Filed by:
G. Scott Shepherd, Site Development Specialist II - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
508.251.0720 x 3807 - gshepherd@sbasite.com

December 11, 2020

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

RE: Notice of Exempt Modification
108 Foxon Road, North Branford, CT 06471
Latitude: 41.328208
Longitude: -72.819063
T-Mobile Site #: CT11302C_Anchor

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 141-foot level of the existing 175-foot Monopole Tower at 108 Foxon Rd., North Branford, CT. The 175-foot tower is owned by SBA Properties, LLC. The property is owned by 108 Foxon Road, LLC. T-Mobile now intends to install remove six (6) 1900/2100 MHz antennas and replace with (6) six new 1900/2100 MHz antennas and install three (3) new L600/ L700M/1900/2100 MHz antennas for a total of nine (9) antennas.

The new antennas support 5G services and would be installed at the 141-foot level of the tower.

Please note: Per the Connecticut Siting Council Website: CSC COVID 19 Guidelines.
In order to prevent the spread of Coronavirus and protect the health and safety of our members and staff, as of March 18, 2020, the Connecticut Siting Council shall convert to full remote operations until March 30, 2020. Please be advised that during this time period, all hard copy filing requirements will be waived in lieu of an electronic filing. Please also be advised that the March 26, 2020 regular meeting shall be held via teleconference. The Council's website is not equipped with an on-line filing fee receipt service. Therefore, filing fees and/or direct cost charges associated with matters received electronically during the above-mentioned time period will be directly invoiced at a later date.

Planned Modifications:

TOWER

Remove:
- N/A

Remove and Replace:

- (3) Ericsson Air21 B2A/B4P antenna (remove) – Ericsson Air32 KRD901146-1_B66A_B2A antenna (Replace)
- (3) Ericsson Air21 B2A/B4P antenna (remove) – Ericsson AIR 6449 B41 antenna (replace)
- (3) Kathrein KRY 112 144 TMA (remove) – Ericsson KRY 112 144/1 TMA (replace)

Install New:

- (3) RFS APXVAAll24-43-U-NA20 antenna
- (3) Ericsson Radio 4449 B71+B85 RRU
- (3) Commscope SDX1926Q-43 Diplexer
- (3) 1-5/8" Fiber
- (1) Metrosite Support rail Kit: MS-HR35-18
- (1) Metrosite Supportrail end connection Kit: MS-HR35-33ECP
- (6) Metrosite V-Bracing Angles: L252525-8

Existing Equipment to Remain:

- Low Profile Platform
- (6) 1-5/8" Coax

Entitlements:

- (6) 1-5/8" Coax
- (1) 1-1/4" fiber
- (1) 1-5/8" Fiber

GROUND

Remove:

- Nortel S8000 Equipment Cabinet

Install New:

- Equipment inside existing RBS6131 equipment cabinet
- Ericsson 6160 Equipment Cabinet

This facility was approved by the North Branford Planning and Zoning Commission on August 17, 2000 under Site Plan Application #99/2000-30. The Commission approved a 180' monopole with a 100' x 100' leased area. There were no post construction stipulations set. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16.50j-72(b)(2). In accordance with R.C.S.A. § 16.50j-73, a copy of this letter is being sent to the Town of North Branford's Town Manager, Michael T. Paulhus and Zoning Enforcement Officer, Tom Hogarty, as well as to the property owner. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

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 modification 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 modification 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 telecommunication facility constitute an exempt modifications under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

G. Scott Shepherd
Site Development Specialist II
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581
508.251.0720 x3807 + T
508.366.2610 + F
508.868.6000 + C
gshepherd@sbasite.com

Attachments
cc: Michael T. Paulhus, Town Manager / with attachments
909 Foxon Road, North Branford, CT 06471
Tom Hogarty, Zoning Enforcement Officer / with attachments
909 Foxon Road, North Branford, CT 06471
108 Foxon Road LLC / with attachments
250 Totoket Rd., North Branford, C 06471

EXHIBIT LIST

Exhibit 1	Check Copy	To be invoiced at a later date per Covid 19 guidelines
Exhibit 2	Notification Receipts	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Original Zoning Approval	Town of North Branford P&Z Commission 8/17/2000
Exhibit 6	Construction Drawings	Chappell Engineering 12/8/20
Exhibit 7	Modification Drawings	TES 11/13/20
Exhibit 8	Structural Analysis	TES 11/16/20
Exhibit 9	Mount Analysis	TES 11/12/20
Exhibit 10	EME Report	Transcom 6/17/19

EXHIBIT 1

Normally, Exhibit 1 would contain a copy of the check for the filing fee.

EXHIBIT 2

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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EXHIBIT 3

150 FOXON RD

Location	150 FOXON RD	**Mblu**	14/ 14/ / /
Acct#	000912	**Owner**	108 FOXON ROAD LLC
Assessment	$237,100	**Appraisal**	$338,600
PID	889	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$0	$338,600	$338,600
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$0	$237,100	$237,100

Owner of Record

Owner	108 FOXON ROAD LLC	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	250 TOTOKET RD NORTH BRANFORD, CT 06471-1035	**Book & Page**	288/ 237
		Sale Date	02/09/2000

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
108 FOXON ROAD LLC	$0		288/ 237	02/09/2000
CANDELORA SALVATORE A +	$0		288/ 236	02/09/2000
CANDELORA SALVATORE A	$125,000		253/ 851	07/22/1996
CORBIN-SMITH ASSOCIATES	$0		136/ 602	03/19/1981

Building Information

Building 1 : Section 1

Year Built:	
Living Area:	0
Replacement Cost:	$0
Building Percent Good:	
Replacement Cost Less Depreciation:	$0

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:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	

Building Photo

(http://images.vgsi.com/photos/NorthBranfordCTPhotos//default.

Building Layout

Building Layout
(http://images.vgsi.com/photos/NorthBranfordCTPhotos//Sketche

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	3880
Description	OTHR OUTDR MDL-00
Zone	I3
Neighborhood	
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	13.5
Frontage	0
Depth	0
Assessed Value	$237,100
Appraised Value	$338,600

Outbuildings

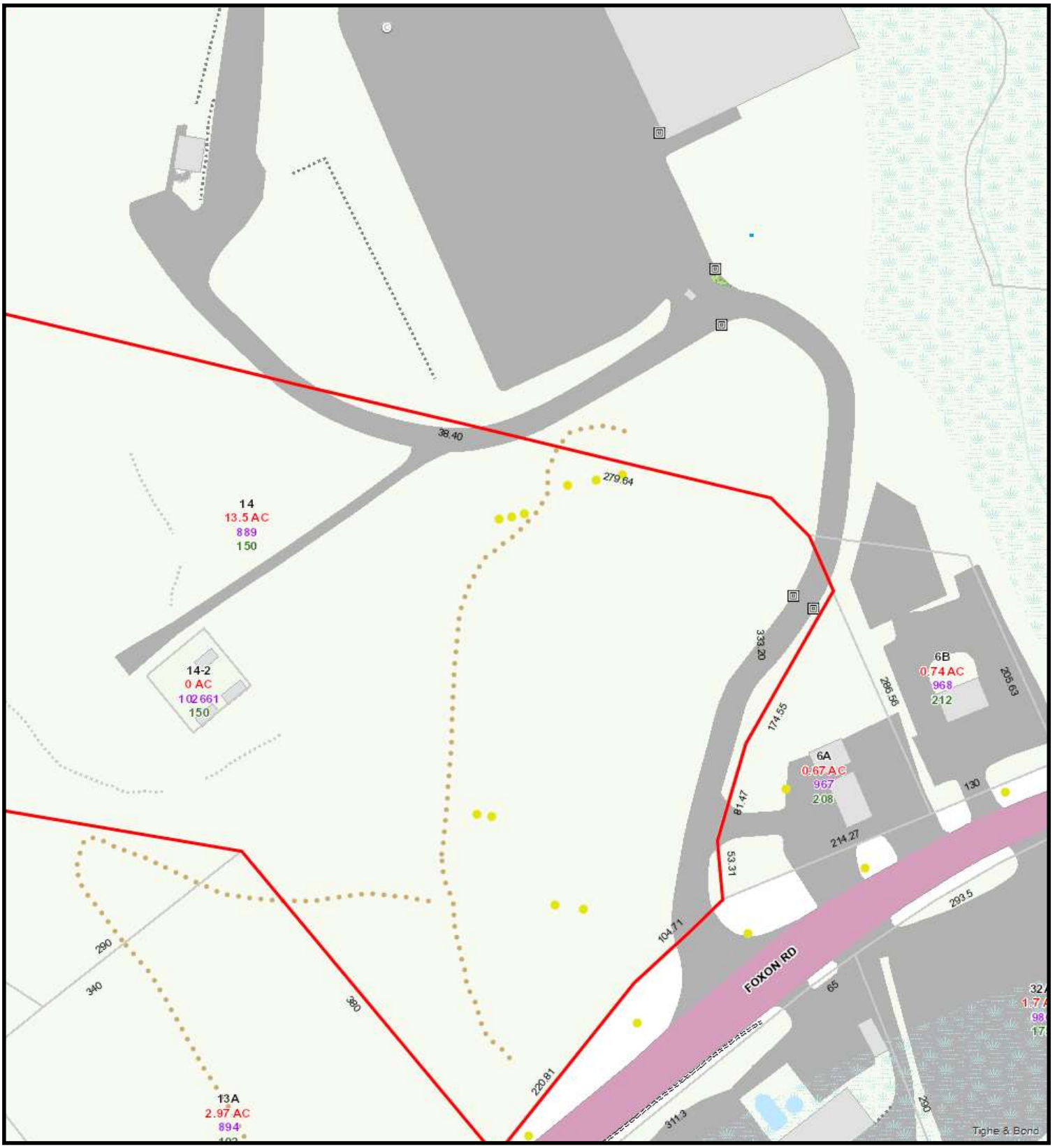
Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$0	$338,600	$338,600
2016	$0	$338,600	$338,600
2015	$0	$338,600	$338,600

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$0	$237,100	$237,100
2016	$0	$237,100	$237,100
2015	$0	$237,100	$237,100

EXHIBIT 4



5/13/2019 11:59:17 AM

Scale: 1"=125'

Scale is approximate

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.

EXHIBIT 5

TOWN OF NORTH BRANFORD

TOWN HALL P.O. BOX 287 1599 FOXON ROAD NORTH BRANFORD, CONNECTICUT 06471-0287
TOWN MANAGER (203) 315-6000 TOWN HALL FAX (203) 315-6025

Certified Mail #7099 3220 0010 3404 7074
August 23, 2000

Michael Hickey
SBA, Inc.
80 Eastern Boulevard
Glastonbury, CT 06033

Subject: Application #99/2000-30 - Site Plan, 150 Foxon Road

Dear Mr. Hickey:

At its Regular Meeting of August 17, 2000, the North Branford Planning and Zoning Commission voted to approve the Site Development Plan for Planning and Zoning Application #99/2000-30, Site Plan, 150 Foxon Road AKA 108 Foxon Road, Assessor's Map 14, Lot 14, Industrial I-3 Zone, Construction of a 180 foot high monopole telecommunications tower with the installation and operation of associated antennas and equipment within a 100 foot by 100 foot leased area, owner 108 Foxon Road, LLC, Applicant SBA, Inc. on plans entitled "SBA Site Number 10125-053 North Branford – West, 108 Foxon Road, North Branford, CT. Cover Sheet Dated 3-27-00 Revised 7-19-00, Existing Condition Survey Dated 3-27-00, Abutting Property Owners Dated 3-27-00 Revised 7-19-00, Comprehensive Site Plan Dated 3-27-00 Revised 7-19-00, Site Layout and Elevations Dated 3-27-00 Revised 7-19-00, Details Drawing CT5061Z3, CT5053Z4, CT5053Z5 dated 3-27-00 Revised 7-19-00 prepared by Goodkind & O'Dea, Inc. and supplemental information prepared by SBA, Inc. with the following conditions:

1. That this approval shall be null and void if construction/site improvements do not commence within one year and be completed within five (5) years of this approval date.

2. That the Town Planner and/or Town Engineer be notified at least forty-eight (48) hours prior to the start of any construction.

3. That no Certificate of Zoning Compliance be issued until such time as all site work is completed or a bond for remaining work is submitted in an amount approved by the Town Engineer and having form and surety acceptable to the Town Attorney.

4. That all sedimentation and erosion controls be in place prior to the start of construction and that the Town Planner and/or Town Engineer be notified at least forty-eight (48) hours prior to start of construction. The Commission reserves the

right to require the developer to install additional sedimentation and erosion control devices in addition to those shown on the approved record plans as deemed necessary by the Town Engineer and/or New Haven Soil and Water Conservation District. A certificate of soil erosion and sediment control compliance shall be issued upon determination that the soil erosion and sediment control complies with the North Branford Subdivision Regulations/Zoning Regulations. Failure to comply with the approved soil erosion and sediment control plan may result in the revocation of the erosion and sediment control certification and other sanctions provided by law.

5. That the erosion and sedimentation control measures be installed as per the approved control plan utilizing the CT Guideline for Erosion and Sedimentation Control Handbook, CT Council on Soil and Water Conservation October, 1984.

6. The proposed 12 foot wide access drive shall be paved.

If you have any questions, please do not hesitate to contact me at (203) 315-6010.

Sincerely,

Carol A. Zebb

Carol A. Zebb
Town Planner/Inland Wetlands Enforcement Officer

CAZ:dfs

cc: Kurt A. Weiss, P.E., Town Engineer

EXHIBIT 6

SPECIAL CONSTRUCTION NOTE (SBA-PROVIDED ANTENNA MOUNT STRUCTURAL MOD SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT THE T-MOBILE RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).

SBA NORTH BRANFORD

108 FOXON ROAD
NORTH BRANFORD, CT 06471
NEW HAVEN COUNTY

SITE NO.: CT11302C

RF DESIGN GUIDELINE: 67D5A997DB OUTDOOR

APPROVALS

PROJECT MANAGER:	DATE:	ZONING/SITE ACQ.:	DATE:
CONSTRUCTION:	DATE:	OPERATIONS:	DATE:
RF ENGINEERING:	DATE:	TOWER OWNER:	DATE:

T-MOBILE TECHNICIAN SITE SAFETY NOTES

LOCATION	SPECIAL RESTRICTIONS
SECTOR A:	ACCESS BY CERTIFIED CLIMBER
SECTOR B:	ACCESS BY CERTIFIED CLIMBER
SECTOR C:	ACCESS BY CERTIFIED CLIMBER
GPS/LMU:	UNRESTRICTED
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE

SITE NOTES

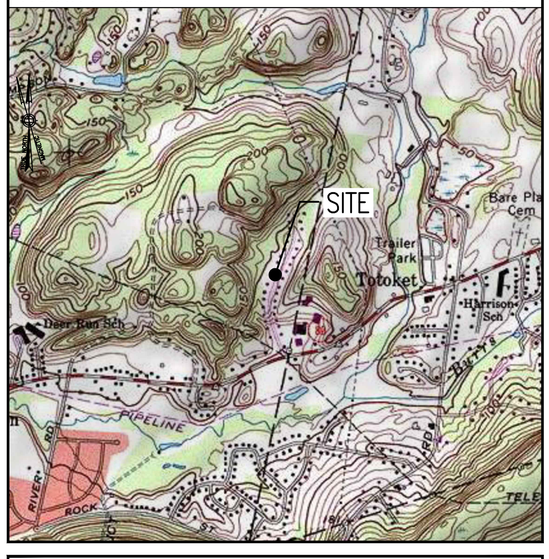
1. THIS IS AN UNMANNED AND RESTRICTED ACCESS TELECOMMUNICATION FACILITY, AND IS NOT FOR HUMAN HABITATION. IT WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
   - ADA COMPLIANCE NOT REQUIRED.
   - POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.
   - NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
2. CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
3. NEW CONSTRUCTION WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
   - BUILDING CODE: 2018 CONNECTICUT STATE BUILDING CODE
   - ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE
   - STRUCTURAL CODE: TIA/EIA-222-G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE OMNIPOINT REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. THE CONTRACTOR SHALL NOTIFY THE PROJECT OWNER'S REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK.

AT LEAST 72 HOURS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 811

VICINITY MAP: 1"=1000'



DIRECTIONS

TURN LEFT ONTO S WASHINGTON ST. TURN RIGHT ONTO MA-123 E. TURN LEFT TO MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. MERGE ONTO I-495 NORTH. TAKE EXIT 13B TO MERGE ONTO I-95 SOUTH TOWARD PROVIDENCE RI. KEEP LEFT TO STAY ON I-95 SOUTH. TAKE EXIT 57 TOWARD BRANDFORD NORTH/US-1. TURN RIGHT ONTO US-1 SOUTH. TURN RIGHT ONTO CT-22 WEST. TURN LEFT ONTO CT-22 WEST/CT-80 WEST. TURN RIGHT, TURN RIGHT, TURN RIGHT, SITE WILL BE ON THE RIGHT.

SHEET INDEX

SHT. NO.	DESCRIPTION	VER.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND & EQUIPMENT PLANS	1
A-2	TOWER ELEVATION & ANTENNA PLANS	1
A-3	SITE DETAILS	1
A-4	ANTENNA & FEEDLINE CHARTS	1
E-1	ELECTRIC & GROUNDING DETAILS	1

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

PROJECT SUMMARY

SITE NUMBER:	CT11302C
SBA SITE NUMBER:	CT03110-S
SBA SITE NAME:	NORTH BRANFORD
SITE ADDRESS:	108 FOXON ROAD NORTH BRANFORD, CT 06471
PROPERTY OWNER:	108 FOXON ROAD LLC. C/O SBA TOWERS INC. 250 TOTOKET ROAD NORTH BRANFORD, CT 06471
TOWER OWNER:	SBA PROPERTIES, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	NEW HAVEN COUNTY
ZONING DISTRICT:	I3 – INDUSTRIAL PARK
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	175'
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
SBA RSM:	STEPHEN ROTH PHONE: 860-539-4920 EMAIL: SRoth@sbasite.com
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: 41.32828° N41°19'41.808" LONGITUDE: -72.81911° W72°49'08.796"

SPECIAL ZONING NOTE:
BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE FACILITY REQUEST, EXPEDITED REVIEW, AND LIMITED/PARTIAL ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW, OR ADMINISTRATIVE REVIEW).

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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
12/8/20

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	12/08/20	ISSUED FOR CONSTRUCTION	CMC
0	10/28/20	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CT11302C

SITE ADDRESS:
108 FOXON ROAD
NORTH BRANFORD, CT 06471

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

1815.066

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – T–MOBILE
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – T–MOBILE
   OEM – ORIGINAL EQUIPMENT MANUFACTURER

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

5. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR AND/OR LANDLORD PRIOR TO CONSTRUCTION.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.

13. THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

14. SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.

15. CONSTRUCTION SHALL COMPLY WITH ALL T–MOBILE STANDARDS AND SPECIFICATIONS.

16. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

17. THE EXISTING CELL SITES ARE IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

18. IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.

3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.

6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.

8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.

9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.

10. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T–MOBILE SPECIFICATION FOR SITE SIGNAGE.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF .....1½ IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....¾ IN.
   BEAMS AND COLUMNS .....1½ IN.

5. A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.

7. CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
   (A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.
   (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

8. AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.

9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T–MOBILE SPECIFICATIONS UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM–A–36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".

2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.

3. BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾"ø) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.

4. NON–STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ⅝" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.

5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL

6. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.

2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.

3. AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.

4. COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.

5. AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND–OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL–GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

1. HAND OPERATED DOUBLE DRUN, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

1. FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T–MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.

2. COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.

3. CABLE LADDER RACK:
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

ELECTRICAL INSTALLATION NOTES:

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

2. SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.

3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

4. CABLES SHALL NOT BE ROUTED THROUGH LADDER–STYLE CABLE TRAY RUNGS.

5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.

6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).

8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

21. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

23. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

24. CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

25. WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED, OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

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STATE OF CONNECTICUT
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No. 25937
LICENSED
PROFESSIONAL CIVIL ENGINEER
12/1/20

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	12/08/20	ISSUED FOR CONSTRUCTION	CMC
0	10/28/20	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CT11302C

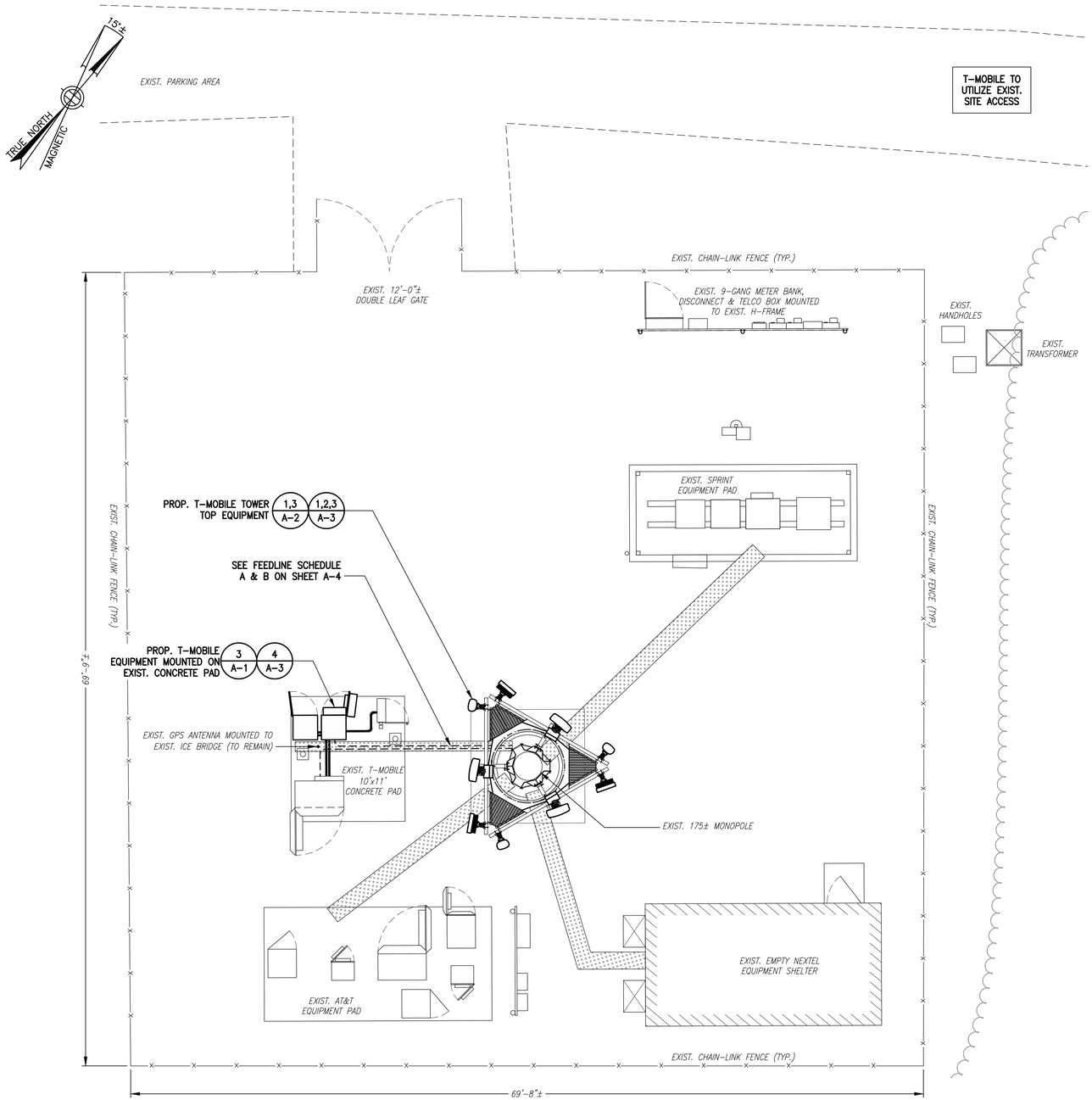
SITE ADDRESS:
108 FOXON ROAD
NORTH BRANFORD, CT 06471

SHEET TITLE
GENERAL NOTES

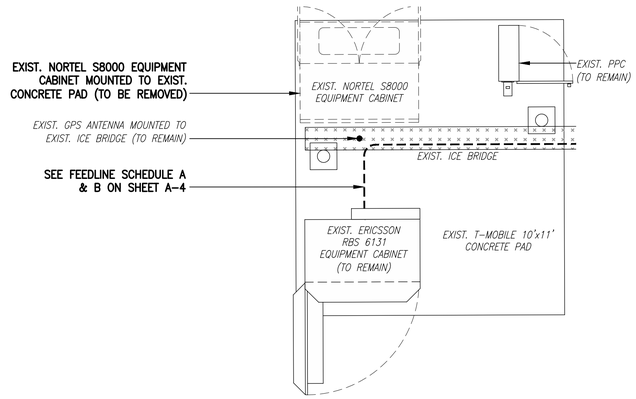
SHEET NUMBER
GN-1

1815.066

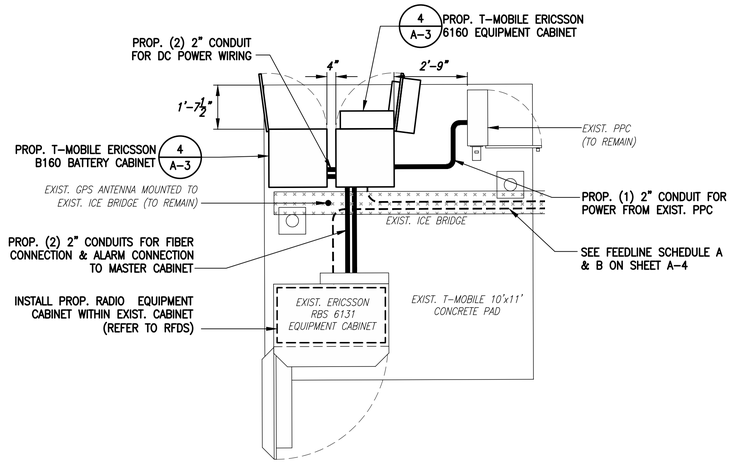
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.



COMPOUND PLAN 1 A-1
SCALE: 3/16" = 1'-0"
0 5'-4" 10'-8" 16'-0"



EXISTING EQUIPMENT PLAN 2 A-1
SCALE: 3/8" = 1'-0"
0 2'-8" 5'-4" 8'-0"



PROPOSED EQUIPMENT PLAN 3 A-1
SCALE: 3/8" = 1'-0"
0 2'-8" 5'-4" 8'-0"

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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED PROFESSIONAL CIVIL ENGINEER
12/11/20

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	12/08/20	ISSUED FOR CONSTRUCTION	CMC
0	10/28/20	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CT11302C

SITE ADDRESS:
108 FOXON ROAD
NORTH BRANFORD, CT 06471

SHEET TITLE
COMPOUND & EQUIPMENT PLANS

SHEET NUMBER
A-1

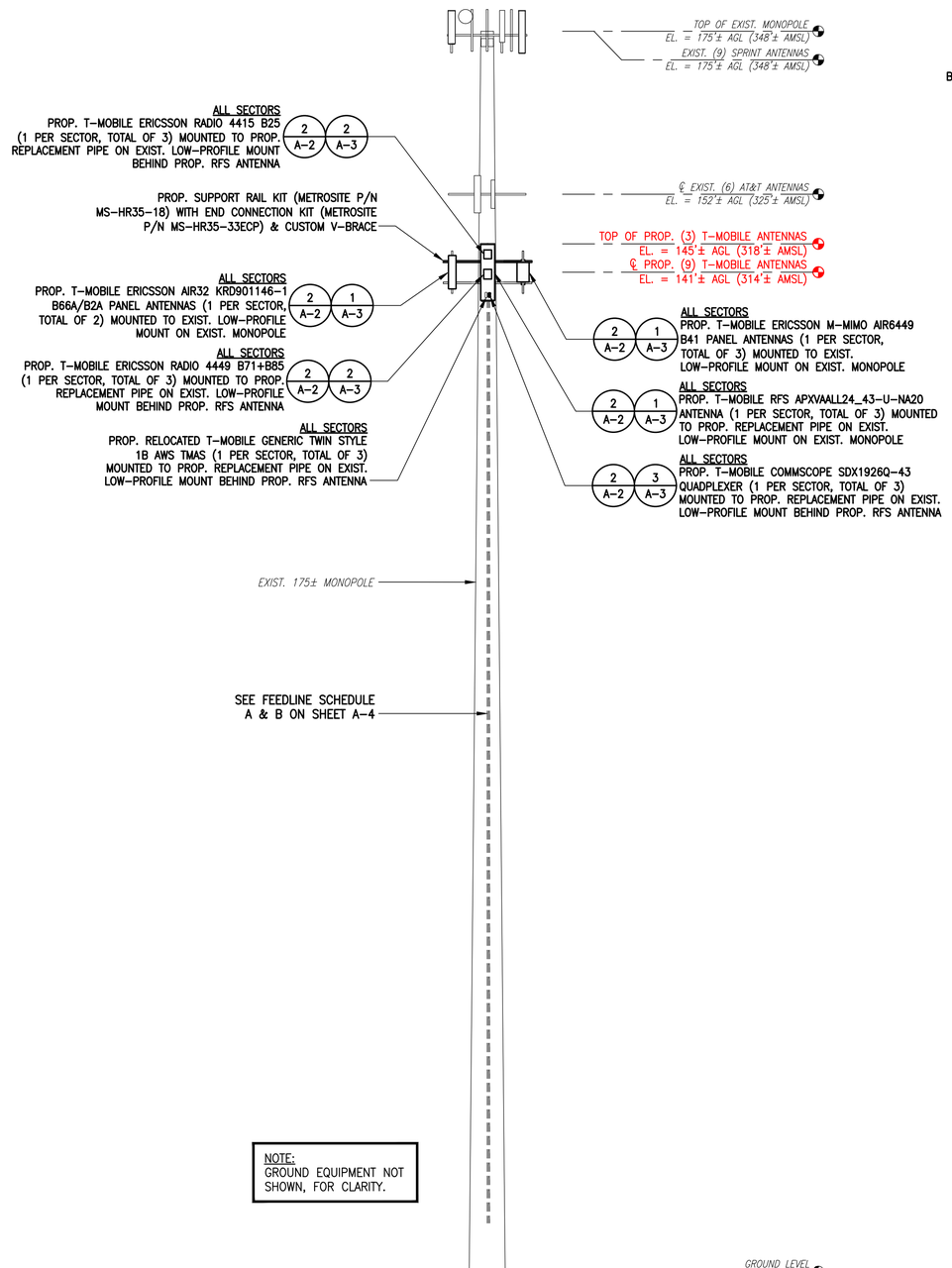
1815.066

SPECIAL CONSTRUCTION NOTE (SBA-PROVIDED ANTENNA MOUNT STRUCTURAL MOD SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT THE T-MOBILE RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).

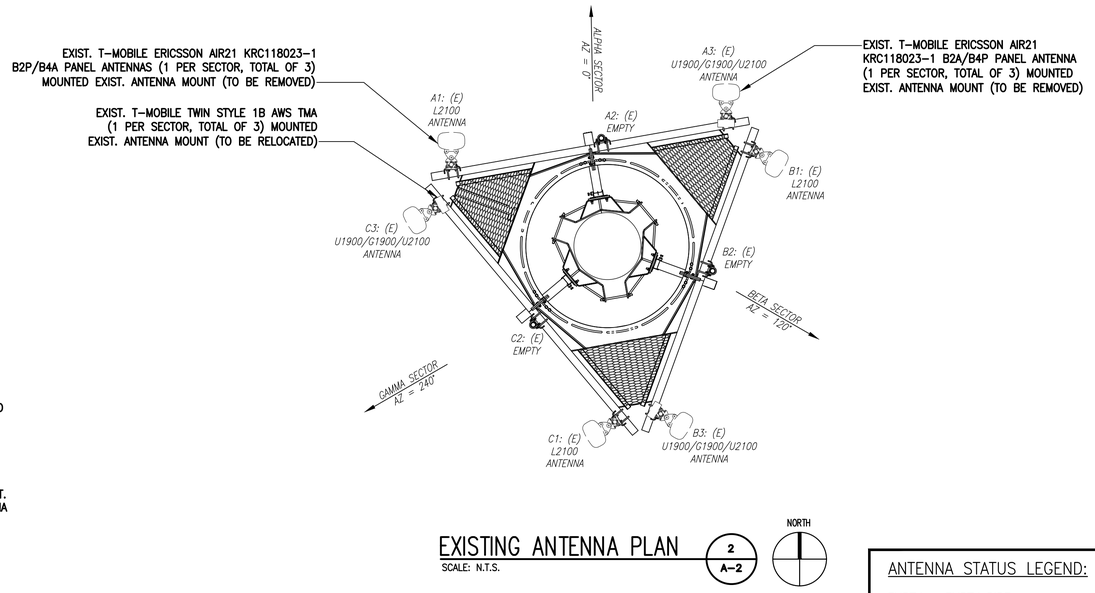
RAD CENTER NOTE:
T-MOBILE RAD CENTER SHOWN IN RED TEXT BASED ON SBA-PROVIDED CO-LOCATION APPLICATION, EQUIPMENT DATABASE, AND STRUCTURAL ANALYSIS. THE SBA-PROVIDED ANTENNA RAD CENTER SHALL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM THE T-MOBILE RFDS.

SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

SPECIAL TOWER TOP EQUIPMENT INSTALLATION WORK NOTE (SAFETY-CLIMB ALIGNMENT REQUIREMENTS):
GENERAL CONTRACTOR SHALL ORIENT PROPOSED PLATFORM REINFORCEMENT KIT RING-MOUNTS SO THAT EXISTING SAFETY CLIMB CABLE IS NOT OBSTRUCTED/RE-ROUTED FROM VERTICAL ALIGNMENT AND IS NOT IN PHYSICAL CONTACT WITH EXISTING OR PROPOOSED RING-MOUNT HARDWARE. GENERAL CONTRACTOR SHALL INSTALL NEW OR ADDITIONAL SAFETY-CLIMB CABLE GUIDES IF ADDITIONAL CLEARANCE IS REQUIRED. ADDITIONAL CABLE GUIDES SHALL BE ATTACHED SECURELY TO THE POLE USING MECHANICAL FASTENERS OR FIELD WELDED BY A CERTIFIED WELDING TECHNICIAN.



TOWER ELEVATION (1 / A-2)
SCALE: 1" = 10'
0 5' 10' 20' 30'

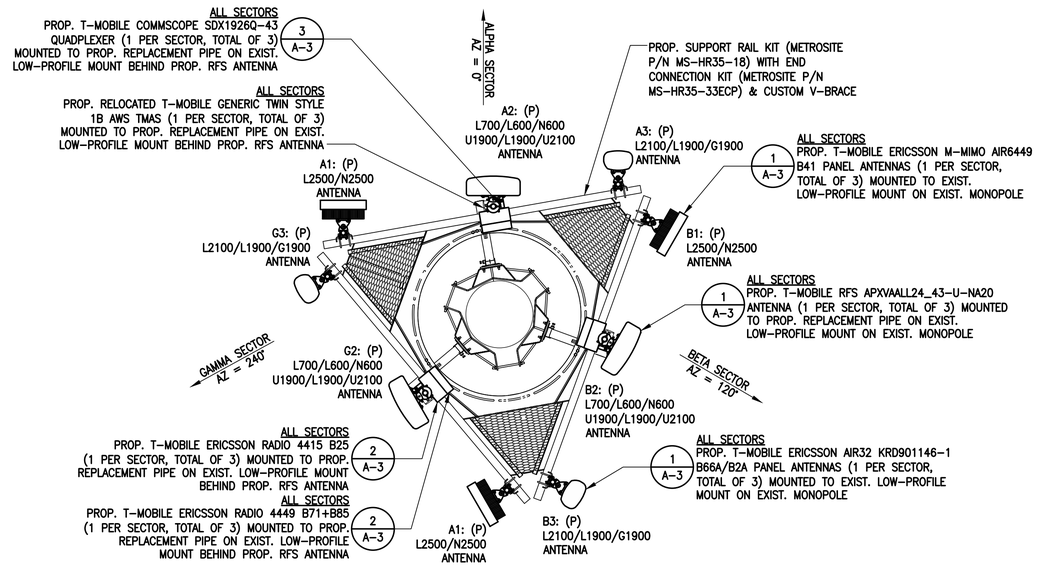


EXISTING ANTENNA PLAN (2 / A-2)
SCALE: N.T.S.

ANTENNA STATUS LEGEND:

EMPTY – EMPTY PIPE

(E) – EXISTING
(P) – INSTALL
(F) – FUTURE



PROPOSED ANTENNA PLAN (3 / A-2)
SCALE: N.T.S.

NOTE:
VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

T-MOBILE
NORTHEAST LLC

15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700

SBA

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
(508) 251-0720

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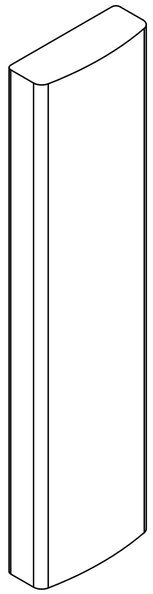
SHEET TITLE
TOWER ELEVATIONS & ANTENNA PLANS

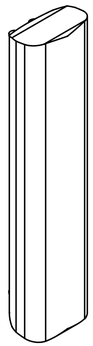
SHEET NUMBER
A-2

1815.066



RFS APXVAARR24_43-U-NA20 ANTENNA

DIMENSIONS: 95.9"H x 24.0"W x 8.7"D
WEIGHT: 128.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3



ERICSSON AIR32 KRD01146-1 B66A/B2A ANTENNA

DIMENSIONS: 56.6"H x 12.9"W x 8.7"D
WEIGHT: 132.2 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ERICSSON M-MIMO AIR6449 B41 ANTENNA

DIMENSIONS: 33.1"H x 20.5"W x 8.3"D
WEIGHT: 103.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ANTENNA DETAILS (1 / A-3)
SCALE: N.T.S.

ERICSSON RADIO 4415 B25

DIMENSIONS: 16.5"H x 13.4"W x 5.9"D
WEIGHT: 46.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ERICSSON RADIO 4449 B71+B85

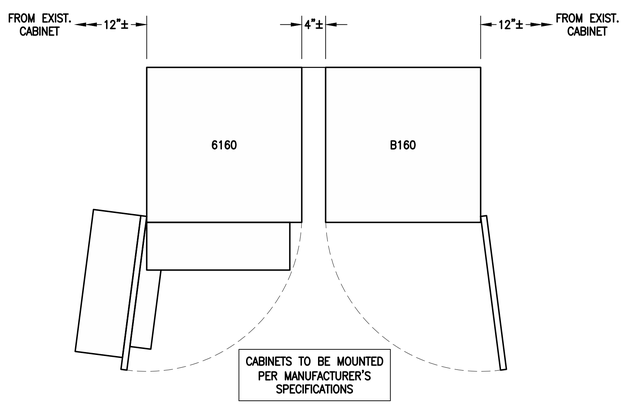
DIMENSIONS: 14.9"H x 13.2"W x 9.3"D
WEIGHT: 74.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

RADIO DETAILS (2 / A-3)
SCALE: N.T.S.

COMMSCOPE SDX1926Q-43 QUADPLEXER

DIMENSIONS: 4.2"H x 6.9"W x 2.9"D
WEIGHT: 6.2 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

DIPLEXER DETAIL (3 / A-3)
SCALE: N.T.S.



ERICSSON 6160 SITE SUPPORT CABINET

DIMENSIONS: 63.25"H x 26.0"W x 34.0"D
WEIGHT: 680.0 lbs
QUANTITY: TOTAL OF 1

ERICSSON B160 BATTERY CABINET

DIMENSIONS: 63.25"H x 26.0"W x 26.0"D
WEIGHT: 1771.0 lbs
QUANTITY: TOTAL OF 1

EQUIPMENT DETAIL (4 / A-3)
SCALE: N.T.S.

T-MOBILE NORTHEAST LLC
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SHEET TITLE
SITE DETAILS

SHEET NUMBER
A-3

1815.066

FINAL ANTENNA CONFIGURATION

SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	SIGNAL CABLES
ALPHA	A1 ERICSSON M-MIMO AIR6449 B41	147'± AGL	0°	0°	2°	L2500/N2500	–	(6) 1-5/8" COAX CABLES (3) 1-5/8" (6x12) HCS FIBER CABLES
	A2 RFS APXVAALL24_43-U-NA20	147'± AGL	0°	0°	2°	L700/L600/N600	RADIO 4449 B71+B85	
					2°	L1900/U1900/U2100	RADIO 4415 B25	
							GENERIC TWIN STYLE 1B AWS TMA	
							SDX1926Q-43 QUADPLEXER	
	A3 ERICSSON AIR32 KRD901146-1 B66A/B2A	147'± AGL	0°	0°	2°	L2100/G1900/L1900	–	
BETA	B1 ERICSSON M-MIMO AIR6449 B41	147'± AGL	120°	0°	2°	L2500/N2500	–	
	B2 RFS APXVAALL24_43-U-NA20	147'± AGL	120°	0°	2°	L700/L600/N600	RADIO 4449 B71+B85	
					2°	L1900/U1900/U2100	RADIO 4415 B25	
							GENERIC TWIN STYLE 1B AWS TMA	
							SDX1926Q-43 QUADPLEXER	
	B3 ERICSSON AIR32 KRD901146-1 B66A/B2A	147'± AGL	120°	0°	2°	L2100/G1900/L1900	–	
GAMMA	C1 ERICSSON M-MIMO AIR6449 B41	147'± AGL	240°	0°	2°	L2500/N2500	–	
	C2 RFS APXVAALL24_43-U-NA20	147'± AGL	240°	0°	2°	L700/L600/N600	RADIO 4449 B71+B85	
					2°	L1900/U1900/U2100	RADIO 4415 B25	
							GENERIC TWIN STYLE 1B AWS TMA	
							SDX1926Q-43 QUADPLEXER	
	C3 ERICSSON AIR32 KRD901146-1 B66A/B2A	147'± AGL	240°	0°	2°	L2100/G1900/L1900	–	

CABLE NOTE: (E)(6) 1-5/8" LMU COAX CABLES & (E)(1) 1-1/4" (9x18) HCS FIBER CABLE TO BE REMOVED. SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV6 – 09/23/20

FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES	LOCATION
A	EXISTING TO REMAIN: (6) 1-5/8" COAX CABLES EXISTING TO BE REMOVED: (1) 1-1/4" (9x18) HCS FIBER CABLE (6) 1-5/8" LMU COAX CABLES	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (3) 1-5/8" (6x12) HCS FIBER CABLES	

NOTE:
EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.

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15 COMMERCE WAY, SUITE B
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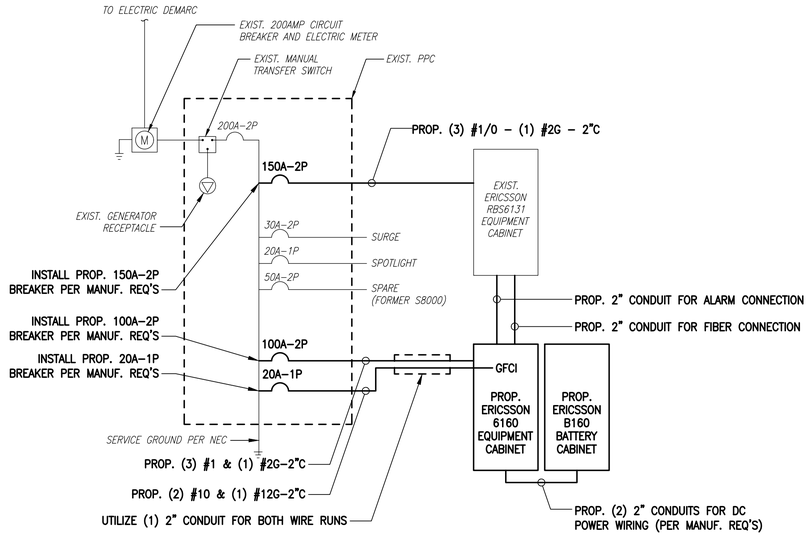
108 FOXON ROAD
NORTH BRANFORD, CT 06471

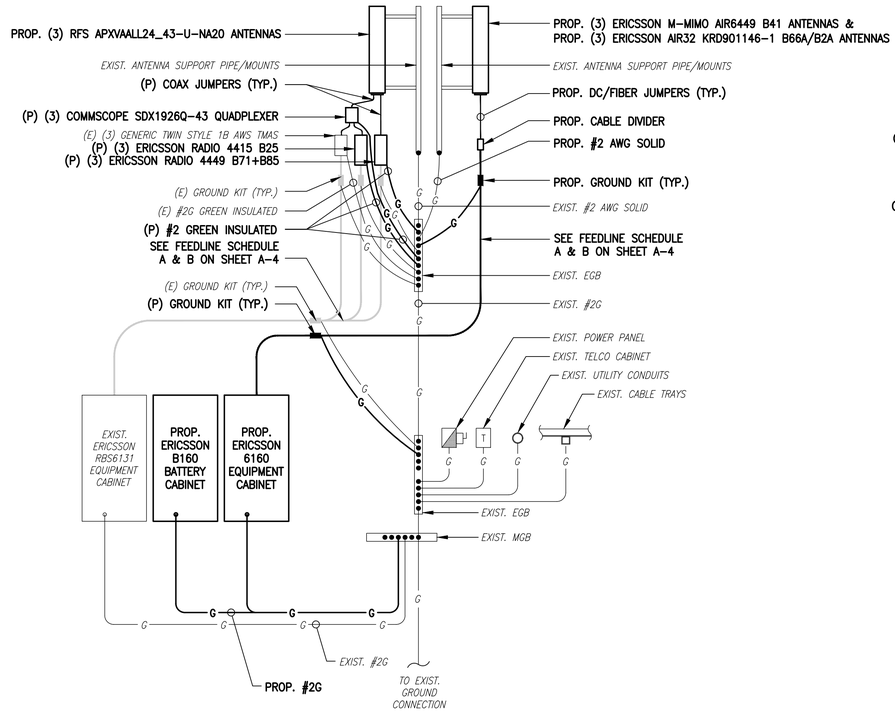
SHEET TITLE
ANTENNA & FEEDLINE CHARTS

SHEET NUMBER
A-4

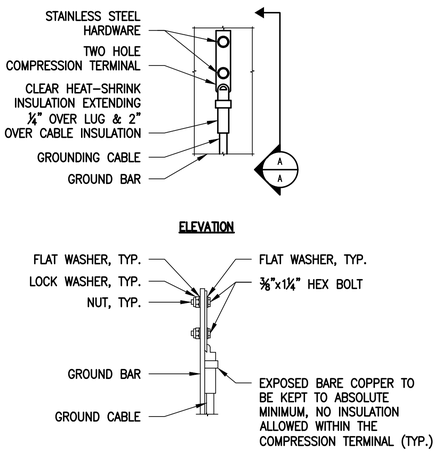
1815.066



ONE LINE DIAGRAM
SCALE: NOT TO SCALE — 1 / E–1

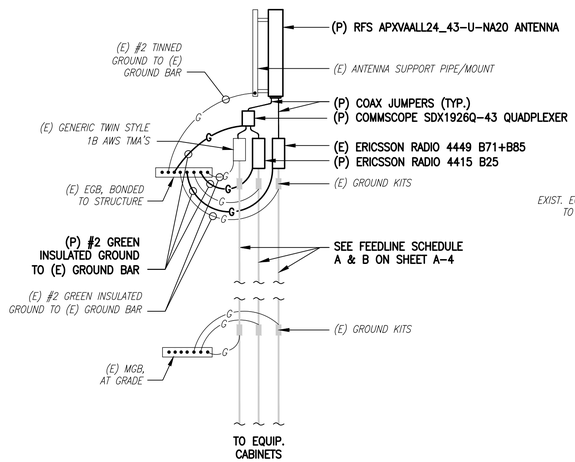


GROUNDING RISER DIAGRAM
SCALE: NOT TO SCALE — 2 / E–1

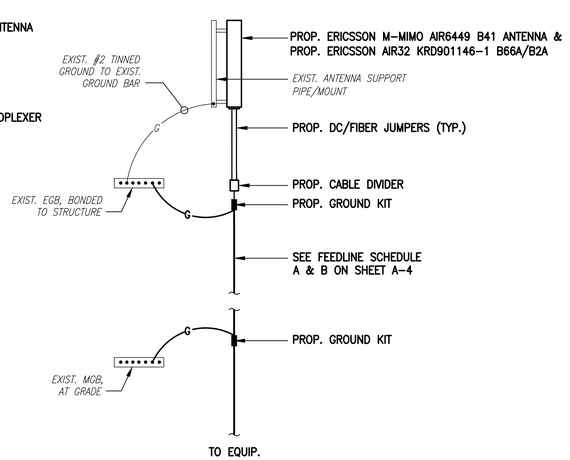


NOTES:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELL DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

TYPICAL GROUND BAR CONNECTIONS DETAIL
SCALE: NOT TO SCALE — 3 / E–1

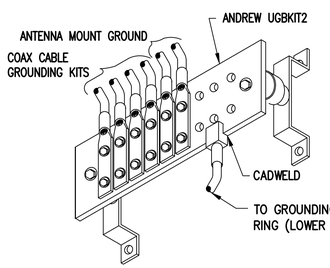


L700/L600/N600/L1900 ANTENNA



L2500/N2500 ANTENNA & L2100/L1900/G1900 ANTENNA

COAX CABLE CONNECTION AND GROUNDING DETAIL
SCALE: NOT TO SCALE — 4 / E–1



GROUND BAR (EGB)
SCALE: NOT TO SCALE — 5 / E–1

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHNINSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY PROJECT OWNER.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T–MOBILE BTS SITE GROUNDING STANDARDS".
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
20. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXIST. TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
21. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE–OUT DOCUMENTATION. 5 OHMNS MINIMUM RESISTANCE REQUIRED.
22. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN–LOSS AND DISTANCE– TO–FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

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SHEET TITLE
ELECTRIC & GROUNDING DETAILS

SHEET NUMBER
E-1

1815.066

EXHIBIT 7

MODIFICATION AND DESIGN
DRAWINGS FOR EXISTING ANTENNA MOUNTS
EXISTING MONOPOLE TOWER

PROPOSED CARRIER: T-MOBILE

TOWER OWNER: SBA / TOWER OWNER SITE #: CT03110-S

CARRIER SITE #/NAME: CT11302C / NORTH BRANFORD

COORDINATES (LATITUDE: 41.328208°, LONGITUDE: -72.819063°)

PLEASE NOTE THIS SET OF DRAWINGS ARE FOR INSTALLATION AND ASSEMBLY ONLY. FABRICATION DETAIL DRAWINGS ARE NOT PROVIDED AND MUST BE COMPLETED BY THE STEEL FABRICATOR SELECTED. TES CAN PROVIDE THE FABRICATION DETAIL DRAWINGS FOR AN ADDITIONAL FEE.

SHEET	SHEET TITLE	REV
T-1	TITLE SHEET	0
BOM	BILL OF MATERIALS	0
GN-1	GENERAL NOTES	0
A-1	ANTENNA MOUNT MODIFICATION DETAILS	0
A-2	ANTENNA MOUNT PHOTOS	0
D-1	STANDARD DETAILS	0
SAF-1	SAFETY CABLE GUIDE DETAILS	0
MS-HRCP-35	METROSITE SUPPORT RAIL CENTER PIPE KIT	
MS-HR35-18	METROSITE SUPPORT RAIL KIT	
MS-HR35-33ECP	METROSITE SUPPORT RAIL END CONNECTION KIT	
MS-H1436	METROSITE HEAVY COLLAR MOUNT PLATE ASSEMBLY	
MPW-1	METROSITE LIGHT COLLAR MOUNT PLATE WELDMENT	
MS-MPVB-350	METROSITE V-BRACING KIT	

NOTE:

1. THE MODIFICATION DRAWINGS ARE BASED ON THE **TES** PROJECT NO. 99377, DATED 11/05/2020.

TES
Tower Engineering Solutions
1320 GREENWAY DRIVE, SUITE 600
IRVING, TX 75038
PH: (972) 483-0607

SBA
5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
(800)-487-SITE

TES JOB NO: 99605

CUSTOMER SITE NO: CT03110-S-SBA

CUSTOMER SITE NAME: NORTH BRANFORD

108 FOXON ROAD
NORTH BRANFORD, CT 06471

STATE OF CONNECTICUT ★ JARRYD TIBBETTS ★ No. 34170 ★ LICENSED PROFESSIONAL ENGINEER ★
11/13/20

DRAWN BY: RA | CHECKED BY: SD/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	11/13/20

SHEET TITLE: TITLE SHEET

SHEET NUMBER: T-1 | REV #: 0

BILL OF MATERIALS

QUANTITY COUNTED	QUANTITY PROVIDED	PART NUMBER	DESCRIPTIONS	SHEET LIST	PIECE WEIGHT (LBS)	WEIGHT (LB)	NOTES
			MATERIAL & HARDWARE				
2	2	MS-HRCP-35	METROSITE SUPPORT RAIL CENTER PIPE KIT	A-1, MS-HRCP-35	23.0	46.0	Galvanized
1	1	MS-HR35-18	METROSITE SUPPORT RAIL KIT	A-1, MS-HR35-18	523.0	523.0	Galvanized
1	1	MS-HR35-33ECP	METROSITE SUPPORT RAIL END CONNECTION KIT	A-1, MS-HR35-33ECP	84.0	84.0	Galvanized
1	1	MS-H1436	METROSITE HEAVY COLLAR MOUNT PLATE ASSEMBLY	A-1, MS-H1436	136.7	136.7	Galvanized
1	1	MS-MPVB-350	METROSITE V-BRACING KIT	A-1, MS-MPVB-350	341.0	341.0	Galvanized
			FOLLOWING ITEMS ARE "CUSTOM" PARTS				
3	3	PX2375-8	2" PX (2.375" O.D. X 0.218" THICKNESS) X 8'-0" A53 GR-B 35KSI	A-1	41.10	123.3	GALVANIZED
2	2	PN 115-203	SAFETY CABLE GUIDE (TUF-TUG OR EQUIV.)	SAF-1	0.00	0.0	GALVANIZED
					TOTAL WEIGHT (LBS) =	**1254.0**	

ALL METROSITE PARTS ARE AVAILABLE FROM METROSITE, LLC.

180 IND PARK BLVD COMMERCE, GA 30529
OFFICE: (706) 335-7045
FAX: (706) 335-7056

NOTE: ALL MATERIALS, WHICH WEREN'T LISTED IN THIS SHEET, ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

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(800)-487-SITE

TES JOB NO:
99605

CUSTOMER SITE NO:
CT03110-S-SBA
CUSTOMER SITE NAME:
NORTH BRANFORD
108 FOXON ROAD
NORTH BRANFORD, CT 06471

DRAWN BY: RA | CHECKED BY: SD/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	11/13/20

SHEET TITLE:
BILL OF MATERIALS

SHEET NUMBER: BOM
REV #: 0

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE ANSI/TIA-222-G, ANSI/ASSP A10.48, 2018 CONNECTICUT STATE BUILDING CODE, AND ANY OTHER GOVERNING BUILDING CODES AND OSHA SAFETY REGULATIONS.
2. ALL WORK INDICATED ON THE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TELECOMMUNICATIONS TOWER, POLE AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF ALL MISCELLANEOUS PARTS (SUCH AS SHIMS), TEMPORARY SUPPORTS, AND GUYINGS, ETC., PER ANSI/ASSP A10.48, TO COMPLETE THE ASSEMBLY AS SHOWN IN THE DRAWINGS.
4. CONTRACTOR SHALL PROCEED WITH THE INSTALLATION WORK CAREFULLY SO THE WORK WILL NOT DAMAGE ANY EXISTING CABLE, EQUIPMENT OR THE STRUCTURE.
5. THE USE OF GAS TORCH OR WELDER, ARE NOT ALLOWED ON ANY TOWER STRUCTURE WITHOUT THE CONSENT OF THE TOWER OWNER.
6. GENERALLY THE CONTRACTOR IS RESPONSIBLE TO CONDUCT AN ONSITE VISIT SURVEY OF THE JOB SITE AFTER AWARD, AND REPORT ANY ISSUES WITH THE SITE TO **TES** BEFORE PROCEEDING CONSTRUCTION.
7. IT IS THE RESPONSIBILITY OF THE GC TO VERIFY THAT THERE IS NO INTERFERENCES (WITH SAFETY CLIMB BRACKETS, TRANSMISSION LINES, ETC.) PRIOR TO MOBILIZATION AND INSTALLATION OF THESE MODIFICATIONS.
8. PLEASE NOTIFY TES IMMEDIATELY IF ANY INSTALLATION ISSUES OCCUR RELATED TO THIS DRAWING @ 972-483-0607 OR EMAIL-TESORDERS@TESTOWER.US

FABRICATION

1. ALL STEEL SHALL MEET OR EXCEED THE MINIMUM STRENGTH AS SPECIFIED IN THE DRAWINGS. IF YIELD STRENGTH WAS NOT NOTED IN THE DRAWINGS, CONTRACTORS SHALL CONTACT TES FOR DIRECTION.
2. ALL FIELD CUT EDGES SHALL BE GROUND SMOOTH. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

WELDING

1. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNO. (E70XX UNLESS NOTED OTHERWISE).
2. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING APPROX. 0.5" BEYOND THE PROPOSED FIELD WELD SURFACES.
3. ALL WELDS SHALL BE INSPECTED VISUALLY. A MINIMUM OF 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. 100% OF WELDS SHALL BE INSPECTED IF DEFECTS ARE FOUND.
4. WELD INSPECTIONS SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
5. AFTER INSPECTION, ALL FIELD WELDED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

BOLTED ASSEMBLIES AND TIGHTENING OF CONNECTIONS

1. ALL HIGH STRENGTH BOLTS SHALL CONFORM TO THE PROVISIONS OF THE SPECIFICATIONS FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS AS APPROVED BY THE RCSC.
2. FLANGE BOLTS SHALL BE TIGHTENED BY THE AISC "TURN-OF-THE-NUT" METHOD. THE FOLLOWING TABLE SHOULD BE USED FOR THE "TURN-OF-THE-NUT" TIGHTENING.
3. SPLICE BOLTS AND ALL OTHER BOLTS IN BEARING TYPE CONNECTIONS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION.
4. THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS ATTAINED BY EITHER A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER WITH AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
5. HB HOLLO-BOLT SHALL BE INSTALLED PER ICC ESR-3330 INSTRUCTIONS.

VERIFICATION AND INSPECTION

1. IF APPLICABLE, VERIFICATION INSPECTION TO BE PERFORMED SHALL BE IN ACCORDANCE TO IBC-2015 SECTION 1705 FOR STEEL CONSTRUCTION AND TABLE 1705.3 FOR CONCRETE CONSTRUCTION.

TABLE 8.2 NUT ROTATION FROM SNUG-TIGHT CONDITION FOR TURN-OF-NUT PRETENSIONING [a,b]

BOLT LENGTH [c]	DISPOSITION OF OUTER FACE OF BOLTED PARTS		
	BOTH FACES NORMAL TO BOLT AXIS	ONE FACE NORMAL TO BOLT AXIS, OTHER SLOPED NOT MORE THAN 1:20 [d]	BOTH FACES SLOPED NOT MORE THAN 1:20 FROM NORMAL TO BOLT AXIS [d]
NOT MORE THAN $4d_b$	1/3 TURN	1/2 TURN	2/3 TURN
MORE THAN $4d_b$ BUT NOT MORE THAN $8d_b$	1/2 TURN	2/3 TURN	5/6 TURN
MORE THAN $8d_b$ BUT NOT MORE THAN $12d_b$	2/3 TURN	5/6 TURN	1 TURN

[a] NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF THE ELEMENT (NUT OR BOLT) BEING TURNED. FOR REQUIRED NUT ROTATIONS OF 1/2 TURN AND LESS, THE TOLERANCE IS PLUS OR MINUS 30 DEGREES; FOR REQUIRED NUT ROTATIONS OF 2/3 TURN AND MORE, THE TOLERANCE IS PLUS OR MINUS 45 DEGREES.

[b] APPLICABLE ONLY TO JOINTS IN WHICH ALL MATERIAL WITHIN THE GRIP IS STEEL.

[c] WHEN THE BOLT LENGTH EXCEEDS $12d_b$, THE REQUIRED NUT ROTATION SHALL BE DETERMINED BY ACTUAL TESTING IN A SUITABLE TENSION CALIBRATOR THAT SIMULATES THE CONDITIONS OF SOLIDLY FITTING STEEL.

[d] BEVELED WASHER NOT USED.

SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, JUNE 30, 2004 RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS

INSTALLATION TORQUE REQUIRED FOR HOLLO BOLTS AND AJAX BOLTS:

1. HB12 HOLLO BOLT: 59 FT-LBS
2. HB16 HOLLO BOLT: 140 FT-LBS
3. HB20 HOLLO BOLT: 221 FT-LBS
4. M20 AJAX BOLT: 280 FT-LBS.

FIELD HOT WORK PLAN NOTES:

FOLLOWING GUIDELINES SHALL BE COMPLIED WITH:

1. CONTRACTOR'S RESPONSIBILITY TO COMPLETE A HOT WORK PLAN IF AWARDED PER CUSTOMER SPECIFICATIONS GUIDELINES FOR WELDING, CUTTING & SPARK PRODUCING WORK.
2. HAVE A FIRE PLAN APPROVED BY THE CUSTOMER AND THEIR SAFETY MANAGEMENT DEPT.
3. CONTRACTOR MUST OBTAIN THE CONTACT INFO OF THE LOCAL FIRE DEPARTMENT AND THE 911 ADDRESS OF THE TOWER SITE BEFORE CONSTRUCTION.
4. CONTRACTOR SHALL MAKE SURE THAT CELL PHONE COVERAGE IS AVAILABLE IN THE TOWER SITE. IF CELL COVERAGE IS NOT AVAILABLE, AN IMMEDIATE AVAILABLE MEANS OF DIRECT COMMUNICATION WITH THE FIRE DEPARTMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION START.
5. ALL CONSTRUCTION SHALL BE PERFORMED UNDER WIND SPEED LESS THAN 10 MPH ON THE GROUND LEVEL. IF WIND SPEED INCREASE, CONTRACTOR MUST DETERMINE IF CONSTRUCTION SHALL BE DISCONTINUED.
6. FIRE SUPPRESSION EQUIPMENT MUST BE MADE AVAILABLE ON SITE AND READY TO USE.
7. CONTRACTOR SHALL ASSIGN A FIRE WATCHER TO PERFORM FIRE-FIGHTING DUTIES.
8. ALL WELDERS SHALL BE AWS OR STATE CERTIFIED. THEY MUST ALSO BE EXPERIENCED IN WELDING ON GALVANIZED MATERIALS.
9. IF IT IS POSSIBLE, ALL EXISTING COAX NEAR WELDING AREA SHALL BE TEMPORARILY MOVED AWAY FROM THE WELDING AREA BEFORE WELDING THE PLATES.
10. PLEASE REPORT ANY FIELD ISSUE TO TES @ 972-483-0607.

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TES JOB NO:
99605

CUSTOMER SITE NO:
CT03110-S-SBA
CUSTOMER SITE NAME:
NORTH BRANFORD
108 FOXON ROAD
NORTH BRANFORD, CT 06471

DRAWN BY: RA | CHECKED BY: SD/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	11/13/20

SHEET TITLE:
GENERAL NOTES

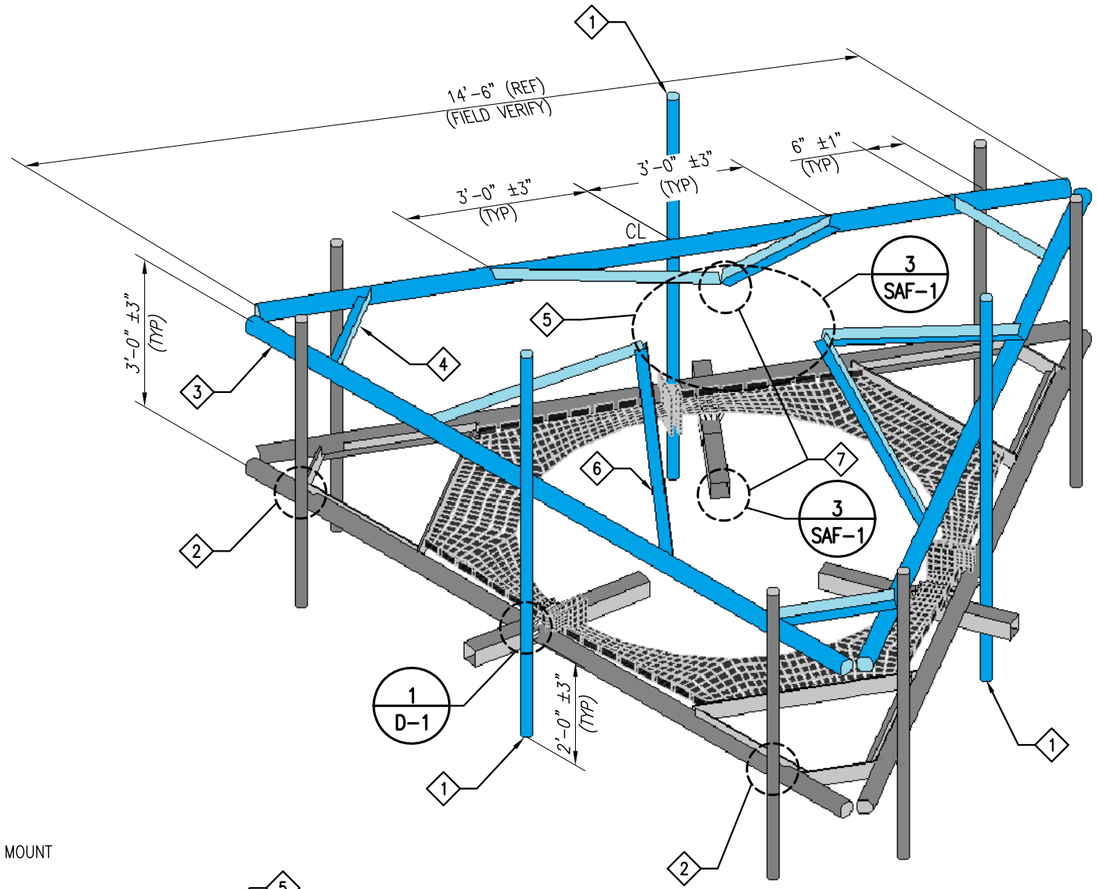
SHEET NUMBER: GN-1
REV #: 0

SCOPE OF WORK

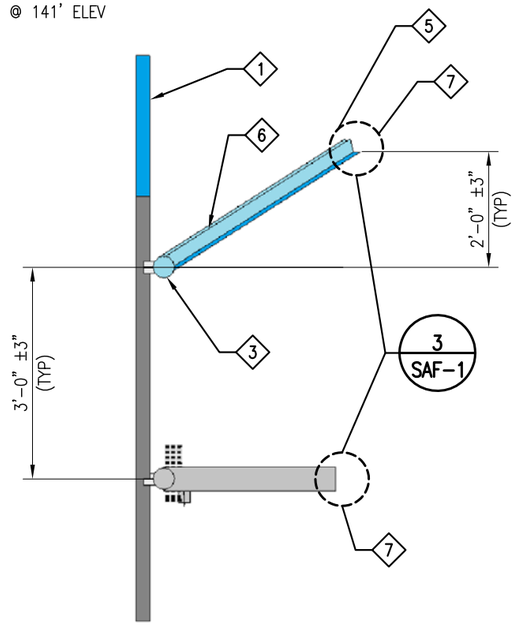
1. REPLACE EXISTING ANTENNA MOUNT PIPE WITH NEW 2" PX ANTENNA MOUNT PIPE (8'-0" LONG), (1) PER SECTOR AS SHOWN.
2. REPLACE EXISTING CHANNEL BRACKETS WITH NEW SUPPORT RAIL CENTER PIPE KITS ON EXISTING BOTTOM SUPPORT RAIL PIPE, (2) PER SECTOR. SEE SHEETS D-1 AND MS-HRCP-35 FOR DETAILS.
3. INSTALL NEW SUPPORT RAIL KIT. SEE SHEET MS-HR35-18 FOR DETAILS.
4. INSTALL NEW SUPPORT RAIL END CONNECTION KIT. SEE SHEET MS-HR35-33ECP FOR DETAILS.
5. INSTALL NEW HEAVY COLLAR MOUNT, (NOT SHOWN FOR CLARITY). SEE SHEET MS-H1436 FOR DETAILS.
6. INSTALL NEW V-BRACING KIT ON NEW SUPPORT RAIL PIPE. SEE SHEET MS-MPVB-350 FOR DETAILS.
7. INSTALL NEW SAFETY CLIMB GUIDES TO PREVENT EXISTING SAFETY CLIMB FROM RUBBING AGAINST NEW AND EXISTING COLLAR MOUNTS. SEE SHEET SAF-1 FOR DETAILS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP, REMOVAL AND DISPOSAL OF EXCESS MATERIALS USED AND REMOVED FROM THE STRUCTURE AT THE COMPLETION OF THE PROJECT.

PHOTO 1

EXISTING ANTENNA MOUNT
@ 141' ELEV



ISOMETRIC VIEW
EXISTING ANTENNA MOUNT @ 141' ELEV.



SIDE VIEW

CONTRACTOR NOTE:
1. **IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THERE IS NO INTERFERENCES WITH (PORT HOLES, SAFETY CLIMB BRACKETS, TRANSMISSION LINES, ETC.) PRIOR TO MOBILIZATION AND INSTALLATION OF THESE MODIFICATIONS.**
2. **PLEASE NOTIFY TES IMMEDIATELY IF ANY INSTALLATION ISSUES OCCUR RELATED TO THIS DRAWING @ 972-483-0607 OR EMAIL-TESORDERS@TESTOWER.US**

NOTES:
1. TEMPORARILY RELOCATE ANY EXISTING COAX ATTACHED TO THE LEGS AND/OR ANY OTHER MEMBERS WHERE OBSTRUCTION WITH THE PROPOSED MODIFICATION MAY OCCUR.
2. WHEN FIELD CUTTING AND DRILLING ANGLES, USE SAME GAGE LINES AND EDGE DISTANCES AS INDICATED ON SHOP CUT AND DRILLED ENDS.
3. APPLY (2) COATS OF ZINGA COLD GALVANIZING COMPOUND AS PER THE MANUFACTURER'S SPECIFICATIONS TO ALL FIELD CUT AND DRILLED AREAS.
4. **MEMBERS IN BLUE COLOR ARE NEW REINFORCEMENTS.**

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	3	PX2375-8	2" PX (2.375" O.D. X 0.218" THICKNESS) X 8'-0" A53 GR-B
2	2	MS-HRCP-35	METROSITE SUPPORT RAIL CENTER PIPE KIT
3	1	MS-HR35-18	METROSITE SUPPORT RAIL KIT
4	1	MS-HR35-33ECP	METROSITE SUPPORT RAIL END CONNECTION KIT
5	1	MS-H1436	METROSITE HEAVY COLLAR MOUNT PLATE ASSEMBLY
6	1	MS-MPVB-350	METROSITE V-BRACING KIT

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TES JOB NO:
99605

CUSTOMER SITE NO:
CT03110-S-SBA
CUSTOMER SITE NAME:
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108 FOXON ROAD
NORTH BRANFORD, CT 06471

DRAWN BY: RA | CHECKED BY: SD/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	11/13/20

SHEET TITLE:
ANTENNA MOUNT MODIFICATION DETAILS

SHEET NUMBER: A-1
REV #: 0

PHOTO 1

REPLACE CHANNEL BRACKET WITH CENTER PIPE KIT FROM NEW SUPPORT RAIL KIT. SEE SHEET D-1 FOR DETAILS.

PHOTO 2

REPLACE EXISTING CHANNEL BRACKETS WITH NEW SUPPORT RAIL CENTER PIPE KITS ON EXISTING BOTTOM SUPPORT RAIL PIPE. (2) PER SECTOR. SEE SHEETS D-1 AND MS-HRCP-35 FOR DETAILS.

INSTALL NEW SAFETY CLIMB GUIDES TO PREVENT EXISTING SAFETY CLIMB FROM RUBBING AGAINST NEW AND EXISTING COLLAR MOUNTS. SEE SHEET SAF-1 FOR DETAILS.

PHOTO 3

REPLACE EXISTING ANTENNA MOUNT PIPE WITH NEW 2" PX ANTENNA MOUNT PIPE (8'-0" LONG), (1) PER SECTOR.

PHOTO 4

NOTE:
EXISTING RRUS/EQUIPMENT MAY BE RELOCATED ALONG THE MEMBER TO ACCOMMODATE THE INSTALLATION OF NEW MOUNT MODIFICATION

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TES JOB NO:
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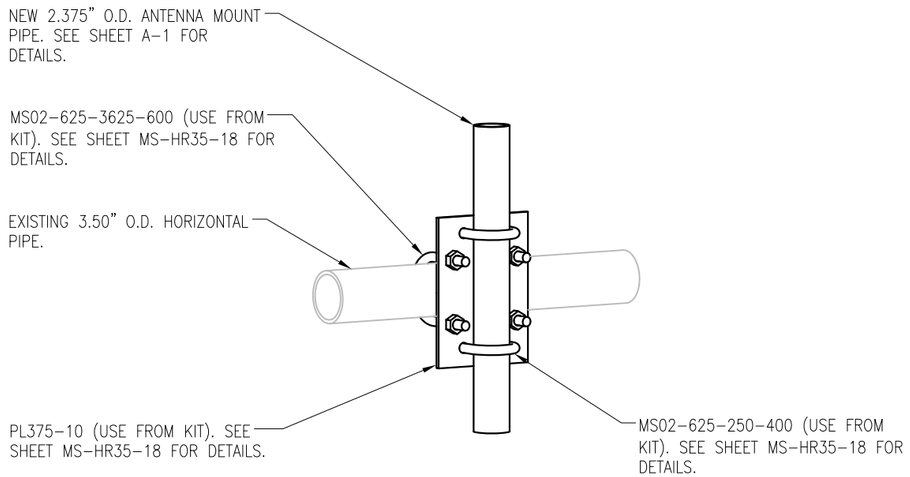
DRAWN BY: RA | CHECKED BY: SD/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	11/13/20

SHEET TITLE:
ANTENNA MOUNT PHOTOS

SHEET NUMBER: A-2
REV #: 0



1 / D-1 DETAIL

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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TES JOB NO:
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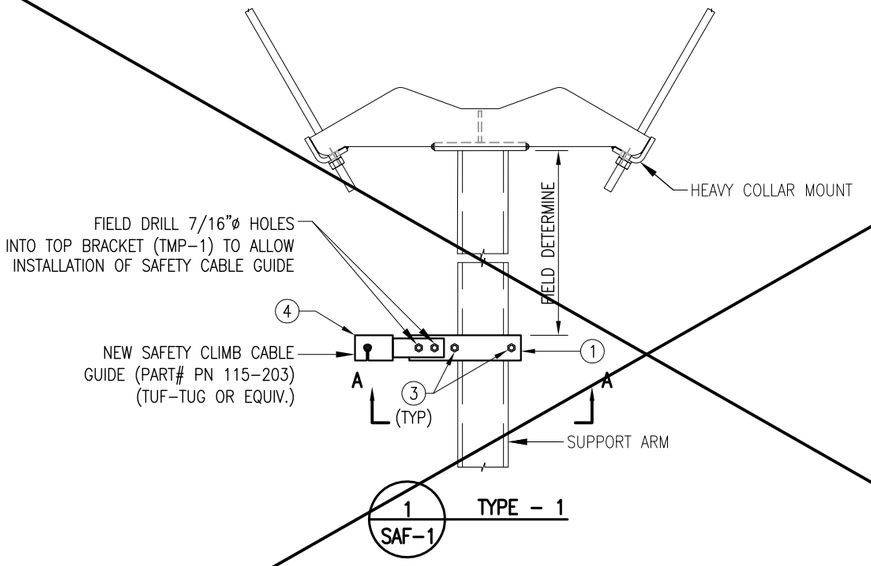
NORTH BRANFORD, CT 06471

DRAWN BY: RA | CHECKED BY: SD/CHLE

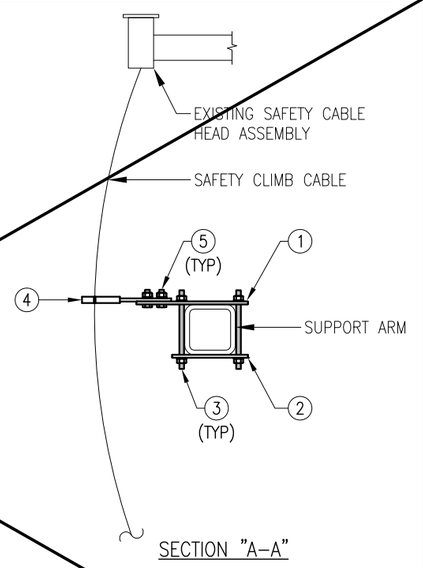
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	11/13/20

SHEET TITLE:
STANDARD DETAILS

SHEET NUMBER: D-1
REV #: 0



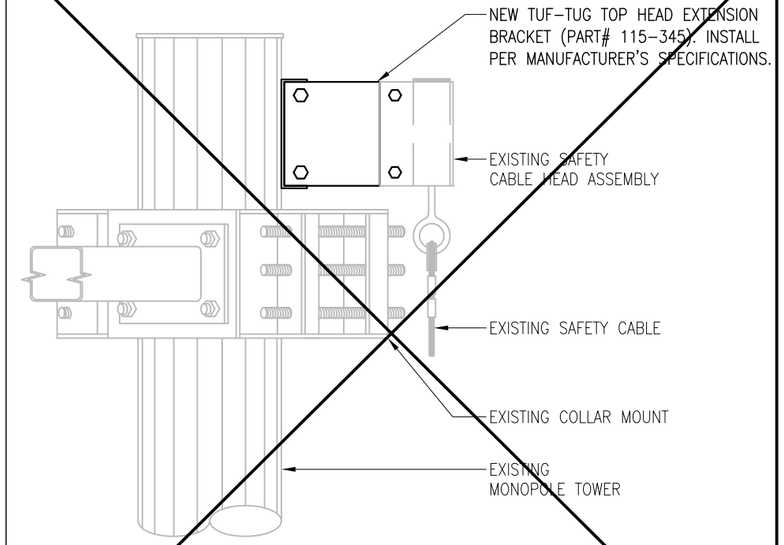
1 SAF-1 TYPE – 1



SECTION "A-A"

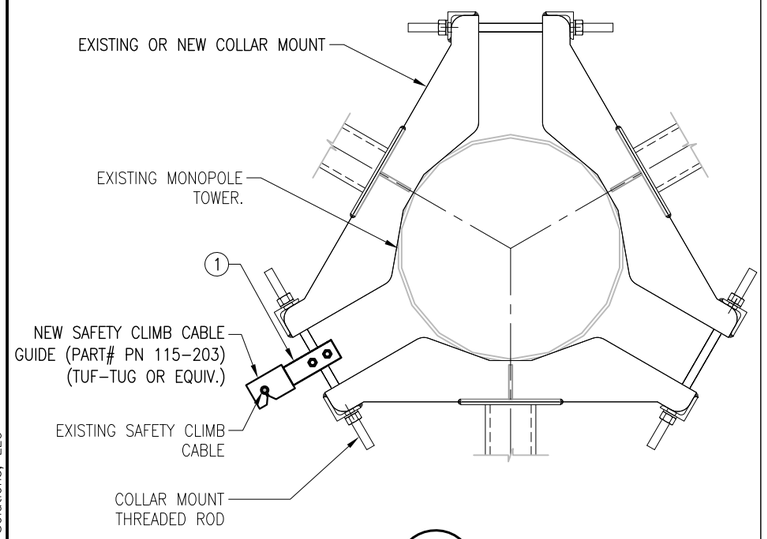
ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	TMP-1	PL 1/4" X 2" X 9 1/2" A36
2	1	BMP-1	PL 1/4" X 2" X 6 1/2" A36
3	2	---	THREADED ROD 3/8" X 8" A36
4	1	PN 115-203	SAFETY CABLE GUIDE (TUF-TUG OR EQUIV.)
5	2	---	BOLT 3/8" X 1 1/2" FULL THREAD SAE GR 5

NOTE:
SAFETY CLIMB GUIDE MAY BE INSTALLED ON EITHER LEFT OR RIGHT SIDE OF THE SUPPORT ARM, DEPENDING ON WHERE THE EXISTING SAFETY CLIMB IS LOCATED.



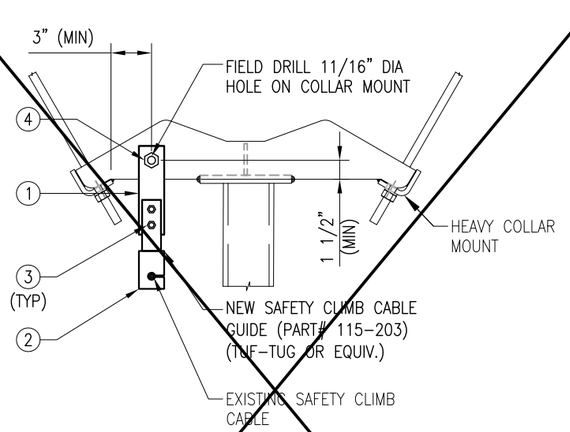
2 SAF-1 TYPE – 2

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	115-345	TUF-TUG MONOPOLE HEAD EXTENSION ASSEMBLY



3 SAF-1 TYPE – 3

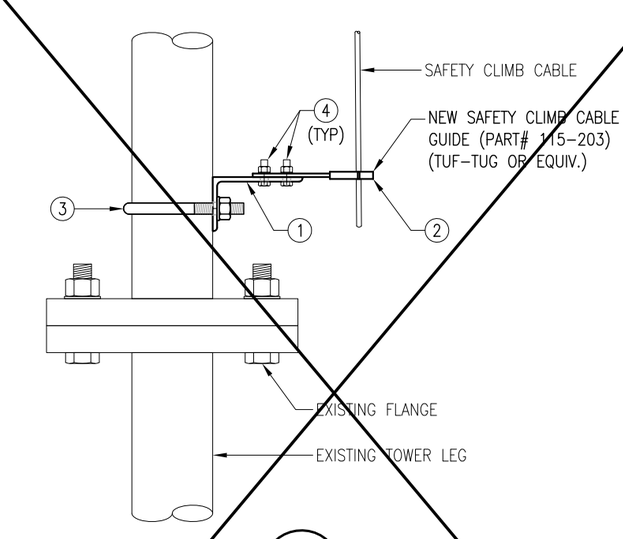
ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	PN 115-203	SAFETY CABLE GUIDE (TUF-TUG OR EQUIV.)



4 SAF-1 TYPE – 4

NOTE:
SAFETY CLIMB GUIDE MAY BE INSTALLED ON EITHER LEFT OR RIGHT SIDE OF THE COLLAR MOUNT, DEPENDING ON WHERE THE EXISTING SAFETY CLIMB IS LOCATED.

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	TMP-2	PL 1/4" X 2" X 7" A36
2	1	PN 115-203	SAFETY CABLE GUIDE (TUF-TUG OR EQUIV.)
3	2	---	BOLT 3/8" X 1 1/2" FULL THREAD SAE GR 5
4	1	---	BOLT 5/8" X 2" A325



5 SAF-1 TYPE – 5

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	SCGB-4	L 5" X 3" X 1/4" X 7 1/2" A36
2	1	PN 115-203	SAFETY CABLE GUIDE (TUF-TUG OR EQUIV.)
3	1	MS02-625-4625-700	RU-BOLT 5/8" X 4 5/8" I.W. X 7" I.L. A36 (OR EQUIV.)
4	2	---	BOLT 3/8" X 1 1/2" FULL THREAD SAE GR 5

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NORTH BRANFORD, CT 06471

DRAWN BY: RA | CHECKED BY: SD/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	11/13/20

SHEET TITLE:
SAFETY CABLE GUIDE DETAILS

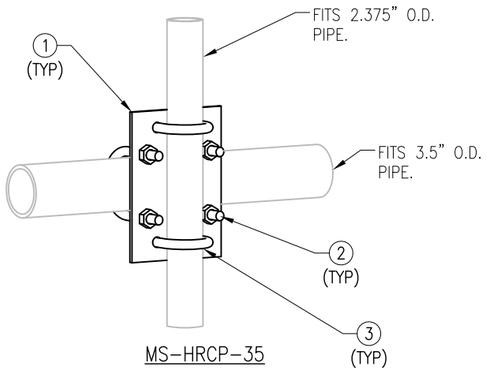
SHEET NUMBER: SAF-1
REV #: 0

THE FOLLOWING DRAWINGS ARE INCLUDED FOR REFERENCE ONLY
PLEASE REFER TO THE INSTALLATION DRAWINGS FOR ACTUAL INSTALLATION DETAILS

NOTES:
1. 1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT-DIPPED GALVANIZED PER ASTM A123.

MS-HRCP-35

ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	3	PL375-10	PL 3/8" X 7 1/8" X 10"	A36	TAF-1	23.1
2	6	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
3	6	MS02-625-250-400	RU-BOLT 5/8" X 2 1/2" I.W. X 4" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
					GALVANIZED WT	23



THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH

STANDARD SHEET TOLERANCES

DECIMALS	ANGLES
.X ± 0.1	± 1°
.XX ± 0.02	FRACTIONS
.XXX ± 0.005	± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

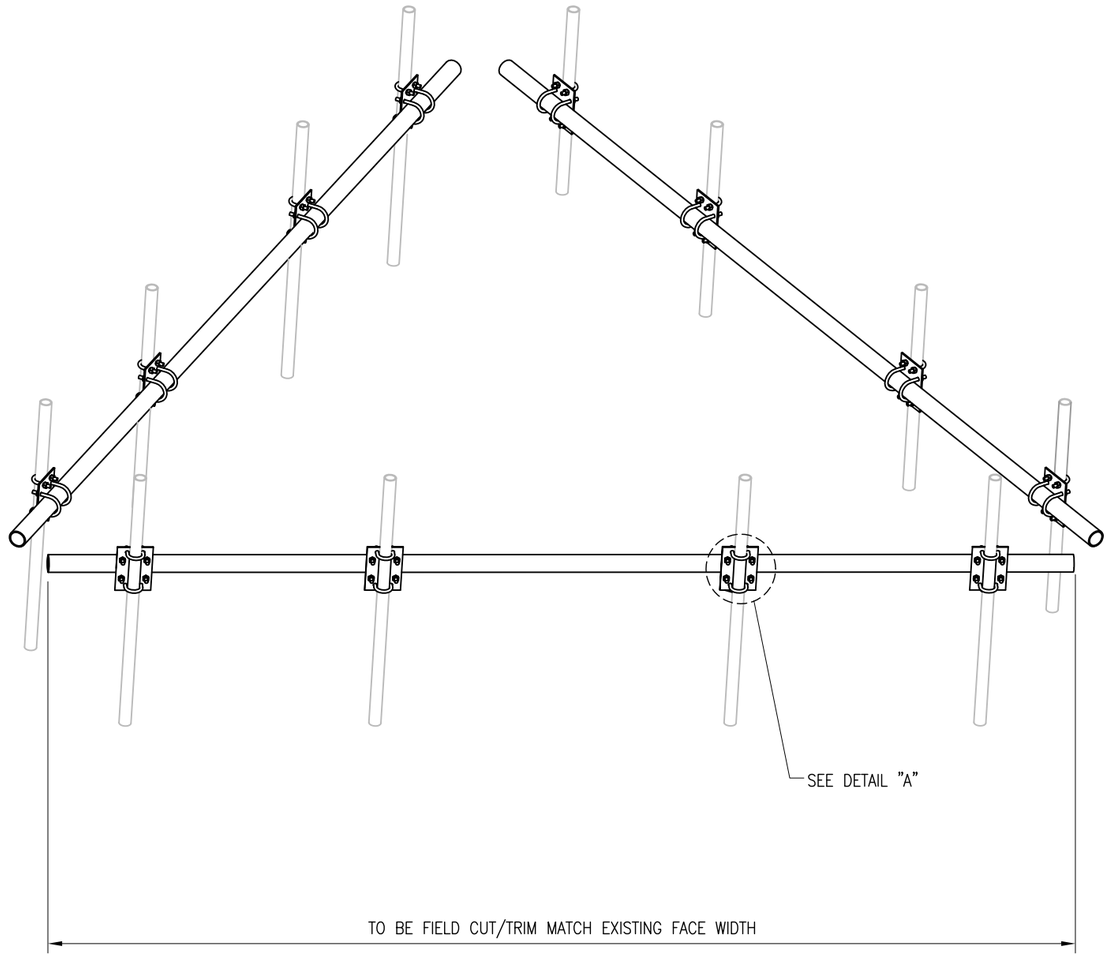
TITLE
MS-HRCP-35
SUPPORT RAIL CENTER PIPE KIT

SIZE	DWG NO	REV
B	MS-HRCP-35	0

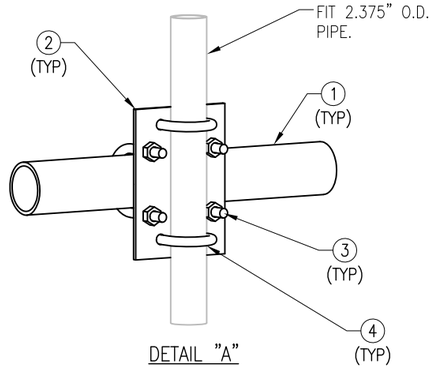
SCALE -
SHEET 1 OF 1

MS-HR35-18

ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	3	3PST-216	3" PST (3.50" O.D X .216" THICK) X 18'-0"	A53 GR-B	HR35-18	430.2
2	12	PL375-10	PL 3/8" X 7 1/8" X 10"	A36	TAF-1	92.4
3	24	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
4	24	MS02-625-250-400	RU-BOLT 5/8" X 2 1/2" I.W. X 4" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
					GALVANIZED WT	523



ELEVATION VIEW



DETAIL "A"

NOTES:
1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT-DIPPED GALVANIZED PER ASTM A123.

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH

STANDARD SHEET TOLERANCES

DECIMALS	ANGLES
.X ± 0.1	± 1°
.XX ± 0.02	FRACTIONS
.XXX ± 0.005	± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

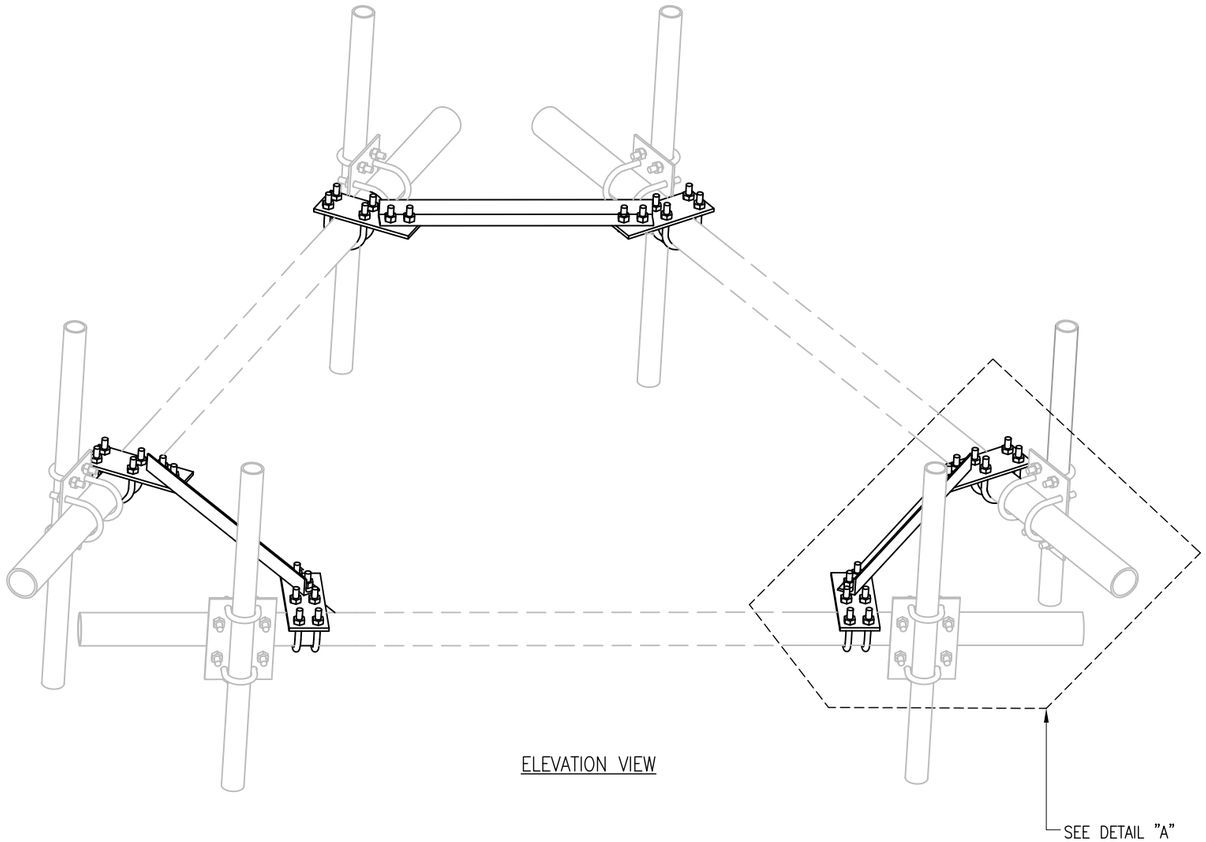
TITLE
MS-HR35-18
SUPPORT RAIL KIT

SIZE	DWG NO	REV
B	MS-HR35-18	0

SCALE -

SHEET 1 OF 1

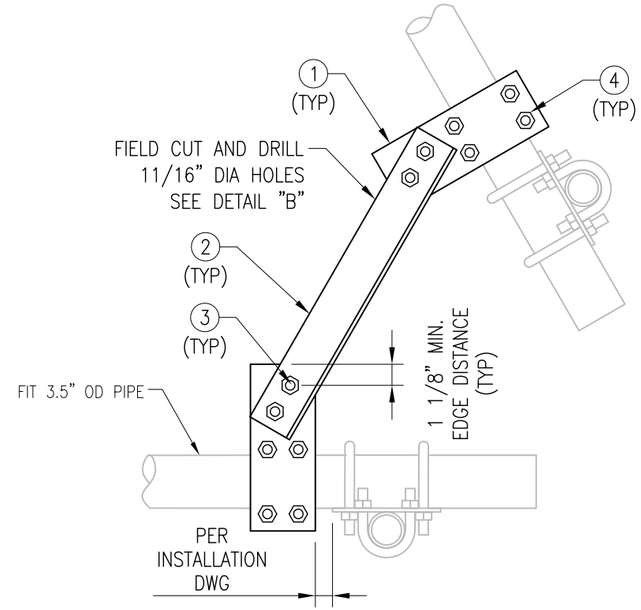
NOTE:
1) FITS 3 1/2" DIA. PIPE.
2) ALL HOLES ARE 11/16" DIA. U.N.O
3) HOT-DIPPED GALVANIZED PER ASTM A123



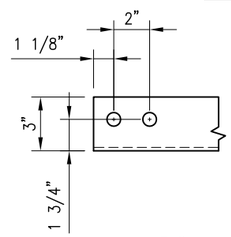
ELEVATION VIEW

MS-HR35-33ECP

ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	6	PL375-11	PL 3/8" X 4 1/4" X 0'-11"	A36	TAF-1	30.0
2	3	AL-33C	L 3" X 3" X 1/4" X 3'-6"	A36	ECP-1	54.0
3	12	--	BOLT 5/8" X 2" A325 W/ HHN & LKW	A325	--	--
4	12	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
				GALVANIZED WT		84



DETAIL "A"



DETAIL "B"
11/16"ø HOLES FIELD DRILLED

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
AND INCLUDE FINISH

STANDARD SHEET TOLERANCES

DECIMALS	ANGLES
.X ± 0.1	± 1°
.XX ± 0.02	FRACTIONS
.XXX ± 0.005	± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

TITLE
MS-HR35-33ECP
SUPPORT RAIL END CONNECTION KIT

SIZE	DWG NO	REV
B	MS-HR35-33ECP	1

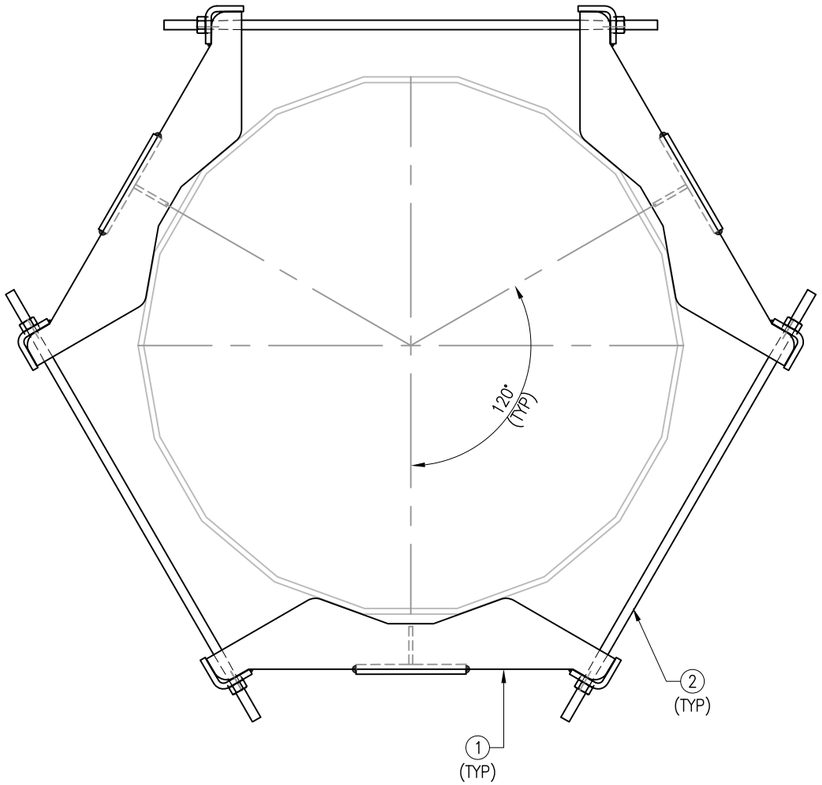
SCALE -

SHEET 1 OF 1

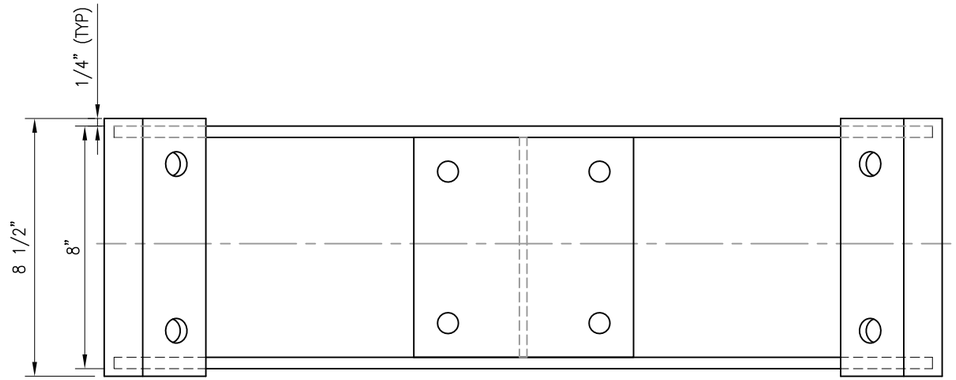
NOTE:
1) FITS 12" DIA TO 32" DIA.

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	3	MPHW-1	MOUNT PLATE WELDMENT A36
2	6	---	THREADED ROD 3/4" X 2'-4 3/4" W/ 2 HHN & LW EA A36

GALVANIZED WEIGHT: 136.7 LBS



TOP VIEW



FRONT VIEW

THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH

STANDARD SHEET TOLERANCES

DECIMALS	ANGLES
.X ± 0.1	± 1°
.XX ± 0.02	FRACTIONS
.XXX ± 0.005	± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

TITLE
HEAVY COLLAR MOUNT PLATE
ASSEMBLY DETAIL MS-H1436

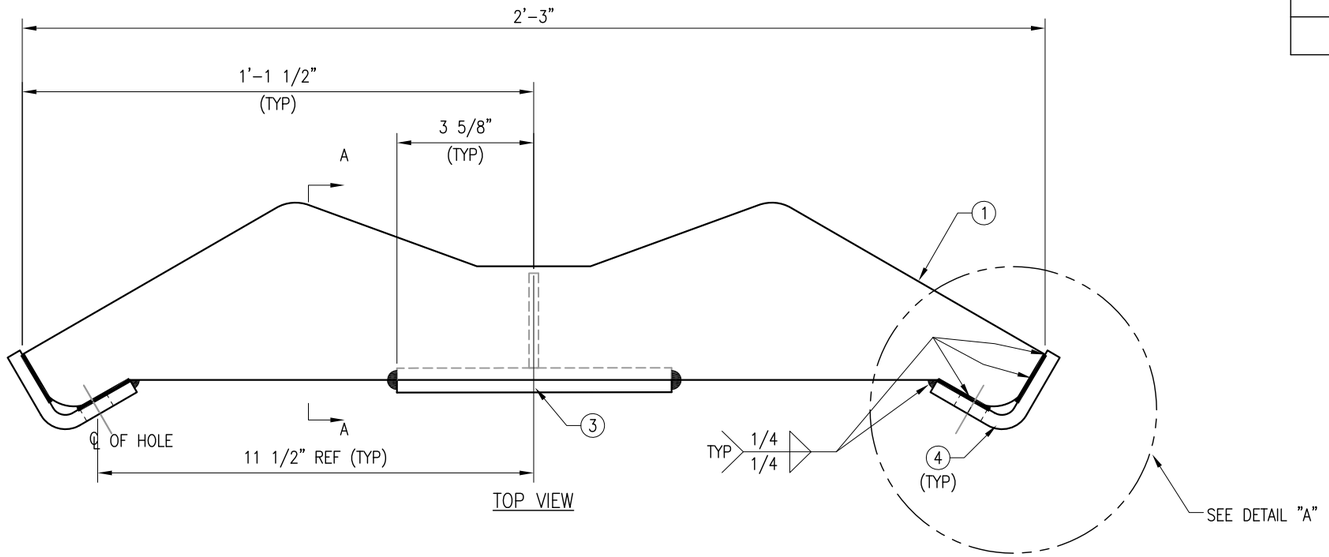
SIZE	DWG NO	REV
B	MS-H1436	1

SCALE -

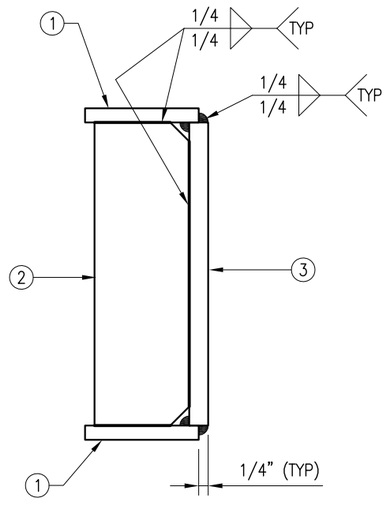
SHEET 1 OF 1

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.
2. WELD TYPE: E70XX.

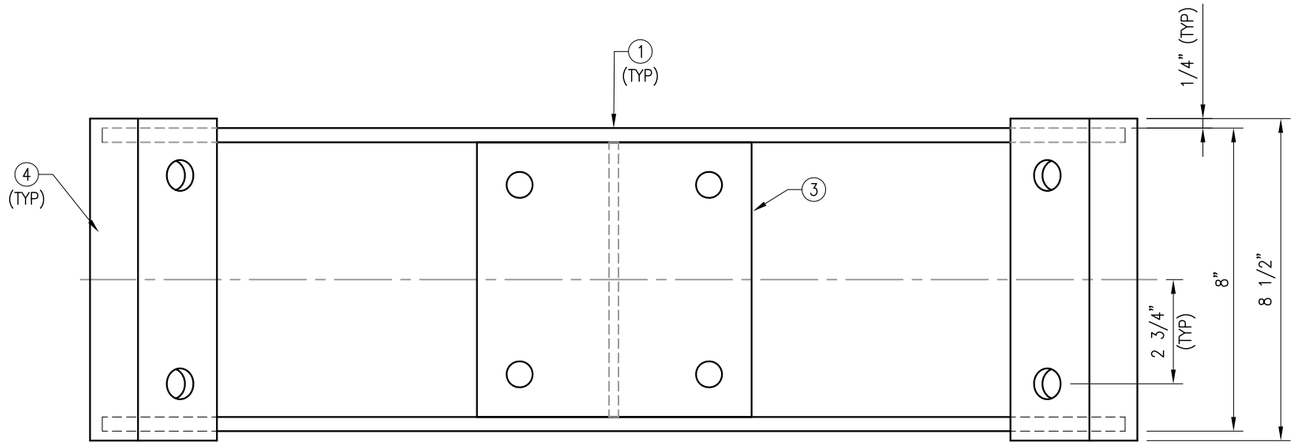
MPHW-1 WELDMENT						
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	2	PL-4	PL 3/8" X 5 3/8" X 2'-3"	A36	F-2	18.8
2	1	PL-5	PL 3/8" X 2 1/2" X 0'-7 1/4"	A36	F-2	1.9
3	1	PL-6	PL 1/2" X 7 1/4" X 0'-7 1/4"	A36	F-2	7.5
4	2	PL-7	PL 3/8" x 4 3/8" x 8 1/2"	A36	F-2	7.8
					BLACK WT	36
					GALVANIZED WT	38



TOP VIEW

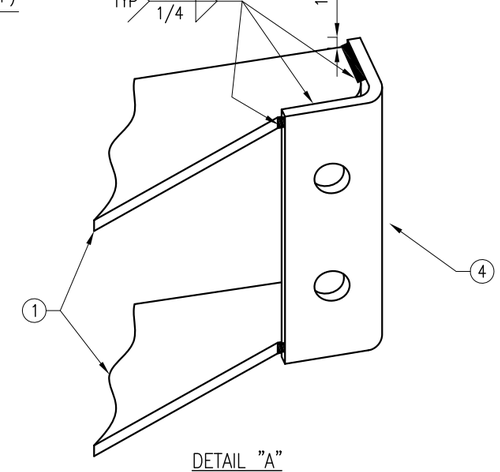


SECTION "A-A"



FRONT VIEW

MPW-1 WELDMENT



DETAIL "A"

THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH

STANDARD SHEET TOLERANCES

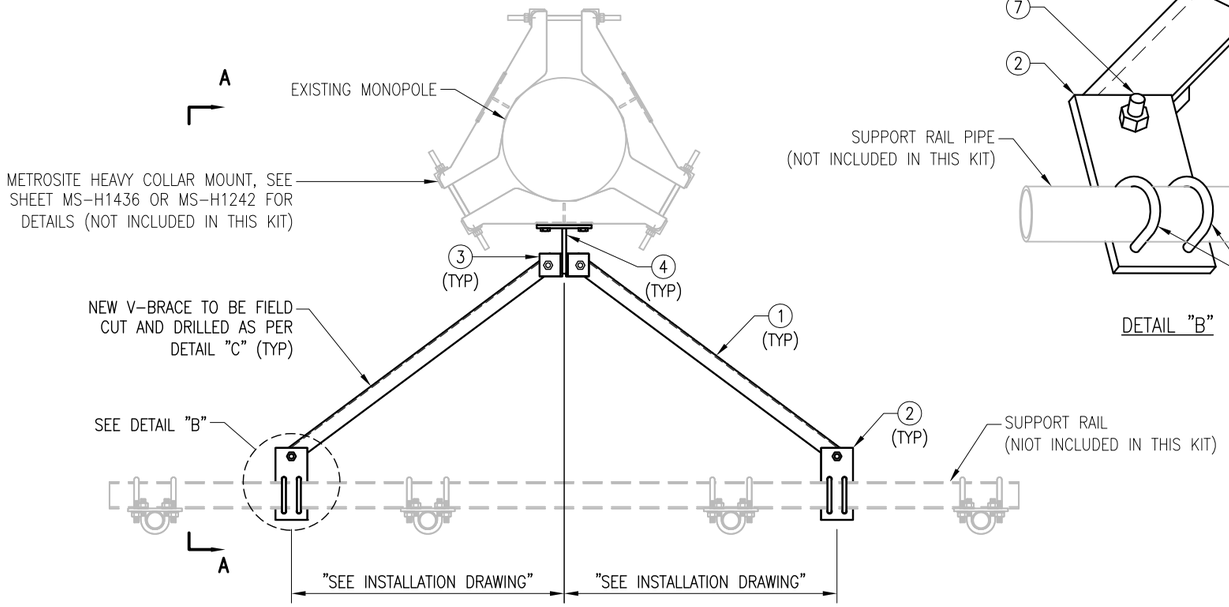
DECIMALS	ANGLES
.X ± 0.1	± 1°
.XX ± 0.02	FRACTIONS
.XXX ± 0.005	± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

TITLE
HEAVY COLLAR MOUNT PLATE WELDMENT DETAIL

SIZE	DWG NO	REV
B	MPHW-1	0

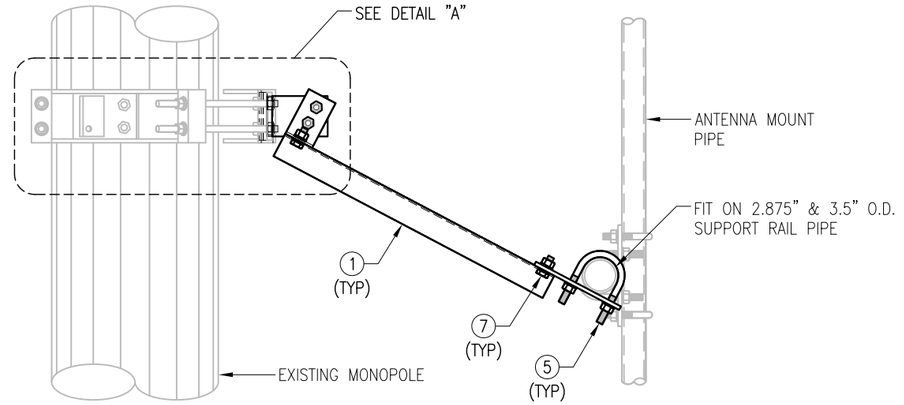
SCALE - SHEET 1 OF 1



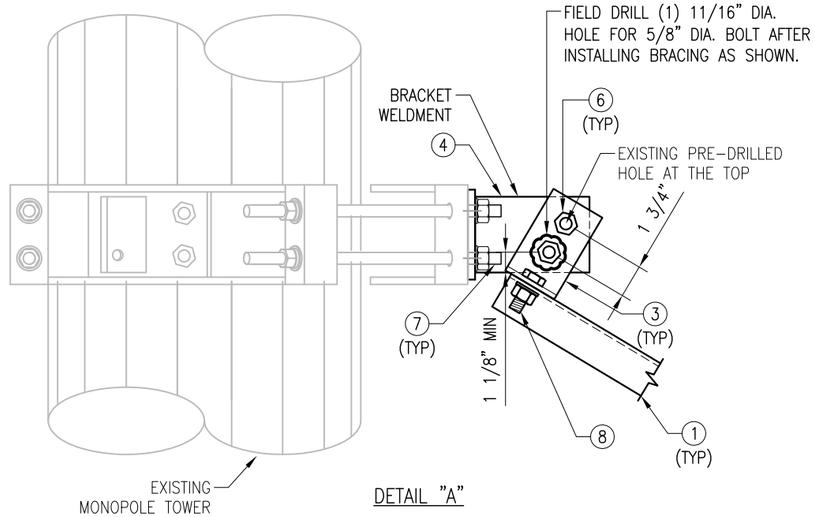
PLAN VIEW
(TYPICAL FOR (3) SECTORS)

DETAIL "B"

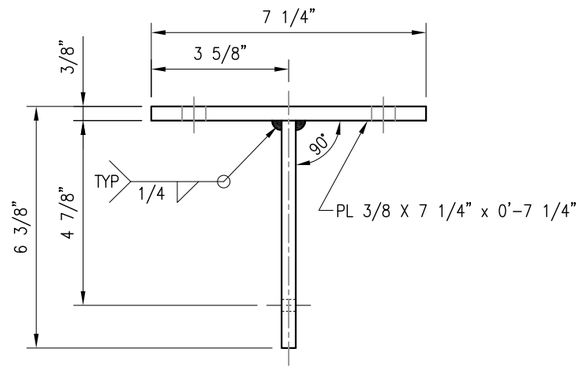
MS-MPVB-350						
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	6	VB-25-10	L 2 1/2" X 2 1/2" X 1/4" X 10'-0"	A36	BK-1	258
2	6	PL375-42595	PL 3/8" X 4 1/4" X 9 1/2"	A36	BK-1	26.4
3	6	AL-533	L 5" X 3" X 1/4" X 3" A36	A36	BK-1	10.2
4	3	BRKW-H6S	WELDMENT BRACKET	A36	BRKW-H6S	28.8
5	12	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	17.4
6	6	---	BOLT 5/8" X 2 1/4" A325 W/ HHN & LKW EA.	A36	--	--
7	18	---	BOLT 5/8" X 2" A325 W/ HHN & LKW EA.	A36	--	--
8	6	---	BOLT 5/8" X 1 3/4" A325 W/ HHN & LKW EA.	A36	--	--
					GALVANIZED WT	341



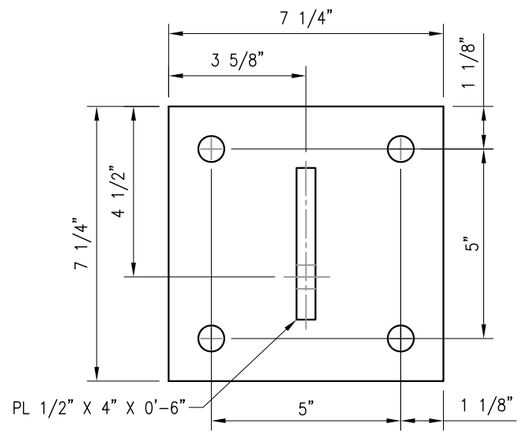
SECTION "A-A"



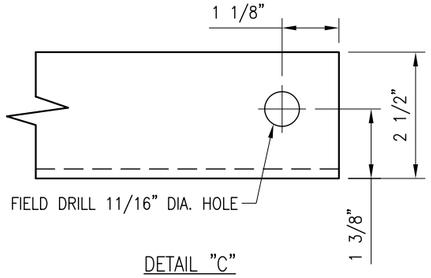
DETAIL "A"



TOP VIEW
BRKW-H6S WELDMENT



FRONT VIEW
BRKW-H6S WELDMENT



DETAIL "C"

NOTE:
1. FIELD ASSEMBLE ALL THE PARTS
2. HOT DIPPED GALVANIZED PER ASTM A123
3. ALL HOLES ARE 11/16" DIA U.N.O
4. FITS ON 2.875" O.D. & 3.5" O.D. SUPPORT RAIL PIPE
5. EXISTING ANTENNA MOUNT IS FOR REPRESENTATION PURPOSE ONLY

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH
STANDARD SHEET TOLERANCES
DECIMALS: .X ± 0.1, .XX ± 0.02, .XXX ± 0.005
ANGLES: ± 1°
FRACTIONS: ± 1/32

APPROVAL / SIGNATURES	DATE
DRAWN BY XXX	02/28/19
REVIEWED XXX	-
APPROVED XXX	-

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

TITLE
MS-MPVB-350
V-BRACING KIT

SIZE	DWG NO	REV
B	MS-MPVB-350	0

SCALE -
SHEET 1 OF 1

EXHIBIT 8

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 175 ft Nudd Corporation Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT03110-S
Customer Site Name: North Branford
Carrier Name: T-Mobile (App#: 116509, V3)
Carrier Site ID / Name: CT11302C / North Branford
Site Location: 108 Foxon Road
North Branford, Connecticut
New Haven County
Latitude: 41.328208
Longitude: -72.819063

Analysis Result:

Max Structural Usage: 66.3% [Pass]
Max Foundation Usage: 34.0% [Pass]
Additional Usage Caused by Mount Modification: +2.6%

Report Prepared By: Nasib Pandey

Introduction

The purpose of this report is to summarize the analysis results on the 175 ft Nudd Corporation Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Fred A. Nudd Corporation, Project 7735: #10125-053, original design drawing dated September, 2000
Foundation Drawing	Fred A. Nudd Corporation, Project 7735: #10125-053, original design drawing dated September, 2000
Geotechnical Report	Jaworski Geotech, Inc. Geotechnical Report, dated 06/01/2000
Modification Drawings	Paul J. Ford and Company, Project # 41702-0001, post-modification calculations dated 05/10/2002
Mount Analysis	Failing mount analysis by TES, Project # 99377, dated 11/05/2020

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-222-G-2**.** In accordance with this standard, the structure was analyzed using **TESPoles,** a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 130 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 101.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft

This structural analysis is based upon the tower being classified as a Structure Class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft.)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	175.0	3	RFS APXVTM14-C-120 - Panel	(3) T-Arms w/ work Platform	(4) 1 1/4"	Sprint
2		3	RFS APXVSPP18-C-A20 - Panel			
3		3	ALU 800 MHz RRU			
4		3	ALU 1900MHz RRU			
5		3	ALU TD-RRH8x20-25			
6		3	ALU 800 MHz Filter			
7		4	RFS ACU-A20-N			
8	152.0	6	Allgon/ 7184 - Panel	(3) T-Arm w/ work Platform	(9) 1 5/8" (1) 3/8" Fiber (2) 1/2" DC	AT&T
9		3	Powerwave/ 7770 - Panel			
10		3	HPA-65R-BUU-H6 - Panel			
11		6	Powerwave/ LGP 21401			
12		6	Powerwave/ 7020 RET			
13		6	Ericsson/ RRUS-11			
14		3	Ericsson/ RRUS-12			
15		3	Ericsson/ RRUS A2			
16		1	Raycap/ DC6-48-60-18-8F			
-	141.0	3	Ericsson AIR21 B2A/B4P - Panel	(1) Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
-		3	Ericsson AIR21 B2A/B4P - Panel			
-		3	Kathrein KRY 112 144			
24	75.0	1	GPS	Flush Mount	(1) 1/2"	Sprint

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
17	141.0	3	Ericsson Air 6449 B41 - Panel	(1) Low Profile Platform w/ (1) METROSITE SUPPORT RAIL KIT: MS-HR35-18 (1) METROSITE SUPPORTRAIL END CONNECTIN KIT: MS-HR35-33ECP (6) METROSITE V-BRACING ANGLES: L252525-8	(9) 1-5/8" Coax (4) 1-5/8" Fiber	T-Mobile
18		3	Ericsson AIR32 KRD901146-1_B66A_B2A (Octo) - Panel			
19		3	RFS APXVAALL24-43-U-NA20 - Panel			
20		3	Ericsson KRY 112 144/1 TMA			
21		3	Commscope SDX1926Q-43 DIplexeer			
22		3	Ericsson Radio 4449 B71+B85			
23		3	Ericsson 4415 B25			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	**66.3%**	**57.3%**	**78.9%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4234.9	36.5	53.0

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 0.9492 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC.** Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.

2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.

3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.

4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

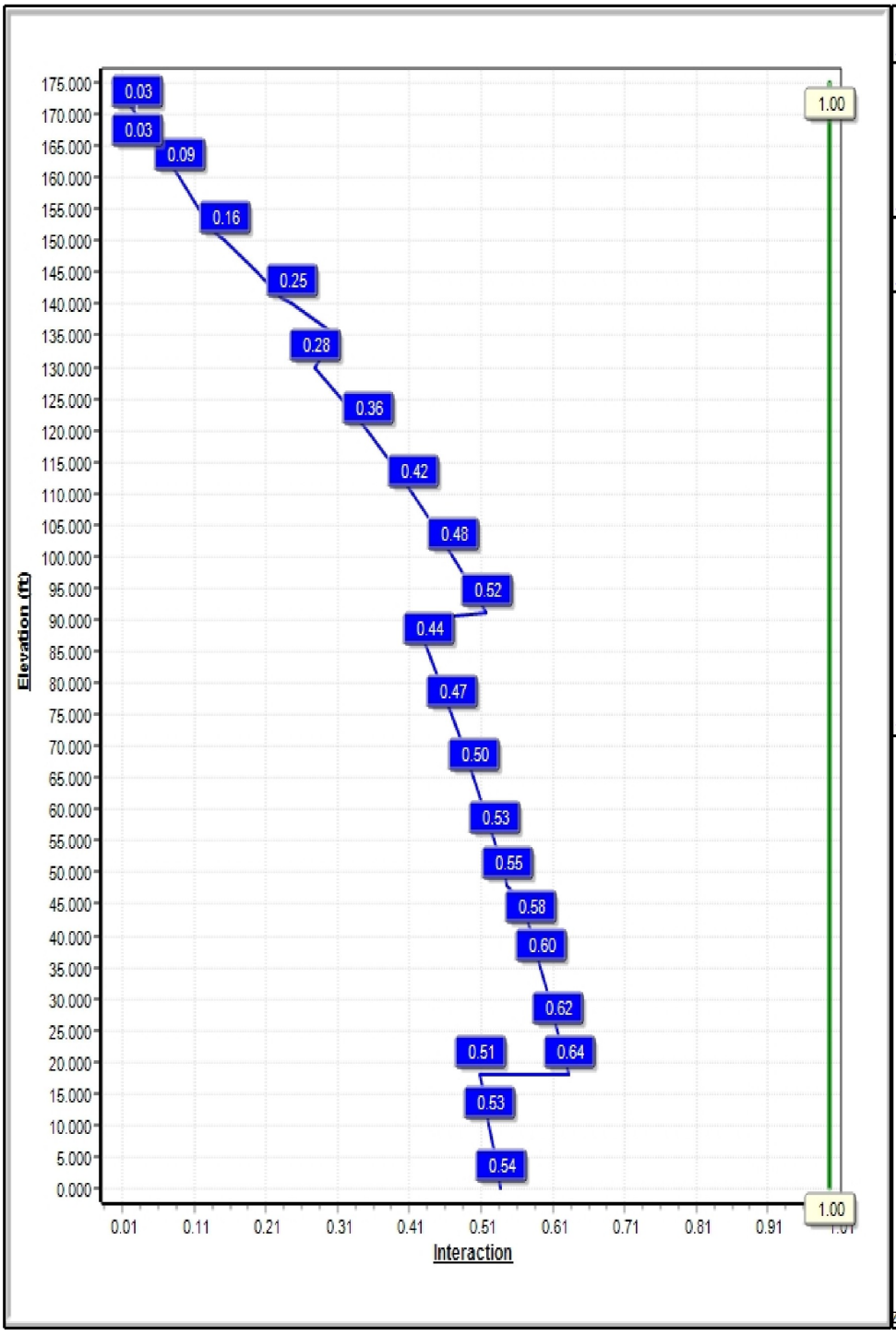
Usage Diagram - Max Ratio 63.72% at 18.0ft

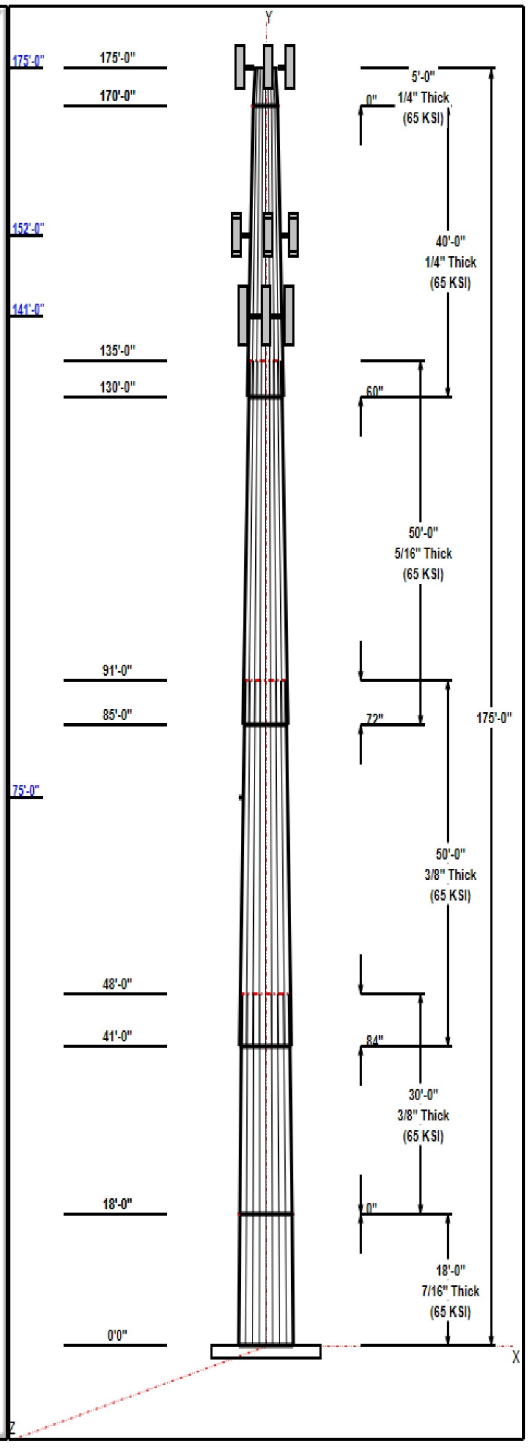
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Gh:**	1.1		
Base Elev:	0.000 (ft)			Page: 1	

Tower Engineering Solutions

Dead Load Factor:	1.20	**Iterations:**	23
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 101 mph Wind





Structure: CT03110-S-SBA

Type: Tapered
Site Name: North Branford
Height: 175.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.24214

11/6/2020

Tower Engineering Solutions

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	18.00	60.14	64.50	0.438		0.24214	65
2	30.00	52.88	60.14	0.375	Butt	0.24214	65
3	50.00	43.22	55.32	0.375	Slip	0.24214	65
4	50.00	33.19	45.29	0.313	Slip	0.24214	65
5	40.00	25.21	34.90	0.250	Slip	0.24214	65
6	5.00	24.00	25.21	0.250	Butt	0.24214	65

Discrete Appurtenances

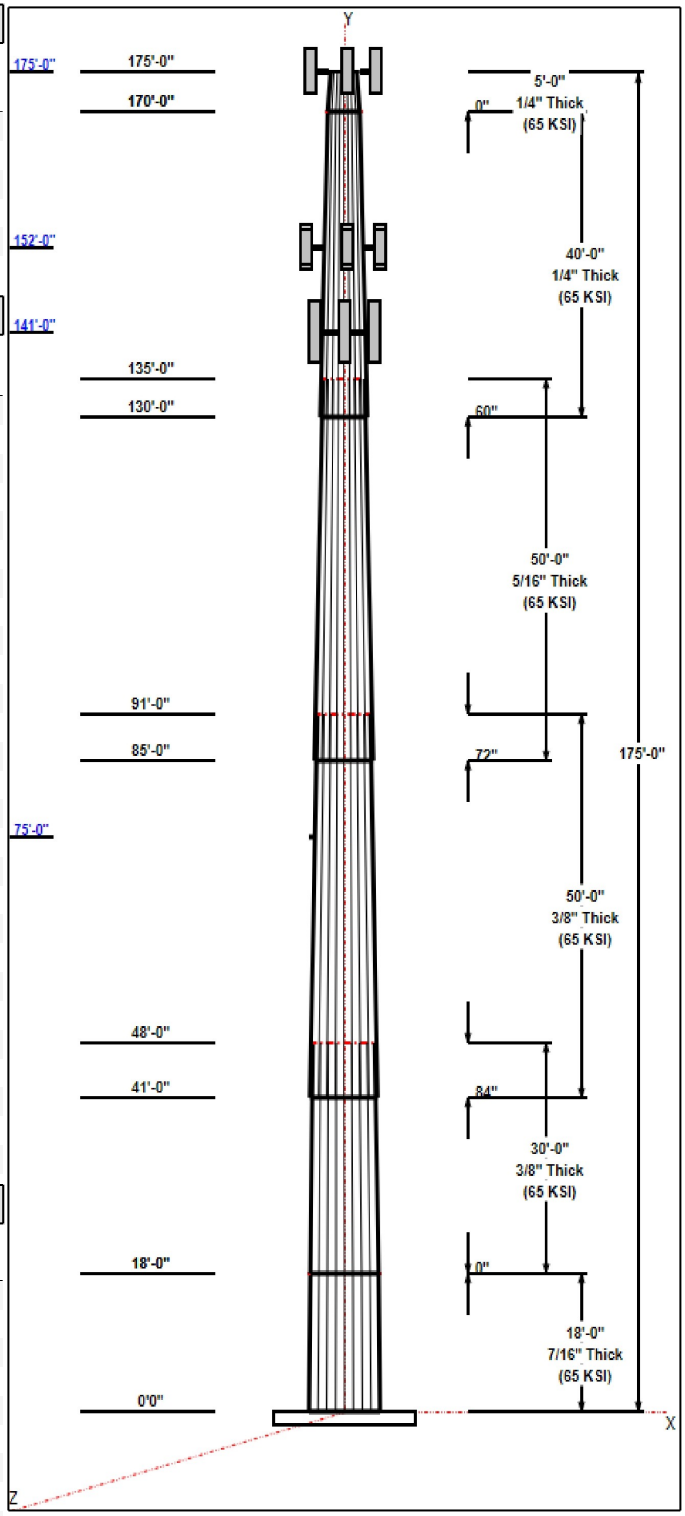
Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
175.00	175.00	3	APXVTM14-C-120	Sprint
175.00	175.00	3	APXVSPP18-C-A20	Sprint
175.00	175.00	3	ALU 800 MHz RRU	Sprint
175.00	175.00	3	ALU 1900MHz RRU	Sprint
175.00	175.00	3	TD-RRH8x20-25	Sprint
175.00	175.00	3	800 MHz Filter	Sprint
175.00	175.00	4	ACU-A20-N	Sprint
175.00	175.00	3	T-Arm w/ work Platform	Sprint
152.00	152.00	3	T-Arm w/ work Platform	AT&T
152.00	152.00	3	Powerwave/ 7770	AT&T
152.00	152.00	6	Powerwave/ LGP 21401	AT&T
152.00	152.00	1	Raycap/ DC6-48-60-18-8F	AT&T
152.00	152.00	6	Ericsson/ RRUS-11	AT&T
152.00	152.00	6	Allgon/ 7184	AT&T
152.00	152.00	3	HPA-65R-BUU-H6	AT&T
152.00	152.00	3	Ericsson/ RRUS-12	AT&T
152.00	152.00	3	Ericsson/ RRUS A2	AT&T
152.00	152.00	6	Powerwave/ 7020 RET	AT&T
141.00	141.00	3	APXVAALL24-43-U-NA20	T-Mobile
141.00	141.00	3	AIR6449 B41	T-Mobile
141.00	141.00	3	AIR32	T-Mobile
141.00	141.00	3	SDX1926Q-43	T-Mobile
141.00	141.00	3	4449 B71 + B85	T-Mobile
141.00	141.00	3	RRUS 4415 B25	T-Mobile
141.00	141.00	3	KRY 112 144	T-Mobile
141.00	141.00	1	Low Profile Platform	T-Mobile
75.00	75.00	1	GPS	Sprint

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	175.00	Outside	1 1/4" Coax	Sprint
0.00	175.00	Outside	Safety Cable	
0.00	175.00	Outside	Step bolts (ladder)	
0.00	155.00	Inside	1/2" DC	AT&T
0.00	155.00	Inside	3/8" Fiber	AT&T
0.00	152.00	Inside	1 5/8" Coax	AT&T
0.00	147.00	Inside	1 5/8" Coax	T-Mobile
0.00	147.00	Inside	1 5/8" Hybrid	T-Mobile
0.00	75.00	Inside	1/2" Coax	Sprint

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement



24	2.00" A687	105.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.5000	84.5	50.0	Round

Reactions

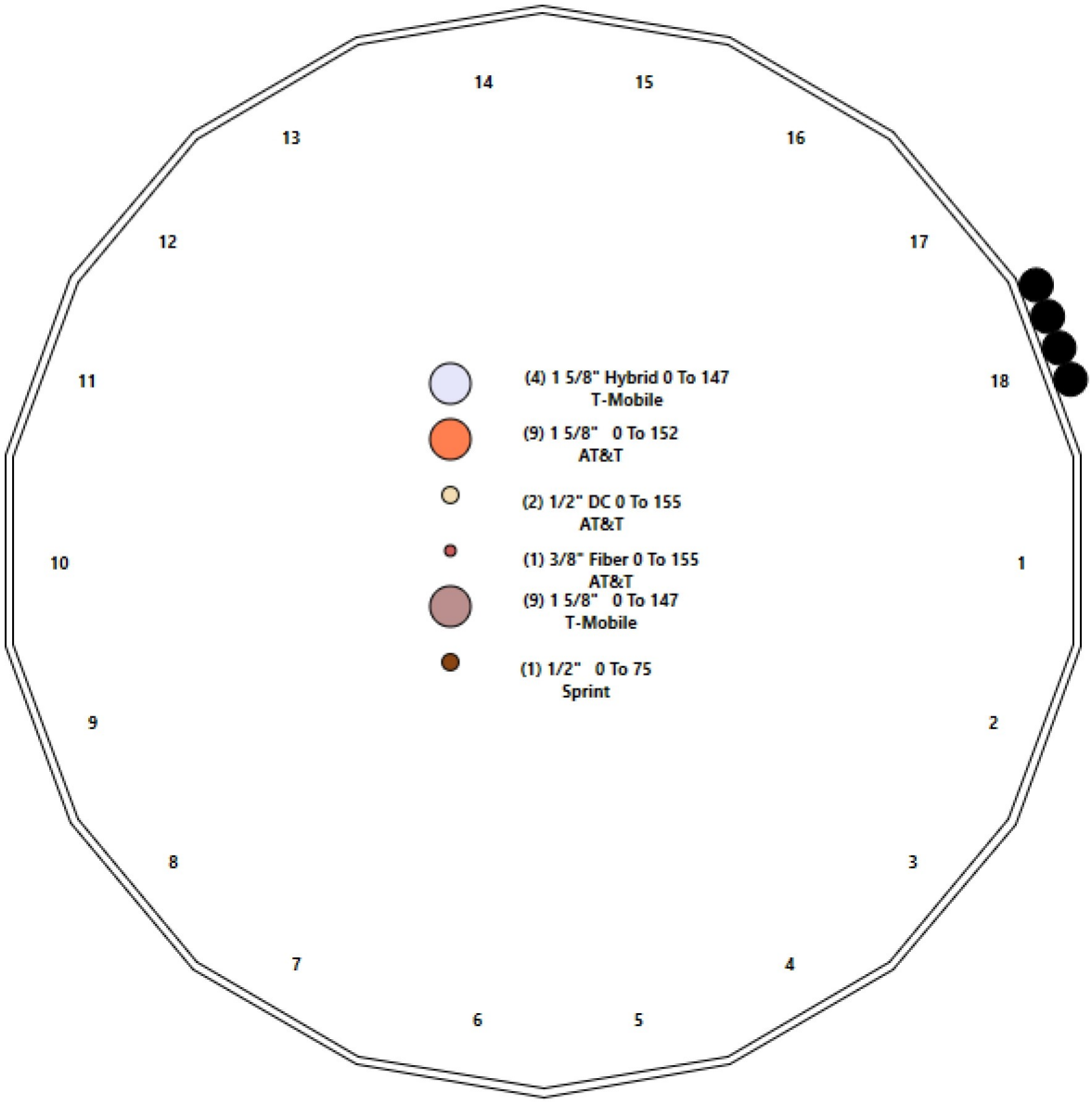
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 101 mph Wind	4074.4	35.4	51.9
0.9D + 1.6W 101 mph Wind	4041.1	35.4	38.9
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1093.9	9.6	79.7
1.0D + 1.0W 60 mph Wind	894.4	7.8	43.3

Structure: CT03110-S-SBA - Coax Line Placement

Type: Monopole
Site Name: North Branford
Height: 175.00 (ft)

11/6/2020

TES Tower Engineering Solutions



Shaft Properties

Structure:	CT03110-S-SBA		**Code:**	EIA/TIA-222-G	11/6/2020
Site Name:	North Branford		**Exposure:**	C	
Height:	175.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	18.000	0.4375	65		0.00	5,263
2	18	30.000	0.3750	65	Flange	0.00	6,820
3	18	50.000	0.3750	65	Slip	84.00	9,901
4	18	50.000	0.3125	65	Slip	72.00	6,569
5	18	40.000	0.2500	65	Slip	60.00	3,219
6	18	5.000	0.2500	65	Flange	0.00	329
					Total Shaft Weight:		**32,101**

	Bottom						Top						
Sec. No.	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Taper**
1	64.50	0.00	88.96	46124.76	24.59	147.43	60.14	18.00	82.90	37336.2	22.83	137.4	0.242143
2	60.14	18.00	71.13	32103.14	26.87	160.38	52.88	48.00	62.49	21762.4	23.45	141.0	0.242143
3	55.32	41.00	65.40	24946.58	24.60	147.53	43.22	91.00	50.99	11822.9	18.91	115.2	0.242143
4	45.29	85.00	44.61	11404.15	24.15	144.94	33.19	135.00	32.60	4451.65	17.31	106.1	0.242143
5	34.90	130.0	27.49	4169.27	23.20	139.59	25.21	170.00	19.81	1559.03	16.37	100.8	0.242143
6	25.21	170.0	19.81	1559.03	16.37	100.84	24.00	175.00	18.84	1343.00	15.52	96.00	0.242143

Load Summary

Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	175.00	APXVTM14-C-120	3	56.00	6.34	0.79	259.40	9.336	0.80	0.00	0.00
2	175.00	APXVSPP18-C-A20	3	57.00	8.02	0.83	232.54	10.857	0.84	0.00	0.00
3	175.00	ALU 800 MHz RRU	3	53.00	2.49	0.67	128.11	3.651	0.67	0.00	0.00
4	175.00	ALU 1900MHz RRU	3	44.00	3.80	0.67	154.86	5.212	0.67	0.00	0.00
5	175.00	TD-RRH8x20-25	3	70.00	4.05	0.67	182.54	4.877	0.67	0.00	0.00
6	175.00	800 MHz Filter	3	10.00	0.42	0.67	35.39	1.038	0.67	0.00	0.00
7	175.00	ACU-A20-N	4	1.00	0.14	0.67	5.36	0.441	0.68	0.00	0.00
8	175.00	T-Arm w/ work Platform	3	400.00	10.00	0.75	683.57	18.862	0.75	0.00	0.00
9	152.00	T-Arm w/ work Platform	3	400.00	10.00	0.75	679.60	18.738	0.75	0.00	0.00
10	152.00	Powerwave/ 7770	3	35.00	5.50	0.73	170.39	6.567	0.74	0.00	0.00
11	152.00	Powerwave/ LGP 21401	6	14.10	1.29	0.50	39.13	2.127	0.50	0.00	0.00
12	152.00	Raycap/ DC6-48-60-18-8F	1	32.80	1.47	1.00	96.65	2.171	1.00	0.00	0.00
13	152.00	Ericsson/ RRUS-11	6	50.00	2.52	0.50	131.63	3.222	0.50	0.00	0.00
14	152.00	Allgon/ 7184	6	9.70	2.85	0.69	60.68	4.565	0.70	0.00	0.00
15	152.00	HPA-65R-BUU-H6	3	51.00	9.66	0.85	299.49	11.028	0.86	0.00	0.00
16	152.00	Ericsson/ RRUS-12	3	60.00	2.70	0.67	134.40	3.778	0.68	0.00	0.00
17	152.00	Ericsson/ RRUS A2	3	21.10	1.86	0.67	57.09	2.835	0.68	0.00	0.00
18	152.00	Powerwave/ 7020 RET	6	2.20	0.40	0.62	12.44	0.885	0.63	0.00	0.00
19	141.00	APXVAALL24-43-U-NA20	3	128.00	20.24	0.70	555.51	22.128	0.70	0.00	0.00
20	141.00	AIR6449 B41	3	103.00	5.65	0.71	239.27	6.595	0.71	0.00	0.00
21	141.00	AIR32	3	132.20	6.51	0.87	315.23	7.683	0.87	0.00	0.00
22	141.00	SDX1926Q-43	3	17.60	0.32	0.67	42.68	0.584	0.67	0.00	0.00
23	141.00	4449 B71 + B85	3	73.20	1.97	0.67	130.59	2.536	0.67	0.00	0.00
24	141.00	RRUS 4415 B25	3	46.00	1.64	0.67	86.85	2.152	0.67	0.00	0.00
25	141.00	KRY 112 144	3	11.00	0.41	0.67	21.71	0.882	0.67	0.00	0.00
26	141.00	Low Profile Platform	1	1200.00	25.00	1.00	2240.67	45.813	1.00	0.00	0.00
27	75.00	GPS	1	10.00	1.00	1.00	37.36	1.664	1.00	0.00	0.00
		Totals:	**88**	**7,007.10**			**17,087.16**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	175.00	(4) 1 1/4" Coax	0.00	Outside
0.00	175.00	(1) Safety Cable	0.00	Outside
0.00	175.00	(1) Step bolts (ladder)	0.00	Outside
0.00	155.00	(2) 1/2" DC	0.00	Inside
0.00	155.00	(1) 3/8" Fiber	0.00	Inside
0.00	152.00	(9) 1 5/8" Coax	0.00	Inside
0.00	147.00	(9) 1 5/8" Coax	0.00	Inside
0.00	147.00	(4) 1 5/8" Hybrid	0.00	Inside
0.00	75.00	(1) 1/2" Coax	0.00	Inside

Shaft Section Properties

Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

Tower Engineering Solutions

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.4375	64.500	88.956	46124.8	24.59	147.43	72.5	1408.	0.0
5.00		0.4375	63.289	87.274	43558.7	24.10	144.66	73.1	1355.	1499.2
10.00		0.4375	62.079	85.593	41089.7	23.61	141.89	73.6	1303.	1470.6
15.00		0.4375	60.868	83.912	38715.8	23.12	139.13	74.2	1252.	1442.0
18.00	Top - Section 1	0.4375	60.141	82.903	37336.3	22.83	137.47	74.6	1222.	851.5
18.00	Bot - Section 2	0.3750	60.141	71.134	32103.1	26.63	160.38	69.8	1051.	
20.00		0.3750	59.657	70.558	31329.1	26.64	159.09	70.1	1034.	482.1
25.00		0.3750	58.446	69.117	29448.5	26.07	155.86	70.7	992.4	1188.2
30.00		0.3750	57.236	67.676	27644.7	25.50	152.63	71.4	951.3	1163.7
35.00		0.3750	56.025	66.235	25916.2	24.93	149.40	72.1	911.1	1139.2
40.00		0.3750	54.814	64.794	24261.2	24.36	146.17	72.7	871.8	1114.7
41.00	Bot - Section 3	0.3750	54.572	64.506	23938.9	24.25	145.53	72.9	864.0	220.0
45.00		0.3750	53.604	63.353	22678.3	23.79	142.94	73.4	833.3	1752.5
48.00	Top - Section 2	0.3750	53.627	63.381	22708.4	23.81	143.01	0.0	0.0	1293.7
50.00		0.3750	53.143	62.805	22094.5	23.58	141.71	73.7	818.9	429.4
55.00		0.3750	51.932	61.364	20608.3	23.01	138.49	74.3	781.6	1056.3
60.00		0.3750	50.721	59.923	19190.3	22.44	135.26	75.0	745.2	1031.8
65.00		0.3750	49.511	58.482	17838.9	21.87	132.03	75.7	709.7	1007.3
70.00		0.3750	48.300	57.041	16552.4	21.30	128.80	76.3	675.0	982.7
75.00		0.3750	47.089	55.600	15329.4	20.73	125.57	77.0	641.2	958.2
80.00		0.3750	45.879	54.159	14168.1	20.16	122.34	77.7	608.3	933.7
85.00	Bot - Section 4	0.3750	44.668	52.718	13067.0	19.59	119.11	78.4	576.2	909.2
90.00		0.3750	43.457	51.277	12024.5	19.02	115.89	79.0	545.0	1633.5
91.00	Top - Section 3	0.3125	43.840	43.172	10334.4	23.33	140.29	0.0	0.0	321.3
95.00		0.3125	42.871	42.212	9659.8	22.78	137.19	74.6	443.8	581.1
100.00		0.3125	41.661	41.011	8858.6	22.10	133.31	75.4	418.8	708.0
105.00		0.3125	40.450	39.810	8103.0	21.41	129.44	76.2	394.6	687.5
110.00		0.3125	39.239	38.609	7391.6	20.73	125.57	77.0	371.0	667.1
115.00		0.3125	38.029	37.408	6723.2	20.05	121.69	77.8	348.2	646.7
120.00		0.3125	36.818	36.207	6096.3	19.36	117.82	78.6	326.1	626.2
125.00		0.3125	35.607	35.007	5509.6	18.68	113.94	79.4	304.8	605.8
130.00	Bot - Section 5	0.3125	34.396	33.806	4961.8	18.00	110.07	80.2	284.1	585.4
135.00	Top - Section 4	0.2500	33.686	26.530	3747.3	22.35	134.74	0.0	0.0	1024.5
140.00		0.2500	32.475	25.570	3354.8	21.49	129.90	76.1	203.5	443.2
141.00		0.2500	32.233	25.377	3279.7	21.32	128.93	76.3	200.4	86.7
145.00		0.2500	31.264	24.609	2990.7	20.64	125.06	77.1	188.4	340.2
150.00		0.2500	30.054	23.648	2653.9	19.79	120.21	78.1	173.9	410.5
152.00		0.2500	29.569	23.264	2526.6	19.44	118.28	78.5	168.3	159.6
155.00		0.2500	28.843	22.688	2343.5	18.93	115.37	79.1	160.0	234.5
160.00		0.2500	27.632	21.727	2058.2	18.08	110.53	80.1	146.7	377.8
165.00		0.2500	26.421	20.766	1797.1	17.22	105.69	81.1	134.0	361.5
170.00	Top - Section 5	0.2500	25.211	19.806	1559.0	16.37	100.84	82.1	121.8	345.1
170.00	Bot - Section 6	0.2500	25.211	19.806	1559.0	16.37	100.84	82.1	121.8	
175.00		0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	328.8
										32101.0

Wind Loading - Shaft

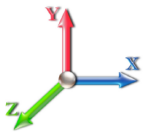
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	21.088	23.20	508.23	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	498.69	0.650	0.000	5.00	27.033	17.57	652.2	0.0	1799.0
10.00		1.00	0.85	21.088	23.20	489.15	0.650	0.000	5.00	26.521	17.24	639.8	0.0	1764.7
15.00		1.00	0.85	21.088	23.20	479.61	0.650	0.000	5.00	26.009	16.91	627.4	0.0	1730.4
18.00	Top - Section 1	1.00	0.88	21.884	24.07	482.75	0.650	0.000	3.00	15.360	9.98	384.5	0.0	1021.7
20.00		1.00	0.90	22.375	24.61	484.20	0.650	0.000	2.00	10.137	6.59	259.5	0.0	578.6
25.00		1.00	0.95	23.451	25.80	485.65	0.650	0.000	5.00	24.984	16.24	670.3	0.0	1425.8
30.00		1.00	0.98	24.369	26.81	484.81	0.650	0.000	5.00	24.472	15.91	682.2	0.0	1396.4
35.00		1.00	1.01	25.172	27.69	482.31	0.650	0.000	5.00	23.960	15.57	690.0	0.0	1367.0
40.00		1.00	1.04	25.890	28.48	478.57	0.650	0.000	5.00	23.448	15.24	694.5	0.0	1337.6
41.00	Bot - Section 3	1.00	1.05	26.025	28.63	477.70	0.650	0.000	1.00	4.628	3.01	137.8	0.0	264.0
45.00		1.00	1.07	26.540	29.19	473.84	0.650	0.000	4.00	18.561	12.06	563.6	0.0	2102.9
48.00	Top - Section 2	1.00	1.08	26.903	29.59	470.60	0.650	0.000	3.00	13.706	8.91	421.8	0.0	1552.5
50.00		1.00	1.09	27.135	29.85	475.00	0.650	0.000	2.00	9.035	5.87	280.5	0.0	515.3
55.00		1.00	1.12	27.685	30.45	468.86	0.650	0.000	5.00	22.228	14.45	704.0	0.0	1267.6
60.00		1.00	1.14	28.197	31.02	462.15	0.650	0.000	5.00	21.716	14.12	700.5	0.0	1238.1
65.00		1.00	1.16	28.676	31.54	454.93	0.650	0.000	5.00	21.204	13.78	695.6	0.0	1208.7
70.00		1.00	1.17	29.127	32.04	447.28	0.650	0.000	5.00	20.692	13.45	689.5	0.0	1179.3
75.00	Appurtenance(s)	1.00	1.19	29.553	32.51	439.25	0.650	0.000	5.00	20.179	13.12	682.2	0.0	1149.9
80.00		1.00	1.21	29.958	32.95	430.87	0.650	0.000	5.00	19.667	12.78	674.0	0.0	1120.4
85.00	Bot - Section 4	1.00	1.22	30.342	33.38	422.19	0.650	0.000	5.00	19.155	12.45	664.9	0.0	1091.0
90.00		1.00	1.24	30.710	33.78	413.22	0.650	0.000	5.00	18.907	12.29	664.2	0.0	1960.2
91.00	Top - Section 3	1.00	1.24	30.781	33.86	411.40	0.650	0.000	1.00	3.720	2.42	131.0	0.0	385.6
95.00		1.00	1.25	31.061	34.17	409.98	0.650	0.000	4.00	14.675	9.54	521.5	0.0	697.3
100.00		1.00	1.27	31.399	34.54	400.56	0.650	0.000	5.00	17.883	11.62	642.3	0.0	849.6
105.00		1.00	1.28	31.723	34.89	390.92	0.650	0.000	5.00	17.370	11.29	630.4	0.0	825.0
110.00		1.00	1.29	32.035	35.24	381.08	0.650	0.000	5.00	16.858	10.96	617.8	0.0	800.5
115.00		1.00	1.30	32.336	35.57	371.06	0.650	0.000	5.00	16.346	10.62	604.7	0.0	776.0
120.00		1.00	1.32	32.627	35.89	360.86	0.650	0.000	5.00	15.834	10.29	591.0	0.0	751.5
125.00		1.00	1.33	32.909	36.20	350.49	0.650	0.000	5.00	15.321	9.96	576.8	0.0	727.0
130.00	Bot - Section 5	1.00	1.34	33.182	36.50	339.98	0.650	0.000	5.00	14.809	9.63	562.1	0.0	702.5
135.00	Top - Section 4	1.00	1.35	33.446	36.79	329.31	0.650	0.000	5.00	14.508	9.43	555.1	0.0	1229.4
140.00		1.00	1.36	33.703	37.07	323.50	0.650	0.000	5.00	13.996	9.10	539.6	0.0	531.9
141.00	Appurtenance(s)	1.00	1.36	33.754	37.13	321.33	0.650	0.000	1.00	2.738	1.78	105.7	0.0	104.0
145.00		1.00	1.37	33.953	37.35	312.59	0.650	0.000	4.00	10.746	6.98	417.4	0.0	408.2
150.00		1.00	1.38	34.196	37.62	301.56	0.650	0.000	5.00	12.972	8.43	507.5	0.0	492.6
152.00	Appurtenance(s)	1.00	1.38	34.292	37.72	297.11	0.650	0.000	2.00	5.045	3.28	197.9	0.0	191.6
155.00		1.00	1.39	34.433	37.88	290.41	0.650	0.000	3.00	7.414	4.82	292.1	0.0	281.5
160.00		1.00	1.40	34.664	38.13	279.15	0.650	0.000	5.00	11.947	7.77	473.8	0.0	453.4
165.00		1.00	1.41	34.890	38.38	267.79	0.650	0.000	5.00	11.435	7.43	456.4	0.0	433.8
170.00	Top - Section 5	1.00	1.42	35.110	38.62	256.32	0.650	0.000	5.00	10.923	7.10	438.7	0.0	414.2
175.00	Appurtenance(s)	1.00	1.42	35.324	38.86	244.76	0.650	0.000	5.00	10.410	6.77	420.7	0.0	394.6
								Totals:	**175.00**			**21,461.5**		**38,521.2**

Discrete Appurtenance Forces

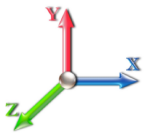
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	175.00	ALU 1900MHz RRU	3	35.324	38.857	0.60	0.90	6.87	158.40	0.000	0.000	427.38	0.00	0.00
2	175.00	APXVTM14-C-120	3	35.324	38.857	0.71	0.90	13.52	201.60	0.000	0.000	840.75	0.00	0.00
3	175.00	APXVSPP18-C-A20	3	35.324	38.857	0.75	0.90	17.97	205.20	0.000	0.000	1117.39	0.00	0.00
4	175.00	ALU 800 MHz RRU	3	35.324	38.857	0.60	0.90	4.50	190.80	0.000	0.000	280.04	0.00	0.00
5	175.00	T-Arm w/ work Platform	3	35.324	38.857	0.56	0.75	16.88	1440.00	0.000	0.000	1049.14	0.00	0.00
6	175.00	TD-RRH8x20-25	3	35.324	38.857	0.60	0.90	7.33	252.00	0.000	0.000	455.49	0.00	0.00
7	175.00	800 MHz Filter	3	35.324	38.857	0.60	0.90	0.76	36.00	0.000	0.000	47.24	0.00	0.00
8	175.00	ACU-A20-N	4	35.324	38.857	0.60	0.90	0.34	4.80	0.000	0.000	20.99	0.00	0.00
9	152.00	Allgon/ 7184	6	34.292	37.721	0.55	0.80	9.44	69.84	0.000	0.000	569.69	0.00	0.00
10	152.00	Ericsson/ RRUS-11	6	34.292	37.721	0.40	0.80	6.05	360.00	0.000	0.000	365.02	0.00	0.00
11	152.00	Raycap/ DC6-48-60-18-8F	1	34.292	37.721	1.00	1.00	1.47	39.36	0.000	0.000	88.72	0.00	0.00
12	152.00	Powerwave/ LGP 21401	6	34.292	37.721	0.40	0.80	3.10	101.52	0.000	0.000	186.86	0.00	0.00
13	152.00	Powerwave/ 7770	3	34.292	37.721	0.58	0.80	9.64	126.00	0.000	0.000	581.57	0.00	0.00
14	152.00	Powerwave/ 7020 RET	6	34.292	37.721	0.50	0.80	1.19	15.84	0.000	0.000	71.85	0.00	0.00
15	152.00	Ericsson/ RRUS-12	3	34.292	37.721	0.54	0.80	4.34	216.00	0.000	0.000	262.03	0.00	0.00
16	152.00	HPA-65R-BUU-H6	3	34.292	37.721	0.68	0.80	19.71	183.60	0.000	0.000	1189.36	0.00	0.00
17	152.00	T-Arm w/ work Platform	3	34.292	37.721	0.56	0.75	16.88	1440.00	0.000	0.000	1018.47	0.00	0.00
18	152.00	Ericsson/ RRUS A2	3	34.292	37.721	0.54	0.80	2.99	75.96	0.000	0.000	180.51	0.00	0.00
19	141.00	AIR6449 B41	3	33.754	37.129	0.53	0.75	9.03	370.80	0.000	0.000	536.20	0.00	0.00
20	141.00	Low Profile Platform	1	33.754	37.129	1.00	1.00	25.00	1440.00	0.000	0.000	1485.17	0.00	0.00
21	141.00	KRY 112 144	3	33.754	37.129	0.50	0.75	0.62	39.60	0.000	0.000	36.72	0.00	0.00
22	141.00	APXVAALL24-43-U-NA20	3	33.754	37.129	0.52	0.75	31.88	460.80	0.000	0.000	1893.77	0.00	0.00
23	141.00	SDX1926Q-43	3	33.754	37.129	0.50	0.75	0.48	63.36	0.000	0.000	28.66	0.00	0.00
24	141.00	AIR32	3	33.754	37.129	0.65	0.75	12.74	475.92	0.000	0.000	757.04	0.00	0.00
25	141.00	4449 B71 + B85	3	33.754	37.129	0.50	0.75	2.97	263.52	0.000	0.000	176.42	0.00	0.00
26	141.00	RRUS 4415 B25	3	33.754	37.129	0.50	0.75	2.47	165.60	0.000	0.000	146.87	0.00	0.00
27	75.00	GPS	1	29.553	32.509	1.00	1.00	1.00	12.00	0.000	0.000	52.01	0.00	0.00
							Totals:		**8,408.52**			**13,865.36**		

Total Applied Force Summary

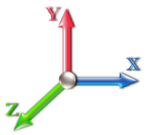
Structure:	CT03110-S-SBA		**Code:**	EIA/TIA-222-G	11/6/2020
Site Name:	North Branford		**Exposure:**	C	
Height:	175.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 10

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		652.16	1964.69	0.00	0.00
10.00		639.80	1930.37	0.00	0.00
15.00		627.44	1896.04	0.00	0.00
18.00		384.53	1121.15	0.00	0.00
20.00		259.48	644.85	0.00	0.00
25.00		670.28	1591.53	0.00	0.00
30.00		682.23	1562.11	0.00	0.00
35.00		689.98	1532.69	0.00	0.00
40.00		694.48	1503.27	0.00	0.00
41.00		137.79	297.12	0.00	0.00
45.00		563.55	2235.48	0.00	0.00
48.00		421.83	1651.90	0.00	0.00
50.00		280.46	581.53	0.00	0.00
55.00		704.01	1433.23	0.00	0.00
60.00		700.51	1403.81	0.00	0.00
65.00		695.61	1374.39	0.00	0.00
70.00		689.47	1344.97	0.00	0.00
75.00	(1) attachments	734.26	1327.55	0.00	0.00
80.00		674.02	1285.17	0.00	0.00
85.00		664.90	1255.75	0.00	0.00
90.00		664.24	2124.92	0.00	0.00
91.00		130.99	418.51	0.00	0.00
95.00		521.46	829.08	0.00	0.00
100.00		642.34	1014.28	0.00	0.00
105.00		630.38	989.76	0.00	0.00
110.00		617.81	965.25	0.00	0.00
115.00		604.67	940.73	0.00	0.00
120.00		590.99	916.21	0.00	0.00
125.00		576.81	891.69	0.00	0.00
130.00		562.15	867.18	0.00	0.00
135.00		555.13	1394.13	0.00	0.00
140.00		539.64	696.57	0.00	0.00
141.00	(22) attachments	5166.57	3416.56	0.00	0.00
145.00		417.41	540.00	0.00	0.00
150.00		507.46	607.81	0.00	0.00
152.00	(40) attachments	4712.00	2852.54	0.00	0.00
155.00		292.06	297.05	0.00	0.00
160.00		473.77	477.12	0.00	0.00
165.00		456.41	457.50	0.00	0.00
170.00		438.71	437.89	0.00	0.00
175.00	(25) attachments	4659.11	2907.08	0.00	0.00
	Totals:	**35,326.90**	**51,979.45**	**0.00**	**0.00**

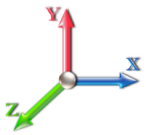
Linear Appurtenance Segment Forces (Factored)

Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	15.84
5.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	1.64
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	6.24
10.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	15.84
10.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	1.64
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	6.24
15.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	15.84
15.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	1.64
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	6.24
18.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	21.884	0.00	9.50
18.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	21.884	0.00	0.98
18.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	21.884	0.00	3.74
20.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.375	0.00	6.34
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.375	0.00	0.66
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.375	0.00	2.50
25.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.451	0.00	15.84
25.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.451	0.00	1.64
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.451	0.00	6.24
30.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.369	0.00	15.84
30.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.369	0.00	1.64
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.369	0.00	6.24
35.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.172	0.00	15.84
35.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.172	0.00	1.64
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.172	0.00	6.24
40.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.890	0.00	15.84
40.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.890	0.00	1.64
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.890	0.00	6.24
41.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.025	0.00	3.17
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.025	0.00	0.33
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.025	0.00	1.25
45.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	26.540	0.00	12.67
45.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	26.540	0.00	1.31
45.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	26.540	0.00	4.99
48.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	26.903	0.00	9.50
48.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	26.903	0.00	0.98
48.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	26.903	0.00	3.74
50.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.135	0.00	6.34
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.135	0.00	0.66
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.135	0.00	2.50
55.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.685	0.00	15.84
55.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.685	0.00	1.64
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.685	0.00	6.24
60.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.197	0.00	15.84
60.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.197	0.00	1.64
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.197	0.00	6.24
65.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.676	0.00	15.84
65.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.676	0.00	1.64

Linear Appurtenance Segment Forces (Factored)

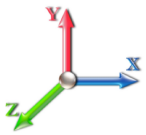
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.676	0.00	6.24
70.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.127	0.00	15.84
70.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.127	0.00	1.64
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.127	0.00	6.24
75.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.553	0.00	15.84
75.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.553	0.00	1.64
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.553	0.00	6.24
80.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.958	0.00	15.84
80.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.958	0.00	1.64
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.958	0.00	6.24
85.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.342	0.00	15.84
85.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.342	0.00	1.64
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.342	0.00	6.24
90.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.710	0.00	15.84
90.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.710	0.00	1.64
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.710	0.00	6.24
91.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.781	0.00	3.17
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.781	0.00	0.33
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.781	0.00	1.25
95.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	31.061	0.00	12.67
95.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	31.061	0.00	1.31
95.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	31.061	0.00	4.99
100.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.399	0.00	15.84
100.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.399	0.00	1.64
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.399	0.00	6.24
105.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.723	0.00	15.84
105.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.723	0.00	1.64
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.723	0.00	6.24
110.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.035	0.00	15.84
110.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.035	0.00	1.64
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.035	0.00	6.24
115.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.336	0.00	15.84
115.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.336	0.00	1.64
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.336	0.00	6.24
120.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.627	0.00	15.84
120.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.627	0.00	1.64
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.627	0.00	6.24
125.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.909	0.00	15.84
125.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.909	0.00	1.64
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.909	0.00	6.24
130.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.182	0.00	15.84
130.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.182	0.00	1.64
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.182	0.00	6.24
135.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.446	0.00	15.84
135.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.446	0.00	1.64
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.446	0.00	6.24
140.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.703	0.00	15.84

Linear Appurtenance Segment Forces (Factored)

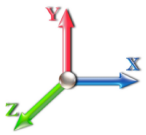
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
140.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.703	0.00	1.64
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.703	0.00	6.24
141.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	33.754	0.00	3.17
141.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	33.754	0.00	0.33
141.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	33.754	0.00	1.25
145.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	33.953	0.00	12.67
145.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	33.953	0.00	1.31
145.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	33.953	0.00	4.99
150.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.196	0.00	15.84
150.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.196	0.00	1.64
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.196	0.00	6.24
152.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.292	0.00	6.34
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.292	0.00	0.66
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.292	0.00	2.50
155.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	9.50
155.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	0.98
155.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	3.74
160.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.664	0.00	15.84
160.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.664	0.00	1.64
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.664	0.00	6.24
165.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.890	0.00	15.84
165.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.890	0.00	1.64
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.890	0.00	6.24
170.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.110	0.00	15.84
170.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.110	0.00	1.64
170.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.110	0.00	6.24
175.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.324	0.00	15.84
175.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.324	0.00	1.64
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.324	0.00	6.24
										Totals:	**0.0**	**830.1**

Calculated Forces

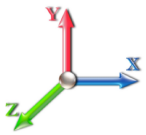
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-51.94	-35.38	0.00	-4074.3	0.00	4074.37	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.541
5.00	-49.90	-34.84	0.00	-3897.4	0.00	3897.46	5738.51	2869.25	14833.4	7427.75	0.07	-0.123	0.000	0.534
10.00	-47.90	-34.30	0.00	-3723.2	0.00	3723.28	5672.18	2836.09	14377.6	7199.49	0.26	-0.247	0.000	0.526
15.00	-45.95	-33.74	0.00	-3551.8	0.00	3551.81	5604.11	2802.06	13924.1	6972.40	0.59	-0.373	0.000	0.518
18.00	-44.79	-33.40	0.00	-3450.5	0.00	3450.59	5562.44	2781.22	13653.2	6836.76	0.85	-0.450	0.000	0.513
18.00	-44.79	-33.40	0.00	-3450.5	0.00	3450.59	4468.60	2234.30	10991.3	5503.84	0.85	-0.450	0.000	0.637
20.00	-44.09	-33.21	0.00	-3383.8	0.00	3383.80	4449.40	2224.70	10854.8	5435.51	1.05	-0.503	0.000	0.633
25.00	-42.42	-32.64	0.00	-3217.7	0.00	3217.75	4400.18	2200.09	10514.1	5264.91	1.66	-0.652	0.000	0.621
30.00	-40.78	-32.04	0.00	-3054.5	0.00	3054.58	4349.23	2174.61	10174.3	5094.75	2.42	-0.804	0.000	0.609
35.00	-39.17	-31.43	0.00	-2894.3	0.00	2894.37	4296.53	2148.27	9835.69	4925.16	3.35	-0.957	0.000	0.597
40.00	-37.63	-30.77	0.00	-2737.2	0.00	2737.20	4242.10	2121.05	9498.40	4756.26	4.43	-1.112	0.000	0.585
41.00	-37.30	-30.68	0.00	-2706.4	0.00	2706.43	4231.01	2115.50	9431.14	4722.58	4.67	-1.143	0.000	0.582
45.00	-35.02	-30.14	0.00	-2583.7	0.00	2583.71	4185.94	2092.97	9162.77	4588.20	5.68	-1.269	0.000	0.572
48.00	-33.33	-29.72	0.00	-2493.3	0.00	2493.30	4187.05	2093.52	9169.29	4591.46	6.51	-1.365	0.000	0.551
50.00	-32.70	-29.49	0.00	-2433.8	0.00	2433.85	4164.11	2082.05	9035.54	4524.49	7.10	-1.429	0.000	0.546
55.00	-31.21	-28.83	0.00	-2286.3	0.00	2286.39	4105.54	2052.77	8702.63	4357.78	8.68	-1.581	0.000	0.532
60.00	-29.75	-28.17	0.00	-2142.2	0.00	2142.22	4045.24	2022.62	8371.99	4192.22	10.41	-1.734	0.000	0.519
65.00	-28.33	-27.51	0.00	-2001.3	0.00	2001.36	3983.21	1991.60	8043.90	4027.93	12.31	-1.888	0.000	0.504
70.00	-26.93	-26.85	0.00	-1863.8	0.00	1863.81	3919.43	1959.72	7718.60	3865.04	14.37	-2.042	0.000	0.489
75.00	-25.57	-26.13	0.00	-1729.5	0.00	1729.57	3853.92	1926.96	7396.37	3703.68	16.59	-2.196	0.000	0.474
80.00	-24.24	-25.47	0.00	-1598.9	0.00	1598.90	3786.67	1893.34	7077.46	3543.99	18.98	-2.350	0.000	0.458
85.00	-22.95	-24.82	0.00	-1471.5	0.00	1471.53	3717.69	1858.85	6762.13	3386.09	21.52	-2.505	0.000	0.441
90.00	-20.81	-24.09	0.00	-1347.4	0.00	1347.44	3646.97	1823.48	6450.65	3230.12	24.23	-2.658	0.000	0.423
91.00	-20.37	-23.97	0.00	-1323.3	0.00	1323.35	2873.92	1436.96	5143.64	2575.64	24.79	-2.690	0.000	0.521
95.00	-19.51	-23.46	0.00	-1227.4	0.00	1227.47	2834.39	1417.20	4959.20	2483.29	27.09	-2.812	0.000	0.501
100.00	-18.46	-22.82	0.00	-1110.1	0.00	1110.17	2783.42	1391.71	4730.46	2368.74	30.13	-2.985	0.000	0.476
105.00	-17.44	-22.19	0.00	-996.06	0.00	996.06	2730.70	1365.35	4503.96	2255.33	33.35	-3.154	0.000	0.448
110.00	-16.45	-21.57	0.00	-885.11	0.00	885.11	2676.25	1338.13	4279.98	2143.17	36.74	-3.319	0.000	0.419
115.00	-15.49	-20.95	0.00	-777.28	0.00	777.28	2620.07	1310.03	4058.76	2032.40	40.30	-3.479	0.000	0.389
120.00	-14.56	-20.34	0.00	-672.53	0.00	672.53	2562.14	1281.07	3840.57	1923.14	44.02	-3.632	0.000	0.356
125.00	-13.66	-19.74	0.00	-570.83	0.00	570.83	2502.48	1251.24	3625.68	1815.54	47.90	-3.777	0.000	0.320
130.00	-12.79	-19.15	0.00	-472.12	0.00	472.12	2441.09	1220.54	3414.34	1709.71	51.93	-3.912	0.000	0.282
135.00	-11.40	-18.52	0.00	-376.37	0.00	376.37	1793.55	896.77	2465.05	1234.36	56.09	-4.033	0.000	0.312
140.00	-10.72	-17.95	0.00	-283.76	0.00	283.76	1751.71	875.86	2319.73	1161.59	60.37	-4.139	0.000	0.251
141.00	-7.68	-12.55	0.00	-265.81	0.00	265.81	1743.14	871.57	2290.90	1147.15	61.24	-4.162	0.000	0.236
145.00	-7.15	-12.11	0.00	-215.60	0.00	215.60	1708.14	854.07	2176.40	1089.82	64.76	-4.246	0.000	0.202
150.00	-6.57	-11.56	0.00	-155.06	0.00	155.06	1662.84	831.42	2035.30	1019.16	69.26	-4.334	0.000	0.156
152.00	-4.08	-6.65	0.00	-131.93	0.00	131.93	1644.23	822.12	1979.55	991.25	71.08	-4.365	0.000	0.136
155.00	-3.80	-6.34	0.00	-111.98	0.00	111.98	1615.80	807.90	1896.71	949.77	73.83	-4.406	0.000	0.120
160.00	-3.36	-5.83	0.00	-80.28	0.00	80.28	1567.02	783.51	1760.89	881.75	78.47	-4.464	0.000	0.093
165.00	-2.93	-5.35	0.00	-51.10	0.00	51.10	1516.50	758.25	1628.10	815.26	83.17	-4.510	0.000	0.065
170.00	-2.53	-4.87	0.00	-24.37	0.00	24.37	1464.25	732.13	1498.59	750.41	87.91	-4.539	0.000	0.034
170.00	-2.53	-4.87	0.00	-24.37	0.00	24.37	1464.25	732.13	1498.59	750.41	87.91	-4.539	0.000	0.034
175.00	0.00	-4.66	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	92.66	-4.551	0.000	0.000

Wind Loading - Shaft

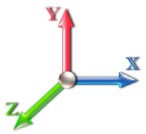
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	21.088	23.20	508.23	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	498.69	0.650	0.000	5.00	27.033	17.57	652.2	0.0	1349.3
10.00		1.00	0.85	21.088	23.20	489.15	0.650	0.000	5.00	26.521	17.24	639.8	0.0	1323.5
15.00		1.00	0.85	21.088	23.20	479.61	0.650	0.000	5.00	26.009	16.91	627.4	0.0	1297.8
18.00	Top - Section 1	1.00	0.88	21.884	24.07	482.75	0.650	0.000	3.00	15.360	9.98	384.5	0.0	766.3
20.00		1.00	0.90	22.375	24.61	484.20	0.650	0.000	2.00	10.137	6.59	259.5	0.0	433.9
25.00		1.00	0.95	23.451	25.80	485.65	0.650	0.000	5.00	24.984	16.24	670.3	0.0	1069.4
30.00		1.00	0.98	24.369	26.81	484.81	0.650	0.000	5.00	24.472	15.91	682.2	0.0	1047.3
35.00		1.00	1.01	25.172	27.69	482.31	0.650	0.000	5.00	23.960	15.57	690.0	0.0	1025.3
40.00		1.00	1.04	25.890	28.48	478.57	0.650	0.000	5.00	23.448	15.24	694.5	0.0	1003.2
41.00	Bot - Section 3	1.00	1.05	26.025	28.63	477.70	0.650	0.000	1.00	4.628	3.01	137.8	0.0	198.0
45.00		1.00	1.07	26.540	29.19	473.84	0.650	0.000	4.00	18.561	12.06	563.6	0.0	1577.2
48.00	Top - Section 2	1.00	1.08	26.903	29.59	470.60	0.650	0.000	3.00	13.706	8.91	421.8	0.0	1164.4
50.00		1.00	1.09	27.135	29.85	475.00	0.650	0.000	2.00	9.035	5.87	280.5	0.0	386.4
55.00		1.00	1.12	27.685	30.45	468.86	0.650	0.000	5.00	22.228	14.45	704.0	0.0	950.7
60.00		1.00	1.14	28.197	31.02	462.15	0.650	0.000	5.00	21.716	14.12	700.5	0.0	928.6
65.00		1.00	1.16	28.676	31.54	454.93	0.650	0.000	5.00	21.204	13.78	695.6	0.0	906.5
70.00		1.00	1.17	29.127	32.04	447.28	0.650	0.000	5.00	20.692	13.45	689.5	0.0	884.5
75.00	Appurtenance(s)	1.00	1.19	29.553	32.51	439.25	0.650	0.000	5.00	20.179	13.12	682.2	0.0	862.4
80.00		1.00	1.21	29.958	32.95	430.87	0.650	0.000	5.00	19.667	12.78	674.0	0.0	840.3
85.00	Bot - Section 4	1.00	1.22	30.342	33.38	422.19	0.650	0.000	5.00	19.155	12.45	664.9	0.0	818.3
90.00		1.00	1.24	30.710	33.78	413.22	0.650	0.000	5.00	18.907	12.29	664.2	0.0	1470.2
91.00	Top - Section 3	1.00	1.24	30.781	33.86	411.40	0.650	0.000	1.00	3.720	2.42	131.0	0.0	289.2
95.00		1.00	1.25	31.061	34.17	409.98	0.650	0.000	4.00	14.675	9.54	521.5	0.0	523.0
100.00		1.00	1.27	31.399	34.54	400.56	0.650	0.000	5.00	17.883	11.62	642.3	0.0	637.2
105.00		1.00	1.28	31.723	34.89	390.92	0.650	0.000	5.00	17.370	11.29	630.4	0.0	618.8
110.00		1.00	1.29	32.035	35.24	381.08	0.650	0.000	5.00	16.858	10.96	617.8	0.0	600.4
115.00		1.00	1.30	32.336	35.57	371.06	0.650	0.000	5.00	16.346	10.62	604.7	0.0	582.0
120.00		1.00	1.32	32.627	35.89	360.86	0.650	0.000	5.00	15.834	10.29	591.0	0.0	563.6
125.00		1.00	1.33	32.909	36.20	350.49	0.650	0.000	5.00	15.321	9.96	576.8	0.0	545.2
130.00	Bot - Section 5	1.00	1.34	33.182	36.50	339.98	0.650	0.000	5.00	14.809	9.63	562.1	0.0	526.8
135.00	Top - Section 4	1.00	1.35	33.446	36.79	329.31	0.650	0.000	5.00	14.508	9.43	555.1	0.0	922.1
140.00		1.00	1.36	33.703	37.07	323.50	0.650	0.000	5.00	13.996	9.10	539.6	0.0	398.9
141.00	Appurtenance(s)	1.00	1.36	33.754	37.13	321.33	0.650	0.000	1.00	2.738	1.78	105.7	0.0	78.0
145.00		1.00	1.37	33.953	37.35	312.59	0.650	0.000	4.00	10.746	6.98	417.4	0.0	306.2
150.00		1.00	1.38	34.196	37.62	301.56	0.650	0.000	5.00	12.972	8.43	507.5	0.0	369.5
152.00	Appurtenance(s)	1.00	1.38	34.292	37.72	297.11	0.650	0.000	2.00	5.045	3.28	197.9	0.0	143.7
155.00		1.00	1.39	34.433	37.88	290.41	0.650	0.000	3.00	7.414	4.82	292.1	0.0	211.1
160.00		1.00	1.40	34.664	38.13	279.15	0.650	0.000	5.00	11.947	7.77	473.8	0.0	340.0
165.00		1.00	1.41	34.890	38.38	267.79	0.650	0.000	5.00	11.435	7.43	456.4	0.0	325.3
170.00	Top - Section 5	1.00	1.42	35.110	38.62	256.32	0.650	0.000	5.00	10.923	7.10	438.7	0.0	310.6
175.00	Appurtenance(s)	1.00	1.42	35.324	38.86	244.76	0.650	0.000	5.00	10.410	6.77	420.7	0.0	295.9
								Totals:	**175.00**			**21,461.5**		**28,890.9**

Discrete Appurtenance Forces

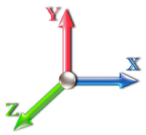
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	175.00	ALU 1900MHz RRU	3	35.324	38.857	0.60	0.90	6.87	118.80	0.000	0.000	427.38	0.00	0.00
2	175.00	APXVTM14-C-120	3	35.324	38.857	0.71	0.90	13.52	151.20	0.000	0.000	840.75	0.00	0.00
3	175.00	APXVSPP18-C-A20	3	35.324	38.857	0.75	0.90	17.97	153.90	0.000	0.000	1117.39	0.00	0.00
4	175.00	ALU 800 MHz RRU	3	35.324	38.857	0.60	0.90	4.50	143.10	0.000	0.000	280.04	0.00	0.00
5	175.00	T-Arm w/ work Platform	3	35.324	38.857	0.56	0.75	16.88	1080.00	0.000	0.000	1049.14	0.00	0.00
6	175.00	TD-RRH8x20-25	3	35.324	38.857	0.60	0.90	7.33	189.00	0.000	0.000	455.49	0.00	0.00
7	175.00	800 MHz Filter	3	35.324	38.857	0.60	0.90	0.76	27.00	0.000	0.000	47.24	0.00	0.00
8	175.00	ACU-A20-N	4	35.324	38.857	0.60	0.90	0.34	3.60	0.000	0.000	20.99	0.00	0.00
9	152.00	Allgon/ 7184	6	34.292	37.721	0.55	0.80	9.44	52.38	0.000	0.000	569.69	0.00	0.00
10	152.00	Ericsson/ RRUS-11	6	34.292	37.721	0.40	0.80	6.05	270.00	0.000	0.000	365.02	0.00	0.00
11	152.00	Raycap/ DC6-48-60-18-8F	1	34.292	37.721	1.00	1.00	1.47	29.52	0.000	0.000	88.72	0.00	0.00
12	152.00	Powerwave/ LGP 21401	6	34.292	37.721	0.40	0.80	3.10	76.14	0.000	0.000	186.86	0.00	0.00
13	152.00	Powerwave/ 7770	3	34.292	37.721	0.58	0.80	9.64	94.50	0.000	0.000	581.57	0.00	0.00
14	152.00	Powerwave/ 7020 RET	6	34.292	37.721	0.50	0.80	1.19	11.88	0.000	0.000	71.85	0.00	0.00
15	152.00	Ericsson/ RRUS-12	3	34.292	37.721	0.54	0.80	4.34	162.00	0.000	0.000	262.03	0.00	0.00
16	152.00	HPA-65R-BUU-H6	3	34.292	37.721	0.68	0.80	19.71	137.70	0.000	0.000	1189.36	0.00	0.00
17	152.00	T-Arm w/ work Platform	3	34.292	37.721	0.56	0.75	16.88	1080.00	0.000	0.000	1018.47	0.00	0.00
18	152.00	Ericsson/ RRUS A2	3	34.292	37.721	0.54	0.80	2.99	56.97	0.000	0.000	180.51	0.00	0.00
19	141.00	AIR6449 B41	3	33.754	37.129	0.53	0.75	9.03	278.10	0.000	0.000	536.20	0.00	0.00
20	141.00	Low Profile Platform	1	33.754	37.129	1.00	1.00	25.00	1080.00	0.000	0.000	1485.17	0.00	0.00
21	141.00	KRY 112 144	3	33.754	37.129	0.50	0.75	0.62	29.70	0.000	0.000	36.72	0.00	0.00
22	141.00	APXVAALL24-43-U-NA20	3	33.754	37.129	0.52	0.75	31.88	345.60	0.000	0.000	1893.77	0.00	0.00
23	141.00	SDX1926Q-43	3	33.754	37.129	0.50	0.75	0.48	47.52	0.000	0.000	28.66	0.00	0.00
24	141.00	AIR32	3	33.754	37.129	0.65	0.75	12.74	356.94	0.000	0.000	757.04	0.00	0.00
25	141.00	4449 B71 + B85	3	33.754	37.129	0.50	0.75	2.97	197.64	0.000	0.000	176.42	0.00	0.00
26	141.00	RRUS 4415 B25	3	33.754	37.129	0.50	0.75	2.47	124.20	0.000	0.000	146.87	0.00	0.00
27	75.00	GPS	1	29.553	32.509	1.00	1.00	1.00	9.00	0.000	0.000	52.01	0.00	0.00
							Totals:		**6,306.39**			**13,865.36**		

Total Applied Force Summary

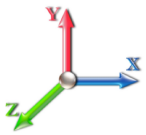
Structure:	CT03110-S-SBA		**Code:**	EIA/TIA-222-G	11/6/2020
Site Name:	North Branford		**Exposure:**	C	
Height:	175.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 17

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		652.16	1473.52	0.00	0.00
10.00		639.80	1447.78	0.00	0.00
15.00		627.44	1422.03	0.00	0.00
18.00		384.53	840.86	0.00	0.00
20.00		259.48	483.64	0.00	0.00
25.00		670.28	1193.65	0.00	0.00
30.00		682.23	1171.58	0.00	0.00
35.00		689.98	1149.52	0.00	0.00
40.00		694.48	1127.45	0.00	0.00
41.00		137.79	222.84	0.00	0.00
45.00		563.55	1676.61	0.00	0.00
48.00		421.83	1238.92	0.00	0.00
50.00		280.46	436.15	0.00	0.00
55.00		704.01	1074.92	0.00	0.00
60.00		700.51	1052.86	0.00	0.00
65.00		695.61	1030.79	0.00	0.00
70.00		689.47	1008.73	0.00	0.00
75.00	(1) attachments	734.26	995.66	0.00	0.00
80.00		674.02	963.88	0.00	0.00
85.00		664.90	941.81	0.00	0.00
90.00		664.24	1593.69	0.00	0.00
91.00		130.99	313.88	0.00	0.00
95.00		521.46	621.81	0.00	0.00
100.00		642.34	760.71	0.00	0.00
105.00		630.38	742.32	0.00	0.00
110.00		617.81	723.93	0.00	0.00
115.00		604.67	705.55	0.00	0.00
120.00		590.99	687.16	0.00	0.00
125.00		576.81	668.77	0.00	0.00
130.00		562.15	650.38	0.00	0.00
135.00		555.13	1045.60	0.00	0.00
140.00		539.64	522.43	0.00	0.00
141.00	(22) attachments	5166.57	2562.42	0.00	0.00
145.00		417.41	405.00	0.00	0.00
150.00		507.46	455.86	0.00	0.00
152.00	(40) attachments	4712.00	2139.41	0.00	0.00
155.00		292.06	222.79	0.00	0.00
160.00		473.77	357.84	0.00	0.00
165.00		456.41	343.13	0.00	0.00
170.00		438.71	328.42	0.00	0.00
175.00	(25) attachments	4659.11	2180.31	0.00	0.00
	Totals:	**35,326.90**	**38,984.59**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

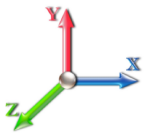
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	11.88
5.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	1.23
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	4.68
10.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	11.88
10.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	1.23
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	4.68
15.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	11.88
15.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	1.23
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	4.68
18.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	21.884	0.00	7.13
18.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	21.884	0.00	0.74
18.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	21.884	0.00	2.81
20.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.375	0.00	4.75
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.375	0.00	0.49
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.375	0.00	1.87
25.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.451	0.00	11.88
25.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.451	0.00	1.23
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.451	0.00	4.68
30.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.369	0.00	11.88
30.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.369	0.00	1.23
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.369	0.00	4.68
35.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.172	0.00	11.88
35.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.172	0.00	1.23
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.172	0.00	4.68
40.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.890	0.00	11.88
40.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.890	0.00	1.23
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.890	0.00	4.68
41.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.025	0.00	2.38
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.025	0.00	0.25
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.025	0.00	0.94
45.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	26.540	0.00	9.50
45.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	26.540	0.00	0.98
45.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	26.540	0.00	3.74
48.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	26.903	0.00	7.13
48.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	26.903	0.00	0.74
48.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	26.903	0.00	2.81
50.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.135	0.00	4.75
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.135	0.00	0.49
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.135	0.00	1.87
55.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.685	0.00	11.88
55.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.685	0.00	1.23
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.685	0.00	4.68
60.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.197	0.00	11.88
60.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.197	0.00	1.23
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.197	0.00	4.68
65.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.676	0.00	11.88
65.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.676	0.00	1.23

Linear Appurtenance Segment Forces (Factored)

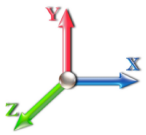
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.676	0.00	4.68
70.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.127	0.00	11.88
70.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.127	0.00	1.23
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.127	0.00	4.68
75.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.553	0.00	11.88
75.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.553	0.00	1.23
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.553	0.00	4.68
80.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.958	0.00	11.88
80.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.958	0.00	1.23
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.958	0.00	4.68
85.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.342	0.00	11.88
85.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.342	0.00	1.23
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.342	0.00	4.68
90.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.710	0.00	11.88
90.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.710	0.00	1.23
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.710	0.00	4.68
91.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.781	0.00	2.38
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.781	0.00	0.25
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.781	0.00	0.94
95.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	31.061	0.00	9.50
95.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	31.061	0.00	0.98
95.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	31.061	0.00	3.74
100.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.399	0.00	11.88
100.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.399	0.00	1.23
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.399	0.00	4.68
105.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.723	0.00	11.88
105.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.723	0.00	1.23
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.723	0.00	4.68
110.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.035	0.00	11.88
110.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.035	0.00	1.23
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.035	0.00	4.68
115.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.336	0.00	11.88
115.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.336	0.00	1.23
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.336	0.00	4.68
120.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.627	0.00	11.88
120.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.627	0.00	1.23
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.627	0.00	4.68
125.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.909	0.00	11.88
125.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.909	0.00	1.23
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.909	0.00	4.68
130.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.182	0.00	11.88
130.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.182	0.00	1.23
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.182	0.00	4.68
135.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.446	0.00	11.88
135.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.446	0.00	1.23
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.446	0.00	4.68
140.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.703	0.00	11.88

Linear Appurtenance Segment Forces (Factored)

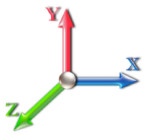
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
140.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.703	0.00	1.23
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.703	0.00	4.68
141.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	33.754	0.00	2.38
141.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	33.754	0.00	0.25
141.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	33.754	0.00	0.94
145.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	33.953	0.00	9.50
145.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	33.953	0.00	0.98
145.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	33.953	0.00	3.74
150.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.196	0.00	11.88
150.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.196	0.00	1.23
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.196	0.00	4.68
152.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.292	0.00	4.75
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.292	0.00	0.49
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.292	0.00	1.87
155.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	7.13
155.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	0.74
155.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	2.81
160.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.664	0.00	11.88
160.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.664	0.00	1.23
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.664	0.00	4.68
165.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.890	0.00	11.88
165.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.890	0.00	1.23
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.890	0.00	4.68
170.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.110	0.00	11.88
170.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.110	0.00	1.23
170.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.110	0.00	4.68
175.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.324	0.00	11.88
175.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.324	0.00	1.23
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.324	0.00	4.68
										Totals:	**0.0**	**622.6**

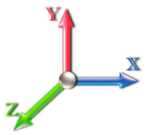
Calculated Forces

Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-38.95	-35.37	0.00	-4041.1	0.00	4041.13	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.535
5.00	-37.40	-34.80	0.00	-3864.2	0.00	3864.29	5738.51	2869.25	14833.4	7427.75	0.07	-0.122	0.000	0.527
10.00	-35.88	-34.23	0.00	-3690.3	0.00	3690.32	5672.18	2836.09	14377.6	7199.49	0.26	-0.245	0.000	0.519
15.00	-34.40	-33.65	0.00	-3519.1	0.00	3519.18	5604.11	2802.06	13924.1	6972.40	0.58	-0.370	0.000	0.511
18.00	-33.53	-33.30	0.00	-3418.2	0.00	3418.22	5562.44	2781.22	13653.2	6836.76	0.84	-0.447	0.000	0.506
18.00	-33.53	-33.30	0.00	-3418.2	0.00	3418.22	4468.60	2234.30	10991.3	5503.84	0.84	-0.447	0.000	0.629
20.00	-32.99	-33.10	0.00	-3351.6	0.00	3351.62	4449.40	2224.70	10854.8	5435.51	1.04	-0.498	0.000	0.624
25.00	-31.72	-32.50	0.00	-3186.1	0.00	3186.15	4400.18	2200.09	10514.1	5264.91	1.64	-0.647	0.000	0.613
30.00	-30.47	-31.88	0.00	-3023.6	0.00	3023.67	4349.23	2174.61	10174.3	5094.75	2.40	-0.797	0.000	0.601
35.00	-29.25	-31.25	0.00	-2864.2	0.00	2864.28	4296.53	2148.27	9835.69	4925.16	3.32	-0.948	0.000	0.589
40.00	-28.08	-30.58	0.00	-2708.0	0.00	2708.04	4242.10	2121.05	9498.40	4756.26	4.39	-1.101	0.000	0.576
41.00	-27.82	-30.48	0.00	-2677.4	0.00	2677.46	4231.01	2115.50	9431.14	4722.58	4.63	-1.133	0.000	0.574
45.00	-26.10	-29.93	0.00	-2555.5	0.00	2555.56	4185.94	2092.97	9162.77	4588.20	5.63	-1.257	0.000	0.563
48.00	-24.83	-29.51	0.00	-2465.7	0.00	2465.78	4187.05	2093.52	9169.29	4591.46	6.45	-1.351	0.000	0.543
50.00	-24.35	-29.27	0.00	-2406.7	0.00	2406.76	4164.11	2082.05	9035.54	4524.49	7.03	-1.415	0.000	0.538
55.00	-23.21	-28.60	0.00	-2260.4	0.00	2260.43	4105.54	2052.77	8702.63	4357.78	8.59	-1.565	0.000	0.525
60.00	-22.11	-27.92	0.00	-2117.4	0.00	2117.46	4045.24	2022.62	8371.99	4192.22	10.31	-1.716	0.000	0.511
65.00	-21.03	-27.25	0.00	-1977.8	0.00	1977.84	3983.21	1991.60	8043.90	4027.93	12.19	-1.868	0.000	0.496
70.00	-19.97	-26.58	0.00	-1841.5	0.00	1841.58	3919.43	1959.72	7718.60	3865.04	14.23	-2.021	0.000	0.482
75.00	-18.94	-25.86	0.00	-1708.6	0.00	1708.67	3853.92	1926.96	7396.37	3703.68	16.43	-2.173	0.000	0.466
80.00	-17.93	-25.20	0.00	-1579.3	0.00	1579.36	3786.67	1893.34	7077.46	3543.99	18.79	-2.326	0.000	0.451
85.00	-16.95	-24.54	0.00	-1453.3	0.00	1453.37	3717.69	1858.85	6762.13	3386.09	21.31	-2.478	0.000	0.434
90.00	-15.35	-23.83	0.00	-1330.6	0.00	1330.68	3646.97	1823.48	6450.65	3230.12	23.98	-2.629	0.000	0.416
91.00	-15.01	-23.70	0.00	-1306.8	0.00	1306.85	2873.92	1436.96	5143.64	2575.64	24.54	-2.661	0.000	0.513
95.00	-14.36	-23.19	0.00	-1212.0	0.00	1212.03	2834.39	1417.20	4959.20	2483.29	26.82	-2.782	0.000	0.493
100.00	-13.56	-22.55	0.00	-1096.0	0.00	1096.08	2783.42	1391.71	4730.46	2368.74	29.82	-2.952	0.000	0.468
105.00	-12.79	-21.92	0.00	-983.32	0.00	983.32	2730.70	1365.35	4503.96	2255.33	33.00	-3.119	0.000	0.441
110.00	-12.05	-21.30	0.00	-873.73	0.00	873.73	2676.25	1338.13	4279.98	2143.17	36.36	-3.282	0.000	0.412
115.00	-11.32	-20.68	0.00	-767.25	0.00	767.25	2620.07	1310.03	4058.76	2032.40	39.88	-3.440	0.000	0.382
120.00	-10.62	-20.08	0.00	-663.85	0.00	663.85	2562.14	1281.07	3840.57	1923.14	43.56	-3.591	0.000	0.350
125.00	-9.94	-19.48	0.00	-563.46	0.00	563.46	2502.48	1251.24	3625.68	1815.54	47.40	-3.734	0.000	0.315
130.00	-9.29	-18.90	0.00	-466.05	0.00	466.05	2441.09	1220.54	3414.34	1709.71	51.38	-3.867	0.000	0.277
135.00	-8.25	-18.29	0.00	-371.56	0.00	371.56	1793.55	896.77	2465.05	1234.36	55.49	-3.987	0.000	0.306
140.00	-7.75	-17.72	0.00	-280.11	0.00	280.11	1751.71	875.86	2319.73	1161.59	59.72	-4.091	0.000	0.246
141.00	-5.55	-12.39	0.00	-262.39	0.00	262.39	1743.14	871.57	2290.90	1147.15	60.58	-4.114	0.000	0.232
145.00	-5.16	-11.95	0.00	-212.82	0.00	212.82	1708.14	854.07	2176.40	1089.82	64.06	-4.197	0.000	0.198
150.00	-4.73	-11.42	0.00	-153.05	0.00	153.05	1662.84	831.42	2035.30	1019.16	68.51	-4.284	0.000	0.153
152.00	-2.94	-6.56	0.00	-130.22	0.00	130.22	1644.23	822.12	1979.55	991.25	70.31	-4.314	0.000	0.133
155.00	-2.74	-6.26	0.00	-110.53	0.00	110.53	1615.80	807.90	1896.71	949.77	73.03	-4.355	0.000	0.118
160.00	-2.41	-5.76	0.00	-79.26	0.00	79.26	1567.02	783.51	1760.89	881.75	77.62	-4.412	0.000	0.091
165.00	-2.10	-5.28	0.00	-50.47	0.00	50.47	1516.50	758.25	1628.10	815.26	82.26	-4.457	0.000	0.063
170.00	-1.81	-4.82	0.00	-24.08	0.00	24.08	1464.25	732.13	1498.59	750.41	86.94	-4.487	0.000	0.033
170.00	-1.81	-4.82	0.00	-24.08	0.00	24.08	1464.25	732.13	1498.59	750.41	86.94	-4.487	0.000	0.033
175.00	0.00	-4.66	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	91.64	-4.498	0.000	0.000

Wind Loading - Shaft

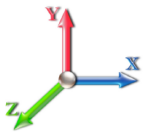
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.242	5.00	28.069	33.68	191.5	502.1	2301.1
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	5.00	27.631	33.16	188.5	528.8	2293.5
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.386	5.00	27.164	32.60	185.3	540.6	2271.0
18.00	Top - Section 1	1.00	0.88	5.363	5.90	0.00	1.200	1.412	3.00	16.065	19.28	113.7	326.6	1348.4
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	2.00	10.613	12.74	76.8	218.4	797.0
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.459	5.00	26.200	31.44	198.8	547.5	1973.3
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	5.00	25.710	30.85	202.7	546.5	1943.0
35.00		1.00	1.01	6.169	6.79	0.00	1.200	1.509	5.00	25.217	30.26	205.3	543.8	1910.8
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	5.00	24.722	29.67	207.1	539.7	1877.3
41.00	Bot - Section 3	1.00	1.05	6.378	7.02	0.00	1.200	1.533	1.00	4.884	5.86	41.1	107.7	371.7
45.00		1.00	1.07	6.504	7.15	0.00	1.200	1.547	4.00	19.593	23.51	168.2	433.4	2536.4
48.00	Top - Section 2	1.00	1.08	6.593	7.25	0.00	1.200	1.557	3.00	14.484	17.38	126.1	323.0	1875.5
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	2.00	9.556	11.47	83.9	214.3	729.6
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.579	5.00	23.544	28.25	210.9	529.1	1796.7
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	23.043	27.65	210.2	521.8	1759.9
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	22.542	27.05	209.1	513.9	1722.7
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	5.00	22.039	26.45	207.7	505.6	1684.9
75.00	Appurtenance(s)	1.00	1.19	7.243	7.97	0.00	1.200	1.628	5.00	21.536	25.84	205.9	496.9	1646.7
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	5.00	21.033	25.24	203.8	487.8	1608.2
85.00	Bot - Section 4	1.00	1.22	7.436	8.18	0.00	1.200	1.649	5.00	20.529	24.63	201.5	478.3	1569.4
90.00		1.00	1.24	7.526	8.28	0.00	1.200	1.658	5.00	20.289	24.35	201.6	475.1	2435.3
91.00	Top - Section 3	1.00	1.24	7.544	8.30	0.00	1.200	1.660	1.00	3.997	4.80	39.8	94.6	480.2
95.00		1.00	1.25	7.612	8.37	0.00	1.200	1.667	4.00	15.786	18.94	158.6	372.1	1069.4
100.00		1.00	1.27	7.695	8.46	0.00	1.200	1.676	5.00	19.279	23.13	195.8	454.9	1304.4
105.00		1.00	1.28	7.774	8.55	0.00	1.200	1.684	5.00	18.774	22.53	192.7	444.4	1269.4
110.00		1.00	1.29	7.851	8.64	0.00	1.200	1.692	5.00	18.268	21.92	189.3	433.7	1234.2
115.00		1.00	1.30	7.925	8.72	0.00	1.200	1.699	5.00	17.762	21.31	185.8	422.8	1198.8
120.00		1.00	1.32	7.996	8.80	0.00	1.200	1.707	5.00	17.256	20.71	182.1	411.8	1163.2
125.00		1.00	1.33	8.065	8.87	0.00	1.200	1.714	5.00	16.749	20.10	178.3	400.5	1127.5
130.00	Bot - Section 5	1.00	1.34	8.132	8.95	0.00	1.200	1.720	5.00	16.243	19.49	174.4	389.1	1091.6
135.00	Top - Section 4	1.00	1.35	8.197	9.02	0.00	1.200	1.727	5.00	15.947	19.14	172.5	383.0	1612.4
140.00		1.00	1.36	8.260	9.09	0.00	1.200	1.733	5.00	15.440	18.53	168.3	371.3	903.1
141.00	Appurtenance(s)	1.00	1.36	8.272	9.10	0.00	1.200	1.734	1.00	3.027	3.63	33.1	73.8	177.8
145.00		1.00	1.37	8.321	9.15	0.00	1.200	1.739	4.00	11.906	14.29	130.8	287.6	695.8
150.00		1.00	1.38	8.381	9.22	0.00	1.200	1.745	5.00	14.426	17.31	159.6	347.5	840.1
152.00	Appurtenance(s)	1.00	1.38	8.404	9.24	0.00	1.200	1.748	2.00	5.628	6.75	62.4	137.1	328.6
155.00		1.00	1.39	8.439	9.28	0.00	1.200	1.751	3.00	8.290	9.95	92.3	201.2	482.7
160.00		1.00	1.40	8.495	9.34	0.00	1.200	1.757	5.00	13.411	16.09	150.4	323.2	776.6
165.00		1.00	1.41	8.551	9.41	0.00	1.200	1.762	5.00	12.903	15.48	145.6	310.9	744.7
170.00	Top - Section 5	1.00	1.42	8.604	9.46	0.00	1.200	1.767	5.00	12.395	14.87	140.8	298.5	712.6
175.00	Appurtenance(s)	1.00	1.42	8.657	9.52	0.00	1.200	1.772	5.00	11.887	14.26	135.8	285.9	680.5
								Totals:	**175.00**			**6,528.1**		**54,346.0**

Discrete Appurtenance Forces

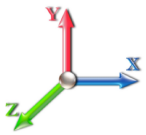
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	175.00	ALU 1900MHz RRU	3	8.657	9.523	0.60	0.90	9.43	397.38	0.000	0.000	89.78	0.00	0.00
2	175.00	APXVTM14-C-120	3	8.657	9.523	0.72	0.90	20.17	811.79	0.000	0.000	192.04	0.00	0.00
3	175.00	APXVSPP18-C-A20	3	8.657	9.523	0.76	0.90	24.62	583.31	0.000	0.000	234.49	0.00	0.00
4	175.00	ALU 800 MHz RRU	3	8.657	9.523	0.60	0.90	6.61	352.83	0.000	0.000	62.90	0.00	0.00
5	175.00	T-Arm w/ work Platform	3	8.657	9.523	0.56	0.75	31.83	2050.72	0.000	0.000	303.10	0.00	0.00
6	175.00	TD-RRH8x20-25	3	8.657	9.523	0.60	0.90	8.82	589.63	0.000	0.000	84.01	0.00	0.00
7	175.00	800 MHz Filter	3	8.657	9.523	0.60	0.90	1.88	112.16	0.000	0.000	17.88	0.00	0.00
8	175.00	ACU-A20-N	4	8.657	9.523	0.61	0.90	1.08	17.05	0.000	0.000	10.29	0.00	0.00
9	152.00	Allgon/ 7184	6	8.404	9.244	0.56	0.80	15.34	288.73	0.000	0.000	141.80	0.00	0.00
10	152.00	Ericsson/ RRUS-11	6	8.404	9.244	0.40	0.80	7.73	849.79	0.000	0.000	71.48	0.00	0.00
11	152.00	Raycap/ DC6-48-60-18-8F	1	8.404	9.244	1.00	1.00	2.17	86.51	0.000	0.000	20.07	0.00	0.00
12	152.00	Powerwave/ LGP 21401	6	8.404	9.244	0.40	0.80	5.10	209.13	0.000	0.000	47.19	0.00	0.00
13	152.00	Powerwave/ 7770	3	8.404	9.244	0.59	0.80	11.66	532.18	0.000	0.000	107.81	0.00	0.00
14	152.00	Powerwave/ 7020 RET	6	8.404	9.244	0.50	0.80	2.68	59.89	0.000	0.000	24.74	0.00	0.00
15	152.00	Ericsson/ RRUS-12	3	8.404	9.244	0.54	0.80	6.17	375.61	0.000	0.000	56.99	0.00	0.00
16	152.00	HPA-65R-BUU-H6	3	8.404	9.244	0.69	0.80	22.76	929.06	0.000	0.000	210.43	0.00	0.00
17	152.00	T-Arm w/ work Platform	3	8.404	9.244	0.56	0.75	31.62	2038.81	0.000	0.000	292.31	0.00	0.00
18	152.00	Ericsson/ RRUS A2	3	8.404	9.244	0.54	0.80	4.63	153.02	0.000	0.000	42.77	0.00	0.00
19	141.00	AIR6449 B41	3	8.272	9.099	0.53	0.75	10.54	684.52	0.000	0.000	95.86	0.00	0.00
20	141.00	Low Profile Platform	1	8.272	9.099	1.00	1.00	45.81	2180.67	0.000	0.000	416.88	0.00	0.00
21	141.00	KRY 112 144	3	8.272	9.099	0.50	0.75	1.33	62.44	0.000	0.000	12.10	0.00	0.00
22	141.00	APXVAALL24-43-U-NA20	3	8.272	9.099	0.52	0.75	34.85	1743.33	0.000	0.000	317.13	0.00	0.00
23	141.00	SDX1926Q-43	3	8.272	9.099	0.50	0.75	0.88	138.61	0.000	0.000	8.01	0.00	0.00
24	141.00	AIR32	3	8.272	9.099	0.65	0.75	15.04	1025.01	0.000	0.000	136.84	0.00	0.00
25	141.00	4449 B71 + B85	3	8.272	9.099	0.50	0.75	3.82	260.48	0.000	0.000	34.78	0.00	0.00
26	141.00	RRUS 4415 B25	3	8.272	9.099	0.50	0.75	3.24	259.95	0.000	0.000	29.52	0.00	0.00
27	75.00	GPS	1	7.243	7.967	1.00	1.00	1.66	31.36	0.000	0.000	13.26	0.00	0.00
							Totals:		**16,823.98**			**3,074.47**		

Total Applied Force Summary

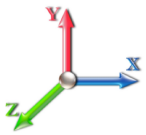
Structure:	CT03110-S-SBA		**Code:**	EIA/TIA-222-G	11/6/2020
Site Name:	North Branford		**Exposure:**	C	
Height:	175.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 24

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		191.48	2534.10	0.00	0.00
10.00		188.49	2533.15	0.00	0.00
15.00		185.31	2514.95	0.00	0.00
18.00		113.73	1495.95	0.00	0.00
20.00		76.82	895.82	0.00	0.00
25.00		198.76	2223.10	0.00	0.00
30.00		202.68	2194.93	0.00	0.00
35.00		205.35	2164.68	0.00	0.00
40.00		207.06	2132.86	0.00	0.00
41.00		41.11	422.91	0.00	0.00
45.00		168.22	2742.06	0.00	0.00
48.00		126.06	2030.25	0.00	0.00
50.00		83.88	832.99	0.00	0.00
55.00		210.86	2056.46	0.00	0.00
60.00		210.19	2020.90	0.00	0.00
65.00		209.11	1984.73	0.00	0.00
70.00		207.67	1948.02	0.00	0.00
75.00	(1) attachments	219.16	1942.20	0.00	0.00
80.00		203.83	1872.28	0.00	0.00
85.00		201.51	1834.29	0.00	0.00
90.00		201.56	2701.06	0.00	0.00
91.00		39.80	533.38	0.00	0.00
95.00		158.63	1282.64	0.00	0.00
100.00		195.82	1571.76	0.00	0.00
105.00		192.66	1537.51	0.00	0.00
110.00		189.32	1503.02	0.00	0.00
115.00		185.80	1468.30	0.00	0.00
120.00		182.13	1433.37	0.00	0.00
125.00		178.31	1398.24	0.00	0.00
130.00		174.35	1362.93	0.00	0.00
135.00		172.55	1884.32	0.00	0.00
140.00		168.35	1175.65	0.00	0.00
141.00	(22) attachments	1084.18	6587.34	0.00	0.00
145.00		130.77	914.25	0.00	0.00
150.00		159.59	1064.20	0.00	0.00
152.00	(40) attachments	1078.02	5927.88	0.00	0.00
155.00		92.34	563.96	0.00	0.00
160.00		150.39	910.27	0.00	0.00
165.00		145.63	878.85	0.00	0.00
170.00		140.78	847.30	0.00	0.00
175.00	(25) attachments	1130.33	5730.50	0.00	0.00
	Totals:	**9,602.58**	**79,653.34**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

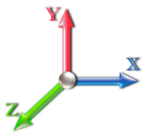
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	59.22
5.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	12.93
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	18.85
10.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	62.77
10.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	14.46
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	20.46
15.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	65.01
15.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	15.46
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	21.51
18.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	5.363	0.00	39.64
18.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	5.363	0.00	9.56
18.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	5.363	0.00	13.21
20.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	26.67
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	6.48
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	8.92
25.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.747	0.00	68.03
25.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.747	0.00	16.83
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.747	0.00	22.95
30.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	69.16
30.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	17.35
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	23.50
35.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.169	0.00	70.14
35.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.169	0.00	17.80
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.169	0.00	23.98
40.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	71.00
40.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	18.21
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	24.40
41.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.378	0.00	14.23
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.378	0.00	3.66
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.378	0.00	4.90
45.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	6.504	0.00	57.42
45.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	6.504	0.00	14.86
45.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	6.504	0.00	19.83
48.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	6.593	0.00	43.33
48.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	6.593	0.00	11.27
48.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	6.593	0.00	15.00
50.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	28.99
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	7.56
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	10.06
55.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.785	0.00	73.14
55.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.785	0.00	19.22
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.785	0.00	25.46
60.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	73.73
60.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	19.51
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	25.76
65.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.028	0.00	74.29
65.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.028	0.00	19.78

Linear Appurtenance Segment Forces (Factored)

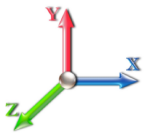
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.028	0.00	26.04
70.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	74.82
70.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	20.03
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	26.31
75.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.243	0.00	75.31
75.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.243	0.00	20.27
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.243	0.00	26.56
80.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	75.77
80.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	20.49
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	26.79
85.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.436	0.00	76.21
85.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.436	0.00	20.71
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.436	0.00	27.02
90.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	76.63
90.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	20.91
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	27.23
91.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.544	0.00	15.34
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.544	0.00	4.19
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.544	0.00	5.45
95.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	7.612	0.00	61.63
95.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	7.612	0.00	16.89
95.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	7.612	0.00	21.95
100.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	77.41
100.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	21.30
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	27.63
105.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.774	0.00	77.78
105.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.774	0.00	21.48
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.774	0.00	27.82
110.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.851	0.00	78.13
110.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.851	0.00	21.65
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.851	0.00	28.00
115.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.925	0.00	78.47
115.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.925	0.00	21.82
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.925	0.00	28.18
120.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.996	0.00	78.79
120.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.996	0.00	21.98
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.996	0.00	28.34
125.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.065	0.00	79.11
125.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.065	0.00	22.14
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.065	0.00	28.51
130.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.132	0.00	79.41
130.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.132	0.00	22.29
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.132	0.00	28.67
135.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.197	0.00	79.71
135.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.197	0.00	22.43
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.197	0.00	28.82
140.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.260	0.00	79.99

Linear Appurtenance Segment Forces (Factored)

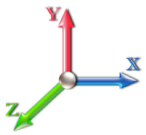
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
140.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.260	0.00	22.57
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.260	0.00	28.97
141.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.272	0.00	16.01
141.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.272	0.00	4.52
141.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.272	0.00	5.80
145.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	8.321	0.00	64.21
145.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	8.321	0.00	18.17
145.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	8.321	0.00	23.29
150.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.381	0.00	80.53
150.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.381	0.00	22.85
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.381	0.00	29.25
152.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.404	0.00	32.26
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.404	0.00	9.16
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.404	0.00	11.72
155.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	8.439	0.00	48.48
155.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	8.439	0.00	13.79
155.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	8.439	0.00	17.63
160.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.495	0.00	81.05
160.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.495	0.00	23.11
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.495	0.00	29.52
165.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.551	0.00	81.30
165.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.551	0.00	23.23
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.551	0.00	29.65
170.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.604	0.00	81.54
170.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.604	0.00	23.35
170.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.604	0.00	29.78
175.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.657	0.00	81.77
175.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.657	0.00	23.47
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.657	0.00	29.90
										Totals:	**0.0**	**4,263.8**

Calculated Forces

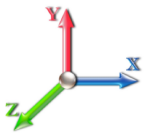
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-79.65	-9.63	0.00	-1093.9	0.00	1093.90	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.157
5.00	-77.11	-9.48	0.00	-1045.7	0.00	1045.77	5738.51	2869.25	14833.4	7427.75	0.02	-0.033	0.000	0.154
10.00	-74.57	-9.33	0.00	-998.38	0.00	998.38	5672.18	2836.09	14377.6	7199.49	0.07	-0.066	0.000	0.152
15.00	-72.05	-9.18	0.00	-951.73	0.00	951.73	5604.11	2802.06	13924.1	6972.40	0.16	-0.100	0.000	0.149
18.00	-70.56	-9.08	0.00	-924.20	0.00	924.20	5562.44	2781.22	13653.2	6836.76	0.23	-0.121	0.000	0.148
18.00	-70.56	-9.08	0.00	-924.20	0.00	924.20	4468.60	2234.30	10991.3	5503.84	0.23	-0.121	0.000	0.184
20.00	-69.66	-9.04	0.00	-906.04	0.00	906.04	4449.40	2224.70	10854.8	5435.51	0.28	-0.135	0.000	0.182
25.00	-67.43	-8.88	0.00	-860.86	0.00	860.86	4400.18	2200.09	10514.1	5264.91	0.44	-0.175	0.000	0.179
30.00	-65.23	-8.71	0.00	-816.47	0.00	816.47	4349.23	2174.61	10174.3	5094.75	0.65	-0.215	0.000	0.175
35.00	-63.06	-8.55	0.00	-772.90	0.00	772.90	4296.53	2148.27	9835.69	4925.16	0.90	-0.256	0.000	0.172
40.00	-60.92	-8.35	0.00	-730.18	0.00	730.18	4242.10	2121.05	9498.40	4756.26	1.19	-0.298	0.000	0.168
41.00	-60.49	-8.33	0.00	-721.82	0.00	721.82	4231.01	2115.50	9431.14	4722.58	1.25	-0.306	0.000	0.167
45.00	-57.75	-8.18	0.00	-688.49	0.00	688.49	4185.94	2092.97	9162.77	4588.20	1.52	-0.340	0.000	0.164
48.00	-55.72	-8.06	0.00	-663.96	0.00	663.96	4187.05	2093.52	9169.29	4591.46	1.74	-0.365	0.000	0.158
50.00	-54.88	-8.00	0.00	-647.83	0.00	647.83	4164.11	2082.05	9035.54	4524.49	1.90	-0.382	0.000	0.156
55.00	-52.82	-7.81	0.00	-607.84	0.00	607.84	4105.54	2052.77	8702.63	4357.78	2.32	-0.423	0.000	0.152
60.00	-50.80	-7.62	0.00	-568.78	0.00	568.78	4045.24	2022.62	8371.99	4192.22	2.79	-0.463	0.000	0.148
65.00	-48.81	-7.43	0.00	-530.67	0.00	530.67	3983.21	1991.60	8043.90	4027.93	3.29	-0.504	0.000	0.144
70.00	-46.86	-7.24	0.00	-493.52	0.00	493.52	3919.43	1959.72	7718.60	3865.04	3.84	-0.545	0.000	0.140
75.00	-44.91	-7.03	0.00	-457.33	0.00	457.33	3853.92	1926.96	7396.37	3703.68	4.44	-0.586	0.000	0.135
80.00	-43.04	-6.84	0.00	-422.17	0.00	422.17	3786.67	1893.34	7077.46	3543.99	5.07	-0.626	0.000	0.131
85.00	-41.20	-6.65	0.00	-387.97	0.00	387.97	3717.69	1858.85	6762.13	3386.09	5.75	-0.667	0.000	0.126
90.00	-38.50	-6.43	0.00	-354.74	0.00	354.74	3646.97	1823.48	6450.65	3230.12	6.47	-0.708	0.000	0.120
91.00	-37.96	-6.40	0.00	-348.31	0.00	348.31	2873.92	1436.96	5143.64	2575.64	6.62	-0.716	0.000	0.148
95.00	-36.68	-6.25	0.00	-322.73	0.00	322.73	2834.39	1417.20	4959.20	2483.29	7.23	-0.748	0.000	0.143
100.00	-35.11	-6.06	0.00	-291.50	0.00	291.50	2783.42	1391.71	4730.46	2368.74	8.04	-0.793	0.000	0.136
105.00	-33.57	-5.87	0.00	-261.22	0.00	261.22	2730.70	1365.35	4503.96	2255.33	8.90	-0.838	0.000	0.128
110.00	-32.06	-5.68	0.00	-231.89	0.00	231.89	2676.25	1338.13	4279.98	2143.17	9.80	-0.881	0.000	0.120
115.00	-30.59	-5.49	0.00	-203.49	0.00	203.49	2620.07	1310.03	4058.76	2032.40	10.74	-0.923	0.000	0.112
120.00	-29.16	-5.31	0.00	-176.03	0.00	176.03	2562.14	1281.07	3840.57	1923.14	11.73	-0.963	0.000	0.103
125.00	-27.76	-5.12	0.00	-149.50	0.00	149.50	2502.48	1251.24	3625.68	1815.54	12.76	-1.001	0.000	0.093
130.00	-26.40	-4.94	0.00	-123.89	0.00	123.89	2441.09	1220.54	3414.34	1709.71	13.83	-1.036	0.000	0.083
135.00	-24.51	-4.74	0.00	-99.20	0.00	99.20	1793.55	896.77	2465.05	1234.36	14.93	-1.068	0.000	0.094
140.00	-23.34	-4.56	0.00	-75.48	0.00	75.48	1751.71	875.86	2319.73	1161.59	16.07	-1.096	0.000	0.078
141.00	-16.78	-3.35	0.00	-70.91	0.00	70.91	1743.14	871.57	2290.90	1147.15	16.30	-1.102	0.000	0.071
145.00	-15.86	-3.21	0.00	-57.50	0.00	57.50	1708.14	854.07	2176.40	1089.82	17.23	-1.125	0.000	0.062
150.00	-14.80	-3.04	0.00	-41.43	0.00	41.43	1662.84	831.42	2035.30	1019.16	18.42	-1.148	0.000	0.050
152.00	-8.90	-1.84	0.00	-35.36	0.00	35.36	1644.23	822.12	1979.55	991.25	18.91	-1.156	0.000	0.041
155.00	-8.33	-1.74	0.00	-29.84	0.00	29.84	1615.80	807.90	1896.71	949.77	19.64	-1.168	0.000	0.037
160.00	-7.43	-1.57	0.00	-21.15	0.00	21.15	1567.02	783.51	1760.89	881.75	20.87	-1.183	0.000	0.029
165.00	-6.55	-1.41	0.00	-13.29	0.00	13.29	1516.50	758.25	1628.10	815.26	22.11	-1.195	0.000	0.021
170.00	-5.71	-1.25	0.00	-6.25	0.00	6.25	1464.25	732.13	1498.59	750.41	23.37	-1.203	0.000	0.012
170.00	-5.71	-1.25	0.00	-6.25	0.00	6.25	1464.25	732.13	1498.59	750.41	23.37	-1.203	0.000	0.012
175.00	0.00	-1.13	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	24.63	-1.205	0.000	0.000

Wind Loading - Shaft

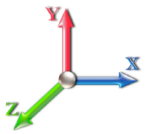
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 29	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	301.92	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	296.25	0.650	0.000	5.00	27.033	17.57	143.8	0.0	1499.2
10.00		1.00	0.85	7.442	8.19	290.58	0.650	0.000	5.00	26.521	17.24	141.1	0.0	1470.6
15.00		1.00	0.85	7.442	8.19	284.92	0.650	0.000	5.00	26.009	16.91	138.4	0.0	1442.0
18.00	Top - Section 1	1.00	0.88	7.723	8.50	286.78	0.650	0.000	3.00	15.360	9.98	84.8	0.0	851.5
20.00		1.00	0.90	7.896	8.69	287.64	0.650	0.000	2.00	10.137	6.59	57.2	0.0	482.1
25.00		1.00	0.95	8.276	9.10	288.50	0.650	0.000	5.00	24.984	16.24	147.8	0.0	1188.2
30.00		1.00	0.98	8.600	9.46	288.00	0.650	0.000	5.00	24.472	15.91	150.5	0.0	1163.7
35.00		1.00	1.01	8.883	9.77	286.52	0.650	0.000	5.00	23.960	15.57	152.2	0.0	1139.2
40.00		1.00	1.04	9.137	10.05	284.30	0.650	0.000	5.00	23.448	15.24	153.2	0.0	1114.7
41.00	Bot - Section 3	1.00	1.05	9.184	10.10	283.78	0.650	0.000	1.00	4.628	3.01	30.4	0.0	220.0
45.00		1.00	1.07	9.366	10.30	281.49	0.650	0.000	4.00	18.561	12.06	124.3	0.0	1752.5
48.00	Top - Section 2	1.00	1.08	9.494	10.44	279.57	0.650	0.000	3.00	13.706	8.91	93.0	0.0	1293.7
50.00		1.00	1.09	9.576	10.53	282.18	0.650	0.000	2.00	9.035	5.87	61.9	0.0	429.4
55.00		1.00	1.12	9.770	10.75	278.53	0.650	0.000	5.00	22.228	14.45	155.3	0.0	1056.3
60.00		1.00	1.14	9.951	10.95	274.54	0.650	0.000	5.00	21.716	14.12	154.5	0.0	1031.8
65.00		1.00	1.16	10.120	11.13	270.26	0.650	0.000	5.00	21.204	13.78	153.4	0.0	1007.3
70.00		1.00	1.17	10.279	11.31	265.71	0.650	0.000	5.00	20.692	13.45	152.1	0.0	982.7
75.00	Appurtenance(s)	1.00	1.19	10.430	11.47	260.94	0.650	0.000	5.00	20.179	13.12	150.5	0.0	958.2
80.00		1.00	1.21	10.572	11.63	255.96	0.650	0.000	5.00	19.667	12.78	148.7	0.0	933.7
85.00	Bot - Section 4	1.00	1.22	10.708	11.78	250.80	0.650	0.000	5.00	19.155	12.45	146.7	0.0	909.2
90.00		1.00	1.24	10.838	11.92	245.48	0.650	0.000	5.00	18.907	12.29	146.5	0.0	1633.5
91.00	Top - Section 3	1.00	1.24	10.863	11.95	244.40	0.650	0.000	1.00	3.720	2.42	28.9	0.0	321.3
95.00		1.00	1.25	10.962	12.06	243.55	0.650	0.000	4.00	14.675	9.54	115.0	0.0	581.1
100.00		1.00	1.27	11.081	12.19	237.96	0.650	0.000	5.00	17.883	11.62	141.7	0.0	708.0
105.00		1.00	1.28	11.195	12.31	232.23	0.650	0.000	5.00	17.370	11.29	139.0	0.0	687.5
110.00		1.00	1.29	11.305	12.44	226.39	0.650	0.000	5.00	16.858	10.96	136.3	0.0	667.1
115.00		1.00	1.30	11.412	12.55	220.43	0.650	0.000	5.00	16.346	10.62	133.4	0.0	646.7
120.00		1.00	1.32	11.514	12.67	214.37	0.650	0.000	5.00	15.834	10.29	130.4	0.0	626.2
125.00		1.00	1.33	11.614	12.78	208.21	0.650	0.000	5.00	15.321	9.96	127.2	0.0	605.8
130.00	Bot - Section 5	1.00	1.34	11.710	12.88	201.97	0.650	0.000	5.00	14.809	9.63	124.0	0.0	585.4
135.00	Top - Section 4	1.00	1.35	11.803	12.98	195.63	0.650	0.000	5.00	14.508	9.43	122.4	0.0	1024.5
140.00		1.00	1.36	11.894	13.08	192.18	0.650	0.000	5.00	13.996	9.10	119.0	0.0	443.2
141.00	Appurtenance(s)	1.00	1.36	11.912	13.10	190.89	0.650	0.000	1.00	2.738	1.78	23.3	0.0	86.7
145.00		1.00	1.37	11.982	13.18	185.70	0.650	0.000	4.00	10.746	6.98	92.1	0.0	340.2
150.00		1.00	1.38	12.068	13.27	179.14	0.650	0.000	5.00	12.972	8.43	111.9	0.0	410.5
152.00	Appurtenance(s)	1.00	1.38	12.102	13.31	176.50	0.650	0.000	2.00	5.045	3.28	43.7	0.0	159.6
155.00		1.00	1.39	12.152	13.37	172.52	0.650	0.000	3.00	7.414	4.82	64.4	0.0	234.5
160.00		1.00	1.40	12.233	13.46	165.83	0.650	0.000	5.00	11.947	7.77	104.5	0.0	377.8
165.00		1.00	1.41	12.313	13.54	159.08	0.650	0.000	5.00	11.435	7.43	100.7	0.0	361.5
170.00	Top - Section 5	1.00	1.42	12.390	13.63	152.27	0.650	0.000	5.00	10.923	7.10	96.8	0.0	345.1
175.00	Appurtenance(s)	1.00	1.42	12.466	13.71	145.40	0.650	0.000	5.00	10.410	6.77	92.8	0.0	328.8
								Totals:	**175.00**			**4,733.7**		**32,101.0**

Discrete Appurtenance Forces

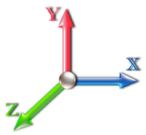
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 30	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	175.00	ALU 1900MHz RRU	3	12.466	13.713	0.60	0.90	6.87	132.00	0.000	0.000	94.26	0.00	0.00
2	175.00	APXVTM14-C-120	3	12.466	13.713	0.71	0.90	13.52	168.00	0.000	0.000	185.44	0.00	0.00
3	175.00	APXVSPP18-C-A20	3	12.466	13.713	0.75	0.90	17.97	171.00	0.000	0.000	246.46	0.00	0.00
4	175.00	ALU 800 MHz RRU	3	12.466	13.713	0.60	0.90	4.50	159.00	0.000	0.000	61.77	0.00	0.00
5	175.00	T-Arm w/ work Platform	3	12.466	13.713	0.56	0.75	16.88	1200.00	0.000	0.000	231.40	0.00	0.00
6	175.00	TD-RRH8x20-25	3	12.466	13.713	0.60	0.90	7.33	210.00	0.000	0.000	100.47	0.00	0.00
7	175.00	800 MHz Filter	3	12.466	13.713	0.60	0.90	0.76	30.00	0.000	0.000	10.42	0.00	0.00
8	175.00	ACU-A20-N	4	12.466	13.713	0.60	0.90	0.34	4.00	0.000	0.000	4.63	0.00	0.00
9	152.00	Allgon/ 7184	6	12.102	13.312	0.55	0.80	9.44	58.20	0.000	0.000	125.65	0.00	0.00
10	152.00	Ericsson/ RRUS-11	6	12.102	13.312	0.40	0.80	6.05	300.00	0.000	0.000	80.51	0.00	0.00
11	152.00	Raycap/ DC6-48-60-18-8F	1	12.102	13.312	1.00	1.00	1.47	32.80	0.000	0.000	19.57	0.00	0.00
12	152.00	Powerwave/ LGP 21401	6	12.102	13.312	0.40	0.80	3.10	84.60	0.000	0.000	41.21	0.00	0.00
13	152.00	Powerwave/ 7770	3	12.102	13.312	0.58	0.80	9.64	105.00	0.000	0.000	128.27	0.00	0.00
14	152.00	Powerwave/ 7020 RET	6	12.102	13.312	0.50	0.80	1.19	13.20	0.000	0.000	15.85	0.00	0.00
15	152.00	Ericsson/ RRUS-12	3	12.102	13.312	0.54	0.80	4.34	180.00	0.000	0.000	57.80	0.00	0.00
16	152.00	HPA-65R-BUU-H6	3	12.102	13.312	0.68	0.80	19.71	153.00	0.000	0.000	262.33	0.00	0.00
17	152.00	T-Arm w/ work Platform	3	12.102	13.312	0.56	0.75	16.88	1200.00	0.000	0.000	224.64	0.00	0.00
18	152.00	Ericsson/ RRUS A2	3	12.102	13.312	0.54	0.80	2.99	63.30	0.000	0.000	39.81	0.00	0.00
19	141.00	AIR6449 B41	3	11.912	13.103	0.53	0.75	9.03	309.00	0.000	0.000	118.27	0.00	0.00
20	141.00	Low Profile Platform	1	11.912	13.103	1.00	1.00	25.00	1200.00	0.000	0.000	327.58	0.00	0.00
21	141.00	KRY 112 144	3	11.912	13.103	0.50	0.75	0.62	33.00	0.000	0.000	8.10	0.00	0.00
22	141.00	APXVAALL24-43-U-NA20	3	11.912	13.103	0.52	0.75	31.88	384.00	0.000	0.000	417.70	0.00	0.00
23	141.00	SDX1926Q-43	3	11.912	13.103	0.50	0.75	0.48	52.80	0.000	0.000	6.32	0.00	0.00
24	141.00	AIR32	3	11.912	13.103	0.65	0.75	12.74	396.60	0.000	0.000	166.98	0.00	0.00
25	141.00	4449 B71 + B85	3	11.912	13.103	0.50	0.75	2.97	219.60	0.000	0.000	38.91	0.00	0.00
26	141.00	RRUS 4415 B25	3	11.912	13.103	0.50	0.75	2.47	138.00	0.000	0.000	32.39	0.00	0.00
27	75.00	GPS	1	10.430	11.473	1.00	1.00	1.00	10.00	0.000	0.000	11.47	0.00	0.00
							Totals:		**7,007.10**			**3,058.23**		

Total Applied Force Summary

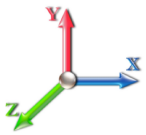
Structure:	CT03110-S-SBA		**Code:**	EIA/TIA-222-G	11/6/2020
Site Name:	North Branford		**Exposure:**	C	
Height:	175.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 31

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		143.84	1637.24	0.00	0.00
10.00		141.12	1608.64	0.00	0.00
15.00		138.39	1580.04	0.00	0.00
18.00		84.81	934.29	0.00	0.00
20.00		57.23	537.37	0.00	0.00
25.00		147.84	1326.27	0.00	0.00
30.00		150.48	1301.76	0.00	0.00
35.00		152.19	1277.24	0.00	0.00
40.00		153.18	1252.72	0.00	0.00
41.00		30.39	247.60	0.00	0.00
45.00		124.30	1862.90	0.00	0.00
48.00		93.04	1376.58	0.00	0.00
50.00		61.86	484.61	0.00	0.00
55.00		155.28	1194.36	0.00	0.00
60.00		154.51	1169.84	0.00	0.00
65.00		153.43	1145.32	0.00	0.00
70.00		152.07	1120.81	0.00	0.00
75.00	(1) attachments	161.95	1106.29	0.00	0.00
80.00		148.67	1070.97	0.00	0.00
85.00		146.65	1046.46	0.00	0.00
90.00		146.51	1770.77	0.00	0.00
91.00		28.89	348.76	0.00	0.00
95.00		115.02	690.90	0.00	0.00
100.00		141.68	845.23	0.00	0.00
105.00		139.04	824.80	0.00	0.00
110.00		136.27	804.37	0.00	0.00
115.00		133.37	783.94	0.00	0.00
120.00		130.35	763.51	0.00	0.00
125.00		127.23	743.08	0.00	0.00
130.00		123.99	722.65	0.00	0.00
135.00		122.44	1161.77	0.00	0.00
140.00		119.03	580.48	0.00	0.00
141.00	(22) attachments	1139.57	2847.13	0.00	0.00
145.00		92.07	450.00	0.00	0.00
150.00		111.93	506.51	0.00	0.00
152.00	(40) attachments	1039.31	2377.12	0.00	0.00
155.00		64.42	247.54	0.00	0.00
160.00		104.50	397.60	0.00	0.00
165.00		100.67	381.25	0.00	0.00
170.00		96.76	364.91	0.00	0.00
175.00	(25) attachments	1027.64	2422.56	0.00	0.00
	Totals:	**7,791.93**	**43,316.21**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

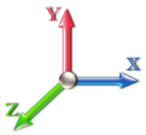
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	13.20
5.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	1.37
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	5.20
10.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	13.20
10.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	1.37
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	5.20
15.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	13.20
15.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	1.37
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	5.20
18.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.723	0.00	7.92
18.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.723	0.00	0.82
18.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.723	0.00	3.12
20.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	5.28
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	0.55
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	2.08
25.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.276	0.00	13.20
25.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.276	0.00	1.37
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.276	0.00	5.20
30.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	13.20
30.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	1.37
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	5.20
35.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.883	0.00	13.20
35.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.883	0.00	1.37
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.883	0.00	5.20
40.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	13.20
40.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	1.37
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	5.20
41.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.184	0.00	2.64
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.184	0.00	0.27
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.184	0.00	1.04
45.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	9.366	0.00	10.56
45.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	9.366	0.00	1.09
45.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	9.366	0.00	4.16
48.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	9.494	0.00	7.92
48.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	9.494	0.00	0.82
48.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	9.494	0.00	3.12
50.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	5.28
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	0.55
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	2.08
55.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.770	0.00	13.20
55.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.770	0.00	1.37
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.770	0.00	5.20
60.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	13.20
60.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	1.37
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	5.20
65.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.120	0.00	13.20
65.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.120	0.00	1.37

Linear Appurtenance Segment Forces (Factored)

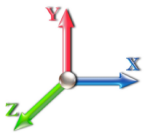
Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 33	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.120	0.00	5.20
70.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	13.20
70.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	1.37
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	5.20
75.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.430	0.00	13.20
75.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.430	0.00	1.37
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.430	0.00	5.20
80.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	13.20
80.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	1.37
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	5.20
85.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.708	0.00	13.20
85.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.708	0.00	1.37
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.708	0.00	5.20
90.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	13.20
90.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	1.37
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	5.20
91.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.863	0.00	2.64
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.863	0.00	0.27
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.863	0.00	1.04
95.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	10.962	0.00	10.56
95.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	10.962	0.00	1.09
95.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	10.962	0.00	4.16
100.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	13.20
100.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	1.37
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	5.20
105.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.195	0.00	13.20
105.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.195	0.00	1.37
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.195	0.00	5.20
110.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.305	0.00	13.20
110.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.305	0.00	1.37
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.305	0.00	5.20
115.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.412	0.00	13.20
115.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.412	0.00	1.37
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.412	0.00	5.20
120.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.514	0.00	13.20
120.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.514	0.00	1.37
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.514	0.00	5.20
125.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.614	0.00	13.20
125.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.614	0.00	1.37
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.614	0.00	5.20
130.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.710	0.00	13.20
130.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.710	0.00	1.37
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.710	0.00	5.20
135.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.803	0.00	13.20
135.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.803	0.00	1.37
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.803	0.00	5.20
140.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.894	0.00	13.20

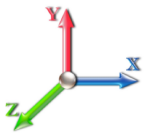
Linear Appurtenance Segment Forces (Factored)

Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 34	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
140.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.894	0.00	1.37
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.894	0.00	5.20
141.00	1 1/4" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.912	0.00	2.64
141.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.912	0.00	0.27
141.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.912	0.00	1.04
145.00	1 1/4" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	11.982	0.00	10.56
145.00	Safety Cable	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	11.982	0.00	1.09
145.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.000	0.000	11.982	0.00	4.16
150.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.068	0.00	13.20
150.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.068	0.00	1.37
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.068	0.00	5.20
152.00	1 1/4" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	12.102	0.00	5.28
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	12.102	0.00	0.55
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	12.102	0.00	2.08
155.00	1 1/4" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	12.152	0.00	7.92
155.00	Safety Cable	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	12.152	0.00	0.82
155.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	12.152	0.00	3.12
160.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.233	0.00	13.20
160.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.233	0.00	1.37
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.233	0.00	5.20
165.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.313	0.00	13.20
165.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.313	0.00	1.37
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.313	0.00	5.20
170.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.390	0.00	13.20
170.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.390	0.00	1.37
170.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.390	0.00	5.20
175.00	1 1/4" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.466	0.00	13.20
175.00	Safety Cable	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.466	0.00	1.37
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.466	0.00	5.20
										Totals:	**0.0**	**691.8**

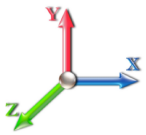
Calculated Forces

Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-43.31	-7.80	0.00	-894.43	0.00	894.43	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.124
5.00	-41.67	-7.68	0.00	-855.42	0.00	855.42	5738.51	2869.25	14833.4	7427.75	0.01	-0.027	0.000	0.122
10.00	-40.06	-7.55	0.00	-817.04	0.00	817.04	5672.18	2836.09	14377.6	7199.49	0.06	-0.054	0.000	0.121
15.00	-38.48	-7.43	0.00	-779.27	0.00	779.27	5604.11	2802.06	13924.1	6972.40	0.13	-0.082	0.000	0.119
18.00	-37.54	-7.35	0.00	-756.98	0.00	756.98	5562.44	2781.22	13653.2	6836.76	0.19	-0.099	0.000	0.117
18.00	-37.54	-7.35	0.00	-756.98	0.00	756.98	4468.60	2234.30	10991.3	5503.84	0.19	-0.099	0.000	0.146
20.00	-37.00	-7.31	0.00	-742.28	0.00	742.28	4449.40	2224.70	10854.8	5435.51	0.23	-0.110	0.000	0.145
25.00	-35.67	-7.18	0.00	-705.74	0.00	705.74	4400.18	2200.09	10514.1	5264.91	0.36	-0.143	0.000	0.142
30.00	-34.37	-7.04	0.00	-669.85	0.00	669.85	4349.23	2174.61	10174.3	5094.75	0.53	-0.176	0.000	0.139
35.00	-33.09	-6.91	0.00	-634.64	0.00	634.64	4296.53	2148.27	9835.69	4925.16	0.73	-0.210	0.000	0.137
40.00	-31.83	-6.76	0.00	-600.10	0.00	600.10	4242.10	2121.05	9498.40	4756.26	0.97	-0.244	0.000	0.134
41.00	-31.58	-6.74	0.00	-593.34	0.00	593.34	4231.01	2115.50	9431.14	4722.58	1.02	-0.251	0.000	0.133
45.00	-29.72	-6.62	0.00	-566.39	0.00	566.39	4185.94	2092.97	9162.77	4588.20	1.25	-0.278	0.000	0.131
48.00	-28.34	-6.53	0.00	-546.54	0.00	546.54	4187.05	2093.52	9169.29	4591.46	1.43	-0.299	0.000	0.126
50.00	-27.85	-6.47	0.00	-533.49	0.00	533.49	4164.11	2082.05	9035.54	4524.49	1.56	-0.313	0.000	0.125
55.00	-26.65	-6.33	0.00	-501.12	0.00	501.12	4105.54	2052.77	8702.63	4357.78	1.90	-0.347	0.000	0.121
60.00	-25.48	-6.18	0.00	-469.49	0.00	469.49	4045.24	2022.62	8371.99	4192.22	2.28	-0.380	0.000	0.118
65.00	-24.33	-6.03	0.00	-438.59	0.00	438.59	3983.21	1991.60	8043.90	4027.93	2.70	-0.414	0.000	0.115
70.00	-23.21	-5.89	0.00	-408.43	0.00	408.43	3919.43	1959.72	7718.60	3865.04	3.15	-0.448	0.000	0.112
75.00	-22.10	-5.73	0.00	-379.00	0.00	379.00	3853.92	1926.96	7396.37	3703.68	3.64	-0.482	0.000	0.108
80.00	-21.03	-5.58	0.00	-350.36	0.00	350.36	3786.67	1893.34	7077.46	3543.99	4.16	-0.515	0.000	0.104
85.00	-19.98	-5.44	0.00	-322.45	0.00	322.45	3717.69	1858.85	6762.13	3386.09	4.72	-0.549	0.000	0.101
90.00	-18.21	-5.28	0.00	-295.26	0.00	295.26	3646.97	1823.48	6450.65	3230.12	5.31	-0.583	0.000	0.096
91.00	-17.86	-5.25	0.00	-289.98	0.00	289.98	2873.92	1436.96	5143.64	2575.64	5.44	-0.590	0.000	0.119
95.00	-17.17	-5.14	0.00	-268.97	0.00	268.97	2834.39	1417.20	4959.20	2483.29	5.94	-0.617	0.000	0.114
100.00	-16.32	-5.00	0.00	-243.27	0.00	243.27	2783.42	1391.71	4730.46	2368.74	6.61	-0.654	0.000	0.109
105.00	-15.50	-4.86	0.00	-218.27	0.00	218.27	2730.70	1365.35	4503.96	2255.33	7.31	-0.691	0.000	0.102
110.00	-14.69	-4.72	0.00	-193.96	0.00	193.96	2676.25	1338.13	4279.98	2143.17	8.06	-0.728	0.000	0.096
115.00	-13.90	-4.59	0.00	-170.34	0.00	170.34	2620.07	1310.03	4058.76	2032.40	8.84	-0.763	0.000	0.089
120.00	-13.14	-4.46	0.00	-147.40	0.00	147.40	2562.14	1281.07	3840.57	1923.14	9.66	-0.796	0.000	0.082
125.00	-12.40	-4.32	0.00	-125.12	0.00	125.12	2502.48	1251.24	3625.68	1815.54	10.51	-0.828	0.000	0.074
130.00	-11.67	-4.20	0.00	-103.49	0.00	103.49	2441.09	1220.54	3414.34	1709.71	11.39	-0.858	0.000	0.065
135.00	-10.51	-4.06	0.00	-82.51	0.00	82.51	1793.55	896.77	2465.05	1234.36	12.30	-0.884	0.000	0.073
140.00	-9.93	-3.93	0.00	-62.21	0.00	62.21	1751.71	875.86	2319.73	1161.59	13.24	-0.907	0.000	0.059
141.00	-7.10	-2.75	0.00	-58.28	0.00	58.28	1743.14	871.57	2290.90	1147.15	13.43	-0.912	0.000	0.055
145.00	-6.65	-2.65	0.00	-47.27	0.00	47.27	1708.14	854.07	2176.40	1089.82	14.21	-0.931	0.000	0.047
150.00	-6.15	-2.54	0.00	-34.00	0.00	34.00	1662.84	831.42	2035.30	1019.16	15.19	-0.950	0.000	0.037
152.00	-3.79	-1.46	0.00	-28.93	0.00	28.93	1644.23	822.12	1979.55	991.25	15.59	-0.957	0.000	0.031
155.00	-3.54	-1.39	0.00	-24.55	0.00	24.55	1615.80	807.90	1896.71	949.77	16.20	-0.966	0.000	0.028
160.00	-3.15	-1.28	0.00	-17.61	0.00	17.61	1567.02	783.51	1760.89	881.75	17.21	-0.979	0.000	0.022
165.00	-2.77	-1.17	0.00	-11.21	0.00	11.21	1516.50	758.25	1628.10	815.26	18.25	-0.989	0.000	0.016
170.00	-2.40	-1.07	0.00	-5.35	0.00	5.35	1464.25	732.13	1498.59	750.41	19.28	-0.995	0.000	0.009
170.00	-2.40	-1.07	0.00	-5.35	0.00	5.35	1464.25	732.13	1498.59	750.41	19.28	-0.995	0.000	0.009
175.00	0.00	-1.03	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	20.33	-0.998	0.000	0.000

Final Analysis Summary

Structure:	CT03110-S-SBA	**Code:**	EIA/TIA-222-G	11/6/2020	
Site Name:	North Branford	**Exposure:**	C		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 36	

Tower Engineering Solutions

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 101 mph Wind	35.4	0.00	51.94	0.00	0.00	4074.37
0.9D + 1.6W 101 mph Wind	35.4	0.00	38.95	0.00	0.00	4041.13
1.2D + 1.0Di + 1.0Wi 50 mph Wind	9.6	0.00	79.65	0.00	0.00	1093.90
1.0D + 1.0W 60 mph Wind	7.8	0.00	43.31	0.00	0.00	894.43

Max Stresses

Load Case	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)	Elev (ft)	Stress Ratio
1.2D + 1.6W 101 mph Wind	-44.79	-33.40	0.00	-3450.5	0.00	-3450.5	5562.44	2781.2	13653.2	6836.76	18.00	0.637
0.9D + 1.6W 101 mph Wind	-33.53	-33.30	0.00	-3418.2	0.00	-3418.2	5562.44	2781.2	13653.2	6836.76	18.00	0.629
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-70.56	-9.08	0.00	-924.20	0.00	-924.20	5562.44	2781.2	13653.2	6836.76	18.00	0.184
1.0D + 1.0W 60 mph Wind	-37.54	-7.35	0.00	-756.98	0.00	-756.98	5562.44	2781.2	13653.2	6836.76	18.00	0.146

Monopole Mat Foundation Design

Customer Name:	T-Mobile	**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	175
Site Number:	CT03110-S-SBA	**Engineer Name:**	J. Tibbetts
Engr. Number:	99378	**Engineer Login ID:**	

Date 11/6/2020

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

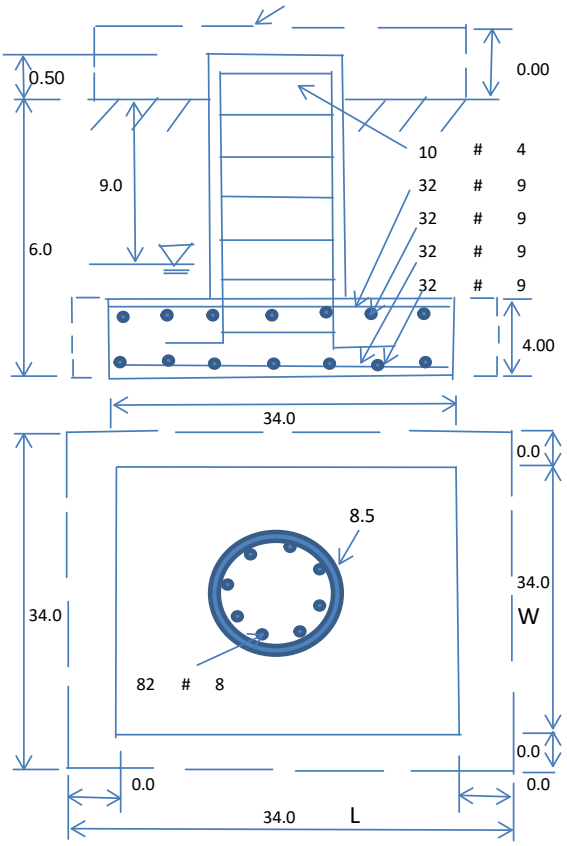
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	53.0	Shear Force (Kips):	36.5
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4234.9
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.5	Depth of Base BG (ft.):	6.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	4.00
Length of Pad (ft.):	34	Width of Pad (ft.):	34
Final Length of pad (ft)	34.0	Final width of pad (ft):	34.0



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	82	Tie Spacing (in):	8.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	9	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf

Rebar at the bottom of the concrete pad:

Qty. of Rebar in Pad (L):	32	Qty. of Rebar in Pad (W):	32

Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	32	Qty. of Rebar in Pad (W):	32
Apply 1.35 factor for e/w Per G:	1.35		

Soil Design Parameters:

Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	9.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	5000	Ultimate Skin Friction:	175	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	Yes		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	2198.51	Total Dry Soil Weight (Kips):	263.82
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	263.82	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4765.86	Total Dry Concrete Weight (Kips):	714.88
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	714.88	Total Vertical Load on Base (Kips):	1031.70

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	1280	<	Allowable Factored Soil Bearing (psf):	3750	0.34	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	15875.1	>	Design Factored Momont (kips-ft):	4472	0.28	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.55	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75			
Strength reduction factor (Axial compresion):	0.65	Wind Load Factor on Concrete Design:	1.00			
					Load/ Capacity Ratio	
(1) Concrete Pier:						
Vertical Steel Rebar Area (sq. in./each):	0.79		Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	12788.7	>	Design Factored Moment (Mu, Kips-F	4326.2	0.34	OK!
Calculated Shear Capacity (Kips):	916.1	>	Design Factored Shear (Kips):	36.5	0.04	OK!
Calculated Tension Capacity (Tn, Kips):	3498.1	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	10749.2	>	Design Factored Axial Load (Pu Kips):	53.0	0.00	OK!
Moment & Axial Strength Combination:	0.34	OK!	Check Tie Spacing (Design/Required):		0.6667	OK!
Pier Reinforcement Ratio:	0.008		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	1489.6	>	One-Way Factored Shear (L-D. Kips):	270.3	0.18	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1489.6	>	One-Way Factored Shear (W-D., Kips)	270.3	0.18	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1409.7	>	One-Way Factored Shear (C-C, Kips):	244.9	0.17	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0018	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0018		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	6266.1	>	Moment at Bottom (L-Dir. K-Ft):	2138.5	0.34	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	6266.1	>	Moment at Bottom (W-Dir. K-Ft):	2138.5	0.34	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	8821.3	>	Moment at Bottom (C-C Dir. K-Ft):	3024.3	0.34	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0018	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0018		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	6266.1	>	Moment at the top (L-Dir K-Ft):	784.7	0.13	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	6266.1	>	Moment at the top (W-Dir K-Ft):	784.7	0.13	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	8821.3	>	Moment at the top (C-C Dir. K-Ft):	733.8	0.08	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1694.0	k-ft.	Max. factored shear stress v_{u_CD}:		2.1	Psi
Max. factored shear stress v_{u_AB}:	6.1	Psi	Factored shear Strength ϕv_n:		164.3	Psi
Max. factored shear stress v_u:	6.1	Psi	Check Usage of Punching Shear Capacity:		0.04	OK!

EXHIBIT 9

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Post-Mod Antenna Mount Analysis Report

Existing 175-Ft Nudd Corporation Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT03110-S-SBA / North Branford

Customer Site Name: North Branford

Carrier Name: T-Mobile (App#: 116509, V#3)

Carrier Site ID / Name: CT11302C / North Branford

Site Location: 108 Foxon Road

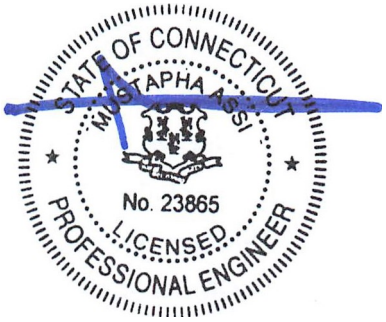
North Branford, Connecticut

New Haven County

Latitude: 41.328208

Longitude: -72.819063

Exp.01/31/2021



Analysis Result: 11/12/2020

Max Structural Usage: 70.4% [Pass]

Report Prepared By: Saroj Dangol

Introduction

The purpose of this report is to summarize the analysis results on the (1) Low-Profile Platform at 141.00' elevation including the proposed modifications to support the proposed antenna configuration. Any existing modification listed under Sources of Information was assumed completed and was included in this analysis.

The proposed modification by **TES** listed under Sources of Information was considered completed and was included in this analysis.

Sources of Information

Mount Drawings	Mount mapping by Full Metal Tower dated 04/26/2019
Antenna Loading	SBA Application #: 116509, v3 dated11/03/2020
Existing Modification	N/A
Proposed Modification	TES Project No. 99605

Analysis Criteria

Basic Wind Speed Used in the Analysis: V_{ULT} = 130 mph (3-Sec. Gust) / Equivalent to
V_{ASD} = 101 mph (3-Sec. Gust)
Basic Wind Speed with Ice: 50 mph (3-Sec. Gust) with 0.75" radial ice concurrent
Operational Wind Speed: 60 mph +0" Radial ice
Standard/Codes: ANSI/TIA/EIA 222-G / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category: C
Structure Class: II
Topographic Category: 1
Crest Height (Ft): 0

The site is a Risk Category II structure per IBC Table 1604.5. This site does not support emergency communication equipment for first responders such as fire departments, police, hospitals, ambulance services or any of the facilities listed for Risk Categories III and IV. The scope of work detailed in this structural analysis does not include items that are a part of emergency service as the 911 or essential facility service of an emergency response system.

Mount Information

(1) Low-Profile Platform at 141.00' elevation

Final Antenna Configuration

3 Ericsson Air 6449 B41
3 Ericsson AIR32 KRD901146-1_B66A_B2A (Octo)
3 RFS APXVAALL24-43-U-NA20
3 Commscope SDX1926Q-43
3 Ericsson KRY 112 144/1
3 Ericsson 4449 B71+B85
3 Ericsson 4415 B25

In addition to the proposed equipment loading, a 500 lb serviceability load was also considered in this analysis in accordance with TIA requirements.

Proposed Modifications

(1) METROSITE SUPPORT RAIL KIT: MS-HR35-18
(1) METROSITE SUPPORT RAIL END CONNECTION KIT: MS-HR35-60ECP
(1) METROSITE HEAVY COLLAR MOUNT PLATE ASSEMBLY: MS-H1436
(1) METROSITE V-BRACING KIT: MS-MPVB-350
(2) METROSITE SUPPORT RAIL CENTER PIPE KIT: MS-HRCP-35
(3) PX2375-8
(2) PN 115-203

Analysis Results

Our calculations have determined that under design wind load the existing mounts will be structurally adequate to support the proposed antenna configuration after the proposed modification is successfully completed. The maximum structural usage is 70.4%, which occurs in the mount pipe. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

Attachments

1. Mount Photos Before Modification
2. Antenna Placement Diagram
3. Mount Mapping Information
4. Analysis Calculations

Standard Conditions

1. The loading configuration as analyzed in this report is as provided from the customer. Any deviation from this design shall be communicated to TES to verify deviation will not adversely impact the analysis.

2. The analysis is based on the presumption that the antenna mount members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.

3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion. The mount analysis is not a condition assessment of the mount.

4. The mount analysis was performed in accordance with the loading provided, and if applicable the modification required to support the additional loading.

5. If the mount is modified, installation must adhere to the configuration communicated in the modification drawings.

6. The modification drawings are not intended to convey means or methods. These are the responsibility of the installing contractor.

7. Rigging plan review is available if the contractor requires for a construction class IV or other if required. Review fee would apply.

8. The mount modification package was created based upon information provided for the mount loading. The underlying tower is assumed to provide support and sufficient rigidity to support the mount loads as a tower analysis was not part of the mount analysis.

9. TES is not responsible for modifications to climbing facilities unless communicated to TES in writing.


04.26.2019 08:35


04.26.2019 08:59

Structure: CT03110-S-SBA - North Branford

Sector: **A**

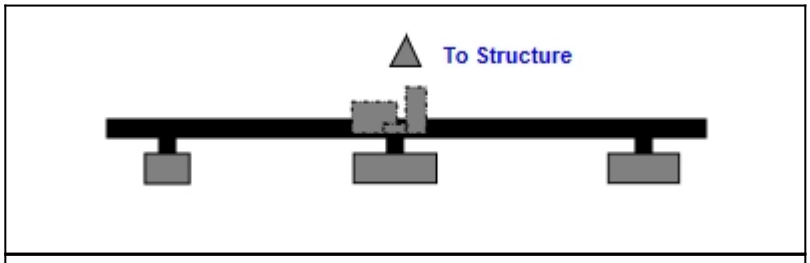
Structure Type: Monopole

Mount Elev: 141.00

11/11/2020

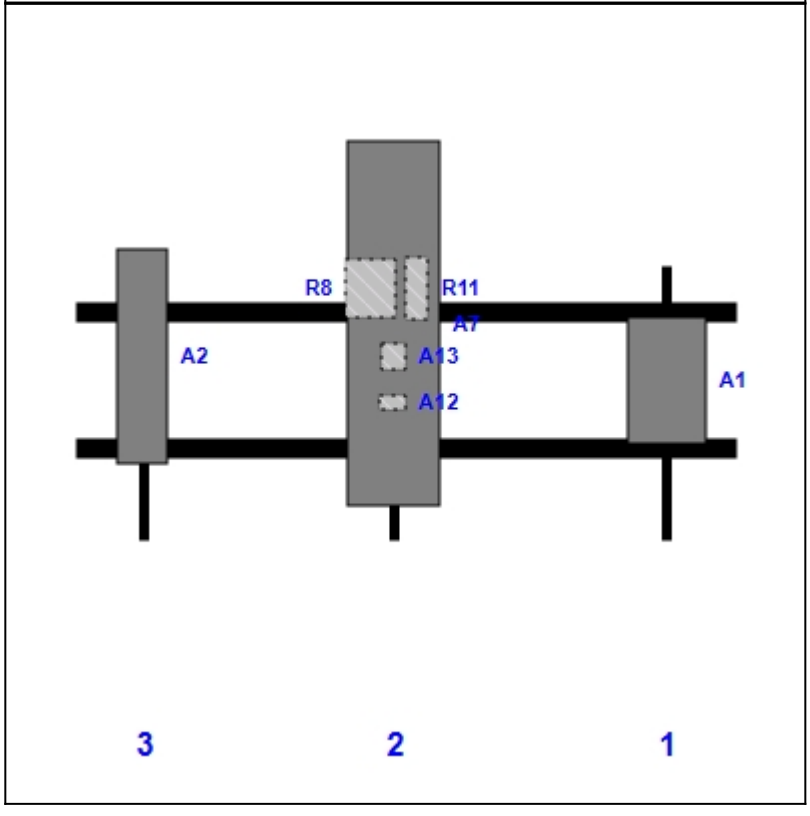
Tower Engineering Solutions

Plan View



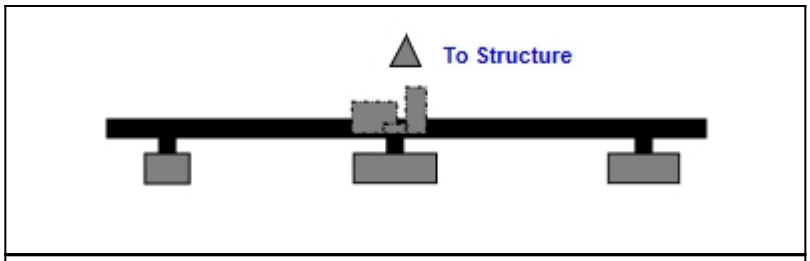
Front View

Looking Toward Structure



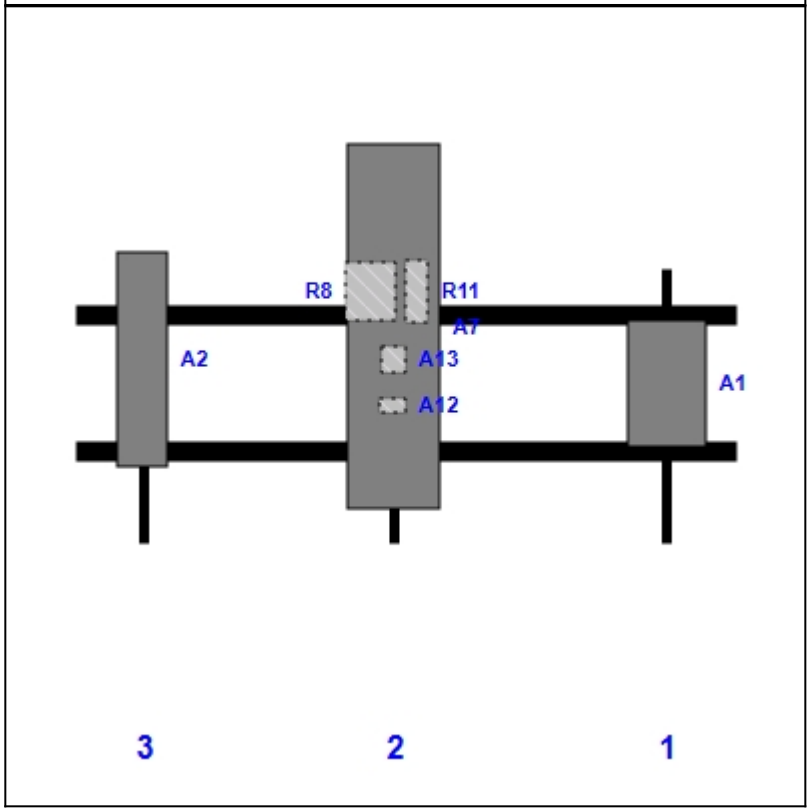
Ref	Model	Height (in)	Width (in)	H Dist Left	Pipe	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	Air 6449 B41	33.10	20.50	156.00	1	a	Front	30.00			
A7	APXVAARR24 43-U-NA20	95.90	24.00	84.00	2	a	Front	15.00			
R8	4449 B71+B85	14.90	13.10	84.00	2	a	Behind	6.00	-6.00		
R11	4415 B25	16.50	5.90	84.00	2	a	Behind	6.00	6.00		
A12	SDX1926Q-43	4.10	6.90	84.00	2	a	Behind	36.00			
A13	KRY 112 144/1	6.90	6.10	84.00	2	a	Behind	24.00			
A2	AIR32 KRD901146-1 B66A B2A (Octo)	56.60	12.90	18.00	3	a	Front	24.00			

Plan View



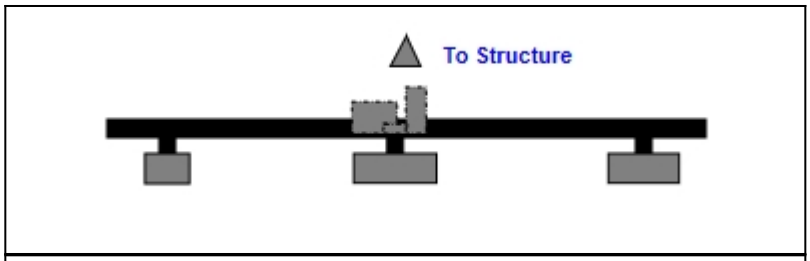
Front View

Looking Toward Structure



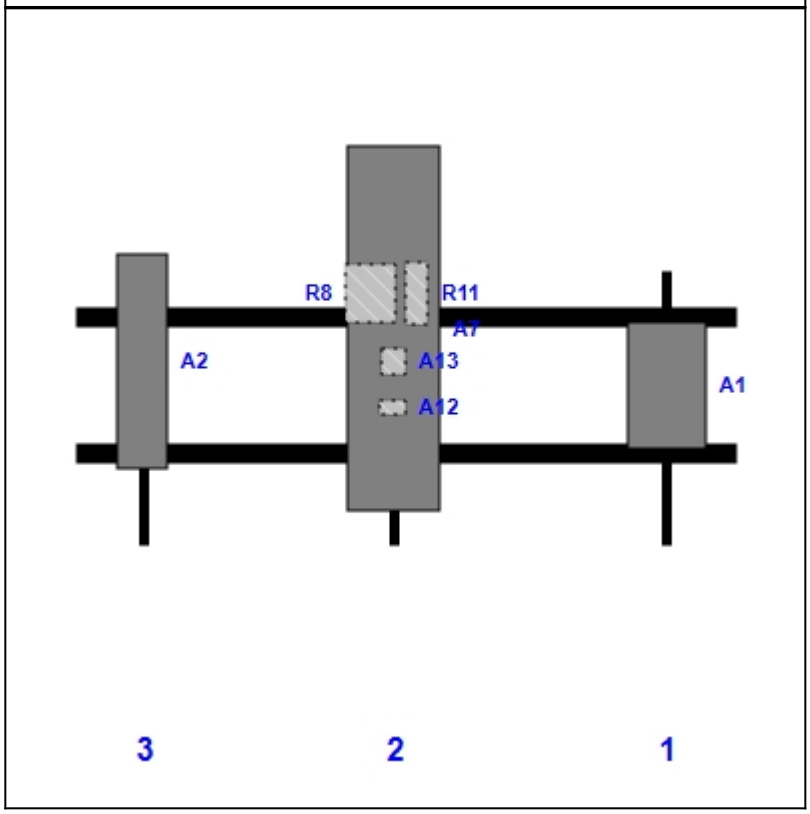
Ref	Model	Height (in)	Width (in)	H Dist Left	Pipe	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	Air 6449 B41	33.10	20.50	156.00	1	a	Front	30.00			
A7	APXVAARR24_43-U-NA20	95.90	24.00	84.00	2	a	Front	15.00			
R8	4449 B71+B85	14.90	13.10	84.00	2	a	Behind	6.00	-6.00		
R11	4415 B25	16.50	5.90	84.00	2	a	Behind	6.00	6.00		
A12	SDX1926Q-43	4.10	6.90	84.00	2	a	Behind	36.00			
A13	KRY 112 144/1	6.90	6.10	84.00	2	a	Behind	24.00			
A2	AIR32 KRD901146-1_B66A_B2A (Octo)	56.60	12.90	18.00	3	a	Front	24.00			

Plan View



Front View

Looking Toward Structure

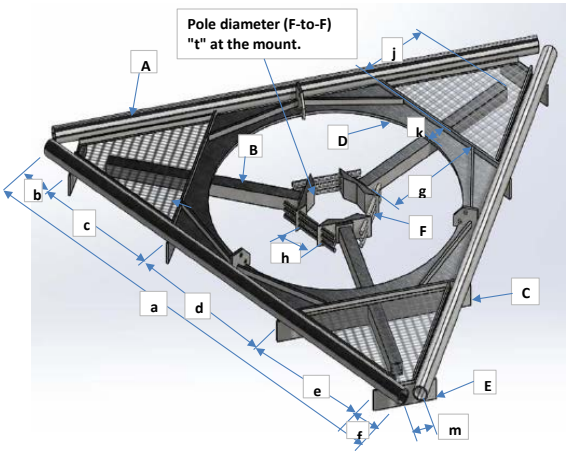


Ref	Model	Height (in)	Width (in)	H Dist Left	Pipe	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	Air 6449 B41	33.10	20.50	156.00	1	a	Front	30.00			
A7	APXVAARR24_43-U-NA20	95.90	24.00	84.00	2	a	Front	15.00			
R8	4449 B71+B85	14.90	13.10	84.00	2	a	Behind	6.00	-6.00		
R11	4415 B25	16.50	5.90	84.00	2	a	Behind	6.00	6.00		
A12	SDX1926Q-43	4.10	6.90	84.00	2	a	Behind	36.00			
A13	KRY 112 144/1	6.90	6.10	84.00	2	a	Behind	24.00			
A2	AIR32 KRD901146-1_B66A_B2A (Octo)	56.60	12.90	18.00	3	a	Front	24.00			

Antenna Mount Type "MT-D" Mapping Form (PATENT PENDING)

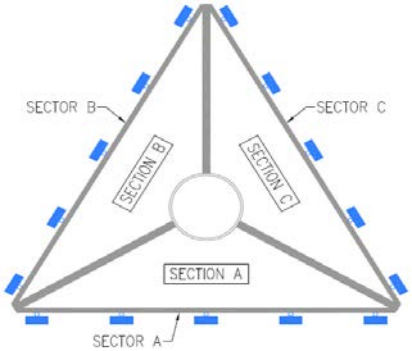
FCC # 1223219

Tower Owner:	SBA Communications	**Mapping Date:**	4/26/19
Site Name:	North Branford	**Structure Type:**	Monopole
Site Number or ID:	CT03110-S-SBA	**Structure Height (Ft.):**	175
Mapping Contractor:	Full Metal Tower Services	**Mount Height (Ft.):**	144.9

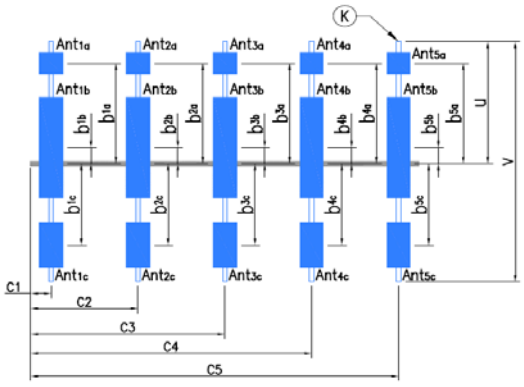


Geometries (Unit: inches)									
a	174	**e**	35	**j**	6	**o**	N/A	**s**	N/A
b	15	**f**	15	**k**	16	**p**	N/A	**t**	23
c	35	**g**	22	**m**	12	**q**	N/A	**u ***	48
d	74	**h**	24	**n**	N/A	**r**	N/A	**v ***	72

Members/Bolts (Unit: inches) * - See Ant. Layout for "u", "v" and member "K" (pipe)									
Items	Member	Lx (O.D.)	Ly (I.D.)	T	Items	Member	Lx (O.D.)	Ly (I.D.)	T
A	3.5 OD x 0.216 Pipe	3.5	3.068	0.216	**F**	3/4" Bolt		24	
B	Tubing 4x4x1/4	4	4	0.25	**G**				
C	3/8" Thick. Plate	0	0	0.375	**H**				
D	1/4" Thick. Plate	0	0	0.25	**J**				
E	3/8" Thick. Plate	0	0	0.375	**K* (pipe)**	2.375 OD x 0.154 Pipe	2.375	2.067	0.154
Distance from top of main platform member to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.)									6'
Distance from top of main platform member to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.)									N/A
Please enter the infomation below if members can't be found from the drop down lists									



Climbing ladder is Located at Section B, at 225° Degree Azimuth



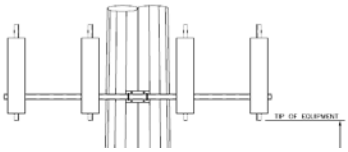
Antenna Layout

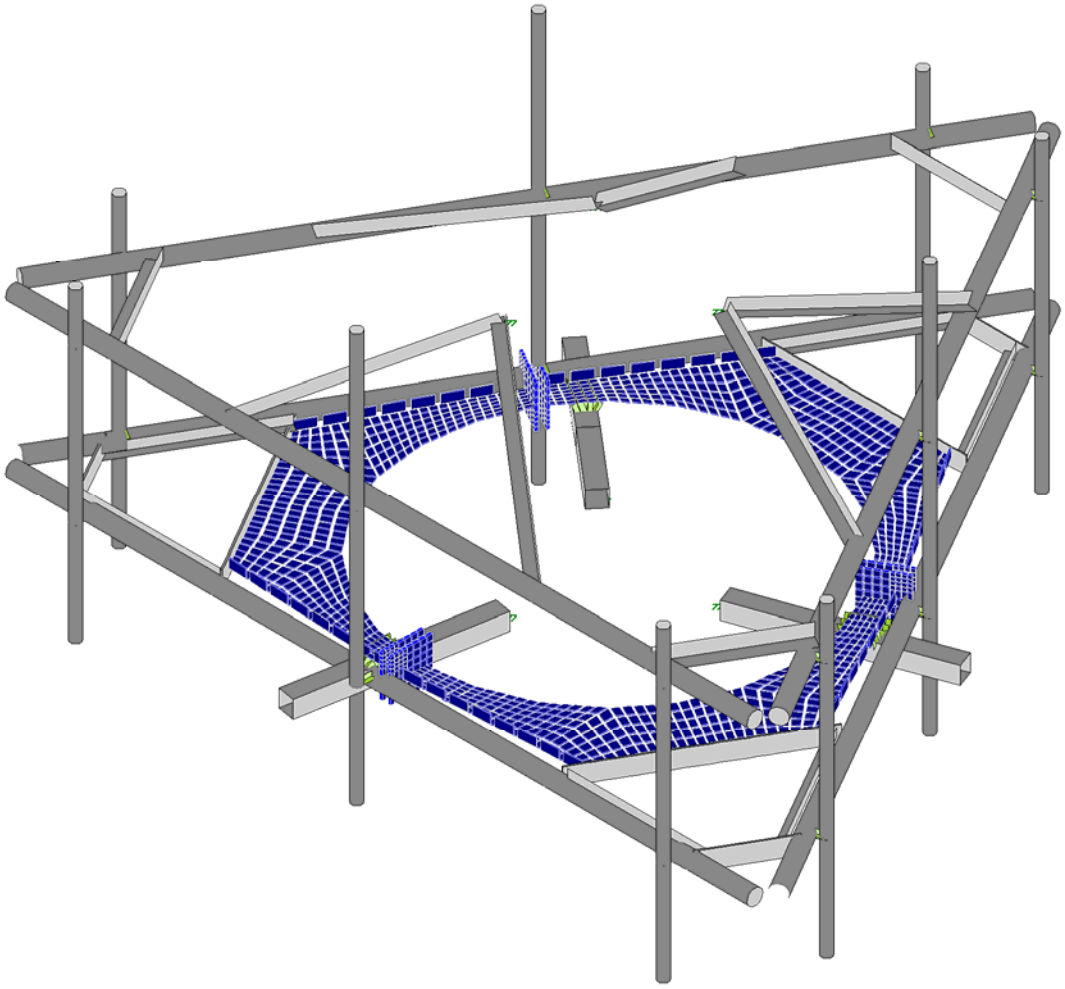
Ants. Items	Enter antenna model. If not labled, enter "Unknown". If no antenna at specified location, enter "N/A". If antennas and the locations are the same on all three sectors, only enter one sector.					Mounting Locations (Unit: inches)			Photos of antennas
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (In.)	Horiz. offset (Use "-" if Ant. is inside)	Horiz. offset "C_1, C_2, C_3, C_4, C_5" (in.)	Photo Numbers
Sector A									
Ant_{1a}									
Ant_{1b}	Antenna A	12	8	56	1/2" (1)	+32"	7	17	
Ant_{1c}									
Ant_{2a}									
Ant_{2b}	Empty Mast	N/A	N/A	N/A	N/A	N/A	N/A	95	
Ant_{2c}									
Ant_{3a}									
Ant_{3b}	Antenna B	13	9	57	1/2" (2)	+32"	8	152	
Ant_{3c}	TMA A	6	3	10	1/2" (2)	+18"	N/A	152	
Ant_{4a}									
Ant_{4b}									
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									
Are Ant same as sector A?	Yes	**Antennas on Sector B are the same as Sector A**							

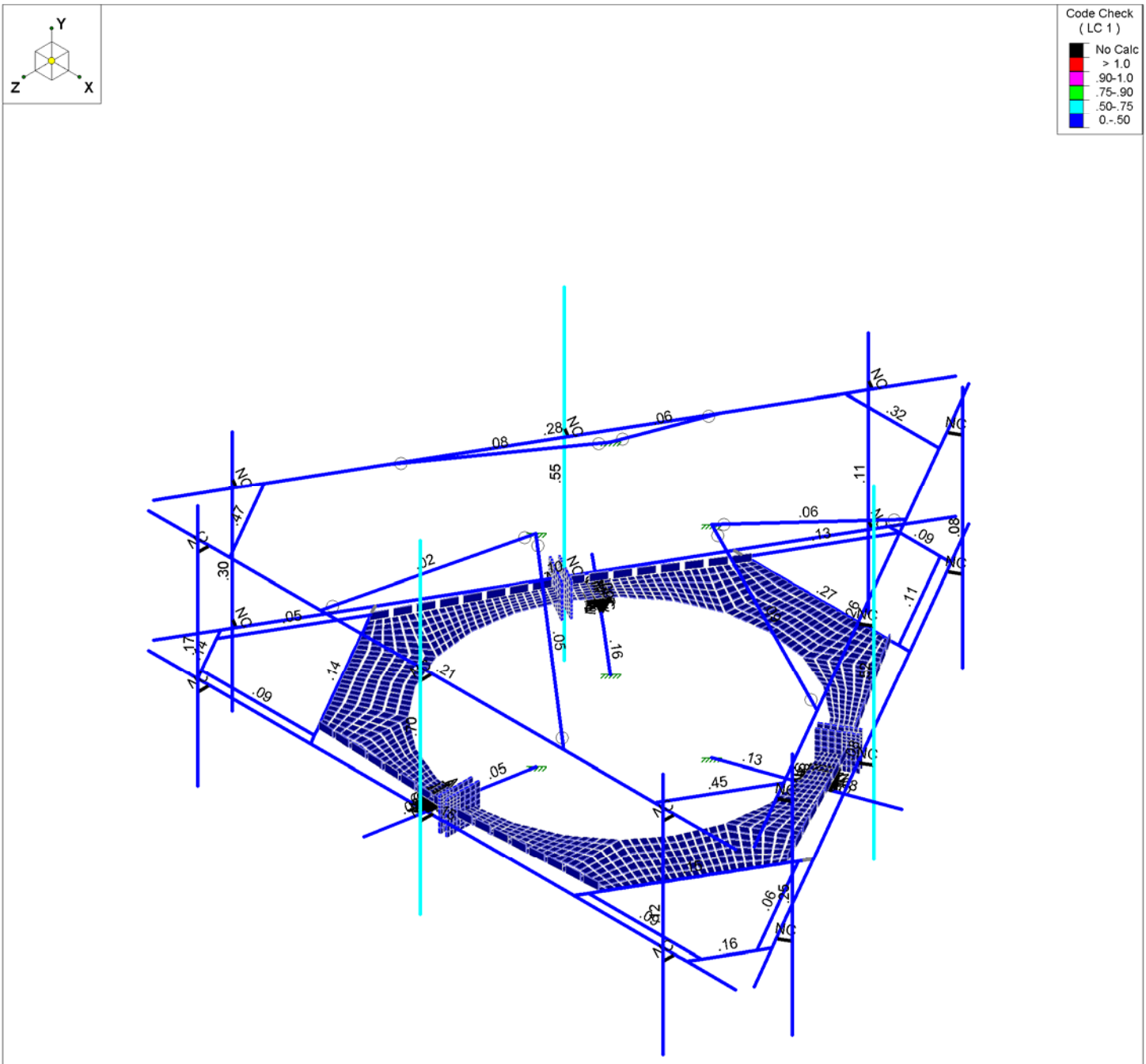
Azimuth (Degree) of Each Sector and Climbing Information

Sector A:	10°	Deg	
Sector B:	120°	Deg	
Sector C:	260°	Deg	
Climbing	225°	Deg	Located at Section B
Climbing Facility	Corrosion Type:		No corrosion observed
	Access:		Climbing path was unobstructed.
	Condition:		N/A

Are Ant same as sector A/B?	Same As A	**Antennas on Sector C are the same as Sector A**

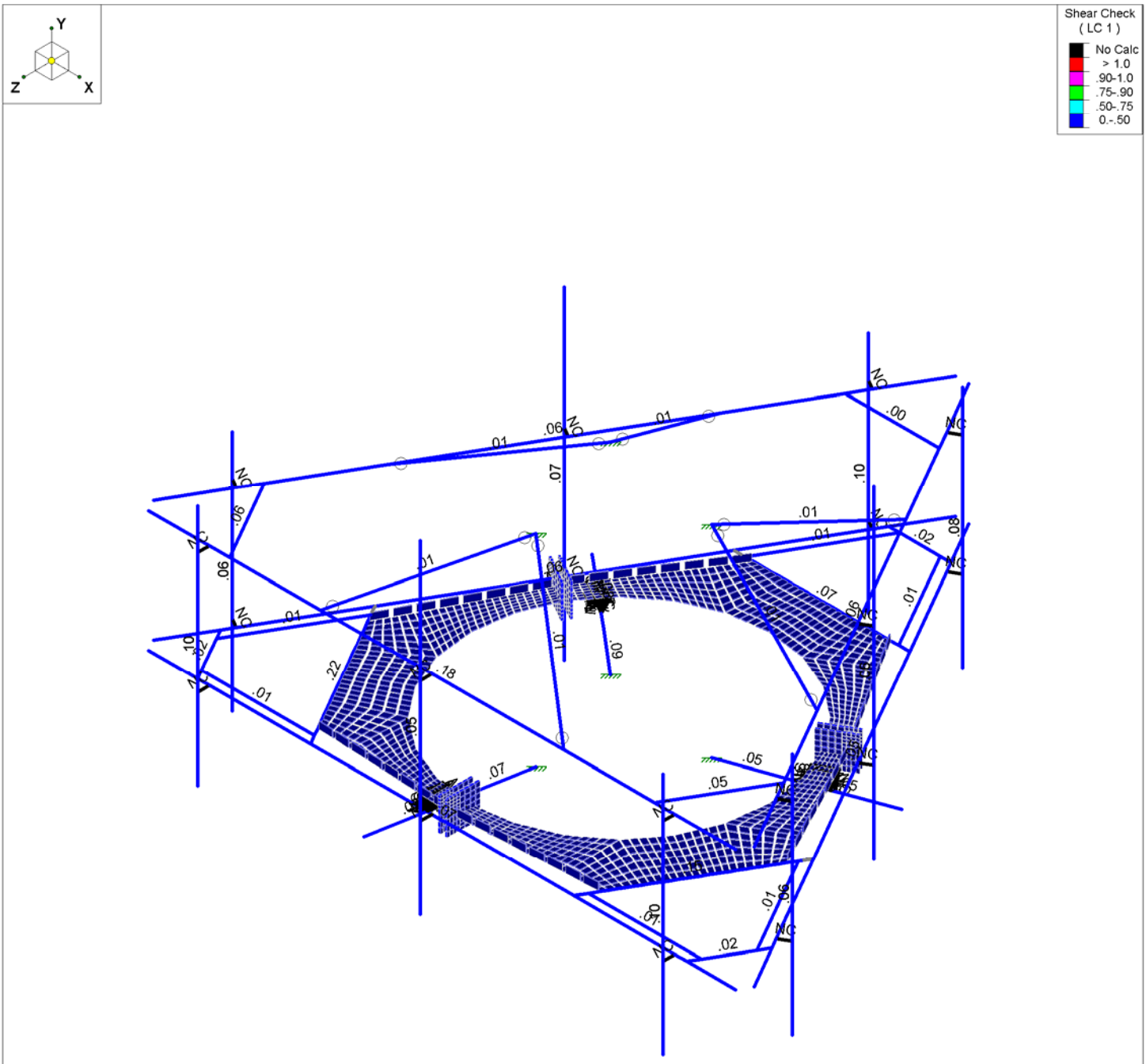



Y
Z
X



Member Code Checks Displayed
Results for LC 1, 1.2D+1.6W (Front)

Tower Engineering Solutio...	CT03110-S-SBA_MT_LO_Loads Only_G	SK - 2
		Nov 11, 2020 at 8:58 AM
TES Project No. 99605		CT03110-S-SBA_99605_G_RISA_L...



Member Shear Checks Displayed
Results for LC 1, 1.2D+1.6W (Front)

Tower Engineering Solutio...	CT03110-S-SBA_MT_LO_Loads Only_G	SK - 3
		Nov 11, 2020 at 8:58 AM
TES Project No. 99605		CT03110-S-SBA_99605_G_RISA_L...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					30			
2	Antenna Di	None					30			
3	Antenna W Front	None					30			
4	Antenna Wi Front	None					30			
5	Antenna W Side	None					30			
6	Antenna Wi Side	None					30			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1					3	
10	Structure Di	None						42	3	
11	Structure W Front	None						42		
12	Structure Wi Front	None						42		
13	Structure W Side	None						42		
14	Structure Wi Side	None						42		
15	BLC 9 Transient Area...	None						20		
16	BLC 10 Transient Are...	None						20		

Load Combinations

	Description	S...	P...	SRSS	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.6W (Front)	Yes	Y		1	1.2	9	1.2	3	1.6	11	1.6												
2	1.2D+1.6W (Back)	Yes	Y		1	1.2	9	1.2	3	-1.6	11	-1.6												
3	1.2D+1.6W (Left)	Yes	Y		1	1.2	9	1.2	5	1.6	13	1.6												
4	1.2D+1.6W (Right)	Yes	Y		1	1.2	9	1.2	5	-1.6	13	-1.6												
5	1.2D+1.0Di+1.0Wi (F...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	1	12	1								
6	1.2D+1.0Di+1.0Wi (B...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-1	12	-1								
7	1.2D+1.0Di+1.0Wi (L...	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	1	14	1								
8	1.2D+1.0Di+1.0Wi (...	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	-1	14	-1								
9	1.2D+1.5L1+.16W (...	Yes	Y		1	1.2	9	1.2	7	1.5	3	.16	11	.16										
10	1.2D+1.5L2+.16W (...	Yes	Y		1	1.2	9	1.2	8	1.5	3	.16	11	.16										
11	1.4D	Yes	Y		1	1.4	9	1.4																

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	-7.25	0	4.378224	0	
2	N2	7.25	0	4.378224	0	
3	N86	-1.362027	-.333	-1.142876	0	
4	N87	-4.170857	-.333	-3.499764	0	
5	N1145A	-2.511094	-.333	-2.107058	0	
6	N1149B	5.75	0	4.378224	0	
7	N1150B	5.75	4	4.668224	0	
8	N1151A	5.75	-2	4.668224	0	
9	N1152A	5.75	0	4.668224	0	
10	N1149C	-5.75	0	4.378224	0	
11	N1150C	-5.75	4	4.668224	0	
12	N1151B	-5.75	-2	4.668224	0	
13	N1152B	-5.75	0	4.668224	0	
14	N1153A	-.25	0	4.378224	0	
15	N1154A	-.25	6	4.668224	0	
16	N1155A	-.25	-2	4.668224	0	
17	N1156A	-.25	0	4.668224	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
18	N18	-6.041667	0	4.378224	0	
19	N19	6.041667	0	4.378224	0	
20	N20	-3.25	0	4.378224	0	
21	N21	3.25	0	4.378224	0	
22	N22	0	0	4.378224	0	
23	N23	0.08333	0	4.378224	0	
24	N25	-0.08333	0	4.378224	0	
25	N25A	0.08333	-0.3333	4.378224	0	
26	N26	-0.08333	-0.3333	4.378224	0	
27	N27	0.08333	.5	4.378224	0	
28	N28	-0.08333	.5	4.378224	0	
29	N29	7.416654	0	4.089572	0	
30	N30	0.166654	0	-8.467796	0	
31	N31	-0.308746	-.333	1.750988	0	
32	N32	-0.945456	-.333	5.36195	0	
33	N33	-0.569219	-.333	3.2282	0	
34	N34	0.916654	0	-7.168758	0	
35	N35	1.167801	4	-7.313758	0	
36	N36	1.167801	-2	-7.313758	0	
37	N37	1.167801	0	-7.313758	0	
38	N38	6.666654	0	2.790534	0	
39	N39	6.917801	4	2.645534	0	
40	N40	6.917801	-2	2.645534	0	
41	N41	6.917801	0	2.645534	0	
42	N42	3.916654	0	-1.972606	0	
43	N43	4.167801	6	-2.117606	0	
44	N44	4.167801	-2	-2.117606	0	
45	N45	4.167801	0	-2.117606	0	
46	N46	6.812487	0	3.043125	0	
47	N47	0.77082	0	-7.421349	0	
48	N48	5.416654	0	0.62547	0	
49	N49	2.166654	0	-5.003695	0	
50	N50	3.791654	0	-2.189112	0	
51	N51	3.749989	0	-2.261278	0	
52	N52	3.833319	0	-2.116946	0	
53	N53	3.749989	-0.3333	-2.261278	0	
54	N54	3.833319	-0.3333	-2.116946	0	
55	N55	3.749989	.5	-2.261278	0	
56	N56	3.833319	.5	-2.116946	0	
57	N57	-0.166654	0	-8.467796	0	
58	N58	-7.416654	0	4.089572	0	
59	N59	1.670773	-.333	-0.608112	0	
60	N60	5.116313	-.333	-1.862186	0	
61	N61	3.080312	-.333	-1.121142	0	
62	N62	-6.666654	0	2.790534	0	
63	N63	-6.917801	4	2.645534	0	
64	N64	-6.917801	-2	2.645534	0	
65	N65	-6.917801	0	2.645534	0	
66	N66	-0.916654	0	-7.168758	0	
67	N67	-1.167801	4	-7.313758	0	
68	N68	-1.167801	-2	-7.313758	0	
69	N69	-1.167801	0	-7.313758	0	
70	N70	-3.666654	0	-2.405619	0	
71	N71	-3.917801	6	-2.550618	0	
72	N72	-3.917801	-2	-2.550618	0	
73	N73	-3.917801	0	-2.550618	0	
74	N74	-0.77082	0	-7.421349	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
75	N75	-6.812487	0	3.043125	0	
76	N76	-2.166654	0	-5.003695	0	
77	N77	-5.416654	0	0.62547	0	
78	N78	-3.791654	0	-2.189112	0	
79	N79	-3.833319	0	-2.116946	0	
80	N80	-3.749989	0	-2.261278	0	
81	N81	-3.833319	-0.3333	-2.116946	0	
82	N82	-3.749989	-0.3333	-2.261278	0	
83	N83	-3.833319	.5	-2.116946	0	
84	N84	-3.749989	.5	-2.261278	0	
85	N85	0	0	-5.003695	0	
86	N86A	0	0	-3.670395	0	
87	N87A	-0.949968	0	-3.545329	0	
88	N88	-1.835197	0	-3.178655	0	
89	N89	-2.595361	0	-2.595361	0	
90	N91	-3.545329	0	-0.949968	0	
91	N92	-3.670395	0	1e-14	0	
92	N93	-3.545329	0	0.949968	0	
93	N94	-3.178655	0	1.835197	0	
94	N95	-2.595361	0	2.595361	0	
95	N96	-1.835197	0	3.178655	0	
96	N97	-0.949968	0	3.545329	0	
97	N98	0.08333	0	3.670395	0	
98	N99	0.949968	0	3.545329	0	
99	N100	1.835197	0	3.178655	0	
100	N101	2.595361	0	2.595361	0	
101	N102	3.178655	0	1.835197	0	
102	N103	3.545329	0	0.949968	0	
103	N104	3.670395	0	-1e-14	0	
104	N105	3.545329	0	-0.949968	0	
105	N107	2.595361	0	-2.595361	0	
106	N108	1.835197	0	-3.178655	0	
107	N109	0.949968	0	-3.545329	0	
108	N110	0.08333	0	4.128224	0	
109	N111	-0.08333	0	4.128224	0	
110	N112	-0.08333	0	3.670395	0	
111	N113	-0.499987	0	-7.421349	0	
112	N114	-1.89582	0	-5.003695	0	
113	N115	-1.687487	0	-5.003695	0	
114	N116	0.499987	0	-7.421349	0	
115	N117	1.89582	0	-5.003695	0	
116	N118	1.687487	0	-5.003695	0	
117	N119	-6.177084	0	4.143676	0	
118	N120	-3.385417	0	4.143676	0	
119	N121	-3.489583	0	3.963254	0	
120	N122	-6.67707	0	3.277673	0	
121	N123	-5.281237	0	0.860019	0	
122	N124	-5.17707	0	1.040441	0	
123	N125	6.67707	0	3.277673	0	
124	N126	5.281237	0	0.860019	0	
125	N127	5.17707	0	1.040441	0	
126	N128	6.177084	0	4.143676	0	
127	N129	3.385417	0	4.143676	0	
128	N130	3.489583	0	3.963254	0	
129	N131	-0.08333	0.208333	4.128224	0	
130	N132	-3.489583	0.208333	3.963254	0	
131	N135	0.08333	0.208333	4.128224	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
132	N136	3.489583	0.208333	3.963254	0	
133	N135A	3.533482	0	-2.136278	0	
134	N136A	3.616812	0	-1.991946	0	
135	N139	3.616812	0.208333	-1.991946	0	
136	N140	5.17707	0.208333	1.040441	0	
137	N141	3.533482	0.208333	-2.136278	0	
138	N142	1.687487	0.208333	-5.003695	0	
139	N143	-3.616812	0	-1.991946	0	
140	N144	-3.533482	0	-2.136278	0	
141	N147	-3.533482	0.208333	-2.136278	0	
142	N148	-1.687487	0.208333	-5.003695	0	
143	N149	-3.616812	0.208333	-1.991946	0	
144	N150	-5.17707	0.208333	1.040441	0	
145	N147A	-3.063802	0.208333	3.983876	0	
146	N148A	-3.063802	0	3.983876	0	
147	N149A	-2.63802	0.208333	4.004497	0	
148	N150A	-2.63802	0	4.004497	0	
149	N151	-2.212238	0.208333	4.025118	0	
150	N152	-2.212238	0	4.025118	0	
151	N153	-1.786457	0.208333	4.045739	0	
152	N154	-1.786457	0	4.045739	0	
153	N155	-1.360675	0.208333	4.066361	0	
154	N156	-1.360675	0	4.066361	0	
155	N157	-0.934893	0.208333	4.086982	0	
156	N158	-0.934893	0	4.086982	0	
157	N159	-0.509112	0.208333	4.107603	0	
158	N160	-0.509112	0	4.107603	0	
159	N161	3.063802	0.208333	3.983876	0	
160	N162	3.063802	0	3.983876	0	
161	N163	2.63802	0.208333	4.004497	0	
162	N164	2.63802	0	4.004497	0	
163	N165	2.212238	0.208333	4.025118	0	
164	N166	2.212238	0	4.025118	0	
165	N167	1.786457	0.208333	4.045739	0	
166	N168	1.786457	0	4.045739	0	
167	N169	1.360675	0.208333	4.066361	0	
168	N170	1.360675	0	4.066361	0	
169	N171	0.934893	0.208333	4.086982	0	
170	N172	0.934893	0	4.086982	0	
171	N173	0.509112	0.208333	4.107603	0	
172	N174	0.509112	0	4.107603	0	
173	N175	4.982038	0.208333	0.661392	0	
174	N176	4.982038	0	0.661392	0	
175	N177	4.787006	0.208333	0.282344	0	
176	N178	4.787006	0	0.282344	0	
177	N179	4.591974	0.208333	-0.096705	0	
178	N180	4.591974	0	-0.096705	0	
179	N181	4.396941	0.208333	-0.475753	0	
180	N182	4.396941	0	-0.475753	0	
181	N183	4.201909	0.208333	-0.854801	0	
182	N184	4.201909	0	-0.854801	0	
183	N185	4.006877	0.208333	-1.23385	0	
184	N186	4.006877	0	-1.23385	0	
185	N187	3.811844	0.208333	-1.612898	0	
186	N188	3.811844	0	-1.612898	0	
187	N189	1.918237	0.208333	-4.645268	0	
188	N190	1.918237	0	-4.645268	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
189	N191	2.148986	0.208333	-4.286841	0	
190	N192	2.148986	0	-4.286841	0	
191	N193	2.379735	0.208333	-3.928414	0	
192	N194	2.379735	0	-3.928414	0	
193	N195	2.610485	0.208333	-3.569986	0	
194	N196	2.610485	0	-3.569986	0	
195	N197	2.841234	0.208333	-3.211559	0	
196	N198	2.841234	0	-3.211559	0	
197	N199	3.071983	0.208333	-2.853132	0	
198	N200	3.071983	0	-2.853132	0	
199	N201	3.302733	0.208333	-2.494705	0	
200	N202	3.302733	0	-2.494705	0	
201	N203	-1.918237	0.208333	-4.645268	0	
202	N204	-1.918237	0	-4.645268	0	
203	N205	-2.148986	0.208333	-4.286841	0	
204	N206	-2.148986	0	-4.286841	0	
205	N207	-2.379735	0.208333	-3.928414	0	
206	N208	-2.379735	0	-3.928414	0	
207	N209	-2.610485	0.208333	-3.569986	0	
208	N210	-2.610485	0	-3.569986	0	
209	N211	-2.841234	0.208333	-3.211559	0	
210	N212	-2.841234	0	-3.211559	0	
211	N213	-3.071983	0.208333	-2.853132	0	
212	N214	-3.071983	0	-2.853132	0	
213	N215	-3.302733	0.208333	-2.494705	0	
214	N216	-3.302733	0	-2.494705	0	
215	N217	-4.982038	0.208333	0.661392	0	
216	N218	-4.982038	0	0.661392	0	
217	N219	-4.787006	0.208333	0.282344	0	
218	N220	-4.787006	0	0.282344	0	
219	N221	-4.591974	0.208333	-0.096705	0	
220	N222	-4.591974	0	-0.096705	0	
221	N223	-4.396941	0.208333	-0.475753	0	
222	N224	-4.396941	0	-0.475753	0	
223	N225	-4.201909	0.208333	-0.854801	0	
224	N226	-4.201909	0	-0.854801	0	
225	N227	-4.006877	0.208333	-1.23385	0	
226	N228	-4.006877	0	-1.23385	0	
227	N229	-3.811844	0.208333	-1.612898	0	
228	N230	-3.811844	0	-1.612898	0	
229	N231	0.08333	-0.3333	3.544924	0	
230	N232	-0.08333	-0.3333	3.544924	0	
231	N233	0.08333	.5	3.544924	0	
232	N234	-0.08333	.5	3.544924	0	
233	N235	-4.333327	0	2.501847	0	
234	N236	.8	0	-5.003695	0	
235	N238	-.8	0	-5.003695	0	
236	N239	-4.733327	0	1.809027	0	
237	N240	-3.933327	0	3.194668	0	
238	N241	4.333327	0	2.501847	0	
239	N242	3.933327	0	3.194668	0	
240	N243	4.733327	0	1.809027	0	
241	N243A	-0.08333	0	4.05192	0	
242	N244	-0.08333	0	3.975615	0	
243	N245	-0.08333	0	3.89931	0	
244	N246	-0.08333	0	3.823005	0	
245	N247	-0.08333	0	3.7467	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
246	N248	-0.225257	0	4.121351	0	
247	N249	-0.225676	0	4.042717	0	
248	N250	-0.226095	0	3.964084	0	
249	N251	-0.226513	0	3.885451	0	
250	N252	-0.226932	0	3.806817	0	
251	N253	-0.227351	0	3.728184	0	
252	N254	-0.22777	0	3.649551	0	
253	N255	-0.367184	0	4.114477	0	
254	N256	-0.368022	0	4.033515	0	
255	N257	-0.368859	0	3.952553	0	
256	N258	-0.369697	0	3.871592	0	
257	N259	-0.370534	0	3.79063	0	
258	N260	-0.371372	0	3.709668	0	
259	N261	-0.372209	0	3.628706	0	
260	N262	-0.510368	0	4.024313	0	
261	N263	-0.511624	0	3.941023	0	
262	N264	-0.51288	0	3.857733	0	
263	N265	-0.514137	0	3.774442	0	
264	N266	-0.515393	0	3.691152	0	
265	N267	-0.516649	0	3.607862	0	
266	N268	-0.651039	0	4.100729	0	
267	N269	-0.652714	0	4.015111	0	
268	N270	-0.654389	0	3.929492	0	
269	N271	-0.656064	0	3.843874	0	
270	N272	-0.657739	0	3.758255	0	
271	N273	-0.659414	0	3.672636	0	
272	N274	-0.661089	0	3.587018	0	
273	N275	-0.792966	0	4.093856	0	
274	N276	-0.79506	0	4.005909	0	
275	N277	-0.797154	0	3.917962	0	
276	N278	-0.799247	0	3.830015	0	
277	N279	-0.801341	0	3.742067	0	
278	N280	-0.803435	0	3.65412	0	
279	N281	-0.805528	0	3.566173	0	
280	N282	-0.937406	0	3.996706	0	
281	N283	-0.939918	0	3.906431	0	
282	N284	-0.942431	0	3.816155	0	
283	N285	-0.944943	0	3.72588	0	
284	N286	-0.947456	0	3.635605	0	
285	N287	-1.097506	0	3.484217	0	
286	N288	-1.245045	0	3.423104	0	
287	N289	-1.392583	0	3.361992	0	
288	N290	-1.540121	0	3.30088	0	
289	N291	-1.687659	0	3.239767	0	
290	N292	-1.094059	0	3.583532	0	
291	N293	-1.240662	0	3.531459	0	
292	N294	-1.387265	0	3.479387	0	
293	N295	-1.533868	0	3.427314	0	
294	N296	-1.680471	0	3.375242	0	
295	N297	-1.827074	0	3.323169	0	
296	N298	-1.090611	0	3.682847	0	
297	N299	-1.236279	0	3.639814	0	
298	N300	-1.381947	0	3.596782	0	
299	N301	-1.527615	0	3.553749	0	
300	N302	-1.673283	0	3.510716	0	
301	N303	-1.81895	0	3.467683	0	
302	N304	-1.087163	0	3.782162	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
303	N305	-1.231896	0	3.748169	0	
304	N306	-1.376629	0	3.714176	0	
305	N307	-1.521362	0	3.680183	0	
306	N308	-1.666094	0	3.64619	0	
307	N309	-1.810827	0	3.612197	0	
308	N310	-1.083716	0	3.881478	0	
309	N311	-1.227513	0	3.856524	0	
310	N312	-1.371311	0	3.831571	0	
311	N313	-1.515108	0	3.806618	0	
312	N314	-1.658906	0	3.781665	0	
313	N315	-1.802704	0	3.756711	0	
314	N316	-1.080268	0	3.980793	0	
315	N317	-1.223131	0	3.964879	0	
316	N318	-1.365993	0	3.948966	0	
317	N319	-1.508855	0	3.933052	0	
318	N320	-1.651718	0	3.917139	0	
319	N321	-1.79458	0	3.901225	0	
320	N322	-1.076821	0	4.080108	0	
321	N323	-1.218748	0	4.073234	0	
322	N324	-1.502602	0	4.059487	0	
323	N325	-1.644529	0	4.052613	0	
324	N326	-1.961891	0	3.081439	0	
325	N327	-2.088585	0	2.984224	0	
326	N328	-2.215279	0	2.887008	0	
327	N329	-2.341973	0	2.789792	0	
328	N330	-2.468667	0	2.692577	0	
329	N331	-1.956307	0	3.24101	0	
330	N332	-2.08554	0	3.158852	0	
331	N333	-2.214772	0	3.076693	0	
332	N334	-2.344005	0	2.994534	0	
333	N335	-2.473238	0	2.912376	0	
334	N336	-2.602471	0	2.830217	0	
335	N337	-1.950722	0	3.400581	0	
336	N338	-2.082494	0	3.33348	0	
337	N339	-2.214266	0	3.266378	0	
338	N340	-2.346037	0	3.199276	0	
339	N341	-2.477809	0	3.132175	0	
340	N342	-2.609581	0	3.065073	0	
341	N343	-1.945138	0	3.560152	0	
342	N344	-2.079448	0	3.508108	0	
343	N345	-2.213759	0	3.456063	0	
344	N346	-2.348069	0	3.404018	0	
345	N347	-2.48238	0	3.351974	0	
346	N348	-2.61669	0	3.299929	0	
347	N349	-1.939553	0	3.719724	0	
348	N350	-2.076402	0	3.682736	0	
349	N351	-2.213252	0	3.645748	0	
350	N352	-2.350101	0	3.60876	0	
351	N353	-2.486951	0	3.571773	0	
352	N354	-2.6238	0	3.534785	0	
353	N355	-1.933968	0	3.879295	0	
354	N356	-2.073357	0	3.857364	0	
355	N357	-2.212745	0	3.835433	0	
356	N358	-2.352133	0	3.813502	0	
357	N359	-2.491522	0	3.791572	0	
358	N360	-2.63091	0	3.769641	0	
359	N361	-1.928384	0	4.038866	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
360	N362	-2.070311	0	4.031992	0	
361	N363	-2.354165	0	4.018244	0	
362	N364	-2.496093	0	4.011371	0	
363	N365	-2.818355	0	2.695245	0	
364	N366	-3.04135	0	2.79513	0	
365	N367	-3.264344	0	2.895014	0	
366	N368	-3.487338	0	2.994899	0	
367	N369	-3.710332	0	3.094783	0	
368	N370	-2.811954	0	2.912308	0	
369	N371	-3.021437	0	2.9944	0	
370	N372	-3.23092	0	3.076491	0	
371	N373	-3.440403	0	3.158583	0	
372	N374	-3.649886	0	3.240674	0	
373	N375	-3.85937	0	3.322765	0	
374	N376	-2.805553	0	3.129371	0	
375	N377	-3.001525	0	3.19367	0	
376	N378	-3.197496	0	3.257968	0	
377	N379	-3.393468	0	3.322266	0	
378	N380	-3.58944	0	3.386565	0	
379	N381	-3.785412	0	3.450863	0	
380	N382	-2.799151	0	3.346434	0	
381	N383	-2.981612	0	3.39294	0	
382	N384	-3.164073	0	3.439445	0	
383	N385	-3.346533	0	3.48595	0	
384	N386	-3.528994	0	3.532456	0	
385	N387	-3.711455	0	3.578961	0	
386	N388	-2.79275	0	3.563497	0	
387	N389	-2.961699	0	3.592209	0	
388	N390	-3.130649	0	3.620922	0	
389	N391	-3.299599	0	3.649634	0	
390	N392	-3.468548	0	3.678346	0	
391	N393	-3.637498	0	3.707059	0	
392	N394	-2.786348	0	3.78056	0	
393	N395	-2.941787	0	3.791479	0	
394	N396	-3.097225	0	3.802399	0	
395	N397	-3.252664	0	3.813318	0	
396	N398	-3.408102	0	3.824237	0	
397	N399	-3.56354	0	3.835156	0	
398	N400	-2.779947	0	3.997623	0	
399	N401	-2.921874	0	3.990749	0	
400	N402	-3.205729	0	3.977002	0	
401	N403	-3.347656	0	3.970128	0	
402	N404	-2.692577	0	2.468667	0	
403	N405	-2.789792	0	2.341973	0	
404	N406	-2.887008	0	2.215279	0	
405	N407	-2.984224	0	2.088585	0	
406	N408	-3.081439	0	1.961891	0	
407	N409	-2.91048	0	2.570422	0	
408	N410	-3.002604	0	2.445599	0	
409	N411	-3.094728	0	2.320776	0	
410	N412	-3.186852	0	2.195952	0	
411	N413	-3.278976	0	2.071129	0	
412	N414	-3.3711	0	1.946306	0	
413	N415	-3.128382	0	2.672177	0	
414	N416	-3.215415	0	2.549225	0	
415	N417	-3.302448	0	2.426272	0	
416	N418	-3.38948	0	2.303319	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
417	N419	-3.476513	0	2.180367	0	
418	N420	-3.563546	0	2.057414	0	
419	N421	-3.346285	0	2.773932	0	
420	N422	-3.428226	0	2.65285	0	
421	N423	-3.510167	0	2.531768	0	
422	N424	-3.592109	0	2.410686	0	
423	N425	-3.67405	0	2.289604	0	
424	N426	-3.755991	0	2.168522	0	
425	N427	-3.564188	0	2.875687	0	
426	N428	-3.641038	0	2.756476	0	
427	N429	-3.717887	0	2.637265	0	
428	N430	-3.794737	0	2.518053	0	
429	N431	-3.871587	0	2.398842	0	
430	N432	-3.948436	0	2.279631	0	
431	N433	-3.782091	0	2.977443	0	
432	N434	-3.853849	0	2.860102	0	
433	N435	-3.925607	0	2.742761	0	
434	N436	-3.997365	0	2.62542	0	
435	N437	-4.069123	0	2.50808	0	
436	N438	-4.140882	0	2.390739	0	
437	N439	-3.999993	0	3.079198	0	
438	N440	-4.06666	0	2.963728	0	
439	N441	-4.133327	0	2.848258	0	
440	N442	-4.199993	0	2.732787	0	
441	N443	-4.26666	0	2.617317	0	
442	N460	0.08333	0	4.05192	0	
443	N461	0.08333	0	3.975615	0	
444	N462	0.08333	0	3.89931	0	
445	N463	0.08333	0	3.823005	0	
446	N464	0.08333	0	3.7467	0	
447	N465	0.225257	0	4.121351	0	
448	N466	0.225676	0	4.042717	0	
449	N467	0.226095	0	3.964084	0	
450	N468	0.226513	0	3.885451	0	
451	N469	0.226932	0	3.806817	0	
452	N470	0.227351	0	3.728184	0	
453	N471	0.22777	0	3.649551	0	
454	N472	0.367184	0	4.114477	0	
455	N473	0.368022	0	4.033515	0	
456	N474	0.368859	0	3.952553	0	
457	N475	0.369697	0	3.871592	0	
458	N476	0.370534	0	3.79063	0	
459	N477	0.371372	0	3.709668	0	
460	N478	0.372209	0	3.628706	0	
461	N479	0.510368	0	4.024313	0	
462	N480	0.511624	0	3.941023	0	
463	N481	0.51288	0	3.857733	0	
464	N482	0.514137	0	3.774442	0	
465	N483	0.515393	0	3.691152	0	
466	N484	0.516649	0	3.607862	0	
467	N485	0.651039	0	4.100729	0	
468	N486	0.652714	0	4.015111	0	
469	N487	0.654389	0	3.929492	0	
470	N488	0.656064	0	3.843874	0	
471	N489	0.657739	0	3.758255	0	
472	N490	0.659414	0	3.672636	0	
473	N491	0.661089	0	3.587018	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
474	N492	0.792966	0	4.093856	0	
475	N493	0.79506	0	4.005909	0	
476	N494	0.797154	0	3.917962	0	
477	N495	0.799247	0	3.830015	0	
478	N496	0.801341	0	3.742067	0	
479	N497	0.803435	0	3.65412	0	
480	N498	0.805528	0	3.566173	0	
481	N499	0.937406	0	3.996706	0	
482	N500	0.939918	0	3.906431	0	
483	N501	0.942431	0	3.816155	0	
484	N502	0.944943	0	3.72588	0	
485	N503	0.947456	0	3.635605	0	
486	N504	1.097506	0	3.484217	0	
487	N505	1.245045	0	3.423104	0	
488	N506	1.392583	0	3.361992	0	
489	N507	1.540121	0	3.30088	0	
490	N508	1.687659	0	3.239767	0	
491	N509	1.094059	0	3.583532	0	
492	N510	1.240662	0	3.531459	0	
493	N511	1.387265	0	3.479387	0	
494	N512	1.533868	0	3.427314	0	
495	N513	1.680471	0	3.375242	0	
496	N514	1.827074	0	3.323169	0	
497	N515	1.090611	0	3.682847	0	
498	N516	1.236279	0	3.639814	0	
499	N517	1.381947	0	3.596782	0	
500	N518	1.527615	0	3.553749	0	
501	N519	1.673283	0	3.510716	0	
502	N520	1.81895	0	3.467683	0	
503	N521	1.087163	0	3.782162	0	
504	N522	1.231896	0	3.748169	0	
505	N523	1.376629	0	3.714176	0	
506	N524	1.521362	0	3.680183	0	
507	N525	1.666094	0	3.64619	0	
508	N526	1.810827	0	3.612197	0	
509	N527	1.083716	0	3.881478	0	
510	N528	1.227513	0	3.856524	0	
511	N529	1.371311	0	3.831571	0	
512	N530	1.515108	0	3.806618	0	
513	N531	1.658906	0	3.781665	0	
514	N532	1.802704	0	3.756711	0	
515	N533	1.080268	0	3.980793	0	
516	N534	1.223131	0	3.964879	0	
517	N535	1.365993	0	3.948966	0	
518	N536	1.508855	0	3.933052	0	
519	N537	1.651718	0	3.917139	0	
520	N538	1.79458	0	3.901225	0	
521	N539	1.076821	0	4.080108	0	
522	N540	1.218748	0	4.073234	0	
523	N541	1.502602	0	4.059487	0	
524	N542	1.644529	0	4.052613	0	
525	N543	1.961891	0	3.081439	0	
526	N544	2.088585	0	2.984224	0	
527	N545	2.215279	0	2.887008	0	
528	N546	2.341973	0	2.789792	0	
529	N547	2.468667	0	2.692577	0	
530	N548	1.956307	0	3.24101	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
531	N549	2.08554	0	3.158852	0	
532	N550	2.214772	0	3.076693	0	
533	N551	2.344005	0	2.994534	0	
534	N552	2.473238	0	2.912376	0	
535	N553	2.602471	0	2.830217	0	
536	N554	1.950722	0	3.400581	0	
537	N555	2.082494	0	3.33348	0	
538	N556	2.214266	0	3.266378	0	
539	N557	2.346037	0	3.199276	0	
540	N558	2.477809	0	3.132175	0	
541	N559	2.609581	0	3.065073	0	
542	N560	1.945138	0	3.560152	0	
543	N561	2.079448	0	3.508108	0	
544	N562	2.213759	0	3.456063	0	
545	N563	2.348069	0	3.404018	0	
546	N564	2.48238	0	3.351974	0	
547	N565	2.61669	0	3.299929	0	
548	N566	1.939553	0	3.719724	0	
549	N567	2.076402	0	3.682736	0	
550	N568	2.213252	0	3.645748	0	
551	N569	2.350101	0	3.60876	0	
552	N570	2.486951	0	3.571773	0	
553	N571	2.6238	0	3.534785	0	
554	N572	1.933968	0	3.879295	0	
555	N573	2.073357	0	3.857364	0	
556	N574	2.212745	0	3.835433	0	
557	N575	2.352133	0	3.813502	0	
558	N576	2.491522	0	3.791572	0	
559	N577	2.63091	0	3.769641	0	
560	N578	1.928384	0	4.038866	0	
561	N579	2.070311	0	4.031992	0	
562	N580	2.354165	0	4.018244	0	
563	N581	2.496093	0	4.011371	0	
564	N582	2.818355	0	2.695245	0	
565	N583	3.04135	0	2.79513	0	
566	N584	3.264344	0	2.895014	0	
567	N585	3.487338	0	2.994899	0	
568	N586	3.710332	0	3.094783	0	
569	N587	2.811954	0	2.912308	0	
570	N588	3.021437	0	2.9944	0	
571	N589	3.23092	0	3.076491	0	
572	N590	3.440403	0	3.158583	0	
573	N591	3.649886	0	3.240674	0	
574	N592	3.85937	0	3.322765	0	
575	N593	2.805553	0	3.129371	0	
576	N594	3.001525	0	3.19367	0	
577	N595	3.197496	0	3.257968	0	
578	N596	3.393468	0	3.322266	0	
579	N597	3.58944	0	3.386565	0	
580	N598	3.785412	0	3.450863	0	
581	N599	2.799151	0	3.346434	0	
582	N600	2.981612	0	3.39294	0	
583	N601	3.164073	0	3.439445	0	
584	N602	3.346533	0	3.48595	0	
585	N603	3.528994	0	3.532456	0	
586	N604	3.711455	0	3.578961	0	
587	N605	2.79275	0	3.563497	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
588	N606	2.961699	0	3.592209	0	
589	N607	3.130649	0	3.620922	0	
590	N608	3.299599	0	3.649634	0	
591	N609	3.468548	0	3.678346	0	
592	N610	3.637498	0	3.707059	0	
593	N611	2.786348	0	3.78056	0	
594	N612	2.941787	0	3.791479	0	
595	N613	3.097225	0	3.802399	0	
596	N614	3.252664	0	3.813318	0	
597	N615	3.408102	0	3.824237	0	
598	N616	3.56354	0	3.835156	0	
599	N617	2.779947	0	3.997623	0	
600	N618	2.921874	0	3.990749	0	
601	N619	3.205729	0	3.977002	0	
602	N620	3.347656	0	3.970128	0	
603	N621	2.692577	0	2.468667	0	
604	N622	2.789792	0	2.341973	0	
605	N623	2.887008	0	2.215279	0	
606	N624	2.984224	0	2.088585	0	
607	N625	3.081439	0	1.961891	0	
608	N626	2.91048	0	2.570422	0	
609	N627	3.002604	0	2.445599	0	
610	N628	3.094728	0	2.320776	0	
611	N629	3.186852	0	2.195952	0	
612	N630	3.278976	0	2.071129	0	
613	N631	3.3711	0	1.946306	0	
614	N632	3.128382	0	2.672177	0	
615	N633	3.215415	0	2.549225	0	
616	N634	3.302448	0	2.426272	0	
617	N635	3.38948	0	2.303319	0	
618	N636	3.476513	0	2.180367	0	
619	N637	3.563546	0	2.057414	0	
620	N638	3.346285	0	2.773932	0	
621	N639	3.428226	0	2.65285	0	
622	N640	3.510167	0	2.531768	0	
623	N641	3.592109	0	2.410686	0	
624	N642	3.67405	0	2.289604	0	
625	N643	3.755991	0	2.168522	0	
626	N644	3.564188	0	2.875687	0	
627	N645	3.641038	0	2.756476	0	
628	N646	3.717887	0	2.637265	0	
629	N647	3.794737	0	2.518053	0	
630	N648	3.871587	0	2.398842	0	
631	N649	3.948436	0	2.279631	0	
632	N650	3.782091	0	2.977443	0	
633	N651	3.853849	0	2.860102	0	
634	N652	3.925607	0	2.742761	0	
635	N653	3.997365	0	2.62542	0	
636	N654	4.069123	0	2.50808	0	
637	N655	4.140882	0	2.390739	0	
638	N656	3.999993	0	3.079198	0	
639	N657	4.06666	0	2.963728	0	
640	N658	4.133327	0	2.848258	0	
641	N659	4.199993	0	2.732787	0	
642	N660	4.26666	0	2.617317	0	
643	N649A	3.13699	0	-1.907363	0	
644	N656A	3.22032	0	-1.763032	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
645	N677	3.55073	0	-1.953794	0	
646	N678	3.484648	0	-1.915641	0	
647	N679	3.418566	0	-1.877489	0	
648	N680	3.352484	0	-1.839337	0	
649	N681	3.286402	0	-1.801184	0	
650	N682	3.681823	0	-1.865597	0	
651	N683	3.613934	0	-1.825918	0	
652	N684	3.546045	0	-1.786238	0	
653	N685	3.478156	0	-1.746559	0	
654	N686	3.410267	0	-1.70688	0	
655	N687	3.342378	0	-1.6672	0	
656	N688	3.274488	0	-1.627521	0	
657	N689	3.746834	0	-1.739247	0	
658	N690	3.677138	0	-1.698041	0	
659	N691	3.607441	0	-1.656835	0	
660	N692	3.537745	0	-1.615629	0	
661	N693	3.468049	0	-1.574423	0	
662	N694	3.398353	0	-1.533217	0	
663	N695	3.328657	0	-1.49201	0	
664	N696	3.740341	0	-1.570165	0	
665	N697	3.668838	0	-1.527432	0	
666	N698	3.597335	0	-1.484699	0	
667	N699	3.525831	0	-1.441966	0	
668	N700	3.454328	0	-1.399233	0	
669	N701	3.382825	0	-1.3565	0	
670	N702	3.876855	0	-1.486549	0	
671	N703	3.803545	0	-1.442289	0	
672	N704	3.730234	0	-1.398029	0	
673	N705	3.656924	0	-1.353769	0	
674	N706	3.583614	0	-1.309509	0	
675	N707	3.510303	0	-1.265249	0	
676	N708	3.436993	0	-1.220989	0	
677	N709	3.941866	0	-1.360199	0	
678	N710	3.866749	0	-1.314412	0	
679	N711	3.791631	0	-1.268626	0	
680	N712	3.716513	0	-1.222839	0	
681	N713	3.641396	0	-1.177052	0	
682	N714	3.566278	0	-1.131265	0	
683	N715	3.491161	0	-1.085479	0	
684	N716	3.929952	0	-1.186536	0	
685	N717	3.853028	0	-1.139222	0	
686	N718	3.776103	0	-1.091909	0	
687	N719	3.699178	0	-1.044595	0	
688	N720	3.622254	0	-0.997282	0	
689	N721	3.566173	0	-0.79164	0	
690	N722	3.587018	0	-0.633312	0	
691	N723	3.607862	0	-0.474984	0	
692	N724	3.628706	0	-0.316656	0	
693	N725	3.64955	0	-0.158328	0	
694	N726	3.650459	0	-0.844283	0	
695	N727	3.678664	0	-0.691285	0	
696	N728	3.70687	0	-0.538287	0	
697	N729	3.735075	0	-0.385289	0	
698	N730	3.763281	0	-0.23229	0	
699	N731	3.791486	0	-0.079292	0	
700	N732	3.734745	0	-0.896927	0	
701	N733	3.770311	0	-0.749258	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
702	N734	3.805878	0	-0.60159	0	
703	N735	3.841444	0	-0.453921	0	
704	N736	3.877011	0	-0.306253	0	
705	N737	3.912577	0	-0.158584	0	
706	N738	3.81903	0	-0.94957	0	
707	N739	3.861958	0	-0.807231	0	
708	N740	3.904885	0	-0.664893	0	
709	N741	3.947813	0	-0.522554	0	
710	N742	3.990741	0	-0.380215	0	
711	N743	4.033668	0	-0.237876	0	
712	N744	3.903316	0	-1.002213	0	
713	N745	3.953605	0	-0.865204	0	
714	N746	4.003893	0	-0.728196	0	
715	N747	4.054182	0	-0.591187	0	
716	N748	4.104471	0	-0.454178	0	
717	N749	4.154759	0	-0.317169	0	
718	N750	3.987602	0	-1.054857	0	
719	N751	4.045252	0	-0.923178	0	
720	N752	4.102901	0	-0.791498	0	
721	N753	4.160551	0	-0.659819	0	
722	N754	4.218201	0	-0.52814	0	
723	N755	4.27585	0	-0.396461	0	
724	N756	4.071888	0	-1.1075	0	
725	N757	4.136898	0	-0.981151	0	
726	N758	4.26692	0	-0.728452	0	
727	N759	4.331931	0	-0.602102	0	
728	N760	3.64955	0	0.158328	0	
729	N761	3.628706	0	0.316656	0	
730	N762	3.607862	0	0.474984	0	
731	N763	3.587018	0	0.633312	0	
732	N764	3.566173	0	0.79164	0	
733	N765	3.784951	0	0.073706	0	
734	N766	3.778416	0	0.226704	0	
735	N767	3.771881	0	0.379703	0	
736	N768	3.765345	0	0.532701	0	
737	N769	3.75881	0	0.685699	0	
738	N770	3.752275	0	0.838697	0	
739	N771	3.920351	0	-0.010916	0	
740	N772	3.928125	0	0.136753	0	
741	N773	3.935899	0	0.284421	0	
742	N774	3.943673	0	0.43209	0	
743	N775	3.951447	0	0.579758	0	
744	N776	3.959221	0	0.727427	0	
745	N777	4.055751	0	-0.095538	0	
746	N778	4.077835	0	0.046801	0	
747	N779	4.099918	0	0.18914	0	
748	N780	4.122001	0	0.331478	0	
749	N781	4.144084	0	0.473817	0	
750	N782	4.166167	0	0.616156	0	
751	N783	4.191152	0	-0.18016	0	
752	N784	4.227544	0	-0.043151	0	
753	N785	4.263936	0	0.093858	0	
754	N786	4.300329	0	0.230867	0	
755	N787	4.336721	0	0.367876	0	
756	N788	4.373114	0	0.504885	0	
757	N789	4.326552	0	-0.264782	0	
758	N790	4.377253	0	-0.133102	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
759	N791	4.427955	0	-0.001423	0	
760	N792	4.478657	0	0.130256	0	
761	N793	4.529358	0	0.261935	0	
762	N794	4.58006	0	0.393615	0	
763	N795	4.461952	0	-0.349403	0	
764	N796	4.526963	0	-0.223054	0	
765	N797	4.656984	0	0.029645	0	
766	N798	4.721995	0	0.155994	0	
767	N799	3.743329	0	1.093145	0	
768	N800	3.941328	0	1.236321	0	
769	N801	4.139328	0	1.379498	0	
770	N802	4.337328	0	1.522674	0	
771	N803	4.535327	0	1.665851	0	
772	N804	3.92811	0	0.979069	0	
773	N805	4.103945	0	1.119441	0	
774	N806	4.27978	0	1.259813	0	
775	N807	4.455614	0	1.400185	0	
776	N808	4.631449	0	1.540557	0	
777	N809	4.807284	0	1.680929	0	
778	N810	4.112891	0	0.864994	0	
779	N811	4.266561	0	1.002562	0	
780	N812	4.420231	0	1.140129	0	
781	N813	4.573901	0	1.277697	0	
782	N814	4.727571	0	1.415264	0	
783	N815	4.881241	0	1.552832	0	
784	N816	4.297673	0	0.750919	0	
785	N817	4.429178	0	0.885682	0	
786	N818	4.560683	0	1.020445	0	
787	N819	4.692188	0	1.155208	0	
788	N820	4.823693	0	1.289971	0	
789	N821	4.955199	0	1.424734	0	
790	N822	4.482454	0	0.636844	0	
791	N823	4.591794	0	0.768802	0	
792	N824	4.701135	0	0.900761	0	
793	N825	4.810475	0	1.032719	0	
794	N826	4.919815	0	1.164678	0	
795	N827	5.029156	0	1.296636	0	
796	N828	4.667235	0	0.522768	0	
797	N829	4.754411	0	0.651922	0	
798	N830	4.841586	0	0.781076	0	
799	N831	4.928762	0	0.91023	0	
800	N832	5.015938	0	1.039384	0	
801	N833	5.103113	0	1.168538	0	
802	N834	4.852017	0	0.408693	0	
803	N835	4.917027	0	0.535043	0	
804	N836	5.047049	0	0.787742	0	
805	N837	5.11206	0	0.914091	0	
806	N838	3.484217	0	1.097506	0	
807	N839	3.423104	0	1.245045	0	
808	N840	3.361992	0	1.392583	0	
809	N841	3.30088	0	1.540121	0	
810	N842	3.239767	0	1.687659	0	
811	N843	3.681291	0	1.235338	0	
812	N844	3.619253	0	1.377532	0	
813	N845	3.557215	0	1.519725	0	
814	N846	3.495176	0	1.661919	0	
815	N847	3.433138	0	1.804112	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
816	N849	3.878365	0	1.37317	0	
817	N850	3.815401	0	1.510019	0	
818	N851	3.752437	0	1.646868	0	
819	N852	3.689473	0	1.783716	0	
820	N853	3.626509	0	1.920565	0	
821	N855	4.075438	0	1.511002	0	
822	N856	4.011549	0	1.642506	0	
823	N857	3.947659	0	1.77401	0	
824	N858	3.88377	0	1.905514	0	
825	N859	3.81988	0	2.037018	0	
826	N861	4.272512	0	1.648834	0	
827	N862	4.207697	0	1.774993	0	
828	N863	4.142882	0	1.901152	0	
829	N864	4.078067	0	2.027312	0	
830	N865	4.013251	0	2.153471	0	
831	N867	4.469586	0	1.786665	0	
832	N868	4.403845	0	1.90748	0	
833	N869	4.338104	0	2.028295	0	
834	N870	4.272363	0	2.14911	0	
835	N871	4.206622	0	2.269924	0	
836	N873	4.66666	0	1.924497	0	
837	N874	4.599993	0	2.039967	0	
838	N875	4.533327	0	2.155437	0	
839	N876	4.46666	0	2.270907	0	
840	N877	4.399993	0	2.386377	0	
841	N878	3.4674	0	-2.098126	0	
842	N879	3.401318	0	-2.059973	0	
843	N880	3.335236	0	-2.021821	0	
844	N881	3.269154	0	-1.983668	0	
845	N882	3.203072	0	-1.945516	0	
846	N883	3.456566	0	-2.255754	0	
847	N884	3.388258	0	-2.2168	0	
848	N885	3.31995	0	-2.177846	0	
849	N886	3.251642	0	-2.138892	0	
850	N887	3.183334	0	-2.099938	0	
851	N888	3.115027	0	-2.060984	0	
852	N889	3.046719	0	-2.02203	0	
853	N890	3.379649	0	-2.375229	0	
854	N891	3.309116	0	-2.335474	0	
855	N892	3.238582	0	-2.295718	0	
856	N893	3.168048	0	-2.255963	0	
857	N894	3.097515	0	-2.216207	0	
858	N895	3.026981	0	-2.176452	0	
859	N896	2.956447	0	-2.136696	0	
860	N897	3.229973	0	-2.454148	0	
861	N898	3.157214	0	-2.413591	0	
862	N899	3.084454	0	-2.373034	0	
863	N900	3.011695	0	-2.332477	0	
864	N901	2.938935	0	-2.291919	0	
865	N902	2.866176	0	-2.251362	0	
866	N903	3.225816	0	-2.614181	0	
867	N904	3.150831	0	-2.572822	0	
868	N905	3.075846	0	-2.531463	0	
869	N906	3.00086	0	-2.490105	0	
870	N907	2.925875	0	-2.448746	0	
871	N908	2.85089	0	-2.407387	0	
872	N909	2.775904	0	-2.366028	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
873	N910	3.1489	0	-2.733657	0	
874	N911	3.071689	0	-2.691496	0	
875	N912	2.994477	0	-2.649336	0	
876	N913	2.917266	0	-2.607176	0	
877	N914	2.840055	0	-2.565015	0	
878	N915	2.762844	0	-2.522855	0	
879	N916	2.685633	0	-2.480695	0	
880	N917	2.992546	0	-2.81017	0	
881	N918	2.913109	0	-2.767209	0	
882	N919	2.833672	0	-2.724247	0	
883	N920	2.754235	0	-2.681285	0	
884	N921	2.674798	0	-2.638323	0	
885	N922	2.468667	0	-2.692577	0	
886	N923	2.341973	0	-2.789792	0	
887	N924	2.215279	0	-2.887008	0	
888	N925	2.088585	0	-2.984224	0	
889	N926	1.961891	0	-3.081439	0	
890	N927	2.5564	0	-2.739249	0	
891	N928	2.438003	0	-2.840174	0	
892	N929	2.319605	0	-2.9411	0	
893	N930	2.201207	0	-3.042026	0	
894	N931	2.08281	0	-3.142951	0	
895	N932	1.964412	0	-3.243877	0	
896	N933	2.644134	0	-2.78592	0	
897	N934	2.534032	0	-2.890556	0	
898	N935	2.423931	0	-2.995192	0	
899	N936	2.313829	0	-3.099828	0	
900	N937	2.203728	0	-3.204463	0	
901	N938	2.093627	0	-3.309099	0	
902	N939	2.731867	0	-2.832592	0	
903	N940	2.630062	0	-2.940938	0	
904	N941	2.528257	0	-3.049284	0	
905	N942	2.426451	0	-3.157629	0	
906	N943	2.324646	0	-3.265975	0	
907	N944	2.222841	0	-3.374321	0	
908	N945	2.8196	0	-2.879264	0	
909	N946	2.726091	0	-2.99132	0	
910	N947	2.632582	0	-3.103376	0	
911	N948	2.539074	0	-3.215431	0	
912	N949	2.445565	0	-3.327487	0	
913	N950	2.352056	0	-3.439543	0	
914	N951	2.907334	0	-2.925936	0	
915	N952	2.822121	0	-3.041702	0	
916	N953	2.736908	0	-3.157467	0	
917	N954	2.651696	0	-3.273233	0	
918	N955	2.566483	0	-3.388999	0	
919	N956	2.48127	0	-3.504765	0	
920	N957	2.995067	0	-2.972608	0	
921	N958	2.918151	0	-3.092084	0	
922	N959	2.764318	0	-3.331035	0	
923	N960	2.687401	0	-3.450511	0	
924	N961	1.687659	0	-3.239767	0	
925	N962	1.540121	0	-3.30088	0	
926	N963	1.392583	0	-3.361992	0	
927	N964	1.245045	0	-3.423104	0	
928	N965	1.097506	0	-3.484217	0	
929	N966	1.828644	0	-3.314717	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
930	N967	1.692876	0	-3.385556	0	
931	N968	1.557108	0	-3.456396	0	
932	N969	1.42134	0	-3.527235	0	
933	N970	1.285572	0	-3.598075	0	
934	N971	1.149804	0	-3.668914	0	
935	N972	1.969629	0	-3.389666	0	
936	N973	1.845631	0	-3.470232	0	
937	N974	1.721634	0	-3.550799	0	
938	N975	1.597636	0	-3.631366	0	
939	N976	1.473638	0	-3.711933	0	
940	N977	1.349641	0	-3.7925	0	
941	N978	2.110614	0	-3.464615	0	
942	N979	1.998386	0	-3.554909	0	
943	N980	1.886159	0	-3.645203	0	
944	N981	1.773932	0	-3.735497	0	
945	N982	1.661704	0	-3.825791	0	
946	N983	1.549477	0	-3.916085	0	
947	N984	2.251599	0	-3.539564	0	
948	N985	2.151142	0	-3.639585	0	
949	N986	2.050684	0	-3.739606	0	
950	N987	1.950227	0	-3.839628	0	
951	N988	1.84977	0	-3.939649	0	
952	N989	1.749313	0	-4.03967	0	
953	N990	2.392583	0	-3.614513	0	
954	N991	2.303897	0	-3.724261	0	
955	N992	2.21521	0	-3.83401	0	
956	N993	2.126523	0	-3.943758	0	
957	N994	2.037836	0	-4.053507	0	
958	N995	1.94915	0	-4.163255	0	
959	N996	2.533568	0	-3.689462	0	
960	N997	2.456652	0	-3.808938	0	
961	N998	2.302819	0	-4.047889	0	
962	N999	2.225902	0	-4.167365	0	
963	N1000	0.924973	0	-3.78839	0	
964	N1001	0.899979	0	-4.031451	0	
965	N1002	0.874984	0	-4.274512	0	
966	N1003	0.849989	0	-4.517573	0	
967	N1004	0.824995	0	-4.760634	0	
968	N1005	1.116156	0	-3.891378	0	
969	N1006	1.082508	0	-4.113841	0	
970	N1007	1.048859	0	-4.336305	0	
971	N1008	1.015211	0	-4.558768	0	
972	N1009	0.981563	0	-4.781231	0	
973	N1010	0.947915	0	-5.003695	0	
974	N1011	1.307339	0	-3.994365	0	
975	N1012	1.265037	0	-4.196231	0	
976	N1013	1.222735	0	-4.398097	0	
977	N1014	1.180433	0	-4.599963	0	
978	N1015	1.138131	0	-4.801829	0	
979	N1016	1.095829	0	-5.003695	0	
980	N1017	1.498521	0	-4.097353	0	
981	N1018	1.447566	0	-4.278621	0	
982	N1019	1.39661	0	-4.45989	0	
983	N1020	1.345655	0	-4.641158	0	
984	N1021	1.294699	0	-4.822426	0	
985	N1022	1.243744	0	-5.003695	0	
986	N1023	1.689704	0	-4.200341	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
987	N1024	1.630095	0	-4.361012	0	
988	N1025	1.570486	0	-4.521682	0	
989	N1026	1.510877	0	-4.682353	0	
990	N1027	1.451267	0	-4.843024	0	
991	N1028	1.391658	0	-5.003695	0	
992	N1029	1.880887	0	-4.303329	0	
993	N1030	1.812624	0	-4.443402	0	
994	N1031	1.744361	0	-4.583475	0	
995	N1032	1.676098	0	-4.723548	0	
996	N1033	1.607836	0	-4.863622	0	
997	N1034	1.539573	0	-5.003695	0	
998	N1035	2.07207	0	-4.406316	0	
999	N1036	1.995153	0	-4.525792	0	
1000	N1037	1.84132	0	-4.764743	0	
1001	N1038	1.764404	0	-4.884219	0	
1002	N1039	0.79164	0	-3.566173	0	
1003	N1040	0.633312	0	-3.587018	0	
1004	N1041	0.474984	0	-3.607862	0	
1005	N1042	0.316656	0	-3.628706	0	
1006	N1043	0.158328	0	-3.64955	0	
1007	N1044	0.770811	0	-3.80576	0	
1008	N1045	0.616649	0	-3.823131	0	
1009	N1046	0.462487	0	-3.840501	0	
1010	N1047	0.308324	0	-3.857871	0	
1011	N1048	0.154162	0	-3.875241	0	
1012	N1049	1e-14	0	-3.892611	0	
1013	N1050	0.749982	0	-4.045347	0	
1014	N1051	0.599986	0	-4.059243	0	
1015	N1052	0.449989	0	-4.07314	0	
1016	N1053	0.299993	0	-4.087036	0	
1017	N1054	0.149996	0	-4.100932	0	
1018	N1055	1e-14	0	-4.114828	0	
1019	N1056	0.729153	0	-4.284934	0	
1020	N1057	0.583323	0	-4.295356	0	
1021	N1058	0.437492	0	-4.305778	0	
1022	N1059	0.291661	0	-4.3162	0	
1023	N1060	0.145831	0	-4.326623	0	
1024	N1061	0	0	-4.337045	0	
1025	N1062	0.708324	0	-4.524521	0	
1026	N1063	0.56666	0	-4.531469	0	
1027	N1064	0.424995	0	-4.538417	0	
1028	N1065	0.28333	0	-4.545365	0	
1029	N1066	0.141665	0	-4.552313	0	
1030	N1067	0	0	-4.559261	0	
1031	N1068	0.687496	0	-4.764108	0	
1032	N1069	0.549996	0	-4.767582	0	
1033	N1070	0.412497	0	-4.771056	0	
1034	N1071	0.274998	0	-4.77453	0	
1035	N1072	0.137499	0	-4.778004	0	
1036	N1073	0	0	-4.781478	0	
1037	N1074	0.666667	0	-5.003695	0	
1038	N1075	0.533333	0	-5.003695	0	
1039	N1076	.4	0	-5.003695	0	
1040	N1077	0.266667	0	-5.003695	0	
1041	N1078	0.133333	0	-5.003695	0	
1042	N1083	-3.22032	0	-1.763032	0	
1043	N1090	-3.13699	0	-1.907363	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1044	N1111	-3.4674	0	-2.098126	0	
1045	N1112	-3.401318	0	-2.059973	0	
1046	N1113	-3.335236	0	-2.021821	0	
1047	N1114	-3.269154	0	-1.983668	0	
1048	N1115	-3.203072	0	-1.945516	0	
1049	N1116	-3.456566	0	-2.255754	0	
1050	N1117	-3.388258	0	-2.2168	0	
1051	N1118	-3.31995	0	-2.177846	0	
1052	N1119	-3.251642	0	-2.138892	0	
1053	N1120	-3.183334	0	-2.099938	0	
1054	N1121	-3.115027	0	-2.060984	0	
1055	N1122	-3.046719	0	-2.02203	0	
1056	N1123	-3.379649	0	-2.375229	0	
1057	N1124	-3.309116	0	-2.335474	0	
1058	N1125	-3.238582	0	-2.295718	0	
1059	N1126	-3.168048	0	-2.255963	0	
1060	N1127	-3.097515	0	-2.216207	0	
1061	N1128	-3.026981	0	-2.176452	0	
1062	N1129	-2.956447	0	-2.136696	0	
1063	N1130	-3.229973	0	-2.454148	0	
1064	N1131	-3.157214	0	-2.413591	0	
1065	N1132	-3.084454	0	-2.373034	0	
1066	N1133	-3.011695	0	-2.332477	0	
1067	N1134	-2.938935	0	-2.291919	0	
1068	N1135	-2.866176	0	-2.251362	0	
1069	N1136	-3.225816	0	-2.614181	0	
1070	N1137	-3.150831	0	-2.572822	0	
1071	N1138	-3.075846	0	-2.531463	0	
1072	N1139	-3.00086	0	-2.490105	0	
1073	N1140	-2.925875	0	-2.448746	0	
1074	N1141	-2.85089	0	-2.407387	0	
1075	N1142	-2.775904	0	-2.366028	0	
1076	N1143	-3.1489	0	-2.733657	0	
1077	N1144	-3.071689	0	-2.691496	0	
1078	N1145	-2.994477	0	-2.649336	0	
1079	N1146	-2.917266	0	-2.607176	0	
1080	N1147	-2.840055	0	-2.565015	0	
1081	N1148	-2.762844	0	-2.522855	0	
1082	N1149	-2.685633	0	-2.480695	0	
1083	N1150	-2.992546	0	-2.81017	0	
1084	N1151	-2.913109	0	-2.767209	0	
1085	N1152	-2.833672	0	-2.724247	0	
1086	N1153	-2.754235	0	-2.681285	0	
1087	N1154	-2.674798	0	-2.638323	0	
1088	N1155	-2.468667	0	-2.692577	0	
1089	N1156	-2.341973	0	-2.789792	0	
1090	N1157	-2.215279	0	-2.887008	0	
1091	N1158	-2.088585	0	-2.984224	0	
1092	N1159	-1.961891	0	-3.081439	0	
1093	N1160	-2.5564	0	-2.739249	0	
1094	N1161	-2.438003	0	-2.840174	0	
1095	N1162	-2.319605	0	-2.9411	0	
1096	N1163	-2.201207	0	-3.042026	0	
1097	N1164	-2.08281	0	-3.142951	0	
1098	N1165	-1.964412	0	-3.243877	0	
1099	N1166	-2.644134	0	-2.78592	0	
1100	N1167	-2.534032	0	-2.890556	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1101	N1168	-2.423931	0	-2.995192	0	
1102	N1169	-2.313829	0	-3.099828	0	
1103	N1170	-2.203728	0	-3.204463	0	
1104	N1171	-2.093627	0	-3.309099	0	
1105	N1172	-2.731867	0	-2.832592	0	
1106	N1173	-2.630062	0	-2.940938	0	
1107	N1174	-2.528257	0	-3.049284	0	
1108	N1175	-2.426451	0	-3.157629	0	
1109	N1176	-2.324646	0	-3.265975	0	
1110	N1177	-2.222841	0	-3.374321	0	
1111	N1178	-2.8196	0	-2.879264	0	
1112	N1179	-2.726091	0	-2.99132	0	
1113	N1180	-2.632582	0	-3.103376	0	
1114	N1181	-2.539074	0	-3.215431	0	
1115	N1182	-2.445565	0	-3.327487	0	
1116	N1183	-2.352056	0	-3.439543	0	
1117	N1184	-2.907334	0	-2.925936	0	
1118	N1185	-2.822121	0	-3.041702	0	
1119	N1186	-2.736908	0	-3.157467	0	
1120	N1187	-2.651696	0	-3.273233	0	
1121	N1188	-2.566483	0	-3.388999	0	
1122	N1189	-2.48127	0	-3.504765	0	
1123	N1190	-2.995067	0	-2.972608	0	
1124	N1191	-2.918151	0	-3.092084	0	
1125	N1192	-2.764318	0	-3.331035	0	
1126	N1193	-2.687401	0	-3.450511	0	
1127	N1194	-1.687659	0	-3.239767	0	
1128	N1195	-1.540121	0	-3.30088	0	
1129	N1196	-1.392583	0	-3.361992	0	
1130	N1197	-1.245045	0	-3.423104	0	
1131	N1198	-1.097506	0	-3.484217	0	
1132	N1199	-1.828644	0	-3.314717	0	
1133	N1200	-1.692876	0	-3.385556	0	
1134	N1201	-1.557108	0	-3.456396	0	
1135	N1202	-1.42134	0	-3.527235	0	
1136	N1203	-1.285572	0	-3.598075	0	
1137	N1204	-1.149804	0	-3.668914	0	
1138	N1205	-1.969629	0	-3.389666	0	
1139	N1206	-1.845631	0	-3.470232	0	
1140	N1207	-1.721634	0	-3.550799	0	
1141	N1208	-1.597636	0	-3.631366	0	
1142	N1209	-1.473638	0	-3.711933	0	
1143	N1210	-1.349641	0	-3.7925	0	
1144	N1211	-2.110614	0	-3.464615	0	
1145	N1212	-1.998386	0	-3.554909	0	
1146	N1213	-1.886159	0	-3.645203	0	
1147	N1214	-1.773932	0	-3.735497	0	
1148	N1215	-1.661704	0	-3.825791	0	
1149	N1216	-1.549477	0	-3.916085	0	
1150	N1217	-2.251599	0	-3.539564	0	
1151	N1218	-2.151142	0	-3.639585	0	
1152	N1219	-2.050684	0	-3.739606	0	
1153	N1220	-1.950227	0	-3.839628	0	
1154	N1221	-1.84977	0	-3.939649	0	
1155	N1222	-1.749313	0	-4.03967	0	
1156	N1223	-2.392583	0	-3.614513	0	
1157	N1224	-2.303897	0	-3.724261	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1158	N1225	-2.21521	0	-3.83401	0	
1159	N1226	-2.126523	0	-3.943758	0	
1160	N1227	-2.037836	0	-4.053507	0	
1161	N1228	-1.94915	0	-4.163255	0	
1162	N1229	-2.533568	0	-3.689462	0	
1163	N1230	-2.456652	0	-3.808938	0	
1164	N1231	-2.302819	0	-4.047889	0	
1165	N1232	-2.225902	0	-4.167365	0	
1166	N1233	-0.924973	0	-3.78839	0	
1167	N1234	-0.899979	0	-4.031451	0	
1168	N1235	-0.874984	0	-4.274512	0	
1169	N1236	-0.849989	0	-4.517573	0	
1170	N1237	-0.824995	0	-4.760634	0	
1171	N1238	-1.116156	0	-3.891378	0	
1172	N1239	-1.082508	0	-4.113841	0	
1173	N1240	-1.048859	0	-4.336305	0	
1174	N1241	-1.015211	0	-4.558768	0	
1175	N1242	-0.981563	0	-4.781231	0	
1176	N1243	-0.947915	0	-5.003695	0	
1177	N1244	-1.307339	0	-3.994365	0	
1178	N1245	-1.265037	0	-4.196231	0	
1179	N1246	-1.222735	0	-4.398097	0	
1180	N1247	-1.180433	0	-4.599963	0	
1181	N1248	-1.138131	0	-4.801829	0	
1182	N1249	-1.095829	0	-5.003695	0	
1183	N1250	-1.498521	0	-4.097353	0	
1184	N1251	-1.447566	0	-4.278621	0	
1185	N1252	-1.39661	0	-4.45989	0	
1186	N1253	-1.345655	0	-4.641158	0	
1187	N1254	-1.294699	0	-4.822426	0	
1188	N1255	-1.243744	0	-5.003695	0	
1189	N1256	-1.689704	0	-4.200341	0	
1190	N1257	-1.630095	0	-4.361012	0	
1191	N1258	-1.570486	0	-4.521682	0	
1192	N1259	-1.510877	0	-4.682353	0	
1193	N1260	-1.451267	0	-4.843024	0	
1194	N1261	-1.391658	0	-5.003695	0	
1195	N1262	-1.880887	0	-4.303329	0	
1196	N1263	-1.812624	0	-4.443402	0	
1197	N1264	-1.744361	0	-4.583475	0	
1198	N1265	-1.676098	0	-4.723548	0	
1199	N1266	-1.607836	0	-4.863622	0	
1200	N1267	-1.539573	0	-5.003695	0	
1201	N1268	-2.07207	0	-4.406316	0	
1202	N1269	-1.995153	0	-4.525792	0	
1203	N1270	-1.84132	0	-4.764743	0	
1204	N1271	-1.764404	0	-4.884219	0	
1205	N1272	-0.79164	0	-3.566173	0	
1206	N1273	-0.633312	0	-3.587018	0	
1207	N1274	-0.474984	0	-3.607862	0	
1208	N1275	-0.316656	0	-3.628706	0	
1209	N1276	-0.158328	0	-3.64955	0	
1210	N1277	-0.770811	0	-3.80576	0	
1211	N1278	-0.616649	0	-3.823131	0	
1212	N1279	-0.462487	0	-3.840501	0	
1213	N1280	-0.308324	0	-3.857871	0	
1214	N1281	-0.154162	0	-3.875241	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1215	N1283	-0.749982	0	-4.045347	0	
1216	N1284	-0.599986	0	-4.059243	0	
1217	N1285	-0.449989	0	-4.07314	0	
1218	N1286	-0.299993	0	-4.087036	0	
1219	N1287	-0.149996	0	-4.100932	0	
1220	N1289	-0.729153	0	-4.284934	0	
1221	N1290	-0.583323	0	-4.295356	0	
1222	N1291	-0.437492	0	-4.305778	0	
1223	N1292	-0.291661	0	-4.3162	0	
1224	N1293	-0.145831	0	-4.326623	0	
1225	N1295	-0.708324	0	-4.524521	0	
1226	N1296	-0.56666	0	-4.531469	0	
1227	N1297	-0.424995	0	-4.538417	0	
1228	N1298	-0.28333	0	-4.545365	0	
1229	N1299	-0.141665	0	-4.552313	0	
1230	N1301	-0.687496	0	-4.764108	0	
1231	N1302	-0.549996	0	-4.767582	0	
1232	N1303	-0.412497	0	-4.771056	0	
1233	N1304	-0.274998	0	-4.77453	0	
1234	N1305	-0.137499	0	-4.778004	0	
1235	N1307	-0.666667	0	-5.003695	0	
1236	N1308	-0.533333	0	-5.003695	0	
1237	N1309	-.4	0	-5.003695	0	
1238	N1310	-0.266667	0	-5.003695	0	
1239	N1311	-0.133333	0	-5.003695	0	
1240	N1312	-3.55073	0	-1.953794	0	
1241	N1313	-3.484648	0	-1.915641	0	
1242	N1314	-3.418566	0	-1.877489	0	
1243	N1315	-3.352484	0	-1.839337	0	
1244	N1316	-3.286402	0	-1.801184	0	
1245	N1317	-3.681823	0	-1.865597	0	
1246	N1318	-3.613934	0	-1.825918	0	
1247	N1319	-3.546045	0	-1.786238	0	
1248	N1320	-3.478156	0	-1.746559	0	
1249	N1321	-3.410267	0	-1.70688	0	
1250	N1322	-3.342378	0	-1.6672	0	
1251	N1323	-3.274488	0	-1.627521	0	
1252	N1324	-3.746834	0	-1.739247	0	
1253	N1325	-3.677138	0	-1.698041	0	
1254	N1326	-3.607441	0	-1.656835	0	
1255	N1327	-3.537745	0	-1.615629	0	
1256	N1328	-3.468049	0	-1.574423	0	
1257	N1329	-3.398353	0	-1.533217	0	
1258	N1330	-3.328657	0	-1.49201	0	
1259	N1331	-3.740341	0	-1.570165	0	
1260	N1332	-3.668838	0	-1.527432	0	
1261	N1333	-3.597335	0	-1.484699	0	
1262	N1334	-3.525831	0	-1.441966	0	
1263	N1335	-3.454328	0	-1.399233	0	
1264	N1336	-3.382825	0	-1.3565	0	
1265	N1337	-3.876855	0	-1.486549	0	
1266	N1338	-3.803545	0	-1.442289	0	
1267	N1339	-3.730234	0	-1.398029	0	
1268	N1340	-3.656924	0	-1.353769	0	
1269	N1341	-3.583614	0	-1.309509	0	
1270	N1342	-3.510303	0	-1.265249	0	
1271	N1343	-3.436993	0	-1.220989	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1272	N1344	-3.941866	0	-1.360199	0	
1273	N1345	-3.866749	0	-1.314412	0	
1274	N1346	-3.791631	0	-1.268626	0	
1275	N1347	-3.716513	0	-1.222839	0	
1276	N1348	-3.641396	0	-1.177052	0	
1277	N1349	-3.566278	0	-1.131265	0	
1278	N1350	-3.491161	0	-1.085479	0	
1279	N1351	-3.929952	0	-1.186536	0	
1280	N1352	-3.853028	0	-1.139222	0	
1281	N1353	-3.776103	0	-1.091909	0	
1282	N1354	-3.699178	0	-1.044595	0	
1283	N1355	-3.622254	0	-0.997282	0	
1284	N1356	-3.566173	0	-0.79164	0	
1285	N1357	-3.587018	0	-0.633312	0	
1286	N1358	-3.607862	0	-0.474984	0	
1287	N1359	-3.628706	0	-0.316656	0	
1288	N1360	-3.64955	0	-0.158328	0	
1289	N1361	-3.650459	0	-0.844283	0	
1290	N1362	-3.678664	0	-0.691285	0	
1291	N1363	-3.70687	0	-0.538287	0	
1292	N1364	-3.735075	0	-0.385289	0	
1293	N1365	-3.763281	0	-0.23229	0	
1294	N1366	-3.791486	0	-0.079292	0	
1295	N1367	-3.734745	0	-0.896927	0	
1296	N1368	-3.770311	0	-0.749258	0	
1297	N1369	-3.805878	0	-0.60159	0	
1298	N1370	-3.841444	0	-0.453921	0	
1299	N1371	-3.877011	0	-0.306253	0	
1300	N1372	-3.912577	0	-0.158584	0	
1301	N1373	-3.81903	0	-0.94957	0	
1302	N1374	-3.861958	0	-0.807231	0	
1303	N1375	-3.904885	0	-0.664893	0	
1304	N1376	-3.947813	0	-0.522554	0	
1305	N1377	-3.990741	0	-0.380215	0	
1306	N1378	-4.033668	0	-0.237876	0	
1307	N1379	-3.903316	0	-1.002213	0	
1308	N1380	-3.953605	0	-0.865204	0	
1309	N1381	-4.003893	0	-0.728196	0	
1310	N1382	-4.054182	0	-0.591187	0	
1311	N1383	-4.104471	0	-0.454178	0	
1312	N1384	-4.154759	0	-0.317169	0	
1313	N1385	-3.987602	0	-1.054857	0	
1314	N1386	-4.045252	0	-0.923178	0	
1315	N1387	-4.102901	0	-0.791498	0	
1316	N1388	-4.160551	0	-0.659819	0	
1317	N1389	-4.218201	0	-0.52814	0	
1318	N1390	-4.27585	0	-0.396461	0	
1319	N1391	-4.071888	0	-1.1075	0	
1320	N1392	-4.136898	0	-0.981151	0	
1321	N1393	-4.26692	0	-0.728452	0	
1322	N1394	-4.331931	0	-0.602102	0	
1323	N1395	-3.64955	0	0.158328	0	
1324	N1396	-3.628706	0	0.316656	0	
1325	N1397	-3.607862	0	0.474984	0	
1326	N1398	-3.587018	0	0.633312	0	
1327	N1399	-3.566173	0	0.79164	0	
1328	N1400	-3.784951	0	0.073706	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1329	N1401	-3.778416	0	0.226704	0	
1330	N1402	-3.771881	0	0.379703	0	
1331	N1403	-3.765345	0	0.532701	0	
1332	N1404	-3.75881	0	0.685699	0	
1333	N1405	-3.752275	0	0.838697	0	
1334	N1406	-3.920351	0	-0.010916	0	
1335	N1407	-3.928125	0	0.136753	0	
1336	N1408	-3.935899	0	0.284421	0	
1337	N1409	-3.943673	0	0.43209	0	
1338	N1410	-3.951447	0	0.579758	0	
1339	N1411	-3.959221	0	0.727427	0	
1340	N1412	-4.055751	0	-0.095538	0	
1341	N1413	-4.077835	0	0.046801	0	
1342	N1414	-4.099918	0	0.18914	0	
1343	N1415	-4.122001	0	0.331478	0	
1344	N1416	-4.144084	0	0.473817	0	
1345	N1417	-4.166167	0	0.616156	0	
1346	N1418	-4.191152	0	-0.18016	0	
1347	N1419	-4.227544	0	-0.043151	0	
1348	N1420	-4.263936	0	0.093858	0	
1349	N1421	-4.300329	0	0.230867	0	
1350	N1422	-4.336721	0	0.367876	0	
1351	N1423	-4.373114	0	0.504885	0	
1352	N1424	-4.326552	0	-0.264782	0	
1353	N1425	-4.377253	0	-0.133102	0	
1354	N1426	-4.427955	0	-0.001423	0	
1355	N1427	-4.478657	0	0.130256	0	
1356	N1428	-4.529358	0	0.261935	0	
1357	N1429	-4.58006	0	0.393615	0	
1358	N1430	-4.461952	0	-0.349403	0	
1359	N1431	-4.526963	0	-0.223054	0	
1360	N1432	-4.656984	0	0.029645	0	
1361	N1433	-4.721995	0	0.155994	0	
1362	N1434	-3.743329	0	1.093145	0	
1363	N1435	-3.941328	0	1.236321	0	
1364	N1436	-4.139328	0	1.379498	0	
1365	N1437	-4.337328	0	1.522674	0	
1366	N1438	-4.535327	0	1.665851	0	
1367	N1439	-3.92811	0	0.979069	0	
1368	N1440	-4.103945	0	1.119441	0	
1369	N1441	-4.27978	0	1.259813	0	
1370	N1442	-4.455614	0	1.400185	0	
1371	N1443	-4.631449	0	1.540557	0	
1372	N1444	-4.807284	0	1.680929	0	
1373	N1445	-4.112891	0	0.864994	0	
1374	N1446	-4.266561	0	1.002562	0	
1375	N1447	-4.420231	0	1.140129	0	
1376	N1448	-4.573901	0	1.277697	0	
1377	N1449	-4.727571	0	1.415264	0	
1378	N1450	-4.881241	0	1.552832	0	
1379	N1451	-4.297673	0	0.750919	0	
1380	N1452	-4.429178	0	0.885682	0	
1381	N1453	-4.560683	0	1.020445	0	
1382	N1454	-4.692188	0	1.155208	0	
1383	N1455	-4.823693	0	1.289971	0	
1384	N1456	-4.955199	0	1.424734	0	
1385	N1457	-4.482454	0	0.636844	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1386	N1458	-4.591794	0	0.768802	0	
1387	N1459	-4.701135	0	0.900761	0	
1388	N1460	-4.810475	0	1.032719	0	
1389	N1461	-4.919815	0	1.164678	0	
1390	N1462	-5.029156	0	1.296636	0	
1391	N1463	-4.667235	0	0.522768	0	
1392	N1464	-4.754411	0	0.651922	0	
1393	N1465	-4.841586	0	0.781076	0	
1394	N1466	-4.928762	0	0.91023	0	
1395	N1467	-5.015938	0	1.039384	0	
1396	N1468	-5.103113	0	1.168538	0	
1397	N1469	-4.852017	0	0.408693	0	
1398	N1470	-4.917027	0	0.535043	0	
1399	N1471	-5.047049	0	0.787742	0	
1400	N1472	-5.11206	0	0.914091	0	
1401	N1473	-3.484217	0	1.097506	0	
1402	N1474	-3.423104	0	1.245045	0	
1403	N1475	-3.361992	0	1.392583	0	
1404	N1476	-3.30088	0	1.540121	0	
1405	N1477	-3.239767	0	1.687659	0	
1406	N1478	-3.681291	0	1.235338	0	
1407	N1479	-3.619253	0	1.377532	0	
1408	N1480	-3.557215	0	1.519725	0	
1409	N1481	-3.495176	0	1.661919	0	
1410	N1482	-3.433138	0	1.804112	0	
1411	N1484	-3.878365	0	1.37317	0	
1412	N1485	-3.815401	0	1.510019	0	
1413	N1486	-3.752437	0	1.646868	0	
1414	N1487	-3.689473	0	1.783716	0	
1415	N1488	-3.626509	0	1.920565	0	
1416	N1490	-4.075438	0	1.511002	0	
1417	N1491	-4.011549	0	1.642506	0	
1418	N1492	-3.947659	0	1.77401	0	
1419	N1493	-3.88377	0	1.905514	0	
1420	N1494	-3.81988	0	2.037018	0	
1421	N1496	-4.272512	0	1.648834	0	
1422	N1497	-4.207697	0	1.774993	0	
1423	N1498	-4.142882	0	1.901152	0	
1424	N1499	-4.078067	0	2.027312	0	
1425	N1500	-4.013251	0	2.153471	0	
1426	N1502	-4.469586	0	1.786665	0	
1427	N1503	-4.403845	0	1.90748	0	
1428	N1504	-4.338104	0	2.028295	0	
1429	N1505	-4.272363	0	2.14911	0	
1430	N1506	-4.206622	0	2.269924	0	
1431	N1508	-4.66666	0	1.924497	0	
1432	N1509	-4.599993	0	2.039967	0	
1433	N1510	-4.533327	0	2.155437	0	
1434	N1511	-4.46666	0	2.270907	0	
1435	N1512	-4.399993	0	2.386377	0	
1436	N1438A	0.08333	0	3.544891	0	
1437	N1439A	-0.08333	0	3.544891	0	
1438	N1440A	0.08333	0.208333	4.378224	0	
1439	N1441A	-0.08333	0.208333	4.378224	0	
1440	N1442A	0.08333	0.208333	3.544891	0	
1441	N1443A	-0.08333	0.208333	3.544891	0	
1442	N1444A	-0.08333	0.208333	4.05192	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1443	N1445A	-0.08333	0.208333	3.975615	0	
1444	N1446A	-0.08333	0.208333	3.823005	0	
1445	N1447A	-0.08333	0.208333	3.7467	0	
1446	N1448A	0.08333	0.208333	4.05192	0	
1447	N1449A	0.08333	0.208333	3.975615	0	
1448	N1450A	0.08333	0.208333	3.89931	0	
1449	N1451A	0.08333	0.208333	3.823005	0	
1450	N1452A	0.08333	0.208333	3.7467	0	
1451	N1455A	0.08333	.5	3.670395	0	
1452	N1456A	0.08333	.5	4.128224	0	
1453	N1457A	-0.08333	.5	4.128224	0	
1454	N1458A	-0.08333	.5	3.670395	0	
1455	N1459A	-0.08333	.5	4.05192	0	
1456	N1460A	-0.08333	.5	3.975615	0	
1457	N1461A	-0.08333	.5	3.823005	0	
1458	N1462A	-0.08333	.5	3.7467	0	
1459	N1463A	0.08333	.5	4.05192	0	
1460	N1464A	0.08333	.5	3.975615	0	
1461	N1465A	0.08333	.5	3.89931	0	
1462	N1466A	0.08333	.5	3.823005	0	
1463	N1467A	0.08333	.5	3.7467	0	
1464	N1466B	0.08333	-0.3333	3.670395	0	
1465	N1467B	0.08333	-0.3333	4.128224	0	
1466	N1468A	0.08333	-0.3333	4.05192	0	
1467	N1469A	0.08333	-0.3333	3.975615	0	
1468	N1470A	0.08333	-0.3333	3.89931	0	
1469	N1471A	0.08333	-0.3333	3.823005	0	
1470	N1472A	0.08333	-0.3333	3.7467	0	
1471	N1473A	0.08333	.5	3.798422	0	
1472	N1474A	0.08333	.5	3.925171	0	
1473	N1475A	0.08333	.375	3.544916	0	
1474	N1476A	0.08333	.375	3.671667	0	
1475	N1477A	0.08333	.375	3.798418	0	
1476	N1478A	0.08333	.375	3.925169	0	
1477	N1479A	0.08333	.375	4.05192	0	
1478	N1480A	0.08333	.25	3.544908	0	
1479	N1481A	0.08333	.25	3.671661	0	
1480	N1482A	0.08333	.25	3.798414	0	
1481	N1483	0.08333	.25	3.925167	0	
1482	N1484A	0.08333	.25	4.05192	0	
1483	N1485A	0.08333	.125	3.5449	0	
1484	N1486A	0.08333	.125	3.671655	0	
1485	N1487A	0.08333	.125	3.79841	0	
1486	N1488A	0.08333	.125	3.925165	0	
1487	N1489	0.08333	.125	4.05192	0	
1488	N1490A	0.08333	0	3.798405	0	
1489	N1491A	0.08333	0	3.925162	0	
1490	N1492A	0.08333	.5	4.296648	0	
1491	N1493A	0.08333	.5	4.215072	0	
1492	N1494A	0.08333	0.427083	4.378224	0	
1493	N1495	0.08333	0.427083	4.296648	0	
1494	N1496A	0.08333	0.427083	4.215072	0	
1495	N1497A	0.08333	0.427083	4.133496	0	
1496	N1498A	0.08333	0.427083	4.05192	0	
1497	N1499A	0.08333	0.354166	4.378224	0	
1498	N1500A	0.08333	0.354166	4.296648	0	
1499	N1501	0.08333	0.354166	4.215072	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1500	N1502A	0.08333	0.354166	4.133496	0	
1501	N1503A	0.08333	0.354166	4.05192	0	
1502	N1504A	0.08333	0.28125	4.378224	0	
1503	N1505A	0.08333	0.28125	4.296648	0	
1504	N1506A	0.08333	0.28125	4.215072	0	
1505	N1507	0.08333	0.28125	4.133496	0	
1506	N1508A	0.08333	0.28125	4.05192	0	
1507	N1509A	0.08333	0.208333	4.296648	0	
1508	N1510A	0.08333	0.208333	4.215072	0	
1509	N1511A	0.08333	0.072925	4.378224	0	
1510	N1512A	0.08333	-0.062483	4.378224	0	
1511	N1513	0.08333	-0.197892	4.378224	0	
1512	N1514	0.08333	0.072925	4.296648	0	
1513	N1515	0.08333	-0.062483	4.296648	0	
1514	N1516	0.08333	-0.197892	4.296648	0	
1515	N1517	0.08333	-0.3333	4.296648	0	
1516	N1518	0.08333	0.072925	4.215072	0	
1517	N1519	0.08333	-0.062483	4.215072	0	
1518	N1520	0.08333	-0.197892	4.215072	0	
1519	N1521	0.08333	-0.3333	4.215072	0	
1520	N1522	0.08333	0.072925	4.133496	0	
1521	N1523	0.08333	-0.062483	4.133496	0	
1522	N1524	0.08333	-0.197892	4.133496	0	
1523	N1525	0.08333	0.072925	4.05192	0	
1524	N1526	0.08333	-0.062483	4.05192	0	
1525	N1527	0.08333	-0.197892	4.05192	0	
1526	N1528	0.08333	-0.3333	3.925171	0	
1527	N1529	0.08333	-0.3333	3.798422	0	
1528	N1530	0.08333	-0.249975	4.05192	0	
1529	N1531	0.08333	-0.249975	3.925169	0	
1530	N1532	0.08333	-0.249975	3.798418	0	
1531	N1533	0.08333	-0.249975	3.671667	0	
1532	N1534	0.08333	-0.249975	3.544916	0	
1533	N1535	0.08333	-0.16665	4.05192	0	
1534	N1536	0.08333	-0.16665	3.925167	0	
1535	N1537	0.08333	-0.16665	3.798414	0	
1536	N1538	0.08333	-0.16665	3.671661	0	
1537	N1539	0.08333	-0.16665	3.544908	0	
1538	N1540	0.08333	-0.083325	4.05192	0	
1539	N1541	0.08333	-0.083325	3.925165	0	
1540	N1542	0.08333	-0.083325	3.79841	0	
1541	N1543	0.08333	-0.083325	3.671655	0	
1542	N1544	0.08333	-0.083325	3.5449	0	
1543	N1563	-0.08333	0.208333	3.89931	0	
1544	N1570	-0.08333	.5	3.89931	0	
1545	N1573	-0.08333	-0.3333	3.670395	0	
1546	N1574	-0.08333	-0.3333	4.128224	0	
1547	N1575	-0.08333	-0.3333	4.05192	0	
1548	N1576	-0.08333	-0.3333	3.975615	0	
1549	N1577	-0.08333	-0.3333	3.89931	0	
1550	N1578	-0.08333	-0.3333	3.823005	0	
1551	N1579	-0.08333	-0.3333	3.7467	0	
1552	N1580	-0.08333	.5	3.798422	0	
1553	N1581	-0.08333	.5	3.925171	0	
1554	N1582	-0.08333	.375	3.544916	0	
1555	N1583	-0.08333	.375	3.671667	0	
1556	N1584	-0.08333	.375	3.798418	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1557	N1585	-0.08333	.375	3.925169	0	
1558	N1586	-0.08333	.375	4.05192	0	
1559	N1587	-0.08333	.25	3.544908	0	
1560	N1588	-0.08333	.25	3.671661	0	
1561	N1589	-0.08333	.25	3.798414	0	
1562	N1590	-0.08333	.25	3.925167	0	
1563	N1591	-0.08333	.25	4.05192	0	
1564	N1592	-0.08333	.125	3.5449	0	
1565	N1593	-0.08333	.125	3.671655	0	
1566	N1594	-0.08333	.125	3.79841	0	
1567	N1595	-0.08333	.125	3.925165	0	
1568	N1596	-0.08333	.125	4.05192	0	
1569	N1597	-0.08333	0	3.798405	0	
1570	N1598	-0.08333	0	3.925162	0	
1571	N1599	-0.08333	.5	4.296648	0	
1572	N1600	-0.08333	.5	4.215072	0	
1573	N1601	-0.08333	0.427083	4.378224	0	
1574	N1602	-0.08333	0.427083	4.296648	0	
1575	N1603	-0.08333	0.427083	4.215072	0	
1576	N1604	-0.08333	0.427083	4.133496	0	
1577	N1605	-0.08333	0.427083	4.05192	0	
1578	N1606	-0.08333	0.354166	4.378224	0	
1579	N1607	-0.08333	0.354166	4.296648	0	
1580	N1608	-0.08333	0.354166	4.215072	0	
1581	N1609	-0.08333	0.354166	4.133496	0	
1582	N1610	-0.08333	0.354166	4.05192	0	
1583	N1611	-0.08333	0.28125	4.378224	0	
1584	N1612	-0.08333	0.28125	4.296648	0	
1585	N1613	-0.08333	0.28125	4.215072	0	
1586	N1614	-0.08333	0.28125	4.133496	0	
1587	N1615	-0.08333	0.28125	4.05192	0	
1588	N1616	-0.08333	0.208333	4.296648	0	
1589	N1617	-0.08333	0.208333	4.215072	0	
1590	N1618	-0.08333	0.072925	4.378224	0	
1591	N1619	-0.08333	-0.062483	4.378224	0	
1592	N1620	-0.08333	-0.197892	4.378224	0	
1593	N1621	-0.08333	0.072925	4.296648	0	
1594	N1622	-0.08333	-0.062483	4.296648	0	
1595	N1623	-0.08333	-0.197892	4.296648	0	
1596	N1624	-0.08333	-0.3333	4.296648	0	
1597	N1625	-0.08333	0.072925	4.215072	0	
1598	N1626	-0.08333	-0.062483	4.215072	0	
1599	N1627	-0.08333	-0.197892	4.215072	0	
1600	N1628	-0.08333	-0.3333	4.215072	0	
1601	N1629	-0.08333	0.072925	4.133496	0	
1602	N1630	-0.08333	-0.062483	4.133496	0	
1603	N1631	-0.08333	-0.197892	4.133496	0	
1604	N1632	-0.08333	0.072925	4.05192	0	
1605	N1633	-0.08333	-0.062483	4.05192	0	
1606	N1634	-0.08333	-0.197892	4.05192	0	
1607	N1635	-0.08333	-0.3333	3.925171	0	
1608	N1636	-0.08333	-0.3333	3.798422	0	
1609	N1637	-0.08333	-0.249975	4.05192	0	
1610	N1638	-0.08333	-0.249975	3.925169	0	
1611	N1639	-0.08333	-0.249975	3.798418	0	
1612	N1640	-0.08333	-0.249975	3.671667	0	
1613	N1641	-0.08333	-0.249975	3.544916	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1614	N1642	-0.08333	-0.16665	4.05192	0	
1615	N1643	-0.08333	-0.16665	3.925167	0	
1616	N1644	-0.08333	-0.16665	3.798414	0	
1617	N1645	-0.08333	-0.16665	3.671661	0	
1618	N1646	-0.08333	-0.16665	3.544908	0	
1619	N1647	-0.08333	-0.083325	4.05192	0	
1620	N1648	-0.08333	-0.083325	3.925165	0	
1621	N1649	-0.08333	-0.083325	3.79841	0	
1622	N1650	-0.08333	-0.083325	3.671655	0	
1623	N1651	-0.08333	-0.083325	3.5449	0	
1624	N1636A	3.02833	-0.3333	-1.844628	0	
1625	N1637A	3.11166	-0.3333	-1.700296	0	
1626	N1638A	3.02833	.5	-1.844628	0	
1627	N1639A	3.11166	.5	-1.700296	0	
1628	N1646A	3.028301	0	-1.844612	0	
1629	N1647A	3.111631	0	-1.70028	0	
1630	N1648A	3.749989	0.208333	-2.261278	0	
1631	N1649A	3.833319	0.208333	-2.116946	0	
1632	N1650A	3.028301	0.208333	-1.844612	0	
1633	N1651A	3.55073	0.208333	-1.953794	0	
1634	N1652	3.4674	0.208333	-2.098126	0	
1635	N1653	3.401318	0.208333	-2.059973	0	
1636	N1654	3.335236	0.208333	-2.021821	0	
1637	N1655	3.269154	0.208333	-1.983668	0	
1638	N1656	3.203072	0.208333	-1.945516	0	
1639	N1657	3.13699	.5	-1.907363	0	
1640	N1658	3.533482	.5	-2.136278	0	
1641	N1659	3.616812	.5	-1.991946	0	
1642	N1660	3.22032	.5	-1.763032	0	
1643	N1661	3.55073	.5	-1.953794	0	
1644	N1662	3.4674	.5	-2.098126	0	
1645	N1663	3.401318	.5	-2.059973	0	
1646	N1664	3.335236	.5	-2.021821	0	
1647	N1665	3.269154	.5	-1.983668	0	
1648	N1666	3.203072	.5	-1.945516	0	
1649	N1667	3.13699	-0.3333	-1.907363	0	
1650	N1668	3.533482	-0.3333	-2.136278	0	
1651	N1669	3.4674	-0.3333	-2.098126	0	
1652	N1670	3.401318	-0.3333	-2.059973	0	
1653	N1671	3.335236	-0.3333	-2.021821	0	
1654	N1672	3.269154	-0.3333	-1.983668	0	
1655	N1673	3.203072	-0.3333	-1.945516	0	
1656	N1674	3.247865	.5	-1.971377	0	
1657	N1675	3.357633	.5	-2.034751	0	
1658	N1676	3.028322	.375	-1.844624	0	
1659	N1677	3.138092	.375	-1.907999	0	
1660	N1678	3.247861	.375	-1.971375	0	
1661	N1679	3.357631	.375	-2.03475	0	
1662	N1680	3.4674	.375	-2.098126	0	
1663	N1681	3.028315	.25	-1.84462	0	
1664	N1682	3.138087	.25	-1.907996	0	
1665	N1683	3.247858	.25	-1.971373	0	
1666	N1684	3.357629	.25	-2.034749	0	
1667	N1685	3.4674	.25	-2.098126	0	
1668	N1686	3.028308	.125	-1.844616	0	
1669	N1687	3.138081	.125	-1.907993	0	
1670	N1688	3.247854	.125	-1.971371	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1671	N1689	3.357627	.125	-2.034748	0	
1672	N1690	3.4674	.125	-2.098126	0	
1673	N1691	3.247851	0	-1.971369	0	
1674	N1692	3.357625	0	-2.034747	0	
1675	N1693	3.679341	.5	-2.22049	0	
1676	N1694	3.608694	.5	-2.179702	0	
1677	N1695	3.749989	0.427083	-2.261278	0	
1678	N1696	3.679341	0.427083	-2.22049	0	
1679	N1697	3.608694	0.427083	-2.179702	0	
1680	N1698	3.538047	0.427083	-2.138914	0	
1681	N1699	3.4674	0.427083	-2.098126	0	
1682	N1700	3.749989	0.354166	-2.261278	0	
1683	N1701	3.679341	0.354166	-2.22049	0	
1684	N1702	3.608694	0.354166	-2.179702	0	
1685	N1703	3.538047	0.354166	-2.138914	0	
1686	N1704	3.4674	0.354166	-2.098126	0	
1687	N1705	3.749989	0.28125	-2.261278	0	
1688	N1706	3.679341	0.28125	-2.22049	0	
1689	N1707	3.608694	0.28125	-2.179702	0	
1690	N1708	3.538047	0.28125	-2.138914	0	
1691	N1709	3.4674	0.28125	-2.098126	0	
1692	N1710	3.679341	0.208333	-2.22049	0	
1693	N1711	3.608694	0.208333	-2.179702	0	
1694	N1712	3.749989	0.072925	-2.261278	0	
1695	N1713	3.749989	-0.062483	-2.261278	0	
1696	N1714	3.749989	-0.197892	-2.261278	0	
1697	N1715	3.679341	0.072925	-2.22049	0	
1698	N1716	3.679341	-0.062483	-2.22049	0	
1699	N1717	3.679341	-0.197892	-2.22049	0	
1700	N1718	3.679341	-0.3333	-2.22049	0	
1701	N1719	3.608694	0.072925	-2.179702	0	
1702	N1720	3.608694	-0.062483	-2.179702	0	
1703	N1721	3.608694	-0.197892	-2.179702	0	
1704	N1722	3.608694	-0.3333	-2.179702	0	
1705	N1723	3.538047	0.072925	-2.138914	0	
1706	N1724	3.538047	-0.062483	-2.138914	0	
1707	N1725	3.538047	-0.197892	-2.138914	0	
1708	N1726	3.4674	0.072925	-2.098126	0	
1709	N1727	3.4674	-0.062483	-2.098126	0	
1710	N1728	3.4674	-0.197892	-2.098126	0	
1711	N1729	3.357633	-0.3333	-2.034751	0	
1712	N1730	3.247865	-0.3333	-1.971377	0	
1713	N1731	3.4674	-0.249975	-2.098126	0	
1714	N1732	3.357631	-0.249975	-2.03475	0	
1715	N1733	3.247861	-0.249975	-1.971375	0	
1716	N1734	3.138092	-0.249975	-1.907999	0	
1717	N1735	3.028322	-0.249975	-1.844624	0	
1718	N1736	3.4674	-0.16665	-2.098126	0	
1719	N1737	3.357629	-0.16665	-2.034749	0	
1720	N1738	3.247858	-0.16665	-1.971373	0	
1721	N1739	3.138087	-0.16665	-1.907996	0	
1722	N1740	3.028315	-0.16665	-1.84462	0	
1723	N1741	3.4674	-0.083325	-2.098126	0	
1724	N1742	3.357627	-0.083325	-2.034748	0	
1725	N1743	3.247854	-0.083325	-1.971371	0	
1726	N1744	3.138081	-0.083325	-1.907993	0	
1727	N1745	3.028308	-0.083325	-1.844616	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1728	N1746	3.418566	0.208333	-1.877489	0	
1729	N1747	3.418566	.5	-1.877489	0	
1730	N1748	3.22032	-0.3333	-1.763032	0	
1731	N1749	3.616812	-0.3333	-1.991946	0	
1732	N1750	3.55073	-0.3333	-1.953794	0	
1733	N1751	3.484648	-0.3333	-1.915641	0	
1734	N1752	3.418566	-0.3333	-1.877489	0	
1735	N1753	3.352484	-0.3333	-1.839337	0	
1736	N1754	3.286402	-0.3333	-1.801184	0	
1737	N1755	3.331195	.5	-1.827045	0	
1738	N1756	3.440963	.5	-1.890419	0	
1739	N1757	3.111652	.375	-1.700292	0	
1740	N1758	3.221422	.375	-1.763668	0	
1741	N1759	3.331191	.375	-1.827043	0	
1742	N1760	3.440961	.375	-1.890418	0	
1743	N1761	3.55073	.375	-1.953794	0	
1744	N1762	3.111645	.25	-1.700288	0	
1745	N1763	3.221417	.25	-1.763665	0	
1746	N1764	3.331188	.25	-1.827041	0	
1747	N1765	3.440959	.25	-1.890417	0	
1748	N1766	3.55073	.25	-1.953794	0	
1749	N1767	3.111638	.125	-1.700284	0	
1750	N1768	3.221411	.125	-1.763661	0	
1751	N1769	3.331184	.125	-1.827039	0	
1752	N1770	3.440957	.125	-1.890416	0	
1753	N1771	3.55073	.125	-1.953794	0	
1754	N1772	3.331181	0	-1.827037	0	
1755	N1773	3.440955	0	-1.890415	0	
1756	N1774	3.762671	.5	-2.076158	0	
1757	N1775	3.692024	.5	-2.03537	0	
1758	N1776	3.833319	0.427083	-2.116946	0	
1759	N1777	3.762671	0.427083	-2.076158	0	
1760	N1778	3.692024	0.427083	-2.03537	0	
1761	N1779	3.621377	0.427083	-1.994582	0	
1762	N1780	3.55073	0.427083	-1.953794	0	
1763	N1781	3.833319	0.354166	-2.116946	0	
1764	N1782	3.762671	0.354166	-2.076158	0	
1765	N1783	3.692024	0.354166	-2.03537	0	
1766	N1784	3.621377	0.354166	-1.994582	0	
1767	N1785	3.55073	0.354166	-1.953794	0	
1768	N1786	3.833319	0.28125	-2.116946	0	
1769	N1787	3.762671	0.28125	-2.076158	0	
1770	N1788	3.692024	0.28125	-2.03537	0	
1771	N1789	3.621377	0.28125	-1.994582	0	
1772	N1790	3.55073	0.28125	-1.953794	0	
1773	N1791	3.762671	0.208333	-2.076158	0	
1774	N1792	3.692024	0.208333	-2.03537	0	
1775	N1793	3.833319	0.072925	-2.116946	0	
1776	N1794	3.833319	-0.062483	-2.116946	0	
1777	N1795	3.833319	-0.197892	-2.116946	0	
1778	N1796	3.762671	0.072925	-2.076158	0	
1779	N1797	3.762671	-0.062483	-2.076158	0	
1780	N1798	3.762671	-0.197892	-2.076158	0	
1781	N1799	3.762671	-0.3333	-2.076158	0	
1782	N1800	3.692024	0.072925	-2.03537	0	
1783	N1801	3.692024	-0.062483	-2.03537	0	
1784	N1802	3.692024	-0.197892	-2.03537	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1785	N1803	3.692024	-0.3333	-2.03537	0	
1786	N1804	3.621377	0.072925	-1.994582	0	
1787	N1805	3.621377	-0.062483	-1.994582	0	
1788	N1806	3.621377	-0.197892	-1.994582	0	
1789	N1807	3.55073	0.072925	-1.953794	0	
1790	N1808	3.55073	-0.062483	-1.953794	0	
1791	N1809	3.55073	-0.197892	-1.953794	0	
1792	N1810	3.440963	-0.3333	-1.890419	0	
1793	N1811	3.331195	-0.3333	-1.827045	0	
1794	N1812	3.55073	-0.249975	-1.953794	0	
1795	N1813	3.440961	-0.249975	-1.890418	0	
1796	N1814	3.331191	-0.249975	-1.827043	0	
1797	N1815	3.221422	-0.249975	-1.763668	0	
1798	N1816	3.111652	-0.249975	-1.700292	0	
1799	N1817	3.55073	-0.16665	-1.953794	0	
1800	N1818	3.440959	-0.16665	-1.890417	0	
1801	N1819	3.331188	-0.16665	-1.827041	0	
1802	N1820	3.221417	-0.16665	-1.763665	0	
1803	N1821	3.111645	-0.16665	-1.700288	0	
1804	N1822	3.55073	-0.083325	-1.953794	0	
1805	N1823	3.440957	-0.083325	-1.890416	0	
1806	N1824	3.331184	-0.083325	-1.827039	0	
1807	N1825	3.221411	-0.083325	-1.763661	0	
1808	N1826	3.111638	-0.083325	-1.700284	0	
1809	N1837	-3.11166	-0.3333	-1.700296	0	
1810	N1838	-3.02833	-0.3333	-1.844628	0	
1811	N1839	-3.11166	.5	-1.700296	0	
1812	N1840	-3.02833	.5	-1.844628	0	
1813	N1847	-3.111631	0	-1.70028	0	
1814	N1848	-3.028301	0	-1.844612	0	
1815	N1849	-3.833319	0.208333	-2.116946	0	
1816	N1850	-3.749989	0.208333	-2.261278	0	
1817	N1851	-3.111631	0.208333	-1.70028	0	
1818	N1852	-3.4674	0.208333	-2.098126	0	
1819	N1853	-3.55073	0.208333	-1.953794	0	
1820	N1854	-3.484648	0.208333	-1.915641	0	
1821	N1855	-3.418566	0.208333	-1.877489	0	
1822	N1856	-3.352484	0.208333	-1.839337	0	
1823	N1857	-3.286402	0.208333	-1.801184	0	
1824	N1858	-3.22032	.5	-1.763032	0	
1825	N1859	-3.616812	.5	-1.991946	0	
1826	N1860	-3.533482	.5	-2.136278	0	
1827	N1861	-3.13699	.5	-1.907363	0	
1828	N1862	-3.4674	.5	-2.098126	0	
1829	N1863	-3.55073	.5	-1.953794	0	
1830	N1864	-3.484648	.5	-1.915641	0	
1831	N1865	-3.418566	.5	-1.877489	0	
1832	N1866	-3.352484	.5	-1.839337	0	
1833	N1867	-3.286402	.5	-1.801184	0	
1834	N1868	-3.22032	-0.3333	-1.763032	0	
1835	N1869	-3.616812	-0.3333	-1.991946	0	
1836	N1870	-3.55073	-0.3333	-1.953794	0	
1837	N1871	-3.484648	-0.3333	-1.915641	0	
1838	N1872	-3.418566	-0.3333	-1.877489	0	
1839	N1873	-3.352484	-0.3333	-1.839337	0	
1840	N1874	-3.286402	-0.3333	-1.801184	0	
1841	N1875	-3.331195	.5	-1.827045	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1842	N1876	-3.440963	.5	-1.890419	0	
1843	N1877	-3.111652	.375	-1.700292	0	
1844	N1878	-3.221422	.375	-1.763668	0	
1845	N1879	-3.331191	.375	-1.827043	0	
1846	N1880	-3.440961	.375	-1.890418	0	
1847	N1881	-3.55073	.375	-1.953794	0	
1848	N1882	-3.111645	.25	-1.700288	0	
1849	N1883	-3.221417	.25	-1.763665	0	
1850	N1884	-3.331188	.25	-1.827041	0	
1851	N1885	-3.440959	.25	-1.890417	0	
1852	N1886	-3.55073	.25	-1.953794	0	
1853	N1887	-3.111638	.125	-1.700284	0	
1854	N1888	-3.221411	.125	-1.763661	0	
1855	N1889	-3.331184	.125	-1.827039	0	
1856	N1890	-3.440957	.125	-1.890416	0	
1857	N1891	-3.55073	.125	-1.953794	0	
1858	N1892	-3.331181	0	-1.827037	0	
1859	N1893	-3.440955	0	-1.890415	0	
1860	N1894	-3.762671	.5	-2.076158	0	
1861	N1895	-3.692024	.5	-2.03537	0	
1862	N1896	-3.833319	0.427083	-2.116946	0	
1863	N1897	-3.762671	0.427083	-2.076158	0	
1864	N1898	-3.692024	0.427083	-2.03537	0	
1865	N1899	-3.621377	0.427083	-1.994582	0	
1866	N1900	-3.55073	0.427083	-1.953794	0	
1867	N1901	-3.833319	0.354166	-2.116946	0	
1868	N1902	-3.762671	0.354166	-2.076158	0	
1869	N1903	-3.692024	0.354166	-2.03537	0	
1870	N1904	-3.621377	0.354166	-1.994582	0	
1871	N1905	-3.55073	0.354166	-1.953794	0	
1872	N1906	-3.833319	0.28125	-2.116946	0	
1873	N1907	-3.762671	0.28125	-2.076158	0	
1874	N1908	-3.692024	0.28125	-2.03537	0	
1875	N1909	-3.621377	0.28125	-1.994582	0	
1876	N1910	-3.55073	0.28125	-1.953794	0	
1877	N1911	-3.762671	0.208333	-2.076158	0	
1878	N1912	-3.692024	0.208333	-2.03537	0	
1879	N1913	-3.833319	0.072925	-2.116946	0	
1880	N1914	-3.833319	-0.062483	-2.116946	0	
1881	N1915	-3.833319	-0.197892	-2.116946	0	
1882	N1916	-3.762671	0.072925	-2.076158	0	
1883	N1917	-3.762671	-0.062483	-2.076158	0	
1884	N1918	-3.762671	-0.197892	-2.076158	0	
1885	N1919	-3.762671	-0.3333	-2.076158	0	
1886	N1920	-3.692024	0.072925	-2.03537	0	
1887	N1921	-3.692024	-0.062483	-2.03537	0	
1888	N1922	-3.692024	-0.197892	-2.03537	0	
1889	N1923	-3.692024	-0.3333	-2.03537	0	
1890	N1924	-3.621377	0.072925	-1.994582	0	
1891	N1925	-3.621377	-0.062483	-1.994582	0	
1892	N1926	-3.621377	-0.197892	-1.994582	0	
1893	N1927	-3.55073	0.072925	-1.953794	0	
1894	N1928	-3.55073	-0.062483	-1.953794	0	
1895	N1929	-3.55073	-0.197892	-1.953794	0	
1896	N1930	-3.440963	-0.3333	-1.890419	0	
1897	N1931	-3.331195	-0.3333	-1.827045	0	
1898	N1932	-3.55073	-0.249975	-1.953794	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1899	N1933	-3.440961	-0.249975	-1.890418	0	
1900	N1934	-3.331191	-0.249975	-1.827043	0	
1901	N1935	-3.221422	-0.249975	-1.763668	0	
1902	N1936	-3.111652	-0.249975	-1.700292	0	
1903	N1937	-3.55073	-0.16665	-1.953794	0	
1904	N1938	-3.440959	-0.16665	-1.890417	0	
1905	N1939	-3.331188	-0.16665	-1.827041	0	
1906	N1940	-3.221417	-0.16665	-1.763665	0	
1907	N1941	-3.111645	-0.16665	-1.700288	0	
1908	N1942	-3.55073	-0.083325	-1.953794	0	
1909	N1943	-3.440957	-0.083325	-1.890416	0	
1910	N1944	-3.331184	-0.083325	-1.827039	0	
1911	N1945	-3.221411	-0.083325	-1.763661	0	
1912	N1946	-3.111638	-0.083325	-1.700284	0	
1913	N1947	-3.335236	0.208333	-2.021821	0	
1914	N1948	-3.335236	.5	-2.021821	0	
1915	N1949	-3.13699	-0.3333	-1.907363	0	
1916	N1950	-3.533482	-0.3333	-2.136278	0	
1917	N1951	-3.4674	-0.3333	-2.098126	0	
1918	N1952	-3.401318	-0.3333	-2.059973	0	
1919	N1953	-3.335236	-0.3333	-2.021821	0	
1920	N1954	-3.269154	-0.3333	-1.983668	0	
1921	N1955	-3.203072	-0.3333	-1.945516	0	
1922	N1956	-3.247865	.5	-1.971377	0	
1923	N1957	-3.357633	.5	-2.034751	0	
1924	N1958	-3.028322	.375	-1.844624	0	
1925	N1959	-3.138092	.375	-1.907999	0	
1926	N1960	-3.247861	.375	-1.971375	0	
1927	N1961	-3.357631	.375	-2.03475	0	
1928	N1962	-3.4674	.375	-2.098126	0	
1929	N1963	-3.028315	.25	-1.84462	0	
1930	N1964	-3.138087	.25	-1.907996	0	
1931	N1965	-3.247858	.25	-1.971373	0	
1932	N1966	-3.357629	.25	-2.034749	0	
1933	N1967	-3.4674	.25	-2.098126	0	
1934	N1968	-3.028308	.125	-1.844616	0	
1935	N1969	-3.138081	.125	-1.907993	0	
1936	N1970	-3.247854	.125	-1.971371	0	
1937	N1971	-3.357627	.125	-2.034748	0	
1938	N1972	-3.4674	.125	-2.098126	0	
1939	N1973	-3.247851	0	-1.971369	0	
1940	N1974	-3.357625	0	-2.034747	0	
1941	N1975	-3.679341	.5	-2.22049	0	
1942	N1976	-3.608694	.5	-2.179702	0	
1943	N1977	-3.749989	0.427083	-2.261278	0	
1944	N1978	-3.679341	0.427083	-2.22049	0	
1945	N1979	-3.608694	0.427083	-2.179702	0	
1946	N1980	-3.538047	0.427083	-2.138914	0	
1947	N1981	-3.4674	0.427083	-2.098126	0	
1948	N1982	-3.749989	0.354166	-2.261278	0	
1949	N1983	-3.679341	0.354166	-2.22049	0	
1950	N1984	-3.608694	0.354166	-2.179702	0	
1951	N1985	-3.538047	0.354166	-2.138914	0	
1952	N1986	-3.4674	0.354166	-2.098126	0	
1953	N1987	-3.749989	0.28125	-2.261278	0	
1954	N1988	-3.679341	0.28125	-2.22049	0	
1955	N1989	-3.608694	0.28125	-2.179702	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1956	N1990	-3.538047	0.28125	-2.138914	0	
1957	N1991	-3.4674	0.28125	-2.098126	0	
1958	N1992	-3.679341	0.208333	-2.22049	0	
1959	N1993	-3.608694	0.208333	-2.179702	0	
1960	N1994	-3.749989	0.072925	-2.261278	0	
1961	N1995	-3.749989	-0.062483	-2.261278	0	
1962	N1996	-3.749989	-0.197892	-2.261278	0	
1963	N1997	-3.679341	0.072925	-2.22049	0	
1964	N1998	-3.679341	-0.062483	-2.22049	0	
1965	N1999	-3.679341	-0.197892	-2.22049	0	
1966	N2000	-3.679341	-0.3333	-2.22049	0	
1967	N2001	-3.608694	0.072925	-2.179702	0	
1968	N2002	-3.608694	-0.062483	-2.179702	0	
1969	N2003	-3.608694	-0.197892	-2.179702	0	
1970	N2004	-3.608694	-0.3333	-2.179702	0	
1971	N2005	-3.538047	0.072925	-2.138914	0	
1972	N2006	-3.538047	-0.062483	-2.138914	0	
1973	N2007	-3.538047	-0.197892	-2.138914	0	
1974	N2008	-3.4674	0.072925	-2.098126	0	
1975	N2009	-3.4674	-0.062483	-2.098126	0	
1976	N2010	-3.4674	-0.197892	-2.098126	0	
1977	N2011	-3.357633	-0.3333	-2.034751	0	
1978	N2012	-3.247865	-0.3333	-1.971377	0	
1979	N2013	-3.4674	-0.249975	-2.098126	0	
1980	N2014	-3.357631	-0.249975	-2.03475	0	
1981	N2015	-3.247861	-0.249975	-1.971375	0	
1982	N2016	-3.138092	-0.249975	-1.907999	0	
1983	N2017	-3.028322	-0.249975	-1.844624	0	
1984	N2018	-3.4674	-0.16665	-2.098126	0	
1985	N2019	-3.357629	-0.16665	-2.034749	0	
1986	N2020	-3.247858	-0.16665	-1.971373	0	
1987	N2021	-3.138087	-0.16665	-1.907996	0	
1988	N2022	-3.028315	-0.16665	-1.84462	0	
1989	N2023	-3.4674	-0.083325	-2.098126	0	
1990	N2024	-3.357627	-0.083325	-2.034748	0	
1991	N2025	-3.247854	-0.083325	-1.971371	0	
1992	N2026	-3.138081	-0.083325	-1.907993	0	
1993	N2027	-3.028308	-0.083325	-1.844616	0	
1994	N2008A	-3.187111	-.333	-2.674303	0	
1995	N2009A	-3.120454	-.333	-2.618372	0	
1996	N2010A	-3.054218	-.333	-2.562793	0	
1997	N2011A	-2.988395	-.333	-2.507561	0	
1998	N2012A	-2.922978	-.333	-2.45267	0	
1999	N2013A	-2.857961	-.333	-2.398114	0	
2000	N2014A	-2.793335	-.333	-2.343887	0	
2001	N2036	-0.722459	-.333	4.09727	0	
2002	N2037	-0.70735	-.333	4.011579	0	
2003	N2038	-0.692335	-.333	3.926427	0	
2004	N2039	-0.677414	-.333	3.841807	0	
2005	N2040	-0.662585	-.333	3.757709	0	
2006	N2041	-0.647847	-.333	3.674123	0	
2007	N2042	-0.633198	-.333	3.591043	0	
2008	N2064	3.90957	-.333	-1.422967	0	
2009	N2065	3.827804	-.333	-1.393207	0	
2010	N2066	3.746553	-.333	-1.363634	0	
2011	N2067	3.66581	-.333	-1.334246	0	
2012	N2068	3.585564	-.333	-1.305039	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
2013	N2069	3.505808	-.333	-1.27601	0	
2014	N2070	3.426533	-.333	-1.247156	0	
2015	N2015A	-7.25	3	4.378224	0	
2016	N2016A	7.25	3	4.378224	0	
2017	N2017A	-1.362027	4.667	-1.142876	0	
2018	N2018A	5.75	3	4.378224	0	
2019	N2019A	5.75	3	4.668224	0	
2020	N2020A	-5.75	3	4.378224	0	
2021	N2021A	-5.75	3	4.668224	0	
2022	N2022A	-.25	3	4.378224	0	
2023	N2023A	-.25	3	4.668224	0	
2024	N2024A	7.416654	3	4.089572	0	
2025	N2025A	0.166654	3	-8.467796	0	
2026	N2026A	-0.308746	4.667	1.750988	0	
2027	N2027A	0.916654	3	-7.168758	0	
2028	N2028	1.167801	3	-7.313758	0	
2029	N2029	6.666654	3	2.790534	0	
2030	N2030	6.917801	3	2.645534	0	
2031	N2031	3.916654	3	-1.972606	0	
2032	N2032	4.167801	3	-2.117606	0	
2033	N2033	-0.166654	3	-8.467796	0	
2034	N2034	-7.416654	3	4.089572	0	
2035	N2035	1.670773	4.667	-0.608112	0	
2036	N2036A	-6.666654	3	2.790534	0	
2037	N2037A	-6.917801	3	2.645534	0	
2038	N2038A	-0.916654	3	-7.168758	0	
2039	N2039A	-1.167801	3	-7.313758	0	
2040	N2040A	-3.666654	3	-2.405619	0	
2041	N2041A	-3.917801	3	-2.550618	0	
2042	N2042A	-5.25	3	4.378224	0	
2043	N2043	5.25	3	4.378224	0	
2044	N2044	6.416654	3	2.357521	0	
2045	N2045	1.166654	3	-6.735746	0	
2046	N2046	-1.166654	3	-6.735746	0	
2047	N2047	-6.416654	3	2.357521	0	
2048	N2048	3.000001	3	4.378224	0	
2049	N2049	-3.	3	4.378224	0	
2050	N2051	2.291653	3	-4.787189	0	
2051	N2052	5.291654	3	0.408964	0	
2052	N2054	-5.291654	3	0.408964	0	
2053	N2055	-2.291653	3	-4.787189	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipes	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
2	Footrails	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
3	Plan Bracing	PL3/8x4	Beam	RECT	A36 Gr.36	Typical	1.5	.018	2	.066
4	Grating Angle	L2x2x4	Beam	Single Angle	A36 Gr.36	Typical	.944	.346	.346	.021
5	Standoff Arm	HSS4X4X4	Beam	SquareTube	A500 Gr....	Typical	3.37	7.8	7.8	12.8
6	N SR	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
7	N End conn	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
8	V Brace kit	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
9	N M Pipe	PIPE_2.0X	Beam	Pipe	A53 Gr.B	Typical	1.4	.827	.827	1.65

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E..Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65 .49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65 .49	50	1.1	65	1.1
3	A992	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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M36	N86	N1145A			HSS4X4X4	Beam	SquareTube	A500 Gr.B...	Typical
2	M60A	N1145A	N87			HSS4X4X4	Beam	SquareTube	A500 Gr.B...	Typical
3	MP1A	N1150B	N1151A			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
4	M64A	N1149B	N1152A			RIGID	None	None	RIGID	Typical
5	MP3A	N1150C	N1151B			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
6	M64B	N1149C	N1152B			RIGID	None	None	RIGID	Typical
7	MP2A	N1154A	N1155A			N M Pipe	Beam	Pipe	A53 Gr.B	Typical
8	M66A	N1153A	N1156A			RIGID	None	None	RIGID	Typical
9	M25	N1	N2			Footrails	Beam	Pipe	A53 Gr.B	Typical
10	M10	N31	N33			HSS4X4X4	Beam	SquareTube	A500 Gr.B...	Typical
11	M11	N33	N32			HSS4X4X4	Beam	SquareTube	A500 Gr.B...	Typical
12	MP1C	N35	N36			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
13	M13	N34	N37			RIGID	None	None	RIGID	Typical
14	MP3C	N39	N40			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
15	M15	N38	N41			RIGID	None	None	RIGID	Typical
16	MP2C	N43	N44			N M Pipe	Beam	Pipe	A53 Gr.B	Typical
17	M17	N42	N45			RIGID	None	None	RIGID	Typical
18	M18	N29	N30			Footrails	Beam	Pipe	A53 Gr.B	Typical
19	M19	N59	N61			HSS4X4X4	Beam	SquareTube	A500 Gr.B...	Typical
20	M20	N61	N60			HSS4X4X4	Beam	SquareTube	A500 Gr.B...	Typical
21	MP1B	N63	N64			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
22	M22	N62	N65			RIGID	None	None	RIGID	Typical
23	MP3B	N67	N68			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
24	M24	N66	N69			RIGID	None	None	RIGID	Typical
25	MP2B	N71	N72			N M Pipe	Beam	Pipe	A53 Gr.B	Typical
26	M26	N70	N73			RIGID	None	None	RIGID	Typical
27	M27	N57	N58			Footrails	Beam	Pipe	A53 Gr.B	Typical
28	M28	N75	N18			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
29	M29	N77	N20			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
30	M30	N19	N46			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
31	M31	N21	N48			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
32	M32	N47	N74			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
33	M33	N49	N76			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
34	M34	N114	N113			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
35	M35	N116	N117			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
36	M36A	N120	N119			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
37	M37	N122	N123			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
38	M38	N126	N125			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
39	M39	N128	N129			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
40	M40	N111	N110			RIGID	None	None	RIGID	Typical
41	M41	N136A	N135A			RIGID	None	None	RIGID	Typical
42	M42	N144	N143			RIGID	None	None	RIGID	Typical
43	M50	N216	N2008A			RIGID	None	None	RIGID	Typical
44	M51	N2008A	N1136			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
45	M52	N1143	N2008A			RIGID	None	None	RIGID	Typical
46	M53	N1130	N2009A			RIGID	None	None	RIGID	Typical
47	M54	N1144	N2009A			RIGID	None	None	RIGID	Typical
48	M55	N1142	N2014A			RIGID	None	None	RIGID	Typical
49	M56	N1141	N2013A			RIGID	None	None	RIGID	Typical
50	M57	N1140	N2012A			RIGID	None	None	RIGID	Typical
51	M58	N1139	N2011A			RIGID	None	None	RIGID	Typical
52	M59	N1138	N2010A			RIGID	None	None	RIGID	Typical
53	M60	N1137	N2009A			RIGID	None	None	RIGID	Typical
54	M61	N1145	N2010A			RIGID	None	None	RIGID	Typical
55	M62	N1146	N2011A			RIGID	None	None	RIGID	Typical
56	M63	N1147	N2012A			RIGID	None	None	RIGID	Typical
57	M64	N1148	N2013A			RIGID	None	None	RIGID	Typical
58	M65	N1149	N2014A			RIGID	None	None	RIGID	Typical
59	M66	N1131	N2010A			RIGID	None	None	RIGID	Typical
60	M67	N1132	N2011A			RIGID	None	None	RIGID	Typical
61	M68	N1133	N2012A			RIGID	None	None	RIGID	Typical
62	M69	N1134	N2013A			RIGID	None	None	RIGID	Typical
63	M70	N1135	N2014A			RIGID	None	None	RIGID	Typical
64	M71	N160	N2036			RIGID	None	None	RIGID	Typical
65	M72	N2036	N268			RIGID	None	None	RIGID	Typical
66	M73	N275	N2036			RIGID	None	None	RIGID	Typical
67	M74	N262	N2037			RIGID	None	None	RIGID	Typical
68	M75	N276	N2037			RIGID	None	None	RIGID	Typical
69	M76	N274	N2042			RIGID	None	None	RIGID	Typical
70	M77	N273	N2041			RIGID	None	None	RIGID	Typical
71	M78	N272	N2040			RIGID	None	None	RIGID	Typical
72	M79	N271	N2039			RIGID	None	None	RIGID	Typical
73	M80	N270	N2038			RIGID	None	None	RIGID	Typical
74	M81	N269	N2037			RIGID	None	None	RIGID	Typical
75	M82	N277	N2038			RIGID	None	None	RIGID	Typical
76	M83	N278	N2039			RIGID	None	None	RIGID	Typical
77	M84	N279	N2040			RIGID	None	None	RIGID	Typical
78	M85	N280	N2041			RIGID	None	None	RIGID	Typical
79	M86	N281	N2042			RIGID	None	None	RIGID	Typical
80	M87	N263	N2038			RIGID	None	None	RIGID	Typical
81	M88	N264	N2039			RIGID	None	None	RIGID	Typical
82	M89	N265	N2040			RIGID	None	None	RIGID	Typical
83	M90	N266	N2041			RIGID	None	None	RIGID	Typical
84	M91	N267	N2042			RIGID	None	None	RIGID	Typical
85	M92	N188	N2064			RIGID	None	None	RIGID	Typical
86	M93	N2064	N702			RIGID	None	None	RIGID	Typical
87	M94	N709	N2064			RIGID	None	None	RIGID	Typical
88	M95	N696	N2065			RIGID	None	None	RIGID	Typical
89	M96	N710	N2065			RIGID	None	None	RIGID	Typical
90	M97	N708	N2070			RIGID	None	None	RIGID	Typical
91	M98	N707	N2069			RIGID	None	None	RIGID	Typical
92	M99	N706	N2068			RIGID	None	None	RIGID	Typical
93	M100	N705	N2067			RIGID	None	None	RIGID	Typical
94	M101	N704	N2066			RIGID	None	None	RIGID	Typical
95	M102	N703	N2065			RIGID	None	None	RIGID	Typical
96	M103	N711	N2066			RIGID	None	None	RIGID	Typical
97	M104	N712	N2067			RIGID	None	None	RIGID	Typical
98	M105	N713	N2068			RIGID	None	None	RIGID	Typical
99	M106	N714	N2069			RIGID	None	None	RIGID	Typical
100	M107	N715	N2070			RIGID	None	None	RIGID	Typical
101	M108	N697	N2066			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
102	M109	N698	N2067			RIGID	None	None	RIGID	Typical
103	M110	N699	N2068			RIGID	None	None	RIGID	Typical
104	M111	N700	N2069			RIGID	None	None	RIGID	Typical
105	M112	N701	N2070			RIGID	None	None	RIGID	Typical
106	M106A	N2018A	N2019A			RIGID	None	None	RIGID	Typical
107	M107A	N2020A	N2021A			RIGID	None	None	RIGID	Typical
108	M108A	N2022A	N2023A			RIGID	None	None	RIGID	Typical
109	M109A	N2015A	N2016A			N SR	Beam	Pipe	A53 Gr.B	Typical
110	M110A	N2027A	N2028			RIGID	None	None	RIGID	Typical
111	M111A	N2029	N2030			RIGID	None	None	RIGID	Typical
112	M112A	N2031	N2032			RIGID	None	None	RIGID	Typical
113	M113	N2024A	N2025A			N SR	Beam	Pipe	A53 Gr.B	Typical
114	M114	N2036A	N2037A			RIGID	None	None	RIGID	Typical
115	M115	N2038A	N2039A			RIGID	None	None	RIGID	Typical
116	M116	N2040A	N2041A			RIGID	None	None	RIGID	Typical
117	M117	N2033	N2034			N SR	Beam	Pipe	A53 Gr.B	Typical
118	M118	N2047	N2042A			N End conn	Beam	Single Angle	A36 Gr.36	Typical
119	M119	N2043	N2044			N End conn	Beam	Single Angle	A36 Gr.36	Typical
120	M120	N2045	N2046			N End conn	Beam	Single Angle	A36 Gr.36	Typical
121	M121	N2026A	N2049			V Brace kit	Beam	Single Angle	A36 Gr.36	Typical
122	M122	N2026A	N2048			V Brace kit	Beam	Single Angle	A36 Gr.36	Typical
123	M123	N2035	N2052			V Brace kit	Beam	Single Angle	A36 Gr.36	Typical
124	M124	N2035	N2051			V Brace kit	Beam	Single Angle	A36 Gr.36	Typical
125	M125	N2017A	N2055			V Brace kit	Beam	Single Angle	A36 Gr.36	Typical
126	M126	N2017A	N2054			V Brace kit	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M36						Yes				None
2	M60A						Yes				None
3	MP1A						Yes				None
4	M64A						Yes	** NA **			None
5	MP3A						Yes				None
6	M64B						Yes	** NA **			None
7	MP2A						Yes				None
8	M66A						Yes	** NA **			None
9	M25						Yes				None
10	M10						Yes				None
11	M11						Yes				None
12	MP1C						Yes				None
13	M13						Yes	** NA **			None
14	MP3C						Yes				None
15	M15						Yes	** NA **			None
16	MP2C						Yes				None
17	M17						Yes	** NA **			None
18	M18						Yes				None
19	M19						Yes				None
20	M20						Yes				None
21	MP1B						Yes				None
22	M22						Yes	** NA **			None
23	MP3B						Yes				None
24	M24						Yes	** NA **			None
25	MP2B						Yes				None
26	M26						Yes	** NA **			None
27	M27						Yes				None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
28	M28						Yes				None
29	M29			2	2		Yes				None
30	M30						Yes				None
31	M31			2	2		Yes				None
32	M32						Yes				None
33	M33			2	2		Yes				None
34	M34						Yes				None
35	M35						Yes				None
36	M36A						Yes				None
37	M37						Yes				None
38	M38						Yes				None
39	M39						Yes				None
40	M40						Yes	** NA **			None
41	M41						Yes	** NA **			None
42	M42						Yes	** NA **			None
43	M50						Yes	** NA **			None
44	M51						Yes	** NA **			None
45	M52						Yes	** NA **			None
46	M53						Yes	** NA **			None
47	M54						Yes	** NA **			None
48	M55						Yes	** NA **			None
49	M56						Yes	** NA **			None
50	M57						Yes	** NA **			None
51	M58						Yes	** NA **			None
52	M59						Yes	** NA **			None
53	M60						Yes	** NA **			None
54	M61						Yes	** NA **			None
55	M62						Yes	** NA **			None
56	M63						Yes	** NA **			None
57	M64						Yes	** NA **			None
58	M65						Yes	** NA **			None
59	M66						Yes	** NA **			None
60	M67						Yes	** NA **			None
61	M68						Yes	** NA **			None
62	M69						Yes	** NA **			None
63	M70						Yes	** NA **			None
64	M71						Yes	** NA **			None
65	M72						Yes	** NA **			None
66	M73						Yes	** NA **			None
67	M74						Yes	** NA **			None
68	M75						Yes	** NA **			None
69	M76						Yes	** NA **			None
70	M77						Yes	** NA **			None
71	M78						Yes	** NA **			None
72	M79						Yes	** NA **			None
73	M80						Yes	** NA **			None
74	M81						Yes	** NA **			None
75	M82						Yes	** NA **			None
76	M83						Yes	** NA **			None
77	M84						Yes	** NA **			None
78	M85						Yes	** NA **			None
79	M86						Yes	** NA **			None
80	M87						Yes	** NA **			None
81	M88						Yes	** NA **			None
82	M89						Yes	** NA **			None
83	M90						Yes	** NA **			None
84	M91						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
85	M92						Yes	** NA **			None
86	M93						Yes	** NA **			None
87	M94						Yes	** NA **			None
88	M95						Yes	** NA **			None
89	M96						Yes	** NA **			None
90	M97						Yes	** NA **			None
91	M98						Yes	** NA **			None
92	M99						Yes	** NA **			None
93	M100						Yes	** NA **			None
94	M101						Yes	** NA **			None
95	M102						Yes	** NA **			None
96	M103						Yes	** NA **			None
97	M104						Yes	** NA **			None
98	M105						Yes	** NA **			None
99	M106						Yes	** NA **			None
100	M107						Yes	** NA **			None
101	M108						Yes	** NA **			None
102	M109						Yes	** NA **			None
103	M110						Yes	** NA **			None
104	M111						Yes	** NA **			None
105	M112						Yes	** NA **			None
106	M106A						Yes	** NA **			None
107	M107A						Yes	** NA **			None
108	M108A						Yes	** NA **			None
109	M109A						Yes				None
110	M110A						Yes	** NA **			None
111	M111A						Yes	** NA **			None
112	M112A						Yes	** NA **			None
113	M113						Yes				None
114	M114						Yes	** NA **			None
115	M115						Yes	** NA **			None
116	M116						Yes	** NA **			None
117	M117						Yes				None
118	M118						Yes				None
119	M119						Yes				None
120	M120						Yes				None
121	M121	BenPIN	BenPIN				Yes				None
122	M122	BenPIN	BenPIN				Yes				None
123	M123	BenPIN	BenPIN				Yes				None
124	M124	BenPIN	BenPIN				Yes				None
125	M125	BenPIN	BenPIN				Yes				None
126	M126	BenPIN	BenPIN				Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
1	M36	HSS4X4X4	1.5			Lbyy			2.1	2.1		Lateral
2	M60A	HSS4X4X4	2.167			Lbyy			2.1	2.1		Lateral
3	MP1A	Mount Pipes	6			Lbyy						Lateral
4	MP3A	Mount Pipes	6			Lbyy						Lateral
5	MP2A	N M Pipe	8			Lbyy						Lateral
6	M25	Footrails	14.5			Lbyy						Lateral
7	M10	HSS4X4X4	1.5			Lbyy			2.1	2.1		Lateral
8	M11	HSS4X4X4	2.167			Lbyy			2.1	2.1		Lateral
9	MP1C	Mount Pipes	6			Lbyy						Lateral
10	MP3C	Mount Pipes	6			Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
11	MP2C	N M Pipe	8			Lbyy						Lateral
12	M18	Footrails	14.5			Lbyy						Lateral
13	M19	HSS4X4X4	1.5			Lbyy			2.1	2.1		Lateral
14	M20	HSS4X4X4	2.167			Lbyy			2.1	2.1		Lateral
15	MP1B	Mount Pipes	6			Lbyy						Lateral
16	MP3B	Mount Pipes	6			Lbyy						Lateral
17	MP2B	N M Pipe	8			Lbyy						Lateral
18	M27	Footrails	14.5			Lbyy						Lateral
19	M28	Plan Bracing	1.542			Lbyy						Lateral
20	M29	Plan Bracing	4.333	Segment	Segment	Lbyy						Lateral
21	M30	Plan Bracing	1.542			Lbyy						Lateral
22	M31	Plan Bracing	4.333	Segment	Segment	Lbyy						Lateral
23	M32	Plan Bracing	1.542			Lbyy						Lateral
24	M33	Plan Bracing	4.333	Segment	Segment	Lbyy						Lateral
25	M34	Grating Angle	2.792			Lbyy						Lateral
26	M35	Grating Angle	2.792			Lbyy						Lateral
27	M36A	Grating Angle	2.792			Lbyy						Lateral
28	M37	Grating Angle	2.792			Lbyy						Lateral
29	M38	Grating Angle	2.792			Lbyy						Lateral
30	M39	Grating Angle	2.792			Lbyy						Lateral
31	M109A	N SR	14.5			Lbyy						Lateral
32	M113	N SR	14.5			Lbyy						Lateral
33	M117	N SR	14.5			Lbyy						Lateral
34	M118	N End conn	2.333			Lbyy						Lateral
35	M119	N End conn	2.333			Lbyy						Lateral
36	M120	N End conn	2.333			Lbyy						Lateral
37	M121	V Brace kit	4.114			Lbyy						Lateral
38	M122	V Brace kit	4.542			Lbyy						Lateral
39	M123	V Brace kit	4.114			Lbyy						Lateral
40	M124	V Brace kit	4.542			Lbyy						Lateral
41	M125	V Brace kit	4.114			Lbyy						Lateral
42	M126	V Brace kit	4.542			Lbyy						Lateral

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N86	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N31	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N59	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N2017A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N2026A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N2035	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N86	max	930.317	4	760.219	6	1741.69	1	1.867	7	1.853	1	.176	3
2		min	-1910.8	3	229.485	1	-2284.052	2	.592	4	-1.219	2	-.589	4
3	N31	max	1301.943	4	761.672	5	2154.747	1	-.397	1	1.484	4	-.378	2
4		min	-1286.417	3	218	2	-1028.273	2	-1.203	6	-.853	3	-1.483	5
5	N59	max	2595.945	4	766.823	8	1096.016	1	.106	1	1.861	2	1.75	7
6		min	-1632.565	3	196.183	3	-1667.679	2	-.747	6	-1.233	1	.681	4
7	N2017A	max	3341.619	8	2488.566	8	1846.582	5	.001	8	0	2	0	3
8		min	-145.39	3	107.576	3	-160.949	2	0	3	0	1	-.002	5
9	N2026A	max	452.353	4	2519.643	6	185.364	1	0	1	0	3	0	4
10		min	-524.257	3	-44.149	1	-3803.55	6	-.002	2	0	4	0	3

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
11	N2035	max	196.152	4	2493.331	7	1999.091	5	.001	3	0	1	.002	5
12		min	-3254.223	7	77.169	4	-109.174	2	0	4	0	2	0	4
13	Totals:	max	8128.995	4	9130.97	8	8291.513	1						
14		min	-8128.985	3	3888.586	3	-8291.517	2						

Envelope Member Section Forces

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
1	M36	1	max	1952.521	2	761.157	6	1344.041	2	-.075	4	1.853	1	1.423	8
2			min	-853.09	1	229.15	1	-1557.175	1	-1.309	7	-1.219	2	.53	3
3		2	max	1945.208	2	749.805	6	1335.325	2	-.075	4	1.271	1	1.157	8
4			min	-845.777	1	223.6	1	-1548.46	1	-1.309	7	-.716	2	.371	3
5		3	max	1937.895	2	738.453	6	1326.61	2	-.075	4	.798	3	.895	8
6			min	-838.464	1	218.05	1	-1539.745	1	-1.309	7	-.325	4	.215	3
7		4	max	1930.582	2	727.102	6	1317.895	2	-.075	4	.512	7	.641	5
8			min	-831.151	1	212.5	1	-1531.029	1	-1.309	7	.014	4	.045	2
9		5	max	1923.269	2	715.75	6	1309.179	2	-.075	4	.771	2	.432	1
10			min	-823.838	1	206.95	1	-1522.314	1	-1.309	7	-.456	1	-.135	2
11	M60A	1	max	1923.269	2	716.329	6	1308.779	2	-.075	4	.771	2	.432	1
12			min	-823.838	1	206.646	1	-1522.254	1	-1.309	7	-.456	1	-.135	2
13		2	max	646.658	7	526.871	6	1515.622	7	.209	1	.436	2	.13	6
14			min	5.043	4	77.69	1	-124.184	4	-.705	6	-.362	1	-.01	1
15		3	max	21.127	3	32.797	6	25.175	2	0	11	.014	1	.018	6
16			min	-21.127	1	16.022	4	-25.171	1	0	1	-.014	2	.009	4
17		4	max	10.563	3	16.4	6	12.586	2	0	11	.003	1	.004	6
18			min	-10.563	1	8.006	4	-12.582	1	0	1	-.003	2	.002	4
19		5	max	0	11	.003	2	.006	1	0	11	0	11	0	11
20			min	0	1	-.011	4	-.011	3	0	1	0	1	0	1
21	MP1A	1	max	0	11	.004	1	.002	1	0	11	0	11	0	11
22			min	0	1	-.009	6	-.026	6	0	1	0	1	0	1
23		2	max	35.481	4	266.81	2	7.789	10	.245	7	.037	1	.352	2
24			min	-292.972	7	-126.131	1	-41.915	8	.043	2	-.102	2	-.158	1
25		3	max	41.728	4	266.81	2	9.906	10	.245	7	.026	1	.066	3
26			min	-273.662	7	-126.131	1	-48.341	6	.043	2	-.153	6	-.084	4
27		4	max	-6.248	10	21.159	3	21.163	2	0	11	.016	1	.016	3
28			min	-19.31	5	-21.162	4	-21.163	1	0	1	-.016	2	-.016	4
29		5	max	0	11	.002	4	.002	5	0	11	0	11	0	11
30			min	0	1	-.014	7	-.002	3	0	1	0	1	0	1
31	M64A	1	max	213.354	1	115.173	4	221.115	3	.157	1	.287	8	.179	6
32			min	-244.331	2	-172.563	3	-365.556	4	-.315	2	.083	3	-.049	1
33		2	max	213.354	1	115.173	4	221.115	3	.157	1	.271	5	.183	6
34			min	-244.331	2	-172.563	3	-365.556	4	-.315	2	.099	3	-.039	1
35		3	max	213.354	1	115.173	4	221.115	3	.157	1	.262	5	.187	6
36			min	-244.331	2	-172.563	3	-365.556	4	-.315	2	.082	2	-.028	1
37		4	max	213.354	1	115.173	4	221.115	3	.157	1	.254	5	.19	6
38			min	-244.331	2	-172.563	3	-365.556	4	-.315	2	.063	2	-.018	1
39		5	max	213.354	1	115.173	4	221.115	3	.157	1	.245	7	.194	6
40			min	-244.331	2	-172.563	3	-365.556	4	-.315	2	.043	2	-.008	1
41	MP3A	1	max	170.271	8	140.015	4	193.651	1	0	11	0	11	0	11
42			min	79.32	1	-139.936	3	-193.776	2	0	1	0	1	0	1
43		2	max	40.835	2	114.281	1	120.288	9	-.053	3	.099	1	.176	1
44			min	-441.279	9	-409.154	9	-42.933	1	-.253	8	-.183	2	-.364	9
45		3	max	47.082	2	114.281	1	122.405	9	-.053	3	.051	1	.25	9
46			min	-435.031	9	-409.154	9	-29.117	3	-.253	8	-.141	2	-.072	4
47		4	max	-6.248	10	21.16	3	21.162	2	0	11	.016	1	.016	3
48			min	-19.31	5	-21.16	4	-21.166	1	0	1	-.016	2	-.016	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
49		5	max	0	11	.004	10	.004	9	0	11	0	11	0	11
50			min	0	1	-.014	9	-.017	6	0	1	0	1	0	1
51	M64B	1	max	214.211	1	138.971	2	409.292	9	.659	9	-.06	4	.153	6
52			min	-218.012	2	-343.09	9	-293.276	4	-.162	4	-.287	7	-.265	9
53		2	max	214.211	1	138.971	2	409.292	9	.659	9	-.081	4	.148	6
54			min	-218.012	2	-343.09	9	-293.276	4	-.162	4	-.273	7	-.24	9
55		3	max	214.211	1	138.971	2	409.292	9	.659	9	-.092	2	.144	6
56			min	-218.012	2	-343.09	9	-293.276	4	-.162	4	-.262	5	-.215	9
57		4	max	214.211	1	138.971	2	409.292	9	.659	9	-.076	2	.14	6
58			min	-218.012	2	-343.09	9	-293.276	4	-.162	4	-.257	5	-.191	9
59		5	max	214.211	1	138.971	2	409.292	9	.659	9	-.053	3	.136	6
60			min	-218.012	2	-343.09	9	-293.276	4	-.162	4	-.253	8	-.166	9
61	MP2A	1	max	0	11	.644	4	2.762	1	0	11	0	11	0	11
62			min	0	1	-.657	3	-2.472	2	0	1	0	1	0	1
63		2	max	314.898	8	288.266	4	632.178	1	0	11	1.086	1	.483	3
64			min	85.113	1	-288.279	3	-631.887	2	0	1	-1.085	2	-.483	4
65		3	max	225.347	1	307.903	4	761.714	6	.055	4	.337	1	.115	4
66			min	-549.802	2	-196.049	3	152.233	1	-.037	3	-.744	2	-.071	3
67		4	max	237.261	1	342.008	4	746.714	6	.055	4	1.06	5	.355	3
68			min	-537.889	2	-230.153	3	-629.471	1	-.037	3	-.178	2	-.535	4
69		5	max	0	11	.119	8	-.056	1	0	11	0	11	0	11
70			min	0	1	-.046	3	-.927	6	0	1	0	1	0	1
71	M66A	1	max	851.244	5	321.086	1	517.704	3	.262	3	.238	4	-.396	3
72			min	-217.762	2	-452.073	2	-629.788	4	-.442	4	-.187	3	-1.021	5
73		2	max	851.244	5	321.086	1	517.704	3	.262	3	.192	4	-.395	3
74			min	-217.762	2	-452.073	2	-629.788	4	-.442	4	-.15	3	-1.022	5
75		3	max	851.244	5	321.086	1	517.704	3	.262	3	.147	4	-.366	2
76			min	-217.762	2	-452.073	2	-629.788	4	-.442	4	-.112	3	-1.022	5
77		4	max	851.244	5	321.086	1	517.704	3	.262	3	.101	4	-.333	2
78			min	-217.762	2	-452.073	2	-629.788	4	-.442	4	-.075	3	-1.022	5
79		5	max	851.244	5	321.086	1	517.704	3	.262	3	.055	4	-.3	2
80			min	-217.762	2	-452.073	2	-629.788	4	-.442	4	-.037	3	-1.022	5
81	M25	1	max	0	11	0	11	0	11	0	11	0	11	0	11
82			min	0	1	-750	9	0	1	0	1	0	1	0	1
83		2	max	324.957	2	-5.172	4	140.516	2	.265	2	.319	2	.282	9
84			min	-411.71	1	-205.618	7	-354.849	1	-.075	1	-.598	1	-.112	2
85		3	max	737.736	6	650.676	10	111.442	2	-.225	4	.645	5	.572	2
86			min	15.55	4	-93.063	1	-369.605	1	-.553	5	-.139	2	-.507	10
87		4	max	318.127	2	98.874	2	340.97	1	.045	1	.336	2	.079	3
88			min	-368.834	1	-51.977	1	-151.273	2	-.278	6	-.563	1	-.199	4
89		5	max	0	11	0	11	0	11	0	11	0	11	0	11
90			min	0	1	0	1	0	1	0	1	0	1	0	1
91	M10	1	max	2203.368	1	762.629	5	1109.13	3	-.238	2	1.484	4	1.425	6
92			min	-1096.174	2	217.517	2	-1318.967	4	-1.269	5	-.853	3	.535	1
93		2	max	2200.829	1	751.277	5	1094.726	3	-.238	2	.992	4	1.166	6
94			min	-1093.635	2	211.967	2	-1304.564	4	-1.269	5	-.439	3	.343	1
95		3	max	2198.289	1	739.926	5	1080.322	3	-.238	2	.635	8	.912	6
96			min	-1091.095	2	206.417	2	-1290.16	4	-1.269	5	-.032	3	.152	1
97		4	max	2195.749	1	728.574	5	1065.919	3	-.238	2	.509	7	.662	6
98			min	-1088.555	2	200.867	2	-1275.756	4	-1.269	5	.024	4	-.035	1
99		5	max	2193.209	1	717.222	5	1051.515	3	-.238	2	.768	3	.519	2
100			min	-1086.015	2	195.317	2	-1261.352	4	-1.269	5	-.452	4	-.221	1
101	M11	1	max	2193.209	1	717.802	5	1051.21	3	-.238	2	.768	3	.519	2
102			min	-1086.015	2	194.841	2	-1261.355	4	-1.269	5	-.452	4	-.221	1
103		2	max	642.136	5	521.238	5	1486.343	8	.148	4	.401	3	.131	7
104			min	22.469	2	96.237	2	22.412	3	-.69	7	-.325	4	-.014	4
105		3	max	7.337	3	32.795	7	41.61	3	0	11	.023	4	.018	7

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
106			min	-7.337	2	16.029	2	-41.61	4	0	1	-.023	3	.009	2
107		4	max	3.669	3	16.398	7	20.804	3	0	11	.006	4	.004	7
108			min	-3.669	2	8.012	2	-20.804	4	0	1	-.006	3	.002	2
109		5	max	0	11	.002	3	.001	4	0	11	0	11	0	11
110			min	0	1	-.004	2	-.002	1	0	1	0	1	0	1
111	MP1C	1	max	0	11	0	2	.02	7	0	11	0	11	0	11
112			min	0	1	-.018	5	-.004	4	0	1	0	1	0	1
113		2	max	59.849	3	129.872	4	169.489	4	.249	8	.391	3	.161	4
114			min	-293.918	8	-229.891	3	-277.203	3	.026	3	-.189	4	-.205	3
115		3	max	66.096	3	151.035	4	169.489	4	.249	8	.095	1	.156	3
116			min	-274.608	8	-251.055	3	-277.203	3	.026	3	-.053	2	-.049	4
117		4	max	-6.248	10	21.164	3	21.163	2	0	11	.016	1	.016	3
118			min	-19.31	5	-21.163	4	-21.16	1	0	1	-.016	2	-.016	4
119		5	max	0	11	.007	8	.012	8	0	11	0	11	0	11
120			min	0	1	0	1	-.003	3	0	1	0	1	0	1
121	M13	1	max	207.799	4	139.395	3	315.958	4	.293	4	.286	7	.224	3
122			min	-240.167	3	-196.618	4	-458.208	3	-.454	3	.074	4	-.095	4
123		2	max	207.799	4	139.395	3	315.958	4	.293	4	.27	6	.214	3
124			min	-240.167	3	-196.618	4	-458.208	3	-.454	3	.097	4	-.08	4
125		3	max	207.799	4	139.395	3	315.958	4	.293	4	.26	8	.204	3
126			min	-240.167	3	-196.618	4	-458.208	3	-.454	3	.092	3	-.066	4
127		4	max	207.799	4	139.395	3	315.958	4	.293	4	.255	8	.197	7
128			min	-240.167	3	-196.618	4	-458.208	3	-.454	3	.059	3	-.052	4
129		5	max	207.799	4	139.395	3	315.958	4	.293	4	.249	8	.2	7
130			min	-240.167	3	-196.618	4	-458.208	3	-.454	3	.026	3	-.038	4
131	MP3C	1	max	170.271	8	180.291	4	153.292	1	0	11	0	11	0	11
132			min	79.32	1	-180.437	3	-153.298	2	0	1	0	1	0	1
133		2	max	59.663	1	97.726	3	263.921	1	-.045	1	.196	2	.251	3
134			min	-212.885	6	-48.511	4	-164.557	2	-.255	6	-.274	1	-.112	4
135		3	max	65.911	1	97.146	1	285.085	1	-.045	1	.137	1	.12	3
136			min	-200.105	2	-47.088	2	-185.72	2	-.255	6	-.067	2	-.055	4
137		4	max	-6.248	10	21.161	3	21.162	2	0	11	.016	1	.016	3
138			min	-19.31	5	-21.165	4	-21.159	1	0	1	-.016	2	-.016	4
139		5	max	0	11	0	1	.012	5	0	11	0	11	0	11
140			min	0	1	-.016	6	-.002	2	0	1	0	1	0	1
141	M15	1	max	150.061	2	157.771	1	464.622	1	.386	1	-.05	2	.179	1
142			min	-156.171	1	-108.41	2	-354.201	2	-.247	2	-.288	5	-.067	2
143		2	max	150.061	2	157.771	1	464.622	1	.386	1	-.076	2	.168	1
144			min	-156.171	1	-108.41	2	-354.201	2	-.247	2	-.273	5	-.059	2
145		3	max	150.061	2	157.771	1	464.622	1	.386	1	-.099	3	.162	10
146			min	-156.171	1	-108.41	2	-354.201	2	-.247	2	-.261	8	-.051	2
147		4	max	150.061	2	157.771	1	464.622	1	.386	1	-.079	1	.159	10
148			min	-156.171	1	-108.41	2	-354.201	2	-.247	2	-.257	6	-.043	2
149		5	max	150.061	2	157.771	1	464.622	1	.386	1	-.045	1	.157	10
150			min	-156.171	1	-108.41	2	-354.201	2	-.247	2	-.255	6	-.035	2
151	MP2C	1	max	0	11	2.18	4	.988	1	0	11	0	11	0	11
152			min	0	1	-1.925	3	-1.118	2	0	1	0	1	0	1
153		2	max	314.898	8	546.147	4	374.058	1	0	11	.634	1	.935	3
154			min	85.113	1	-545.892	3	-374.188	2	0	1	-.634	2	-.935	4
155		3	max	197.738	4	606.224	5	8.505	4	.068	2	.385	3	.499	3
156			min	-523.511	3	78.103	2	-535.778	6	-.05	1	-.144	4	-.169	4
157		4	max	209.651	4	606.224	5	23.988	1	.068	2	.152	1	.157	3
158			min	-511.598	3	-544.016	4	-549.386	6	-.05	1	-.787	6	-.829	8
159		5	max	0	11	-.049	4	.432	5	0	11	0	11	0	11
160			min	0	1	-.842	7	-.013	2	0	1	0	1	0	1
161	M17	1	max	824.62	8	293.586	4	538.255	1	.244	1	.256	2	-.391	4
162			min	-80.892	3	-426.235	3	-648.582	2	-.421	2	-.206	1	-1.019	6

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
163		2	max	824.62	8	293.586	4	538.255	1	.244	1	.209	2	-.388	1
164			min	-80.892	3	-426.235	3	-648.582	2	-.421	2	-.167	1	-1.015	6
165		3	max	824.62	8	293.586	4	538.255	1	.244	1	.162	2	-.374	1
166			min	-80.892	3	-426.235	3	-648.582	2	-.421	2	-.128	1	-1.013	8
167		4	max	824.62	8	293.586	4	538.255	1	.244	1	.115	2	-.357	3
168			min	-80.892	3	-426.235	3	-648.582	2	-.421	2	-.089	1	-1.013	8
169		5	max	824.62	8	293.586	4	538.255	1	.244	1	.068	2	-.326	3
170			min	-80.892	3	-426.235	3	-648.582	2	-.421	2	-.05	1	-1.013	8
171	M18	1	max	0	11	0	3	.01	2	0	11	0	11	0	11
172			min	0	1	-.005	1	-.004	4	0	1	0	1	0	1
173		2	max	339.277	1	9.612	2	66.327	3	.239	5	.158	1	.237	6
174			min	-420.685	2	-208.159	5	-301.21	8	-.038	2	-.435	2	-.072	1
175		3	max	766.924	5	271.068	3	135.06	3	-.199	4	.644	8	.637	3
176			min	-124.329	2	-126.896	4	-392.26	4	-.55	6	-.124	3	-.482	4
177		4	max	457.07	3	131.116	3	313.508	4	.085	4	.331	3	.132	4
178			min	-503.988	4	-82.534	4	-125.037	3	-.299	3	-.556	4	-.248	3
179		5	max	0	11	.006	4	.001	1	0	11	0	11	0	11
180			min	0	1	-.001	6	-.013	3	0	1	0	1	0	1
181	M19	1	max	2339.989	4	767.802	8	1279.926	1	-.191	1	1.861	2	1.42	5
182			min	-1237.79	3	195.648	3	-1487.175	2	-1.285	6	-1.233	1	.525	2
183		2	max	2335.216	4	756.45	8	1266.812	1	-.191	1	1.306	2	1.162	7
184			min	-1233.017	3	190.098	3	-1474.061	2	-1.285	6	-.755	1	.353	4
185		3	max	2330.442	4	745.098	8	1253.698	1	-.191	1	.759	3	.91	7
186			min	-1228.243	3	184.548	3	-1460.947	2	-1.285	6	-.285	4	.156	4
187		4	max	2325.669	4	733.747	8	1240.583	1	-.191	1	.479	7	.662	7
188			min	-1223.47	3	178.998	3	-1447.832	2	-1.285	6	.149	4	-.04	4
189		5	max	2320.896	4	722.395	8	1227.469	1	-.191	1	.648	1	.531	3
190			min	-1218.697	3	173.448	3	-1434.718	2	-1.285	6	-.33	2	-.233	4
191	M20	1	max	2320.896	4	722.985	8	1227.429	1	-.191	1	.648	1	.531	3
192			min	-1218.697	3	172.913	3	-1434.831	2	-1.285	6	-.33	2	-.233	4
193		2	max	626.644	6	530.384	8	1525.725	6	.165	3	.389	1	.132	5
194			min	94.437	1	57.287	3	-144.656	1	-.691	8	-.312	2	-.02	2
195		3	max	13.789	4	32.796	6	37.886	1	0	11	.021	2	.018	6
196			min	-13.789	1	16.025	3	-37.891	2	0	1	-.021	1	.009	3
197		4	max	6.895	4	16.399	6	18.943	1	0	11	.005	2	.004	6
198			min	-6.895	1	8.009	3	-18.948	2	0	1	-.005	1	.002	3
199		5	max	0	11	.003	2	.005	3	0	11	0	11	0	11
200			min	0	1	-.008	3	-.005	2	0	1	0	1	0	1
201	MP1B	1	max	0	11	.026	8	.008	6	0	11	0	11	0	11
202			min	0	1	-.002	3	-.002	1	0	1	0	1	0	1
203		2	max	76.109	1	60.393	2	310.714	1	.248	6	.211	2	.05	3
204			min	-298.83	6	-190.345	9	-167.907	2	.034	1	-.353	1	-.26	9
205		3	max	82.356	1	60.393	2	331.878	1	.248	6	.157	9	.025	9
206			min	-286.123	2	-190.345	9	-189.07	2	.034	1	-.056	2	-.125	8
207		4	max	-6.248	10	21.163	3	21.16	2	0	11	.016	1	.016	3
208			min	-19.31	5	-21.162	4	-21.163	1	0	1	-.016	2	-.016	4
209		5	max	0	11	.008	6	.005	9	0	11	0	11	0	11
210			min	0	1	-.004	1	-.013	6	0	1	0	1	0	1
211	M22	1	max	139.311	3	155.713	1	314.685	2	.264	2	.289	5	.183	1
212			min	-171.21	4	-212.745	2	-459.757	1	-.494	9	.065	2	-.052	2
213		2	max	139.311	3	155.713	1	314.685	2	.264	2	.272	7	.182	5
214			min	-171.21	4	-212.745	2	-459.757	1	-.494	9	.088	2	-.037	2
215		3	max	139.311	3	155.713	1	314.685	2	.264	2	.259	7	.184	5
216			min	-171.21	4	-212.745	2	-459.757	1	-.494	9	.094	4	-.022	2
217		4	max	139.311	3	155.713	1	314.685	2	.264	2	.253	6	.186	5
218			min	-171.21	4	-212.745	2	-459.757	1	-.494	9	.067	1	-.006	2
219		5	max	139.311	3	155.713	1	314.685	2	.264	2	.248	6	.189	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
220			min	-171.21	4	-212.745	2	-459.757	1	-.494	9	.034	1	.009	2
221	MP3B	1	max	170.271	8	180.205	4	153.568	1	0	11	0	11	0	11
222			min	79.32	1	-180.135	3	-153.437	2	0	1	0	1	0	1
223		2	max	64.557	4	168.904	4	157.259	3	-.041	4	.367	4	.112	4
224			min	-214.072	7	-110.695	3	-248.543	4	-.256	7	-.208	3	-.117	3
225		3	max	70.805	4	190.068	4	157.259	3	-.041	4	.1	1	.065	3
226			min	-206.406	3	-131.859	3	-248.543	4	-.256	7	-.078	2	-.157	4
227		4	max	-6.248	10	21.166	3	21.163	2	0	11	.016	1	.016	3
228			min	-19.31	5	-21.161	4	-21.161	1	0	1	-.016	2	-.016	4
229		5	max	0	11	.016	8	.01	7	0	11	0	11	0	11
230			min	0	1	.001	1	-.003	4	0	1	0	1	0	1
231	M24	1	max	228.477	3	162.627	4	420.97	4	.383	4	-.067	3	.202	4
232			min	-232.755	4	-114.827	3	-313.884	3	-.248	3	-.284	6	-.093	3
233		2	max	228.477	3	162.627	4	420.97	4	.383	4	-.089	3	.19	4
234			min	-232.755	4	-114.827	3	-313.884	3	-.248	3	-.271	6	-.084	3
235		3	max	228.477	3	162.627	4	420.97	4	.383	4	-.102	4	.179	4
236			min	-232.755	4	-114.827	3	-313.884	3	-.248	3	-.261	7	-.076	3
237		4	max	228.477	3	162.627	4	420.97	4	.383	4	-.072	4	.167	4
238			min	-232.755	4	-114.827	3	-313.884	3	-.248	3	-.258	7	-.068	3
239		5	max	228.477	3	162.627	4	420.97	4	.383	4	-.041	4	.155	4
240			min	-232.755	4	-114.827	3	-313.884	3	-.248	3	-.256	7	-.06	3
241	MP2B	1	max	0	11	1.933	4	.981	1	0	11	0	11	0	11
242			min	0	1	-2.175	3	-1.134	2	0	1	0	1	0	1
243		2	max	314.898	8	545.9	4	374.051	1	0	11	.634	1	.935	3
244			min	85.113	1	-546.142	3	-374.205	2	0	1	-.634	2	-.935	4
245		3	max	127.883	3	-114.345	2	83.204	3	.067	1	.315	4	.151	3
246			min	-494.431	8	-747.245	5	-299.561	6	-.049	2	-.151	3	-.525	4
247		4	max	139.797	3	544	3	373.081	2	.067	1	.295	1	1.053	7
248			min	-451.561	8	-747.245	5	-313.169	6	-.049	2	-.538	2	-.157	4
249		5	max	0	11	.776	8	.548	5	0	11	0	11	0	11
250			min	0	1	.033	3	.011	2	0	1	0	1	0	1
251	M26	1	max	829.715	7	223.7	3	544.344	2	.243	2	.258	1	-.383	2
252			min	-99.067	4	-357.653	4	-657.952	1	-.424	1	-.207	2	-1.025	7
253		2	max	829.715	7	223.7	3	544.344	2	.243	2	.21	1	-.379	4
254			min	-99.067	4	-357.653	4	-657.952	1	-.424	1	-.167	2	-1.024	7
255		3	max	829.715	7	223.7	3	544.344	2	.243	2	.162	1	-.353	4
256			min	-99.067	4	-357.653	4	-657.952	1	-.424	1	-.128	2	-1.022	7
257		4	max	829.715	7	223.7	3	544.344	2	.243	2	.115	1	-.327	4
258			min	-99.067	4	-357.653	4	-657.952	1	-.424	1	-.088	2	-1.021	7
259		5	max	829.715	7	223.7	3	544.344	2	.243	2	.067	1	-.302	4
260			min	-99.067	4	-357.653	4	-657.952	1	-.424	1	-.049	2	-1.02	7
261	M27	1	max	0	11	0	11	.013	3	0	11	0	11	0	11
262			min	0	1	-.004	4	0	6	0	1	0	1	0	1
263		2	max	402.006	4	-4.387	3	113.891	4	.287	4	.313	4	.28	3
264			min	-487.089	3	-202.956	8	-327.624	3	-.097	3	-.591	3	-.129	4
265		3	max	759.706	8	233.503	1	49.464	1	-.2	4	.614	6	.508	1
266			min	-74.078	3	-87.591	2	-361.446	6	-.556	7	.037	1	-.349	2
267		4	max	377.153	1	192.357	9	269.84	7	.038	2	.163	1	.126	2
268			min	-422.697	2	-72.11	2	-61.819	4	-.277	5	-.387	2	-.245	1
269		5	max	0	11	.006	2	.005	4	0	11	0	11	0	11
270			min	0	1	-.004	3	-.009	1	0	1	0	1	0	1
271	M28	1	max	-108.729	2	371.28	9	133.15	4	.007	8	.033	3	-.016	2
272			min	-360.138	5	-65.848	1	-187.268	3	-.006	9	-.025	4	-.116	5
273		2	max	-102.298	3	351.459	9	83.153	1	.006	1	.029	2	-.034	3
274			min	-308.08	8	-88.005	1	-79.841	2	-.008	9	-.031	1	-.18	9
275		3	max	-95.688	3	348.355	9	79.337	1	.006	1	.001	3	-.024	1
276			min	-309.62	8	-91.11	1	-76.025	2	-.008	9	-.002	4	-.315	9

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
277		4	max	-89.079	3	345.256	9	75.972	4	.006	1	.03	1	.012	1
278			min	-311.159	8	-94.208	1	-73.97	3	-.008	9	-.029	2	-.449	9
279		5	max	-80.336	2	333.831	9	224.834	1	.004	1	.046	1	.05	1
280			min	-361.531	7	-107.497	1	-167.164	2	-.011	9	-.036	2	-.579	9
281	M29	1	max	977.123	6	91.786	10	574.243	4	.025	4	.035	1	-.004	10
282			min	-168.997	1	-59.434	9	-275.114	3	-.035	3	-.065	2	-.38	9
283		2	max	1018.612	3	73.773	10	.516	4	.003	2	0	3	-.08	1
284			min	-294.877	4	-58.887	9	-.843	3	-.003	5	0	4	-.344	6
285		3	max	1081.626	3	42.763	10	2.064	4	0	2	0	3	-.127	1
286			min	-320.004	4	-91.508	9	-1.012	1	-.003	5	0	4	-.297	6
287		4	max	774.769	5	8.426	10	-.099	3	.002	7	0	3	-.041	3
288			min	-72.822	2	-124.326	6	-.689	8	-.004	4	0	4	-.208	5
289		5	max	1189.015	5	357.649	5	220.692	3	.061	5	.036	3	.043	2
290			min	-157.231	2	-73.602	2	-594.561	4	-.025	2	-.078	4	-.272	10
291	M30	1	max	-120.625	2	104.048	3	129.011	2	.009	2	.041	1	-.001	1
292			min	-356.833	6	-60.02	4	-184.006	1	-.006	1	-.033	2	-.119	6
293		2	max	-95.348	4	81.127	3	105.516	2	.004	2	.041	1	-.022	1
294			min	-309.527	7	-80.62	4	-104.072	1	-.006	10	-.042	2	-.128	6
295		3	max	-101.957	4	78.03	3	109.332	2	.004	2	.001	4	-.028	4
296			min	-307.988	7	-83.717	4	-107.888	1	-.006	10	-.002	3	-.124	7
297		4	max	-108.567	4	74.927	3	113.148	2	.004	2	.042	2	.005	4
298			min	-306.449	7	-86.82	4	-111.704	1	-.006	10	-.042	1	-.123	7
299		5	max	-44.057	3	47.734	3	269.95	4	.002	2	.043	4	.039	4
300			min	-369.016	8	-96.372	4	-213.506	3	-.009	7	-.033	3	-.134	3
301	M31	1	max	972.06	5	107.18	2	513.287	3	.029	2	.035	4	.001	2
302			min	-199.959	2	-98.213	10	-211.411	4	-.04	1	-.065	3	-.365	5
303		2	max	992.557	1	69.741	2	.357	3	.004	3	0	1	-.081	2
304			min	-267.655	2	-78.526	10	-.683	4	-.004	8	0	2	-.348	5
305		3	max	955.97	8	45.463	2	1.675	4	0	3	0	5	-.13	4
306			min	-74.273	2	-115.426	10	-2.116	3	-.003	8	0	2	-.296	7
307		4	max	735.731	8	16.087	2	.118	4	.002	5	0	8	-.007	1
308			min	100.991	3	-143.916	10	-.737	7	-.003	3	0	3	-.214	6
309		5	max	1205.233	6	355.415	8	363.366	4	.06	8	.04	1	.078	10
310			min	-175.073	1	-61.364	3	-733.953	3	-.026	3	-.083	2	-.242	6
311	M32	1	max	-121.082	4	82.399	4	92.416	1	.007	7	.033	4	-.008	4
312			min	-361.834	7	-39.735	3	-145.745	2	-.004	4	-.026	3	-.115	7
313		2	max	-88.15	2	67.219	4	114.396	3	.006	3	.043	4	-.036	4
314			min	-309.524	5	-63.583	3	-111.688	4	-.007	4	-.045	3	-.124	7
315		3	max	-88.15	2	63.683	4	114.396	3	.006	3	.002	2	-.044	2
316			min	-309.524	5	-67.119	3	-111.688	4	-.007	4	-.003	1	-.121	5
317		4	max	-88.15	2	60.147	4	114.396	3	.006	3	.044	3	-.022	3
318			min	-309.524	5	-70.655	3	-111.688	4	-.007	4	-.043	4	-.12	8
319		5	max	-71.617	1	37.391	4	218.231	2	.004	3	.033	3	.007	3
320			min	-366.296	6	-87.608	3	-161.087	1	-.01	8	-.023	4	-.106	8
321	M33	1	max	1024.483	4	108.948	3	645.284	1	.023	3	.04	2	.019	3
322			min	-336.54	3	-75.072	4	-343.957	2	-.033	4	-.071	1	-.368	8
323		2	max	930.735	6	75.573	3	.647	1	.003	1	0	2	-.068	3
324			min	-130.624	1	-68.586	4	-.973	2	-.003	6	0	1	-.347	8
325		3	max	1026.906	2	50.072	3	2.163	2	0	4	0	6	-.137	9
326			min	-267.053	1	-101.936	4	-2.604	1	-.003	7	0	1	-.294	6
327		4	max	775.126	7	18.842	3	.151	2	.002	6	0	2	-.011	4
328			min	-75.941	4	-126.926	8	-.744	5	-.004	1	0	1	-.214	7
329		5	max	1241.542	7	344.228	7	416.101	2	.059	6	.047	2	.086	4
330			min	-361.612	4	-16.416	4	-790.525	1	-.012	1	-.089	1	-.256	3
331	M34	1	max	316.817	2	20.424	6	50.66	4	0	4	.041	2	.051	2
332			min	-248.869	1	-.961	1	-41.771	3	0	3	-.048	1	-.089	1
333		2	max	310.833	2	9.297	6	43.682	1	0	4	.029	2	.028	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
334			min	-242.884	1	-4.648	1	-34.694	2	0	3	-.026	1	-.065	1
335		3	max	304.848	2	2.063	2	40.227	1	0	4	.025	4	.008	2
336			min	-236.9	1	-16.005	5	-31.239	2	0	3	-.019	3	-.049	5
337		4	max	298.864	2	-4.266	2	36.772	1	0	4	.032	4	.017	4
338			min	-230.915	1	-35.175	5	-27.783	2	0	3	-.03	3	-.036	3
339		5	max	292.879	2	-9.753	2	33.317	1	0	4	.03	4	.032	4
340			min	-224.931	1	-51.778	5	-24.328	2	0	3	-.038	3	-.034	3
341	M35	1	max	172.245	2	49.05	7	20.414	2	0	4	.034	3	.034	3
342			min	-101.942	1	11.692	2	-29.71	1	-.001	3	-.039	4	-.035	4
343		2	max	178.23	2	35.462	7	23.869	2	0	4	.033	3	.015	3
344			min	-107.927	1	7.196	2	-33.165	1	-.001	3	-.029	4	-.035	4
345		3	max	184.214	2	16.697	7	27.325	2	0	4	.025	3	-.006	2
346			min	-113.911	1	1	2	-36.62	1	-.001	3	-.017	4	-.048	8
347		4	max	190.199	2	6.109	1	35.995	4	0	4	.027	2	.009	2
348			min	-119.896	1	-3.13	2	-45.179	3	-.001	3	-.02	1	-.062	5
349		5	max	196.183	2	3.419	1	46.36	4	0	4	.041	2	.028	2
350			min	-125.88	1	-6.433	8	-55.544	3	-.001	3	-.039	1	-.073	1
351	M36A	1	max	237.893	3	15.384	5	75.819	2	.001	2	.035	1	.045	1
352			min	-168.971	4	-2.184	2	-67.252	1	0	1	-.041	2	-.083	2
353		2	max	237.893	3	10.3	9	61.999	2	.001	2	.02	3	.014	9
354			min	-168.971	4	-4.875	2	-53.432	1	0	1	-.019	4	-.056	6
355		3	max	237.893	3	4.575	9	48.178	2	.001	2	.018	3	.002	3
356			min	-168.971	4	-13.767	6	-39.611	1	0	1	-.013	4	-.047	8
357		4	max	237.893	3	-2.074	9	34.358	2	.001	2	.029	2	.011	2
358			min	-168.971	4	-33.911	6	-25.791	1	0	1	-.027	1	-.032	5
359		5	max	237.893	3	-8.907	9	20.538	2	.001	2	.032	2	.035	2
360			min	-168.971	4	-54.615	6	-16.898	9	0	1	-.04	1	-.036	1
361	M37	1	max	159.369	3	52.496	8	19.014	3	0	2	.026	4	.034	4
362			min	-89.113	4	11.538	3	-28.019	4	0	1	-.031	3	-.036	3
363		2	max	165.354	3	36.347	8	29.379	3	0	2	.023	1	.008	4
364			min	-95.098	4	6.201	3	-38.384	4	0	1	-.019	2	-.032	7
365		3	max	171.338	3	18.743	8	39.744	3	0	2	.023	1	-.009	1
366			min	-101.082	4	.386	3	-48.75	4	0	1	-.014	2	-.049	6
367		4	max	177.322	3	6.423	4	50.11	3	0	2	.024	3	.011	3
368			min	-107.067	4	-5.148	3	-59.115	4	0	1	-.017	4	-.063	8
369		5	max	183.307	3	3.733	4	60.475	3	0	2	.048	3	.041	3
370			min	-113.051	4	-9.376	7	-69.48	4	0	1	-.046	4	-.086	4
371	M38	1	max	317.12	4	14.131	8	74.429	3	0	3	.05	4	.067	4
372			min	-249.964	3	-5.062	3	-65.664	4	0	4	-.055	3	-.106	3
373		2	max	311.136	4	9.838	4	64.064	3	0	3	.026	4	.032	4
374			min	-243.98	3	-7.752	3	-55.299	4	0	4	-.024	3	-.068	3
375		3	max	305.151	4	4.306	4	53.698	3	0	3	.023	1	.004	4
376			min	-237.996	3	-15.398	7	-44.934	4	0	4	-.018	2	-.046	6
377		4	max	299.167	4	-1.508	4	43.333	3	0	3	.025	1	.013	1
378			min	-232.011	3	-33	7	-34.568	4	0	4	-.023	2	-.032	2
379		5	max	293.183	4	-6.846	4	32.968	3	0	3	.024	3	.027	3
380			min	-226.027	3	-49.149	7	-24.203	4	0	4	-.031	4	-.029	4
381	M39	1	max	155.263	4	58.508	6	13.62	1	0	1	.036	2	.043	2
382			min	-83.261	3	13.426	1	-22.444	2	0	2	-.043	1	-.044	1
383		2	max	155.263	4	37.803	6	27.441	1	0	1	.033	2	.018	2
384			min	-83.261	3	6.592	1	-36.264	2	0	2	-.028	1	-.039	1
385		3	max	155.263	4	17.655	6	41.261	1	0	1	.019	2	-.01	4
386			min	-83.261	3	-.058	1	-50.085	2	0	2	-.009	1	-.049	7
387		4	max	155.263	4	5.914	2	55.081	1	0	1	.022	4	.002	1
388			min	-83.261	3	-5.784	1	-63.905	2	0	2	-.015	3	-.061	6
389		5	max	155.263	4	3.224	2	68.902	1	0	1	.04	1	.036	1
390			min	-83.261	3	-11.18	5	-77.725	2	0	2	-.038	2	-.08	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
391	M40	1	max	568.574	2	79.917	5	955.836	1	.01	2	.068	2	.038	5
392			min	-1210.372	1	45.623	2	-490.258	2	.005	1	-.146	1	.009	2
393		2	max	568.574	2	79.917	5	955.836	1	.01	2	.047	2	.035	5
394			min	-1210.372	1	45.623	2	-490.258	2	.005	1	-.106	1	.007	2
395		3	max	568.574	2	79.917	5	955.836	1	.01	2	.027	2	.032	5
396			min	-1210.372	1	45.623	2	-490.258	2	.005	1	-.066	1	.005	2
397		4	max	568.574	2	79.917	5	955.836	1	.01	2	.006	2	.028	5
398			min	-1210.372	1	45.623	2	-490.258	2	.005	1	-.026	1	.003	2
399		5	max	568.574	2	79.917	5	955.836	1	.01	2	.015	4	.025	5
400			min	-1210.372	1	45.623	2	-490.258	2	.005	1	-.015	3	0	2
401	M41	1	max	750.265	3	79.209	8	992.821	2	.01	3	.069	1	.038	8
402			min	-1388.341	4	49.8	3	-529.336	1	.005	4	-.147	2	.011	3
403		2	max	750.265	3	79.209	8	992.821	2	.01	3	.047	1	.035	8
404			min	-1388.341	4	49.8	3	-529.336	1	.005	4	-.106	2	.008	3
405		3	max	750.265	3	79.209	8	992.821	2	.01	3	.025	1	.031	8
406			min	-1388.341	4	49.8	3	-529.336	1	.005	4	-.064	2	.006	3
407		4	max	750.265	3	79.209	8	992.821	2	.01	3	.003	1	.028	8
408			min	-1388.341	4	49.8	3	-529.336	1	.005	4	-.025	6	.004	3
409		5	max	750.265	3	79.209	8	992.821	2	.01	3	.018	2	.025	8
410			min	-1388.341	4	49.8	3	-529.336	1	.005	4	-.019	1	.002	3
411	M42	1	max	419.75	1	79.804	7	1065.161	3	.009	4	.083	4	.038	7
412			min	-1057.69	2	46.368	4	-599.647	4	.005	3	-.161	3	.011	4
413		2	max	419.75	1	79.804	7	1065.161	3	.009	4	.058	4	.035	7
414			min	-1057.69	2	46.368	4	-599.647	4	.005	3	-.117	3	.009	4
415		3	max	419.75	1	79.804	7	1065.161	3	.009	4	.033	4	.031	7
416			min	-1057.69	2	46.368	4	-599.647	4	.005	3	-.073	3	.007	4
417		4	max	419.75	1	79.804	7	1065.161	3	.009	4	.008	4	.028	7
418			min	-1057.69	2	46.368	4	-599.647	4	.005	3	-.028	3	.005	4
419		5	max	419.75	1	79.804	7	1065.161	3	.009	4	.016	3	.025	7
420			min	-1057.69	2	46.368	4	-599.647	4	.005	3	-.017	4	.003	4
421	M50	1	max	298.67	4	2232.24	6	-19.002	1	.12	3	.043	4	-.003	1
422			min	-1108.143	7	48.049	1	-301.021	6	-.064	4	-.087	3	-.014	6
423		2	max	298.67	4	2232.24	6	-19.002	1	.12	3	.037	4	-.008	1
424			min	-1108.143	7	48.049	1	-301.021	6	-.064	4	-.103	3	-.235	6
425		3	max	298.67	4	2232.24	6	-19.002	1	.12	3	.03	4	-.013	1
426			min	-1108.143	7	48.049	1	-301.021	6	-.064	4	-.122	7	-.456	6
427		4	max	298.67	4	2232.24	6	-19.002	1	.12	3	.024	4	-.017	1
428			min	-1108.143	7	48.049	1	-301.021	6	-.064	4	-.15	7	-.676	6
429		5	max	298.67	4	2232.24	6	-19.002	1	.12	3	.017	4	-.022	1
430			min	-1108.143	7	48.049	1	-301.021	6	-.064	4	-.179	7	-.897	6
431	M51	1	max	93.473	7	911.47	6	217.396	7	.002	6	.007	4	.311	6
432			min	-20.274	4	-253.89	1	-33.394	4	0	1	-.084	7	-.086	1
433		2	max	93.473	7	911.47	6	217.396	7	.002	6	.004	4	.233	6
434			min	-20.274	4	-253.89	1	-33.394	4	0	1	-.065	7	-.065	1
435		3	max	93.473	7	911.47	6	217.396	7	.002	6	.002	4	.155	6
436			min	-20.274	4	-253.89	1	-33.394	4	0	1	-.047	7	-.043	1
437		4	max	93.473	7	911.47	6	217.396	7	.002	6	-.001	4	.078	6
438			min	-20.274	4	-253.89	1	-33.394	4	0	1	-.028	7	-.022	1
439		5	max	93.473	7	911.47	6	217.396	7	.002	6	0	1	0	6
440			min	-20.274	4	-253.89	1	-33.394	4	0	1	-.011	6	0	1
441	M52	1	max	1295.194	6	623.723	5	158.442	1	.003	6	.015	6	.135	6
442			min	276.634	1	-186.626	2	-186.74	2	0	1	0	1	.014	1
443		2	max	1295.194	6	623.723	5	158.442	1	.003	6	.014	1	.104	2
444			min	276.634	1	-186.626	2	-186.74	2	0	1	-.005	2	-.038	1
445		3	max	1295.194	6	623.723	5	158.442	1	.003	6	.027	1	.12	2
446			min	276.634	1	-186.626	2	-186.74	2	0	1	-.021	2	-.089	1
447		4	max	1295.194	6	623.723	5	158.442	1	.003	6	.041	1	.136	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
448			min	276.634	1	-186.626	2	-186.74	2	0	1	-.036	2	-.141	1
449		5	max	1295.194	6	623.723	5	158.442	1	.003	6	.054	1	.152	2
450			min	276.634	1	-186.626	2	-186.74	2	0	1	-.052	2	-.193	1
451	M53	1	max	113.742	1	228.685	4	121.915	1	.013	6	.022	6	0	1
452			min	-282.319	2	-314.997	3	-314.665	2	-.003	1	-.005	1	-.014	6
453		2	max	113.742	1	228.685	4	121.915	1	.013	6	.013	3	.025	3
454			min	-282.319	2	-314.997	3	-314.665	2	-.003	1	-.016	4	-.026	4
455		3	max	113.742	1	228.685	4	121.915	1	.013	6	.021	3	.055	3
456			min	-282.319	2	-314.997	3	-314.665	2	-.003	1	-.044	4	-.048	4
457		4	max	113.742	1	228.685	4	121.915	1	.013	6	.031	1	.086	3
458			min	-282.319	2	-314.997	3	-314.665	2	-.003	1	-.072	2	-.07	4
459		5	max	113.742	1	228.685	4	121.915	1	.013	6	.043	1	.116	3
460			min	-282.319	2	-314.997	3	-314.665	2	-.003	1	-.102	2	-.093	4
461	M54	1	max	1680.986	6	735.679	1	.819	1	.011	6	.043	6	.147	6
462			min	402.684	1	-638.101	2	-381.146	6	0	1	.001	1	.016	1
463		2	max	1680.986	6	735.679	1	.819	1	.011	6	.011	7	.152	2
464			min	402.684	1	-638.101	2	-381.146	6	0	1	-.002	4	-.047	1
465		3	max	1680.986	6	735.679	1	.819	1	.011	6	.003	3	.207	2
466			min	402.684	1	-638.101	2	-381.146	6	0	1	-.023	8	-.11	1
467		4	max	1680.986	6	735.679	1	.819	1	.011	6	.001	1	.262	2
468			min	402.684	1	-638.101	2	-381.146	6	0	1	-.056	6	-.174	1
469		5	max	1680.986	6	735.679	1	.819	1	.011	6	.001	1	.317	2
470			min	402.684	1	-638.101	2	-381.146	6	0	1	-.088	6	-.237	1
471	M55	1	max	97.495	7	127.427	1	285.621	4	0	6	.006	6	0	6
472			min	33.679	4	-801.053	6	-229.401	3	0	1	.001	1	0	1
473		2	max	97.495	7	127.427	1	285.621	4	0	6	.026	4	.067	6
474			min	33.679	4	-801.053	6	-229.401	3	0	1	-.016	3	-.011	1
475		3	max	97.495	7	127.427	1	285.621	4	0	6	.05	4	.134	6
476			min	33.679	4	-801.053	6	-229.401	3	0	1	-.035	3	-.021	1
477		4	max	97.495	7	127.427	1	285.621	4	0	6	.074	4	.201	6
478			min	33.679	4	-801.053	6	-229.401	3	0	1	-.054	3	-.032	1
479		5	max	97.495	7	127.427	1	285.621	4	0	6	.098	4	.268	6
480			min	33.679	4	-801.053	6	-229.401	3	0	1	-.074	3	-.043	1
481	M56	1	max	3.896	7	183.026	3	96.036	3	0	6	.011	6	0	2
482			min	-1.16	4	-69.061	4	-84.402	4	0	1	.002	1	0	1
483		2	max	3.896	7	183.026	3	96.036	3	0	6	.014	3	.006	4
484			min	-1.16	4	-69.061	4	-84.402	4	0	1	-.003	4	-.015	3
485		3	max	3.896	7	183.026	3	96.036	3	0	6	.022	3	.012	4
486			min	-1.16	4	-69.061	4	-84.402	4	0	1	-.01	4	-.03	3
487		4	max	3.896	7	183.026	3	96.036	3	0	6	.03	3	.017	4
488			min	-1.16	4	-69.061	4	-84.402	4	0	1	-.017	4	-.046	3
489		5	max	3.896	7	183.026	3	96.036	3	0	6	.038	3	.023	4
490			min	-1.16	4	-69.061	4	-84.402	4	0	1	-.024	4	-.061	3
491	M57	1	max	-2.126	4	39.926	1	80.346	4	0	4	-.002	1	0	1
492			min	-3.275	7	-102.916	2	-104.877	3	0	7	-.008	6	0	2
493		2	max	-2.126	4	39.926	1	80.346	4	0	4	.004	4	.009	2
494			min	-3.275	7	-102.916	2	-104.877	3	0	7	-.013	3	-.003	1
495		3	max	-2.126	4	39.926	1	80.346	4	0	4	.011	4	.017	2
496			min	-3.275	7	-102.916	2	-104.877	3	0	7	-.022	3	-.007	1
497		4	max	-2.126	4	39.926	1	80.346	4	0	4	.017	4	.026	2
498			min	-3.275	7	-102.916	2	-104.877	3	0	7	-.031	3	-.01	1
499		5	max	-2.126	4	39.926	1	80.346	4	0	4	.024	4	.034	2
500			min	-3.275	7	-102.916	2	-104.877	3	0	7	-.039	3	-.013	1
501	M58	1	max	4.583	1	94.431	1	81.474	4	0	4	-.001	4	0	1
502			min	-11.301	2	-114.755	2	-106.435	3	0	7	-.005	7	0	6
503		2	max	4.583	1	94.431	1	81.474	4	0	4	.006	4	.01	2
504			min	-11.301	2	-114.755	2	-106.435	3	0	7	-.013	3	-.008	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
505		3	max	4.583	1	94.431	1	81.474	4	0	4	.012	4	.019	2
506			min	-11.301	2	-114.755	2	-106.435	3	0	7	-.022	3	-.016	1
507		4	max	4.583	1	94.431	1	81.474	4	0	4	.019	4	.029	2
508			min	-11.301	2	-114.755	2	-106.435	3	0	7	-.031	3	-.024	1
509		5	max	4.583	1	94.431	1	81.474	4	0	4	.026	4	.038	2
510			min	-11.301	2	-114.755	2	-106.435	3	0	7	-.039	3	-.031	1
511	M59	1	max	16.87	1	129.953	1	82.845	4	0	4	0	4	0	1
512			min	-12.234	2	-107.179	2	-90.183	3	0	7	-.004	3	0	6
513		2	max	16.87	1	129.953	1	82.845	4	0	4	.007	4	.009	2
514			min	-12.234	2	-107.179	2	-90.183	3	0	7	-.011	3	-.011	1
515		3	max	16.87	1	129.953	1	82.845	4	0	4	.014	4	.018	2
516			min	-12.234	2	-107.179	2	-90.183	3	0	7	-.019	3	-.022	1
517		4	max	16.87	1	129.953	1	82.845	4	0	4	.021	4	.027	2
518			min	-12.234	2	-107.179	2	-90.183	3	0	7	-.026	3	-.033	1
519		5	max	16.87	1	129.953	1	82.845	4	0	4	.028	4	.036	2
520			min	-12.234	2	-107.179	2	-90.183	3	0	7	-.034	3	-.044	1
521	M60	1	max	-7.819	1	232.129	1	84.519	4	.002	6	.01	6	0	1
522			min	-265.525	6	-188.589	2	-94.93	3	0	1	-.002	1	0	6
523		2	max	-7.819	1	232.129	1	84.519	4	.002	6	.013	2	.016	2
524			min	-265.525	6	-188.589	2	-94.93	3	0	1	-.008	1	-.02	1
525		3	max	-7.819	1	232.129	1	84.519	4	.002	6	.019	4	.032	2
526			min	-265.525	6	-188.589	2	-94.93	3	0	1	-.014	3	-.039	1
527		4	max	-7.819	1	232.129	1	84.519	4	.002	6	.026	4	.048	2
528			min	-265.525	6	-188.589	2	-94.93	3	0	1	-.022	3	-.059	1
529		5	max	-7.819	1	232.129	1	84.519	4	.002	6	.033	4	.064	2
530			min	-265.525	6	-188.589	2	-94.93	3	0	1	-.03	3	-.078	1
531	M61	1	max	183.443	5	467.655	5	82.852	1	.012	6	.038	6	.045	6
532			min	-5.526	2	-17.638	2	-558.649	6	0	1	-.001	1	.006	1
533		2	max	183.443	5	467.655	5	82.852	1	.012	6	.006	1	.03	2
534			min	-5.526	2	-17.638	2	-558.649	6	0	1	-.013	2	-.026	1
535		3	max	183.443	5	467.655	5	82.852	1	.012	6	.013	1	.032	2
536			min	-5.526	2	-17.638	2	-558.649	6	0	1	-.059	6	-.057	1
537		4	max	183.443	5	467.655	5	82.852	1	.012	6	.021	1	.034	2
538			min	-5.526	2	-17.638	2	-558.649	6	0	1	-.108	6	-.088	1
539		5	max	183.443	5	467.655	5	82.852	1	.012	6	.028	1	.035	2
540			min	-5.526	2	-17.638	2	-558.649	6	0	1	-.157	6	-.124	5
541	M62	1	max	134.204	6	352.346	6	141.52	1	.011	6	.031	6	.026	6
542			min	38.273	1	53.693	1	-609.425	6	-.001	1	-.003	1	.004	1
543		2	max	134.204	6	352.346	6	141.52	1	.011	6	.01	1	.003	3
544			min	38.273	1	53.693	1	-609.425	6	-.001	1	-.025	2	-.007	4
545		3	max	134.204	6	352.346	6	141.52	1	.011	6	.022	1	-.005	1
546			min	38.273	1	53.693	1	-609.425	6	-.001	1	-.077	6	-.037	6
547		4	max	134.204	6	352.346	6	141.52	1	.011	6	.035	1	-.01	1
548			min	38.273	1	53.693	1	-609.425	6	-.001	1	-.131	6	-.068	6
549		5	max	134.204	6	352.346	6	141.52	1	.011	6	.047	1	-.015	1
550			min	38.273	1	53.693	1	-609.425	6	-.001	1	-.185	6	-.099	6
551	M63	1	max	175.462	2	483.011	2	206.853	1	.013	6	.03	6	.016	6
552			min	-106.638	1	-261.431	1	-669.652	2	-.001	1	-.003	1	.004	1
553		2	max	175.462	2	483.011	2	206.853	1	.013	6	.015	1	.027	1
554			min	-106.638	1	-261.431	1	-669.652	2	-.001	1	-.035	2	-.034	2
555		3	max	175.462	2	483.011	2	206.853	1	.013	6	.034	1	.051	1
556			min	-106.638	1	-261.431	1	-669.652	2	-.001	1	-.095	2	-.077	2
557		4	max	175.462	2	483.011	2	206.853	1	.013	6	.053	1	.075	1
558			min	-106.638	1	-261.431	1	-669.652	2	-.001	1	-.156	2	-.121	2
559		5	max	175.462	2	483.011	2	206.853	1	.013	6	.071	1	.098	1
560			min	-106.638	1	-261.431	1	-669.652	2	-.001	1	-.216	2	-.165	2
561	M64	1	max	474.937	2	982.671	2	191.756	1	.014	6	.031	6	.01	6

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
562			min	-408.647	1	-790.533	1	-683.246	6	0	1	-.001	1	.004	1
563		2	max	474.937	2	982.671	2	191.756	1	.014	6	.016	1	.077	1
564			min	-408.647	1	-790.533	1	-683.246	6	0	1	-.037	2	-.084	2
565		3	max	474.937	2	982.671	2	191.756	1	.014	6	.034	1	.149	1
566			min	-408.647	1	-790.533	1	-683.246	6	0	1	-.099	2	-.175	2
567		4	max	474.937	2	982.671	2	191.756	1	.014	6	.052	1	.222	1
568			min	-408.647	1	-790.533	1	-683.246	6	0	1	-.161	2	-.265	2
569		5	max	474.937	2	982.671	2	191.756	1	.014	6	.069	1	.295	1
570			min	-408.647	1	-790.533	1	-683.246	6	0	1	-.223	2	-.356	2
571	M65	1	max	980.034	2	1463.955	2	1713.988	1	.009	6	.017	6	.002	1
572			min	-822.503	1	-1571.733	1	-2275	2	0	1	0	1	0	6
573		2	max	980.034	2	1463.955	2	1713.988	1	.009	6	.162	1	.149	1
574			min	-822.503	1	-1571.733	1	-2275	2	0	1	-.201	2	-.138	2
575		3	max	980.034	2	1463.955	2	1713.988	1	.009	6	.323	1	.297	1
576			min	-822.503	1	-1571.733	1	-2275	2	0	1	-.415	2	-.276	2
577		4	max	980.034	2	1463.955	2	1713.988	1	.009	6	.484	1	.445	1
578			min	-822.503	1	-1571.733	1	-2275	2	0	1	-.629	2	-.413	2
579		5	max	980.034	2	1463.955	2	1713.988	1	.009	6	.645	1	.592	1
580			min	-822.503	1	-1571.733	1	-2275	2	0	1	-.843	2	-.551	2
581	M66	1	max	60.911	4	219.047	8	175.737	1	.009	2	.017	2	-.002	1
582			min	-96.876	3	-40.78	3	-382.864	2	-.003	1	-.006	1	-.017	6
583		2	max	60.911	4	219.047	8	175.737	1	.009	2	.01	1	-.004	3
584			min	-96.876	3	-40.78	3	-382.864	2	-.003	1	-.019	2	-.036	8
585		3	max	60.911	4	219.047	8	175.737	1	.009	2	.027	1	0	3
586			min	-96.876	3	-40.78	3	-382.864	2	-.003	1	-.055	2	-.057	8
587		4	max	60.911	4	219.047	8	175.737	1	.009	2	.044	1	.003	3
588			min	-96.876	3	-40.78	3	-382.864	2	-.003	1	-.091	2	-.078	8
589		5	max	60.911	4	219.047	8	175.737	1	.009	2	.06	1	.007	3
590			min	-96.876	3	-40.78	3	-382.864	2	-.003	1	-.128	2	-.099	8
591	M67	1	max	96.079	2	299.162	6	229.808	1	.008	2	.017	2	0	1
592			min	-22.568	1	-70.476	1	-460.49	2	-.003	1	-.007	1	-.011	6
593		2	max	96.079	2	299.162	6	229.808	1	.008	2	.015	1	.007	1
594			min	-22.568	1	-70.476	1	-460.49	2	-.003	1	-.026	2	-.038	6
595		3	max	96.079	2	299.162	6	229.808	1	.008	2	.036	1	.014	1
596			min	-22.568	1	-70.476	1	-460.49	2	-.003	1	-.069	2	-.066	6
597		4	max	96.079	2	299.162	6	229.808	1	.008	2	.057	1	.02	1
598			min	-22.568	1	-70.476	1	-460.49	2	-.003	1	-.112	2	-.094	6
599		5	max	96.079	2	299.162	6	229.808	1	.008	2	.079	1	.027	1
600			min	-22.568	1	-70.476	1	-460.49	2	-.003	1	-.155	2	-.122	6
601	M68	1	max	183.246	2	496.571	2	294.343	1	.007	2	.015	2	.002	1
602			min	-64.165	1	-225.69	1	-556.125	2	-.003	1	-.006	1	-.006	6
603		2	max	183.246	2	496.571	2	294.343	1	.007	2	.021	1	.023	1
604			min	-64.165	1	-225.69	1	-556.125	2	-.003	1	-.036	2	-.05	2
605		3	max	183.246	2	496.571	2	294.343	1	.007	2	.047	1	.043	1
606			min	-64.165	1	-225.69	1	-556.125	2	-.003	1	-.086	2	-.095	2
607		4	max	183.246	2	496.571	2	294.343	1	.007	2	.074	1	.064	1
608			min	-64.165	1	-225.69	1	-556.125	2	-.003	1	-.137	2	-.141	2
609		5	max	183.246	2	496.571	2	294.343	1	.007	2	.101	1	.084	1
610			min	-64.165	1	-225.69	1	-556.125	2	-.003	1	-.188	2	-.186	2
611	M69	1	max	210.085	3	649.988	2	305.275	1	.005	6	.013	6	.002	1
612			min	-68.855	4	-288.374	1	-602.555	2	-.002	1	-.004	1	-.004	6
613		2	max	210.085	3	649.988	2	305.275	1	.005	6	.023	1	.028	1
614			min	-68.855	4	-288.374	1	-602.555	2	-.002	1	-.042	2	-.062	2
615		3	max	210.085	3	649.988	2	305.275	1	.005	6	.05	1	.054	1
616			min	-68.855	4	-288.374	1	-602.555	2	-.002	1	-.096	2	-.12	2
617		4	max	210.085	3	649.988	2	305.275	1	.005	6	.078	1	.08	1
618			min	-68.855	4	-288.374	1	-602.555	2	-.002	1	-.15	2	-.178	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
619		5	max	210.085	3	649.988	2	305.275	1	.005	6	.105	1	.105	1
620			min	-68.855	4	-288.374	1	-602.555	2	-.002	1	-.204	2	-.236	2
621	M70	1	max	352.377	3	1037.553	3	743.183	1	.002	6	.006	6	.001	1
622			min	-191.64	4	-422.653	4	-987.759	2	0	1	-.002	1	0	6
623		2	max	352.377	3	1037.553	3	743.183	1	.002	6	.064	1	.038	4
624			min	-191.64	4	-422.653	4	-987.759	2	0	1	-.082	2	-.091	3
625		3	max	352.377	3	1037.553	3	743.183	1	.002	6	.13	1	.075	4
626			min	-191.64	4	-422.653	4	-987.759	2	0	1	-.169	2	-.183	3
627		4	max	352.377	3	1037.553	3	743.183	1	.002	6	.195	1	.113	4
628			min	-191.64	4	-422.653	4	-987.759	2	0	1	-.256	2	-.274	3
629		5	max	352.377	3	1037.553	3	743.183	1	.002	6	.261	1	.15	4
630			min	-191.64	4	-422.653	4	-987.759	2	0	1	-.344	2	-.366	3
631	M71	1	max	330.431	2	2278.178	7	-12.72	2	.116	1	.041	2	-.002	2
632			min	-1113.6	5	-155.145	4	-301.896	5	-.06	2	-.085	1	-.014	5
633		2	max	330.431	2	2278.178	7	-12.72	2	.116	1	.04	2	.011	4
634			min	-1113.6	5	-155.145	4	-301.896	5	-.06	2	-.107	1	-.239	7
635		3	max	330.431	2	2278.178	7	-12.72	2	.116	1	.038	2	.026	4
636			min	-1113.6	5	-155.145	4	-301.896	5	-.06	2	-.128	1	-.464	7
637		4	max	330.431	2	2278.178	7	-12.72	2	.116	1	.037	2	.042	4
638			min	-1113.6	5	-155.145	4	-301.896	5	-.06	2	-.153	5	-.69	7
639		5	max	330.431	2	2278.178	7	-12.72	2	.116	1	.036	2	.057	4
640			min	-1113.6	5	-155.145	4	-301.896	5	-.06	2	-.183	5	-.915	7
641	M72	1	max	89.942	8	904.394	7	209.405	8	.002	7	-.007	2	.308	7
642			min	-3.997	3	-226.778	4	2.215	3	0	4	-.08	8	-.077	4
643		2	max	89.942	8	904.394	7	209.405	8	.002	7	-.006	2	.231	7
644			min	-3.997	3	-226.778	4	2.215	3	0	4	-.063	5	-.058	4
645		3	max	89.942	8	904.394	7	209.405	8	.002	7	-.004	2	.154	7
646			min	-3.997	3	-226.778	4	2.215	3	0	4	-.045	5	-.039	4
647		4	max	89.942	8	904.394	7	209.405	8	.002	7	-.003	2	.077	7
648			min	-3.997	3	-226.778	4	2.215	3	0	4	-.028	5	-.019	4
649		5	max	89.942	8	904.394	7	209.405	8	.002	7	0	4	0	7
650			min	-3.997	3	-226.778	4	2.215	3	0	4	-.011	7	0	4
651	M73	1	max	1296.905	5	658.671	2	141.893	4	.003	7	.015	7	.134	5
652			min	259.278	2	-236.116	1	-170.489	3	0	4	.002	4	.015	2
653		2	max	1296.905	5	658.671	2	141.893	4	.003	7	.014	4	.108	1
654			min	259.278	2	-236.116	1	-170.489	3	0	4	-.004	3	-.041	2
655		3	max	1296.905	5	658.671	2	141.893	4	.003	7	.026	4	.128	1
656			min	259.278	2	-236.116	1	-170.489	3	0	4	-.019	3	-.097	2
657		4	max	1296.905	5	658.671	2	141.893	4	.003	7	.038	4	.148	1
658			min	259.278	2	-236.116	1	-170.489	3	0	4	-.033	3	-.153	2
659		5	max	1296.905	5	658.671	2	141.893	4	.003	7	.05	4	.168	1
660			min	259.278	2	-236.116	1	-170.489	3	0	4	-.048	3	-.209	2
661	M74	1	max	220.937	2	392.84	2	162.106	4	.013	7	.022	7	0	2
662			min	-391.732	1	-479.469	1	-355.375	3	-.002	4	-.003	4	-.014	5
663		2	max	220.937	2	392.84	2	162.106	4	.013	7	.012	4	.037	1
664			min	-391.732	1	-479.469	1	-355.375	3	-.002	4	-.016	3	-.038	2
665		3	max	220.937	2	392.84	2	162.106	4	.013	7	.028	4	.084	1
666			min	-391.732	1	-479.469	1	-355.375	3	-.002	4	-.051	3	-.076	2
667		4	max	220.937	2	392.84	2	162.106	4	.013	7	.044	4	.13	1
668			min	-391.732	1	-479.469	1	-355.375	3	-.002	4	-.085	3	-.115	2
669		5	max	220.937	2	392.84	2	162.106	4	.013	7	.059	4	.176	1
670			min	-391.732	1	-479.469	1	-355.375	3	-.002	4	-.119	3	-.153	2
671	M75	1	max	1683.708	5	636.712	2	29.39	4	.011	7	.042	7	.147	5
672			min	379.283	2	-541.428	1	-387.428	7	.001	4	.004	4	.018	2
673		2	max	1683.708	5	636.712	2	29.39	4	.011	7	.013	1	.147	5
674			min	379.283	2	-541.428	1	-387.428	7	.001	4	-.005	2	-.037	2
675		3	max	1683.708	5	636.712	2	29.39	4	.011	7	.009	4	.189	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
676			min	379.283	2	-541.428	1	-387.428	7	.001	4	-.026	3	-.092	2
677		4	max	1683.708	5	636.712	2	29.39	4	.011	7	.012	4	.236	1
678			min	379.283	2	-541.428	1	-387.428	7	.001	4	-.058	7	-.147	2
679		5	max	1683.708	5	636.712	2	29.39	4	.011	7	.014	4	.283	1
680			min	379.283	2	-541.428	1	-387.428	7	.001	4	-.091	7	-.201	2
681	M76	1	max	99.409	5	83.447	4	251.903	2	0	5	.006	5	0	7
682			min	24.852	2	-789.703	7	-195.54	1	0	2	.001	2	0	4
683		2	max	99.409	5	83.447	4	251.903	2	0	5	.022	2	.066	7
684			min	24.852	2	-789.703	7	-195.54	1	0	2	-.012	1	-.007	4
685		3	max	99.409	5	83.447	4	251.903	2	0	5	.043	2	.132	7
686			min	24.852	2	-789.703	7	-195.54	1	0	2	-.029	1	-.014	4
687		4	max	99.409	5	83.447	4	251.903	2	0	5	.064	2	.198	7
688			min	24.852	2	-789.703	7	-195.54	1	0	2	-.045	1	-.021	4
689		5	max	99.409	5	83.447	4	251.903	2	0	5	.085	2	.264	7
690			min	24.852	2	-789.703	7	-195.54	1	0	2	-.061	1	-.028	4
691	M77	1	max	3.937	5	160.048	8	61.622	4	0	5	.011	5	0	3
692			min	-1.349	2	-44.794	3	-50.008	3	0	2	.002	2	0	4
693		2	max	3.937	5	160.048	8	61.622	4	0	5	.013	5	.004	3
694			min	-1.349	2	-44.794	3	-50.008	3	0	2	-.002	2	-.013	8
695		3	max	3.937	5	160.048	8	61.622	4	0	5	.017	1	.008	3
696			min	-1.349	2	-44.794	3	-50.008	3	0	2	-.006	2	-.027	8
697		4	max	3.937	5	160.048	8	61.622	4	0	5	.022	1	.011	3
698			min	-1.349	2	-44.794	3	-50.008	3	0	2	-.01	2	-.04	8
699		5	max	3.937	5	160.048	8	61.622	4	0	5	.027	1	.015	3
700			min	-1.349	2	-44.794	3	-50.008	3	0	2	-.014	2	-.053	8
701	M78	1	max	-2.181	4	29.519	4	50.05	2	0	2	-.002	2	0	4
702			min	-3.266	7	-92.651	3	-74.608	1	0	5	-.008	5	0	7
703		2	max	-2.181	4	29.519	4	50.05	2	0	2	.002	2	.008	3
704			min	-3.266	7	-92.651	3	-74.608	1	0	5	-.012	1	-.002	4
705		3	max	-2.181	4	29.519	4	50.05	2	0	2	.007	2	.015	3
706			min	-3.266	7	-92.651	3	-74.608	1	0	5	-.018	1	-.005	4
707		4	max	-2.181	4	29.519	4	50.05	2	0	2	.011	2	.023	3
708			min	-3.266	7	-92.651	3	-74.608	1	0	5	-.024	1	-.007	4
709		5	max	-2.181	4	29.519	4	50.05	2	0	2	.015	2	.031	3
710			min	-3.266	7	-92.651	3	-74.608	1	0	5	-.03	1	-.01	4
711	M79	1	max	3.191	4	73.35	4	45.193	3	0	2	-.001	2	0	4
712			min	-9.933	3	-93.897	3	-70.132	4	0	5	-.005	5	0	7
713		2	max	3.191	4	73.35	4	45.193	3	0	2	.002	2	.008	3
714			min	-9.933	3	-93.897	3	-70.132	4	0	5	-.01	1	-.006	4
715		3	max	3.191	4	73.35	4	45.193	3	0	2	.006	2	.016	3
716			min	-9.933	3	-93.897	3	-70.132	4	0	5	-.015	1	-.012	4
717		4	max	3.191	4	73.35	4	45.193	3	0	2	.01	2	.023	3
718			min	-9.933	3	-93.897	3	-70.132	4	0	5	-.021	1	-.018	4
719		5	max	3.191	4	73.35	4	45.193	3	0	2	.013	2	.031	3
720			min	-9.933	3	-93.897	3	-70.132	4	0	5	-.027	1	-.024	4
721	M80	1	max	14.322	4	101.336	4	61.237	3	0	3	0	3	0	4
722			min	-9.755	3	-78.788	3	-68.633	4	0	8	-.003	8	0	7
723		2	max	14.322	4	101.336	4	61.237	3	0	3	.005	3	.007	3
724			min	-9.755	3	-78.788	3	-68.633	4	0	8	-.009	4	-.008	4
725		3	max	14.322	4	101.336	4	61.237	3	0	3	.01	3	.013	3
726			min	-9.755	3	-78.788	3	-68.633	4	0	8	-.015	4	-.017	4
727		4	max	14.322	4	101.336	4	61.237	3	0	3	.015	3	.02	3
728			min	-9.755	3	-78.788	3	-68.633	4	0	8	-.021	4	-.025	4
729		5	max	14.322	4	101.336	4	61.237	3	0	3	.021	3	.026	3
730			min	-9.755	3	-78.788	3	-68.633	4	0	8	-.026	4	-.034	4
731	M81	1	max	-25.467	2	183.368	4	71.933	3	.002	7	.01	7	0	2
732			min	-260.592	5	-140.38	3	-82.403	4	0	4	-.001	4	0	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
733		2	max	-25.467	2	183.368	4	71.933	3	.002	7	.014	3	.012	3
734			min	-260.592	5	-140.38	3	-82.403	4	0	4	-.008	4	-.015	4
735		3	max	-25.467	2	183.368	4	71.933	3	.002	7	.02	3	.024	3
736			min	-260.592	5	-140.38	3	-82.403	4	0	4	-.015	4	-.031	4
737		4	max	-25.467	2	183.368	4	71.933	3	.002	7	.026	3	.035	3
738			min	-260.592	5	-140.38	3	-82.403	4	0	4	-.022	4	-.046	4
739		5	max	-25.467	2	183.368	4	71.933	3	.002	7	.032	3	.047	3
740			min	-260.592	5	-140.38	3	-82.403	4	0	4	-.029	4	-.062	4
741	M82	1	max	178.21	6	464.123	6	63.658	4	.012	7	.038	7	.044	5
742			min	15.877	1	-4.695	1	-553.481	7	0	4	.002	4	.006	2
743		2	max	178.21	6	464.123	6	63.658	4	.012	7	.008	4	.029	1
744			min	15.877	1	-4.695	1	-553.481	7	0	4	-.014	3	-.024	2
745		3	max	178.21	6	464.123	6	63.658	4	.012	7	.013	4	.03	1
746			min	15.877	1	-4.695	1	-553.481	7	0	4	-.059	7	-.055	2
747		4	max	178.21	6	464.123	6	63.658	4	.012	7	.019	4	.03	1
748			min	15.877	1	-4.695	1	-553.481	7	0	4	-.107	7	-.085	2
749		5	max	178.21	6	464.123	6	63.658	4	.012	7	.024	4	.031	1
750			min	15.877	1	-4.695	1	-553.481	7	0	4	-.156	7	-.123	6
751	M83	1	max	133.57	5	348.675	7	101.613	4	.011	7	.03	7	.026	5
752			min	40.454	2	68.457	4	-599.197	7	0	4	0	4	.004	2
753		2	max	133.57	5	348.675	7	101.613	4	.011	7	.009	4	0	1
754			min	40.454	2	68.457	4	-599.197	7	0	4	-.024	3	-.006	7
755		3	max	133.57	5	348.675	7	101.613	4	.011	7	.018	4	-.006	4
756			min	40.454	2	68.457	4	-599.197	7	0	4	-.076	7	-.037	7
757		4	max	133.57	5	348.675	7	101.613	4	.011	7	.027	4	-.012	4
758			min	40.454	2	68.457	4	-599.197	7	0	4	-.129	7	-.068	7
759		5	max	133.57	5	348.675	7	101.613	4	.011	7	.036	4	-.018	4
760			min	40.454	2	68.457	4	-599.197	7	0	4	-.182	7	-.098	7
761	M84	1	max	132.122	1	372.057	1	147.051	4	.012	7	.03	7	.016	5
762			min	-62.171	2	-147.608	2	-649.411	7	0	4	0	4	.004	2
763		2	max	132.122	1	372.057	1	147.051	4	.012	7	.012	4	.017	2
764			min	-62.171	2	-147.608	2	-649.411	7	0	4	-.032	3	-.024	1
765		3	max	132.122	1	372.057	1	147.051	4	.012	7	.026	4	.03	2
766			min	-62.171	2	-147.608	2	-649.411	7	0	4	-.088	7	-.057	1
767		4	max	132.122	1	372.057	1	147.051	4	.012	7	.039	4	.044	2
768			min	-62.171	2	-147.608	2	-649.411	7	0	4	-.146	7	-.091	1
769		5	max	132.122	1	372.057	1	147.051	4	.012	7	.052	4	.057	2
770			min	-62.171	2	-147.608	2	-649.411	7	0	4	-.205	7	-.124	1
771	M85	1	max	308.402	3	669.335	1	131.936	4	.014	7	.03	7	.01	5
772			min	-240.897	4	-472.701	2	-668.126	7	0	4	0	4	.004	2
773		2	max	308.402	3	669.335	1	131.936	4	.014	7	.013	4	.047	2
774			min	-240.897	4	-472.701	2	-668.126	7	0	4	-.034	3	-.055	1
775		3	max	308.402	3	669.335	1	131.936	4	.014	7	.025	4	.091	2
776			min	-240.897	4	-472.701	2	-668.126	7	0	4	-.093	7	-.117	1
777		4	max	308.402	3	669.335	1	131.936	4	.014	7	.037	4	.134	2
778			min	-240.897	4	-472.701	2	-668.126	7	0	4	-.154	7	-.179	1
779		5	max	308.402	3	669.335	1	131.936	4	.014	7	.05	4	.178	2
780			min	-240.897	4	-472.701	2	-668.126	7	0	4	-.216	7	-.24	1
781	M86	1	max	737.126	3	1024.53	3	1298.989	4	.008	7	.016	7	.002	2
782			min	-577.271	4	-1128.587	4	-1864.392	3	0	4	.002	4	0	5
783		2	max	737.126	3	1024.53	3	1298.989	4	.008	7	.124	4	.107	4
784			min	-577.271	4	-1128.587	4	-1864.392	3	0	4	-.164	3	-.096	3
785		3	max	737.126	3	1024.53	3	1298.989	4	.008	7	.246	4	.213	4
786			min	-577.271	4	-1128.587	4	-1864.392	3	0	4	-.339	3	-.193	3
787		4	max	737.126	3	1024.53	3	1298.989	4	.008	7	.368	4	.319	4
788			min	-577.271	4	-1128.587	4	-1864.392	3	0	4	-.514	3	-.289	3
789		5	max	737.126	3	1024.53	3	1298.989	4	.008	7	.49	4	.425	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
790			min	-577.271	4	-1128.587	4	-1864.392	3	0	4	-.689	3	-.385	3
791	M87	1	max	80.563	2	222.047	6	198.76	4	.009	7	.017	7	-.002	2
792			min	-116.61	1	-52.538	1	-406.641	3	-.003	4	-.005	4	-.017	5
793		2	max	80.563	2	222.047	6	198.76	4	.009	7	.014	4	-.005	4
794			min	-116.61	1	-52.538	1	-406.641	3	-.003	4	-.022	3	-.036	7
795		3	max	80.563	2	222.047	6	198.76	4	.009	7	.033	4	-.001	1
796			min	-116.61	1	-52.538	1	-406.641	3	-.003	4	-.061	3	-.057	6
797		4	max	80.563	2	222.047	6	198.76	4	.009	7	.051	4	.004	1
798			min	-116.61	1	-52.538	1	-406.641	3	-.003	4	-.099	3	-.078	6
799		5	max	80.563	2	222.047	6	198.76	4	.009	7	.07	4	.009	1
800			min	-116.61	1	-52.538	1	-406.641	3	-.003	4	-.138	3	-.099	6
801	M88	1	max	85.754	7	289.898	7	245.594	4	.008	3	.015	3	0	2
802			min	-7.486	4	-32.576	4	-477.215	3	-.003	4	-.006	4	-.01	5
803		2	max	85.754	7	289.898	7	245.594	4	.008	3	.017	4	.002	4
804			min	-7.486	4	-32.576	4	-477.215	3	-.003	4	-.029	3	-.037	7
805		3	max	85.754	7	289.898	7	245.594	4	.008	3	.04	4	.006	4
806			min	-7.486	4	-32.576	4	-477.215	3	-.003	4	-.073	3	-.064	7
807		4	max	85.754	7	289.898	7	245.594	4	.008	3	.063	4	.009	4
808			min	-7.486	4	-32.576	4	-477.215	3	-.003	4	-.118	3	-.091	7
809		5	max	85.754	7	289.898	7	245.594	4	.008	3	.086	4	.012	4
810			min	-7.486	4	-32.576	4	-477.215	3	-.003	4	-.162	3	-.118	7
811	M89	1	max	184.009	1	435.01	1	296.563	4	.006	3	.014	3	.001	4
812			min	-64.062	2	-161.35	2	-559.504	3	-.002	4	-.005	4	-.006	7
813		2	max	184.009	1	435.01	1	296.563	4	.006	3	.022	4	.016	2
814			min	-64.062	2	-161.35	2	-559.504	3	-.002	4	-.037	3	-.043	1
815		3	max	184.009	1	435.01	1	296.563	4	.006	3	.049	4	.031	2
816			min	-64.062	2	-161.35	2	-559.504	3	-.002	4	-.088	3	-.083	1
817		4	max	184.009	1	435.01	1	296.563	4	.006	3	.076	4	.045	2
818			min	-64.062	2	-161.35	2	-559.504	3	-.002	4	-.139	3	-.123	1
819		5	max	184.009	1	435.01	1	296.563	4	.006	3	.103	4	.06	2
820			min	-64.062	2	-161.35	2	-559.504	3	-.002	4	-.19	3	-.163	1
821	M90	1	max	290.812	1	757.322	1	299.937	4	.005	7	.013	7	.001	4
822			min	-149.279	2	-392.173	2	-598.433	3	-.001	4	-.003	4	-.004	7
823		2	max	290.812	1	757.322	1	299.937	4	.005	7	.024	4	.036	2
824			min	-149.279	2	-392.173	2	-598.433	3	-.001	4	-.042	3	-.07	1
825		3	max	290.812	1	757.322	1	299.937	4	.005	7	.05	4	.072	2
826			min	-149.279	2	-392.173	2	-598.433	3	-.001	4	-.096	3	-.138	1
827		4	max	290.812	1	757.322	1	299.937	4	.005	7	.077	4	.107	2
828			min	-149.279	2	-392.173	2	-598.433	3	-.001	4	-.15	3	-.206	1
829		5	max	290.812	1	757.322	1	299.937	4	.005	7	.104	4	.142	2
830			min	-149.279	2	-392.173	2	-598.433	3	-.001	4	-.203	3	-.274	1
831	M91	1	max	264.938	1	934.449	1	844.045	4	.002	7	.006	7	.001	4
832			min	-104.07	2	-318.621	2	-1090.881	3	0	4	-.001	4	0	7
833		2	max	264.938	1	934.449	1	844.045	4	.002	7	.073	4	.029	2
834			min	-104.07	2	-318.621	2	-1090.881	3	0	4	-.092	3	-.082	1
835		3	max	264.938	1	934.449	1	844.045	4	.002	7	.148	4	.057	2
836			min	-104.07	2	-318.621	2	-1090.881	3	0	4	-.188	3	-.165	1
837		4	max	264.938	1	934.449	1	844.045	4	.002	7	.222	4	.085	2
838			min	-104.07	2	-318.621	2	-1090.881	3	0	4	-.284	3	-.247	1
839		5	max	264.938	1	934.449	1	844.045	4	.002	7	.297	4	.114	2
840			min	-104.07	2	-318.621	2	-1090.881	3	0	4	-.38	3	-.33	1
841	M92	1	max	143.308	1	2292.339	5	-13.364	3	.106	2	.032	1	-.002	3
842			min	-1073.996	6	-207.334	2	-301.731	8	-.051	1	-.076	2	-.014	8
843		2	max	143.308	1	2292.339	5	-13.364	3	.106	2	.018	1	.015	2
844			min	-1073.996	6	-207.334	2	-301.731	8	-.051	1	-.089	6	-.24	5
845		3	max	143.308	1	2292.339	5	-13.364	3	.106	2	.014	3	.035	2
846			min	-1073.996	6	-207.334	2	-301.731	8	-.051	1	-.118	8	-.467	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
847		4	max	143.308	1	2292.339	5	-13.364	3	.106	2	.013	3	.056	2
848			min	-1073.996	6	-207.334	2	-301.731	8	-.051	1	-.147	8	-.694	5
849		5	max	143.308	1	2292.339	5	-13.364	3	.106	2	.012	3	.076	2
850			min	-1073.996	6	-207.334	2	-301.731	8	-.051	1	-.177	8	-.92	5
851	M93	1	max	93.48	6	896.465	5	217.997	6	.002	8	.005	1	.305	5
852			min	-18.896	1	-193.1	2	-33.008	1	0	3	-.084	6	-.066	2
853		2	max	93.48	6	896.465	5	217.997	6	.002	8	.002	1	.229	5
854			min	-18.896	1	-193.1	2	-33.008	1	0	3	-.065	6	-.049	2
855		3	max	93.48	6	896.465	5	217.997	6	.002	8	0	1	.153	5
856			min	-18.896	1	-193.1	2	-33.008	1	0	3	-.046	6	-.033	2
857		4	max	93.48	6	896.465	5	217.997	6	.002	8	-.003	1	.076	5
858			min	-18.896	1	-193.1	2	-33.008	1	0	3	-.028	6	-.016	2
859		5	max	93.48	6	896.465	5	217.997	6	.002	8	0	3	0	8
860			min	-18.896	1	-193.1	2	-33.008	1	0	3	-.011	8	0	3
861	M94	1	max	1303.408	8	767.919	3	127.365	3	.003	8	.015	8	.136	8
862			min	231.892	3	-344.869	4	-156.021	4	0	3	0	3	.007	3
863		2	max	1303.408	8	767.919	3	127.365	3	.003	8	.013	2	.125	4
864			min	231.892	3	-344.869	4	-156.021	4	0	3	-.004	1	-.058	3
865		3	max	1303.408	8	767.919	3	127.365	3	.003	8	.024	2	.155	4
866			min	231.892	3	-344.869	4	-156.021	4	0	3	-.017	1	-.124	3
867		4	max	1303.408	8	767.919	3	127.365	3	.003	8	.035	2	.184	4
868			min	231.892	3	-344.869	4	-156.021	4	0	3	-.03	1	-.189	3
869		5	max	1303.408	8	767.919	3	127.365	3	.003	8	.045	2	.213	4
870			min	231.892	3	-344.869	4	-156.021	4	0	3	-.043	1	-.254	3
871	M95	1	max	233.003	3	393.743	3	181.176	2	.013	8	.021	8	.001	3
872			min	-402.114	4	-479.001	4	-375.117	1	-.002	3	-.003	3	-.014	8
873		2	max	233.003	3	393.743	3	181.176	2	.013	8	.016	2	.036	4
874			min	-402.114	4	-479.001	4	-375.117	1	-.002	3	-.019	1	-.037	3
875		3	max	233.003	3	393.743	3	181.176	2	.013	8	.033	2	.082	4
876			min	-402.114	4	-479.001	4	-375.117	1	-.002	3	-.056	1	-.075	3
877		4	max	233.003	3	393.743	3	181.176	2	.013	8	.051	2	.128	4
878			min	-402.114	4	-479.001	4	-375.117	1	-.002	3	-.092	1	-.113	3
879		5	max	233.003	3	393.743	3	181.176	2	.013	8	.068	2	.175	4
880			min	-402.114	4	-479.001	4	-375.117	1	-.002	3	-.128	1	-.151	3
881	M96	1	max	1689.383	8	893.61	3	8.527	2	.011	8	.043	8	.149	8
882			min	355.799	3	-796.463	4	-382.906	5	0	3	0	3	.009	3
883		2	max	1689.383	8	893.61	3	8.527	2	.011	8	.012	4	.173	4
884			min	355.799	3	-796.463	4	-382.906	5	0	3	-.005	3	-.068	3
885		3	max	1689.383	8	893.61	3	8.527	2	.011	8	.01	2	.242	4
886			min	355.799	3	-796.463	4	-382.906	5	0	3	-.027	1	-.145	3
887		4	max	1689.383	8	893.61	3	8.527	2	.011	8	.01	2	.31	4
888			min	355.799	3	-796.463	4	-382.906	5	0	3	-.058	5	-.222	3
889		5	max	1689.383	8	893.61	3	8.527	2	.011	8	.011	2	.379	4
890			min	355.799	3	-796.463	4	-382.906	5	0	3	-.091	5	-.299	3
891	M97	1	max	99.246	8	77.921	3	229.632	1	0	8	.006	8	0	8
892			min	25.472	3	-786.962	8	-173.184	2	0	3	0	3	0	3
893		2	max	99.246	8	77.921	3	229.632	1	0	8	.023	1	.066	8
894			min	25.472	3	-786.962	8	-173.184	2	0	3	-.012	2	-.007	3
895		3	max	99.246	8	77.921	3	229.632	1	0	8	.042	1	.132	8
896			min	25.472	3	-786.962	8	-173.184	2	0	3	-.027	2	-.013	3
897		4	max	99.246	8	77.921	3	229.632	1	0	8	.061	1	.197	8
898			min	25.472	3	-786.962	8	-173.184	2	0	3	-.041	2	-.02	3
899		5	max	99.246	8	77.921	3	229.632	1	0	8	.08	1	.263	8
900			min	25.472	3	-786.962	8	-173.184	2	0	3	-.056	2	-.026	3
901	M98	1	max	3.825	8	195.648	2	94.441	2	0	8	.011	8	0	4
902			min	-.864	3	-81.952	1	-83.002	1	0	3	.002	3	0	3
903		2	max	3.825	8	195.648	2	94.441	2	0	8	.013	6	.007	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
904			min	-.864	3	-81.952	1	-83.002	1	0	3	-.001	1	-.016	2
905		3	max	3.825	8	195.648	2	94.441	2	0	8	.019	2	.014	1
906			min	-.864	3	-81.952	1	-83.002	1	0	3	-.008	1	-.033	2
907		4	max	3.825	8	195.648	2	94.441	2	0	8	.027	2	.021	1
908			min	-.864	3	-81.952	1	-83.002	1	0	3	-.015	1	-.049	2
909		5	max	3.825	8	195.648	2	94.441	2	0	8	.035	2	.027	1
910			min	-.864	3	-81.952	1	-83.002	1	0	3	-.022	1	-.065	2
911	M99	1	max	-2.272	1	28.252	3	73.77	1	0	1	-.002	3	0	3
912			min	-3.245	6	-91.459	4	-98.119	2	0	6	-.008	8	0	8
913		2	max	-2.272	1	28.252	3	73.77	1	0	1	.002	1	.008	4
914			min	-3.245	6	-91.459	4	-98.119	2	0	6	-.012	2	-.002	3
915		3	max	-2.272	1	28.252	3	73.77	1	0	1	.009	1	.015	4
916			min	-3.245	6	-91.459	4	-98.119	2	0	6	-.02	2	-.005	3
917		4	max	-2.272	1	28.252	3	73.77	1	0	1	.015	1	.023	4
918			min	-3.245	6	-91.459	4	-98.119	2	0	6	-.028	2	-.007	3
919		5	max	-2.272	1	28.252	3	73.77	1	0	1	.021	1	.03	4
920			min	-3.245	6	-91.459	4	-98.119	2	0	6	-.036	2	-.009	3
921	M100	1	max	3.705	3	82.168	3	79.513	1	0	1	-.001	1	0	3
922			min	-10.442	4	-102.705	4	-104.306	2	0	6	-.005	6	0	8
923		2	max	3.705	3	82.168	3	79.513	1	0	1	.005	1	.009	4
924			min	-10.442	4	-102.705	4	-104.306	2	0	6	-.012	2	-.007	3
925		3	max	3.705	3	82.168	3	79.513	1	0	1	.012	1	.017	4
926			min	-10.442	4	-102.705	4	-104.306	2	0	6	-.021	2	-.014	3
927		4	max	3.705	3	82.168	3	79.513	1	0	1	.018	1	.026	4
928			min	-10.442	4	-102.705	4	-104.306	2	0	6	-.03	2	-.021	3
929		5	max	3.705	3	82.168	3	79.513	1	0	1	.025	1	.034	4
930			min	-10.442	4	-102.705	4	-104.306	2	0	6	-.038	2	-.027	3
931	M101	1	max	14.66	3	119.237	3	88.854	1	0	1	0	1	0	3
932			min	-10.057	4	-96.597	4	-96.083	2	0	2	-.004	2	0	8
933		2	max	14.66	3	119.237	3	88.854	1	0	1	.008	1	.008	4
934			min	-10.057	4	-96.597	4	-96.083	2	0	2	-.012	2	-.01	3
935		3	max	14.66	3	119.237	3	88.854	1	0	1	.015	1	.016	4
936			min	-10.057	4	-96.597	4	-96.083	2	0	2	-.02	2	-.02	3
937		4	max	14.66	3	119.237	3	88.854	1	0	1	.023	1	.024	4
938			min	-10.057	4	-96.597	4	-96.083	2	0	2	-.028	2	-.03	3
939		5	max	14.66	3	119.237	3	88.854	1	0	1	.03	1	.032	4
940			min	-10.057	4	-96.597	4	-96.083	2	0	2	-.036	2	-.04	3
941	M102	1	max	3.503	3	215.133	3	96.977	1	.002	8	.01	8	0	3
942			min	-267.392	8	-171.966	4	-107.22	2	0	3	-.001	3	0	8
943		2	max	3.503	3	215.133	3	96.977	1	.002	8	.015	1	.014	4
944			min	-267.392	8	-171.966	4	-107.22	2	0	3	-.009	2	-.018	3
945		3	max	3.503	3	215.133	3	96.977	1	.002	8	.023	1	.029	4
946			min	-267.392	8	-171.966	4	-107.22	2	0	3	-.019	2	-.036	3
947		4	max	3.503	3	215.133	3	96.977	1	.002	8	.031	1	.043	4
948			min	-267.392	8	-171.966	4	-107.22	2	0	3	-.028	2	-.054	3
949		5	max	3.503	3	215.133	3	96.977	1	.002	8	.04	1	.058	4
950			min	-267.392	8	-171.966	4	-107.22	2	0	3	-.037	2	-.073	3
951	M103	1	max	185.86	7	479.781	7	37.811	3	.012	8	.038	8	.045	8
952			min	-17.278	4	-72.829	4	-546.286	8	0	3	-.001	3	.004	3
953		2	max	185.86	7	479.781	7	37.811	3	.012	8	.006	2	.038	4
954			min	-17.278	4	-72.829	4	-546.286	8	0	3	-.013	1	-.033	3
955		3	max	185.86	7	479.781	7	37.811	3	.012	8	.007	2	.044	4
956			min	-17.278	4	-72.829	4	-546.286	8	0	3	-.058	5	-.069	3
957		4	max	185.86	7	479.781	7	37.811	3	.012	8	.009	3	.05	4
958			min	-17.278	4	-72.829	4	-546.286	8	0	3	-.105	5	-.105	3
959		5	max	185.86	7	479.781	7	37.811	3	.012	8	.012	3	.057	4
960			min	-17.278	4	-72.829	4	-546.286	8	0	3	-.153	8	-.142	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
961	M104	1	max	135.688	8	353.615	8	95.042	3	.011	8	.031	8	.026	8
962			min	31.142	3	45.183	3	-596.39	8	-.001	3	-.003	3	.003	3
963		2	max	135.688	8	353.615	8	95.042	3	.011	8	.006	3	.003	2
964			min	31.142	3	45.183	3	-596.39	8	-.001	3	-.022	8	-.007	1
965		3	max	135.688	8	353.615	8	95.042	3	.011	8	.014	3	-.003	2
966			min	31.142	3	45.183	3	-596.39	8	-.001	3	-.075	8	-.037	5
967		4	max	135.688	8	353.615	8	95.042	3	.011	8	.023	3	-.009	3
968			min	31.142	3	45.183	3	-596.39	8	-.001	3	-.128	8	-.068	8
969		5	max	135.688	8	353.615	8	95.042	3	.011	8	.031	3	-.013	3
970			min	31.142	3	45.183	3	-596.39	8	-.001	3	-.181	8	-.1	8
971	M105	1	max	204.418	4	551.814	4	156.163	3	.013	8	.03	8	.016	8
972			min	-135.125	3	-328.994	3	-650.046	8	-.001	3	-.003	3	.003	3
973		2	max	204.418	4	551.814	4	156.163	3	.013	8	.011	3	.033	3
974			min	-135.125	3	-328.994	3	-650.046	8	-.001	3	-.031	4	-.039	4
975		3	max	204.418	4	551.814	4	156.163	3	.013	8	.025	3	.062	3
976			min	-135.125	3	-328.994	3	-650.046	8	-.001	3	-.087	8	-.089	4
977		4	max	204.418	4	551.814	4	156.163	3	.013	8	.04	3	.092	3
978			min	-135.125	3	-328.994	3	-650.046	8	-.001	3	-.146	8	-.139	4
979		5	max	204.418	4	551.814	4	156.163	3	.013	8	.054	3	.122	3
980			min	-135.125	3	-328.994	3	-650.046	8	-.001	3	-.205	8	-.189	4
981	M106	1	max	520.715	4	1099.921	4	143.437	3	.014	8	.031	8	.01	8
982			min	-453.477	3	-905.922	3	-669.46	8	0	3	-.001	3	.004	3
983		2	max	520.715	4	1099.921	4	143.437	3	.014	8	.012	3	.087	3
984			min	-453.477	3	-905.922	3	-669.46	8	0	3	-.033	4	-.095	4
985		3	max	520.715	4	1099.921	4	143.437	3	.014	8	.025	3	.17	3
986			min	-453.477	3	-905.922	3	-669.46	8	0	3	-.093	8	-.196	4
987		4	max	520.715	4	1099.921	4	143.437	3	.014	8	.039	3	.254	3
988			min	-453.477	3	-905.922	3	-669.46	8	0	3	-.154	8	-.297	4
989		5	max	520.715	4	1099.921	4	143.437	3	.014	8	.052	3	.337	3
990			min	-453.477	3	-905.922	3	-669.46	8	0	3	-.216	8	-.398	4
991	M107	1	max	962.525	4	1446.261	4	1529.402	3	.009	8	.016	8	.002	3
992			min	-803.048	3	-1551.813	3	-2095.346	4	0	3	0	3	-.001	8
993		2	max	962.525	4	1446.261	4	1529.402	3	.009	8	.144	3	.148	3
994			min	-803.048	3	-1551.813	3	-2095.346	4	0	3	-.184	4	-.137	4
995		3	max	962.525	4	1446.261	4	1529.402	3	.009	8	.288	3	.294	3
996			min	-803.048	3	-1551.813	3	-2095.346	4	0	3	-.381	4	-.273	4
997		4	max	962.525	4	1446.261	4	1529.402	3	.009	8	.432	3	.439	3
998			min	-803.048	3	-1551.813	3	-2095.346	4	0	3	-.578	4	-.409	4
999		5	max	962.525	4	1446.261	4	1529.402	3	.009	8	.575	3	.585	3
1000			min	-803.048	3	-1551.813	3	-2095.346	4	0	3	-.775	4	-.544	4
1001	M108	1	max	62.258	3	217.071	5	209.273	2	.009	8	.017	8	0	3
1002			min	-98.229	4	-31.826	2	-417.918	1	-.003	3	-.005	3	-.017	8
1003		2	max	62.258	3	217.071	5	209.273	2	.009	8	.016	2	-.002	2
1004			min	-98.229	4	-31.826	2	-417.918	1	-.003	3	-.024	1	-.037	5
1005		3	max	62.258	3	217.071	5	209.273	2	.009	8	.036	2	0	2
1006			min	-98.229	4	-31.826	2	-417.918	1	-.003	3	-.064	1	-.057	5
1007		4	max	62.258	3	217.071	5	209.273	2	.009	8	.055	2	.004	2
1008			min	-98.229	4	-31.826	2	-417.918	1	-.003	3	-.104	1	-.078	5
1009		5	max	62.258	3	217.071	5	209.273	2	.009	8	.075	2	.007	2
1010			min	-98.229	4	-31.826	2	-417.918	1	-.003	3	-.143	1	-.098	5
1011	M109	1	max	96.075	4	297.057	8	253.414	2	.007	4	.015	4	.001	3
1012			min	-22.249	3	-65.83	3	-485.919	1	-.003	3	-.005	3	-.011	8
1013		2	max	96.075	4	297.057	8	253.414	2	.007	4	.019	2	.007	3
1014			min	-22.249	3	-65.83	3	-485.919	1	-.003	3	-.031	1	-.038	8
1015		3	max	96.075	4	297.057	8	253.414	2	.007	4	.043	2	.013	3
1016			min	-22.249	3	-65.83	3	-485.919	1	-.003	3	-.076	1	-.066	8
1017		4	max	96.075	4	297.057	8	253.414	2	.007	4	.066	2	.019	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
1018			min	-22.249	3	-65.83	3	-485.919	1	-.003	3	-.121	1	-.094	8
1019		5	max	96.075	4	297.057	8	253.414	2	.007	4	.09	2	.026	3
1020			min	-22.249	3	-65.83	3	-485.919	1	-.003	3	-.166	1	-.121	8
1021	M110	1	max	221.131	4	569.078	4	295.852	2	.006	4	.014	4	.002	3
1022			min	-101.689	3	-296.99	3	-559.821	1	-.002	3	-.005	3	-.006	8
1023		2	max	221.131	4	569.078	4	295.852	2	.006	4	.023	2	.029	3
1024			min	-101.689	3	-296.99	3	-559.821	1	-.002	3	-.038	1	-.057	4
1025		3	max	221.131	4	569.078	4	295.852	2	.006	4	.05	2	.057	3
1026			min	-101.689	3	-296.99	3	-559.821	1	-.002	3	-.089	1	-.109	4
1027		4	max	221.131	4	569.078	4	295.852	2	.006	4	.077	2	.084	3
1028			min	-101.689	3	-296.99	3	-559.821	1	-.002	3	-.14	1	-.161	4
1029		5	max	221.131	4	569.078	4	295.852	2	.006	4	.104	2	.111	3
1030			min	-101.689	3	-296.99	3	-559.821	1	-.002	3	-.191	1	-.213	4
1031	M111	1	max	288.048	4	852.398	4	287.267	2	.005	8	.012	8	.002	3
1032			min	-147.28	3	-489.658	3	-586.807	1	-.001	3	-.003	3	-.004	8
1033		2	max	288.048	4	852.398	4	287.267	2	.005	8	.024	2	.046	3
1034			min	-147.28	3	-489.658	3	-586.807	1	-.001	3	-.043	1	-.08	4
1035		3	max	288.048	4	852.398	4	287.267	2	.005	8	.05	2	.09	3
1036			min	-147.28	3	-489.658	3	-586.807	1	-.001	3	-.095	1	-.156	4
1037		4	max	288.048	4	852.398	4	287.267	2	.005	8	.075	2	.134	3
1038			min	-147.28	3	-489.658	3	-586.807	1	-.001	3	-.148	1	-.233	4
1039		5	max	288.048	4	852.398	4	287.267	2	.005	8	.101	2	.178	3
1040			min	-147.28	3	-489.658	3	-586.807	1	-.001	3	-.2	1	-.309	4
1041	M112	1	max	351.372	2	915.638	2	974.748	2	.002	8	.006	8	.001	3
1042			min	-191.346	1	-303.123	1	-1223.882	1	0	3	-.001	3	0	8
1043		2	max	351.372	2	915.638	2	974.748	2	.002	8	.086	2	.027	1
1044			min	-191.346	1	-303.123	1	-1223.882	1	0	3	-.104	1	-.08	2
1045		3	max	351.372	2	915.638	2	974.748	2	.002	8	.172	2	.054	1
1046			min	-191.346	1	-303.123	1	-1223.882	1	0	3	-.212	1	-.161	2
1047		4	max	351.372	2	915.638	2	974.748	2	.002	8	.258	2	.081	1
1048			min	-191.346	1	-303.123	1	-1223.882	1	0	3	-.32	1	-.242	2
1049		5	max	351.372	2	915.638	2	974.748	2	.002	8	.344	2	.107	1
1050			min	-191.346	1	-303.123	1	-1223.882	1	0	3	-.428	1	-.322	2
1051	M106A	1	max	206.957	1	449.916	7	267.384	2	.221	1	-.083	4	.124	1
1052			min	-175.987	2	31.754	4	-126.678	1	-.486	2	-.288	7	-.072	2
1053		2	max	206.957	1	449.916	7	267.384	2	.221	1	-.073	4	.104	1
1054			min	-175.987	2	31.754	4	-126.678	1	-.486	2	-.277	7	-.077	2
1055		3	max	206.957	1	449.916	7	267.384	2	.221	1	-.064	4	.083	1
1056			min	-175.987	2	31.754	4	-126.678	1	-.486	2	-.267	7	-.081	2
1057		4	max	206.957	1	449.916	7	267.384	2	.221	1	-.054	4	.062	1
1058			min	-175.987	2	31.754	4	-126.678	1	-.486	2	-.256	7	-.086	2
1059		5	max	206.957	1	449.916	7	267.384	2	.221	1	-.043	2	.042	4
1060			min	-175.987	2	31.754	4	-126.678	1	-.486	2	-.245	7	-.09	2
1061	M107A	1	max	257.179	1	526.72	9	114.879	1	.568	9	.287	8	.048	3
1062			min	-253.384	2	43.64	2	-409.72	9	-.269	4	.064	3	-.064	9
1063		2	max	257.179	1	526.72	9	114.879	1	.568	9	.278	8	.043	3
1064			min	-253.384	2	43.64	2	-409.72	9	-.269	4	.061	3	-.102	9
1065		3	max	257.179	1	526.72	9	114.879	1	.568	9	.27	8	.038	3
1066			min	-253.384	2	43.64	2	-409.72	9	-.269	4	.059	3	-.14	9
1067		4	max	257.179	1	526.72	9	114.879	1	.568	9	.261	8	.033	3
1068			min	-253.384	2	43.64	2	-409.72	9	-.269	4	.056	3	-.178	9
1069		5	max	257.179	1	526.72	9	114.879	1	.568	9	.253	8	.029	3
1070			min	-253.384	2	43.64	2	-409.72	9	-.269	4	.053	3	-.217	9
1071	M108A	1	max	578.018	1	1159.171	6	334.933	3	1.133	3	.009	4	.766	2
1072			min	-1182.755	2	21.959	1	-222.703	4	-1.289	4	-.066	7	-1.544	1
1073		2	max	578.018	1	1159.171	6	334.933	3	1.133	3	-.006	9	.709	2
1074			min	-1182.755	2	21.959	1	-222.703	4	-1.289	4	-.053	6	-1.545	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
1075		3	max	578.018	1	1159.171	6	334.933	3	1.133	3	-.009	1	.651	2
1076			min	-1182.755	2	21.959	1	-222.703	4	-1.289	4	-.045	8	-1.547	1
1077		4	max	578.018	1	1159.171	6	334.933	3	1.133	3	.013	3	.594	2
1078			min	-1182.755	2	21.959	1	-222.703	4	-1.289	4	-.039	4	-1.548	1
1079		5	max	578.018	1	1159.171	6	334.933	3	1.133	3	.037	3	.536	2
1080			min	-1182.755	2	21.959	1	-222.703	4	-1.289	4	-.055	4	-1.55	1
1081	M109A	1	max	0	11	0	11	0	11	0	11	0	11	0	11
1082			min	0	1	0	1	0	1	0	1	0	1	0	1
1083		2	max	650.903	7	95.224	1	1454.436	6	.737	1	1.01	6	.647	6
1084			min	48.614	9	-550.236	6	359.622	1	-.384	2	-.037	1	-.196	1
1085		3	max	2869.551	6	29.047	4	497.67	2	.381	2	1.062	1	.296	4
1086			min	349.136	1	-492.019	7	-275.36	1	-.807	1	-.511	2	-.774	3
1087		4	max	703.151	5	550.707	6	-356.962	1	.38	2	.714	6	.532	6
1088			min	157.028	2	-82.323	1	-1363.219	6	-.806	1	-.077	1	-.15	1
1089		5	max	0	11	0	11	0	11	0	11	0	11	0	11
1090			min	0	1	0	1	0	1	0	1	0	1	0	1
1091	M110A	1	max	115.236	4	450.92	8	272.53	3	.353	4	-.067	2	.074	6
1092			min	-82.867	3	7.084	3	-129.454	4	-.621	3	-.29	5	-.021	1
1093		2	max	115.236	4	450.92	8	272.53	3	.353	4	-.065	2	.066	2
1094			min	-82.867	3	7.084	3	-129.454	4	-.621	3	-.278	5	-.038	1
1095		3	max	115.236	4	450.92	8	272.53	3	.353	4	-.062	2	.058	2
1096			min	-82.867	3	7.084	3	-129.454	4	-.621	3	-.266	8	-.055	1
1097		4	max	115.236	4	450.92	8	272.53	3	.353	4	-.045	3	.05	2
1098			min	-82.867	3	7.084	3	-129.454	4	-.621	3	-.258	8	-.072	1
1099		5	max	115.236	4	450.92	8	272.53	3	.353	4	-.026	3	.042	2
1100			min	-82.867	3	7.084	3	-129.454	4	-.621	3	-.249	8	-.089	1
1101	M111A	1	max	235.08	4	402.509	6	92.428	4	.596	1	.284	6	.105	1
1102			min	-230.409	3	25.849	1	-199.492	3	-.402	2	.07	4	-.092	2
1103		2	max	235.08	4	402.509	6	92.428	4	.596	1	.276	6	.103	1
1104			min	-230.409	3	25.849	1	-199.492	3	-.402	2	.072	1	-.113	2
1105		3	max	235.08	4	402.509	6	92.428	4	.596	1	.269	6	.101	1
1106			min	-230.409	3	25.849	1	-199.492	3	-.402	2	.063	1	-.134	2
1107		4	max	235.08	4	402.509	6	92.428	4	.596	1	.262	6	.099	1
1108			min	-230.409	3	25.849	1	-199.492	3	-.402	2	.054	1	-.155	2
1109		5	max	235.08	4	402.509	6	92.428	4	.596	1	.255	6	.097	1
1110			min	-230.409	3	25.849	1	-199.492	3	-.402	2	.045	1	-.176	2
1111	M112A	1	max	421.196	4	1152.639	7	291.119	1	1.163	1	-.008	10	.489	3
1112			min	-1024.828	3	52.274	4	-181.314	2	-1.317	2	-.066	7	-1.262	4
1113		2	max	421.196	4	1152.639	7	291.119	1	1.163	1	-.003	4	.433	3
1114			min	-1024.828	3	52.274	4	-181.314	2	-1.317	2	-.058	7	-1.266	4
1115		3	max	421.196	4	1152.639	7	291.119	1	1.163	1	.014	4	.377	3
1116			min	-1024.828	3	52.274	4	-181.314	2	-1.317	2	-.05	7	-1.269	4
1117		4	max	421.196	4	1152.639	7	291.119	1	1.163	1	.031	4	.321	3
1118			min	-1024.828	3	52.274	4	-181.314	2	-1.317	2	-.057	3	-1.307	8
1119		5	max	421.196	4	1152.639	7	291.119	1	1.163	1	.05	1	.265	3
1120			min	-1024.828	3	52.274	4	-181.314	2	-1.317	2	-.068	2	-1.38	8
1121	M113	1	max	0	11	.017	3	.019	1	0	11	0	11	0	11
1122			min	0	1	-.013	1	-.023	3	0	1	0	1	0	1
1123		2	max	662.081	5	58.949	2	1473.863	7	.585	4	1.038	7	.664	3
1124			min	147.819	3	-541.278	5	257.776	4	-.235	3	-.155	4	-.217	4
1125		3	max	2833.209	7	108.154	2	348.464	1	.253	3	.884	4	.293	2
1126			min	518.569	2	-508.139	5	-128.564	2	-.676	4	-.332	3	-.772	1
1127		4	max	696.027	6	554.008	7	-281.947	2	.252	3	.733	5	.526	5
1128			min	232.716	3	-107.901	4	-1377.896	5	-.676	4	-.126	2	-.086	2
1129		5	max	0	11	.019	3	.03	1	0	11	0	11	0	11
1130			min	0	1	-.005	1	-.021	3	0	1	0	1	0	1
1131	M114	1	max	183.724	3	455.778	6	336.119	9	.281	2	-.081	3	.137	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
1132			min	-151.826	4	-8.889	1	-73.535	2	-.553	1	-.286	6	-.085	4
1133		2	max	183.724	3	455.778	6	336.119	9	.281	2	-.082	1	.122	3
1134			min	-151.826	4	-8.889	1	-73.535	2	-.553	1	-.276	6	-.095	4
1135		3	max	183.724	3	455.778	6	336.119	9	.281	2	-.066	1	.107	3
1136			min	-151.826	4	-8.889	1	-73.535	2	-.553	1	-.267	6	-.105	4
1137		4	max	183.724	3	455.778	6	336.119	9	.281	2	-.05	1	.092	3
1138			min	-151.826	4	-8.889	1	-73.535	2	-.553	1	-.258	6	-.115	4
1139		5	max	183.724	3	455.778	6	336.119	9	.281	2	-.034	1	.077	3
1140			min	-151.826	4	-8.889	1	-73.535	2	-.553	1	-.248	6	-.125	4
1141	M115	1	max	156.625	3	403.702	7	91.415	3	.617	4	.288	5	.092	4
1142			min	-152.368	4	20.48	4	-199.552	4	-.427	3	.052	2	-.08	3
1143		2	max	156.625	3	403.702	7	91.415	3	.617	4	.278	5	.09	4
1144			min	-152.368	4	20.48	4	-199.552	4	-.427	3	.055	2	-.102	3
1145		3	max	156.625	3	403.702	7	91.415	3	.617	4	.269	5	.089	4
1146			min	-152.368	4	20.48	4	-199.552	4	-.427	3	.057	2	-.123	3
1147		4	max	156.625	3	403.702	7	91.415	3	.617	4	.262	7	.087	4
1148			min	-152.368	4	20.48	4	-199.552	4	-.427	3	.055	4	-.145	3
1149		5	max	156.625	3	403.702	7	91.415	3	.617	4	.256	7	.086	4
1150			min	-152.368	4	20.48	4	-199.552	4	-.427	3	.041	4	-.167	3
1151	M116	1	max	402.134	3	1139.577	8	285.464	2	1.184	2	-.017	1	.499	4
1152			min	-1006.651	4	122.318	3	-170.953	1	-1.341	1	-.064	7	-1.272	3
1153		2	max	402.134	3	1139.577	8	285.464	2	1.184	2	-.013	2	.448	4
1154			min	-1006.651	4	122.318	3	-170.953	1	-1.341	1	-.056	5	-1.281	3
1155		3	max	402.134	3	1139.577	8	285.464	2	1.184	2	.007	2	.397	4
1156			min	-1006.651	4	122.318	3	-170.953	1	-1.341	1	-.049	5	-1.29	3
1157		4	max	402.134	3	1139.577	8	285.464	2	1.184	2	.028	2	.346	4
1158			min	-1006.651	4	122.318	3	-170.953	1	-1.341	1	-.055	1	-1.314	7
1159		5	max	402.134	3	1139.577	8	285.464	2	1.184	2	.049	2	.295	4
1160			min	-1006.651	4	122.318	3	-170.953	1	-1.341	1	-.067	1	-1.388	7
1161	M117	1	max	0	11	.009	1	.022	4	0	11	0	11	0	11
1162			min	0	1	-.019	4	-.026	1	0	1	0	1	0	1
1163		2	max	648.789	6	137.508	3	1466.913	5	.614	3	1.015	5	.633	5
1164			min	207.3	1	-557.456	8	289.686	2	-.264	4	-.017	2	-.091	2
1165		3	max	2867.342	8	121.16	3	502.979	4	.235	4	.858	3	.339	1
1166			min	316.96	3	-509.524	8	-281.339	3	-.658	3	-.308	4	-.816	2
1167		4	max	708.749	7	535.839	5	-263.371	3	.233	4	.752	4	.547	4
1168			min	134.451	9	-21.745	2	-1382.346	8	-.658	3	-.218	3	-.18	3
1169		5	max	0	11	.015	1	.025	4	0	11	0	11	0	11
1170			min	0	1	-.014	4	-.019	1	0	1	0	1	0	1
1171	M118	1	max	1611.946	8	413.318	1	147.552	1	.007	1	.166	2	-.252	4
1172			min	567.328	2	-412.415	2	-104.738	2	-.006	2	-.566	1	-1.251	7
1173		2	max	1609.999	8	409.888	1	143.221	1	.007	1	.003	3	-.324	4
1174			min	574.831	2	-415.845	2	-100.406	2	-.006	2	-.508	8	-1.212	7
1175		3	max	1608.053	8	406.458	1	138.889	1	.007	1	-.098	3	-.32	2
1176			min	582.334	2	-419.275	2	-96.074	2	-.006	2	-.469	8	-1.181	5
1177		4	max	1606.106	8	403.028	1	134.557	1	.007	1	.113	1	-.185	2
1178			min	589.837	2	-422.705	2	-91.743	2	-.006	2	-.501	6	-1.168	5
1179		5	max	1604.16	8	399.598	1	130.225	1	.007	1	.334	1	-.046	2
1180			min	597.339	2	-426.135	2	-87.411	2	-.006	2	-.684	2	-1.153	5
1181	M119	1	max	1603.015	7	395.693	2	125.961	2	.006	2	.252	1	-.15	2
1182			min	625.821	4	-402.142	1	-82.29	1	-.006	1	-.647	2	-1.269	5
1183		2	max	1604.961	7	392.263	2	130.293	2	.006	2	.051	1	-.26	2
1184			min	618.318	4	-405.572	1	-86.622	1	-.006	1	-.518	6	-1.223	5
1185		3	max	1606.908	7	388.833	2	134.624	2	.006	2	-.072	4	-.366	2
1186			min	610.815	4	-409.002	1	-90.954	1	-.006	1	-.474	7	-1.173	5
1187		4	max	1608.854	7	385.403	2	138.956	2	.006	2	.056	4	-.286	3
1188			min	603.313	4	-412.432	1	-95.285	1	-.006	1	-.489	7	-1.151	8

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
1189		5	max	1610.801	7	381.973	2	143.288	2	.006	2	.217	2	-.196	3
1190			min	595.81	4	-415.862	1	-99.617	1	-.006	1	-.573	1	-1.126	8
1191	M120	1	max	1630.675	5	480.285	3	151.779	3	.008	3	.28	4	-.244	3
1192			min	488.161	2	-482.256	4	-108.856	4	-.007	4	-.678	3	-1.252	8
1193		2	max	1630.675	5	476.855	3	151.779	3	.008	3	.036	4	-.378	3
1194			min	488.161	2	-485.686	4	-108.856	4	-.007	4	-.515	7	-1.202	8
1195		3	max	1630.675	5	473.425	3	151.779	3	.008	3	-.062	2	-.449	4
1196			min	488.161	2	-489.116	4	-108.856	4	-.007	4	-.477	5	-1.16	7
1197		4	max	1630.675	5	469.996	3	151.779	3	.008	3	.098	3	-.291	4
1198			min	488.161	2	-492.546	4	-108.856	4	-.007	4	-.497	8	-1.152	7
1199		5	max	1630.675	5	466.566	3	151.779	3	.008	3	.353	3	-.132	4
1200			min	488.161	2	-495.976	4	-108.856	4	-.007	4	-.706	4	-1.14	7
1201	M121	1	max	115.582	1	29.356	7	28.036	2	.002	2	0	11	0	11
1202			min	-3237.534	6	-2.028	4	-28.036	1	0	1	0	1	0	1
1203		2	max	105.096	1	14.678	7	14.018	2	.002	2	.026	3	.016	2
1204			min	-3228.211	6	-1.014	4	-14.018	1	0	1	-.016	4	-.026	1
1205		3	max	94.61	1	0	11	0	11	.002	2	.034	3	.022	2
1206			min	-3218.888	6	0	1	0	1	0	1	-.021	4	-.035	1
1207		4	max	84.125	1	1.014	4	14.018	1	.002	2	.026	3	.016	2
1208			min	-3209.565	6	-14.678	7	-14.018	2	0	1	-.016	4	-.026	1
1209		5	max	73.639	1	2.028	4	28.036	1	.002	2	0	11	0	11
1210			min	-3200.242	6	-29.356	7	-28.036	2	0	1	0	1	0	1
1211	M122	1	max	92.661	1	32.563	8	35.91	1	0	1	0	11	0	11
1212			min	-3046.069	6	-.804	3	-35.91	2	-.002	6	0	1	0	1
1213		2	max	81.424	1	16.282	8	17.955	1	0	1	.034	1	.015	3
1214			min	-3036.535	6	-.402	3	-17.955	2	-.002	6	-.022	2	-.027	4
1215		3	max	70.188	1	0	11	0	11	0	1	.045	1	.02	3
1216			min	-3027.001	6	0	1	0	1	-.002	6	-.029	2	-.036	4
1217		4	max	58.951	1	.402	3	17.955	2	0	1	.034	1	.015	3
1218			min	-3017.468	6	-16.282	8	-17.955	1	-.002	6	-.022	2	-.027	4
1219		5	max	47.714	1	.804	3	35.91	2	0	1	0	11	0	11
1220			min	-3007.934	6	-32.563	8	-35.91	1	-.002	6	0	1	0	1
1221	M123	1	max	204.195	4	28.868	8	47.497	1	.002	3	0	11	0	11
1222			min	-3257.561	7	-.291	3	-47.497	2	0	4	0	1	0	1
1223		2	max	195.584	4	14.434	8	23.748	1	.002	3	.034	1	.018	1
1224			min	-3248.764	7	-.145	3	-23.748	2	0	4	-.024	2	-.028	2
1225		3	max	186.973	4	0	11	0	11	.002	3	.045	1	.024	1
1226			min	-3239.967	7	0	1	0	1	0	4	-.032	2	-.037	2
1227		4	max	178.362	4	.145	3	23.748	2	.002	3	.034	1	.018	1
1228			min	-3231.171	7	-14.434	8	-23.748	1	0	4	-.024	2	-.028	2
1229		5	max	169.751	4	.291	3	47.497	2	.002	3	0	11	0	11
1230			min	-3222.374	7	-28.868	8	-47.497	1	0	4	0	1	0	1
1231	M124	1	max	-198.703	2	31.7	6	55.081	4	0	2	0	11	0	11
1232			min	-2990.843	5	2.272	1	-55.081	3	-.002	5	0	1	0	1
1233		2	max	-206.806	2	15.85	6	27.54	4	0	2	.041	4	.025	4
1234			min	-2982.188	5	1.136	1	-27.54	3	-.002	5	-.029	3	-.038	3
1235		3	max	-214.91	2	0	11	0	11	0	2	.055	4	.034	4
1236			min	-2973.534	5	0	1	0	1	-.002	5	-.038	3	-.05	3
1237		4	max	-223.013	2	-1.136	1	27.54	3	0	2	.041	4	.025	4
1238			min	-2964.88	5	-15.85	6	-27.54	4	-.002	5	-.029	3	-.038	3
1239		5	max	-231.117	2	-2.272	1	55.081	3	0	2	0	11	0	11
1240			min	-2956.226	5	-31.7	6	-55.081	4	-.002	5	0	1	0	1
1241	M125	1	max	-236.138	2	28.825	6	48.059	4	.002	1	0	11	0	11
1242			min	-3172.532	5	-.138	1	-48.059	3	0	2	0	1	0	1
1243		2	max	-244.576	2	14.413	6	24.03	4	.002	1	.028	4	.024	4
1244			min	-3163.784	5	-.069	1	-24.03	3	0	2	-.019	3	-.034	3
1245		3	max	-253.014	2	0	11	0	11	.002	1	.038	4	.032	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
1246			min	-3155.036	5	0	1	0	1	0	2	-.025	3	-.045	3
1247		4	max	-261.452	2	.069	1	24.03	3	.002	1	.028	4	.024	4
1248			min	-3146.288	5	-14.413	6	-24.03	4	0	2	-.019	3	-.034	3
1249		5	max	-269.89	2	.138	1	48.059	3	.002	1	0	11	0	11
1250			min	-3137.539	5	-28.825	6	-48.059	4	0	2	0	1	0	1
1251	M126	1	max	192.841	3	32.157	7	49.137	2	0	3	0	11	0	11
1252			min	-3070.031	8	.642	4	-49.137	1	-.002	8	0	1	0	1
1253		2	max	182.672	3	16.079	7	24.569	2	0	3	.031	2	.028	2
1254			min	-3060.797	8	.321	4	-24.569	1	-.002	8	-.019	1	-.04	1
1255		3	max	172.503	3	0	11	0	11	0	3	.042	2	.037	2
1256			min	-3051.563	8	0	1	0	1	-.002	8	-.025	1	-.053	1
1257		4	max	162.334	3	-.321	4	24.569	1	0	3	.031	2	.028	2
1258			min	-3042.329	8	-16.079	7	-24.569	2	-.002	8	-.019	1	-.04	1
1259		5	max	152.166	3	-.642	4	49.137	1	0	3	0	11	0	11
1260			min	-3033.096	8	-32.157	7	-49.137	2	-.002	8	0	1	0	1

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

	Member	Shape	Code Check	Loc...	LC	Shea...	Loc....		LC	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn
1	MP2A	PIPE_2.0X	.701	3	2	.073	6		8	19844...	44100	2.531	2.531	...	H1-1b
2	M120	L3X3X4	.697	0	7	.066	0	y	3	41355...	46656	1.688	3.756	...	H2-1
3	M118	L3X3X4	.691	0	5	.058	0	y	1	41355...	46656	1.688	3.756	...	H2-1
4	MP2C	PIPE_2.0X	.691	3	3	.080	3		3	19844...	44100	2.531	2.531	...	H1-1b
5	M119	L3X3X4	.689	0	6	.053	0	y	2	41355...	46656	1.688	3.756	...	H2-1
6	MP2B	PIPE_2.0X	.659	3	4	.077	3		3	19844...	44100	2.531	2.531	...	H1-1b
7	M113	PIPE_3.0	.427	4.38	7	.186	10....		8	21266...	65205	5.749	5.749	...	H1-1b
8	M109A	PIPE_3.0	.421	4.38	6	.190	10....		5	21266...	65205	5.749	5.749	...	H1-1b
9	M117	PIPE_3.0	.419	4.38	5	.184	10....		7	21266...	65205	5.749	5.749	...	H1-1b
10	MP3A	PIPE_2.0	.370	4	9	.161	1		8	20866...	32130	1.872	1.872	...	H1-1b
11	MP1C	PIPE_2.0	.331	1	3	.161	1		8	20866...	32130	1.872	1.872	...	H1-1b
12	MP1B	PIPE_2.0	.300	1	9	.161	1		6	20866...	32130	1.872	1.872	...	H1-1b
13	M31	PL3/8x4	.285	4	2	.309	3.708	y	8	48260...	48600	.38	4.05	...	H1-1b
14	MP3B	PIPE_2.0	.285	1	4	.161	1		5	20866...	32130	1.872	1.872	...	H1-1b
15	M33	PL3/8x4	.270	4	3	.307	3.708	y	7	48260...	48600	.38	4.05	...	H1-1b
16	MP1A	PIPE_2.0	.265	1	2	.161	1		7	20866...	32130	1.872	1.872	...	H1-1b
17	M29	PL3/8x4	.255	4	4	.312	3.708	y	5	48260...	48600	.38	4.05	...	H1-1b
18	MP3C	PIPE_2.0	.247	1	1	.161	1		6	20866...	32130	1.872	1.872	...	H1-1b
19	M28	PL3/8x4	.191	1.542	9	.054	1.285	y	9	11603...	48600	.38	4.05	...	H1-1b
20	M32	PL3/8x4	.173	.273	3	.037	1.542	y	8	11603...	48600	.38	4.05	...	H1-1b
21	M30	PL3/8x4	.167	.273	2	.034	1.542	y	5	11603...	48600	.38	4.05	...	H1-1b
22	M19	HSS4X4X4	.165	0	3	.113	0	y	6	13384...	139518	16.181	16.181	...	H1-1b
23	M36	HSS4X4X4	.165	0	1	.115	0	y	7	13384...	139518	16.181	16.181	...	H1-1b
24	M25	PIPE_3.0	.160	1.208	9	.136	1.208		9	21266...	65205	5.749	5.749	...	H1-1b
25	M27	PIPE_3.0	.157	6.948	7	.127	10....		7	21266...	65205	5.749	5.749	...	H1-1b
26	M38	L2x2x4	.155	0	3	.013	0	z	3	20615...	30585.6	.691	1.577	...	H2-1
27	M10	HSS4X4X4	.153	0	8	.113	0	y	5	13384...	139518	16.181	16.181	...	H1-1b
28	M18	PIPE_3.0	.150	6.948	6	.127	10....		8	21266...	65205	5.749	5.749	...	H1-1b
29	M34	L2x2x4	.133	0	1	.011	0	z	4	20615...	30585.6	.691	1.577	...	H2-1
30	M37	L2x2x4	.125	2.792	4	.011	2.792	z	4	20615...	30585.6	.691	1.577	...	H2-1
31	M36A	L2x2x4	.115	0	2	.014	0	z	2	20615...	30585.6	.691	1.577	...	H2-1
32	M125	L2.5x2.5x4	.109	2.057	8	.010	4.114	z	4	22195...	38556	1.114	2.39	...	H2-1
33	M123	L2.5x2.5x4	.109	2.057	5	.009	4.114	y	7	22195...	38556	1.114	2.39	...	H2-1
34	M121	L2.5x2.5x4	.108	2.057	6	.011	0	z	2	22195...	38556	1.114	2.39	...	H2-1
35	M35	L2x2x4	.107	2.792	1	.012	2.792	z	3	20615...	30585.6	.691	1.577	...	H2-1
36	M39	L2x2x4	.106	2.792	2	.014	2.792	z	2	20615...	30585.6	.691	1.577	...	H2-1
37	M126	L2.5x2.5x4	.106	2.271	8	.011	0	y	8	19667...	38556	1.114	2.346	...	H2-1

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

	Member	Shape	Code Check	Loc...	LC	Shea...	Loc.....		LC	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn
38	M124	L2.5x2.5x4	.106	2.271	5	.011	0	y	5	19667...	38556	1.114	2.346	...	H2-1
39	M122	L2.5x2.5x4	.104	2.271	7	.011	4.542	z	2	19667...	38556	1.114	2.346	...	H2-1
40	M60A	HSS4X4X4	.103	.361	2	.114	0	y	7	12793...	139518	16.181	16.181	...	H1-1b
41	M20	HSS4X4X4	.097	.361	4	.112	0	y	6	12793...	139518	16.181	16.181	...	H1-1b
42	M11	HSS4X4X4	.080	.361	3	.112	0	y	5	12793...	139518	16.181	16.181	...	H1-1b

EXHIBIT 10

Transcom Engineering, Inc.
Wireless Network Design and Deployment

Radio Frequency Emissions Analysis Report

T-MOBILE Existing Facility

Site ID: CT11302C

SBA North Branford
108 Foxon Road
North Branford, CT 06471

June 17, 2019

Transcom Engineering Project Number: 737001-0164

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**4.92 %**

June 17, 2019

T-MOBILE
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 6009

Emissions Analysis for Site: **CT11302C – SBA North Branford**

Transcom Engineering, Inc ("Transcom") was directed to analyze the proposed upgrades to the T-MOBILE facility located at **108 Foxon Road, North Branford, CT**, 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 (μW/cm2). 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.

Population 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 & 700 MHz 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) and 2100 MHz (AWS) 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 performed for the proposed upgrades to the T-MOBILE antenna facility located at **108 Foxon Road, North Branford, CT**, 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 manufactures supplied specifications, minus 10 dB for directional panel antennas, 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.

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. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
GSM	1900 MHz (PCS)	1	15
UMTS	1900 MHz (PCS)	1	40
UMTS	2100 MHz (AWS)	1	40
LTE	2100 MHz (AWS)	2	60
LTE / 5G NR	600 MHz	2	40
LTE	700 MHz	2	20

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 600 MHz, 700 MHz, 1900 MHz (PCS) and 2100 MHz (AWS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, 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.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Ericsson AIR21 B2A/B4P	147
A	2	Ericsson AIR21 B4A/B2P	147
A	3	RFS APXVAARR24_43-U-NA20	147
B	1	Ericsson AIR21 B2A/B4P	147
B	2	Ericsson AIR21 B4A/B2P	147
B	3	RFS APXVAARR24_43-U-NA20	147
C	1	Ericsson AIR21 B2A/B4P	147
C	2	Ericsson AIR21 B4A/B2P	147
C	3	RFS APXVAARR24_43-U-NA20	147

Table 2: Antenna Data

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

Cable losses were factored in the calculations for this site. Since all **2100 MHz (AWS) UMTS** radios are ground mounted the following cable loss values were used. For each ground mounted **2100 MHz (AWS) UMTS** radio there was **1.91 dB** of cable loss calculated into the system gains / losses for this site. These values were calculated based upon the manufacturers specifications for **180 feet** of **1-5/8"** coax.

RESULTS

Per the calculations completed for the proposed T-MOBILE configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9 / 15.9	3	95	3,142.19	0.57
Antenna A2	Ericsson AIR21 B4A/B2P	2100 MHz (AWS)	15.9	2	120	4,668.54	0.84
Antenna A3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.04
						Sector A Composite MPE%	**2.45**
Antenna B1	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9 / 15.9	3	95	3,142.19	0.57
Antenna B2	Ericsson AIR21 B4A/B2P	2100 MHz (AWS)	15.9	2	120	4,668.54	0.84
Antenna B3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.04
						Sector B Composite MPE%	**2.45**
Antenna C1	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9 / 15.9	3	95	3,142.19	0.57
Antenna C2	Ericsson AIR21 B4A/B2P	2100 MHz (AWS)	15.9	2	120	4,668.54	0.84
Antenna C3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.04
						Sector C Composite MPE%	**2.45**

Table 3: T-MOBILE Emissions Levels

The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum T-MOBILE MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each T-MOBILE Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
T-MOBILE – Max Per Sector Value	**2.45 %**
Nextel	0.22 %
MetroPCS	0.78 %
Clearwire	0.07 %
Sprint	0.44 %
AT&T	0.96 %
Site Total MPE %:	**4.92 %**

Table 4: All Carrier MPE Contributions

T-MOBILE Sector A Total:	2.45 %
T-MOBILE Sector B Total:	2.45 %
T-MOBILE Sector C Total:	2.45 %
Site Total:	4.92 %

Table 5: Site MPE Summary

FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated T-MOBILE sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

T-MOBILE _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile 1900 MHz (PCS) GSM	1	583.57	147	1.06	1900 MHz (PCS)	1000	0.11%
T-Mobile 1900 MHz (PCS) UMTS	1	1,556.18	147	2.81	1900 MHz (PCS)	1000	0.28%
T-Mobile 2100 MHz (AWS) UMTS	1	1,002.44	147	1.81	2100 MHz (AWS)	1000	0.18%
T-Mobile 2100 MHz (AWS) LTE	2	2,334.27	147	8.44	2100 MHz (AWS)	1000	0.84%
T-Mobile 600 MHz LTE / 5G NR	2	788.97	147	2.85	600 MHz	400	0.71%
T-Mobile 700 MHz LTE	2	432.54	147	1.56	700 MHz	467	0.33%
						Total:	**2.45%**

Table 6: T-MOBILE Maximum Sector MPE Power Values

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:	2.45 %
Sector B:	2.45 %
Sector C:	2.45 %
T-MOBILE Maximum Total (per sector):	2.45 %
Site Total:	4.92 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **4.92 %** 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.

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EXHIBIT 11

EXHIBIT 12