NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

Northeast Site Solutions
Denise Sabo
4 Angela's Way, Burlington CT 06013
203-435-3640
denise@northeastsitesolutions.com

June 2, 2022

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Exempt Modification Application
39 Ciro Road, North Branford, CT 06471
Latitude: 41.331080
Longitude: -72.756152
Site #: CT04066-S _CT11372B_SBA/T-Mobile

Dear Ms. Bachman:

T-Mobile is requesting to file an exempt modification for an existing tower located at 39 Ciro Road, Branford, CT 06471. T-Mobile currently maintains nine (9) antennas at the 167-foot level of the existing 170-foot monopole tower. The property is owned by Joseph Casagrande, and the tower is owned by SBA. T-Mobile now intends to replace (3) antennas. The new antennas would be installed at the 167-foot level of the tower. This modification includes B2, B5 hardware that is both 4G (LTE), and 5G capable. Antenna mount modifications will be completed as per the attached TES mount analysis dated May 3, 2022.

T-Mobile Planned Modifications:
Remove:
(2) Coax – 1-5/8"

Remove and Replace:
(3) COMMSCOPE Antennas (REMOVE) - (3) RFS APXVAALL24-43-U-NA20 Antennas (REPLACE)
(3) ERICSSON RRUS-11 B12 (REMOVE) - (3) ERICSSON 4480 B71+B85 RRU (REPLACE)

Install New:
(1) HCS Fiber Cable 1.9"

Existing to Remain:
(3) ERICSSON AIR21 B2A/B4P Antennas
(3) ERICSSON AIR21 B4A/B2P Antennas
(1) HCS Fiber Cable 1-5/8""
(6) Coax – 1-5/8"
(4) Coax – 1-5/8" *
(3) Twin TMAs – KRY 112 144/1 *

*Equipment listed for entitlement purposed only

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The facility was approved by the Town of North Branford Zoning Board of Appeals on June 18, 2001. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies§ 16- SOj-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.SA. § 16-SOj-73, a copy of this letter is being sent to Mayor Jeffrey Macmillen, Michael T. Paulhus, Town Manager, and Eric Knapp, Town Planner for the Town of North Branford, as well as the property owner and the tower owner.

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

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

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

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

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

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

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

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

Sincerely,

Denise Sabo
Mobile: 203-435-3640
Fax: 413-521-0558
Office: 4 Angela's Way, Burlington CT 06013
Email: denise@northeastsitesolutions.com

NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

Attachments

Cc: Mayor Jeffrey Macmillen
Town of North Branford
909 Foxon Road
North Branford, CT 06471-1290

Michael T. Paulhus, Town Manager
Town of North Branford
909 Foxon Road
North Branford, CT 06471-1290

Eric Knapp, Town Planner
Town of North Branford
909 Foxon Road
North Branford, CT 06471-1290

Joseph Casagrande – Property Owner
4 Lochbourne Dr
Clinton, CT 06413

SBA - Tower Owner

Exhibit A

Original Facility Approval

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 6145
June 20, 2001

Wendell G. Davis, Jr., Esq.
SBA Properties, Inc.
80 Eastern Boulevard
Glastonbury, CT 06033

Re: ZBA Application #2000/01-24

Dear Mr. Davis:

At its Regular Meeting of June 18, 2001 the North Branford Zoning Board of Appeals voted to approve Application #2000/01-24, 39 Ciro Road, North Branford, (Assessor Map 27, Lot 39F), seeking a variance of Section 23.1 (use) and Section 24.3 (height) to allow the construction of a 170 foot telecommunications tower and facility within an Industrial I-2 zone. Owner: Pasquelini Casagrande, Applicant: SBA, Properties Inc.

Notice of this decision has been published on June 21, 2001 in the New Haven Register. Pursuant to Section 8-7 of the Connecticut General Statutes, this decision is subject to a 15-day appeal period, which ends on July 6, 2001.

You are requested by Connecticut General Statutes, Section 8-7 to record the attached form in the Town Clerk's Office. Note that there is a filing fee per paper. Return the second copy of the attached form with the Town Clerk's Attestation to the Planning and Zoning Office. We advise you to consider filing these forms after the 15 day appeal period.

You are also advised that any area, location and bulk variance granted by the Zoning Board of Appeals shall expire and be null and void unless 1) **within one (1) year** from the effective date of the variance a Building Permit or Certificate of Zoning Compliance is obtained for the building or other structure authorized by the variance, or 2) approval for final subdivision plan shall have been obtained within one (1) year from the effective date of such variance. The Zoning Board of Appeals may grant one (1) extension of such period for an additional period not to exceed one (1) year for good cause.

Sincerely,

Steve Kenning RF

Steve Kenning, Chairman
Zoning Board of Appeals

I, Steve Kenning, Chairman of the North Branford Zoning Board of Appeals hereby certify that on June 18, 2001 the Zoning Board of Appeals of the Town of North Branford granted a variance of Section 23.1 and Section 24.3 of the North Branford Zoning Regulations as follows (including conditions, if any):

> **Granted: Application #2000/01-24, 39 Ciro Road, North Branford, (Assessor Map 27, Lot 39F), seeking a variance of Section 23.1 (use) and Section 24.3 (height) to allow the construction of a 170 foot telecommunications tower and facility within an Industrial I-2 zone. Owner: Pasquelini Casagrande, Applicant: SBA, Properties Inc.**

Said variance was granted for the property located at: 39 Ciro Road and more particularly described as follows as per the Assessor's Maps:

Map #27, Lot # 39F

The owner of record is said parcel is Pasquelini Casagrande

Dated at North Branford, Connecticut this 18th day of June, 2001

Steve Kenning, Chairman

dfs

Sec. 8-3d, CGS

Received for Record this _____ day of _____ 200__.

Exhibit B

Property Card

39 CIRO RD

Location	39 CIRO RD	**Mblu**	27/C 39F/ / /
Acct#	000629	**Owner**	CASAGRANDE JOSEPH J JR
Assessment	$151,200	**Appraisal**	$216,000
PID	2083	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$48,300	$167,700	$216,000
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$33,800	$117,400	$151,200

Owner of Record

Owner	CASAGRANDE JOSEPH J JR	**Sale Price**	$165,000
Co-Owner		**Certificate**	
Address	4 LOCHBOURNE DR CLINTON, CT 06413-1412	**Book & Page**	0326/0604
		Sale Date	12/23/2002
		Instrument	01

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
CASAGRANDE JOSEPH J JR	$165,000		0326/0604	01	12/23/2002
CASAGRANDE PASQUALINA	$0		0271/0303		06/25/1998
CASAGRANDE JOSEPH	$0		0092/0202		05/07/1974

Building Information

Building 1 : Section 1

Year Built:	1974
Living Area:	2,562
Replacement Cost:	$117,903
Building Percent Good:	41

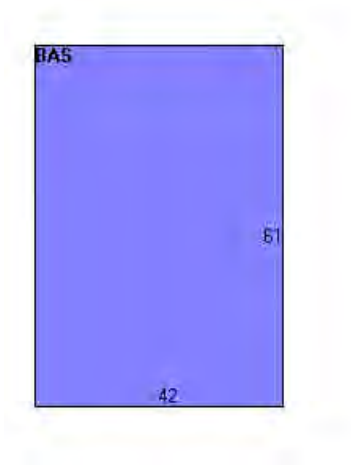
Replacement Cost
Less Depreciation: $48,300

Building Attributes	
Field	**Description**
Style:	Warehouse
Model	Ind or Comm
Grade	Low Cost
Stories:	1
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Hot Air-no Duc
AC Type	None
Struct Class	
Bldg Use	COMM WHSE MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	3320
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	NONE
Rooms/Prtns	AVERAGE
Wall Height	14.00
% Comn Wall	0.00

Building Photo

(http://images.vgsi.com/photos/NorthBranfordCTPhotos//\00\00\52\91.jpg)

Building Layout



(http://images.vgsi.com/photos/NorthBranfordCTPhotos//Sketches/2083_2

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	2,562	2,562
		2,562	2,562

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	316I
Description	COMM WHSE MDL-96
Zone	I2
Neighborhood	
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	2.48
Frontage	0
Depth	0
Assessed Value	$117,400
Appraised Value	$167,700

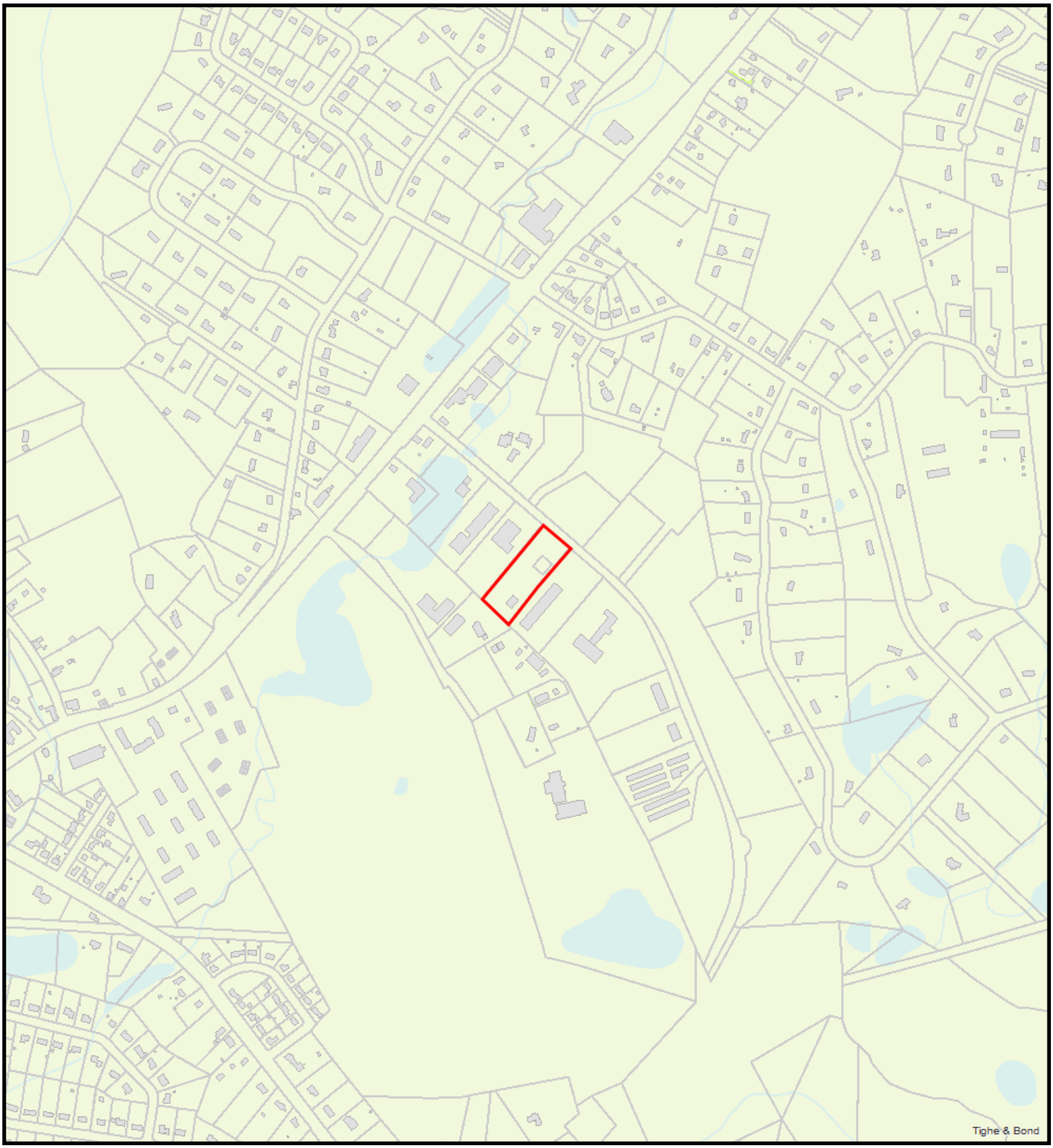
Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$52,600	$163,000	$215,600
2018	$52,600	$163,000	$215,600
2017	$52,600	$163,000	$215,600

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$36,800	$114,200	$151,000
2018	$36,800	$114,200	$151,000
2017	$36,800	$114,200	$151,000



39 CIRO ROAD

6/2/2022 3:07:50 PM

Scale: 1"=750'

Scale is approximate

N
W
E
S

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 C

Construction Drawings

SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).

SBA N BRANFORD EAST

39 CIRO ROAD
NORTH BRANFORD, CT 06471
NEW HAVEN COUNTY

SITE NO.: CT11372B

SITE TYPE: 170'± MONOPOLE

RF DESIGN GUIDELINE: 67E93B OUTDOOR

SCOPE OF WORK

REMOVE:
- 3 ANTENNAS
- 1 100A-2P BREAKER

INSTALL:
- 3 ANTENNAS
- 3 RRUs
- 1 HYBRID CABLES
- 1 125A-2P BREAKER

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.

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

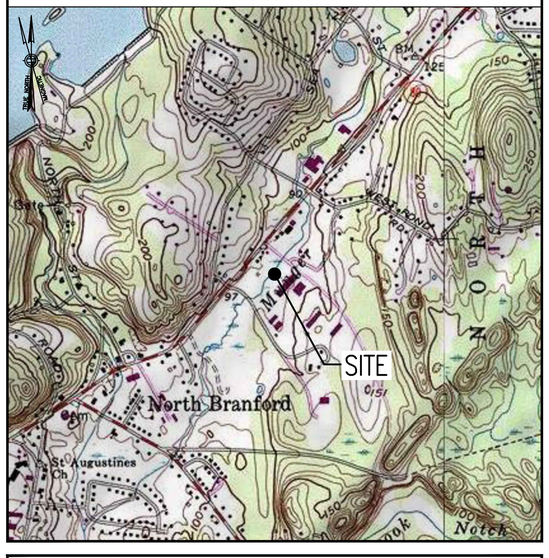
GENERAL NOTES

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

SCALE: 1" = 1000'-0"



DIRECTIONS

TURN RIGHT ONTO SOUTH WASHINGTON STREET. TURN LEFT ONTO INDUSTRIAL PARK ROAD. TURN LEFT AT THE 1ST CROSS STREET ONTO BAY STREET. TURN RIGHT ONTO MERGE ONTO I-495 SOUTH. TAKE EXIT 15 TO MERGE ONTO US-44 EAST TOWARD MIDDLEBORO. AT THE TRAFFIC CIRCLE, TAKE THE THIRD EXIT AND STAY ON US-44 EAST. EXIT ONTO MA-58 SOUTH TOWARD CARVER. TURN LEFT ONTO PLYMOUTH STREET (2X). TURN LEFT ONTO CARVER ROAD. TURN RIGHT ONTO PINEWOOD ROAD. SITE WILL BE ON THE LEFT.

SHEET INDEX

SHT. NO.	DESCRIPTION	VER.
T-1	TITLE SHEET	0
GN-1	GENERAL NOTES	0
A-1	COMPOUND & EQUIPMENT PLAN	0
A-2	TOWER ELEVATIONS & ANTENNA PLAN	0
A-3	SITE DETAILS, ANTENNA & FEEDLINE CHARTS	0
E-1	ELECTRIC & GROUNDING DETAILS	0

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:	CT11372B
SBA SITE NUMBER:	CT04066-S
SBA SITE NAME:	NORTH BRANFORD EAST
SITE ADDRESS:	39 CIRO ROAD NORTH BRANFORD, CT 06471
PROPERTY OWNER:	CASAGRANDE JOSEPH J. JR. 4 LOCHBOURNE DRIVE CLINTON, CT 06413-1412
TOWER OWNER:	SBA PROPERTIES, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	NEW HAVEN
ZONING DISTRICT:	I2 (INDUSTRIAL)
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	170'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
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: N.41.331060° N41°19'51.82" LONGITUDE W.72.756172° W72°45'22.22"

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).

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700

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

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil ·Structural ·Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
5/11/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	04/18/22	ISSUED FOR CONSTRUCTION	JRV

SITE NUMBER:
CT11372B

SITE ADDRESS:
39 CIRO ROAD
NORTH BRANFORD, CT 06471

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

1815.478

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
JAMES M. FITZGERALD
No. 25937
LICENSED
PROFESSIONAL CIVIL ENGINEER

5/11/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	04/18/22	ISSUED FOR CONSTRUCTION	JRV

SITE NUMBER:
CT11372B

SITE ADDRESS:
39 CIRO ROAD
NORTH BRANFORD, CT 06471

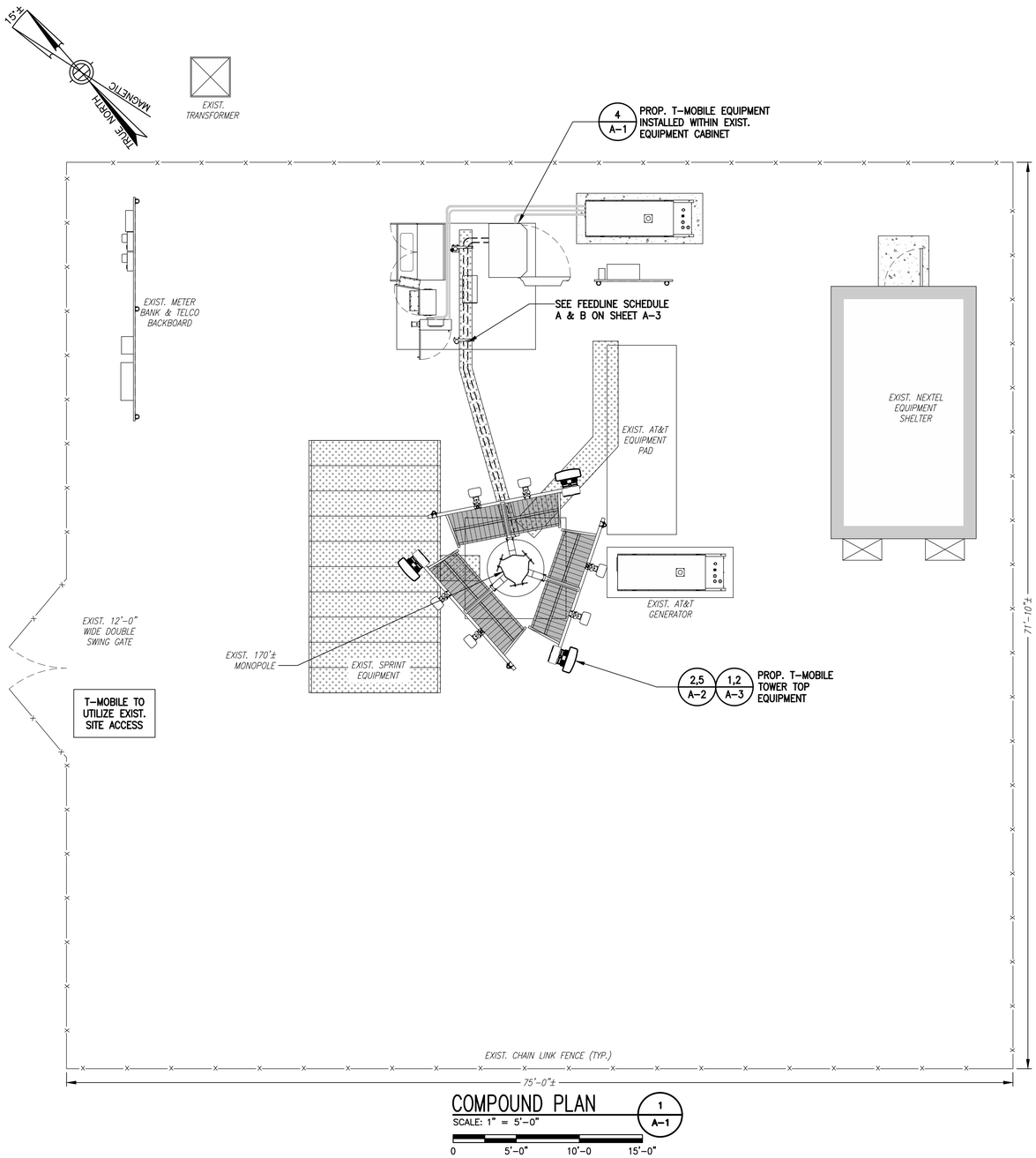
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

1815.478

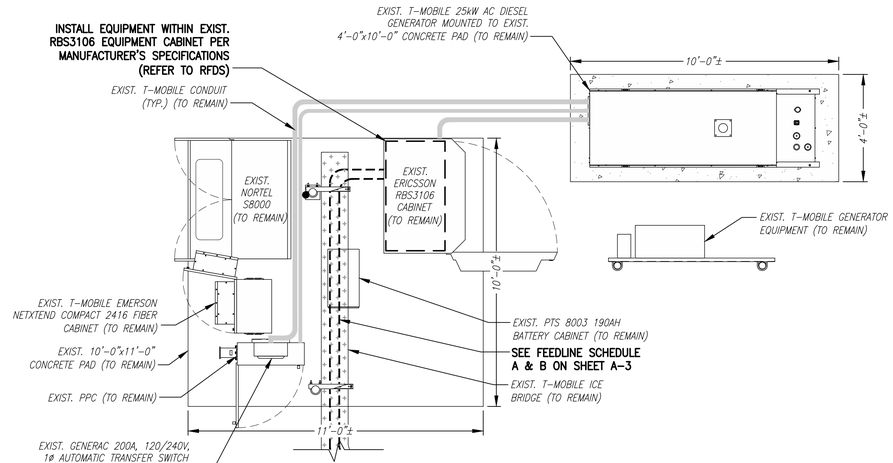
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY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

SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).

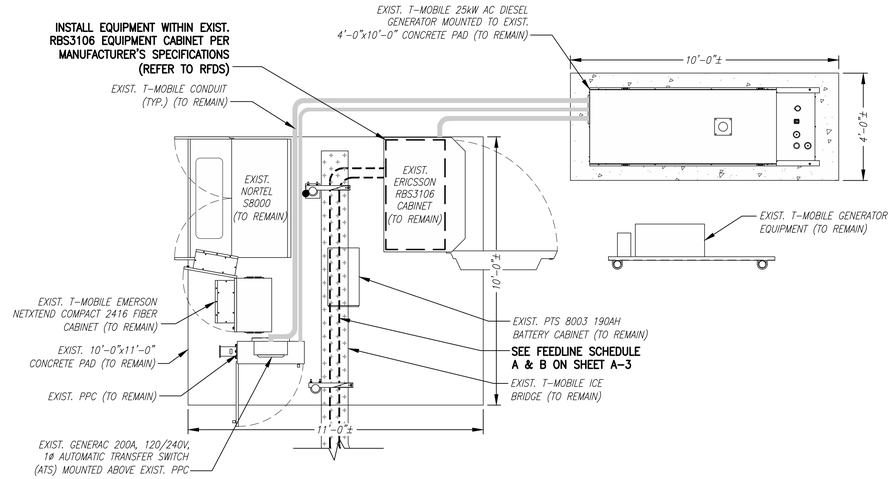


COMPOUND PLAN 1 A-1
SCALE: 1" = 5'-0"
0 5'-0" 10'-0 15'-0"

EXISTING EQUIPMENT PHOTO 2 A-1
SCALE: N.T.S.



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



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

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SITE NUMBER:
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SHEET TITLE
COMPOUND & EQUIPMENT PLANS

SHEET NUMBER
A-1

1815.478

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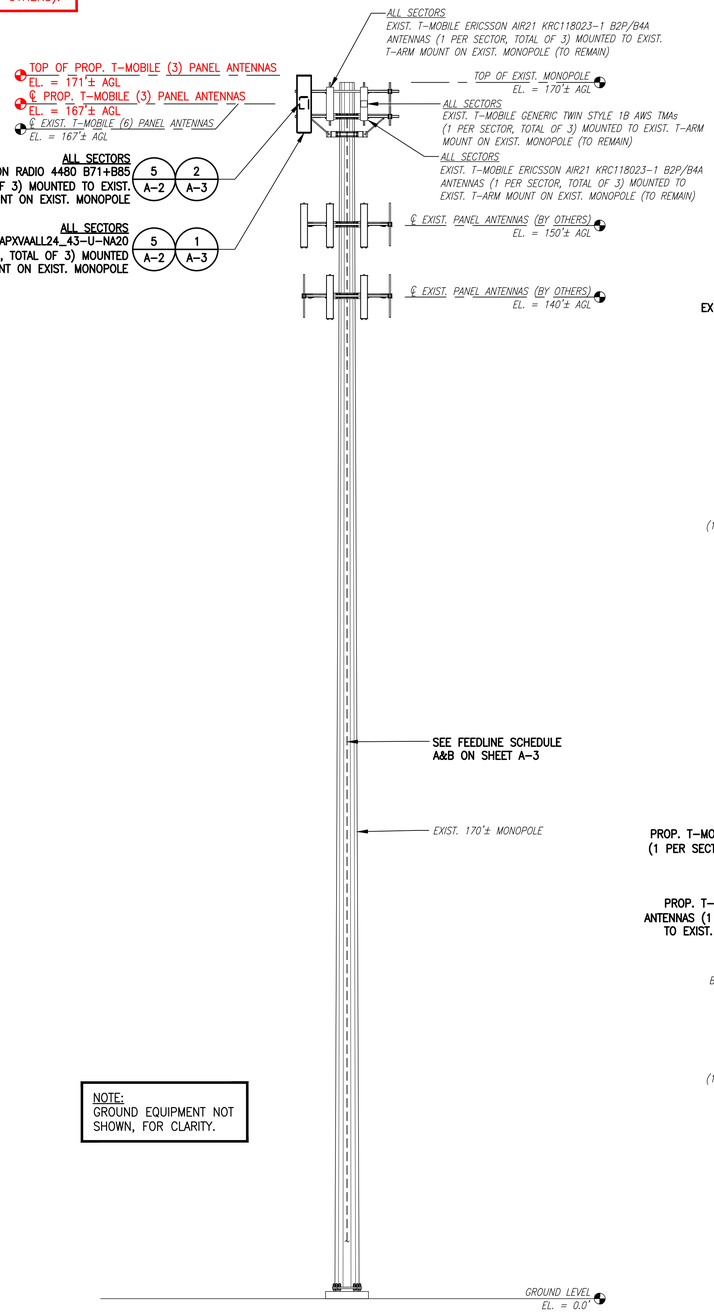
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S 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.

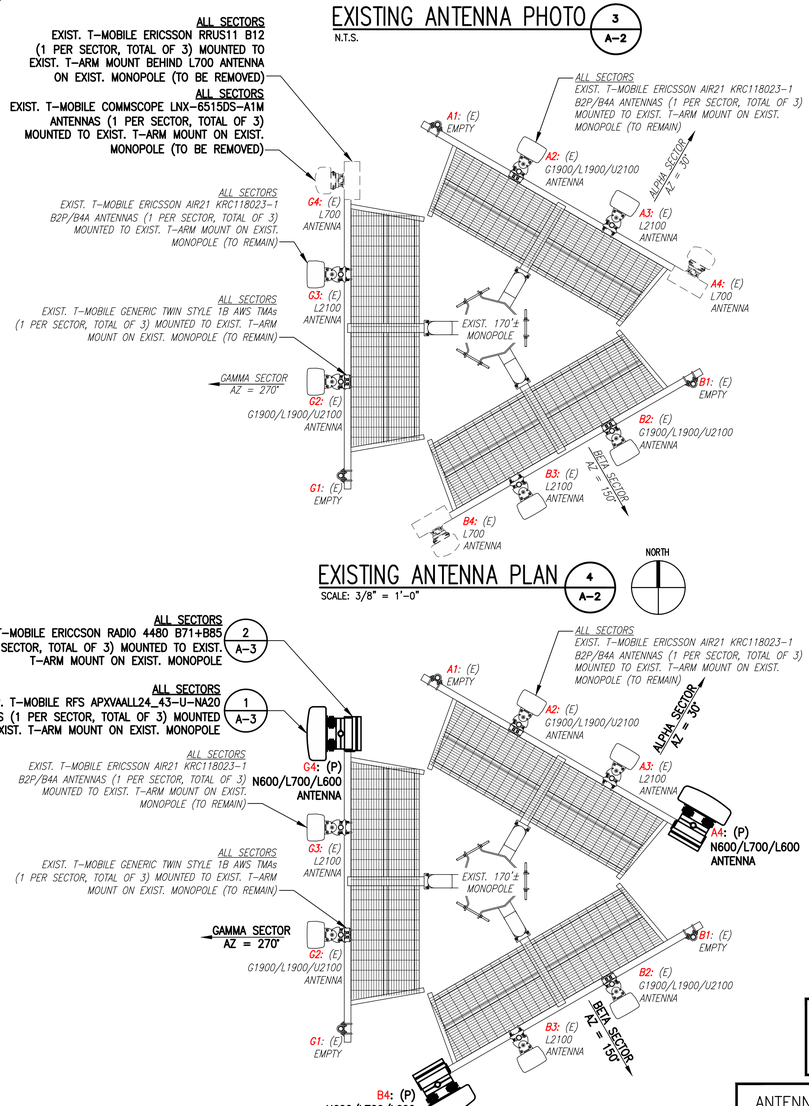
EXISTING TOWER PHOTO (1 / A-2)
N.T.S.

EXISTING ANTENNA PHOTO (3 / A-2)
N.T.S.



NOTE:
GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.

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



EXISTING ANTENNA PLAN (4 / A-2)
SCALE: 3/8" = 1'-0"

PROPOSED ANTENNA PLAN (5 / A-2)
SCALE: 3/8" = 1'-0"

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

ANTENNA STATUS LEGEND:

EMPTY - EMPTY PIPE

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

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SHEET TITLE
TOWER ELEVATIONS & ANTENNA PLANS

SHEET NUMBER
A-2

1815.478

FINAL ANTENNA CONFIGURATION

SECTOR		ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	SIGNAL CABLES
ALPHA	A1	*EMPTY PIPE*	–	–	–	–	–	–	*(6) 7/8" COAX CABLES* *(1) 1-5/8" (9x18) HCS FIBER CABLE* **(1) 2" (6x24) HCS FIBER CABLE**
	A2	*ERICSSON AIR21 KRC118023-1 B2A/B4P*	*167'± AGL*	*30°*	*0°*	*2°*	*G1900/L1900/U2100*	*GENERIC TWIN STYLE 1B AWS TMA*	
	A3	*ERICSSON AIR21 KRC118023-1 B2P/B4A*	*167'± AGL*	*30°*	*0°*	*2°*	*L2100*	–	
	A4	**RFS APXVAALL24_43-U-NA20**	**167'± AGL**	**30°**	**0°**	**0°**	**L700/L600/N600**	**RADIO 4480 B71+B85**	
BETA	B1	*EMPTY PIPE*	–	–	–	–	–	–	
	B2	*ERICSSON AIR21 KRC118023-1 B2A/B4P*	*167'± AGL*	*150°*	*0°*	*2°*	*G1900/L1900/U2100*	*GENERIC TWIN STYLE 1B AWS TMA*	
	B3	*ERICSSON AIR21 KRC118023-1 B2P/B4A*	*167'± AGL*	*150°*	*0°*	*2°*	*L2100*	–	
	B4	**RFS APXVAALL24_43-U-NA20**	**167'± AGL**	**150°**	**0°**	**0°**	**L700/L600/N600**	**RADIO 4480 B71+B85**	
GAMMA	G1	*EMPTY PIPE*	–	–	–	–	–	–	
	G2	*ERICSSON AIR21 KRC118023-1 B2A/B4P*	*167'± AGL*	*270°*	*0°*	*2°*	*G1900/L1900/U2100*	*GENERIC TWIN STYLE 1B AWS TMA*	
	G3	*ERICSSON AIR21 KRC118023-1 B2P/B4A*	*167'± AGL*	*270°*	*0°*	*2°*	*L2100*	–	
	G4	**RFS APXVAALL24_43-U-NA20**	**167'± AGL**	**270°**	**0°**	**0°**	**L700/L600/N600**	**RADIO 4480 B71+B85**	

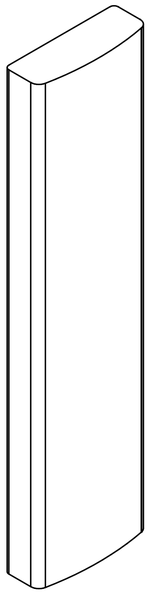
CABLE NOTE: SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV5 – 03/09/22

FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES		LOCATION
A	*EXISTING TO REMAIN:*	*(1) ½" COAX CABLE FOR GPS ANTENNA* *(6) 7/8" COAX CABLES* *(1) 1-5/8" (9x18) HCS FIBER CABLE*	ROUTED PER STRUCTURAL ANALYSIS
	EXISTING TO BE REMOVED:	*NONE*	
B	PROPOSED:	(1) 2" (6x24) HCS FIBER CABLE	

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



RFS APXVAALL24_43-U-NA20 ANTENNA
DIMENSIONS: 95.9"H x 24.0"W x 8.5"D
WEIGHT: 122.8 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

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

ERICSSON RADIO 4480 B71+B85
DIMENSIONS: 19.2"H x 15.1"W x 7.5"D
WEIGHT: 92.6 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

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

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700

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

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil ·Structural ·Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED PROFESSIONAL CIVIL ENGINEER
5/11/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	04/18/22	ISSUED FOR CONSTRUCTION	JRV

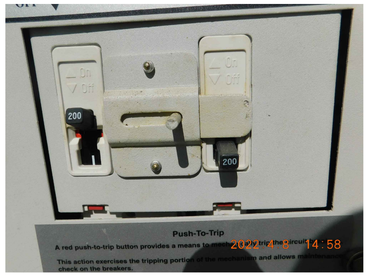
SITE NUMBER:
CT11372B

SITE ADDRESS:
39 CIRO ROAD
NORTH BRANFORD, CT 06471

SHEET TITLE
SITE DETAILS, ANTENNA & FEEDLINE CHARTS

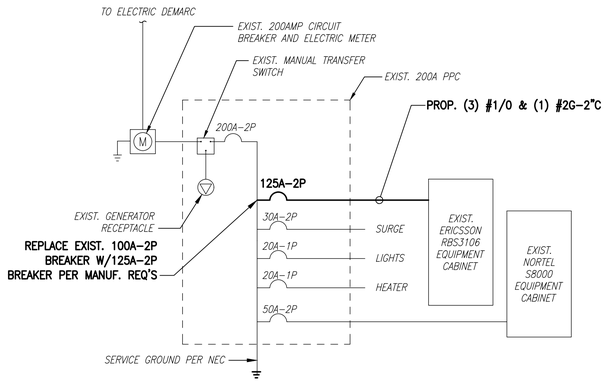
SHEET NUMBER
A-3

1815.478



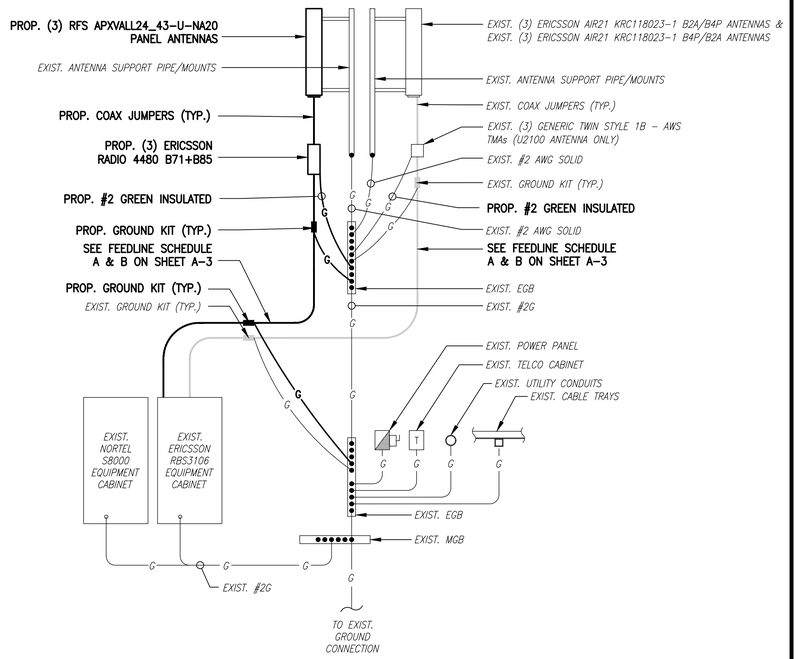
EXISTING POWER PANEL PHOTOS

SCALE: NOT TO SCALE — 1 / E-1



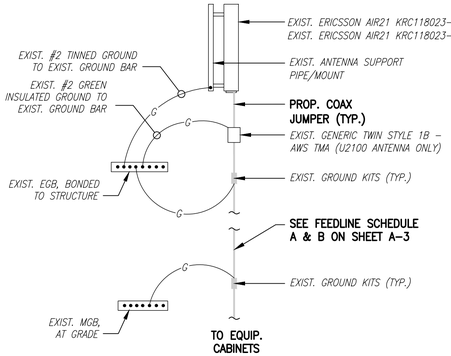
ONE LINE DIAGRAM

SCALE: NOT TO SCALE — 2 / E-1

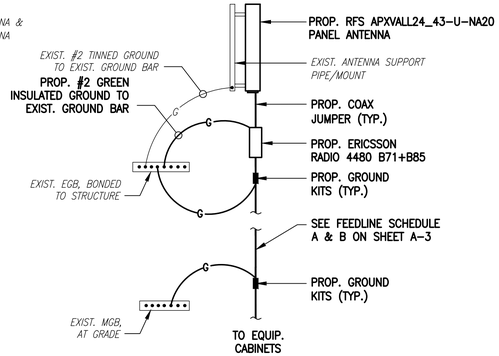


GROUNDING RISER DIAGRAM

SCALE: NOT TO SCALE — 3 / E-1



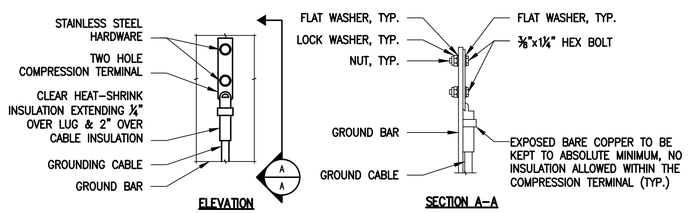
G1900/L1900/U2100 & L2100 ANTENNAS



L700/L600/N600 ANTENNA

COAX CABLE CONNECTION AND GROUNDING DETAIL

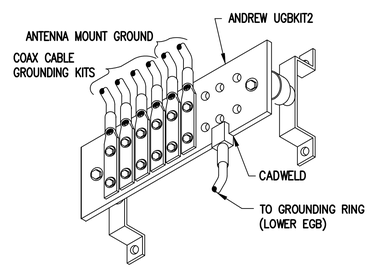
SCALE: NOT TO SCALE — 4 / E-1



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 — 5 / E-1



GROUND BAR (EGB)

SCALE: NOT TO SCALE — 6 / 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 8" 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.

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25937
LICENSED PROFESSIONAL CIVIL ENGINEER
5/11/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	04/18/22	ISSUED FOR CONSTRUCTION	JRV

SITE NUMBER:
CT11372B

SITE ADDRESS:
39 CIRO ROAD
NORTH BRANFORD, CT 06471

SHEET TITLE
ELECTRIC & GROUNDING DETAILS

SHEET NUMBER
E-1

1815.478

Exhibit D

Structural Analysis Report

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 Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT04066-S-SBA / North Branford East

Customer Site Name: North Branford East

Carrier Name: T-Mobile (App#: 194455-1)

Carrier Site ID / Name: CT11372B / SBA N Branford East

Site Location: 39 Ciro Road

North Branford, Connecticut

New Haven County

Latitude: 41.331060

Longitude: -72.756172

Analysis Result:

Max Structural Usage: 81.5% [Pass]

Report Prepared By: Jian Ma

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 Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT04066-S-SBA / North Branford East

Customer Site Name: North Branford East

Carrier Name: T-Mobile (App#: 194455-1)

Carrier Site ID / Name: CT11372B / SBA N Branford East

Site Location: 39 Ciro Road

North Branford, Connecticut

New Haven County

Latitude: 41.331060

Longitude: -72.756172

Analysis Result:

Max Structural Usage: 81.5% [Pass]

Report Prepared By: Jian Ma

Introduction

The purpose of this report is to summarize the analysis results on the (1) T-Arm with Working Platform at 167.00' 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 Tower Engineering Professionals; dated 4/20/2022
Antenna Loading	Provided by SBA; Application #: 194455, v1; dated 4/6/2022
Existing Modification	N/A
Proposed Modification	TES Project No. 128553

Analysis Criteria

Basic Wind Speed Used in the Analysis: V_{ULT} = 127 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: 30 mph +0" Radial ice
Standard/Codes: ANSI/TIA/EIA 222-G /2015 IBC
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) T-Arm with Working Platform at 167.00' elevation

Final Antenna Configuration

3 Ericsson AIR 21 B2A/B4P @167'
3 Ericsson AIR 21 B4A/B2P @167'
3 RFS APXVAALL24_43-U-NA20 @165'
3 Ericsson KRY 112 144/1
3 Ericsson 4480 B71 + B85

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 81.5%, which occurs in the connection. 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.

Structure: CT04066-S-SBA - North Branford East

Sector: A

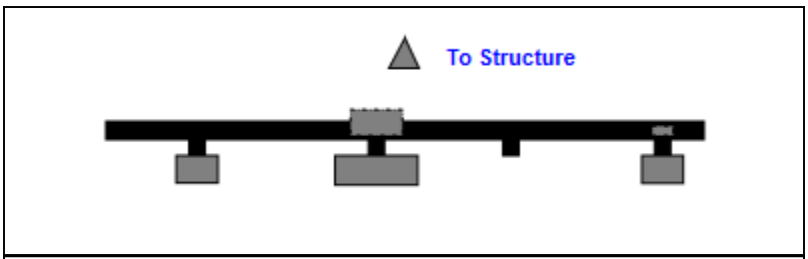
Structure Type: Monopole

Mount Elev: 167.00

5/3/2022

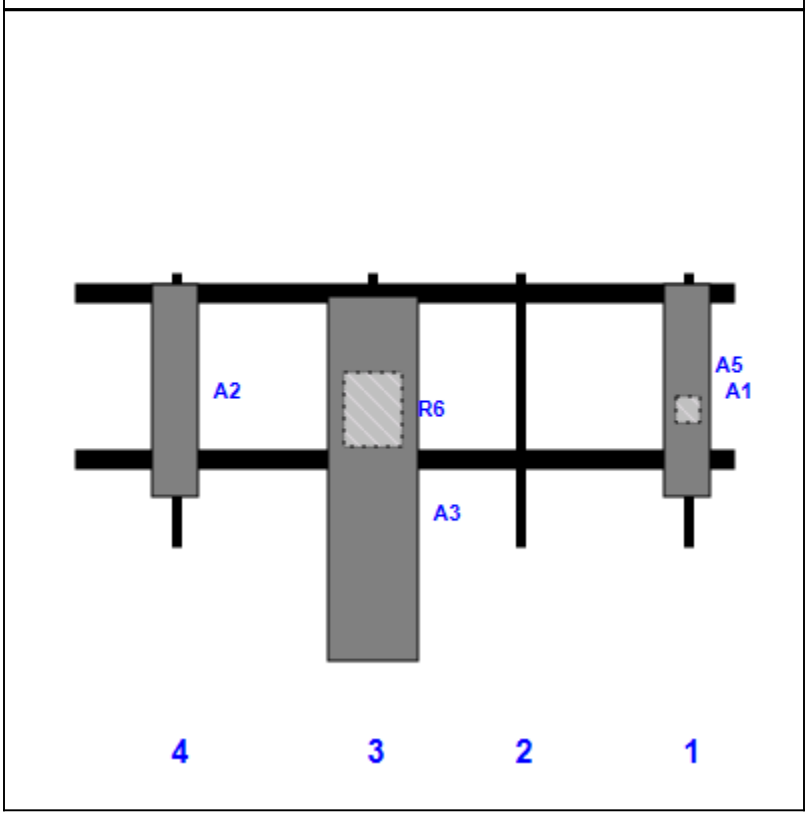
Tower Engineering Solutions

Plan View



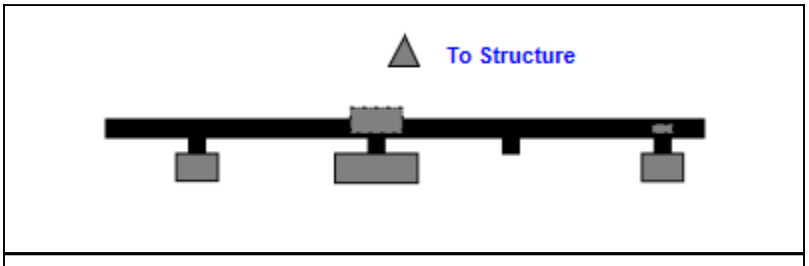
Front View

Looking Toward Structure



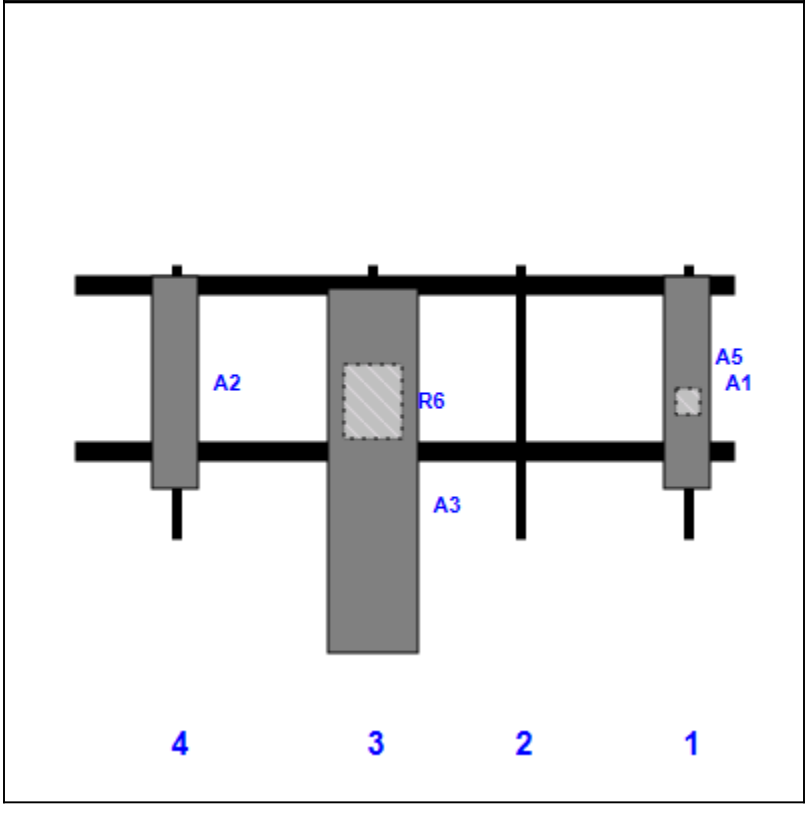
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	AIR 21 B2A/B4P @167'	56.00	12.00	162.00	1	a	Front	30.96			
A5	KRY 112 144/1	6.90	6.10	162.00	1	a	Behind	36.00			
A3	APXVAALL24_43-U-NA20 @165'	95.90	24.00	79.00	3	a	Front	54.00			
R6	4480 B71 + B85	19.20	15.10	79.00	3	a	Behind	36.00			
A2	AIR 21 B4A/B2P @167'	56.00	12.10	27.00	4	a	Front	30.96			

Plan View



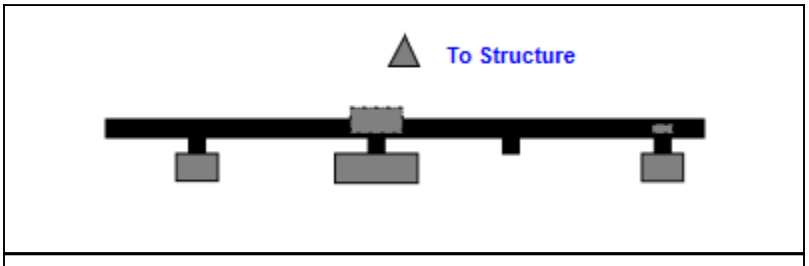
Front View

Looking Toward Structure



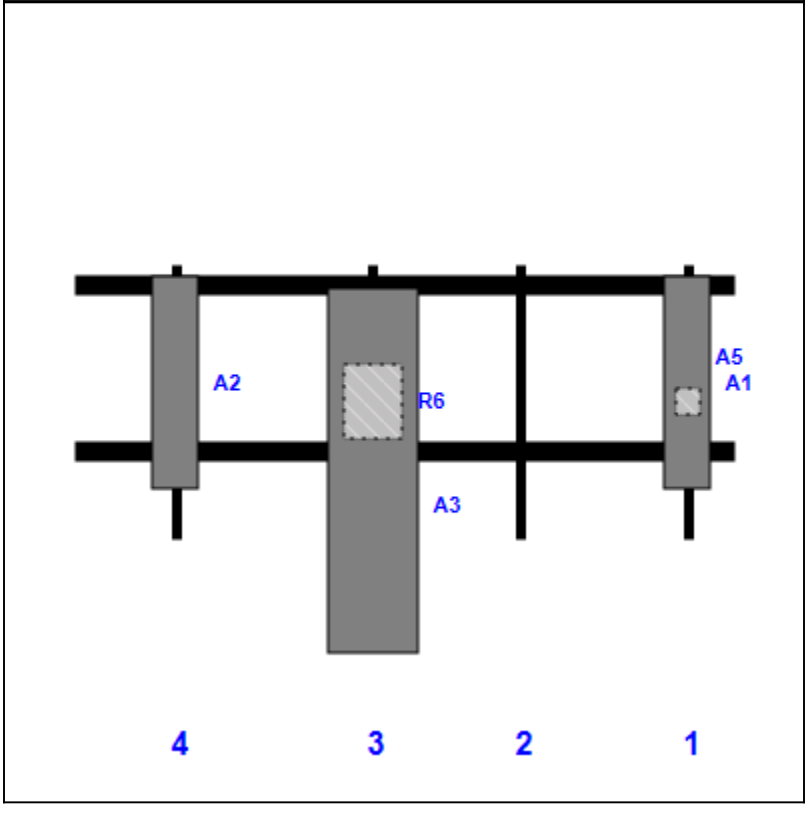
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	AIR 21 B2A/B4P @167'	56.00	12.00	162.00	1	a	Front	30.96			
A5	KRY 112 144/1	6.90	6.10	162.00	1	a	Behind	36.00			
A3	APXVAALL24_43-U-NA20 @165'	95.90	24.00	79.00	3	a	Front	54.00			
R6	4480 B71 + B85	19.20	15.10	79.00	3	a	Behind	36.00			
A2	AIR 21 B4A/B2P @167'	56.00	12.10	27.00	4	a	Front	30.96			

Plan View



Front View

Looking Toward Structure



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A1	AIR 21 B2A/B4P @167'	56.00	12.00	162.00	1	a	Front	30.96			
A5	KRY 112 144/1	6.90	6.10	162.00	1	a	Behind	36.00			
A3	APXVAALL24_43-U-NA20 @165'	95.90	24.00	79.00	3	a	Front	54.00			
R6	4480 B71 + B85	19.20	15.10	79.00	3	a	Behind	36.00			
A2	AIR 21 B4A/B2P @167'	56.00	12.10	27.00	4	a	Front	30.96			

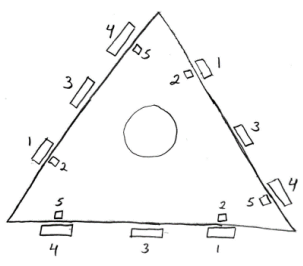
V4.1 Updated on 12-17-2021

Antenna Mount Mapping Form (PATENT PENDING)

FCC # 1236057

Tower Owner:	SBA Communications	**Mapping Date:**	4/20/2022
Site Name:	North Branford East	**Tower Type:**	Monopole
Site Number or ID:	CT04066-S	**Tower Height (Ft.):**	170
Mapping Contractor:	Tower Engineering Professionals	**Mount Elevation (Ft.):**	167.5

Ant Plan View

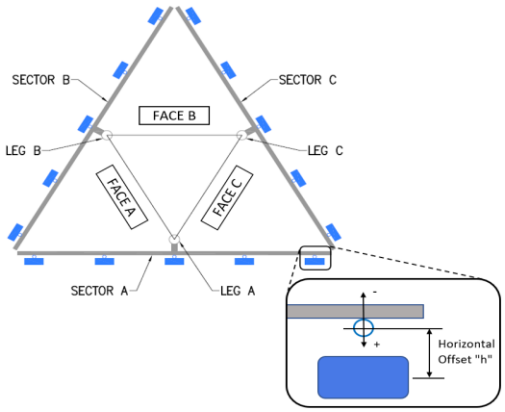


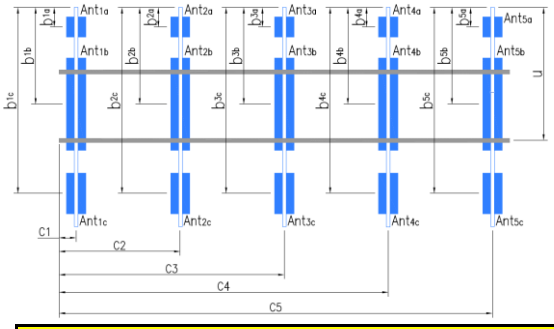
1: Ericsson Air 21 B2A B4P
2: 7"T x 6"W x 2½"D TMA
3: Ericsson Air 21 B4A B2P
4: Commscope LNX-6515DS-A1M
5: RRUS 11 B12

Mount Pipe Configuration and Geometries [Unit = Inches]

Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2.4"x6'-0"x.154	49.00	12.50	C1	2.4"x6'-0"x.154	49.00	12.50
A2	2.4"x6'-0"x.154	49.00	56.75	C2	2.4"x6'-0"x.154	49.00	56.75
A3	2.4"x6'-0"x.154	49.00	95.50	C3	2.4"x6'-0"x.154	49.00	95.50
A4	2.4"x10'-6"x.154	49.00	147.00	C4	2.4"x10'-6"x.154	49.00	147.00
A5				C5			
A6				C6			
B1	2.4"x6'-0"x.154	49.00	12.50	D1			
B2	2.4"x6'-0"x.154	49.00	56.75	D2			
B3	2.4"x6'-0"x.154	49.00	95.50	D3			
B4	2.4"x10'-6"x.154	49.00	147.00	D4			
B5				D5			
B6				D6			

Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	
Please enter additional infomation or comments below.	
Tower Face Width at Mount Elev. (ft.):	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.): 25.99



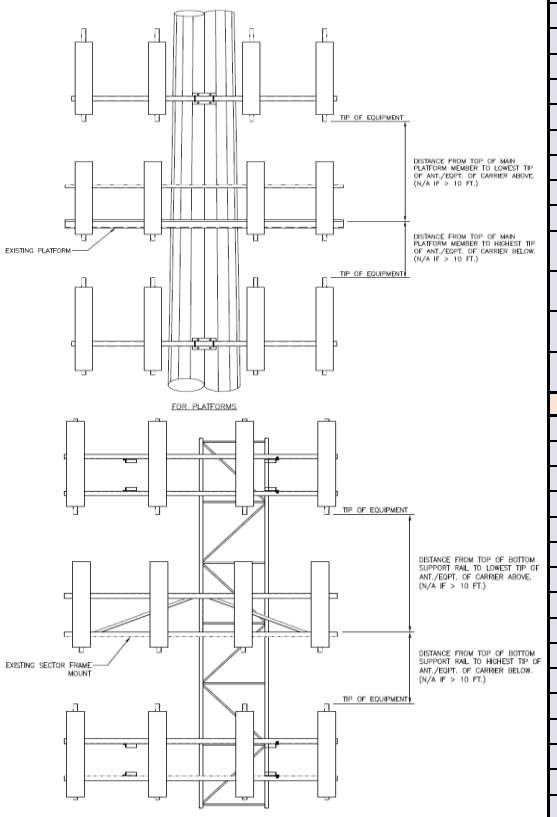


Antenna Layout (Looking Out From Tower)

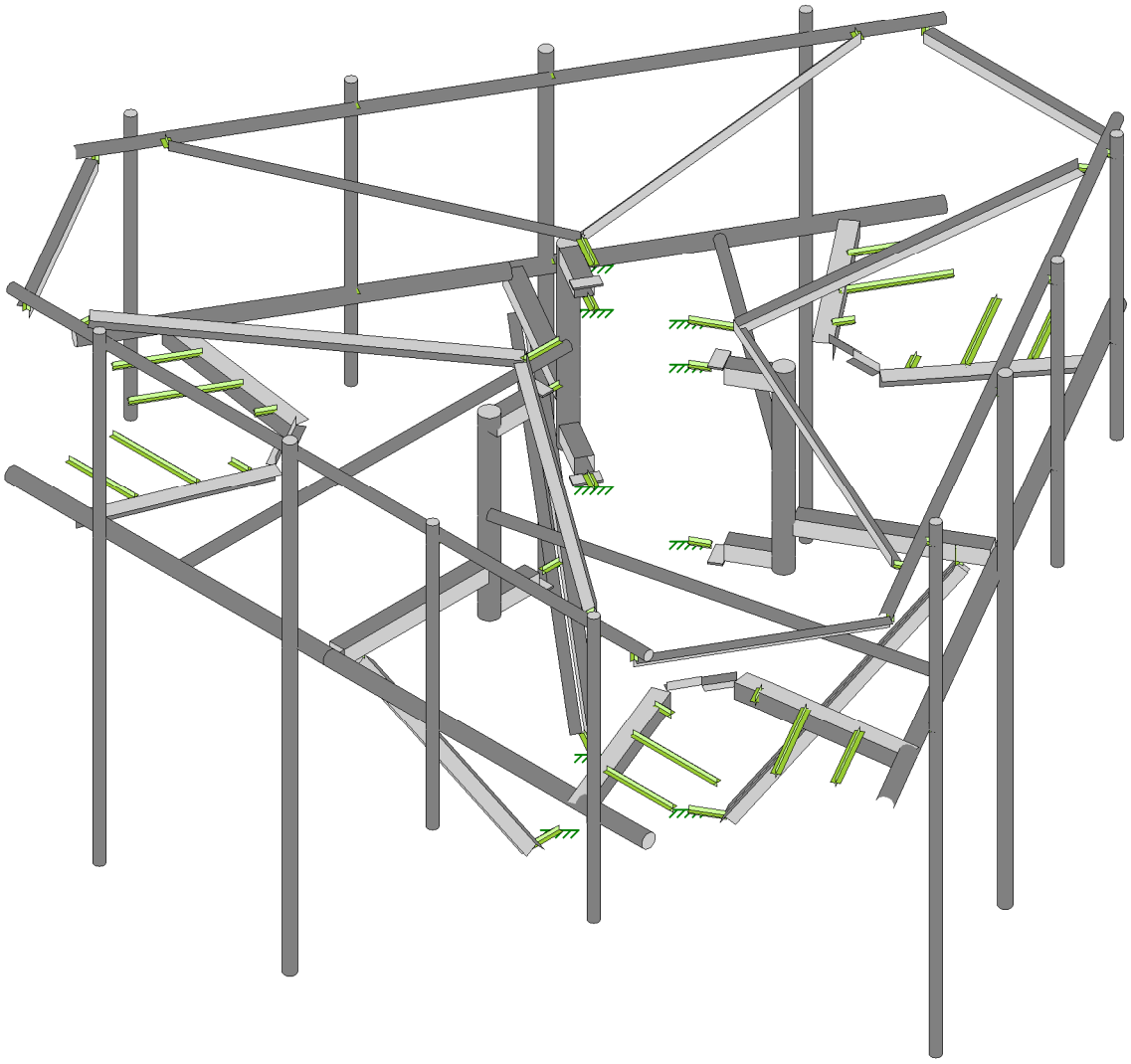
Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	Air 21 B2A B4P	12.00	8.00	56.00	1 3/4" HY	168.5	33.25	11.00	50.00	61-63
Ant_{2c}	Unknown TMA	6.00	2.50	7.00	FH 1 5/8"	168	35.50	3.00	50.00	230-231
Ant_{3a}										
Ant_{3b}	Air 21 B4A B2P	12.00	8.00	56.00	Jumpered	168.5	32.50	10.50	50.00	65
Ant_{3c}										
Ant_{4a}	RRUS 11 B12	16.97	7.17	19.69	FH 1 5/8"	171.5	19.25	6.00	50.00	233
Ant_{4b}	LNX-6515DS-A1M	10.59	5.20	101.46	Jumpered	168.5	56.00	9.50	50.00	77
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector			Tower Leg Azimuth (Degree) for Each Sector		
Sector A:	45.00	Deg	Leg A:		Deg
Sector B:	145.00	Deg	Leg B:		Deg
Sector C:	280.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

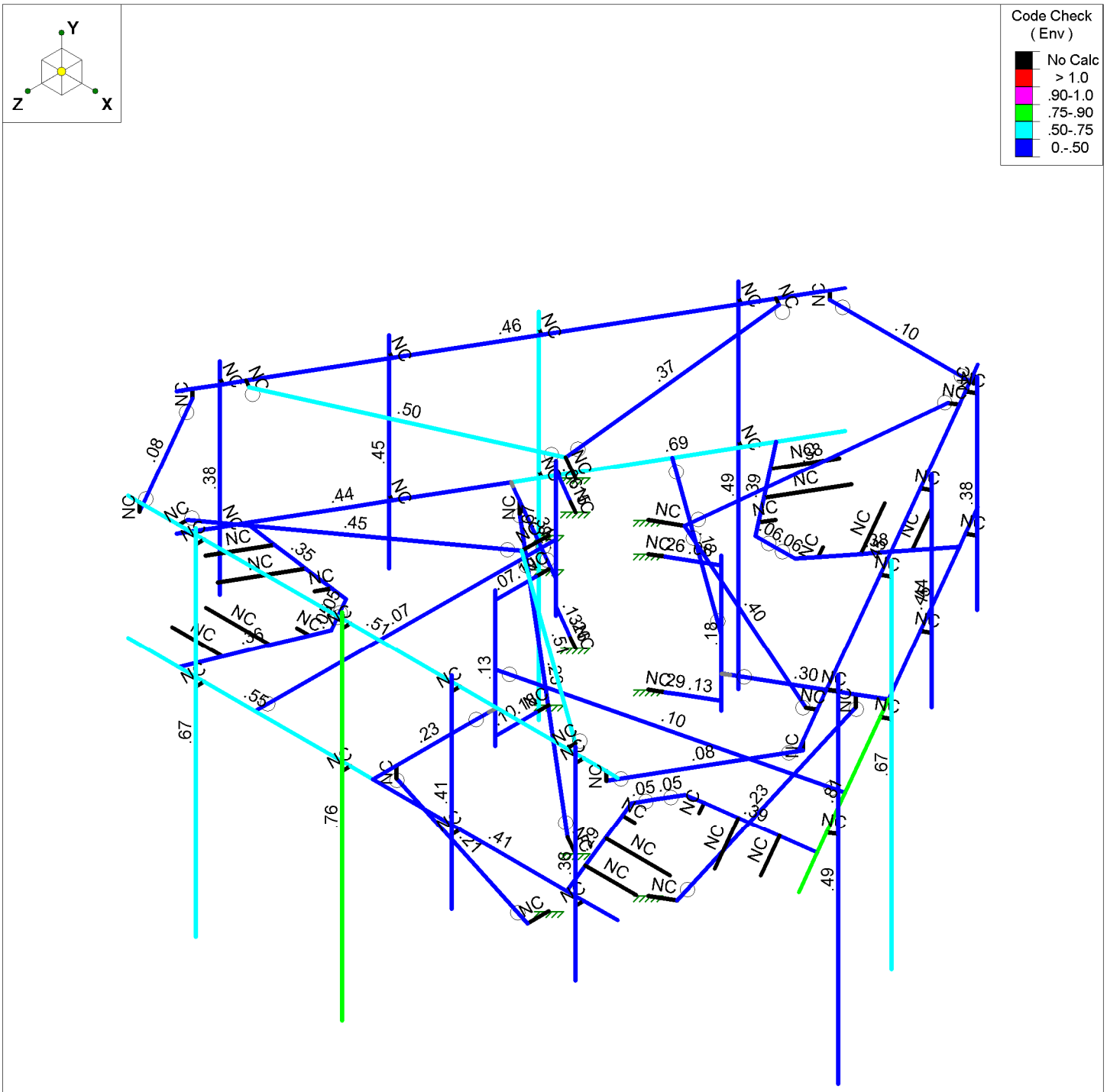
Climbing Facility Information			
Location:	15.00	Deg	
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was unobstructed.
	Condition:		Good condition.



Sector B										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	Air 21 B2A B4P	12.00	8.00	56.00	Jumpered	168.5	33.25	11.00	145.00	67
Ant_{2c}	Unknown TMA	6.00	2.50	7.00	FH 1 5/8"	168	35.50	3.00	145.00	235
Ant_{3a}										
Ant_{3b}	Air 21 B4A B2P	12.00	8.00	56.00	Jumpered	168	32.50	10.50	145.00	69
Ant_{3c}										
Ant_{4a}	RRUS 11 B12	16.97	7.17	19.69	FH 1 5/8"	171.5	19.25	6.00	145.00	237
Ant_{4b}	LNX-6515DS-A1M	10.59	5.20	101.46	Jumpered	168.5	56.00	9.50	145.00	79
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	Air 21 B2A B4P	12.00	8.00	56.00	Jumpered	168.5	33.25	11.00	300.00	71
Ant_{2c}	Unknown TMA	6.00	2.50	7.00	FH 1 5/8"	168	35.50	3.00	300.00	239
Ant_{3a}										
Ant_{3b}	Air 21 B4A B2P	12.00	8.00	56.00	Jumpered	168	32.50	10.50	300.00	74
Ant_{3c}										
Ant_{4a}	RRUS 11 B12	16.97	7.17	19.69	FH 1 5/8"	171.5	19.25	6.00	300.00	241
Ant_{4b}	LNX-6515DS-A1M	10.59	5.20	101.46	Jumpered	168	56.00	9.50	300.00	81
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

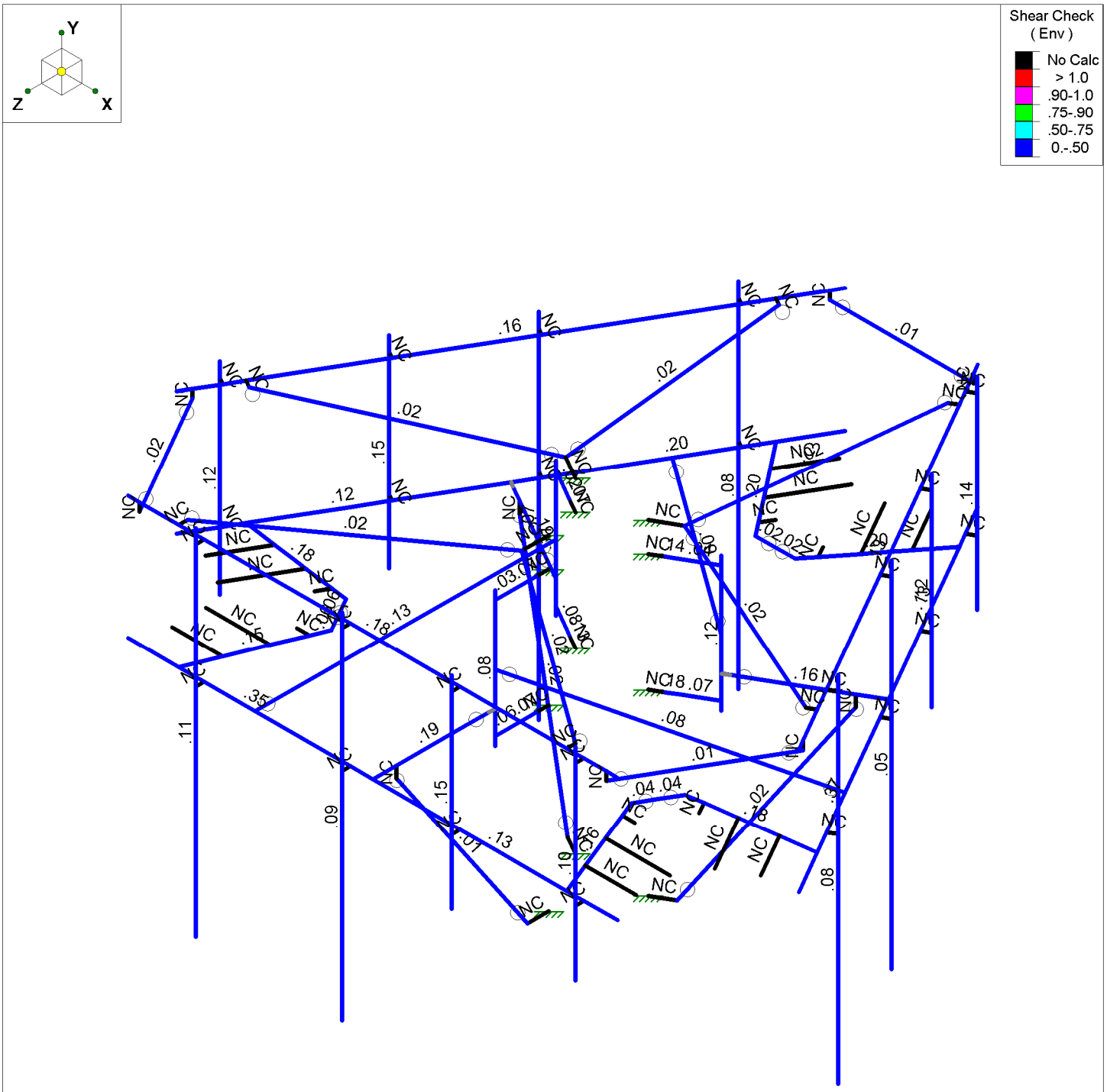


Envelope Only Solution



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Tower Engineering Solutio...	CT04066-S-SBA_MT_LO_Loads Only_G	SK - 2
Progesh Roka		May 3, 2022 at 9:02 AM
TES Project No. 128553		CT04066-S-SBA_128553_G_RISA_...



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Tower Engineering Solutio...	CT04066-S-SBA_MT_LO_Loads Only_G	SK - 3
Progesh Roka		May 3, 2022 at 9:02 AM
TES Project No. 128553		CT04066-S-SBA_128553_G_RISA_...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(M...	Surface...
1	Antenna D	None					24			
2	Antenna Di	None					24			
3	Antenna W Front	None					24			
4	Antenna Wi Front	None					24			
5	Antenna W Side	None					24			
6	Antenna Wi Side	None					24			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1					8	
10	Structure Di	None						66	8	
11	Structure W Front	None						66		
12	Structure Wi Front	None						66		
13	Structure W Side	None						66		
14	Structure Wi Side	None						66		
15	BLC 9 Transient Area Loads	None						116		
16	BLC 10 Transient Area Loads	None						116		

Load Combinations

	Description	S...	P...	S...	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 (Front)	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	1	12	1								
6	1.2D+1.0Di+1.0Wi (Back)	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-1	12	-1								
7	1.2D+1.0Di+1.0Wi (Left)	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	1	14	1								
8	1.2D+1.0Di+1.0Wi (Right)	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	-1	14	-1								
9	1.2D+1.5L1+.16W (Maintai...	Yes	Y		1	1.2	9	1.2	7	1.5	3	.16	11	.16										
10	1.2D+1.5L2+.16W (Maintai...	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	-2e-14	0	2.832917	0	
2	N2	-7.25	0	6.457914	0	
3	N3	7.25	0	6.457914	0	
4	N4	-7.25	3.666666	6.457914	0	
5	N5	7.25	3.666666	6.457914	0	
6	N6	-2e-14	0	6.457914	0	
7	N7	-2e-14	-0.333333	5.753747	0	
8	N8	-2e-14	-0.958333	2.832917	0	
9	N9	-2e-14	3.041667	2.832917	0	
10	N10	-2e-14	-0.708333	2.832917	0	
11	N11	-2e-14	2.791667	2.832917	0	
12	N12	-2e-14	-0.708333	1.874583	0	
13	N13	-2e-14	2.791667	1.874583	0	
14	N14	-2e-14	-0.708333	1.624583	0	
15	N15	-2e-14	2.791667	1.624583	0	
16	N16	-2e-14	2.791667	1.249583	0	
17	N17	-2e-14	-0.708333	1.249583	0	
18	N18	-6.916667	3.666666	6.457914	0	
19	N19	-6.916667	3.416666	6.457914	0	
20	N20	6.916667	3.666666	6.457914	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
21	N21	6.916667	3.416666	6.457914	0	
22	N22	2.453378	0	-1.416458	0	
23	N23	9.217718	0	3.049727	0	
24	N24	1.967718	0	-9.507641	0	
25	N25	9.217718	3.666666	3.049727	0	
26	N26	1.967718	3.666666	-9.507641	0	
27	N27	5.592718	0	-3.228957	0	
28	N28	4.982891	-0.333333	-2.876873	0	
29	N29	2.453378	-0.958333	-1.416458	0	
30	N30	2.453378	3.041667	-1.416458	0	
31	N31	2.453378	-0.708333	-1.416458	0	
32	N32	2.453378	2.791667	-1.416458	0	
33	N33	1.623437	-0.708333	-0.937292	0	
34	N34	1.623437	2.791667	-0.937292	0	
35	N35	1.40693	-0.708333	-0.812292	0	
36	N36	1.40693	2.791667	-0.812292	0	
37	N37	1.082171	2.791667	-0.624792	0	
38	N38	1.082171	-0.708333	-0.624792	0	
39	N39	-2.453378	0	-1.416458	0	
40	N40	-1.967718	0	-9.507641	0	
41	N41	-9.217718	0	3.049727	0	
42	N42	-1.967718	3.666666	-9.507641	0	
43	N43	-9.217718	3.666666	3.049727	0	
44	N44	-5.592718	0	-3.228957	0	
45	N45	-4.982891	-0.333333	-2.876873	0	
46	N46	-2.453378	-0.958333	-1.416458	0	
47	N47	-2.453378	3.041667	-1.416458	0	
48	N48	-2.453378	-0.708333	-1.416458	0	
49	N49	-2.453378	2.791667	-1.416458	0	
50	N50	-1.623437	-0.708333	-0.937292	0	
51	N51	-1.623437	2.791667	-0.937292	0	
52	N52	-1.40693	-0.708333	-0.812292	0	
53	N53	-1.40693	2.791667	-0.812292	0	
54	N54	-1.082171	2.791667	-0.624792	0	
55	N55	-1.082171	-0.708333	-0.624792	0	
56	N56	9.051051	3.666666	2.761052	0	
57	N57	9.051051	3.416666	2.761052	0	
58	N58	2.134384	3.666666	-9.218966	0	
59	N59	2.134384	3.416666	-9.218966	0	
60	N60	-2.134384	3.666666	-9.218966	0	
61	N61	-2.134384	3.416666	-9.218966	0	
62	N62	-9.051051	3.666666	2.761052	0	
63	N63	-9.051051	3.416666	2.761052	0	
64	N64	-5.75	3.666666	6.457914	0	
65	N65	-5.75	3.666666	6.207914	0	
66	N66	5.75	3.666666	6.457914	0	
67	N67	5.75	3.666666	6.207914	0	
68	N68	8.467718	3.666666	1.750689	0	
69	N69	8.251211	3.666666	1.875689	0	
70	N70	2.717718	3.666666	-8.208603	0	
71	N71	2.501211	3.666666	-8.083603	0	
72	N72	-2.717718	3.666666	-8.208603	0	
73	N73	-2.501211	3.666666	-8.083603	0	
74	N74	-8.467718	3.666666	1.750689	0	
75	N75	-8.251211	3.666666	1.875689	0	
76	N76	-2e-14	3.666667	2.04125	0	
77	N77	-2e-14	3.666667	1.249583	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
78	N78	-2e-14	0	5.753747	0	
79	N79	4.982891	0	-2.876873	0	
80	N80	-4.982891	0	-2.876873	0	
81	N81	-2e-14	-6	1.874583	0	
82	N82	-2e-14	-6	1.249583	0	
83	N83	1.623437	-6	-0.937292	0	
84	N84	1.082171	-6	-0.624792	0	
85	N85	-1.623437	-6	-0.937292	0	
86	N86	-1.082171	-6	-0.624792	0	
87	N87	1.767774	3.666667	-1.020625	0	
88	N88	1.082171	3.666667	-0.624792	0	
89	N89	-1.767774	3.666667	-1.020625	0	
90	N90	-1.082171	3.666667	-0.624792	0	
91	N91	-1e-14	-0.	-5.468966	0	
92	N92	-0.583333	-0.	-5.468966	0	
93	N93	0.583333	-0.	-5.468966	0	
94	N94	5.75	-0.	6.457914	0	
95	N95	-5.75	0	6.457914	0	
96	N96	2.717718	-0.	-8.208603	0	
97	N97	8.467718	0	1.750689	0	
98	N98	-8.467718	-0.	1.750689	0	
99	N99	-2.717718	0	-8.208603	0	
100	N100	-4.736264	-0.	2.734483	0	
101	N101	-4.444597	-0.	3.239665	0	
102	N102	-5.02793	-0.	2.229302	0	
103	N103	4.736264	-0.	2.734483	0	
104	N104	5.02793	-0.	2.229302	0	
105	N105	4.444597	-0.	3.239665	0	
106	N106	-5.37412	0	5.531246	0	
107	N107	5.37412	-0.	5.531246	0	
108	N108	-6.87412	-0.	5.531246	0	
109	N109	6.87412	-0.	5.531246	0	
110	N110	6.734415	-0.	1.991861	0	
111	N111	1.642206	-0.	-6.828105	0	
112	N112	-1.642206	-0.	-6.828105	0	
113	N113	-6.734415	-0.	1.991861	0	
114	N114	-5	0	6.457914	0	
115	N115	-5	3.666666	6.457914	0	
116	N116	-5	0	6.707914	0	
117	N117	-5	3.666666	6.707914	0	
118	N118	-0.666667	0	6.457914	0	
119	N119	-0.666667	3.666666	6.457914	0	
120	N120	-0.666667	0	6.707914	0	
121	N121	-0.666667	3.666666	6.707914	0	
122	N122	2.583333	0	6.457914	0	
123	N123	2.583333	3.666666	6.457914	0	
124	N124	2.583333	0	6.707914	0	
125	N125	2.583333	3.666666	6.707914	0	
126	N126	6.25	0	6.457914	0	
127	N127	6.25	3.666666	6.457914	0	
128	N128	6.25	0	6.707914	0	
129	N129	6.25	3.666666	6.707914	0	
130	N130	-0.666667	4.083333	6.707914	0	
131	N131	2.583333	4.083333	6.707914	0	
132	N132	6.25	4.083333	6.707914	0	
133	N133	-0.666667	-6.416667	6.707914	0	
134	N134	2.583333	-1.916667	6.707914	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
135	N135	6.25	-1.916667	6.707914	0	
136	N136	-5	4.083333	6.707914	0	
137	N137	-5	-6.416667	6.707914	0	
138	N138	8.092718	0	1.10117	0	
139	N139	8.092718	3.666666	1.10117	0	
140	N140	8.309224	0	0.97617	0	
141	N141	8.309224	3.666666	0.97617	0	
142	N142	5.926051	0	-2.651607	0	
143	N143	5.926051	3.666666	-2.651607	0	
144	N144	6.142557	0	-2.776607	0	
145	N145	6.142557	3.666666	-2.776607	0	
146	N146	4.301051	0	-5.466189	0	
147	N147	4.301051	3.666666	-5.466189	0	
148	N148	4.517557	0	-5.591189	0	
149	N149	4.517557	3.666666	-5.591189	0	
150	N150	2.467718	0	-8.641616	0	
151	N151	2.467718	3.666666	-8.641616	0	
152	N152	2.684224	0	-8.766616	0	
153	N153	2.684224	3.666666	-8.766616	0	
154	N154	6.142557	4.083333	-2.776607	0	
155	N155	4.517557	4.083333	-5.591189	0	
156	N156	2.684224	4.083333	-8.766616	0	
157	N157	6.142557	-6.416667	-2.776607	0	
158	N158	4.517557	-1.916667	-5.591189	0	
159	N159	2.684224	-1.916667	-8.766616	0	
160	N160	8.309224	4.083333	0.97617	0	
161	N161	8.309224	-6.416667	0.97617	0	
162	N162	-3.092718	0	-7.559084	0	
163	N163	-3.092718	3.666666	-7.559084	0	
164	N164	-3.309224	0	-7.684084	0	
165	N165	-3.309224	3.666666	-7.684084	0	
166	N166	-5.259384	0	-3.806307	0	
167	N167	-5.259384	3.666666	-3.806307	0	
168	N168	-5.475891	0	-3.931307	0	
169	N169	-5.475891	3.666666	-3.931307	0	
170	N170	-6.884384	0	-0.991725	0	
171	N171	-6.884384	3.666666	-0.991725	0	
172	N172	-7.100891	0	-1.116725	0	
173	N173	-7.100891	3.666666	-1.116725	0	
174	N174	-8.717718	0	2.183702	0	
175	N175	-8.717718	3.666666	2.183702	0	
176	N176	-8.934224	0	2.058702	0	
177	N177	-8.934224	3.666666	2.058702	0	
178	N178	-5.475891	4.083333	-3.931307	0	
179	N179	-7.100891	4.083333	-1.116725	0	
180	N180	-8.934224	4.083333	2.058702	0	
181	N181	-5.475891	-6.416667	-3.931307	0	
182	N182	-7.100891	-1.916667	-1.116725	0	
183	N183	-8.934224	-1.916667	2.058702	0	
184	N184	-3.309224	4.083333	-7.684084	0	
185	N185	-3.309224	-6.416667	-7.684084	0	
186	N186	-4.968495	0	4.531246	0	
187	N187	4.968495	-0.	4.531246	0	
188	N188	-6.87412	-0.	4.531246	0	
189	N189	6.87412	-0.	4.531246	0	
190	N190	-4.630474	0	3.697912	0	
191	N191	4.630474	-0.	3.697912	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
192	N192	-6.87412	-0.	3.697912	0	
193	N193	6.87412	-0.	3.697912	0	
194	N194	-2e-14	0	3.697912	0	
195	N195	-5	-0.	3.697912	0	
196	N196	5	-0.	3.697912	0	
197	N197	-5	-0.	4.531246	0	
198	N198	5	-0.	4.531246	0	
199	N199	8.227259	-0.	3.18754	0	
200	N200	1.353139	-0.	-8.718785	0	
201	N201	7.361234	-0.	3.68754	0	
202	N202	0.487114	-0.	-8.218785	0	
203	N203	5.702486	-0.	2.481171	0	
204	N204	0.702486	-0.	-6.179083	0	
205	N205	6.424174	-0.	2.064504	0	
206	N206	1.424174	-0.	-6.59575	0	
207	N207	-1.353139	-0.	-8.718785	0	
208	N208	-8.227259	-0.	3.18754	0	
209	N209	-0.487114	-0.	-8.218785	0	
210	N210	-7.361234	-0.	3.68754	0	
211	N211	-0.702486	-0.	-6.179083	0	
212	N212	-5.702486	-0.	2.481171	0	
213	N213	-1.424174	-0.	-6.59575	0	
214	N214	-6.424174	-0.	2.064504	0	
215	N215	7.477259	0	1.888502	0	
216	N216	2.103139	-0.	-7.419747	0	
217	N219	6.408421	0	2.03722	0	
218	N220	1.439926	-0.	-6.568466	0	
219	N223	5.517723	0	2.161152	0	
220	N224	0.887249	-0.	-5.859064	0	
221	N227	-2.103139	0	-7.419747	0	
222	N228	-7.477259	-0.	1.888502	0	
223	N231	-1.439926	0	-6.568466	0	
224	N232	-6.408421	-0.	2.03722	0	
225	N235	-0.887249	0	-5.859064	0	
226	N236	-5.517723	-0.	2.161152	0	
227	N227A	3.5	0	6.457914	0	
228	N228A	-3.5	0	6.457914	0	
229	N229	3.202486	0	-1.848956	0	
230	N230	3.842718	0	-6.260046	0	
231	N231A	7.342718	0	-0.197868	0	
232	N232A	-3.202486	0	-1.848956	0	
233	N233	-7.342718	0	-0.197868	0	
234	N234	-3.842718	0	-6.260046	0	
235	N241	-4.5e-13	1	2.832917	0	
236	N236A	2.453378	1	-1.416458	0	
237	N237	-2.453378	1	-1.416458	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Platform	L2x2x2	Beam	Single A...	A36 Gr.36	Typical	.491	.189	.189	.003
2	Working Platform Vert...	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
3	Tie Back	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Standoff Horizontal	HSS4X4X4	Beam	SquareT...	A500 Gr....	Typical	3.37	7.8	7.8	12.8
5	Standoff Vertical	PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical	2.96	6.82	6.82	13.6
6	Face Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design L...	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
7	Mount Pipe	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
8	Mount Pipe 2.5	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
9	Support Rail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
10	End Connection	L2.5x2.5x3	Beam	Single A...	A36 Gr.36	Typical	.901	.535	.535	.011
11	Plane Brace	L2.5x2.5x4	Beam	Single A...	A36 Gr.36	Typical	1.19	.692	.692	.026
12	FF End Connection	L4X4X4	Beam	Single A...	A36 Gr.36	Typical	1.93	3	3	.044
13	V Braces	L2.5x2.5x3	Beam	Single A...	A36 Gr.36	Typical	.901	.535	.535	.011
14	End Plates	PL1/2x6	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237
15	FF Connector	L2x2x4	Beam	Single A...	A36 Gr.36	Typical	.944	.346	.346	.021
16	Kicker	LL3x3x4x0	Beam	Double A...	A36 Gr.36	Typical	2.88	4.5	2.46	.063

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	V-Brace	5.44CU3.7x1875	Beam	CU	A570 Gr.33	Typical	2.262	3.221	11.043	.027
2	V-Brace Connect.	6CU6.5x250	Beam	CU	A570 Gr.33	Typical	4.491	20.132	29.124	.094

Aluminum Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	AL1A	AACS14X13.9	Beam	AA Channel	3003-H14	Typical	11.8	44.7	401	1.19

Hot Rolled Steel Properties

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

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[k/ft^3]	Yield[ksi]	Fu[ksi]
1	A570 Gr.33	29500	11346	.3	.65	.49	33	52
2	A607 C1 Gr.55	29500	11346	.3	.65	.49	55	70

Aluminum Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (...	Density[...	Table B.4	kt	Ftu[ksi]	Fty[ksi]	Fcy[ksi]	Fsu[ksi]	Ct
1	3003-H14	10100	3787.5	.33	1.3	.173	Table B....	0	0	0	0	0	0
2	6061-T6	10100	3787.5	.33	1.3	.173	Table B....	0	0	0	0	0	0
3	6063-T5	10100	3787.5	.33	1.3	.173	Table B....	0	0	0	0	0	0
4	6063-T6	10100	3787.5	.33	1.3	.173	Table B....	0	0	0	0	0	0
5	5052-H34	10200	3787.5	.33	1.3	.173	Table B....	0	0	0	0	0	0
6	6061-T6 W	10100	3787.5	.33	1.3	.173	Table B....	0	0	0	0	0	0

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(...	Section/Shape	Type	Design List	Material	Design R...
1	M1	N2	N6			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
2	M2	N1	N6			Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
3	M3	N4	N5			Support Rail	Beam	Pipe	A53 Gr.B	Typical
4	M4	N7	N81			Kicker	Beam	Double An...	A36 Gr.36	Typical
5	M5	N9	N8			Standoff Vertical	Beam	Pipe	A53 Gr.B	Typical
6	M6	N11	N13			Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
7	M7	N10	N12			Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
8	M8	N13	N15		90	End Plates	Beam	RECT	A36 Gr.36	Typical
9	M9	N12	N14		90	End Plates	Beam	RECT	A36 Gr.36	Typical
10	M10	N15	N16			RIGID	Beam	None	RIGID	DR1
11	M11	N14	N17			RIGID	Beam	None	RIGID	DR1
12	M12	N18	N19			RIGID	Beam	None	RIGID	DR1
13	M13	N20	N21			RIGID	Beam	None	RIGID	DR1
14	M14	N23	N27			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
15	M15	N22	N27			Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
16	M16	N25	N26			Support Rail	Beam	Pipe	A53 Gr.B	Typical
17	M17	N30	N29			Standoff Vertical	Beam	Pipe	A53 Gr.B	Typical
18	M18	N32	N34			Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
19	M19	N31	N33			Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
20	M20	N34	N36		90	End Plates	Beam	RECT	A36 Gr.36	Typical
21	M21	N33	N35		90	End Plates	Beam	RECT	A36 Gr.36	Typical
22	M22	N36	N37			RIGID	Beam	None	RIGID	DR1
23	M23	N35	N38			RIGID	Beam	None	RIGID	DR1
24	M24	N40	N44			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
25	M25	N39	N44			Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
26	M26	N42	N43			Support Rail	Beam	Pipe	A53 Gr.B	Typical
27	M27	N47	N46			Standoff Vertical	Beam	Pipe	A53 Gr.B	Typical
28	M28	N49	N51			Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
29	M29	N48	N50			Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
30	M30	N51	N53		90	End Plates	Beam	RECT	A36 Gr.36	Typical
31	M31	N50	N52		90	End Plates	Beam	RECT	A36 Gr.36	Typical
32	M32	N53	N54			RIGID	Beam	None	RIGID	DR1
33	M33	N52	N55			RIGID	Beam	None	RIGID	DR1
34	M34	N56	N57			RIGID	Beam	None	RIGID	DR1
35	M35	N58	N59			RIGID	Beam	None	RIGID	DR1
36	M36	N60	N61			RIGID	Beam	None	RIGID	DR1
37	M37	N62	N63			RIGID	Beam	None	RIGID	DR1
38	M38	N19	N63		180	End Connection	Beam	Single Angle	A36 Gr.36	Typical
39	M39	N57	N21		180	End Connection	Beam	Single Angle	A36 Gr.36	Typical
40	M40	N61	N59		180	End Connection	Beam	Single Angle	A36 Gr.36	Typical
41	M41	N64	N65			RIGID	Beam	None	RIGID	DR1
42	M42	N66	N67			RIGID	Beam	None	RIGID	DR1
43	M43	N68	N69			RIGID	Beam	None	RIGID	DR1
44	M44	N70	N71			RIGID	Beam	None	RIGID	DR1
45	M45	N72	N73			RIGID	Beam	None	RIGID	DR1
46	M46	N74	N75			RIGID	Beam	None	RIGID	DR1
47	M47	N76	N77			RIGID	Beam	None	RIGID	DR1
48	M48	N65	N76			V Braces	Beam	Single Angle	A36 Gr.36	Typical
49	M49	N67	N76		270	V Braces	Beam	Single Angle	A36 Gr.36	Typical
50	M50	N78	N7			RIGID	Beam	None	RIGID	DR1
51	M51	N80	N45			RIGID	Beam	None	RIGID	DR1
52	M52	N79	N28			RIGID	Beam	None	RIGID	DR1
53	M53	N81	N82			RIGID	Beam	None	RIGID	DR1
54	M54	N28	N83			Kicker	Beam	Double An...	A36 Gr.36	Typical
55	M56	N83	N84			RIGID	Beam	None	RIGID	DR1
56	M57	N45	N85			Kicker	Beam	Double An...	A36 Gr.36	Typical
57	M59	N85	N86			RIGID	Beam	None	RIGID	DR1

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(...	Section/Shape	Type	Design List	Material	Design R...
58	M60	N87	N88			RIGID	Beam	None	RIGID	DR1
59	M61	N69	N87			V Braces	Beam	Single Angle	A36 Gr.36	Typical
60	M62	N71	N87		270	V Braces	Beam	Single Angle	A36 Gr.36	Typical
61	M63	N89	N90			RIGID	Beam	None	RIGID	DR1
62	M64	N73	N89			V Braces	Beam	Single Angle	A36 Gr.36	Typical
63	M65	N75	N89		270	V Braces	Beam	Single Angle	A36 Gr.36	Typical
64	M66	N92	N91		270	FF Connector	Beam	Single Angle	A36 Gr.36	Typical
65	M67	N99	N92		90	FF End Connection	Beam	Single Angle	A36 Gr.36	Typical
66	M68	N93	N96		90	FF End Connection	Beam	Single Angle	A36 Gr.36	Typical
67	M69	N91	N93			FF Connector	Beam	Single Angle	A36 Gr.36	Typical
68	M70	N101	N100		270	FF Connector	Beam	Single Angle	A36 Gr.36	Typical
69	M71	N95	N101		90	FF End Connection	Beam	Single Angle	A36 Gr.36	Typical
70	M72	N102	N98		90	FF End Connection	Beam	Single Angle	A36 Gr.36	Typical
71	M73	N100	N102			FF Connector	Beam	Single Angle	A36 Gr.36	Typical
72	M74	N104	N103		270	FF Connector	Beam	Single Angle	A36 Gr.36	Typical
73	M75	N97	N104		90	FF End Connection	Beam	Single Angle	A36 Gr.36	Typical
74	M76	N105	N94		90	FF End Connection	Beam	Single Angle	A36 Gr.36	Typical
75	M77	N103	N105			FF Connector	Beam	Single Angle	A36 Gr.36	Typical
76	M78	N117	N115			RIGID	Beam	None	RIGID	DR1
77	M79	N116	N114			RIGID	Beam	None	RIGID	DR1
78	M80	N121	N119			RIGID	Beam	None	RIGID	DR1
79	M81	N120	N118			RIGID	Beam	None	RIGID	DR1
80	M82	N125	N123			RIGID	Beam	None	RIGID	DR1
81	M83	N124	N122			RIGID	Beam	None	RIGID	DR1
82	M84	N129	N127			RIGID	Beam	None	RIGID	DR1
83	M85	N128	N126			RIGID	Beam	None	RIGID	DR1
84	MP3A	N130	N133			Mount Pipe 2.5	Beam	Pipe	A53 Gr.B	Typical
85	MP2A	N131	N134			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
86	MP1A	N132	N135			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
87	MP4A	N136	N137			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
88	M90	N141	N139			RIGID	Beam	None	RIGID	DR1
89	M91	N140	N138			RIGID	Beam	None	RIGID	DR1
90	M92	N145	N143			RIGID	Beam	None	RIGID	DR1
91	M93	N144	N142			RIGID	Beam	None	RIGID	DR1
92	M94	N149	N147			RIGID	Beam	None	RIGID	DR1
93	M95	N148	N146			RIGID	Beam	None	RIGID	DR1
94	M96	N153	N151			RIGID	Beam	None	RIGID	DR1
95	M97	N152	N150			RIGID	Beam	None	RIGID	DR1
96	MP3C	N154	N157			Mount Pipe 2.5	Beam	Pipe	A53 Gr.B	Typical
97	MP2C	N155	N158			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
98	MP1C	N156	N159			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
99	MP4C	N160	N161			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
100	M102	N165	N163			RIGID	Beam	None	RIGID	DR1
101	M103	N164	N162			RIGID	Beam	None	RIGID	DR1
102	M104	N169	N167			RIGID	Beam	None	RIGID	DR1
103	M105	N168	N166			RIGID	Beam	None	RIGID	DR1
104	M106	N173	N171			RIGID	Beam	None	RIGID	DR1
105	M107	N172	N170			RIGID	Beam	None	RIGID	DR1
106	M108	N177	N175			RIGID	Beam	None	RIGID	DR1
107	M109	N176	N174			RIGID	Beam	None	RIGID	DR1
108	MP3B	N178	N181			Mount Pipe 2.5	Beam	Pipe	A53 Gr.B	Typical
109	MP2B	N179	N182			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
110	MP1B	N180	N183			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
111	MP4B	N184	N185			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
112	M112	N108	N106			RIGID	Beam	None	RIGID	DR1
113	M114	N109	N107			RIGID	Beam	None	RIGID	DR1
114	M114A	N188	N186			RIGID	Beam	None	RIGID	DR1

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(...	Section/Shape	Type	Design List	Material	Design R...
115	M115	N189	N187			RIGID	Beam	None	RIGID	DR1
116	M116	N195	N190			RIGID	Beam	None	RIGID	DR1
117	M117	N196	N191			RIGID	Beam	None	RIGID	DR1
118	M118	N199	N215			RIGID	Beam	None	RIGID	DR1
119	M119	N200	N216			RIGID	Beam	None	RIGID	DR1
120	M120	N201	N219			RIGID	Beam	None	RIGID	DR1
121	M121	N202	N220			RIGID	Beam	None	RIGID	DR1
122	M122	N203	N223			RIGID	Beam	None	RIGID	DR1
123	M123	N204	N224			RIGID	Beam	None	RIGID	DR1
124	M124	N207	N227			RIGID	Beam	None	RIGID	DR1
125	M125	N208	N228			RIGID	Beam	None	RIGID	DR1
126	M126	N209	N231			RIGID	Beam	None	RIGID	DR1
127	M127	N210	N232			RIGID	Beam	None	RIGID	DR1
128	M128	N211	N235			RIGID	Beam	None	RIGID	DR1
129	M129	N212	N236			RIGID	Beam	None	RIGID	DR1
130	M130	N6	N3			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
131	M131	N27	N24			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
132	M132	N44	N41			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
133	M133	N241	N231A			Tie Back	Beam	Pipe	A53 Gr.B	Typical
134	M134	N236A	N234			Tie Back	Beam	Pipe	A53 Gr.B	Typical
135	M135	N237	N228A			Tie Back	Beam	Pipe	A53 Gr.B	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	M1						Yes				None
2	M2	BenPIN		2.25	1.75		Yes				None
3	M3						Yes				None
4	M4		BenPIN				Yes				None
5	M5						Yes				None
6	M6						Yes				None
7	M7						Yes				None
8	M8						Yes		-z+2		None
9	M9						Yes		+z+2		None
10	M10						Yes				None
11	M11						Yes				None
12	M12						Yes				None
13	M13						Yes				None
14	M14						Yes				None
15	M15	BenPIN		2.25	1.75		Yes				None
16	M16						Yes				None
17	M17						Yes				None
18	M18						Yes				None
19	M19						Yes				None
20	M20						Yes		-z+2		None
21	M21						Yes		+z+2		None
22	M22						Yes				None
23	M23						Yes				None
24	M24						Yes				None
25	M25	BenPIN		2.25	1.75		Yes				None
26	M26						Yes				None
27	M27						Yes				None
28	M28						Yes				None
29	M29						Yes				None
30	M30						Yes		-z+2		None
31	M31						Yes		+z+2		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...
32	M32						Yes				None
33	M33						Yes				None
34	M34						Yes				None
35	M35						Yes				None
36	M36						Yes				None
37	M37						Yes				None
38	M38	BenPIN	BenPIN				Yes				None
39	M39	BenPIN	BenPIN				Yes				None
40	M40	BenPIN	BenPIN				Yes				None
41	M41	BenPIN					Yes				None
42	M42	BenPIN					Yes				None
43	M43	BenPIN					Yes				None
44	M44	BenPIN					Yes				None
45	M45	BenPIN					Yes				None
46	M46	BenPIN					Yes				None
47	M47						Yes				None
48	M48		BenPIN				Yes				None
49	M49		BenPIN				Yes				None
50	M50	BenPIN					Yes				None
51	M51	BenPIN					Yes				None
52	M52	BenPIN					Yes				None
53	M53						Yes				None
54	M54		BenPIN				Yes				None
55	M56						Yes				None
56	M57		BenPIN				Yes				None
57	M59						Yes				None
58	M60						Yes				None
59	M61		BenPIN				Yes				None
60	M62		BenPIN				Yes				None
61	M63						Yes				None
62	M64		BenPIN				Yes				None
63	M65		BenPIN				Yes				None
64	M66	BenPIN					Yes		+y+0.125		None
65	M67						Yes		+z+0.5		None
66	M68						Yes		+z+0.5		None
67	M69		BenPIN				Yes		+z+0.125		None
68	M70	BenPIN					Yes		+y+0.125		None
69	M71						Yes		+z+0.5		None
70	M72						Yes		+z+0.5		None
71	M73		BenPIN				Yes		+z+0.125		None
72	M74	BenPIN					Yes		+y+0.125		None
73	M75						Yes		+z+0.5		None
74	M76						Yes		+z+0.5		None
75	M77		BenPIN				Yes		+z+0.125		None
76	M78						Yes				None
77	M79						Yes				None
78	M80						Yes				None
79	M81						Yes				None
80	M82						Yes				None
81	M83						Yes				None
82	M84						Yes				None
83	M85						Yes				None
84	MP3A						Yes				None
85	MP2A						Yes				None
86	MP1A						Yes				None
87	MP4A						Yes				None
88	M90						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...
89	M91						Yes				None
90	M92						Yes				None
91	M93						Yes				None
92	M94						Yes				None
93	M95						Yes				None
94	M96						Yes				None
95	M97						Yes				None
96	MP3C						Yes				None
97	MP2C						Yes				None
98	MP1C						Yes				None
99	MP4C						Yes				None
100	M102						Yes				None
101	M103						Yes				None
102	M104						Yes				None
103	M105						Yes				None
104	M106						Yes				None
105	M107						Yes				None
106	M108						Yes				None
107	M109						Yes				None
108	MP3B						Yes				None
109	MP2B						Yes				None
110	MP1B						Yes				None
111	MP4B						Yes				None
112	M112						Yes				None
113	M114						Yes				None
114	M114A						Yes				None
115	M115						Yes				None
116	M116						Yes				None
117	M117						Yes				None
118	M118						Yes				None
119	M119						Yes				None
120	M120						Yes				None
121	M121						Yes				None
122	M122						Yes				None
123	M123						Yes				None
124	M124						Yes				None
125	M125						Yes				None
126	M126						Yes				None
127	M127						Yes				None
128	M128						Yes				None
129	M129						Yes				None
130	M130						Yes				None
131	M131						Yes				None
132	M132						Yes				None
133	M133	BenPIN	BenPIN				Yes				None
134	M134	BenPIN	BenPIN				Yes				None
135	M135	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	M1	Face Horizo...	7.25			Lbyy			2.1	2.1		Lateral
2	M2	Standoff Ho...	3.625			Lbyy						Lateral
3	M3	Support Rail	14.5			Lbyy						Gravity
4	M4	Kicker	6.867			Lbyy						Lateral
5	M5	Standoff Ve...	4			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
6	M6	Standoff Ho...	.958			Lbyy						Lateral
7	M7	Standoff Ho...	.958			Lbyy						Lateral
8	M8	End Plates	.25			Lbyy						Lateral
9	M9	End Plates	.25			Lbyy						Lateral
10	M14	Face Horizo...	7.25			Lbyy			2.1	2.1		Lateral
11	M15	Standoff Ho...	3.625			Lbyy						Lateral
12	M16	Support Rail	14.5			Lbyy						Gravity
13	M17	Standoff Ve...	4			Lbyy						Lateral
14	M18	Standoff Ho...	.958			Lbyy						Lateral
15	M19	Standoff Ho...	.958			Lbyy						Lateral
16	M20	End Plates	.25			Lbyy						Lateral
17	M21	End Plates	.25			Lbyy						Lateral
18	M24	Face Horizo...	7.25			Lbyy			2.1	2.1		Lateral
19	M25	Standoff Ho...	3.625			Lbyy						Lateral
20	M26	Support Rail	14.5			Lbyy						Gravity
21	M27	Standoff Ve...	4			Lbyy						Lateral
22	M28	Standoff Ho...	.958			Lbyy						Lateral
23	M29	Standoff Ho...	.958			Lbyy						Lateral
24	M30	End Plates	.25			Lbyy						Lateral
25	M31	End Plates	.25			Lbyy						Lateral
26	M38	End Conne...	4.269			Lbyy						Lateral
27	M39	End Conne...	4.269			Lbyy						Lateral
28	M40	End Conne...	4.269			Lbyy						Lateral
29	M48	V Braces	7.101			Lbyy						Lateral
30	M49	V Braces	7.101			Lbyy						Lateral
31	M54	Kicker	6.867			Lbyy						Lateral
32	M57	Kicker	6.867			Lbyy						Lateral
33	M61	V Braces	7.101			Lbyy						Lateral
34	M62	V Braces	7.101			Lbyy						Lateral
35	M64	V Braces	7.101			Lbyy						Lateral
36	M65	V Braces	7.101			Lbyy						Lateral
37	M66	FF Connector	.583			Lbyy						Lateral
38	M67	FF End Con...	3.473			Lbyy						Lateral
39	M68	FF End Con...	3.473			Lbyy						Lateral
40	M69	FF Connector	.583			Lbyy						Lateral
41	M70	FF Connector	.583			Lbyy						Lateral
42	M71	FF End Con...	3.473			Lbyy						Lateral
43	M72	FF End Con...	3.473			Lbyy						Lateral
44	M73	FF Connector	.583			Lbyy						Lateral
45	M74	FF Connector	.583			Lbyy						Lateral
46	M75	FF End Con...	3.473			Lbyy						Lateral
47	M76	FF End Con...	3.473			Lbyy						Lateral
48	M77	FF Connector	.583			Lbyy						Lateral
49	MP3A	Mount Pipe ...	10.5			Lbyy						Lateral
50	MP2A	Mount Pipe	6			Lbyy						Lateral
51	MP1A	Mount Pipe	6			Lbyy						Lateral
52	MP4A	Mount Pipe	10.5			Lbyy						Lateral
53	MP3C	Mount Pipe ...	10.5			Lbyy						Lateral
54	MP2C	Mount Pipe	6			Lbyy						Lateral
55	MP1C	Mount Pipe	6			Lbyy						Lateral
56	MP4C	Mount Pipe	10.5			Lbyy						Lateral
57	MP3B	Mount Pipe ...	10.5			Lbyy						Lateral
58	MP2B	Mount Pipe	6			Lbyy						Lateral
59	MP1B	Mount Pipe	6			Lbyy						Lateral
60	MP4B	Mount Pipe	10.5			Lbyy						Lateral
61	M130	Face Horizo...	7.25			Lbyy			2.1	2.1		Lateral
62	M131	Face Horizo...	7.25			Lbyy			2.1	2.1		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
63	M132	Face Horizo...	7.25			Lbyy			2.1	2.1		Lateral
64	M133	Tie Back	8.006			Lbyy						Lateral
65	M134	Tie Back	8.006			Lbyy						Lateral
66	M135	Tie Back	8.006			Lbyy						Lateral

Cold Formed Steel Design Parameters

Label	Shape	Lengt...	Lbyy[ft]	Lbzz[ft]	Lcomp t...	Lcomp ...	L-torque...	Kyy	Kzz	Cm-...	Cm-...	Cb	R	a[ft]	y sw...	z sw...
No Data to Print ...																

Aluminum Design Parameters

Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
No Data to Print ...											

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	N1						
2	N8						
3	N9						
4	N10						
5	N11						
6	N12						
7	N13						
8	N14						
9	N15						
10	N16	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
11	N17	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
12	N22						
13	N29						
14	N30						
15	N31						
16	N32						
17	N33						
18	N34						
19	N35						
20	N36						
21	N37	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
22	N38	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
23	N39						
24	N46						
25	N47						
26	N48						
27	N49						
28	N50						
29	N51						
30	N52						
31	N53						
32	N54	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
33	N55	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
34	N76						
35	N77	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
36	N81						
37	N82	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Joint Boundary Conditions (Continued)

	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]
38	N83						
39	N84	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
40	N85						
41	N86	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
42	N87						
43	N88	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
44	N89						
45	N90	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
46	N241						
47	N236A						
48	N237						

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	N16	max	405.46	2	1091.904	2	577.136	1	.461	1	.622	2	.027	1
2		min	-347.974	1	-682.841	1	-925.414	2	-.733	2	-.54	1	-.035	9
3	N17	max	1537.783	4	88.365	1	500.779	1	.864	6	2.372	4	.286	4
4		min	-1595.04	3	-916.216	6	-2246.974	6	-.122	1	-2.448	3	-.3	3
5	N37	max	1015.267	4	1237.558	3	261.361	8	.383	3	1.302	3	.753	3
6		min	-1346.711	3	-827.265	4	-67.611	3	-.25	4	-1.224	4	-.514	4
7	N38	max	1790.672	4	371.863	4	1787.894	1	.093	2	2.779	3	.435	4
8		min	-2992.452	3	-1025.372	7	-1032.82	2	-.477	5	-2.916	4	-.898	3
9	N54	max	487.166	8	750.755	1	644.793	1	.271	1	.741	1	.209	2
10		min	-171.439	2	-352.075	2	-432.99	2	-.135	2	-.679	2	-.438	1
11	N55	max	2056.43	8	62.433	2	2485.993	1	.311	2	3.017	1	.756	8
12		min	-278.741	3	-959.284	5	-1840.235	2	-.568	1	-3.135	2	.086	3
13	N77	max	736.256	4	100.79	6	1459.854	1	-.016	1	.583	4	.001	4
14		min	-729.671	3	21.551	3	-1555.015	2	-.079	6	-.578	3	0	3
15	N82	max	105.942	4	4091.596	5	2606.295	5	-.386	2	.07	4	.002	4
16		min	-106.559	3	617.948	2	281.492	2	-2.557	5	-.069	3	-.002	3
17	N84	max	2381.319	8	4306.842	8	-253.542	1	1.346	8	.056	2	2.331	8
18		min	376.786	3	882.332	3	-1363.644	6	.279	3	-.058	1	.476	3
19	N86	max	-359.682	4	4320.926	7	-254.843	1	1.349	7	.059	1	-.46	4
20		min	-2386.41	7	852.754	4	-1372.123	7	.269	4	-.057	2	-2.339	7
21	N88	max	1141.027	4	100.134	7	1004.527	1	.039	7	.628	2	.068	7
22		min	-1240.053	3	20.985	2	-949.583	2	.007	4	-.629	1	.013	2
23	N90	max	1432.384	4	100.204	8	884.109	1	.039	8	.54	1	-.013	2
24		min	-1365.079	3	20.706	2	-805.561	2	.007	3	-.537	4	-.068	8
25	Totals:	max	10559.941	4	11630.52	5	10442.245	1						
26		min	-10559.93	3	4185.15	2	-10442.195	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	M1	1	max	0	11	0	11	0	11	0	11	0	11	0	11
2			min	0	1	0	1	0	1	0	1	0	1	0	1
3		2	max	175.745	2	-60.792	4	402.789	2	-.065	4	.87	1	.536	9
4			min	-179.625	1	-819.599	9	-406.202	1	-.352	6	-.859	2	-.029	2
5		3	max	515.124	9	-153.108	3	883.14	2	.017	4	.519	2	.467	9
6			min	-105.075	4	-614.626	9	-879.678	1	-.328	6	-.459	1	-.294	4
7		4	max	526.856	9	-126.897	2	526.566	4	.004	4	.935	4	1.393	9
8			min	-187.301	4	-649.811	5	-523.919	3	-.316	6	-.918	3	.204	4
9		5	max	990.143	3	-617.955	4	1240.607	2	1.285	1	1.904	4	2.689	7
10			min	-524.643	4	-2148.983	5	-1278.714	1	-1.446	2	-1.867	3	-.791	4
11	M2	1	max	489.164	1	483.346	2	1113.584	3	2.031	4	0	11	0	11

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
12			min	-2725.536	6	-837.466	1	-1128.795	4	-2.219	3	0	1	0	1
13		2	max	489.164	1	468.43	2	1079.556	3	2.031	4	.902	3	.694	1
14			min	-2725.536	6	-853.139	1	-1094.499	4	-2.219	3	-.915	4	-.393	2
15		3	max	489.164	1	435.199	2	1045.783	3	2.031	4	1.777	3	1.411	1
16			min	-2725.536	6	-886.37	1	-1060.725	4	-2.219	3	-1.802	4	-.764	2
17		4	max	489.164	1	409.795	2	1012.01	3	2.031	4	2.624	3	2.151	1
18			min	-2725.536	6	-911.775	1	-1026.952	4	-2.219	3	-2.661	4	-1.112	2
19		5	max	1814.316	1	3001.834	5	879.382	3	2.031	4	3.407	3	1.711	1
20			min	-1780.22	2	936.13	2	-895.044	4	-2.219	3	-3.456	4	-1.744	2
21	M3	1	max	0	11	0	11	0	11	0	11	0	11	0	11
22			min	0	1	0	1	0	1	0	1	0	1	0	1
23		2	max	887.635	2	-88.457	2	92.221	1	.032	1	.189	4	-.032	2
24			min	-1101.129	1	-417.194	9	-102.139	2	-.044	9	-.2	3	-.279	9
25		3	max	802.386	2	181.093	7	99.243	2	.167	2	.083	1	.313	7
26			min	-1242.891	1	-81.143	4	-90.077	1	-.17	1	-.128	2	-.064	4
27		4	max	919.331	2	315.798	8	135.692	2	.206	2	.147	3	.242	8
28			min	-1088.486	1	94.979	3	-139.074	1	-.208	1	-.128	4	.036	3
29		5	max	0	11	0	11	0	11	0	11	0	11	0	11
30			min	0	1	0	1	0	1	0	1	0	1	0	1
31	M4	1	max	4658.733	5	72.603	2	99.826	4	.004	4	.04	4	-.152	2
32			min	700.812	2	-113.685	1	-99.808	3	-.003	3	-.04	3	-.86	5
33		2	max	4706.18	5	25.216	2	46.982	4	.004	4	.166	4	-.236	2
34			min	692.84	2	-106.556	5	-46.963	3	-.003	3	-.166	3	-.693	6
35		3	max	4753.626	5	-22.171	2	5.882	3	.004	4	.202	4	-.137	1
36			min	684.868	2	-125.23	5	-5.863	4	-.003	3	-.202	3	-.526	6
37		4	max	4801.072	5	-39.952	1	58.726	3	.004	4	.146	4	-.047	1
38			min	676.895	2	-153.311	6	-58.708	4	-.003	3	-.146	3	-.295	6
39		5	max	4848.519	5	-15.374	1	111.571	3	.004	4	0	11	0	11
40			min	668.923	2	-190.786	6	-111.553	4	-.003	3	0	1	0	1
41	M5	1	max	0	11	0	1	0	8	0	11	0	11	0	11
42			min	0	1	0	2	0	2	0	1	0	1	0	1
43		2	max	712.173	1	348.204	1	897.26	2	.252	3	.212	1	.335	2
44			min	-1062.572	2	-405.053	2	-549.598	1	-.251	4	-.305	2	-.288	1
45		3	max	724.26	1	348.204	1	869.557	2	.252	3	.578	2	.74	2
46			min	-1050.485	2	-405.053	2	-521.895	1	-.251	4	-.324	1	-.636	1
47		4	max	896.304	1	637.024	2	486.146	6	.251	3	1.028	2	1.098	9
48			min	-1160.948	2	-666.872	1	-16.055	1	-.239	4	-.491	1	-.697	4
49		5	max	0	11	0	1	.002	6	0	11	0	11	0	11
50			min	0	1	0	9	0	1	0	1	0	1	0	1
51	M6	1	max	577.136	1	700.224	1	348.068	1	.027	1	.252	3	.631	1
52			min	-925.414	2	-1074.387	2	-405.287	2	-.035	9	-.251	4	-.985	2
53		2	max	577.136	1	696.678	1	348.068	1	.027	1	.202	3	.463	1
54			min	-925.414	2	-1077.933	2	-405.287	2	-.035	9	-.204	4	-.727	2
55		3	max	577.136	1	693.132	1	348.068	1	.027	1	.156	1	.297	1
56			min	-925.414	2	-1081.479	2	-405.287	2	-.035	9	-.174	2	-.469	2
57		4	max	577.136	1	689.587	1	348.068	1	.027	1	.239	1	.131	1
58			min	-925.414	2	-1085.025	2	-405.287	2	-.035	9	-.272	2	-.209	2
59		5	max	577.136	1	686.041	1	348.068	1	.027	1	.323	1	.051	2
60			min	-925.414	2	-1088.57	2	-405.287	2	-.035	9	-.369	2	-.034	1
61	M7	1	max	500.779	1	952.822	6	1539.864	3	.283	4	.034	2	.609	6
62			min	-2246.974	6	-70.936	1	-1482.536	4	-.297	3	-.071	9	-.007	1
63		2	max	500.779	1	945.486	6	1549.697	3	.283	4	.328	3	.381	6
64			min	-2246.974	6	-74.482	1	-1492.369	4	-.297	3	-.329	4	.01	1
65		3	max	500.779	1	938.151	6	1559.53	3	.283	4	.701	3	.155	6
66			min	-2246.974	6	-78.027	1	-1502.202	4	-.297	3	-.688	4	.028	1
67		4	max	500.779	1	930.816	6	1569.363	3	.283	4	1.076	3	.047	1
68			min	-2246.974	6	-81.573	1	-1512.034	4	-.297	3	-1.049	4	-.094	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
69		5	max	500.779	1	923.481	6	1579.195	3	.283	4	1.453	3	.067	1
70			min	-2246.974	6	-85.119	1	-1521.867	4	-.297	3	-1.413	4	-.291	6
71	M8	1	max	577.136	1	348	1	1088.129	2	.045	2	.075	1	.369	2
72			min	-925.414	2	-405.412	2	-686.198	1	-.038	1	-.122	2	-.323	1
73		2	max	577.136	1	348	1	1088.895	2	.045	2	.032	1	.394	2
74			min	-925.414	2	-405.412	2	-685.432	1	-.038	1	-.054	2	-.344	1
75		3	max	577.136	1	348	1	1089.66	2	.045	2	.014	2	.419	2
76			min	-925.414	2	-405.412	2	-684.667	1	-.038	1	-.011	1	-.366	1
77		4	max	577.136	1	348	1	1090.426	2	.045	2	.082	2	.445	2
78			min	-925.414	2	-405.412	2	-683.901	1	-.038	1	-.054	1	-.388	1
79		5	max	577.136	1	348	1	1091.192	2	.045	2	.15	2	.47	2
80			min	-925.414	2	-405.412	2	-683.135	1	-.038	1	-.097	1	-.41	1
81	M9	1	max	500.779	1	1579.524	3	85.23	1	.035	1	.131	6	1.413	4
82			min	-2246.974	6	-1522.248	4	-922.024	6	-.042	2	-.027	1	-1.453	3
83		2	max	500.779	1	1583.372	3	85.995	1	.035	1	.073	6	1.508	4
84			min	-2246.974	6	-1526.095	4	-920.398	6	-.042	2	-.021	1	-1.552	3
85		3	max	500.779	1	1587.219	3	86.761	1	.035	1	.025	2	1.603	4
86			min	-2246.974	6	-1529.943	4	-918.773	6	-.042	2	-.016	1	-1.651	3
87		4	max	500.779	1	1591.067	3	87.527	1	.035	1	-.01	1	1.699	4
88			min	-2246.974	6	-1533.79	4	-917.147	6	-.042	2	-.042	6	-1.75	3
89		5	max	500.779	1	1594.914	3	88.292	1	.035	1	-.005	1	1.795	4
90			min	-2246.974	6	-1537.638	4	-915.522	6	-.042	2	-.099	6	-1.85	3
91	M10	1	max	577.136	1	682.841	1	347.974	1	.027	1	.41	1	.324	2
92			min	-925.414	2	-1091.904	2	-405.46	2	-.035	9	-.47	2	-.205	1
93		2	max	577.136	1	682.841	1	347.974	1	.027	1	.442	1	.426	2
94			min	-925.414	2	-1091.904	2	-405.46	2	-.035	9	-.508	2	-.269	1
95		3	max	577.136	1	682.841	1	347.974	1	.027	1	.475	1	.529	2
96			min	-925.414	2	-1091.904	2	-405.46	2	-.035	9	-.546	2	-.333	1
97		4	max	577.136	1	682.841	1	347.974	1	.027	1	.507	1	.631	2
98			min	-925.414	2	-1091.904	2	-405.46	2	-.035	9	-.584	2	-.397	1
99		5	max	577.136	1	682.841	1	347.974	1	.027	1	.54	1	.733	2
100			min	-925.414	2	-1091.904	2	-405.46	2	-.035	9	-.622	2	-.461	1
101	M11	1	max	500.779	1	916.216	6	1595.04	3	.286	4	1.85	3	.089	1
102			min	-2246.974	6	-88.365	1	-1537.783	4	-.3	3	-1.795	4	-.52	6
103		2	max	500.779	1	916.216	6	1595.04	3	.286	4	1.999	3	.097	1
104			min	-2246.974	6	-88.365	1	-1537.783	4	-.3	3	-1.939	4	-.606	6
105		3	max	500.779	1	916.216	6	1595.04	3	.286	4	2.149	3	.106	1
106			min	-2246.974	6	-88.365	1	-1537.783	4	-.3	3	-2.084	4	-.692	6
107		4	max	500.779	1	916.216	6	1595.04	3	.286	4	2.298	3	.114	1
108			min	-2246.974	6	-88.365	1	-1537.783	4	-.3	3	-2.228	4	-.778	6
109		5	max	500.779	1	916.216	6	1595.04	3	.286	4	2.448	3	.122	1
110			min	-2246.974	6	-88.365	1	-1537.783	4	-.3	3	-2.372	4	-.864	6
111	M12	1	max	-3.815	4	178.452	2	337.281	2	0	11	.072	1	.044	2
112			min	-28.381	6	-149.921	1	-286.429	1	0	1	-.085	2	-.037	1
113		2	max	-3.815	4	178.452	2	337.281	2	0	11	.054	1	.033	2
114			min	-28.381	6	-149.921	1	-286.429	1	0	1	-.064	2	-.028	1
115		3	max	-3.815	4	178.452	2	337.281	2	0	11	.036	1	.021	2
116			min	-28.381	6	-149.921	1	-286.429	1	0	1	-.043	2	-.018	1
117		4	max	-3.815	4	178.452	2	337.281	2	0	11	.018	1	.01	2
118			min	-28.381	6	-149.921	1	-286.429	1	0	1	-.022	2	-.009	1
119		5	max	-3.815	4	178.452	2	337.281	2	0	11	0	1	0	1
120			min	-28.381	6	-149.921	1	-286.429	1	0	1	0	9	-.002	9
121	M13	1	max	-4.364	3	105.633	4	324.315	3	0	11	.066	4	.026	4
122			min	-27.74	6	-140.463	3	-265.757	4	0	1	-.081	3	-.035	3
123		2	max	-4.364	3	105.633	4	324.315	3	0	11	.05	4	.02	4
124			min	-27.74	6	-140.463	3	-265.757	4	0	1	-.061	3	-.027	3
125		3	max	-4.364	3	105.633	4	324.315	3	0	11	.033	4	.013	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
126			min	-27.74	6	-140.463	3	-265.757	4	0	1	-.04	3	-.018	3
127		4	max	-4.364	3	105.633	4	324.315	3	0	11	.017	4	.007	4
128			min	-27.74	6	-140.463	3	-265.757	4	0	1	-.02	3	-.009	3
129		5	max	-4.364	3	105.633	4	324.315	3	0	11	0	9	0	2
130			min	-27.74	6	-140.463	3	-265.757	4	0	1	0	2	-.001	9
131	M14	1	max	0	11	.012	7	.002	3	0	11	0	11	0	11
132			min	0	1	-.078	1	-.004	1	0	1	0	1	0	1
133		2	max	165.82	3	-93.274	1	397.968	3	-.123	2	.97	4	.015	1
134			min	-174.935	4	-283.886	7	-409.294	4	-.453	7	-.937	3	-.03	3
135		3	max	544.273	5	-182.079	2	707.547	3	.107	4	.414	1	.247	1
136			min	-202.454	2	-546.683	7	-704.646	4	-.441	7	-.384	2	-.295	2
137		4	max	716.533	1	-100.391	1	854.644	2	.12	4	1.317	3	.973	8
138			min	-419.972	2	-718.967	6	-842.478	1	-.429	7	-1.324	4	.287	1
139		5	max	1318.351	1	-740.131	1	1822.399	3	1.178	4	3.186	3	2.782	5
140			min	-791.509	2	-2249.939	8	-1893.725	4	-1.364	3	-3.291	4	-.384	2
141	M15	1	max	902.421	4	416.008	3	1341.562	1	1.588	2	0	11	0	11
142			min	-2999.068	7	-787.304	4	-1360.223	2	-1.713	1	0	1	0	1
143		2	max	887.797	4	401.2	3	1315.816	1	1.588	2	1.094	1	.653	4
144			min	-2995.643	7	-802.609	4	-1333.842	2	-1.713	1	-1.109	2	-.337	3
145		3	max	873.172	4	365.799	3	1290.486	1	1.588	2	2.166	1	1.328	4
146			min	-2992.217	7	-838.01	4	-1308.512	2	-1.713	1	-2.196	2	-.653	3
147		4	max	858.548	4	327.17	3	1265.156	1	1.588	2	3.217	1	2.033	4
148			min	-2988.792	7	-904.613	8	-1283.182	2	-1.713	1	-3.262	2	-.938	3
149		5	max	2094.457	4	3209.847	6	1159.583	1	1.588	2	4.218	1	1.636	4
150			min	-2031.569	3	965.439	1	-1176.259	2	-1.713	1	-4.277	2	-1.65	3
151	M16	1	max	0	11	.002	7	0	6	0	11	0	11	0	11
152			min	0	1	-.01	1	-.003	4	0	1	0	1	0	1
153		2	max	769.733	3	-100.171	3	72.332	4	.127	4	.151	3	-.036	3
154			min	-983.451	4	-334.717	8	-85.159	3	-.119	3	-.145	4	-.179	8
155		3	max	398.851	3	188.72	5	69.903	1	.131	3	.017	4	.331	5
156			min	-850.583	4	-39.727	2	-57.841	2	-.139	4	-.071	7	-.013	2
157		4	max	566.43	1	339.602	6	78.528	1	.17	3	.175	1	.259	6
158			min	-721.387	2	107.854	1	-78.727	2	-.176	4	-.151	2	.051	1
159		5	max	0	11	.009	2	.006	1	0	11	0	11	0	11
160			min	0	1	0	8	-.008	3	0	1	0	1	0	1
161	M17	1	max	0	11	.001	3	.002	3	0	11	0	11	0	11
162			min	0	1	0	4	-.001	4	0	1	0	1	0	1
163		2	max	856.597	4	1290.57	3	67.01	3	.256	1	.642	3	.12	8
164			min	-1208.226	3	-960.799	4	-261.297	8	-.257	2	-.553	4	-.038	3
165		3	max	868.684	4	1262.867	3	67.01	3	.256	1	.709	3	1.044	4
166			min	-1196.139	3	-933.096	4	-261.297	8	-.257	2	-.743	4	-1.315	3
167		4	max	1129.458	4	570.349	4	907.604	4	.247	1	.198	9	.591	4
168			min	-1393.808	3	-221.387	3	-1036.489	3	-.239	2	-.309	7	-1.166	3
169		5	max	0	11	.002	7	0	3	0	11	0	11	0	11
170			min	0	1	-.001	4	-.001	4	0	1	0	1	0	1
171	M18	1	max	760.466	4	844.662	4	658.966	4	.039	4	.256	1	.751	4
172			min	-1108.785	3	-1220.032	3	-717.741	3	-.044	3	-.257	2	-1.107	3
173		2	max	764.724	4	841.116	4	661.424	4	.039	4	.326	4	.549	4
174			min	-1113.043	3	-1223.578	3	-720.199	3	-.044	3	-.324	3	-.814	3
175		3	max	768.982	4	837.57	4	663.882	4	.039	4	.485	4	.348	4
176			min	-1117.3	3	-1227.124	3	-722.658	3	-.044	3	-.497	3	-.521	3
177		4	max	773.239	4	834.024	4	666.341	4	.039	4	.644	4	.148	4
178			min	-1121.558	3	-1230.669	3	-725.116	3	-.044	3	-.671	3	-.226	3
179		5	max	777.497	4	830.479	4	668.799	4	.039	4	.804	4	.069	3
180			min	-1125.816	3	-1234.215	3	-727.574	3	-.044	3	-.845	3	-.051	4
181	M19	1	max	966.431	4	1062.144	7	1853.581	4	.267	2	.018	3	.683	7
182			min	-2484.063	7	-354.238	4	-1757.952	3	-.274	1	-.031	4	-.225	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
183		2	max	970.688	4	1054.808	7	1856.04	4	.267	2	.413	4	.43	7
184			min	-2485.06	7	-357.784	4	-1760.41	3	-.274	1	-.403	3	-.14	4
185		3	max	974.946	4	1047.473	7	1858.498	4	.267	2	.858	4	.178	7
186			min	-2486.057	7	-361.33	4	-1762.869	3	-.274	1	-.825	3	-.053	4
187		4	max	979.204	4	1040.138	7	1860.956	4	.267	2	1.304	4	.034	4
188			min	-2487.054	7	-364.876	4	-1765.327	3	-.274	1	-1.248	3	-.082	3
189		5	max	983.461	4	1032.803	7	1863.414	4	.267	2	1.75	4	.121	4
190			min	-2488.052	7	-368.422	4	-1767.785	3	-.274	1	-1.671	3	-.321	7
191	M20	1	max	777.497	4	668.559	4	1233.559	3	.093	3	.094	4	.845	3
192			min	-1125.816	3	-727.938	3	-830.773	4	-.086	4	-.142	3	-.804	4
193		2	max	779.163	4	669.521	4	1234.324	3	.093	3	.042	4	.89	3
194			min	-1127.482	3	-728.9	3	-830.007	4	-.086	4	-.065	3	-.846	4
195		3	max	780.829	4	670.483	4	1235.09	3	.093	3	.012	3	.936	3
196			min	-1129.148	3	-729.862	3	-829.241	4	-.086	4	-.009	4	-.888	4
197		4	max	782.495	4	671.445	4	1235.856	3	.093	3	.09	3	.982	3
198			min	-1130.814	3	-730.824	3	-828.476	4	-.086	4	-.061	4	-.93	4
199		5	max	784.161	4	672.407	4	1236.621	3	.093	3	.167	3	1.027	3
200			min	-1132.48	3	-731.786	3	-827.71	4	-.086	4	-.113	4	-.972	4
201	M21	1	max	983.461	4	1862.789	4	368.798	4	.094	4	.146	7	1.671	3
202			min	-2488.052	7	-1769.271	3	-1031.004	7	-.102	3	-.063	4	-1.75	4
203		2	max	985.127	4	1863.751	4	369.564	4	.094	4	.085	3	1.782	3
204			min	-2488.397	7	-1770.233	3	-1029.379	7	-.102	3	-.04	4	-1.866	4
205		3	max	986.794	4	1864.713	4	370.33	4	.094	4	.026	3	1.892	3
206			min	-2488.742	7	-1771.195	3	-1027.753	7	-.102	3	-.017	4	-1.983	4
207		4	max	988.46	4	1865.675	4	371.095	4	.094	4	.006	4	2.003	3
208			min	-2489.087	7	-1772.157	3	-1026.128	7	-.102	3	-.047	7	-2.1	4
209		5	max	990.126	4	1866.637	4	371.861	4	.094	4	.03	4	2.114	3
210			min	-2489.433	7	-1773.119	3	-1024.502	7	-.102	3	-.111	7	-2.216	4
211	M22	1	max	784.161	4	827.265	4	672.326	4	.04	4	.972	4	.379	3
212			min	-1132.48	3	-1237.558	3	-731.909	3	-.045	3	-1.027	3	-.26	4
213		2	max	784.161	4	827.265	4	672.326	4	.04	4	1.035	4	.495	3
214			min	-1132.48	3	-1237.558	3	-731.909	3	-.045	3	-1.096	3	-.338	4
215		3	max	784.161	4	827.265	4	672.326	4	.04	4	1.098	4	.611	3
216			min	-1132.48	3	-1237.558	3	-731.909	3	-.045	3	-1.164	3	-.415	4
217		4	max	784.161	4	827.265	4	672.326	4	.04	4	1.161	4	.727	3
218			min	-1132.48	3	-1237.558	3	-731.909	3	-.045	3	-1.233	3	-.493	4
219		5	max	784.161	4	827.265	4	672.326	4	.04	4	1.224	4	.843	3
220			min	-1132.48	3	-1237.558	3	-731.909	3	-.045	3	-1.302	3	-.57	4
221	M23	1	max	990.126	4	1025.372	7	1866.396	4	.269	2	2.216	4	.215	4
222			min	-2489.433	7	-371.863	4	-1773.682	3	-.277	1	-2.114	3	-.578	7
223		2	max	990.126	4	1025.372	7	1866.396	4	.269	2	2.391	4	.25	4
224			min	-2489.433	7	-371.863	4	-1773.682	3	-.277	1	-2.28	3	-.674	7
225		3	max	990.126	4	1025.372	7	1866.396	4	.269	2	2.566	4	.285	4
226			min	-2489.433	7	-371.863	4	-1773.682	3	-.277	1	-2.447	3	-.77	7
227		4	max	990.126	4	1025.372	7	1866.396	4	.269	2	2.741	4	.32	4
228			min	-2489.433	7	-371.863	4	-1773.682	3	-.277	1	-2.613	3	-.866	7
229		5	max	990.126	4	1025.372	7	1866.396	4	.269	2	2.916	4	.355	4
230			min	-2489.433	7	-371.863	4	-1773.682	3	-.277	1	-2.779	3	-.962	7
231	M24	1	max	0	11	.013	7	.006	3	0	11	0	11	0	11
232			min	0	1	-.09	2	-.007	2	0	1	0	1	0	1
233		2	max	171.088	4	-94.229	2	442.631	1	-.146	2	1.004	2	.002	2
234			min	-166.245	3	-282.486	8	-460.786	2	-.448	8	-.955	1	-.022	5
235		3	max	535.144	8	-170.14	2	784.605	4	.086	4	.747	4	.181	2
236			min	-171.856	3	-545.951	8	-766.403	3	-.392	5	-.694	3	-.236	3
237		4	max	769.859	4	-43.01	4	956.926	3	.095	4	1.336	1	.99	6
238			min	-452.43	3	-733.813	7	-949.768	4	-.383	5	-1.336	2	.183	4
239		5	max	1327.524	4	-615.023	4	1158.045	1	.69	3	2.863	1	2.861	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
240			min	-770.468	3	-2275.36	7	-1203.189	2	-.835	4	-2.918	2	-.672	1
241	M25	1	max	13.708	2	244.934	4	1153.168	4	1.896	1	0	11	0	11
242			min	-2800.477	5	-622.671	7	-1165.67	3	-2.159	2	0	1	0	1
243		2	max	-.916	2	229.149	4	1143.844	4	1.896	1	.945	4	.524	7
244			min	-2797.051	5	-662.045	7	-1156.55	3	-2.159	2	-.956	3	-.196	4
245		3	max	-15.54	2	193.748	4	1135.401	4	1.896	1	1.883	4	1.108	7
246			min	-2793.626	5	-758.464	7	-1148.107	3	-2.159	2	-1.904	3	-.371	4
247		4	max	-30.165	2	155.119	4	1126.957	4	1.896	1	2.814	4	1.776	7
248			min	-2790.201	5	-864.787	7	-1139.664	3	-2.159	2	-2.845	3	-.514	4
249		5	max	1039.587	2	3230.929	7	1079.087	4	1.896	1	3.722	4	.978	3
250			min	-981.054	1	914.082	4	-1087.544	3	-2.159	2	-3.762	3	-1.067	4
251	M26	1	max	0	11	.002	7	.007	3	0	11	0	11	0	11
252			min	0	1	-.011	2	-.009	2	0	1	0	1	0	1
253		2	max	550.883	4	-96.886	1	65.653	3	.094	4	.215	1	-.044	1
254			min	-799.524	3	-334.433	6	-70.687	4	-.085	3	-.215	2	-.178	6
255		3	max	725.337	4	191.984	6	114.108	4	.142	4	.094	3	.333	6
256			min	-1213.606	3	-52.358	1	-99.392	3	-.138	3	-.145	4	-.02	1
257		4	max	917.975	4	338.905	5	143.696	4	.167	4	.157	4	.257	5
258			min	-1104.226	3	103.194	2	-146.238	3	-.164	3	-.133	3	.05	2
259		5	max	0	11	.01	1	.003	4	0	11	0	11	0	11
260			min	0	1	0	8	0	1	0	1	0	1	0	1
261	M27	1	max	0	11	0	1	0	2	0	11	0	11	0	11
262			min	0	1	0	2	0	1	0	1	0	1	0	1
263		2	max	381.407	2	171.395	2	358.074	2	.247	2	.124	2	.154	2
264			min	-721.423	1	-477.833	5	-569.267	1	-.236	1	-.113	1	-.249	1
265		3	max	393.494	2	171.395	2	330.371	2	.247	2	.468	2	.313	8
266			min	-709.336	1	-477.833	5	-541.564	1	-.236	1	-.668	1	-.018	2
267		4	max	561.09	2	316.653	2	561.352	1	.251	2	-.151	3	.729	1
268			min	-817.827	1	-586.946	1	-797.242	2	-.23	1	-.528	7	-.353	2
269		5	max	0	11	0	3	0	2	0	11	0	11	0	11
270			min	0	1	-.001	8	-.001	5	0	1	0	1	0	1
271	M28	1	max	341.27	2	369.351	2	248.312	2	.01	2	.247	2	.32	2
272			min	-684.36	1	-733.419	1	-294.511	1	-.013	1	-.236	1	-.665	1
273		2	max	345.528	2	365.805	2	255.687	2	.01	2	.308	2	.232	2
274			min	-688.617	1	-736.964	1	-301.886	1	-.013	1	-.308	1	-.489	1
275		3	max	349.786	2	362.259	2	263.061	2	.01	2	.37	2	.145	2
276			min	-692.875	1	-740.51	1	-309.261	1	-.013	1	-.381	1	-.312	1
277		4	max	354.044	2	358.713	2	270.436	2	.01	2	.434	2	.059	2
278			min	-697.133	1	-744.056	1	-316.635	1	-.013	1	-.456	1	-.134	1
279		5	max	358.301	2	355.167	2	277.81	2	.01	2	.499	2	.045	1
280			min	-701.39	1	-747.602	1	-324.01	1	-.013	1	-.533	1	-.027	2
281	M29	1	max	151.914	2	995.87	5	1982.643	2	.302	1	.043	4	.643	5
282			min	-2306.164	5	-45.163	2	-1898.504	1	-.323	2	-.052	3	-.032	2
283		2	max	156.172	2	988.535	5	1990.018	2	.302	1	.433	2	.405	5
284			min	-2307.161	5	-48.708	2	-1905.878	1	-.323	2	-.428	1	-.021	2
285		3	max	160.429	2	981.2	5	1997.393	2	.302	1	.911	2	.169	5
286			min	-2308.158	5	-52.254	2	-1913.253	1	-.323	2	-.885	1	-.009	2
287		4	max	164.687	2	973.865	5	2004.767	2	.302	1	1.391	2	.032	3
288			min	-2309.156	5	-55.8	2	-1920.627	1	-.323	2	-1.345	1	-.082	4
289		5	max	168.945	2	966.529	5	2012.142	2	.302	1	1.872	2	.018	2
290			min	-2310.153	5	-59.346	2	-1928.002	1	-.323	2	-1.806	1	-.298	5
291	M30	1	max	358.301	2	277.739	2	747.346	1	.048	1	.04	2	.533	1
292			min	-701.39	1	-324.16	1	-355.225	2	-.042	2	-.087	1	-.499	2
293		2	max	359.967	2	280.624	2	748.112	1	.048	1	.018	2	.553	1
294			min	-703.057	1	-327.046	1	-354.46	2	-.042	2	-.04	1	-.517	2
295		3	max	361.633	2	283.51	2	748.877	1	.048	1	.01	4	.574	1
296			min	-704.723	1	-329.932	1	-353.694	2	-.042	2	-.007	3	-.535	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
297		4	max	363.299	2	286.396	2	749.643	1	.048	1	.053	1	.594	1
298			min	-706.389	1	-332.818	1	-352.928	2	-.042	2	-.026	2	-.552	2
299		5	max	364.966	2	289.281	2	750.408	1	.048	1	.1	1	.615	1
300			min	-708.055	1	-335.703	1	-352.163	2	-.042	2	-.048	2	-.57	2
301	M31	1	max	168.945	2	2012.035	2	59.363	2	.054	2	.135	5	1.806	1
302			min	-2310.153	5	-1929.058	1	-964.997	5	-.06	1	-.014	2	-1.872	2
303		2	max	170.611	2	2014.92	2	60.129	2	.054	2	.075	5	1.926	1
304			min	-2310.498	5	-1931.944	1	-963.372	5	-.06	1	-.01	2	-1.998	2
305		3	max	172.277	2	2017.806	2	60.894	2	.054	2	.017	4	2.047	1
306			min	-2310.843	5	-1934.829	1	-961.746	5	-.06	1	-.007	3	-2.124	2
307		4	max	173.943	2	2020.692	2	61.66	2	.054	2	-.003	2	2.168	1
308			min	-2311.189	5	-1937.715	1	-960.121	5	-.06	1	-.045	5	-2.25	2
309		5	max	175.609	2	2023.577	2	62.425	2	.054	2	.001	2	2.289	1
310			min	-2311.534	5	-1940.601	1	-958.495	5	-.06	1	-.105	5	-2.376	2
311	M32	1	max	364.966	2	352.075	2	289.261	2	.012	2	.57	2	.233	1
312			min	-708.055	1	-750.755	1	-335.747	1	-.015	1	-.615	1	-.117	2
313		2	max	364.966	2	352.075	2	289.261	2	.012	2	.597	2	.303	1
314			min	-708.055	1	-750.755	1	-335.747	1	-.015	1	-.647	1	-.15	2
315		3	max	364.966	2	352.075	2	289.261	2	.012	2	.625	2	.374	1
316			min	-708.055	1	-750.755	1	-335.747	1	-.015	1	-.678	1	-.183	2
317		4	max	364.966	2	352.075	2	289.261	2	.012	2	.652	2	.444	1
318			min	-708.055	1	-750.755	1	-335.747	1	-.015	1	-.71	1	-.216	2
319		5	max	364.966	2	352.075	2	289.261	2	.012	2	.679	2	.515	1
320			min	-708.055	1	-750.755	1	-335.747	1	-.015	1	-.741	1	-.249	2
321	M33	1	max	175.609	2	959.284	5	2023.532	2	.304	1	2.376	2	.034	2
322			min	-2311.534	5	-62.433	2	-1941.005	1	-.326	2	-2.289	1	-.538	5
323		2	max	175.609	2	959.284	5	2023.532	2	.304	1	2.566	2	.04	2
324			min	-2311.534	5	-62.433	2	-1941.005	1	-.326	2	-2.471	1	-.628	5
325		3	max	175.609	2	959.284	5	2023.532	2	.304	1	2.756	2	.046	2
326			min	-2311.534	5	-62.433	2	-1941.005	1	-.326	2	-2.653	1	-.718	5
327		4	max	175.609	2	959.284	5	2023.532	2	.304	1	2.945	2	.052	2
328			min	-2311.534	5	-62.433	2	-1941.005	1	-.326	2	-2.835	1	-.808	5
329		5	max	175.609	2	959.284	5	2023.532	2	.304	1	3.135	2	.058	2
330			min	-2311.534	5	-62.433	2	-1941.005	1	-.326	2	-3.017	1	-.898	5
331	M34	1	max	-6.195	2	235.171	3	265.76	4	0	11	.081	3	.059	3
332			min	-28.473	7	-200.307	4	-324.28	3	0	1	-.066	4	-.05	4
333		2	max	-6.195	2	235.171	3	265.76	4	0	11	.061	3	.044	3
334			min	-28.473	7	-200.307	4	-324.28	3	0	1	-.05	4	-.037	4
335		3	max	-6.195	2	235.171	3	265.76	4	0	11	.04	3	.03	3
336			min	-28.473	7	-200.307	4	-324.28	3	0	1	-.033	4	-.025	4
337		4	max	-6.195	2	235.171	3	265.76	4	0	11	.02	3	.015	3
338			min	-28.473	7	-200.307	4	-324.28	3	0	1	-.017	4	-.012	4
339		5	max	-6.195	2	235.171	3	265.76	4	0	11	0	2	.001	9
340			min	-28.473	7	-200.307	4	-324.28	3	0	1	0	9	0	2
341	M35	1	max	-5.066	4	407.947	1	54.731	2	0	11	.014	1	.102	1
342			min	-27.679	6	-345.026	2	-54.541	1	0	1	-.014	2	-.086	2
343		2	max	-5.066	4	407.947	1	54.731	2	0	11	.01	1	.076	1
344			min	-27.679	6	-345.026	2	-54.541	1	0	1	-.011	2	-.065	2
345		3	max	-5.066	4	407.947	1	54.731	2	0	11	.007	1	.051	1
346			min	-27.679	6	-345.026	2	-54.541	1	0	1	-.007	2	-.043	2
347		4	max	-5.066	4	407.947	1	54.731	2	0	11	.003	1	.025	1
348			min	-27.679	6	-345.026	2	-54.541	1	0	1	-.004	2	-.022	2
349		5	max	-5.066	4	407.947	1	54.731	2	0	11	0	3	0	5
350			min	-27.679	6	-345.026	2	-54.541	1	0	1	-.001	4	0	4
351	M36	1	max	-6.531	2	345.019	2	54.612	2	0	11	.014	1	.086	2
352			min	-28.259	8	-407.939	1	-54.833	1	0	1	-.013	2	-.102	1
353		2	max	-6.531	2	345.019	2	54.612	2	0	11	.01	1	.065	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
354			min	-28.259	8	-407.939	1	-54.833	1	0	1	-.01	2	-.076	1
355		3	max	-6.531	2	345.019	2	54.612	2	0	11	.007	1	.043	2
356			min	-28.259	8	-407.939	1	-54.833	1	0	1	-.006	2	-.051	1
357		4	max	-6.531	2	345.019	2	54.612	2	0	11	.003	1	.022	2
358			min	-28.259	8	-407.939	1	-54.833	1	0	1	-.003	2	-.025	1
359		5	max	-6.531	2	345.019	2	54.612	2	0	11	.001	4	0	7
360			min	-28.259	8	-407.939	1	-54.833	1	0	1	0	3	0	1
361	M37	1	max	-3.113	2	195.483	3	257.284	3	0	11	.075	4	.049	3
362			min	-27.924	8	-221.841	4	-301.658	4	0	1	-.064	3	-.056	4
363		2	max	-3.113	2	195.483	3	257.284	3	0	11	.056	4	.037	3
364			min	-27.924	8	-221.841	4	-301.658	4	0	1	-.048	3	-.042	4
365		3	max	-3.113	2	195.483	3	257.284	3	0	11	.038	4	.025	3
366			min	-27.924	8	-221.841	4	-301.658	4	0	1	-.032	3	-.028	4
367		4	max	-3.113	2	195.483	3	257.284	3	0	11	.019	4	.013	3
368			min	-27.924	8	-221.841	4	-301.658	4	0	1	-.016	3	-.014	4
369		5	max	-3.113	2	195.483	3	257.284	3	0	11	0	9	.002	9
370			min	-27.924	8	-221.841	4	-301.658	4	0	1	0	1	0	1
371	M38	1	max	381.34	2	-7.853	10	41.061	3	0	1	0	11	0	11
372			min	-323.009	1	-27.661	5	-41.061	4	-.002	9	0	1	0	1
373		2	max	369.487	2	-3.926	10	20.531	3	0	1	.019	3	.028	3
374			min	-311.155	1	-13.83	5	-20.531	4	-.002	9	-.028	4	-.019	4
375		3	max	357.633	2	0	11	0	11	0	1	.025	3	.037	3
376			min	-299.302	1	0	1	0	1	-.002	9	-.037	4	-.025	4
377		4	max	360.381	4	13.83	8	20.531	4	0	1	.019	3	.028	3
378			min	-308.741	3	3.926	1	-20.531	3	-.002	9	-.028	4	-.019	4
379		5	max	372.235	4	27.661	8	41.061	4	0	1	0	11	0	11
380			min	-320.594	3	7.853	1	-41.061	3	-.002	9	0	1	0	1
381	M39	1	max	398.481	3	-7.853	10	41.061	4	0	2	0	11	0	11
382			min	-330.334	4	-27.661	5	-41.061	3	-.001	9	0	1	0	1
383		2	max	386.628	3	-3.926	10	20.531	4	0	2	.019	4	.028	4
384			min	-318.481	4	-13.83	5	-20.531	3	-.001	9	-.028	3	-.019	3
385		3	max	374.774	3	0	11	0	11	0	2	.025	4	.037	4
386			min	-306.628	4	0	1	0	1	-.001	9	-.037	3	-.025	3
387		4	max	362.921	3	13.83	8	20.531	3	0	2	.019	4	.028	4
388			min	-294.774	4	3.926	1	-20.531	4	-.001	9	-.028	3	-.019	3
389		5	max	351.068	3	27.661	8	41.061	3	0	2	0	11	0	11
390			min	-282.921	4	7.853	1	-41.061	4	-.001	9	0	1	0	1
391	M40	1	max	407.946	1	-7.853	10	54.748	2	0	3	0	11	0	11
392			min	-345.01	2	-27.661	5	-54.748	1	-.001	4	0	1	0	1
393		2	max	407.946	1	-3.926	10	27.374	2	0	3	.027	2	.035	2
394			min	-345.01	2	-13.83	5	-27.374	1	-.001	4	-.035	1	-.027	1
395		3	max	407.946	1	0	11	0	11	0	3	.035	2	.047	2
396			min	-345.01	2	0	1	0	1	-.001	4	-.047	1	-.035	1
397		4	max	407.946	1	13.83	8	27.374	1	0	3	.027	2	.035	2
398			min	-345.01	2	3.926	1	-27.374	2	-.001	4	-.035	1	-.027	1
399		5	max	407.946	1	27.661	8	54.748	1	0	3	0	11	0	11
400			min	-345.01	2	7.853	1	-54.748	2	-.001	4	0	1	0	1
401	M41	1	max	525.124	1	44.54	5	788.562	1	.014	8	0	11	0	11
402			min	-579.041	2	9.521	9	-842.323	2	.003	9	0	1	0	1
403		2	max	525.124	1	44.54	5	788.562	1	.014	8	.049	1	0	9
404			min	-579.041	2	9.521	9	-842.323	2	.003	9	-.053	2	-.003	5
405		3	max	525.124	1	44.54	5	788.562	1	.014	8	.099	1	-.001	9
406			min	-579.041	2	9.521	9	-842.323	2	.003	9	-.105	2	-.006	5
407		4	max	525.124	1	44.54	5	788.562	1	.014	8	.148	1	-.002	9
408			min	-579.041	2	9.521	9	-842.323	2	.003	9	-.158	2	-.008	5
409		5	max	525.124	1	44.54	5	788.562	1	.014	8	.197	1	-.002	9
410			min	-579.041	2	9.521	9	-842.323	2	.003	9	-.211	2	-.011	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
411	M42	1	max	639.746	1	45.003	5	971.479	2	-.004	4	0	11	0	11
412			min	-681	2	11.679	9	-938.533	1	-.014	7	0	1	0	1
413		2	max	639.746	1	45.003	5	971.479	2	-.004	4	.061	2	0	9
414			min	-681	2	11.679	9	-938.533	1	-.014	7	-.059	1	-.003	5
415		3	max	639.746	1	45.003	5	971.479	2	-.004	4	.121	2	-.001	9
416			min	-681	2	11.679	9	-938.533	1	-.014	7	-.117	1	-.006	5
417		4	max	639.746	1	45.003	5	971.479	2	-.004	4	.182	2	-.002	9
418			min	-681	2	11.679	9	-938.533	1	-.014	7	-.176	1	-.008	5
419		5	max	639.746	1	45.003	5	971.479	2	-.004	4	.243	2	-.003	9
420			min	-681	2	11.679	9	-938.533	1	-.014	7	-.235	1	-.011	5
421	M43	1	max	590.022	4	44.902	8	795.374	4	.014	8	0	11	0	11
422			min	-640.898	3	12.012	1	-857.856	3	.004	9	0	1	0	1
423		2	max	590.022	4	44.902	8	795.374	4	.014	8	.05	4	0	1
424			min	-640.898	3	12.012	1	-857.856	3	.004	9	-.054	3	-.003	8
425		3	max	590.022	4	44.902	8	795.374	4	.014	8	.099	4	-.002	1
426			min	-640.898	3	12.012	1	-857.856	3	.004	9	-.107	3	-.006	8
427		4	max	590.022	4	44.902	8	795.374	4	.014	8	.149	4	-.002	1
428			min	-640.898	3	12.012	1	-857.856	3	.004	9	-.161	3	-.008	8
429		5	max	590.022	4	44.902	8	795.374	4	.014	8	.199	4	-.003	1
430			min	-640.898	3	12.012	1	-857.856	3	.004	9	-.214	3	-.011	8
431	M44	1	max	507.72	2	44.664	6	725.067	1	-.003	4	0	11	0	11
432			min	-560.683	1	12.188	10	-661.827	2	-.014	5	0	1	0	1
433		2	max	507.72	2	44.664	6	725.067	1	-.003	4	.045	1	0	10
434			min	-560.683	1	12.188	10	-661.827	2	-.014	5	-.041	2	-.003	6
435		3	max	507.72	2	44.664	6	725.067	1	-.003	4	.091	1	-.002	10
436			min	-560.683	1	12.188	10	-661.827	2	-.014	5	-.083	2	-.006	6
437		4	max	507.72	2	44.664	6	725.067	1	-.003	4	.136	1	-.002	10
438			min	-560.683	1	12.188	10	-661.827	2	-.014	5	-.124	2	-.008	6
439		5	max	507.72	2	44.664	6	725.067	1	-.003	4	.181	1	-.003	10
440			min	-560.683	1	12.188	10	-661.827	2	-.014	5	-.165	2	-.011	6
441	M45	1	max	425.225	2	44.261	6	555.018	2	.014	5	0	11	0	11
442			min	-494.419	1	11.827	9	-640.17	1	.003	3	0	1	0	1
443		2	max	425.225	2	44.261	6	555.018	2	.014	5	.035	2	0	9
444			min	-494.419	1	11.827	9	-640.17	1	.003	3	-.04	1	-.003	6
445		3	max	425.225	2	44.261	6	555.018	2	.014	5	.069	2	-.001	9
446			min	-494.419	1	11.827	9	-640.17	1	.003	3	-.08	1	-.006	6
447		4	max	425.225	2	44.261	6	555.018	2	.014	5	.104	2	-.002	9
448			min	-494.419	1	11.827	9	-640.17	1	.003	3	-.12	1	-.008	6
449		5	max	425.225	2	44.261	6	555.018	2	.014	5	.139	2	-.003	9
450			min	-494.419	1	11.827	9	-640.17	1	.003	3	-.16	1	-.011	6
451	M46	1	max	744.979	3	45.609	7	1027.805	4	-.004	1	0	11	0	11
452			min	-773.433	4	11.878	1	-997.12	3	-.014	7	0	1	0	1
453		2	max	744.979	3	45.609	7	1027.805	4	-.004	1	.064	4	0	1
454			min	-773.433	4	11.878	1	-997.12	3	-.014	7	-.062	3	-.003	7
455		3	max	744.979	3	45.609	7	1027.805	4	-.004	1	.128	4	-.001	1
456			min	-773.433	4	11.878	1	-997.12	3	-.014	7	-.125	3	-.006	7
457		4	max	744.979	3	45.609	7	1027.805	4	-.004	1	.193	4	-.002	1
458			min	-773.433	4	11.878	1	-997.12	3	-.014	7	-.187	3	-.009	7
459		5	max	744.979	3	45.609	7	1027.805	4	-.004	1	.257	4	-.003	1
460			min	-773.433	4	11.878	1	-997.12	3	-.014	7	-.249	3	-.011	7
461	M47	1	max	1459.854	1	-21.551	3	729.671	3	.001	4	0	11	.002	2
462			min	-1555.015	2	-100.79	6	-736.256	4	0	3	0	1	-.003	1
463		2	max	1459.854	1	-21.551	3	729.671	3	.001	4	.144	3	.019	6
464			min	-1555.015	2	-100.79	6	-736.256	4	0	3	-.146	4	.002	1
465		3	max	1459.854	1	-21.551	3	729.671	3	.001	4	.289	3	.039	6
466			min	-1555.015	2	-100.79	6	-736.256	4	0	3	-.291	4	.007	1
467		4	max	1459.854	1	-21.551	3	729.671	3	.001	4	.433	3	.059	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
468			min	-1555.015	2	-100.79	6	-736.256	4	0	3	-.437	4	.011	1
469		5	max	1459.854	1	-21.551	3	729.671	3	.001	4	.578	3	.079	6
470			min	-1555.015	2	-100.79	6	-736.256	4	0	3	-.583	4	.016	1
471	M48	1	max	941.45	1	43.6	7	42.477	4	0	2	.145	1	.134	1
472			min	-1027.742	2	11.815	2	-38.953	3	-.001	1	-.143	2	-.155	2
473		2	max	963.086	1	20.593	7	26.799	4	0	2	.177	1	.144	1
474			min	-1049.378	2	5.284	2	-23.275	3	-.001	1	-.151	2	-.185	2
475		3	max	984.722	1	-.488	9	29.655	2	0	2	.164	1	.126	1
476			min	-1071.014	2	-2.469	5	-27.763	1	-.001	1	-.13	2	-.169	2
477		4	max	1006.358	1	-7.019	9	59.513	2	0	2	.105	1	.077	1
478			min	-1092.65	2	-25.476	5	-57.62	1	-.001	1	-.08	2	-.107	2
479		5	max	1027.994	1	-13.551	9	89.371	2	0	2	0	11	0	11
480			min	-1114.286	2	-48.482	5	-87.478	1	-.001	1	0	1	0	1
481	M49	1	max	1127.305	1	41.936	3	43.619	6	.002	1	.171	1	.178	2
482			min	-1193.403	2	-38.64	4	11.766	2	-.001	2	-.165	2	-.16	1
483		2	max	1148.941	1	26.257	3	20.613	6	.002	1	.197	1	.202	2
484			min	-1215.039	2	-22.962	4	5.235	2	-.001	2	-.168	2	-.164	1
485		3	max	1170.577	1	34.202	2	-.691	10	.002	1	.177	1	.18	2
486			min	-1236.675	2	-33.043	1	-2.473	5	-.001	2	-.141	2	-.139	1
487		4	max	1192.213	1	64.06	2	-7.222	10	.002	1	.111	1	.113	2
488			min	-1258.311	2	-62.9	1	-25.479	5	-.001	2	-.085	2	-.084	1
489		5	max	1213.849	1	93.918	2	-13.753	10	.002	1	0	11	0	11
490			min	-1279.947	2	-92.758	1	-48.486	5	-.001	2	0	1	0	1
491	M50	1	max	3892.795	5	105.777	3	2579.951	5	.02	3	0	11	0	11
492			min	537.189	2	-106.602	4	456.771	2	-.019	4	0	1	0	1
493		2	max	3892.795	5	105.777	3	2579.951	5	.02	3	.215	5	.009	4
494			min	537.189	2	-106.602	4	456.771	2	-.019	4	.038	2	-.009	3
495		3	max	3892.795	5	105.777	3	2579.951	5	.02	3	.43	5	.018	4
496			min	537.189	2	-106.602	4	456.771	2	-.019	4	.076	2	-.018	3
497		4	max	3892.795	5	105.777	3	2579.951	5	.02	3	.645	5	.027	4
498			min	537.189	2	-106.602	4	456.771	2	-.019	4	.114	2	-.026	3
499		5	max	3892.795	5	105.777	3	2579.951	5	.02	3	.86	5	.036	4
500			min	537.189	2	-106.602	4	456.771	2	-.019	4	.152	2	-.035	3
501	M51	1	max	4122.126	7	-545.478	4	-259.568	4	.015	2	0	11	0	11
502			min	771.996	4	-2355.921	7	-1384.465	7	-.014	1	0	1	0	1
503		2	max	4122.126	7	-545.478	4	-259.568	4	.015	2	-.022	4	.196	7
504			min	771.996	4	-2355.921	7	-1384.465	7	-.014	1	-.115	7	.045	4
505		3	max	4122.126	7	-545.478	4	-259.568	4	.015	2	-.043	4	.393	7
506			min	771.996	4	-2355.921	7	-1384.465	7	-.014	1	-.231	7	.091	4
507		4	max	4122.126	7	-545.478	4	-259.568	4	.015	2	-.065	4	.589	7
508			min	771.996	4	-2355.921	7	-1384.465	7	-.014	1	-.346	7	.136	4
509		5	max	4122.126	7	-545.478	4	-259.568	4	.015	2	-.087	4	.785	7
510			min	771.996	4	-2355.921	7	-1384.465	7	-.014	1	-.461	7	.182	4
511	M52	1	max	4108.042	8	2351.769	8	-267.939	3	.015	1	0	11	0	11
512			min	801.573	3	562.865	3	-1373.083	8	-.015	2	0	1	0	1
513		2	max	4108.042	8	2351.769	8	-267.939	3	.015	1	-.022	3	-.047	3
514			min	801.573	3	562.865	3	-1373.083	8	-.015	2	-.114	8	-.196	8
515		3	max	4108.042	8	2351.769	8	-267.939	3	.015	1	-.045	3	-.094	3
516			min	801.573	3	562.865	3	-1373.083	8	-.015	2	-.229	8	-.392	8
517		4	max	4108.042	8	2351.769	8	-267.939	3	.015	1	-.067	3	-.141	3
518			min	801.573	3	562.865	3	-1373.083	8	-.015	2	-.343	8	-.588	8
519		5	max	4108.042	8	2351.769	8	-267.939	3	.015	1	-.089	3	-.188	3
520			min	801.573	3	562.865	3	-1373.083	8	-.015	2	-.458	8	-.784	8
521	M53	1	max	2606.295	5	-617.948	2	106.559	3	.002	4	.003	3	0	11
522			min	281.492	2	-4091.596	5	-105.942	4	-.002	3	-.003	4	0	1
523		2	max	2606.295	5	-617.948	2	106.559	3	.002	4	.019	3	.639	5
524			min	281.492	2	-4091.596	5	-105.942	4	-.002	3	-.02	4	.097	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
525		3	max	2606.295	5	-617.948	2	106.559	3	.002	4	.036	3	1.279	5
526			min	281.492	2	-4091.596	5	-105.942	4	-.002	3	-.036	4	.193	2
527		4	max	2606.295	5	-617.948	2	106.559	3	.002	4	.053	3	1.918	5
528			min	281.492	2	-4091.596	5	-105.942	4	-.002	3	-.053	4	.29	2
529		5	max	2606.295	5	-617.948	2	106.559	3	.002	4	.069	3	2.557	5
530			min	281.492	2	-4091.596	5	-105.942	4	-.002	3	-.07	4	.386	2
531	M54	1	max	4916.054	8	58.519	3	82.79	2	.006	3	.034	2	-.207	3
532			min	1011.647	3	-103.954	4	-83.015	1	-.005	4	-.033	1	-.908	8
533		2	max	4962.956	8	14.178	3	38.889	2	.006	3	.139	2	-.252	2
534			min	1005.76	3	-112.715	8	-39.113	1	-.005	4	-.138	1	-.739	7
535		3	max	5009.858	8	-30.164	3	4.788	1	.006	3	.168	2	-.135	4
536			min	999.873	3	-132.185	8	-5.013	2	-.005	4	-.167	1	-.556	7
537		4	max	5056.759	8	-39.358	4	48.69	1	.006	3	.122	2	-.049	4
538			min	993.986	3	-161.912	7	-48.914	2	-.005	4	-.121	1	-.309	7
539		5	max	5103.661	8	-17.826	4	92.591	1	.006	3	0	11	0	11
540			min	988.099	3	-198.591	7	-92.816	2	-.005	4	0	1	0	1
541	M56	1	max	2743.54	8	-882.332	3	87.079	1	.003	3	.005	4	0	11
542			min	460.314	3	-4306.842	8	-82.705	2	-.003	4	-.005	3	0	1
543		2	max	2743.54	8	-882.332	3	87.079	1	.003	3	.017	1	.673	8
544			min	460.314	3	-4306.842	8	-82.705	2	-.003	4	-.017	2	.138	3
545		3	max	2743.54	8	-882.332	3	87.079	1	.003	3	.031	1	1.346	8
546			min	460.314	3	-4306.842	8	-82.705	2	-.003	4	-.03	2	.276	3
547		4	max	2743.54	8	-882.332	3	87.079	1	.003	3	.045	1	2.019	8
548			min	460.314	3	-4306.842	8	-82.705	2	-.003	4	-.043	2	.414	3
549		5	max	2743.54	8	-882.332	3	87.079	1	.003	3	.058	1	2.692	8
550			min	460.314	3	-4306.842	8	-82.705	2	-.003	4	-.056	2	.551	3
551	M57	1	max	4932.881	7	59.453	4	83.054	1	.006	1	.033	1	-.201	4
552			min	976.387	4	-105.957	3	-82.808	2	-.005	2	-.034	2	-.911	7
553		2	max	4979.782	7	15.112	4	39.153	1	.006	1	.138	1	-.247	2
554			min	970.5	4	-113.166	7	-38.906	2	-.005	2	-.139	2	-.739	5
555		3	max	5026.684	7	-29.23	4	4.996	2	.006	1	.167	1	-.142	3
556			min	964.613	4	-132.635	7	-4.749	1	-.005	2	-.168	2	-.555	8
557		4	max	5073.586	7	-41.361	3	48.897	2	.006	1	.121	1	-.053	3
558			min	958.726	4	-161.572	8	-48.651	1	-.005	2	-.122	2	-.309	8
559		5	max	5120.487	7	-19.829	3	92.799	2	.006	1	0	11	0	11
560			min	952.839	4	-198.252	8	-92.552	1	-.005	2	0	1	0	1
561	M59	1	max	2752.753	7	-852.754	4	83.532	2	.003	1	.004	2	0	11
562			min	441.1	4	-4320.926	7	-86.3	1	-.003	2	-.005	1	0	1
563		2	max	2752.753	7	-852.754	4	83.532	2	.003	1	.017	2	.675	7
564			min	441.1	4	-4320.926	7	-86.3	1	-.003	2	-.018	1	.133	4
565		3	max	2752.753	7	-852.754	4	83.532	2	.003	1	.03	2	1.35	7
566			min	441.1	4	-4320.926	7	-86.3	1	-.003	2	-.032	1	.266	4
567		4	max	2752.753	7	-852.754	4	83.532	2	.003	1	.043	2	2.025	7
568			min	441.1	4	-4320.926	7	-86.3	1	-.003	2	-.045	1	.4	4
569		5	max	2752.753	7	-852.754	4	83.532	2	.003	1	.057	2	2.701	7
570			min	441.1	4	-4320.926	7	-86.3	1	-.003	2	-.059	1	.533	4
571	M60	1	max	1067.901	4	-20.985	2	794.951	1	0	2	0	11	.001	3
572			min	-1168.332	3	-100.134	7	-793.329	2	0	1	0	1	-.002	4
573		2	max	1067.901	4	-20.985	2	794.951	1	0	2	.157	1	.019	7
574			min	-1168.332	3	-100.134	7	-793.329	2	0	1	-.157	2	.002	4
575		3	max	1067.901	4	-20.985	2	794.951	1	0	2	.315	1	.039	7
576			min	-1168.332	3	-100.134	7	-793.329	2	0	1	-.314	2	.007	4
577		4	max	1067.901	4	-20.985	2	794.951	1	0	2	.472	1	.059	7
578			min	-1168.332	3	-100.134	7	-793.329	2	0	1	-.471	2	.011	2
579		5	max	1067.901	4	-20.985	2	794.951	1	0	2	.629	1	.078	7
580			min	-1168.332	3	-100.134	7	-793.329	2	0	1	-.628	2	.015	2
581	M61	1	max	983.794	4	43.602	6	75.089	2	0	3	.147	4	.135	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
582			min	-1077.917	3	11.718	3	-72.588	1	-.001	4	-.145	3	-.158	3
583		2	max	1000.751	4	20.596	6	37.128	2	0	3	.137	4	.103	4
584			min	-1094.875	3	5.187	3	-34.628	1	-.001	4	-.111	3	-.145	3
585		3	max	1017.709	4	-.677	9	30.202	3	0	3	.115	2	.079	2
586			min	-1111.833	3	-2.495	8	-28.002	4	-.001	4	-.086	1	-.122	1
587		4	max	1034.667	4	-7.208	9	41.293	1	0	3	.086	2	.059	2
588			min	-1128.791	3	-25.502	8	-38.793	2	-.001	4	-.062	1	-.089	1
589		5	max	1051.625	4	-13.74	9	79.254	1	0	3	0	11	0	11
590			min	-1145.749	3	-48.508	8	-76.753	2	-.001	4	0	1	0	1
591	M62	1	max	829.89	2	73.027	4	43.625	7	.002	2	.122	2	.135	1
592			min	-919.452	1	-71.229	3	11.681	1	-.001	1	-.121	1	-.112	2
593		2	max	834.568	2	27.977	4	20.618	7	.002	2	.164	4	.171	3
594			min	-924.131	1	-26.179	3	5.15	1	-.001	1	-.14	3	-.134	4
595		3	max	839.247	2	25.527	1	-.679	4	.002	2	.174	4	.179	3
596			min	-928.809	1	-23.301	2	-2.445	6	-.001	1	-.142	3	-.138	4
597		4	max	843.925	2	63.922	3	-7.21	4	.002	2	.119	4	.122	3
598			min	-933.487	1	-62.124	4	-25.452	6	-.001	1	-.095	3	-.093	4
599		5	max	848.603	2	108.972	3	-13.741	4	.002	2	0	11	0	11
600			min	-938.165	1	-107.174	4	-48.458	6	-.001	1	0	1	0	1
601	M63	1	max	1186.189	3	-20.706	2	677.808	4	0	1	0	11	.001	4
602			min	-1262.642	4	-100.204	8	-681.89	1	0	2	0	1	-.002	3
603		2	max	1186.189	3	-20.706	2	677.808	4	0	1	.134	4	.019	8
604			min	-1262.642	4	-100.204	8	-681.89	1	0	2	-.135	1	.002	3
605		3	max	1186.189	3	-20.706	2	677.808	4	0	1	.268	4	.039	8
606			min	-1262.642	4	-100.204	8	-681.89	1	0	2	-.27	1	.006	3
607		4	max	1186.189	3	-20.706	2	677.808	4	0	1	.402	4	.059	8
608			min	-1262.642	4	-100.204	8	-681.89	1	0	2	-.405	1	.011	3
609		5	max	1186.189	3	-20.706	2	677.808	4	0	1	.537	4	.079	8
610			min	-1262.642	4	-100.204	8	-681.89	1	0	2	-.54	1	.015	3
611	M64	1	max	696.72	2	43.588	7	74.697	3	0	1	.103	2	.093	2
612			min	-811.326	1	11.749	1	-72.934	4	-.001	2	-.107	1	-.12	1
613		2	max	701.398	2	20.582	7	29.647	3	0	1	.158	3	.128	3
614			min	-816.004	1	5.218	1	-27.884	4	-.001	2	-.134	4	-.165	4
615		3	max	706.076	2	-.683	9	22.538	1	0	1	.17	3	.134	3
616			min	-820.682	1	-2.457	6	-19.54	2	-.001	2	-.138	4	-.175	4
617		4	max	710.754	2	-7.214	9	62.216	4	0	1	.117	3	.091	3
618			min	-825.36	1	-25.463	6	-60.454	3	-.001	2	-.093	4	-.12	4
619		5	max	715.432	2	-13.746	9	107.267	4	0	1	0	11	0	11
620			min	-830.038	1	-48.47	6	-105.504	3	-.001	2	0	1	0	1
621	M65	1	max	1233.943	3	74.212	2	43.63	8	.002	3	.183	3	.189	4
622			min	-1295.487	4	-71.622	1	11.59	4	-.001	4	-.174	4	-.17	3
623		2	max	1250.901	3	36.251	2	20.624	8	.002	3	.164	3	.168	4
624			min	-1312.445	4	-33.662	1	5.059	4	-.001	4	-.133	4	-.129	3
625		3	max	1267.859	3	36.185	4	-.648	1	.002	3	.127	3	.13	4
626			min	-1329.403	4	-35.105	3	-2.5	7	-.001	4	-.09	4	-.087	3
627		4	max	1284.817	3	43.761	4	-7.179	1	.002	3	.087	2	.09	1
628			min	-1346.361	4	-42.68	3	-25.506	7	-.001	4	-.064	1	-.06	2
629		5	max	1301.775	3	80.22	1	-13.711	1	.002	3	0	11	0	11
630			min	-1363.319	4	-77.63	2	-48.512	7	-.001	4	0	1	0	1
631	M66	1	max	442.579	1	11.959	2	9.309	8	.002	3	.019	2	.019	1
632			min	-464.598	2	-11.981	1	2.983	2	-.003	2	-.019	1	-.019	2
633		2	max	442.579	1	8.966	2	6.687	8	.002	3	.021	2	.02	1
634			min	-464.598	2	-8.989	1	2.126	2	-.003	2	-.019	1	-.02	2
635		3	max	442.579	1	5.974	2	4.065	8	.002	3	.022	2	.021	1
636			min	-464.598	2	-5.996	1	1.268	2	-.003	2	-.02	1	-.021	2
637		4	max	442.579	1	2.981	2	1.442	8	.002	3	.022	2	.021	1
638			min	-464.598	2	-3.003	1	.41	2	-.003	2	-.02	1	-.021	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
639		5	max	442.579	1	0	3	-.218	9	.002	3	.022	2	.022	1
640			min	-464.598	2	-.012	2	-.675	6	-.003	2	-.02	1	-.021	2
641	M67	1	max	349.988	1	306.195	2	-83.356	2	.061	2	.867	1	.955	2
642			min	-362.69	2	-288.863	1	-246.299	8	-.029	1	-.677	2	-.688	1
643		2	max	332.712	1	319.654	2	-76.098	2	.061	2	.635	1	.714	2
644			min	-345.414	2	-302.321	1	-226.552	8	-.029	1	-.534	2	-.557	1
645		3	max	315.434	1	332.371	2	-50.159	10	.054	2	.408	1	.479	2
646			min	-328.137	2	-316.555	1	-149.04	5	-.036	1	-.369	2	-.403	1
647		4	max	298.135	1	345.327	2	-21.445	10	.046	2	.189	1	.252	2
648			min	-310.835	2	-330.485	1	-63.489	8	-.044	1	-.18	2	-.225	1
649		5	max	280.855	1	358.722	2	-3.208	10	.046	2	.029	2	.029	2
650			min	-293.555	2	-343.995	1	-14.348	4	-.044	1	-.027	1	-.027	1
651	M68	1	max	282.027	1	342.633	1	8.246	6	.046	1	.026	2	.026	2
652			min	-296.39	2	-356.199	2	-8.997	4	-.048	2	-.025	1	-.025	1
653		2	max	299.299	1	329.106	1	65.242	6	.046	1	.19	1	.251	2
654			min	-313.665	2	-342.798	2	10.442	4	-.048	2	-.178	2	-.223	1
655		3	max	316.604	1	315.135	1	150.61	6	.038	1	.409	1	.48	2
656			min	-330.969	2	-329.825	2	39.118	4	-.057	2	-.362	2	-.4	1
657		4	max	333.88	1	300.878	1	228.073	6	.03	1	.634	1	.716	2
658			min	-348.245	2	-317.089	2	65.211	4	-.064	2	-.523	2	-.553	1
659		5	max	351.156	1	287.419	1	247.82	6	.03	1	.865	1	.959	2
660			min	-365.521	2	-303.63	2	72.468	4	-.064	2	-.661	2	-.682	1
661	M69	1	max	442.579	1	-.155	2	0	4	.002	3	.018	2	.016	2
662			min	-464.598	2	-.67	8	-.012	2	-.003	2	-.016	1	-.017	1
663		2	max	442.579	1	-.717	2	2.981	2	.002	3	.018	2	.017	2
664			min	-464.598	2	-2.385	8	-3.003	1	-.003	2	-.016	1	-.017	1
665		3	max	442.579	1	-1.28	2	5.974	2	.002	3	.018	2	.017	2
666			min	-464.598	2	-4.101	8	-5.996	1	-.003	2	-.016	1	-.017	1
667		4	max	442.579	1	-1.842	2	8.966	2	.002	3	.019	2	.018	2
668			min	-464.598	2	-5.816	8	-8.989	1	-.003	2	-.017	1	-.018	1
669		5	max	442.579	1	-2.404	2	11.959	2	.002	3	.019	2	.019	2
670			min	-464.598	2	-7.532	8	-11.981	1	-.003	2	-.019	1	-.019	1
671	M70	1	max	357.422	4	8.972	3	6.853	8	.004	8	.016	3	.015	4
672			min	-384.773	3	-8.97	4	2.054	2	-.01	9	-.015	4	-.016	3
673		2	max	358.717	4	6.727	3	5.137	8	.004	8	.017	3	.016	4
674			min	-386.069	3	-6.726	4	1.492	2	-.01	9	-.016	4	-.017	3
675		3	max	360.013	4	4.483	3	3.422	8	.004	8	.018	3	.017	4
676			min	-387.365	3	-4.481	4	.93	2	-.01	9	-.016	4	-.017	3
677		4	max	361.309	4	2.238	3	1.706	8	.004	8	.018	3	.017	4
678			min	-388.66	3	-2.237	4	.368	2	-.01	9	-.016	4	-.017	3
679		5	max	362.605	4	.009	1	.008	9	.004	8	.018	3	.017	4
680			min	-389.956	3	-.006	3	-.194	2	-.01	9	-.016	4	-.018	3
681	M71	1	max	274.91	4	304.405	1	-46.8	4	.046	1	.838	2	.874	1
682			min	-293.186	3	-299.909	2	-185.728	5	-.028	2	-.569	1	-.588	2
683		2	max	262.498	4	299.371	1	-39.75	4	.046	1	.605	2	.641	1
684			min	-280.774	3	-294.875	2	-166.618	5	-.028	2	-.432	1	-.456	2
685		3	max	250.085	4	293.81	1	-23.514	4	.043	1	.383	2	.42	1
686			min	-268.361	3	-290.462	2	-118.567	5	-.032	2	-.297	3	-.323	4
687		4	max	237.682	4	288.538	1	-4.255	4	.039	1	.174	2	.213	1
688			min	-255.959	3	-285.703	2	-61.659	5	-.036	2	-.151	3	-.187	4
689		5	max	225.272	4	297.187	3	14.002	4	.039	1	.024	3	.024	3
690			min	-243.55	3	-280.702	2	-25.99	2	-.036	2	-.023	4	-.023	4
691	M72	1	max	234.592	4	284.372	4	22.157	4	.039	4	.022	3	.022	3
692			min	-249.932	3	-304.799	3	-19.418	2	-.041	3	-.02	4	-.02	4
693		2	max	239.454	4	283.615	4	65.147	7	.039	4	.173	4	.227	3
694			min	-254.795	3	-304.192	3	-.052	2	-.041	3	-.147	3	-.183	2
695		3	max	244.233	4	282.663	4	150.51	7	.031	4	.379	4	.444	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
696			min	-259.567	3	-303.978	3	28.426	2	-.049	3	-.303	3	-.318	4
697		4	max	249.097	4	281.428	4	227.967	7	.024	4	.599	4	.676	3
698			min	-264.43	3	-303.801	3	54.296	2	-.057	3	-.444	3	-.444	4
699		5	max	253.961	4	280.751	4	247.714	7	.024	4	.832	4	.922	3
700			min	-269.294	3	-303.124	3	61.553	2	-.057	3	-.571	3	-.556	4
701	M73	1	max	362.604	4	.194	2	.009	1	.004	8	.015	3	.014	3
702			min	-389.955	3	-.008	9	-.006	3	-.01	9	-.013	2	-.014	2
703		2	max	363.9	4	-.368	2	2.238	3	.004	8	.015	3	.014	3
704			min	-391.251	3	-1.706	8	-2.237	4	-.01	9	-.014	2	-.014	2
705		3	max	365.196	4	-.93	2	4.483	3	.004	8	.015	3	.015	3
706			min	-392.547	3	-3.422	8	-4.481	4	-.01	9	-.014	2	-.014	2
707		4	max	366.492	4	-1.492	2	6.727	3	.004	8	.016	3	.016	3
708			min	-393.843	3	-5.137	8	-6.726	4	-.01	9	-.014	4	-.015	4
709		5	max	367.788	4	-2.054	2	8.972	3	.004	8	.017	3	.017	3
710			min	-395.139	3	-6.853	8	-8.97	4	-.01	9	-.015	4	-.015	4
711	M74	1	max	400.747	3	8.983	4	9.307	6	0	2	.017	4	.017	3
712			min	-415.357	4	-8.987	3	2.871	3	-.006	5	-.017	3	-.017	4
713		2	max	399.451	3	6.738	4	6.685	6	0	2	.018	4	.018	3
714			min	-414.061	4	-6.742	3	2.013	3	-.006	5	-.017	3	-.018	4
715		3	max	398.156	3	4.494	4	4.063	6	0	2	.019	4	.019	3
716			min	-412.765	4	-4.498	3	1.155	3	-.006	5	-.018	3	-.018	4
717		4	max	396.86	3	2.249	4	1.44	6	0	2	.02	4	.019	3
718			min	-411.469	4	-2.253	3	.297	3	-.006	5	-.018	3	-.019	4
719		5	max	395.564	3	.015	2	-.221	10	0	2	.02	4	.019	3
720			min	-410.174	4	-.009	3	-.688	5	-.006	5	-.018	3	-.019	4
721	M75	1	max	272.885	3	320.332	4	-77.14	1	.057	4	.906	3	.962	4
722			min	-280.197	4	-308.457	3	-247.946	7	-.026	3	-.615	4	-.619	3
723		2	max	268.021	3	321.009	4	-69.883	1	.057	4	.653	3	.707	4
724			min	-275.333	4	-309.133	3	-228.199	7	-.026	3	-.477	4	-.492	3
725		3	max	263.161	3	321.125	4	-43.787	1	.049	4	.414	3	.466	4
726			min	-270.474	4	-310.451	3	-150.705	7	-.033	3	-.324	4	-.351	3
727		4	max	258.269	3	321.411	4	-15.039	1	.041	4	.189	3	.24	4
728			min	-265.595	4	-311.589	3	-65.056	7	-.041	3	-.155	4	-.194	3
729		5	max	253.403	3	322.002	4	3.188	1	.041	4	.026	4	.026	4
730			min	-260.729	4	-312.345	3	-26.611	3	-.041	3	-.023	3	-.023	3
731	M76	1	max	246.974	3	303.25	3	9.464	1	.04	3	.023	4	.023	4
732			min	-257.605	4	-311.543	4	-16.837	3	-.042	4	-.023	3	-.023	3
733		2	max	259.389	3	272.586	3	61.764	5	.04	3	.149	3	.204	4
734			min	-270.02	4	-281.004	4	1.392	3	-.043	4	-.159	4	-.205	3
735		3	max	271.791	3	241.703	3	118.658	5	.035	3	.312	3	.378	4
736			min	-282.423	4	-250.721	4	20.616	3	-.047	4	-.312	4	-.357	3
737		4	max	284.202	3	210.51	3	166.703	5	.032	3	.467	3	.543	4
738			min	-294.835	4	-220.704	4	36.778	3	-.05	4	-.436	4	-.48	3
739		5	max	296.613	3	179.911	3	185.813	5	.032	3	.611	3	.699	4
740			min	-307.247	4	-190.106	4	43.828	3	-.05	4	-.533	4	-.575	3
741	M77	1	max	395.565	3	-.043	3	.016	2	0	2	.016	4	.015	4
742			min	-410.175	4	-.668	6	-.009	3	-.006	5	-.014	3	-.015	3
743		2	max	394.269	3	-.605	3	2.249	4	0	2	.016	4	.015	4
744			min	-408.879	4	-2.383	6	-2.253	3	-.006	5	-.014	3	-.015	3
745		3	max	392.973	3	-1.167	3	4.494	4	0	2	.016	4	.015	4
746			min	-407.583	4	-4.099	6	-4.498	3	-.006	5	-.015	3	-.015	3
747		4	max	391.677	3	-1.729	3	6.738	4	0	2	.016	4	.016	4
748			min	-406.287	4	-5.814	6	-6.742	3	-.006	5	-.015	3	-.016	3
749		5	max	390.382	3	-2.291	3	8.983	4	0	2	.017	4	.017	4
750			min	-404.991	4	-7.53	6	-8.987	3	-.006	5	-.016	3	-.016	3
751	M78	1	max	94.242	1	-48.116	2	-1.556	3	.909	9	.125	3	.075	4
752			min	-87.6	2	-386.87	9	-588.138	9	.228	3	-.09	4	-.11	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
753		2	max	94.242	1	-48.116	2	-1.556	3	.909	9	.125	3	.079	4
754			min	-87.6	2	-386.87	9	-588.138	9	.228	3	-.107	4	-.101	3
755		3	max	94.242	1	-48.116	2	-1.556	3	.909	9	.125	3	.082	4
756			min	-87.6	2	-386.87	9	-588.138	9	.228	3	-.124	4	-.096	3
757		4	max	94.242	1	-48.116	2	-1.556	3	.909	9	.125	3	.086	4
758			min	-87.6	2	-386.87	9	-588.138	9	.228	3	-.141	4	-.09	3
759		5	max	94.242	1	-48.116	2	-1.556	3	.909	9	.124	3	.09	4
760			min	-87.6	2	-386.87	9	-588.138	9	.228	3	-.159	4	-.085	3
761	M79	1	max	434.177	1	233.317	9	588.195	9	1.264	9	.09	4	.058	4
762			min	-440.828	2	-242.185	6	-145.641	4	.006	3	-.125	3	-.155	9
763		2	max	434.177	1	233.317	9	588.195	9	1.264	9	.081	4	.064	4
764			min	-440.828	2	-242.185	6	-145.641	4	.006	3	-.099	3	-.169	9
765		3	max	434.177	1	233.317	9	588.195	9	1.264	9	.072	4	.07	4
766			min	-440.828	2	-242.185	6	-145.641	4	.006	3	-.072	3	-.184	9
767		4	max	434.177	1	233.317	9	588.195	9	1.264	9	.063	4	.075	4
768			min	-440.828	2	-242.185	6	-145.641	4	.006	3	-.046	3	-.199	9
769		5	max	434.177	1	233.317	9	588.195	9	1.264	9	.067	9	.081	4
770			min	-440.828	2	-242.185	6	-145.641	4	.006	3	-.02	3	-.213	9
771	M80	1	max	130.657	1	568.814	9	249.708	3	.633	9	.22	9	.234	2
772			min	-146.858	2	30.054	4	-460.164	4	-.074	3	-.098	4	-.15	1
773		2	max	130.657	1	568.814	9	249.708	3	.633	9	.197	9	.224	2
774			min	-146.858	2	30.054	4	-460.164	4	-.074	3	-.127	4	-.163	1
775		3	max	130.657	1	568.814	9	249.708	3	.633	9	.174	9	.214	2
776			min	-146.858	2	30.054	4	-460.164	4	-.074	3	-.156	4	-.176	1
777		4	max	130.657	1	568.814	9	249.708	3	.633	9	.176	3	.204	2
778			min	-146.858	2	30.054	4	-460.164	4	-.074	3	-.185	4	-.189	1
779		5	max	130.657	1	568.814	9	249.708	3	.633	9	.192	3	.195	2
780			min	-146.858	2	30.054	4	-460.164	4	-.074	3	-.213	4	-.202	1
781	M81	1	max	1375.37	1	-358.045	4	547.832	3	1.686	4	.098	4	1.275	1
782			min	-1359.162	2	-1481.567	7	-337.338	4	-1.211	3	-.22	9	-1.418	2
783		2	max	1375.37	1	-358.045	4	547.832	3	1.686	4	.077	4	1.309	1
784			min	-1359.162	2	-1481.567	7	-337.338	4	-1.211	3	-.197	9	-1.387	2
785		3	max	1375.37	1	-358.045	4	547.832	3	1.686	4	.056	4	1.342	1
786			min	-1359.162	2	-1481.567	7	-337.338	4	-1.211	3	-.174	9	-1.357	2
787		4	max	1375.37	1	-358.045	4	547.832	3	1.686	4	.038	2	1.376	1
788			min	-1359.162	2	-1481.567	7	-337.338	4	-1.211	3	-.151	9	-1.326	2
789		5	max	1375.37	1	-358.045	4	547.832	3	1.686	4	.047	6	1.41	1
790			min	-1359.162	2	-1481.567	7	-337.338	4	-1.211	3	-.128	9	-1.296	2
791	M82	1	max	43.091	9	252.52	8	400.346	7	-.087	4	.205	1	.064	6
792			min	-12.706	4	-68.53	3	39.471	4	-.662	7	-.229	2	-.018	1
793		2	max	43.091	9	252.52	8	400.346	7	-.087	4	.214	1	.055	9
794			min	-12.706	4	-68.53	3	39.471	4	-.662	7	-.222	2	-.023	1
795		3	max	43.091	9	252.52	8	400.346	7	-.087	4	.224	1	.056	9
796			min	-12.706	4	-68.53	3	39.471	4	-.662	7	-.215	2	-.028	1
797		4	max	43.091	9	252.52	8	400.346	7	-.087	4	.234	1	.057	9
798			min	-12.706	4	-68.53	3	39.471	4	-.662	7	-.207	2	-.033	1
799		5	max	43.091	9	252.52	8	400.346	7	-.087	4	.243	1	.058	9
800			min	-12.706	4	-68.53	3	39.471	4	-.662	7	-.2	2	-.038	1
801	M83	1	max	94.322	1	43.54	3	-116.068	2	-.144	4	.229	2	.094	9
802			min	-102.524	2	-331.025	8	-379.731	8	-.772	7	-.205	1	-.1	1
803		2	max	94.322	1	43.54	3	-116.068	2	-.144	4	.222	2	.099	2
804			min	-102.524	2	-331.025	8	-379.731	8	-.772	7	-.214	1	-.094	1
805		3	max	94.322	1	43.54	3	-116.068	2	-.144	4	.215	2	.104	2
806			min	-102.524	2	-331.025	8	-379.731	8	-.772	7	-.224	1	-.087	1
807		4	max	94.322	1	43.54	3	-116.068	2	-.144	4	.208	2	.11	2
808			min	-102.524	2	-331.025	8	-379.731	8	-.772	7	-.233	1	-.081	1
809		5	max	94.322	1	43.54	3	-116.068	2	-.144	4	.2	2	.116	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
810			min	-102.524	2	-331.025	8	-379.731	8	-.772	7	-.243	1	-.074	1
811	M84	1	max	348.143	1	-62.048	3	379.085	7	-.153	4	.113	3	.162	1
812			min	-350.121	2	-199.333	8	-61.605	4	-.586	7	-.123	4	-.189	2
813		2	max	348.143	1	-62.048	3	379.085	7	-.153	4	.131	3	.167	1
814			min	-350.121	2	-199.333	8	-61.605	4	-.586	7	-.127	4	-.184	2
815		3	max	348.143	1	-62.048	3	379.085	7	-.153	4	.149	3	.172	1
816			min	-350.121	2	-199.333	8	-61.605	4	-.586	7	-.131	4	-.18	2
817		4	max	348.143	1	-62.048	3	379.085	7	-.153	4	.168	3	.177	1
818			min	-350.121	2	-199.333	8	-61.605	4	-.586	7	-.135	4	-.175	2
819		5	max	348.143	1	-62.048	3	379.085	7	-.153	4	.186	3	.183	1
820			min	-350.121	2	-199.333	8	-61.605	4	-.586	7	-.139	4	-.17	2
821	M85	1	max	127.136	1	-52.432	4	72.985	3	-.134	4	.123	4	.44	1
822			min	-125.122	2	-185.084	7	-384.66	8	-.687	7	-.113	3	-.421	2
823		2	max	127.136	1	-52.432	4	72.985	3	-.134	4	.104	4	.444	1
824			min	-125.122	2	-185.084	7	-384.66	8	-.687	7	-.108	3	-.416	2
825		3	max	127.136	1	-52.432	4	72.985	3	-.134	4	.092	2	.448	1
826			min	-125.122	2	-185.084	7	-384.66	8	-.687	7	-.104	3	-.412	2
827		4	max	127.136	1	-52.432	4	72.985	3	-.134	4	.084	2	.452	1
828			min	-125.122	2	-185.084	7	-384.66	8	-.687	7	-.106	1	-.408	2
829		5	max	127.136	1	-52.432	4	72.985	3	-.134	4	.076	2	.455	1
830			min	-125.122	2	-185.084	7	-384.66	8	-.687	7	-.113	1	-.404	2
831	MP3A	1	max	0	11	.015	3	.004	1	0	11	0	11	0	11
832			min	0	1	-.014	4	-.003	2	0	1	0	1	0	1
833		2	max	868.434	7	-61	3	539.219	1	.22	9	.635	1	.283	8
834			min	120.991	4	-360.618	9	-523.039	2	-.098	4	-.516	2	.01	3
835		3	max	-108.194	10	360.531	3	714.624	2	0	11	1.95	1	.977	3
836			min	-377.135	5	-360.663	4	-714.547	1	0	1	-1.95	2	-.978	4
837		4	max	-90.937	10	314.071	3	668.164	2	0	11	.135	1	.091	3
838			min	-333.633	5	-314.203	4	-668.088	1	0	1	-.135	2	-.092	4
839		5	max	0	11	1.068	4	1.375	1	0	11	0	11	0	11
840			min	0	1	-1.523	7	-1.299	2	0	1	0	1	0	1
841	MP2A	1	max	0	11	.008	3	.004	6	0	11	0	11	0	11
842			min	0	1	-.014	8	-.003	9	0	1	0	1	0	1
843		2	max	272.141	8	392.633	7	28.24	1	.205	1	.051	6	.234	7
844			min	-62.255	3	59.132	4	-40.876	9	-.229	2	.001	3	.031	4
845		3	max	291.769	8	384.283	7	50.171	1	.205	1	.064	1	-.074	4
846			min	-56.007	3	81.063	4	-58.43	2	-.229	2	-.051	9	-.349	7
847		4	max	-6.247	10	21.897	3	21.915	2	0	11	.016	1	.016	3
848			min	-19.628	5	-21.885	4	-21.913	1	0	1	-.016	2	-.016	4
849		5	max	0	11	.093	8	.024	5	0	11	0	11	0	11
850			min	0	1	-.034	3	-.017	2	0	1	0	1	0	1
851	MP1A	1	max	0	11	.009	3	.01	2	0	11	0	11	0	11
852			min	0	1	-.014	8	-.009	1	0	1	0	1	0	1
853		2	max	-5.813	3	345.248	7	140.383	2	.113	3	.028	3	.21	6
854			min	-44.311	8	95.234	4	-138.36	1	-.123	4	-.034	4	.066	9
855		3	max	8.85	3	341.524	8	110.421	2	.113	3	.18	2	-.091	4
856			min	-14.508	4	108.434	3	-108.398	1	-.123	4	-.202	1	-.304	7
857		4	max	-56.048	10	155.721	3	209.131	2	0	11	.046	1	.037	3
858			min	-154.985	5	-155.642	4	-209.163	1	0	1	-.046	2	-.037	4
859		5	max	0	11	.563	8	.223	1	0	11	0	11	0	11
860			min	0	1	-.277	3	-.259	6	0	1	0	1	0	1
861	MP4A	1	max	0	11	.019	7	.002	9	0	11	0	11	0	11
862			min	0	1	-.008	4	0	2	0	1	0	1	0	1
863		2	max	17.633	2	-102.003	4	131.577	1	.125	3	.176	1	.397	9
864			min	-320.874	9	-591.438	9	-138.241	2	-.09	4	-.21	2	.038	4
865		3	max	-21.866	10	75.993	3	76.345	2	0	11	.2	1	.197	3
866			min	-68.699	5	-76.177	4	-76.402	1	0	1	-.199	2	-.198	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
867		4	max	-10.933	10	37.614	3	37.965	2	0	11	.049	1	.048	3
868			min	-34.349	5	-37.797	4	-38.022	1	0	1	-.049	2	-.049	4
869		5	max	0	11	.583	4	.358	1	0	11	0	11	0	11
870			min	0	1	-1.243	7	-.423	6	0	1	0	1	0	1
871	M90	1	max	168.509	4	-61.985	3	-21.287	1	.761	8	.091	3	.026	1
872			min	-153.839	3	-219.434	8	-475.594	6	.236	9	-.061	4	-.077	9
873		2	max	168.509	4	-61.985	3	-21.287	1	.761	8	.076	3	.031	4
874			min	-153.839	3	-219.434	8	-475.594	6	.236	9	-.066	4	-.072	9
875		3	max	168.509	4	-61.985	3	-21.287	1	.761	8	.061	3	.037	4
876			min	-153.839	3	-219.434	8	-475.594	6	.236	9	-.072	4	-.067	9
877		4	max	168.509	4	-61.985	3	-21.287	1	.761	8	.05	9	.044	4
878			min	-153.839	3	-219.434	8	-475.594	6	.236	9	-.077	4	-.062	9
879		5	max	168.509	4	-61.985	3	-21.287	1	.761	8	.042	9	.05	4
880			min	-153.839	3	-219.434	8	-475.594	6	.236	9	-.083	4	-.057	9
881	M91	1	max	265.397	4	-52.02	4	520.258	5	.977	6	.061	4	.292	4
882			min	-280.099	3	-212.279	7	-96.822	2	.061	1	-.091	3	-.22	3
883		2	max	265.397	4	-52.02	4	520.258	5	.977	6	.082	4	.295	4
884			min	-280.099	3	-212.279	7	-96.822	2	.061	1	-.091	3	-.214	3
885		3	max	265.397	4	-52.02	4	520.258	5	.977	6	.103	4	.299	4
886			min	-280.099	3	-212.279	7	-96.822	2	.061	1	-.092	3	-.208	3
887		4	max	265.397	4	-52.02	4	520.258	5	.977	6	.124	4	.302	4
888			min	-280.099	3	-212.279	7	-96.822	2	.061	1	-.093	3	-.202	3
889		5	max	265.397	4	-52.02	4	520.258	5	.977	6	.145	4	.305	4
890			min	-280.099	3	-212.279	7	-96.822	2	.061	1	-.094	3	-.196	3
891	M92	1	max	72.236	4	566.882	5	234.889	1	.502	6	.078	9	.281	3
892			min	-89.015	3	100.237	2	-465.637	2	-.038	1	-.007	4	-.2	4
893		2	max	72.236	4	566.882	5	234.889	1	.502	6	.076	9	.273	3
894			min	-89.015	3	100.237	2	-465.637	2	-.038	1	-.017	2	-.216	4
895		3	max	72.236	4	566.882	5	234.889	1	.502	6	.073	9	.266	3
896			min	-89.015	3	100.237	2	-465.637	2	-.038	1	-.047	2	-.233	4
897		4	max	72.236	4	566.882	5	234.889	1	.502	6	.071	9	.258	3
898			min	-89.015	3	100.237	2	-465.637	2	-.038	1	-.076	2	-.249	4
899		5	max	72.236	4	566.882	5	234.889	1	.502	6	.069	1	.25	3
900			min	-89.015	3	100.237	2	-465.637	2	-.038	1	-.105	2	-.266	4
901	M93	1	max	1126.811	4	-428.966	2	586.686	4	1.758	2	.007	4	.909	4
902			min	-1110.015	3	-1513.497	5	-356.302	2	-1.231	1	-.078	9	-1.052	3
903		2	max	1126.811	4	-428.966	2	586.686	4	1.758	2	.044	4	.946	4
904			min	-1110.015	3	-1513.497	5	-356.302	2	-1.231	1	-.07	9	-1.024	3
905		3	max	1126.811	4	-428.966	2	586.686	4	1.758	2	.08	4	.984	4
906			min	-1110.015	3	-1513.497	5	-356.302	2	-1.231	1	-.091	3	-.995	3
907		4	max	1126.811	4	-428.966	2	586.686	4	1.758	2	.117	4	1.021	4
908			min	-1110.015	3	-1513.497	5	-356.302	2	-1.231	1	-.112	3	-.967	3
909		5	max	1126.811	4	-428.966	2	586.686	4	1.758	2	.154	4	1.059	4
910			min	-1110.015	3	-1513.497	5	-356.302	2	-1.231	1	-.133	3	-.939	3
911	M94	1	max	14.189	6	252.541	6	428.108	5	-.159	2	.148	4	.071	3
912			min	-4.049	4	-31.569	1	84.461	2	-.709	5	-.169	3	-.032	4
913		2	max	14.189	6	252.541	6	428.108	5	-.159	2	.16	4	.063	3
914			min	-4.049	4	-31.569	1	84.461	2	-.709	5	-.164	3	-.034	4
915		3	max	14.189	6	252.541	6	428.108	5	-.159	2	.172	4	.055	3
916			min	-4.049	4	-31.569	1	84.461	2	-.709	5	-.158	3	-.035	4
917		4	max	14.189	6	252.541	6	428.108	5	-.159	2	.184	4	.047	3
918			min	-4.049	4	-31.569	1	84.461	2	-.709	5	-.152	3	-.036	4
919		5	max	14.189	6	252.541	6	428.108	5	-.159	2	.196	4	.039	3
920			min	-4.049	4	-31.569	1	84.461	2	-.709	5	-.147	3	-.038	4
921	M95	1	max	79.989	4	6.536	1	-131.318	1	-.205	3	.169	3	.055	3
922			min	-88.479	3	-331.043	6	-417.234	6	-.832	8	-.148	4	-.064	4
923		2	max	79.989	4	6.536	1	-131.318	1	-.205	3	.161	3	.065	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
924			min	-88.479	3	-331.043	6	-417.234	6	-.832	8	-.157	4	-.062	4
925		3	max	79.989	4	6.536	1	-131.318	1	-.205	3	.153	3	.074	3
926			min	-88.479	3	-331.043	6	-417.234	6	-.832	8	-.166	4	-.059	4
927		4	max	79.989	4	6.536	1	-131.318	1	-.205	3	.144	3	.084	3
928			min	-88.479	3	-331.043	6	-417.234	6	-.832	8	-.175	4	-.056	4
929		5	max	79.989	4	6.536	1	-131.318	1	-.205	3	.136	3	.093	3
930			min	-88.479	3	-331.043	6	-417.234	6	-.832	8	-.184	4	-.053	4
931	M96	1	max	324.395	4	-71.582	1	401.863	5	-.174	2	.161	4	.2	4
932			min	-327.918	3	-223.472	6	-37.348	2	-.632	5	-.179	3	-.227	3
933		2	max	324.395	4	-71.582	1	401.863	5	-.174	2	.176	4	.205	4
934			min	-327.918	3	-223.472	6	-37.348	2	-.632	5	-.178	3	-.221	3
935		3	max	324.395	4	-71.582	1	401.863	5	-.174	2	.19	4	.211	4
936			min	-327.918	3	-223.472	6	-37.348	2	-.632	5	-.177	3	-.215	3
937		4	max	324.395	4	-71.582	1	401.863	5	-.174	2	.205	4	.216	4
938			min	-327.918	3	-223.472	6	-37.348	2	-.632	5	-.175	3	-.21	3
939		5	max	324.395	4	-71.582	1	401.863	5	-.174	2	.22	4	.221	4
940			min	-327.918	3	-223.472	6	-37.348	2	-.632	5	-.174	3	-.204	3
941	M97	1	max	105.459	2	-44.605	2	40.985	1	-.162	2	.179	3	.431	4
942			min	-106.636	1	-160.834	5	-404.309	6	-.737	5	-.161	4	-.418	3
943		2	max	105.459	2	-44.605	2	40.985	1	-.162	2	.164	3	.435	4
944			min	-106.636	1	-160.834	5	-404.309	6	-.737	5	-.161	4	-.414	3
945		3	max	105.459	2	-44.605	2	40.985	1	-.162	2	.148	3	.439	4
946			min	-106.636	1	-160.834	5	-404.309	6	-.737	5	-.161	4	-.411	3
947		4	max	105.459	2	-44.605	2	40.985	1	-.162	2	.133	3	.443	4
948			min	-106.636	1	-160.834	5	-404.309	6	-.737	5	-.162	4	-.408	3
949		5	max	105.459	2	-44.605	2	40.985	1	-.162	2	.118	3	.447	4
950			min	-106.636	1	-160.834	5	-404.309	6	-.737	5	-.162	4	-.405	3
951	MP3C	1	max	0	11	.006	2	.008	2	0	11	0	11	0	11
952			min	0	1	-.006	1	-.009	1	0	1	0	1	0	1
953		2	max	900.529	5	462.391	4	311.131	7	.078	9	.244	3	.238	3
954			min	191.106	2	-329.435	3	-60.851	4	-.007	4	-.133	4	-.438	4
955		3	max	-108.194	10	626.147	3	449.202	2	0	11	1.221	1	1.707	3
956			min	-377.135	5	-625.992	4	-449.132	1	0	1	-1.221	2	-1.706	4
957		4	max	-90.937	10	579.688	3	402.743	2	0	11	.103	1	.125	3
958			min	-333.633	5	-579.532	4	-402.672	1	0	1	-.103	2	-.124	4
959		5	max	0	11	1.568	8	1.186	5	0	11	0	11	0	11
960			min	0	1	-1.227	3	-1.077	2	0	1	0	1	0	1
961	MP2C	1	max	0	11	.01	7	.011	6	0	11	0	11	0	11
962			min	0	1	-.005	4	-.005	1	0	1	0	1	0	1
963		2	max	272.161	6	-45.901	2	-72.205	3	.148	4	.197	8	-.038	4
964			min	-25.323	1	-222.666	5	-359.7	8	-.169	3	.036	3	-.164	7
965		3	max	291.79	6	-45.901	2	-72.205	3	.148	4	-.072	3	.172	5
966			min	-19.076	1	-222.666	5	-359.7	8	-.169	3	-.343	8	.025	2
967		4	max	-6.248	10	21.905	3	21.896	2	0	11	.016	1	.016	3
968			min	-19.628	5	-21.908	4	-21.91	1	0	1	-.016	2	-.016	4
969		5	max	0	11	.023	4	.021	1	0	11	0	11	0	11
970			min	0	1	-.047	7	-.085	6	0	1	0	1	0	1
971	MP1C	1	max	0	11	.014	7	.012	6	0	11	0	11	0	11
972			min	0	1	-.01	4	-.007	1	0	1	0	1	0	1
973		2	max	-15.267	1	79.613	3	-41.519	4	.161	4	.218	6	.009	2
974			min	-68.499	6	-216.486	8	-332.867	7	-.179	3	.058	4	-.089	5
975		3	max	-.604	1	44.058	3	-41.519	4	.161	4	-.004	4	.236	8
976			min	-29.783	6	-204.7	8	-332.867	7	-.179	3	-.284	7	-.109	3
977		4	max	-56.048	10	195.727	3	169.077	2	0	11	.04	1	.044	3
978			min	-154.985	5	-195.78	4	-169.14	1	0	1	-.04	2	-.044	4
979		5	max	0	11	.259	4	.206	1	0	11	0	11	0	11
980			min	0	1	-.522	7	-.406	6	0	1	0	1	0	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
981	MP4C	1	max	0	11	.005	2	.003	2	0	11	0	11	0	11
982			min	0	1	-.01	8	-.014	5	0	1	0	1	0	1
983		2	max	4.639	3	238.038	6	411.37	5	.091	3	.248	5	.067	1
984			min	-44.615	8	15.942	1	64.44	2	-.061	4	-.018	2	-.143	2
985		3	max	-21.866	10	76.236	3	76.337	2	0	11	.198	1	.199	3
986			min	-68.699	5	-76.18	4	-76.153	1	0	1	-.199	2	-.198	4
987		4	max	-10.933	10	37.856	3	37.957	2	0	11	.049	1	.049	3
988			min	-34.349	5	-37.8	4	-37.773	1	0	1	-.049	2	-.049	4
989		5	max	0	11	.695	8	1.156	5	0	11	0	11	0	11
990			min	0	1	-.524	3	-.423	2	0	1	0	1	0	1
991	M102	1	max	51.126	2	-61.869	1	-33.047	2	.759	7	.086	3	.124	4
992			min	-55.835	9	-219.534	6	-472.149	5	.25	9	-.055	4	-.146	3
993		2	max	51.126	2	-61.869	1	-33.047	2	.759	7	.07	3	.128	4
994			min	-55.835	9	-219.534	6	-472.149	5	.25	9	-.059	4	-.139	3
995		3	max	51.126	2	-61.869	1	-33.047	2	.759	7	.054	3	.132	4
996			min	-55.835	9	-219.534	6	-472.149	5	.25	9	-.063	4	-.133	3
997		4	max	51.126	2	-61.869	1	-33.047	2	.759	7	.047	2	.136	4
998			min	-55.835	9	-219.534	6	-472.149	5	.25	9	-.072	1	-.126	3
999		5	max	51.126	2	-61.869	1	-33.047	2	.759	7	.044	2	.14	4
1000			min	-55.835	9	-219.534	6	-472.149	5	.25	9	-.089	1	-.12	3
1001	M103	1	max	451.357	3	-49.933	3	523.479	6	.97	5	.055	4	.263	4
1002			min	-458.211	4	-212.145	5	-109.767	1	.086	2	-.086	3	-.215	3
1003		2	max	451.357	3	-49.933	3	523.479	6	.97	5	.075	4	.269	4
1004			min	-458.211	4	-212.145	5	-109.767	1	.086	2	-.086	3	-.212	3
1005		3	max	451.357	3	-49.933	3	523.479	6	.97	5	.095	4	.274	4
1006			min	-458.211	4	-212.145	5	-109.767	1	.086	2	-.085	3	-.209	3
1007		4	max	451.357	3	-49.933	3	523.479	6	.97	5	.114	4	.28	4
1008			min	-458.211	4	-212.145	5	-109.767	1	.086	2	-.084	3	-.206	3
1009		5	max	451.357	3	-49.933	3	523.479	6	.97	5	.134	4	.286	4
1010			min	-458.211	4	-212.145	5	-109.767	1	.086	2	-.084	3	-.203	3
1011	M104	1	max	129.866	3	578.209	6	218.813	2	.49	5	.109	3	.162	1
1012			min	-142.39	4	62.728	1	-449.385	1	0	2	-.091	4	-.076	2
1013		2	max	129.866	3	578.209	6	218.813	2	.49	5	.089	2	.158	1
1014			min	-142.39	4	62.728	1	-449.385	1	0	2	-.081	4	-.096	2
1015		3	max	129.866	3	578.209	6	218.813	2	.49	5	.102	2	.154	1
1016			min	-142.39	4	62.728	1	-449.385	1	0	2	-.09	1	-.116	2
1017		4	max	129.866	3	578.209	6	218.813	2	.49	5	.116	2	.15	1
1018			min	-142.39	4	62.728	1	-449.385	1	0	2	-.118	1	-.136	2
1019		5	max	129.866	3	578.209	6	218.813	2	.49	5	.13	2	.146	1
1020			min	-142.39	4	62.728	1	-449.385	1	0	2	-.146	1	-.156	2
1021	M105	1	max	1069.159	3	-391.304	1	602.673	2	1.734	1	.091	4	.928	3
1022			min	-1056.657	4	-1525.235	6	-368.654	1	-1.212	2	-.109	3	-1.068	4
1023		2	max	1069.159	3	-391.304	1	602.673	2	1.734	1	.124	4	.96	3
1024			min	-1056.657	4	-1525.235	6	-368.654	1	-1.212	2	-.128	3	-1.033	4
1025		3	max	1069.159	3	-391.304	1	602.673	2	1.734	1	.158	4	.991	3
1026			min	-1056.657	4	-1525.235	6	-368.654	1	-1.212	2	-.147	3	-.999	4
1027		4	max	1069.159	3	-391.304	1	602.673	2	1.734	1	.191	4	1.023	3
1028			min	-1056.657	4	-1525.235	6	-368.654	1	-1.212	2	-.166	3	-.965	4
1029		5	max	1069.159	3	-391.304	1	602.673	2	1.734	1	.225	4	1.055	3
1030			min	-1056.657	4	-1525.235	6	-368.654	1	-1.212	2	-.186	3	-.93	4
1031	M106	1	max	17.726	6	253.06	5	432.276	6	-.119	1	.18	3	.062	5
1032			min	-10.625	1	-42.973	2	57.567	1	-.715	6	-.215	4	-.005	2
1033		2	max	17.726	6	253.06	5	432.276	6	-.119	1	.188	3	.047	8
1034			min	-10.625	1	-42.973	2	57.567	1	-.715	6	-.205	4	-.002	2
1035		3	max	17.726	6	253.06	5	432.276	6	-.119	1	.196	3	.034	8
1036			min	-10.625	1	-42.973	2	57.567	1	-.715	6	-.194	4	-.01	3
1037		4	max	17.726	6	253.06	5	432.276	6	-.119	1	.205	3	.027	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
1038			min	-10.625	1	-42.973	2	57.567	1	-.715	6	-.184	4	-.018	3
1039		5	max	17.726	6	253.06	5	432.276	6	-.119	1	.213	3	.025	4
1040			min	-10.625	1	-42.973	2	57.567	1	-.715	6	-.173	4	-.026	3
1041	M107	1	max	72.582	3	17.821	2	-125.613	4	-.167	1	.215	4	.084	4
1042			min	-84.939	4	-331.563	5	-418.197	7	-.841	6	-.18	3	-.076	3
1043		2	max	72.582	3	17.821	2	-125.613	4	-.167	1	.208	4	.087	4
1044			min	-84.939	4	-331.563	5	-418.197	7	-.841	6	-.191	3	-.066	3
1045		3	max	72.582	3	17.821	2	-125.613	4	-.167	1	.2	4	.09	4
1046			min	-84.939	4	-331.563	5	-418.197	7	-.841	6	-.202	3	-.056	3
1047		4	max	72.582	3	17.821	2	-125.613	4	-.167	1	.192	4	.093	4
1048			min	-84.939	4	-331.563	5	-418.197	7	-.841	6	-.213	3	-.046	3
1049		5	max	72.582	3	17.821	2	-125.613	4	-.167	1	.184	4	.096	4
1050			min	-84.939	4	-331.563	5	-418.197	7	-.841	6	-.224	3	-.037	3
1051	M108	1	max	256.08	3	-72.55	2	400.562	6	-.167	1	.148	2	.154	2
1052			min	-250.256	4	-222.758	5	-42.707	1	-.629	6	-.162	1	-.176	1
1053		2	max	256.08	3	-72.55	2	400.562	6	-.167	1	.166	2	.159	2
1054			min	-250.256	4	-222.758	5	-42.707	1	-.629	6	-.165	1	-.17	1
1055		3	max	256.08	3	-72.55	2	400.562	6	-.167	1	.184	2	.163	2
1056			min	-250.256	4	-222.758	5	-42.707	1	-.629	6	-.167	1	-.164	1
1057		4	max	256.08	3	-72.55	2	400.562	6	-.167	1	.202	2	.168	2
1058			min	-250.256	4	-222.758	5	-42.707	1	-.629	6	-.17	1	-.158	1
1059		5	max	256.08	3	-72.55	2	400.562	6	-.167	1	.22	2	.172	2
1060			min	-250.256	4	-222.758	5	-42.707	1	-.629	6	-.173	1	-.153	1
1061	M109	1	max	140.002	3	-45.359	1	49.163	2	-.151	1	.162	1	.316	3
1062			min	-145.817	4	-161.334	6	-403.302	5	-.735	6	-.148	2	-.303	1
1063		2	max	140.002	3	-45.359	1	49.163	2	-.151	1	.144	1	.319	3
1064			min	-145.817	4	-161.334	6	-403.302	5	-.735	6	-.145	2	-.3	1
1065		3	max	140.002	3	-45.359	1	49.163	2	-.151	1	.125	1	.322	3
1066			min	-145.817	4	-161.334	6	-403.302	5	-.735	6	-.142	2	-.297	1
1067		4	max	140.002	3	-45.359	1	49.163	2	-.151	1	.107	1	.325	3
1068			min	-145.817	4	-161.334	6	-403.302	5	-.735	6	-.139	2	-.294	1
1069		5	max	140.002	3	-45.359	1	49.163	2	-.151	1	.088	1	.328	3
1070			min	-145.817	4	-161.334	6	-403.302	5	-.735	6	-.136	2	-.292	1
1071	MP3B	1	max	0	11	.005	1	.012	2	0	11	0	11	0	11
1072			min	0	1	-.007	6	-.011	1	0	1	0	1	0	1
1073		2	max	911.847	6	381.929	4	61.328	4	.109	3	.105	4	.392	3
1074			min	153.691	1	-272.863	3	-334.949	7	-.091	4	-.378	7	-.389	4
1075		3	max	-108.194	10	626.188	3	448.987	2	0	11	1.221	1	1.707	3
1076			min	-377.135	5	-626.192	4	-449.171	1	0	1	-1.22	2	-1.707	4
1077		4	max	-90.937	10	579.728	3	402.527	2	0	11	.103	1	.125	3
1078			min	-333.633	5	-579.732	4	-402.712	1	0	1	-.102	2	-.125	4
1079		5	max	0	11	1.183	4	1.108	1	0	11	0	11	0	11
1080			min	0	1	-1.187	3	-1.676	6	0	1	0	1	0	1
1081	MP2B	1	max	0	11	.005	7	.008	2	0	11	0	11	0	11
1082			min	0	1	-.002	4	-.015	5	0	1	0	1	0	1
1083		2	max	272.669	5	-37.632	1	375.487	6	.18	3	-.062	1	.018	1
1084			min	-36.663	2	-200.892	6	64.575	1	-.215	4	-.234	8	-.097	6
1085		3	max	292.298	5	-33.309	4	367.137	6	.18	3	.323	6	.214	7
1086			min	-30.415	2	-203.464	7	86.506	1	-.215	4	.051	1	.023	4
1087		4	max	-6.247	10	21.911	3	21.899	2	0	11	.016	1	.016	3
1088			min	-19.628	5	-21.919	4	-21.89	1	0	1	-.016	2	-.016	4
1089		5	max	0	11	.012	4	.084	5	0	11	0	11	0	11
1090			min	0	1	-.052	7	-.032	2	0	1	0	1	0	1
1091	MP1B	1	max	0	11	.008	7	.01	2	0	11	0	11	0	11
1092			min	0	1	-.007	4	-.016	5	0	1	0	1	0	1
1093		2	max	-14.979	2	27.997	2	334.149	6	.148	2	-.039	3	-.02	2
1094			min	-67.655	5	-206.104	8	30.017	1	-.162	1	-.181	8	-.152	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
1095		3	max	-.317	2	27.997	2	324.451	6	.148	2	.317	6	.168	1
1096			min	-28.939	5	-205.892	5	56.321	1	-.162	1	.018	1	-.083	3
1097		4	max	-56.048	10	195.852	3	169.051	2	0	11	.039	1	.044	3
1098			min	-154.985	5	-195.844	4	-168.984	1	0	1	-.04	2	-.044	4
1099		5	max	0	11	.195	4	.625	5	0	11	0	11	0	11
1100			min	0	1	-.188	3	-.295	2	0	1	0	1	0	1
1101	MP4B	1	max	0	11	.003	4	.017	6	0	11	0	11	0	11
1102			min	0	1	-.009	7	-.007	1	0	1	0	1	0	1
1103		2	max	4.123	1	273.861	8	-44.485	4	.086	3	.063	4	.182	3
1104			min	-44.759	6	-96.116	3	-410.056	7	-.055	4	-.218	7	-.301	4
1105		3	max	-21.866	10	76.544	3	76.049	2	0	11	.199	1	.2	3
1106			min	-68.699	5	-76.4	4	-76.218	1	0	1	-.198	2	-.2	4
1107		4	max	-10.933	10	38.165	3	37.67	2	0	11	.049	1	.05	3
1108			min	-34.349	5	-38.02	4	-37.838	1	0	1	-.049	2	-.049	4
1109		5	max	0	11	.784	8	.542	1	0	11	0	11	0	11
1110			min	0	1	-.215	3	-1.093	6	0	1	0	1	0	1
1111	M112	1	max	0	11	0	9	0	11	0	11	0	11	0	9
1112			min	0	1	0	3	0	9	0	1	0	9	0	4
1113		2	max	0	11	-1.032	9	0	11	0	11	0	11	0	7
1114			min	0	1	-3.165	8	0	9	0	1	0	9	0	4
1115		3	max	0	11	-2.367	9	0	11	0	11	0	11	.002	7
1116			min	0	1	-7.26	8	0	9	0	1	0	9	0	2
1117		4	max	0	11	-4.005	9	0	11	0	11	0	1	.006	6
1118			min	0	1	-12.285	8	0	9	0	1	0	9	.002	2
1119		5	max	0	11	-5.947	9	0	11	0	11	0	1	.012	6
1120			min	0	1	-18.241	8	0	9	0	1	0	9	.004	2
1121	M114	1	max	0	11	0	4	0	2	0	11	0	2	0	3
1122			min	0	1	0	9	0	1	0	1	0	6	0	6
1123		2	max	0	11	-1.032	4	0	2	0	11	0	2	0	7
1124			min	0	1	-3.165	7	0	1	0	1	0	6	0	2
1125		3	max	0	11	-2.367	4	0	2	0	11	0	2	.002	7
1126			min	0	1	-7.26	7	0	1	0	1	0	4	0	2
1127		4	max	0	11	-4.005	4	0	2	0	11	0	2	.006	7
1128			min	0	1	-12.285	7	0	1	0	1	0	5	.002	1
1129		5	max	0	11	-5.947	4	0	2	0	11	0	2	.012	7
1130			min	0	1	-18.241	7	0	1	0	1	0	1	.004	1
1131	M114A	1	max	0	11	0	9	0	11	0	11	0	11	0	9
1132			min	0	1	0	3	0	1	0	1	0	7	0	6
1133		2	max	0	11	-1.169	9	0	11	0	11	0	11	0	8
1134			min	0	1	-3.587	8	0	1	0	1	0	7	0	2
1135		3	max	0	11	-2.339	9	0	11	0	11	0	11	.003	8
1136			min	0	1	-7.174	8	0	1	0	1	0	6	.001	2
1137		4	max	0	11	-3.509	9	0	11	0	11	0	11	.008	8
1138			min	0	1	-10.763	8	0	1	0	1	0	6	.003	2
1139		5	max	0	11	-4.59	9	.029	9	0	11	0	9	.014	6
1140			min	0	1	-14.404	6	-.016	5	0	1	0	5	.004	9
1141	M115	1	max	0	11	0	3	0	6	0	11	0	2	0	3
1142			min	0	1	0	8	0	2	0	1	0	6	0	8
1143		2	max	0	11	-1.17	3	0	6	0	11	0	2	0	8
1144			min	0	1	-3.588	8	0	2	0	1	0	6	0	9
1145		3	max	0	11	-2.339	3	0	6	0	11	0	2	.003	8
1146			min	0	1	-7.175	8	0	2	0	1	0	8	.001	9
1147		4	max	0	11	-3.509	3	0	6	0	11	0	6	.008	8
1148			min	0	1	-10.763	8	0	2	0	1	0	2	.003	9
1149		5	max	0	11	-4.652	3	.019	1	0	11	0	1	.014	7
1150			min	0	1	-14.388	7	-.03	6	0	1	0	2	.004	4
1151	M116	1	max	0	11	.01	3	.002	9	0	11	0	4	0	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
1152			min	0	1	-.006	4	-.001	4	0	1	0	1	0	7
1153		2	max	0	11	-.164	3	.002	9	0	11	0	3	0	8
1154			min	0	1	-.535	5	-.001	4	0	1	0	1	0	9
1155		3	max	0	11	-.289	3	.002	9	0	11	0	3	0	5
1156			min	0	1	-.917	5	-.001	4	0	1	0	4	0	9
1157		4	max	0	11	-.364	3	.002	9	0	11	0	9	0	5
1158			min	0	1	-1.147	5	-.001	4	0	1	0	4	0	9
1159		5	max	0	11	-.389	3	.002	9	0	11	0	9	0	5
1160			min	0	1	-1.225	5	-.001	4	0	1	0	4	0	3
1161	M117	1	max	0	11	.008	6	.001	7	0	11	0	1	0	6
1162			min	0	1	-.006	4	0	1	0	1	0	2	0	7
1163		2	max	0	11	-.173	10	.001	7	0	11	0	1	0	8
1164			min	0	1	-.535	8	0	1	0	1	0	2	0	1
1165		3	max	0	11	-.298	10	.001	7	0	11	0	6	0	8
1166			min	0	1	-.917	8	0	1	0	1	0	2	0	10
1167		4	max	0	11	-.373	10	.001	7	0	11	0	7	0	8
1168			min	0	1	-1.147	8	0	1	0	1	0	2	0	10
1169		5	max	0	11	-.398	10	.001	7	0	11	0	7	0	8
1170			min	0	1	-1.225	8	0	1	0	1	0	4	0	10
1171	M118	1	max	.002	2	0	4	.002	4	0	7	0	2	0	4
1172			min	-.001	6	0	8	0	1	0	5	0	1	0	8
1173		2	max	.002	2	-2.041	4	.002	4	0	7	0	2	.001	7
1174			min	-.001	6	-6.262	8	0	1	0	5	0	1	0	2
1175		3	max	.002	2	-4.704	4	.002	4	0	7	0	2	.005	8
1176			min	-.001	6	-14.43	8	0	1	0	5	0	1	.002	9
1177		4	max	.002	2	-7.989	4	.002	4	0	7	0	4	.012	8
1178			min	-.001	6	-24.503	8	0	1	0	5	0	1	.004	4
1179		5	max	.002	2	-11.894	4	.002	4	0	7	0	4	.024	8
1180			min	-.001	6	-36.483	8	0	1	0	5	0	1	.008	4
1181	M119	1	max	.001	1	0	6	.003	2	0	6	0	4	0	6
1182			min	-.002	2	0	1	-.003	1	0	3	0	2	0	2
1183		2	max	.001	1	-2.041	3	.003	2	0	6	0	2	.001	6
1184			min	-.002	2	-6.262	5	-.003	1	0	3	0	1	0	2
1185		3	max	.001	1	-4.704	3	.003	2	0	6	0	2	.005	8
1186			min	-.002	2	-14.43	5	-.003	1	0	3	0	1	.002	3
1187		4	max	.001	1	-7.989	3	.003	2	0	6	0	2	.012	5
1188			min	-.002	2	-24.503	5	-.003	1	0	3	0	1	.004	3
1189		5	max	.001	1	-11.894	3	.003	2	0	6	0	2	.024	5
1190			min	-.002	2	-36.482	5	-.003	1	0	3	0	1	.008	3
1191	M120	1	max	.002	4	0	2	0	2	0	2	0	2	0	5
1192			min	-.001	7	0	8	-.003	1	0	5	0	4	0	2
1193		2	max	.002	4	-2.339	2	0	2	0	2	0	2	.002	5
1194			min	-.001	7	-7.174	8	-.003	1	0	5	0	1	0	2
1195		3	max	.002	4	-4.678	2	0	2	0	2	0	2	.007	8
1196			min	-.001	7	-14.349	8	-.003	1	0	5	0	1	.002	2
1197		4	max	.002	4	-7.018	2	0	2	0	2	0	2	.015	8
1198			min	-.001	7	-21.525	8	-.003	1	0	5	0	1	.005	2
1199		5	max	.142	2	-9.335	4	.114	1	0	4	0	1	.027	6
1200			min	-.019	3	-28.778	6	-.058	3	0	2	0	4	.009	4
1201	M121	1	max	0	4	0	8	0	2	0	7	0	7	0	2
1202			min	-.003	1	0	7	-.001	1	0	1	0	3	0	7
1203		2	max	0	4	-2.339	4	0	2	0	7	0	4	.002	6
1204			min	-.003	1	-7.175	7	-.001	1	0	1	0	1	0	4
1205		3	max	0	4	-4.678	4	0	2	0	7	0	4	.007	6
1206			min	-.003	1	-14.35	7	-.001	1	0	1	0	1	.002	4
1207		4	max	0	4	-7.018	4	0	2	0	7	0	2	.015	6
1208			min	-.003	1	-21.525	7	-.001	1	0	1	0	1	.005	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
1209		5	max	.101	2	-9.358	9	.046	2	0	6	0	1	.027	5
1210			min	-.202	3	-28.809	5	-.108	3	0	1	0	3	.009	9
1211	M122	1	max	.009	6	.003	7	.004	6	0	3	0	2	0	7
1212			min	-.01	1	-.011	5	-.012	1	0	1	0	4	0	5
1213		2	max	.009	6	-.172	2	.004	6	0	3	0	6	0	7
1214			min	-.01	1	-.544	5	-.012	1	0	1	0	1	0	9
1215		3	max	.009	6	-.297	2	.004	6	0	3	0	6	0	8
1216			min	-.01	1	-.926	5	-.012	1	0	1	0	1	0	9
1217		4	max	.009	6	-.372	2	.004	6	0	3	0	6	0	8
1218			min	-.01	1	-1.156	5	-.012	1	0	1	0	1	0	9
1219		5	max	.009	6	-.397	2	.004	6	0	3	0	6	0	8
1220			min	-.01	1	-1.234	5	-.012	1	0	1	0	1	0	9
1221	M123	1	max	.008	2	.001	5	.009	3	0	7	0	3	0	6
1222			min	-.007	3	-.002	4	-.005	4	0	1	0	1	0	2
1223		2	max	.008	2	-.173	1	.009	3	0	7	0	3	0	6
1224			min	-.007	3	-.535	7	-.005	4	0	1	0	1	0	2
1225		3	max	.008	2	-.297	1	.009	3	0	7	0	3	0	6
1226			min	-.007	3	-.917	7	-.005	4	0	1	0	5	0	2
1227		4	max	.008	2	-.372	1	.009	3	0	7	0	3	0	8
1228			min	-.007	3	-1.147	7	-.005	4	0	1	0	4	0	2
1229		5	max	.008	2	-.398	1	.009	3	0	7	0	3	0	8
1230			min	-.007	3	-1.225	7	-.005	4	0	1	0	4	0	2
1231	M124	1	max	0	9	0	6	.002	3	0	5	0	3	0	7
1232			min	-.005	3	0	1	-.003	4	0	1	0	1	0	2
1233		2	max	0	9	-2.063	4	.002	3	0	5	0	3	.001	7
1234			min	-.005	3	-6.329	5	-.003	4	0	1	0	4	0	2
1235		3	max	0	9	-4.734	4	.002	3	0	5	0	3	.005	7
1236			min	-.005	3	-14.519	5	-.003	4	0	1	0	4	.002	2
1237		4	max	0	9	-8.011	4	.002	3	0	5	0	3	.012	8
1238			min	-.005	3	-24.57	5	-.003	4	0	1	0	4	.004	2
1239		5	max	0	9	-11.894	4	.002	3	0	5	0	3	.024	8
1240			min	-.005	3	-36.482	5	-.003	4	0	1	0	4	.008	2
1241	M125	1	max	.002	2	0	7	.001	2	0	1	0	4	0	7
1242			min	-.002	9	0	2	-.001	1	0	2	0	1	0	3
1243		2	max	.002	2	-2.063	1	.001	2	0	1	0	2	.001	5
1244			min	-.002	9	-6.329	6	-.001	1	0	2	0	1	0	3
1245		3	max	.002	2	-4.734	1	.001	2	0	1	0	2	.005	5
1246			min	-.002	9	-14.519	6	-.001	1	0	2	0	1	.002	1
1247		4	max	.002	2	-8.011	1	.001	2	0	1	0	2	.012	5
1248			min	-.002	9	-24.57	6	-.001	1	0	2	0	1	.004	1
1249		5	max	.002	2	-11.894	1	.001	2	0	1	0	2	.024	5
1250			min	-.002	9	-36.482	6	-.001	1	0	2	0	1	.008	1
1251	M126	1	max	.003	1	0	5	0	6	0	5	0	3	0	5
1252			min	0	9	0	8	-.001	1	0	7	0	4	0	6
1253		2	max	.003	1	-2.339	9	0	6	0	5	0	7	.002	7
1254			min	0	9	-7.174	8	-.001	1	0	7	0	1	0	1
1255		3	max	.003	1	-4.678	9	0	6	0	5	0	7	.007	7
1256			min	0	9	-14.349	8	-.001	1	0	7	0	1	.002	1
1257		4	max	.003	1	-7.018	9	0	6	0	5	0	7	.015	8
1258			min	0	9	-21.525	8	-.001	1	0	7	0	1	.005	1
1259		5	max	.212	4	-9.271	9	.035	3	0	8	0	2	.027	7
1260			min	-.231	3	-28.701	6	-.087	7	0	6	0	7	.009	9
1261	M127	1	max	.003	2	0	6	0	2	0	5	0	9	0	5
1262			min	0	4	0	3	0	9	0	2	0	2	0	2
1263		2	max	.003	2	-2.339	2	0	2	0	5	0	3	.002	7
1264			min	0	4	-7.175	8	0	9	0	2	0	7	0	2
1265		3	max	.003	2	-4.678	2	0	2	0	5	0	2	.007	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
1266			min	0	4	-14.35	8	0	9	0	2	0	7	.002	2
1267		4	max	.003	2	-7.018	2	0	2	0	5	0	2	.015	7
1268			min	0	4	-21.525	8	0	9	0	2	0	7	.005	2
1269		5	max	.191	4	-9.322	3	.185	2	0	1	0	2	.027	6
1270			min	-.176	2	-28.801	5	-.038	8	0	4	0	4	.009	10
1271	M128	1	max	.008	3	.013	2	.004	2	0	5	0	4	0	2
1272			min	-.021	4	-.008	6	-.006	4	0	7	0	3	0	6
1273		2	max	.008	3	-.16	2	.004	2	0	5	0	4	0	5
1274			min	-.021	4	-.542	6	-.006	4	0	7	0	3	0	1
1275		3	max	.008	3	-.285	2	.004	2	0	5	0	4	0	6
1276			min	-.021	4	-.923	6	-.006	4	0	7	0	3	0	2
1277		4	max	.008	3	-.36	2	.004	2	0	5	0	2	0	6
1278			min	-.021	4	-1.153	6	-.006	4	0	7	0	3	0	2
1279		5	max	.008	3	-.385	2	.004	2	0	5	0	2	0	6
1280			min	-.021	4	-1.231	6	-.006	4	0	7	0	3	0	2
1281	M129	1	max	.004	2	.004	2	.003	1	0	1	0	4	0	2
1282			min	-.01	4	-.003	8	-.004	4	0	5	0	3	0	5
1283		2	max	.004	2	-.17	2	.003	1	0	1	0	8	0	8
1284			min	-.01	4	-.536	8	-.004	4	0	5	0	3	0	4
1285		3	max	.004	2	-.294	2	.003	1	0	1	0	8	0	8
1286			min	-.01	4	-.918	8	-.004	4	0	5	0	3	0	2
1287		4	max	.004	2	-.369	2	.003	1	0	1	0	8	0	8
1288			min	-.01	4	-1.148	8	-.004	4	0	5	0	3	0	2
1289		5	max	.004	2	-.395	2	.003	1	0	1	0	8	0	8
1290			min	-.01	4	-1.226	8	-.004	4	0	5	0	6	0	2
1291	M130	1	max	743.56	8	891.511	8	536.56	1	.435	2	1.9	2	2.24	8
1292			min	111.302	3	151.746	3	-540.776	2	-.248	1	-1.804	1	.157	3
1293		2	max	743.56	8	844.555	8	497.507	1	.435	2	.956	2	.661	8
1294			min	111.302	3	132.816	3	-501.723	2	-.248	1	-.885	4	-.103	3
1295		3	max	363.823	8	448.262	6	428.117	4	.551	2	.389	2	.253	8
1296			min	-17.485	3	139.006	4	-403.465	3	-.322	1	-.342	1	-.008	3
1297		4	max	363.823	8	406.238	6	428.117	4	.551	2	.654	4	-.064	4
1298			min	-17.485	3	121.684	4	-403.465	3	-.322	1	-.588	3	-.56	7
1299		5	max	0	11	0	11	0	11	0	11	0	11	0	11
1300			min	0	1	0	1	0	1	0	1	0	1	0	1
1301	M131	1	max	806.332	7	975.144	6	635.637	2	.449	3	2.302	1	2.413	6
1302			min	127.815	4	234.558	1	-626.315	1	-.293	4	-2.25	2	.421	1
1303		2	max	801.131	7	917.356	6	625.874	2	.449	3	1.175	1	.687	6
1304			min	144.725	4	212.096	1	-616.551	1	-.293	4	-1.107	2	.013	1
1305		3	max	386.166	7	492.948	5	578.332	2	.542	3	.387	3	.256	6
1306			min	14.788	4	162.568	3	-559.87	1	-.346	4	-.367	4	.005	1
1307		4	max	380.965	7	444.784	5	568.569	2	.542	3	.891	2	-.122	2
1308			min	31.699	4	143.244	3	-550.107	1	-.346	4	-.806	1	-.627	5
1309		5	max	0	11	.046	2	.01	1	0	11	0	11	0	11
1310			min	0	1	-.005	8	-.066	3	0	1	0	1	0	1
1311	M132	1	max	814.125	5	974.097	5	692.692	3	.382	1	2.345	4	2.421	5
1312			min	73.348	2	201.618	2	-688.663	4	-.259	2	-2.26	3	.282	2
1313		2	max	808.923	5	916.309	5	663.402	3	.382	1	1.123	4	.697	5
1314			min	90.258	2	179.157	2	-659.373	4	-.259	2	-1.031	3	-.066	2
1315		3	max	391.573	5	493.733	8	562.339	3	.461	4	.25	9	.257	5
1316			min	-34.985	2	150.152	1	-545.868	4	-.246	2	-.154	3	-.003	2
1317		4	max	386.371	5	445.568	8	533.049	3	.461	4	.839	3	-.085	1
1318			min	-18.075	2	130.828	1	-516.578	4	-.246	2	-.736	4	-.628	6
1319		5	max	0	11	.05	1	.01	4	0	11	0	11	0	11
1320			min	0	1	-.006	8	-.034	1	0	1	0	1	0	1
1321	M133	1	max	1152.995	2	52.999	8	50.076	1	.057	2	0	11	0	11
1322			min	-1131.414	1	13.849	3	-50.076	2	-.128	1	0	1	0	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
1323		2	max	1143.782	2	26.499	8	25.038	1	.057	2	.075	1	-.021	3
1324			min	-1120.119	1	6.924	3	-25.038	2	-.128	1	-.075	2	-.08	8
1325		3	max	1134.57	2	0	11	0	11	.057	2	.1	1	-.028	3
1326			min	-1108.824	1	0	1	0	1	-.128	1	-.1	2	-.106	8
1327		4	max	1125.357	2	-6.924	3	25.038	2	.057	2	.075	1	-.021	3
1328			min	-1097.529	1	-26.499	8	-25.038	1	-.128	1	-.075	2	-.08	8
1329		5	max	1116.145	2	-13.849	3	50.076	2	.057	2	0	11	0	11
1330			min	-1086.234	1	-52.999	8	-50.076	1	-.128	1	0	1	0	1
1331	M134	1	max	1840.954	3	53.336	7	36.938	2	.071	1	0	11	0	11
1332			min	-1854.864	4	12.963	4	-36.938	1	-.149	2	0	1	0	1
1333		2	max	1827.779	3	26.668	7	18.469	2	.071	1	.055	2	-.019	4
1334			min	-1839.607	4	6.482	4	-18.469	1	-.149	2	-.055	1	-.08	7
1335		3	max	1814.604	3	0	11	0	11	.071	1	.074	2	-.026	4
1336			min	-1824.349	4	0	1	0	1	-.149	2	-.074	1	-.107	7
1337		4	max	1801.43	3	-6.482	4	18.469	1	.071	1	.055	2	-.019	4
1338			min	-1809.092	4	-26.668	7	-18.469	2	-.149	2	-.055	1	-.08	7
1339		5	max	1788.255	3	-12.963	4	36.938	1	.071	1	0	11	0	11
1340			min	-1793.834	4	-53.336	7	-36.938	2	-.149	2	0	1	0	1
1341	M135	1	max	1091.472	1	52.472	5	57.522	3	.097	4	0	11	0	11
1342			min	-1120.06	2	15.232	2	-57.522	4	-.219	9	0	1	0	1
1343		2	max	1087.309	1	26.236	5	28.761	3	.097	4	.086	3	-.023	2
1344			min	-1113.815	2	7.616	2	-28.761	4	-.219	9	-.086	4	-.079	5
1345		3	max	1083.147	1	0	11	0	11	.097	4	.115	3	-.03	2
1346			min	-1107.57	2	0	1	0	1	-.219	9	-.115	4	-.105	5
1347		4	max	1078.984	1	-7.616	2	28.761	4	.097	4	.086	3	-.023	2
1348			min	-1101.325	2	-26.236	5	-28.761	3	-.219	9	-.086	4	-.079	5
1349		5	max	1074.821	1	-15.232	2	57.522	4	.097	4	0	11	0	11
1350			min	-1095.08	2	-52.472	5	-57.522	3	-.219	9	0	1	0	1

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[..	Dir	LC	phi*Pnc...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
1	M14	PIPE_3.0	.815	7.25	4	.367	7.25		3	19288.9...	65205	5.749	5.749	3...	H3-6
2	M1	PIPE_3.0	.551	7.25	3	.354	7.25		2	19288.9...	65205	5.749	5.749	3...	H1-1b
3	M68	L4X4X4	.385	3.473	1	.204	2.496	y	2	49756.3...	62532	3.138	6.715	1...	H2-1
4	M24	PIPE_3.0	.687	7.25	2	.200	7.25		1	19288.9...	65205	5.749	5.749	3...	H1-1b
5	M67	L4X4X4	.386	0	1	.197	.977	y	2	49756.3...	62532	3.138	6.715	1...	H2-1
6	M2	HSS4X4X4	.225	2.743	3	.192	2.743	y	9	133332....	139518	16.181	16.181	1...	H1-1b
7	M25	HSS4X4X4	.306	2.743	3	.187	0	z	2	133332....	139518	16.181	16.181	1...	H1-1b
8	M75	L4X4X4	.386	0	3	.183	.977	y	4	49756.3...	62532	3.138	6.715	1...	H2-1
9	M72	L4X4X4	.353	3.473	4	.182	2.496	y	3	49756.3...	62532	3.138	6.715	1...	H2-1
10	M21	PL1/2x6	.293	0	3	.178	.25	y	3	95031.5...	97200	1.012	12.15	1...	H1-1b
11	M3	PIPE_2.0	.507	6.495	9	.177	13.1...		2	4678.524	32130	1.872	1.872	2...	H1-1b
12	M26	PIPE_2.0	.455	6.495	7	.164	13.1...		4	4678.524	32130	1.872	1.872	2...	H1-1b
13	M15	HSS4X4X4	.296	2.743	2	.160	0	z	1	133332....	139518	16.181	16.181	1...	H1-1b
14	M76	L4X4X4	.287	3.473	3	.159	2.496	y	4	49756.3...	62532	3.138	6.715	1...	H2-1
15	MP2A	PIPE_2.0	.409	4.063	7	.152	4.063		2	20866.7...	32130	1.872	1.872	2...	H1-1b
16	M71	L4X4X4	.360	0	2	.152	0	y	1	49756.3...	62532	3.138	6.715	1...	H2-1
17	MP2B	PIPE_2.0	.446	4.063	6	.147	.438		4	20866.7...	32130	1.872	1.872	2...	H1-1b
18	MP1C	PIPE_2.0	.382	4.063	8	.141	.438		3	20866.7...	32130	1.872	1.872	2...	H1-1b
19	M20	PL1/2x6	.255	.25	3	.140	.25	y	3	95031.5...	97200	1.012	12.15	1...	H1-1b
20	M135	PIPE_2.0	.073	0	1	.133	0		9	14898.0...	32130	1.872	1.872	1...	H1-1b*
21	M130	PIPE_3.0	.414	0	8	.129	2.643		2	19288.9...	65205	5.749	5.749	2...	H1-1b
22	M31	PL1/2x6	.261	.25	1	.128	.25	y	1	95031.5...	97200	1.012	12.15	1...	H1-1b
23	M131	PIPE_3.0	.454	0	2	.128	0		7	19288.9...	65205	5.749	5.749	2...	H1-1b
24	M16	PIPE_2.0	.455	6.495	8	.126	13.1...		3	4678.524	32130	1.872	1.872	2...	H1-1b

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[..	Dir	LC	phi*Pnc...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
25	MP1B	PIPE_2.0	.381	4.063	7	.125	.438		2	20866.7...	32130	1.872	1.872	2...	H1-1b
26	M132	PIPE_3.0	.442	0	5	.124	0		5	19288.9...	65205	5.749	5.749	2...	H1-1b
27	M17	PIPE_4.0	.179	3.042	3	.122	3.042		3	88587.9...	93240	10.631	10.631	1...	H1-1b
28	MP2C	PIPE_2.0	.444	4.063	8	.116	4.063		3	20866.7...	32130	1.872	1.872	2...	H1-1b
29	M27	PIPE_4.0	.185	3.042	1	.112	3.042		1	88587.9...	93240	10.631	10.631	1...	H1-1b
30	MP4A	PIPE_2.0	.674	4.047	9	.110	4.047		9	8922.084	32130	1.872	1.872	3...	H1-1b
31	MP1A	PIPE_2.0	.355	4.063	5	.103	.438		2	20866.7...	32130	1.872	1.872	2...	H1-1b
32	M134	PIPE_2.0	.124	0	3	.094	0		2	14898.0...	32130	1.872	1.872	1...	H1-1b*
33	MP3A	PIPE_2.5	.764	4.156	2	.094	4.047		9	20573.2...	50715	3.596	3.596	3...	H1-1b
34	M5	PIPE_4.0	.133	3.042	3	.085	3.042		3	88587.9...	93240	10.631	10.631	2...	H1-1b
35	MP4B	PIPE_2.0	.487	4.047	6	.085	.438		7	8922.084	32130	1.872	1.872	3...	H1-1b
36	MP4C	PIPE_2.0	.487	4.047	5	.083	.438		3	8922.084	32130	1.872	1.872	4...	H1-1b
37	M133	PIPE_2.0	.095	4.003	2	.082	0		1	14898.0...	32130	1.872	1.872	1...	H1-1b
38	M29	HSS4X4X4	.130	.958	1	.076	.958	z	2	138982....	139518	16.181	16.181	2...	H1-1b
39	M30	PL1/2x6	.153	.25	1	.071	.25	y	1	95031.5...	97200	1.012	12.15	1...	H1-1b
40	M8	PL1/2x6	.192	.25	2	.069	0	y	2	95031.5...	97200	1.012	12.15	1...	H1-1b
41	MP3B	PIPE_2.5	.669	4.156	4	.068	4.047		3	20573.2...	50715	3.596	3.596	2...	H1-1b
42	M19	HSS4X4X4	.131	.958	3	.067	.958	z	4	138982....	139518	16.181	16.181	2...	H1-1b
43	M9	PL1/2x6	.184	.25	3	.066	0	y	9	95031.5...	97200	1.012	12.15	1...	H1-1b
44	M7	HSS4X4X4	.097	.958	3	.063	.958	z	3	138982....	139518	16.181	16.181	2...	H1-1b
45	M70	L2x2x4	.050	.583	3	.059	0	z	9	30063.3...	30585.6	.691	1.577	1...	H2-1
46	M73	L2x2x4	.047	.583	3	.059	.583	y	9	30063.3...	30585.6	.691	1.577	1...	H2-1
47	MP3C	PIPE_2.5	.669	4.156	3	.051	4.047		3	20573.2...	50715	3.596	3.596	2...	H1-1b
48	M77	L2x2x4	.049	.583	4	.038	.583	y	5	30063.3...	30585.6	.691	1.577	1...	H2-1
49	M74	L2x2x4	.054	.565	4	.038	0	z	5	30063.3...	30585.6	.691	1.577	1...	H2-1
50	M18	HSS4X4X4	.082	0	3	.036	.958	y	3	138982....	139518	16.181	16.181	1...	H1-1b
51	M6	HSS4X4X4	.065	0	2	.031	.958	y	2	138982....	139518	16.181	16.181	1...	H1-1b
52	M49	L2.5x2.5x3	.510	1.775	1	.024	7.101	y	1	6512.721	29192.4	.873	1.529	1...	H2-1
53	M48	L2.5x2.5x3	.447	2.071	1	.022	7.101	z	1	6512.721	29192.4	.873	1.517	1...	H2-1
54	M64	L2.5x2.5x3	.366	2.959	3	.021	7.101	z	3	6512.721	29192.4	.873	1.488	1...	H2-1
55	M28	HSS4X4X4	.058	0	1	.021	.958	y	1	138982....	139518	16.181	16.181	1...	H1-1b
56	M65	L2.5x2.5x3	.501	0	3	.020	7.101	y	3	6512.721	29192.4	.873	1.668	1...	H2-1
57	M62	L2.5x2.5x3	.384	2.885	4	.020	7.101	y	4	6512.721	29192.4	.873	1.489	1...	H2-1
58	M61	L2.5x2.5x3	.400	0	4	.017	7.101	z	4	6512.721	29192.4	.873	1.666	1...	H2-1
59	M38	L2.5x2.5x3	.079	2.179	4	.017	0	y	9	16001.0...	29192.4	.873	1.728	1...	H2-1
60	M69	L2x2x4	.056	.583	2	.017	.583	z	2	30063.3...	30585.6	.691	1.577	1...	H2-1
61	M66	L2x2x4	.061	.577	2	.017	0	y	2	30063.3...	30585.6	.691	1.577	1...	H2-1
62	M54	LL3x3x4x0	.226	0	8	.016	6.867	y	3	61399.9...	93312	6.48	4.911	1...	H1-1b
63	M57	LL3x3x4x0	.227	0	7	.015	6.867	y	1	61399.9...	93312	6.48	4.911	1...	H1-1b
64	M4	LL3x3x4x0	.213	0	5	.012	6.867	z	4	61399.9...	93312	6.48	4.911	1...	H1-1b
65	M40	L2.5x2.5x3	.100	2.134	1	.012	0	y	4	16001.0...	29192.4	.873	1.728	1...	H2-1
66	M39	L2.5x2.5x3	.080	2.09	3	.011	0	y	9	16001.0...	29192.4	.873	1.728	1...	H2-1

Envelope AISI S100-10: LRFD Cold Formed Steel Code Checks

Member	Shape	Code ...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pn[lb]	phi*Tn[lb]	phi*Mny...	phi*Mnz...	Cb	Cmyy	Cmzz	Eqn
No Data to Print ...																

Envelope AA ADM1-15: LRFD - Building Aluminum Code Checks

Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc...	phi*Pnt[..	phi*Mn...	phi*Mn...	phi*Vny...	phi*Vnz...	Cb	Eqn
No Data to Print ...																

Wood Wall Panel Parameters

	Label	Top Plate	Sill Plate	Studs	Min Stud Sp...	Max Stud Sp...	Green Lumb...	Header Size	Header Matl
1	Typical	2-2X6	2X6	2X6	16	16		6x8	Same as Wall
2	Typical_APP	2-2X6	2X6	2X6	16	16		6x8	Same as Wall

Additional Wood Wall Panel Parameters

	Label	Schedule	Min. Pan...	Max. Pa...	Double S..	Max. Nai...	Min. Nail...	HD Chor...	HD Chor...	Hold Down	Chord...	Eccen...
1	Typical	IBC2012 Pan...	.375	.75	Optimum	6-in.	2-in.	2-2X6	Same as...	CAN SIMPS...	SIMP...	Yes
2	Typical_APP	IBC2012 Pan...	.375	.75	Optimum	6-in.	2-in.	2-2X6	Same as...	CAN SIMPS...	SIMP...	Yes

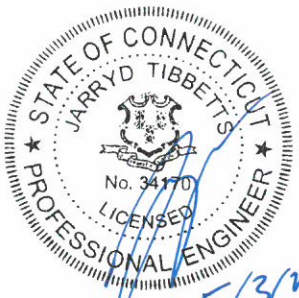
Exhibit E

Mount Analysis

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

Structural Analysis Report

Existing 170 ft Nudd Corporation Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT04066-S
Customer Site Name: North Branford East
Carrier Name: T-Mobile (App#: 194455-1)
Carrier Site ID / Name: CT11372B / SBA N Branford East
Site Location: 39 Ciro Road
North Branford, Connecticut
New Haven County
Latitude: 41.331060
Longitude: -72.756172



5/3/22

Analysis Result:

Max Structural Usage: 94.1% [Pass]
Max Foundation Usage: 99.0% [Pass]
Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Kevin Azisllari

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

Structural Analysis Report

Existing 170 ft Nudd Corporation Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT04066-S

Customer Site Name: North Branford East

Carrier Name: T-Mobile (App#: 194455-1)

Carrier Site ID / Name: CT11372B / SBA N Branford East

Site Location: 39 Ciro Road

North Branford, Connecticut

New Haven County

Latitude: 41.331060

Longitude: -72.756172

Analysis Result:

Max Structural Usage: 94.1% [Pass]

Max Foundation Usage: 99.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Kevin Azisllari

Introduction

The purpose of this report is to summarize the analysis results on the 170 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 # 01-8471-1 Dated 08/08/2001
Foundation Drawing	Fred A. Nudd Corporation, Project # 01-8471-1 Dated 08/08/2001
Geotechnical Report	Jaworski, Project # 01480G Dated 07/23/2001
Modification Drawings	N/A
Mount Analysis	TES 127371, dated 04/25/2022

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} = 130.0 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
Seismic Parameters:	S_S = 0.178, S_1 = 0.061

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
-	167.0	3	Ericsson - AIR21 B2A/B4P - Panel	Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
-		3	Ericsson - AIR21 B4A/B2P - Panel			
-		3	Ericsson - KRY 112 144 - Double TMA			
-		3	Ericsson - S11B12 - RRU			
-	165.0	3	Commscope - LNX-6515DS-A1M - Panel			
6	147.0	3	Powerwave 7770 - Panel	Low Profile Platform	(12) 1 5/8" (4) 1/2" DC (1) 2" Conduit (2) 3/8" Fiber (3) 3/8" RET	AT&T*
7		6	Kathrein 800 10965 - Panel			
8		6	Powerwave LGP21402 TMA			
9		6	Powerwave LGP21903 Diplexer			
10		3	Ericsson RRUS 8843 B2 B66A			
11		3	Ericsson RRUS 4449 B5, B12			
12		1	Raycap DC6-48-60-18-8F			
13		1	Raycap DC6-48-60-18-8C			
14	137.0	3	RFS - APXVSPP18-C-A20 - Panel	Low Profile Platform	(3) 1 1/4"	Sprint**
15		3	RFS - APXVTM14-C-I20 - Panel			
16		3	ALU - 800MHz - RRH			
17		3	ALU - 1900MHz - RRH			
18		3	ALU - TD-RRH8x20-25 - RRU			
19		3	ALU - 800MHz Filter			
20		4	RFS - ACU-A20-N - RET			
21	110.0	3	JMA Wireless MX08FRO665-21 - Panel	Platform w/ Hand Rails [(1) Commscope MC-PK8-DSH]	(1) 1.6" Hybrid	Dish Wireless
22		3	Fujitsu TA08025-B605 - RRU			
23		3	Fujitsu TA08025-B604 - RRU			
24		1	Raycap RDIDC-9181-PF-48 - COVP			
25	75.0	1	GPS	(1) Standoff	(1) 1/2"	Sprint

*2" conduit will contain proposed fiber and DC lines

** Sprint is terminated but not yet removed, the loading is included in the current SA.

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
1	167.0	3	Ericsson AIR 21 B2A/B4P - Panel	Low Profile Platform w/ mods	(11) 1 5/8" (1) 1.9" Fiber	T-Mobile
2		3	Ericsson AIR 21 B4A/B2P - Panel			
3		3	Ericsson KRY 112 144/1 - TMA			
4		3	Ericsson 4480 B71 + B85 - RRU			
5	165.0	3	RFS APXVAALL24_43-U-NA20 - Panel			

The proposed transmission lines can be installed inside the pole shafts.

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:	**60.9%**	**45.7%**	**94.1%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4578.7	40.0	60.2

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 0.9609 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 ANSI/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 60.85% at 0.0ft

Structure:	CT04066-S-SBA	**Code:**	EIA/TIA-222-G	5/3/2022
Site Name:	North Branford East	**Exposure:**	C	
Height:	170.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

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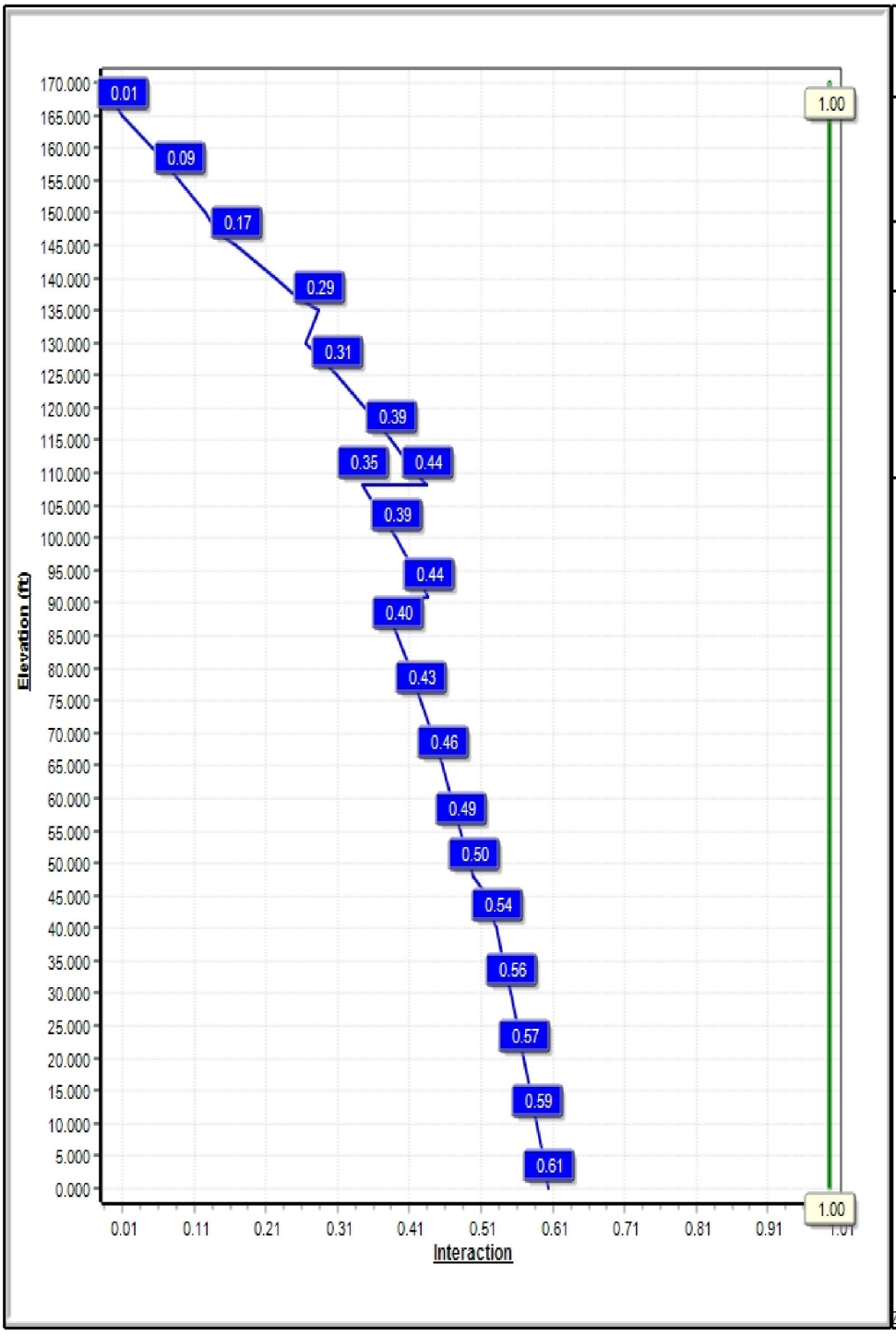
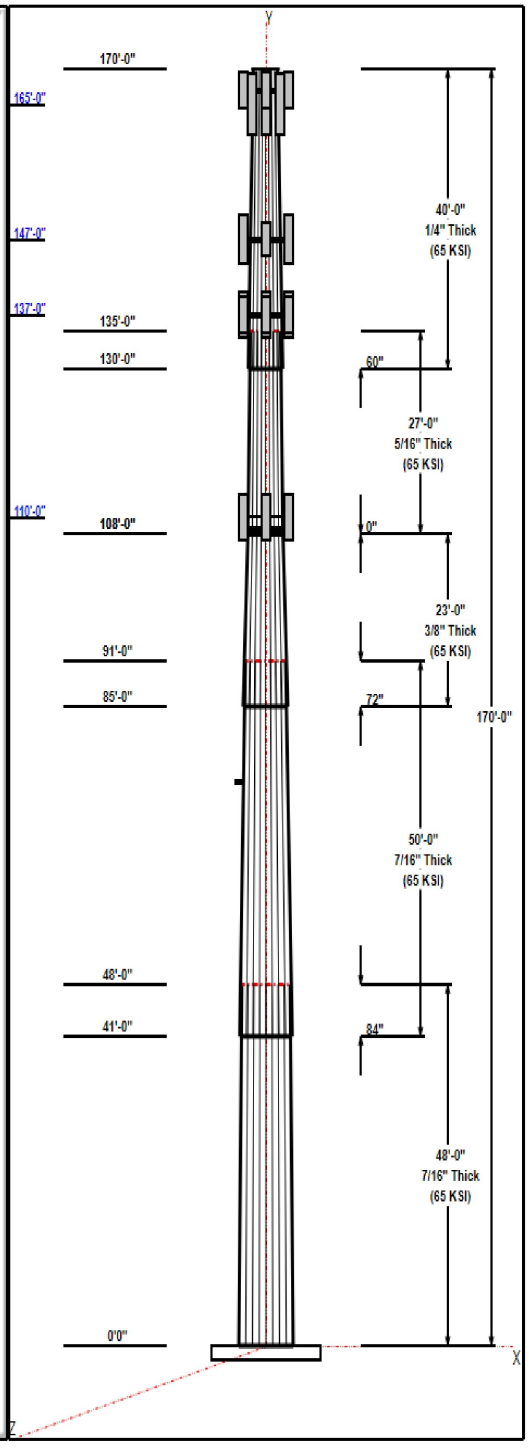
Dead Load Factor:	1.20
Wind Load Factor:	1.60

Load Case : 1.2D + 1.6W 101 mph Wind

Iterations: 23





Structure: CT04066-S-SBA

Type: Tapered
Site Name: North Branford East
Height: 170.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.25074

5/3/2022

Tower Engineering Solutions

Shaft Properties

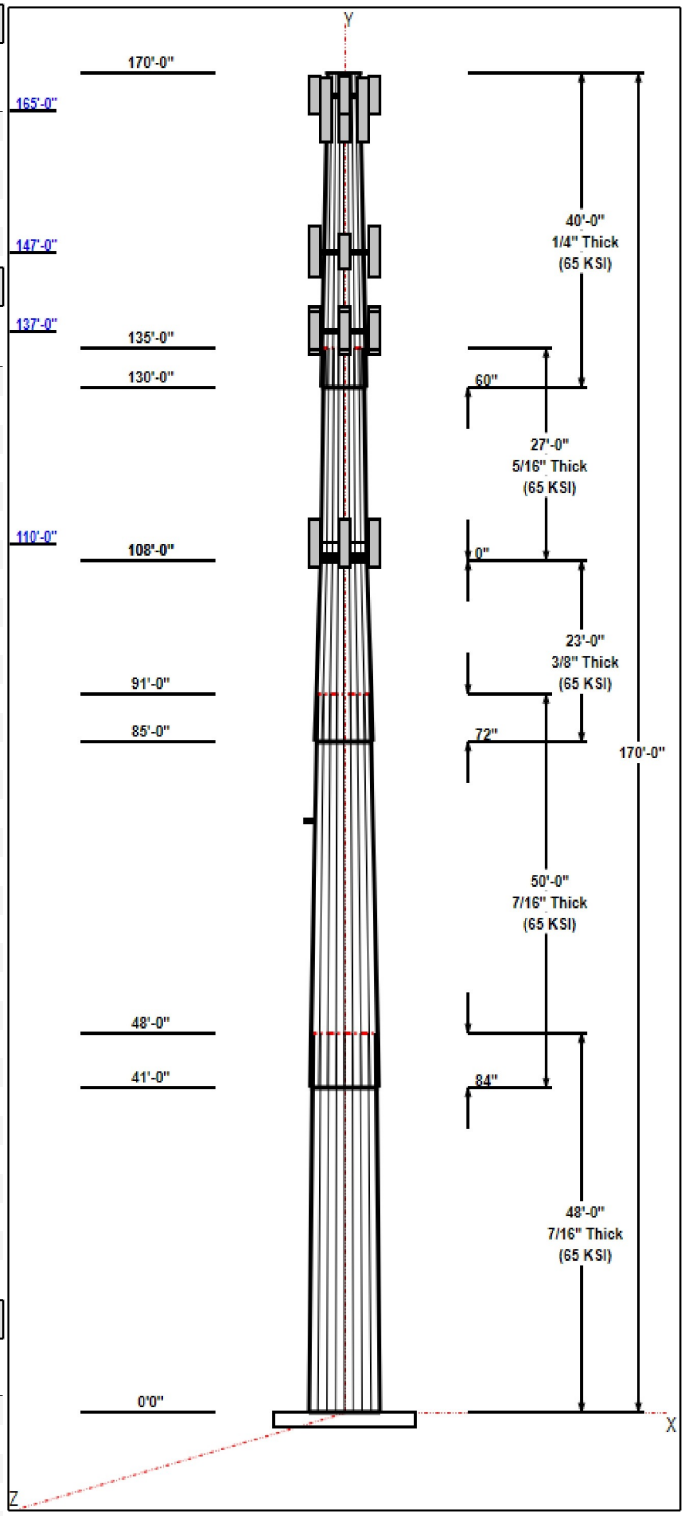
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	52.46	64.50	0.438		0.25074	65
2	50.00	42.56	55.09	0.438	Slip	0.25074	65
3	23.00	39.05	44.81	0.375	Slip	0.25074	65
4	27.00	32.28	39.05	0.313	Butt	0.25074	65
5	40.00	24.00	34.03	0.250	Slip	0.25074	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
170.00	170.00	1	6' Lightning rod	
167.00	167.00	3	Ericsson AIR 21 B2A/B4P	T-Mobile
167.00	167.00	3	Ericsson AIR 21 B4A/B2P	T-Mobile
167.00	167.00	3	Ericsson KRY 112 144/1	T-Mobile
167.00	167.00	1	Low Profile	T-Mobile
167.00	167.00	3	Ericsson 4480 B71 + B85	T-Mobile
167.00	167.00	1	addition 8'x2 7/8" mount	T-Mobile
165.00	165.00	3	RFS	T-Mobile
147.00	147.00	3	7770	AT&T
147.00	147.00	6	800 10965	AT&T
147.00	147.00	6	Powerwave LGP21402	AT&T
147.00	147.00	6	Powerwave LGP21903	AT&T
147.00	147.00	3	Ericsson RRUS 8843 B2	AT&T
147.00	147.00	3	Ericsson RRUS 4449 B5,	AT&T
147.00	147.00	1	Raycap DC6-48-60-18-8F	AT&T
147.00	147.00	1	Raycap DC6-48-60-18-8C	AT&T
147.00	147.00	1	Low Profile	AT&T
137.00	137.00	3	APXVSPP18-C-A20	Sprint
137.00	137.00	3	APXVTM14-C-I20	Sprint
137.00	137.00	3	800MHz - RRH	Sprint
137.00	137.00	3	1900MHz - RRH	Sprint
137.00	137.00	3	TD-RRH8x20-25 - RRU	Sprint
137.00	137.00	4	ACU-A20-N - RET	Sprint
137.00	137.00	3	ALU - 800MHz Filter	Sprint
137.00	137.00	1	Low Profile	Sprint
110.00	110.00	3	JMA Wireless	Dish Wireless
110.00	110.00	3	Fujitsu TA08025-B605	Dish Wireless
110.00	110.00	3	Fujitsu TA08025-B604	Dish Wireless
110.00	110.00	1	Raycap	Dish Wireless
110.00	110.00	1	MC-PK8-DSH	Dish Wireless
75.00	75.00	1	Standoff	Sprint
75.00	75.00	1	GPS	Sprint

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	167.00	Inside	1 5/8" Coax	T-Mobile
0.00	167.00	Inside	1.9" Fiber	T-Mobile
0.00	147.00	Inside	1 5/8" Coax	AT&T
0.00	147.00	Inside	1/2" DC	AT&T
0.00	147.00	Inside	2" Conduit	AT&T
0.00	147.00	Inside	3/8" Fiber	AT&T
0.00	147.00	Inside	3/8" RET	AT&T
0.00	137.00	Inside	1 1/4" Coax	Sprint
0.00	110.00	Outside	1.6" Hybrid	Dish Wireless



0.00	75.00	Inside	1/2"	Coax	Sprint

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
29	2.00" A687	105.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.2500	64.5	50.0	Round

Reactions

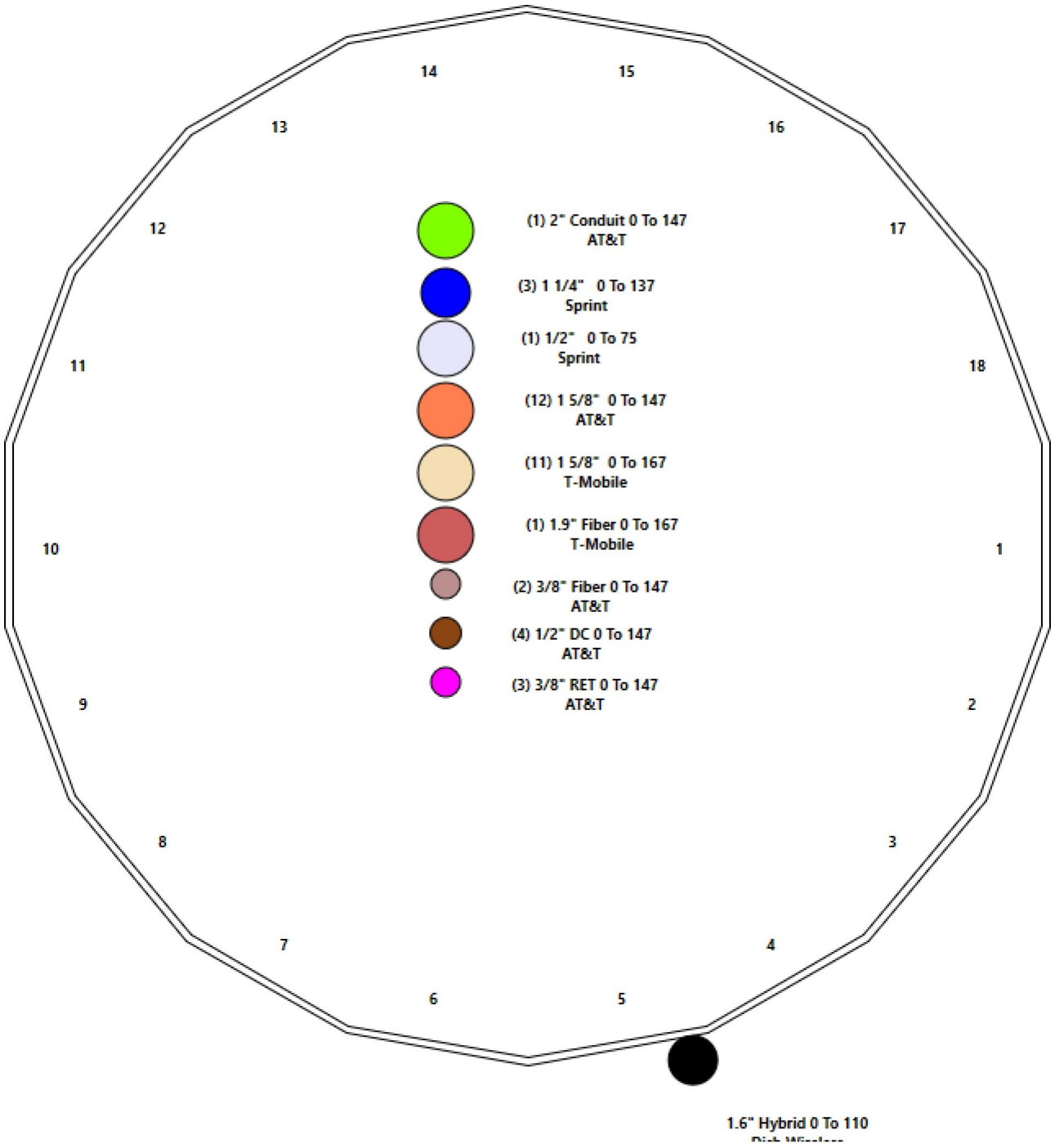
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 101 mph Wind	4578.7	40.0	60.2
0.9D + 1.6W 101 mph Wind	4541.2	40.0	45.1
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1191.3	10.6	88.2
1.2D + 1.0E	216.3	1.8	60.2
0.9D + 1.0E	214.2	1.8	45.2
1.0D + 1.0W 60 mph Wind	1005.1	8.8	50.2

Structure: CT04066-S-SBA - Coax Line Placement

Type: Monopole
Site Name: North Branford East
Height: 170.00 (ft)

5/3/2022

Tower Engineering Solutions



Shaft Properties

Structure:	CT04066-S-SBA		**Code:**	TIA-222-G	5/3/2022
Site Name:	North Branford East		**Exposure:**	C	
Height:	170.00 (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	48.000	0.4375	65		0.00	13,165
2	18	50.000	0.4375	65	Slip	84.00	11,432
3	18	23.000	0.3750	65	Slip	72.00	3,871
4	18	27.000	0.3125	65	Flange	0.00	3,221
5	18	40.000	0.2500	65	Slip	60.00	3,107
					Total Shaft Weight:		**34,795**

	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	52.46	48.00	72.24	24706.6	19.73	119.9	0.250735
2	55.09	41.00	75.90	28646.28	20.79	125.93	42.56	91.00	58.49	13110.0	15.74	97.28	0.250735
3	44.81	85.00	52.89	13195.46	19.66	119.50	39.05	108.00	46.03	8695.97	16.95	104.1	0.250735
4	39.05	108.0	38.42	7281.83	20.62	124.95	32.28	135.00	31.70	4092.10	16.80	103.2	0.250735
5	34.03	130.0	26.80	3864.03	22.59	136.12	24.00	170.00	18.84	1343.00	15.52	96.00	0.250735

Load Summary

Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (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	170.00	6' Lightning rod	1	6.50	0.38	1.00	43.26	1.481	1.00	0.00	0.00
2	167.00	Ericsson AIR 21 B2A/B4P	3	91.50	6.09	0.84	262.57	7.200	0.85	0.00	0.00
3	167.00	Ericsson AIR 21 B4A/B2P	3	90.40	6.09	0.85	261.47	7.200	0.85	0.00	0.00
4	167.00	Ericsson KRY 112 144/1	3	11.00	0.41	0.70	21.90	0.890	0.74	0.00	0.00
5	167.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2823.04	39.852	1.00	0.00	0.00
6	167.00	Ericsson 4480 B71 + B85	3	93.00	2.85	0.67	165.71	3.532	0.67	0.00	0.00
7	167.00	addition 8'x2 7/8" mount pipe	1	29.20	2.80	1.00	90.81	6.475	1.00	0.00	0.00
8	165.00	RFS APXVAALL24_43-U-NA20	3	122.80	20.24	0.73	555.12	22.159	0.73	0.00	0.00
9	147.00	7770	3	35.00	5.50	0.73	169.84	6.563	0.73	0.00	0.00
10	147.00	800 10965	6	108.60	13.81	0.71	406.06	15.387	0.71	0.00	0.00
11	147.00	Powerwave LGP21402 TMA	6	14.10	1.29	0.64	39.05	2.124	0.64	0.00	0.00
12	147.00	Powerwave LGP21903 Diplexer	6	5.50	0.27	0.84	13.91	0.667	0.84	0.00	0.00
13	147.00	Ericsson RRUS 8843 B2 B66A	3	72.00	1.64	0.67	118.75	2.136	0.67	0.00	0.00
14	147.00	Ericsson RRUS 4449 B5, B12	3	71.00	1.97	0.67	124.27	2.516	0.67	0.00	0.00
15	147.00	Raycap DC6-48-60-18-8F	1	31.80	0.92	1.00	93.50	1.357	1.00	0.00	0.00
16	147.00	Raycap DC6-48-60-18-8C	1	20.00	1.26	1.00	72.65	1.918	1.00	0.00	0.00
17	147.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2806.27	39.626	1.00	0.00	0.00
18	137.00	APXVSPP18-C-A20	3	57.00	8.02	0.85	228.29	10.789	0.86	0.00	0.00
19	137.00	APXVTM14-C-I20	3	56.00	6.34	0.86	214.67	7.443	0.88	0.00	0.00
20	137.00	800MHz - RRH	3	53.00	2.49	0.67	126.29	3.623	0.69	0.00	0.00
21	137.00	1900MHz - RRH	3	44.00	3.80	0.67	152.18	5.178	0.69	0.00	0.00
22	137.00	TD-RRH8x20-25 - RRU	3	70.00	4.05	0.67	179.26	4.855	0.69	0.00	0.00
23	137.00	ACU-A20-N - RET	4	1.00	0.14	0.78	5.26	0.434	0.80	0.00	0.00
24	137.00	ALU - 800MHz Filter	3	8.80	0.78	0.50	26.28	1.421	0.55	0.00	0.00
25	137.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2797.10	39.502	1.00	0.00	0.00
26	110.00	JMA Wireless MX08FRO665-21	3	64.50	12.49	0.74	346.49	13.910	0.74	0.00	0.00
27	110.00	Fujitsu TA08025-B605	3	75.00	1.96	0.67	125.71	2.504	0.67	0.00	0.00
28	110.00	Fujitsu TA08025-B604	3	63.90	1.96	0.67	112.98	2.504	0.67	0.00	0.00
29	110.00	Raycap RDIDC-9181-PF-48	1	21.90	2.01	1.00	73.52	2.561	1.00	0.00	0.00
30	110.00	MC-PK8-DSH	1	1727.00	37.59	1.00	3363.29	83.381	1.00	0.00	0.00
31	75.00	Standoff	1	40.00	2.63	0.75	114.90	8.199	0.75	0.00	0.00
32	75.00	GPS	1	10.00	1.00	1.00	37.36	1.664	1.00	0.00	0.00
		Totals:	**84**	**10,396.30**			**24,666.19**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	167.00	(11) 1 5/8" Coax	0.00	Inside
0.00	167.00	(1) 1.9" Fiber	0.00	Inside
0.00	147.00	(12) 1 5/8" Coax	0.00	Inside
0.00	147.00	(4) 1/2" DC	0.00	Inside
0.00	147.00	(1) 2" Conduit	0.00	Inside
0.00	147.00	(2) 3/8" Fiber	0.00	Inside
0.00	147.00	(3) 3/8" RET	0.00	Inside
0.00	137.00	(3) 1 1/4" Coax	0.00	Inside
0.00	110.00	(1) 1.6" Hybrid	1.60	Outside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
0.00	75.00	(1) 1/2" Coax			0.00	Inside					

Shaft Section Properties

Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (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

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	63.246	87.215	43469.5	24.08	144.56	73.1	1353.	1498.7
10.00		0.4375	61.993	85.474	40918.1	23.57	141.70	73.7	1300.	1469.1
15.00		0.4375	60.739	83.733	38468.6	23.07	138.83	74.3	1247.	1439.4
20.00		0.4375	59.485	81.992	36118.8	22.56	135.97	74.9	1195.	1409.8
25.00		0.4375	58.232	80.251	33866.7	22.06	133.10	75.5	1145.	1380.2
30.00		0.4375	56.978	78.511	31710.3	21.55	130.24	76.1	1096.	1350.6
35.00		0.4375	55.724	76.770	29647.4	21.05	127.37	76.6	1047.	1321.0
40.00		0.4375	54.471	75.029	27675.9	20.54	124.50	77.2	1000.	1291.3
41.00	Bot - Section 2	0.4375	54.220	74.681	27292.4	20.44	123.93	77.4	991.4	254.7
45.00		0.4375	53.217	73.288	25793.8	20.04	121.64	77.8	954.7	2030.6
48.00	Top - Section 1	0.4375	53.340	73.459	25974.3	20.09	121.92	0.0	0.0	1498.0
50.00		0.4375	52.838	72.762	25242.6	19.88	120.77	78.0	941.0	497.6
55.00		0.4375	51.585	71.022	23473.9	19.38	117.91	78.6	896.3	1223.2
60.00		0.4375	50.331	69.281	21789.7	18.87	115.04	79.2	852.7	1193.5
65.00		0.4375	49.077	67.540	20188.1	18.37	112.18	79.8	810.2	1163.9
70.00		0.4375	47.824	65.799	18667.0	17.86	109.31	80.4	768.8	1134.3
75.00		0.4375	46.570	64.058	17224.2	17.36	106.45	81.0	728.5	1104.7
80.00		0.4375	45.316	62.317	15857.8	16.85	103.58	81.6	689.2	1075.1
85.00	Bot - Section 3	0.4375	44.063	60.577	14565.6	16.35	100.71	82.2	651.1	1045.5
90.00		0.4375	42.809	58.836	13345.6	15.84	97.85	82.5	614.0	1903.0
91.00	Top - Section 2	0.3750	43.308	51.099	11900.1	18.95	115.49	0.0	0.0	374.0
95.00		0.3750	42.305	49.906	11085.5	18.48	112.81	79.7	516.1	687.4
100.00		0.3750	41.051	48.413	10120.6	17.89	109.47	80.4	485.6	836.4
105.00		0.3750	39.798	46.921	9213.4	17.30	106.13	81.0	456.0	811.0
108.00	Top - Section 3	0.3750	39.046	46.026	8696.0	16.95	104.12	81.5	438.7	474.4
108.00	Bot - Section 4	0.3125	39.046	38.417	7281.8	20.34	124.95	77.1	367.3	
110.00		0.3125	38.544	37.920	7002.6	20.34	123.34	77.5	357.8	259.8
115.00		0.3125	37.290	36.676	6336.1	19.63	119.33	78.3	334.7	634.6
120.00		0.3125	36.037	35.433	5713.3	18.92	115.32	79.1	312.3	613.4
125.00		0.3125	34.783	34.189	5132.6	18.22	111.31	80.0	290.6	592.3
130.00	Bot - Section 5	0.3125	33.529	32.946	4592.7	17.51	107.29	80.8	269.8	571.1
135.00	Top - Section 4	0.2500	32.776	25.808	3449.6	21.71	131.10	0.0	0.0	997.5
137.00		0.2500	32.274	25.410	3292.5	21.35	129.10	76.3	200.9	174.3
140.00		0.2500	31.522	24.813	3065.9	20.82	126.09	76.9	191.6	256.4
145.00		0.2500	30.268	23.819	2711.7	19.94	121.07	78.0	176.5	413.7
147.00		0.2500	29.767	23.421	2578.1	19.58	119.07	78.4	170.6	160.7
150.00		0.2500	29.015	22.824	2386.0	19.05	116.06	79.0	162.0	236.0
155.00		0.2500	27.761	21.829	2087.4	18.17	111.04	80.0	148.1	379.9
160.00		0.2500	26.507	20.834	1814.8	17.29	106.03	81.1	134.9	362.9
165.00		0.2500	25.254	19.840	1567.1	16.40	101.01	82.1	122.2	346.0
167.00		0.2500	24.752	19.442	1474.7	16.05	99.01	82.5	117.3	133.7
170.00		0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	195.4
										34795.0

Wind Loading - Shaft

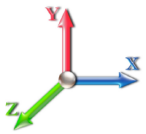
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

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	498.35	0.650	0.000	5.00	27.024	17.57	651.9	0.0	1798.4
10.00		1.00	0.85	21.088	23.20	488.47	0.650	0.000	5.00	26.494	17.22	639.1	0.0	1762.9
15.00		1.00	0.85	21.088	23.20	478.59	0.650	0.000	5.00	25.964	16.88	626.3	0.0	1727.3
20.00		1.00	0.90	22.375	24.61	482.81	0.650	0.000	5.00	25.433	16.53	651.0	0.0	1691.8
25.00		1.00	0.95	23.451	25.80	483.87	0.650	0.000	5.00	24.903	16.19	668.1	0.0	1656.2
30.00		1.00	0.98	24.369	26.81	482.62	0.650	0.000	5.00	24.372	15.84	679.4	0.0	1620.7
35.00		1.00	1.01	25.172	27.69	479.72	0.650	0.000	5.00	23.842	15.50	686.6	0.0	1585.2
40.00		1.00	1.04	25.890	28.48	475.57	0.650	0.000	5.00	23.311	15.15	690.4	0.0	1549.6
41.00	Bot - Section 2	1.00	1.05	26.025	28.63	474.61	0.650	0.000	1.00	4.599	2.99	136.9	0.0	305.7
45.00		1.00	1.07	26.540	29.19	470.42	0.650	0.000	4.00	18.479	12.01	561.0	0.0	2436.7
48.00	Top - Section 1	1.00	1.08	26.903	29.59	466.93	0.650	0.000	3.00	13.636	8.86	419.7	0.0	1797.6
50.00		1.00	1.09	27.135	29.85	472.28	0.650	0.000	2.00	8.985	5.84	278.9	0.0	597.1
55.00		1.00	1.12	27.685	30.45	465.73	0.650	0.000	5.00	22.090	14.36	699.6	0.0	1467.8
60.00		1.00	1.14	28.197	31.02	458.59	0.650	0.000	5.00	21.560	14.01	695.5	0.0	1432.3
65.00		1.00	1.16	28.676	31.54	450.95	0.650	0.000	5.00	21.030	13.67	689.9	0.0	1396.7
70.00		1.00	1.17	29.127	32.04	442.87	0.650	0.000	5.00	20.499	13.32	683.1	0.0	1361.2
75.00	Appurtenance(s)	1.00	1.19	29.553	32.51	434.40	0.650	0.000	5.00	19.969	12.98	675.1	0.0	1325.6
80.00		1.00	1.21	29.958	32.95	425.59	0.650	0.000	5.00	19.438	12.63	666.2	0.0	1290.1
85.00	Bot - Section 3	1.00	1.22	30.342	33.38	416.47	0.650	0.000	5.00	18.908	12.29	656.3	0.0	1254.5
90.00		1.00	1.24	30.710	33.78	407.06	0.650	0.000	5.00	18.695	12.15	656.8	0.0	2283.6
91.00	Top - Section 2	1.00	1.24	30.781	33.86	405.15	0.650	0.000	1.00	3.675	2.39	129.4	0.0	448.8
95.00		1.00	1.25	31.061	34.17	404.57	0.650	0.000	4.00	14.489	9.42	514.9	0.0	824.9
100.00		1.00	1.27	31.399	34.54	394.70	0.650	0.000	5.00	17.634	11.46	633.4	0.0	1003.7
105.00		1.00	1.28	31.723	34.89	384.62	0.650	0.000	5.00	17.103	11.12	620.7	0.0	973.2
108.00	Top - Section 3	1.00	1.29	31.911	35.10	378.47	0.650	0.000	3.00	10.007	6.50	365.3	0.0	569.3
110.00	Appurtenance(s)	1.00	1.29	32.035	35.24	374.33	0.650	0.000	2.00	6.566	4.27	240.6	0.0	311.7
115.00		1.00	1.30	32.336	35.57	363.85	0.650	0.000	5.00	16.043	10.43	593.5	0.0	761.5
120.00		1.00	1.32	32.627	35.89	353.20	0.650	0.000	5.00	15.512	10.08	579.0	0.0	736.1
125.00		1.00	1.33	32.909	36.20	342.38	0.650	0.000	5.00	14.982	9.74	564.0	0.0	710.7
130.00	Bot - Section 5	1.00	1.34	33.182	36.50	331.41	0.650	0.000	5.00	14.451	9.39	548.6	0.0	685.3
135.00	Top - Section 4	1.00	1.35	33.446	36.79	320.28	0.650	0.000	5.00	14.132	9.19	540.7	0.0	1197.0
137.00	Appurtenance(s)	1.00	1.35	33.550	36.90	320.77	0.650	0.000	2.00	5.504	3.58	211.3	0.0	209.1
140.00		1.00	1.36	33.703	37.07	314.01	0.650	0.000	3.00	8.098	5.26	312.2	0.0	307.6
145.00		1.00	1.37	33.953	37.35	302.63	0.650	0.000	5.00	13.072	8.50	507.7	0.0	496.5
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	298.05	0.650	0.000	2.00	5.080	3.30	197.9	0.0	192.9
150.00		1.00	1.38	34.196	37.62	291.13	0.650	0.000	3.00	7.461	4.85	291.9	0.0	283.2
155.00		1.00	1.39	34.433	37.88	279.52	0.650	0.000	5.00	12.011	7.81	473.1	0.0	455.8
160.00		1.00	1.40	34.664	38.13	267.79	0.650	0.000	5.00	11.480	7.46	455.3	0.0	435.5
165.00	Appurtenance(s)	1.00	1.41	34.890	38.38	255.95	0.650	0.000	5.00	10.950	7.12	437.1	0.0	415.2
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	251.19	0.650	0.000	2.00	4.231	2.75	169.3	0.0	160.4
170.00	Appurtenance(s)	1.00	1.42	35.110	38.62	244.01	0.650	0.000	3.00	6.188	4.02	248.5	0.0	234.5
								Totals:	**170.00**			**20,746.4**		**41,754.0**

Discrete Appurtenance Forces

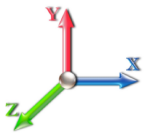
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

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	170.00	6' Lightning rod	1	35.110	38.620	1.00	1.00	0.38	7.80	0.000	0.000	23.48	0.00	0.00
2	167.00	addition 8'x2 7/8" mount	1	34.978	38.476	1.00	1.00	2.80	35.04	0.000	0.000	172.37	0.00	0.00
3	167.00	Ericsson 4480 B71 + B85	3	34.978	38.476	0.54	0.80	4.58	334.80	0.000	0.000	282.12	0.00	0.00
4	167.00	Low Profile	1	34.978	38.476	1.00	1.00	22.00	1800.00	0.000	0.000	1354.35	0.00	0.00
5	167.00	Ericsson KRY 112 144/1	3	34.978	38.476	0.56	0.80	0.69	39.60	0.000	0.000	42.40	0.00	0.00
6	167.00	Ericsson AIR 21 B4A/B2P	3	34.978	38.476	0.77	0.90	13.98	325.44	0.000	0.000	860.42	0.00	0.00
7	167.00	Ericsson AIR 21 B2A/B4P	3	34.978	38.476	0.76	0.90	13.81	329.40	0.000	0.000	850.30	0.00	0.00
8	165.00	RFS	3	34.890	38.378	0.58	0.80	35.46	442.08	0.000	0.000	2177.47	0.00	0.00
9	147.00	Low Profile	1	34.051	37.456	1.00	1.00	22.00	1800.00	0.000	0.000	1318.47	0.00	0.00
10	147.00	Raycap DC6-48-60-18-8C	1	34.051	37.456	0.80	0.80	1.01	24.00	0.000	0.000	60.41	0.00	0.00
11	147.00	Raycap DC6-48-60-18-8F	1	34.051	37.456	0.80	0.80	0.74	38.16	0.000	0.000	44.11	0.00	0.00
12	147.00	Ericsson RRUS 4449 B5,	3	34.051	37.456	0.54	0.80	3.17	255.60	0.000	0.000	189.84	0.00	0.00
13	147.00	Ericsson RRUS 8843 B2	3	34.051	37.456	0.54	0.80	2.64	259.20	0.000	0.000	158.04	0.00	0.00
14	147.00	Powerwave LGP21903	6	34.051	37.456	0.67	0.80	1.09	39.60	0.000	0.000	65.24	0.00	0.00
15	147.00	Powerwave LGP21402	6	34.051	37.456	0.51	0.80	3.96	101.52	0.000	0.000	237.50	0.00	0.00
16	147.00	800 10965	6	34.051	37.456	0.57	0.80	47.06	781.92	0.000	0.000	2820.59	0.00	0.00
17	147.00	7770	3	34.051	37.456	0.58	0.80	9.64	126.00	0.000	0.000	577.49	0.00	0.00
18	137.00	1900MHz - RRH	3	33.550	36.905	0.54	0.80	6.11	158.40	0.000	0.000	360.81	0.00	0.00
19	137.00	APXVSPP18-C-A20	3	33.550	36.905	0.68	0.80	16.36	205.20	0.000	0.000	966.07	0.00	0.00
20	137.00	APXVTM14-C-I20	3	33.550	36.905	0.69	0.80	13.09	201.60	0.000	0.000	772.69	0.00	0.00
21	137.00	800MHz - RRH	3	33.550	36.905	0.54	0.80	4.00	190.80	0.000	0.000	236.42	0.00	0.00
22	137.00	Low Profile	1	33.550	36.905	1.00	1.00	22.00	1800.00	0.000	0.000	1299.06	0.00	0.00
23	137.00	TD-RRH8x20-25 - RRU	3	33.550	36.905	0.54	0.80	6.51	252.00	0.000	0.000	384.54	0.00	0.00
24	137.00	ACU-A20-N - RET	4	33.550	36.905	0.62	0.80	0.35	4.80	0.000	0.000	20.63	0.00	0.00
25	137.00	ALU - 800MHz Filter	3	33.550	36.905	0.40	0.80	0.94	31.68	0.000	0.000	55.27	0.00	0.00
26	110.00	MC-PK8-DSH	1	32.035	35.238	1.00	1.00	37.59	2072.40	0.000	0.000	2119.38	0.00	0.00
27	110.00	Raycap	1	32.035	35.238	1.00	1.00	2.01	26.28	0.000	0.000	113.33	0.00	0.00
28	110.00	Fujitsu TA08025-B604	3	32.035	35.238	0.50	0.75	2.95	230.04	0.000	0.000	166.59	0.00	0.00
29	110.00	Fujitsu TA08025-B605	3	32.035	35.238	0.50	0.75	2.95	270.00	0.000	0.000	166.59	0.00	0.00
30	110.00	JMA Wireless	3	32.035	35.238	0.55	0.75	20.80	232.20	0.000	0.000	1172.50	0.00	0.00
31	75.00	GPS	1	29.553	32.509	0.80	0.80	0.80	12.00	0.000	0.000	41.61	0.00	0.00
32	75.00	Standoff	1	29.553	32.509	0.56	0.75	1.48	48.00	0.000	0.000	76.95	0.00	0.00
							Totals:		**12,475.56**			**19,187.05**		

Total Applied Force Summary

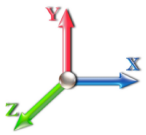
Structure:	CT04066-S-SBA		**Code:**	TIA-222-G	5/3/2022
Site Name:	North Branford East		**Exposure:**	C	
Height:	170.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 11

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		651.94	1998.63	0.00	0.00
10.00		639.14	1963.08	0.00	0.00
15.00		626.35	1927.54	0.00	0.00
20.00		651.00	1892.00	0.00	0.00
25.00		668.09	1856.46	0.00	0.00
30.00		679.44	1820.92	0.00	0.00
35.00		686.58	1785.37	0.00	0.00
40.00		690.44	1749.83	0.00	0.00
41.00		136.91	345.70	0.00	0.00
45.00		561.04	2596.85	0.00	0.00
48.00		419.68	1917.78	0.00	0.00
50.00		278.91	677.16	0.00	0.00
55.00		699.64	1668.01	0.00	0.00
60.00		695.47	1632.47	0.00	0.00
65.00		689.89	1596.93	0.00	0.00
70.00		683.06	1561.39	0.00	0.00
75.00	(2) attachments	793.68	1585.85	0.00	0.00
80.00		666.18	1484.06	0.00	0.00
85.00		656.32	1448.52	0.00	0.00
90.00		656.78	2477.58	0.00	0.00
91.00		129.42	487.60	0.00	0.00
95.00		514.85	980.06	0.00	0.00
100.00		633.41	1197.65	0.00	0.00
105.00		620.70	1167.19	0.00	0.00
108.00		365.34	685.69	0.00	0.00
110.00	(11) attachments	3979.00	3220.22	0.00	0.00
115.00		593.46	944.56	0.00	0.00
120.00		579.00	919.17	0.00	0.00
125.00		564.03	893.78	0.00	0.00
130.00		548.57	868.40	0.00	0.00
135.00		540.74	1380.08	0.00	0.00
137.00	(23) attachments	4306.76	3126.85	0.00	0.00
140.00		312.21	410.33	0.00	0.00
145.00		507.73	667.63	0.00	0.00
147.00	(30) attachments	5669.59	3687.37	0.00	0.00
150.00		291.88	328.39	0.00	0.00
155.00		473.12	531.07	0.00	0.00
160.00		455.26	510.77	0.00	0.00
165.00	(3) attachments	2614.52	932.54	0.00	0.00
167.00	(14) attachments	3731.29	3054.78	0.00	0.00
170.00	(1) attachments	272.03	242.31	0.00	0.00
	Totals:	**39,933.45**	**60,222.57**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

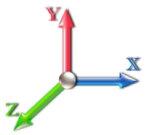
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

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)
5.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.025	0.000	21.088	0.00	10.92
10.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.025	0.000	21.088	0.00	10.92
15.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.026	0.000	21.088	0.00	10.92
20.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.026	0.000	22.375	0.00	10.92
25.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.027	0.000	23.451	0.00	10.92
30.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.027	0.000	24.369	0.00	10.92
35.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.028	0.000	25.172	0.00	10.92
40.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.029	0.000	25.890	0.00	10.92
41.00	1.6" Hybrid	Yes	1.00	0.000	1.60	0.13	0.00	0.029	0.000	26.025	0.00	2.18
45.00	1.6" Hybrid	Yes	4.00	0.000	1.60	0.53	0.00	0.029	0.000	26.540	0.00	8.74
48.00	1.6" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.030	0.000	26.903	0.00	6.55
50.00	1.6" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.030	0.000	27.135	0.00	4.37
55.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.030	0.000	27.685	0.00	10.92
60.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.031	0.000	28.197	0.00	10.92
65.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.032	0.000	28.676	0.00	10.92
70.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.033	0.000	29.127	0.00	10.92
75.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.033	0.000	29.553	0.00	10.92
80.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.034	0.000	29.958	0.00	10.92
85.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.035	0.000	30.342	0.00	10.92
90.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.036	0.000	30.710	0.00	10.92
91.00	1.6" Hybrid	Yes	1.00	0.000	1.60	0.13	0.00	0.037	0.000	30.781	0.00	2.18
95.00	1.6" Hybrid	Yes	4.00	0.000	1.60	0.53	0.00	0.037	0.000	31.061	0.00	8.74
100.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.038	0.000	31.399	0.00	10.92
105.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.039	0.000	31.723	0.00	10.92
108.00	1.6" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.040	0.000	31.911	0.00	6.55
110.00	1.6" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.041	0.000	32.035	0.00	4.37
										Totals:	**0.0**	**240.2**

Calculated Forces

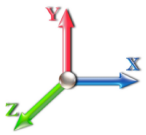
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

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	-60.17	-40.01	0.00	-4578.7	0.00	4578.70	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.609
5.00	-58.08	-39.49	0.00	-4378.6	0.00	4378.67	5736.18	2868.09	14817.2	7419.63	0.07	-0.138	0.000	0.600
10.00	-56.02	-38.99	0.00	-4181.2	0.00	4181.20	5667.41	2833.70	14345.3	7183.34	0.30	-0.278	0.000	0.592
15.00	-54.00	-38.48	0.00	-3986.2	0.00	3986.27	5596.76	2798.38	13875.9	6948.30	0.66	-0.420	0.000	0.584
20.00	-52.02	-37.95	0.00	-3793.8	0.00	3793.86	5524.26	2762.13	13409.4	6714.68	1.18	-0.564	0.000	0.575
25.00	-50.08	-37.39	0.00	-3604.1	0.00	3604.13	5449.89	2724.95	12945.9	6482.61	1.85	-0.710	0.000	0.565
30.00	-48.17	-36.81	0.00	-3417.2	0.00	3417.20	5373.66	2686.83	12485.9	6252.24	2.67	-0.857	0.000	0.556
35.00	-46.30	-36.21	0.00	-3233.1	0.00	3233.17	5295.57	2647.79	12029.5	6023.71	3.65	-1.006	0.000	0.546
40.00	-44.51	-35.56	0.00	-3052.1	0.00	3052.11	5215.62	2607.81	11577.1	5797.18	4.79	-1.157	0.000	0.535
41.00	-44.12	-35.48	0.00	-3016.5	0.00	3016.55	5199.41	2599.70	11487.1	5752.13	5.03	-1.188	0.000	0.533
45.00	-41.47	-34.94	0.00	-2874.6	0.00	2874.65	5133.81	2566.90	11129.0	5572.78	6.08	-1.311	0.000	0.524
48.00	-39.51	-34.52	0.00	-2769.8	0.00	2769.85	5141.90	2570.95	11172.7	5594.66	6.94	-1.405	0.000	0.503
50.00	-38.78	-34.30	0.00	-2700.8	0.00	2700.80	5108.73	2554.36	10994.5	5505.45	7.54	-1.468	0.000	0.498
55.00	-37.05	-33.65	0.00	-2529.3	0.00	2529.30	5024.49	2512.24	10552.4	5284.05	9.16	-1.615	0.000	0.486
60.00	-35.35	-33.00	0.00	-2361.0	0.00	2361.04	4938.39	2469.19	10115.2	5065.12	10.93	-1.763	0.000	0.473
65.00	-33.69	-32.35	0.00	-2196.0	0.00	2196.04	4850.42	2425.21	9683.22	4848.81	12.85	-1.912	0.000	0.460
70.00	-32.07	-31.69	0.00	-2034.3	0.00	2034.31	4760.60	2380.30	9256.75	4635.26	14.94	-2.061	0.000	0.446
75.00	-30.44	-30.92	0.00	-1875.8	0.00	1875.84	4668.91	2334.45	8836.09	4424.61	17.17	-2.210	0.000	0.431
80.00	-28.90	-30.27	0.00	-1721.2	0.00	1721.24	4575.36	2287.68	8421.51	4217.02	19.57	-2.358	0.000	0.415
85.00	-27.41	-29.62	0.00	-1569.8	0.00	1569.89	4479.95	2239.97	8013.32	4012.62	22.12	-2.506	0.000	0.398
90.00	-24.92	-28.89	0.00	-1421.7	0.00	1421.77	4371.20	2185.60	7591.89	3801.59	24.82	-2.652	0.000	0.380
91.00	-24.40	-28.77	0.00	-1392.8	0.00	1392.88	3638.14	1819.07	6412.59	3211.06	25.38	-2.682	0.000	0.441
95.00	-23.38	-28.27	0.00	-1277.7	0.00	1277.78	3578.07	1789.03	6158.09	3083.62	27.68	-2.798	0.000	0.421
100.00	-22.14	-27.63	0.00	-1136.4	0.00	1136.45	3501.29	1750.65	5844.19	2926.44	30.69	-2.953	0.000	0.395
105.00	-20.95	-27.00	0.00	-998.28	0.00	998.28	3422.66	1711.33	5535.26	2771.74	33.86	-3.103	0.000	0.367
108.00	-20.25	-26.62	0.00	-917.29	0.00	917.29	3374.59	1687.29	5352.40	2680.18	35.84	-3.192	0.000	0.349
108.00	-20.25	-26.62	0.00	-917.29	0.00	917.29	2667.38	1333.69	4244.39	2125.35	35.84	-3.192	0.000	0.440
110.00	-17.22	-22.50	0.00	-864.05	0.00	864.05	2644.20	1322.10	4152.60	2079.39	37.19	-3.250	0.000	0.422
115.00	-16.25	-21.90	0.00	-751.55	0.00	751.55	2584.96	1292.48	3925.36	1965.60	40.68	-3.414	0.000	0.389
120.00	-15.31	-21.30	0.00	-642.06	0.00	642.06	2523.85	1261.93	3701.54	1853.52	44.34	-3.570	0.000	0.353
125.00	-14.40	-20.72	0.00	-535.54	0.00	535.54	2460.88	1230.44	3481.44	1743.31	48.16	-3.717	0.000	0.313
130.00	-13.53	-20.15	0.00	-431.94	0.00	431.94	2396.05	1198.03	3265.33	1635.09	52.13	-3.851	0.000	0.270
135.00	-12.16	-19.53	0.00	-331.22	0.00	331.22	1762.27	881.13	2355.65	1179.58	56.22	-3.969	0.000	0.288
137.00	-9.33	-15.02	0.00	-292.16	0.00	292.16	1744.61	872.31	2295.82	1149.62	57.89	-4.013	0.000	0.260
140.00	-8.92	-14.70	0.00	-247.09	0.00	247.09	1717.57	858.78	2206.74	1105.01	60.44	-4.083	0.000	0.229
145.00	-8.27	-14.15	0.00	-173.61	0.00	173.61	1671.00	835.50	2060.16	1031.61	64.76	-4.180	0.000	0.174
147.00	-5.01	-8.23	0.00	-145.31	0.00	145.31	1651.86	825.93	2002.25	1002.61	66.52	-4.214	0.000	0.148
150.00	-4.69	-7.92	0.00	-120.61	0.00	120.61	1622.58	811.29	1916.22	959.54	69.18	-4.258	0.000	0.129
155.00	-4.19	-7.41	0.00	-81.02	0.00	81.02	1572.29	786.15	1775.21	888.92	73.67	-4.318	0.000	0.094
160.00	-3.71	-6.92	0.00	-43.96	0.00	43.96	1520.15	760.07	1637.42	819.92	78.21	-4.360	0.000	0.056
165.00	-2.98	-4.24	0.00	-9.36	0.00	9.36	1466.13	733.07	1503.13	752.68	82.79	-4.381	0.000	0.014
167.00	-0.22	-0.29	0.00	-0.87	0.00	0.87	1444.01	722.00	1450.46	726.31	84.63	-4.383	0.000	0.001
170.00	0.00	-0.27	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	87.38	-4.383	0.000	0.000

Wind Loading - Shaft

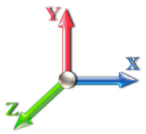
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 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	498.35	0.650	0.000	5.00	27.024	17.57	651.9	0.0	1348.8
10.00		1.00	0.85	21.088	23.20	488.47	0.650	0.000	5.00	26.494	17.22	639.1	0.0	1322.1
15.00		1.00	0.85	21.088	23.20	478.59	0.650	0.000	5.00	25.964	16.88	626.3	0.0	1295.5
20.00		1.00	0.90	22.375	24.61	482.81	0.650	0.000	5.00	25.433	16.53	651.0	0.0	1268.8
25.00		1.00	0.95	23.451	25.80	483.87	0.650	0.000	5.00	24.903	16.19	668.1	0.0	1242.2
30.00		1.00	0.98	24.369	26.81	482.62	0.650	0.000	5.00	24.372	15.84	679.4	0.0	1215.5
35.00		1.00	1.01	25.172	27.69	479.72	0.650	0.000	5.00	23.842	15.50	686.6	0.0	1188.9
40.00		1.00	1.04	25.890	28.48	475.57	0.650	0.000	5.00	23.311	15.15	690.4	0.0	1162.2
41.00	Bot - Section 2	1.00	1.05	26.025	28.63	474.61	0.650	0.000	1.00	4.599	2.99	136.9	0.0	229.2
45.00		1.00	1.07	26.540	29.19	470.42	0.650	0.000	4.00	18.479	12.01	561.0	0.0	1827.5
48.00	Top - Section 1	1.00	1.08	26.903	29.59	466.93	0.650	0.000	3.00	13.636	8.86	419.7	0.0	1348.2
50.00		1.00	1.09	27.135	29.85	472.28	0.650	0.000	2.00	8.985	5.84	278.9	0.0	447.8
55.00		1.00	1.12	27.685	30.45	465.73	0.650	0.000	5.00	22.090	14.36	699.6	0.0	1100.8
60.00		1.00	1.14	28.197	31.02	458.59	0.650	0.000	5.00	21.560	14.01	695.5	0.0	1074.2
65.00		1.00	1.16	28.676	31.54	450.95	0.650	0.000	5.00	21.030	13.67	689.9	0.0	1047.5
70.00		1.00	1.17	29.127	32.04	442.87	0.650	0.000	5.00	20.499	13.32	683.1	0.0	1020.9
75.00	Appurtenance(s)	1.00	1.19	29.553	32.51	434.40	0.650	0.000	5.00	19.969	12.98	675.1	0.0	994.2
80.00		1.00	1.21	29.958	32.95	425.59	0.650	0.000	5.00	19.438	12.63	666.2	0.0	967.6
85.00	Bot - Section 3	1.00	1.22	30.342	33.38	416.47	0.650	0.000	5.00	18.908	12.29	656.3	0.0	940.9
90.00		1.00	1.24	30.710	33.78	407.06	0.650	0.000	5.00	18.695	12.15	656.8	0.0	1712.7
91.00	Top - Section 2	1.00	1.24	30.781	33.86	405.15	0.650	0.000	1.00	3.675	2.39	129.4	0.0	336.6
95.00		1.00	1.25	31.061	34.17	404.57	0.650	0.000	4.00	14.489	9.42	514.9	0.0	618.7
100.00		1.00	1.27	31.399	34.54	394.70	0.650	0.000	5.00	17.634	11.46	633.4	0.0	752.8
105.00		1.00	1.28	31.723	34.89	384.62	0.650	0.000	5.00	17.103	11.12	620.7	0.0	729.9
108.00	Top - Section 3	1.00	1.29	31.911	35.10	378.47	0.650	0.000	3.00	10.007	6.50	365.3	0.0	427.0
110.00	Appurtenance(s)	1.00	1.29	32.035	35.24	374.33	0.650	0.000	2.00	6.566	4.27	240.6	0.0	233.8
115.00		1.00	1.30	32.336	35.57	363.85	0.650	0.000	5.00	16.043	10.43	593.5	0.0	571.1
120.00		1.00	1.32	32.627	35.89	353.20	0.650	0.000	5.00	15.512	10.08	579.0	0.0	552.1
125.00		1.00	1.33	32.909	36.20	342.38	0.650	0.000	5.00	14.982	9.74	564.0	0.0	533.0
130.00	Bot - Section 5	1.00	1.34	33.182	36.50	331.41	0.650	0.000	5.00	14.451	9.39	548.6	0.0	514.0
135.00	Top - Section 4	1.00	1.35	33.446	36.79	320.28	0.650	0.000	5.00	14.132	9.19	540.7	0.0	897.8
137.00	Appurtenance(s)	1.00	1.35	33.550	36.90	320.77	0.650	0.000	2.00	5.504	3.58	211.3	0.0	156.9
140.00		1.00	1.36	33.703	37.07	314.01	0.650	0.000	3.00	8.098	5.26	312.2	0.0	230.7
145.00		1.00	1.37	33.953	37.35	302.63	0.650	0.000	5.00	13.072	8.50	507.7	0.0	372.3
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	298.05	0.650	0.000	2.00	5.080	3.30	197.9	0.0	144.7
150.00		1.00	1.38	34.196	37.62	291.13	0.650	0.000	3.00	7.461	4.85	291.9	0.0	212.4
155.00		1.00	1.39	34.433	37.88	279.52	0.650	0.000	5.00	12.011	7.81	473.1	0.0	341.9
160.00		1.00	1.40	34.664	38.13	267.79	0.650	0.000	5.00	11.480	7.46	455.3	0.0	326.6
165.00	Appurtenance(s)	1.00	1.41	34.890	38.38	255.95	0.650	0.000	5.00	10.950	7.12	437.1	0.0	311.4
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	251.19	0.650	0.000	2.00	4.231	2.75	169.3	0.0	120.3
170.00	Appurtenance(s)	1.00	1.42	35.110	38.62	244.01	0.650	0.000	3.00	6.188	4.02	248.5	0.0	175.9
								Totals:	**170.00**			**20,746.4**		**31,315.5**

Discrete Appurtenance Forces

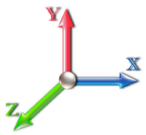
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

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	170.00	6' Lightning rod	1	35.110	38.620	1.00	1.00	0.38	5.85	0.000	0.000	23.48	0.00	0.00
2	167.00	addition 8'x2 7/8" mount	1	34.978	38.476	1.00	1.00	2.80	26.28	0.000	0.000	172.37	0.00	0.00
3	167.00	Ericsson 4480 B71 + B85	3	34.978	38.476	0.54	0.80	4.58	251.10	0.000	0.000	282.12	0.00	0.00
4	167.00	Low Profile	1	34.978	38.476	1.00	1.00	22.00	1350.00	0.000	0.000	1354.35	0.00	0.00
5	167.00	Ericsson KRY 112 144/1	3	34.978	38.476	0.56	0.80	0.69	29.70	0.000	0.000	42.40	0.00	0.00
6	167.00	Ericsson AIR 21 B4A/B2P	3	34.978	38.476	0.77	0.90	13.98	244.08	0.000	0.000	860.42	0.00	0.00
7	167.00	Ericsson AIR 21 B2A/B4P	3	34.978	38.476	0.76	0.90	13.81	247.05	0.000	0.000	850.30	0.00	0.00
8	165.00	RFS	3	34.890	38.378	0.58	0.80	35.46	331.56	0.000	0.000	2177.47	0.00	0.00
9	147.00	Low Profile	1	34.051	37.456	1.00	1.00	22.00	1350.00	0.000	0.000	1318.47	0.00	0.00
10	147.00	Raycap DC6-48-60-18-8C	1	34.051	37.456	0.80	0.80	1.01	18.00	0.000	0.000	60.41	0.00	0.00
11	147.00	Raycap DC6-48-60-18-8F	1	34.051	37.456	0.80	0.80	0.74	28.62	0.000	0.000	44.11	0.00	0.00
12	147.00	Ericsson RRUS 4449 B5,	3	34.051	37.456	0.54	0.80	3.17	191.70	0.000	0.000	189.84	0.00	0.00
13	147.00	Ericsson RRUS 8843 B2	3	34.051	37.456	0.54	0.80	2.64	194.40	0.000	0.000	158.04	0.00	0.00
14	147.00	Powerwave LGP21903	6	34.051	37.456	0.67	0.80	1.09	29.70	0.000	0.000	65.24	0.00	0.00
15	147.00	Powerwave LGP21402	6	34.051	37.456	0.51	0.80	3.96	76.14	0.000	0.000	237.50	0.00	0.00
16	147.00	800 10965	6	34.051	37.456	0.57	0.80	47.06	586.44	0.000	0.000	2820.59	0.00	0.00
17	147.00	7770	3	34.051	37.456	0.58	0.80	9.64	94.50	0.000	0.000	577.49	0.00	0.00
18	137.00	1900MHz - RRH	3	33.550	36.905	0.54	0.80	6.11	118.80	0.000	0.000	360.81	0.00	0.00
19	137.00	APXVSPP18-C-A20	3	33.550	36.905	0.68	0.80	16.36	153.90	0.000	0.000	966.07	0.00	0.00
20	137.00	APXVTM14-C-I20	3	33.550	36.905	0.69	0.80	13.09	151.20	0.000	0.000	772.69	0.00	0.00
21	137.00	800MHz - RRH	3	33.550	36.905	0.54	0.80	4.00	143.10	0.000	0.000	236.42	0.00	0.00
22	137.00	Low Profile	1	33.550	36.905	1.00	1.00	22.00	1350.00	0.000	0.000	1299.06	0.00	0.00
23	137.00	TD-RRH8x20-25 - RRU	3	33.550	36.905	0.54	0.80	6.51	189.00	0.000	0.000	384.54	0.00	0.00
24	137.00	ACU-A20-N - RET	4	33.550	36.905	0.62	0.80	0.35	3.60	0.000	0.000	20.63	0.00	0.00
25	137.00	ALU - 800MHz Filter	3	33.550	36.905	0.40	0.80	0.94	23.76	0.000	0.000	55.27	0.00	0.00
26	110.00	MC-PK8-DSH	1	32.035	35.238	1.00	1.00	37.59	1554.30	0.000	0.000	2119.38	0.00	0.00
27	110.00	Raycap	1	32.035	35.238	1.00	1.00	2.01	19.71	0.000	0.000	113.33	0.00	0.00
28	110.00	Fujitsu TA08025-B604	3	32.035	35.238	0.50	0.75	2.95	172.53	0.000	0.000	166.59	0.00	0.00
29	110.00	Fujitsu TA08025-B605	3	32.035	35.238	0.50	0.75	2.95	202.50	0.000	0.000	166.59	0.00	0.00
30	110.00	JMA Wireless	3	32.035	35.238	0.55	0.75	20.80	174.15	0.000	0.000	1172.50	0.00	0.00
31	75.00	GPS	1	29.553	32.509	0.80	0.80	0.80	9.00	0.000	0.000	41.61	0.00	0.00
32	75.00	Standoff	1	29.553	32.509	0.56	0.75	1.48	36.00	0.000	0.000	76.95	0.00	0.00
							Totals:		**9,356.67**			**19,187.05**		

Total Applied Force Summary

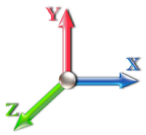
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

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		651.94	1498.97	0.00	0.00
10.00		639.14	1472.31	0.00	0.00
15.00		626.35	1445.66	0.00	0.00
20.00		651.00	1419.00	0.00	0.00
25.00		668.09	1392.34	0.00	0.00
30.00		679.44	1365.69	0.00	0.00
35.00		686.58	1339.03	0.00	0.00
40.00		690.44	1312.37	0.00	0.00
41.00		136.91	259.28	0.00	0.00
45.00		561.04	1947.64	0.00	0.00
48.00		419.68	1438.34	0.00	0.00
50.00		278.91	507.87	0.00	0.00
55.00		699.64	1251.01	0.00	0.00
60.00		695.47	1224.35	0.00	0.00
65.00		689.89	1197.70	0.00	0.00
70.00		683.06	1171.04	0.00	0.00
75.00	(2) attachments	793.68	1189.38	0.00	0.00
80.00		666.18	1113.05	0.00	0.00
85.00		656.32	1086.39	0.00	0.00
90.00		656.78	1858.19	0.00	0.00
91.00		129.42	365.70	0.00	0.00
95.00		514.85	735.04	0.00	0.00
100.00		633.41	898.24	0.00	0.00
105.00		620.70	875.39	0.00	0.00
108.00		365.34	514.27	0.00	0.00
110.00	(11) attachments	3979.00	2415.16	0.00	0.00
115.00		593.46	708.42	0.00	0.00
120.00		579.00	689.38	0.00	0.00
125.00		564.03	670.34	0.00	0.00
130.00		548.57	651.30	0.00	0.00
135.00		540.74	1035.06	0.00	0.00
137.00	(23) attachments	4306.76	2345.13	0.00	0.00
140.00		312.21	307.75	0.00	0.00
145.00		507.73	500.73	0.00	0.00
147.00	(30) attachments	5669.59	2765.53	0.00	0.00
150.00		291.88	246.30	0.00	0.00
155.00		473.12	398.31	0.00	0.00
160.00		455.26	383.07	0.00	0.00
165.00	(3) attachments	2614.52	699.40	0.00	0.00
167.00	(14) attachments	3731.29	2291.08	0.00	0.00
170.00	(1) attachments	272.03	181.73	0.00	0.00
	Totals:	**39,933.45**	**45,166.93**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

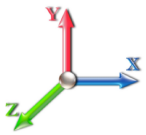
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

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	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.025	0.000	21.088	0.00	8.19
10.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.025	0.000	21.088	0.00	8.19
15.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.026	0.000	21.088	0.00	8.19
20.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.026	0.000	22.375	0.00	8.19
25.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.027	0.000	23.451	0.00	8.19
30.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.027	0.000	24.369	0.00	8.19
35.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.028	0.000	25.172	0.00	8.19
40.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.029	0.000	25.890	0.00	8.19
41.00	1.6" Hybrid	Yes	1.00	0.000	1.60	0.13	0.00	0.029	0.000	26.025	0.00	1.64
45.00	1.6" Hybrid	Yes	4.00	0.000	1.60	0.53	0.00	0.029	0.000	26.540	0.00	6.55
48.00	1.6" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.030	0.000	26.903	0.00	4.91
50.00	1.6" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.030	0.000	27.135	0.00	3.28
55.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.030	0.000	27.685	0.00	8.19
60.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.031	0.000	28.197	0.00	8.19
65.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.032	0.000	28.676	0.00	8.19
70.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.033	0.000	29.127	0.00	8.19
75.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.033	0.000	29.553	0.00	8.19
80.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.034	0.000	29.958	0.00	8.19
85.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.035	0.000	30.342	0.00	8.19
90.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.036	0.000	30.710	0.00	8.19
91.00	1.6" Hybrid	Yes	1.00	0.000	1.60	0.13	0.00	0.037	0.000	30.781	0.00	1.64
95.00	1.6" Hybrid	Yes	4.00	0.000	1.60	0.53	0.00	0.037	0.000	31.061	0.00	6.55
100.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.038	0.000	31.399	0.00	8.19
105.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.039	0.000	31.723	0.00	8.19
108.00	1.6" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.040	0.000	31.911	0.00	4.91
110.00	1.6" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.041	0.000	32.035	0.00	3.28
									Totals:		**0.0**	**180.2**

Calculated Forces

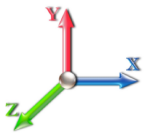
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

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	-45.12	-39.99	0.00	-4541.2	0.00	4541.25	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.601
5.00	-43.52	-39.44	0.00	-4341.3	0.00	4341.31	5736.18	2868.09	14817.2	7419.63	0.07	-0.137	0.000	0.593
10.00	-41.96	-38.90	0.00	-4144.1	0.00	4144.11	5667.41	2833.70	14345.3	7183.34	0.29	-0.276	0.000	0.584
15.00	-40.42	-38.36	0.00	-3949.6	0.00	3949.63	5596.76	2798.38	13875.9	6948.30	0.66	-0.417	0.000	0.576
20.00	-38.92	-37.80	0.00	-3757.8	0.00	3757.82	5524.26	2762.13	13409.4	6714.68	1.17	-0.559	0.000	0.567
25.00	-37.44	-37.21	0.00	-3568.8	0.00	3568.83	5449.89	2724.95	12945.9	6482.61	1.83	-0.703	0.000	0.558
30.00	-35.99	-36.60	0.00	-3382.7	0.00	3382.79	5373.66	2686.83	12485.9	6252.24	2.65	-0.849	0.000	0.548
35.00	-34.57	-35.98	0.00	-3199.7	0.00	3199.78	5295.57	2647.79	12029.5	6023.71	3.62	-0.997	0.000	0.538
40.00	-33.21	-35.32	0.00	-3019.8	0.00	3019.86	5215.62	2607.81	11577.1	5797.18	4.74	-1.146	0.000	0.527
41.00	-32.91	-35.22	0.00	-2984.5	0.00	2984.54	5199.41	2599.70	11487.1	5752.13	4.99	-1.177	0.000	0.525
45.00	-30.91	-34.68	0.00	-2843.6	0.00	2843.65	5133.81	2566.90	11129.0	5572.78	6.03	-1.299	0.000	0.516
48.00	-29.43	-34.26	0.00	-2739.6	0.00	2739.62	5141.90	2570.95	11172.7	5594.66	6.87	-1.391	0.000	0.496
50.00	-28.87	-34.03	0.00	-2671.0	0.00	2671.09	5108.73	2554.36	10994.5	5505.45	7.47	-1.453	0.000	0.491
55.00	-27.55	-33.36	0.00	-2500.9	0.00	2500.96	5024.49	2512.24	10552.4	5284.05	9.07	-1.599	0.000	0.479
60.00	-26.27	-32.70	0.00	-2334.1	0.00	2334.15	4938.39	2469.19	10115.2	5065.12	10.82	-1.745	0.000	0.466
65.00	-25.01	-32.04	0.00	-2170.6	0.00	2170.65	4850.42	2425.21	9683.22	4848.81	12.73	-1.892	0.000	0.453
70.00	-23.78	-31.37	0.00	-2010.4	0.00	2010.47	4760.60	2380.30	9256.75	4635.26	14.79	-2.040	0.000	0.439
75.00	-22.54	-30.60	0.00	-1853.6	0.00	1853.60	4668.91	2334.45	8836.09	4424.61	17.01	-2.187	0.000	0.424
80.00	-21.38	-29.94	0.00	-1700.6	0.00	1700.62	4575.36	2287.68	8421.51	4217.02	19.38	-2.334	0.000	0.408
85.00	-20.25	-29.29	0.00	-1550.9	0.00	1550.92	4479.95	2239.97	8013.32	4012.62	21.90	-2.480	0.000	0.391
90.00	-18.38	-28.58	0.00	-1404.4	0.00	1404.47	4371.20	2185.60	7591.89	3801.59	24.57	-2.624	0.000	0.374
91.00	-17.98	-28.46	0.00	-1375.8	0.00	1375.89	3638.14	1819.07	6412.59	3211.06	25.13	-2.654	0.000	0.434
95.00	-17.21	-27.95	0.00	-1262.0	0.00	1262.06	3578.07	1789.03	6158.09	3083.62	27.40	-2.768	0.000	0.414
100.00	-16.27	-27.31	0.00	-1122.3	0.00	1122.32	3501.29	1750.65	5844.19	2926.44	30.38	-2.921	0.000	0.388
105.00	-15.38	-26.68	0.00	-985.76	0.00	985.76	3422.66	1711.33	5535.26	2771.74	33.52	-3.069	0.000	0.360
108.00	-14.85	-26.31	0.00	-905.72	0.00	905.72	3374.59	1687.29	5352.40	2680.18	35.48	-3.157	0.000	0.343
108.00	-14.85	-26.31	0.00	-905.72	0.00	905.72	2667.38	1333.69	4244.39	2125.35	35.48	-3.157	0.000	0.432
110.00	-12.62	-22.22	0.00	-853.11	0.00	853.11	2644.20	1322.10	4152.60	2079.39	36.81	-3.214	0.000	0.415
115.00	-11.88	-21.62	0.00	-742.00	0.00	742.00	2584.96	1292.48	3925.36	1965.60	40.26	-3.376	0.000	0.382
120.00	-11.17	-21.03	0.00	-633.89	0.00	633.89	2523.85	1261.93	3701.54	1853.52	43.88	-3.531	0.000	0.347
125.00	-10.49	-20.45	0.00	-528.73	0.00	528.73	2460.88	1230.44	3481.44	1743.31	47.66	-3.676	0.000	0.308
130.00	-9.83	-19.88	0.00	-426.47	0.00	426.47	2396.05	1198.03	3265.33	1635.09	51.58	-3.808	0.000	0.265
135.00	-8.81	-19.29	0.00	-327.05	0.00	327.05	1762.27	881.13	2355.65	1179.58	55.63	-3.925	0.000	0.283
137.00	-6.75	-14.84	0.00	-288.48	0.00	288.48	1744.61	872.31	2295.82	1149.62	57.28	-3.967	0.000	0.255
140.00	-6.45	-14.51	0.00	-243.97	0.00	243.97	1717.57	858.78	2206.74	1105.01	59.80	-4.036	0.000	0.225
145.00	-5.97	-13.98	0.00	-171.41	0.00	171.41	1671.00	835.50	2060.16	1031.61	64.08	-4.133	0.000	0.170
147.00	-3.62	-8.12	0.00	-143.46	0.00	143.46	1651.86	825.93	2002.25	1002.61	65.81	-4.166	0.000	0.145
150.00	-3.38	-7.82	0.00	-119.09	0.00	119.09	1622.58	811.29	1916.22	959.54	68.44	-4.209	0.000	0.126
155.00	-3.02	-7.32	0.00	-80.00	0.00	80.00	1572.29	786.15	1775.21	888.92	72.88	-4.269	0.000	0.092
160.00	-2.66	-6.84	0.00	-43.40	0.00	43.40	1520.15	760.07	1637.42	819.92	77.37	-4.311	0.000	0.055
165.00	-2.16	-4.18	0.00	-9.21	0.00	9.21	1466.13	733.07	1503.13	752.68	81.90	-4.331	0.000	0.014
167.00	-0.16	-0.28	0.00	-0.85	0.00	0.85	1444.01	722.00	1450.46	726.31	83.71	-4.333	0.000	0.001
170.00	0.00	-0.27	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	86.43	-4.333	0.000	0.000

Wind Loading - Shaft

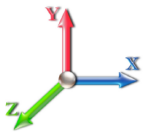
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Tower Engineering Solutions

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

Dead Load Factor 1.20

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	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	28.059	33.67	191.4	501.8	2300.2
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	5.00	27.603	33.12	188.3	528.1	2290.9
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.386	5.00	27.119	32.54	185.0	539.5	2266.8
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	5.00	26.622	31.95	192.7	544.4	2236.2
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.459	5.00	26.118	31.34	198.1	545.5	2201.8
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	5.00	25.610	30.73	201.9	544.1	2164.8
35.00		1.00	1.01	6.169	6.79	0.00	1.200	1.509	5.00	25.099	30.12	204.4	540.9	2126.1
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	5.00	24.586	29.50	205.9	536.4	2086.0
41.00	Bot - Section 2	1.00	1.05	6.378	7.02	0.00	1.200	1.533	1.00	4.854	5.82	40.9	107.1	412.7
45.00		1.00	1.07	6.504	7.15	0.00	1.200	1.547	4.00	19.510	23.41	167.5	431.4	2868.1
48.00	Top - Section 1	1.00	1.08	6.593	7.25	0.00	1.200	1.557	3.00	14.415	17.30	125.5	321.3	2118.9
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	2.00	9.506	11.41	83.4	213.1	810.2
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.579	5.00	23.406	28.09	209.6	525.7	1993.5
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	22.887	27.46	208.8	517.9	1950.2
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	22.367	26.84	207.5	509.6	1906.3
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	5.00	21.847	26.22	205.9	500.8	1862.0
75.00	Appurtenance(s)	1.00	1.19	7.243	7.97	0.00	1.200	1.628	5.00	21.326	25.59	203.9	491.6	1817.2
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	5.00	20.804	24.96	201.6	482.0	1772.1
85.00	Bot - Section 3	1.00	1.22	7.436	8.18	0.00	1.200	1.649	5.00	20.282	24.34	199.1	472.1	1726.6
90.00		1.00	1.24	7.526	8.28	0.00	1.200	1.658	5.00	20.077	24.09	199.5	469.6	2753.2
91.00	Top - Section 2	1.00	1.24	7.544	8.30	0.00	1.200	1.660	1.00	3.952	4.74	39.4	93.5	542.3
95.00		1.00	1.25	7.612	8.37	0.00	1.200	1.667	4.00	15.601	18.72	156.8	367.3	1192.2
100.00		1.00	1.27	7.695	8.46	0.00	1.200	1.676	5.00	19.030	22.84	193.3	448.5	1452.1
105.00		1.00	1.28	7.774	8.55	0.00	1.200	1.684	5.00	18.507	22.21	189.9	437.5	1410.7
108.00	Top - Section 3	1.00	1.29	7.821	8.60	0.00	1.200	1.689	3.00	10.852	13.02	112.0	258.5	827.8
110.00	Appurtenance(s)	1.00	1.29	7.851	8.64	0.00	1.200	1.692	2.00	7.130	8.56	73.9	170.5	482.2
115.00		1.00	1.30	7.925	8.72	0.00	1.200	1.699	5.00	17.459	20.95	182.6	415.0	1176.5
120.00		1.00	1.32	7.996	8.80	0.00	1.200	1.707	5.00	16.934	20.32	178.7	403.4	1139.5
125.00		1.00	1.33	8.065	8.87	0.00	1.200	1.714	5.00	16.410	19.69	174.7	391.7	1102.4
130.00	Bot - Section 5	1.00	1.34	8.132	8.95	0.00	1.200	1.720	5.00	15.885	19.06	170.5	379.8	1065.1
135.00	Top - Section 4	1.00	1.35	8.197	9.02	0.00	1.200	1.727	5.00	15.572	18.69	168.5	373.1	1570.1
137.00	Appurtenance(s)	1.00	1.35	8.222	9.04	0.00	1.200	1.729	2.00	6.081	7.30	66.0	147.3	356.4
140.00		1.00	1.36	8.260	9.09	0.00	1.200	1.733	3.00	8.964	10.76	97.7	216.5	524.2
145.00		1.00	1.37	8.321	9.15	0.00	1.200	1.739	5.00	14.521	17.43	159.5	348.6	845.0
147.00	Appurtenance(s)	1.00	1.37	8.345	9.18	0.00	1.200	1.742	2.00	5.661	6.79	62.4	137.4	330.3
150.00		1.00	1.38	8.381	9.22	0.00	1.200	1.745	3.00	8.334	10.00	92.2	201.7	484.9
155.00		1.00	1.39	8.439	9.28	0.00	1.200	1.751	5.00	13.470	16.16	150.0	323.5	779.4
160.00		1.00	1.40	8.495	9.34	0.00	1.200	1.757	5.00	12.944	15.53	145.2	310.8	746.3
165.00	Appurtenance(s)	1.00	1.41	8.551	9.41	0.00	1.200	1.762	5.00	12.418	14.90	140.2	298.0	713.2
167.00	Appurtenance(s)	1.00	1.41	8.572	9.43	0.00	1.200	1.764	2.00	4.819	5.78	54.5	117.1	277.5
170.00	Appurtenance(s)	1.00	1.42	8.604	9.46	0.00	1.200	1.767	3.00	7.072	8.49	80.3	171.0	405.5
								Totals:	**170.00**			**6,309.1**		**57,087.7**

Discrete Appurtenance Forces

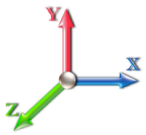
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Tower Engineering Solutions

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

Dead Load Factor 1.20

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	170.00	6' Lightning rod	1	8.604	9.465	1.00	1.00	1.48	39.26	0.000	0.000	14.02	0.00	0.00
2	167.00	addition 8'x2 7/8" mount	1	8.572	9.429	1.00	1.00	6.47	82.55	0.000	0.000	61.05	0.00	0.00
3	167.00	Ericsson 4480 B71 + B85	3	8.572	9.429	0.54	0.80	5.68	501.93	0.000	0.000	53.55	0.00	0.00
4	167.00	Low Profile	1	8.572	9.429	1.00	1.00	39.85	2823.04	0.000	0.000	375.78	0.00	0.00
5	167.00	Ericsson KRY 112 144/1	3	8.572	9.429	0.59	0.80	1.58	62.99	0.000	0.000	14.91	0.00	0.00
6	167.00	Ericsson AIR 21 B4A/B2P	3	8.572	9.429	0.77	0.90	16.52	838.64	0.000	0.000	155.81	0.00	0.00
7	167.00	Ericsson AIR 21 B2A/B4P	3	8.572	9.429	0.77	0.90	16.52	842.60	0.000	0.000	155.81	0.00	0.00
8	165.00	RFS	3	8.551	9.406	0.58	0.80	38.82	1739.03	0.000	0.000	365.15	0.00	0.00
9	147.00	Low Profile	1	8.345	9.180	1.00	1.00	39.63	2806.27	0.000	0.000	363.75	0.00	0.00
10	147.00	Raycap DC6-48-60-18-8C	1	8.345	9.180	0.80	0.80	1.53	61.55	0.000	0.000	14.09	0.00	0.00
11	147.00	Raycap DC6-48-60-18-8F	1	8.345	9.180	0.80	0.80	1.09	82.16	0.000	0.000	9.97	0.00	0.00
12	147.00	Ericsson RRUS 4449 B5,	3	8.345	9.180	0.54	0.80	4.05	374.62	0.000	0.000	37.14	0.00	0.00
13	147.00	Ericsson RRUS 8843 B2	3	8.345	9.180	0.54	0.80	3.43	363.45	0.000	0.000	31.53	0.00	0.00
14	147.00	Powerwave LGP21903	6	8.345	9.180	0.67	0.80	2.69	75.66	0.000	0.000	24.68	0.00	0.00
15	147.00	Powerwave LGP21402	6	8.345	9.180	0.51	0.80	6.52	208.62	0.000	0.000	59.90	0.00	0.00
16	147.00	800 10965	6	8.345	9.180	0.57	0.80	52.44	2566.68	0.000	0.000	481.38	0.00	0.00
17	147.00	7770	3	8.345	9.180	0.58	0.80	11.50	530.52	0.000	0.000	105.55	0.00	0.00
18	137.00	1900MHz - RRH	3	8.222	9.044	0.55	0.80	8.57	389.34	0.000	0.000	77.55	0.00	0.00
19	137.00	APXVSPP18-C-A20	3	8.222	9.044	0.69	0.80	22.27	570.58	0.000	0.000	201.40	0.00	0.00
20	137.00	APXVTM14-C-I20	3	8.222	9.044	0.70	0.80	15.72	677.62	0.000	0.000	142.17	0.00	0.00
21	137.00	800MHz - RRH	3	8.222	9.044	0.55	0.80	6.00	347.38	0.000	0.000	54.27	0.00	0.00
22	137.00	Low Profile	1	8.222	9.044	1.00	1.00	39.50	2797.10	0.000	0.000	357.28	0.00	0.00
23	137.00	TD-RRH8x20-25 - RRU	3	8.222	9.044	0.55	0.80	8.04	579.78	0.000	0.000	72.72	0.00	0.00
24	137.00	ACU-A20-N - RET	4	8.222	9.044	0.64	0.80	1.11	16.63	0.000	0.000	10.05	0.00	0.00
25	137.00	ALU - 800MHz Filter	3	8.222	9.044	0.44	0.80	1.88	69.13	0.000	0.000	16.97	0.00	0.00
26	110.00	MC-PK8-DSH	1	7.851	8.636	1.00	1.00	83.38	3335.69	0.000	0.000	720.08	0.00	0.00
27	110.00	Raycap	1	7.851	8.636	1.00	1.00	2.56	65.20	0.000	0.000	22.12	0.00	0.00
28	110.00	Fujitsu TA08025-B604	3	7.851	8.636	0.50	0.75	3.77	340.99	0.000	0.000	32.60	0.00	0.00
29	110.00	Fujitsu TA08025-B605	3	7.851	8.636	0.50	0.75	3.77	384.32	0.000	0.000	32.60	0.00	0.00
30	110.00	JMA Wireless	3	7.851	8.636	0.55	0.75	23.16	876.57	0.000	0.000	200.01	0.00	0.00
31	75.00	GPS	1	7.243	7.967	0.80	0.80	1.33	31.36	0.000	0.000	10.61	0.00	0.00
32	75.00	Standoff	1	7.243	7.967	0.56	0.75	4.61	99.90	0.000	0.000	36.74	0.00	0.00
							Totals:		**24,581.15**			**4,311.23**		

Total Applied Force Summary

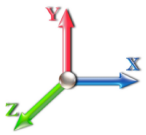
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

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 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		191.41	2518.64	0.00	0.00
10.00		188.30	2511.34	0.00	0.00
15.00		185.00	2488.49	0.00	0.00
20.00		192.69	2458.79	0.00	0.00
25.00		198.14	2425.13	0.00	0.00
30.00		201.89	2388.85	0.00	0.00
35.00		204.39	2350.69	0.00	0.00
40.00		205.91	2311.10	0.00	0.00
41.00		40.87	457.76	0.00	0.00
45.00		167.51	3048.51	0.00	0.00
48.00		125.45	2254.42	0.00	0.00
50.00		83.44	900.59	0.00	0.00
55.00		209.63	2219.81	0.00	0.00
60.00		208.77	2176.84	0.00	0.00
65.00		207.49	2133.31	0.00	0.00
70.00		205.85	2089.28	0.00	0.00
75.00	(2) attachments	251.23	2176.08	0.00	0.00
80.00		201.62	1993.73	0.00	0.00
85.00		199.08	1948.52	0.00	0.00
90.00		199.45	2975.40	0.00	0.00
91.00		39.35	586.76	0.00	0.00
95.00		156.76	1370.14	0.00	0.00
100.00		193.30	1674.76	0.00	0.00
105.00		189.92	1633.57	0.00	0.00
108.00		112.03	961.59	0.00	0.00
110.00	(11) attachments	1081.29	5574.23	0.00	0.00
115.00		182.63	1359.52	0.00	0.00
120.00		178.74	1322.57	0.00	0.00
125.00		174.70	1285.45	0.00	0.00
130.00		170.51	1248.15	0.00	0.00
135.00		168.48	1753.19	0.00	0.00
137.00	(23) attachments	998.39	5877.21	0.00	0.00
140.00		97.74	626.88	0.00	0.00
145.00		159.50	1016.22	0.00	0.00
147.00	(30) attachments	1190.34	7468.35	0.00	0.00
150.00		92.19	530.07	0.00	0.00
155.00		150.04	854.60	0.00	0.00
160.00		145.15	821.58	0.00	0.00
165.00	(3) attachments	505.31	2527.48	0.00	0.00
167.00	(14) attachments	871.45	5459.38	0.00	0.00
170.00	(1) attachments	94.34	444.80	0.00	0.00
	Totals:	**10,620.30**	**88,223.79**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

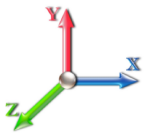
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

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 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	1.6" Hybrid	Yes	5.00	0.000	1.60	1.70	0.00	0.025	0.000	5.168	0.00	29.14
10.00	1.6" Hybrid	Yes	5.00	0.000	1.60	1.78	0.00	0.025	0.000	5.168	0.00	31.10
15.00	1.6" Hybrid	Yes	5.00	0.000	1.60	1.82	0.00	0.026	0.000	5.168	0.00	32.35
20.00	1.6" Hybrid	Yes	5.00	0.000	1.60	1.86	0.00	0.026	0.000	5.483	0.00	33.30
25.00	1.6" Hybrid	Yes	5.00	0.000	1.60	1.88	0.00	0.027	0.000	5.747	0.00	34.07
30.00	1.6" Hybrid	Yes	5.00	0.000	1.60	1.90	0.00	0.027	0.000	5.972	0.00	34.72
35.00	1.6" Hybrid	Yes	5.00	0.000	1.60	1.92	0.00	0.028	0.000	6.169	0.00	35.28
40.00	1.6" Hybrid	Yes	5.00	0.000	1.60	1.94	0.00	0.029	0.000	6.345	0.00	35.79
41.00	1.6" Hybrid	Yes	1.00	0.000	1.60	0.39	0.00	0.029	0.000	6.378	0.00	7.18
45.00	1.6" Hybrid	Yes	4.00	0.000	1.60	1.56	0.00	0.029	0.000	6.504	0.00	28.99
48.00	1.6" Hybrid	Yes	3.00	0.000	1.60	1.18	0.00	0.030	0.000	6.593	0.00	21.90
50.00	1.6" Hybrid	Yes	2.00	0.000	1.60	0.79	0.00	0.030	0.000	6.650	0.00	14.66
55.00	1.6" Hybrid	Yes	5.00	0.000	1.60	1.98	0.00	0.030	0.000	6.785	0.00	37.03
60.00	1.6" Hybrid	Yes	5.00	0.000	1.60	1.99	0.00	0.031	0.000	6.910	0.00	37.39
65.00	1.6" Hybrid	Yes	5.00	0.000	1.60	2.00	0.00	0.032	0.000	7.028	0.00	37.72
70.00	1.6" Hybrid	Yes	5.00	0.000	1.60	2.01	0.00	0.033	0.000	7.138	0.00	38.03
75.00	1.6" Hybrid	Yes	5.00	0.000	1.60	2.02	0.00	0.033	0.000	7.243	0.00	38.32
80.00	1.6" Hybrid	Yes	5.00	0.000	1.60	2.03	0.00	0.034	0.000	7.342	0.00	38.59
85.00	1.6" Hybrid	Yes	5.00	0.000	1.60	2.04	0.00	0.035	0.000	7.436	0.00	38.86
90.00	1.6" Hybrid	Yes	5.00	0.000	1.60	2.05	0.00	0.036	0.000	7.526	0.00	39.11
91.00	1.6" Hybrid	Yes	1.00	0.000	1.60	0.41	0.00	0.037	0.000	7.544	0.00	7.83
95.00	1.6" Hybrid	Yes	4.00	0.000	1.60	1.64	0.00	0.037	0.000	7.612	0.00	31.48
100.00	1.6" Hybrid	Yes	5.00	0.000	1.60	2.06	0.00	0.038	0.000	7.695	0.00	39.57
105.00	1.6" Hybrid	Yes	5.00	0.000	1.60	2.07	0.00	0.039	0.000	7.774	0.00	39.79
108.00	1.6" Hybrid	Yes	3.00	0.000	1.60	1.24	0.00	0.040	0.000	7.821	0.00	23.95
110.00	1.6" Hybrid	Yes	2.00	0.000	1.60	0.83	0.00	0.041	0.000	7.851	0.00	16.00
										Totals:	**0.0**	**802.1**

Calculated Forces

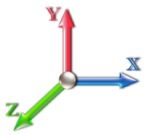
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

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 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	-88.22	-10.65	0.00	-1191.3	0.00	1191.30	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.171
5.00	-85.70	-10.51	0.00	-1138.0	0.00	1138.06	5736.18	2868.09	14817.2	7419.63	0.02	-0.036	0.000	0.168
10.00	-83.18	-10.37	0.00	-1085.5	0.00	1085.51	5667.41	2833.70	14345.3	7183.34	0.08	-0.072	0.000	0.166
15.00	-80.68	-10.24	0.00	-1033.6	0.00	1033.65	5596.76	2798.38	13875.9	6948.30	0.17	-0.109	0.000	0.163
20.00	-78.22	-10.09	0.00	-982.48	0.00	982.48	5524.26	2762.13	13409.4	6714.68	0.31	-0.146	0.000	0.160
25.00	-75.79	-9.93	0.00	-932.03	0.00	932.03	5449.89	2724.95	12945.9	6482.61	0.48	-0.184	0.000	0.158
30.00	-73.39	-9.77	0.00	-882.37	0.00	882.37	5373.66	2686.83	12485.9	6252.24	0.69	-0.222	0.000	0.155
35.00	-71.04	-9.61	0.00	-833.51	0.00	833.51	5295.57	2647.79	12029.5	6023.71	0.95	-0.261	0.000	0.152
40.00	-68.72	-9.42	0.00	-785.48	0.00	785.48	5215.62	2607.81	11577.1	5797.18	1.24	-0.300	0.000	0.149
41.00	-68.26	-9.40	0.00	-776.06	0.00	776.06	5199.41	2599.70	11487.1	5752.13	1.31	-0.308	0.000	0.148
45.00	-65.21	-9.24	0.00	-738.48	0.00	738.48	5133.81	2566.90	11129.0	5572.78	1.58	-0.339	0.000	0.145
48.00	-62.95	-9.13	0.00	-710.74	0.00	710.74	5141.90	2570.95	11172.7	5594.66	1.80	-0.363	0.000	0.139
50.00	-62.05	-9.07	0.00	-692.49	0.00	692.49	5108.73	2554.36	10994.5	5505.45	1.95	-0.379	0.000	0.138
55.00	-59.82	-8.88	0.00	-647.16	0.00	647.16	5024.49	2512.24	10552.4	5284.05	2.37	-0.417	0.000	0.134
60.00	-57.64	-8.69	0.00	-602.76	0.00	602.76	4938.39	2469.19	10115.2	5065.12	2.83	-0.455	0.000	0.131
65.00	-55.51	-8.51	0.00	-559.29	0.00	559.29	4850.42	2425.21	9683.22	4848.81	3.33	-0.493	0.000	0.127
70.00	-53.41	-8.32	0.00	-516.76	0.00	516.76	4760.60	2380.30	9256.75	4635.26	3.86	-0.531	0.000	0.123
75.00	-51.23	-8.08	0.00	-475.18	0.00	475.18	4668.91	2334.45	8836.09	4424.61	4.44	-0.569	0.000	0.118
80.00	-49.24	-7.89	0.00	-434.79	0.00	434.79	4575.36	2287.68	8421.51	4217.02	5.05	-0.606	0.000	0.114
85.00	-47.29	-7.70	0.00	-395.35	0.00	395.35	4479.95	2239.97	8013.32	4012.62	5.71	-0.643	0.000	0.109
90.00	-44.31	-7.48	0.00	-356.86	0.00	356.86	4371.20	2185.60	7591.89	3801.59	6.40	-0.680	0.000	0.104
91.00	-43.72	-7.45	0.00	-349.38	0.00	349.38	3638.14	1819.07	6412.59	3211.06	6.55	-0.688	0.000	0.121
95.00	-42.35	-7.30	0.00	-319.59	0.00	319.59	3578.07	1789.03	6158.09	3083.62	7.14	-0.717	0.000	0.115
100.00	-40.67	-7.11	0.00	-283.08	0.00	283.08	3501.29	1750.65	5844.19	2926.44	7.91	-0.755	0.000	0.108
105.00	-39.04	-6.92	0.00	-247.52	0.00	247.52	3422.66	1711.33	5535.26	2771.74	8.72	-0.793	0.000	0.101
108.00	-38.08	-6.81	0.00	-226.76	0.00	226.76	3374.59	1687.29	5352.40	2680.18	9.22	-0.815	0.000	0.096
108.00	-38.08	-6.81	0.00	-226.76	0.00	226.76	2667.38	1333.69	4244.39	2125.35	9.22	-0.815	0.000	0.121
110.00	-32.52	-5.66	0.00	-213.14	0.00	213.14	2644.20	1322.10	4152.60	2079.39	9.57	-0.829	0.000	0.115
115.00	-31.15	-5.48	0.00	-184.83	0.00	184.83	2584.96	1292.48	3925.36	1965.60	10.46	-0.869	0.000	0.106
120.00	-29.83	-5.30	0.00	-157.43	0.00	157.43	2523.85	1261.93	3701.54	1853.52	11.39	-0.908	0.000	0.097
125.00	-28.55	-5.12	0.00	-130.93	0.00	130.93	2460.88	1230.44	3481.44	1743.31	12.36	-0.944	0.000	0.087
130.00	-27.30	-4.95	0.00	-105.31	0.00	105.31	2396.05	1198.03	3265.33	1635.09	13.37	-0.976	0.000	0.076
135.00	-25.55	-4.76	0.00	-80.59	0.00	80.59	1762.27	881.13	2355.65	1179.58	14.41	-1.005	0.000	0.083
137.00	-19.69	-3.66	0.00	-71.07	0.00	71.07	1744.61	872.31	2295.82	1149.62	14.83	-1.016	0.000	0.073
140.00	-19.06	-3.56	0.00	-60.10	0.00	60.10	1717.57	858.78	2206.74	1105.01	15.47	-1.033	0.000	0.066
145.00	-18.05	-3.38	0.00	-42.32	0.00	42.32	1671.00	835.50	2060.16	1031.61	16.57	-1.057	0.000	0.052
147.00	-10.60	-2.06	0.00	-35.55	0.00	35.55	1651.86	825.93	2002.25	1002.61	17.01	-1.065	0.000	0.042
150.00	-10.07	-1.96	0.00	-29.38	0.00	29.38	1622.58	811.29	1916.22	959.54	17.69	-1.075	0.000	0.037
155.00	-9.22	-1.79	0.00	-19.60	0.00	19.60	1572.29	786.15	1775.21	888.92	18.82	-1.090	0.000	0.028
160.00	-8.40	-1.63	0.00	-10.63	0.00	10.63	1520.15	760.07	1637.42	819.92	19.97	-1.100	0.000	0.018
165.00	-5.88	-1.08	0.00	-2.47	0.00	2.47	1466.13	733.07	1503.13	752.68	21.12	-1.105	0.000	0.007
167.00	-0.44	-0.10	0.00	-0.31	0.00	0.31	1444.01	722.00	1450.46	726.31	21.59	-1.106	0.000	0.001
170.00	0.00	-0.09	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	22.28	-1.106	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (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 + 1.0E

Gust Response Factor	1.10			**Sds**	0.19	**Iterations**	21
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10	**Ss**	0.18
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.38	**SA**	0.04	**S1**	0.06
						Seismic Importance Factor	1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1498.6	0.00	0.03	0.02	24.25	
10.00		1469.0	0.01	0.05	0.03	35.62	
15.00		1439.4	0.01	0.06	0.04	41.12	
20.00		1409.8	0.03	0.07	0.04	43.64	
25.00		1380.2	0.04	0.07	0.04	44.64	
30.00		1350.5	0.06	0.07	0.04	44.94	
35.00		1320.9	0.08	0.07	0.04	44.97	
40.00		1291.3	0.10	0.07	0.04	44.92	
41.00	Bot - Section 2	254.71	0.11	0.07	0.04	8.90	
45.00		2030.5	0.13	0.07	0.03	72.05	
48.00	Top - Section 1	1498.0	0.15	0.07	0.03	53.69	
50.00		497.56	0.16	0.07	0.03	17.92	
55.00		1223.1	0.20	0.06	0.02	44.23	
60.00		1193.5	0.24	0.06	0.02	42.44	
65.00		1163.9	0.28	0.05	0.01	39.31	
70.00		1134.3	0.32	0.04	0.01	34.39	
75.00	Appurtenance(s)	1154.6	0.37	0.03	0.01	28.58	
80.00		1075.0	0.42	0.01	0.01	18.14	
85.00	Bot - Section 3	1045.4	0.47	-0.01	0.01	7.21	
90.00		1903.0	0.53	-0.03	0.01	-8.21	
91.00	Top - Section 2	374.00	0.54	-0.03	0.01	-2.46	
95.00		687.39	0.59	-0.05	0.01	-10.57	
100.00		836.39	0.65	-0.07	0.02	-20.74	
105.00		811.01	0.72	-0.09	0.03	-25.43	
108.00	Top - Section 3	474.42	0.76	-0.10	0.04	-15.94	
110.00	Appurtenance(s)	2618.8	0.79	-0.11	0.05	-89.91	
115.00		634.58	0.86	-0.12	0.07	-21.19	
120.00		613.43	0.94	-0.12	0.10	-17.47	
125.00		592.27	1.02	-0.10	0.14	-11.62	
130.00	Bot - Section 5	571.11	1.11	-0.07	0.19	-3.90	
135.00	Top - Section 4	997.52	1.19	0.00	0.25	9.83	
137.00	Appurtenance(s)	2544.6	1.23	0.03	0.28	44.85	
140.00		256.35	1.28	0.10	0.32	7.81	
145.00		413.71	1.37	0.24	0.41	22.76	
147.00	Appurtenance(s)	3015.7	1.41	0.31	0.45	198.85	
150.00		236.04	1.47	0.43	0.51	19.72	
155.00		379.86	1.57	0.69	0.63	44.13	
160.00		362.94	1.67	1.03	0.78	55.50	
165.00	Appurtenance(s)	714.41	1.78	1.45	0.94	138.53	
167.00	Appurtenance(s)	2520.5	1.82	1.65	1.02	533.12	
170.00	Appurtenance(s)	201.92	1.89	1.98	1.14	48.30	
	Totals:	**45,191.3**				**1,586.9**	**Total Wind:** **39,933.4**

Calculated Forces

Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (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 + 1.0E							**Iterations**	21
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.38	**SA**	0.04	**Seismic Importance Factor**			1.00

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	-60.22	-1.82	0.00	-216.28	0.00	216.28	5803.10	2901.55	15291.3	7657.05		0.00	0.00	0.039
5.00	-58.22	-1.80	0.00	-207.20	0.00	207.20	5736.18	2868.09	14817.2	7419.63		0.00	-0.01	0.038
10.00	-56.26	-1.77	0.00	-198.20	0.00	198.20	5667.41	2833.70	14345.3	7183.34		0.01	-0.01	0.038
15.00	-54.33	-1.74	0.00	-189.35	0.00	189.35	5596.76	2798.38	13875.9	6948.30		0.03	-0.02	0.037
20.00	-52.44	-1.70	0.00	-180.67	0.00	180.67	5524.26	2762.13	13409.4	6714.68		0.06	-0.03	0.036
25.00	-50.58	-1.66	0.00	-172.19	0.00	172.19	5449.89	2724.95	12945.9	6482.61		0.09	-0.03	0.036
30.00	-48.76	-1.62	0.00	-163.90	0.00	163.90	5373.66	2686.83	12485.9	6252.24		0.13	-0.04	0.035
35.00	-46.98	-1.58	0.00	-155.81	0.00	155.81	5295.57	2647.79	12029.5	6023.71		0.17	-0.05	0.035
40.00	-45.23	-1.53	0.00	-147.93	0.00	147.93	5215.62	2607.81	11577.1	5797.18		0.23	-0.06	0.034
41.00	-44.88	-1.53	0.00	-146.39	0.00	146.39	5199.41	2599.70	11487.1	5752.13		0.24	-0.06	0.034
45.00	-42.28	-1.46	0.00	-140.28	0.00	140.28	5133.81	2566.90	11129.0	5572.78		0.29	-0.06	0.033
48.00	-40.37	-1.40	0.00	-135.91	0.00	135.91	5141.90	2570.95	11172.7	5594.66		0.33	-0.07	0.032
50.00	-39.69	-1.39	0.00	-133.10	0.00	133.10	5108.73	2554.36	10994.5	5505.45		0.36	-0.07	0.032
55.00	-38.02	-1.35	0.00	-126.16	0.00	126.16	5024.49	2512.24	10552.4	5284.05		0.44	-0.08	0.031
60.00	-36.39	-1.31	0.00	-119.42	0.00	119.42	4938.39	2469.19	10115.2	5065.12		0.52	-0.09	0.031
65.00	-34.79	-1.27	0.00	-112.89	0.00	112.89	4850.42	2425.21	9683.22	4848.81		0.62	-0.09	0.030
70.00	-33.23	-1.24	0.00	-106.54	0.00	106.54	4760.60	2380.30	9256.75	4635.26		0.72	-0.10	0.030
75.00	-31.64	-1.21	0.00	-100.35	0.00	100.35	4668.91	2334.45	8836.09	4424.61		0.83	-0.11	0.029
80.00	-30.16	-1.19	0.00	-94.30	0.00	94.30	4575.36	2287.68	8421.51	4217.02		0.94	-0.12	0.029
85.00	-28.71	-1.19	0.00	-88.33	0.00	88.33	4479.95	2239.97	8013.32	4012.62		1.07	-0.12	0.028
90.00	-26.23	-1.18	0.00	-82.39	0.00	82.39	4371.20	2185.60	7591.89	3801.59		1.20	-0.13	0.028
91.00	-25.75	-1.19	0.00	-81.21	0.00	81.21	3638.14	1819.07	6412.59	3211.06		1.23	-0.13	0.032
95.00	-24.77	-1.19	0.00	-76.47	0.00	76.47	3578.07	1789.03	6158.09	3083.62		1.35	-0.14	0.032
100.00	-23.57	-1.19	0.00	-70.54	0.00	70.54	3501.29	1750.65	5844.19	2926.44		1.50	-0.15	0.031
105.00	-22.40	-1.19	0.00	-64.60	0.00	64.60	3422.66	1711.33	5535.26	2771.74		1.66	-0.16	0.030
108.00	-21.71	-1.19	0.00	-61.04	0.00	61.04	3374.59	1687.29	5352.40	2680.18		1.77	-0.17	0.029
108.00	-21.71	-1.19	0.00	-61.04	0.00	61.04	2667.38	1333.69	4244.39	2125.35		1.77	-0.17	0.037
110.00	-18.49	-1.18	0.00	-58.67	0.00	58.67	2644.20	1322.10	4152.60	2079.39		1.84	-0.17	0.035
115.00	-17.55	-1.18	0.00	-52.77	0.00	52.77	2584.96	1292.48	3925.36	1965.60		2.02	-0.18	0.034
120.00	-16.63	-1.18	0.00	-46.87	0.00	46.87	2523.85	1261.93	3701.54	1853.52		2.22	-0.19	0.032
125.00	-15.74	-1.18	0.00	-40.96	0.00	40.96	2460.88	1230.44	3481.44	1743.31		2.43	-0.20	0.030
130.00	-14.87	-1.18	0.00	-35.06	0.00	35.06	2396.05	1198.03	3265.33	1635.09		2.65	-0.21	0.028
135.00	-13.49	-1.17	0.00	-29.16	0.00	29.16	1762.27	881.13	2355.65	1179.58		2.87	-0.22	0.032
137.00	-10.36	-1.11	0.00	-26.83	0.00	26.83	1744.61	872.31	2295.82	1149.62		2.97	-0.23	0.029
140.00	-9.95	-1.10	0.00	-23.50	0.00	23.50	1717.57	858.78	2206.74	1105.01		3.11	-0.23	0.027
145.00	-9.28	-1.08	0.00	-17.99	0.00	17.99	1671.00	835.50	2060.16	1031.61		3.37	-0.24	0.023
147.00	-5.60	-0.86	0.00	-15.83	0.00	15.83	1651.86	825.93	2002.25	1002.61		3.47	-0.25	0.019
150.00	-5.27	-0.84	0.00	-13.24	0.00	13.24	1622.58	811.29	1916.22	959.54		3.63	-0.25	0.017
155.00	-4.74	-0.80	0.00	-9.02	0.00	9.02	1572.29	786.15	1775.21	888.92		3.89	-0.26	0.013
160.00	-4.23	-0.74	0.00	-5.04	0.00	5.04	1520.15	760.07	1637.42	819.92		4.17	-0.26	0.009
165.00	-3.29	-0.60	0.00	-1.34	0.00	1.34	1466.13	733.07	1503.13	752.68		4.45	-0.27	0.004
167.00	-0.24	-0.05	0.00	-0.15	0.00	0.15	1444.01	722.00	1450.46	726.31		4.56	-0.27	0.000
170.00	0.00	-0.05	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38		4.73	-0.27	0.000

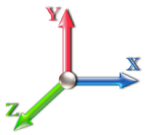
Seismic Segment Forces (Factored)

Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (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: 0.9D + 1.0E

Gust Response Factor	1.10			**Sds**	0.19	**Iterations**	20
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10	**Ss**	0.18
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.38	**SA**	0.04	**S1**	0.06
						Seismic Importance Factor	1.00



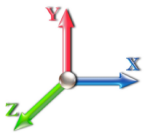
Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1498.6	0.00	0.03	0.02	24.25	
10.00		1469.0	0.01	0.05	0.03	35.62	
15.00		1439.4	0.01	0.06	0.04	41.12	
20.00		1409.8	0.03	0.07	0.04	43.64	
25.00		1380.2	0.04	0.07	0.04	44.64	
30.00		1350.5	0.06	0.07	0.04	44.94	
35.00		1320.9	0.08	0.07	0.04	44.97	
40.00		1291.3	0.10	0.07	0.04	44.92	
41.00	Bot - Section 2	254.71	0.11	0.07	0.04	8.90	
45.00		2030.5	0.13	0.07	0.03	72.05	
48.00	Top - Section 1	1498.0	0.15	0.07	0.03	53.69	
50.00		497.56	0.16	0.07	0.03	17.92	
55.00		1223.1	0.20	0.06	0.02	44.23	
60.00		1193.5	0.24	0.06	0.02	42.44	
65.00		1163.9	0.28	0.05	0.01	39.31	
70.00		1134.3	0.32	0.04	0.01	34.39	
75.00	Appurtenance(s)	1154.6	0.37	0.03	0.01	28.58	
80.00		1075.0	0.42	0.01	0.01	18.14	
85.00	Bot - Section 3	1045.4	0.47	-0.01	0.01	7.21	
90.00		1903.0	0.53	-0.03	0.01	-8.21	
91.00	Top - Section 2	374.00	0.54	-0.03	0.01	-2.46	
95.00		687.39	0.59	-0.05	0.01	-10.57	
100.00		836.39	0.65	-0.07	0.02	-20.74	
105.00		811.01	0.72	-0.09	0.03	-25.43	
108.00	Top - Section 3	474.42	0.76	-0.10	0.04	-15.94	
110.00	Appurtenance(s)	2618.8	0.79	-0.11	0.05	-89.91	
115.00		634.58	0.86	-0.12	0.07	-21.19	
120.00		613.43	0.94	-0.12	0.10	-17.47	
125.00		592.27	1.02	-0.10	0.14	-11.62	
130.00	Bot - Section 5	571.11	1.11	-0.07	0.19	-3.90	
135.00	Top - Section 4	997.52	1.19	0.00	0.25	9.83	
137.00	Appurtenance(s)	2544.6	1.23	0.03	0.28	44.85	
140.00		256.35	1.28	0.10	0.32	7.81	
145.00		413.71	1.37	0.24	0.41	22.76	
147.00	Appurtenance(s)	3015.7	1.41	0.31	0.45	198.85	
150.00		236.04	1.47	0.43	0.51	19.72	
155.00		379.86	1.57	0.69	0.63	44.13	
160.00		362.94	1.67	1.03	0.78	55.50	
165.00	Appurtenance(s)	714.41	1.78	1.45	0.94	138.53	
167.00	Appurtenance(s)	2520.5	1.82	1.65	1.02	533.12	
170.00	Appurtenance(s)	201.92	1.89	1.98	1.14	48.30	
	Totals:	**45,191.3**				**1,586.9**	**Total Wind:** **39,933.4**

Calculated Forces

Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (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: 0.9D + 1.0E



Gust Response Factor	1.10			**Sds**	0.19			**Iterations**	20
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**Ss**	0.18
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.38	**SA**	0.04			**S1**	0.06
								Seismic Importance Factor	1.00

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	-45.17	-1.82	0.00	-214.23	0.00	214.23	5803.10	2901.55	15291.3	7657.05		0.00	0.00	0.036
5.00	-43.67	-1.80	0.00	-205.16	0.00	205.16	5736.18	2868.09	14817.2	7419.63		0.00	-0.01	0.035
10.00	-42.20	-1.77	0.00	-196.17	0.00	196.17	5667.41	2833.70	14345.3	7183.34		0.01	-0.01	0.035
15.00	-40.75	-1.73	0.00	-187.35	0.00	187.35	5596.76	2798.38	13875.9	6948.30		0.03	-0.02	0.034
20.00	-39.33	-1.69	0.00	-178.71	0.00	178.71	5524.26	2762.13	13409.4	6714.68		0.06	-0.03	0.034
25.00	-37.94	-1.65	0.00	-170.26	0.00	170.26	5449.89	2724.95	12945.9	6482.61		0.09	-0.03	0.033
30.00	-36.57	-1.61	0.00	-162.02	0.00	162.02	5373.66	2686.83	12485.9	6252.24		0.13	-0.04	0.033
35.00	-35.23	-1.57	0.00	-153.99	0.00	153.99	5295.57	2647.79	12029.5	6023.71		0.17	-0.05	0.032
40.00	-33.92	-1.52	0.00	-146.16	0.00	146.16	5215.62	2607.81	11577.1	5797.18		0.23	-0.05	0.032
41.00	-33.66	-1.51	0.00	-144.64	0.00	144.64	5199.41	2599.70	11487.1	5752.13		0.24	-0.06	0.032
45.00	-31.71	-1.44	0.00	-138.58	0.00	138.58	5133.81	2566.90	11129.0	5572.78		0.29	-0.06	0.031
48.00	-30.27	-1.39	0.00	-134.25	0.00	134.25	5141.90	2570.95	11172.7	5594.66		0.33	-0.07	0.030
50.00	-29.77	-1.37	0.00	-131.47	0.00	131.47	5108.73	2554.36	10994.5	5505.45		0.36	-0.07	0.030
55.00	-28.52	-1.33	0.00	-124.60	0.00	124.60	5024.49	2512.24	10552.4	5284.05		0.43	-0.08	0.029
60.00	-27.29	-1.29	0.00	-117.94	0.00	117.94	4938.39	2469.19	10115.2	5065.12		0.52	-0.08	0.029
65.00	-26.09	-1.25	0.00	-111.48	0.00	111.48	4850.42	2425.21	9683.22	4848.81		0.61	-0.09	0.028
70.00	-24.92	-1.22	0.00	-105.21	0.00	105.21	4760.60	2380.30	9256.75	4635.26		0.71	-0.10	0.028
75.00	-23.73	-1.19	0.00	-99.11	0.00	99.11	4668.91	2334.45	8836.09	4424.61		0.82	-0.11	0.027
80.00	-22.62	-1.18	0.00	-93.14	0.00	93.14	4575.36	2287.68	8421.51	4217.02		0.93	-0.11	0.027
85.00	-21.53	-1.17	0.00	-87.26	0.00	87.26	4479.95	2239.97	8013.32	4012.62		1.06	-0.12	0.027
90.00	-19.67	-1.17	0.00	-81.41	0.00	81.41	4371.20	2185.60	7591.89	3801.59		1.19	-0.13	0.026
91.00	-19.31	-1.17	0.00	-80.24	0.00	80.24	3638.14	1819.07	6412.59	3211.06		1.22	-0.13	0.030
95.00	-18.57	-1.17	0.00	-75.57	0.00	75.57	3578.07	1789.03	6158.09	3083.62		1.33	-0.14	0.030
100.00	-17.68	-1.17	0.00	-69.72	0.00	69.72	3501.29	1750.65	5844.19	2926.44		1.48	-0.15	0.029
105.00	-16.80	-1.17	0.00	-63.87	0.00	63.87	3422.66	1711.33	5535.26	2771.74		1.65	-0.16	0.028
108.00	-16.29	-1.17	0.00	-60.36	0.00	60.36	3374.59	1687.29	5352.40	2680.18		1.75	-0.16	0.027
108.00	-16.29	-1.17	0.00	-60.36	0.00	60.36	2667.38	1333.69	4244.39	2125.35		1.75	-0.16	0.035
110.00	-13.87	-1.16	0.00	-58.03	0.00	58.03	2644.20	1322.10	4152.60	2079.39		1.82	-0.17	0.033
115.00	-13.16	-1.16	0.00	-52.20	0.00	52.20	2584.96	1292.48	3925.36	1965.60		2.00	-0.18	0.032
120.00	-12.47	-1.17	0.00	-46.38	0.00	46.38	2523.85	1261.93	3701.54	1853.52		2.19	-0.19	0.030
125.00	-11.80	-1.17	0.00	-40.55	0.00	40.55	2460.88	1230.44	3481.44	1743.31		2.40	-0.20	0.028
130.00	-11.15	-1.16	0.00	-34.73	0.00	34.73	2396.05	1198.03	3265.33	1635.09		2.61	-0.21	0.026
135.00	-10.11	-1.15	0.00	-28.90	0.00	28.90	1762.27	881.13	2355.65	1179.58		2.84	-0.22	0.030
137.00	-7.77	-1.10	0.00	-26.60	0.00	26.60	1744.61	872.31	2295.82	1149.62		2.94	-0.23	0.028
140.00	-7.46	-1.09	0.00	-23.30	0.00	23.30	1717.57	858.78	2206.74	1105.01		3.08	-0.23	0.025
145.00	-6.96	-1.07	0.00	-17.85	0.00	17.85	1671.00	835.50	2060.16	1031.61		3.33	-0.24	0.021
147.00	-4.20	-0.86	0.00	-15.71	0.00	15.71	1651.86	825.93	2002.25	1002.61		3.43	-0.24	0.018
150.00	-3.95	-0.84	0.00	-13.14	0.00	13.14	1622.58	811.29	1916.22	959.54		3.59	-0.25	0.016
155.00	-3.55	-0.79	0.00	-8.96	0.00	8.96	1572.29	786.15	1775.21	888.92		3.85	-0.26	0.012
160.00	-3.17	-0.73	0.00	-5.00	0.00	5.00	1520.15	760.07	1637.42	819.92		4.12	-0.26	0.008
165.00	-2.47	-0.59	0.00	-1.33	0.00	1.33	1466.13	733.07	1503.13	752.68		4.40	-0.26	0.003
167.00	-0.18	-0.05	0.00	-0.15	0.00	0.15	1444.01	722.00	1450.46	726.31		4.51	-0.26	0.000
170.00	0.00	-0.05	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38		4.67	-0.26	0.000

Wind Loading - Shaft

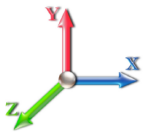
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Tower Engineering Solutions

Load Case: 1.0D + 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	296.05	0.650	0.000	5.00	27.024	17.57	143.8	0.0	1498.7
10.00		1.00	0.85	7.442	8.19	290.18	0.650	0.000	5.00	26.494	17.22	141.0	0.0	1469.1
15.00		1.00	0.85	7.442	8.19	284.31	0.650	0.000	5.00	25.964	16.88	138.2	0.0	1439.4
20.00		1.00	0.90	7.896	8.69	286.82	0.650	0.000	5.00	25.433	16.53	143.6	0.0	1409.8
25.00		1.00	0.95	8.276	9.10	287.44	0.650	0.000	5.00	24.903	16.19	147.4	0.0	1380.2
30.00		1.00	0.98	8.600	9.46	286.71	0.650	0.000	5.00	24.372	15.84	149.9	0.0	1350.6
35.00		1.00	1.01	8.883	9.77	284.98	0.650	0.000	5.00	23.842	15.50	151.4	0.0	1321.0
40.00		1.00	1.04	9.137	10.05	282.52	0.650	0.000	5.00	23.311	15.15	152.3	0.0	1291.3
41.00	Bot - Section 2	1.00	1.05	9.184	10.10	281.95	0.650	0.000	1.00	4.599	2.99	30.2	0.0	254.7
45.00		1.00	1.07	9.366	10.30	279.46	0.650	0.000	4.00	18.479	12.01	123.7	0.0	2030.6
48.00	Top - Section 1	1.00	1.08	9.494	10.44	277.39	0.650	0.000	3.00	13.636	8.86	92.6	0.0	1498.0
50.00		1.00	1.09	9.576	10.53	280.56	0.650	0.000	2.00	8.985	5.84	61.5	0.0	497.6
55.00		1.00	1.12	9.770	10.75	276.67	0.650	0.000	5.00	22.090	14.36	154.3	0.0	1223.2
60.00		1.00	1.14	9.951	10.95	272.43	0.650	0.000	5.00	21.560	14.01	153.4	0.0	1193.5
65.00		1.00	1.16	10.120	11.13	267.89	0.650	0.000	5.00	21.030	13.67	152.2	0.0	1163.9
70.00		1.00	1.17	10.279	11.31	263.09	0.650	0.000	5.00	20.499	13.32	150.7	0.0	1134.3
75.00	Appurtenance(s)	1.00	1.19	10.430	11.47	258.06	0.650	0.000	5.00	19.969	12.98	148.9	0.0	1104.7
80.00		1.00	1.21	10.572	11.63	252.83	0.650	0.000	5.00	19.438	12.63	146.9	0.0	1075.1
85.00	Bot - Section 3	1.00	1.22	10.708	11.78	247.41	0.650	0.000	5.00	18.908	12.29	144.8	0.0	1045.5
90.00		1.00	1.24	10.838	11.92	241.82	0.650	0.000	5.00	18.695	12.15	144.9	0.0	1903.0
91.00	Top - Section 2	1.00	1.24	10.863	11.95	240.68	0.650	0.000	1.00	3.675	2.39	28.5	0.0	374.0
95.00		1.00	1.25	10.962	12.06	240.34	0.650	0.000	4.00	14.489	9.42	113.6	0.0	687.4
100.00		1.00	1.27	11.081	12.19	234.48	0.650	0.000	5.00	17.634	11.46	139.7	0.0	836.4
105.00		1.00	1.28	11.195	12.31	228.49	0.650	0.000	5.00	17.103	11.12	136.9	0.0	811.0
108.00	Top - Section 3	1.00	1.29	11.262	12.39	224.83	0.650	0.000	3.00	10.007	6.50	80.6	0.0	474.4
110.00	Appurtenance(s)	1.00	1.29	11.305	12.44	222.37	0.650	0.000	2.00	6.566	4.27	53.1	0.0	259.8
115.00		1.00	1.30	11.412	12.55	216.15	0.650	0.000	5.00	16.043	10.43	130.9	0.0	634.6
120.00		1.00	1.32	11.514	12.67	209.82	0.650	0.000	5.00	15.512	10.08	127.7	0.0	613.4
125.00		1.00	1.33	11.614	12.78	203.39	0.650	0.000	5.00	14.982	9.74	124.4	0.0	592.3
130.00	Bot - Section 5	1.00	1.34	11.710	12.88	196.87	0.650	0.000	5.00	14.451	9.39	121.0	0.0	571.1
135.00	Top - Section 4	1.00	1.35	11.803	12.98	190.27	0.650	0.000	5.00	14.132	9.19	119.3	0.0	997.5
137.00	Appurtenance(s)	1.00	1.35	11.840	13.02	190.55	0.650	0.000	2.00	5.504	3.58	46.6	0.0	174.3
140.00		1.00	1.36	11.894	13.08	186.54	0.650	0.000	3.00	8.098	5.26	68.9	0.0	256.4
145.00		1.00	1.37	11.982	13.18	179.78	0.650	0.000	5.00	13.072	8.50	112.0	0.0	413.7
147.00	Appurtenance(s)	1.00	1.37	12.017	13.22	177.06	0.650	0.000	2.00	5.080	3.30	43.6	0.0	160.7
150.00		1.00	1.38	12.068	13.27	172.95	0.650	0.000	3.00	7.461	4.85	64.4	0.0	236.0
155.00		1.00	1.39	12.152	13.37	166.05	0.650	0.000	5.00	12.011	7.81	104.4	0.0	379.9
160.00		1.00	1.40	12.233	13.46	159.08	0.650	0.000	5.00	11.480	7.46	100.4	0.0	362.9
165.00	Appurtenance(s)	1.00	1.41	12.313	13.54	152.05	0.650	0.000	5.00	10.950	7.12	96.4	0.0	346.0
167.00	Appurtenance(s)	1.00	1.41	12.344	13.58	149.22	0.650	0.000	2.00	4.231	2.75	37.3	0.0	133.7
170.00	Appurtenance(s)	1.00	1.42	12.390	13.63	144.96	0.650	0.000	3.00	6.188	4.02	54.8	0.0	195.4
								Totals:	**170.00**			**4,576.0**		**34,795.0**

Discrete Appurtenance Forces

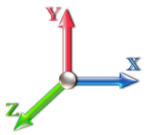
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 29	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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	170.00	6' Lightning rod	1	12.390	13.629	1.00	1.00	0.38	6.50	0.000	0.000	5.18	0.00	0.00
2	167.00	addition 8'x2 7/8" mount	1	12.344	13.578	1.00	1.00	2.80	29.20	0.000	0.000	38.02	0.00	0.00
3	167.00	Ericsson 4480 B71 + B85	3	12.344	13.578	0.54	0.80	4.58	279.00	0.000	0.000	62.23	0.00	0.00
4	167.00	Low Profile	1	12.344	13.578	1.00	1.00	22.00	1500.00	0.000	0.000	298.73	0.00	0.00
5	167.00	Ericsson KRY 112 144/1	3	12.344	13.578	0.56	0.80	0.69	33.00	0.000	0.000	9.35	0.00	0.00
6	167.00	Ericsson AIR 21 B4A/B2P	3	12.344	13.578	0.77	0.90	13.98	271.20	0.000	0.000	189.78	0.00	0.00
7	167.00	Ericsson AIR 21 B2A/B4P	3	12.344	13.578	0.76	0.90	13.81	274.50	0.000	0.000	187.55	0.00	0.00
8	165.00	RFS	3	12.313	13.544	0.58	0.80	35.46	368.40	0.000	0.000	480.28	0.00	0.00
9	147.00	Low Profile	1	12.017	13.219	1.00	1.00	22.00	1500.00	0.000	0.000	290.81	0.00	0.00
10	147.00	Raycap DC6-48-60-18-8C	1	12.017	13.219	0.80	0.80	1.01	20.00	0.000	0.000	13.32	0.00	0.00
11	147.00	Raycap DC6-48-60-18-8F	1	12.017	13.219	0.80	0.80	0.74	31.80	0.000	0.000	9.73	0.00	0.00
12	147.00	Ericsson RRUS 4449 B5,	3	12.017	13.219	0.54	0.80	3.17	213.00	0.000	0.000	41.87	0.00	0.00
13	147.00	Ericsson RRUS 8843 B2	3	12.017	13.219	0.54	0.80	2.64	216.00	0.000	0.000	34.86	0.00	0.00
14	147.00	Powerwave LGP21903	6	12.017	13.219	0.67	0.80	1.09	33.00	0.000	0.000	14.39	0.00	0.00
15	147.00	Powerwave LGP21402	6	12.017	13.219	0.51	0.80	3.96	84.60	0.000	0.000	52.38	0.00	0.00
16	147.00	800 10965	6	12.017	13.219	0.57	0.80	47.06	651.60	0.000	0.000	622.13	0.00	0.00
17	147.00	7770	3	12.017	13.219	0.58	0.80	9.64	105.00	0.000	0.000	127.37	0.00	0.00
18	137.00	1900MHz - RRH	3	11.840	13.024	0.54	0.80	6.11	132.00	0.000	0.000	79.58	0.00	0.00
19	137.00	APXVSPP18-C-A20	3	11.840	13.024	0.68	0.80	16.36	171.00	0.000	0.000	213.08	0.00	0.00
20	137.00	APXVTM14-C-I20	3	11.840	13.024	0.69	0.80	13.09	168.00	0.000	0.000	170.43	0.00	0.00
21	137.00	800MHz - RRH	3	11.840	13.024	0.54	0.80	4.00	159.00	0.000	0.000	52.15	0.00	0.00
22	137.00	Low Profile	1	11.840	13.024	1.00	1.00	22.00	1500.00	0.000	0.000	286.53	0.00	0.00
23	137.00	TD-RRH8x20-25 - RRU	3	11.840	13.024	0.54	0.80	6.51	210.00	0.000	0.000	84.82	0.00	0.00
24	137.00	ACU-A20-N - RET	4	11.840	13.024	0.62	0.80	0.35	4.00	0.000	0.000	4.55	0.00	0.00
25	137.00	ALU - 800MHz Filter	3	11.840	13.024	0.40	0.80	0.94	26.40	0.000	0.000	12.19	0.00	0.00
26	110.00	MC-PK8-DSH	1	11.305	12.436	1.00	1.00	37.59	1727.00	0.000	0.000	467.46	0.00	0.00
27	110.00	Raycap	1	11.305	12.436	1.00	1.00	2.01	21.90	0.000	0.000	25.00	0.00	0.00
28	110.00	Fujitsu TA08025-B604	3	11.305	12.436	0.50	0.75	2.95	191.70	0.000	0.000	36.74	0.00	0.00
29	110.00	Fujitsu TA08025-B605	3	11.305	12.436	0.50	0.75	2.95	225.00	0.000	0.000	36.74	0.00	0.00
30	110.00	JMA Wireless	3	11.305	12.436	0.55	0.75	20.80	193.50	0.000	0.000	258.61	0.00	0.00
31	75.00	GPS	1	10.430	11.473	0.80	0.80	0.80	10.00	0.000	0.000	9.18	0.00	0.00
32	75.00	Standoff	1	10.430	11.473	0.56	0.75	1.48	40.00	0.000	0.000	16.97	0.00	0.00
							Totals:		**10,396.30**			**4,232.02**		

Total Applied Force Summary

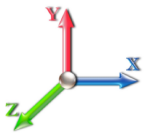
Structure:	CT04066-S-SBA		**Code:**	TIA-222-G	5/3/2022
Site Name:	North Branford East		**Exposure:**	C	
Height:	170.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 30

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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		143.80	1665.52	0.00	0.00
10.00		140.97	1635.90	0.00	0.00
15.00		138.15	1606.28	0.00	0.00
20.00		143.59	1576.67	0.00	0.00
25.00		147.36	1547.05	0.00	0.00
30.00		149.86	1517.43	0.00	0.00
35.00		151.44	1487.81	0.00	0.00
40.00		152.29	1458.19	0.00	0.00
41.00		30.20	288.08	0.00	0.00
45.00		123.75	2164.04	0.00	0.00
48.00		92.57	1598.15	0.00	0.00
50.00		61.52	564.30	0.00	0.00
55.00		154.32	1390.01	0.00	0.00
60.00		153.40	1360.39	0.00	0.00
65.00		152.17	1330.78	0.00	0.00
70.00		150.66	1301.16	0.00	0.00
75.00	(2) attachments	175.06	1321.54	0.00	0.00
80.00		146.94	1236.72	0.00	0.00
85.00		144.76	1207.10	0.00	0.00
90.00		144.86	2064.65	0.00	0.00
91.00		28.55	406.33	0.00	0.00
95.00		113.56	816.71	0.00	0.00
100.00		139.71	998.04	0.00	0.00
105.00		136.90	972.66	0.00	0.00
108.00		80.58	571.41	0.00	0.00
110.00	(11) attachments	877.63	2683.52	0.00	0.00
115.00		130.90	787.13	0.00	0.00
120.00		127.71	765.98	0.00	0.00
125.00		124.41	744.82	0.00	0.00
130.00		121.00	723.66	0.00	0.00
135.00		119.27	1150.07	0.00	0.00
137.00	(23) attachments	949.93	2605.71	0.00	0.00
140.00		68.86	341.94	0.00	0.00
145.00		111.99	556.36	0.00	0.00
147.00	(30) attachments	1250.52	3072.81	0.00	0.00
150.00		64.38	273.66	0.00	0.00
155.00		104.36	442.56	0.00	0.00
160.00		100.42	425.64	0.00	0.00
165.00	(3) attachments	576.68	777.11	0.00	0.00
167.00	(14) attachments	823.00	2545.65	0.00	0.00
170.00	(1) attachments	60.00	201.92	0.00	0.00
	Totals:	**8,807.99**	**50,185.47**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

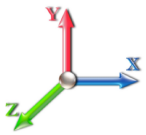
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.025	0.000	7.442	0.00	9.10
10.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.025	0.000	7.442	0.00	9.10
15.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.026	0.000	7.442	0.00	9.10
20.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.026	0.000	7.896	0.00	9.10
25.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.027	0.000	8.276	0.00	9.10
30.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.027	0.000	8.600	0.00	9.10
35.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.028	0.000	8.883	0.00	9.10
40.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.029	0.000	9.137	0.00	9.10
41.00	1.6" Hybrid	Yes	1.00	0.000	1.60	0.13	0.00	0.029	0.000	9.184	0.00	1.82
45.00	1.6" Hybrid	Yes	4.00	0.000	1.60	0.53	0.00	0.029	0.000	9.366	0.00	7.28
48.00	1.6" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.030	0.000	9.494	0.00	5.46
50.00	1.6" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.030	0.000	9.576	0.00	3.64
55.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.030	0.000	9.770	0.00	9.10
60.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.031	0.000	9.951	0.00	9.10
65.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.032	0.000	10.120	0.00	9.10
70.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.033	0.000	10.279	0.00	9.10
75.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.033	0.000	10.430	0.00	9.10
80.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.034	0.000	10.572	0.00	9.10
85.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.035	0.000	10.708	0.00	9.10
90.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.036	0.000	10.838	0.00	9.10
91.00	1.6" Hybrid	Yes	1.00	0.000	1.60	0.13	0.00	0.037	0.000	10.863	0.00	1.82
95.00	1.6" Hybrid	Yes	4.00	0.000	1.60	0.53	0.00	0.037	0.000	10.962	0.00	7.28
100.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.038	0.000	11.081	0.00	9.10
105.00	1.6" Hybrid	Yes	5.00	0.000	1.60	0.67	0.00	0.039	0.000	11.195	0.00	9.10
108.00	1.6" Hybrid	Yes	3.00	0.000	1.60	0.40	0.00	0.040	0.000	11.262	0.00	5.46
110.00	1.6" Hybrid	Yes	2.00	0.000	1.60	0.27	0.00	0.041	0.000	11.305	0.00	3.64
									Totals:		**0.0**	**200.2**

Calculated Forces

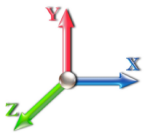
Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

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	-50.18	-8.82	0.00	-1005.1	0.00	1005.11	5803.10	2901.55	15291.3	7657.05	0.00	0.000	0.000	0.140
5.00	-48.51	-8.70	0.00	-961.01	0.00	961.01	5736.18	2868.09	14817.2	7419.63	0.02	-0.030	0.000	0.138
10.00	-46.87	-8.59	0.00	-917.50	0.00	917.50	5667.41	2833.70	14345.3	7183.34	0.06	-0.061	0.000	0.136
15.00	-45.26	-8.47	0.00	-874.57	0.00	874.57	5596.76	2798.38	13875.9	6948.30	0.15	-0.092	0.000	0.134
20.00	-43.68	-8.35	0.00	-832.22	0.00	832.22	5524.26	2762.13	13409.4	6714.68	0.26	-0.124	0.000	0.132
25.00	-42.13	-8.22	0.00	-790.48	0.00	790.48	5449.89	2724.95	12945.9	6482.61	0.41	-0.156	0.000	0.130
30.00	-40.61	-8.09	0.00	-749.38	0.00	749.38	5373.66	2686.83	12485.9	6252.24	0.59	-0.188	0.000	0.127
35.00	-39.12	-7.95	0.00	-708.93	0.00	708.93	5295.57	2647.79	12029.5	6023.71	0.80	-0.221	0.000	0.125
40.00	-37.66	-7.81	0.00	-669.16	0.00	669.16	5215.62	2607.81	11577.1	5797.18	1.05	-0.254	0.000	0.123
41.00	-37.37	-7.79	0.00	-661.35	0.00	661.35	5199.41	2599.70	11487.1	5752.13	1.10	-0.261	0.000	0.122
45.00	-35.20	-7.67	0.00	-630.19	0.00	630.19	5133.81	2566.90	11129.0	5572.78	1.33	-0.288	0.000	0.120
48.00	-33.60	-7.58	0.00	-607.18	0.00	607.18	5141.90	2570.95	11172.7	5594.66	1.52	-0.308	0.000	0.115
50.00	-33.03	-7.53	0.00	-592.03	0.00	592.03	5108.73	2554.36	10994.5	5505.45	1.65	-0.322	0.000	0.114
55.00	-31.64	-7.38	0.00	-554.39	0.00	554.39	5024.49	2512.24	10552.4	5284.05	2.01	-0.354	0.000	0.111
60.00	-30.28	-7.24	0.00	-517.48	0.00	517.48	4938.39	2469.19	10115.2	5065.12	2.40	-0.387	0.000	0.108
65.00	-28.94	-7.09	0.00	-481.29	0.00	481.29	4850.42	2425.21	9683.22	4848.81	2.82	-0.419	0.000	0.105
70.00	-27.64	-6.95	0.00	-445.83	0.00	445.83	4760.60	2380.30	9256.75	4635.26	3.28	-0.452	0.000	0.102
75.00	-26.31	-6.78	0.00	-411.09	0.00	411.09	4668.91	2334.45	8836.09	4424.61	3.77	-0.485	0.000	0.099
80.00	-25.07	-6.63	0.00	-377.20	0.00	377.20	4575.36	2287.68	8421.51	4217.02	4.29	-0.517	0.000	0.095
85.00	-23.87	-6.49	0.00	-344.04	0.00	344.04	4479.95	2239.97	8013.32	4012.62	4.85	-0.549	0.000	0.091
90.00	-21.80	-6.33	0.00	-311.58	0.00	311.58	4371.20	2185.60	7591.89	3801.59	5.44	-0.581	0.000	0.087
91.00	-21.39	-6.31	0.00	-305.25	0.00	305.25	3638.14	1819.07	6412.59	3211.06	5.57	-0.588	0.000	0.101
95.00	-20.57	-6.19	0.00	-280.02	0.00	280.02	3578.07	1789.03	6158.09	3083.62	6.07	-0.613	0.000	0.097
100.00	-19.57	-6.06	0.00	-249.05	0.00	249.05	3501.29	1750.65	5844.19	2926.44	6.73	-0.647	0.000	0.091
105.00	-18.60	-5.92	0.00	-218.77	0.00	218.77	3422.66	1711.33	5535.26	2771.74	7.43	-0.680	0.000	0.084
108.00	-18.03	-5.83	0.00	-201.03	0.00	201.03	3374.59	1687.29	5352.40	2680.18	7.86	-0.700	0.000	0.080
108.00	-18.03	-5.83	0.00	-201.03	0.00	201.03	2667.38	1333.69	4244.39	2125.35	7.86	-0.700	0.000	0.101
110.00	-15.35	-4.93	0.00	-189.36	0.00	189.36	2644.20	1322.10	4152.60	2079.39	8.16	-0.713	0.000	0.097
115.00	-14.57	-4.80	0.00	-164.71	0.00	164.71	2584.96	1292.48	3925.36	1965.60	8.92	-0.748	0.000	0.089
120.00	-13.80	-4.67	0.00	-140.73	0.00	140.73	2523.85	1261.93	3701.54	1853.52	9.73	-0.783	0.000	0.081
125.00	-13.05	-4.54	0.00	-117.39	0.00	117.39	2460.88	1230.44	3481.44	1743.31	10.56	-0.815	0.000	0.073
130.00	-12.33	-4.41	0.00	-94.69	0.00	94.69	2396.05	1198.03	3265.33	1635.09	11.43	-0.844	0.000	0.063
135.00	-11.18	-4.28	0.00	-72.62	0.00	72.62	1762.27	881.13	2355.65	1179.58	12.33	-0.870	0.000	0.068
137.00	-8.59	-3.29	0.00	-64.06	0.00	64.06	1744.61	872.31	2295.82	1149.62	12.70	-0.880	0.000	0.061
140.00	-8.25	-3.22	0.00	-54.18	0.00	54.18	1717.57	858.78	2206.74	1105.01	13.26	-0.895	0.000	0.054
145.00	-7.69	-3.10	0.00	-38.07	0.00	38.07	1671.00	835.50	2060.16	1031.61	14.21	-0.916	0.000	0.042
147.00	-4.64	-1.80	0.00	-31.86	0.00	31.86	1651.86	825.93	2002.25	1002.61	14.59	-0.924	0.000	0.035
150.00	-4.36	-1.74	0.00	-26.45	0.00	26.45	1622.58	811.29	1916.22	959.54	15.18	-0.933	0.000	0.030
155.00	-3.92	-1.63	0.00	-17.77	0.00	17.77	1572.29	786.15	1775.21	888.92	16.16	-0.947	0.000	0.022
160.00	-3.50	-1.52	0.00	-9.64	0.00	9.64	1520.15	760.07	1637.42	819.92	17.16	-0.956	0.000	0.014
165.00	-2.73	-0.93	0.00	-2.05	0.00	2.05	1466.13	733.07	1503.13	752.68	18.16	-0.960	0.000	0.005
167.00	-0.20	-0.06	0.00	-0.19	0.00	0.19	1444.01	722.00	1450.46	726.31	18.57	-0.961	0.000	0.000
170.00	0.00	-0.06	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	19.17	-0.961	0.000	0.000

Final Analysis Summary

Structure:	CT04066-S-SBA	**Code:**	TIA-222-G	5/3/2022	
Site Name:	North Branford East	**Exposure:**	C		
Height:	170.00 (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

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	40.0	0.00	60.17	0.00	0.00	4578.70
0.9D + 1.6W 101 mph Wind	40.0	0.00	45.12	0.00	0.00	4541.25
1.2D + 1.0Di + 1.0Wi 50 mph Wind	10.6	0.00	88.22	0.00	0.00	1191.30
1.2D + 1.0E	1.8	0.00	60.22	0.00	0.00	216.28
0.9D + 1.0E	1.8	0.00	45.17	0.00	0.00	214.23
1.0D + 1.0W 60 mph Wind	8.8	0.00	50.18	0.00	0.00	1005.11

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	-60.17	-40.01	0.00	-4578.7	0.00	-4578.7	5803.10	2901.5	15291.3	7657.05	0.00	0.609
0.9D + 1.6W 101 mph Wind	-45.12	-39.99	0.00	-4541.2	0.00	-4541.2	5803.10	2901.5	15291.3	7657.05	0.00	0.601
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-88.22	-10.65	0.00	-1191.3	0.00	-1191.3	5803.10	2901.5	15291.3	7657.05	0.00	0.171
1.2D + 1.0E	-60.22	-1.82	0.00	-216.28	0.00	-216.28	5803.10	2901.5	15291.3	7657.05	0.00	0.039
0.9D + 1.0E	-45.17	-1.82	0.00	-214.23	0.00	-214.23	5803.10	2901.5	15291.3	7657.05	0.00	0.036
1.0D + 1.0W 60 mph Wind	-50.18	-8.82	0.00	-1005.1	0.00	-1005.1	5803.10	2901.5	15291.3	7657.05	0.00	0.140

Monopole Mat Foundation Design

			Date: 5/2/2022
Customer Name:	T-Mobile	**TIA Standard:**	TIA-222-G
Site Name:		**Structure Height (Ft.):**	170
Site Number:	CT04066-S-SBA	**Engineer Name:**	K. Azisllari
Engr. Number:	128552	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

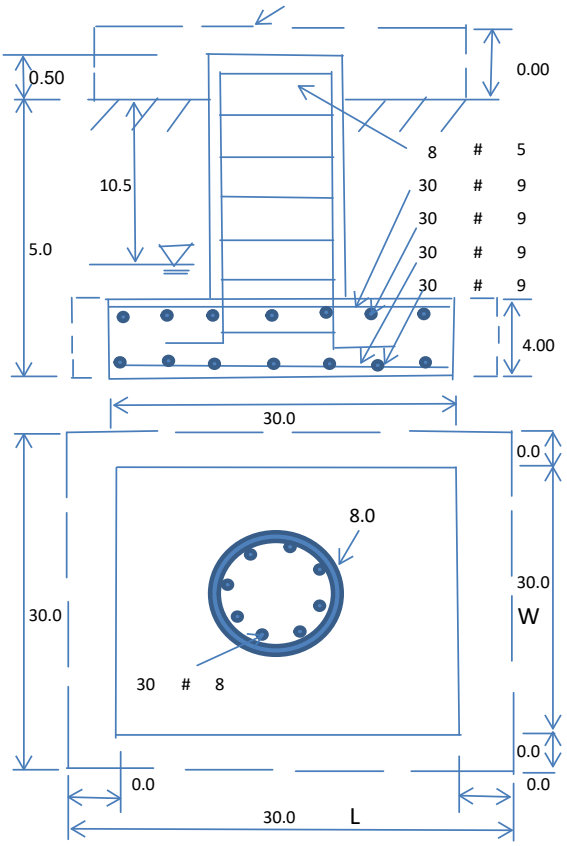
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	60.2	Shear Force (Kips):	40.0
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4578.7
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	5.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	4.00
Length of Pad (ft.):	30	Width of Pad (ft.):	30
Final Length of pad (ft)	30.0	Final width of pad (ft):	30.0



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 #:	5	
Qty. of Vertical Rebars:	30	Tie Spacing (in):	9.0	
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):	30	Qty. of Rebar in Pad (W):	30

Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	30	Qty. of Rebar in Pad (W):	30
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):	10.5	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	80000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		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.):	849.73	Total Dry Soil Weight (Kips):	101.97
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	101.97	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	3675.40	Total Dry Concrete Weight (Kips):	551.31
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	551.31	Total Vertical Load on Base (Kips):	713.48

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	1979	<	Allowable Factored Soil Bearing (psf):	60000	0.03	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	9722.3	>	Design Factored Momont (kips-ft):	4799	0.49	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	2.03	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):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	4665.7	>	Design Factored Moment (Mu, Kips-F	4638.7	0.99	OK!
Calculated Shear Capacity (Kips):	912.1	>	Design Factored Shear (Kips):	40.0	0.04	OK!
Calculated Tension Capacity (Tn, Kips):	1279.8	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9566.5	>	Design Factored Axial Load (Pu Kips):	60.2	0.01	OK!
Moment & Axial Strength Combination:	0.99	OK!	Check Tie Spacing (Design/Required):		0.75	OK!
Pier Reinforcement Ratio:	0.003		Reinforcement Ratio is too small			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	1314.3	>	One-Way Factored Shear (L-D. Kips):	258.7	0.20	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1314.3	>	One-Way Factored Shear (W-D., Kips)	258.7	0.20	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1183.8	>	One-Way Factored Shear (C-C, Kips):	243.8	0.21	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0019	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0019		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	5866.7	>	Moment at Bottom (L-Dir. K-Ft):	1824.5	0.31	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	5866.7	>	Moment at Bottom (W-Dir. K-Ft):	1824.5	0.31	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	8253.3	>	Moment at Bottom (C-C Dir. K-Ft):	2580.3	0.31	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0019	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0019		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	5866.7	>	Moment at the top (L-Dir K-Ft):	774.0	0.13	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	5866.7	>	Moment at the top (W-Dir K-Ft):	774.0	0.13	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	8253.3	>	Moment at the top (C-C Dir. K-Ft):	725.0	0.09	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1831.5	k-ft.	Max. factored shear stress v_{u_CD}:		2.7	Psi
Max. factored shear stress v_{u_AB}:	7.3	Psi	Factored shear Strength ϕv_n:		164.3	Psi
Max. factored shear stress v_u:	7.3	Psi	Check Usage of Punching Shear Capacity:		0.04	OK!

Exhibit F

Power Density/RF Emissions Report

Fox Hill Telecom

Radio Frequency Emissions Analysis Report

T-Mobile

Site ID: CT11372B

SBA N. Branford East
39 Ciro Road
North Branford, CT 06471

June 5, 2022

Fox Hill Telecom Project Number: 221292

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**7.31 %**

Fox Hill Telecom

June 5, 2022

T-MOBILE
Attn: RF Manager
35 Griffin Road South
Bloomfield, CT 06009

Emissions Analysis for Site: **CT11372B – SBA N. Branford East**

Fox Hill Telecom, Inc ("Fox Hill") was directed to analyze the proposed upgrades to the T-MOBILE facility located at **39 Ciro 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.

General 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 **39 Ciro 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)
LTE / 5G NR	600 MHz	2	40
LTE	700 MHz	2	20
LTE	1900 MHz (PCS)	4	40
GSM	1900 MHz (PCS)	1	15
UMTS	2100 MHz (AWS)	1	40
LTE	2100 MHz (AWS)	4	40

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	RFS APXVAALL24_43-U-NA20	165
A	2	Ericsson AIR21 B2A/B4P	167
A	3	Ericsson AIR21 B4A/B2P	167
B	1	RFS APXVAALL24_43-U-NA20	165
B	2	Ericsson AIR21 B2A/B4P	167
B	3	Ericsson AIR21 B4A/B2P	167
C	1	RFS APXVAALL24_43-U-NA20	165
C	2	Ericsson AIR21 B2A/B4P	167
C	3	Ericsson AIR21 B4A/B2P	167

Table 2: Antenna Data

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

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	RFS APXVAALL24_43-U-NA20	600 MHz / 700 MHz	13.65 / 13.85	4	120	2,824.56	0.96
Antenna A2	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9 / 15.9	6	215	8,364.47	1.16
Antenna A3	Ericsson AIR21 B4A/B2P	2100 MHz (AWS)	15.9	4	160	6,224.72	0.86
						Sector A Composite MPE%	**2.98**
Antenna B1	RFS APXVAALL24_43-U-NA20	600 MHz / 700 MHz	13.65 / 13.85	4	120	2,824.56	0.96
Antenna B2	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9 / 15.9	6	215	8,364.47	1.16
Antenna B3	Ericsson AIR21 B4A/B2P	2100 MHz (AWS)	15.9	4	160	6,224.72	0.86
						Sector B Composite MPE%	**2.98**
Antenna C1	RFS APXVAALL24_43-U-NA20	600 MHz / 700 MHz	13.65 / 13.85	4	120	2,824.56	0.96
Antenna C2	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9 / 15.9	6	215	8,364.47	1.16
Antenna C3	Ericsson AIR21 B4A/B2P	2100 MHz (AWS)	15.9	4	160	6,224.72	0.86
						Sector C Composite MPE%	**2.98**

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	**2.98 %**
AT&T	3.98 %
Sprint	0.02 %
Nextel	0.33 %
Site Total MPE %:	**7.31 %**

Table 4: All Carrier MPE Contributions

T-MOBILE Sector A Total:	2.98 %
T-MOBILE Sector B Total:	2.98 %
T-MOBILE Sector C Total:	2.98 %
Site Total:	7.31 %

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 600 MHz LTE / 5G NR	2	926.96	165	2.64	600 MHz	400	0.66%
T-Mobile 700 MHz LTE	2	485.32	165	1.38	700 MHz	467	0.30%
T-Mobile 1900 MHz (PCS) LTE	4	1,556.18	167	8.63	1900 MHz (PCS)	1000	0.86%
T-Mobile 1900 MHz (PCS) GSM	1	583.57	167	0.81	1900 MHz (PCS)	1000	0.08%
T-Mobile 2100 MHz (AWS) UMTS	1	1,556.18	167	2.16	2100 MHz (AWS)	1000	0.22%
T-Mobile 2100 MHz (AWS) LTE	4	1,556.18	167	8.63	2100 MHz (AWS)	1000	0.86%
						Total:	**2.98%**

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:	2.98 %
Sector B:	2.98 %
Sector C:	2.98 %
T-MOBILE Maximum Total (per sector):	2.98 %
Site Total:	7.31 %
Site Compliance Status:	**COMPLIANT**

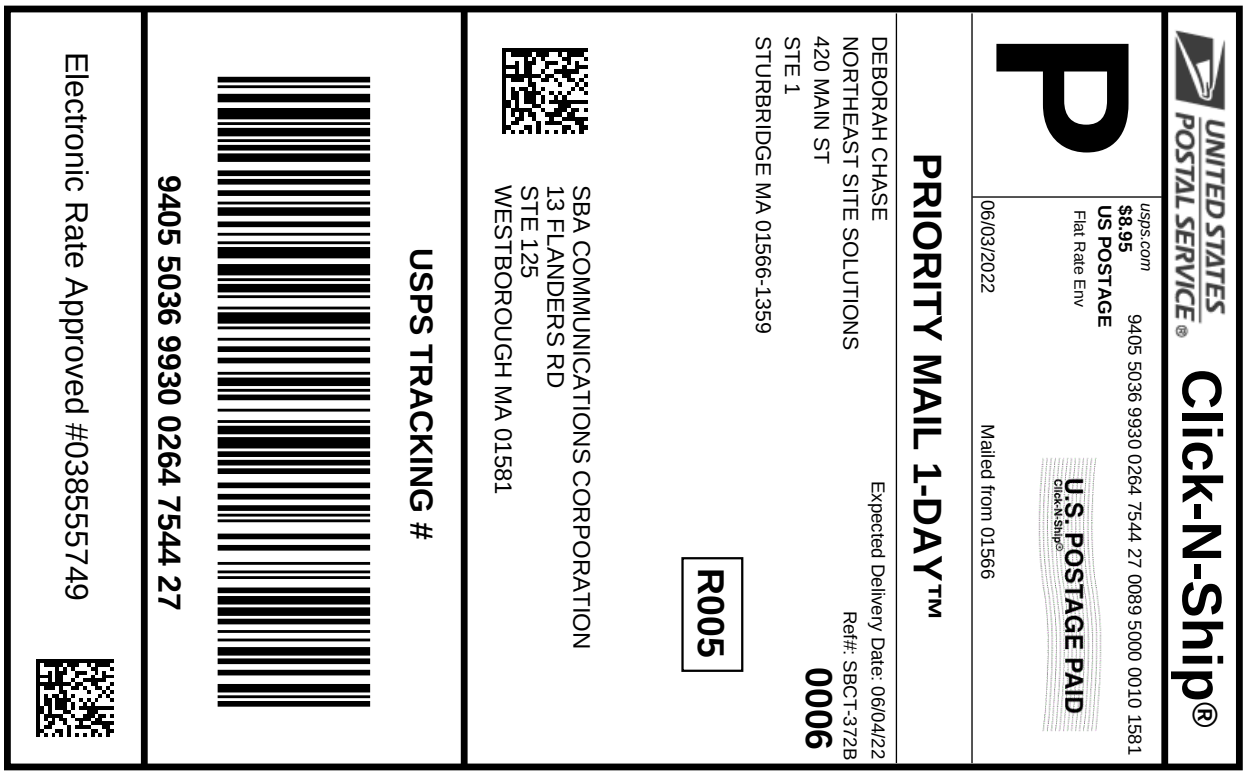
The anticipated composite MPE value for this site assuming all carriers present is **7.31 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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.

Scott Heffernan
Principal RF Engineer
Fox Hill Telecom, Inc
Holden, MA 01520
(978)660-3998

Exhibit G

Recipient Mailings



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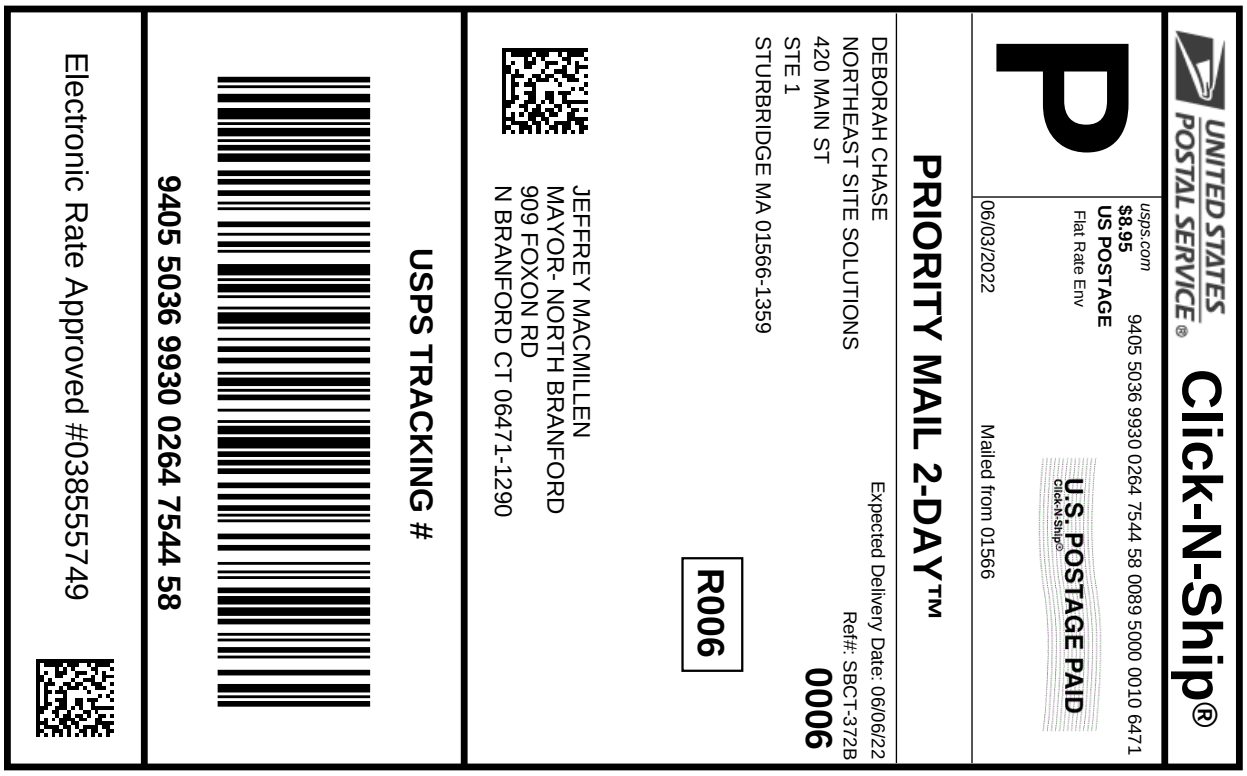

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MAYOR- NORTH BRANFORD
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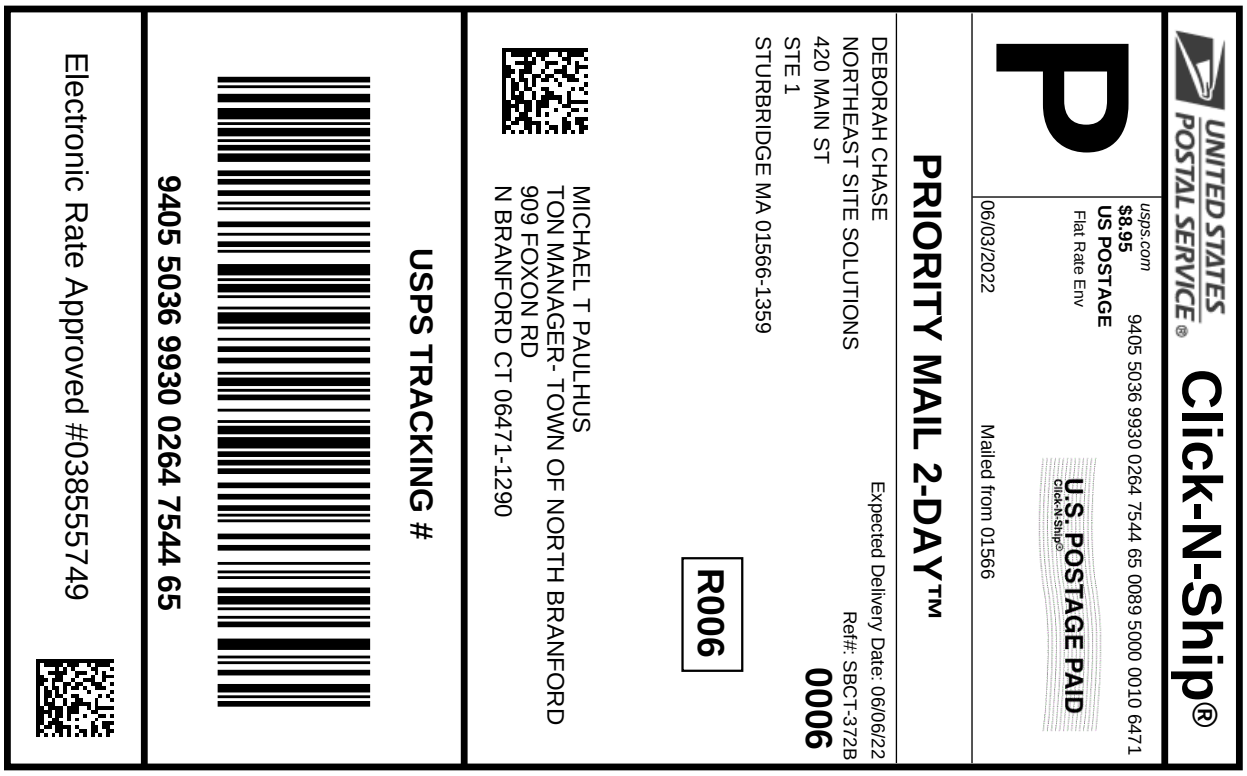

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STURBRIDGE MA 01566-1359

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TON MANAGER- TOWN OF NORTH BRANFORD
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N BRANFORD CT 06471-1290

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ERIC KNAPP
PLANNING & ZONING ADMINISTRATOR/TOWN
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JOSEPH CASAGRANDE
4 LOCHBOURNE DR
CLINTON CT 06413-1410

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Print Date:	06/03/2022
Ship Date:	06/03/2022
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Total:	**$8.95**

From: DEBORAH CHASE
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420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Ref#: SBCT-372B

To: JOSEPH CASAGRANDE
4 LOCHBOURNE DR
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Product	Qty	Unit Price	Price
Prepaid Mail Clinton, CT 06413 Weight: 0 lb 8.80 oz Acceptance Date: Tue 06/07/2022 Tracking #: 9405 5036 9930 0264 7544 89	1		$0.00
Prepaid Mail North Branford, CT 06471 Weight: 0 lb 10.00 oz Acceptance Date: Tue 06/07/2022 Tracking #: 9405 5036 9930 0264 7544 72	1		$0.00
Prepaid Mail North Branford, CT 06471 Weight: 0 lb 10.70 oz Acceptance Date: Tue 06/07/2022 Tracking #: 9405 5036 9930 0264 7544 65	1		$0.00
Prepaid Mail North Branford, CT 06471 Weight: 0 lb 10.00 oz Acceptance Date: Tue 06/07/2022 Tracking #: 9405 5036 9930 0264 7544 58	1		$0.00
Prepaid Mail Westborough, MA 01581 Weight: 0 lb 4.10 oz Acceptance Date: Tue 06/07/2022 Tracking #: 9405 5036 9930 0264 7544 27	1		$0.00

Grand Total: $0.00

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