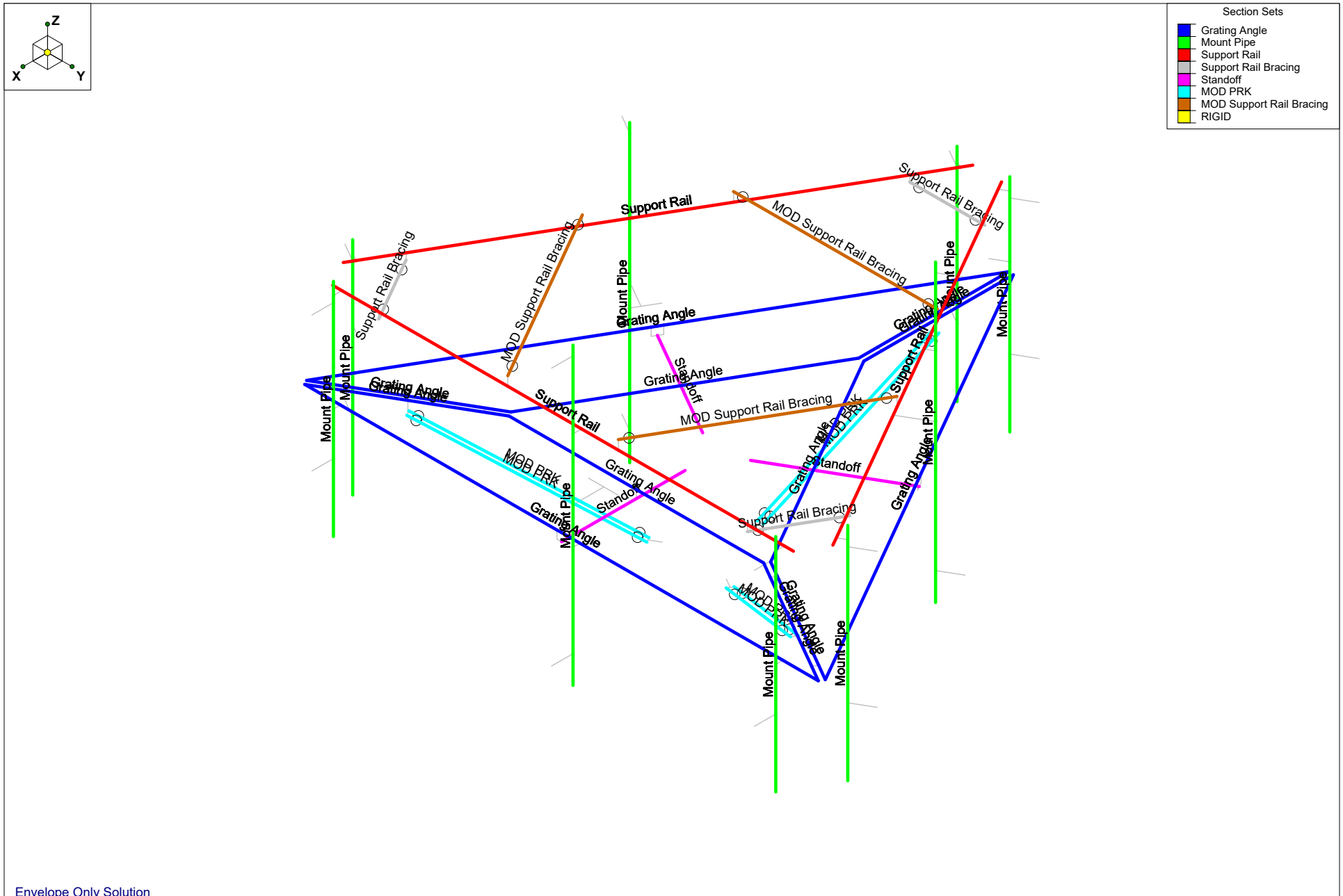
Envelope Only Solution

CLS	41124-12927170-Enfd - Enfield	SK - 2
SMR		July 8, 2019 at 10:43 AM
41124-12927170-01-MA-R1	Joint Labels	41124-12927170-01-MA-R1.r3d



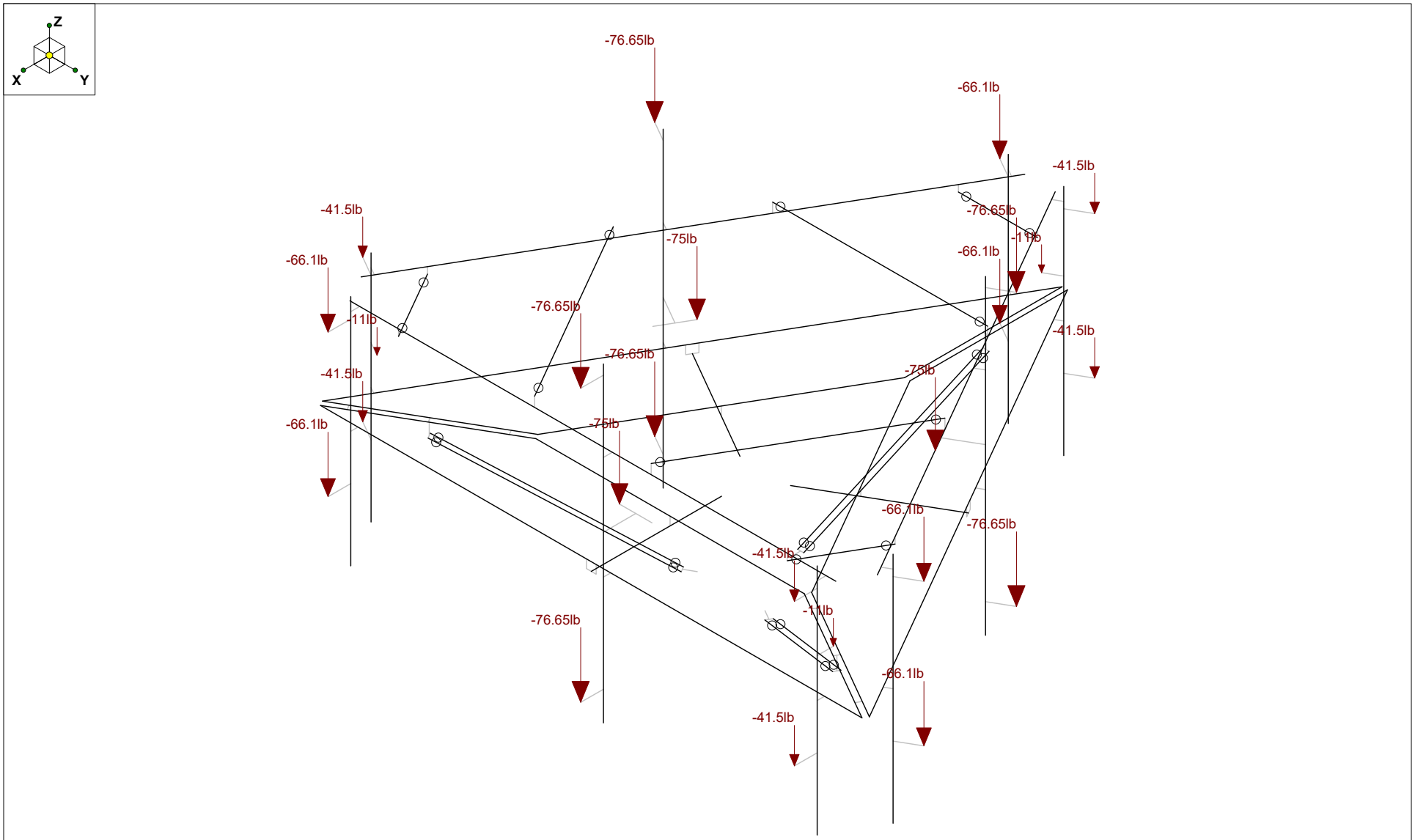
Envelope Only Solution

CLS	41124-12927170-Enfd - Enfield	SK - 3
SMR		July 8, 2019 at 10:43 AM
41124-12927170-01-MA-R1	Member Labels	41124-12927170-01-MA-R1.r3d



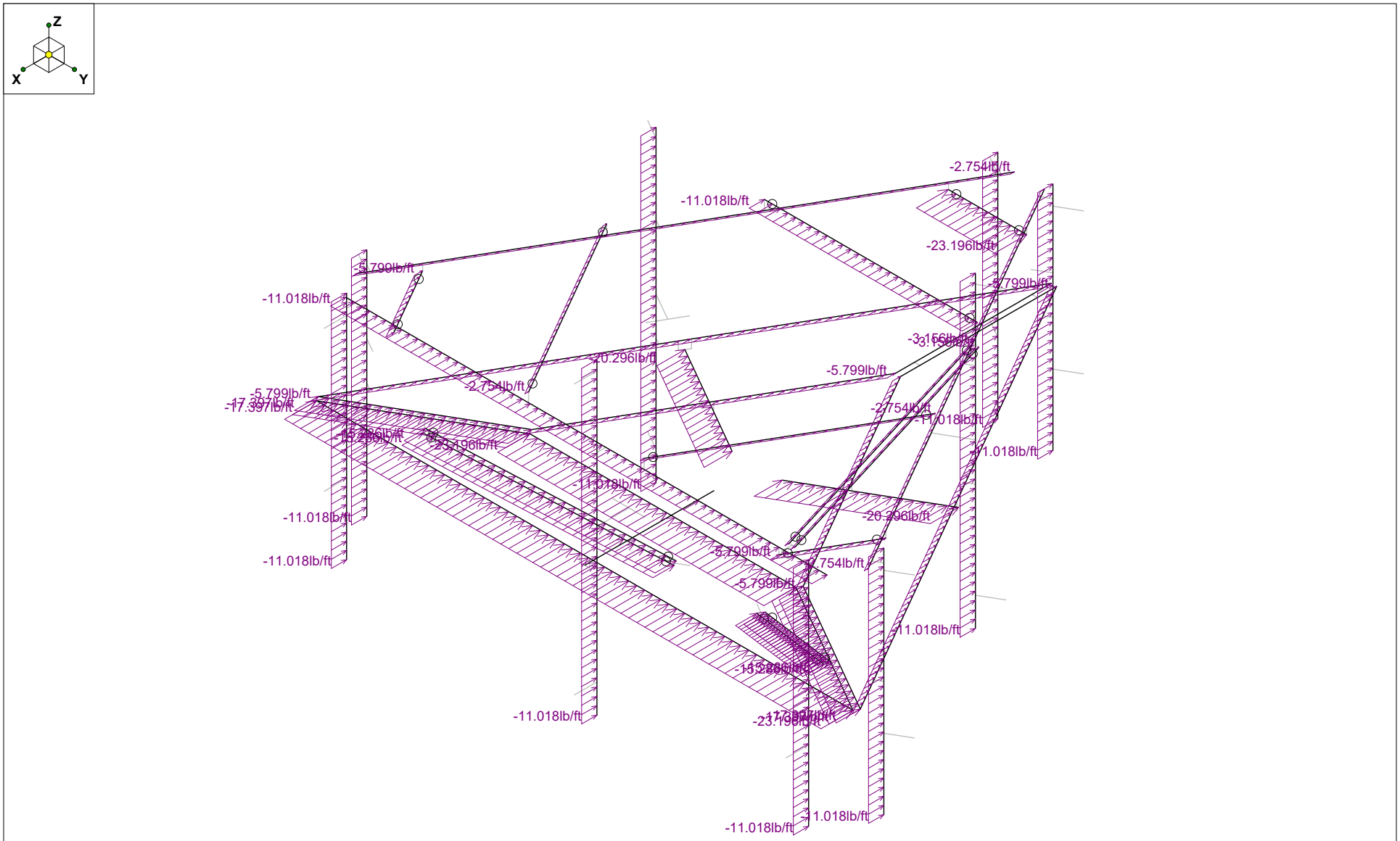
Envelope Only Solution

CLS	41124-12927170-Enfd - Enfield	SK - 4
SMR		July 8, 2019 at 10:44 AM
41124-12927170-01-MA-R1	Section Sets	41124-12927170-01-MA-R1.r3d



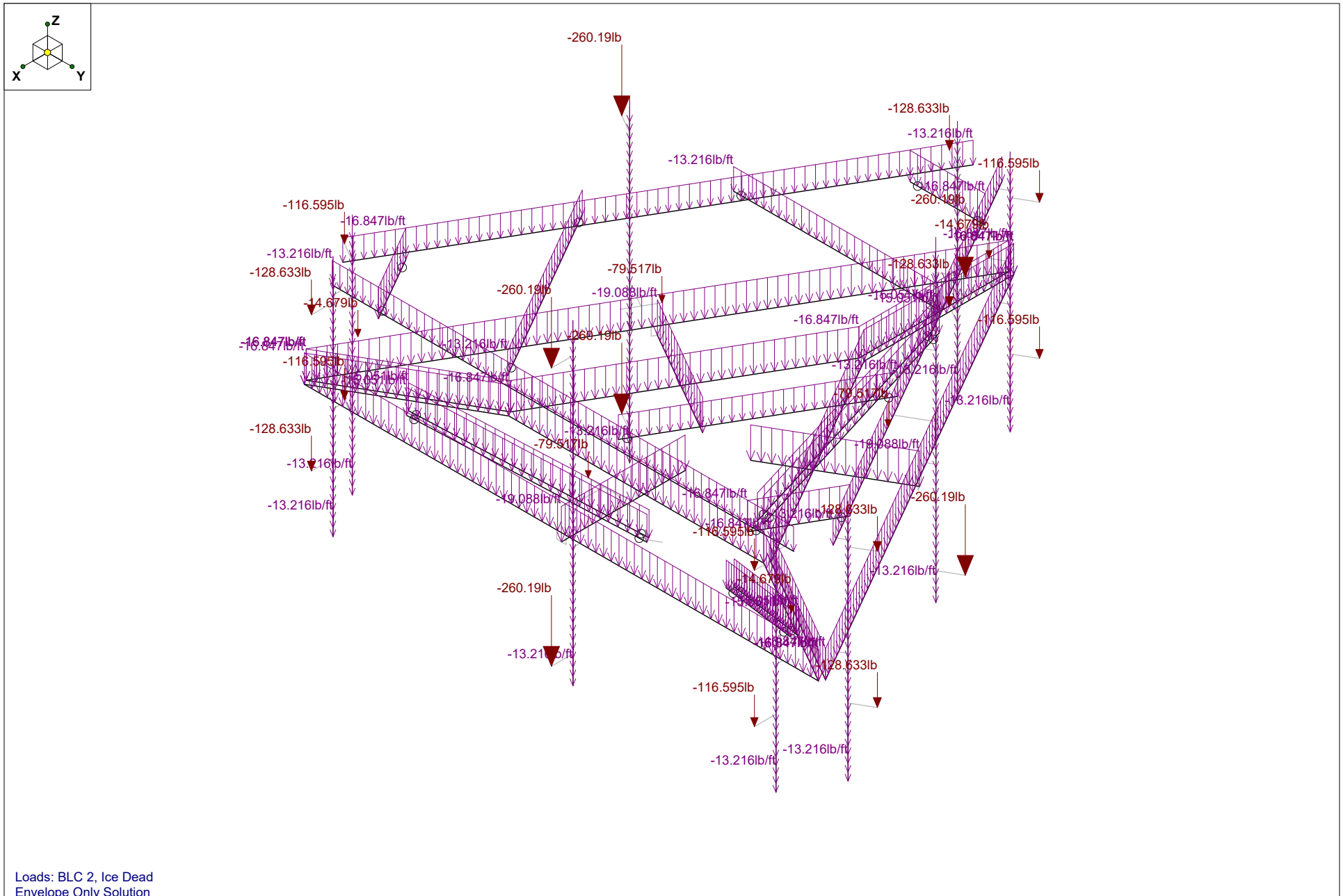
Loads: BLC 1, Dead
Envelope Only Solution

CLS		SK - 5
SMR	41124-12927170-Enfd - Enfield	July 8, 2019 at 10:44 AM
41124-12927170-01-MA-R1	Joint Loads - Dead and Normal Wind	41124-12927170-01-MA-R1.r3d



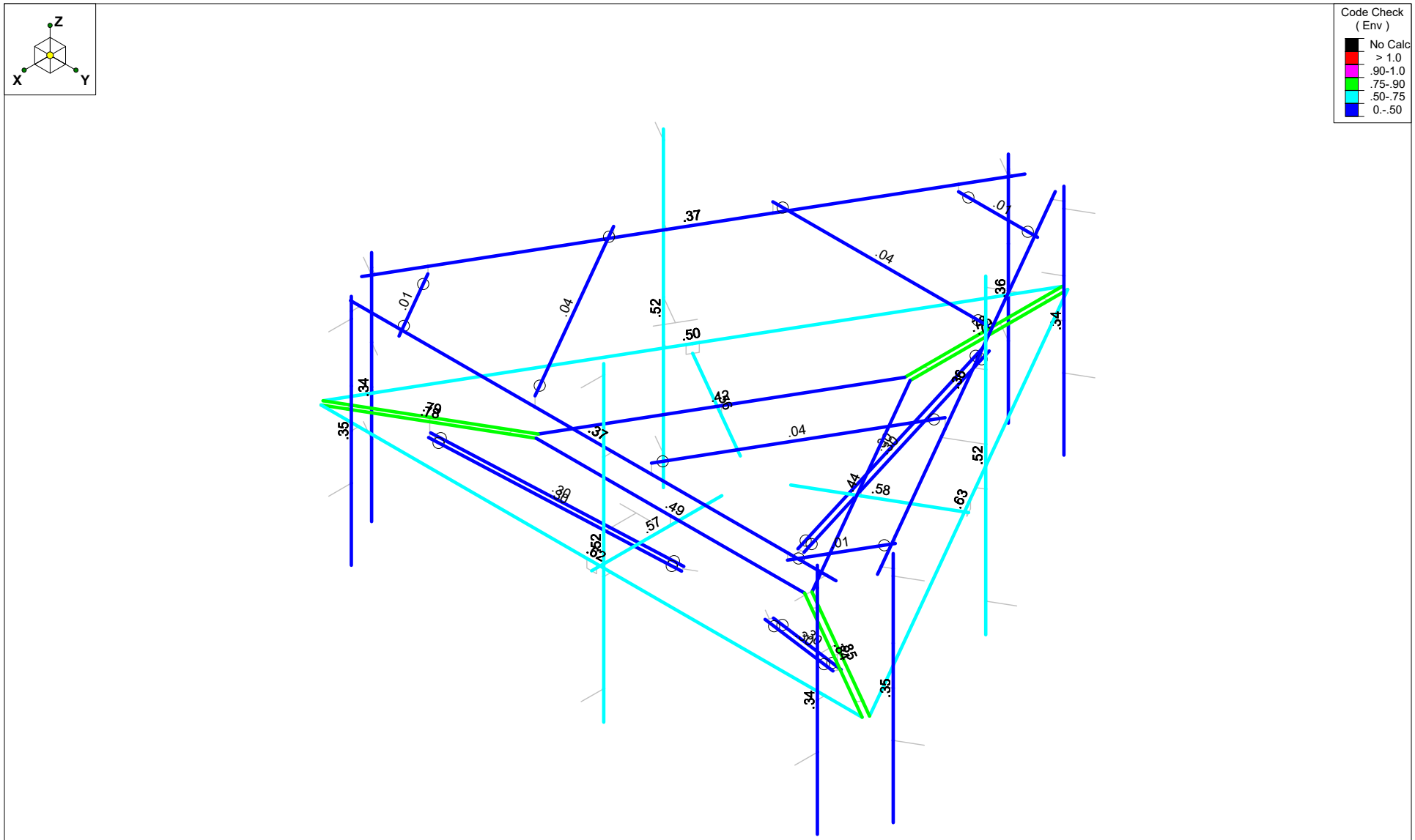
Loads: BLC 4, Structure Wind 0°
Envelope Only Solution

CLS		SK - 6
SMR	41124-12927170-Enfd - Enfield	July 8, 2019 at 10:56 AM
41124-12927170-01-MA-R1	Distributed Load - Normal Wind	41124-12927170-01-MA-R1.r3d



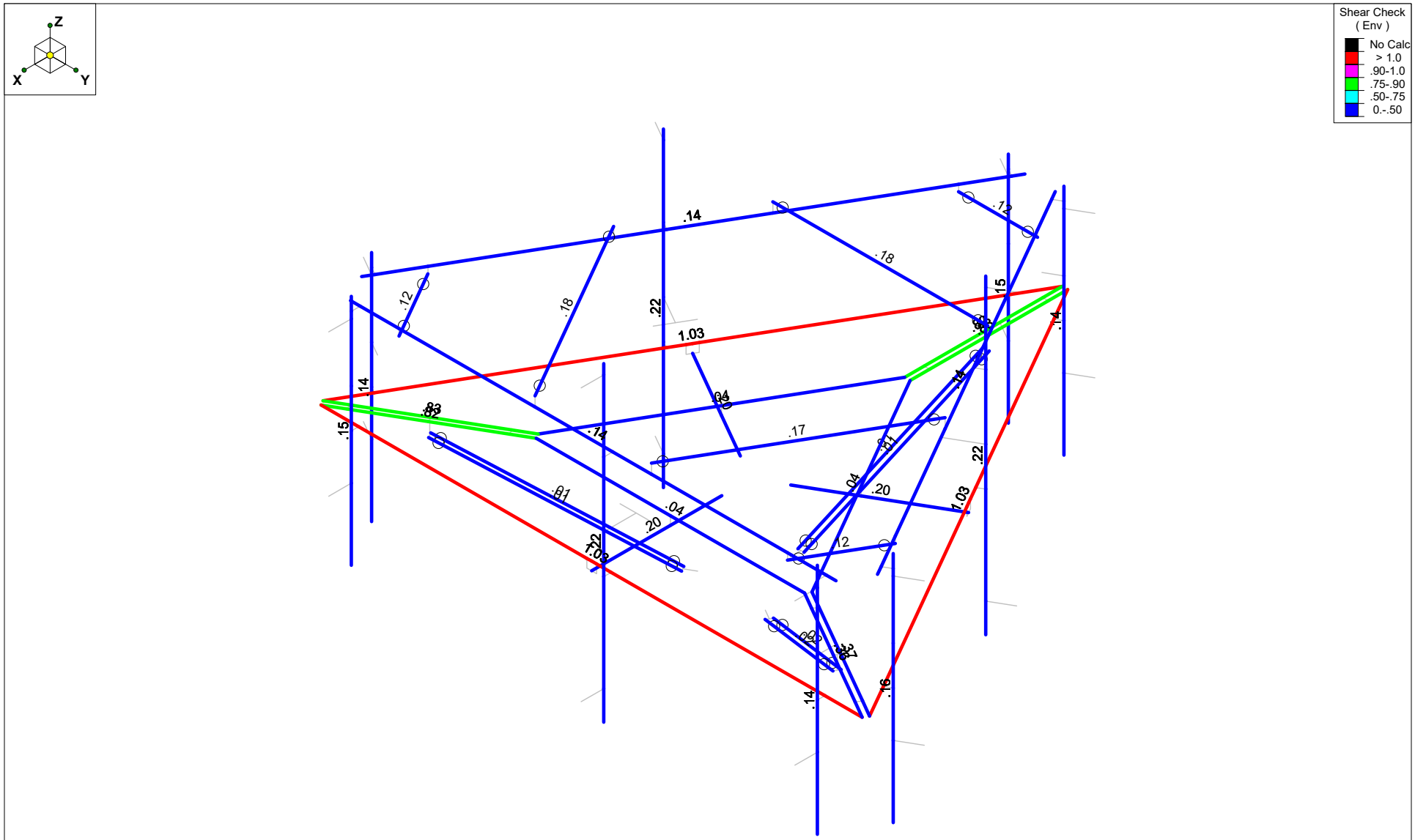
Loads: BLC 2, Ice Dead
Envelope Only Solution

CLS		SK - 7
SMR	41124-12927170-Enfd - Enfield	July 8, 2019 at 10:56 AM
41124-12927170-01-MA-R1	Ice Dead Loads	41124-12927170-01-MA-R1.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

CLS	41124-12927170-Enfd - Enfield	SK - 8
SMR		July 8, 2019 at 10:45 AM
41124-12927170-01-MA-R1	Envelope Member Unity Check Results - Bending	41124-12927170-01-MA-R1.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

CLS		SK - 9
SMR	41124-12927170-Enfd - Enfield	July 8, 2019 at 10:45 AM
41124-12927170-01-MA-R1	Envelope Member Check Results - Shear	41124-12927170-01-MA-R1.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	Dead	DL			-1	24				
2	Ice Dead	RL				24		39		
4	Structure Wind 0Á	None						36		
5	Structure Wind 30Á	None						68		
6	Structure Wind 45Á	None						78		
7	Structure Wind 60Á	None						72		
8	Structure Wind 90Á	None						34		
9	Structure Wind 120Á	None						72		
10	Structure Wind 135Á	None						78		
11	Structure Wind 150Á	None						68		
12	Structure Wind w/ Ice 0Á	None						36		
13	Structure Wind w/ Ice 30Á	None						68		
14	Structure Wind w/ Ice 45Á	None						78		
15	Structure Wind w/ Ice 60Á	None						72		
16	Structure Wind w/ Ice 90Á	None						34		
17	Structure Wind w/ Ice 120Á	None						72		
18	Structure Wind w/ Ice 135Á	None						78		
19	Structure Wind w/ Ice 150Á	None						68		
20	Antenna Wind 0Á	None				23				
21	Antenna Wind 30Á	None				48				
22	Antenna Wind 45Á	None				48				
23	Antenna Wind 60Á	None				46				
24	Antenna Wind 90Á	None				24				
25	Antenna Wind 120Á	None				46				
26	Antenna Wind 135Á	None				48				
27	Antenna Wind 150Á	None				48				
28	Antenna Wind w/ Ice 0Á	None				23				
29	Antenna Wind w/ Ice 30Á	None				48				
30	Antenna Wind w/ Ice 45Á	None				48				
31	Antenna Wind w/ Ice 60Á	None				46				
32	Antenna Wind w/ Ice 90Á	None				24				
33	Antenna Wind w/ Ice 120Á	None				46				
34	Antenna Wind w/ Ice 135Á	None				48				
35	Antenna Wind w/ Ice 150Á	None				48				
39	Maintenance Live 500 (1)	OL1				1				
40	Maintenance Live 500 (2)	OL2				1				
41	Maintenance Live 500 (3)	OL3				1				

Load Combinations

	Description	Solve	PDe..	SRSS	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
1	DISPLAY (1.0D + ...	Yes	Y		DL	1	20	1																		
2	1.4D	Yes	Y		DL	1.4																				
3	1.2D + 1.0W 0Á	Yes	Y		DL	1.2	4	1	20	1																
4	1.2D + 1.0W_30Á	Yes	Y		DL	1.2	5	1	21	1																
5	1.2D + 1.0W_45Á	Yes	Y		DL	1.2	6	1	22	1																
6	1.2D + 1.0W_60Á	Yes	Y		DL	1.2	7	1	23	1																
7	1.2D + 1.0W_90Á	Yes	Y		DL	1.2	8	1	24	1																
8	1.2D + 1.0W_120Á	Yes	Y		DL	1.2	9	1	25	1																
9	1.2D + 1.0W_135Á	Yes	Y		DL	1.2	10	1	26	1																

Load Combinations (Continued)

	Description	Solve	PDe..	SRSS	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
10	1.2D + 1.0W_150Á	Yes	Y		DL	1.2	11	1	27	1																
11	1.2D + 1.0W_180Á	Yes	Y		DL	1.2	4	-1	20	-1																
12	1.2D + 1.0W_210Á	Yes	Y		DL	1.2	5	-1	21	-1																
13	1.2D + 1.0W_225Á	Yes	Y		DL	1.2	6	-1	22	-1																
14	1.2D + 1.0W_240Á	Yes	Y		DL	1.2	7	-1	23	-1																
15	1.2D + 1.0W_270Á	Yes	Y		DL	1.2	8	-1	24	-1																
16	1.2D + 1.0W_300Á	Yes	Y		DL	1.2	9	-1	25	-1																
17	1.2D + 1.0W_315Á	Yes	Y		DL	1.2	10	-1	26	-1																
18	1.2D + 1.0W_330Á	Yes	Y		DL	1.2	11	-1	27	-1																
19	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	12	1	28	1	RL	1														
20	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	13	1	29	1	RL	1														
21	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	14	1	30	1	RL	1														
22	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	15	1	31	1	RL	1														
23	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	16	1	32	1	RL	1														
24	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	17	1	33	1	RL	1														
25	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	18	1	34	1	RL	1														
26	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	19	1	35	1	RL	1														
27	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	12	-1	28	-1	RL	1														
28	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	13	-1	29	-1	RL	1														
29	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	14	-1	30	-1	RL	1														
30	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	15	-1	31	-1	RL	1														
31	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	16	-1	32	-1	RL	1														
32	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	17	-1	33	-1	RL	1														
33	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	18	-1	34	-1	RL	1														
34	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	19	-1	35	-1	RL	1														
35	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	4	.061	20	.061	OL1	1.5														
36	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	5	.061	21	.061	OL1	1.5														
37	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	6	.061	22	.061	OL1	1.5														
38	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	7	.061	23	.061	OL1	1.5														
39	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	8	.061	24	.061	OL1	1.5														
40	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	9	.061	25	.061	OL1	1.5														
41	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	10	.061	26	.061	OL1	1.5														
42	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	11	.061	27	.061	OL1	1.5														
43	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	4	-.061	20	-.061	OL1	1.5														
44	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	5	-.061	21	-.061	OL1	1.5														
45	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	6	-.061	22	-.061	OL1	1.5														
46	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	7	-.061	23	-.061	OL1	1.5														
47	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	8	-.061	24	-.061	OL1	1.5														
48	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	9	-.061	25	-.061	OL1	1.5														
49	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	10	-.061	26	-.061	OL1	1.5														
50	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	11	-.061	27	-.061	OL1	1.5														
51	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	4	.061	20	.061	OL2	1.5														
52	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	5	.061	21	.061	OL2	1.5														
53	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	6	.061	22	.061	OL2	1.5														
54	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	7	.061	23	.061	OL2	1.5														
55	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	8	.061	24	.061	OL2	1.5														
56	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	9	.061	25	.061	OL2	1.5														
57	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	10	.061	26	.061	OL2	1.5														
58	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	11	.061	27	.061	OL2	1.5														
59	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	4	-.061	20	-.061	OL2	1.5														
60	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	5	-.061	21	-.061	OL2	1.5														
61	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	6	-.061	22	-.061	OL2	1.5														

Load Combinations (Continued)

	Description	Solve	PDe..	SRSS	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
62	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	7	-.061	23	-.061	OL2	1.5														
63	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	8	-.061	24	-.061	OL2	1.5														
64	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	9	-.061	25	-.061	OL2	1.5														
65	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	10	-.061	26	-.061	OL2	1.5														
66	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	11	-.061	27	-.061	OL2	1.5														
67	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	4	.061	20	.061	OL3	1.5														
68	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	5	.061	21	.061	OL3	1.5														
69	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	6	.061	22	.061	OL3	1.5														
70	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	7	.061	23	.061	OL3	1.5														
71	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	8	.061	24	.061	OL3	1.5														
72	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	9	.061	25	.061	OL3	1.5														
73	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	10	.061	26	.061	OL3	1.5														
74	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	11	.061	27	.061	OL3	1.5														
75	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	4	-.061	20	-.061	OL3	1.5														
76	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	5	-.061	21	-.061	OL3	1.5														
77	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	6	-.061	22	-.061	OL3	1.5														
78	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	7	-.061	23	-.061	OL3	1.5														
79	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	8	-.061	24	-.061	OL3	1.5														
80	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	9	-.061	25	-.061	OL3	1.5														
81	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	10	-.061	26	-.061	OL3	1.5														
82	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	11	-.061	27	-.061	OL3	1.5														

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Grating Angle	L3X3X4	Beam	None	A36 Gr.36	Typical	1.44	1.23	1.23	.031
2	Mount Pipe	PIPE_2.0	Column	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
3	Support Rail	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Support Rail Bracing	L3X3X4	Beam	None	A36 Gr.36	Typical	1.44	1.23	1.23	.031
5	Standoff	HSS3.5X3.5X4	Beam	None	A36 Gr.36	Typical	2.91	5.04	5.04	8.35
6	MOD PRK	L2.5x2.5x3	Beam	None	A36 Gr.36	Typical	.901	.535	.535	.011
7	MOD Support Rail Brac...	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[...	Lcomp...L-tor...	Kyy	Kzz	Cb	Functi...
1	M25	Grating Angle	48.656			Lbyy					Lateral
2	M26	Grating Angle	167.164	84		Lbyy					Lateral
3	M27	Grating Angle	48.656			Lbyy					Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[...	Lcomp...	L-tor...	Kyy	Kzz	Cb	Functi...
4	M29	Grating Angle	82.889	42		Lbyy						Lateral
5	M32	Grating Angle	48.656			Lbyy						Lateral
6	M33	Grating Angle	167.164	84		Lbyy						Lateral
7	M34	Grating Angle	48.656			Lbyy						Lateral
8	M36	Grating Angle	82.889	42		Lbyy						Lateral
9	M39	Grating Angle	48.656			Lbyy						Lateral
10	M40	Grating Angle	167.164	84		Lbyy						Lateral
11	M41	Grating Angle	48.656			Lbyy						Lateral
12	M42	Grating Angle	82.889	42		Lbyy						Lateral
13	M24	Standoff	40.221			Lbyy						Lateral
14	M32A	Standoff	40.221			Lbyy						Lateral
15	M33B	Standoff	40.221			Lbyy						Lateral
16	M34B	Mount Pipe	72			Lbyy						Lateral
17	M35	Mount Pipe	96			Lbyy						Lateral
18	M36A	Mount Pipe	72			Lbyy						Lateral
19	M40A	Support Rail	150			Lbyy						Lateral
20	M60	Mount Pipe	72			Lbyy						Lateral
21	M61	Mount Pipe	96			Lbyy						Lateral
22	M62	Mount Pipe	72			Lbyy						Lateral
23	M66	Support Rail	150			Lbyy						Lateral
24	M86	Mount Pipe	72			Lbyy						Lateral
25	M87	Mount Pipe	96			Lbyy						Lateral
26	M88	Mount Pipe	72			Lbyy						Lateral
27	M92	Support Rail	150			Lbyy						Lateral
28	M109	Support Rail Bracing	24.388			Lbyy						Lateral
29	M110	Support Rail Bracing	24.388			Lbyy						Lateral
30	M111	Support Rail Bracing	24.388			Lbyy						Lateral
31	PR5	MOD PRK	62.564									Lateral
32	PR6	MOD PRK	62.564									Lateral
33	PR11	MOD PRK	62.564									Lateral
34	PR12	MOD PRK	62.564									Lateral
35	PR17	MOD PRK	62.564									Lateral
36	PR18	MOD PRK	62.564									Lateral
37	M124	MOD Support Rail Bracing	66.388			Lbyy						Lateral
38	M125	MOD Support Rail Bracing	66.388			Lbyy						Lateral
39	M126	MOD Support Rail Bracing	66.388			Lbyy						Lateral

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N52A	max	2702.888	3	1998.253	15	1215.297	23	4007.082	24	2565.854	19	2761.734	11
2		min	-2868.26	11	-1724.54	7	273.958	47	618.349	15	148.863	11	-2740.755	3
3	N54A	max	2690.464	3	1746.889	15	1200.156	33	-684.415	7	2267.581	19	2740.909	6
4		min	-2832.613	11	-1998.489	7	272.028	73	-4000.538	31	29.247	11	-2732.552	14
5	P5	max	-567.858	11	98.039	15	2243.079	19	17.568	16	630.866	19	26.593	12
6		min	-4847.479	19	-98.248	7	263.445	11	-17.813	8	74.094	11	-27.527	10
7	P21	max	2395.687	24	4150.275	24	2219.637	24	540.534	24	-26.755	15	99.403	38
8		min	286.79	16	496.699	16	265.976	16	64.966	17	-313.623	23	-45.932	11
9	P13	max	2424.964	30	-493.124	6	2243.807	30	-62.702	5	-33.392	7	26.091	12
10		min	284.7	6	-4199.232	30	264.132	6	-547.057	30	-314.612	30	-39.861	79
11	N37	max	1185.853	3	3011.012	16	1212.855	27	644.105	8	-871.687	1	2931.654	17

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
12		min	-873.016	11	-3000.975	6	264.462	1	-568.154	16	-4637.784	27	-2928.053	9
13	Totals:	max	5579.449	3	5579.274	15	9943.73	32						
14		min	-5579.457	11	-5579.263	7	2410.337	1						

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Member	Shape	Code Ch...	Loc[in]	LC	Shear ...	Loc[in]	...	LC	phi*Pnc ..	phi*Pnt [...	phi*Mn y-y [...	phi*Mn z...	Cb	Eqn
1	M26	L3X3X4	.627	154.9...	27	1.034	0	y	32	15778.1...	46656	1688.138	2280.997	1	H2-1
2	M33	L3X3X4	.503	154.9...	23	1.027	0	y	27	15778.1...	46656	1688.138	2280.997	1	H2-1
3	M40	L3X3X4	.619	12.189	22	1.026	167.1...	y	32	15778.1...	46656	1688.138	2280.997	1	H2-1
4	M27	L3X3X4	.786	24.328	19	.828	5.575	z	19	32415.0...	46656	1688.138	3655.912	1.401	H2-1
5	M34	L3X3X4	.787	24.328	30	.827	5.575	z	30	32415.0...	46656	1688.138	3656.106	1.402	H2-1
6	M39	L3X3X4	.781	24.328	30	.819	5.575	y	30	32415.0...	46656	1688.138	3655.518	1.4	H2-1
7	M32	L3X3X4	.781	24.328	19	.818	5.575	y	19	32415.0...	46656	1688.138	3655.706	1.401	H2-1
8	M25	L3X3X4	.855	24.328	28	.369	43.081	z	24	32415.0...	46656	1688.138	3640.336	1.364	H2-1
9	M41	L3X3X4	.842	24.328	22	.361	43.081	y	24	32415.0...	46656	1688.138	3638.958	1.361	H2-1
10	M87	PIPE_2.0	.517	39	8	.216	51		12	14916.0...	32130	1871.625	1871.625	4.969	H1-1b
11	M61	PIPE_2.0	.517	39	14	.216	51		18	14916.0...	32130	1871.625	1871.625	4.946	H1-1b
12	M35	PIPE_2.0	.517	39	3	.216	51		7	14916.0...	32130	1871.625	1871.625	4.955	H1-1b
13	M32A	HSS3.5X...	.575	40.221	24	.199	40.221	z	3	89759.8...	94284	9450	9450	1.594	H1-1b
14	M33B	HSS3.5X...	.557	40.221	19	.198	40.221	z	14	89759.8...	94284	9450	9450	1.603	H1-1b
15	M24	HSS3.5X...	.573	40.221	24	.198	40.221	z	8	89759.8...	94284	9450	9450	1.593	H1-1b
16	M125	PIPE_2.0	.041	33.194	19	.175	0		7	22260.6...	32130	1871.625	1871.625	1.136	H1-1b
17	M124	PIPE_2.0	.041	33.194	30	.175	66.388		9	22260.6...	32130	1871.625	1871.625	1.136	H1-1b
18	M126	PIPE_2.0	.041	33.194	24	.172	0		12	22260.6...	32130	1871.625	1871.625	1.136	H1-1b
19	M60	PIPE_2.0	.351	67.5	10	.156	66		7	20866.7...	32130	1871.625	1871.625	2.447	H1-1b
20	M34B	PIPE_2.0	.355	67.5	15	.154	66		12	20866.7...	32130	1871.625	1871.625	2.452	H1-1b
21	M86	PIPE_2.0	.357	67.5	5	.154	66		18	20866.7...	32130	1871.625	1871.625	2.459	H1-1b
22	M40A	PIPE_2.0	.367	3.125	15	.143	92.188		9	6295.422	32130	1871.625	1871.625	2.244	H1-1b
23	M66	PIPE_2.0	.364	3.125	10	.142	92.188		3	6295.422	32130	1871.625	1871.625	2.246	H1-1b
24	M92	PIPE_2.0	.370	3.125	21	.141	92.188		14	6295.422	32130	1871.625	1871.625	1.99	H1-1b
25	M36A	PIPE_2.0	.336	67.5	7	.139	66		10	20866.7...	32130	1871.625	1871.625	2.451	H1-1b
26	M62	PIPE_2.0	.341	67.5	17	.137	66		4	20866.7...	32130	1871.625	1871.625	2.463	H1-1b
27	M88	PIPE_2.0	.340	67.5	12	.137	66		15	20866.7...	32130	1871.625	1871.625	2.455	H1-1b
28	M109	L3X3X4	.010	12.194	14	.122	24.388	z	10	42576.72	46656	1688.138	3755.745	1.136	H2-1
29	M111	L3X3X4	.010	12.194	3	.122	24.388	z	15	42576.72	46656	1688.138	3755.745	1.136	H2-1
30	M110	L3X3X4	.010	12.194	8	.120	24.388	z	4	42576.72	46656	1688.138	3755.745	1.136	H2-1
31	M42	L3X3X4	.486	41.445	24	.045	82.889	y	23	35567.9...	46656	1688.138	3028.367	1	H2-1
32	M29	L3X3X4	.439	41.445	24	.042	0	y	25	35567.9...	46656	1688.138	3028.367	1	H2-1
33	M36	L3X3X4	.415	41.445	29	.035	82.889	y	29	35567.9...	46656	1688.138	3028.367	1	H2-1
34	PR18	L2.5x2.5x3	.296	31.282	26	.016	62.564	y	12	12000.9...	29192.4	872.574	1643.803	1.136	H2-1
35	PR17	L2.5x2.5x3	.297	31.282	23	.016	62.564	z	12	12000.9...	29192.4	872.574	1643.803	1.136	H2-1
36	PR11	L2.5x2.5x3	.299	31.282	28	.014	62.564	z	10	12000.9...	29192.4	872.574	1643.803	1.136	H2-1
37	PR12	L2.5x2.5x3	.296	31.282	31	.014	0	y	10	12000.9...	29192.4	872.574	1643.803	1.136	H2-1
38	PR5	L2.5x2.5x3	.299	31.282	34	.014	62.564	z	15	12000.9...	29192.4	872.574	1643.803	1.136	H2-1
39	PR6	L2.5x2.5x3	.295	31.282	20	.014	62.564	y	15	12000.9...	29192.4	872.574	1643.803	1.136	H2-1

Exhibit E

Mount Analysis

Mount Analysis of Existing Platform w/ Support Rails for American Tower on behalf of T-Mobile
302489 - Enfd - Enfield
Project #: 12927170

T-Mobile Site ID: CT11534A

Program: L600

CLS Engineering PLLC Project #41124-12927170-01-MA-R1

July 8, 2019

MOUNT DESCRIPTION	Existing Platform w/ Support Rails at 139 ft AGL
ANTENNA ELEVATION	Nominal Rad. Elevation of 140 ft AGL (Eccentricity of ~1 ft)
SITE DESCRIPTION	150 ft Monopole
SITE ADDRESS	Town Farm Road, Enfield, CT 06082, Hartford County
GPS COORDINATES	41.965900, -72.552700
ANALYSIS STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
LOADING CRITERIA	125 mph, V_{ult} / 96.8 mph, V_{asd} (3-Second Gust) w/o ice & 50 mph (3-Second Gust) w/ 1" Ice

■ **ANALYSIS RESULT:** **Pass (Conditional)**

MEMBER USAGE	*103%*	*Acceptable*
COLLAR USAGE	**93%**	**Pass**

Usages up to 105% are considered acceptable.

Modifications are proposed to bring mounts into compliance; see conclusion for details.

Prepared by:
Sean Rock, E.I.

Reviewed and Approved by:
Tyler M. Barker, P.E.

STATE OF CONNECTICUT
TYLER M BARKER
No. 32402
LICENSED PROFESSIONAL ENGINEER

Tyler M. Barker
CLS Engineering, PLLC
Director of Engineering
PE # 32402 Exp. 1/31/2020
COA # PEC.001833 Exp. 8/14/2019

IdenTrust part of HID Global
Digitally signed by Tyler Barker
DN: c=US, o=Telamon Corporation, ou=A01427E0000016A4525ADF800001D17, cn=Tyler Barker
Date: 2019.07.08 17:27:04 -04'00'

■ INTRODUCTION

The proposed equipment is to be mounted to the existing Platform w/ Support Rails. This proposed mounting configuration was analyzed using RISA-3D, a commercially available finite element analysis software package. A selection of input and output from our analysis is attached to the end of this report.

■ STRUCTURAL DOCUMENTS PROVIDED

STRUCTURAL DATA	Site Photos dated July 17, 2018 Site Pro 1 Drawings, Part #PRK-1245L, dated July 22, 2014 Site Pro 1 Drawings, Part #PUCK, dated August 30, 2010
PREVIOUS ANALYSES	Structural Analysis by American Tower Corporation, Engineering #OAA713357_C3_02, dated January 7, 2019
LOADING DATA	ATC Application, Project #12927170, dated April 2, 2019

■ ANALYSIS CRITERIA

STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
BASIC WIND SPEED	125 mph, V_{ult} / 96.8 mph, V_{asd} (3-Second Gust)
BASIC WIND SPEED W/ ICE	50 mph (3-Second Gust) w/ 1" Radial Ice (Escalating)
EXPOSURE CATEGORY	C
MAX. TOPOGRAPHIC FACTOR, K_{zt}	1.00
RISK CATEGORY	II
MAINTENANCE LIVE LOAD	L_M: 500 lb

■ FINAL EQUIPMENT

ELEVATION (ft)		ANTENNAS	
MOUNT	**RAD.**	**#**	**NAME**
139.0	140.0	3	Ericsson AIR 32 B66Aa/B2A
		3	Ericsson AIR 21, 1.3M, B2A/B4P
		3	Ericsson RADIO 4449 B12/B71
		3	Ericsson KRY 112 144/1
		3	RFS Celwave APXVAARR24_43-U-NA20

■ RESULTS SUMMARY

Existing Mount Usages:

COMPONENT	PEAK USAGE	RESULT
Collar Reactions	156%	Fail
Platform Base	117%	Fail
Stand-Off Horizontals	88%	Pass
Mount Pipes	69%	Pass

Mount Usages after Modification:

COMPONENT	PEAK USAGE	RESULT
Face Horizontals	*103%*	*Acceptable*
Collar Reactions	93%	Pass
Platform Base	85%	Pass
Stand-Off Horizontals	58%	Pass
Mount Pipes	52%	Pass
Support Rail	37%	Pass
Reinforcement Members	30%	Pass

Usages up to 105% are considered acceptable.

■ CONCLUSION AND RECOMMENDATIONS

According to our structural analysis, the mounts have been found to **CONDITIONALLY PASS**. The mounting configuration considered in this analysis will be capable of supporting the referenced loading pursuant to referenced standards once the following scope is executed:

- **Install (3) 6'-6" long Pipe 2 STD, A53 Gr. B, support rail bracing pipes at the existing platform mount. Connect to existing support rail pipes with Site Pro 1 PUCK or equal, as shown in the following sketches.**
- **Remove (6) existing pipe kickers from below platform.**
- **Install (1) proposed Site Pro 1 PRK-1245L. Connect to offset angles using 1/2"ø A325 bolts with proposed Site Pro 1 X-253992 T-bracket included in the kit. Field-Cut proposed angles as required. Maintain minimum bolt edge distances.**
- **Connect offset angles to each other as Show in the following sketches.**
- **All hardware for Site Pro 1 PUCK connection to the existing support rails should be installed with "turn of the nut" method per the following table:**

BOLT TIGHTENING PROCEDURE

1. TIGHTEN BOLTS BY AISC "TURN OF THE NUT" METHOD USING THE CHART BELOW:

   BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS:
   +1/3 TURN BEYOND SNUG TIGHT

   BOLT LENGTHS OVER FOUR AND UP TO EIGHT DIAMETERS:
   +1/2 TURN BEYOND SNUG TIGHT

   BOLT LENGTHS OVER EIGHT AND UP TO TWELVE DIAMETERS:
   +2/3 TURN BEYOND SNUG TIGHT

2. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8(d)(1) OF THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS AS FOLLOWS:

   "FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND BE TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8(d)(1) THROUGH 8(d)(4).

   8(d)(1) TURN-OF-THE-NUT TIGHTENING.
   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION. SNUG TIGHT IS DEFINED AS THE TIGHTNESS THAT EXISTS WHEN THE PLIES OF A JOINT ARE IN FIRM CONTACT. THIS MAY BE OBTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH. SNUG TIGHTENING SHALL PROGRESS SYSTEMATICALLY...UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION, ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION, THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

BEFORE ⅓ TURN AFTER ⅓ TURN

See following sketches and Site Pro 1 assembly drawings for additional details.

■ ASSUMPTIONS AND CONDITIONS

This analysis is inclusive of the antenna supporting frames/mounts and all recorded connections that will support the equipment listed in this report. It considers only the theoretical capacity of structural components and it is not a condition assessment. The validity of the analysis may be dependent on the accuracy of structural information supplied by others. The client is responsible for verifying this information. If any provided information is revised after completion of this analysis, CLS Engineering PLLC should be notified immediately to revise results.

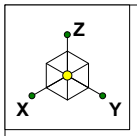
This analysis assumes the following:

1. The tower or other superstructure and mounts (if existing) were properly constructed as per the original design and have been properly maintained in accordance with applicable code standards.
2. Member sizes and strengths are accurate as supplied or are assumed as stated in the calculations.
3. In the absence of sufficient design information, all welds and connections are assumed to develop at least the capacity of the connected member, unless otherwise stated in this analysis.
4. All prior structural modifications, if any, are assumed to be correctly installed and fully effective.
5. The loading configuration is complete and accurate as supplied and/or as modeled in the previous analysis. All appurtenances are assumed to be properly installed and supported as per manufacturer requirements.
6. Some conservative assumptions may be used regarding appurtenances and their projected areas based on careful interpretation of data supplied, previous experience and standard industry practice.

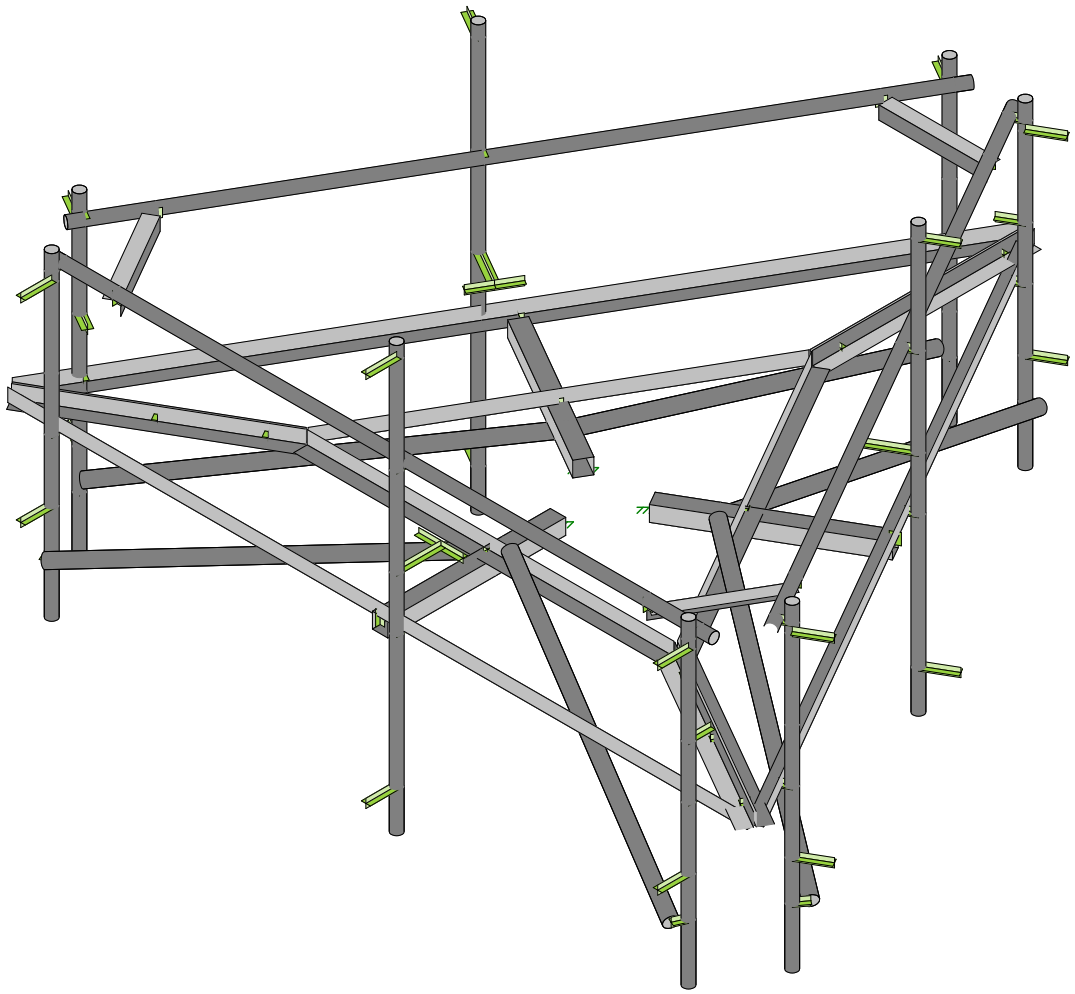
All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of the report. All opinions and conclusions contained herein are subject to revision based upon receipt of new or updated information. All services are provided exercising a level of care and diligence equivalent to the standard of our profession. No warranty or guarantee, either expressed or implied, is offered. All services are confidential in nature and this report will not be released to any other party without the client's consent. The use of this analysis is limited to the expressed purpose for which it was commissioned and it may not be reused, copied or disseminated for any other purpose without consent from CLS Engineering PLLC.

All services were performed, results obtained and recommendations made in accordance with generally accepted engineering principles and practices. CLS Engineering PLLC is not responsible for the conclusions, opinions or recommendations made by others based on the information supplied in this analysis.

It is not possible to have the fully detailed information necessary to perform a complete and thorough analysis of every structural sub-component of an existing structure. The structural analysis by CLS Engineering PLLC verifies the adequacy of the primary members of the structure. CLS Engineering PLLC provides a limited scope of service in that we cannot verify the adequacy of every weld, bolt, gusset, etc.



Existing Mount - To Be Modified



CLS		EX - 1
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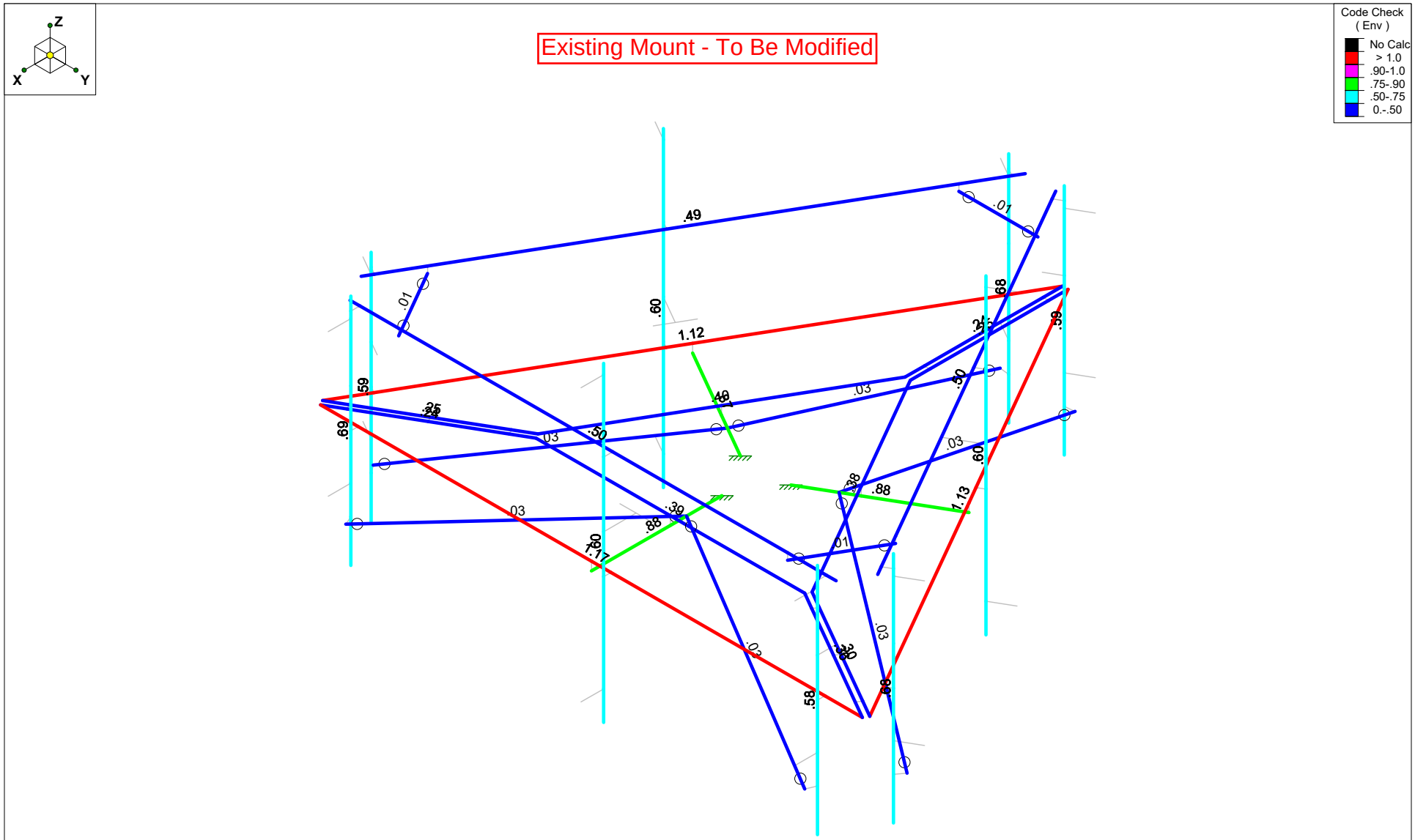
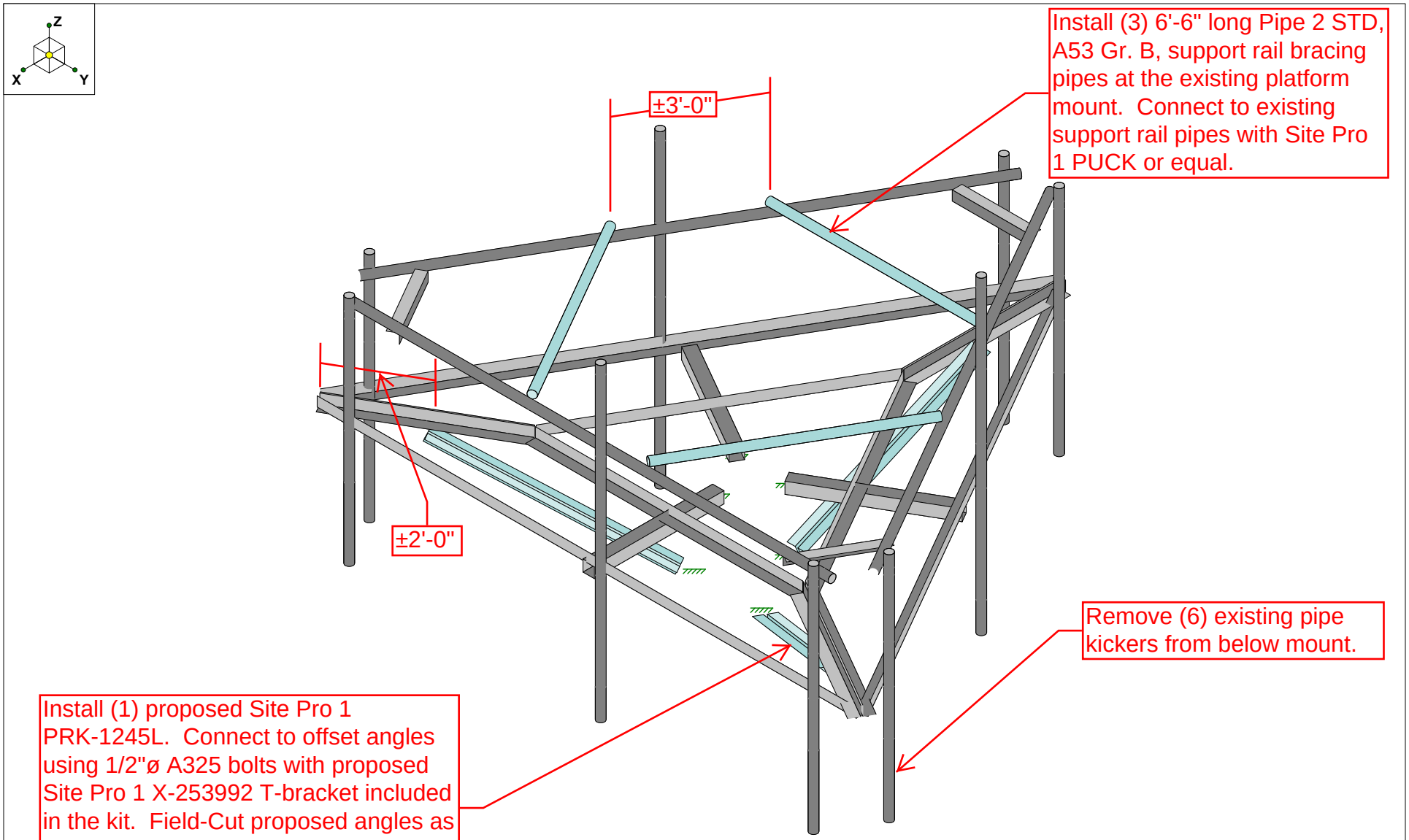


CLS		EX - 2
JLK	41124-12927170-Enfd - Enfield	Apr 12, 2019 at 12:58 PM
41124-12927170-01-MA	Envelope Member Unity Check Results - Bending	41124-12927170-01-MA.r3d



CLS	41124-12927170-Enfd - Enfield	MOD - 1
JLK		Apr 12, 2019 at 2:15 PM
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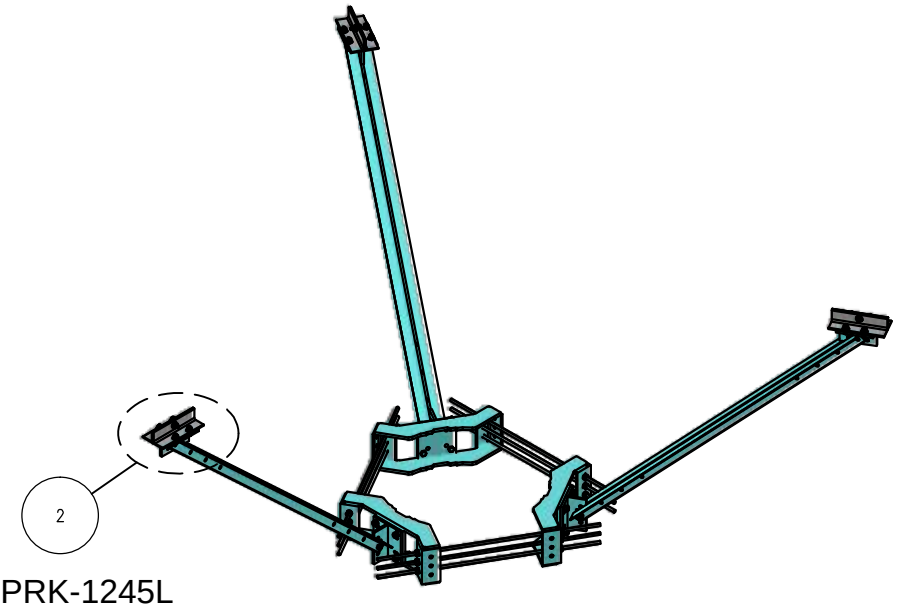
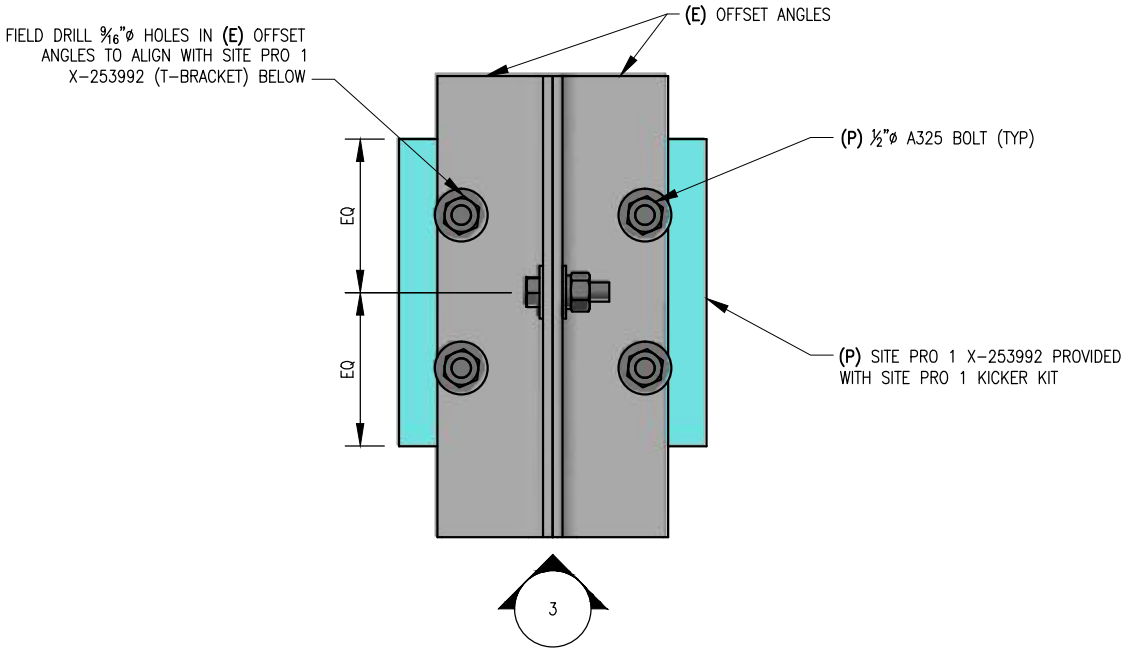


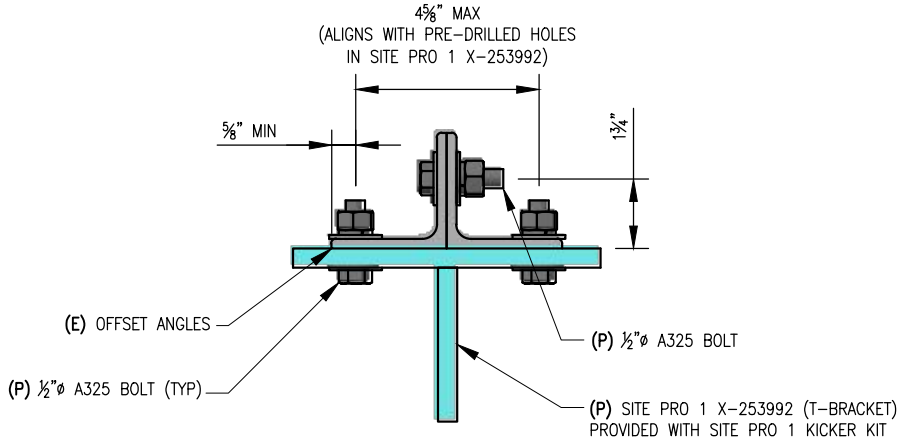
1 SITE PRO 1 PRK-1245L

SCALE: N.T.S.



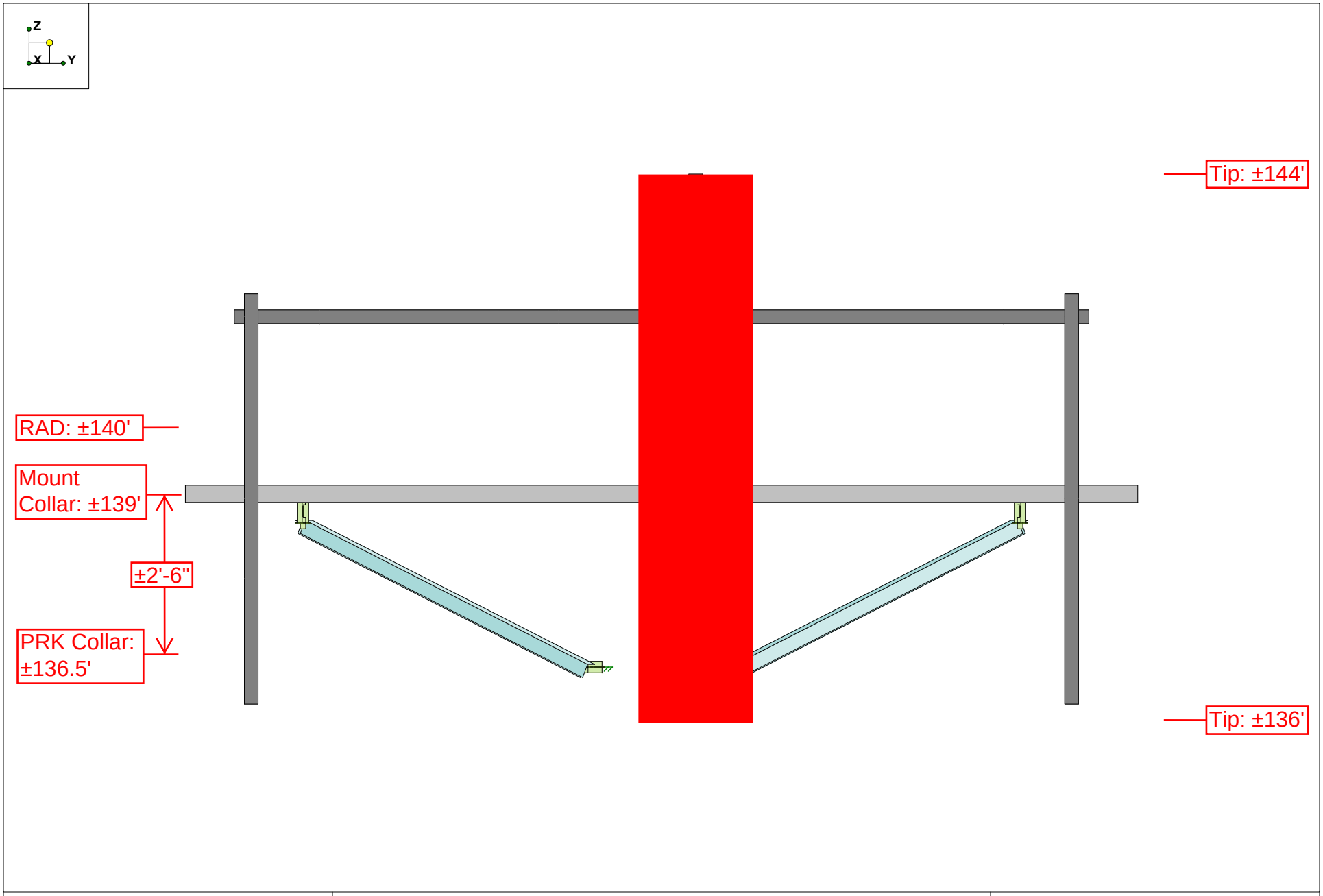
2 SITE PRO 1 KICKER CONNECTION PLAN VIEW

SCALE: N.T.S.



3 SITE PRO 1 KICKER CONNECTION FRONT ELEVATION

SCALE: N.T.S.



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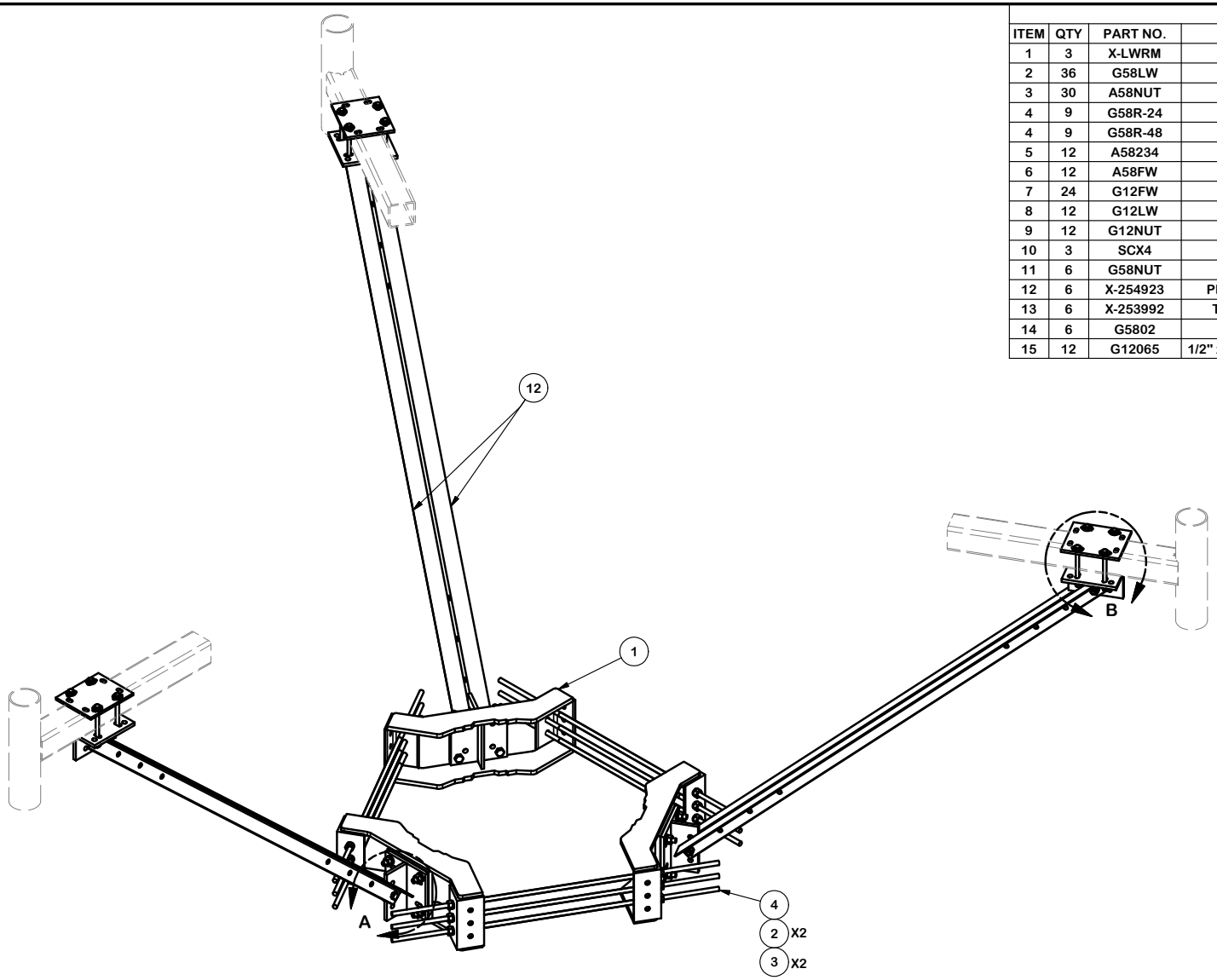
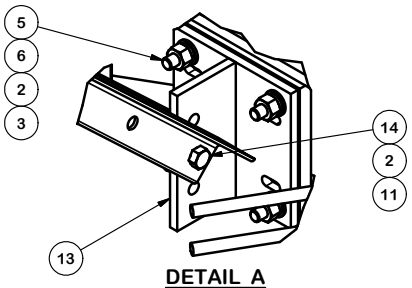
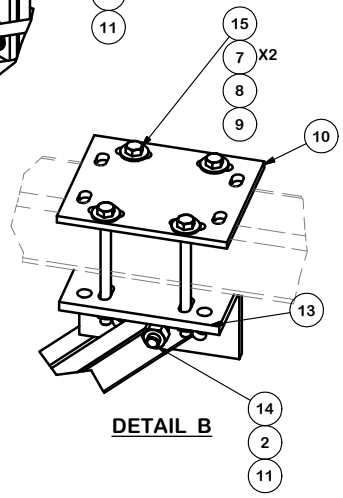




DETAIL A



DETAIL B

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-LWRM	RING MOUNT WELDMENT		68.81	206.42
2	36	G58LW	5/8" HDG LOCKWASHER		0.03	0.94
3	30	A58NUT	5/8" HDG A325 HEX NUT		0.13	3.90
4	9	G58R-24	5/8" x 24" THREADED ROD (HDG.)		0.55	4.94
4	9	G58R-48	5/8" x 48" THREADED ROD (HDG.)		0.55	4.94
5	12	A58234	5/8" x 2-3/4" HDG A325 HEX BOLT	2 3/4 in	0.36	4.27
6	12	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.41
7	24	G12FW	1/2" HDG USS FLATWASHER		0.03	0.82
8	12	G12LW	1/2" HDG LOCKWASHER		0.01	0.17
9	12	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.86
10	3	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	18.06
11	6	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	0.78
12	6	X-254923	PLATFORM REINFORCEMENT KIT ANGLE	84 in	22.83	137.00
13	6	X-253992	T-BRACKET FOR REINFORCEMENT KIT		13.55	81.27
14	6	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.62
15	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	4.91
					TOTAL WT. #	515.92

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

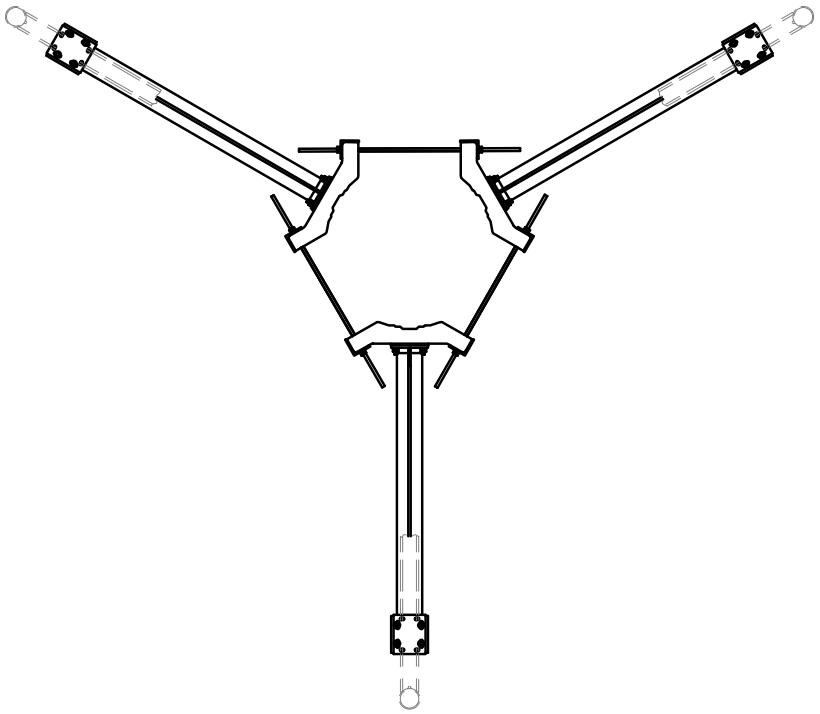
DESCRIPTION
PLATFORM REINFORCEMENT
ON A 12" T0 45" POLE
7' ANGLE

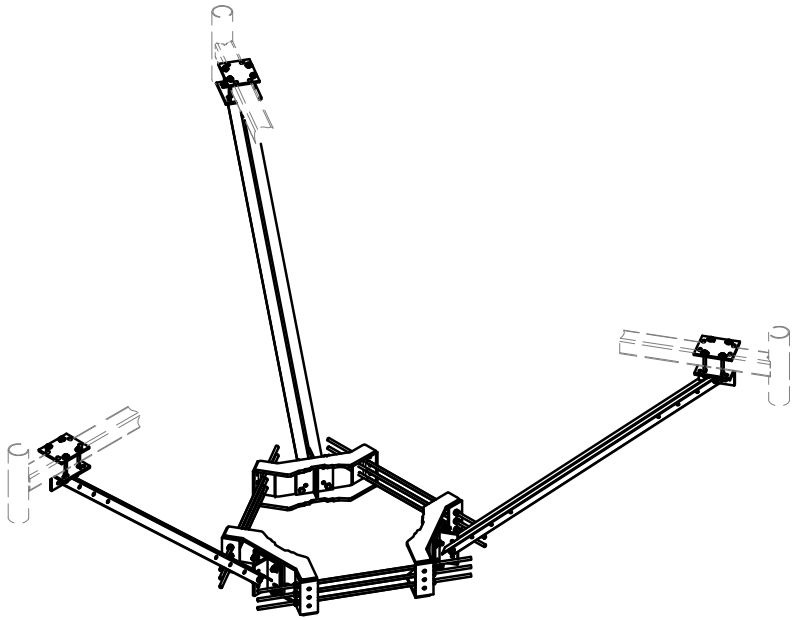
SITE PRO 1
A valmont COMPANY

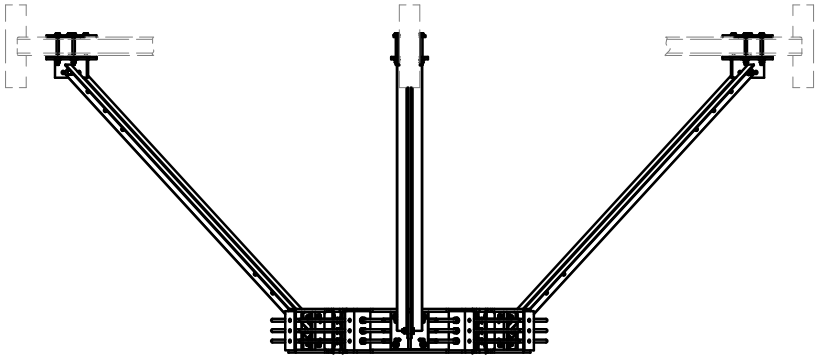
Engineering Support Team:
1-888-753-7446

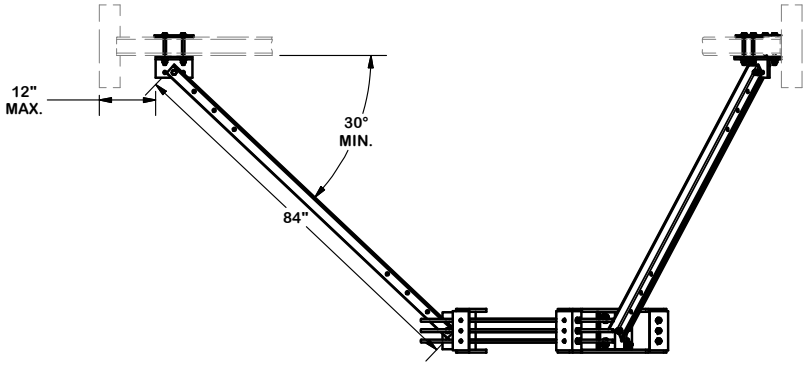
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	
4488	CEK 7/15/2014		PRK-1245L	PAGE 1 OF 2
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81 / 01	CUSTOMER	BMC 7/22/2014	PRK-1245L	









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BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
PLATFORM REINFORCEMENT
ON A 12" T0 45" POLE
7' ANGLE

SITE PRO 1 — A valmont COMPANY

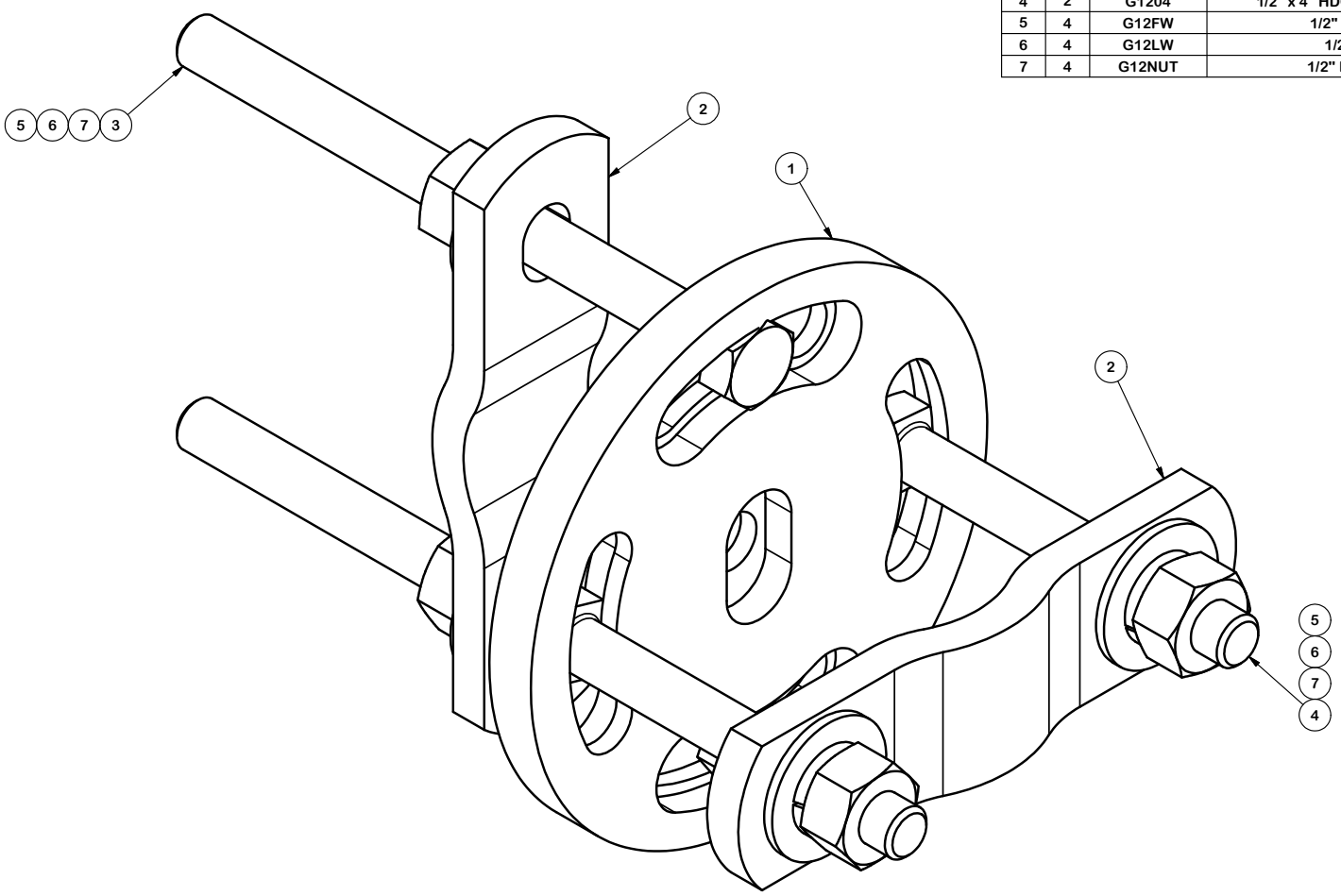
Engineering Support Team: 1-888-753-7446

Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
4488	CEK 7/15/2014		PRK-1245L

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 7/22/2014	PRK-1245L

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-127594	FLAT DISK CLAMP PLATE 4" CENTERS (GALVANIZED)		2.48	2.48
2	2	X-100064	CLAMP (S) (4" V-CLAMP) GALVANIZED		0.91	1.83
3	2	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	0.82
4	2	G1204	1/2" x 4" HDG HEX BOLT GR5 FULL THREAD	4 in	0.27	0.54
5	4	G12FW	1/2" HDG USS FLATWASHER		0.03	0.14
6	4	G12LW	1/2" HDG LOCKWASHER		0.01	0.06
7	4	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.29
					TOTAL WT. #	6.16



TOLERANCE NOTES

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DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: ADJUSTABLE CLAMP PLATE TIE-BACK ASSEMBLY

SITE PRO 1 — A valmont COMPANY

Engineering Support Team: 1-888-753-7446

Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 8/30/2010		PUCK

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 9/1/2010	PUCK

Wind & Ice Loading

Nominal Mount Elevation (AGL), z_{mount}	139 ft	K_a	0.90
Nominal Rad Elevation (AGL), z_{rad}	140 ft	K_d	0.95
Elevation AMSL (ft)	-	K_e	-
TIA Standard	G	K_z	1.36
Basic Wind Speed, V_{ult} (bare)	125 mph	K_{zt}	1.00
Basic Wind Speed, V (ice)	50 mph	K_s	-
Design Ice Thickness, t_i	1 in	t_{iz}	2.31 in
Exposure Category	C	G_h	1.00
Risk Category	II	q_z (bare)	51.5 psf
Seismic Response Coeff., C_s	-	q_z (ice)	8.2 psf

Live Loading

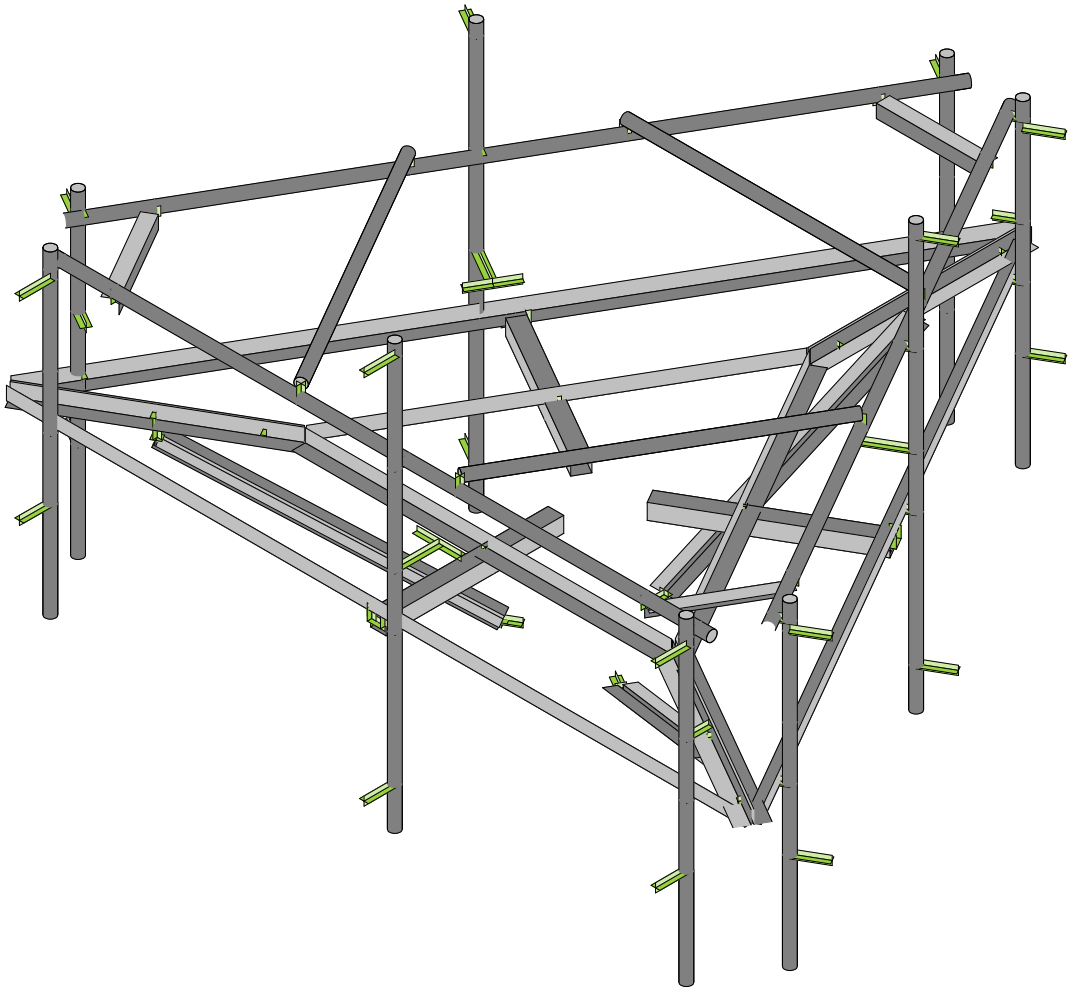
At Mount Pipes, L_M	500 lb
Joint Labels Considered	M1
	M2
	M4

Member Distributed Loading

Section Set Label	Shape Label	F_A (lb/ft)		Ice Wt. (lb/ft)
		Bare	Ice	
Grating Angle	L3X3X4	23.20	3.71	16.85
Standoff	HSS3.5X3.5X4	27.06	3.75	19.09
Mount Pipe	PIPE_2.0	11.02	5.19	13.22
Support Rail	PIPE_2.0	11.02	5.19	13.22
Support Rail Bracing	L3X3X4	23.20	3.71	16.85
MOD PRK	L2.5x2.5x3	19.33	3.66	15.05
MOD Support Rail Bracing	PIPE_2.0	11.02	5.19	13.22

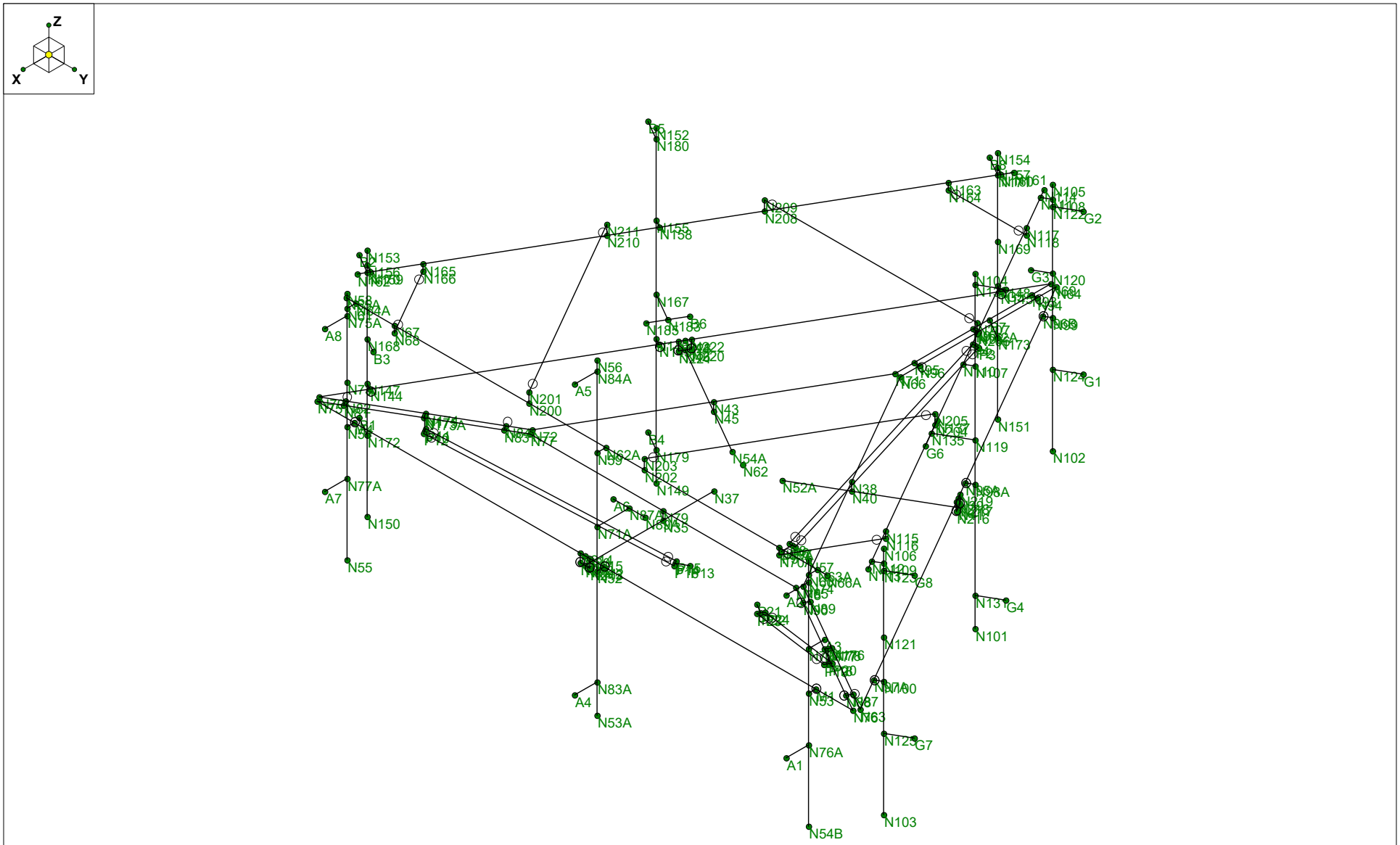
Appurtenances

Appurtenance Model	Status	Azimuth Offset (°, ↻)	Rad Elev. Override (ft)	Swap Width & Depth	Area Factor		Qty. per Azimuth			Total Qty. Override	0° Joints		120° Joints		240° Joints		Height (in)	Width (in)	Depth (in)	Weight (Bare) (lb)	Shape	Weight of Ice (lb)	EPA_A (Bare) (ft^2)		EPA_A (Ice) (ft^2)		F_A (Bare) (lb)		F_A (Ice) (lb)	
					Front	Side	0°	120°	240°		1	2	1	2	1	2							N	T	N	T	N	T	N	T
AIR 21, 1.3M, B2A/B4P				☐			1	1	1		A1	A2	B1	B2	G1	G2	55	12	7.9	83	Flat	233.19	5.92	4.22	8.59	6.74	275.26	196.03	63.86	50.12
KRY 112 144/1				☐	0		1	1	1		A3		B3		G3		7	6	3	11	Flat	14.68	0.00	0.18	0.00	0.74	0.00	8.13	0.00	5.49
APXVAARR24_43-U-NA20				☐			1	1	1		A4	A5	B4	B5	G4	G5	0	0	0	153.3	Generic	520.38	14.67	5.32	18.18	8.42	681.59	247.17	135.17	62.57
RADIO 4449 B12/B71				☑	0.5		1	1	1		A6		B6		G6		15	13.2	10.4	75	Flat	79.52	0.65	1.65	1.23	2.91	30.20	76.66	9.13	21.66
AIR 32 B66Aa/B2A				☐			1	1	1		A7	A8	B7	B8	G7	G8	56.6	12.9	8.7	132.2	Flat	257.27	6.51	4.71	9.27	7.32	302.46	218.94	68.90	54.45



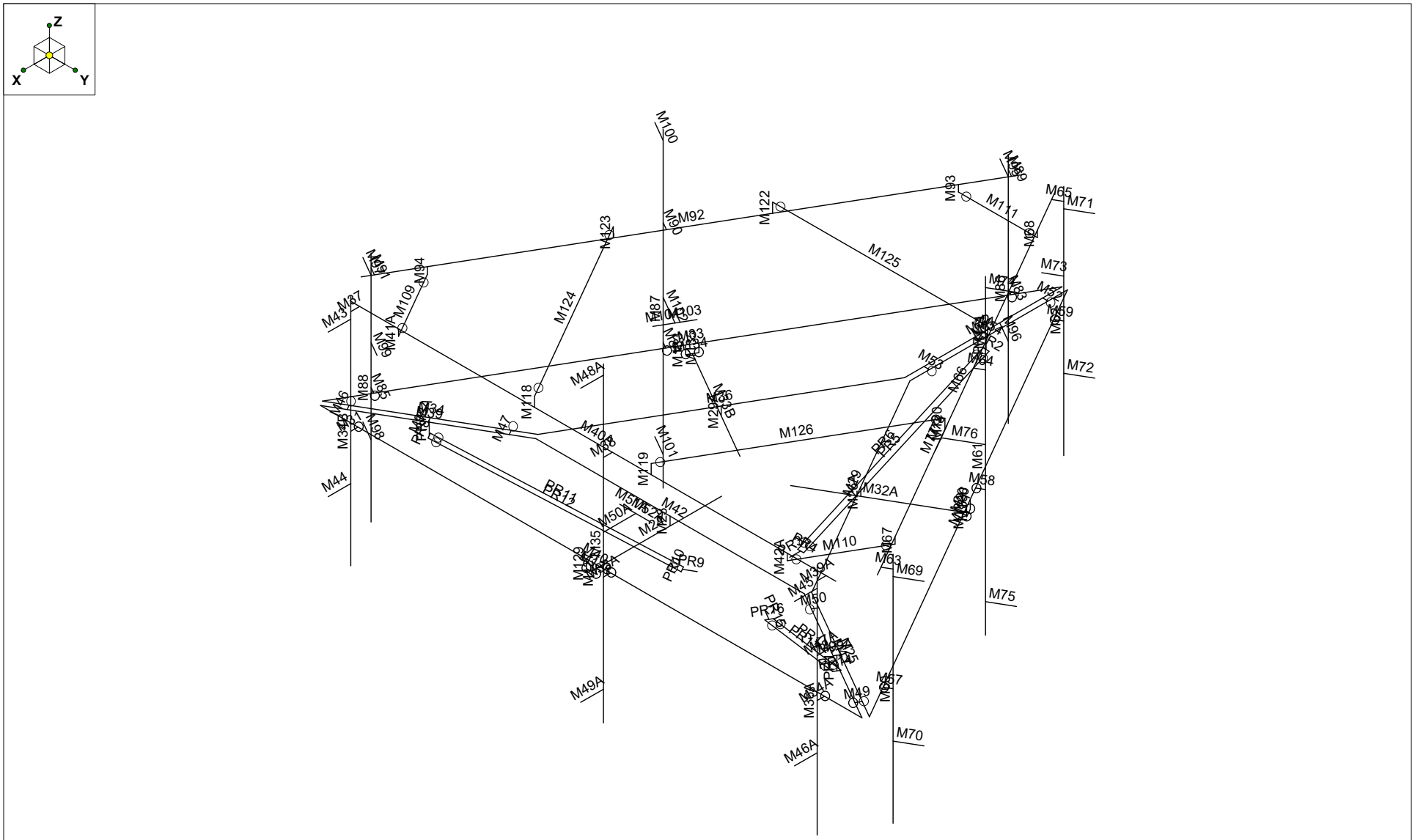
Envelope Only Solution

CLS	41124-12927170-Enfd - Enfield	SK - 1
SMR		July 8, 2019 at 10:43 AM
41124-12927170-01-MA-R1	Rendered	41124-12927170-01-MA-R1.r3d



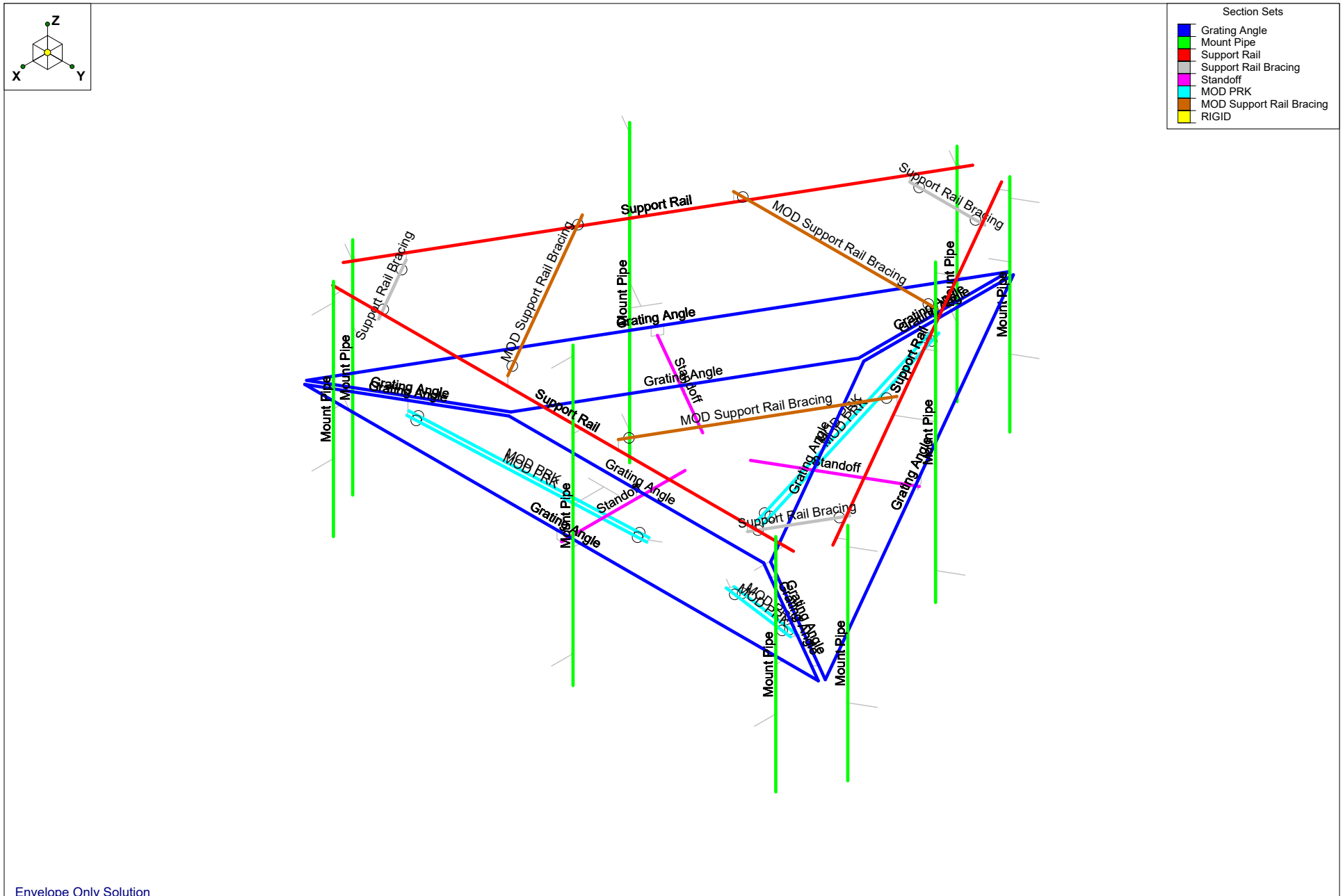
Envelope Only Solution

CLS	41124-12927170-Enfd - Enfield	SK - 2
SMR		July 8, 2019 at 10:43 AM
41124-12927170-01-MA-R1	Joint Labels	41124-12927170-01-MA-R1.r3d



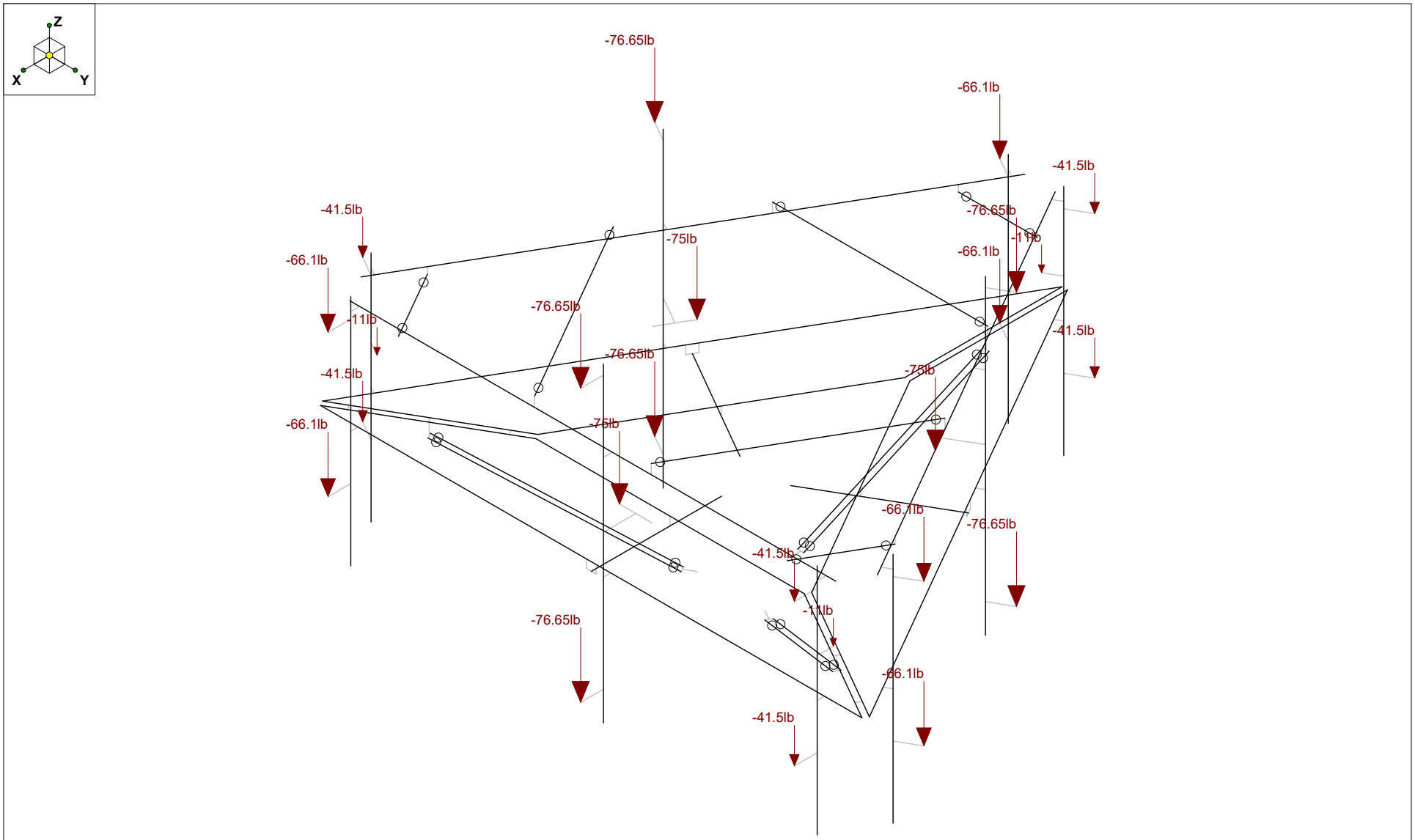
Envelope Only Solution

CLS	41124-12927170-Enfd - Enfield	SK - 3
SMR		July 8, 2019 at 10:43 AM
41124-12927170-01-MA-R1	Member Labels	41124-12927170-01-MA-R1.r3d



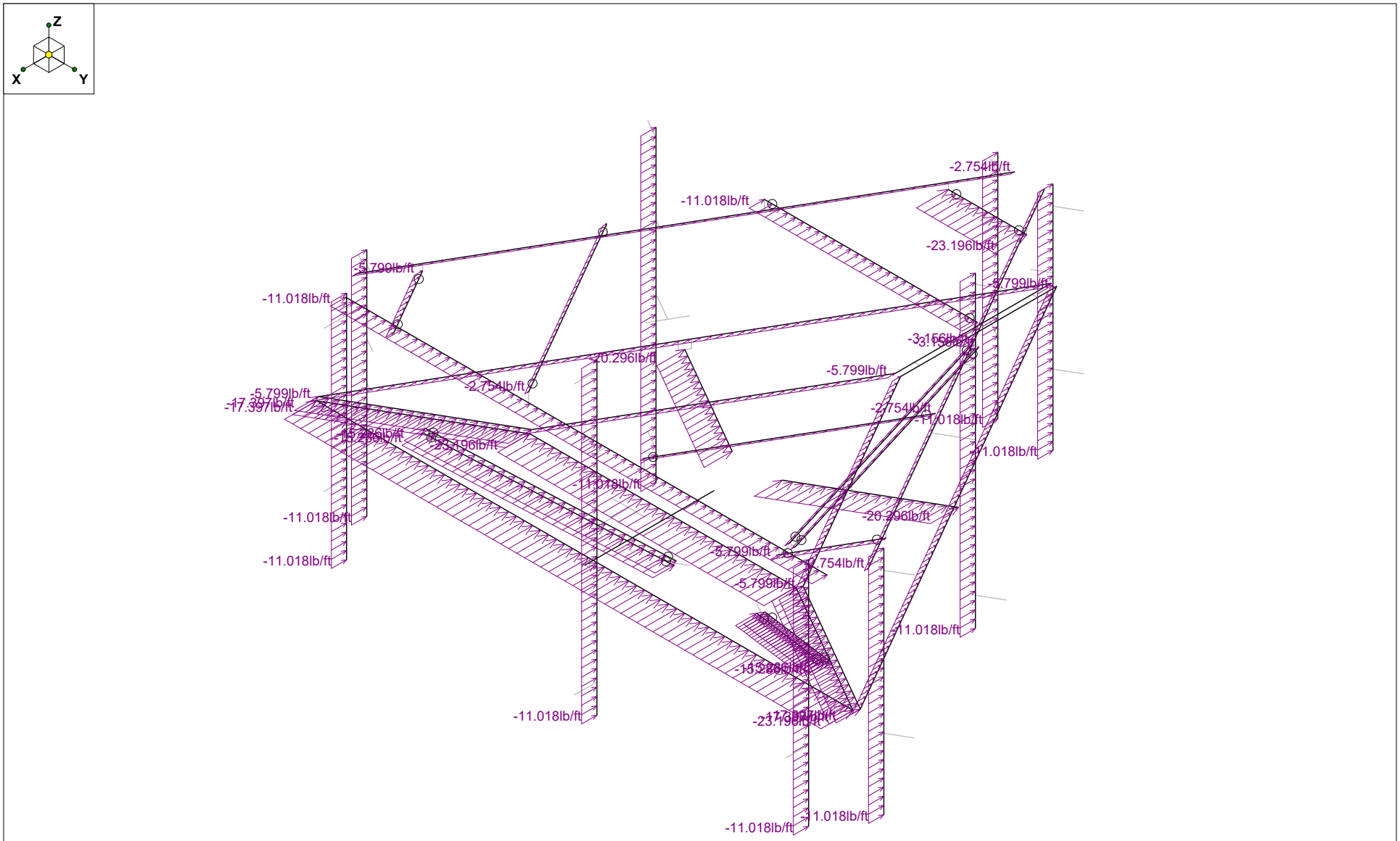
Envelope Only Solution

CLS	41124-12927170-Enfd - Enfield	SK - 4
SMR		July 8, 2019 at 10:44 AM
41124-12927170-01-MA-R1	Section Sets	41124-12927170-01-MA-R1.r3d



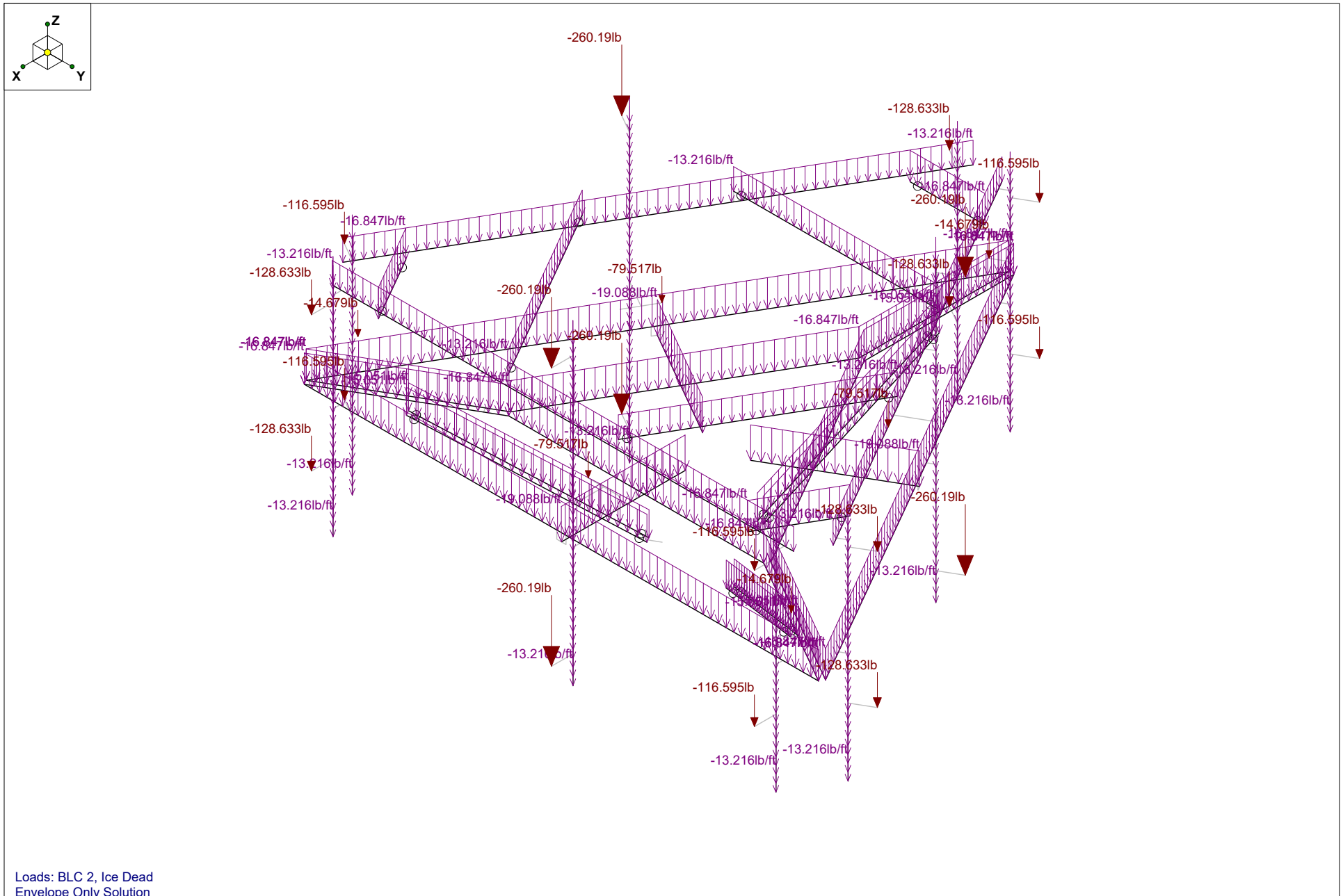
Loads: BLC 1, Dead
Envelope Only Solution

CLS		SK - 5
SMR	41124-12927170-Enfd - Enfield	July 8, 2019 at 10:44 AM
41124-12927170-01-MA-R1	Joint Loads - Dead and Normal Wind	41124-12927170-01-MA-R1.r3d



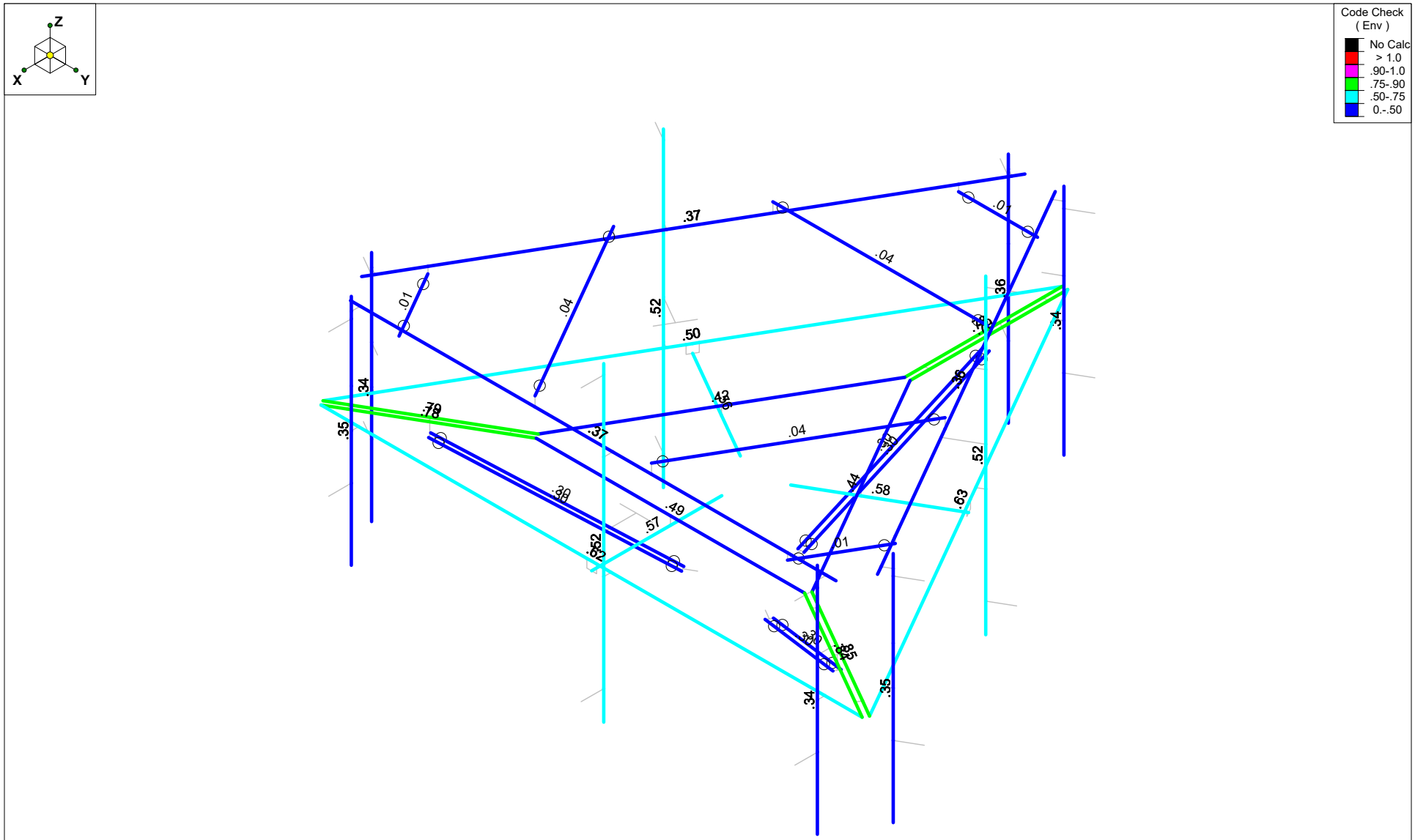
Loads: BLC 4, Structure Wind 0°
Envelope Only Solution

CLS		SK - 6
SMR	41124-12927170-Enfd - Enfield	July 8, 2019 at 10:56 AM
41124-12927170-01-MA-R1	Distributed Load - Normal Wind	41124-12927170-01-MA-R1.r3d



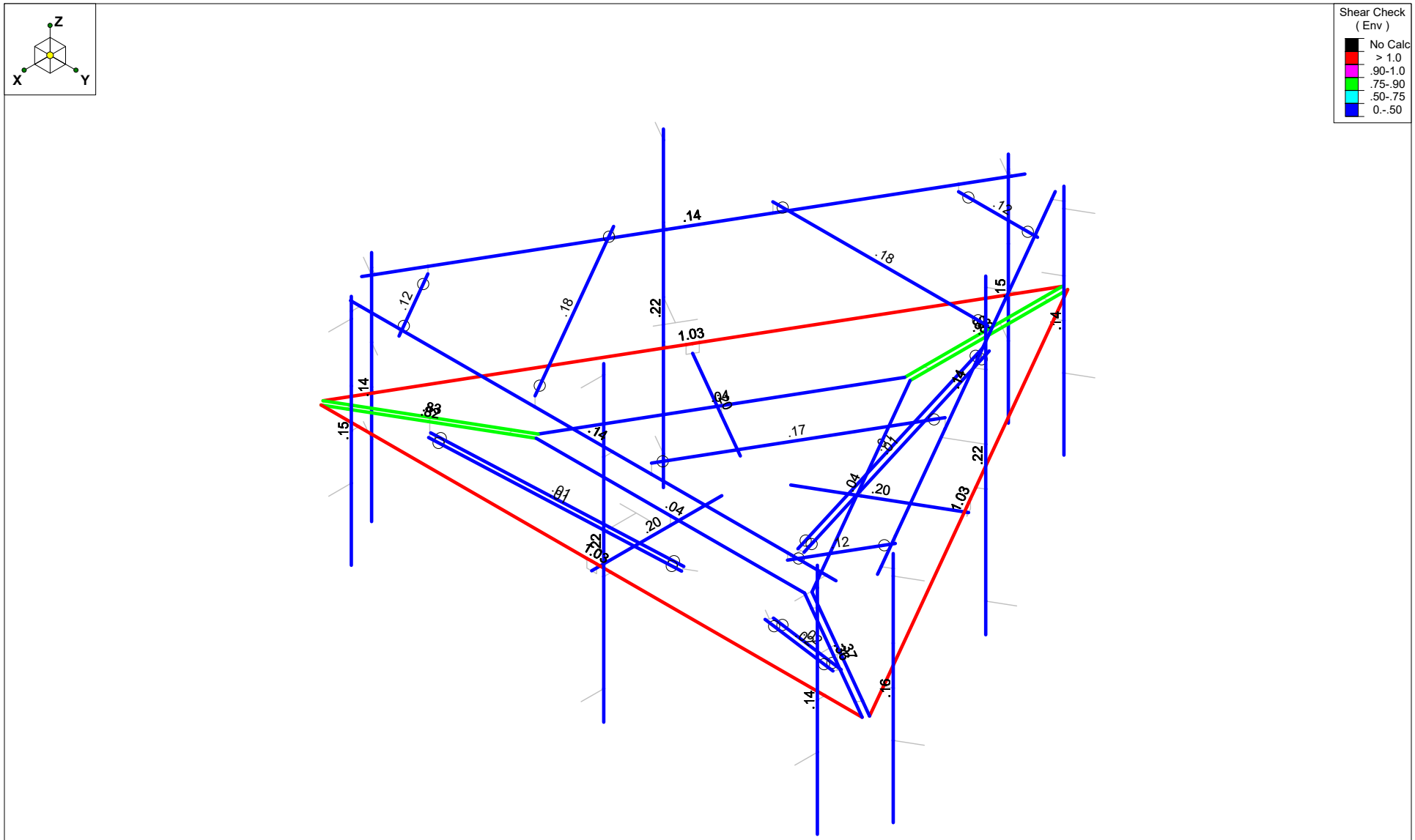
Loads: BLC 2, Ice Dead
Envelope Only Solution

CLS		SK - 7
SMR	41124-12927170-Enfd - Enfield	July 8, 2019 at 10:56 AM
41124-12927170-01-MA-R1	Ice Dead Loads	41124-12927170-01-MA-R1.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

CLS	41124-12927170-Enfd - Enfield	SK - 8
SMR		July 8, 2019 at 10:45 AM
41124-12927170-01-MA-R1	Envelope Member Unity Check Results - Bending	41124-12927170-01-MA-R1.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

CLS		SK - 9
SMR	41124-12927170-Enfd - Enfield	July 8, 2019 at 10:45 AM
41124-12927170-01-MA-R1	Envelope Member Check Results - Shear	41124-12927170-01-MA-R1.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	Dead	DL			-1	24				
2	Ice Dead	RL				24		39		
4	Structure Wind 0Á	None						36		
5	Structure Wind 30Á	None						68		
6	Structure Wind 45Á	None						78		
7	Structure Wind 60Á	None						72		
8	Structure Wind 90Á	None						34		
9	Structure Wind 120Á	None						72		
10	Structure Wind 135Á	None						78		
11	Structure Wind 150Á	None						68		
12	Structure Wind w/ Ice 0Á	None						36		
13	Structure Wind w/ Ice 30Á	None						68		
14	Structure Wind w/ Ice 45Á	None						78		
15	Structure Wind w/ Ice 60Á	None						72		
16	Structure Wind w/ Ice 90Á	None						34		
17	Structure Wind w/ Ice 120Á	None						72		
18	Structure Wind w/ Ice 135Á	None						78		
19	Structure Wind w/ Ice 150Á	None						68		
20	Antenna Wind 0Á	None				23				
21	Antenna Wind 30Á	None				48				
22	Antenna Wind 45Á	None				48				
23	Antenna Wind 60Á	None				46				
24	Antenna Wind 90Á	None				24				
25	Antenna Wind 120Á	None				46				
26	Antenna Wind 135Á	None				48				
27	Antenna Wind 150Á	None				48				
28	Antenna Wind w/ Ice 0Á	None				23				
29	Antenna Wind w/ Ice 30Á	None				48				
30	Antenna Wind w/ Ice 45Á	None				48				
31	Antenna Wind w/ Ice 60Á	None				46				
32	Antenna Wind w/ Ice 90Á	None				24				
33	Antenna Wind w/ Ice 120Á	None				46				
34	Antenna Wind w/ Ice 135Á	None				48				
35	Antenna Wind w/ Ice 150Á	None				48				
39	Maintenance Live 500 (1)	OL1				1				
40	Maintenance Live 500 (2)	OL2				1				
41	Maintenance Live 500 (3)	OL3				1				

Load Combinations

	Description	Solve	PDe..	SRSS	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
1	DISPLAY (1.0D + ...	Yes	Y		DL	1	20	1																		
2	1.4D	Yes	Y		DL	1.4																				
3	1.2D + 1.0W 0Á	Yes	Y		DL	1.2	4	1	20	1																
4	1.2D + 1.0W_30Á	Yes	Y		DL	1.2	5	1	21	1																
5	1.2D + 1.0W_45Á	Yes	Y		DL	1.2	6	1	22	1																
6	1.2D + 1.0W_60Á	Yes	Y		DL	1.2	7	1	23	1																
7	1.2D + 1.0W_90Á	Yes	Y		DL	1.2	8	1	24	1																
8	1.2D + 1.0W_120Á	Yes	Y		DL	1.2	9	1	25	1																
9	1.2D + 1.0W_135Á	Yes	Y		DL	1.2	10	1	26	1																

Load Combinations (Continued)

	Description	Solve	PDe..	SRSS	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
10	1.2D + 1.0W_150Á	Yes	Y		DL	1.2	11	1	27	1																
11	1.2D + 1.0W_180Á	Yes	Y		DL	1.2	4	-1	20	-1																
12	1.2D + 1.0W_210Á	Yes	Y		DL	1.2	5	-1	21	-1																
13	1.2D + 1.0W_225Á	Yes	Y		DL	1.2	6	-1	22	-1																
14	1.2D + 1.0W_240Á	Yes	Y		DL	1.2	7	-1	23	-1																
15	1.2D + 1.0W_270Á	Yes	Y		DL	1.2	8	-1	24	-1																
16	1.2D + 1.0W_300Á	Yes	Y		DL	1.2	9	-1	25	-1																
17	1.2D + 1.0W_315Á	Yes	Y		DL	1.2	10	-1	26	-1																
18	1.2D + 1.0W_330Á	Yes	Y		DL	1.2	11	-1	27	-1																
19	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	12	1	28	1	RL	1														
20	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	13	1	29	1	RL	1														
21	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	14	1	30	1	RL	1														
22	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	15	1	31	1	RL	1														
23	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	16	1	32	1	RL	1														
24	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	17	1	33	1	RL	1														
25	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	18	1	34	1	RL	1														
26	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	19	1	35	1	RL	1														
27	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	12	-1	28	-1	RL	1														
28	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	13	-1	29	-1	RL	1														
29	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	14	-1	30	-1	RL	1														
30	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	15	-1	31	-1	RL	1														
31	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	16	-1	32	-1	RL	1														
32	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	17	-1	33	-1	RL	1														
33	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	18	-1	34	-1	RL	1														
34	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	19	-1	35	-1	RL	1														
35	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	4	.061	20	.061	OL1	1.5														
36	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	5	.061	21	.061	OL1	1.5														
37	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	6	.061	22	.061	OL1	1.5														
38	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	7	.061	23	.061	OL1	1.5														
39	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	8	.061	24	.061	OL1	1.5														
40	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	9	.061	25	.061	OL1	1.5														
41	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	10	.061	26	.061	OL1	1.5														
42	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	11	.061	27	.061	OL1	1.5														
43	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	4	-.061	20	-.061	OL1	1.5														
44	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	5	-.061	21	-.061	OL1	1.5														
45	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	6	-.061	22	-.061	OL1	1.5														
46	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	7	-.061	23	-.061	OL1	1.5														
47	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	8	-.061	24	-.061	OL1	1.5														
48	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	9	-.061	25	-.061	OL1	1.5														
49	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	10	-.061	26	-.061	OL1	1.5														
50	1.2D + 1.5Lm_1 +...	Yes	Y		DL	1.2	11	-.061	27	-.061	OL1	1.5														
51	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	4	.061	20	.061	OL2	1.5														
52	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	5	.061	21	.061	OL2	1.5														
53	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	6	.061	22	.061	OL2	1.5														
54	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	7	.061	23	.061	OL2	1.5														
55	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	8	.061	24	.061	OL2	1.5														
56	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	9	.061	25	.061	OL2	1.5														
57	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	10	.061	26	.061	OL2	1.5														
58	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	11	.061	27	.061	OL2	1.5														
59	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	4	-.061	20	-.061	OL2	1.5														
60	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	5	-.061	21	-.061	OL2	1.5														
61	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	6	-.061	22	-.061	OL2	1.5														

Load Combinations (Continued)

	Description	Solve	PDe..	SRSS	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
62	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	7	-.061	23	-.061	OL2	1.5														
63	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	8	-.061	24	-.061	OL2	1.5														
64	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	9	-.061	25	-.061	OL2	1.5														
65	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	10	-.061	26	-.061	OL2	1.5														
66	1.2D + 1.5Lm_2 +...	Yes	Y		DL	1.2	11	-.061	27	-.061	OL2	1.5														
67	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	4	.061	20	.061	OL3	1.5														
68	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	5	.061	21	.061	OL3	1.5														
69	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	6	.061	22	.061	OL3	1.5														
70	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	7	.061	23	.061	OL3	1.5														
71	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	8	.061	24	.061	OL3	1.5														
72	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	9	.061	25	.061	OL3	1.5														
73	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	10	.061	26	.061	OL3	1.5														
74	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	11	.061	27	.061	OL3	1.5														
75	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	4	-.061	20	-.061	OL3	1.5														
76	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	5	-.061	21	-.061	OL3	1.5														
77	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	6	-.061	22	-.061	OL3	1.5														
78	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	7	-.061	23	-.061	OL3	1.5														
79	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	8	-.061	24	-.061	OL3	1.5														
80	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	9	-.061	25	-.061	OL3	1.5														
81	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	10	-.061	26	-.061	OL3	1.5														
82	1.2D + 1.5Lm_3 +...	Yes	Y		DL	1.2	11	-.061	27	-.061	OL3	1.5														

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Grating Angle	L3X3X4	Beam	None	A36 Gr.36	Typical	1.44	1.23	1.23	.031
2	Mount Pipe	PIPE_2.0	Column	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
3	Support Rail	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Support Rail Bracing	L3X3X4	Beam	None	A36 Gr.36	Typical	1.44	1.23	1.23	.031
5	Standoff	HSS3.5X3.5X4	Beam	None	A36 Gr.36	Typical	2.91	5.04	5.04	8.35
6	MOD PRK	L2.5x2.5x3	Beam	None	A36 Gr.36	Typical	.901	.535	.535	.011
7	MOD Support Rail Brac...	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[...	Lcomp...L-tor...	Kyy	Kzz	Cb	Functi...
1	M25	Grating Angle	48.656			Lbyy					Lateral
2	M26	Grating Angle	167.164	84		Lbyy					Lateral
3	M27	Grating Angle	48.656			Lbyy					Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[...	Lcomp...	L-tor...	Kyy	Kzz	Cb	Functi...
4	M29	Grating Angle	82.889	42		Lbyy						Lateral
5	M32	Grating Angle	48.656			Lbyy						Lateral
6	M33	Grating Angle	167.164	84		Lbyy						Lateral
7	M34	Grating Angle	48.656			Lbyy						Lateral
8	M36	Grating Angle	82.889	42		Lbyy						Lateral
9	M39	Grating Angle	48.656			Lbyy						Lateral
10	M40	Grating Angle	167.164	84		Lbyy						Lateral
11	M41	Grating Angle	48.656			Lbyy						Lateral
12	M42	Grating Angle	82.889	42		Lbyy						Lateral
13	M24	Standoff	40.221			Lbyy						Lateral
14	M32A	Standoff	40.221			Lbyy						Lateral
15	M33B	Standoff	40.221			Lbyy						Lateral
16	M34B	Mount Pipe	72			Lbyy						Lateral
17	M35	Mount Pipe	96			Lbyy						Lateral
18	M36A	Mount Pipe	72			Lbyy						Lateral
19	M40A	Support Rail	150			Lbyy						Lateral
20	M60	Mount Pipe	72			Lbyy						Lateral
21	M61	Mount Pipe	96			Lbyy						Lateral
22	M62	Mount Pipe	72			Lbyy						Lateral
23	M66	Support Rail	150			Lbyy						Lateral
24	M86	Mount Pipe	72			Lbyy						Lateral
25	M87	Mount Pipe	96			Lbyy						Lateral
26	M88	Mount Pipe	72			Lbyy						Lateral
27	M92	Support Rail	150			Lbyy						Lateral
28	M109	Support Rail Bracing	24.388			Lbyy						Lateral
29	M110	Support Rail Bracing	24.388			Lbyy						Lateral
30	M111	Support Rail Bracing	24.388			Lbyy						Lateral
31	PR5	MOD PRK	62.564									Lateral
32	PR6	MOD PRK	62.564									Lateral
33	PR11	MOD PRK	62.564									Lateral
34	PR12	MOD PRK	62.564									Lateral
35	PR17	MOD PRK	62.564									Lateral
36	PR18	MOD PRK	62.564									Lateral
37	M124	MOD Support Rail Bracing	66.388			Lbyy						Lateral
38	M125	MOD Support Rail Bracing	66.388			Lbyy						Lateral
39	M126	MOD Support Rail Bracing	66.388			Lbyy						Lateral

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N52A	max	2702.888	3	1998.253	15	1215.297	23	4007.082	24	2565.854	19	2761.734	11
2		min	-2868.26	11	-1724.54	7	273.958	47	618.349	15	148.863	11	-2740.755	3
3	N54A	max	2690.464	3	1746.889	15	1200.156	33	-684.415	7	2267.581	19	2740.909	6
4		min	-2832.613	11	-1998.489	7	272.028	73	-4000.538	31	29.247	11	-2732.552	14
5	P5	max	-567.858	11	98.039	15	2243.079	19	17.568	16	630.866	19	26.593	12
6		min	-4847.479	19	-98.248	7	263.445	11	-17.813	8	74.094	11	-27.527	10
7	P21	max	2395.687	24	4150.275	24	2219.637	24	540.534	24	-26.755	15	99.403	38
8		min	286.79	16	496.699	16	265.976	16	64.966	17	-313.623	23	-45.932	11
9	P13	max	2424.964	30	-493.124	6	2243.807	30	-62.702	5	-33.392	7	26.091	12
10		min	284.7	6	-4199.232	30	264.132	6	-547.057	30	-314.612	30	-39.861	79
11	N37	max	1185.853	3	3011.012	16	1212.855	27	644.105	8	-871.687	1	2931.654	17

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
12		min	-873.016	11	-3000.975	6	264.462	1	-568.154	16	-4637.784	27	-2928.053	9
13	Totals:	max	5579.449	3	5579.274	15	9943.73	32						
14		min	-5579.457	11	-5579.263	7	2410.337	1						

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Member	Shape	Code Ch...	Loc[in]	LC	Shear ...	Loc[in]	...	LC	phi*Pnc ..	phi*Pnt [...	phi*Mn y-y [...	phi*Mn z...	Cb	Eqn
1	M26	L3X3X4	.627	154.9...	27	1.034	0	y	32	15778.1...	46656	1688.138	2280.997	1	H2-1
2	M33	L3X3X4	.503	154.9...	23	1.027	0	y	27	15778.1...	46656	1688.138	2280.997	1	H2-1
3	M40	L3X3X4	.619	12.189	22	1.026	167.1...	y	32	15778.1...	46656	1688.138	2280.997	1	H2-1
4	M27	L3X3X4	.786	24.328	19	.828	5.575	z	19	32415.0...	46656	1688.138	3655.912	1.401	H2-1
5	M34	L3X3X4	.787	24.328	30	.827	5.575	z	30	32415.0...	46656	1688.138	3656.106	1.402	H2-1
6	M39	L3X3X4	.781	24.328	30	.819	5.575	y	30	32415.0...	46656	1688.138	3655.518	1.4	H2-1
7	M32	L3X3X4	.781	24.328	19	.818	5.575	y	19	32415.0...	46656	1688.138	3655.706	1.401	H2-1
8	M25	L3X3X4	.855	24.328	28	.369	43.081	z	24	32415.0...	46656	1688.138	3640.336	1.364	H2-1
9	M41	L3X3X4	.842	24.328	22	.361	43.081	y	24	32415.0...	46656	1688.138	3638.958	1.361	H2-1
10	M87	PIPE_2.0	.517	39	8	.216	51		12	14916.0...	32130	1871.625	1871.625	4.969	H1-1b
11	M61	PIPE_2.0	.517	39	14	.216	51		18	14916.0...	32130	1871.625	1871.625	4.946	H1-1b
12	M35	PIPE_2.0	.517	39	3	.216	51		7	14916.0...	32130	1871.625	1871.625	4.955	H1-1b
13	M32A	HSS3.5X...	.575	40.221	24	.199	40.221	z	3	89759.8...	94284	9450	9450	1.594	H1-1b
14	M33B	HSS3.5X...	.557	40.221	19	.198	40.221	z	14	89759.8...	94284	9450	9450	1.603	H1-1b
15	M24	HSS3.5X...	.573	40.221	24	.198	40.221	z	8	89759.8...	94284	9450	9450	1.593	H1-1b
16	M125	PIPE_2.0	.041	33.194	19	.175	0		7	22260.6...	32130	1871.625	1871.625	1.136	H1-1b
17	M124	PIPE_2.0	.041	33.194	30	.175	66.388		9	22260.6...	32130	1871.625	1871.625	1.136	H1-1b
18	M126	PIPE_2.0	.041	33.194	24	.172	0		12	22260.6...	32130	1871.625	1871.625	1.136	H1-1b
19	M60	PIPE_2.0	.351	67.5	10	.156	66		7	20866.7...	32130	1871.625	1871.625	2.447	H1-1b
20	M34B	PIPE_2.0	.355	67.5	15	.154	66		12	20866.7...	32130	1871.625	1871.625	2.452	H1-1b
21	M86	PIPE_2.0	.357	67.5	5	.154	66		18	20866.7...	32130	1871.625	1871.625	2.459	H1-1b
22	M40A	PIPE_2.0	.367	3.125	15	.143	92.188		9	6295.422	32130	1871.625	1871.625	2.244	H1-1b
23	M66	PIPE_2.0	.364	3.125	10	.142	92.188		3	6295.422	32130	1871.625	1871.625	2.246	H1-1b
24	M92	PIPE_2.0	.370	3.125	21	.141	92.188		14	6295.422	32130	1871.625	1871.625	1.99	H1-1b
25	M36A	PIPE_2.0	.336	67.5	7	.139	66		10	20866.7...	32130	1871.625	1871.625	2.451	H1-1b
26	M62	PIPE_2.0	.341	67.5	17	.137	66		4	20866.7...	32130	1871.625	1871.625	2.463	H1-1b
27	M88	PIPE_2.0	.340	67.5	12	.137	66		15	20866.7...	32130	1871.625	1871.625	2.455	H1-1b
28	M109	L3X3X4	.010	12.194	14	.122	24.388	z	10	42576.72	46656	1688.138	3755.745	1.136	H2-1
29	M111	L3X3X4	.010	12.194	3	.122	24.388	z	15	42576.72	46656	1688.138	3755.745	1.136	H2-1
30	M110	L3X3X4	.010	12.194	8	.120	24.388	z	4	42576.72	46656	1688.138	3755.745	1.136	H2-1
31	M42	L3X3X4	.486	41.445	24	.045	82.889	y	23	35567.9...	46656	1688.138	3028.367	1	H2-1
32	M29	L3X3X4	.439	41.445	24	.042	0	y	25	35567.9...	46656	1688.138	3028.367	1	H2-1
33	M36	L3X3X4	.415	41.445	29	.035	82.889	y	29	35567.9...	46656	1688.138	3028.367	1	H2-1
34	PR18	L2.5x2.5x3	.296	31.282	26	.016	62.564	y	12	12000.9...	29192.4	872.574	1643.803	1.136	H2-1
35	PR17	L2.5x2.5x3	.297	31.282	23	.016	62.564	z	12	12000.9...	29192.4	872.574	1643.803	1.136	H2-1
36	PR11	L2.5x2.5x3	.299	31.282	28	.014	62.564	z	10	12000.9...	29192.4	872.574	1643.803	1.136	H2-1
37	PR12	L2.5x2.5x3	.296	31.282	31	.014	0	y	10	12000.9...	29192.4	872.574	1643.803	1.136	H2-1
38	PR5	L2.5x2.5x3	.299	31.282	34	.014	62.564	z	15	12000.9...	29192.4	872.574	1643.803	1.136	H2-1
39	PR6	L2.5x2.5x3	.295	31.282	20	.014	62.564	y	15	12000.9...	29192.4	872.574	1643.803	1.136	H2-1

Exhibit F

Power Density/RF Emissions Report

EBI Consulting

environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11534A

CT534/Spectrasite
1 Ecology Drive
Enfield, Connecticut 06082

May 31, 2019

EBI Project Number: 6219001923

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**28.64%**

21 B Street, Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

May 31, 2019

T-Mobile
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CT11534A - CT534/Spectrasite

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **1 Ecology Drive** in **Enfield, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 1 Ecology Drive in Enfield, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

3) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

4) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

5) 2 UMTS channels (AWS Band - 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

6) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

7) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

8) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

9) The antennas used in this modeling are the Ericsson AIR21 B2A_B4P for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s), the Ericsson AIR32 B66A_B2A for the 1900 MHz / 2100 MHz channel(s) in Sector A, the Ericsson AIR21 B2A_B4P for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s), the Ericsson AIR32 B66A_B2A for the 1900 MHz / 2100 MHz channel(s) in Sector B, the Ericsson AIR21 B2A_B4P for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s), the Ericsson AIR32 B66A_B2A for the 1900 MHz / 2100 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

10) The antenna mounting height centerline of the proposed antennas is 140 feet above ground level (AGL).

11) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

12) All calculations were done with respect to uncontrolled / general population threshold limits.

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Ericsson AIR21 B2A_B4P	Make / Model:	Ericsson AIR21 B2A_B4P	Make / Model:	Ericsson AIR21 B2A_B4P
Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.35 dBd	Gain:	15.35 dBd / 15.35 dBd	Gain:	15.35 dBd / 15.35 dBd
Height (AGL):	140 feet	Height (AGL):	140 feet	Height (AGL):	140 feet
Channel Count:	6	Channel Count:	6	Channel Count:	6
Total TX Power (W):	180 Watts	Total TX Power (W):	180 Watts	Total TX Power (W):	180 Watts
ERP (W):	6,169.82	ERP (W):	6,169.82	ERP (W):	6,169.82
Antenna A1 MPE %:	**1.13%**	Antenna B1 MPE %:	**1.13%**	Antenna C1 MPE %:	**1.13%**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Frequency Bands:	600 MHz / 700 MHz	Frequency Bands:	600 MHz / 700 MHz	Frequency Bands:	600 MHz / 700 MHz
Gain:	12.95 dBd / 13.35 dBd	Gain:	12.95 dBd / 13.35 dBd	Gain:	12.95 dBd / 13.35 dBd
Height (AGL):	140 feet	Height (AGL):	140 feet	Height (AGL):	140 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts
ERP (W):	2,481.08	ERP (W):	2,481.08	ERP (W):	2,481.08
Antenna A2 MPE %:	**1.05%**	Antenna B2 MPE %:	**1.05%**	Antenna C2 MPE %:	**1.05%**
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	Ericsson AIR32 B66A_B2A	Make / Model:	Ericsson AIR32 B66A_B2A	Make / Model:	Ericsson AIR32 B66A_B2A
Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.85 dBd
Height (AGL):	140 feet	Height (AGL):	140 feet	Height (AGL):	140 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	8,728.31	ERP (W):	8,728.31	ERP (W):	8,728.31
Antenna A3 MPE %:	**1.60%**	Antenna B3 MPE %:	**1.60%**	Antenna C3 MPE %:	**1.60%**

Site Composite MPE %	
Carrier	**MPE %**
T-Mobile (Max at Sector A):	3.79%
SNET Paging	0.35%
AT&T	2.36%
Clearwire	0.17%
Pocket (now MetroPCS)	0.51%
Verizon	21.31%
Continental Cablevision	0.000009%
Antennas 1-6	0.15%
Site Total MPE % :	28.64%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	3.79%
T-Mobile Sector B Total:	3.79%
T-Mobile Sector C Total:	3.79%
Site Total MPE % :	28.64%

T-Mobile Maximum MPE Power Values (Sector A)

T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
T-Mobile 1900 MHz GSM	4	1028.30	140.0	7.54	1900 MHz GSM	1000	0.75%
T-Mobile 2100 MHz UMTS	2	1028.30	140.0	3.77	2100 MHz UMTS	1000	0.38%
T-Mobile 600 MHz LTE	2	591.73	140.0	2.17	600 MHz LTE	400	0.54%
T-Mobile 700 MHz LTE	2	648.82	140.0	2.38	700 MHz LTE	467	0.51%
T-Mobile 1900 MHz LTE PCS	2	2056.61	140.0	7.54	1900 MHz LTE PCS	1000	0.75%
T-Mobile 2100 MHz LTE AWS	2	2307.55	140.0	8.47	2100 MHz LTE AWS	1000	0.85%
						Total:	**3.79%**

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector A:	3.79%
Sector B:	3.79%
Sector C:	3.79%
T-Mobile Maximum MPE % (Sector A):	3.79%
Site Total:	28.64%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **28.64%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Exhibit G

Mailing Receipts/Proof of Notice

UPS Internet Shipping: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the 'Find Locations' Quick link at ups.com.
   Schedule a same day or future day Pickup to have a UPS driver pickup all of your Internet Shipping packages.
   Hand the package to any UPS driver in your area.

UPS Access Point™
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MAHWAH ,NJ 07430

UPS Access Point™
THE UPS STORE
120 E MAIN ST
RAMSEY ,NJ 07446

UPS Access Point™
POSTNET NY137
74 LAFAYETTE AVE
SUFFERN ,NY 10901

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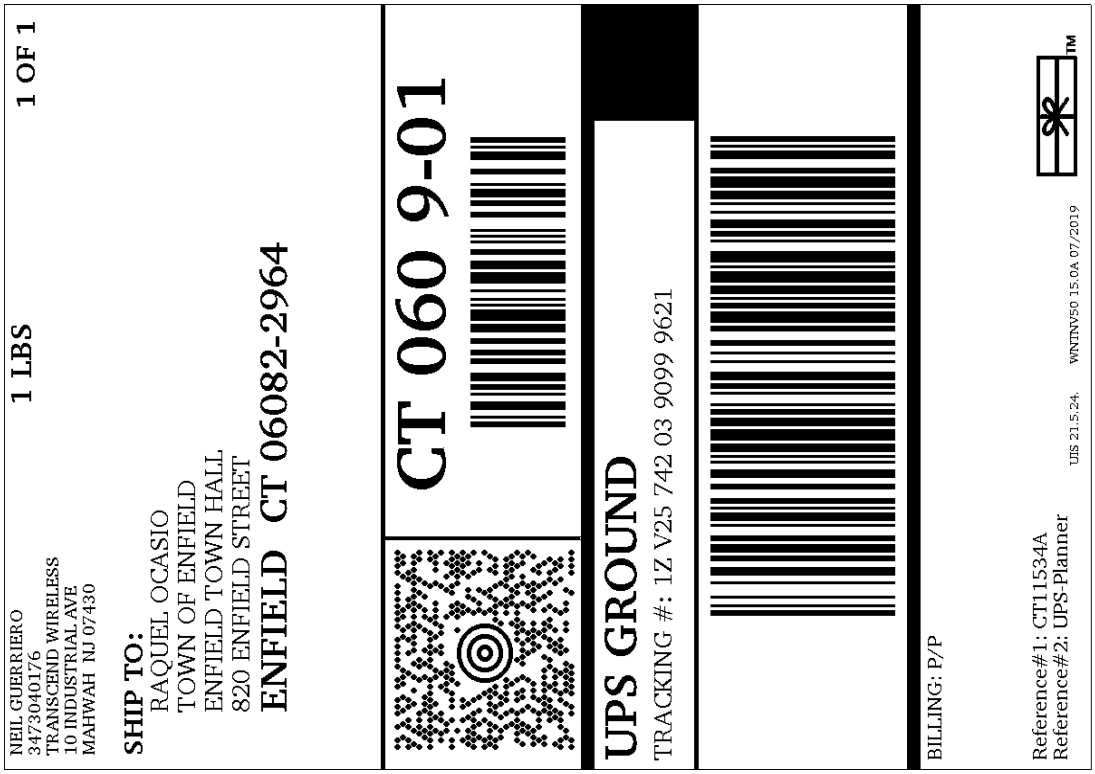

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   Hand the package to any UPS driver in your area.

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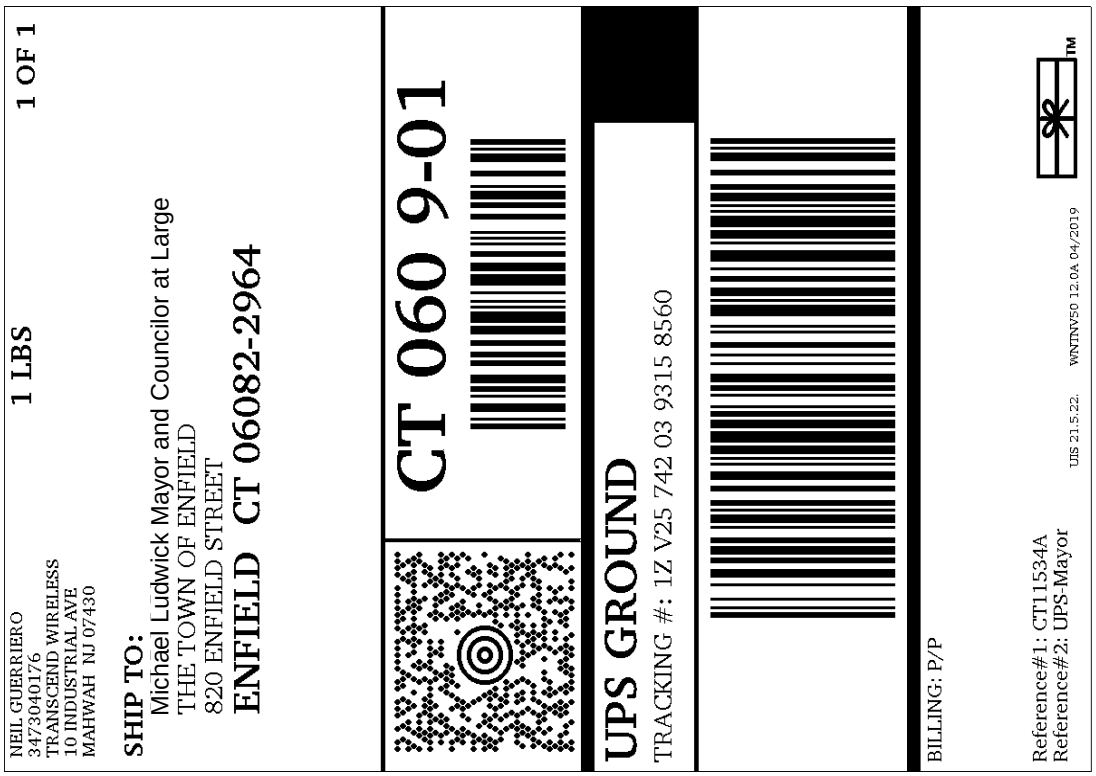

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