August 12, 2022

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

RE: Notice of Exempt Modification
29 Mahoney Road, Colchester, CT 06415
Latitude: 41.564533
Longitude: -72.251697
T-Mobile Site #: CT11472A_Anchor

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 177-foot level of the existing 180-foot Monopole Tower at 29 Mahoney Rd., Colchester, CT. The 180-foot tower is owned by SBA Properties, LLC. The property is owned by the Colchester Fish & Game Club, Inc. T-Mobile now intends to remove three (3) L700/L600 MHz antennas and install (3) new L600/L700, 1900/2100 and three (3) new L2500/N2500 MHz antennas.

The new antennas support 5G services and would be installed at the 177-foot level of the tower.

Planned Modifications:

TOWER

Remove:

Remove and Replace:

- (3) EMSRR90-17-XXDP antenna (remove) – (3) Commscope W-65A-R1 (replace)

Install New:

- (3) AIR6419 B41 antennas
- (3) Ericsson Radio 4460 B25+B66 RRU
  (3) 1 1/4" Fiber
  (1) 1.99” Fiber

Existing Equipment to Remain:

(3) RS APXVAALL24_43-U-NA20 antennas
(3) Ericsson Radio 4449 B71+B85 RRU
(1) Low Profile Platform
(3) Kathrein 782 10662 Bias T
(3) Twin Style 1A PCS TMA*
(3) Twin Style 1BX TMA*
(12) coax cables*

*Equipment shown for entitlement purposes only

GROUND

Install New:

(1) 6160 Cabinet
(1) B160 Cabinet
(1) Slackbox
(1) 200A PPC
(1) 100A-2P Breaker
(1) 125A-2P Breaker
(1) 25A-1P Breaker

This facility was approved by the Town of Colchester's Planning and Zoning Commission on March 15, 2000. Approval was given under SDP #2000-238. A bond was to be posted prior to commencement of work. No post construction stipulations were set. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16.50j-72(b)(2). In accordance with R.C.S.A. § 16.50j-73, a copy of this letter is being sent to the Town of Colchester's First Selectman, Andreas Bisbikos, First Selectman, Salvatore Tassone / Town Engineer, well as to the property owner. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16.50j- 72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modification will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.

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

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

Elizabeth Jamieson
Site Development Specialist II
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581
860-605-7808 + C
EJamieson@sbasite.com

Attachments
cc: Andreas Bisbikos, First Selectman / with attachments
127 Norwich Avenue, Colchester, CT 06415
Salvatore Tassone / Town Engineer / with attachments
127 Norwich Avenue, Colchester, CT 06415
Colchester Fish and Game Club / with attachments
PO Box 257 Colchester, CT 06415

Exhibit List

Exhibit 1	Check Copy	To be invoiced at a later per Covid guidelines
Exhibit 2	Notification Receipts	X
Exhibit 3	Property Card	X
Exhibit 4	Property Map	X
Exhibit 5	Original Zoning Approval	Town of Colchester Z&P Commission 3/15/2000
Exhibit 6	Construction Drawings	Chappell Engineering 06/15/2022
Exhibit 7	Structural Analysis	TES 06/13/2022
Exhibit 8	Mount Analysis	TES 06/13/2022
Exhibit 10	EME Report	Centerline 07/06/2022

EXHIBIT 1

EXHIBIT 2

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

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

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EXHIBIT 3

Town of Colchester, CT

Property Listing Report | Map Block Lot 03-03/002-000 | Account C0061900 | PID 924

Property Information

Property Location	29 MAHONEY RD
Owner	COLCHESTER FISH + GAME CLUB IN
Co-Owner	
Mailing Address	PO BOX 257 COLCHESTER CT 06415
Land Use	1060 Vacant w Improvmts
Land Class	R
Zoning Code	R60
Census Tract	36
Sub Lot	

Neighborhood	0050
Acreage	90
Utilities	Well,Septic
Lot Setting/Desc	Rural Below
Survey Map	
Additional Info	

Photo

Sketch

Primary Construction Details

Year Built		Bedrooms		Exterior Walls	
Stories		Full Bathrooms		Interior Walls	
Building Style		Half Bathrooms		Heating Type	
Building Use		Bath Style		Heating Fuel	
Building Condition		Kitchen Style		AC Type	
Floors		Roof Style		Gross Bldg Area	
Total Rooms		Roof Cover		Total Living Area	

Report Created On 5/16/2019

Town of Colchester, CT

Property Listing Report | Map Block Lot 03-03/002-000 | Account C0061900

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Outbuildings	6600	4600
Land	394000	203790
Total	400600	208390

Outbuilding and Extra Items

Type	Description
Canopy Ave	377.00 S.F.
Canopy Ave	720.00 S.F.

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area		0

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
COLCHESTER FISH + GAME CLUB IN	0086/0409	6/15/1965	0

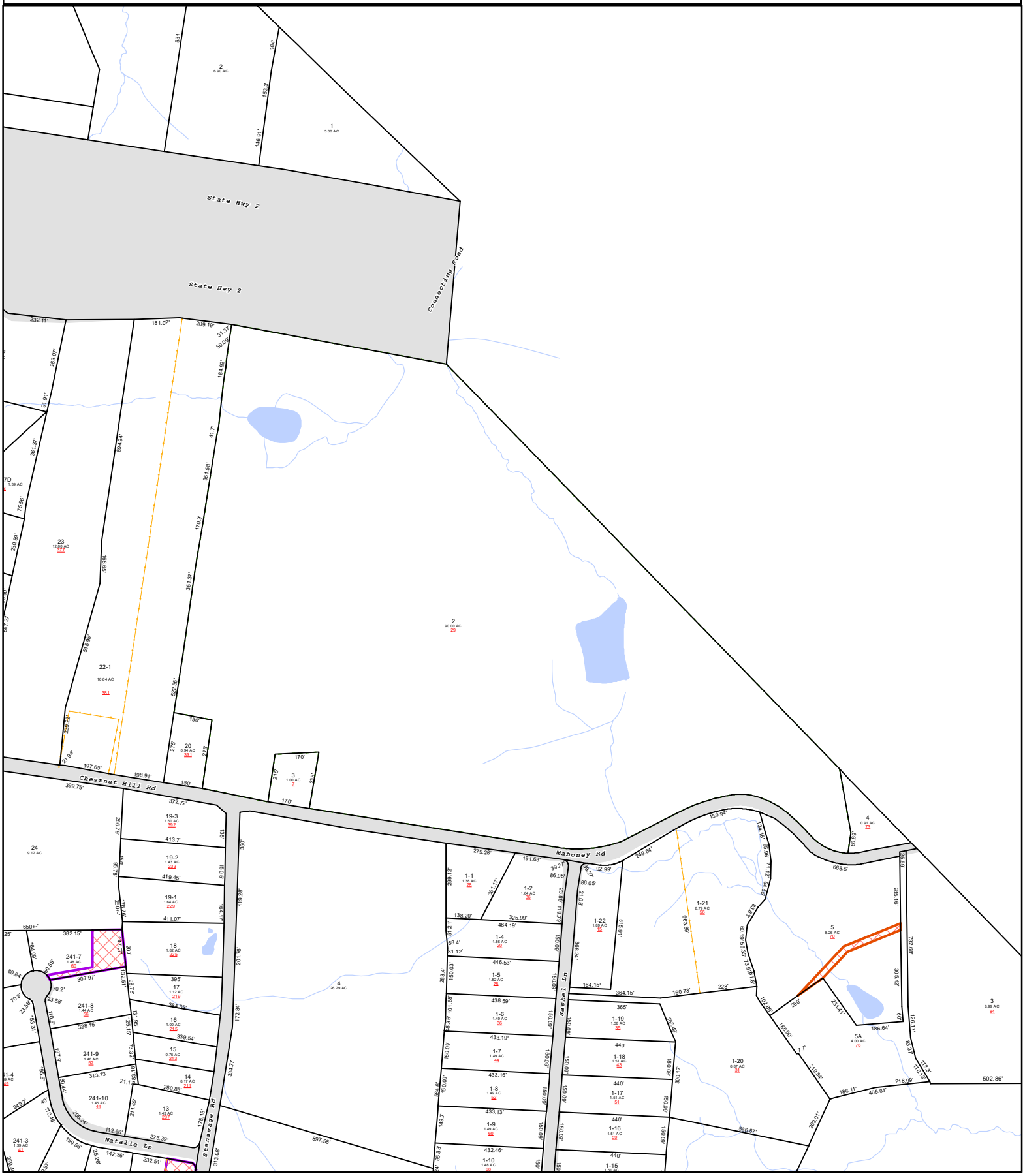
Report Created On 5/16/2019

EXHIBIT 4

Town of Colchester, Connecticut - Assessment Parcel Map

Parcel: 03-03-002-000

Address: 29 MAHONEY RD



Approximate Scale: **1 inch = 500 feet**

0 260 520 780 1,040 Feet

Map Produced: September 2018 / Grand List: 2017

EXHIBIT 5

TOWN OF COLCHESTER
INCORPORATED
1698
CONNECTICUT

Planning and Zoning
Planning Director
Town Engineer
Code Administration
Health Director
Building Official
Fire Marshal
Registered Sanitarian
Zoning Enforcement
Wetlands Enforcement

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 16, 2000

Esther McNanny and Jim Smith
SBA, Inc.
80 Eastern Boulevard
Glastonbury, CT 06033

RE: SDP#2000-238, Application of SBA, Inc. for Site Development Plan Review for Communications Tower at 29 Mahoney Road, Colchester, CT

Dear Esther and Jim:

The Colchester Zoning & Planning Commission at its March 15, 2000 regular meeting *approved* your above-referenced application. Notice of this decision will be published in the Zone 4 Section of the Hartford Courant and in the Rivereast News Bulletin on Friday, March 17, 2000.

Per Section 12.10.1 of the Zoning Regulations, a bond in the amount of 25% of the total cost of site improvements must be posted prior to the endorsement of this plan and/or commencement of work. A bond estimate must be submitted to the Town Engineer for his review and approval.

Please feel free to contact me at (860) 537-7294 with any questions.

Very truly yours,

Liz Rasmussen
Zoning Enforcement Officer

/lbr
cc: File
(p:/liz/zpc/decisionletters/sdp#2000-23829mahoneyroadsba)

EXHIBIT 6

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

RT2/COLCHESTER-BOZRAH

29 MAHONEY ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

SITE NO.: CT11472A

SITE TYPE: 180'± MONOPOLE

RF DESIGN GUIDELINE: 67D5D998E ODE+6160

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
SECTOR D:	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

SCOPE OF WORK

REMOVE:
- 3 ANTENNAS
- 6 TMAS
- 3 RADIOS
- 12 COAX CABLES
- 1 200A ELECTRIC PANEL

INSTALL:
- 6 ANTENNAS
- 3 RADIOS
- 2 HYBRID CABLES
- 1 6160 CABINET
- 1 B160 CABINET
- 1 SLACKBOX
- 1 200A PPC
- 1 100A-2P BREAKER
- 1 125A-2P BREAKER
- 1 25A-1P 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.

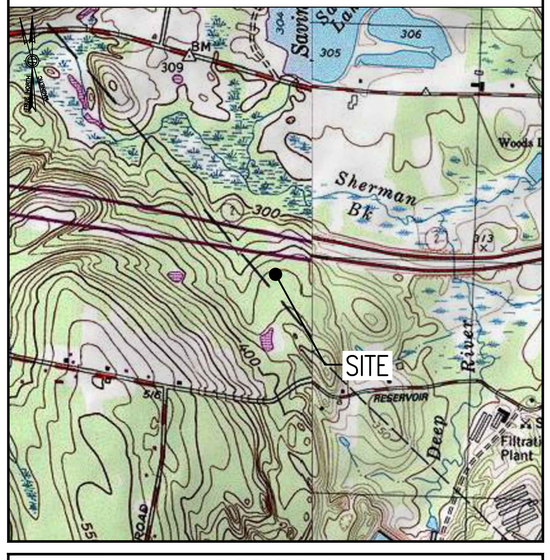
GENERAL NOTES

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

MERGE ONTO I-495 NORTH TOWER MANSFIELD/MARLBORO. TAKE EXIT 33B FOR I-95 SOUTH TOWARD PROVIDENCE RI. TAKE EXIT 6 FOR I-295. CONTINUE ONTO I-295 SOUTH. ENTER RI. TAKE EXIT 9C US-6 WEST TOWARD HARTFORD CT. KEEP RIGHT AT FORK. FOLLOW SIGNS FOR JOHNSTON/SCITUATE/FOSTER. MERGE ONTO US-6 WEST. CONTINUE STRAIGHT ONTO US-6 WEST. ENTER CT. TAKE SLIGHT LEFT ONTO CONNECTICUT TURNPIKE/GOVERNOR JOHN DAVIS LODGE TURNPIKE. FOLLOW SIGNS FOR I-395 SOUTH/NORWICH. TAKE EXIT ON LEFT FOR I-395 SOUTH. TAKE EXIT 14 TOWARD CT-2 WEST/CT-32 NORTH/HARTFORD/COLCHESTER. TURN RIGHT ONTO WEST TOWN STREET. CONTINUE ONTO FITCHVILLE ROAD/FRANKLIN TURNPIKE/NORWICH-COLCHESTER TURNPIKE. TURN LEFT ONTO CT-2 WEST TOWARD HARTFORD. TAKE EXIT 22 TOWARD LEBANON/GILMAN. TURN RIGHT ONTO SCOTT HILL ROAD. TURN LEFT ONTO STATE HIGHWAY 616. TURN LEFT ONTO CAMP MOOWEEN ROAD. CONTINUE STRAIGHT ONTO RESERVOIR ROAD. CONTINUE ONTO MAHONEY ROAD. SITE IS LOCATED ON THE RIGHT HAND SIDE.

SHEET INDEX

SHEET NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	0
GN-1	GENERAL NOTES	0
A-1	COMPOUND & EQUIPMENT PLANS	0
A-2	TOWER ELEVATIONS & ANTENNA PLANS	0
A-3	SITE DETAILS	0
A-4	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:	CT11472A
SITE NAME:	RT2/COLCHESTER-BOZRAH
SBA SITE NUMBER:	CT02652-S
SBA SITE NAME:	COLCHESTER 3
SITE ADDRESS:	29 MAHONEY ROAD COLCHESTER, CT 06415
PROPERTY OWNER:	COLCHESTER FISH & GAME CLUB, INC. COLCHESTER, CT 06415-0257
TOWER OWNER:	SBA PROPERTIES, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	NEW LONDON
ZONING DISTRICT:	RURAL
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	180'±
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: 41.564499° N41°33'52.20" LONGITUDE: -72.251655° W72°15'05.96"

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

7/1/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	06/15/22	ISSUED FOR CONSTRUCTION	CMC

SITE NUMBER:
CT11472A

SITE ADDRESS:
29 MAHONEY ROAD
COLCHESTER, CT 06415

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

1815.499

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
7/1/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	06/15/22	ISSUED FOR CONSTRUCTION	CMC

SITE NUMBER:
CT11472A

SITE ADDRESS:
29 MAHONEY ROAD
COLCHESTER, CT 06415

SHEET TITLE
GENERAL NOTES

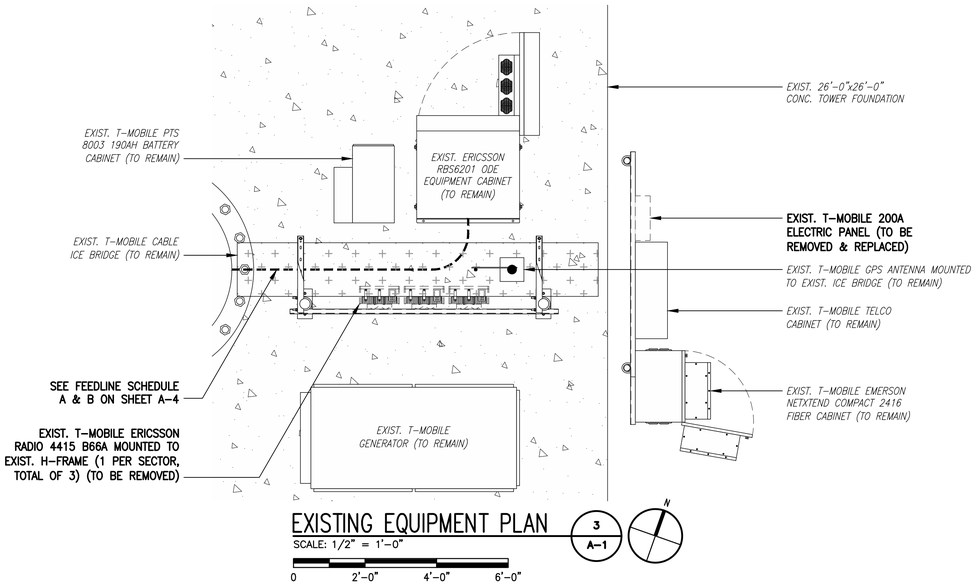
SHEET NUMBER
GN-1

1815.499

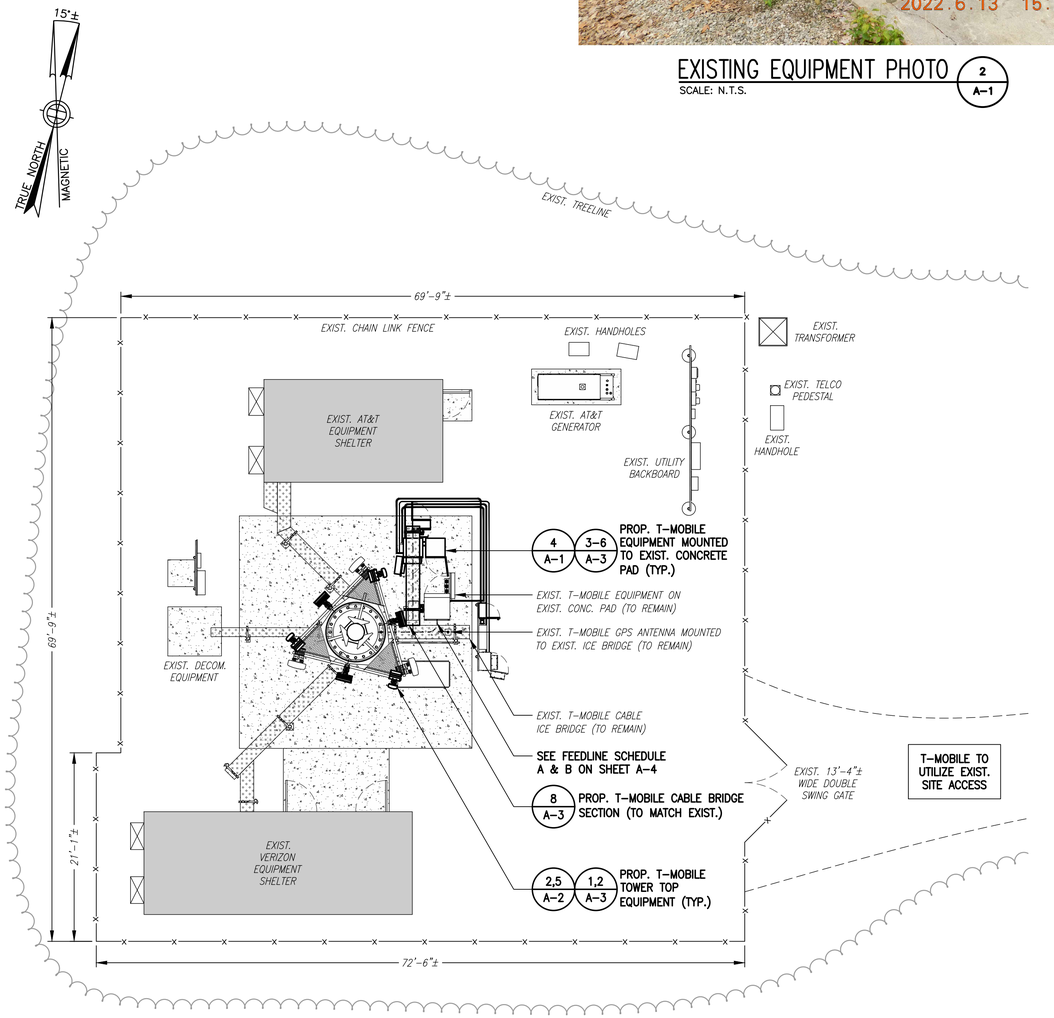
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY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

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



EXISTING EQUIPMENT PLAN (3 / A-1)
SCALE: 1/2" = 1'-0"
0 2'-0" 4'-0" 6'-0"



COMPOUND PLAN (1 / A-1)
SCALE: 1/8" = 1'-0"
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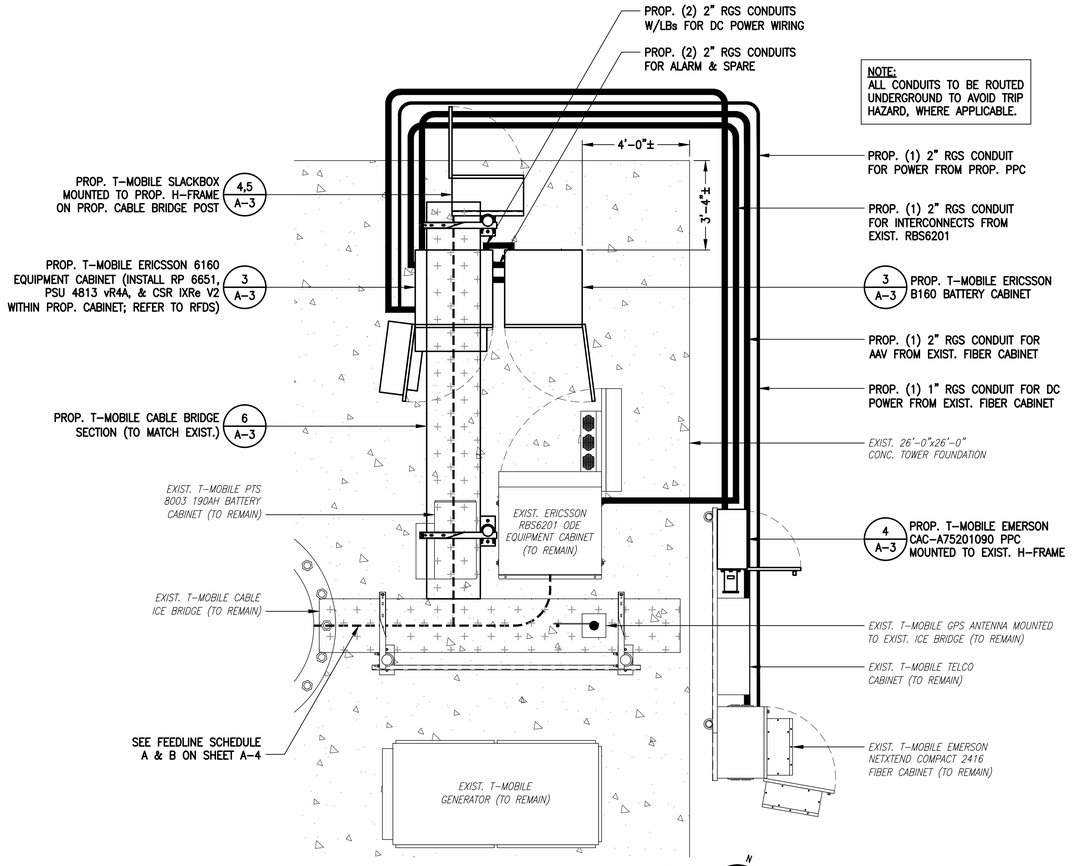

PROPOSED EQUIPMENT PLAN (4 / A-1)
SCALE: 1/2" = 1'-0"
0 2'-0" 4'-0" 6'-0"

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7/11/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
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SITE NUMBER:
CT11472A

SITE ADDRESS:
29 MAHONEY ROAD
COLCHESTER, CT 06415

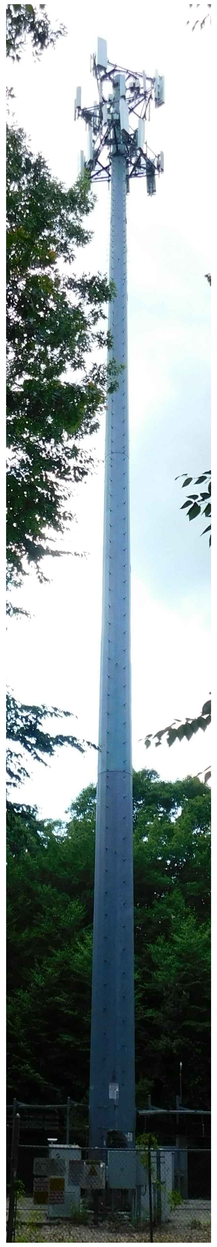
SHEET TITLE
COMPOUND & EQUIPMENT PLANS

SHEET NUMBER
A-1

1815.499

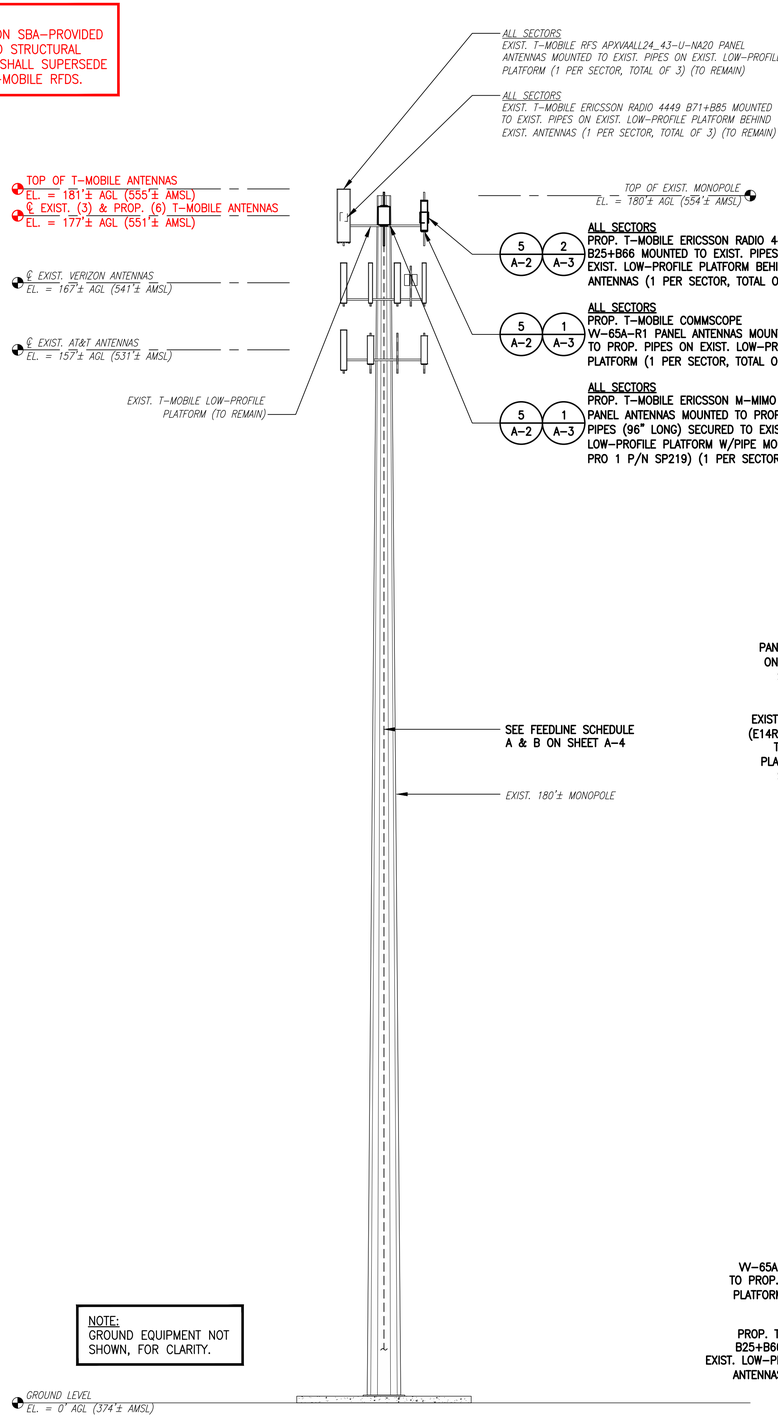
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY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

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.

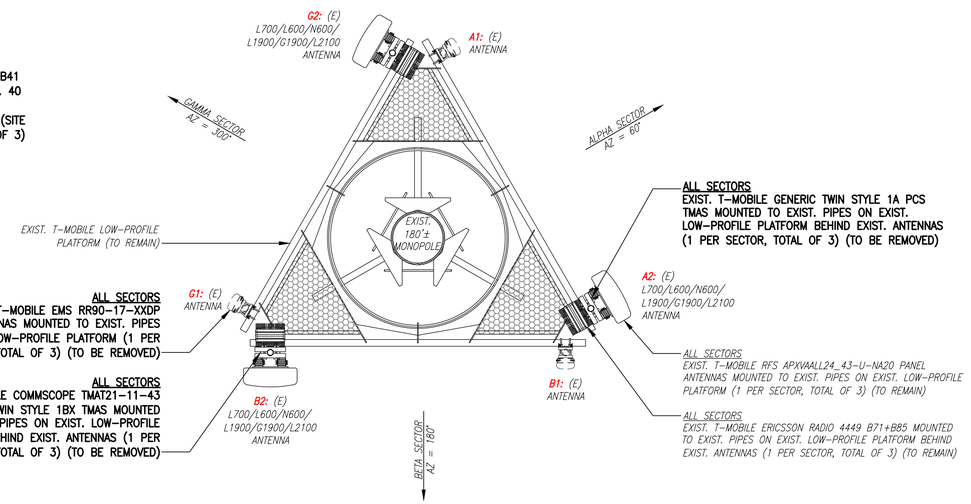


EXISTING TOWER PHOTO (1 / A-2)
SCALE: N.T.S.

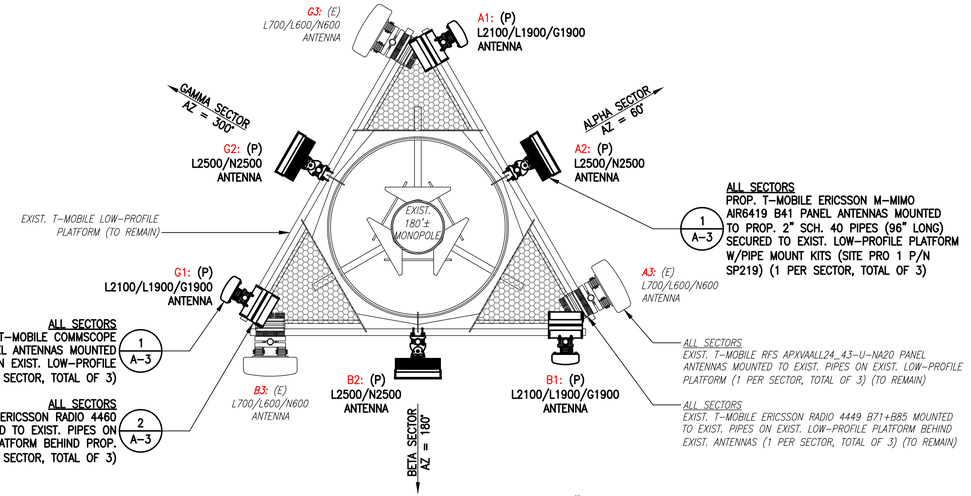
EXISTING ANTENNA PHOTO (3 / A-2)
SCALE: N.T.S.



TOWER ELEVATION (2 / A-2)
SCALE: 3/32" = 1'-0"
0 10'-8" 21'-4" 32'-0"



EXISTING ANTENNA PLAN (4 / A-2)
SCALE: N.T.S.



PROPOSED ANTENNA PLAN (5 / A-2)
SCALE: N.T.S.

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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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED PROFESSIONAL CIVIL ENGINEER
7/1/2022

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	06/15/22	ISSUED FOR CONSTRUCTION	CMC

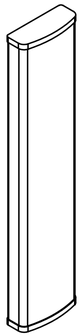
SITE NUMBER:
CT11472A

SITE ADDRESS:
29 MAHONEY ROAD
COLCHESTER, CT 06415

SHEET TITLE
TOWER ELEVATION, ANTENNA PLANS & PHOTOS

SHEET NUMBER
A-2

1815.499



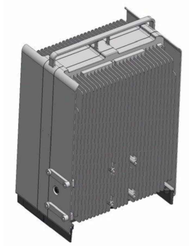
COMMSCOPE VV-65A-R1 ANTENNA

DIMENSIONS: 54.7"H x 12.1"W x 4.6"D
WEIGHT: 23.8 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ERICSSON M-MIMO AIR6419 B41 ANTENNA

DIMENSIONS: 36.3"H x 20.9"W x 9.0"D
WEIGHT: 83.3 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

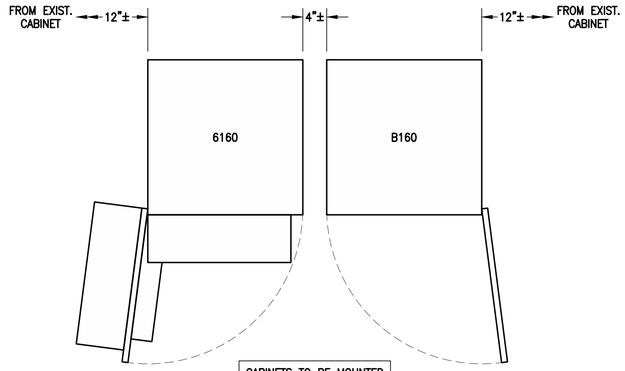
ANTENNA DETAILS (1 / A-3)
SCALE: N.T.S.



ERICSSON RADIO 4460 B25+B66

DIMENSIONS: 17.0"H x 15.1"W x 11.9"D
WEIGHT: 104.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

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



ERICSSON 6160 SITE SUPPORT CABINET

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

ERICSSON B160 BATTERY CABINET

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

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

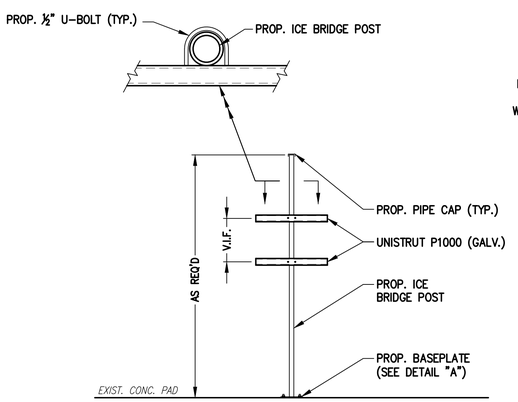
EMERSON CAC-A75201090 PPC

DIMENSIONS: 24.0"H x 15.7"W x 20.0"D
WEIGHT: 80 lbs
QUANTITY: TOTAL OF 1

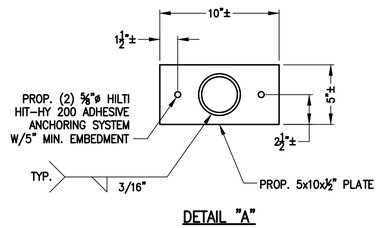
SLACKBOX - HOFFMAN 32FH91 NEMA 3R ENCLOSURE

DIMENSIONS: 24.0"H x 24.0"W x 12.0"D
QUANTITY: TOTAL OF 1

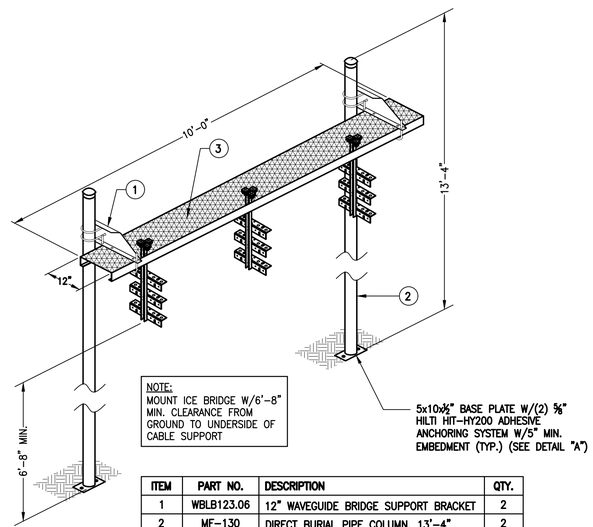
SSC DETAILS (4 / A-3)
SCALE: N.T.S.



H-FRAME DETAIL (5 / A-3)
SCALE: N.T.S.



DETAIL "A"



ITEM	PART NO.	DESCRIPTION	QTY.
1	WBLB123.06	12" WAVEGUIDE BRIDGE SUPPORT BRACKET	2
2	MF-130	DIRECT BURIAL PIPE COLUMN, 13'-4"	2
3	WB-CY110	12" SAFETY GRATING	1
4	WB-K110BH	HARDWARE KIT ITEM #5-16	1

CABLE BRIDGE DETAIL (6 / A-3)
SCALE: NTS

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0	06/15/22	ISSUED FOR CONSTRUCTION	CMC

SITE NUMBER:
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COLCHESTER, CT 06415

SHEET TITLE
SITE DETAILS

SHEET NUMBER
A-3

1815.499

FINAL ANTENNA CONFIGURATION

SECTOR		ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	CABLES
ALPHA	A1	COMMSCOPE VV-65A-R1	177'± AGL	60°	0°	2°	L1900/L2100/G1900	ERICSSON RADIO 4460 B25+B66	EXIST. (1) 1-5/8" (6x12) HCS FIBER CABLE PROP. (2) 2" (6x24) HCS FIBER CABLES (230'±)
	A2	ERICSSON M-MIMO AIR6419 B41	177'± AGL	60°	0°	2°	L2500/N2500	–	
	A3	*RFS APXVAALL24_43-U-NA20*	*177'± AGL*	*60°*	*0°*	*2°*	*L700/L600/N600*	*ERICSSON RADIO 4449 B71+B85*	
BETA	B1	COMMSCOPE VV-65A-R1	177'± AGL	180°	0°	2°	L1900/L2100/G1900	ERICSSON RADIO 4460 B25+B66	
	B2	ERICSSON M-MIMO AIR6419 B41	177'± AGL	180°	0°	2°	L2500/N2500	–	
	B3	*RFS APXVAALL24_43-U-NA20*	*177'± AGL*	*180°*	*0°*	*2°*	*L700/L600/N600*	*ERICSSON RADIO 4449 B71+B85*	
GAMMA	G1	COMMSCOPE VV-65A-R1	177'± AGL	300°	0°	2°	L1900/L2100/G1900	ERICSSON RADIO 4460 B25+B66	
	G2	ERICSSON M-MIMO AIR6419 B41	177'± AGL	300°	0°	2°	L2500/N2500	–	
	G3	*RFS APXVAALL24_43-U-NA20*	*177'± AGL*	300°	*0°*	*2°*	*L700/L600/N600*	*ERICSSON RADIO 4449 B71+B85*	

CABLE NOTE: EXIST. (12) 1-¼" COAX CABLES TO BE REMOVED. SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV4 – 04/20/22

FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES		LOCATION
A	*EXISTING TO REMAIN:*	*(1) ½" COAX FOR GPS ANTENNA* *(1) 1-5/8" (6x12) HCS FIBER CABLE*	ROUTED PER STRUCTURAL ANALYSIS
	EXISTING TO BE REMOVED:	*(12) 1-¼" COAX CABLES*	
B	PROPOSED:	(2) 2" (6x24) HCS FIBER CABLES (230'±)	

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

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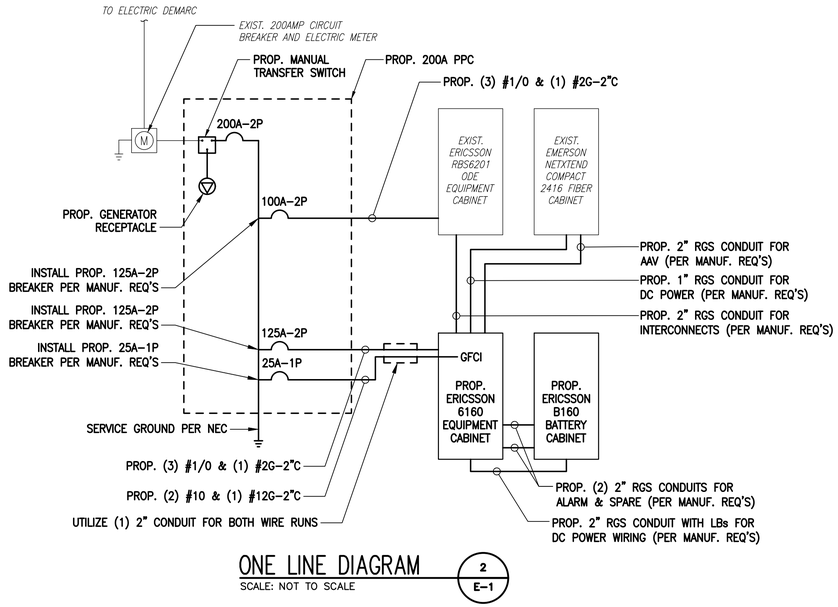
SHEET TITLE
ANTENNA & FEEDLINE CHARTS

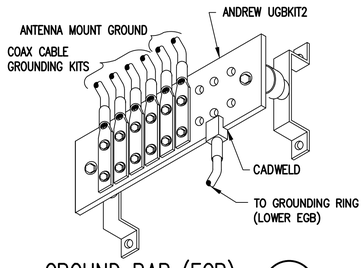
SHEET NUMBER
A-4

1815.499

EXISTING POWER PANEL PHOTOS (1 / E-1)
SCALE: NOT TO SCALE

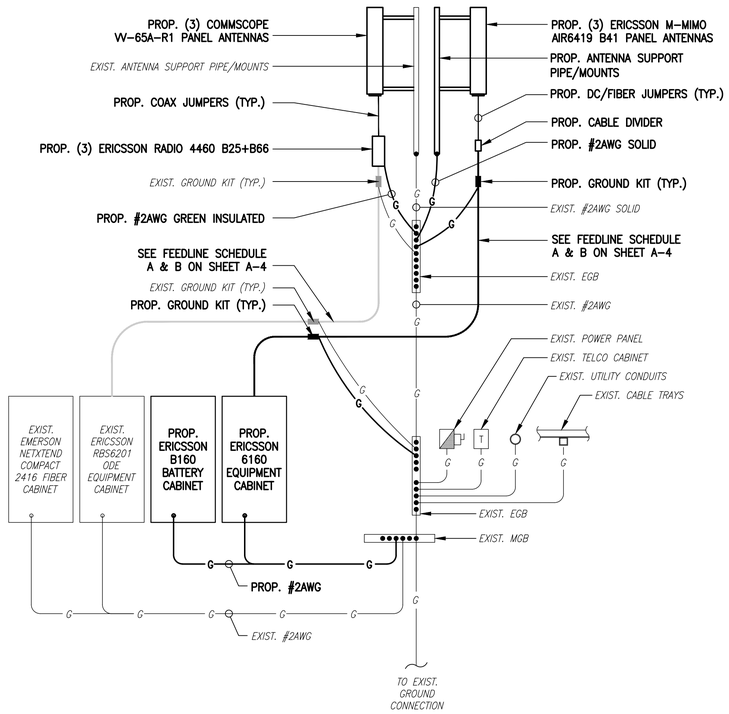


ONE LINE DIAGRAM (2 / E-1)
SCALE: NOT TO SCALE

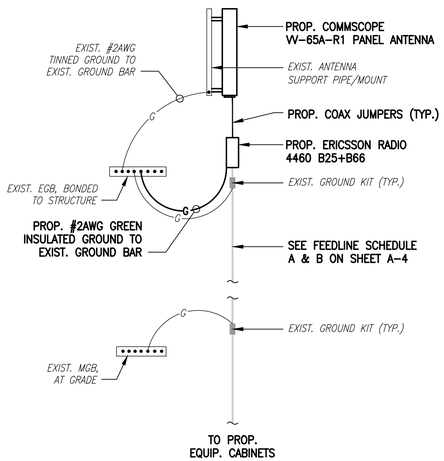


GROUND BAR (EGB) (5 / E-1)
SCALE: NOT TO SCALE

NOTE:
EXIST. RFS ANTENNA & RADIOS NOT SHOWN, FOR CLARITY.

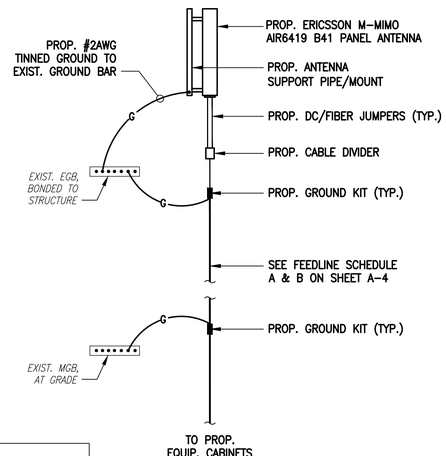


GROUNDING RISER DIAGRAM (3 / E-1)
SCALE: NOT TO SCALE



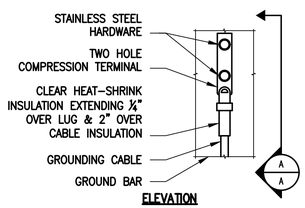
L1900/L2100/G1900 ANTENNA

NOTE:
EXIST. RFS ANTENNA & RADIOS NOT SHOWN, FOR CLARITY.

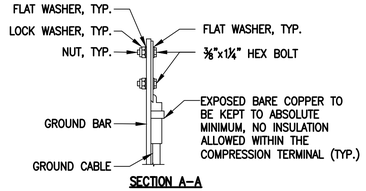


L2500/N2500 ANTENNA

COAX CABLE CONNECTION AND GROUNDING DETAIL (4 / E-1)
SCALE: NOT TO SCALE



ELEVATION



SECTION A-A

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 (6 / E-1)
SCALE: NOT TO SCALE

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 THININSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY PROJECT OWNER.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
20. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXIST. TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
21. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMNS MINIMUM RESISTANCE REQUIRED.
22. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

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SUBMITTALS

REV.	DATE	DESCRIPTION	BY
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SITE NUMBER:
CT11472A

SITE ADDRESS:
29 MAHONEY ROAD
COLCHESTER, CT 06415

SHEET TITLE
ELECTRIC & GROUNDING DETAILS

SHEET NUMBER
E-1

1815.499

EXHIBIT 7

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

Structural Analysis Report

Existing 180 ft Valmont Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT02652-S

Customer Site Name: Colchester 3 CT

Carrier Name: T-Mobile (App#: 197460, V2)

Carrier Site ID / Name: CT11472A / Rt2/Colchester-Bozrah

Site Location: 29 Mahoney Road

Colchester, Connecticut

New London County

Latitude: 41.564533

Longitude: -72.251697

Analysis Result:

Max Structural Usage: 98.9% [Pass]

Max Foundation Usage: 78% [Pass]

Additional Usage Caused by Mount Modification: +2.3%

Report Prepared By: Praveen Shrestha

Introduction

The purpose of this report is to summarize the analysis results on the 180 ft Valmont 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	Valmont Microflect (Order # 11277-00) original design drawings, dated 011/03/1999
Foundation Drawing	Valmont Microflect (Order # 11277-00) drawing # 3097-F, dated 04/03/2000
Geotechnical Report	FDH Engineering, Inc. (Project # 1465721600) Geotechnical Report, dated 05/22/2014
Modification Drawings	N/A
Mount Analysis	Tower Engineering Solutions, TES Project Number: 130371, dated 06/31/22

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 = 0.172, 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
-	177.0	9	EMS RR90-17-02DP Panel	(1) Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
-		3	RFS APXVAARR18_43-U-NA20 Panel			
-		3	Ericsson KRY 112 489/2 TMA			
-		3	Ericsson KRY 112 144/2 TMA			
-		3	Ericsson Radio 4449 RRU			
-		3	Kathrein 782 10662 Bias-T			
10	167.0	6	JMA Wireless MX06FRO660-03 - Panel	Platform Mount w/ Mod	(10) 1 5/8" (2) 1 5/8" Hybrid	Verizon
11		3	Samsung VZS01 – Panel			
12		3	Antel BXA-70063-6CF – Panel			
13		3	Samsung B2/B66A RRH-BR049 RRU			
14		3	Samsung B5/B13 RRH-BR04C RRU			
15		1	Commscope FE-16148-OVP-B12 OVP			
16	160.0	3	CCI HPA-65R-BUU-H8 – Panel	Low Profile Platform w/ (1) Handrail Kit [HRK-12] [3] New 2.5" Pipe	(12) 1 5/8" (4) 3/4" DC (1) 3/8" Fiber	AT&T
17		3	Powerwave - 7770 – Panel			
18		3	CCI - DMP65R-BU8DA – Panel			
19		6	Powerwave LGP21401 TMA			
20		6	Powerwave LGP21901 Diplexers			
21		12	Powerwave 7020.00 RET			
22		3	Ericsson RRUS 4449 B5/B12 RRU			
23		3	Ericsson RRUS-12 B2 RRU			
24		3	Ericsson RRUS A2 Module			
25		1	Raycap DC6-48-60-18-8F COVP			
26		1	Raycap DC6-48-60-0-8C-EV COVP			
27	150.0	3	JMA Wireless MX08FRO665-21	Platform w/HRK (1) Commscope MC-PK8-DSH	(1) 1.6" Hybrid	Dish Wireless
28		3	Fujitsu TA08025-B605 RRU			
29		3	Fujitsu TA08025-B604 RRU			
30		1	Raycap RDIDC-9181-PF-48 OVP			

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	177.0	3	RFS APXVAALL24-43-U-NA20 Panel	(1) Low Profile Platform; Support rail w/end connection kit; Mount pipes	(3) 1 1/4" Fiber (1) 1 5/8" Fiber (1) 1.99" Fiber	T-Mobile
2		3	Ericsson AIR6419 B41 Panel			
3		3	Commscope VV-65A-R1 Panel			
4		3	EMS RR90-17-02VDPL2/-R Panel			
5		3	Ericsson KRY 112 144/2 TMA			
6		3	Ericsson KRY 112 489/2 TMA			
7		3	Ericsson 4449 B71 + B85 RRU			
8		3	Ericsson 4460 B25 + B66 RRU			
9		3	Kathrein 782 11056 Bias Ts			

All transmission lines are considered running inside of 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:	**98.9%**	**89.4%**	**72.0%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	6371.42	48.3	61.8

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 2.0289 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 98.96% at 53.0ft

Structure:	CT02652-S-SBA	**Code:**	EIA/TIA-222-G	6/15/2022
Site Name:	Colchester 3 CT	**Exposure:**	C	
Height:	180.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

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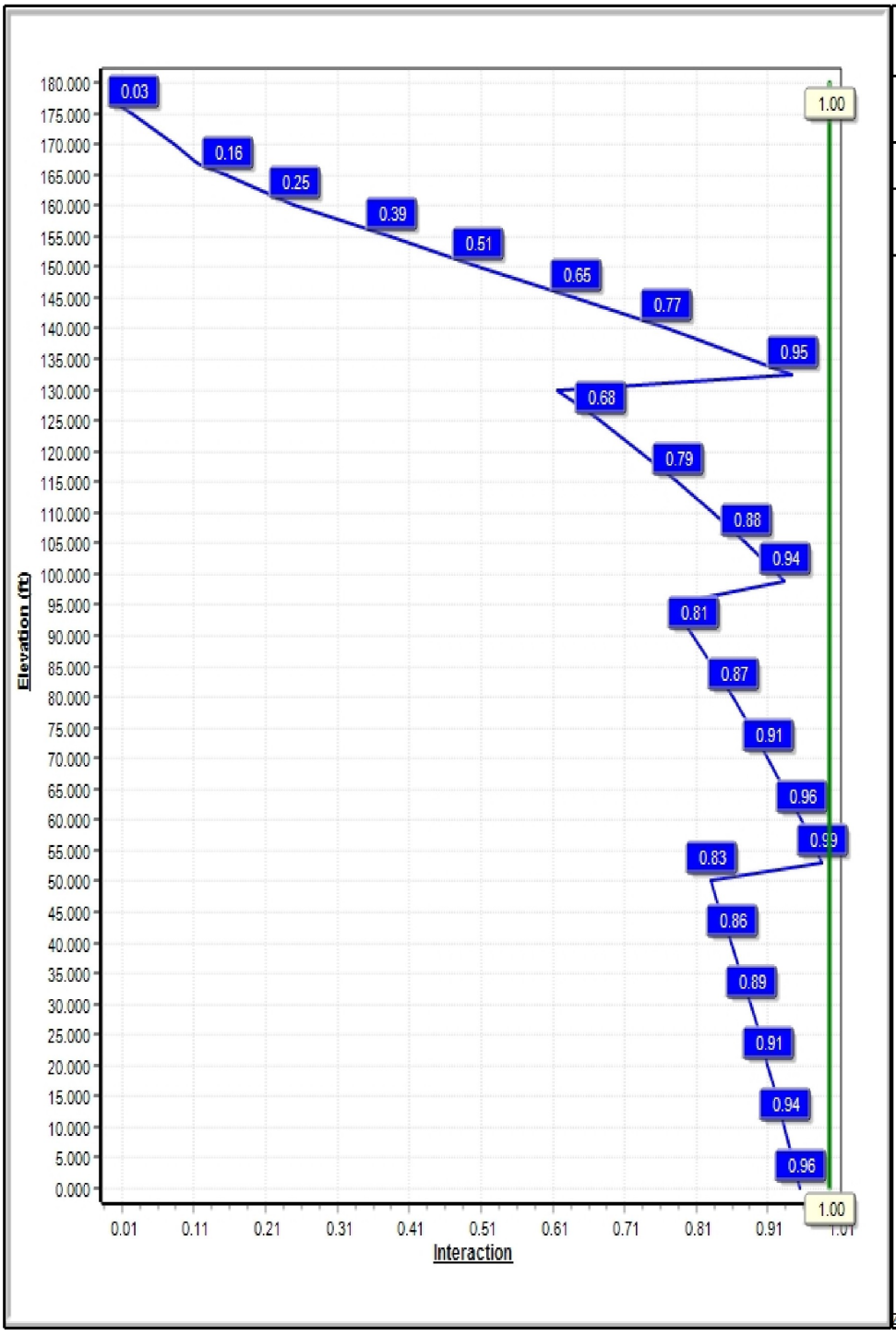
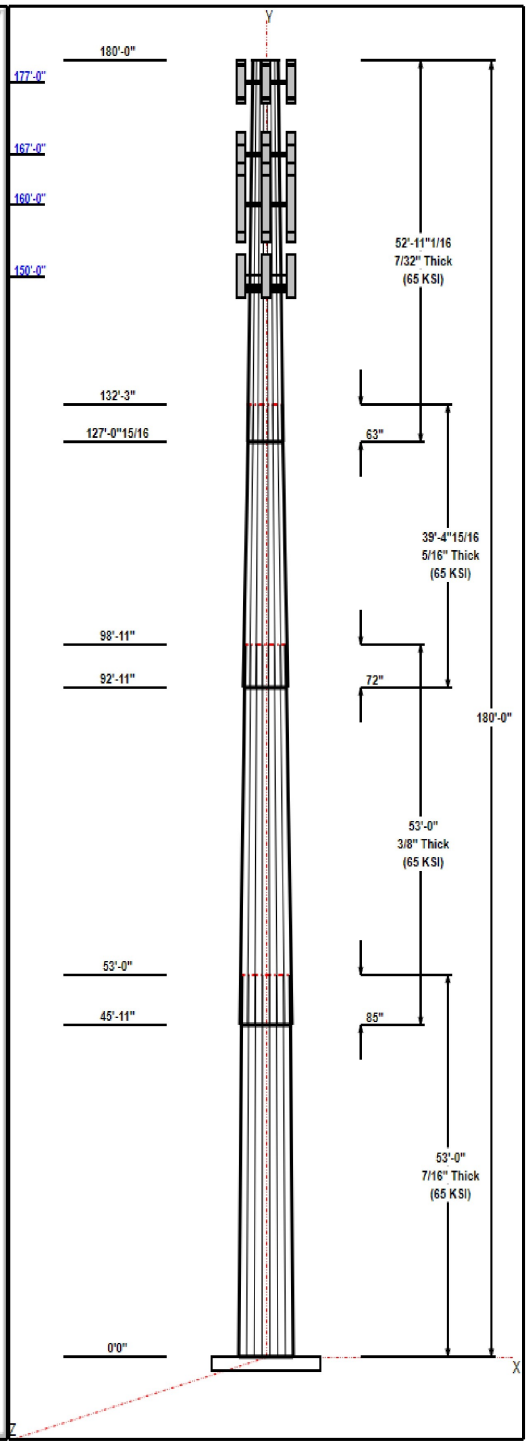
Dead Load Factor:	1.20	**Iterations:**	26
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 101 mph Wind





Structure: CT02652-S-SBA

Type: Tapered
Site Name: Colchester 3 CT
Height: 180.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 16 Sided
Taper: 0.20502

6/15/2022

Tower Engineering Solutions

Shaft Properties

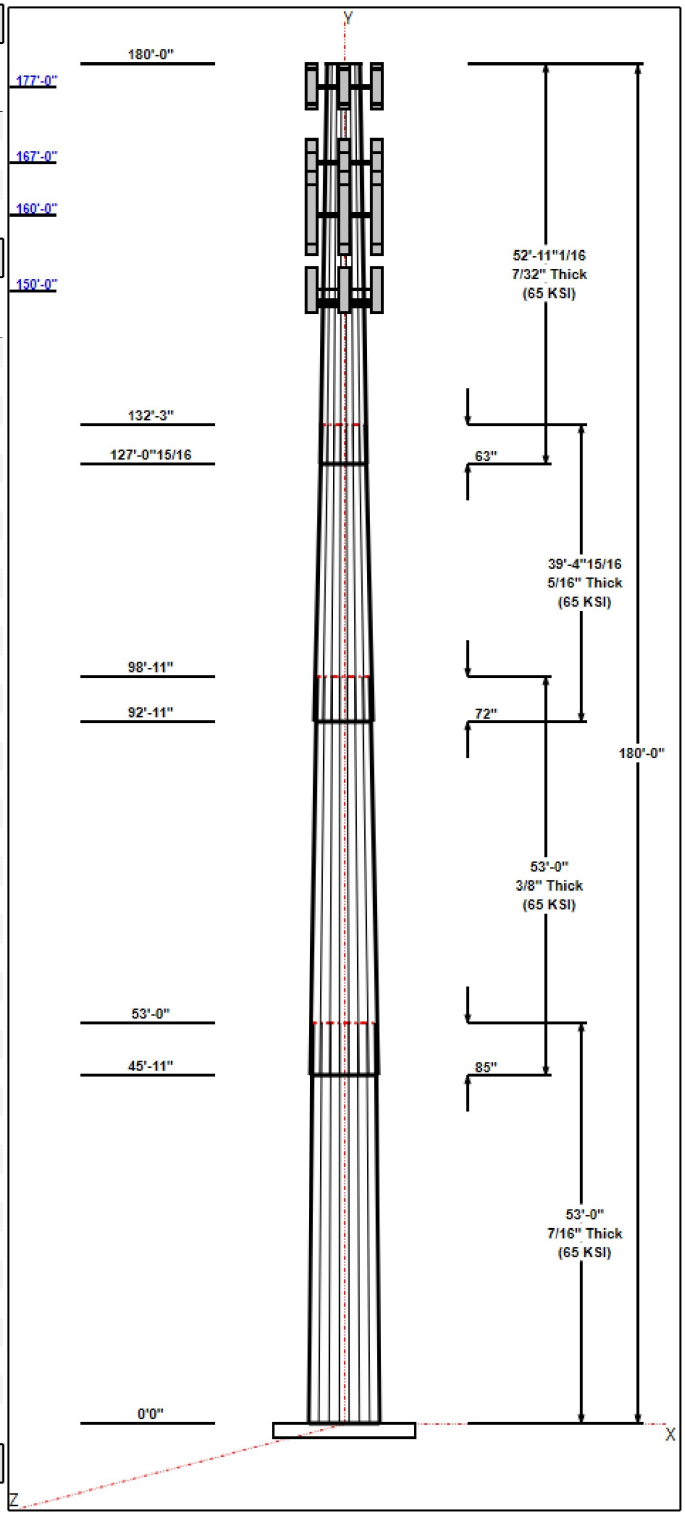
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.00	49.13	60.00	0.438		0.20502	65
2	53.00	40.47	51.34	0.375	Slip	0.20502	65
3	39.41	34.25	42.33	0.313	Slip	0.20502	65
4	52.92	24.91	35.76	0.219	Slip	0.20502	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
180.00	183.50	1	Lightning Rod	
177.00	177.00	3	AIR6419 B41	T-Mobile
177.00	177.00	3	VV-65A-R1	T-Mobile
177.00	177.00	3	782 11056	T-Mobile
177.00	177.00	1	HRK12 (Handrail Kit)	T-Mobile
177.00	177.00	1	mount pipe & end	T-Mobile
177.00	177.00	3	EMS RR90-17-02DP	T-Mobile
177.00	177.00	1	Low Profile Platform	T-Mobile
177.00	177.46	3	KRY 112 489/2	T-Mobile
177.00	177.29	3	KRY 112 144/2	T-Mobile
177.00	177.63	3	Ericsson 4449 B71 + B85	T-Mobile
177.00	177.00	3	4460 B25 + B66	T-Mobile
177.00	177.00	3	APXVAARR18_43-U-NA20	T-Mobile
167.00	167.00	6	JMA Wireless	Verizon
167.00	167.00	3	Samsung VZS01	Verizon
167.00	167.00	3	Antel BXA-70063-6CF	Verizon
167.00	167.00	3	Samsung B2/B66A	Verizon
167.00	167.00	3	Samsung B5/B13	Verizon
167.00	167.00	1	Commscope	Verizon
167.00	167.00	1	Platform Mount w/ Mods	Verizon
160.00	160.00	3	CCI HPA-65R-BUU-H8	AT&T
160.00	160.00	3	Ericsson RRUS-12 B2	AT&T
160.00	160.00	3	Ericsson RRUS A2 Module	AT&T
160.00	160.00	6	LGP21401 TMA	AT&T
160.00	160.00	12	Powerwave 7020.00 RET	AT&T
160.00	160.00	6	LGP21901 Diplexers	AT&T
160.00	160.00	1	Raycap DC6-48-60-18-8F	AT&T
160.00	157.00	3	7770	AT&T
160.00	160.00	1	Low Profile Platform	AT&T
160.00	160.00	1	Raycap	AT&T
160.00	160.00	3	DMP65R-BU8DA	AT&T
160.00	160.00	3	Ericsson RRUS4449	AT&T
160.00	160.00	1	Handrail Kit [SitePro1	AT&T
150.00	150.00	3	MX08FRO665-21	Dish Wireless
150.00	150.00	3	TA08025-B605	Dish Wireless
150.00	150.00	3	TA08025-B604	Dish Wireless
150.00	150.00	1	RDIDC-9181-OF-48	Dish Wireless
150.00	150.00	1	MC-PK8-DSH	Dish Wireless

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	180.00	Outside	Climbing Ladder	
0.00	177.00	Inside	1 1/4" Fiber	T-Mobile
0.00	177.00	Inside	1 5/8" Fiber	T-Mobile
0.00	177.00	Inside	1.99" Fiber	T-Mobile



0.00	167.00	Inside	1 5/8" Coax	Verizon
0.00	167.00	Inside	1 5/8" Hybrid	Verizon
0.00	160.00	Inside	1 5/8" Coax	AT&T
0.00	160.00	Inside	3/4" DC	AT&T
0.00	160.00	Inside	3/8" Fiber	AT&T
0.00	150.00	Inside	1.6" Hybrid	Dish Wireless

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
20	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	74.6	60.0	Polygon

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 101 mph Wind	6371.4	48.3	61.8
0.9D + 1.6W 101 mph Wind	6276.1	48.2	46.4
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1648.9	12.0	95.5
1.2D + 1.0E	366.7	2.5	62.0
0.9D + 1.0E	360.7	2.5	46.5
1.0D + 1.0W 60 mph Wind	1396.0	10.6	51.6

Structure: CT02652-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Colchester 3 CT
Height: 180.00 (ft)

6/15/2022

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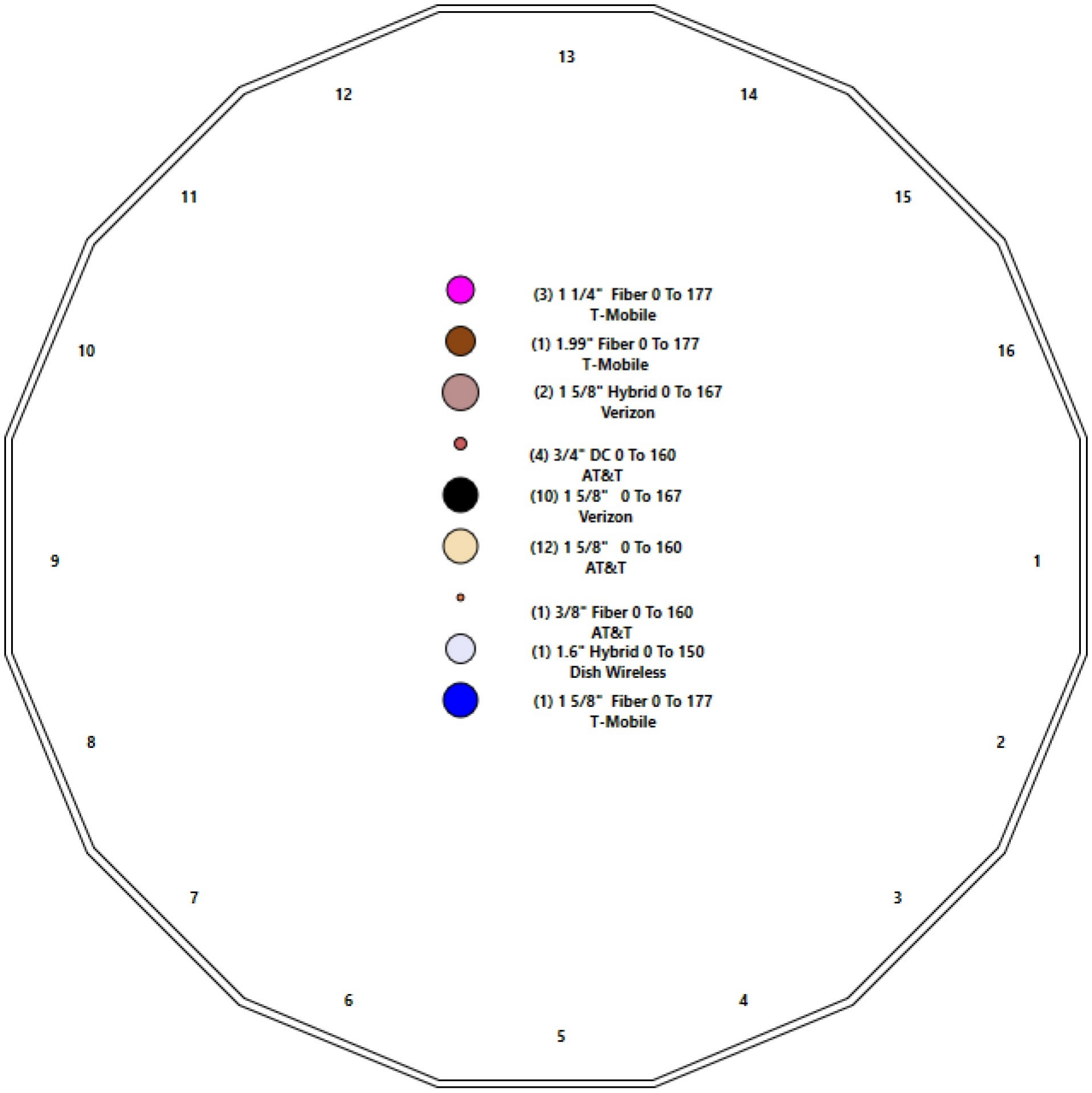

Shaft Properties

Structure:	CT02652-S-SBA		**Code:**	TIA-222-G	6/15/2022
Site Name:	Colchester 3 CT		**Exposure:**	C	
Height:	180.00 (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

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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	16	53.000	0.4380	65		0.00	13,640
2	16	53.000	0.3750	65	Slip	85.00	9,822
3	16	39.410	0.3130	65	Slip	72.00	5,085
4	16	52.923	0.2190	65	Slip	63.00	3,789
					Total Shaft Weight:		**32,335**

	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	60.00	0.00	83.22	37298.12	25.66	136.99	49.13	53.00	68.04	20382.3	20.72	112.1	0.205022
2	51.34	45.92	60.96	20001.00	25.64	136.90	40.47	98.92	47.96	9740.99	19.88	107.9	0.205022
3	42.33	92.92	41.95	9354.08	25.31	135.23	34.25	132.33	33.88	4928.56	20.17	109.4	0.205022
4	35.76	127.0	24.83	3962.37	30.89	163.29	24.91	180.00	17.25	1328.51	21.03	113.7	0.205022

Load Summary

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (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	180.00	Lightning Rod	1	35.00	1.05	1.00	66.99	3.467	1.00	0.00	3.50
2	177.00	AIR6419 B41	3	103.00	5.65	0.71	242.41	6.616	0.71	0.00	0.00
3	177.00	VV-65A-R1	3	44.10	6.62	0.82	227.84	7.749	0.82	0.00	0.00
4	177.00	782 11056	3	2.90	0.12	0.50	7.09	0.395	0.50	0.00	0.00
5	177.00	HRK12 (Handrail Kit)	1	261.72	6.75	1.00	577.50	13.457	1.00	0.00	0.00
6	177.00	mount pipe & end connectn	1	250.00	19.30	0.75	780.53	44.778	0.75	0.00	0.00
7	177.00	EMS RR90-17-02DP	3	18.00	4.36	0.72	118.45	5.364	0.72	0.00	0.00
8	177.00	Low Profile Platform	1	2000.00	24.00	1.00	3774.34	43.589	1.00	0.00	0.00
9	177.00	KRY 112 489/2	3	15.40	0.65	0.50	33.31	1.272	0.50	0.00	0.46
10	177.00	KRY 112 144/2	3	9.70	0.41	0.50	19.37	0.893	0.50	0.00	0.29
11	177.00	Ericsson 4449 B71 + B85	3	74.00	1.65	0.50	142.70	2.171	0.50	0.00	0.63
12	177.00	4460 B25 + B66	3	84.50	1.88	0.50	136.62	2.440	0.50	0.00	0.00
13	177.00	APXVAARR18_43-U-NA20	3	106.00	15.76	0.70	442.67	16.260	0.70	0.00	0.00
14	167.00	JMA Wireless MX06FRO660-03	6	46.00	9.87	0.87	318.33	11.261	0.87	0.00	0.00
15	167.00	Samsung VZS01	3	87.10	4.30	0.69	199.59	5.194	0.69	0.00	0.00
16	167.00	Antel BXA-70063-6CF	3	17.00	7.57	0.73	193.47	8.845	0.73	0.00	0.00
17	167.00	Samsung B2/B66A RRH-BR049	3	70.30	1.87	0.50	140.60	2.450	0.50	0.00	0.00
18	167.00	Samsung B5/B13 RRH-BR04C	3	84.40	1.88	0.50	136.21	2.437	0.50	0.00	0.00
19	167.00	Commscope FE-16148-OVP-B12	1	20.00	2.51	1.00	115.22	3.171	1.00	0.00	0.00
20	167.00	Platform Mount w/ Mods	1	2000.00	36.00	1.00	3764.05	65.213	1.00	0.00	0.00
21	160.00	CCI HPA-65R-BUU-H8	3	68.00	12.98	0.79	361.24	14.606	0.79	0.00	0.00
22	160.00	Ericsson RRUS-12 B2	3	58.00	3.15	0.50	130.29	4.414	0.50	0.00	0.00
23	160.00	Ericsson RRUS A2 Module	3	21.20	1.86	0.50	57.54	2.840	0.50	0.00	0.00
24	160.00	LGP21401 TMA	6	17.50	1.29	0.50	48.73	2.131	0.50	0.00	0.00
25	160.00	Powerwave 7020.00 RET	12	2.20	0.40	0.50	12.50	0.887	0.50	0.00	0.00
26	160.00	LGP21901 Diplexers	6	31.00	0.63	0.50	74.63	1.645	0.50	0.00	0.00
27	160.00	Raycap DC6-48-60-18-8F COVP	1	32.80	1.47	1.00	96.98	2.174	1.00	0.00	0.00
28	160.00	7770	3	35.00	5.50	0.73	218.73	6.572	0.73	0.00	-3.00
29	160.00	Low Profile Platform	1	1800.00	22.00	1.00	3380.86	39.776	1.00	0.00	0.00
30	160.00	Raycap DC6-48-60-0-8C-EV COVP	1	26.20	3.78	1.00	230.13	4.484	1.00	0.00	0.00
31	160.00	DMP65R-BU8DA	3	95.70	13.75	0.79	475.40	19.705	0.79	0.00	0.00
32	160.00	Ericsson RRUS4449 B5/B12	3	73.00	1.97	0.50	128.24	2.521	0.50	0.00	0.00
33	160.00	Handrail Kit [SitePro1 HRK-12]+Pipe	1	330.00	8.75	1.00	724.16	17.357	1.00	0.00	0.00
34	150.00	MX08FRO665-21	3	64.50	12.49	0.74	355.37	13.955	0.74	0.00	0.00
35	150.00	TA08025-B605	3	75.00	1.96	0.50	127.30	2.521	0.50	0.00	0.00
36	150.00	TA08025-B604	3	63.90	1.96	0.50	114.53	2.521	0.50	0.00	0.00
37	150.00	RDIDC-9181-OF-48	1	21.90	2.01	1.00	75.15	2.578	1.00	0.00	0.00
38	150.00	MC-PK8-DSH	1	1727.00	37.59	1.00	3414.83	84.824	1.00	0.00	0.00
		Totals:	**108**	**12,910.12**			**31,827.85**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	180.00	(1) Climbing Ladder	0.00	Outside
0.00	177.00	(3) 1 1/4" Fiber	0.00	Inside
0.00	177.00	(1) 1 5/8" Fiber	0.00	Inside

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	177.00	(1) 1.99" Fiber			0.00	Inside					
0.00	167.00	(10) 1 5/8" Coax			0.00	Inside					
0.00	167.00	(2) 1 5/8" Hybrid			0.00	Inside					
0.00	160.00	(12) 1 5/8" Coax			0.00	Inside					
0.00	160.00	(4) 3/4" DC			0.00	Inside					
0.00	160.00	(1) 3/8" Fiber			0.00	Inside					
0.00	150.00	(1) 1.6" Hybrid			0.00	Inside					

Shaft Section Properties

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (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	

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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		0.4380	60.000	83.221	37298.1	25.66	136.99	73.5	1219.	0.0
5.00		0.4380	58.975	81.789	35405.3	25.19	134.65	74.1	1177.	1403.7
10.00		0.4380	57.950	80.357	33577.6	24.73	132.31	74.6	1136.	1379.4
15.00		0.4380	56.925	78.924	31813.9	24.26	129.96	75.1	1096.	1355.0
20.00		0.4380	55.900	77.492	30113.1	23.79	127.62	75.6	1056.	1330.6
25.00		0.4380	54.874	76.060	28474.0	23.33	125.28	76.2	1017.	1306.3
30.00		0.4380	53.849	74.627	26895.5	22.86	122.94	76.7	979.7	1281.9
35.00		0.4380	52.824	73.195	25376.4	22.40	120.60	77.2	942.3	1257.5
40.00		0.4380	51.799	71.763	23915.7	21.93	118.26	77.8	905.7	1233.1
45.00		0.4380	50.774	70.330	22512.1	21.47	115.92	78.3	869.7	1208.8
45.92	Bot - Section 2	0.4380	50.586	70.068	22260.8	21.38	115.49	78.4	863.2	219.0
50.00		0.4380	49.749	68.898	21164.5	21.00	113.58	78.8	834.5	1805.5
53.00	Top - Section 1	0.3750	49.884	59.225	18339.4	24.87	133.02	0.0	0.0	1307.3
55.00		0.3750	49.474	58.734	17887.4	24.65	131.93	74.7	709.2	401.4
60.00		0.3750	48.449	57.508	16790.3	24.11	129.20	75.3	679.8	988.9
65.00		0.3750	47.424	56.282	15738.9	23.56	126.46	75.9	651.0	968.0
70.00		0.3750	46.398	55.056	14732.4	23.02	123.73	76.5	622.8	947.1
75.00		0.3750	45.373	53.829	13769.7	22.48	121.00	77.1	595.3	926.3
80.00		0.3750	44.348	52.603	12849.9	21.93	118.26	77.8	568.4	905.4
85.00		0.3750	43.323	51.377	11972.0	21.39	115.53	78.4	542.1	884.5
90.00		0.3750	42.298	50.150	11135.1	20.84	112.79	79.0	516.4	863.7
92.92	Bot - Section 3	0.3750	41.700	49.435	10665.4	20.53	111.20	79.3	501.7	494.2
95.00		0.3750	41.273	48.924	10338.1	20.30	110.06	79.6	491.3	644.5
98.92	Top - Section 2	0.3130	41.096	40.720	8556.2	24.53	131.30	0.0	0.0	1193.7
100.00		0.3130	40.874	40.499	8417.2	24.38	130.59	75.0	403.9	149.7
105.00		0.3130	39.849	39.475	7795.0	23.73	127.31	75.7	383.7	680.3
110.00		0.3130	38.824	38.452	7204.2	23.08	124.04	76.5	364.0	662.9
115.00		0.3130	37.798	37.428	6644.1	22.43	120.76	77.2	344.8	645.5
120.00		0.3130	36.773	36.405	6113.8	21.78	117.49	77.9	326.1	628.1
125.00		0.3130	35.748	35.381	5612.5	21.13	114.21	78.7	308.0	610.7
127.08	Bot - Section 4	0.3130	35.322	34.956	5412.6	20.86	112.85	79.0	300.6	248.5
130.00		0.3130	34.723	34.357	5139.3	20.48	110.94	79.4	290.3	589.7
132.33	Top - Section 3	0.2190	34.684	24.078	3613.2	29.91	158.37	0.0	0.0	462.1
135.00		0.2190	34.136	23.695	3443.5	29.41	155.87	69.3	197.9	217.3
140.00		0.2190	33.111	22.979	3140.6	28.48	151.19	70.3	186.1	397.0
145.00		0.2190	32.086	22.262	2856.0	27.55	146.51	71.4	174.6	384.9
150.00		0.2190	31.061	21.546	2589.2	26.62	141.83	72.5	163.5	372.7
155.00		0.2190	30.036	20.830	2339.5	25.69	137.15	73.5	152.8	360.5
160.00		0.2190	29.010	20.114	2106.4	24.76	132.47	74.6	142.4	348.3
165.00		0.2190	27.985	19.398	1889.3	23.83	127.79	75.6	132.4	336.1
167.00		0.2190	27.575	19.111	1806.8	23.45	125.91	76.0	128.5	131.0
170.00		0.2190	26.960	18.682	1687.7	22.90	123.11	76.7	122.8	192.9
175.00		0.2190	25.935	17.966	1500.9	21.96	118.43	77.7	113.5	311.8
177.00		0.2190	25.525	17.679	1430.3	21.59	116.55	78.1	109.9	121.3
180.00		0.2190	24.910	17.249	1328.5	21.03	113.74	78.8	104.6	178.3
										32335.3

Wind Loading - Shaft

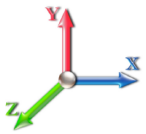
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 26

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	474.71	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	466.60	0.750	0.000	5.00	25.272	18.95	703.5	0.0	1684.5
10.00		1.00	0.85	21.088	23.20	458.49	0.750	0.000	5.00	24.837	18.63	691.3	0.0	1655.2
15.00		1.00	0.85	21.088	23.20	450.38	0.750	0.000	5.00	24.401	18.30	679.2	0.0	1626.0
20.00		1.00	0.90	22.375	24.61	455.56	0.750	0.000	5.00	23.966	17.97	707.8	0.0	1596.7
25.00		1.00	0.95	23.451	25.80	457.84	0.750	0.000	5.00	23.530	17.65	728.4	0.0	1567.5
30.00		1.00	0.98	24.369	26.81	457.99	0.750	0.000	5.00	23.095	17.32	742.9	0.0	1538.3
35.00		1.00	1.01	25.172	27.69	456.62	0.750	0.000	5.00	22.659	16.99	752.9	0.0	1509.0
40.00		1.00	1.04	25.890	28.48	454.10	0.750	0.000	5.00	22.224	16.67	759.5	0.0	1479.8
45.00		1.00	1.07	26.540	29.19	450.67	0.750	0.000	5.00	21.788	16.34	763.3	0.0	1450.5
45.92	Bot - Section 2	1.00	1.07	26.653	29.32	449.95	0.750	0.000	0.92	3.947	2.96	138.9	0.0	262.8
50.00		1.00	1.09	27.135	29.85	446.49	0.750	0.000	4.08	17.666	13.25	632.8	0.0	2166.6
53.00	Top - Section 1	1.00	1.11	27.470	30.22	443.68	0.750	0.000	3.00	12.794	9.60	463.9	0.0	1568.8
55.00		1.00	1.12	27.685	30.45	448.50	0.750	0.000	2.00	8.442	6.33	308.5	0.0	481.7
60.00		1.00	1.14	28.197	31.02	443.25	0.750	0.000	5.00	20.800	15.60	774.2	0.0	1186.6
65.00		1.00	1.16	28.676	31.54	437.54	0.750	0.000	5.00	20.365	15.27	770.9	0.0	1161.6
70.00		1.00	1.17	29.127	32.04	431.44	0.750	0.000	5.00	19.929	14.95	766.2	0.0	1136.6
75.00		1.00	1.19	29.553	32.51	424.98	0.750	0.000	5.00	19.494	14.62	760.5	0.0	1111.5
80.00		1.00	1.21	29.958	32.95	418.21	0.750	0.000	5.00	19.058	14.29	753.6	0.0	1086.5
85.00		1.00	1.22	30.342	33.38	411.16	0.750	0.000	5.00	18.623	13.97	745.9	0.0	1061.5
90.00		1.00	1.24	30.710	33.78	403.85	0.750	0.000	5.00	18.187	13.64	737.3	0.0	1036.4
92.92	Bot - Section 3	1.00	1.25	30.917	34.01	399.48	0.750	0.000	2.92	10.408	7.81	424.8	0.0	593.0
95.00		1.00	1.25	31.061	34.17	396.31	0.750	0.000	2.08	7.454	5.59	305.6	0.0	773.4
98.92	Top - Section 2	1.00	1.26	31.327	34.46	390.26	0.750	0.000	3.92	13.810	10.36	571.0	0.0	1432.4
100.00		1.00	1.27	31.399	34.54	394.60	0.750	0.000	1.08	3.773	2.83	156.4	0.0	179.6
105.00		1.00	1.28	31.723	34.89	386.69	0.750	0.000	5.00	17.147	12.86	718.0	0.0	816.4
110.00		1.00	1.29	32.035	35.24	378.59	0.750	0.000	5.00	16.711	12.53	706.6	0.0	795.5
115.00		1.00	1.30	32.336	35.57	370.32	0.750	0.000	5.00	16.276	12.21	694.7	0.0	774.6
120.00		1.00	1.32	32.627	35.89	361.90	0.750	0.000	5.00	15.840	11.88	682.2	0.0	753.7
125.00		1.00	1.33	32.909	36.20	353.32	0.750	0.000	5.00	15.405	11.55	669.2	0.0	732.8
127.08	Bot - Section 4	1.00	1.33	33.023	36.33	349.72	0.750	0.000	2.08	6.270	4.70	273.3	0.0	298.2
130.00		1.00	1.34	33.182	36.50	344.61	0.750	0.000	2.92	8.808	6.61	385.8	0.0	707.6
132.33	Top - Section 3	1.00	1.34	33.306	36.64	340.51	0.750	0.000	2.33	6.904	5.18	303.5	0.0	554.5
135.00		1.00	1.35	33.446	36.79	340.13	0.750	0.000	2.67	7.816	5.86	345.1	0.0	260.7
140.00		1.00	1.36	33.703	37.07	331.18	0.750	0.000	5.00	14.284	10.71	635.5	0.0	476.5
145.00		1.00	1.37	33.953	37.35	322.12	0.750	0.000	5.00	13.849	10.39	620.7	0.0	461.8
150.00	Appurtenance(s)	1.00	1.38	34.196	37.62	312.94	0.750	0.000	5.00	13.413	10.06	605.5	0.0	447.2
155.00		1.00	1.39	34.433	37.88	303.66	0.750	0.000	5.00	12.978	9.73	589.9	0.0	432.6
160.00	Appurtenance(s)	1.00	1.40	34.664	38.13	294.28	0.750	0.000	5.00	12.542	9.41	573.9	0.0	418.0
165.00		1.00	1.41	34.890	38.38	284.80	0.750	0.000	5.00	12.107	9.08	557.6	0.0	403.3
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	280.98	0.750	0.000	2.00	4.721	3.54	218.0	0.0	157.2
170.00		1.00	1.42	35.110	38.62	275.23	0.750	0.000	3.00	6.950	5.21	322.1	0.0	231.5
175.00		1.00	1.42	35.324	38.86	265.58	0.750	0.000	5.00	11.236	8.43	523.9	0.0	374.1
177.00	Appurtenance(s)	1.00	1.43	35.409	38.95	261.69	0.750	0.000	2.00	4.372	3.28	204.4	0.0	145.5
180.00	Appurtenance(s)	1.00	1.43	35.535	39.09	255.84	0.750	0.000	3.00	6.428	4.82	301.5	0.0	213.9
								Totals:	**180.00**			**24,770.3**		**38,802.4**

Discrete Appurtenance Forces

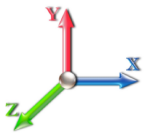
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 26

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	180.00	Lightning Rod	1	35.679	39.247	1.00	1.00	1.05	42.00	0.000	3.500	65.93	0.00	230.77
2	177.00	EMS RR90-17-02DP	3	35.409	38.950	0.58	0.80	7.53	64.80	0.000	0.000	469.52	0.00	0.00
3	177.00	AIR6419 B41	3	35.409	38.950	0.57	0.80	9.63	370.80	0.000	0.000	599.99	0.00	0.00
4	177.00	VV-65A-R1	3	35.409	38.950	0.66	0.80	13.03	158.76	0.000	0.000	811.91	0.00	0.00
5	177.00	782 11056	3	35.409	38.950	0.40	0.80	0.14	10.44	0.000	0.000	8.97	0.00	0.00
6	177.00	mount pipe & end	1	35.409	38.950	0.56	0.75	10.86	300.00	0.000	0.000	676.56	0.00	0.00
7	177.00	HRK12 (Handrail Kit)	1	35.409	38.950	1.00	1.00	6.75	314.06	0.000	0.000	420.66	0.00	0.00
8	177.00	Ericsson 4449 B71 + B85	3	35.435	38.979	0.40	0.80	1.98	266.40	0.000	0.625	123.49	0.00	77.18
9	177.00	APXVAARR18_43-U-NA2	3	35.409	38.950	0.56	0.80	26.48	381.60	0.000	0.000	1650.03	0.00	0.00
10	177.00	4460 B25 + B66	3	35.409	38.950	0.40	0.80	2.26	304.20	0.000	0.000	140.59	0.00	0.00
11	177.00	Low Profile Platform	1	35.409	38.950	1.00	1.00	24.00	2400.00	0.000	0.000	1495.68	0.00	0.00
12	177.00	KRY 112 144/2	3	35.421	38.963	0.40	0.80	0.49	34.92	0.000	0.287	30.67	0.00	8.82
13	177.00	KRY 112 489/2	3	35.428	38.971	0.40	0.80	0.78	55.44	0.000	0.458	48.64	0.00	22.29
14	167.00	Platform Mount w/ Mods	1	34.978	38.476	1.00	1.00	36.00	2400.00	0.000	0.000	2216.22	0.00	0.00
15	167.00	Commscope	1	34.978	38.476	1.00	1.00	2.51	24.00	0.000	0.000	154.52	0.00	0.00
16	167.00	Samsung B5/B13	3	34.978	38.476	0.38	0.75	2.11	303.84	0.000	0.000	130.20	0.00	0.00
17	167.00	Samsung B2/B66A	3	34.978	38.476	0.38	0.75	2.10	253.08	0.000	0.000	129.51	0.00	0.00
18	167.00	Antel BXA-70063-6CF	3	34.978	38.476	0.55	0.75	12.43	61.20	0.000	0.000	765.44	0.00	0.00
19	167.00	Samsung VZS01	3	34.978	38.476	0.52	0.75	6.68	313.56	0.000	0.000	410.97	0.00	0.00
20	167.00	JMA Wireless	6	34.978	38.476	0.65	0.75	38.64	331.20	0.000	0.000	2378.80	0.00	0.00
21	160.00	LGP21901 Diplexers	6	34.664	38.131	0.40	0.80	1.51	223.20	0.000	0.000	92.25	0.00	0.00
22	160.00	CCI HPA-65R-BUU-H8	3	34.664	38.131	0.63	0.80	24.61	244.80	0.000	0.000	1501.44	0.00	0.00
23	160.00	Ericsson RRUS-12 B2	3	34.664	38.131	0.40	0.80	3.78	208.80	0.000	0.000	230.61	0.00	0.00
24	160.00	Ericsson RRUS A2	3	34.664	38.131	0.40	0.80	2.23	76.32	0.000	0.000	136.17	0.00	0.00
25	160.00	LGP21401 TMA	6	34.664	38.131	0.40	0.80	3.10	126.00	0.000	0.000	188.88	0.00	0.00
26	160.00	Powerwave 7020.00 RET	12	34.664	38.131	0.40	0.80	1.92	31.68	0.000	0.000	117.14	0.00	0.00
27	160.00	Handrail Kit [SitePro1	1	34.664	38.131	1.00	1.00	8.75	396.00	0.000	0.000	533.83	0.00	0.00
28	160.00	Raycap	1	34.664	38.131	1.00	1.00	3.78	31.44	0.000	0.000	230.61	0.00	0.00
29	160.00	Ericsson RRUS4449	3	34.664	38.131	0.40	0.80	2.36	262.80	0.000	0.000	144.23	0.00	0.00
30	160.00	DMP65R-BU8DA	3	34.664	38.131	0.63	0.80	26.07	344.52	0.000	0.000	1590.51	0.00	0.00
31	160.00	Raycap DC6-48-60-18-8F	1	34.664	38.131	1.00	1.00	1.47	39.36	0.000	0.000	89.68	0.00	0.00
32	160.00	Low Profile Platform	1	34.664	38.131	1.00	1.00	22.00	2160.00	0.000	0.000	1342.20	0.00	0.00
33	160.00	7770	3	34.526	37.979	0.58	0.80	9.64	126.00	0.000	-3.000	585.55	0.00	-1756.64
34	150.00	MC-PK8-DSH	1	34.196	37.616	1.00	1.00	37.59	2072.40	0.000	0.000	2262.38	0.00	0.00
35	150.00	RDIDC-9181-OF-48	1	34.196	37.616	0.75	0.75	1.51	26.28	0.000	0.000	90.73	0.00	0.00
36	150.00	TA08025-B604	3	34.196	37.616	0.38	0.75	2.21	230.04	0.000	0.000	132.71	0.00	0.00
37	150.00	TA08025-B605	3	34.196	37.616	0.38	0.75	2.21	270.00	0.000	0.000	132.71	0.00	0.00
38	150.00	MX08FRO665-21	3	34.196	37.616	0.55	0.75	20.80	232.20	0.000	0.000	1251.61	0.00	0.00
							Totals:		**15,492.14**			**23,381.56**		

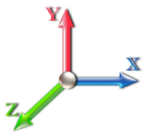
Total Applied Force Summary

Structure:	CT02652-S-SBA		**Code:**	TIA-222-G	6/15/2022
Site Name:	Colchester 3 CT		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 11

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 26

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		703.46	1913.44	0.00	0.00
10.00		691.34	1884.20	0.00	0.00
15.00		679.22	1854.95	0.00	0.00
20.00		707.81	1825.71	0.00	0.00
25.00		728.38	1796.47	0.00	0.00
30.00		742.87	1767.22	0.00	0.00
35.00		752.90	1737.98	0.00	0.00
40.00		759.49	1708.74	0.00	0.00
45.00		763.30	1679.50	0.00	0.00
45.92		138.87	304.74	0.00	0.00
50.00		632.75	2353.63	0.00	0.00
53.00		463.91	1706.13	0.00	0.00
55.00		308.51	573.25	0.00	0.00
60.00		774.19	1415.60	0.00	0.00
65.00		770.86	1390.57	0.00	0.00
70.00		766.23	1365.53	0.00	0.00
75.00		760.46	1340.49	0.00	0.00
80.00		753.64	1315.46	0.00	0.00
85.00		745.88	1290.42	0.00	0.00
90.00		737.25	1265.38	0.00	0.00
92.92		424.75	726.58	0.00	0.00
95.00		305.64	868.81	0.00	0.00
98.92		571.04	1611.77	0.00	0.00
100.00		156.36	229.25	0.00	0.00
105.00		718.00	1045.36	0.00	0.00
110.00		706.65	1024.46	0.00	0.00
115.00		694.70	1003.57	0.00	0.00
120.00		682.20	982.67	0.00	0.00
125.00		669.17	961.77	0.00	0.00
127.08		273.32	393.31	0.00	0.00
130.00		385.78	841.45	0.00	0.00
132.33		303.51	661.03	0.00	0.00
135.00		345.07	383.16	0.00	0.00
140.00		635.48	705.42	0.00	0.00
145.00		620.68	690.80	0.00	0.00
150.00	(11) attachments	4475.61	3507.09	0.00	0.00
155.00		589.86	655.55	0.00	0.00
160.00	(46) attachments	7356.99	4911.85	0.00	-1756.64
165.00		557.57	541.47	0.00	0.00
167.00	(20) attachments	6403.62	3899.37	0.00	0.00
170.00		322.12	268.99	0.00	0.00
175.00		523.90	436.63	0.00	0.00
177.00	(30) attachments	6681.08	4831.98	0.00	108.29
180.00	(1) attachments	367.44	280.78	0.00	230.77
	Totals:	**48,151.85**	**61,952.51**	**0.00**	**-1,417.58**

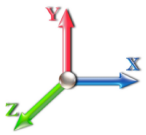
Linear Appurtenance Segment Forces (Factored)

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (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	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 26

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	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	41.40
10.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	41.40
15.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	41.40
20.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	22.375	0.00	41.40
25.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.451	0.00	41.40
30.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.369	0.00	41.40
35.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.172	0.00	41.40
40.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.890	0.00	41.40
45.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.540	0.00	41.40
45.92	Climbing Ladder	Yes	0.92	0.000	0.00	0.00	0.00	0.000	0.000	26.653	0.00	7.59
50.00	Climbing Ladder	Yes	4.08	0.000	0.00	0.00	0.00	0.000	0.000	27.135	0.00	33.81
53.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	27.470	0.00	24.84
55.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.685	0.00	16.56
60.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.197	0.00	41.40
65.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.676	0.00	41.40
70.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.127	0.00	41.40
75.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.553	0.00	41.40
80.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.958	0.00	41.40
85.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.342	0.00	41.40
90.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.710	0.00	41.40
92.92	Climbing Ladder	Yes	2.92	0.000	0.00	0.00	0.00	0.000	0.000	30.917	0.00	24.15
95.00	Climbing Ladder	Yes	2.08	0.000	0.00	0.00	0.00	0.000	0.000	31.061	0.00	17.25
98.92	Climbing Ladder	Yes	3.92	0.000	0.00	0.00	0.00	0.000	0.000	31.327	0.00	32.43
100.00	Climbing Ladder	Yes	1.08	0.000	0.00	0.00	0.00	0.000	0.000	31.399	0.00	8.97
105.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.723	0.00	41.40
110.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.035	0.00	41.40
115.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.336	0.00	41.40
120.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.627	0.00	41.40
125.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.909	0.00	41.40
127.08	Climbing Ladder	Yes	2.08	0.000	0.00	0.00	0.00	0.000	0.000	33.023	0.00	17.19
130.00	Climbing Ladder	Yes	2.92	0.000	0.00	0.00	0.00	0.000	0.000	33.182	0.00	24.21
132.33	Climbing Ladder	Yes	2.33	0.000	0.00	0.00	0.00	0.000	0.000	33.306	0.00	19.26
135.00	Climbing Ladder	Yes	2.67	0.000	0.00	0.00	0.00	0.000	0.000	33.446	0.00	22.14
140.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.703	0.00	41.40
145.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.953	0.00	41.40
150.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.196	0.00	41.40
155.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	41.40
160.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.664	0.00	41.40
165.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.890	0.00	41.40
167.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.978	0.00	16.56
170.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	35.110	0.00	24.84
175.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.324	0.00	41.40
177.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.409	0.00	16.56
180.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	35.535	0.00	24.84
										Totals:	**0.0**	**1,490.4**

Calculated Forces

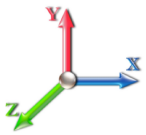
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 26

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	-61.85	-48.28	0.00	-6371.4	0.00	6371.42	5508.12	2754.06	13547.4	6725.55	0.00	0.000	0.000	0.959
5.00	-59.74	-47.83	0.00	-6130.0	0.00	6130.01	5452.09	2726.05	13177.2	6541.73	0.13	-0.238	0.000	0.948
10.00	-57.66	-47.37	0.00	-5890.8	0.00	5890.89	5394.71	2697.35	12808.5	6358.68	0.51	-0.480	0.000	0.937
15.00	-55.61	-46.91	0.00	-5654.0	0.00	5654.05	5335.97	2667.98	12441.5	6176.49	1.14	-0.724	0.000	0.926
20.00	-53.59	-46.41	0.00	-5419.5	0.00	5419.51	5275.87	2637.93	12076.4	5995.24	2.03	-0.972	0.000	0.914
25.00	-51.61	-45.87	0.00	-5187.4	0.00	5187.48	5214.41	2607.20	11713.3	5815.02	3.19	-1.223	0.000	0.902
30.00	-49.66	-45.31	0.00	-4958.1	0.00	4958.13	5151.59	2575.80	11352.6	5635.92	4.60	-1.476	0.000	0.890
35.00	-47.74	-44.72	0.00	-4731.5	0.00	4731.59	5087.42	2543.71	10994.2	5458.02	6.28	-1.732	0.000	0.877
40.00	-45.86	-44.12	0.00	-4507.9	0.00	4507.98	5021.88	2510.94	10638.5	5281.41	8.24	-1.991	0.000	0.863
45.00	-44.09	-43.41	0.00	-4287.4	0.00	4287.40	4954.99	2477.50	10285.5	5106.18	10.46	-2.253	0.000	0.849
45.92	-43.69	-43.36	0.00	-4247.6	0.00	4247.61	4942.58	2471.29	10221.1	5074.21	10.90	-2.302	0.000	0.846
50.00	-41.23	-42.77	0.00	-4070.5	0.00	4070.55	4886.75	2443.37	9935.52	4932.41	12.96	-2.519	0.000	0.834
53.00	-39.44	-42.32	0.00	-3942.2	0.00	3942.25	3967.43	1983.71	8109.29	4025.79	14.60	-2.681	0.000	0.990
55.00	-38.73	-42.12	0.00	-3857.6	0.00	3857.61	3947.58	1973.79	8001.39	3972.23	15.75	-2.790	0.000	0.981
60.00	-37.14	-41.47	0.00	-3647.0	0.00	3647.00	3897.00	1948.50	7732.70	3838.84	18.83	-3.088	0.000	0.960
65.00	-35.59	-40.81	0.00	-3439.6	0.00	3439.65	3845.06	1922.53	7465.70	3706.29	22.22	-3.388	0.000	0.938
70.00	-34.06	-40.14	0.00	-3235.6	0.00	3235.60	3791.77	1895.89	7200.54	3574.65	25.93	-3.690	0.000	0.915
75.00	-32.56	-39.47	0.00	-3034.8	0.00	3034.89	3737.12	1868.56	6937.41	3444.02	29.95	-3.993	0.000	0.890
80.00	-31.10	-38.78	0.00	-2837.5	0.00	2837.57	3681.11	1840.56	6676.48	3314.49	34.29	-4.296	0.000	0.865
85.00	-29.67	-38.10	0.00	-2643.6	0.00	2643.65	3623.74	1811.87	6417.92	3186.13	38.95	-4.599	0.000	0.838
90.00	-28.32	-37.38	0.00	-2453.1	0.00	2453.16	3565.02	1782.51	6161.91	3059.03	43.92	-4.902	0.000	0.810
92.92	-27.53	-36.96	0.00	-2344.1	0.00	2344.14	3530.13	1765.07	6013.81	2985.51	46.97	-5.081	0.000	0.793
95.00	-26.58	-36.67	0.00	-2267.1	0.00	2267.13	3504.93	1752.47	5908.61	2933.28	49.22	-5.209	0.000	0.781
98.92	-24.93	-36.01	0.00	-2123.5	0.00	2123.52	2742.07	1371.04	4616.42	2291.78	53.58	-5.446	0.000	0.936
100.00	-24.59	-35.93	0.00	-2084.5	0.00	2084.51	2732.96	1366.48	4575.83	2271.63	54.82	-5.512	0.000	0.927
105.00	-23.41	-35.24	0.00	-1904.8	0.00	1904.88	2690.08	1345.04	4389.32	2179.04	60.77	-5.849	0.000	0.884
110.00	-22.27	-34.56	0.00	-1728.6	0.00	1728.66	2645.83	1322.92	4204.31	2087.20	67.06	-6.181	0.000	0.837
115.00	-21.16	-33.88	0.00	-1555.8	0.00	1555.85	2600.23	1300.12	4020.98	1996.19	73.70	-6.505	0.000	0.788
120.00	-20.09	-33.20	0.00	-1386.4	0.00	1386.46	2553.28	1276.64	3839.50	1906.09	80.67	-6.820	0.000	0.736
125.00	-19.09	-32.49	0.00	-1220.4	0.00	1220.47	2504.96	1252.48	3660.03	1816.99	87.96	-7.123	0.000	0.680
127.08	-18.65	-32.21	0.00	-1153.0	0.00	1153.01	2484.49	1242.25	3586.13	1780.31	91.08	-7.248	0.000	0.656
130.00	-17.79	-31.77	0.00	-1058.8	0.00	1058.84	2455.29	1227.64	3482.76	1728.99	95.56	-7.418	0.000	0.620
132.33	-17.09	-31.43	0.00	-984.92	0.00	984.92	1489.30	744.65	2121.68	1053.29	99.20	-7.550	0.000	0.948
135.00	-16.62	-31.11	0.00	-900.91	0.00	900.91	1477.63	738.82	2071.36	1028.31	103.45	-7.695	0.000	0.889
140.00	-15.84	-30.47	0.00	-745.38	0.00	745.38	1454.76	727.38	1977.27	981.60	111.68	-8.036	0.000	0.772
145.00	-15.10	-29.83	0.00	-593.04	0.00	593.04	1430.53	715.26	1883.34	934.97	120.23	-8.339	0.000	0.647
150.00	-12.19	-24.94	0.00	-443.90	0.00	443.90	1404.94	702.47	1789.74	888.50	129.08	-8.597	0.000	0.510
155.00	-11.55	-24.29	0.00	-319.22	0.00	319.22	1377.99	688.99	1696.65	842.29	138.17	-8.806	0.000	0.389
160.00	-7.80	-16.28	0.00	-197.76	0.00	197.76	1349.68	674.84	1604.25	796.42	147.44	-8.964	0.000	0.255
165.00	-7.34	-15.65	0.00	-116.36	0.00	116.36	1320.02	660.01	1512.71	750.97	156.85	-9.070	0.000	0.161
167.00	-4.49	-8.72	0.00	-85.05	0.00	85.05	1307.77	653.89	1476.37	732.93	160.65	-9.100	0.000	0.120
170.00	-4.27	-8.36	0.00	-58.90	0.00	58.90	1289.00	644.50	1422.20	706.04	166.35	-9.134	0.000	0.087
175.00	-3.92	-7.77	0.00	-17.11	0.00	17.11	1256.62	628.31	1332.89	661.70	175.90	-9.166	0.000	0.029
177.00	-0.22	-0.41	0.00	-1.45	0.00	1.45	1243.29	621.64	1297.54	644.16	179.72	-9.170	0.000	0.002
180.00	0.00	-0.37	0.00	-0.23	0.00	0.23	1222.88	611.44	1244.96	618.05	185.46	-9.170	0.000	0.000

Wind Loading - Shaft

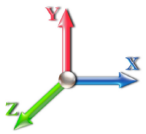
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

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	474.71	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	466.60	0.750	0.000	5.00	25.272	18.95	703.5	0.0	1263.4
10.00		1.00	0.85	21.088	23.20	458.49	0.750	0.000	5.00	24.837	18.63	691.3	0.0	1241.4
15.00		1.00	0.85	21.088	23.20	450.38	0.750	0.000	5.00	24.401	18.30	679.2	0.0	1219.5
20.00		1.00	0.90	22.375	24.61	455.56	0.750	0.000	5.00	23.966	17.97	707.8	0.0	1197.6
25.00		1.00	0.95	23.451	25.80	457.84	0.750	0.000	5.00	23.530	17.65	728.4	0.0	1175.6
30.00		1.00	0.98	24.369	26.81	457.99	0.750	0.000	5.00	23.095	17.32	742.9	0.0	1153.7
35.00		1.00	1.01	25.172	27.69	456.62	0.750	0.000	5.00	22.659	16.99	752.9	0.0	1131.8
40.00		1.00	1.04	25.890	28.48	454.10	0.750	0.000	5.00	22.224	16.67	759.5	0.0	1109.8
45.00		1.00	1.07	26.540	29.19	450.67	0.750	0.000	5.00	21.788	16.34	763.3	0.0	1087.9
45.92	Bot - Section 2	1.00	1.07	26.653	29.32	449.95	0.750	0.000	0.92	3.947	2.96	138.9	0.0	197.1
50.00		1.00	1.09	27.135	29.85	446.49	0.750	0.000	4.08	17.666	13.25	632.8	0.0	1625.0
53.00	Top - Section 1	1.00	1.11	27.470	30.22	443.68	0.750	0.000	3.00	12.794	9.60	463.9	0.0	1176.6
55.00		1.00	1.12	27.685	30.45	448.50	0.750	0.000	2.00	8.442	6.33	308.5	0.0	361.3
60.00		1.00	1.14	28.197	31.02	443.25	0.750	0.000	5.00	20.800	15.60	774.2	0.0	890.0
65.00		1.00	1.16	28.676	31.54	437.54	0.750	0.000	5.00	20.365	15.27	770.9	0.0	871.2
70.00		1.00	1.17	29.127	32.04	431.44	0.750	0.000	5.00	19.929	14.95	766.2	0.0	852.4
75.00		1.00	1.19	29.553	32.51	424.98	0.750	0.000	5.00	19.494	14.62	760.5	0.0	833.6
80.00		1.00	1.21	29.958	32.95	418.21	0.750	0.000	5.00	19.058	14.29	753.6	0.0	814.9
85.00		1.00	1.22	30.342	33.38	411.16	0.750	0.000	5.00	18.623	13.97	745.9	0.0	796.1
90.00		1.00	1.24	30.710	33.78	403.85	0.750	0.000	5.00	18.187	13.64	737.3	0.0	777.3
92.92	Bot - Section 3	1.00	1.25	30.917	34.01	399.48	0.750	0.000	2.92	10.408	7.81	424.8	0.0	444.8
95.00		1.00	1.25	31.061	34.17	396.31	0.750	0.000	2.08	7.454	5.59	305.6	0.0	580.1
98.92	Top - Section 2	1.00	1.26	31.327	34.46	390.26	0.750	0.000	3.92	13.810	10.36	571.0	0.0	1074.3
100.00		1.00	1.27	31.399	34.54	394.60	0.750	0.000	1.08	3.773	2.83	156.4	0.0	134.7
105.00		1.00	1.28	31.723	34.89	386.69	0.750	0.000	5.00	17.147	12.86	718.0	0.0	612.3
110.00		1.00	1.29	32.035	35.24	378.59	0.750	0.000	5.00	16.711	12.53	706.6	0.0	596.6
115.00		1.00	1.30	32.336	35.57	370.32	0.750	0.000	5.00	16.276	12.21	694.7	0.0	581.0
120.00		1.00	1.32	32.627	35.89	361.90	0.750	0.000	5.00	15.840	11.88	682.2	0.0	565.3
125.00		1.00	1.33	32.909	36.20	353.32	0.750	0.000	5.00	15.405	11.55	669.2	0.0	549.6
127.08	Bot - Section 4	1.00	1.33	33.023	36.33	349.72	0.750	0.000	2.08	6.270	4.70	273.3	0.0	223.7
130.00		1.00	1.34	33.182	36.50	344.61	0.750	0.000	2.92	8.808	6.61	385.8	0.0	530.7
132.33	Top - Section 3	1.00	1.34	33.306	36.64	340.51	0.750	0.000	2.33	6.904	5.18	303.5	0.0	415.9
135.00		1.00	1.35	33.446	36.79	340.13	0.750	0.000	2.67	7.816	5.86	345.1	0.0	195.6
140.00		1.00	1.36	33.703	37.07	331.18	0.750	0.000	5.00	14.284	10.71	635.5	0.0	357.3
145.00		1.00	1.37	33.953	37.35	322.12	0.750	0.000	5.00	13.849	10.39	620.7	0.0	346.4
150.00	Appurtenance(s)	1.00	1.38	34.196	37.62	312.94	0.750	0.000	5.00	13.413	10.06	605.5	0.0	335.4
155.00		1.00	1.39	34.433	37.88	303.66	0.750	0.000	5.00	12.978	9.73	589.9	0.0	324.4
160.00	Appurtenance(s)	1.00	1.40	34.664	38.13	294.28	0.750	0.000	5.00	12.542	9.41	573.9	0.0	313.5
165.00		1.00	1.41	34.890	38.38	284.80	0.750	0.000	5.00	12.107	9.08	557.6	0.0	302.5
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	280.98	0.750	0.000	2.00	4.721	3.54	218.0	0.0	117.9
170.00		1.00	1.42	35.110	38.62	275.23	0.750	0.000	3.00	6.950	5.21	322.1	0.0	173.6
175.00		1.00	1.42	35.324	38.86	265.58	0.750	0.000	5.00	11.236	8.43	523.9	0.0	280.6
177.00	Appurtenance(s)	1.00	1.43	35.409	38.95	261.69	0.750	0.000	2.00	4.372	3.28	204.4	0.0	109.2
180.00	Appurtenance(s)	1.00	1.43	35.535	39.09	255.84	0.750	0.000	3.00	6.428	4.82	301.5	0.0	160.5
								Totals:	**180.00**			**24,770.3**		**29,101.8**

Discrete Appurtenance Forces

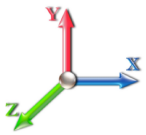
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

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	180.00	Lightning Rod	1	35.679	39.247	1.00	1.00	1.05	31.50	0.000	3.500	65.93	0.00	230.77
2	177.00	EMS RR90-17-02DP	3	35.409	38.950	0.58	0.80	7.53	48.60	0.000	0.000	469.52	0.00	0.00
3	177.00	AIR6419 B41	3	35.409	38.950	0.57	0.80	9.63	278.10	0.000	0.000	599.99	0.00	0.00
4	177.00	VV-65A-R1	3	35.409	38.950	0.66	0.80	13.03	119.07	0.000	0.000	811.91	0.00	0.00
5	177.00	782 11056	3	35.409	38.950	0.40	0.80	0.14	7.83	0.000	0.000	8.97	0.00	0.00
6	177.00	mount pipe & end	1	35.409	38.950	0.56	0.75	10.86	225.00	0.000	0.000	676.56	0.00	0.00
7	177.00	HRK12 (Handrail Kit)	1	35.409	38.950	1.00	1.00	6.75	235.55	0.000	0.000	420.66	0.00	0.00
8	177.00	Ericsson 4449 B71 + B85	3	35.435	38.979	0.40	0.80	1.98	199.80	0.000	0.625	123.49	0.00	77.18
9	177.00	APXVAARR18_43-U-NA2	3	35.409	38.950	0.56	0.80	26.48	286.20	0.000	0.000	1650.03	0.00	0.00
10	177.00	4460 B25 + B66	3	35.409	38.950	0.40	0.80	2.26	228.15	0.000	0.000	140.59	0.00	0.00
11	177.00	Low Profile Platform	1	35.409	38.950	1.00	1.00	24.00	1800.00	0.000	0.000	1495.68	0.00	0.00
12	177.00	KRY 112 144/2	3	35.421	38.963	0.40	0.80	0.49	26.19	0.000	0.287	30.67	0.00	8.82
13	177.00	KRY 112 489/2	3	35.428	38.971	0.40	0.80	0.78	41.58	0.000	0.458	48.64	0.00	22.29
14	167.00	Platform Mount w/ Mods	1	34.978	38.476	1.00	1.00	36.00	1800.00	0.000	0.000	2216.22	0.00	0.00
15	167.00	Commscope	1	34.978	38.476	1.00	1.00	2.51	18.00	0.000	0.000	154.52	0.00	0.00
16	167.00	Samsung B5/B13	3	34.978	38.476	0.38	0.75	2.11	227.88	0.000	0.000	130.20	0.00	0.00
17	167.00	Samsung B2/B66A	3	34.978	38.476	0.38	0.75	2.10	189.81	0.000	0.000	129.51	0.00	0.00
18	167.00	Antel BXA-70063-6CF	3	34.978	38.476	0.55	0.75	12.43	45.90	0.000	0.000	765.44	0.00	0.00
19	167.00	Samsung VZS01	3	34.978	38.476	0.52	0.75	6.68	235.17	0.000	0.000	410.97	0.00	0.00
20	167.00	JMA Wireless	6	34.978	38.476	0.65	0.75	38.64	248.40	0.000	0.000	2378.80	0.00	0.00
21	160.00	LGP21901 Diplexers	6	34.664	38.131	0.40	0.80	1.51	167.40	0.000	0.000	92.25	0.00	0.00
22	160.00	CCI HPA-65R-BUU-H8	3	34.664	38.131	0.63	0.80	24.61	183.60	0.000	0.000	1501.44	0.00	0.00
23	160.00	Ericsson RRUS-12 B2	3	34.664	38.131	0.40	0.80	3.78	156.60	0.000	0.000	230.61	0.00	0.00
24	160.00	Ericsson RRUS A2	3	34.664	38.131	0.40	0.80	2.23	57.24	0.000	0.000	136.17	0.00	0.00
25	160.00	LGP21401 TMA	6	34.664	38.131	0.40	0.80	3.10	94.50	0.000	0.000	188.88	0.00	0.00
26	160.00	Powerwave 7020.00 RET	12	34.664	38.131	0.40	0.80	1.92	23.76	0.000	0.000	117.14	0.00	0.00
27	160.00	Handrail Kit [SitePro1	1	34.664	38.131	1.00	1.00	8.75	297.00	0.000	0.000	533.83	0.00	0.00
28	160.00	Raycap	1	34.664	38.131	1.00	1.00	3.78	23.58	0.000	0.000	230.61	0.00	0.00
29	160.00	Ericsson RRUS4449	3	34.664	38.131	0.40	0.80	2.36	197.10	0.000	0.000	144.23	0.00	0.00
30	160.00	DMP65R-BU8DA	3	34.664	38.131	0.63	0.80	26.07	258.39	0.000	0.000	1590.51	0.00	0.00
31	160.00	Raycap DC6-48-60-18-8F	1	34.664	38.131	1.00	1.00	1.47	29.52	0.000	0.000	89.68	0.00	0.00
32	160.00	Low Profile Platform	1	34.664	38.131	1.00	1.00	22.00	1620.00	0.000	0.000	1342.20	0.00	0.00
33	160.00	7770	3	34.526	37.979	0.58	0.80	9.64	94.50	0.000	-3.000	585.55	0.00	-1756.64
34	150.00	MC-PK8-DSH	1	34.196	37.616	1.00	1.00	37.59	1554.30	0.000	0.000	2262.38	0.00	0.00
35	150.00	RDIDC-9181-OF-48	1	34.196	37.616	0.75	0.75	1.51	19.71	0.000	0.000	90.73	0.00	0.00
36	150.00	TA08025-B604	3	34.196	37.616	0.38	0.75	2.21	172.53	0.000	0.000	132.71	0.00	0.00
37	150.00	TA08025-B605	3	34.196	37.616	0.38	0.75	2.21	202.50	0.000	0.000	132.71	0.00	0.00
38	150.00	MX08FRO665-21	3	34.196	37.616	0.55	0.75	20.80	174.15	0.000	0.000	1251.61	0.00	0.00
							Totals:		**11,619.11**			**23,381.56**		

Total Applied Force Summary

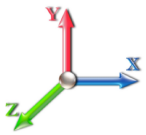
Structure:	CT02652-S-SBA		**Code:**	TIA-222-G	6/15/2022
Site Name:	Colchester 3 CT		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 16

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

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		703.46	1435.08	0.00	0.00
10.00		691.34	1413.15	0.00	0.00
15.00		679.22	1391.21	0.00	0.00
20.00		707.81	1369.28	0.00	0.00
25.00		728.38	1347.35	0.00	0.00
30.00		742.87	1325.42	0.00	0.00
35.00		752.90	1303.49	0.00	0.00
40.00		759.49	1281.55	0.00	0.00
45.00		763.30	1259.62	0.00	0.00
45.92		138.87	228.55	0.00	0.00
50.00		632.75	1765.22	0.00	0.00
53.00		463.91	1279.60	0.00	0.00
55.00		308.51	429.94	0.00	0.00
60.00		774.19	1061.70	0.00	0.00
65.00		770.86	1042.92	0.00	0.00
70.00		766.23	1024.15	0.00	0.00
75.00		760.46	1005.37	0.00	0.00
80.00		753.64	986.59	0.00	0.00
85.00		745.88	967.81	0.00	0.00
90.00		737.25	949.04	0.00	0.00
92.92		424.75	544.93	0.00	0.00
95.00		305.64	651.61	0.00	0.00
98.92		571.04	1208.83	0.00	0.00
100.00		156.36	171.94	0.00	0.00
105.00		718.00	784.02	0.00	0.00
110.00		706.65	768.35	0.00	0.00
115.00		694.70	752.67	0.00	0.00
120.00		682.20	737.00	0.00	0.00
125.00		669.17	721.33	0.00	0.00
127.08		273.32	294.99	0.00	0.00
130.00		385.78	631.09	0.00	0.00
132.33		303.51	495.77	0.00	0.00
135.00		345.07	287.37	0.00	0.00
140.00		635.48	529.06	0.00	0.00
145.00		620.68	518.10	0.00	0.00
150.00	(11) attachments	4475.61	2630.32	0.00	0.00
155.00		589.86	491.66	0.00	0.00
160.00	(46) attachments	7356.99	3683.89	0.00	-1756.64
165.00		557.57	406.10	0.00	0.00
167.00	(20) attachments	6403.62	2924.53	0.00	0.00
170.00		322.12	201.75	0.00	0.00
175.00		523.90	327.47	0.00	0.00
177.00	(30) attachments	6681.08	3623.99	0.00	108.29
180.00	(1) attachments	367.44	210.58	0.00	230.77
	Totals:	**48,151.85**	**46,464.39**	**0.00**	**-1,417.58**

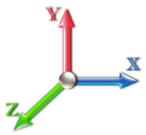
Linear Appurtenance Segment Forces (Factored)

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (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	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

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	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	31.05
10.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	31.05
15.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.088	0.00	31.05
20.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	22.375	0.00	31.05
25.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.451	0.00	31.05
30.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.369	0.00	31.05
35.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.172	0.00	31.05
40.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.890	0.00	31.05
45.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.540	0.00	31.05
45.92	Climbing Ladder	Yes	0.92	0.000	0.00	0.00	0.00	0.000	0.000	26.653	0.00	5.69
50.00	Climbing Ladder	Yes	4.08	0.000	0.00	0.00	0.00	0.000	0.000	27.135	0.00	25.36
53.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	27.470	0.00	18.63
55.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.685	0.00	12.42
60.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.197	0.00	31.05
65.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.676	0.00	31.05
70.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.127	0.00	31.05
75.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.553	0.00	31.05
80.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.958	0.00	31.05
85.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.342	0.00	31.05
90.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	30.710	0.00	31.05
92.92	Climbing Ladder	Yes	2.92	0.000	0.00	0.00	0.00	0.000	0.000	30.917	0.00	18.11
95.00	Climbing Ladder	Yes	2.08	0.000	0.00	0.00	0.00	0.000	0.000	31.061	0.00	12.94
98.92	Climbing Ladder	Yes	3.92	0.000	0.00	0.00	0.00	0.000	0.000	31.327	0.00	24.32
100.00	Climbing Ladder	Yes	1.08	0.000	0.00	0.00	0.00	0.000	0.000	31.399	0.00	6.73
105.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	31.723	0.00	31.05
110.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.035	0.00	31.05
115.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.336	0.00	31.05
120.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.627	0.00	31.05
125.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	32.909	0.00	31.05
127.08	Climbing Ladder	Yes	2.08	0.000	0.00	0.00	0.00	0.000	0.000	33.023	0.00	12.90
130.00	Climbing Ladder	Yes	2.92	0.000	0.00	0.00	0.00	0.000	0.000	33.182	0.00	18.15
132.33	Climbing Ladder	Yes	2.33	0.000	0.00	0.00	0.00	0.000	0.000	33.306	0.00	14.45
135.00	Climbing Ladder	Yes	2.67	0.000	0.00	0.00	0.00	0.000	0.000	33.446	0.00	16.60
140.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.703	0.00	31.05
145.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	33.953	0.00	31.05
150.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.196	0.00	31.05
155.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	31.05
160.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.664	0.00	31.05
165.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	34.890	0.00	31.05
167.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.978	0.00	12.42
170.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	35.110	0.00	18.63
175.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	35.324	0.00	31.05
177.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.409	0.00	12.42
180.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	35.535	0.00	18.63
										Totals:	**0.0**	**1,117.8**

Calculated Forces

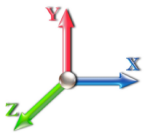
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

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	-46.36	-48.25	0.00	-6276.0	0.00	6276.07	5508.12	2754.06	13547.4	6725.55	0.00	0.000	0.000	0.942
5.00	-44.73	-47.73	0.00	-6034.8	0.00	6034.84	5452.09	2726.05	13177.2	6541.73	0.13	-0.235	0.000	0.931
10.00	-43.13	-47.21	0.00	-5796.2	0.00	5796.20	5394.71	2697.35	12808.5	6358.68	0.50	-0.472	0.000	0.920
15.00	-41.55	-46.69	0.00	-5560.1	0.00	5560.17	5335.97	2667.98	12441.5	6176.49	1.12	-0.713	0.000	0.908
20.00	-39.99	-46.13	0.00	-5326.7	0.00	5326.72	5275.87	2637.93	12076.4	5995.24	2.00	-0.956	0.000	0.896
25.00	-38.46	-45.55	0.00	-5096.0	0.00	5096.06	5214.41	2607.20	11713.3	5815.02	3.13	-1.203	0.000	0.884
30.00	-36.96	-44.93	0.00	-4868.3	0.00	4868.33	5151.59	2575.80	11352.6	5635.92	4.53	-1.451	0.000	0.871
35.00	-35.48	-44.30	0.00	-4643.6	0.00	4643.66	5087.42	2543.71	10994.2	5458.02	6.18	-1.703	0.000	0.858
40.00	-34.03	-43.66	0.00	-4422.1	0.00	4422.15	5021.88	2510.94	10638.5	5281.41	8.10	-1.957	0.000	0.844
45.00	-32.68	-42.93	0.00	-4203.8	0.00	4203.88	4954.99	2477.50	10285.5	5106.18	10.29	-2.214	0.000	0.830
45.92	-32.36	-42.86	0.00	-4164.5	0.00	4164.52	4942.58	2471.29	10221.1	5074.21	10.72	-2.262	0.000	0.828
50.00	-30.49	-42.25	0.00	-3989.5	0.00	3989.52	4886.75	2443.37	9935.52	4932.41	12.75	-2.475	0.000	0.815
53.00	-29.14	-41.80	0.00	-3862.7	0.00	3862.76	3967.43	1983.71	8109.29	4025.79	14.35	-2.633	0.000	0.967
55.00	-28.58	-41.57	0.00	-3779.1	0.00	3779.16	3947.58	1973.79	8001.39	3972.23	15.48	-2.740	0.000	0.959
60.00	-27.34	-40.89	0.00	-3571.3	0.00	3571.30	3897.00	1948.50	7732.70	3838.84	18.50	-3.032	0.000	0.938
65.00	-26.14	-40.19	0.00	-3366.8	0.00	3366.88	3845.06	1922.53	7465.70	3706.29	21.84	-3.326	0.000	0.916
70.00	-24.96	-39.50	0.00	-3165.9	0.00	3165.91	3791.77	1895.89	7200.54	3574.65	25.48	-3.621	0.000	0.893
75.00	-23.81	-38.79	0.00	-2968.4	0.00	2968.44	3737.12	1868.56	6937.41	3444.02	29.43	-3.917	0.000	0.869
80.00	-22.68	-38.09	0.00	-2774.4	0.00	2774.47	3681.11	1840.56	6676.48	3314.49	33.68	-4.214	0.000	0.844
85.00	-21.58	-37.39	0.00	-2584.0	0.00	2584.02	3623.74	1811.87	6417.92	3186.13	38.25	-4.511	0.000	0.817
90.00	-20.54	-36.66	0.00	-2397.0	0.00	2397.09	3565.02	1782.51	6161.91	3059.03	43.13	-4.807	0.000	0.790
92.92	-19.94	-36.24	0.00	-2290.1	0.00	2290.17	3530.13	1765.07	6013.81	2985.51	46.12	-4.981	0.000	0.773
95.00	-19.21	-35.94	0.00	-2214.6	0.00	2214.68	3504.93	1752.47	5908.61	2933.28	48.32	-5.106	0.000	0.761
98.92	-17.96	-35.31	0.00	-2073.9	0.00	2073.92	2742.07	1371.04	4616.42	2291.78	52.60	-5.338	0.000	0.912
100.00	-17.69	-35.20	0.00	-2035.6	0.00	2035.67	2732.96	1366.48	4575.83	2271.63	53.82	-5.403	0.000	0.903
105.00	-16.78	-34.50	0.00	-1859.6	0.00	1859.69	2690.08	1345.04	4389.32	2179.04	59.64	-5.732	0.000	0.860
110.00	-15.90	-33.81	0.00	-1687.1	0.00	1687.19	2645.83	1322.92	4204.31	2087.20	65.81	-6.055	0.000	0.815
115.00	-15.05	-33.12	0.00	-1518.1	0.00	1518.14	2600.23	1300.12	4020.98	1996.19	72.31	-6.372	0.000	0.767
120.00	-14.22	-32.43	0.00	-1352.5	0.00	1352.55	2553.28	1276.64	3839.50	1906.09	79.14	-6.679	0.000	0.716
125.00	-13.47	-31.73	0.00	-1190.3	0.00	1190.38	2504.96	1252.48	3660.03	1816.99	86.28	-6.975	0.000	0.661
127.08	-13.13	-31.46	0.00	-1124.4	0.00	1124.49	2484.49	1242.25	3586.13	1780.31	89.33	-7.097	0.000	0.638
130.00	-12.47	-31.03	0.00	-1032.5	0.00	1032.53	2455.29	1227.64	3482.76	1728.99	93.72	-7.263	0.000	0.603
132.33	-11.95	-30.69	0.00	-960.34	0.00	960.34	1489.30	744.65	2121.68	1053.29	97.28	-7.391	0.000	0.921
135.00	-11.58	-30.36	0.00	-878.29	0.00	878.29	1477.63	738.82	2071.36	1028.31	101.45	-7.533	0.000	0.864
140.00	-10.98	-29.72	0.00	-726.48	0.00	726.48	1454.76	727.38	1977.27	981.60	109.50	-7.864	0.000	0.749
145.00	-10.41	-29.08	0.00	-577.88	0.00	577.88	1430.53	715.26	1883.34	934.97	117.87	-8.160	0.000	0.627
150.00	-8.36	-24.31	0.00	-432.46	0.00	432.46	1404.94	702.47	1789.74	888.50	126.53	-8.411	0.000	0.494
155.00	-7.89	-23.68	0.00	-310.91	0.00	310.91	1377.99	688.99	1696.65	842.29	135.42	-8.615	0.000	0.376
160.00	-5.32	-15.86	0.00	-192.52	0.00	192.52	1349.68	674.84	1604.25	796.42	144.50	-8.769	0.000	0.246
165.00	-4.99	-15.25	0.00	-113.22	0.00	113.22	1320.02	660.01	1512.71	750.97	153.71	-8.872	0.000	0.155
167.00	-3.09	-8.48	0.00	-82.71	0.00	82.71	1307.77	653.89	1476.37	732.93	157.42	-8.901	0.000	0.115
170.00	-2.93	-8.13	0.00	-57.29	0.00	57.29	1289.00	644.50	1422.20	706.04	163.00	-8.934	0.000	0.084
175.00	-2.69	-7.56	0.00	-16.65	0.00	16.65	1256.62	628.31	1332.89	661.70	172.34	-8.965	0.000	0.027
177.00	-0.15	-0.40	0.00	-1.42	0.00	1.42	1243.29	621.64	1297.54	644.16	176.08	-8.969	0.000	0.002
180.00	0.00	-0.37	0.00	-0.23	0.00	0.23	1222.88	611.44	1244.96	618.05	181.69	-8.969	0.000	0.000

Wind Loading - Shaft

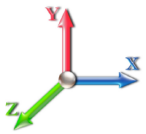
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

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 25

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	26.307	31.57	179.5	472.8	2157.3
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	5.00	25.946	31.14	177.0	498.9	2154.1
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.386	5.00	25.556	30.67	174.3	511.0	2137.0
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	5.00	25.154	30.19	182.1	517.0	2113.8
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.459	5.00	24.746	29.69	187.7	519.5	2087.0
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	5.00	24.333	29.20	191.8	519.7	2057.9
35.00		1.00	1.01	6.169	6.79	0.00	1.200	1.509	5.00	23.916	28.70	194.8	518.2	2027.2
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	5.00	23.498	28.20	196.8	515.4	1995.2
45.00		1.00	1.07	6.504	7.15	0.00	1.200	1.547	5.00	23.077	27.69	198.1	511.7	1962.2
45.92	Bot - Section 2	1.00	1.07	6.532	7.19	0.00	1.200	1.550	0.92	4.184	5.02	36.1	93.7	356.4
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	4.08	18.730	22.48	164.4	420.2	2586.9
53.00	Top - Section 1	1.00	1.11	6.732	7.41	0.00	1.200	1.573	3.00	13.580	16.30	120.7	306.9	1875.7
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.579	2.00	8.968	10.76	80.3	203.8	685.4
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	22.127	26.55	201.8	503.6	1690.3
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	21.702	26.04	201.3	497.4	1659.0
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	5.00	21.277	25.53	200.5	490.8	1627.3
75.00		1.00	1.19	7.243	7.97	0.00	1.200	1.628	5.00	20.851	25.02	199.3	483.7	1595.2
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	5.00	20.424	24.51	197.9	476.3	1562.8
85.00		1.00	1.22	7.436	8.18	0.00	1.200	1.649	5.00	19.997	24.00	196.3	468.6	1530.1
90.00		1.00	1.24	7.526	8.28	0.00	1.200	1.658	5.00	19.569	23.48	194.4	460.7	1497.1
92.92	Bot - Section 3	1.00	1.25	7.577	8.33	0.00	1.200	1.664	2.92	11.217	13.46	112.2	265.9	859.0
95.00		1.00	1.25	7.612	8.37	0.00	1.200	1.667	2.08	8.033	9.64	80.7	191.3	964.7
98.92	Top - Section 2	1.00	1.26	7.677	8.45	0.00	1.200	1.674	3.92	14.902	17.88	151.0	354.4	1786.9
100.00		1.00	1.27	7.695	8.46	0.00	1.200	1.676	1.08	4.075	4.89	41.4	97.6	277.3
105.00		1.00	1.28	7.774	8.55	0.00	1.200	1.684	5.00	18.550	22.26	190.4	442.0	1258.4
110.00		1.00	1.29	7.851	8.64	0.00	1.200	1.692	5.00	18.121	21.75	187.8	433.2	1228.7
115.00		1.00	1.30	7.925	8.72	0.00	1.200	1.699	5.00	17.692	21.23	185.1	424.2	1198.8
120.00		1.00	1.32	7.996	8.80	0.00	1.200	1.707	5.00	17.262	20.71	182.2	415.0	1168.7
125.00		1.00	1.33	8.065	8.87	0.00	1.200	1.714	5.00	16.833	20.20	179.2	405.6	1138.5
127.08	Bot - Section 4	1.00	1.33	8.093	8.90	0.00	1.200	1.717	2.08	6.864	8.24	73.3	166.9	465.1
130.00		1.00	1.34	8.132	8.95	0.00	1.200	1.720	2.92	9.646	11.58	103.5	234.4	942.0
132.33	Top - Section 3	1.00	1.34	8.162	8.98	0.00	1.200	1.723	2.33	7.572	9.09	81.6	184.5	739.0
135.00		1.00	1.35	8.197	9.02	0.00	1.200	1.727	2.67	8.585	10.30	92.9	209.2	470.0
140.00		1.00	1.36	8.260	9.09	0.00	1.200	1.733	5.00	15.729	18.87	171.5	381.6	858.0
145.00		1.00	1.37	8.321	9.15	0.00	1.200	1.739	5.00	15.298	18.36	168.0	371.7	833.5
150.00	Appurtenance(s)	1.00	1.38	8.381	9.22	0.00	1.200	1.745	5.00	14.868	17.84	164.5	361.7	808.9
155.00		1.00	1.39	8.439	9.28	0.00	1.200	1.751	5.00	14.437	17.32	160.8	351.6	784.2
160.00	Appurtenance(s)	1.00	1.40	8.495	9.34	0.00	1.200	1.757	5.00	14.006	16.81	157.1	341.4	759.4
165.00		1.00	1.41	8.551	9.41	0.00	1.200	1.762	5.00	13.575	16.29	153.2	331.1	734.4
167.00	Appurtenance(s)	1.00	1.41	8.572	9.43	0.00	1.200	1.764	2.00	5.309	6.37	60.1	130.8	288.0
170.00		1.00	1.42	8.604	9.46	0.00	1.200	1.767	3.00	7.834	9.40	89.0	192.4	423.9
175.00		1.00	1.42	8.657	9.52	0.00	1.200	1.772	5.00	12.713	15.26	145.3	310.2	684.3
177.00	Appurtenance(s)	1.00	1.43	8.678	9.55	0.00	1.200	1.774	2.00	4.964	5.96	56.9	122.4	267.9
180.00	Appurtenance(s)	1.00	1.43	8.709	9.58	0.00	1.200	1.777	3.00	7.317	8.78	84.1	179.8	393.7
								Totals:	**180.00**			**6,546.9**		**54,691.1**

Discrete Appurtenance Forces

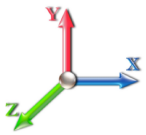
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

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 25

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	180.00	Lightning Rod	1	8.744	9.618	1.00	1.00	3.47	64.99	0.000	3.500	33.35	0.00	116.72
2	177.00	EMS RR90-17-02DP	3	8.678	9.546	0.58	0.80	9.27	366.16	0.000	0.000	88.48	0.00	0.00
3	177.00	AIR6419 B41	3	8.678	9.546	0.57	0.80	11.27	693.92	0.000	0.000	107.62	0.00	0.00
4	177.00	VV-65A-R1	3	8.678	9.546	0.66	0.80	15.25	709.99	0.000	0.000	145.58	0.00	0.00
5	177.00	782 11056	3	8.678	9.546	0.40	0.80	0.47	19.71	0.000	0.000	4.53	0.00	0.00
6	177.00	mount pipe & end	1	8.678	9.546	0.56	0.75	25.19	1037.23	0.000	0.000	240.43	0.00	0.00
7	177.00	HRK12 (Handrail Kit)	1	8.678	9.546	1.00	1.00	13.46	891.56	0.000	0.000	128.46	0.00	0.00
8	177.00	Ericsson 4449 B71 + B85	3	8.684	9.553	0.40	0.80	2.60	472.51	0.000	0.625	24.88	0.00	15.55
9	177.00	APXVAARR18_43-U-NA2	3	8.678	9.546	0.56	0.80	27.32	1391.60	0.000	0.000	260.75	0.00	0.00
10	177.00	4460 B25 + B66	3	8.678	9.546	0.40	0.80	2.93	423.05	0.000	0.000	27.95	0.00	0.00
11	177.00	Low Profile Platform	1	8.678	9.546	1.00	1.00	43.59	3674.34	0.000	0.000	416.08	0.00	0.00
12	177.00	KRY 112 144/2	3	8.681	9.549	0.40	0.80	1.07	50.72	0.000	0.287	10.23	0.00	2.94
13	177.00	KRY 112 489/2	3	8.683	9.551	0.40	0.80	1.53	94.18	0.000	0.458	14.58	0.00	6.68
14	167.00	Platform Mount w/ Mods	1	8.572	9.429	1.00	1.00	65.21	3664.05	0.000	0.000	614.92	0.00	0.00
15	167.00	Commscope	1	8.572	9.429	1.00	1.00	3.17	119.22	0.000	0.000	29.90	0.00	0.00
16	167.00	Samsung B5/B13	3	8.572	9.429	0.38	0.75	2.74	353.68	0.000	0.000	25.85	0.00	0.00
17	167.00	Samsung B2/B66A	3	8.572	9.429	0.38	0.75	2.76	463.99	0.000	0.000	25.99	0.00	0.00
18	167.00	Antel BXA-70063-6CF	3	8.572	9.429	0.55	0.75	14.53	590.62	0.000	0.000	136.99	0.00	0.00
19	167.00	Samsung VZS01	3	8.572	9.429	0.52	0.75	8.06	651.02	0.000	0.000	76.03	0.00	0.00
20	167.00	JMA Wireless	6	8.572	9.429	0.65	0.75	44.09	1965.16	0.000	0.000	415.73	0.00	0.00
21	160.00	LGP21901 Diplexers	6	8.495	9.345	0.40	0.80	3.95	624.76	0.000	0.000	36.88	0.00	0.00
22	160.00	CCI HPA-65R-BUU-H8	3	8.495	9.345	0.63	0.80	27.69	1124.53	0.000	0.000	258.79	0.00	0.00
23	160.00	Ericsson RRUS-12 B2	3	8.495	9.345	0.40	0.80	5.30	356.08	0.000	0.000	49.49	0.00	0.00
24	160.00	Ericsson RRUS A2	3	8.495	9.345	0.40	0.80	3.41	154.75	0.000	0.000	31.85	0.00	0.00
25	160.00	LGP21401 TMA	6	8.495	9.345	0.40	0.80	5.11	291.19	0.000	0.000	47.80	0.00	0.00
26	160.00	Powerwave 7020.00 RET	12	8.495	9.345	0.40	0.80	4.26	120.51	0.000	0.000	39.79	0.00	0.00
27	160.00	Handrail Kit [SitePro1	1	8.495	9.345	1.00	1.00	17.36	396.00	0.000	0.000	162.20	0.00	0.00
28	160.00	Raycap	1	8.495	9.345	1.00	1.00	4.48	215.77	0.000	0.000	41.90	0.00	0.00
29	160.00	Ericsson RRUS4449	3	8.495	9.345	0.40	0.80	3.03	393.72	0.000	0.000	28.27	0.00	0.00
30	160.00	DMP65R-BU8DA	3	8.495	9.345	0.63	0.80	37.36	1483.62	0.000	0.000	349.13	0.00	0.00
31	160.00	Raycap DC6-48-60-18-8F	1	8.495	9.345	1.00	1.00	2.17	86.84	0.000	0.000	20.32	0.00	0.00
32	160.00	Low Profile Platform	1	8.495	9.345	1.00	1.00	39.78	3040.86	0.000	0.000	371.70	0.00	0.00
33	160.00	7770	3	8.462	9.308	0.58	0.80	11.52	677.20	0.000	-3.000	107.18	0.00	-321.53
34	150.00	MC-PK8-DSH	1	8.381	9.219	1.00	1.00	84.82	3387.23	0.000	0.000	781.97	0.00	0.00
35	150.00	RDIDC-9181-OF-48	1	8.381	9.219	0.75	0.75	1.93	66.83	0.000	0.000	17.83	0.00	0.00
36	150.00	TA08025-B604	3	8.381	9.219	0.38	0.75	2.84	345.63	0.000	0.000	26.15	0.00	0.00
37	150.00	TA08025-B605	3	8.381	9.219	0.38	0.75	2.84	389.11	0.000	0.000	26.15	0.00	0.00
38	150.00	MX08FRO665-21	3	8.381	9.219	0.55	0.75	23.23	903.21	0.000	0.000	214.19	0.00	0.00
							Totals:		**31,755.53**			**5,439.93**		

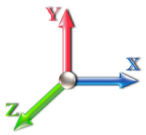
Total Applied Force Summary

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

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		179.46	2413.93	0.00	0.00
10.00		177.00	2413.17	0.00	0.00
15.00		174.34	2397.61	0.00	0.00
20.00		182.07	2375.56	0.00	0.00
25.00		187.73	2349.76	0.00	0.00
30.00		191.82	2321.48	0.00	0.00
35.00		194.76	2291.44	0.00	0.00
40.00		196.80	2260.05	0.00	0.00
45.00		198.13	2227.61	0.00	0.00
45.92		36.08	405.10	0.00	0.00
50.00		164.41	2804.00	0.00	0.00
53.00		120.68	2035.37	0.00	0.00
55.00		80.32	791.96	0.00	0.00
60.00		201.84	1957.08	0.00	0.00
65.00		201.33	1926.21	0.00	0.00
70.00		200.48	1894.88	0.00	0.00
75.00		199.34	1863.15	0.00	0.00
80.00		197.93	1831.06	0.00	0.00
85.00		196.28	1798.65	0.00	0.00
90.00		194.41	1765.95	0.00	0.00
92.92		112.18	1015.89	0.00	0.00
95.00		80.72	1076.82	0.00	0.00
98.92		151.02	1997.86	0.00	0.00
100.00		41.39	335.65	0.00	0.00
105.00		190.36	1528.09	0.00	0.00
110.00		187.79	1498.62	0.00	0.00
115.00		185.07	1468.96	0.00	0.00
120.00		182.20	1439.12	0.00	0.00
125.00		179.20	1409.11	0.00	0.00
127.08		73.33	577.52	0.00	0.00
130.00		103.54	1100.36	0.00	0.00
132.33		81.58	865.07	0.00	0.00
135.00		92.89	614.91	0.00	0.00
140.00		171.49	1129.32	0.00	0.00
145.00		168.03	1105.03	0.00	0.00
150.00	(11) attachments	1230.75	6172.63	0.00	0.00
155.00		160.81	1050.08	0.00	0.00
160.00	(46) attachments	1702.36	9991.26	0.00	-321.53
165.00		153.22	915.84	0.00	0.00
167.00	(20) attachments	1385.49	8168.34	0.00	0.00
170.00		88.98	487.48	0.00	0.00
175.00		145.27	790.43	0.00	0.00
177.00	(30) attachments	1526.44	10135.37	0.00	25.18
180.00	(1) attachments	117.45	509.80	0.00	116.72
	Totals:	**11,986.81**	**95,507.56**	**0.00**	**-179.64**

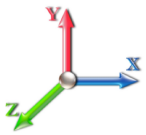
Linear Appurtenance Segment Forces (Factored)

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (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	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

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	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	69.07
10.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	71.51
15.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	73.07
20.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	74.24
25.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.747	0.00	75.18
30.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	75.97
35.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.169	0.00	76.67
40.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	77.28
45.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.504	0.00	77.83
45.92	Climbing Ladder	Yes	0.92	0.000	0.00	0.00	0.00	0.000	0.000	6.532	0.00	14.29
50.00	Climbing Ladder	Yes	4.08	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	63.97
53.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	6.732	0.00	47.17
55.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.785	0.00	31.52
60.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	79.22
65.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.028	0.00	79.62
70.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	80.00
75.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.243	0.00	80.35
80.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	80.68
85.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.436	0.00	81.00
90.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	81.30
92.92	Climbing Ladder	Yes	2.92	0.000	0.00	0.00	0.00	0.000	0.000	7.577	0.00	47.52
95.00	Climbing Ladder	Yes	2.08	0.000	0.00	0.00	0.00	0.000	0.000	7.612	0.00	34.00
98.92	Climbing Ladder	Yes	3.92	0.000	0.00	0.00	0.00	0.000	0.000	7.677	0.00	64.08
100.00	Climbing Ladder	Yes	1.08	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	17.74
105.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.774	0.00	82.13
110.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.851	0.00	82.38
115.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.925	0.00	82.63
120.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.996	0.00	82.86
125.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.065	0.00	83.09
127.08	Climbing Ladder	Yes	2.08	0.000	0.00	0.00	0.00	0.000	0.000	8.093	0.00	34.55
130.00	Climbing Ladder	Yes	2.92	0.000	0.00	0.00	0.00	0.000	0.000	8.132	0.00	48.71
132.33	Climbing Ladder	Yes	2.33	0.000	0.00	0.00	0.00	0.000	0.000	8.162	0.00	38.81
135.00	Climbing Ladder	Yes	2.67	0.000	0.00	0.00	0.00	0.000	0.000	8.197	0.00	44.66
140.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.260	0.00	83.73
145.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.321	0.00	83.93
150.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.381	0.00	84.12
155.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.439	0.00	84.31
160.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.495	0.00	84.50
165.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.551	0.00	84.68
167.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.572	0.00	33.90
170.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	8.604	0.00	50.91
175.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.657	0.00	85.02
177.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.678	0.00	34.04
180.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	8.709	0.00	51.11
										Totals:	**0.0**	**2,893.3**

Calculated Forces

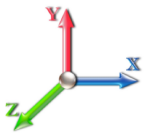
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

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 25

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	-95.50	-12.04	0.00	-1648.8	0.00	1648.87	5508.12	2754.06	13547.4	6725.55	0.00	0.000	0.000	0.263
5.00	-93.07	-11.96	0.00	-1588.6	0.00	1588.68	5452.09	2726.05	13177.2	6541.73	0.03	-0.062	0.000	0.260
10.00	-90.65	-11.88	0.00	-1528.8	0.00	1528.89	5394.71	2697.35	12808.5	6358.68	0.13	-0.124	0.000	0.257
15.00	-88.24	-11.80	0.00	-1469.5	0.00	1469.50	5335.97	2667.98	12441.5	6176.49	0.30	-0.188	0.000	0.254
20.00	-85.85	-11.70	0.00	-1410.5	0.00	1410.53	5275.87	2637.93	12076.4	5995.24	0.53	-0.252	0.000	0.252
25.00	-83.49	-11.60	0.00	-1352.0	0.00	1352.02	5214.41	2607.20	11713.3	5815.02	0.83	-0.318	0.000	0.249
30.00	-81.15	-11.49	0.00	-1294.0	0.00	1294.03	5151.59	2575.80	11352.6	5635.92	1.19	-0.384	0.000	0.245
35.00	-78.85	-11.37	0.00	-1236.6	0.00	1236.61	5087.42	2543.71	10994.2	5458.02	1.63	-0.451	0.000	0.242
40.00	-76.58	-11.24	0.00	-1179.7	0.00	1179.77	5021.88	2510.94	10638.5	5281.41	2.14	-0.518	0.000	0.239
45.00	-74.35	-11.08	0.00	-1123.5	0.00	1123.57	4954.99	2477.50	10285.5	5106.18	2.72	-0.587	0.000	0.235
45.92	-73.93	-11.08	0.00	-1113.4	0.00	1113.41	4942.58	2471.29	10221.1	5074.21	2.83	-0.600	0.000	0.234
50.00	-71.12	-10.95	0.00	-1068.1	0.00	1068.17	4886.75	2443.37	9935.52	4932.41	3.37	-0.657	0.000	0.231
53.00	-69.08	-10.84	0.00	-1035.3	0.00	1035.33	3967.43	1983.71	8109.29	4025.79	3.80	-0.699	0.000	0.275
55.00	-68.28	-10.82	0.00	-1013.6	0.00	1013.65	3947.58	1973.79	8001.39	3972.23	4.10	-0.728	0.000	0.273
60.00	-66.31	-10.68	0.00	-959.55	0.00	959.55	3897.00	1948.50	7732.70	3838.84	4.90	-0.806	0.000	0.267
65.00	-64.38	-10.54	0.00	-906.15	0.00	906.15	3845.06	1922.53	7465.70	3706.29	5.79	-0.885	0.000	0.261
70.00	-62.47	-10.40	0.00	-853.44	0.00	853.44	3791.77	1895.89	7200.54	3574.65	6.76	-0.965	0.000	0.255
75.00	-60.60	-10.25	0.00	-801.46	0.00	801.46	3737.12	1868.56	6937.41	3444.02	7.81	-1.045	0.000	0.249
80.00	-58.75	-10.10	0.00	-750.22	0.00	750.22	3681.11	1840.56	6676.48	3314.49	8.95	-1.125	0.000	0.242
85.00	-56.95	-9.95	0.00	-699.72	0.00	699.72	3623.74	1811.87	6417.92	3186.13	10.17	-1.205	0.000	0.235
90.00	-55.17	-9.77	0.00	-649.99	0.00	649.99	3565.02	1782.51	6161.91	3059.03	11.47	-1.285	0.000	0.228
92.92	-54.15	-9.68	0.00	-621.48	0.00	621.48	3530.13	1765.07	6013.81	2985.51	12.27	-1.333	0.000	0.224
95.00	-53.07	-9.62	0.00	-601.32	0.00	601.32	3504.93	1752.47	5908.61	2933.28	12.86	-1.367	0.000	0.220
98.92	-51.07	-9.45	0.00	-563.66	0.00	563.66	2742.07	1371.04	4616.42	2291.78	14.01	-1.429	0.000	0.265
100.00	-50.73	-9.45	0.00	-553.42	0.00	553.42	2732.96	1366.48	4575.83	2271.63	14.34	-1.447	0.000	0.262
105.00	-49.19	-9.30	0.00	-506.17	0.00	506.17	2690.08	1345.04	4389.32	2179.04	15.90	-1.537	0.000	0.251
110.00	-47.68	-9.14	0.00	-459.68	0.00	459.68	2645.83	1322.92	4204.31	2087.20	17.56	-1.625	0.000	0.238
115.00	-46.21	-8.98	0.00	-413.98	0.00	413.98	2600.23	1300.12	4020.98	1996.19	19.30	-1.711	0.000	0.225
120.00	-44.76	-8.82	0.00	-369.08	0.00	369.08	2553.28	1276.64	3839.50	1906.09	21.14	-1.795	0.000	0.211
125.00	-43.35	-8.64	0.00	-324.98	0.00	324.98	2504.96	1252.48	3660.03	1816.99	23.06	-1.875	0.000	0.196
127.08	-42.77	-8.58	0.00	-307.04	0.00	307.04	2484.49	1242.25	3586.13	1780.31	23.89	-1.909	0.000	0.190
130.00	-41.67	-8.46	0.00	-281.98	0.00	281.98	2455.29	1227.64	3482.76	1728.99	25.07	-1.954	0.000	0.180
132.33	-40.80	-8.38	0.00	-262.29	0.00	262.29	1489.30	744.65	2121.68	1053.29	26.03	-1.989	0.000	0.277
135.00	-40.18	-8.31	0.00	-239.89	0.00	239.89	1477.63	738.82	2071.36	1028.31	27.16	-2.028	0.000	0.261
140.00	-39.05	-8.16	0.00	-198.34	0.00	198.34	1454.76	727.38	1977.27	981.60	29.33	-2.118	0.000	0.229
145.00	-37.94	-8.00	0.00	-157.55	0.00	157.55	1430.53	715.26	1883.34	934.97	31.59	-2.199	0.000	0.195
150.00	-31.81	-6.56	0.00	-117.57	0.00	117.57	1404.94	702.47	1789.74	888.50	33.93	-2.267	0.000	0.155
155.00	-30.76	-6.38	0.00	-84.77	0.00	84.77	1377.99	688.99	1696.65	842.29	36.34	-2.323	0.000	0.123
160.00	-20.85	-4.29	0.00	-52.85	0.00	52.85	1349.68	674.84	1604.25	796.42	38.80	-2.365	0.000	0.082
165.00	-19.94	-4.10	0.00	-31.42	0.00	31.42	1320.02	660.01	1512.71	750.97	41.29	-2.393	0.000	0.057
167.00	-11.83	-2.38	0.00	-23.22	0.00	23.22	1307.77	653.89	1476.37	732.93	42.29	-2.402	0.000	0.041
170.00	-11.35	-2.27	0.00	-16.09	0.00	16.09	1289.00	644.50	1422.20	706.04	43.81	-2.411	0.000	0.032
175.00	-10.57	-2.09	0.00	-4.74	0.00	4.74	1256.62	628.31	1332.89	661.70	46.34	-2.420	0.000	0.016
177.00	-0.50	-0.14	0.00	-0.53	0.00	0.53	1243.29	621.64	1297.54	644.16	47.35	-2.421	0.000	0.001
180.00	0.00	-0.12	0.00	-0.12	0.00	0.12	1222.88	611.44	1244.96	618.05	48.87	-2.421	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (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							**Iterations**	23
Gust Response Factor	1.10				**Sds**	0.18		**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28		**SA**	0.03	**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		1403.7	0.00	0.03	0.02	24.91	
10.00		1379.3	0.01	0.05	0.03	35.84	
15.00		1354.9	0.01	0.06	0.03	41.10	
20.00		1330.6	0.02	0.07	0.04	43.55	
25.00		1306.2	0.04	0.07	0.04	44.57	
30.00		1281.8	0.05	0.07	0.04	44.90	
35.00		1257.5	0.07	0.07	0.04	44.97	
40.00		1233.1	0.09	0.07	0.04	45.00	
45.00		1208.7	0.12	0.07	0.03	45.02	
45.92	Bot - Section 2	218.97	0.12	0.07	0.03	8.19	
50.00		1805.5	0.15	0.07	0.03	68.53	
53.00	Top - Section 1	1307.2	0.16	0.07	0.03	50.07	
55.00		401.39	0.18	0.07	0.03	15.44	
60.00		988.87	0.21	0.06	0.02	38.05	
65.00		968.00	0.25	0.06	0.02	36.42	
70.00		947.14	0.29	0.05	0.01	33.52	
75.00		926.28	0.33	0.04	0.01	28.88	
80.00		905.41	0.37	0.03	0.01	22.14	
85.00		884.55	0.42	0.01	0.01	13.24	
90.00		863.69	0.47	-0.01	0.01	2.69	
92.92	Bot - Section 3	494.18	0.50	-0.02	0.01	-2.18	
95.00		644.51	0.53	-0.03	0.01	-6.33	
98.92	Top - Section 2	1193.6	0.57	-0.04	0.01	-23.36	
100.00		149.70	0.58	-0.05	0.01	-3.30	
105.00		680.33	0.64	-0.07	0.02	-21.76	
110.00		662.92	0.71	-0.09	0.03	-25.59	
115.00		645.50	0.77	-0.11	0.05	-26.81	
120.00		628.09	0.84	-0.12	0.07	-25.65	
125.00		610.68	0.91	-0.12	0.09	-22.38	
127.08	Bot - Section 4	248.52	0.94	-0.12	0.10	-8.43	
130.00		589.65	0.99	-0.11	0.12	-17.15	
132.33	Top - Section 3	462.07	1.02	-0.10	0.14	-11.30	
135.00		217.29	1.06	-0.09	0.17	-3.97	
140.00		397.05	1.14	-0.04	0.21	-1.66	
145.00		384.86	1.23	0.03	0.27	5.05	
150.00	Appurtenance(s)	2731.7	1.31	0.14	0.35	92.07	
155.00		360.49	1.40	0.29	0.43	20.77	
160.00	Appurtenance(s)	3907.4	1.49	0.48	0.53	331.75	
165.00		336.12	1.59	0.74	0.65	38.87	
167.00	Appurtenance(s)	3203.4	1.63	0.86	0.71	413.06	
170.00		192.90	1.69	1.07	0.79	28.92	
175.00		311.76	1.79	1.48	0.95	58.56	
177.00	Appurtenance(s)	4005.8	1.83	1.67	1.03	817.28	
180.00	Appurtenance(s)	213.28	1.89	1.98	1.14	48.93	
	Totals:	**45,245.5**				**2,342.4**	**Total Wind:** **48,151.8**

Seismic Segment Forces (Factored)

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (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	

Calculated Forces

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	23
Gust Response Factor	1.10			**Sds**	0.18			**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28	**SA**	0.03	**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	-61.95	-2.55	0.00	-366.72	0.00	366.72	5508.12	2754.06	13547.4	6725.55		0.00	0.00	0.066
5.00	-60.04	-2.54	0.00	-353.97	0.00	353.97	5452.09	2726.05	13177.2	6541.73		0.01	-0.01	0.065
10.00	-58.15	-2.52	0.00	-341.28	0.00	341.28	5394.71	2697.35	12808.5	6358.68		0.03	-0.03	0.064
15.00	-56.30	-2.49	0.00	-328.71	0.00	328.71	5335.97	2667.98	12441.5	6176.49		0.07	-0.04	0.064
20.00	-54.47	-2.46	0.00	-316.27	0.00	316.27	5275.87	2637.93	12076.4	5995.24		0.12	-0.06	0.063
25.00	-52.67	-2.42	0.00	-303.99	0.00	303.99	5214.41	2607.20	11713.3	5815.02		0.18	-0.07	0.062
30.00	-50.91	-2.39	0.00	-291.87	0.00	291.87	5151.59	2575.80	11352.6	5635.92		0.27	-0.09	0.062
35.00	-49.17	-2.35	0.00	-279.92	0.00	279.92	5087.42	2543.71	10994.2	5458.02		0.36	-0.10	0.061
40.00	-47.46	-2.32	0.00	-268.15	0.00	268.15	5021.88	2510.94	10638.5	5281.41		0.48	-0.12	0.060
45.00	-45.78	-2.28	0.00	-256.56	0.00	256.56	4954.99	2477.50	10285.5	5106.18		0.61	-0.13	0.059
45.92	-45.47	-2.28	0.00	-254.47	0.00	254.47	4942.58	2471.29	10221.1	5074.21		0.63	-0.13	0.059
50.00	-43.12	-2.21	0.00	-245.18	0.00	245.18	4886.75	2443.37	9935.52	4932.41		0.76	-0.15	0.059
53.00	-41.41	-2.16	0.00	-238.55	0.00	238.55	3967.43	1983.71	8109.29	4025.79		0.85	-0.16	0.070
55.00	-40.84	-2.15	0.00	-234.23	0.00	234.23	3947.58	1973.79	8001.39	3972.23		0.92	-0.16	0.069
60.00	-39.42	-2.12	0.00	-223.46	0.00	223.46	3897.00	1948.50	7732.70	3838.84		1.10	-0.18	0.068
65.00	-38.03	-2.09	0.00	-212.85	0.00	212.85	3845.06	1922.53	7465.70	3706.29		1.30	-0.20	0.067
70.00	-36.67	-2.07	0.00	-202.38	0.00	202.38	3791.77	1895.89	7200.54	3574.65		1.52	-0.22	0.066
75.00	-35.33	-2.05	0.00	-192.04	0.00	192.04	3737.12	1868.56	6937.41	3444.02		1.76	-0.24	0.065
80.00	-34.01	-2.03	0.00	-181.81	0.00	181.81	3681.11	1840.56	6676.48	3314.49		2.02	-0.26	0.064
85.00	-32.72	-2.02	0.00	-171.66	0.00	171.66	3623.74	1811.87	6417.92	3186.13		2.30	-0.28	0.063
90.00	-31.45	-2.02	0.00	-161.56	0.00	161.56	3565.02	1782.51	6161.91	3059.03		2.61	-0.30	0.062
92.92	-30.73	-2.02	0.00	-155.66	0.00	155.66	3530.13	1765.07	6013.81	2985.51		2.79	-0.31	0.061
95.00	-29.86	-2.02	0.00	-151.45	0.00	151.45	3504.93	1752.47	5908.61	2933.28		2.93	-0.32	0.060
98.92	-28.24	-2.02	0.00	-143.52	0.00	143.52	2742.07	1371.04	4616.42	2291.78		3.20	-0.33	0.073
100.00	-28.01	-2.03	0.00	-141.34	0.00	141.34	2732.96	1366.48	4575.83	2271.63		3.27	-0.34	0.072
105.00	-26.97	-2.03	0.00	-131.21	0.00	131.21	2690.08	1345.04	4389.32	2179.04		3.64	-0.36	0.070
110.00	-25.94	-2.03	0.00	-121.06	0.00	121.06	2645.83	1322.92	4204.31	2087.20		4.03	-0.38	0.068
115.00	-24.94	-2.04	0.00	-110.89	0.00	110.89	2600.23	1300.12	4020.98	1996.19		4.44	-0.41	0.065
120.00	-23.96	-2.04	0.00	-100.71	0.00	100.71	2553.28	1276.64	3839.50	1906.09		4.88	-0.43	0.062
125.00	-22.99	-2.04	0.00	-90.51	0.00	90.51	2504.96	1252.48	3660.03	1816.99		5.34	-0.45	0.059
127.08	-22.60	-2.04	0.00	-86.28	0.00	86.28	2484.49	1242.25	3586.13	1780.31		5.54	-0.46	0.058
130.00	-21.76	-2.04	0.00	-80.32	0.00	80.32	2455.29	1227.64	3482.76	1728.99		5.83	-0.47	0.055
132.33	-21.10	-2.04	0.00	-75.58	0.00	75.58	1489.30	744.65	2121.68	1053.29		6.06	-0.48	0.086
135.00	-20.71	-2.04	0.00	-70.14	0.00	70.14	1477.63	738.82	2071.36	1028.31		6.34	-0.50	0.082
140.00	-20.01	-2.04	0.00	-59.95	0.00	59.95	1454.76	727.38	1977.27	981.60		6.87	-0.52	0.075
145.00	-19.31	-2.04	0.00	-49.74	0.00	49.74	1430.53	715.26	1883.34	934.97		7.43	-0.55	0.067
150.00	-15.81	-1.92	0.00	-39.55	0.00	39.55	1404.94	702.47	1789.74	888.50		8.02	-0.57	0.056
155.00	-15.15	-1.89	0.00	-29.96	0.00	29.96	1377.99	688.99	1696.65	842.29		8.62	-0.59	0.047
160.00	-10.24	-1.51	0.00	-20.49	0.00	20.49	1349.68	674.84	1604.25	796.42		9.25	-0.60	0.033
165.00	-9.70	-1.47	0.00	-12.92	0.00	12.92	1320.02	660.01	1512.71	750.97		9.89	-0.62	0.025
167.00	-5.81	-1.02	0.00	-9.97	0.00	9.97	1307.77	653.89	1476.37	732.93		10.15	-0.62	0.018
170.00	-5.54	-0.99	0.00	-6.92	0.00	6.92	1289.00	644.50	1422.20	706.04		10.54	-0.62	0.014
175.00	-5.10	-0.92	0.00	-2.00	0.00	2.00	1256.62	628.31	1332.89	661.70		11.19	-0.63	0.007
177.00	-0.28	-0.05	0.00	-0.16	0.00	0.16	1243.29	621.64	1297.54	644.16		11.45	-0.63	0.000
180.00	0.00	-0.05	0.00	0.00	0.00	0.00	1222.88	611.44	1244.96	618.05		11.85	-0.63	0.000

Seismic Segment Forces (Factored)

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (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							**Iterations**	23
Gust Response Factor	1.10				**Sds**	0.18		**Ss**	0.17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28		**SA**	0.03	**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		1403.7	0.00	0.03	0.02	24.91	
10.00		1379.3	0.01	0.05	0.03	35.84	
15.00		1354.9	0.01	0.06	0.03	41.10	
20.00		1330.6	0.02	0.07	0.04	43.55	
25.00		1306.2	0.04	0.07	0.04	44.57	
30.00		1281.8	0.05	0.07	0.04	44.90	
35.00		1257.5	0.07	0.07	0.04	44.97	
40.00		1233.1	0.09	0.07	0.04	45.00	
45.00		1208.7	0.12	0.07	0.03	45.02	
45.92	Bot - Section 2	218.97	0.12	0.07	0.03	8.19	
50.00		1805.5	0.15	0.07	0.03	68.53	
53.00	Top - Section 1	1307.2	0.16	0.07	0.03	50.07	
55.00		401.39	0.18	0.07	0.03	15.44	
60.00		988.87	0.21	0.06	0.02	38.05	
65.00		968.00	0.25	0.06	0.02	36.42	
70.00		947.14	0.29	0.05	0.01	33.52	
75.00		926.28	0.33	0.04	0.01	28.88	
80.00		905.41	0.37	0.03	0.01	22.14	
85.00		884.55	0.42	0.01	0.01	13.24	
90.00		863.69	0.47	-0.01	0.01	2.69	
92.92	Bot - Section 3	494.18	0.50	-0.02	0.01	-2.18	
95.00		644.51	0.53	-0.03	0.01	-6.33	
98.92	Top - Section 2	1193.6	0.57	-0.04	0.01	-23.36	
100.00		149.70	0.58	-0.05	0.01	-3.30	
105.00		680.33	0.64	-0.07	0.02	-21.76	
110.00		662.92	0.71	-0.09	0.03	-25.59	
115.00		645.50	0.77	-0.11	0.05	-26.81	
120.00		628.09	0.84	-0.12	0.07	-25.65	
125.00		610.68	0.91	-0.12	0.09	-22.38	
127.08	Bot - Section 4	248.52	0.94	-0.12	0.10	-8.43	
130.00		589.65	0.99	-0.11	0.12	-17.15	
132.33	Top - Section 3	462.07	1.02	-0.10	0.14	-11.30	
135.00		217.29	1.06	-0.09	0.17	-3.97	
140.00		397.05	1.14	-0.04	0.21	-1.66	
145.00		384.86	1.23	0.03	0.27	5.05	
150.00	Appurtenance(s)	2731.7	1.31	0.14	0.35	92.07	
155.00		360.49	1.40	0.29	0.43	20.77	
160.00	Appurtenance(s)	3907.4	1.49	0.48	0.53	331.75	
165.00		336.12	1.59	0.74	0.65	38.87	
167.00	Appurtenance(s)	3203.4	1.63	0.86	0.71	413.06	
170.00		192.90	1.69	1.07	0.79	28.92	
175.00		311.76	1.79	1.48	0.95	58.56	
177.00	Appurtenance(s)	4005.8	1.83	1.67	1.03	817.28	
180.00	Appurtenance(s)	213.28	1.89	1.98	1.14	48.93	
	Totals:	**45,245.5**				**2,342.4**	**Total Wind:** **48,151.8**

Seismic Segment Forces (Factored)

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (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	

Calculated Forces

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (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:	0.9D + 1.0E							**Iterations**	23
Gust Response Factor	1.10			**Sds**	0.18			**Ss**	0.17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28	**SA**	0.03	**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	-46.46	-2.55	0.00	-360.74	0.00	360.74	5508.12	2754.06	13547.4	6725.55		0.00	0.00	0.062
5.00	-45.03	-2.53	0.00	-348.01	0.00	348.01	5452.09	2726.05	13177.2	6541.73		0.01	-0.01	0.061
10.00	-43.61	-2.51	0.00	-335.35	0.00	335.35	5394.71	2697.35	12808.5	6358.68		0.03	-0.03	0.061
15.00	-42.22	-2.48	0.00	-322.82	0.00	322.82	5335.97	2667.98	12441.5	6176.49		0.06	-0.04	0.060
20.00	-40.85	-2.44	0.00	-310.44	0.00	310.44	5275.87	2637.93	12076.4	5995.24		0.12	-0.06	0.060
25.00	-39.51	-2.40	0.00	-298.24	0.00	298.24	5214.41	2607.20	11713.3	5815.02		0.18	-0.07	0.059
30.00	-38.18	-2.37	0.00	-286.22	0.00	286.22	5151.59	2575.80	11352.6	5635.92		0.26	-0.08	0.058
35.00	-36.88	-2.33	0.00	-274.38	0.00	274.38	5087.42	2543.71	10994.2	5458.02		0.36	-0.10	0.058
40.00	-35.59	-2.29	0.00	-262.73	0.00	262.73	5021.88	2510.94	10638.5	5281.41		0.47	-0.11	0.057
45.00	-34.33	-2.25	0.00	-251.27	0.00	251.27	4954.99	2477.50	10285.5	5106.18		0.60	-0.13	0.056
45.92	-34.10	-2.25	0.00	-249.21	0.00	249.21	4942.58	2471.29	10221.1	5074.21		0.62	-0.13	0.056
50.00	-32.34	-2.18	0.00	-240.04	0.00	240.04	4886.75	2443.37	9935.52	4932.41		0.74	-0.15	0.055
53.00	-31.06	-2.13	0.00	-233.50	0.00	233.50	3967.43	1983.71	8109.29	4025.79		0.84	-0.15	0.066
55.00	-30.63	-2.12	0.00	-229.24	0.00	229.24	3947.58	1973.79	8001.39	3972.23		0.90	-0.16	0.065
60.00	-29.57	-2.09	0.00	-218.64	0.00	218.64	3897.00	1948.50	7732.70	3838.84		1.08	-0.18	0.065
65.00	-28.52	-2.06	0.00	-208.20	0.00	208.20	3845.06	1922.53	7465.70	3706.29		1.28	-0.20	0.064
70.00	-27.50	-2.03	0.00	-197.91	0.00	197.91	3791.77	1895.89	7200.54	3574.65		1.49	-0.22	0.063
75.00	-26.49	-2.01	0.00	-187.76	0.00	187.76	3737.12	1868.56	6937.41	3444.02		1.73	-0.23	0.062
80.00	-25.51	-1.99	0.00	-177.74	0.00	177.74	3681.11	1840.56	6676.48	3314.49		1.98	-0.25	0.061
85.00	-24.54	-1.98	0.00	-167.80	0.00	167.80	3623.74	1811.87	6417.92	3186.13		2.26	-0.27	0.059
90.00	-23.59	-1.98	0.00	-157.92	0.00	157.92	3565.02	1782.51	6161.91	3059.03		2.56	-0.29	0.058
92.92	-23.04	-1.98	0.00	-152.15	0.00	152.15	3530.13	1765.07	6013.81	2985.51		2.74	-0.30	0.057
95.00	-22.39	-1.98	0.00	-148.03	0.00	148.03	3504.93	1752.47	5908.61	2933.28		2.87	-0.31	0.057
98.92	-21.18	-1.98	0.00	-140.28	0.00	140.28	2742.07	1371.04	4616.42	2291.78		3.13	-0.33	0.069
100.00	-21.01	-1.98	0.00	-138.14	0.00	138.14	2732.96	1366.48	4575.83	2271.63		3.21	-0.33	0.068
105.00	-20.22	-1.98	0.00	-128.24	0.00	128.24	2690.08	1345.04	4389.32	2179.04		3.57	-0.35	0.066
110.00	-19.45	-1.99	0.00	-118.32	0.00	118.32	2645.83	1322.92	4204.31	2087.20		3.95	-0.38	0.064
115.00	-18.70	-1.99	0.00	-108.39	0.00	108.39	2600.23	1300.12	4020.98	1996.19		4.35	-0.40	0.061
120.00	-17.96	-1.99	0.00	-98.45	0.00	98.45	2553.28	1276.64	3839.50	1906.09		4.78	-0.42	0.059
125.00	-17.24	-1.99	0.00	-88.50	0.00	88.50	2504.96	1252.48	3660.03	1816.99		5.24	-0.44	0.056
127.08	-16.95	-1.99	0.00	-84.37	0.00	84.37	2484.49	1242.25	3586.13	1780.31		5.43	-0.45	0.054
130.00	-16.31	-1.99	0.00	-78.55	0.00	78.55	2455.29	1227.64	3482.76	1728.99		5.71	-0.46	0.052
132.33	-15.82	-1.99	0.00	-73.93	0.00	73.93	1489.30	744.65	2121.68	1053.29		5.94	-0.47	0.081
135.00	-15.53	-1.99	0.00	-68.61	0.00	68.61	1477.63	738.82	2071.36	1028.31		6.21	-0.48	0.077
140.00	-15.00	-1.99	0.00	-58.66	0.00	58.66	1454.76	727.38	1977.27	981.60		6.73	-0.51	0.070
145.00	-14.48	-1.99	0.00	-48.70	0.00	48.70	1430.53	715.26	1883.34	934.97		7.28	-0.54	0.062
150.00	-11.85	-1.88	0.00	-38.76	0.00	38.76	1404.94	702.47	1789.74	888.50		7.85	-0.56	0.052
155.00	-11.36	-1.85	0.00	-29.39	0.00	29.39	1377.99	688.99	1696.65	842.29		8.45	-0.58	0.043
160.00	-7.68	-1.49	0.00	-20.12	0.00	20.12	1349.68	674.84	1604.25	796.42		9.06	-0.59	0.031
165.00	-7.27	-1.44	0.00	-12.70	0.00	12.70	1320.02	660.01	1512.71	750.97		9.68	-0.60	0.022
167.00	-4.35	-1.00	0.00	-9.81	0.00	9.81	1307.77	653.89	1476.37	732.93		9.94	-0.61	0.017
170.00	-4.15	-0.97	0.00	-6.81	0.00	6.81	1289.00	644.50	1422.20	706.04		10.32	-0.61	0.013
175.00	-3.83	-0.91	0.00	-1.97	0.00	1.97	1256.62	628.31	1332.89	661.70		10.96	-0.61	0.006
177.00	-0.21	-0.05	0.00	-0.15	0.00	0.15	1243.29	621.64	1297.54	644.16		11.22	-0.61	0.000
180.00	0.00	-0.05	0.00	0.00	0.00	0.00	1222.88	611.44	1244.96	618.05		11.60	-0.61	0.000

Wind Loading - Shaft

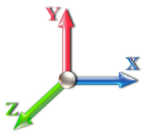
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 30	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

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	282.00	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	277.19	0.750	0.000	5.00	25.272	18.95	155.2	0.0	1403.7
10.00		1.00	0.85	7.442	8.19	272.37	0.750	0.000	5.00	24.837	18.63	152.5	0.0	1379.4
15.00		1.00	0.85	7.442	8.19	267.55	0.750	0.000	5.00	24.401	18.30	149.8	0.0	1355.0
20.00		1.00	0.90	7.896	8.69	270.63	0.750	0.000	5.00	23.966	17.97	156.1	0.0	1330.6
25.00		1.00	0.95	8.276	9.10	271.98	0.750	0.000	5.00	23.530	17.65	160.7	0.0	1306.3
30.00		1.00	0.98	8.600	9.46	272.07	0.750	0.000	5.00	23.095	17.32	163.9	0.0	1281.9
35.00		1.00	1.01	8.883	9.77	271.26	0.750	0.000	5.00	22.659	16.99	166.1	0.0	1257.5
40.00		1.00	1.04	9.137	10.05	269.76	0.750	0.000	5.00	22.224	16.67	167.5	0.0	1233.1
45.00		1.00	1.07	9.366	10.30	267.72	0.750	0.000	5.00	21.788	16.34	168.4	0.0	1208.8
45.92	Bot - Section 2	1.00	1.07	9.406	10.35	267.30	0.750	0.000	0.92	3.947	2.96	30.6	0.0	219.0
50.00		1.00	1.09	9.576	10.53	265.24	0.750	0.000	4.08	17.666	13.25	139.6	0.0	1805.5
53.00	Top - Section 1	1.00	1.11	9.694	10.66	263.58	0.750	0.000	3.00	12.794	9.60	102.3	0.0	1307.3
55.00		1.00	1.12	9.770	10.75	266.44	0.750	0.000	2.00	8.442	6.33	68.0	0.0	401.4
60.00		1.00	1.14	9.951	10.95	263.32	0.750	0.000	5.00	20.800	15.60	170.8	0.0	988.9
65.00		1.00	1.16	10.120	11.13	259.93	0.750	0.000	5.00	20.365	15.27	170.0	0.0	968.0
70.00		1.00	1.17	10.279	11.31	256.30	0.750	0.000	5.00	19.929	14.95	169.0	0.0	947.1
75.00		1.00	1.19	10.430	11.47	252.46	0.750	0.000	5.00	19.494	14.62	167.7	0.0	926.3
80.00		1.00	1.21	10.572	11.63	248.44	0.750	0.000	5.00	19.058	14.29	166.2	0.0	905.4
85.00		1.00	1.22	10.708	11.78	244.25	0.750	0.000	5.00	18.623	13.97	164.5	0.0	884.5
90.00		1.00	1.24	10.838	11.92	239.91	0.750	0.000	5.00	18.187	13.64	162.6	0.0	863.7
92.92	Bot - Section 3	1.00	1.25	10.911	12.00	237.32	0.750	0.000	2.92	10.408	7.81	93.7	0.0	494.2
95.00		1.00	1.25	10.962	12.06	235.43	0.750	0.000	2.08	7.454	5.59	67.4	0.0	644.5
98.92	Top - Section 2	1.00	1.26	11.055	12.16	231.84	0.750	0.000	3.92	13.810	10.36	126.0	0.0	1193.7
100.00		1.00	1.27	11.081	12.19	234.42	0.750	0.000	1.08	3.773	2.83	34.5	0.0	149.7
105.00		1.00	1.28	11.195	12.31	229.72	0.750	0.000	5.00	17.147	12.86	158.4	0.0	680.3
110.00		1.00	1.29	11.305	12.44	224.91	0.750	0.000	5.00	16.711	12.53	155.9	0.0	662.9
115.00		1.00	1.30	11.412	12.55	219.99	0.750	0.000	5.00	16.276	12.21	153.2	0.0	645.5
120.00		1.00	1.32	11.514	12.67	214.99	0.750	0.000	5.00	15.840	11.88	150.5	0.0	628.1
125.00		1.00	1.33	11.614	12.78	209.90	0.750	0.000	5.00	15.405	11.55	147.6	0.0	610.7
127.08	Bot - Section 4	1.00	1.33	11.654	12.82	207.76	0.750	0.000	2.08	6.270	4.70	60.3	0.0	248.5
130.00		1.00	1.34	11.710	12.88	204.72	0.750	0.000	2.92	8.808	6.61	85.1	0.0	589.7
132.33	Top - Section 3	1.00	1.34	11.754	12.93	202.28	0.750	0.000	2.33	6.904	5.18	66.9	0.0	462.1
135.00		1.00	1.35	11.803	12.98	202.06	0.750	0.000	2.67	7.816	5.86	76.1	0.0	217.3
140.00		1.00	1.36	11.894	13.08	196.74	0.750	0.000	5.00	14.284	10.71	140.2	0.0	397.0
145.00		1.00	1.37	11.982	13.18	191.36	0.750	0.000	5.00	13.849	10.39	136.9	0.0	384.9
150.00	Appurtenance(s)	1.00	1.38	12.068	13.27	185.91	0.750	0.000	5.00	13.413	10.06	133.5	0.0	372.7
155.00		1.00	1.39	12.152	13.37	180.39	0.750	0.000	5.00	12.978	9.73	130.1	0.0	360.5
160.00	Appurtenance(s)	1.00	1.40	12.233	13.46	174.82	0.750	0.000	5.00	12.542	9.41	126.6	0.0	348.3
165.00		1.00	1.41	12.313	13.54	169.19	0.750	0.000	5.00	12.107	9.08	123.0	0.0	336.1
167.00	Appurtenance(s)	1.00	1.41	12.344	13.58	166.92	0.750	0.000	2.00	4.721	3.54	48.1	0.0	131.0
170.00		1.00	1.42	12.390	13.63	163.50	0.750	0.000	3.00	6.950	5.21	71.0	0.0	192.9
175.00		1.00	1.42	12.466	13.71	157.77	0.750	0.000	5.00	11.236	8.43	115.6	0.0	311.8
177.00	Appurtenance(s)	1.00	1.43	12.496	13.75	155.46	0.750	0.000	2.00	4.372	3.28	45.1	0.0	121.3
180.00	Appurtenance(s)	1.00	1.43	12.540	13.79	151.98	0.750	0.000	3.00	6.428	4.82	66.5	0.0	178.3
								Totals:	**180.00**			**5,463.5**		**32,335.3**

Discrete Appurtenance Forces

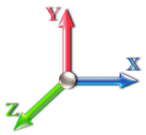
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

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	180.00	Lightning Rod	1	12.591	13.850	1.00	1.00	1.05	35.00	0.000	3.500	14.54	0.00	50.90
2	177.00	EMS RR90-17-02DP	3	12.496	13.746	0.58	0.80	7.53	54.00	0.000	0.000	103.56	0.00	0.00
3	177.00	AIR6419 B41	3	12.496	13.746	0.57	0.80	9.63	309.00	0.000	0.000	132.34	0.00	0.00
4	177.00	VV-65A-R1	3	12.496	13.746	0.66	0.80	13.03	132.30	0.000	0.000	179.08	0.00	0.00
5	177.00	782 11056	3	12.496	13.746	0.40	0.80	0.14	8.70	0.000	0.000	1.98	0.00	0.00
6	177.00	mount pipe & end	1	12.496	13.746	0.56	0.75	10.86	250.00	0.000	0.000	149.23	0.00	0.00
7	177.00	HRK12 (Handrail Kit)	1	12.496	13.746	1.00	1.00	6.75	261.72	0.000	0.000	92.78	0.00	0.00
8	177.00	Ericsson 4449 B71 + B85	3	12.505	13.756	0.40	0.80	1.98	222.00	0.000	0.625	27.24	0.00	17.02
9	177.00	APXVAARR18_43-U-NA2	3	12.496	13.746	0.56	0.80	26.48	318.00	0.000	0.000	363.94	0.00	0.00
10	177.00	4460 B25 + B66	3	12.496	13.746	0.40	0.80	2.26	253.50	0.000	0.000	31.01	0.00	0.00
11	177.00	Low Profile Platform	1	12.496	13.746	1.00	1.00	24.00	2000.00	0.000	0.000	329.90	0.00	0.00
12	177.00	KRY 112 144/2	3	12.500	13.750	0.40	0.80	0.49	29.10	0.000	0.287	6.77	0.00	1.94
13	177.00	KRY 112 489/2	3	12.503	13.753	0.40	0.80	0.78	46.20	0.000	0.458	10.73	0.00	4.92
14	167.00	Platform Mount w/ Mods	1	12.344	13.578	1.00	1.00	36.00	2000.00	0.000	0.000	488.82	0.00	0.00
15	167.00	Commscope	1	12.344	13.578	1.00	1.00	2.51	20.00	0.000	0.000	34.08	0.00	0.00
16	167.00	Samsung B5/B13	3	12.344	13.578	0.38	0.75	2.11	253.20	0.000	0.000	28.72	0.00	0.00
17	167.00	Samsung B2/B66A	3	12.344	13.578	0.38	0.75	2.10	210.90	0.000	0.000	28.57	0.00	0.00
18	167.00	Antel BXA-70063-6CF	3	12.344	13.578	0.55	0.75	12.43	51.00	0.000	0.000	168.83	0.00	0.00
19	167.00	Samsung VZS01	3	12.344	13.578	0.52	0.75	6.68	261.30	0.000	0.000	90.65	0.00	0.00
20	167.00	JMA Wireless	6	12.344	13.578	0.65	0.75	38.64	276.00	0.000	0.000	524.68	0.00	0.00
21	160.00	LGP21901 Diplexers	6	12.233	13.457	0.40	0.80	1.51	186.00	0.000	0.000	20.35	0.00	0.00
22	160.00	CCI HPA-65R-BUU-H8	3	12.233	13.457	0.63	0.80	24.61	204.00	0.000	0.000	331.17	0.00	0.00
23	160.00	Ericsson RRUS-12 B2	3	12.233	13.457	0.40	0.80	3.78	174.00	0.000	0.000	50.87	0.00	0.00
24	160.00	Ericsson RRUS A2	3	12.233	13.457	0.40	0.80	2.23	63.60	0.000	0.000	30.04	0.00	0.00
25	160.00	LGP21401 TMA	6	12.233	13.457	0.40	0.80	3.10	105.00	0.000	0.000	41.66	0.00	0.00
26	160.00	Powerwave 7020.00 RET	12	12.233	13.457	0.40	0.80	1.92	26.40	0.000	0.000	25.84	0.00	0.00
27	160.00	Handrail Kit [SitePro1	1	12.233	13.457	1.00	1.00	8.75	330.00	0.000	0.000	117.74	0.00	0.00
28	160.00	Raycap	1	12.233	13.457	1.00	1.00	3.78	26.20	0.000	0.000	50.87	0.00	0.00
29	160.00	Ericsson RRUS4449	3	12.233	13.457	0.40	0.80	2.36	219.00	0.000	0.000	31.81	0.00	0.00
30	160.00	DMP65R-BU8DA	3	12.233	13.457	0.63	0.80	26.07	287.10	0.000	0.000	350.81	0.00	0.00
31	160.00	Raycap DC6-48-60-18-8F	1	12.233	13.457	1.00	1.00	1.47	32.80	0.000	0.000	19.78	0.00	0.00
32	160.00	Low Profile Platform	1	12.233	13.457	1.00	1.00	22.00	1800.00	0.000	0.000	296.04	0.00	0.00
33	160.00	7770	3	12.185	13.403	0.58	0.80	9.64	105.00	0.000	-3.000	129.15	0.00	-387.46
34	150.00	MC-PK8-DSH	1	12.068	13.275	1.00	1.00	37.59	1727.00	0.000	0.000	499.01	0.00	0.00
35	150.00	RDIDC-9181-OF-48	1	12.068	13.275	0.75	0.75	1.51	21.90	0.000	0.000	20.01	0.00	0.00
36	150.00	TA08025-B604	3	12.068	13.275	0.38	0.75	2.21	191.70	0.000	0.000	29.27	0.00	0.00
37	150.00	TA08025-B605	3	12.068	13.275	0.38	0.75	2.21	225.00	0.000	0.000	29.27	0.00	0.00
38	150.00	MX08FRO665-21	3	12.068	13.275	0.55	0.75	20.80	193.50	0.000	0.000	276.06	0.00	0.00
							Totals:		**12,910.12**			**5,157.19**		

Total Applied Force Summary

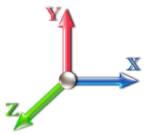
Structure:	CT02652-S-SBA		**Code:**	TIA-222-G	6/15/2022
Site Name:	Colchester 3 CT		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 32

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

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		155.16	1594.53	0.00	0.00
10.00		152.49	1570.16	0.00	0.00
15.00		149.81	1545.79	0.00	0.00
20.00		156.12	1521.42	0.00	0.00
25.00		160.66	1497.06	0.00	0.00
30.00		163.85	1472.69	0.00	0.00
35.00		166.07	1448.32	0.00	0.00
40.00		167.52	1423.95	0.00	0.00
45.00		168.36	1399.58	0.00	0.00
45.92		30.63	253.95	0.00	0.00
50.00		139.56	1961.36	0.00	0.00
53.00		102.32	1421.77	0.00	0.00
55.00		68.05	477.71	0.00	0.00
60.00		170.76	1179.67	0.00	0.00
65.00		170.03	1158.80	0.00	0.00
70.00		169.01	1137.94	0.00	0.00
75.00		167.73	1117.08	0.00	0.00
80.00		166.23	1096.21	0.00	0.00
85.00		164.52	1075.35	0.00	0.00
90.00		162.61	1054.49	0.00	0.00
92.92		93.69	605.48	0.00	0.00
95.00		67.41	724.01	0.00	0.00
98.92		125.95	1343.14	0.00	0.00
100.00		34.49	191.04	0.00	0.00
105.00		158.37	871.13	0.00	0.00
110.00		155.86	853.72	0.00	0.00
115.00		153.23	836.30	0.00	0.00
120.00		150.47	818.89	0.00	0.00
125.00		147.60	801.48	0.00	0.00
127.08		60.28	327.76	0.00	0.00
130.00		85.09	701.21	0.00	0.00
132.33		66.95	550.86	0.00	0.00
135.00		76.11	319.30	0.00	0.00
140.00		140.17	587.85	0.00	0.00
145.00		136.90	575.66	0.00	0.00
150.00	(11) attachments	987.17	2922.58	0.00	0.00
155.00		130.10	546.29	0.00	0.00
160.00	(46) attachments	1622.71	4093.21	0.00	-387.46
165.00		122.98	451.22	0.00	0.00
167.00	(20) attachments	1412.43	3249.48	0.00	0.00
170.00		71.05	224.16	0.00	0.00
175.00		115.56	363.86	0.00	0.00
177.00	(30) attachments	1473.62	4026.65	0.00	23.88
180.00	(1) attachments	81.04	233.98	0.00	50.90
	Totals:	**10,620.69**	**51,627.10**	**0.00**	**-312.67**

Linear Appurtenance Segment Forces (Factored)

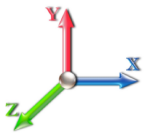
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 33	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

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	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	34.50
10.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	34.50
15.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	34.50
20.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	34.50
25.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.276	0.00	34.50
30.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	34.50
35.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.883	0.00	34.50
40.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	34.50
45.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.366	0.00	34.50
45.92	Climbing Ladder	Yes	0.92	0.000	0.00	0.00	0.00	0.000	0.000	9.406	0.00	6.33
50.00	Climbing Ladder	Yes	4.08	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	28.17
53.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	9.694	0.00	20.70
55.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.770	0.00	13.80
60.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	34.50
65.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.120	0.00	34.50
70.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	34.50
75.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.430	0.00	34.50
80.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	34.50
85.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.708	0.00	34.50
90.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	34.50
92.92	Climbing Ladder	Yes	2.92	0.000	0.00	0.00	0.00	0.000	0.000	10.911	0.00	20.13
95.00	Climbing Ladder	Yes	2.08	0.000	0.00	0.00	0.00	0.000	0.000	10.962	0.00	14.37
98.92	Climbing Ladder	Yes	3.92	0.000	0.00	0.00	0.00	0.000	0.000	11.055	0.00	27.03
100.00	Climbing Ladder	Yes	1.08	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	7.47
105.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.195	0.00	34.50
110.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.305	0.00	34.50
115.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.412	0.00	34.50
120.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.514	0.00	34.50
125.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.614	0.00	34.50
127.08	Climbing Ladder	Yes	2.08	0.000	0.00	0.00	0.00	0.000	0.000	11.654	0.00	14.33
130.00	Climbing Ladder	Yes	2.92	0.000	0.00	0.00	0.00	0.000	0.000	11.710	0.00	20.17
132.33	Climbing Ladder	Yes	2.33	0.000	0.00	0.00	0.00	0.000	0.000	11.754	0.00	16.05
135.00	Climbing Ladder	Yes	2.67	0.000	0.00	0.00	0.00	0.000	0.000	11.803	0.00	18.45
140.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.894	0.00	34.50
145.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.982	0.00	34.50
150.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.068	0.00	34.50
155.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.152	0.00	34.50
160.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.233	0.00	34.50
165.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.313	0.00	34.50
167.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	12.344	0.00	13.80
170.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	12.390	0.00	20.70
175.00	Climbing Ladder	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	12.466	0.00	34.50
177.00	Climbing Ladder	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	12.496	0.00	13.80
180.00	Climbing Ladder	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	12.540	0.00	20.70
										Totals:	**0.0**	**1,242.0**

Calculated Forces

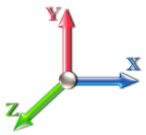
Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 34	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-51.62	-10.64	0.00	-1395.9	0.00	1395.98	5508.12	2754.06	13547.4	6725.55	0.00	0.000	0.000	0.217
5.00	-50.02	-10.53	0.00	-1342.7	0.00	1342.76	5452.09	2726.05	13177.2	6541.73	0.03	-0.052	0.000	0.214
10.00	-48.44	-10.42	0.00	-1290.0	0.00	1290.09	5394.71	2697.35	12808.5	6358.68	0.11	-0.105	0.000	0.212
15.00	-46.88	-10.31	0.00	-1237.9	0.00	1237.97	5335.97	2667.98	12441.5	6176.49	0.25	-0.159	0.000	0.209
20.00	-45.35	-10.20	0.00	-1186.4	0.00	1186.40	5275.87	2637.93	12076.4	5995.24	0.45	-0.213	0.000	0.207
25.00	-43.85	-10.07	0.00	-1135.4	0.00	1135.42	5214.41	2607.20	11713.3	5815.02	0.70	-0.268	0.000	0.204
30.00	-42.37	-9.94	0.00	-1085.0	0.00	1085.06	5151.59	2575.80	11352.6	5635.92	1.01	-0.323	0.000	0.201
35.00	-40.91	-9.81	0.00	-1035.3	0.00	1035.35	5087.42	2543.71	10994.2	5458.02	1.38	-0.379	0.000	0.198
40.00	-39.48	-9.67	0.00	-986.32	0.00	986.32	5021.88	2510.94	10638.5	5281.41	1.80	-0.436	0.000	0.195
45.00	-38.07	-9.51	0.00	-937.98	0.00	937.98	4954.99	2477.50	10285.5	5106.18	2.29	-0.493	0.000	0.191
45.92	-37.81	-9.50	0.00	-929.26	0.00	929.26	4942.58	2471.29	10221.1	5074.21	2.39	-0.504	0.000	0.191
50.00	-35.85	-9.37	0.00	-890.48	0.00	890.48	4886.75	2443.37	9935.52	4932.41	2.84	-0.551	0.000	0.188
53.00	-34.42	-9.27	0.00	-862.38	0.00	862.38	3967.43	1983.71	8109.29	4025.79	3.20	-0.587	0.000	0.223
55.00	-33.94	-9.22	0.00	-843.84	0.00	843.84	3947.58	1973.79	8001.39	3972.23	3.45	-0.611	0.000	0.221
60.00	-32.75	-9.07	0.00	-797.74	0.00	797.74	3897.00	1948.50	7732.70	3838.84	4.12	-0.676	0.000	0.216
65.00	-31.58	-8.93	0.00	-752.37	0.00	752.37	3845.06	1922.53	7465.70	3706.29	4.87	-0.742	0.000	0.211
70.00	-30.44	-8.78	0.00	-707.74	0.00	707.74	3791.77	1895.89	7200.54	3574.65	5.68	-0.808	0.000	0.206
75.00	-29.31	-8.63	0.00	-663.85	0.00	663.85	3737.12	1868.56	6937.41	3444.02	6.56	-0.874	0.000	0.201
80.00	-28.21	-8.48	0.00	-620.72	0.00	620.72	3681.11	1840.56	6676.48	3314.49	7.51	-0.940	0.000	0.195
85.00	-27.13	-8.32	0.00	-578.34	0.00	578.34	3623.74	1811.87	6417.92	3186.13	8.53	-1.006	0.000	0.189
90.00	-26.07	-8.17	0.00	-536.72	0.00	536.72	3565.02	1782.51	6161.91	3059.03	9.62	-1.073	0.000	0.183
92.92	-25.46	-8.08	0.00	-512.90	0.00	512.90	3530.13	1765.07	6013.81	2985.51	10.29	-1.112	0.000	0.179
95.00	-24.73	-8.01	0.00	-496.07	0.00	496.07	3504.93	1752.47	5908.61	2933.28	10.78	-1.140	0.000	0.176
98.92	-23.39	-7.87	0.00	-464.69	0.00	464.69	2742.07	1371.04	4616.42	2291.78	11.74	-1.192	0.000	0.211
100.00	-23.19	-7.85	0.00	-456.16	0.00	456.16	2732.96	1366.48	4575.83	2271.63	12.01	-1.206	0.000	0.209
105.00	-22.31	-7.70	0.00	-416.90	0.00	416.90	2690.08	1345.04	4389.32	2179.04	13.31	-1.280	0.000	0.200
110.00	-21.45	-7.55	0.00	-378.39	0.00	378.39	2645.83	1322.92	4204.31	2087.20	14.69	-1.353	0.000	0.189
115.00	-20.61	-7.41	0.00	-340.61	0.00	340.61	2600.23	1300.12	4020.98	1996.19	16.15	-1.424	0.000	0.179
120.00	-19.79	-7.26	0.00	-303.58	0.00	303.58	2553.28	1276.64	3839.50	1906.09	17.67	-1.492	0.000	0.167
125.00	-18.99	-7.11	0.00	-267.29	0.00	267.29	2504.96	1252.48	3660.03	1816.99	19.27	-1.559	0.000	0.155
127.08	-18.66	-7.05	0.00	-252.53	0.00	252.53	2484.49	1242.25	3586.13	1780.31	19.96	-1.586	0.000	0.149
130.00	-17.95	-6.95	0.00	-231.93	0.00	231.93	2455.29	1227.64	3482.76	1728.99	20.94	-1.623	0.000	0.141
132.33	-17.40	-6.88	0.00	-215.76	0.00	215.76	1489.30	744.65	2121.68	1053.29	21.74	-1.652	0.000	0.217
135.00	-17.08	-6.81	0.00	-197.37	0.00	197.37	1477.63	738.82	2071.36	1028.31	22.67	-1.684	0.000	0.204
140.00	-16.49	-6.67	0.00	-163.32	0.00	163.32	1454.76	727.38	1977.27	981.60	24.48	-1.759	0.000	0.178
145.00	-15.91	-6.53	0.00	-129.96	0.00	129.96	1430.53	715.26	1883.34	934.97	26.36	-1.825	0.000	0.150
150.00	-13.01	-5.47	0.00	-97.29	0.00	97.29	1404.94	702.47	1789.74	888.50	28.30	-1.882	0.000	0.119
155.00	-12.47	-5.33	0.00	-69.96	0.00	69.96	1377.99	688.99	1696.65	842.29	30.30	-1.928	0.000	0.092
160.00	-8.43	-3.57	0.00	-43.34	0.00	43.34	1349.68	674.84	1604.25	796.42	32.33	-1.962	0.000	0.061
165.00	-7.98	-3.43	0.00	-25.49	0.00	25.49	1320.02	660.01	1512.71	750.97	34.40	-1.985	0.000	0.040
167.00	-4.79	-1.91	0.00	-18.63	0.00	18.63	1307.77	653.89	1476.37	732.93	35.24	-1.992	0.000	0.029
170.00	-4.56	-1.83	0.00	-12.90	0.00	12.90	1289.00	644.50	1422.20	706.04	36.49	-1.999	0.000	0.022
175.00	-4.20	-1.70	0.00	-3.75	0.00	3.75	1256.62	628.31	1332.89	661.70	38.59	-2.006	0.000	0.009
177.00	-0.23	-0.09	0.00	-0.32	0.00	0.32	1243.29	621.64	1297.54	644.16	39.43	-2.007	0.000	0.001
180.00	0.00	-0.08	0.00	-0.05	0.00	0.05	1222.88	611.44	1244.96	618.05	40.69	-2.007	0.000	0.000

Final Analysis Summary

Structure:	CT02652-S-SBA	**Code:**	TIA-222-G	6/15/2022	
Site Name:	Colchester 3 CT	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

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	48.3	0.00	61.85	0.00	0.00	6371.42
0.9D + 1.6W 101 mph Wind	48.2	0.00	46.36	0.00	0.00	6276.07
1.2D + 1.0Di + 1.0Wi 50 mph Wind	12.0	0.00	95.50	0.00	0.00	1648.87
1.2D + 1.0E	2.5	0.00	61.95	0.00	0.00	366.72
0.9D + 1.0E	2.5	0.00	46.46	0.00	0.00	360.74
1.0D + 1.0W 60 mph Wind	10.6	0.00	51.62	0.00	0.00	1395.98

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	-39.44	-42.32	0.00	-3942.2	0.00	-3942.2	3967.43	1983.7	8109.29	4025.79	53.00	0.990
0.9D + 1.6W 101 mph Wind	-29.14	-41.80	0.00	-3862.7	0.00	-3862.7	3967.43	1983.7	8109.29	4025.79	53.00	0.967
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-40.80	-8.38	0.00	-262.29	0.00	-262.29	1489.30	744.65	2121.68	1053.29	132.33	0.277
1.2D + 1.0E	-21.10	-2.04	0.00	-75.58	0.00	-75.58	1489.30	744.65	2121.68	1053.29	132.33	0.086
0.9D + 1.0E	-15.82	-1.99	0.00	-73.93	0.00	-73.93	1489.30	744.65	2121.68	1053.29	132.33	0.081
1.0D + 1.0W 60 mph Wind	-34.42	-9.27	0.00	-862.38	0.00	-862.38	3967.43	1983.7	8109.29	4025.79	53.00	0.223

Base Plate Summary

Structure:	CT02652-S-SB		**Code:**	TIA-222-G	6/15/2022
Site Name:	Colchester 3 CT		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 36

Tower Engineering Solutions

Reactions	
Original Design	
Moment (kip-ft):	5045.00
Axial (kip):	56.10
Shear (kip):	39.50
Analysis (1.2D + 1.6W)	
Moment (kip-ft):	6371.42
Axial (kip):	61.85
Shear (kip):	48.28

Base Plate	
Yield (ksi):	60.00
Width (in):	74.62
Style:	Polygon
Polygon Sides:	16.00
Clip Length (in):	14.84
Effective Len (in):	13.35
Moment (kip-in):	981.03
Allow Stress (ksi):	81.00
Applied Stress (ksi):	58.32
Stress Ratio:	0.72

Anchor Bolts	
Bolt Circle:	68.62
Number Bolts:	20.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Radial
Cluster Dist (in):	0.00
Start Angle (deg):	0.00
Compression	
Force (kip):	227.62
Allowable (kip):	260.00
Ratio:	0.89
Tension	
Force (kip):	218.07
Allowable (kip):	260.00
Ratio:	0.86

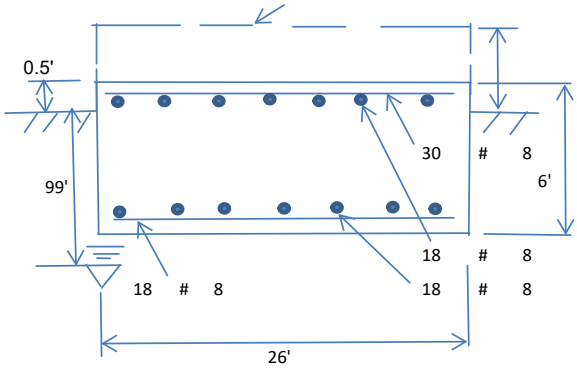
Monopole Mat Foundation Design

			Date: 6/14/2022
Customer Name:	T-Mobile	**TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	180
Site Number:	CT02652-S-SBA	**Engineer Name:**	S. Hesselbein
Engr. Number:	130363	**Engineer Login ID:**	

Foundation Info Obtained from: Mapping Operation

Structure Type: Monopole

Analysis or Design? Analysis

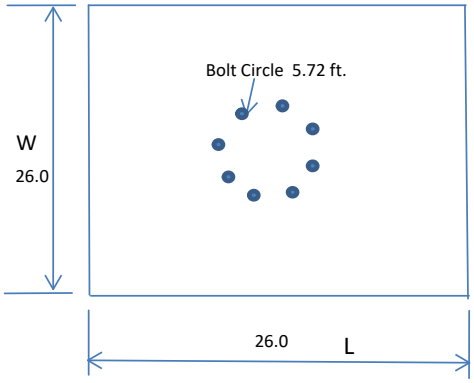


Base Reactions (Factored):

Axial Load (Kips):	91.4	Shear Force (Kips):	48.3
Uplift Force (Kips):	0.0	Moment (Kips-ft):	6371.4
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Anchor Bolt Circle (ft.):	5.72	Depth of Base BG (ft.):	5.50
Thickness of Pad (ft):	6.00		
Length of Pad (ft.):	26	Width of Pad (ft.):	26
Final Length of pad (ft)	26.0	Final width of pad (ft):	26.0



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Pad Rebar Yield (Ksi):	60	Tie Spacing (in):	12.0	
Pad Steel Rebar Size (#):	8			
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):	18	Qty. of Rebar in Pad (W):	18	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	30000	Ultimate Skin Friction:	425	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	Yes		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	Yes	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.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4056.00	Total Dry Concrete Weight (Kips):	608.40
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	608.40	Total Vertical Load on Base (Kips):	699.84

Check Soil Capacities:

				Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	3732	<	Allowable Factored Soil Bearing (psf): 22500	0.17	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	8307.0	>	Design Factored Momont (kips-ft): 6491	0.78	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.28	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

Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1755.9	>	One-Way Factored Shear (L-D. Kips):	326.6	0.19	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1755.9	>	One-Way Factored Shear (W-D., Kips)	326.6	0.19	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	2063.1	>	One-Way Factored Shear (C-C, Kips):	942.8	0.46	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0011	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0011		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	7210.2	>	Moment at Bottom (L-Direct. K-Ft):	682.8	0.09	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	7210.2	>	Moment at Bottom (W-Direct. K-Ft):	682.8	0.09	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	10169.3	>	Moment at Bottom (C-C Dir. K-Ft):	965.7	0.09	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0007	OK!	Upper Steel Reinf. Ratio (W-Direct.):	0.0007		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	4349.0	>	Moment at the top (L-Dir Kips-Ft):	189.9	0.04	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	4349.0	>	Moment at the top (W-Dir Kips-Ft):	189.9	0.04	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	6140.5	>	Moment at the top (C-C Direc. K-Ft):	835.6	0.14	OK!

EXHIBIT 8

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 180-Ft Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT02652-S-SBA

Customer Site Name: Colchester 3 CT

Carrier Name: T-Mobile (App#: 197460, V2)

Carrier Site ID / Name: CT11472A / Rt2/Colchester-Bozrah

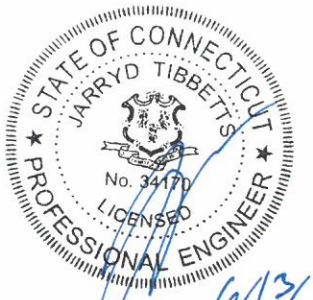
Site Location: 29 Mahoney Road

Colchester, Connecticut

New London County

Latitude: 41.564533

Longitude: -72.251697



Analysis Result:

Max Structural Usage: 78.60% [Pass]

Report Prepared By: Sarath Basamsetti

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

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New London County

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Analysis Result:

Max Structural Usage: 78.60% [Pass]

Report Prepared By: Sarath Basamsetti

Introduction

The purpose of this report is to summarize the analysis results on the (1) Platform w/Handrail at 177.00' elevation including the proposed modifications to support the proposed antenna configuration. Any existing modification listed under Sources of Information was assumed completed and was included in this analysis.

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

Sources of Information

Mount Drawings	Mount mapping by Full Metal Tower Services, dated 4/29/2019.
Antenna Loading	SBA, Application #: 197460, v2 dated 06/06/2022
Previous Mount Analysis	TES Project: 130139, dated: 06/07/2022
Proposed Modification	TES Project No. 130371

Analysis Criteria

Basic Wind Speed Used in the Analysis: V_{ULT} = 130 mph (3-Sec. Gust) / Equivalent to
V_{ASD} = 101 mph (3-Sec. Gust)
Basic Wind Speed with Ice: 50 mph (3-Sec. Gust) with 0.75" radial ice concurrent
Operational Wind Speed: 60 mph +0" Radial ice
Standard/Codes: ANSI/TIA/EIA 222-G
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) Platform w/Handrail at 177.00' elevation.

Final Antenna Configuration

3	EMS RR90-17-02VDPL2/-R
3	RFS APXVAALL24-43-U-NA20
3	Ericsson AIR6419 B41
3	Commscope VV-65A-R1
3	Ericsson KRY 112 489/2
3	Ericsson KRY 112 144/2*
3	Ericsson 4449 B71 + B85
3	Ericsson 4460 B25 + B66

3	Kathrein 782 11056*	

* Equipment to be flush mounted directly to the face horizontal and are not included in the placement diagrams.

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 78.60%, which occurs in the face corner braces. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

Attachments

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

Standard Conditions

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

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

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

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

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

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

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

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

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


04.29.2019 10:43

Structure: CT02652-S-SBA - Colchester 3 CT

Sector: **A**

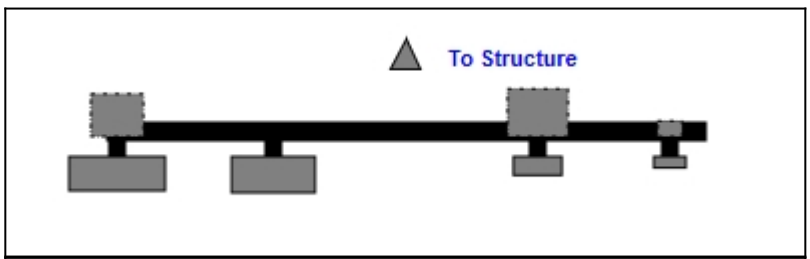
Structure Type: Monopole

Mount Elev: 177.00

6/13/2022

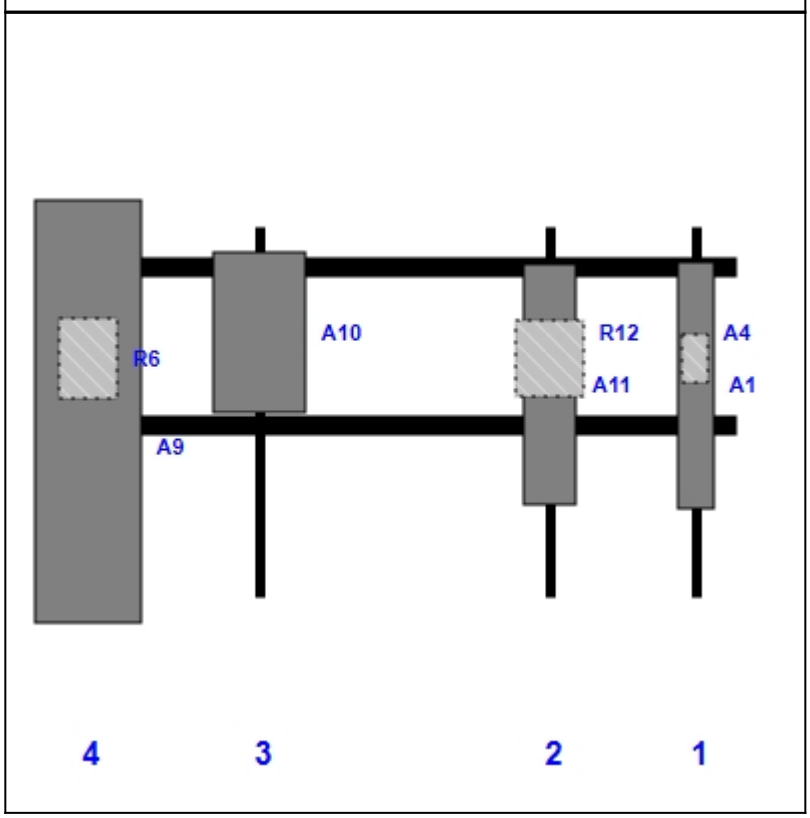
Tower Engineering Solutions

Plan View



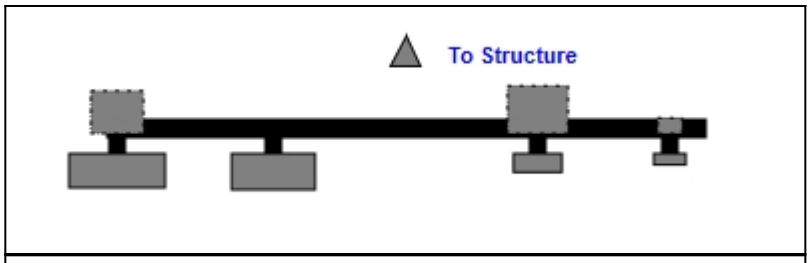
Front View

Looking Toward Structure



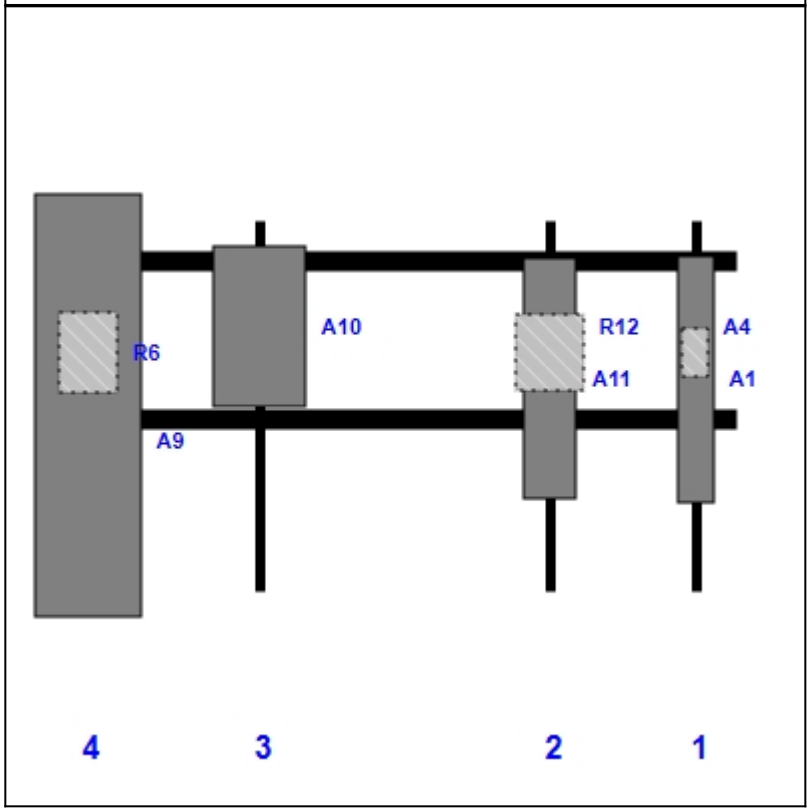
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	RR90-17-02VDPL2/-R	56.00	8.00	141.00	1	a	Front	36.00			
A4	KRY 112 489/2	11.00	6.10	141.00	1	a	Behind	30.00			
A11	VV-65A-R1	54.72	12.08	108.00	2	a	Front	36.00			
R12	4460 B25 + B66	17.00	15.10	108.00	2	a	Behind	30.00			
A10	AIR6419 B41	36.30	20.90	42.00	3	a	Front	24.00			
A9	APXVAALL24-43-U-NA20	95.90	24.00	3.00	4	a	Front	42.00			
R6	4449 B71 + B85	17.90	13.10	3.00	4	a	Behind	30.00			
M1	KRY 112 144/2	8.60	6.60		Member						
M1	782 11056	5.50	3.20		Member						

Plan View



Front View

Looking Toward Structure



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A1	RR90-17-02VDPL2/-R	56.00	8.00	141.00	1	a	Front	36.00			
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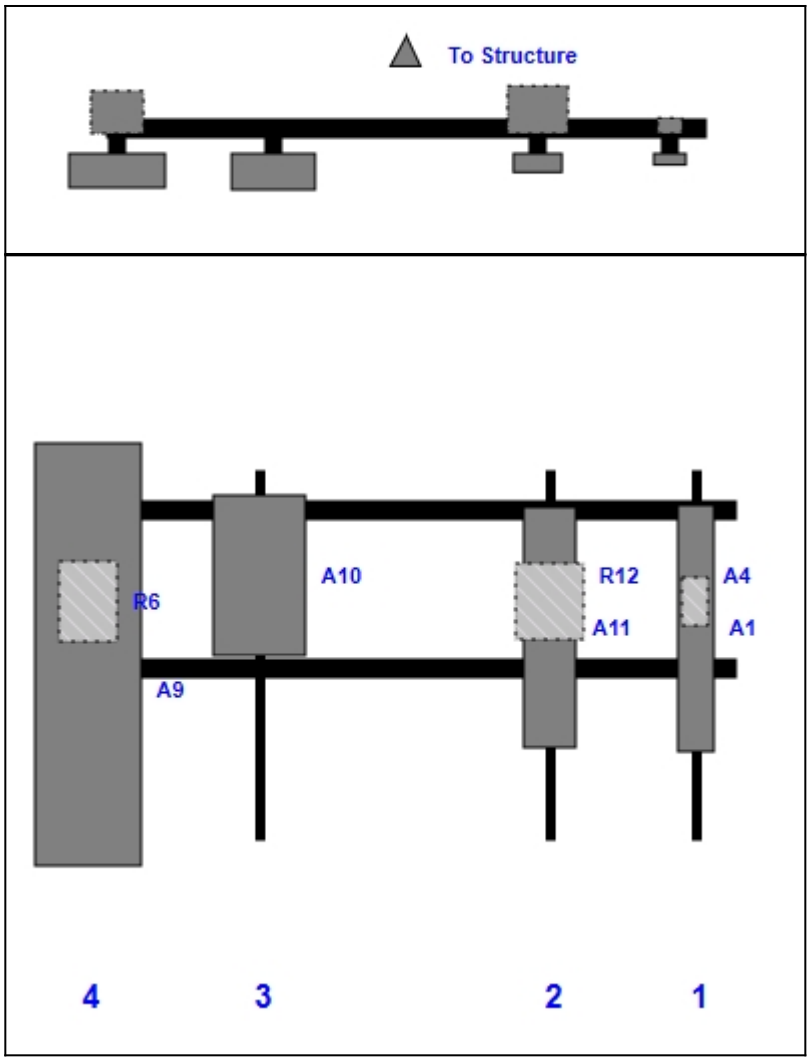
A11	VV-65A-R1	54.72	12.08	108.00	2	a	Front	36.00			
R12	4460 B25 + B66	17.00	15.10	108.00	2	a	Behind	30.00			
A10	AIR6419 B41	36.30	20.90	42.00	3	a	Front	24.00			
A9	APXVAALL24-43-U-NA20	95.90	24.00	3.00	4	a	Front	42.00			
R6	4449 B71 + B85	17.90	13.10	3.00	4	a	Behind	30.00			

Plan View



Front View

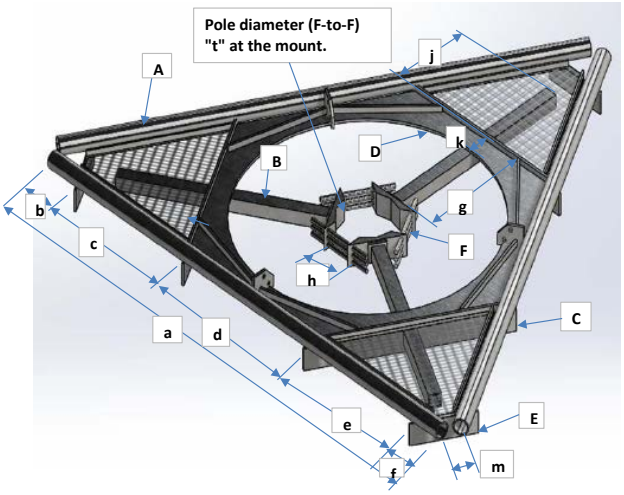
Looking Toward Structure

Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	RR90-17-02VDPL2/-R	56.00	8.00	141.00	1	a	Front	36.00			
A4	KRY 112 489/2	11.00	6.10	141.00	1	a	Behind	30.00			
A11	VV-65A-R1	54.72	12.08	108.00	2	a	Front	36.00			
R12	4460 B25 + B66	17.00	15.10	108.00	2	a	Behind	30.00			
A10	AIR6419 B41	36.30	20.90	42.00	3	a	Front	24.00			
A9	APXVAALL24-43-U-NA20	95.90	24.00	3.00	4	a	Front	42.00			
R6	4449 B71 + B85	17.90	13.10	3.00	4	a	Behind	30.00			

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

FCC # 1228267

Tower Owner:	SBA Communications	**Mapping Date:**	4/29/19
Site Name:	Colchester 3 CT	**Structure Type:**	Monopole
Site Number or ID:	CT02652-S-SBA	**Structure Height (Ft.):**	180
Mapping Contractor:	Full Metal Tower Services	**Mount Height (Ft.):**	178.3



Geometries (Unit: inches)									
a	150	**e**	35	**j**	15	**o**	N/A	**s**	N/A
b	15	**f**	15	**k**	7	**p**	N/A	**t**	26
c	35	**g**	33	**m**	12	**q**	N/A	**u ***	30
d	50	**h**	29	**n**	N/A	**r**	N/A	**v ***	72

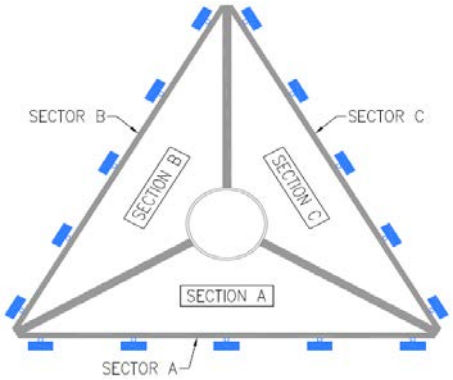
Members/Bolts (Unit: inches) *** - See Ant. Layout for "u", "v" and member "K" (pipe)**

Items	Member	Lx (O.D.)	Ly (I.D.)	T	Items	Member	Lx (O.D.)	Ly (I.D.)	T
A	3.5 OD x 0.216 Pipe	3.5	3.068	0.216	**F**	5/8" Bolt		29	
B	Tubing 4x4x1/4	4	4	0.25	**G**				
C	3/8" Thick. Plate	0	0	0.375	**H**				
D	1/4" Thick. Plate	0	0	0.25	**J**				
E	3/8" Thick. Plate	0	0	0.375	**K* (pipe)**	2.375 OD x 0.154 Pipe	2.375	2.067	0.154

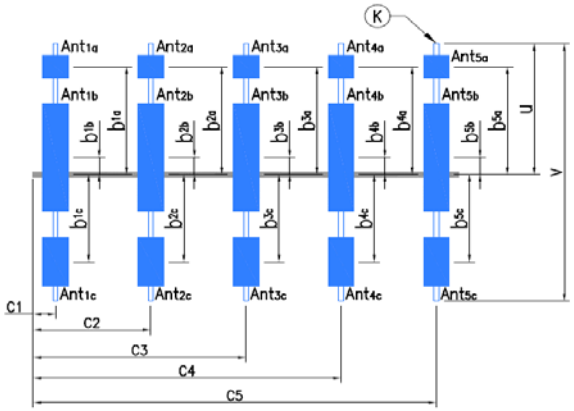
Distance from top of main platform member to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.)	N/A
Distance from top of main platform member to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.)	3

Please enter the infomation below if members can't be found from the drop down lists

(3) TMAs (6"x4"x12") Mounted to member A behind Antenn Pos2



Climbing ladder is Located at Section A, at 90° Degree Azimuth



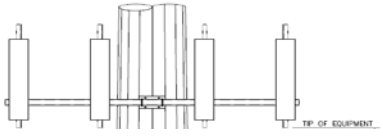
Antenna Layout

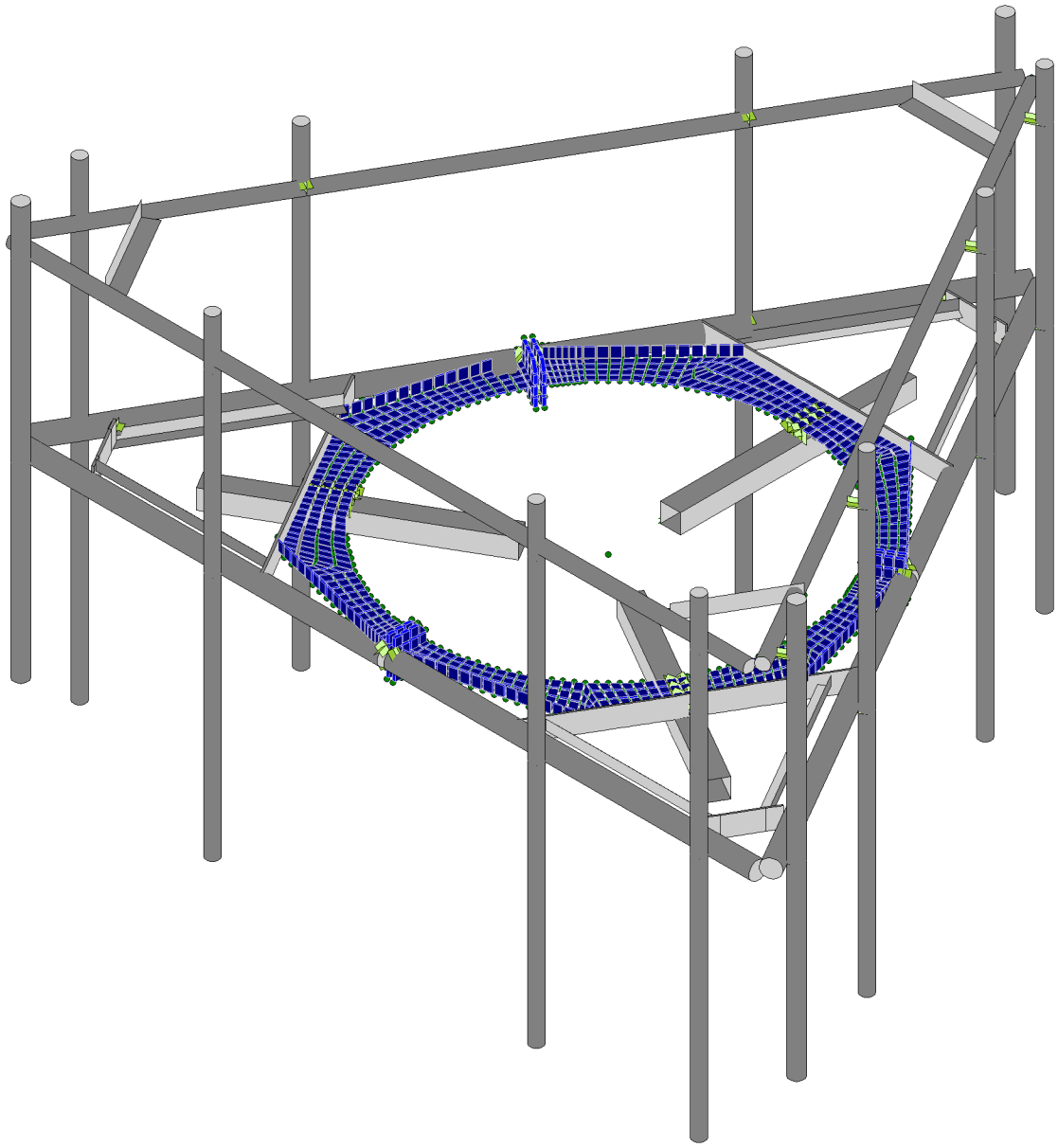
Ants. Items	Enter antenna model. If not labled, enter "Unknown". If no antenna at specified location, enter "N/A". If antennas and the locations are the same on all three sectors, only enter one sector.					Mounting Locations (Unit: inches)			Photos of antennas
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (In.)	Horiz. offset (Use "-" if Ant. is inside)	Horiz. offset "C_1, C_2, C_3, C_4, C_5" (in.)	Photo Numbers
Sector A									
Ant_{1a}									
Ant_{1b}	Antenna A	8.5	3	56	1/2" (2)	+4"	6	9	
Ant_{1c}	TMA A	6	4	12	1/2" (2)	+12"	N/A	9	
Ant_{2a}									
Ant_{2b}	Antenna B	12	7.5	96.5	1/2" (2)	+10"	7	147	
Ant_{2c}									
Ant_{3a}									
Ant_{3b}									
Ant_{3c}									
Ant_{4a}									
Ant_{4b}									
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									
Are Ant same as sector A?	Yes	**Antennas on Sector B are the same as Sector A**							

Azimuth (Degree) of Each Sector and Climbing Information

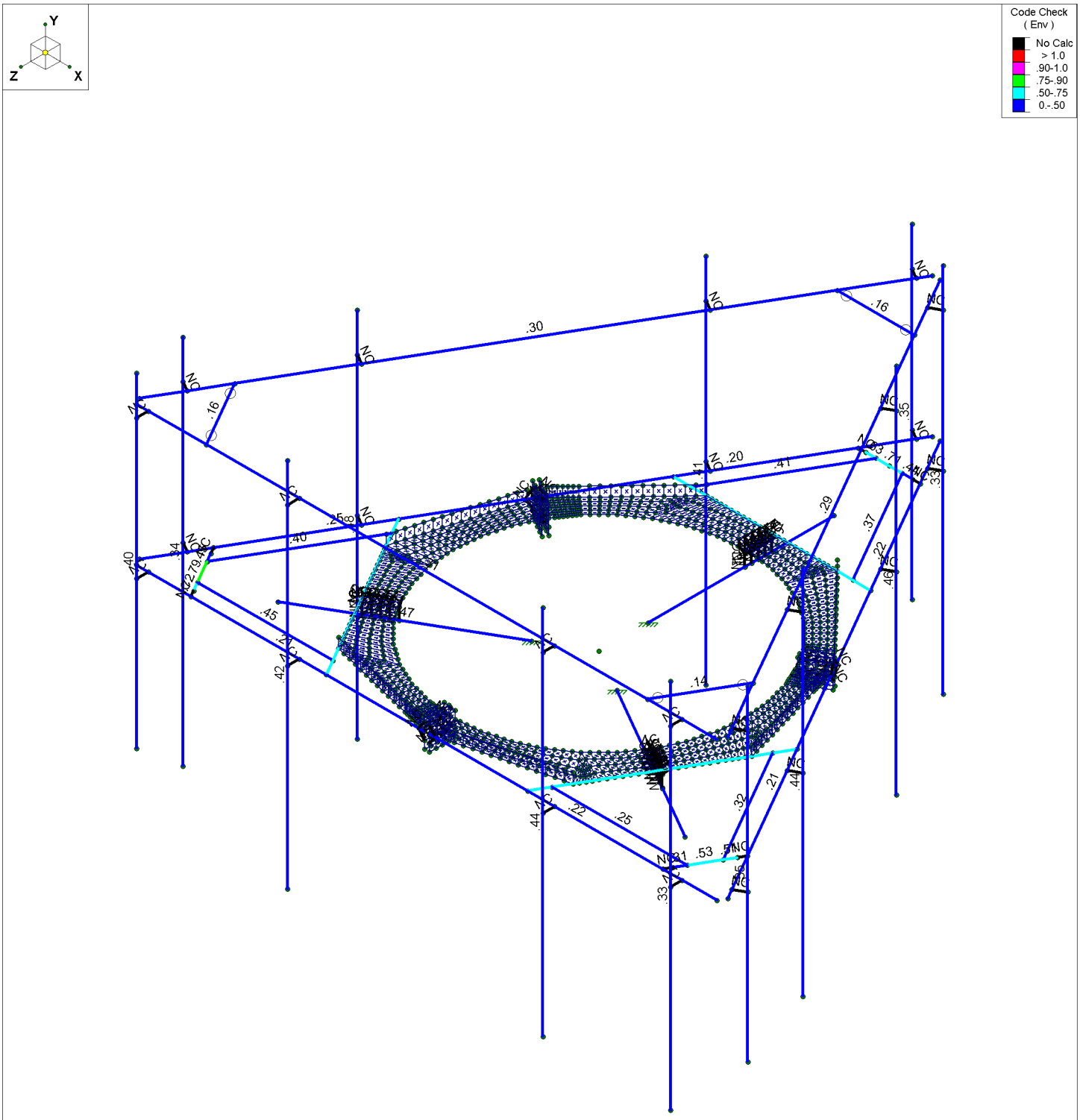
Sector A:	60°	Deg	
Sector B:	180°	Deg	
Sector C:	310°	Deg	
Climbing	90°	Deg	Located at Section A
Climbing Facility	Corrosion Type:		No corrosion observed
	Access:		Climbing path was unobstructed.
	Condition:		N/A

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



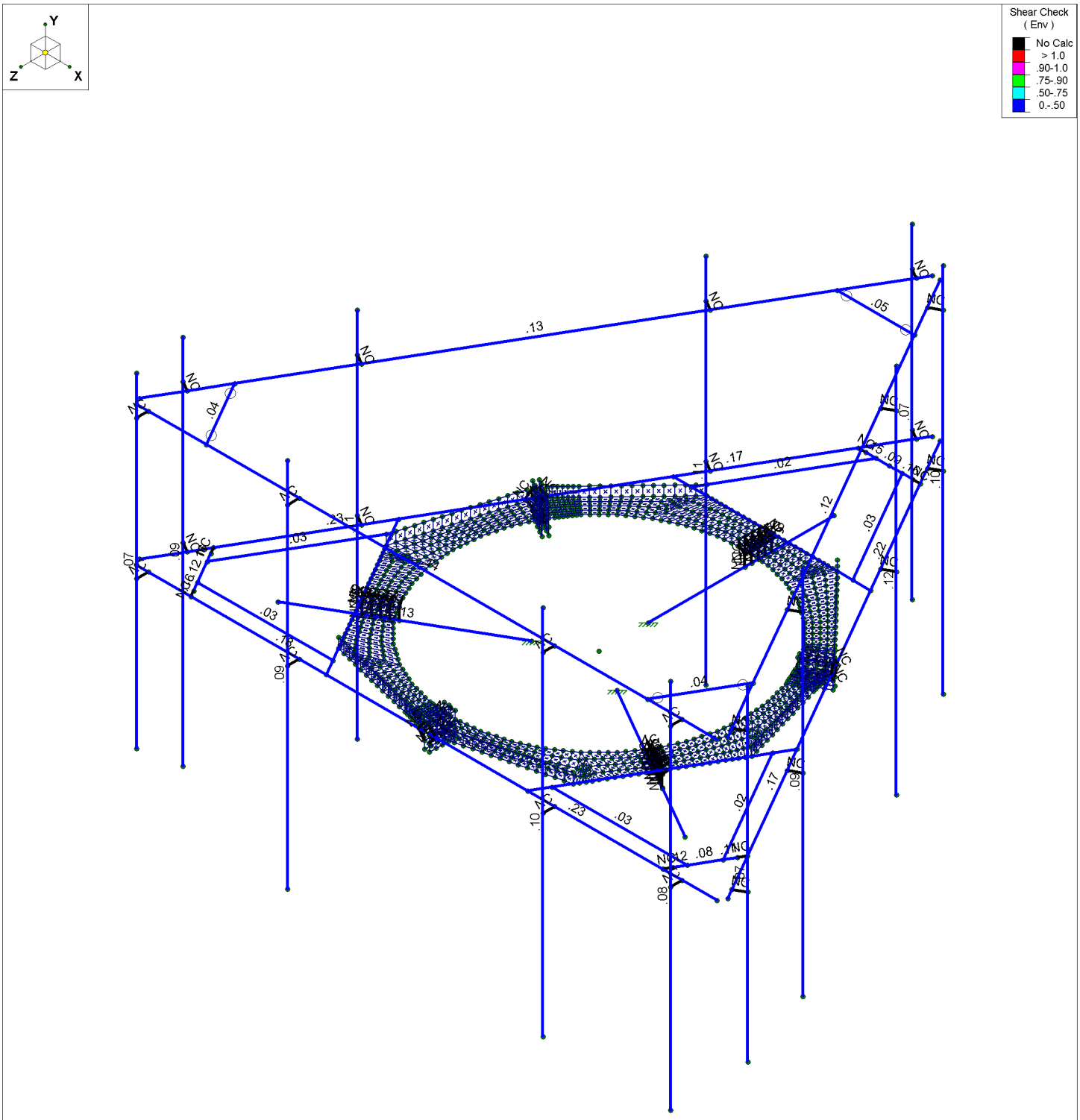


Tower Engineering Solutio...	CT02652-S-SBA_MT_LO_Loads Only_G	SK - 1
SB		June 13, 2022 at 1:37 PM
TES Project No. 130371		CT02652-S-SBA_130371_G_RISA_...



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

Tower Engineering Solutio...	CT02652-S-SBA_MT_LO_Loads Only_G	SK - 3
SB		June 13, 2022 at 1:38 PM
TES Project No. 130371		CT02652-S-SBA_130371_G_RISA_...



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

Tower Engineering Solutio...	CT02652-S-SBA_MT_LO_Loads Only_G	SK - 4
SB		June 13, 2022 at 1:38 PM
TES Project No. 130371		CT02652-S-SBA_130371_G_RISA_...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					35			
2	Antenna Di	None					35			
3	Antenna W Front	None					35			
4	Antenna Wi Front	None					35			
5	Antenna W Side	None					35			
6	Antenna Wi Side	None					35			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1					6	
10	Structure Di	None						45	6	
11	Structure W Front	None						45		
12	Structure Wi Front	None						45		
13	Structure W Side	None						45		
14	Structure Wi Side	None						45		
15	BLC 9 Transient Area...	None						36		
16	BLC 10 Transient Are...	None						36		

Load Combinations

	Description	Solve	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.6W (Fr...	Yes	Y		1	1.2	9	1.2	3	1.6	11	1.6														
2	1.2D+1.6W (Ba...	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 (Ri...	Yes	Y		1	1.2	9	1.2	5	-1.6	13	-1.6														
5	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	1	12	1										
6	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-1	12	-1										
7	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	1	14	1										
8	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	-1	14	-1										
9	1.2D+1.5L1+.16...	Yes	Y		1	1.2	9	1.2	7	1.5	3	.16	11	.16												
10	1.2D+1.5L2+.16...	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	-6.25	.333	3.704857	0	
2	N2	6.25	.333	3.704857	0	
3	N3	0	0	0	0	
4	N4	-5.083	.333	3.704857	0	
5	N5	-2.167	.333	3.704857	0	
6	N6	2.167	.333	3.704857	0	
7	N7	5.083	.333	3.704857	0	
8	N8	6.3335	.333	3.56023	0	
9	N9	0.0835	.333	-7.265087	0	
10	N10	5.75	.333	2.549579	0	
11	N11	4.292	.333	0.024249	0	
12	N12	2.125	.333	-3.729106	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
13	N13	0.667	.333	-6.254436	0	
14	N14	-0.0835	.333	-7.265087	0	
15	N15	-6.3335	.333	3.56023	0	
16	N16	-0.667	.333	-6.254436	0	
17	N17	-2.125	.333	-3.729106	0	
18	N18	-4.292	.333	0.024249	0	
19	N19	-5.75	.333	2.549579	0	
20	N20	-5.275258	.333	3.371857	0	
21	N21	-2.359258	.333	3.371857	0	
22	N22	5.275258	.333	3.371857	0	
23	N23	2.359258	.333	3.371857	0	
24	N24	5.557743	.333	2.882579	0	
25	N25	4.099743	.333	0.357249	0	
26	N26	0.282485	.333	-6.254436	0	
27	N27	1.740485	.333	-3.729106	0	
28	N28	-0.282485	.333	-6.254436	0	
29	N29	-1.740485	.333	-3.729106	0	
30	N30	-5.557743	.333	2.882579	0	
31	N31	-4.099743	.333	0.357249	0	
32	N32	-0.052083	.333	3.704857	0	
33	N33	0	0	-1.062441	0	
34	N34	-2.525758	.333	3.083471	0	
35	N35	2.525758	.333	3.083471	0	
36	N36	-5e-14	.333	-3.729106	0	
37	N37	-2e-14	.333	-3.146106	0	
38	N38	-2.724607	.333	1.573053	0	
39	N39	-2.410057	.333	2.022278	0	
40	N40	-2.022278	.333	2.410057	0	
41	N41	-1.573053	.333	2.724607	0	
42	N42	-1.076031	.333	2.956372	0	
43	N43	-0.546315	.333	3.098309	0	
44	N44	-0.052083	.333	3.146106	0	
45	N45	0.546315	.333	3.098309	0	
46	N46	1.076031	.333	2.956372	0	
47	N47	1.573053	.333	2.724607	0	
48	N48	2.022278	.333	2.410057	0	
49	N49	2.410057	.333	2.022278	0	
50	N50	2.724607	.333	1.573053	0	
51	N51	-3.2295	.333	1.864553	0	
52	N52	-2.9795	.333	2.297565	0	
53	N53	-2.7295	.333	2.730578	0	
54	N54	3.2295	.333	1.864553	0	
55	N55	2.9795	.333	2.297565	0	
56	N56	2.7295	.333	2.730578	0	
57	N57	-1.894318	.333	3.238817	0	
58	N58	-1.262879	.333	3.394164	0	
59	N59	-0.631439	.333	3.54951	0	
60	N60	0.631439	.333	3.54951	0	
61	N61	1.262879	.333	3.394164	0	
62	N62	1.894318	.333	3.238817	0	
63	N63	-0.273158	.333	3.122207	0	
64	N64	-0.317303	.333	3.626794	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
65	N65	-4e-14	.333	-3.583356	0	
66	N66	-4e-14	.333	-3.437606	0	
67	N67	-4e-14	.333	-3.291856	0	
68	N68	2.850831	.333	1.645928	0	
69	N69	2.977054	.333	1.718803	0	
70	N70	3.103277	.333	1.791678	0	
71	N71	2.64597	.333	1.685359	0	
72	N72	2.567332	.333	1.797665	0	
73	N73	2.488694	.333	1.909971	0	
74	N74	2.776227	.333	1.757221	0	
75	N75	2.701624	.333	1.868514	0	
76	N76	2.627021	.333	1.979807	0	
77	N77	2.552418	.333	2.0911	0	
78	N78	2.906485	.333	1.829082	0	
79	N79	2.835916	.333	1.939362	0	
80	N80	2.765347	.333	2.049642	0	
81	N81	2.694778	.333	2.159922	0	
82	N82	3.036743	.333	1.900944	0	
83	N83	2.970208	.333	2.010211	0	
84	N84	2.903674	.333	2.119477	0	
85	N85	2.837139	.333	2.228744	0	
86	N86	3.167	.333	1.972806	0	
87	N87	3.1045	.333	2.081059	0	
88	N88	3.042	.333	2.189312	0	
89	N89	2.313112	.333	2.119222	0	
90	N90	2.216167	.333	2.216167	0	
91	N91	2.119222	.333	2.313112	0	
92	N92	2.464084	.333	2.190871	0	
93	N93	2.37575	.333	2.290643	0	
94	N94	2.287417	.333	2.390415	0	
95	N95	2.199083	.333	2.490187	0	
96	N96	2.615056	.333	2.262521	0	
97	N97	2.535334	.333	2.365119	0	
98	N98	2.455611	.333	2.467718	0	
99	N99	2.375889	.333	2.570317	0	
100	N100	2.766028	.333	2.33417	0	
101	N101	2.694917	.333	2.439596	0	
102	N102	2.623806	.333	2.545022	0	
103	N103	2.552695	.333	2.650448	0	
104	N104	2.917	.333	2.405819	0	
105	N105	2.8545	.333	2.514072	0	
106	N106	2.792	.333	2.622325	0	
107	N107	2.399888	.333	2.915117	0	
108	N108	2.274018	.333	2.746764	0	
109	N109	2.148148	.333	2.57841	0	
110	N110	2.367898	.333	3.122307	0	
111	N111	2.253416	.333	2.963904	0	
112	N112	2.138935	.333	2.805501	0	
113	N113	2.024453	.333	2.647098	0	
114	N114	1.909971	.333	2.488694	0	
115	N115	2.210038	.333	3.161144	0	
116	N116	2.106945	.333	3.012691	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
117	N117	2.003852	.333	2.864238	0	
118	N118	1.900758	.333	2.715785	0	
119	N119	1.797665	.333	2.567332	0	
120	N120	2.052178	.333	3.199981	0	
121	N121	1.960473	.333	3.061478	0	
122	N122	1.868769	.333	2.922975	0	
123	N123	1.777064	.333	2.784472	0	
124	N124	1.685359	.333	2.64597	0	
125	N125	1.814002	.333	3.110265	0	
126	N126	1.733686	.333	2.981712	0	
127	N127	1.653369	.333	2.85316	0	
128	N128	1.736458	.333	3.277654	0	
129	N129	1.664543	.333	3.153877	0	
130	N130	1.592628	.333	3.030101	0	
131	N131	1.520713	.333	2.906325	0	
132	N132	1.448797	.333	2.782549	0	
133	N133	1.578599	.333	3.31649	0	
134	N134	1.515084	.333	3.19749	0	
135	N135	1.45157	.333	3.07849	0	
136	N136	1.388056	.333	2.95949	0	
137	N137	1.324542	.333	2.84049	0	
138	N138	1.420739	.333	3.355327	0	
139	N139	1.365626	.333	3.241103	0	
140	N140	1.310513	.333	3.126879	0	
141	N141	1.2554	.333	3.012655	0	
142	N142	1.200287	.333	2.898431	0	
143	N143	1.216167	.333	3.284716	0	
144	N144	1.169455	.333	3.175268	0	
145	N145	1.122743	.333	3.06582	0	
146	N146	1.105019	.333	3.433	0	
147	N147	1.064665	.333	3.322714	0	
148	N148	1.024311	.333	3.212428	0	
149	N149	0.983957	.333	3.102142	0	
150	N150	0.943602	.333	2.991856	0	
151	N151	0.947159	.333	3.471837	0	
152	N152	0.913163	.333	3.360713	0	
153	N153	0.879166	.333	3.249589	0	
154	N154	0.84517	.333	3.138465	0	
155	N155	0.811173	.333	3.027341	0	
156	N156	0.789299	.333	3.510674	0	
157	N157	0.761661	.333	3.398712	0	
158	N158	0.734022	.333	3.286749	0	
159	N159	0.706383	.333	3.174787	0	
160	N160	0.678744	.333	3.062825	0	
161	N161	0.610158	.333	3.43671	0	
162	N162	0.588877	.333	3.32391	0	
163	N163	0.567596	.333	3.211109	0	
164	N164	0.409737	.333	3.110258	0	
165	N165	0.273158	.333	3.122207	0	
166	N166	0.136579	.333	3.134156	0	
167	N167	0.425697	.333	3.22978	0	
168	N168	0.283798	.333	3.248451	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
169	N169	0.141899	.333	3.267122	0	
170	N170	-0.052083	.333	3.285793	0	
171	N171	0.441658	.333	3.349303	0	
172	N172	0.294439	.333	3.374696	0	
173	N173	0.147219	.333	3.400088	0	
174	N174	-0.052083	.333	3.425481	0	
175	N175	0.457619	.333	3.468825	0	
176	N176	0.305079	.333	3.50094	0	
177	N177	0.15254	.333	3.533054	0	
178	N178	-0.052083	.333	3.565169	0	
179	N179	0.47358	.333	3.588347	0	
180	N180	0.31572	.333	3.627184	0	
181	N181	0.15786	.333	3.66602	0	
182	N182	-0.678744	.333	3.062825	0	
183	N183	-0.811173	.333	3.027341	0	
184	N184	-0.943602	.333	2.991856	0	
185	N185	-0.567596	.333	3.211109	0	
186	N186	-0.706383	.333	3.174787	0	
187	N187	-0.84517	.333	3.138465	0	
188	N188	-0.983957	.333	3.102142	0	
189	N189	-1.122743	.333	3.06582	0	
190	N190	-0.588877	.333	3.32391	0	
191	N191	-0.734022	.333	3.286749	0	
192	N192	-0.879166	.333	3.249589	0	
193	N193	-1.024311	.333	3.212428	0	
194	N194	-1.169455	.333	3.175268	0	
195	N195	-0.610158	.333	3.43671	0	
196	N196	-0.761661	.333	3.398712	0	
197	N197	-0.913163	.333	3.360713	0	
198	N198	-1.064665	.333	3.322714	0	
199	N199	-1.216167	.333	3.284716	0	
200	N200	-0.789299	.333	3.510674	0	
201	N201	-0.947159	.333	3.471837	0	
202	N202	-1.105019	.333	3.433	0	
203	N203	-1.448797	.333	2.782549	0	
204	N204	-1.324542	.333	2.84049	0	
205	N205	-1.200287	.333	2.898431	0	
206	N206	-1.653369	.333	2.85316	0	
207	N207	-1.520713	.333	2.906325	0	
208	N208	-1.388056	.333	2.95949	0	
209	N209	-1.2554	.333	3.012655	0	
210	N210	-1.733686	.333	2.981712	0	
211	N211	-1.592628	.333	3.030101	0	
212	N212	-1.45157	.333	3.07849	0	
213	N213	-1.310513	.333	3.126879	0	
214	N214	-1.814002	.333	3.110265	0	
215	N215	-1.664543	.333	3.153877	0	
216	N216	-1.515084	.333	3.19749	0	
217	N217	-1.365626	.333	3.241103	0	
218	N218	-1.736458	.333	3.277654	0	
219	N219	-1.578599	.333	3.31649	0	
220	N220	-1.420739	.333	3.355327	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
221	N221	-1.685359	.333	2.64597	0	
222	N222	-1.797665	.333	2.567332	0	
223	N223	-1.909971	.333	2.488694	0	
224	N224	-1.811229	.333	2.814323	0	
225	N225	-1.908193	.333	2.733289	0	
226	N226	-2.005156	.333	2.652255	0	
227	N227	-2.10212	.333	2.571221	0	
228	N228	-2.199083	.333	2.490187	0	
229	N229	-2.049405	.333	2.904039	0	
230	N230	-2.131026	.333	2.820609	0	
231	N231	-2.212647	.333	2.737178	0	
232	N232	-2.294268	.333	2.653748	0	
233	N233	-2.375889	.333	2.570317	0	
234	N234	-2.287581	.333	2.993755	0	
235	N235	-2.35386	.333	2.907928	0	
236	N236	-2.420138	.333	2.822101	0	
237	N237	-2.486416	.333	2.736275	0	
238	N238	-2.552695	.333	2.650448	0	
239	N239	-2.576693	.333	2.995247	0	
240	N240	-2.627629	.333	2.907024	0	
241	N241	-2.678565	.333	2.818801	0	
242	N242	-2.119222	.333	2.313112	0	
243	N243	-2.216167	.333	2.216167	0	
244	N244	-2.313112	.333	2.119222	0	
245	N245	-2.287417	.333	2.390415	0	
246	N246	-2.37575	.333	2.290643	0	
247	N247	-2.464084	.333	2.190871	0	
248	N248	-2.552418	.333	2.0911	0	
249	N249	-2.455611	.333	2.467718	0	
250	N250	-2.535334	.333	2.365119	0	
251	N251	-2.615056	.333	2.262521	0	
252	N252	-2.694778	.333	2.159922	0	
253	N253	-2.623806	.333	2.545022	0	
254	N254	-2.694917	.333	2.439596	0	
255	N255	-2.766028	.333	2.33417	0	
256	N256	-2.837139	.333	2.228744	0	
257	N257	-2.792	.333	2.622325	0	
258	N258	-2.8545	.333	2.514072	0	
259	N259	-2.917	.333	2.405819	0	
260	N260	-2.488694	.333	1.909971	0	
261	N261	-2.567332	.333	1.797665	0	
262	N262	-2.64597	.333	1.685359	0	
263	N263	-2.627021	.333	1.979807	0	
264	N264	-2.701624	.333	1.868514	0	
265	N265	-2.776227	.333	1.757221	0	
266	N266	-2.850831	.333	1.645928	0	
267	N267	-2.765347	.333	2.049642	0	
268	N268	-2.835916	.333	1.939362	0	
269	N269	-2.906485	.333	1.829082	0	
270	N270	-2.977054	.333	1.718803	0	
271	N271	-2.903674	.333	2.119477	0	
272	N272	-2.970208	.333	2.010211	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
273	N273	-3.036743	.333	1.900944	0	
274	N274	-3.103277	.333	1.791678	0	
275	N275	-3.042	.333	2.189312	0	
276	N276	-3.1045	.333	2.081059	0	
277	N277	-3.167	.333	1.972806	0	
278	N278	-0.478026	.333	3.104284	0	
279	N279	-0.409737	.333	3.110258	0	
280	N280	-0.341447	.333	3.116233	0	
281	N281	-0.496746	.333	3.220421	0	
282	N282	-0.425895	.333	3.229732	0	
283	N283	-0.355045	.333	3.239043	0	
284	N284	-0.284194	.333	3.248354	0	
285	N285	-0.515466	.333	3.336557	0	
286	N286	-0.442054	.333	3.349205	0	
287	N287	-0.368642	.333	3.361853	0	
288	N288	-0.295231	.333	3.374501	0	
289	N289	-0.534186	.333	3.452694	0	
290	N290	-0.458213	.333	3.468679	0	
291	N291	-0.38224	.333	3.484663	0	
292	N292	-0.306267	.333	3.500647	0	
293	N293	-0.552905	.333	3.568831	0	
294	N294	-0.474371	.333	3.588152	0	
295	N295	-0.395837	.333	3.607473	0	
296	N296	-0.204868	.333	3.128182	0	
297	N297	-0.136579	.333	3.134156	0	
298	N298	-0.213146	.333	3.257714	0	
299	N299	-0.142097	.333	3.267074	0	
300	N300	-0.221423	.333	3.387246	0	
301	N301	-0.147615	.333	3.399991	0	
302	N302	-0.2297	.333	3.516778	0	
303	N303	-0.153133	.333	3.532908	0	
304	N304	-0.237978	.333	3.64631	0	
305	N305	-0.158652	.333	3.665826	0	
306	N306	2.627629	.333	2.907024	0	
307	N307	2.425845	.333	2.741368	0	
308	N308	-2.210038	.333	3.161144	0	
309	N309	-1.99771	.333	3.015632	0	
310	N310	-5e-14	0	-3.729106	0	
311	N311	-2e-14	0	-3.146106	0	
312	N312	-4e-14	0	-3.583356	0	
313	N313	-4e-14	0	-3.437606	0	
314	N314	-4e-14	0	-3.291856	0	
315	N315	-3.2295	0	1.864553	0	
316	N316	-2.724607	0	1.573053	0	
317	N317	-3.103277	0	1.791678	0	
318	N318	-2.977054	0	1.718803	0	
319	N319	-2.850831	0	1.645928	0	
320	N320	3.2295	0	1.864553	0	
321	N321	2.724607	0	1.573053	0	
322	N322	3.103277	0	1.791678	0	
323	N323	2.977054	0	1.718803	0	
324	N324	2.850831	0	1.645928	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
325	N325	-2.023557	.333	2.959835	0	
326	N326	-2.195728	.333	3.041071	0	
327	N327	-2.367898	.333	3.122307	0	
328	N328	-2.103874	.333	3.088388	0	
329	N329	-1.838463	.333	2.906498	0	
330	N330	-1.865698	.333	2.998672	0	
331	N331	-1.958938	.333	3.099326	0	
332	N332	-2.052178	.333	3.199981	0	
333	N333	2.576693	.333	2.995247	0	
334	N334	2.463312	.333	2.869657	0	
335	N335	2.526737	.333	2.824196	0	
336	N336	2.349931	.333	2.744066	0	
337	N337	2.678565	.333	2.818801	0	
338	N338	2.539716	.333	2.737322	0	
339	N339	2.400867	.333	2.655843	0	
340	N340	2.274507	.333	2.617127	0	
341	N341	0.052084	.333	3.704857	0	
342	N342	0.052084	.333	3.146106	0	
343	N343	0.052084	.333	3.285793	0	
344	N344	0.052084	.333	3.425481	0	
345	N345	0.052084	.333	3.565169	0	
346	N346	-0.052083	0.666333	3.704857	0	
347	N347	-0.052083	0.666333	3.285793	0	
348	N348	-0.052083	0.666333	3.425481	0	
349	N349	-0.052083	0.666333	3.565169	0	
350	N350	0.052084	0.666333	3.704857	0	
351	N351	0.052084	0.666333	3.285793	0	
352	N352	0.052084	0.666333	3.425481	0	
353	N353	0.052084	0.666333	3.565169	0	
354	N354	-0.052083	-.000333	3.704857	0	
355	N355	-0.052083	-.000333	3.146106	0	
356	N356	-0.052083	-.000333	3.285793	0	
357	N357	-0.052083	-.000333	3.425481	0	
358	N358	-0.052083	-.000333	3.565169	0	
359	N359	0.052084	-.000333	3.704857	0	
360	N360	0.052084	-.000333	3.146106	0	
361	N361	0.052084	-.000333	3.285793	0	
362	N362	0.052084	-.000333	3.425481	0	
363	N363	0.052084	-.000333	3.565169	0	
364	N364	-0.052083	0.166334	3.704857	0	
365	N365	-0.052083	0.166334	3.146106	0	
366	N366	-0.052083	0.166334	3.285793	0	
367	N367	-0.052083	0.166334	3.425481	0	
368	N368	-0.052083	0.166334	3.565169	0	
369	N369	0.052084	0.166334	3.704857	0	
370	N370	0.052084	0.166334	3.146106	0	
371	N371	0.052084	0.166334	3.285793	0	
372	N372	0.052084	0.166334	3.425481	0	
373	N373	0.052084	0.166334	3.565169	0	
374	N374	-0.052083	0.499667	3.704857	0	
375	N375	-0.052083	0.499667	3.146106	0	
376	N376	-0.052083	0.499667	3.285793	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
377	N377	-0.052083	0.499667	3.425481	0	
378	N378	-0.052083	0.499667	3.565169	0	
379	N379	0.052084	0.499667	3.704857	0	
380	N380	0.052084	0.499667	3.146106	0	
381	N381	0.052084	0.499667	3.285793	0	
382	N382	0.052084	0.499667	3.425481	0	
383	N383	0.052084	0.499667	3.565169	0	
384	N384	3.234542	.333	-1.807323	0	
385	N385	3.933243	.333	0.645635	0	
386	N386	1.407485	.333	-3.729106	0	
387	N387	2.956372	.333	1.076031	0	
388	N388	3.098309	.333	0.546315	0	
389	N389	3.146106	.333	-4.2e-13	0	
390	N390	3.098309	.333	-0.546315	0	
391	N391	2.956372	.333	-1.076031	0	
392	N392	2.750649	.333	-1.527948	0	
393	N393	2.410057	.333	-2.022278	0	
394	N394	2.022278	.333	-2.410057	0	
395	N395	1.573053	.333	-2.724607	0	
396	N396	1.076031	.333	-2.956372	0	
397	N397	0.546315	.333	-3.098309	0	
398	N398	3.4795	.333	1.43154	0	
399	N399	3.7295	.333	0.998527	0	
400	N400	0.5	.333	-3.729106	0	
401	N401	1	.333	-3.729106	0	
402	N402	3.752057	.333	0.021119	0	
403	N403	3.570871	.333	-0.603397	0	
404	N404	3.389686	.333	-1.227913	0	
405	N405	2.758246	.333	-2.321598	0	
406	N406	2.307993	.333	-2.790767	0	
407	N407	1.857739	.333	-3.259936	0	
408	N408	2.84049	.333	-1.324542	0	
409	N409	3.299547	.333	-1.538604	0	
410	N410	0.136579	.333	-3.134156	0	
411	N411	0.273158	.333	-3.122207	0	
412	N412	0.409737	.333	-3.110258	0	
413	N413	0.133684	.333	-3.282894	0	
414	N414	0.267368	.333	-3.273932	0	
415	N415	0.401052	.333	-3.26497	0	
416	N416	0.534737	.333	-3.256008	0	
417	N417	0.130789	.333	-3.431631	0	
418	N418	0.261579	.333	-3.425656	0	
419	N419	0.392368	.333	-3.419682	0	
420	N420	0.523158	.333	-3.413707	0	
421	N421	0.127895	.333	-3.580368	0	
422	N422	0.255789	.333	-3.577381	0	
423	N423	0.383684	.333	-3.574394	0	
424	N424	0.511579	.333	-3.571406	0	
425	N425	0.125	.333	-3.729106	0	
426	N426	0.25	.333	-3.729106	0	
427	N427	0.375	.333	-3.729106	0	
428	N428	0.678744	.333	-3.062825	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
429	N429	0.811173	.333	-3.027341	0	
430	N430	0.943602	.333	-2.991856	0	
431	N431	0.665308	.333	-3.229395	0	
432	N432	0.79588	.333	-3.202782	0	
433	N433	0.926452	.333	-3.176169	0	
434	N434	1.057024	.333	-3.149556	0	
435	N435	0.651872	.333	-3.395965	0	
436	N436	0.780587	.333	-3.378223	0	
437	N437	0.909301	.333	-3.360481	0	
438	N438	1.038016	.333	-3.342739	0	
439	N439	0.638436	.333	-3.562535	0	
440	N440	0.765293	.333	-3.553664	0	
441	N441	0.892151	.333	-3.544793	0	
442	N442	1.019008	.333	-3.535922	0	
443	N443	0.625	.333	-3.729106	0	
444	N444	0.75	.333	-3.729106	0	
445	N445	0.875	.333	-3.729106	0	
446	N446	1.324622	.333	-3.535922	0	
447	N447	1.241758	.333	-3.342739	0	
448	N448	1.158895	.333	-3.149556	0	
449	N449	1.520048	.333	-3.611813	0	
450	N450	1.440108	.333	-3.433468	0	
451	N451	1.360168	.333	-3.255122	0	
452	N452	1.280227	.333	-3.076777	0	
453	N453	1.200287	.333	-2.898431	0	
454	N454	1.632612	.333	-3.494521	0	
455	N455	1.555594	.333	-3.331013	0	
456	N456	1.478577	.333	-3.167505	0	
457	N457	1.40156	.333	-3.003998	0	
458	N458	1.324542	.333	-2.84049	0	
459	N459	1.745175	.333	-3.377229	0	
460	N460	1.671081	.333	-3.228559	0	
461	N461	1.596986	.333	-3.079889	0	
462	N462	1.522892	.333	-2.931219	0	
463	N463	1.448797	.333	-2.782549	0	
464	N464	1.786567	.333	-3.126104	0	
465	N465	1.715396	.333	-2.992272	0	
466	N466	1.644224	.333	-2.85844	0	
467	N467	1.970302	.333	-3.142644	0	
468	N468	1.899066	.333	-3.018475	0	
469	N469	1.827831	.333	-2.894307	0	
470	N470	1.756595	.333	-2.770138	0	
471	N471	1.685359	.333	-2.64597	0	
472	N472	2.082866	.333	-3.025352	0	
473	N473	2.011566	.333	-2.910847	0	
474	N474	1.940265	.333	-2.796342	0	
475	N475	1.868965	.333	-2.681837	0	
476	N476	1.797665	.333	-2.567332	0	
477	N477	2.195429	.333	-2.908059	0	
478	N478	2.124065	.333	-2.803218	0	
479	N479	2.0527	.333	-2.698377	0	
480	N480	1.981336	.333	-2.593536	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
481	N481	1.909971	.333	-2.488694	0	
482	N482	2.236564	.333	-2.695589	0	
483	N483	2.165135	.333	-2.600412	0	
484	N484	2.093706	.333	-2.505234	0	
485	N485	2.420556	.333	-2.673475	0	
486	N486	2.345223	.333	-2.583384	0	
487	N487	2.269889	.333	-2.493293	0	
488	N488	2.194556	.333	-2.403203	0	
489	N489	2.119222	.333	-2.313112	0	
490	N490	2.53312	.333	-2.556182	0	
491	N491	2.453881	.333	-2.471179	0	
492	N492	2.374643	.333	-2.386175	0	
493	N493	2.295405	.333	-2.301171	0	
494	N494	2.216167	.333	-2.216167	0	
495	N495	2.645683	.333	-2.43889	0	
496	N496	2.56254	.333	-2.358973	0	
497	N497	2.479397	.333	-2.279056	0	
498	N498	2.396255	.333	-2.199139	0	
499	N499	2.313112	.333	-2.119222	0	
500	N500	2.671199	.333	-2.246768	0	
501	N501	2.584152	.333	-2.171938	0	
502	N502	2.497104	.333	-2.097108	0	
503	N503	2.488694	.333	-1.909971	0	
504	N504	2.567332	.333	-1.797665	0	
505	N505	2.64597	.333	-1.685359	0	
506	N506	2.584223	.333	-1.983555	0	
507	N507	2.671342	.333	-1.870002	0	
508	N508	2.758461	.333	-1.756449	0	
509	N509	2.871622	.333	-1.597792	0	
510	N510	2.679752	.333	-2.057138	0	
511	N511	2.775353	.333	-1.942339	0	
512	N512	2.870953	.333	-1.82754	0	
513	N513	2.992595	.333	-1.667635	0	
514	N514	2.775281	.333	-2.130722	0	
515	N515	2.879363	.333	-2.014676	0	
516	N516	2.983445	.333	-1.89863	0	
517	N517	3.113569	.333	-1.737479	0	
518	N518	2.87081	.333	-2.204305	0	
519	N519	2.983373	.333	-2.087013	0	
520	N520	3.095937	.333	-1.969721	0	
521	N521	2.991856	.333	-0.943602	0	
522	N522	3.027341	.333	-0.811173	0	
523	N523	3.062825	.333	-0.678744	0	
524	N524	3.064701	.333	-1.114002	0	
525	N525	3.102638	.333	-0.975648	0	
526	N526	3.140575	.333	-0.837294	0	
527	N527	3.178512	.333	-0.69894	0	
528	N528	3.21645	.333	-0.560586	0	
529	N529	3.173029	.333	-1.151972	0	
530	N530	3.213419	.333	-1.007693	0	
531	N531	3.25381	.333	-0.863414	0	
532	N532	3.2942	.333	-0.719135	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
533	N533	3.33459	.333	-0.574856	0	
534	N534	3.281357	.333	-1.189942	0	
535	N535	3.324201	.333	-1.039738	0	
536	N536	3.367044	.333	-0.889534	0	
537	N537	3.409888	.333	-0.73933	0	
538	N538	3.452731	.333	-0.589126	0	
539	N539	3.434982	.333	-1.071784	0	
540	N540	3.480279	.333	-0.915655	0	
541	N541	3.525575	.333	-0.759526	0	
542	N542	3.134156	.333	-0.136579	0	
543	N543	3.122207	.333	-0.273158	0	
544	N544	3.110258	.333	-0.409737	0	
545	N545	3.297593	.333	0.00528	0	
546	N546	3.277307	.333	-0.136187	0	
547	N547	3.257022	.333	-0.277653	0	
548	N548	3.236736	.333	-0.419119	0	
549	N549	3.449081	.333	0.01056	0	
550	N550	3.420459	.333	-0.135794	0	
551	N551	3.391836	.333	-0.282148	0	
552	N552	3.363213	.333	-0.428502	0	
553	N553	3.600569	.333	0.015839	0	
554	N554	3.56361	.333	-0.135402	0	
555	N555	3.52665	.333	-0.286644	0	
556	N556	3.48969	.333	-0.437885	0	
557	N557	3.706761	.333	-0.13501	0	
558	N558	3.661464	.333	-0.291139	0	
559	N559	3.616168	.333	-0.447268	0	
560	N560	3.134156	.333	0.136579	0	
561	N561	3.122207	.333	0.273158	0	
562	N562	3.110258	.333	0.409737	0	
563	N563	3.34289	.333	0.161409	0	
564	N564	3.321194	.333	0.285899	0	
565	N565	3.299498	.333	0.410389	0	
566	N566	3.277803	.333	0.534879	0	
567	N567	3.256107	.333	0.659368	0	
568	N568	3.539674	.333	0.322818	0	
569	N569	3.508232	.333	0.435218	0	
570	N570	3.476789	.333	0.547619	0	
571	N571	3.445347	.333	0.66002	0	
572	N572	3.413905	.333	0.772421	0	
573	N573	3.736458	.333	0.484226	0	
574	N574	3.695269	.333	0.584538	0	
575	N575	3.65408	.333	0.68485	0	
576	N576	3.612891	.333	0.785162	0	
577	N577	3.571702	.333	0.885474	0	
578	N578	3.882307	.333	0.733858	0	
579	N579	3.831371	.333	0.822081	0	
580	N580	3.780436	.333	0.910304	0	
581	N581	3.062825	.333	0.678744	0	
582	N582	3.027341	.333	0.811173	0	
583	N583	2.991856	.333	0.943602	0	
584	N584	3.213869	.333	0.785754	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
585	N585	3.171631	.333	0.912139	0	
586	N586	3.129392	.333	1.038524	0	
587	N587	3.087154	.333	1.164909	0	
588	N588	3.364913	.333	0.892763	0	
589	N589	3.31592	.333	1.013104	0	
590	N590	3.266928	.333	1.133445	0	
591	N591	3.217936	.333	1.253786	0	
592	N592	3.515956	.333	0.999772	0	
593	N593	3.46021	.333	1.114069	0	
594	N594	3.404464	.333	1.228366	0	
595	N595	3.348718	.333	1.342663	0	
596	N596	3.667	.333	1.106781	0	
597	N597	3.6045	.333	1.215034	0	
598	N598	3.542	.333	1.323287	0	
599	N599	2.898431	.333	1.200287	0	
600	N600	2.84049	.333	1.324542	0	
601	N601	2.782549	.333	1.448797	0	
602	N602	3.028073	.333	1.285163	0	
603	N603	2.968992	.333	1.405418	0	
604	N604	2.909911	.333	1.525673	0	
605	N605	3.157716	.333	1.37004	0	
606	N606	3.097495	.333	1.486294	0	
607	N607	3.037274	.333	1.602549	0	
608	N608	3.287358	.333	1.454917	0	
609	N609	3.225998	.333	1.56717	0	
610	N610	3.164637	.333	1.679424	0	
611	N611	3.417	.333	1.539793	0	
612	N612	3.3545	.333	1.648046	0	
613	N613	3.292	.333	1.7563	0	
614	N614	2.927402	.333	-1.138159	0	
615	N615	2.898431	.333	-1.200287	0	
616	N616	2.86946	.333	-1.262414	0	
617	N617	3.037339	.333	-1.180016	0	
618	N618	3.009977	.333	-1.24603	0	
619	N619	2.982616	.333	-1.312044	0	
620	N620	2.955254	.333	-1.378058	0	
621	N621	3.147276	.333	-1.221872	0	
622	N622	3.121524	.333	-1.291773	0	
623	N623	3.095771	.333	-1.361673	0	
624	N624	3.070019	.333	-1.431573	0	
625	N625	3.257214	.333	-1.263729	0	
626	N626	3.23307	.333	-1.337516	0	
627	N627	3.208927	.333	-1.411302	0	
628	N628	3.184783	.333	-1.485089	0	
629	N629	3.367151	.333	-1.305586	0	
630	N630	3.344617	.333	-1.383258	0	
631	N631	3.322082	.333	-1.460931	0	
632	N632	2.811519	.333	-1.38667	0	
633	N633	2.782549	.333	-1.448797	0	
634	N634	2.927836	.333	-1.444267	0	
635	N635	2.900417	.333	-1.510477	0	
636	N636	3.044152	.333	-1.501865	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
637	N637	3.018286	.333	-1.572157	0	
638	N638	3.160469	.333	-1.559463	0	
639	N639	3.136155	.333	-1.633837	0	
640	N640	3.276786	.333	-1.61706	0	
641	N641	3.254024	.333	-1.695516	0	
642	N642	1.203743	.333	-3.729106	0	
643	N643	1.161172	.333	-3.471528	0	
644	N644	3.84265	.333	0.333377	0	
645	N645	3.610468	.333	0.222251	0	
646	N646	3.575071	.333	0.272534	0	
647	N647	3.731509	.333	0.38102	0	
648	N648	3.887946	.333	0.489506	0	
649	N649	3.726559	.333	0.277814	0	
650	N650	3.436332	.333	0.138907	0	
651	N651	3.529775	.333	0.116405	0	
652	N652	3.663564	.333	0.146827	0	
653	N653	3.797353	.333	0.177248	0	
654	N654	1.305614	.333	-3.729106	0	
655	N655	1.253539	.333	-3.568119	0	
656	N656	1.182457	.333	-3.600317	0	
657	N657	1.201465	.333	-3.407133	0	
658	N658	1.101871	.333	-3.729106	0	
659	N659	1.100733	.333	-3.568119	0	
660	N660	1.099594	.333	-3.407133	0	
661	N661	1.129244	.333	-3.278344	0	
662	N662	3.182458	.333	-1.897535	0	
663	N663	2.698565	.333	-1.618159	0	
664	N664	2.819539	.333	-1.688003	0	
665	N665	2.940512	.333	-1.757847	0	
666	N666	3.061485	.333	-1.827691	0	
667	N667	3.234542	0.666333	-1.807323	0	
668	N668	2.871622	0.666333	-1.597792	0	
669	N669	2.992595	0.666333	-1.667635	0	
670	N670	3.113569	0.666333	-1.737479	0	
671	N671	3.182458	0.666333	-1.897535	0	
672	N672	2.819539	0.666333	-1.688003	0	
673	N673	2.940512	0.666333	-1.757847	0	
674	N674	3.061485	0.666333	-1.827691	0	
675	N675	3.234542	-.000333	-1.807323	0	
676	N676	2.750649	-.000333	-1.527948	0	
677	N677	2.871622	-.000333	-1.597792	0	
678	N678	2.992595	-.000333	-1.667635	0	
679	N679	3.113569	-.000333	-1.737479	0	
680	N680	3.182458	-.000333	-1.897535	0	
681	N681	2.698565	-.000333	-1.618159	0	
682	N682	2.819539	-.000333	-1.688003	0	
683	N683	2.940512	-.000333	-1.757847	0	
684	N684	3.061485	-.000333	-1.827691	0	
685	N685	3.234542	0.166334	-1.807323	0	
686	N686	2.750649	0.166334	-1.527948	0	
687	N687	2.871622	0.166334	-1.597792	0	
688	N688	2.992595	0.166334	-1.667635	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
689	N689	3.113569	0.166334	-1.737479	0	
690	N690	3.182458	0.166334	-1.897535	0	
691	N691	2.698565	0.166334	-1.618159	0	
692	N692	2.819539	0.166334	-1.688003	0	
693	N693	2.940512	0.166334	-1.757847	0	
694	N694	3.061485	0.166334	-1.827691	0	
695	N695	3.234542	0.499667	-1.807323	0	
696	N696	2.750649	0.499667	-1.527948	0	
697	N697	2.871622	0.499667	-1.597792	0	
698	N698	2.992595	0.499667	-1.667635	0	
699	N699	3.113569	0.499667	-1.737479	0	
700	N700	3.182458	0.499667	-1.897535	0	
701	N701	2.698565	0.499667	-1.618159	0	
702	N702	2.819539	0.499667	-1.688003	0	
703	N703	2.940512	0.499667	-1.757847	0	
704	N704	3.061485	0.499667	-1.827691	0	
705	N705	-3.182459	.333	-1.897534	0	
706	N706	-1.407485	.333	-3.729106	0	
707	N707	-3.933243	.333	0.645635	0	
708	N708	-0.546315	.333	-3.098309	0	
709	N709	-1.076031	.333	-2.956372	0	
710	N710	-1.573053	.333	-2.724607	0	
711	N711	-2.022278	.333	-2.410057	0	
712	N712	-2.410057	.333	-2.022278	0	
713	N713	-2.698566	.333	-1.618158	0	
714	N714	-2.956372	.333	-1.076031	0	
715	N715	-3.098309	.333	-0.546315	0	
716	N716	-3.146106	.333	1e-14	0	
717	N717	-3.098309	.333	0.546315	0	
718	N718	-2.956372	.333	1.076031	0	
719	N719	-0.5	.333	-3.729106	0	
720	N720	-1	.333	-3.729106	0	
721	N721	-3.4795	.333	1.43154	0	
722	N722	-3.7295	.333	0.998527	0	
723	N723	-1.857739	.333	-3.259936	0	
724	N724	-2.307993	.333	-2.790767	0	
725	N725	-2.758246	.333	-2.321598	0	
726	N726	-3.389686	.333	-1.227913	0	
727	N727	-3.570871	.333	-0.603397	0	
728	N728	-3.752057	.333	0.021119	0	
729	N729	-2.567332	.333	-1.797665	0	
730	N730	-2.982244	.333	-2.08819	0	
731	N731	-2.782549	.333	1.448797	0	
732	N732	-2.84049	.333	1.324542	0	
733	N733	-2.898431	.333	1.200287	0	
734	N734	-2.909911	.333	1.525673	0	
735	N735	-2.968992	.333	1.405418	0	
736	N736	-3.028073	.333	1.285163	0	
737	N737	-3.087154	.333	1.164909	0	
738	N738	-3.037274	.333	1.602549	0	
739	N739	-3.097495	.333	1.486294	0	
740	N740	-3.157716	.333	1.37004	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
741	N741	-3.217936	.333	1.253786	0	
742	N742	-3.164637	.333	1.679424	0	
743	N743	-3.225998	.333	1.56717	0	
744	N744	-3.287358	.333	1.454917	0	
745	N745	-3.348718	.333	1.342663	0	
746	N746	-3.292	.333	1.7563	0	
747	N747	-3.3545	.333	1.648046	0	
748	N748	-3.417	.333	1.539793	0	
749	N749	-2.991856	.333	0.943602	0	
750	N750	-3.027341	.333	0.811173	0	
751	N751	-3.062825	.333	0.678744	0	
752	N752	-3.129392	.333	1.038524	0	
753	N753	-3.171631	.333	0.912139	0	
754	N754	-3.213869	.333	0.785754	0	
755	N755	-3.256107	.333	0.659368	0	
756	N756	-3.266928	.333	1.133445	0	
757	N757	-3.31592	.333	1.013104	0	
758	N758	-3.364913	.333	0.892763	0	
759	N759	-3.413905	.333	0.772421	0	
760	N760	-3.404464	.333	1.228366	0	
761	N761	-3.46021	.333	1.114069	0	
762	N762	-3.515956	.333	0.999772	0	
763	N763	-3.571702	.333	0.885474	0	
764	N764	-3.542	.333	1.323287	0	
765	N765	-3.6045	.333	1.215034	0	
766	N766	-3.667	.333	1.106781	0	
767	N767	-3.724509	.333	0.620805	0	
768	N768	-3.515776	.333	0.595975	0	
769	N769	-3.307043	.333	0.571145	0	
770	N770	-3.887946	.333	0.489506	0	
771	N771	-3.693524	.333	0.469564	0	
772	N772	-3.499102	.333	0.449621	0	
773	N773	-3.30468	.333	0.429679	0	
774	N774	-3.110258	.333	0.409737	0	
775	N775	-3.84265	.333	0.333377	0	
776	N776	-3.662539	.333	0.318322	0	
777	N777	-3.482429	.333	0.303267	0	
778	N778	-3.302318	.333	0.288213	0	
779	N779	-3.122207	.333	0.273158	0	
780	N780	-3.797353	.333	0.177248	0	
781	N781	-3.631554	.333	0.167081	0	
782	N782	-3.465755	.333	0.156913	0	
783	N783	-3.299956	.333	0.146746	0	
784	N784	-3.134156	.333	0.136579	0	
785	N785	-3.600569	.333	0.015839	0	
786	N786	-3.449081	.333	0.01056	0	
787	N787	-3.297593	.333	0.00528	0	
788	N788	-3.706761	.333	-0.13501	0	
789	N789	-3.56361	.333	-0.135402	0	
790	N790	-3.420459	.333	-0.135794	0	
791	N791	-3.277307	.333	-0.136187	0	
792	N792	-3.134156	.333	-0.136579	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
793	N793	-3.661464	.333	-0.291139	0	
794	N794	-3.52665	.333	-0.286644	0	
795	N795	-3.391836	.333	-0.282148	0	
796	N796	-3.257022	.333	-0.277653	0	
797	N797	-3.122207	.333	-0.273158	0	
798	N798	-3.616168	.333	-0.447268	0	
799	N799	-3.48969	.333	-0.437885	0	
800	N800	-3.363213	.333	-0.428502	0	
801	N801	-3.236736	.333	-0.419119	0	
802	N802	-3.110258	.333	-0.409737	0	
803	N803	-3.452731	.333	-0.589126	0	
804	N804	-3.33459	.333	-0.574856	0	
805	N805	-3.21645	.333	-0.560586	0	
806	N806	-3.525575	.333	-0.759526	0	
807	N807	-3.409888	.333	-0.73933	0	
808	N808	-3.2942	.333	-0.719135	0	
809	N809	-3.178512	.333	-0.69894	0	
810	N810	-3.062825	.333	-0.678744	0	
811	N811	-3.480279	.333	-0.915655	0	
812	N812	-3.367044	.333	-0.889534	0	
813	N813	-3.25381	.333	-0.863414	0	
814	N814	-3.140575	.333	-0.837294	0	
815	N815	-3.027341	.333	-0.811173	0	
816	N816	-3.434982	.333	-1.071784	0	
817	N817	-3.324201	.333	-1.039738	0	
818	N818	-3.213419	.333	-1.007693	0	
819	N819	-3.102638	.333	-0.975648	0	
820	N820	-2.991856	.333	-0.943602	0	
821	N821	-3.281357	.333	-1.189942	0	
822	N822	-3.173029	.333	-1.151972	0	
823	N823	-3.064701	.333	-1.114002	0	
824	N824	-2.898431	.333	-1.200287	0	
825	N825	-2.84049	.333	-1.324542	0	
826	N826	-2.782549	.333	-1.448797	0	
827	N827	-3.009921	.333	-1.246225	0	
828	N828	-2.955141	.333	-1.378449	0	
829	N829	-2.900361	.333	-1.510673	0	
830	N830	-2.819539	.333	-1.688002	0	
831	N831	-3.12141	.333	-1.292164	0	
832	N832	-3.069791	.333	-1.432356	0	
833	N833	-3.018173	.333	-1.572548	0	
834	N834	-2.940512	.333	-1.757846	0	
835	N835	-3.2329	.333	-1.338103	0	
836	N836	-3.184442	.333	-1.486263	0	
837	N837	-3.135985	.333	-1.634424	0	
838	N838	-3.061486	.333	-1.82769	0	
839	N839	-3.344389	.333	-1.384042	0	
840	N840	-3.299093	.333	-1.540171	0	
841	N841	-3.253797	.333	-1.6963	0	
842	N842	-2.313112	.333	-2.119222	0	
843	N843	-2.216167	.333	-2.216167	0	
844	N844	-2.119222	.333	-2.313112	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
845	N845	-2.497104	.333	-2.097108	0	
846	N846	-2.396255	.333	-2.199139	0	
847	N847	-2.295405	.333	-2.301171	0	
848	N848	-2.194556	.333	-2.403203	0	
849	N849	-2.093706	.333	-2.505234	0	
850	N850	-2.584152	.333	-2.171938	0	
851	N851	-2.479397	.333	-2.279056	0	
852	N852	-2.374643	.333	-2.386175	0	
853	N853	-2.269889	.333	-2.493293	0	
854	N854	-2.165135	.333	-2.600412	0	
855	N855	-2.671199	.333	-2.246768	0	
856	N856	-2.56254	.333	-2.358973	0	
857	N857	-2.453881	.333	-2.471179	0	
858	N858	-2.345223	.333	-2.583384	0	
859	N859	-2.236564	.333	-2.695589	0	
860	N860	-2.645683	.333	-2.43889	0	
861	N861	-2.53312	.333	-2.556182	0	
862	N862	-2.420556	.333	-2.673475	0	
863	N863	-1.685359	.333	-2.64597	0	
864	N864	-1.797665	.333	-2.567332	0	
865	N865	-1.909971	.333	-2.488694	0	
866	N866	-1.644224	.333	-2.85844	0	
867	N867	-1.756595	.333	-2.770138	0	
868	N868	-1.868965	.333	-2.681837	0	
869	N869	-1.981336	.333	-2.593536	0	
870	N870	-1.715396	.333	-2.992272	0	
871	N871	-1.827831	.333	-2.894307	0	
872	N872	-1.940265	.333	-2.796342	0	
873	N873	-2.0527	.333	-2.698377	0	
874	N874	-1.786567	.333	-3.126104	0	
875	N875	-1.899066	.333	-3.018475	0	
876	N876	-2.011566	.333	-2.910847	0	
877	N877	-2.124065	.333	-2.803218	0	
878	N878	-1.970302	.333	-3.142644	0	
879	N879	-2.082866	.333	-3.025352	0	
880	N880	-2.195429	.333	-2.908059	0	
881	N881	-1.448797	.333	-2.782549	0	
882	N882	-1.324542	.333	-2.84049	0	
883	N883	-1.200287	.333	-2.898431	0	
884	N884	-1.531661	.333	-2.975732	0	
885	N885	-1.413002	.333	-3.019188	0	
886	N886	-1.294342	.333	-3.062644	0	
887	N887	-1.175683	.333	-3.1061	0	
888	N888	-1.057024	.333	-3.149556	0	
889	N889	-1.490269	.333	-3.226856	0	
890	N890	-1.377206	.333	-3.255827	0	
891	N891	-1.264142	.333	-3.284798	0	
892	N892	-1.151079	.333	-3.313768	0	
893	N893	-1.038016	.333	-3.342739	0	
894	N894	-1.448877	.333	-3.477981	0	
895	N895	-1.34141	.333	-3.492466	0	
896	N896	-1.233942	.333	-3.506952	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
897	N897	-1.126475	.333	-3.521437	0	
898	N898	-1.019008	.333	-3.535922	0	
899	N899	-1.305614	.333	-3.729106	0	
900	N900	-1.203743	.333	-3.729106	0	
901	N901	-1.101871	.333	-3.729106	0	
902	N902	-0.943602	.333	-2.991856	0	
903	N903	-0.811173	.333	-3.027341	0	
904	N904	-0.678744	.333	-3.062825	0	
905	N905	-0.926452	.333	-3.176169	0	
906	N906	-0.79588	.333	-3.202782	0	
907	N907	-0.665308	.333	-3.229395	0	
908	N908	-0.534737	.333	-3.256008	0	
909	N909	-0.909301	.333	-3.360481	0	
910	N910	-0.780587	.333	-3.378223	0	
911	N911	-0.651872	.333	-3.395965	0	
912	N912	-0.523158	.333	-3.413707	0	
913	N913	-0.892151	.333	-3.544793	0	
914	N914	-0.765293	.333	-3.553664	0	
915	N915	-0.638436	.333	-3.562535	0	
916	N916	-0.511579	.333	-3.571406	0	
917	N917	-0.875	.333	-3.729106	0	
918	N918	-0.75	.333	-3.729106	0	
919	N919	-0.625	.333	-3.729106	0	
920	N920	-0.409737	.333	-3.110258	0	
921	N921	-0.273158	.333	-3.122207	0	
922	N922	-0.136579	.333	-3.134156	0	
923	N923	-0.401052	.333	-3.26497	0	
924	N924	-0.267368	.333	-3.273932	0	
925	N925	-0.133684	.333	-3.282894	0	
926	N926	-0.392368	.333	-3.419682	0	
927	N927	-0.261579	.333	-3.425656	0	
928	N928	-0.130789	.333	-3.431631	0	
929	N929	-0.383684	.333	-3.574394	0	
930	N930	-0.255789	.333	-3.577381	0	
931	N931	-0.127895	.333	-3.580368	0	
932	N932	-0.375	.333	-3.729106	0	
933	N933	-0.25	.333	-3.729106	0	
934	N934	-0.125	.333	-3.729106	0	
935	N935	-2.449376	.333	-1.966125	0	
936	N936	-2.488694	.333	-1.909971	0	
937	N937	-2.528013	.333	-1.853818	0	
938	N938	-2.540593	.333	-2.040405	0	
939	N939	-2.584082	.333	-1.983702	0	
940	N940	-2.627571	.333	-1.926999	0	
941	N941	-2.67106	.333	-1.870296	0	
942	N942	-2.631811	.333	-2.114685	0	
943	N943	-2.67947	.333	-2.057433	0	
944	N944	-2.727129	.333	-2.00018	0	
945	N945	-2.774788	.333	-1.942928	0	
946	N946	-2.723028	.333	-2.188965	0	
947	N947	-2.774858	.333	-2.131163	0	
948	N948	-2.826687	.333	-2.073361	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
949	N949	-2.878516	.333	-2.015559	0	
950	N950	-2.814246	.333	-2.263246	0	
951	N951	-2.870245	.333	-2.204894	0	
952	N952	-2.926245	.333	-2.146542	0	
953	N953	-2.606651	.333	-1.741512	0	
954	N954	-2.64597	.333	-1.685359	0	
955	N955	-2.71469	.333	-1.813446	0	
956	N956	-2.75832	.333	-1.756597	0	
957	N957	-2.822729	.333	-1.885381	0	
958	N958	-2.870671	.333	-1.827834	0	
959	N959	-2.930769	.333	-1.957315	0	
960	N960	-2.983022	.333	-1.899072	0	
961	N961	-3.038808	.333	-2.029249	0	
962	N962	-3.095372	.333	-1.970309	0	
963	N963	-3.831371	.333	0.822081	0	
964	N964	-3.587017	.333	0.730159	0	
965	N965	-1.632612	.333	-3.494521	0	
966	N966	-1.612759	.333	-3.237883	0	
967	N967	-1.551514	.333	-3.23237	0	
968	N968	-1.535781	.333	-3.422091	0	
969	N969	-1.520048	.333	-3.611813	0	
970	N970	-1.622685	.333	-3.366202	0	
971	N971	-1.597869	.333	-3.045405	0	
972	N972	-1.664077	.333	-3.115077	0	
973	N973	-1.704626	.333	-3.246153	0	
974	N974	-1.745175	.333	-3.377229	0	
975	N975	-3.882307	.333	0.733858	0	
976	N976	-3.716852	.333	0.698463	0	
977	N977	-3.709194	.333	0.77612	0	
978	N978	-3.551397	.333	0.663067	0	
979	N979	-3.780436	.333	0.910304	0	
980	N980	-3.640448	.333	0.830797	0	
981	N981	-3.500461	.333	0.75129	0	
982	N982	-3.403752	.333	0.661218	0	
983	N983	-3.234542	.333	-1.807322	0	
984	N984	-2.750649	.333	-1.527947	0	
985	N985	-2.871623	.333	-1.597791	0	
986	N986	-2.992596	.333	-1.667635	0	
987	N987	-3.113569	.333	-1.737479	0	
988	N988	-3.182459	0.666333	-1.897534	0	
989	N989	-2.819539	0.666333	-1.688002	0	
990	N990	-2.940512	0.666333	-1.757846	0	
991	N991	-3.061486	0.666333	-1.82769	0	
992	N992	-3.234542	0.666333	-1.807322	0	
993	N993	-2.871623	0.666333	-1.597791	0	
994	N994	-2.992596	0.666333	-1.667635	0	
995	N995	-3.113569	0.666333	-1.737479	0	
996	N996	-3.182459	-.000333	-1.897534	0	
997	N997	-2.698566	-.000333	-1.618158	0	
998	N998	-2.819539	-.000333	-1.688002	0	
999	N999	-2.940512	-.000333	-1.757846	0	
1000	N1000	-3.061486	-.000333	-1.82769	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1001	N1001	-3.234542	-.000333	-1.807322	0	
1002	N1002	-2.750649	-.000333	-1.527947	0	
1003	N1003	-2.871623	-.000333	-1.597791	0	
1004	N1004	-2.992596	-.000333	-1.667635	0	
1005	N1005	-3.113569	-.000333	-1.737479	0	
1006	N1006	-3.182459	0.166334	-1.897534	0	
1007	N1007	-2.698566	0.166334	-1.618158	0	
1008	N1008	-2.819539	0.166334	-1.688002	0	
1009	N1009	-2.940512	0.166334	-1.757846	0	
1010	N1010	-3.061486	0.166334	-1.82769	0	
1011	N1011	-3.234542	0.166334	-1.807322	0	
1012	N1012	-2.750649	0.166334	-1.527947	0	
1013	N1013	-2.871623	0.166334	-1.597791	0	
1014	N1014	-2.992596	0.166334	-1.667635	0	
1015	N1015	-3.113569	0.166334	-1.737479	0	
1016	N1016	-3.182459	0.499667	-1.897534	0	
1017	N1017	-2.698566	0.499667	-1.618158	0	
1018	N1018	-2.819539	0.499667	-1.688002	0	
1019	N1019	-2.940512	0.499667	-1.757846	0	
1020	N1020	-3.061486	0.499667	-1.82769	0	
1021	N1021	-3.234542	0.499667	-1.807322	0	
1022	N1022	-2.750649	0.499667	-1.527947	0	
1023	N1023	-2.871623	0.499667	-1.597791	0	
1024	N1024	-2.992596	0.499667	-1.667635	0	
1025	N1025	-3.113569	0.499667	-1.737479	0	
1026	N1026	-2.525758	0.541333	3.083471	0	
1027	N1027	2.525758	0.541333	3.083471	0	
1028	N1028	-1.894318	0.541333	3.238817	0	
1029	N1029	-1.262879	0.541333	3.394164	0	
1030	N1030	-0.631439	0.541333	3.54951	0	
1031	N1031	0.631439	0.541333	3.54951	0	
1032	N1032	1.262879	0.541333	3.394164	0	
1033	N1033	1.894318	0.541333	3.238817	0	
1034	N1034	-0.317303	0.541333	3.626794	0	
1035	N1035	2.367898	0.541333	3.122307	0	
1036	N1036	2.210038	0.541333	3.161144	0	
1037	N1037	2.052178	0.541333	3.199981	0	
1038	N1038	1.736458	0.541333	3.277654	0	
1039	N1039	1.578599	0.541333	3.31649	0	
1040	N1040	1.420739	0.541333	3.355327	0	
1041	N1041	1.105019	0.541333	3.433	0	
1042	N1042	0.947159	0.541333	3.471837	0	
1043	N1043	0.789299	0.541333	3.510674	0	
1044	N1044	0.47358	0.541333	3.588347	0	
1045	N1045	0.31572	0.541333	3.627184	0	
1046	N1046	0.15786	0.541333	3.66602	0	
1047	N1047	-0.789299	0.541333	3.510674	0	
1048	N1048	-0.947159	0.541333	3.471837	0	
1049	N1049	-1.105019	0.541333	3.433	0	
1050	N1050	-1.736458	0.541333	3.277654	0	
1051	N1051	-1.578599	0.541333	3.31649	0	
1052	N1052	-1.420739	0.541333	3.355327	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1053	N1053	-0.552905	0.541333	3.568831	0	
1054	N1054	-0.474371	0.541333	3.588152	0	
1055	N1055	-0.395837	0.541333	3.607473	0	
1056	N1056	-0.237978	0.541333	3.64631	0	
1057	N1057	-0.158652	0.541333	3.665826	0	
1058	N1058	-2.210038	0.541333	3.161144	0	
1059	N1059	-2.367898	0.541333	3.122307	0	
1060	N1060	-2.052178	0.541333	3.199981	0	
1061	N1061	3.933243	0.541333	0.645635	0	
1062	N1062	1.407485	0.541333	-3.729106	0	
1063	N1063	3.752057	0.541333	0.021119	0	
1064	N1064	3.570871	0.541333	-0.603397	0	
1065	N1065	3.389686	0.541333	-1.227913	0	
1066	N1066	2.758246	0.541333	-2.321598	0	
1067	N1067	2.307993	0.541333	-2.790767	0	
1068	N1068	1.857739	0.541333	-3.259936	0	
1069	N1069	3.299547	0.541333	-1.538604	0	
1070	N1070	1.520048	0.541333	-3.611813	0	
1071	N1071	1.632612	0.541333	-3.494521	0	
1072	N1072	1.745175	0.541333	-3.377229	0	
1073	N1073	1.970302	0.541333	-3.142644	0	
1074	N1074	2.082866	0.541333	-3.025352	0	
1075	N1075	2.195429	0.541333	-2.908059	0	
1076	N1076	2.420556	0.541333	-2.673475	0	
1077	N1077	2.53312	0.541333	-2.556182	0	
1078	N1078	2.645683	0.541333	-2.43889	0	
1079	N1079	2.87081	0.541333	-2.204305	0	
1080	N1080	2.983373	0.541333	-2.087013	0	
1081	N1081	3.095937	0.541333	-1.969721	0	
1082	N1082	3.434982	0.541333	-1.071784	0	
1083	N1083	3.480279	0.541333	-0.915655	0	
1084	N1084	3.525575	0.541333	-0.759526	0	
1085	N1085	3.706761	0.541333	-0.13501	0	
1086	N1086	3.661464	0.541333	-0.291139	0	
1087	N1087	3.616168	0.541333	-0.447268	0	
1088	N1088	3.367151	0.541333	-1.305586	0	
1089	N1089	3.344617	0.541333	-1.383258	0	
1090	N1090	3.322082	0.541333	-1.460931	0	
1091	N1091	3.276786	0.541333	-1.61706	0	
1092	N1092	3.254024	0.541333	-1.695516	0	
1093	N1093	3.84265	0.541333	0.333377	0	
1094	N1094	3.887946	0.541333	0.489506	0	
1095	N1095	3.797353	0.541333	0.177248	0	
1096	N1096	-1.407485	0.541333	-3.729106	0	
1097	N1097	-3.933243	0.541333	0.645635	0	
1098	N1098	-1.857739	0.541333	-3.259936	0	
1099	N1099	-2.307993	0.541333	-2.790767	0	
1100	N1100	-2.758246	0.541333	-2.321598	0	
1101	N1101	-3.389686	0.541333	-1.227913	0	
1102	N1102	-3.570871	0.541333	-0.603397	0	
1103	N1103	-3.752057	0.541333	0.021119	0	
1104	N1104	-2.982244	0.541333	-2.08819	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1105	N1105	-3.887946	0.541333	0.489506	0	
1106	N1106	-3.84265	0.541333	0.333377	0	
1107	N1107	-3.797353	0.541333	0.177248	0	
1108	N1108	-3.706761	0.541333	-0.13501	0	
1109	N1109	-3.661464	0.541333	-0.291139	0	
1110	N1110	-3.616168	0.541333	-0.447268	0	
1111	N1111	-3.525575	0.541333	-0.759526	0	
1112	N1112	-3.480279	0.541333	-0.915655	0	
1113	N1113	-3.434982	0.541333	-1.071784	0	
1114	N1114	-3.344389	0.541333	-1.384042	0	
1115	N1115	-3.299093	0.541333	-1.540171	0	
1116	N1116	-3.253797	0.541333	-1.6963	0	
1117	N1117	-2.645683	0.541333	-2.43889	0	
1118	N1118	-2.53312	0.541333	-2.556182	0	
1119	N1119	-2.420556	0.541333	-2.673475	0	
1120	N1120	-1.970302	0.541333	-3.142644	0	
1121	N1121	-2.082866	0.541333	-3.025352	0	
1122	N1122	-2.195429	0.541333	-2.908059	0	
1123	N1123	-2.814246	0.541333	-2.263246	0	
1124	N1124	-2.870245	0.541333	-2.204894	0	
1125	N1125	-2.926245	0.541333	-2.146542	0	
1126	N1126	-3.038808	0.541333	-2.029249	0	
1127	N1127	-3.095372	0.541333	-1.970309	0	
1128	N1128	-1.632612	0.541333	-3.494521	0	
1129	N1129	-1.520048	0.541333	-3.611813	0	
1130	N1130	-1.745175	0.541333	-3.377229	0	
1131	N1131	-0.507185	.333	-6.254436	0	
1132	N1132	0.507185	.333	-6.254436	0	
1133	N1133	-5.162908	.333	3.566453	0	
1134	N1134	-5.670093	.333	2.687983	0	
1135	N1135	5.670093	.333	2.687983	0	
1136	N1136	5.162908	.333	3.566453	0	
1137	N1137	-3.247595	0	1.875	0	
1138	N1138	3.247595	0	1.875	0	
1139	N1139	-4e-14	.333	-6.254436	0	
1140	N1140	-4e-14	-0.000333	-5.062461	0	
1141	N1141	-2e-14	0.249667	-3.146106	0	
1142	N1142	-4e-14	0.249667	-3.291856	0	
1143	N1143	-4e-14	0.249667	-3.437606	0	
1144	N1144	-4e-14	0.249667	-3.583356	0	
1145	N1145	-5e-14	0.249667	-3.729106	0	
1146	N1146	-2.724607	0.249667	1.573053	0	
1147	N1147	-2.850831	0.249667	1.645928	0	
1148	N1148	-2.977054	0.249667	1.718803	0	
1149	N1149	-3.103277	0.249667	1.791678	0	
1150	N1150	-3.2295	0.249667	1.864553	0	
1151	N1151	2.724607	0.249667	1.573053	0	
1152	N1152	2.850831	0.249667	1.645928	0	
1153	N1153	2.977054	0.249667	1.718803	0	
1154	N1154	3.103277	0.249667	1.791678	0	
1155	N1155	3.2295	0.249667	1.864553	0	
1156	N1156	5.5	.333	3.704857	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1157	N1157	2.75	.333	3.704857	0	
1158	N1158	-2.75	.333	3.704857	0	
1159	N1159	-6	.333	3.704857	0	
1160	N1160	-6	4.166333	3.954857	0	
1161	N1161	-6	-2.833667	3.954857	0	
1162	N1162	5.5	4.166	3.954857	0	
1163	N1163	2.75	4.166	3.954857	0	
1164	N1164	-2.75	4.166	3.954857	0	
1165	N1165	5.5	-3.834	3.954857	0	
1166	N1166	2.75	-3.834	3.954857	0	
1167	N1167	-2.75	-3.834	3.954857	0	
1168	N1168	-0.177083	.333	3.704857	0	
1169	N1169	0.177083	.333	3.704857	0	
1170	N1170	3.297042	.333	-1.69907	0	
1171	N1171	3.119959	.333	-2.005787	0	
1172	N1172	-3.119959	.333	-2.005787	0	
1173	N1173	-3.297042	.333	-1.69907	0	
1174	N1174	-0.920101	0	0.531221	0	
1175	N1175	-4.38422	-0.000333	2.53123	0	
1176	N1176	0.920101	0	0.531221	0	
1177	N1177	4.38422	-0.000333	2.53123	0	
1178	N1178	5.5	.333	3.954857	0	
1179	N1179	2.75	.333	3.954857	0	
1180	N1180	-2.75	.333	3.954857	0	
1181	N1181	-6	.333	3.954857	0	
1182	N1182	0.4585	.333	-6.615568	0	
1183	N1183	1.8335	.333	-4.233998	0	
1184	N1184	4.5835	.333	0.529141	0	
1185	N1185	6.2085	.333	3.343724	0	
1186	N1186	6.425007	4.166333	3.218724	0	
1187	N1187	6.425007	-2.833667	3.218724	0	
1188	N1189	2.050007	4.166	-4.358998	0	
1189	N1190	4.800007	4.166	0.404141	0	
1190	N1192	2.050007	-3.834	-4.358998	0	
1191	N1193	4.800007	-3.834	0.404141	0	
1192	N1194	0.675007	.333	-6.740568	0	
1193	N1195	2.050007	.333	-4.358998	0	
1194	N1196	4.800007	.333	0.404141	0	
1195	N1197	6.425007	.333	3.218724	0	
1196	N1198	-5.9585	.333	2.910711	0	
1197	N1199	-4.5835	.333	0.529141	0	
1198	N1200	-1.8335	.333	-4.233998	0	
1199	N1201	-0.2085	.333	-7.048581	0	
1200	N1202	-0.425007	4.166333	-7.173581	0	
1201	N1203	-0.425007	-2.833667	-7.173581	0	
1202	N1204	-6.175007	4.166	2.785711	0	
1203	N1205	-4.800007	4.166	0.404141	0	
1204	N1206	-2.050007	4.166	-4.358998	0	
1205	N1207	-6.175007	-3.834	2.785711	0	
1206	N1208	-4.800007	-3.834	0.404141	0	
1207	N1209	-2.050007	-3.834	-4.358998	0	
1208	N1210	-6.175007	.333	2.785711	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1209	N1211	-4.800007	.333	0.404141	0	
1210	N1212	-2.050007	.333	-4.358998	0	
1211	N1213	-0.425007	.333	-7.173581	0	
1212	N1214	-6.25	3.333	3.704857	0	
1213	N1215	6.25	3.333	3.704857	0	
1214	N1216	6.3335	3.333	3.56023	0	
1215	N1217	0.0835	3.333	-7.265087	0	
1216	N1218	-0.0835	3.333	-7.265087	0	
1217	N1219	-6.3335	3.333	3.56023	0	
1218	N1220	5.5	3.333	3.704857	0	
1219	N1221	2.75	3.333	3.704857	0	
1220	N1222	-2.75	3.333	3.704857	0	
1221	N1223	-6	3.333	3.704857	0	
1222	N1224	5.5	3.333	3.954857	0	
1223	N1225	2.75	3.333	3.954857	0	
1224	N1226	-2.75	3.333	3.954857	0	
1225	N1227	-6	3.333	3.954857	0	
1226	N1228	0.4585	3.333	-6.615568	0	
1227	N1229	1.8335	3.333	-4.233998	0	
1228	N1230	4.5835	3.333	0.529141	0	
1229	N1231	6.2085	3.333	3.343724	0	
1230	N1232	0.675007	3.333	-6.740568	0	
1231	N1233	2.050007	3.333	-4.358998	0	
1232	N1234	4.800007	3.333	0.404141	0	
1233	N1235	6.425007	3.333	3.218724	0	
1234	N1236	-5.9585	3.333	2.910711	0	
1235	N1237	-4.5835	3.333	0.529141	0	
1236	N1238	-1.8335	3.333	-4.233998	0	
1237	N1239	-0.2085	3.333	-7.048581	0	
1238	N1240	-6.175007	3.333	2.785711	0	
1239	N1241	-4.800007	3.333	0.404141	0	
1240	N1242	-2.050007	3.333	-4.358998	0	
1241	N1243	-0.425007	3.333	-7.173581	0	
1242	N2437	0.675007	4.166	-6.740568	0	
1243	N2438	0.675007	-3.834	-6.740568	0	
1244	N1244	-4.75	3.333	3.704857	0	
1245	N1245	4.75	3.333	3.704857	0	
1246	N1246	5.5835	3.333	2.261192	0	
1247	N1247	0.8335	3.333	-5.966049	0	
1248	N1248	-0.8335	3.333	-5.966049	0	
1249	N1249	-5.5835	3.333	2.261192	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipes 1	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
3	Plan Bracing	PL3/8x4	Beam	RECT	A36 Gr.36	Typical	1.5	.018	2	.066
4	Grating Angle	L2x2x4	Beam	Single Angle	A36 Gr.36	Typical	.944	.346	.346	.021
5	Standoff Arm	HSS4X4X4	Beam	SquareTube	A500 Gr.B ...	Typical	3.37	7.8	7.8	12.8
6	Plate Bracing2	PL3/8x4	Beam	RECT	A36 Gr.36	Typical	1.5	.018	2	.066

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
7	MP 2	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
8	Support Rail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
9	End Connection	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N1	N32			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
2	M2	N18	N5			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
3	M3	N6	N11			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
4	M4	N1131	N28			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
5	M5	N12	N17			Plan Bracing	Beam	RECT	A36 Gr.36	Typical
6	M6	N20	N21		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
7	M7	N22	N23			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
8	M8	N24	N25		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
9	M9	N26	N27			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
10	M10	N28	N29		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
11	M11	N30	N31			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
12	M12	N341	N2			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
13	M13	N33	N1140			HSS4X4X4	Beam	SquareTube	A500 Gr....	Typical
14	M14	N37	N1141			RIGID	None	None	RIGID	Typical
15	M15	N67	N1142			RIGID	None	None	RIGID	Typical
16	M16	N66	N1143			RIGID	None	None	RIGID	Typical
17	M17	N65	N1144			RIGID	None	None	RIGID	Typical
18	M18	N36	N1145			RIGID	None	None	RIGID	Typical
19	M19	N377	N382			RIGID	None	None	RIGID	Typical
20	M20	N367	N372			RIGID	None	None	RIGID	Typical
21	M21	N366	N371			RIGID	None	None	RIGID	Typical
22	M22	N8	N384			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
23	M23	N662	N9			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
24	M24	N698	N703			RIGID	None	None	RIGID	Typical
25	M25	N688	N693			RIGID	None	None	RIGID	Typical
26	M26	N687	N692			RIGID	None	None	RIGID	Typical
27	M27	N14	N705			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
28	M28	N983	N15			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
29	M29	N1019	N1024			RIGID	None	None	RIGID	Typical
30	M30	N1009	N1014			RIGID	None	None	RIGID	Typical
31	M31	N1008	N1013			RIGID	None	None	RIGID	Typical
32	M32	N16	N1131			RIGID	None	None	RIGID	Typical
33	M33	N13	N1132			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
34	M34	N1133	N20			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
35	M35	N4	N1133			RIGID	None	None	RIGID	Typical
36	M36	N19	N1134			RIGID	None	None	RIGID	Typical
37	M37	N1135	N24			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
38	M38	N10	N1135			RIGID	None	None	RIGID	Typical
39	M39	N7	N1136			RIGID	None	None	RIGID	Typical
40	M40	N30	N1134			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
41	M41	N28	N26			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
42	M42	N26	N1132			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
43	M43	N24	N22			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
44	M44	N22	N1136			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
45	M45	N20	N30			Plate Bracing2	Beam	RECT	A36 Gr.36	Typical
46	M46	N1141	N311			RIGID	None	None	RIGID	Typical
47	M47	N1142	N314			RIGID	None	None	RIGID	Typical
48	M48	N1143	N313			RIGID	None	None	RIGID	Typical
49	M49	N1144	N312			RIGID	None	None	RIGID	Typical
50	M50	N1145	N310			RIGID	None	None	RIGID	Typical
51	M51	N1141	N922			RIGID	None	None	RIGID	Typical
52	M52	N1141	N410			RIGID	None	None	RIGID	Typical
53	M53	N1142	N925			RIGID	None	None	RIGID	Typical
54	M54	N1142	N413			RIGID	None	None	RIGID	Typical
55	M55	N1143	N928			RIGID	None	None	RIGID	Typical
56	M56	N1143	N417			RIGID	None	None	RIGID	Typical
57	M57	N1144	N931			RIGID	None	None	RIGID	Typical
58	M58	N1144	N421			RIGID	None	None	RIGID	Typical
59	M59	N1145	N934			RIGID	None	None	RIGID	Typical
60	M60	N1145	N425			RIGID	None	None	RIGID	Typical
61	M61	N38	N1146			RIGID	None	None	RIGID	Typical
62	M62	N266	N1147			RIGID	None	None	RIGID	Typical
63	M63	N270	N1148			RIGID	None	None	RIGID	Typical
64	M64	N274	N1149			RIGID	None	None	RIGID	Typical
65	M65	N51	N1150			RIGID	None	None	RIGID	Typical
66	M66	N1146	N316			RIGID	None	None	RIGID	Typical
67	M67	N1147	N319			RIGID	None	None	RIGID	Typical
68	M68	N1148	N318			RIGID	None	None	RIGID	Typical
69	M69	N1149	N317			RIGID	None	None	RIGID	Typical
70	M70	N1150	N315			RIGID	None	None	RIGID	Typical
71	M71	N1146	N262			RIGID	None	None	RIGID	Typical
72	M72	N1146	N731			RIGID	None	None	RIGID	Typical
73	M73	N1147	N265			RIGID	None	None	RIGID	Typical
74	M74	N1147	N734			RIGID	None	None	RIGID	Typical
75	M75	N1148	N269			RIGID	None	None	RIGID	Typical
76	M76	N1148	N738			RIGID	None	None	RIGID	Typical
77	M77	N1149	N273			RIGID	None	None	RIGID	Typical
78	M78	N1149	N742			RIGID	None	None	RIGID	Typical
79	M79	N1150	N277			RIGID	None	None	RIGID	Typical
80	M80	N1150	N746			RIGID	None	None	RIGID	Typical
81	M81	N50	N1151			RIGID	None	None	RIGID	Typical
82	M82	N68	N1152			RIGID	None	None	RIGID	Typical
83	M83	N69	N1153			RIGID	None	None	RIGID	Typical
84	M84	N70	N1154			RIGID	None	None	RIGID	Typical
85	M85	N54	N1155			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
86	M86	N1151	N321			RIGID	None	None	RIGID	Typical
87	M87	N1152	N324			RIGID	None	None	RIGID	Typical
88	M88	N1153	N323			RIGID	None	None	RIGID	Typical
89	M89	N1154	N322			RIGID	None	None	RIGID	Typical
90	M90	N1155	N320			RIGID	None	None	RIGID	Typical
91	M91	N1151	N601			RIGID	None	None	RIGID	Typical
92	M92	N1151	N71			RIGID	None	None	RIGID	Typical
93	M93	N1152	N604			RIGID	None	None	RIGID	Typical
94	M94	N1152	N74			RIGID	None	None	RIGID	Typical
95	M95	N1153	N607			RIGID	None	None	RIGID	Typical
96	M96	N1153	N78			RIGID	None	None	RIGID	Typical
97	M97	N1154	N610			RIGID	None	None	RIGID	Typical
98	M98	N1154	N82			RIGID	None	None	RIGID	Typical
99	M99	N1155	N613			RIGID	None	None	RIGID	Typical
100	M100	N1155	N86			RIGID	None	None	RIGID	Typical
101	MP3A	N1164	N1167			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
102	MP2A	N1163	N1166			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
103	MP1A	N1162	N1165			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
104	MP4A	N1160	N1161			MP 2	Beam	Pipe	A53 Gr.B	Typical
105	M105	N374	N1168			RIGID	None	None	RIGID	Typical
106	M106	N1168	N364			RIGID	None	None	RIGID	Typical
107	M107	N379	N1169			RIGID	None	None	RIGID	Typical
108	M108	N1169	N369			RIGID	None	None	RIGID	Typical
109	M109	N695	N1170			RIGID	None	None	RIGID	Typical
110	M110	N1170	N685			RIGID	None	None	RIGID	Typical
111	M111	N700	N1171			RIGID	None	None	RIGID	Typical
112	M112	N1171	N690			RIGID	None	None	RIGID	Typical
113	M113	N1016	N1172			RIGID	None	None	RIGID	Typical
114	M114	N1172	N1006			RIGID	None	None	RIGID	Typical
115	M115	N1021	N1173			RIGID	None	None	RIGID	Typical
116	M116	N1173	N1011			RIGID	None	None	RIGID	Typical
117	M117	N1174	N1175			HSS4X4X4	Beam	SquareTube	A500 Gr....	Typical
118	M118	N1176	N1177			HSS4X4X4	Beam	SquareTube	A500 Gr....	Typical
119	M119	N1181	N1159			RIGID	None	None	RIGID	Typical
120	M120	N1180	N1158			RIGID	None	None	RIGID	Typical
121	M121	N1179	N1157			RIGID	None	None	RIGID	Typical
122	M122	N1178	N1156			RIGID	None	None	RIGID	Typical
123	MP3C	N1190	N1193			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
124	MP2C	N1189	N1192			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
125	MP4C	N1186	N1187			MP 2	Beam	Pipe	A53 Gr.B	Typical
126	M127	N1197	N1185			RIGID	None	None	RIGID	Typical
127	M128	N1196	N1184			RIGID	None	None	RIGID	Typical
128	M129	N1195	N1183			RIGID	None	None	RIGID	Typical
129	M130	N1194	N1182			RIGID	None	None	RIGID	Typical
130	MP3B	N1206	N1209			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
131	MP2B	N1205	N1208			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
132	MP1B	N1204	N1207			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
133	MP4B	N1202	N1203			MP 2	Beam	Pipe	A53 Gr.B	Typical
134	M135	N1213	N1201			RIGID	None	None	RIGID	Typical
135	M136	N1212	N1200			RIGID	None	None	RIGID	Typical
136	M137	N1211	N1199			RIGID	None	None	RIGID	Typical
137	M138	N1210	N1198			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
138	M139	N1214	N1215			Support Rail	Beam	Pipe	A53 Gr.B	Typical
139	M140	N1219	N1218			Support Rail	Beam	Pipe	A53 Gr.B	Typical
140	M141	N1217	N1216			Support Rail	Beam	Pipe	A53 Gr.B	Typical
141	M142	N1227	N1223			RIGID	None	None	RIGID	Typical
142	M143	N1226	N1222			RIGID	None	None	RIGID	Typical
143	M144	N1225	N1221			RIGID	None	None	RIGID	Typical
144	M145	N1224	N1220			RIGID	None	None	RIGID	Typical
145	M146	N1235	N1231			RIGID	None	None	RIGID	Typical
146	M147	N1234	N1230			RIGID	None	None	RIGID	Typical
147	M148	N1233	N1229			RIGID	None	None	RIGID	Typical
148	M149	N1232	N1228			RIGID	None	None	RIGID	Typical
149	M150	N1243	N1239			RIGID	None	None	RIGID	Typical
150	M151	N1242	N1238			RIGID	None	None	RIGID	Typical
151	M152	N1241	N1237			RIGID	None	None	RIGID	Typical
152	M153	N1240	N1236			RIGID	None	None	RIGID	Typical
153	MP1C	N2437	N2438			Mount Pipes 1	Beam	Pipe	A53 Gr.B	Typical
154	M154	N1248	N1247			End Connection	Beam	Single Angle	A36 Gr.36	Typical
155	M155	N1244	N1249			End Connection	Beam	Single Angle	A36 Gr.36	Typical
156	M156	N1246	N1245			End Connection	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes				None
3	M3						Yes				None
4	M4						Yes				None
5	M5						Yes				None
6	M6						Yes				None
7	M7						Yes				None
8	M8						Yes				None
9	M9						Yes				None
10	M10						Yes				None
11	M11						Yes				None
12	M12						Yes				None
13	M13						Yes				None
14	M14						Yes	** NA **			None
15	M15						Yes	** NA **			None
16	M16						Yes	** NA **			None
17	M17						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20						Yes	** NA **			None
21	M21						Yes	** NA **			None
22	M22						Yes				None
23	M23						Yes				None
24	M24						Yes	** NA **			None
25	M25						Yes	** NA **			None
26	M26						Yes	** NA **			None
27	M27						Yes				None
28	M28						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...
29	M29						Yes	** NA **			None
30	M30						Yes	** NA **			None
31	M31						Yes	** NA **			None
32	M32						Yes	** NA **			None
33	M33						Yes	** NA **			None
34	M34						Yes				None
35	M35						Yes	** NA **			None
36	M36						Yes	** NA **			None
37	M37						Yes				None
38	M38						Yes	** NA **			None
39	M39						Yes	** NA **			None
40	M40						Yes				None
41	M41						Yes				None
42	M42						Yes				None
43	M43						Yes				None
44	M44						Yes				None
45	M45						Yes				None
46	M46						Yes	** NA **			None
47	M47						Yes	** NA **			None
48	M48						Yes	** NA **			None
49	M49						Yes	** NA **			None
50	M50						Yes	** NA **			None
51	M51						Yes	** NA **			None
52	M52						Yes	** NA **			None
53	M53						Yes	** NA **			None
54	M54						Yes	** NA **			None
55	M55						Yes	** NA **			None
56	M56						Yes	** NA **			None
57	M57						Yes	** NA **			None
58	M58						Yes	** NA **			None
59	M59						Yes	** NA **			None
60	M60						Yes	** NA **			None
61	M61						Yes	** NA **			None
62	M62						Yes	** NA **			None
63	M63						Yes	** NA **			None
64	M64						Yes	** NA **			None
65	M65						Yes	** NA **			None
66	M66						Yes	** NA **			None
67	M67						Yes	** NA **			None
68	M68						Yes	** NA **			None
69	M69						Yes	** NA **			None
70	M70						Yes	** NA **			None
71	M71						Yes	** NA **			None
72	M72						Yes	** NA **			None
73	M73						Yes	** NA **			None
74	M74						Yes	** NA **			None
75	M75						Yes	** NA **			None
76	M76						Yes	** NA **			None
77	M77						Yes	** NA **			None
78	M78						Yes	** NA **			None
79	M79						Yes	** NA **			None
80	M80						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
81	M81						Yes	** NA **			None
82	M82						Yes	** NA **			None
83	M83						Yes	** NA **			None
84	M84						Yes	** NA **			None
85	M85						Yes	** NA **			None
86	M86						Yes	** NA **			None
87	M87						Yes	** NA **			None
88	M88						Yes	** NA **			None
89	M89						Yes	** NA **			None
90	M90						Yes	** NA **			None
91	M91						Yes	** NA **			None
92	M92						Yes	** NA **			None
93	M93						Yes	** NA **			None
94	M94						Yes	** NA **			None
95	M95						Yes	** NA **			None
96	M96						Yes	** NA **			None
97	M97						Yes	** NA **			None
98	M98						Yes	** NA **			None
99	M99						Yes	** NA **			None
100	M100						Yes	** NA **			None
101	MP3A						Yes				None
102	MP2A						Yes				None
103	MP1A						Yes				None
104	MP4A						Yes				None
105	M105						Yes	** NA **			None
106	M106						Yes	** NA **			None
107	M107						Yes	** NA **			None
108	M108						Yes	** NA **			None
109	M109						Yes	** NA **			None
110	M110						Yes	** NA **			None
111	M111						Yes	** NA **			None
112	M112						Yes	** NA **			None
113	M113						Yes	** NA **			None
114	M114						Yes	** NA **			None
115	M115						Yes	** NA **			None
116	M116						Yes	** NA **			None
117	M117						Yes				None
118	M118						Yes				None
119	M119						Yes	** NA **			None
120	M120						Yes	** NA **			None
121	M121						Yes	** NA **			None
122	M122						Yes	** NA **			None
123	MP3C						Yes				None
124	MP2C						Yes				None
125	MP4C						Yes				None
126	M127						Yes	** NA **			None
127	M128						Yes	** NA **			None
128	M129						Yes	** NA **			None
129	M130						Yes	** NA **			None
130	MP3B						Yes				None
131	MP2B						Yes				None
132	MP1B						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...
133	MP4B						Yes				None
134	M135						Yes	** NA **			None
135	M136						Yes	** NA **			None
136	M137						Yes	** NA **			None
137	M138						Yes	** NA **			None
138	M139						Yes		+z		None
139	M140						Yes		+z		None
140	M141						Yes		+z		None
141	M142						Yes	** NA **			None
142	M143						Yes	** NA **			None
143	M144						Yes	** NA **			None
144	M145						Yes	** NA **			None
145	M146						Yes	** NA **			None
146	M147						Yes	** NA **			None
147	M148						Yes	** NA **			None
148	M149						Yes	** NA **			None
149	M150						Yes	** NA **			None
150	M151						Yes	** NA **			None
151	M152						Yes	** NA **			None
152	M153						Yes	** NA **			None
153	MP1C						Yes				None
154	M154	OOOOXO	OOOOXO				Yes				None
155	M155	OOOOXO	OOOOXO				Yes				None
156	M156	OOOOXO	OOOOXO				Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Face Horizo...	6.198			Lbyy			1	1		Lateral
2	M2	Plan Bracing	4.25	Segment	Segment	Lbyy			.65	.65		Lateral
3	M3	Plan Bracing	4.25	Segment	Segment	Lbyy			.65	.65		Lateral
4	M4	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
5	M5	Plan Bracing	4.25	Segment	Segment	Lbyy			.65	.65		Lateral
6	M6	Grating Angle	2.916			Lbyy			.65	.65		Lateral
7	M7	Grating Angle	2.916			Lbyy			.65	.65		Lateral
8	M8	Grating Angle	2.916			Lbyy			.65	.65		Lateral
9	M9	Grating Angle	2.916			Lbyy			.65	.65		Lateral
10	M10	Grating Angle	2.916			Lbyy			.65	.65		Lateral
11	M11	Grating Angle	2.916			Lbyy			.65	.65		Lateral
12	M12	Face Horizo...	6.198			Lbyy			1	1		Lateral
13	M13	HSS4X4X4	4			Lbyy			2.1	2.1		Lateral
14	M22	Face Horizo...	6.198			Lbyy			1	1		Lateral
15	M23	Face Horizo...	6.198			Lbyy			1	1		Lateral
16	M27	Face Horizo...	6.198			Lbyy			1	1		Lateral
17	M28	Face Horizo...	6.198			Lbyy			1	1		Lateral
18	M34	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
19	M37	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
20	M40	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
21	M41	Plate Bracin...	.565			Lbyy			.65	.65		Lateral
22	M42	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
23	M43	Plate Bracin...	.565			Lbyy			.65	.65		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
24	M44	Plate Bracin...	.225			Lbyy			.65	.65		Lateral
25	M45	Plate Bracin...	.565			Lbyy			.65	.65		Lateral
26	MP3A	Mount Pipe...	8			Lbyy						Lateral
27	MP2A	Mount Pipe...	8			Lbyy						Lateral
28	MP1A	Mount Pipe...	8			Lbyy						Lateral
29	MP4A	MP 2	7			Lbyy						Lateral
30	M117	HSS4X4X4	4			Lbyy			2.1	2.1		Lateral
31	M118	HSS4X4X4	4			Lbyy			2.1	2.1		Lateral
32	MP3C	Mount Pipe...	8			Lbyy						Lateral
33	MP2C	Mount Pipe...	8			Lbyy						Lateral
34	MP4C	MP 2	7			Lbyy						Lateral
35	MP3B	Mount Pipe...	8			Lbyy						Lateral
36	MP2B	Mount Pipe...	8			Lbyy						Lateral
37	MP1B	Mount Pipe...	8			Lbyy						Lateral
38	MP4B	MP 2	7			Lbyy						Lateral
39	M139	Support Rail	12.5			Lbyy						Lateral
40	M140	Support Rail	12.5			Lbyy						Lateral
41	M141	Support Rail	12.5			Lbyy						Lateral
42	MP1C	Mount Pipe...	8			Lbyy						Lateral
43	M154	End Connec...	1.667			Lbyy						Lateral
44	M155	End Connec...	1.667			Lbyy						Lateral
45	M156	End Connec...	1.667			Lbyy						Lateral

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N33	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N1174	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N1176	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N33	max	2582.235	4	3188.254	5	1857.78	1	6.848	5	3.227	3	1.377	3
2		min	-2580.843	3	308.927	2	-6729.934	6	-1.249	2	-3.235	4	-1.377	4
3	N1174	max	1436.858	4	3239.629	8	3754.802	1	.66	1	2.384	1	.963	3
4		min	-5764.325	7	412.557	3	-1664.712	2	-3.565	6	-2.373	2	-6.073	8
5	N1176	max	5759.055	8	3168.689	7	3430.07	5	.643	1	1.506	2	5.899	7
6		min	-1389.324	3	394.367	4	-1224.742	2	-3.473	6	-1.511	1	-.979	4
7	Totals:	max	9003.694	4	9092.159	5	8914.475	1						
8		min	-9003.7	3	3320.172	2	-8914.484	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 Mome...	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	821.609	3	-6.89	1	29.127	1	.171	1	.576	2	.135	4
4			min	-827.851	4	-377.042	6	-127.513	6	-.361	2	-.546	1	-.197	3
5		3	max	821.609	3	-19.987	1	-.369	4	.171	1	.426	2	.518	8

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
6			min	-827.851	4	-407.855	6	-126.565	7	-.361	2	-.527	1	-.125	3
7		4	max	1624.928	3	365.278	4	426.474	1	.294	9	.326	2	.679	4
8			min	-1284.918	4	-275.609	3	-307.042	2	-.205	10	-.488	1	-.374	3
9		5	max	1071.591	3	62.487	4	136.128	1	0	6	.057	1	.026	6
10			min	-852.87	4	-62.351	10	-84.952	2	0	1	-.048	2	-.005	1
11	M2	1	max	1091.771	2	-100.05	3	414.203	1	.012	1	.067	2	.032	1
12			min	-776.057	1	-1417.694	8	-400.58	2	-.033	6	-.069	1	-.912	6
13		2	max	-294.596	2	-131.768	3	.515	4	.004	9	0	3	.722	8
14			min	-2789.919	7	-1372.962	8	-1.656	7	-.004	3	0	6	-.202	3
15		3	max	0	11	3.434	5	1.947	3	0	11	0	4	0	8
16			min	-1.125	3	1.153	2	-1.947	4	0	1	0	3	0	1
17		4	max	-13.496	4	1312.336	8	3.231	5	.004	1	0	2	.79	6
18			min	-2858.568	7	132.281	3	-.069	2	-.006	9	0	5	-.131	1
19		5	max	958.978	1	1351.029	8	199.617	1	.031	8	.028	1	.081	3
20			min	-596.961	2	123.197	3	-203.388	2	-.006	3	-.028	2	-.779	8
21	M3	1	max	1423.471	1	-162.2	4	299.459	4	.01	4	.045	3	.006	4
22			min	-1089.8	2	-1397.843	7	-280.038	3	-.032	7	-.047	4	-.899	7
23		2	max	400.387	3	-149.647	4	.409	2	.006	10	0	3	.716	6
24			min	-2923.784	8	-1360.851	7	-1.676	5	-.005	1	0	8	-.178	1
25		3	max	0	11	3.435	8	1.947	4	0	11	0	3	0	7
26			min	-1.125	4	1.153	3	-1.947	3	0	1	0	4	0	4
27		4	max	-263.834	3	1261.209	7	3.274	8	.003	2	0	4	.779	7
28			min	-2787.122	8	96.223	4	-.476	3	-.005	10	0	7	-.163	4
29		5	max	805.194	4	1301.669	7	186.864	2	.031	6	.027	2	.144	1
30			min	-479.015	3	43.516	4	-189.873	1	-.008	1	-.027	1	-.747	6
31	M4	1	max	518.482	3	22.936	9	1198.834	3	.041	3	.184	4	.194	3
32			min	-612.132	4	-340.692	5	-918.851	4	-.039	4	-.22	3	-.195	4
33		2	max	518.482	3	22.592	9	1198.834	3	.041	3	.133	4	.197	3
34			min	-612.132	4	-341.65	5	-918.851	4	-.039	4	-.153	3	-.185	4
35		3	max	518.482	3	22.248	9	1198.834	3	.041	3	.081	4	.2	3
36			min	-612.132	4	-342.608	5	-918.851	4	-.039	4	-.085	3	-.176	4
37		4	max	518.482	3	21.904	9	1198.834	3	.041	3	.029	4	.202	3
38			min	-612.132	4	-343.567	5	-918.851	4	-.039	4	-.018	3	-.166	4
39		5	max	518.482	3	21.56	9	1198.834	3	.041	3	.049	3	.205	3
40			min	-612.132	4	-344.525	5	-918.851	4	-.039	4	-.022	4	-.156	4
41	M5	1	max	1468.803	4	-89.993	2	392.42	3	.009	3	.065	4	.014	3
42			min	-1158.88	3	-1394.726	5	-374.1	4	-.032	8	-.067	3	-.888	8
43		2	max	252.848	1	-105.298	2	-.177	1	.005	3	0	3	.684	7
44			min	-2924.273	6	-1356.024	5	-1.516	6	-.005	4	0	8	-.086	4
45		3	max	0	1	-1.153	1	2.597	1	0	11	0	1	0	8
46			min	-.001	6	-3.434	6	-2.597	2	0	1	0	2	0	2
47		4	max	-132.225	1	1283.504	5	3.177	6	.005	3	0	4	.764	8
48			min	-2835.728	6	65.595	2	-.012	1	-.005	4	0	7	-.082	3
49		5	max	858.711	3	1323.6	5	221.976	3	.03	7	.031	3	.095	4
50			min	-529.699	4	34.468	2	-229.005	4	-.007	4	-.032	4	-.749	7
51	M6	1	max	436.382	7	146.765	1	37.075	2	0	1	.154	2	.293	1
52			min	-120.163	2	-118.578	2	-24.785	1	-.002	8	-.172	1	-.261	2
53		2	max	436.382	7	161.909	1	28.977	2	0	1	.106	2	.199	1
54			min	-120.163	2	-133.722	2	-32.883	1	-.002	8	-.107	1	-.179	2
55		3	max	436.382	7	177.053	1	20.169	2	0	1	.045	2	.093	1
56			min	-120.163	2	-148.865	2	-41.691	1	-.002	8	-.039	1	-.093	2
57		4	max	436.382	7	192.197	1	12.379	2	0	1	.033	1	.003	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 Mome...	LC
58			min	-120.163	2	-164.009	2	-60.778	5	-.002	8	-.027	2	-.045	8
59		5	max	436.382	7	207.34	1	8.402	2	0	1	.109	1	.09	2
60			min	-120.163	2	-179.153	2	-72.986	5	-.002	8	-.11	2	-.156	1
61	M7	1	max	496.325	4	36.749	4	95.58	3	.003	7	.089	4	.158	4
62			min	-233.03	3	-21.379	3	-80.576	4	0	4	-.099	3	-.162	3
63		2	max	496.325	4	30.132	4	95.58	3	.003	7	.065	4	.105	2
64			min	-233.03	3	-27.996	3	-80.576	4	0	4	-.062	3	-.108	1
65		3	max	496.325	4	21.864	4	102.124	1	.003	7	.037	4	.058	2
66			min	-233.03	3	-36.263	3	-85.587	2	0	4	-.029	3	-.049	1
67		4	max	496.325	4	14.201	4	117.268	1	.003	7	.021	1	.045	7
68			min	-233.03	3	-50.737	7	-100.731	2	0	4	-.016	2	-.007	4
69		5	max	496.325	4	10.232	4	132.412	1	.003	7	.068	1	.109	3
70			min	-233.03	3	-62.919	7	-115.874	2	0	4	-.073	2	-.054	4
71	M8	1	max	426.653	8	103.245	4	30.161	1	0	4	.101	3	.207	4
72			min	-72.156	3	-72.248	3	-17.72	2	-.002	7	-.123	4	-.169	3
73		2	max	428.727	8	114.603	4	22.061	1	0	4	.069	3	.145	4
74			min	-78.714	3	-83.606	3	-25.82	2	-.002	7	-.072	4	-.12	3
75		3	max	430.8	8	125.96	4	13.252	1	0	4	.034	1	.073	4
76			min	-85.271	3	-94.964	3	-36.493	6	-.002	7	-.028	2	-.071	3
77		4	max	432.874	8	137.318	4	5.461	1	0	4	.033	4	.006	1
78			min	-91.829	3	-106.322	3	-60.428	6	-.002	7	-.026	3	-.044	6
79		5	max	434.948	8	148.676	4	1.483	1	0	4	.088	4	.046	1
80			min	-98.386	3	-117.68	3	-72.637	6	-.002	7	-.087	3	-.112	2
81	M9	1	max	429.604	6	42.563	3	129.38	4	.003	5	.136	3	.235	3
82			min	-84.732	1	-24.294	4	-111.941	3	0	2	-.148	4	-.244	4
83		2	max	431.677	6	34.465	3	140.738	4	.003	5	.096	3	.155	3
84			min	-91.29	1	-32.391	4	-123.299	3	0	2	-.093	4	-.16	4
85		3	max	433.751	6	25.657	3	152.096	4	.003	5	.045	3	.073	3
86			min	-97.847	1	-41.2	4	-134.656	3	0	2	-.037	4	-.065	4
87		4	max	435.825	6	17.867	3	163.453	4	.003	5	.021	4	.045	8
88			min	-104.404	1	-53.807	8	-146.014	3	0	2	-.016	3	-.011	3
89		5	max	437.898	6	13.89	3	174.811	4	.003	5	.082	4	.153	4
90			min	-110.962	1	-66.015	8	-157.372	3	0	2	-.087	3	-.097	3
91	M10	1	max	435.948	6	138.555	3	38.013	4	0	2	.139	4	.266	3
92			min	-53.359	1	-110.065	4	-29.027	3	-.002	5	-.158	3	-.231	4
93		2	max	438.021	6	149.913	3	31.397	4	0	2	.098	4	.175	3
94			min	-59.917	1	-121.423	4	-35.643	3	-.002	5	-.1	3	-.153	4
95		3	max	440.095	6	161.271	3	23.129	4	0	2	.046	4	.074	3
96			min	-66.474	1	-132.78	4	-43.911	3	-.002	5	-.04	3	-.074	4
97		4	max	442.169	6	172.629	3	15.46	4	0	2	.025	2	.008	4
98			min	-73.031	1	-144.138	4	-60.535	7	-.002	5	-.019	1	-.044	7
99		5	max	444.242	6	183.986	3	11.488	4	0	2	.086	3	.092	4
100			min	-79.589	1	-155.496	4	-72.725	7	-.002	5	-.086	4	-.156	3
101	M11	1	max	447.579	1	46.818	1	147.702	2	.003	8	.143	1	.251	1
102			min	-184.181	2	-32.627	2	-129.321	1	0	3	-.155	2	-.261	2
103		2	max	454.136	1	40.202	1	151.488	2	.003	8	.098	1	.161	1
104			min	-190.738	2	-39.244	2	-133.107	1	0	3	-.096	2	-.166	2
105		3	max	460.694	1	31.934	1	155.273	2	.003	8	.047	1	.073	1
106			min	-197.296	2	-47.511	2	-136.893	1	0	3	-.04	2	-.064	2
107		4	max	467.251	1	24.265	1	159.059	2	.003	8	.022	3	.048	6
108			min	-203.853	2	-55.18	2	-140.678	1	0	3	-.016	4	-.013	1
109		5	max	473.809	1	20.294	1	162.845	2	.003	8	.068	2	.156	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 Mome...	LC
110			min	-210.411	2	-67.25	6	-144.464	1	0	3	-.073	1	-.098	1
111	M12	1	max	1002.969	4	71.669	4	109.332	2	0	1	.07	3	.026	6
112			min	-801.519	3	-54.897	3	-151.905	1	0	6	-.064	4	-.005	1
113		2	max	1735.01	4	295.459	4	289.16	2	.257	9	.318	2	.624	3
114			min	-1405.659	3	-345.497	3	-389.491	1	-.242	10	-.456	1	-.383	4
115		3	max	850.026	4	413.226	7	180.209	1	.6	6	.119	4	.513	10
116			min	-881.23	3	40.162	1	-108.489	2	.077	10	-.181	3	-.196	4
117		4	max	850.026	4	382.413	7	169.002	3	.6	6	.095	1	.149	3
118			min	-881.23	3	27.065	1	-99.999	4	.077	10	-.05	2	-.258	4
119		5	max	0	11	0	11	0	11	0	11	0	11	0	11
120			min	0	1	0	1	0	1	0	1	0	1	0	1
121	M13	1	max	6729.934	6	3207.783	5	2585.084	4	1.377	4	3.227	3	6.848	5
122			min	-1857.78	1	301.763	2	-2583.609	3	-1.377	3	-3.235	4	-1.249	2
123		2	max	6729.934	6	3177.045	5	2543.537	4	1.377	4	.664	3	3.728	1
124			min	-1857.78	1	286.963	2	-2542.062	3	-1.377	3	-.671	4	-1.544	2
125		3	max	6729.934	6	3146.307	5	2501.991	4	1.377	4	1.852	4	1.867	1
126			min	-1857.78	1	272.163	2	-2500.515	3	-1.377	3	-1.857	3	-1.823	2
127		4	max	0	11	30.738	8	41.547	4	0	11	.021	3	.015	8
128			min	0	1	14.8	1	-41.547	3	0	1	-.021	4	.007	1
129		5	max	0	11	0	11	0	11	0	11	0	11	0	11
130			min	0	1	0	1	0	1	0	1	0	1	0	1
131	M14	1	max	465.271	5	279.429	3	1128.791	1	0	4	.031	5	0	10
132			min	40.714	2	-277.892	4	-1081.121	2	0	3	.003	2	0	9
133		2	max	465.271	5	279.429	3	1128.791	1	0	4	.042	1	.006	4
134			min	40.714	2	-277.892	4	-1081.121	2	0	3	-.02	2	-.006	3
135		3	max	465.271	5	279.429	3	1128.791	1	0	4	.065	1	.012	4
136			min	40.714	2	-277.892	4	-1081.121	2	0	3	-.042	2	-.012	3
137		4	max	465.271	5	279.429	3	1128.791	1	0	4	.089	1	.017	4
138			min	40.714	2	-277.892	4	-1081.121	2	0	3	-.065	2	-.017	3
139		5	max	465.271	5	279.429	3	1128.791	1	0	4	.112	1	.023	4
140			min	40.714	2	-277.892	4	-1081.121	2	0	3	-.088	2	-.023	3
141	M15	1	max	58.289	5	112.797	3	241.938	2	0	4	.061	5	0	10
142			min	4.177	2	-114.201	4	-322.078	1	0	3	.005	2	0	9
143		2	max	58.289	5	112.797	3	241.938	2	0	4	.057	5	.003	4
144			min	4.177	2	-114.201	4	-322.078	1	0	3	.01	2	-.003	3
145		3	max	58.289	5	112.797	3	241.938	2	0	4	.053	5	.005	4
146			min	4.177	2	-114.201	4	-322.078	1	0	3	.015	2	-.005	3
147		4	max	58.289	5	112.797	3	241.938	2	0	4	.051	6	.007	4
148			min	4.177	2	-114.201	4	-322.078	1	0	3	.016	1	-.007	3
149		5	max	58.289	5	112.797	3	241.938	2	0	4	.05	6	.01	4
150			min	4.177	2	-114.201	4	-322.078	1	0	3	.009	1	-.01	3
151	M16	1	max	44.205	5	120.428	4	223.123	2	0	4	.06	5	0	4
152			min	3.387	2	-121.664	3	-267.125	1	0	3	.005	2	0	9
153		2	max	44.205	5	120.428	4	223.123	2	0	4	.057	5	.002	3
154			min	3.387	2	-121.664	3	-267.125	1	0	3	.01	2	-.002	4
155		3	max	44.205	5	120.428	4	223.123	2	0	4	.055	5	.005	3
156			min	3.387	2	-121.664	3	-267.125	1	0	3	.014	2	-.005	4
157		4	max	44.205	5	120.428	4	223.123	2	0	4	.052	6	.007	3
158			min	3.387	2	-121.664	3	-267.125	1	0	3	.017	10	-.007	4
159		5	max	44.205	5	120.428	4	223.123	2	0	4	.052	6	.01	3
160			min	3.387	2	-121.664	3	-267.125	1	0	3	.013	1	-.01	4
161	M17	1	max	12.573	5	156.558	4	190.603	2	0	4	.058	5	0	10

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 Mome...	LC
162			min	.328	2	-157.037	3	-231.761	1	0	3	.005	2	0	9
163		2	max	12.573	5	156.558	4	190.603	2	0	4	.056	5	.003	3
164			min	.328	2	-157.037	3	-231.761	1	0	3	.009	2	-.003	4
165		3	max	12.573	5	156.558	4	190.603	2	0	4	.053	5	.006	3
166			min	.328	2	-157.037	3	-231.761	1	0	3	.013	2	-.006	4
167		4	max	12.573	5	156.558	4	190.603	2	0	4	.051	5	.01	3
168			min	.328	2	-157.037	3	-231.761	1	0	3	.017	2	-.01	4
169		5	max	12.573	5	156.558	4	190.603	2	0	4	.05	6	.013	3
170			min	.328	2	-157.037	3	-231.761	1	0	3	.015	1	-.013	4
171	M18	1	max	-27.992	2	518.869	4	257.245	2	0	4	.028	5	0	10
172			min	-371.735	5	-518.673	3	-145.365	1	0	3	.002	2	0	9
173		2	max	-27.992	2	518.869	4	257.245	2	0	4	.031	5	.011	3
174			min	-371.735	5	-518.673	3	-145.365	1	0	3	.008	2	-.011	4
175		3	max	-27.992	2	518.869	4	257.245	2	0	4	.034	6	.022	3
176			min	-371.735	5	-518.673	3	-145.365	1	0	3	.011	1	-.022	4
177		4	max	-27.992	2	518.869	4	257.245	2	0	4	.038	6	.032	3
178			min	-371.735	5	-518.673	3	-145.365	1	0	3	.008	1	-.032	4
179		5	max	-27.992	2	518.869	4	257.245	2	0	4	.042	6	.043	3
180			min	-371.735	5	-518.673	3	-145.365	1	0	3	.005	1	-.043	4
181	M19	1	max	-36.473	2	387.403	4	620.873	9	0	11	.114	5	.044	2
182			min	-1804.407	5	-385.776	3	-495.027	10	0	1	-.018	2	-.044	1
183		2	max	-36.473	2	387.403	4	620.873	9	0	11	.119	5	.044	2
184			min	-1804.407	5	-385.776	3	-495.027	10	0	1	-.019	2	-.044	1
185		3	max	-36.473	2	387.403	4	620.873	9	0	11	.124	5	.045	2
186			min	-1804.407	5	-385.776	3	-495.027	10	0	1	-.02	2	-.045	1
187		4	max	-36.473	2	387.403	4	620.873	9	0	11	.128	5	.045	2
188			min	-1804.407	5	-385.776	3	-495.027	10	0	1	-.021	2	-.046	1
189		5	max	-36.473	2	387.403	4	620.873	9	0	11	.133	5	.046	2
190			min	-1804.407	5	-385.776	3	-495.027	10	0	1	-.022	2	-.046	1
191	M20	1	max	1804.236	6	126.873	10	258.935	10	0	11	.159	6	.081	5
192			min	-479.754	1	-167.837	9	-313.84	9	0	1	.009	1	-.005	2
193		2	max	1804.236	6	126.873	10	258.935	10	0	11	.156	6	.083	5
194			min	-479.754	1	-167.837	9	-313.84	9	0	1	.009	1	-.005	2
195		3	max	1804.236	6	126.873	10	258.935	10	0	11	.152	6	.084	5
196			min	-479.754	1	-167.837	9	-313.84	9	0	1	.009	1	-.006	2
197		4	max	1804.236	6	126.873	10	258.935	10	0	11	.149	6	.086	5
198			min	-479.754	1	-167.837	9	-313.84	9	0	1	.009	1	-.006	2
199		5	max	1804.236	6	126.873	10	258.935	10	0	11	.146	6	.088	5
200			min	-479.754	1	-167.837	9	-313.84	9	0	1	.009	1	-.006	2
201	M21	1	max	-113.778	2	311.965	9	176.026	10	0	11	.087	5	.166	5
202			min	-2568.34	5	-254.286	10	-217.263	9	0	1	.014	2	-.002	2
203		2	max	-113.778	2	311.965	9	176.026	10	0	11	.086	5	.163	5
204			min	-2568.34	5	-254.286	10	-217.263	9	0	1	.013	2	-.002	2
205		3	max	-113.778	2	311.965	9	176.026	10	0	11	.084	5	.161	5
206			min	-2568.34	5	-254.286	10	-217.263	9	0	1	.013	2	-.002	2
207		4	max	-113.778	2	311.965	9	176.026	10	0	11	.082	5	.159	5
208			min	-2568.34	5	-254.286	10	-217.263	9	0	1	.012	2	-.003	2
209		5	max	-113.778	2	311.965	9	176.026	10	0	11	.081	5	.157	5
210			min	-2568.34	5	-254.286	10	-217.263	9	0	1	.011	2	-.003	2
211	M22	1	max	0	11	.006	2	.003	2	0	11	0	11	0	11
212			min	0	1	0	8	-.003	4	0	1	0	1	0	1
213		2	max	1139.489	1	25.24	4	7.931	2	.11	4	.326	3	.114	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 Mome...	LC
214			min	-1180.699	2	-415.235	10	-116.894	5	-.325	7	-.321	4	-.172	1
215		3	max	1154.124	1	12.143	4	-.519	2	.11	4	.276	3	.491	10
216			min	-1195.334	2	-428.332	10	-119.584	8	-.325	7	-.39	4	-.037	1
217		4	max	1839.361	1	319.29	2	311.22	2	.178	10	.202	3	.605	3
218			min	-1559.068	2	-235.516	1	-190.513	1	-.08	1	-.364	4	-.308	4
219		5	max	1109.841	1	59.171	2	184.836	4	0	7	.073	2	.026	7
220			min	-921.172	2	-60.12	1	-133.43	3	0	4	-.062	1	-.005	4
221	M23	1	max	947.221	2	53.675	2	71.837	3	0	2	.078	4	.025	7
222			min	-760.407	1	-38.903	1	-113.964	4	0	5	-.071	3	-.004	4
223		2	max	1541.674	3	254.555	2	425.264	3	.143	10	.466	3	.637	1
224			min	-1249.927	4	-307.609	1	-526.016	4	-.125	1	-.602	4	-.391	2
225		3	max	1138.505	3	410.566	5	256.609	4	.607	7	.196	3	.452	5
226			min	-1187.281	4	17.725	2	-191.069	3	.122	4	-.266	4	-.206	2
227		4	max	1123.871	3	379.753	5	231.261	4	.607	7	.112	4	.125	4
228			min	-1172.646	4	4.628	2	-165.721	3	.122	4	-.081	3	-.238	7
229		5	max	0	11	.003	7	0	10	0	11	0	11	0	11
230			min	0	1	-.023	1	-.009	3	0	1	0	1	0	1
231	M24	1	max	-90.072	3	335.828	2	501.212	2	0	1	.113	8	.053	3
232			min	-1821.781	8	-330.698	1	-408.521	1	0	9	-.028	3	-.054	4
233		2	max	-90.072	3	335.828	2	501.212	2	0	1	.114	8	.047	3
234			min	-1821.781	8	-330.698	1	-408.521	1	0	9	-.019	3	-.049	4
235		3	max	-90.072	3	335.828	2	501.212	2	0	1	.116	8	.041	3
236			min	-1821.781	8	-330.698	1	-408.521	1	0	9	-.009	3	-.043	4
237		4	max	-90.072	3	335.828	2	501.212	2	0	1	.118	8	.036	3
238			min	-1821.781	8	-330.698	1	-408.521	1	0	9	-.001	1	-.038	4
239		5	max	-90.072	3	335.828	2	501.212	2	0	1	.123	6	.038	1
240			min	-1821.781	8	-330.698	1	-408.521	1	0	9	-.012	1	-.041	2
241	M25	1	max	1713.948	7	72.198	1	211.513	3	0	4	.15	5	.082	8
242			min	-514.53	4	-104.231	2	-257.571	4	0	7	.018	4	-.003	3
243		2	max	1713.948	7	72.198	1	211.513	3	0	4	.149	7	.083	8
244			min	-514.53	4	-104.231	2	-257.571	4	0	7	.011	4	-.002	3
245		3	max	1713.948	7	72.198	1	211.513	3	0	4	.148	7	.084	8
246			min	-514.53	4	-104.231	2	-257.571	4	0	7	.004	4	-.002	3
247		4	max	1713.948	7	72.198	1	211.513	3	0	4	.147	7	.086	8
248			min	-514.53	4	-104.231	2	-257.571	4	0	7	-.002	4	0	3
249		5	max	1713.948	7	72.198	1	211.513	3	0	4	.146	7	.087	8
250			min	-514.53	4	-104.231	2	-257.571	4	0	7	-.009	4	0	3
251	M26	1	max	-253.357	3	174.494	10	85.076	3	0	4	.085	8	.161	8
252			min	-2493.423	8	-17.34	1	-118.365	4	0	6	.012	3	.008	3
253		2	max	-253.357	3	174.494	10	85.076	3	0	4	.083	8	.159	8
254			min	-2493.423	8	-17.34	1	-118.365	4	0	6	.014	3	.008	3
255		3	max	-253.357	3	174.494	10	85.076	3	0	4	.082	8	.157	8
256			min	-2493.423	8	-17.34	1	-118.365	4	0	6	.017	3	.007	3
257		4	max	-253.357	3	174.494	10	85.076	3	0	4	.08	8	.155	8
258			min	-2493.423	8	-17.34	1	-118.365	4	0	6	.016	1	.007	3
259		5	max	-253.357	3	174.494	10	85.076	3	0	4	.078	6	.153	8
260			min	-2493.423	8	-17.34	1	-118.365	4	0	6	.015	1	.006	3
261	M27	1	max	0	11	.007	1	.006	3	0	11	0	11	0	11
262			min	0	1	0	8	0	2	0	1	0	1	0	1
263		2	max	1322.293	4	3.501	2	45.228	3	.072	3	.518	4	.108	3
264			min	-1340.446	3	-365.798	5	-118.254	4	-.328	8	-.51	3	-.187	9
265		3	max	1336.927	4	-9.596	2	19.88	3	.072	3	.355	4	.483	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 Mome...	LC
266			min	-1355.081	3	-396.611	5	-113.25	6	-.328	8	-.46	3	-.113	2
267		4	max	1795.834	4	336.648	1	427.32	3	.168	1	.301	4	.711	1
268			min	-1479.765	3	-257.239	2	-310.241	4	-.109	2	-.457	3	-.415	2
269		5	max	1125.254	2	45.41	1	141.47	2	0	5	.076	3	.026	8
270			min	-919.632	1	-48.862	4	-91.108	1	0	2	-.066	4	-.003	3
271	M28	1	max	1118.79	1	70.248	1	113.268	4	0	3	.091	2	.026	8
272			min	-946.254	2	-55.823	2	-157.242	3	0	8	-.083	1	-.004	3
273		2	max	2034.311	1	264.287	1	399.717	1	.124	1	.416	1	.574	4
274			min	-1757.476	2	-322.307	2	-503.46	2	-.132	9	-.555	2	-.31	3
275		3	max	1296.009	1	420.13	8	282.923	2	.621	8	.235	1	.476	9
276			min	-1356.836	2	24.489	3	-212.757	1	.139	2	-.309	2	-.123	3
277		4	max	1281.375	1	389.317	8	274.474	2	.621	8	.123	2	.153	2
278			min	-1342.201	2	11.392	3	-204.307	1	.139	2	-.088	1	-.261	1
279		5	max	0	11	.003	7	0	7	0	11	0	11	0	11
280			min	0	1	-.02	2	-.009	1	0	1	0	1	0	1
281	M29	1	max	-83.787	4	352.495	1	599.729	1	0	3	.107	6	.047	1
282			min	-1847.512	7	-354.551	2	-522.92	2	0	6	-.008	1	-.048	2
283		2	max	-83.787	4	352.495	1	599.729	1	0	3	.11	7	.037	1
284			min	-1847.512	7	-354.551	2	-522.92	2	0	6	-.004	4	-.039	2
285		3	max	-83.787	4	352.495	1	599.729	1	0	3	.115	7	.039	4
286			min	-1847.512	7	-354.551	2	-522.92	2	0	6	-.013	4	-.04	3
287		4	max	-83.787	4	352.495	1	599.729	1	0	3	.12	7	.045	4
288			min	-1847.512	7	-354.551	2	-522.92	2	0	6	-.023	4	-.046	3
289		5	max	-83.787	4	352.495	1	599.729	1	0	3	.126	7	.051	4
290			min	-1847.512	7	-354.551	2	-522.92	2	0	6	-.032	4	-.052	3
291	M30	1	max	1745.307	8	76.002	2	220.334	1	0	5	.158	8	.082	7
292			min	-374.5	3	-108.778	1	-272.267	2	0	1	.003	3	-.001	4
293		2	max	1745.307	8	76.002	2	220.334	1	0	5	.154	8	.084	7
294			min	-374.5	3	-108.778	1	-272.267	2	0	1	.008	3	-.002	4
295		3	max	1745.307	8	76.002	2	220.334	1	0	5	.15	8	.085	7
296			min	-374.5	3	-108.778	1	-272.267	2	0	1	.013	2	-.003	4
297		4	max	1745.307	8	76.002	2	220.334	1	0	5	.149	5	.087	7
298			min	-374.5	3	-108.778	1	-272.267	2	0	1	.006	2	-.004	4
299		5	max	1745.307	8	76.002	2	220.334	1	0	5	.148	5	.088	7
300			min	-374.5	3	-108.778	1	-272.267	2	0	1	-.002	2	-.005	4
301	M31	1	max	-172.639	4	78.235	5	77.623	9	0	8	.085	7	.162	7
302			min	-2515.665	7	-122.409	9	-93.704	4	0	4	.018	4	.002	4
303		2	max	-172.639	4	78.235	5	77.623	9	0	8	.084	7	.16	7
304			min	-2515.665	7	-122.409	9	-93.704	4	0	4	.016	4	.002	4
305		3	max	-172.639	4	78.235	5	77.623	9	0	8	.083	7	.158	7
306			min	-2515.665	7	-122.409	9	-93.704	4	0	4	.013	4	.002	4
307		4	max	-172.639	4	78.235	5	77.623	9	0	8	.082	7	.156	7
308			min	-2515.665	7	-122.409	9	-93.704	4	0	4	.011	4	.002	4
309		5	max	-172.639	4	78.235	5	77.623	9	0	8	.081	7	.155	7
310			min	-2515.665	7	-122.409	9	-93.704	4	0	4	.009	4	.002	4
311	M32	1	max	518.478	3	22.939	9	1196.114	3	.041	3	.332	4	.186	3
312			min	-612.144	4	-340.693	5	-921.696	4	-.039	4	-.411	3	-.222	4
313		2	max	518.478	3	22.939	9	1196.114	3	.041	3	.295	4	.188	3
314			min	-612.144	4	-340.693	5	-921.696	4	-.039	4	-.363	3	-.215	4
315		3	max	518.478	3	22.939	9	1196.114	3	.041	3	.258	4	.19	3
316			min	-612.144	4	-340.693	5	-921.696	4	-.039	4	-.315	3	-.208	4
317		4	max	518.478	3	22.939	9	1196.114	3	.041	3	.221	4	.192	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 Mome...	LC
318			min	-612.144	4	-340.693	5	-921.696	4	-.039	4	-.268	3	-.201	4
319		5	max	518.478	3	22.939	9	1196.114	3	.041	3	.184	4	.194	3
320			min	-612.144	4	-340.693	5	-921.696	4	-.039	4	-.22	3	-.195	4
321	M33	1	max	282.234	3	407.058	8	653.678	3	.035	3	.298	4	.401	5
322			min	-378.593	4	-.022	9	-869.944	4	-.042	4	-.241	3	.062	9
323		2	max	282.234	3	407.058	8	653.678	3	.035	3	.264	4	.385	5
324			min	-378.593	4	-.022	9	-869.944	4	-.042	4	-.215	3	.062	9
325		3	max	282.234	3	407.058	8	653.678	3	.035	3	.229	4	.369	5
326			min	-378.593	4	-.022	9	-869.944	4	-.042	4	-.188	3	.062	9
327		4	max	282.234	3	407.058	8	653.678	3	.035	3	.194	4	.353	5
328			min	-378.593	4	-.022	9	-869.944	4	-.042	4	-.162	3	.062	9
329		5	max	282.234	3	407.058	8	653.678	3	.035	3	.159	4	.336	5
330			min	-378.593	4	-.022	9	-869.944	4	-.042	4	-.136	3	.062	9
331	M34	1	max	733.395	1	27.427	10	1359.053	1	.042	1	.212	2	.27	1
332			min	-843.232	2	-575.73	9	-1092.45	2	-.041	2	-.245	1	-.3	9
333		2	max	734.405	1	27.083	10	1359.636	1	.042	1	.151	2	.271	1
334			min	-844.243	2	-576.074	9	-1093.033	2	-.041	2	-.169	1	-.267	2
335		3	max	735.416	1	26.739	10	1360.22	1	.042	1	.089	2	.271	1
336			min	-845.253	2	-576.418	9	-1093.617	2	-.041	2	-.093	1	-.254	2
337		4	max	736.426	1	26.395	10	1360.803	1	.042	1	.028	2	.272	1
338			min	-846.264	2	-576.762	9	-1094.2	2	-.041	2	-.016	1	-.241	2
339		5	max	737.437	1	26.051	10	1361.387	1	.042	1	.06	1	.273	1
340			min	-847.275	2	-577.106	9	-1094.784	2	-.041	2	-.034	2	-.227	2
341	M35	1	max	733.392	1	27.428	10	1354.8	1	.042	1	.388	2	.269	1
342			min	-843.231	2	-575.731	9	-1096.868	2	-.041	2	-.462	1	-.392	9
343		2	max	733.392	1	27.428	10	1354.8	1	.042	1	.344	2	.269	1
344			min	-843.231	2	-575.731	9	-1096.868	2	-.041	2	-.408	1	-.369	9
345		3	max	733.392	1	27.428	10	1354.8	1	.042	1	.3	2	.269	1
346			min	-843.231	2	-575.731	9	-1096.868	2	-.041	2	-.354	1	-.346	9
347		4	max	733.392	1	27.428	10	1354.8	1	.042	1	.256	2	.27	1
348			min	-843.231	2	-575.731	9	-1096.868	2	-.041	2	-.299	1	-.323	9
349		5	max	733.392	1	27.428	10	1354.8	1	.042	1	.212	2	.27	1
350			min	-843.231	2	-575.731	9	-1096.868	2	-.041	2	-.245	1	-.3	9
351	M36	1	max	487.016	1	573.888	9	630.521	1	.033	1	.298	2	.418	6
352			min	-598.218	2	-3.068	10	-856.603	2	-.041	2	-.238	1	.092	10
353		2	max	487.016	1	573.888	9	630.521	1	.033	1	.264	2	.4	6
354			min	-598.218	2	-3.068	10	-856.603	2	-.041	2	-.212	1	.09	2
355		3	max	487.016	1	573.888	9	630.521	1	.033	1	.23	2	.383	6
356			min	-598.218	2	-3.068	10	-856.603	2	-.041	2	-.187	1	.08	2
357		4	max	487.016	1	573.888	9	630.521	1	.033	1	.195	2	.365	6
358			min	-598.218	2	-3.068	10	-856.603	2	-.041	2	-.162	1	.07	2
359		5	max	487.016	1	573.888	9	630.521	1	.033	1	.161	2	.347	8
360			min	-598.218	2	-3.068	10	-856.603	2	-.041	2	-.137	1	.06	2
361	M37	1	max	535.522	4	326.034	10	991.023	4	.029	4	.135	3	.17	4
362			min	-637.136	3	-379.618	7	-693.578	3	-.027	3	-.174	4	-.169	3
363		2	max	536.532	4	325.69	10	992.773	4	.029	4	.096	3	.169	4
364			min	-638.146	3	-380.577	7	-695.329	3	-.027	3	-.118	4	-.155	3
365		3	max	537.543	4	325.346	10	994.524	4	.029	4	.057	3	.168	4
366			min	-639.157	3	-381.535	7	-697.079	3	-.027	3	-.062	4	-.14	3
367		4	max	538.554	4	325.002	10	996.274	4	.029	4	.026	1	.167	4
368			min	-640.168	3	-382.493	7	-698.829	3	-.027	3	-.014	2	-.125	3
369		5	max	539.564	4	324.657	10	998.025	4	.029	4	.05	4	.166	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 Mome...	LC
370			min	-641.178	3	-383.452	7	-700.58	3	-.027	3	-.022	3	-.11	3
371	M38	1	max	535.523	4	326.051	10	988.859	4	.029	4	.246	3	.202	10
372			min	-637.139	3	-379.621	7	-695.708	3	-.027	3	-.332	4	-.211	3
373		2	max	535.523	4	326.051	10	988.859	4	.029	4	.218	3	.189	10
374			min	-637.139	3	-379.621	7	-695.708	3	-.027	3	-.292	4	-.201	3
375		3	max	535.523	4	326.051	10	988.859	4	.029	4	.191	3	.176	10
376			min	-637.139	3	-379.621	7	-695.708	3	-.027	3	-.253	4	-.19	3
377		4	max	535.523	4	326.051	10	988.859	4	.029	4	.163	3	.171	4
378			min	-637.139	3	-379.621	7	-695.708	3	-.027	3	-.213	4	-.18	3
379		5	max	535.523	4	326.051	10	988.859	4	.029	4	.135	3	.17	4
380			min	-637.139	3	-379.621	7	-695.708	3	-.027	3	-.174	4	-.169	3
381	M39	1	max	321.076	4	446.349	7	400.935	2	.025	2	.202	1	.434	7
382			min	-429.336	3	-327.215	10	-598.925	1	-.033	1	-.15	2	-.227	10
383		2	max	321.076	4	446.349	7	400.935	2	.025	2	.178	1	.416	7
384			min	-429.336	3	-327.215	10	-598.925	1	-.033	1	-.134	2	-.214	10
385		3	max	321.076	4	446.349	7	400.935	2	.025	2	.154	1	.398	7
386			min	-429.336	3	-327.215	10	-598.925	1	-.033	1	-.118	2	-.201	10
387		4	max	321.076	4	446.349	7	400.935	2	.025	2	.13	1	.38	7
388			min	-429.336	3	-327.215	10	-598.925	1	-.033	1	-.102	2	-.188	10
389		5	max	321.076	4	446.349	7	400.935	2	.025	2	.106	1	.363	7
390			min	-429.336	3	-327.215	10	-598.925	1	-.033	1	-.086	2	-.175	10
391	M40	1	max	482.962	1	4.446	10	629.925	1	.033	1	.039	6	.255	5
392			min	-594.176	2	-572.523	9	-851.92	2	-.041	2	-.005	1	.005	2
393		2	max	483.972	1	4.102	10	630.508	1	.033	1	.03	1	.278	8
394			min	-595.187	2	-572.867	9	-852.503	2	-.041	2	-.017	2	.019	2
395		3	max	484.983	1	3.758	10	631.092	1	.033	1	.066	1	.301	8
396			min	-596.197	2	-573.211	9	-853.087	2	-.041	2	-.065	2	.033	2
397		4	max	485.994	1	3.414	10	631.675	1	.033	1	.101	1	.324	8
398			min	-597.208	2	-573.555	9	-853.67	2	-.041	2	-.113	2	.047	2
399		5	max	487.004	1	3.07	10	632.259	1	.033	1	.137	1	.347	8
400			min	-598.219	2	-573.899	9	-854.254	2	-.041	2	-.161	2	.06	2
401	M41	1	max	541.904	3	15.741	9	887.911	3	.017	4	.24	4	.168	3
402			min	-521.16	4	-366.309	8	-851.278	4	-.025	3	-.25	3	-.123	4
403		2	max	541.904	3	14.555	9	887.911	3	.017	4	.119	4	.171	3
404			min	-521.16	4	-369.704	8	-851.278	4	-.025	3	-.124	3	-.094	4
405		3	max	541.904	3	13.37	9	887.911	3	.017	4	.001	3	.175	3
406			min	-521.16	4	-373.103	8	-851.325	4	-.025	3	0	4	-.064	4
407		4	max	541.904	3	12.183	9	887.849	3	.017	4	.127	3	.199	7
408			min	-521.16	4	-376.498	8	-851.325	4	-.025	3	-.121	4	-.034	4
409		5	max	541.904	3	10.997	9	887.849	3	.017	4	.252	3	.25	5
410			min	-521.16	4	-379.893	8	-851.325	4	-.025	3	-.241	4	-.004	4
411	M42	1	max	282.239	3	1.4	9	654.667	3	.035	3	.039	8	.245	5
412			min	-378.601	4	-403.204	8	-868.504	4	-.042	4	-.011	3	.029	4
413		2	max	282.239	3	1.056	9	654.667	3	.035	3	.026	3	.268	5
414			min	-378.601	4	-404.162	8	-868.504	4	-.042	4	-.013	4	.039	4
415		3	max	282.239	3	.712	9	654.667	3	.035	3	.063	3	.291	5
416			min	-378.601	4	-405.12	8	-868.504	4	-.042	4	-.062	4	.05	4
417		4	max	282.239	3	.368	9	654.667	3	.035	3	.099	3	.314	5
418			min	-378.601	4	-406.079	8	-868.504	4	-.042	4	-.111	4	.059	2
419		5	max	282.239	3	.024	9	654.667	3	.035	3	.136	3	.336	5
420			min	-378.601	4	-407.037	8	-868.504	4	-.042	4	-.159	4	.062	9
421	M43	1	max	624.371	4	326.508	10	650.051	4	.014	3	.169	3	.136	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 Mome...	LC
422			min	-614.614	3	-408.987	7	-597.746	3	-.023	4	-.184	4	-.085	3
423		2	max	626.912	4	325.324	10	654.452	4	.014	3	.085	3	.132	4
424			min	-617.155	3	-412.379	7	-602.147	3	-.023	4	-.092	4	-.045	3
425		3	max	629.453	4	324.139	10	658.854	4	.014	3	.001	4	.158	8
426			min	-619.696	3	-415.771	7	-606.549	3	-.023	4	0	3	-.013	10
427		4	max	631.994	4	322.954	10	663.255	4	.014	3	.094	4	.207	6
428			min	-622.237	3	-419.163	7	-610.95	3	-.023	4	-.087	3	-.059	10
429		5	max	634.535	4	321.77	10	667.656	4	.014	3	.188	4	.263	7
430			min	-624.778	3	-422.555	7	-615.351	3	-.023	4	-.173	3	-.104	10
431	M44	1	max	317.033	4	328.571	10	403.182	2	.025	2	.037	5	.263	7
432			min	-425.294	3	-442.479	7	-601.087	1	-.033	1	-.005	2	-.101	10
433		2	max	318.043	4	328.227	10	402.599	2	.025	2	.029	4	.288	7
434			min	-426.304	3	-443.437	7	-600.504	1	-.033	1	-.016	3	-.12	10
435		3	max	319.054	4	327.883	10	402.016	2	.025	2	.044	4	.312	7
436			min	-427.315	3	-444.395	7	-599.92	1	-.033	1	-.042	3	-.138	10
437		4	max	320.065	4	327.539	10	401.432	2	.025	2	.063	2	.337	7
438			min	-428.325	3	-445.354	7	-599.337	1	-.033	1	-.073	1	-.157	10
439		5	max	321.075	4	327.194	10	400.849	2	.025	2	.086	2	.363	7
440			min	-429.336	3	-446.312	7	-598.753	1	-.033	1	-.106	1	-.175	10
441	M45	1	max	807.639	1	21.579	10	956.804	1	.024	2	.259	2	.229	1
442			min	-804.419	2	-566.351	9	-922.899	2	-.033	1	-.269	1	-.188	2
443		2	max	810.18	1	20.393	10	958.271	1	.024	2	.129	2	.228	1
444			min	-806.96	2	-567.536	9	-924.366	2	-.033	1	-.133	1	-.149	2
445		3	max	812.721	1	19.208	10	959.738	1	.024	2	.002	1	.226	1
446			min	-809.501	2	-568.722	9	-925.833	2	-.033	1	-.002	2	-.11	2
447		4	max	815.262	1	18.022	10	961.205	1	.024	2	.138	1	.224	1
448			min	-812.042	2	-569.907	9	-927.3	2	-.033	1	-.133	2	-.071	2
449		5	max	817.803	1	16.837	10	962.672	1	.024	2	.274	1	.265	5
450			min	-814.583	2	-571.093	9	-928.767	2	-.033	1	-.264	2	-.032	2
451	M46	1	max	1064.754	5	4166.321	4	3530.046	1	.694	4	.338	1	.345	3
452			min	106.192	2	-4167.851	3	-4841.312	2	-.696	3	-.398	2	-.345	4
453		2	max	1064.754	5	4166.321	4	3530.046	1	.694	4	.558	1	.605	3
454			min	106.192	2	-4167.851	3	-4841.312	2	-.696	3	-.7	2	-.605	4
455		3	max	1064.754	5	4166.321	4	3530.046	1	.694	4	.778	1	.865	3
456			min	106.192	2	-4167.851	3	-4841.312	2	-.696	3	-1.002	2	-.865	4
457		4	max	1064.754	5	4166.321	4	3530.046	1	.694	4	.999	1	1.126	3
458			min	106.192	2	-4167.851	3	-4841.312	2	-.696	3	-1.304	2	-1.125	4
459		5	max	1064.754	5	4166.321	4	3530.046	1	.694	4	1.219	1	1.386	3
460			min	106.192	2	-4167.851	3	-4841.312	2	-.696	3	-1.606	2	-1.385	4
461	M47	1	max	11.055	1	442.256	4	-326.572	2	.149	4	.071	5	.024	3
462			min	-.452	2	-440.499	3	-1060.669	5	-.149	3	-.014	2	-.024	4
463		2	max	11.055	1	442.256	4	-326.572	2	.149	4	.031	1	.051	3
464			min	-.452	2	-440.499	3	-1060.669	5	-.149	3	-.034	2	-.051	4
465		3	max	11.055	1	442.256	4	-326.572	2	.149	4	.004	1	.079	3
466			min	-.452	2	-440.499	3	-1060.669	5	-.149	3	-.075	6	-.079	4
467		4	max	11.055	1	442.256	4	-326.572	2	.149	4	-.022	1	.106	3
468			min	-.452	2	-440.499	3	-1060.669	5	-.149	3	-.14	6	-.106	4
469		5	max	11.055	1	442.256	4	-326.572	2	.149	4	-.049	1	.134	3
470			min	-.452	2	-440.499	3	-1060.669	5	-.149	3	-.205	6	-.134	4
471	M48	1	max	-3.567	2	95.328	3	-296.532	2	.082	4	.064	5	.005	4
472			min	-22.743	5	-94.121	4	-1101.034	5	-.083	3	-.012	2	-.005	3
473		2	max	-3.567	2	95.328	3	-296.532	2	.082	4	.022	1	.011	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 Mome...	LC
474			min	-22.743	5	-94.121	4	-1101.034	5	-.083	3	-.03	2	-.011	3
475		3	max	-3.567	2	95.328	3	-296.532	2	.082	4	-.008	1	.017	4
476			min	-22.743	5	-94.121	4	-1101.034	5	-.083	3	-.083	6	-.017	3
477		4	max	-3.567	2	95.328	3	-296.532	2	.082	4	-.038	1	.023	4
478			min	-22.743	5	-94.121	4	-1101.034	5	-.083	3	-.149	6	-.023	3
479		5	max	-3.567	2	95.328	3	-296.532	2	.082	4	-.068	1	.029	4
480			min	-22.743	5	-94.121	4	-1101.034	5	-.083	3	-.215	6	-.029	3
481	M49	1	max	33.829	5	195.064	3	-259.945	2	.035	10	.06	5	.013	4
482			min	4.971	2	-194.6	4	-1090.49	5	-.037	9	-.009	2	-.013	3
483		2	max	33.829	5	195.064	3	-259.945	2	.035	10	.016	1	.026	4
484			min	4.971	2	-194.6	4	-1090.49	5	-.037	9	-.025	2	-.026	3
485		3	max	33.829	5	195.064	3	-259.945	2	.035	10	-.015	1	.038	4
486			min	4.971	2	-194.6	4	-1090.49	5	-.037	9	-.083	6	-.038	3
487		4	max	33.829	5	195.064	3	-259.945	2	.035	10	-.047	1	.05	4
488			min	4.971	2	-194.6	4	-1090.49	5	-.037	9	-.147	6	-.05	3
489		5	max	33.829	5	195.064	3	-259.945	2	.035	10	-.07	10	.062	4
490			min	4.971	2	-194.6	4	-1090.49	5	-.037	9	-.213	5	-.062	3
491	M50	1	max	1983.521	5	1900.31	3	-252.754	1	.032	4	.023	1	.423	3
492			min	142.59	2	-1900.848	4	-759.804	6	-.033	3	-.02	2	-.423	4
493		2	max	1983.521	5	1900.31	3	-252.754	1	.032	4	.007	1	.305	3
494			min	142.59	2	-1900.848	4	-759.804	6	-.033	3	-.047	6	-.305	4
495		3	max	1983.521	5	1900.31	3	-252.754	1	.032	4	-.008	1	.186	3
496			min	142.59	2	-1900.848	4	-759.804	6	-.033	3	-.095	6	-.186	4
497		4	max	1983.521	5	1900.31	3	-252.754	1	.032	4	-.024	1	.15	10
498			min	142.59	2	-1900.848	4	-759.804	6	-.033	3	-.142	6	-.158	9
499		5	max	1983.521	5	1900.31	3	-252.754	1	.032	4	-.04	1	.127	10
500			min	142.59	2	-1900.848	4	-759.804	6	-.033	3	-.189	6	-.137	9
501	M51	1	max	3634.049	7	488.83	4	2994.348	3	-.001	2	.338	4	.078	4
502			min	-621.35	4	-1877.965	7	-2078.34	4	-.022	5	-.476	3	-.301	7
503		2	max	3634.049	7	488.83	4	2994.348	3	-.001	2	.254	4	.058	4
504			min	-621.35	4	-1877.965	7	-2078.34	4	-.022	5	-.356	3	-.226	7
505		3	max	3634.049	7	488.83	4	2994.348	3	-.001	2	.171	4	.039	4
506			min	-621.35	4	-1877.965	7	-2078.34	4	-.022	5	-.236	3	-.15	7
507		4	max	3634.049	7	488.83	4	2994.348	3	-.001	2	.088	4	.019	4
508			min	-621.35	4	-1877.965	7	-2078.34	4	-.022	5	-.116	3	-.075	7
509		5	max	3634.049	7	488.83	4	2994.348	3	-.001	2	.013	5	.001	3
510			min	-621.35	4	-1877.965	7	-2078.34	4	-.022	5	0	2	0	4
511	M52	1	max	3618.9	8	417.625	3	2076.77	3	.021	5	.474	4	.067	3
512			min	-501.772	3	-1873.235	8	-2981.442	4	.003	2	-.338	3	-.3	8
513		2	max	3618.9	8	417.625	3	2076.77	3	.021	5	.354	4	.05	3
514			min	-501.772	3	-1873.235	8	-2981.442	4	.003	2	-.254	3	-.225	8
515		3	max	3618.9	8	417.625	3	2076.77	3	.021	5	.235	4	.033	3
516			min	-501.772	3	-1873.235	8	-2981.442	4	.003	2	-.171	3	-.15	8
517		4	max	3618.9	8	417.625	3	2076.77	3	.021	5	.115	4	.016	3
518			min	-501.772	3	-1873.235	8	-2981.442	4	.003	2	-.088	3	-.075	8
519		5	max	3618.9	8	417.625	3	2076.77	3	.021	5	-.002	2	.001	4
520			min	-501.772	3	-1873.235	8	-2981.442	4	.003	2	-.013	5	0	3
521	M53	1	max	2981.214	6	-206.045	1	824.528	7	-.002	2	.055	4	-.03	1
522			min	319.231	1	-1884.866	6	-304.483	4	-.042	5	-.116	3	-.295	6
523		2	max	2981.214	6	-206.045	1	824.528	7	-.002	2	.043	4	-.022	1
524			min	319.231	1	-1884.866	6	-304.483	4	-.042	5	-.085	3	-.221	6
525		3	max	2981.214	6	-206.045	1	824.528	7	-.002	2	.031	4	-.014	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 Mome...	LC
526			min	319.231	1	-1884.866	6	-304.483	4	-.042	5	-.053	3	-.147	6
527		4	max	2981.214	6	-206.045	1	824.528	7	-.002	2	.019	4	-.006	1
528			min	319.231	1	-1884.866	6	-304.483	4	-.042	5	-.021	3	-.072	6
529		5	max	2981.214	6	-206.045	1	824.528	7	-.002	2	.026	5	.003	7
530			min	319.231	1	-1884.866	6	-304.483	4	-.042	5	.001	2	0	4
531	M54	1	max	3003.282	6	-159.287	1	309.5	3	.041	5	.116	4	-.023	1
532			min	223.659	1	-1894.945	6	-803.396	8	.006	2	-.056	3	-.297	6
533		2	max	3003.282	6	-159.287	1	309.5	3	.041	5	.085	4	-.017	1
534			min	223.659	1	-1894.945	6	-803.396	8	.006	2	-.044	3	-.222	6
535		3	max	3003.282	6	-159.287	1	309.5	3	.041	5	.053	4	-.011	1
536			min	223.659	1	-1894.945	6	-803.396	8	.006	2	-.032	3	-.147	6
537		4	max	3003.282	6	-159.287	1	309.5	3	.041	5	.021	4	-.004	1
538			min	223.659	1	-1894.945	6	-803.396	8	.006	2	-.019	3	-.072	6
539		5	max	3003.282	6	-159.287	1	309.5	3	.041	5	-.003	2	.003	8
540			min	223.659	1	-1894.945	6	-803.396	8	.006	2	-.025	5	0	3
541	M55	1	max	859.719	8	-152.756	3	635.212	7	-.001	2	.023	4	-.023	3
542			min	195.864	3	-581.248	8	-108.62	4	-.041	5	-.074	7	-.088	8
543		2	max	859.719	8	-152.756	3	635.212	7	-.001	2	.019	4	-.017	3
544			min	195.864	3	-581.248	8	-108.62	4	-.041	5	-.049	7	-.065	8
545		3	max	859.719	8	-152.756	3	635.212	7	-.001	2	.014	4	-.011	3
546			min	195.864	3	-581.248	8	-108.62	4	-.041	5	-.028	3	-.043	8
547		4	max	859.719	8	-152.756	3	635.212	7	-.001	2	.01	4	-.005	3
548			min	195.864	3	-581.248	8	-108.62	4	-.041	5	-.008	3	-.02	8
549		5	max	859.719	8	-152.756	3	635.212	7	-.001	2	.026	5	.002	5
550			min	195.864	3	-581.248	8	-108.62	4	-.041	5	0	2	0	2
551	M56	1	max	862.161	7	-144.97	4	121.985	3	.04	5	.071	8	-.021	4
552			min	183.93	4	-582.17	7	-616.411	8	.005	2	-.025	3	-.088	7
553		2	max	862.161	7	-144.97	4	121.985	3	.04	5	.049	4	-.016	4
554			min	183.93	4	-582.17	7	-616.411	8	.005	2	-.02	3	-.065	7
555		3	max	862.161	7	-144.97	4	121.985	3	.04	5	.029	4	-.01	4
556			min	183.93	4	-582.17	7	-616.411	8	.005	2	-.015	3	-.043	7
557		4	max	862.161	7	-144.97	4	121.985	3	.04	5	.009	2	-.004	4
558			min	183.93	4	-582.17	7	-616.411	8	.005	2	-.011	1	-.02	7
559		5	max	862.161	7	-144.97	4	121.985	3	.04	5	-.003	2	.002	5
560			min	183.93	4	-582.17	7	-616.411	8	.005	2	-.025	5	0	2
561	M57	1	max	308.363	1	558.713	6	512.908	7	-.001	2	.002	10	.089	6
562			min	-841.361	6	-192.315	1	21.979	10	-.04	5	-.054	7	-.026	1
563		2	max	308.363	1	558.713	6	512.908	7	-.001	2	.002	10	.068	6
564			min	-841.361	6	-192.315	1	21.979	10	-.04	5	-.034	7	-.019	1
565		3	max	308.363	1	558.713	6	512.908	7	-.001	2	.003	10	.047	6
566			min	-841.361	6	-192.315	1	21.979	10	-.04	5	-.015	6	-.012	1
567		4	max	308.363	1	558.713	6	512.908	7	-.001	2	.01	1	.025	6
568			min	-841.361	6	-192.315	1	21.979	10	-.04	5	-.006	2	-.004	1
569		5	max	308.363	1	558.713	6	512.908	7	-.001	2	.026	5	.005	5
570			min	-841.361	6	-192.315	1	21.979	10	-.04	5	0	2	0	2
571	M58	1	max	327.006	1	561.205	6	-15.73	9	.038	5	.052	6	.09	6
572			min	-843.231	6	-202.419	1	-495.776	8	.005	2	-.002	9	-.028	1
573		2	max	327.006	1	561.205	6	-15.73	9	.038	5	.033	6	.068	6
574			min	-843.231	6	-202.419	1	-495.776	8	.005	2	-.003	9	-.02	1
575		3	max	327.006	1	561.205	6	-15.73	9	.038	5	.015	6	.047	6
576			min	-843.231	6	-202.419	1	-495.776	8	.005	2	-.005	1	-.013	1
577		4	max	327.006	1	561.205	6	-15.73	9	.038	5	.005	2	.025	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 Mome...	LC
578			min	-843.231	6	-202.419	1	-495.776	8	.005	2	-.009	1	-.005	1
579		5	max	327.006	1	561.205	6	-15.73	9	.038	5	-.003	2	.005	5
580			min	-843.231	6	-202.419	1	-495.776	8	.005	2	-.025	5	0	2
581	M59	1	max	1357.62	1	6261.703	6	509.019	7	-.004	10	-.002	1	2.887	5
582			min	-7577.036	6	-84.585	1	67.185	4	-.027	5	-.077	6	.705	2
583		2	max	1357.62	1	6261.703	6	509.019	7	-.004	10	0	1	2.69	5
584			min	-7577.036	6	-84.585	1	67.185	4	-.027	5	-.058	6	.547	2
585		3	max	1357.62	1	6261.703	6	509.019	7	-.004	10	.003	1	2.494	5
586			min	-7577.036	6	-84.585	1	67.185	4	-.027	5	-.039	6	.389	2
587		4	max	1357.62	1	6261.703	6	509.019	7	-.004	10	.006	1	2.298	5
588			min	-7577.036	6	-84.585	1	67.185	4	-.027	5	-.02	6	.232	2
589		5	max	1357.62	1	6261.703	6	509.019	7	-.004	10	.008	1	2.102	5
590			min	-7577.036	6	-84.585	1	67.185	4	-.027	5	-.009	2	.074	2
591	M60	1	max	1534.518	1	6331.541	6	-34.575	1	.026	5	.077	6	2.869	5
592			min	-7582.953	6	-157.089	1	-503.535	6	.003	9	-.003	1	.741	2
593		2	max	1534.518	1	6331.541	6	-34.575	1	.026	5	.058	6	2.671	5
594			min	-7582.953	6	-157.089	1	-503.535	6	.003	9	-.004	1	.579	2
595		3	max	1534.518	1	6331.541	6	-34.575	1	.026	5	.039	6	2.473	5
596			min	-7582.953	6	-157.089	1	-503.535	6	.003	9	-.006	1	.417	2
597		4	max	1534.518	1	6331.541	6	-34.575	1	.026	5	.02	6	2.275	5
598			min	-7582.953	6	-157.089	1	-503.535	6	.003	9	-.007	1	.255	2
599		5	max	1534.518	1	6331.541	6	-34.575	1	.026	5	.009	2	2.077	5
600			min	-7582.953	6	-157.089	1	-503.535	6	.003	9	-.008	1	.093	2
601	M61	1	max	473.007	8	893.097	4	424.597	3	0	2	-.002	3	-.003	3
602			min	56.015	3	-839.973	3	-467.415	4	0	1	-.016	8	-.027	8
603		2	max	473.007	8	893.097	4	424.597	3	0	2	.007	3	.014	3
604			min	56.015	3	-839.973	3	-467.415	4	0	1	-.019	8	-.034	4
605		3	max	473.007	8	893.097	4	424.597	3	0	2	.016	3	.032	3
606			min	56.015	3	-839.973	3	-467.415	4	0	1	-.028	4	-.053	4
607		4	max	473.007	8	893.097	4	424.597	3	0	2	.025	3	.049	3
608			min	56.015	3	-839.973	3	-467.415	4	0	1	-.038	4	-.071	4
609		5	max	473.007	8	893.097	4	424.597	3	0	2	.033	3	.067	3
610			min	56.015	3	-839.973	3	-467.415	4	0	1	-.048	4	-.09	4
611	M62	1	max	59.235	8	138.287	3	217.116	4	0	4	-.004	3	-.006	3
612			min	6.115	3	-213.763	4	-175.035	3	0	3	-.031	8	-.053	8
613		2	max	59.235	8	138.287	3	217.116	4	0	4	-.008	3	-.009	3
614			min	6.115	3	-213.763	4	-175.035	3	0	3	-.029	8	-.05	8
615		3	max	59.235	8	138.287	3	217.116	4	0	4	-.008	4	-.012	3
616			min	6.115	3	-213.763	4	-175.035	3	0	3	-.027	5	-.047	8
617		4	max	59.235	8	138.287	3	217.116	4	0	4	-.004	4	-.013	10
618			min	6.115	3	-213.763	4	-175.035	3	0	3	-.027	7	-.044	6
619		5	max	59.235	8	138.287	3	217.116	4	0	4	0	4	-.012	10
620			min	6.115	3	-213.763	4	-175.035	3	0	3	-.027	7	-.042	7
621	M63	1	max	44.952	8	135.469	1	215.255	4	0	4	-.004	3	-.006	3
622			min	4.91	3	-177.059	2	-190.281	3	0	3	-.03	8	-.052	8
623		2	max	44.952	8	135.469	1	215.255	4	0	4	-.006	1	-.008	3
624			min	4.91	3	-177.059	2	-190.281	3	0	3	-.029	6	-.05	8
625		3	max	44.952	8	135.469	1	215.255	4	0	4	-.004	1	-.011	3
626			min	4.91	3	-177.059	2	-190.281	3	0	3	-.029	6	-.049	8
627		4	max	44.952	8	135.469	1	215.255	4	0	4	-.003	1	-.013	3
628			min	4.91	3	-177.059	2	-190.281	3	0	3	-.028	6	-.047	5
629		5	max	44.952	8	135.469	1	215.255	4	0	4	.001	4	-.01	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 Mome...	LC
630			min	4.91	3	-177.059	2	-190.281	3	0	3	-.028	7	-.046	5
631	M64	1	max	12.817	8	132.4	1	169.785	4	0	4	-.003	3	-.006	3
632			min	.759	3	-171.201	2	-146.334	3	0	3	-.029	8	-.051	8
633		2	max	12.817	8	132.4	1	169.785	4	0	4	-.005	1	-.008	3
634			min	.759	3	-171.201	2	-146.334	3	0	3	-.028	6	-.049	8
635		3	max	12.817	8	132.4	1	169.785	4	0	4	-.003	1	-.01	3
636			min	.759	3	-171.201	2	-146.334	3	0	3	-.028	6	-.047	8
637		4	max	12.817	8	132.4	1	169.785	4	0	4	-.002	1	-.012	3
638			min	.759	3	-171.201	2	-146.334	3	0	3	-.028	6	-.046	8
639		5	max	12.817	8	132.4	1	169.785	4	0	4	0	1	-.009	2
640			min	.759	3	-171.201	2	-146.334	3	0	3	-.027	6	-.045	5
641	M65	1	max	-40.604	3	338.932	1	264.342	1	0	4	-.002	3	-.003	3
642			min	-378.082	8	-238.984	2	-315.597	2	0	3	-.014	8	-.025	8
643		2	max	-40.604	3	338.932	1	264.342	1	0	4	.002	1	-.007	2
644			min	-378.082	8	-238.984	2	-315.597	2	0	3	-.017	6	-.027	5
645		3	max	-40.604	3	338.932	1	264.342	1	0	4	.008	1	-.002	2
646			min	-378.082	8	-238.984	2	-315.597	2	0	3	-.02	2	-.032	5
647		4	max	-40.604	3	338.932	1	264.342	1	0	4	.013	1	.003	2
648			min	-378.082	8	-238.984	2	-315.597	2	0	3	-.026	2	-.036	5
649		5	max	-40.604	3	338.932	1	264.342	1	0	4	.019	1	.008	2
650			min	-378.082	8	-238.984	2	-315.597	2	0	3	-.033	2	-.041	5
651	M66	1	max	1082.455	8	3251.112	4	4199.229	1	.559	2	.341	1	.359	3
652			min	140.218	3	-4336.329	3	-3549.191	2	-.565	1	-.312	2	-.312	4
653		2	max	1082.455	8	3251.112	4	4199.229	1	.559	2	.603	1	.63	3
654			min	140.218	3	-4336.329	3	-3549.191	2	-.565	1	-.533	2	-.515	4
655		3	max	1082.455	8	3251.112	4	4199.229	1	.559	2	.865	1	.9	3
656			min	140.218	3	-4336.329	3	-3549.191	2	-.565	1	-.755	2	-.718	4
657		4	max	1082.455	8	3251.112	4	4199.229	1	.559	2	1.127	1	1.171	3
658			min	140.218	3	-4336.329	3	-3549.191	2	-.565	1	-.976	2	-.92	4
659		5	max	1082.455	8	3251.112	4	4199.229	1	.559	2	1.389	1	1.442	3
660			min	140.218	3	-4336.329	3	-3549.191	2	-.565	1	-1.198	2	-1.123	4
661	M67	1	max	10.22	4	-143.248	1	599.433	5	.123	2	.013	1	.009	3
662			min	.495	3	-969.232	6	-75.157	2	-.125	1	-.038	6	-.063	8
663		2	max	10.22	4	-143.248	1	599.433	5	.123	2	.041	1	.029	3
664			min	.495	3	-969.232	6	-75.157	2	-.125	1	-.04	2	-.027	4
665		3	max	10.22	4	-143.248	1	599.433	5	.123	2	.07	1	.066	7
666			min	.495	3	-969.232	6	-75.157	2	-.125	1	-.044	2	-.005	4
667		4	max	10.22	4	-143.248	1	599.433	5	.123	2	.098	1	.124	6
668			min	.495	3	-969.232	6	-75.157	2	-.125	1	-.049	2	.013	1
669		5	max	10.22	4	-143.248	1	599.433	5	.123	2	.127	1	.184	6
670			min	.495	3	-969.232	6	-75.157	2	-.125	1	-.054	2	.022	1
671	M68	1	max	-3.937	3	-237.63	3	573.577	6	.069	2	.007	3	.005	3
672			min	-23.239	8	-978.703	8	93.352	1	-.071	1	-.033	8	-.056	8
673		2	max	-3.937	3	-237.63	3	573.577	6	.069	2	.02	3	.019	3
674			min	-23.239	8	-978.703	8	93.352	1	-.071	1	-.016	4	-.013	4
675		3	max	-3.937	3	-237.63	3	573.577	6	.069	2	.044	7	.072	5
676			min	-23.239	8	-978.703	8	93.352	1	-.071	1	-.005	4	.009	2
677		4	max	-3.937	3	-237.63	3	573.577	6	.069	2	.078	7	.132	5
678			min	-23.239	8	-978.703	8	93.352	1	-.071	1	.007	4	.03	2
679		5	max	-3.937	3	-237.63	3	573.577	6	.069	2	.113	6	.192	5
680			min	-23.239	8	-978.703	8	93.352	1	-.071	1	.016	1	.052	2
681	M69	1	max	34.203	8	-208.278	3	580.446	6	.021	2	.006	3	.003	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 Mome...	LC
682			min	6.483	3	-969.78	8	24.217	1	-.047	10	-.031	8	-.052	8
683		2	max	34.203	8	-208.278	3	580.446	6	.021	2	.018	3	.023	1
684			min	6.483	3	-969.78	8	24.217	1	-.047	10	-.013	4	-.014	2
685		3	max	34.203	8	-208.278	3	580.446	6	.021	2	.046	6	.075	5
686			min	6.483	3	-969.78	8	24.217	1	-.047	10	-.009	1	.005	2
687		4	max	34.203	8	-208.278	3	580.446	6	.021	2	.082	6	.134	5
688			min	6.483	3	-969.78	8	24.217	1	-.047	10	-.008	1	.025	2
689		5	max	34.203	8	-208.278	3	580.446	6	.021	2	.118	6	.193	5
690			min	6.483	3	-969.78	8	24.217	1	-.047	10	-.006	1	.044	2
691	M70	1	max	2017.418	8	521.94	2	1436.15	2	.027	2	.307	1	.189	3
692			min	210.098	3	-1007.107	1	-1161.633	1	-.031	10	-.31	2	-.188	4
693		2	max	2017.418	8	521.94	2	1436.15	2	.027	2	.251	4	.18	3
694			min	210.098	3	-1007.107	1	-1161.633	1	-.031	10	-.241	3	-.149	4
695		3	max	2017.418	8	521.94	2	1436.15	2	.027	2	.217	4	.171	3
696			min	210.098	3	-1007.107	1	-1161.633	1	-.031	10	-.189	3	-.11	4
697		4	max	2017.418	8	521.94	2	1436.15	2	.027	2	.182	4	.162	3
698			min	210.098	3	-1007.107	1	-1161.633	1	-.031	10	-.137	3	-.071	4
699		5	max	2017.418	8	521.94	2	1436.15	2	.027	2	.148	4	.186	7
700			min	210.098	3	-1007.107	1	-1161.633	1	-.031	10	-.109	10	-.031	4
701	M71	1	max	3756.362	5	710.283	2	3352.493	1	-.005	1	.396	2	.114	2
702			min	-908.163	2	-1951.403	5	-2431.55	2	-.022	8	-.535	1	-.313	5
703		2	max	3756.362	5	710.283	2	3352.493	1	-.005	1	.299	2	.085	2
704			min	-908.163	2	-1951.403	5	-2431.55	2	-.022	8	-.4	1	-.234	5
705		3	max	3756.362	5	710.283	2	3352.493	1	-.005	1	.201	2	.057	2
706			min	-908.163	2	-1951.403	5	-2431.55	2	-.022	8	-.266	1	-.156	5
707		4	max	3756.362	5	710.283	2	3352.493	1	-.005	1	.104	2	.028	2
708			min	-908.163	2	-1951.403	5	-2431.55	2	-.022	8	-.131	1	-.078	5
709		5	max	3756.362	5	710.283	2	3352.493	1	-.005	1	.013	6	0	1
710			min	-908.163	2	-1951.403	5	-2431.55	2	-.022	8	.003	1	0	9
711	M72	1	max	3618.825	7	480.181	4	1750.553	4	.022	8	.421	3	.077	4
712			min	-402.575	4	-1892.117	7	-2627.613	3	0	3	-.29	4	-.303	7
713		2	max	3618.825	7	480.181	4	1750.553	4	.022	8	.316	3	.058	4
714			min	-402.575	4	-1892.117	7	-2627.613	3	0	3	-.219	4	-.227	7
715		3	max	3618.825	7	480.181	4	1750.553	4	.022	8	.211	3	.038	4
716			min	-402.575	4	-1892.117	7	-2627.613	3	0	3	-.149	4	-.151	7
717		4	max	3618.825	7	480.181	4	1750.553	4	.022	8	.105	3	.019	4
718			min	-402.575	4	-1892.117	7	-2627.613	3	0	3	-.079	4	-.076	7
719		5	max	3618.825	7	480.181	4	1750.553	4	.022	8	0	3	0	3
720			min	-402.575	4	-1892.117	7	-2627.613	3	0	3	-.013	8	0	4
721	M73	1	max	3001.865	7	-245.67	4	846.357	5	-.01	3	.057	2	-.037	4
722			min	389.298	4	-1899.158	7	-293.627	2	-.042	8	-.12	1	-.298	7
723		2	max	3001.865	7	-245.67	4	846.357	5	-.01	3	.046	2	-.027	4
724			min	389.298	4	-1899.158	7	-293.627	2	-.042	8	-.088	1	-.223	7
725		3	max	3001.865	7	-245.67	4	846.357	5	-.01	3	.034	2	-.017	4
726			min	389.298	4	-1899.158	7	-293.627	2	-.042	8	-.057	1	-.148	7
727		4	max	3001.865	7	-245.67	4	846.357	5	-.01	3	.023	2	-.007	4
728			min	389.298	4	-1899.158	7	-293.627	2	-.042	8	-.025	1	-.073	7
729		5	max	3001.865	7	-245.67	4	846.357	5	-.01	3	.026	8	.003	8
730			min	389.298	4	-1899.158	7	-293.627	2	-.042	8	.006	3	0	3
731	M74	1	max	2998.436	7	-280.565	4	129.364	1	.042	8	.094	6	-.043	4
732			min	412.68	4	-1892.387	7	-756.186	6	0	3	-.025	1	-.296	7
733		2	max	2998.436	7	-280.565	4	129.364	1	.042	8	.064	6	-.032	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
734			min	412.68	4	-1892.387	7	-756.186	6	0	3	-.02	1	-.222	7
735		3	max	2998.436	7	-280.565	4	129.364	1	.042	8	.036	2	-.021	4
736			min	412.68	4	-1892.387	7	-756.186	6	0	3	-.015	1	-.147	7
737		4	max	2998.436	7	-280.565	4	129.364	1	.042	8	.017	3	-.01	4
738			min	412.68	4	-1892.387	7	-756.186	6	0	3	-.016	4	-.072	7
739		5	max	2998.436	7	-280.565	4	129.364	1	.042	8	0	3	.003	6
740			min	412.68	4	-1892.387	7	-756.186	6	0	3	-.026	8	0	1
741	M75	1	max	875.64	6	-156.643	1	652.249	5	-.009	3	.025	2	-.024	1
742			min	211.276	1	-594.375	6	-94.239	2	-.041	8	-.076	5	-.09	6
743		2	max	875.64	6	-156.643	1	652.249	5	-.009	3	.021	2	-.018	1
744			min	211.276	1	-594.375	6	-94.239	2	-.041	8	-.051	1	-.067	6
745		3	max	875.64	6	-156.643	1	652.249	5	-.009	3	.017	2	-.011	1
746			min	211.276	1	-594.375	6	-94.239	2	-.041	8	-.032	1	-.044	6
747		4	max	875.64	6	-156.643	1	652.249	5	-.009	3	.014	2	-.005	4
748			min	211.276	1	-594.375	6	-94.239	2	-.041	8	-.012	1	-.021	7
749		5	max	875.64	6	-156.643	1	652.249	5	-.009	3	.026	8	.002	8
750			min	211.276	1	-594.375	6	-94.239	2	-.041	8	.006	3	0	3
751	M76	1	max	885.09	5	-147.713	3	36.688	1	.041	8	.066	6	-.022	3
752			min	196.731	2	-596.73	5	-593.378	6	0	3	-.009	1	-.09	5
753		2	max	885.09	5	-147.713	3	36.688	1	.041	8	.043	6	-.017	3
754			min	196.731	2	-596.73	5	-593.378	6	0	3	-.008	1	-.067	5
755		3	max	885.09	5	-147.713	3	36.688	1	.041	8	.021	7	-.011	2
756			min	196.731	2	-596.73	5	-593.378	6	0	3	-.007	1	-.044	5
757		4	max	885.09	5	-147.713	3	36.688	1	.041	8	.009	3	-.005	2
758			min	196.731	2	-596.73	5	-593.378	6	0	3	-.011	4	-.021	5
759		5	max	885.09	5	-147.713	3	36.688	1	.041	8	0	3	.002	8
760			min	196.731	2	-596.73	5	-593.378	6	0	3	-.026	8	0	3
761	M77	1	max	196.522	2	532.058	5	531.015	7	-.009	3	.001	4	.085	5
762			min	-803.664	5	-106.546	2	69.371	4	-.039	8	-.057	7	-.014	2
763		2	max	196.522	2	532.058	5	531.015	7	-.009	3	.004	4	.065	5
764			min	-803.664	5	-106.546	2	69.371	4	-.039	8	-.037	7	-.01	2
765		3	max	196.522	2	532.058	5	531.015	7	-.009	3	.006	4	.045	5
766			min	-803.664	5	-106.546	2	69.371	4	-.039	8	-.016	7	-.006	2
767		4	max	196.522	2	532.058	5	531.015	7	-.009	3	.009	4	.025	5
768			min	-803.664	5	-106.546	2	69.371	4	-.039	8	-.005	3	-.002	2
769		5	max	196.522	2	532.058	5	531.015	7	-.009	3	.026	8	.005	8
770			min	-803.664	5	-106.546	2	69.371	4	-.039	8	.006	3	0	3
771	M78	1	max	280.634	4	547.37	7	16.034	10	.04	8	.05	6	.088	7
772			min	-822.564	7	-168.41	4	-489.522	6	0	3	-.006	10	-.023	4
773		2	max	280.634	4	547.37	7	16.034	10	.04	8	.031	6	.067	7
774			min	-822.564	7	-168.41	4	-489.522	6	0	3	-.005	10	-.016	4
775		3	max	280.634	4	547.37	7	16.034	10	.04	8	.013	7	.046	7
776			min	-822.564	7	-168.41	4	-489.522	6	0	3	-.005	10	-.01	4
777		4	max	280.634	4	547.37	7	16.034	10	.04	8	.004	3	.025	7
778			min	-822.564	7	-168.41	4	-489.522	6	0	3	-.009	4	-.003	4
779		5	max	280.634	4	547.37	7	16.034	10	.04	8	0	3	.005	8
780			min	-822.564	7	-168.41	4	-489.522	6	0	3	-.026	8	0	3
781	M79	1	max	567.086	2	6200.643	5	526.792	5	-.007	4	.003	2	2.942	6
782			min	-7360.729	7	277.286	2	30.84	2	-.028	7	-.08	5	.751	1
783		2	max	567.086	2	6200.643	5	526.792	5	-.007	4	.004	2	2.741	6
784			min	-7360.729	7	277.286	2	30.84	2	-.028	7	-.06	5	.606	1
785		3	max	567.086	2	6200.643	5	526.792	5	-.007	4	.005	2	2.539	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 Mome...	LC
786			min	-7360.729	7	277.286	2	30.84	2	-.028	7	-.04	5	.461	1
787		4	max	567.086	2	6200.643	5	526.792	5	-.007	4	.007	2	2.338	6
788			min	-7360.729	7	277.286	2	30.84	2	-.028	7	-.02	5	.316	1
789		5	max	567.086	2	6200.643	5	526.792	5	-.007	4	.008	2	2.137	6
790			min	-7360.729	7	277.286	2	30.84	2	-.028	7	-.008	1	.17	1
791	M80	1	max	1125.856	4	6315.225	7	-74.936	10	.028	8	.074	7	2.953	8
792			min	-7483.768	7	46.276	4	-488.965	7	.002	10	.007	4	.566	3
793		2	max	1125.856	4	6315.225	7	-74.936	10	.028	8	.056	7	2.753	8
794			min	-7483.768	7	46.276	4	-488.965	7	.002	10	.003	4	.411	3
795		3	max	1125.856	4	6315.225	7	-74.936	10	.028	8	.038	7	2.552	8
796			min	-7483.768	7	46.276	4	-488.965	7	.002	10	-.001	4	.256	3
797		4	max	1125.856	4	6315.225	7	-74.936	10	.028	8	.019	7	2.352	8
798			min	-7483.768	7	46.276	4	-488.965	7	.002	10	-.005	4	.101	3
799		5	max	1125.856	4	6315.225	7	-74.936	10	.028	8	.01	3	2.152	8
800			min	-7483.768	7	46.276	4	-488.965	7	.002	10	-.01	4	-.054	3
801	M81	1	max	462.296	7	834.317	4	418.77	4	0	4	-.002	4	.027	7
802			min	53.314	4	-867.418	3	-462.071	3	0	3	-.015	7	.003	4
803		2	max	462.296	7	834.317	4	418.77	4	0	4	.007	4	.033	3
804			min	53.314	4	-867.418	3	-462.071	3	0	3	-.019	7	-.015	4
805		3	max	462.296	7	834.317	4	418.77	4	0	4	.016	4	.051	3
806			min	53.314	4	-867.418	3	-462.071	3	0	3	-.028	3	-.032	4
807		4	max	462.296	7	834.317	4	418.77	4	0	4	.024	4	.069	3
808			min	53.314	4	-867.418	3	-462.071	3	0	3	-.037	3	-.049	4
809		5	max	462.296	7	834.317	4	418.77	4	0	4	.033	4	.088	3
810			min	53.314	4	-867.418	3	-462.071	3	0	3	-.047	3	-.067	4
811	M82	1	max	57.846	7	201.537	3	218.528	3	0	4	-.004	4	.052	7
812			min	5.772	4	-127.679	4	-184.539	4	0	3	-.03	7	.006	4
813		2	max	57.846	7	201.537	3	218.528	3	0	4	-.007	1	.049	7
814			min	5.772	4	-127.679	4	-184.539	4	0	3	-.028	6	.008	4
815		3	max	57.846	7	201.537	3	218.528	3	0	4	-.008	3	.046	7
816			min	5.772	4	-127.679	4	-184.539	4	0	3	-.027	6	.011	4
817		4	max	57.846	7	201.537	3	218.528	3	0	4	-.003	3	.043	5
818			min	5.772	4	-127.679	4	-184.539	4	0	3	-.027	8	.013	9
819		5	max	57.846	7	201.537	3	218.528	3	0	4	.001	3	.042	5
820			min	5.772	4	-127.679	4	-184.539	4	0	3	-.027	8	.01	2
821	M83	1	max	43.9	7	199.781	2	210.333	3	0	4	-.004	4	.051	7
822			min	4.646	4	-158.455	1	-192.325	4	0	3	-.03	7	.006	4
823		2	max	43.9	7	199.781	2	210.333	3	0	4	-.005	1	.049	7
824			min	4.646	4	-158.455	1	-192.325	4	0	3	-.029	6	.008	4
825		3	max	43.9	7	199.781	2	210.333	3	0	4	-.003	1	.048	7
826			min	4.646	4	-158.455	1	-192.325	4	0	3	-.028	6	.01	4
827		4	max	43.9	7	199.781	2	210.333	3	0	4	-.002	1	.046	5
828			min	4.646	4	-158.455	1	-192.325	4	0	3	-.028	6	.012	2
829		5	max	43.9	7	199.781	2	210.333	3	0	4	0	3	.046	5
830			min	4.646	4	-158.455	1	-192.325	4	0	3	-.028	8	.007	2
831	M84	1	max	12.512	7	175.658	2	161.938	3	0	4	-.003	4	.05	7
832			min	.679	4	-138.185	1	-142.826	4	0	3	-.029	7	.005	4
833		2	max	12.512	7	175.658	2	161.938	3	0	4	-.005	1	.048	7
834			min	.679	4	-138.185	1	-142.826	4	0	3	-.028	6	.008	4
835		3	max	12.512	7	175.658	2	161.938	3	0	4	-.003	1	.046	7
836			min	.679	4	-138.185	1	-142.826	4	0	3	-.028	6	.01	4
837		4	max	12.512	7	175.658	2	161.938	3	0	4	-.002	1	.045	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 Mome...	LC
838			min	.679	4	-138.185	1	-142.826	4	0	3	-.027	6	.012	4
839		5	max	12.512	7	175.658	2	161.938	3	0	4	0	1	.044	5
840			min	.679	4	-138.185	1	-142.826	4	0	3	-.027	6	.009	2
841	M85	1	max	-38.376	4	141.902	2	120.914	1	0	4	-.002	4	.024	7
842			min	-369.263	7	-247.01	1	-166.569	2	0	3	-.014	7	.003	4
843		2	max	-38.376	4	141.902	2	120.914	1	0	4	0	1	.027	7
844			min	-369.263	7	-247.01	1	-166.569	2	0	3	-.016	6	.007	4
845		3	max	-38.376	4	141.902	2	120.914	1	0	4	.002	1	.031	5
846			min	-369.263	7	-247.01	1	-166.569	2	0	3	-.018	6	.005	2
847		4	max	-38.376	4	141.902	2	120.914	1	0	4	.005	1	.035	5
848			min	-369.263	7	-247.01	1	-166.569	2	0	3	-.02	6	.003	2
849		5	max	-38.376	4	141.902	2	120.914	1	0	4	.007	1	.039	5
850			min	-369.263	7	-247.01	1	-166.569	2	0	3	-.022	6	0	2
851	M86	1	max	1058.311	7	4290.582	4	3771.576	1	.462	1	.312	1	.302	3
852			min	134.007	4	-3145.672	3	-3142.439	2	-.46	2	-.285	2	-.356	4
853		2	max	1058.311	7	4290.582	4	3771.576	1	.462	1	.547	1	.498	3
854			min	134.007	4	-3145.672	3	-3142.439	2	-.46	2	-.481	2	-.623	4
855		3	max	1058.311	7	4290.582	4	3771.576	1	.462	1	.782	1	.695	3
856			min	134.007	4	-3145.672	3	-3142.439	2	-.46	2	-.677	2	-.891	4
857		4	max	1058.311	7	4290.582	4	3771.576	1	.462	1	1.018	1	.891	3
858			min	134.007	4	-3145.672	3	-3142.439	2	-.46	2	-.873	2	-1.159	4
859		5	max	1058.311	7	4290.582	4	3771.576	1	.462	1	1.253	1	1.087	3
860			min	134.007	4	-3145.672	3	-3142.439	2	-.46	2	-1.069	2	-1.427	4
861	M87	1	max	10.25	3	940.284	6	571.475	5	.081	1	.009	1	.061	7
862			min	.528	4	190.813	1	2.124	2	-.077	2	-.037	6	-.009	4
863		2	max	10.25	3	940.284	6	571.475	5	.081	1	.032	1	.025	3
864			min	.528	4	190.813	1	2.124	2	-.077	2	-.03	2	-.027	4
865		3	max	10.25	3	940.284	6	571.475	5	.081	1	.055	1	.002	3
866			min	.528	4	190.813	1	2.124	2	-.077	2	-.03	2	-.065	8
867		4	max	10.25	3	940.284	6	571.475	5	.081	1	.08	5	-.02	3
868			min	.528	4	190.813	1	2.124	2	-.077	2	-.03	2	-.121	8
869		5	max	10.25	3	940.284	6	571.475	5	.081	1	.116	5	-.038	1
870			min	.528	4	190.813	1	2.124	2	-.077	2	-.03	2	-.178	6
871	M88	1	max	-3.792	4	958.918	7	565.101	6	.051	9	.007	4	.054	7
872			min	-22.636	7	225.509	4	91.604	1	-.031	2	-.032	7	-.005	4
873		2	max	-3.792	4	958.918	7	565.101	6	.051	9	.02	4	.014	2
874			min	-22.636	7	225.509	4	91.604	1	-.031	2	-.016	3	-.021	1
875		3	max	-3.792	4	958.918	7	565.101	6	.051	9	.044	8	-.007	2
876			min	-22.636	7	225.509	4	91.604	1	-.031	2	-.005	3	-.072	5
877		4	max	-3.792	4	958.918	7	565.101	6	.051	9	.078	8	-.027	2
878			min	-22.636	7	225.509	4	91.604	1	-.031	2	.007	3	-.13	5
879		5	max	-3.792	4	958.918	7	565.101	6	.051	9	.112	6	-.048	2
880			min	-22.636	7	225.509	4	91.604	1	-.031	2	.016	1	-.188	5
881	M89	1	max	33.936	7	948.907	7	566.997	6	.046	9	.005	4	.05	7
882			min	6.243	4	201.904	4	43.021	1	-.014	3	-.03	7	-.003	4
883		2	max	33.936	7	948.907	7	566.997	6	.046	9	.017	4	.013	2
884			min	6.243	4	201.904	4	43.021	1	-.014	3	-.012	3	-.022	1
885		3	max	33.936	7	948.907	7	566.997	6	.046	9	.044	6	-.006	2
886			min	6.243	4	201.904	4	43.021	1	-.014	3	-.005	1	-.073	5
887		4	max	33.936	7	948.907	7	566.997	6	.046	9	.08	6	-.026	2
888			min	6.243	4	201.904	4	43.021	1	-.014	3	-.002	1	-.131	5
889		5	max	33.936	7	948.907	7	566.997	6	.046	9	.115	6	-.046	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 Mome...	LC
890			min	6.243	4	201.904	4	43.021	1	-.014	3	0	1	-.189	5
891	M90	1	max	1970.078	7	968.967	1	1418.846	2	.031	9	.395	1	.217	1
892			min	198.185	4	-505.903	2	-1121.323	1	-.007	2	-.413	2	-.226	2
893		2	max	1970.078	7	968.967	1	1418.846	2	.031	9	.325	1	.156	1
894			min	198.185	4	-505.903	2	-1121.323	1	-.007	2	-.324	2	-.194	2
895		3	max	1970.078	7	968.967	1	1418.846	2	.031	9	.255	1	.1	3
896			min	198.185	4	-505.903	2	-1121.323	1	-.007	2	-.236	2	-.168	4
897		4	max	1970.078	7	968.967	1	1418.846	2	.031	9	.185	1	.064	3
898			min	198.185	4	-505.903	2	-1121.323	1	-.007	2	-.147	2	-.161	4
899		5	max	1970.078	7	968.967	1	1418.846	2	.031	9	.138	3	.028	3
900			min	198.185	4	-505.903	2	-1121.323	1	-.007	2	-.107	9	-.187	8
901	M91	1	max	3623.428	8	482.381	3	2604.482	4	0	4	.281	3	.077	3
902			min	-418.49	3	-1903.631	8	-1699.581	3	-.021	7	-.418	4	-.305	8
903		2	max	3623.428	8	482.381	3	2604.482	4	0	4	.213	3	.058	3
904			min	-418.49	3	-1903.631	8	-1699.581	3	-.021	7	-.313	4	-.229	8
905		3	max	3623.428	8	482.381	3	2604.482	4	0	4	.145	3	.039	3
906			min	-418.49	3	-1903.631	8	-1699.581	3	-.021	7	-.209	4	-.152	8
907		4	max	3623.428	8	482.381	3	2604.482	4	0	4	.077	3	.019	3
908			min	-418.49	3	-1903.631	8	-1699.581	3	-.021	7	-.104	4	-.076	8
909		5	max	3623.428	8	482.381	3	2604.482	4	0	4	.013	7	0	2
910			min	-418.49	3	-1903.631	8	-1699.581	3	-.021	7	0	4	0	1
911	M92	1	max	3647.331	5	531.588	2	2059.497	2	.022	6	.475	1	.085	2
912			min	-560.003	2	-1897.564	5	-2973.707	1	.003	1	-.338	2	-.304	5
913		2	max	3647.331	5	531.588	2	2059.497	2	.022	6	.356	1	.064	2
914			min	-560.003	2	-1897.564	5	-2973.707	1	.003	1	-.255	2	-.228	5
915		3	max	3647.331	5	531.588	2	2059.497	2	.022	6	.237	1	.042	2
916			min	-560.003	2	-1897.564	5	-2973.707	1	.003	1	-.172	2	-.152	5
917		4	max	3647.331	5	531.588	2	2059.497	2	.022	6	.117	1	.021	2
918			min	-560.003	2	-1897.564	5	-2973.707	1	.003	1	-.09	2	-.076	5
919		5	max	3647.331	5	531.588	2	2059.497	2	.022	6	-.002	1	.001	1
920			min	-560.003	2	-1897.564	5	-2973.707	1	.003	1	-.013	6	0	10
921	M93	1	max	2979.342	8	-243.426	3	727.793	8	0	4	.014	3	-.037	3
922			min	358.89	3	-1880.505	8	15.392	3	-.041	7	-.093	8	-.294	8
923		2	max	2979.342	8	-243.426	3	727.793	8	0	4	.015	3	-.027	3
924			min	358.89	3	-1880.505	8	15.392	3	-.041	7	-.064	8	-.22	8
925		3	max	2979.342	8	-243.426	3	727.793	8	0	4	.015	3	-.018	3
926			min	358.89	3	-1880.505	8	15.392	3	-.041	7	-.036	4	-.146	8
927		4	max	2979.342	8	-243.426	3	727.793	8	0	4	.016	3	-.008	3
928			min	358.89	3	-1880.505	8	15.392	3	-.041	7	-.018	4	-.072	8
929		5	max	2979.342	8	-243.426	3	727.793	8	0	4	.026	7	.003	6
930			min	358.89	3	-1880.505	8	15.392	3	-.041	7	0	4	0	1
931	M94	1	max	2992.499	8	-196.471	3	127.948	2	.041	6	.102	5	-.029	3
932			min	305.555	3	-1891.409	8	-796.563	5	.007	1	-.034	2	-.296	8
933		2	max	2992.499	8	-196.471	3	127.948	2	.041	6	.071	1	-.021	3
934			min	305.555	3	-1891.409	8	-796.563	5	.007	1	-.029	2	-.222	8
935		3	max	2992.499	8	-196.471	3	127.948	2	.041	6	.046	1	-.013	3
936			min	305.555	3	-1891.409	8	-796.563	5	.007	1	-.024	2	-.147	8
937		4	max	2992.499	8	-196.471	3	127.948	2	.041	6	.021	1	-.006	3
938			min	305.555	3	-1891.409	8	-796.563	5	.007	1	-.019	2	-.072	8
939		5	max	2992.499	8	-196.471	3	127.948	2	.041	6	-.004	1	.003	7
940			min	305.555	3	-1891.409	8	-796.563	5	.007	1	-.026	6	0	4
941	M95	1	max	869.735	5	-146.845	4	556.716	6	0	4	.002	9	-.022	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 Mome...	LC
942			min	197.793	2	-587.116	5	5.717	9	-.04	7	-.064	8	-.089	5
943		2	max	869.735	5	-146.845	4	556.716	6	0	4	.002	9	-.016	2
944			min	197.793	2	-587.116	5	5.717	9	-.04	7	-.043	8	-.066	5
945		3	max	869.735	5	-146.845	4	556.716	6	0	4	.007	3	-.01	2
946			min	197.793	2	-587.116	5	5.717	9	-.04	7	-.021	8	-.043	5
947		4	max	869.735	5	-146.845	4	556.716	6	0	4	.012	3	-.004	2
948			min	197.793	2	-587.116	5	5.717	9	-.04	7	-.01	4	-.021	5
949		5	max	869.735	5	-146.845	4	556.716	6	0	4	.026	7	.002	7
950			min	197.793	2	-587.116	5	5.717	9	-.04	7	0	4	0	4
951	M96	1	max	869.11	6	-140.652	1	-38.327	2	.04	6	.071	5	-.021	1
952			min	193.315	1	-589.991	6	-611.723	5	.007	1	-.007	2	-.089	6
953		2	max	869.11	6	-140.652	1	-38.327	2	.04	6	.047	5	-.016	1
954			min	193.315	1	-589.991	6	-611.723	5	.007	1	-.008	2	-.066	6
955		3	max	869.11	6	-140.652	1	-38.327	2	.04	6	.024	1	-.01	1
956			min	193.315	1	-589.991	6	-611.723	5	.007	1	-.01	2	-.043	6
957		4	max	869.11	6	-140.652	1	-38.327	2	.04	6	.01	1	-.005	1
958			min	193.315	1	-589.991	6	-611.723	5	.007	1	-.011	2	-.021	8
959		5	max	869.11	6	-140.652	1	-38.327	2	.04	6	-.005	1	.002	7
960			min	193.315	1	-589.991	6	-611.723	5	.007	1	-.026	6	0	4
961	M97	1	max	317.76	3	552.922	8	473.135	5	0	4	.005	9	.088	8
962			min	-833.73	8	-192.408	3	-14.536	9	-.039	7	-.049	5	-.026	3
963		2	max	317.76	3	552.922	8	473.135	5	0	4	.005	9	.067	8
964			min	-833.73	8	-192.408	3	-14.536	9	-.039	7	-.031	5	-.019	3
965		3	max	317.76	3	552.922	8	473.135	5	0	4	.004	9	.046	8
966			min	-833.73	8	-192.408	3	-14.536	9	-.039	7	-.013	8	-.012	3
967		4	max	317.76	3	552.922	8	473.135	5	0	4	.009	3	.025	8
968			min	-833.73	8	-192.408	3	-14.536	9	-.039	7	-.005	4	-.004	3
969		5	max	317.76	3	552.922	8	473.135	5	0	4	.025	7	.005	7
970			min	-833.73	8	-192.408	3	-14.536	9	-.039	7	0	4	0	4
971	M98	1	max	208.148	3	536.6	8	-99.884	3	.039	6	.055	8	.086	8
972			min	-802.94	8	-131.598	3	-516.68	8	.006	1	.004	3	-.017	3
973		2	max	208.148	3	536.6	8	-99.884	3	.039	6	.036	8	.066	8
974			min	-802.94	8	-131.598	3	-516.68	8	.006	1	0	3	-.012	3
975		3	max	208.148	3	536.6	8	-99.884	3	.039	6	.016	9	.045	8
976			min	-802.94	8	-131.598	3	-516.68	8	.006	1	-.004	3	-.007	3
977		4	max	208.148	3	536.6	8	-99.884	3	.039	6	.004	4	.025	8
978			min	-802.94	8	-131.598	3	-516.68	8	.006	1	-.008	3	-.002	3
979		5	max	208.148	3	536.6	8	-99.884	3	.039	6	-.004	1	.005	7
980			min	-802.94	8	-131.598	3	-516.68	8	.006	1	-.025	6	0	4
981	M99	1	max	1349.649	3	6258.273	8	486.263	8	-.002	9	-.004	3	2.893	7
982			min	-7552.147	8	-144.283	3	74.051	9	-.027	7	-.074	8	.589	4
983		2	max	1349.649	3	6258.273	8	486.263	8	-.002	9	0	3	2.697	7
984			min	-7552.147	8	-144.283	3	74.051	9	-.027	7	-.056	8	.429	4
985		3	max	1349.649	3	6258.273	8	486.263	8	-.002	9	.003	3	2.501	7
986			min	-7552.147	8	-144.283	3	74.051	9	-.027	7	-.038	8	.269	4
987		4	max	1349.649	3	6258.273	8	486.263	8	-.002	9	.006	3	2.306	7
988			min	-7552.147	8	-144.283	3	74.051	9	-.027	7	-.02	8	.109	4
989		5	max	1349.649	3	6258.273	8	486.263	8	-.002	9	.009	3	2.11	7
990			min	-7552.147	8	-144.283	3	74.051	9	-.027	7	-.01	4	-.051	4
991	M100	1	max	828.577	3	6191.376	8	-46.732	3	.028	6	.078	8	2.915	6
992			min	-7354.994	8	299.017	3	-514.325	8	.005	1	.002	3	.642	1
993		2	max	828.577	3	6191.376	8	-46.732	3	.028	6	.058	8	2.711	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 Mome...	LC
994			min	-7354.994	8	299.017	3	-514.325	8	.005	1	0	3	.51	1
995		3	max	828.577	3	6191.376	8	-46.732	3	.028	6	.039	8	2.507	6
996			min	-7354.994	8	299.017	3	-514.325	8	.005	1	-.002	3	.379	1
997		4	max	828.577	3	6191.376	8	-46.732	3	.028	6	.02	5	2.303	6
998			min	-7354.994	8	299.017	3	-514.325	8	.005	1	-.004	2	.248	1
999		5	max	828.577	3	6191.376	8	-46.732	3	.028	6	.008	1	2.099	6
1000			min	-7354.994	8	299.017	3	-514.325	8	.005	1	-.008	2	.117	1
1001	MP3A	1	max	0	11	.018	8	.019	5	0	11	0	11	0	11
1002			min	0	1	-.009	3	-.015	2	0	1	0	1	0	1
1003		2	max	602.807	6	290.11	4	256.85	1	.084	2	.174	5	.094	4
1004			min	69.569	1	-457.64	3	-154.823	2	-.058	1	.036	2	-.122	3
1005		3	max	-16.66	10	59.223	3	59.26	2	0	11	.119	1	.118	3
1006			min	-52.639	5	-59.242	4	-59.228	1	0	1	-.119	2	-.119	4
1007		4	max	-8.33	10	29.621	3	29.658	2	0	11	.03	1	.03	3
1008			min	-26.32	5	-29.64	4	-29.626	1	0	1	-.03	2	-.03	4
1009		5	max	0	11	.019	3	.176	6	0	11	0	11	0	11
1010			min	0	1	-.11	8	-.024	1	0	1	0	1	0	1
1011	MP2A	1	max	0	11	.009	4	.021	5	0	11	0	11	0	11
1012			min	0	1	-.013	7	-.017	2	0	1	0	1	0	1
1013		2	max	528.811	6	449.985	4	276.088	1	.056	1	.148	5	.133	4
1014			min	14.972	1	-268.874	3	-172.598	2	-.096	2	.023	2	-.108	3
1015		3	max	-30.946	10	144.954	3	305.443	2	0	11	.365	1	.204	3
1016			min	-138.06	5	-144.926	4	-305.397	1	0	1	-.365	2	-.204	4
1017		4	max	-8.33	10	29.656	3	29.677	2	0	11	.03	1	.03	3
1018			min	-26.32	5	-29.629	4	-29.631	1	0	1	-.03	2	-.03	4
1019		5	max	0	11	.231	7	.354	6	0	11	0	11	0	11
1020			min	0	1	-.027	4	-.029	1	0	1	0	1	0	1
1021	MP1A	1	max	0	11	.012	4	.013	1	0	11	0	11	0	11
1022			min	0	1	-.015	7	-.013	2	0	1	0	1	0	1
1023		2	max	35.115	2	355.394	8	130.269	5	.099	1	.051	10	.053	8
1024			min	-292.893	5	-81.876	3	-29.886	2	-.095	2	-.046	3	-.015	3
1025		3	max	-24.76	10	121.473	3	195.111	2	0	11	.254	1	.181	3
1026			min	-111.159	5	-121.45	4	-195.103	1	0	1	-.254	2	-.181	4
1027		4	max	-8.33	10	29.666	3	29.652	2	0	11	.03	1	.03	3
1028			min	-26.32	5	-29.644	4	-29.644	1	0	1	-.03	2	-.03	4
1029		5	max	0	11	.206	7	.096	6	0	11	0	11	0	11
1030			min	0	1	-.042	4	-.042	1	0	1	0	1	0	1
1031	MP4A	1	max	0	11	.023	4	.019	1	0	11	0	11	0	11
1032			min	0	1	-.021	3	-.02	2	0	1	0	1	0	1
1033		2	max	231.044	2	152.575	4	424.091	1	.075	2	.13	7	.035	2
1034			min	-206.157	1	-498.637	7	-301.626	2	-.111	1	.002	2	-.073	7
1035		3	max	334.985	6	282.468	4	506.859	1	.075	2	.9	1	.829	7
1036			min	-104.652	1	-555.253	3	-384.395	2	-.111	1	-.605	2	-.365	4
1037		4	max	-85.185	10	303.592	3	662.001	2	0	11	.5	1	.232	3
1038			min	-320.696	5	-303.69	4	-661.9	1	0	1	-.5	2	-.232	4
1039		5	max	0	11	.114	3	.587	6	0	11	0	11	0	11
1040			min	0	1	-.711	8	-.031	2	0	1	0	1	0	1
1041	M105	1	max	31.76	3	141.128	3	910.442	9	.085	8	.007	3	.025	6
1042			min	-442.856	8	-701.161	8	-599.853	10	-.008	3	-.061	8	-.013	1
1043		2	max	31.76	3	141.128	3	910.442	9	.085	8	.015	9	.059	6
1044			min	-442.856	8	-701.161	8	-599.853	10	-.008	3	-.065	10	-.008	1
1045		3	max	31.76	3	141.128	3	910.442	9	.085	8	.062	9	.093	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 Mome...	LC
1046			min	-442.856	8	-701.161	8	-599.853	10	-.008	3	-.096	10	-.005	3
1047		4	max	31.76	3	141.128	3	910.442	9	.085	8	.109	9	.129	8
1048			min	-442.856	8	-701.161	8	-599.853	10	-.008	3	-.128	10	-.013	3
1049		5	max	31.76	3	141.128	3	910.442	9	.085	8	.157	9	.166	8
1050			min	-442.856	8	-701.161	8	-599.853	10	-.008	3	-.159	10	-.02	3
1051	M106	1	max	647.609	6	876.722	6	641.451	10	.08	6	.146	9	.229	6
1052			min	-168.673	1	-240.719	1	-837.439	9	-.047	1	-.16	10	-.045	1
1053		2	max	647.609	6	876.722	6	641.451	10	.08	6	.102	9	.184	6
1054			min	-168.673	1	-240.719	1	-837.439	9	-.047	1	-.127	10	-.032	1
1055		3	max	647.609	6	876.722	6	641.451	10	.08	6	.059	9	.138	6
1056			min	-168.673	1	-240.719	1	-837.439	9	-.047	1	-.094	10	-.02	1
1057		4	max	647.609	6	876.722	6	641.451	10	.08	6	.032	1	.092	6
1058			min	-168.673	1	-240.719	1	-837.439	9	-.047	1	-.06	10	-.007	1
1059		5	max	647.609	6	876.722	6	641.451	10	.08	6	.034	1	.047	8
1060			min	-168.673	1	-240.719	1	-837.439	9	-.047	1	-.057	6	.001	3
1061	M107	1	max	39.303	4	183.958	4	761.08	9	.017	4	.061	7	.025	6
1062			min	-450.527	7	-682.461	7	-750.723	10	-.085	7	-.013	4	-.011	1
1063		2	max	39.303	4	183.958	4	761.08	9	.017	4	.072	9	.058	6
1064			min	-450.527	7	-682.461	7	-750.723	10	-.085	7	-.006	10	-.01	1
1065		3	max	39.303	4	183.958	4	761.08	9	.017	4	.112	9	.091	6
1066			min	-450.527	7	-682.461	7	-750.723	10	-.085	7	-.046	10	-.009	4
1067		4	max	39.303	4	183.958	4	761.08	9	.017	4	.151	9	.126	7
1068			min	-450.527	7	-682.461	7	-750.723	10	-.085	7	-.085	10	-.018	4
1069		5	max	39.303	4	183.958	4	761.08	9	.017	4	.191	9	.161	7
1070			min	-450.527	7	-682.461	7	-750.723	10	-.085	7	-.124	10	-.028	4
1071	M108	1	max	646.152	8	864.545	6	686.758	10	.041	1	.192	9	.227	6
1072			min	-180.511	3	-206.922	1	-792.489	9	-.08	6	-.113	10	-.04	1
1073		2	max	646.152	8	864.545	6	686.758	10	.041	1	.151	9	.182	6
1074			min	-180.511	3	-206.922	1	-792.489	9	-.08	6	-.077	10	-.029	1
1075		3	max	646.152	8	864.545	6	686.758	10	.041	1	.11	9	.137	6
1076			min	-180.511	3	-206.922	1	-792.489	9	-.08	6	-.044	3	-.018	1
1077		4	max	646.152	8	864.545	6	686.758	10	.041	1	.068	8	.092	6
1078			min	-180.511	3	-206.922	1	-792.489	9	-.08	6	-.029	3	-.007	1
1079		5	max	646.152	8	864.545	6	686.758	10	.041	1	.058	6	.047	6
1080			min	-180.511	3	-206.922	1	-792.489	9	-.08	6	-.03	1	.003	1
1081	M109	1	max	66.135	4	90.3	4	558.886	2	.085	6	.005	1	.024	5
1082			min	-467.211	7	-706.126	7	-344.148	1	-.005	1	-.062	6	-.009	2
1083		2	max	66.135	4	90.3	4	558.886	2	.085	6	-.003	10	.06	7
1084			min	-467.211	7	-706.126	7	-344.148	1	-.005	1	-.043	8	-.013	4
1085		3	max	66.135	4	90.3	4	558.886	2	.085	6	.025	10	.097	7
1086			min	-467.211	7	-706.126	7	-344.148	1	-.005	1	-.032	5	-.018	4
1087		4	max	66.135	4	90.3	4	558.886	2	.085	6	.053	10	.134	7
1088			min	-467.211	7	-706.126	7	-344.148	1	-.005	1	-.048	1	-.022	4
1089		5	max	66.135	4	90.3	4	558.886	2	.085	6	.082	10	.17	7
1090			min	-467.211	7	-706.126	7	-344.148	1	-.005	1	-.066	1	-.027	4
1091	M110	1	max	645.77	5	828.982	7	164.939	4	.073	5	.086	2	.22	7
1092			min	-256.635	2	-184.576	4	-512.127	10	-.033	4	-.076	1	-.04	4
1093		2	max	645.77	5	828.982	7	164.939	4	.073	5	.07	2	.177	7
1094			min	-256.635	2	-184.576	4	-512.127	10	-.033	4	-.068	1	-.03	4
1095		3	max	645.77	5	828.982	7	164.939	4	.073	5	.055	2	.134	7
1096			min	-256.635	2	-184.576	4	-512.127	10	-.033	4	-.06	1	-.021	4
1097		4	max	645.77	5	828.982	7	164.939	4	.073	5	.039	2	.091	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 Mome...	LC
1098			min	-256.635	2	-184.576	4	-512.127	10	-.033	4	-.052	1	-.011	4
1099		5	max	645.77	5	828.982	7	164.939	4	.073	5	.024	2	.048	7
1100			min	-256.635	2	-184.576	4	-512.127	10	-.033	4	-.053	5	-.002	4
1101	M111	1	max	58.456	2	164.115	2	456.141	2	.007	2	.061	5	.025	7
1102			min	-461.535	5	-692.164	5	-424.415	1	-.084	5	-.005	2	-.014	4
1103		2	max	58.456	2	164.115	2	456.141	2	.007	2	.061	7	.057	5
1104			min	-461.535	5	-692.164	5	-424.415	1	-.084	5	.006	9	-.007	2
1105		3	max	58.456	2	164.115	2	456.141	2	.007	2	.078	10	.093	5
1106			min	-461.535	5	-692.164	5	-424.415	1	-.084	5	-.01	1	-.015	2
1107		4	max	58.456	2	164.115	2	456.141	2	.007	2	.1	10	.129	5
1108			min	-461.535	5	-692.164	5	-424.415	1	-.084	5	-.032	1	-.024	2
1109		5	max	58.456	2	164.115	2	456.141	2	.007	2	.122	10	.165	5
1110			min	-461.535	5	-692.164	5	-424.415	1	-.084	5	-.054	1	-.032	2
1111	M112	1	max	664.169	7	851.508	7	303.103	1	.055	4	.123	10	.223	7
1112			min	-331.058	4	-270.667	4	-445.892	10	-.086	3	-.051	1	-.048	4
1113		2	max	664.169	7	851.508	7	303.103	1	.055	4	.1	10	.178	7
1114			min	-331.058	4	-270.667	4	-445.892	10	-.086	3	-.035	1	-.033	4
1115		3	max	664.169	7	851.508	7	303.103	1	.055	4	.077	10	.134	7
1116			min	-331.058	4	-270.667	4	-445.892	10	-.086	3	-.028	4	-.019	4
1117		4	max	664.169	7	851.508	7	303.103	1	.055	4	.066	7	.089	7
1118			min	-331.058	4	-270.667	4	-445.892	10	-.086	3	-.034	4	-.005	4
1119		5	max	664.169	7	851.508	7	303.103	1	.055	4	.062	3	.047	5
1120			min	-331.058	4	-270.667	4	-445.892	10	-.086	3	-.04	4	0	2
1121	M113	1	max	72.807	2	148.994	2	544.936	1	.086	5	0	2	.026	8
1122			min	-475.245	5	-727.155	5	-341.591	2	-.001	2	-.062	5	-.014	3
1123		2	max	72.807	2	148.994	2	544.936	1	.086	5	-.001	10	.06	5
1124			min	-475.245	5	-727.155	5	-341.591	2	-.001	2	-.049	9	-.007	2
1125		3	max	72.807	2	148.994	2	544.936	1	.086	5	.025	1	.098	5
1126			min	-475.245	5	-727.155	5	-341.591	2	-.001	2	-.064	9	-.015	2
1127		4	max	72.807	2	148.994	2	544.936	1	.086	5	.054	1	.136	5
1128			min	-475.245	5	-727.155	5	-341.591	2	-.001	2	-.079	9	-.022	2
1129		5	max	72.807	2	148.994	2	544.936	1	.086	5	.082	1	.174	5
1130			min	-475.245	5	-727.155	5	-341.591	2	-.001	2	-.094	9	-.03	2
1131	M114	1	max	682.92	8	868.7	8	309.006	9	.08	8	.069	1	.227	8
1132			min	-315.065	3	-226.137	3	-443.227	1	-.048	3	-.095	9	-.035	3
1133		2	max	682.92	8	868.7	8	309.006	9	.08	8	.049	3	.181	8
1134			min	-315.065	3	-226.137	3	-443.227	1	-.048	3	-.079	9	-.023	3
1135		3	max	682.92	8	868.7	8	309.006	9	.08	8	.045	3	.136	8
1136			min	-315.065	3	-226.137	3	-443.227	1	-.048	3	-.063	9	-.012	3
1137		4	max	682.92	8	868.7	8	309.006	9	.08	8	.04	3	.091	5
1138			min	-315.065	3	-226.137	3	-443.227	1	-.048	3	-.055	4	-.002	2
1139		5	max	682.92	8	868.7	8	309.006	9	.08	8	.035	3	.049	5
1140			min	-315.065	3	-226.137	3	-443.227	1	-.048	3	-.057	8	-.002	2
1141	M115	1	max	71.256	3	107.229	3	550.288	1	.012	1	.063	6	.025	5
1142			min	-479.742	8	-706.564	8	-530.364	2	-.087	6	-.011	1	-.011	2
1143		2	max	71.256	3	107.229	3	550.288	1	.012	1	.062	8	.061	8
1144			min	-479.742	8	-706.564	8	-530.364	2	-.087	6	.01	9	-.011	3
1145		3	max	71.256	3	107.229	3	550.288	1	.012	1	.072	5	.097	8
1146			min	-479.742	8	-706.564	8	-530.364	2	-.087	6	-.014	2	-.017	3
1147		4	max	71.256	3	107.229	3	550.288	1	.012	1	.081	5	.134	8
1148			min	-479.742	8	-706.564	8	-530.364	2	-.087	6	-.042	2	-.023	3
1149		5	max	71.256	3	107.229	3	550.288	1	.012	1	.104	1	.171	8

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1150			min	-479.742	8	-706.564	8	-530.364	2	-.087	6	-.069	2	-.028	3
1151	M116	1	max	675.775	5	851.577	5	384.053	9	.047	2	.101	1	.224	8
1152			min	-343.377	2	-185.35	2	-320.285	3	-.08	5	-.062	2	-.023	2
1153		2	max	675.775	5	851.577	5	384.053	9	.047	2	.09	1	.18	8
1154			min	-343.377	2	-185.35	2	-320.285	3	-.08	5	-.055	2	-.016	3
1155		3	max	675.775	5	851.577	5	384.053	9	.047	2	.079	1	.136	8
1156			min	-343.377	2	-185.35	2	-320.285	3	-.08	5	-.048	2	-.011	3
1157		4	max	675.775	5	851.577	5	384.053	9	.047	2	.068	1	.092	8
1158			min	-343.377	2	-185.35	2	-320.285	3	-.08	5	-.042	2	-.006	3
1159		5	max	675.775	5	851.577	5	384.053	9	.047	2	.058	5	.049	8
1160			min	-343.377	2	-185.35	2	-320.285	3	-.08	5	-.035	2	0	3
1161	M117	1	max	6602.381	7	3259.865	8	1971.246	2	1.086	2	2.384	1	6.946	8
1162			min	-1419.726	4	407.727	3	-1984.719	1	-1.089	1	-2.373	2	-.796	3
1163		2	max	6598.159	7	3229.128	8	1940.086	2	1.086	2	.415	1	3.702	8
1164			min	-1401.736	4	392.927	3	-1953.559	1	-1.089	1	-.417	2	-1.197	3
1165		3	max	6593.936	7	3198.39	8	1908.925	2	1.086	2	1.507	2	1.659	4
1166			min	-1383.745	4	378.127	3	-1922.399	1	-1.089	1	-1.523	1	-1.582	3
1167		4	max	17.99	3	30.75	5	31.156	2	0	11	.016	1	.015	5
1168			min	-17.99	2	14.732	4	-31.164	1	0	1	-.016	2	.007	4
1169		5	max	0	11	.013	5	0	11	0	11	0	11	0	11
1170			min	0	1	-.068	4	-.006	4	0	1	0	1	0	1
1171	M118	1	max	6588.029	8	3188.287	7	1441.926	1	1.013	1	1.506	2	6.758	7
1172			min	-1394.63	3	389.444	4	-1440.83	2	-1.038	2	-1.511	1	-.834	4
1173		2	max	6583.806	8	3157.549	7	1410.766	1	1.013	1	.242	3	3.585	7
1174			min	-1376.639	3	374.644	4	-1409.67	2	-1.038	2	-.247	4	-1.216	4
1175		3	max	6579.584	8	3126.811	7	1379.606	1	1.013	1	1.311	1	1.631	3
1176			min	-1358.649	3	359.844	4	-1378.51	2	-1.038	2	-1.313	2	-1.584	4
1177		4	max	17.99	4	30.75	5	31.158	1	0	11	.016	2	.015	5
1178			min	-17.99	2	14.734	3	-31.162	2	0	1	-.016	1	.007	3
1179		5	max	0	11	.012	5	.006	4	0	11	0	11	0	11
1180			min	0	1	-.066	3	-.002	2	0	1	0	1	0	1
1181	M119	1	max	1201.447	1	10.902	1	890.259	3	.885	6	.111	1	.386	1
1182			min	-1076.08	2	-684.719	6	-616.76	4	.108	1	-.075	2	-.723	2
1183		2	max	1201.447	1	10.902	1	890.259	3	.885	6	.116	1	.385	1
1184			min	-1076.08	2	-684.719	6	-616.76	4	.108	1	-.063	2	-.696	2
1185		3	max	1201.447	1	10.902	1	890.259	3	.885	6	.136	5	.384	1
1186			min	-1076.08	2	-684.719	6	-616.76	4	.108	1	-.051	2	-.669	2
1187		4	max	1201.447	1	10.902	1	890.259	3	.885	6	.162	5	.384	1
1188			min	-1076.08	2	-684.719	6	-616.76	4	.108	1	-.044	4	-.643	2
1189		5	max	1201.447	1	10.902	1	890.259	3	.885	6	.192	7	.383	1
1190			min	-1076.08	2	-684.719	6	-616.76	4	.108	1	-.083	4	-.616	2
1191	M120	1	max	463.427	1	-142.616	1	634.053	3	.688	3	.058	1	.243	2
1192			min	-359.058	2	-819.423	6	-467.573	4	-.408	4	-.084	2	-.547	5
1193		2	max	463.427	1	-142.616	1	634.053	3	.688	3	.057	1	.266	2
1194			min	-359.058	2	-819.423	6	-467.573	4	-.408	4	-.072	2	-.533	1
1195		3	max	463.427	1	-142.616	1	634.053	3	.688	3	.057	3	.29	2
1196			min	-359.058	2	-819.423	6	-467.573	4	-.408	4	-.062	4	-.524	1
1197		4	max	463.427	1	-142.616	1	634.053	3	.688	3	.097	3	.314	2
1198			min	-359.058	2	-819.423	6	-467.573	4	-.408	4	-.091	4	-.515	1
1199		5	max	463.427	1	-142.616	1	634.053	3	.688	3	.137	3	.337	2
1200			min	-359.058	2	-819.423	6	-467.573	4	-.408	4	-.12	4	-.506	1
1201	M121	1	max	743.528	1	-175.554	1	547.69	3	.321	3	.096	2	.079	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 Mome...	LC
1202			min	-637.339	2	-910.949	6	-727.174	4	-.628	4	-.056	1	-.478	5
1203		2	max	743.528	1	-175.554	1	547.69	3	.321	3	.085	2	.106	2
1204			min	-637.339	2	-910.949	6	-727.174	4	-.628	4	-.056	1	-.425	5
1205		3	max	743.528	1	-175.554	1	547.69	3	.321	3	.074	2	.133	2
1206			min	-637.339	2	-910.949	6	-727.174	4	-.628	4	-.057	1	-.371	5
1207		4	max	743.528	1	-175.554	1	547.69	3	.321	3	.098	3	.16	2
1208			min	-637.339	2	-910.949	6	-727.174	4	-.628	4	-.092	4	-.328	1
1209		5	max	743.528	1	-175.554	1	547.69	3	.321	3	.132	3	.186	2
1210			min	-637.339	2	-910.949	6	-727.174	4	-.628	4	-.137	4	-.317	1
1211	M122	1	max	350.647	1	201.328	10	256.527	3	-.011	3	.095	2	.027	1
1212			min	-274.506	2	-85.019	2	-447.638	4	-.555	6	-.099	1	-.238	6
1213		2	max	350.647	1	201.328	10	256.527	3	-.011	3	.086	2	.016	1
1214			min	-274.506	2	-85.019	2	-447.638	4	-.555	6	-.101	1	-.242	6
1215		3	max	350.647	1	201.328	10	256.527	3	-.011	3	.076	2	.006	1
1216			min	-274.506	2	-85.019	2	-447.638	4	-.555	6	-.104	1	-.247	10
1217		4	max	350.647	1	201.328	10	256.527	3	-.011	3	.066	2	-.005	1
1218			min	-274.506	2	-85.019	2	-447.638	4	-.555	6	-.106	1	-.259	10
1219		5	max	350.647	1	201.328	10	256.527	3	-.011	3	.056	2	-.016	1
1220			min	-274.506	2	-85.019	2	-447.638	4	-.555	6	-.108	1	-.272	10
1221	MP3C	1	max	0	11	.015	4	.009	1	0	11	0	11	0	11
1222			min	0	1	-.015	3	-.021	6	0	1	0	1	0	1
1223		2	max	577.699	5	287.898	8	457.589	1	.068	3	.057	2	.012	1
1224			min	41.355	2	-139.96	3	-363.846	2	-.037	4	-.145	5	-.156	6
1225		3	max	-16.66	10	59.267	3	59.23	2	0	11	.119	1	.119	3
1226			min	-52.639	5	-59.232	4	-59.23	1	0	1	-.119	2	-.119	4
1227		4	max	-8.33	10	29.665	3	29.628	2	0	11	.03	1	.03	3
1228			min	-26.32	5	-29.63	4	-29.628	1	0	1	-.03	2	-.03	4
1229		5	max	0	11	.198	7	.026	2	0	11	0	11	0	11
1230			min	0	1	-.028	4	-.026	1	0	1	0	1	0	1
1231	MP2C	1	max	0	11	.023	8	.012	1	0	11	0	11	0	11
1232			min	0	1	-.014	3	-.012	2	0	1	0	1	0	1
1233		2	max	524.26	7	336.237	4	173.602	1	.053	4	.069	3	.012	1
1234			min	-44.475	4	-348.712	3	-370.006	6	-.099	3	-.102	4	-.167	6
1235		3	max	-30.946	10	265.305	3	185.047	2	0	11	.245	1	.325	3
1236			min	-138.06	5	-265.281	4	-185.095	1	0	1	-.244	2	-.325	4
1237		4	max	-8.33	10	29.657	3	29.633	2	0	11	.03	1	.03	3
1238			min	-26.32	5	-29.632	4	-29.68	1	0	1	-.03	2	-.03	4
1239		5	max	0	11	.19	7	.031	2	0	11	0	11	0	11
1240			min	0	1	-.03	4	-.375	5	0	1	0	1	0	1
1241	MP4C	1	max	0	11	.019	4	.021	1	0	11	0	11	0	11
1242			min	0	1	-.02	3	-.022	2	0	1	0	1	0	1
1243		2	max	286.677	3	446.165	4	460.335	1	.085	1	.019	3	.052	10
1244			min	-256.449	4	-198.803	3	-300.629	2	-.097	2	-.101	8	-.081	3
1245		3	max	388.182	3	579.275	4	541.495	1	.085	1	.835	1	.396	3
1246			min	-154.945	4	-331.913	3	-381.789	2	-.097	2	-.612	2	-.867	4
1247		4	max	-85.185	10	572.479	3	393.219	2	0	11	.299	1	.433	3
1248			min	-320.696	5	-572.354	4	-393.184	1	0	1	-.299	2	-.433	4
1249		5	max	0	11	.784	7	.314	6	0	11	0	11	0	11
1250			min	0	1	-.04	9	-.067	1	0	1	0	1	0	1
1251	M127	1	max	965.607	4	60.978	4	933.707	1	.85	5	.097	2	.262	4
1252			min	-828.522	3	-702.301	7	-672.957	2	.051	4	-.085	1	-.602	3
1253		2	max	965.607	4	60.978	4	933.707	1	.85	5	.127	4	.258	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 Mome...	LC
1254			min	-828.522	3	-702.301	7	-672.957	2	.051	4	-.097	3	-.572	3
1255		3	max	965.607	4	60.978	4	933.707	1	.85	5	.17	4	.254	4
1256			min	-828.522	3	-702.301	7	-672.957	2	.051	4	-.125	3	-.542	3
1257		4	max	965.607	4	60.978	4	933.707	1	.85	5	.214	4	.25	4
1258			min	-828.522	3	-702.301	7	-672.957	2	.051	4	-.152	3	-.512	3
1259		5	max	965.607	4	60.978	4	933.707	1	.85	5	.257	4	.246	4
1260			min	-828.522	3	-702.301	7	-672.957	2	.051	4	-.179	3	-.482	3
1261	M128	1	max	369.009	4	-116.029	2	630.354	1	.719	1	.037	4	.147	3
1262			min	-287.27	3	-794.443	5	-477.019	2	-.458	2	-.068	3	-.47	8
1263		2	max	369.009	4	-116.029	2	630.354	1	.719	1	.058	4	.166	3
1264			min	-287.27	3	-794.443	5	-477.019	2	-.458	2	-.08	3	-.423	8
1265		3	max	369.009	4	-116.029	2	630.354	1	.719	1	.079	4	.185	3
1266			min	-287.27	3	-794.443	5	-477.019	2	-.458	2	-.091	3	-.391	4
1267		4	max	369.009	4	-116.029	2	630.354	1	.719	1	.099	4	.204	3
1268			min	-287.27	3	-794.443	5	-477.019	2	-.458	2	-.102	3	-.378	4
1269		5	max	369.009	4	-116.029	2	630.354	1	.719	1	.12	4	.223	3
1270			min	-287.27	3	-794.443	5	-477.019	2	-.458	2	-.113	3	-.366	4
1271	M129	1	max	648.092	4	-117.053	4	463.724	1	.269	4	.099	3	.144	3
1272			min	-559.963	3	-906.273	7	-632.391	2	-.577	7	-.053	4	-.449	8
1273		2	max	648.092	4	-117.053	4	463.724	1	.269	4	.063	7	.174	3
1274			min	-559.963	3	-906.273	7	-632.391	2	-.577	7	-.024	4	-.398	8
1275		3	max	648.092	4	-117.053	4	463.724	1	.269	4	.087	1	.204	3
1276			min	-559.963	3	-906.273	7	-632.391	2	-.577	7	-.063	2	-.388	4
1277		4	max	648.092	4	-117.053	4	463.724	1	.269	4	.116	1	.234	3
1278			min	-559.963	3	-906.273	7	-632.391	2	-.577	7	-.102	2	-.381	4
1279		5	max	648.092	4	-117.053	4	463.724	1	.269	4	.145	1	.264	3
1280			min	-559.963	3	-906.273	7	-632.391	2	-.577	7	-.142	2	-.374	4
1281	M130	1	max	315.575	4	140.09	10	216.949	4	.057	4	.106	3	-.023	4
1282			min	-220.252	3	-52.892	3	-400.839	3	-.559	7	-.098	4	-.264	7
1283		2	max	315.575	4	140.09	10	216.949	4	.057	4	.081	3	-.031	4
1284			min	-220.252	3	-52.892	3	-400.839	3	-.559	7	-.084	4	-.267	7
1285		3	max	315.575	4	140.09	10	216.949	4	.057	4	.056	3	-.039	4
1286			min	-220.252	3	-52.892	3	-400.839	3	-.559	7	-.071	4	-.271	7
1287		4	max	315.575	4	140.09	10	216.949	4	.057	4	.051	1	-.047	4
1288			min	-220.252	3	-52.892	3	-400.839	3	-.559	7	-.078	2	-.274	7
1289		5	max	315.575	4	140.09	10	216.949	4	.057	4	.063	1	-.055	4
1290			min	-220.252	3	-52.892	3	-400.839	3	-.559	7	-.102	2	-.277	7
1291	MP3B	1	max	0	11	.013	4	.014	5	0	11	0	11	0	11
1292			min	0	1	-.022	7	-.011	2	0	1	0	1	0	1
1293		2	max	594.806	8	347.417	4	199.279	1	.081	4	.066	4	.191	6
1294			min	14.206	3	-335.65	3	-381.95	2	-.047	3	-.104	3	.01	1
1295		3	max	-16.66	10	59.231	3	59.226	2	0	11	.119	1	.119	3
1296			min	-52.639	5	-59.249	4	-59.257	1	0	1	-.118	2	-.119	4
1297		4	max	-8.33	10	29.629	3	29.624	2	0	11	.03	1	.03	3
1298			min	-26.32	5	-29.647	4	-29.655	1	0	1	-.03	2	-.03	4
1299		5	max	0	11	.027	3	.022	2	0	11	0	11	0	11
1300			min	0	1	-.102	8	-.173	5	0	1	0	1	0	1
1301	MP2B	1	max	0	11	.016	4	.009	1	0	11	0	11	0	11
1302			min	0	1	-.017	3	-.019	6	0	1	0	1	0	1
1303		2	max	526.511	5	125.638	4	478.506	1	.033	3	.075	2	.132	6
1304			min	-23.392	2	-297.068	7	-373.607	2	-.081	8	-.144	1	-.017	1
1305		3	max	-30.946	10	265.289	3	185.049	2	0	11	.244	1	.325	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 Mome...	LC
1306			min	-138.06	5	-265.345	4	-185.046	1	0	1	-.244	2	-.325	4
1307		4	max	-8.33	10	29.64	3	29.634	2	0	11	.03	1	.03	3
1308			min	-26.32	5	-29.696	4	-29.631	1	0	1	-.03	2	-.03	4
1309		5	max	0	11	.038	3	.067	6	0	11	0	11	0	11
1310			min	0	1	-.439	8	-.029	1	0	1	0	1	0	1
1311	MP1B	1	max	0	11	.016	8	.011	1	0	11	0	11	0	11
1312			min	0	1	-.013	3	-.014	6	0	1	0	1	0	1
1313		2	max	50.43	4	-8.652	4	272.717	1	.08	2	.032	2	.016	10
1314			min	-306.966	7	-295.392	7	-154.637	2	-.087	1	-.041	1	-.06	9
1315		3	max	-24.76	10	176.701	3	139.872	2	0	11	.199	1	.236	3
1316			min	-111.159	5	-176.72	4	-139.853	1	0	1	-.199	2	-.236	4
1317		4	max	-8.33	10	29.655	3	29.652	2	0	11	.03	1	.03	3
1318			min	-26.32	5	-29.674	4	-29.633	1	0	1	-.03	2	-.03	4
1319		5	max	0	11	.053	3	.169	6	0	11	0	11	0	11
1320			min	0	1	-.191	8	-.031	1	0	1	0	1	0	1
1321	MP4B	1	max	0	11	.022	4	.022	1	0	11	0	11	0	11
1322			min	0	1	-.022	3	-.022	2	0	1	0	1	0	1
1323		2	max	184.629	1	402.693	4	164.938	1	.095	4	.054	9	.108	6
1324			min	-155.678	2	-386.146	3	-540.666	6	-.107	3	-.053	1	.009	9
1325		3	max	326.571	5	535.803	4	246.098	1	.095	4	.313	1	.852	3
1326			min	-54.174	2	-519.256	3	-562.078	6	-.107	3	-.947	6	-.814	4
1327		4	max	-85.185	10	572.368	3	393.189	2	0	11	.299	1	.433	3
1328			min	-320.696	5	-572.403	4	-393.313	1	0	1	-.299	2	-.433	4
1329		5	max	0	11	.058	10	.072	2	0	11	0	11	0	11
1330			min	0	1	-.25	8	-.845	5	0	1	0	1	0	1
1331	M135	1	max	981.368	3	-41.773	2	871.056	2	.877	8	.107	3	.186	3
1332			min	-842.666	4	-676.905	5	-600.966	1	.151	3	-.095	4	-.586	8
1333		2	max	981.368	3	-41.773	2	871.056	2	.877	8	.081	2	.192	3
1334			min	-842.666	4	-676.905	5	-600.966	1	.151	3	-.052	1	-.545	8
1335		3	max	981.368	3	-41.773	2	871.056	2	.877	8	.136	2	.199	3
1336			min	-842.666	4	-676.905	5	-600.966	1	.151	3	-.089	1	-.504	8
1337		4	max	981.368	3	-41.773	2	871.056	2	.877	8	.19	2	.206	3
1338			min	-842.666	4	-676.905	5	-600.966	1	.151	3	-.127	1	-.473	4
1339		5	max	981.368	3	-41.773	2	871.056	2	.877	8	.245	2	.213	3
1340			min	-842.666	4	-676.905	5	-600.966	1	.151	3	-.164	1	-.454	4
1341	M136	1	max	418.205	3	-87.654	3	546.16	2	.646	4	.047	3	.237	4
1342			min	-332.964	4	-811.308	8	-383.15	1	-.367	3	-.081	4	-.51	3
1343		2	max	418.205	3	-87.654	3	546.16	2	.646	4	.029	2	.264	4
1344			min	-332.964	4	-811.308	8	-383.15	1	-.367	3	-.052	1	-.504	3
1345		3	max	418.205	3	-87.654	3	546.16	2	.646	4	.063	2	.29	4
1346			min	-332.964	4	-811.308	8	-383.15	1	-.367	3	-.076	1	-.499	3
1347		4	max	418.205	3	-87.654	3	546.16	2	.646	4	.097	2	.317	4
1348			min	-332.964	4	-811.308	8	-383.15	1	-.367	3	-.1	1	-.493	3
1349		5	max	418.205	3	-87.654	3	546.16	2	.646	4	.131	2	.343	4
1350			min	-332.964	4	-811.308	8	-383.15	1	-.367	3	-.123	1	-.488	3
1351	M137	1	max	588.514	3	-140.325	2	585.705	2	.362	2	.081	8	.078	1
1352			min	-503.033	4	-908.795	5	-752.626	1	-.655	1	-.033	3	-.432	6
1353		2	max	588.514	3	-140.325	2	585.705	2	.362	2	.096	4	.107	1
1354			min	-503.033	4	-908.795	5	-752.626	1	-.655	1	-.062	3	-.38	6
1355		3	max	588.514	3	-140.325	2	585.705	2	.362	2	.113	4	.136	1
1356			min	-503.033	4	-908.795	5	-752.626	1	-.655	1	-.09	3	-.327	6
1357		4	max	588.514	3	-140.325	2	585.705	2	.362	2	.131	4	.165	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 Mome...	LC
1358			min	-503.033	4	-908.795	5	-752.626	1	-.655	1	-.119	3	-.311	2
1359		5	max	588.514	3	-140.325	2	585.705	2	.362	2	.149	4	.194	1
1360			min	-503.033	4	-908.795	5	-752.626	1	-.655	1	-.147	3	-.302	2
1361	M138	1	max	309.14	3	202.857	9	288.342	2	.058	2	.087	1	-.002	3
1362			min	-216.722	4	-100.728	4	-475.942	1	-.567	5	-.08	2	-.253	8
1363		2	max	309.14	3	202.857	9	288.342	2	.058	2	.08	4	-.014	3
1364			min	-216.722	4	-100.728	4	-475.942	1	-.567	5	-.084	3	-.257	8
1365		3	max	309.14	3	202.857	9	288.342	2	.058	2	.085	4	-.026	3
1366			min	-216.722	4	-100.728	4	-475.942	1	-.567	5	-.102	3	-.26	8
1367		4	max	309.14	3	202.857	9	288.342	2	.058	2	.091	4	-.038	3
1368			min	-216.722	4	-100.728	4	-475.942	1	-.567	5	-.119	3	-.264	8
1369		5	max	309.14	3	202.857	9	288.342	2	.058	2	.097	4	-.049	3
1370			min	-216.722	4	-100.728	4	-475.942	1	-.567	5	-.137	3	-.267	8
1371	M139	1	max	0	3	0	3	0	11	0	3	0	4	0	11
1372			min	0	4	0	8	0	1	0	8	0	3	0	1
1373		2	max	54.314	3	72.49	4	-.411	3	.223	1	.034	2	.383	7
1374			min	-598.035	8	-399.661	7	-162.189	6	-.175	2	-.037	1	-.034	4
1375		3	max	-234.813	4	117.02	4	32.212	1	.023	1	.041	1	.047	6
1376			min	-838.73	7	-109.928	3	-29.821	2	-.021	2	-.076	2	-.012	1
1377		4	max	97.505	4	402.043	8	174.868	7	.121	2	.126	1	.353	8
1378			min	-594.945	7	-99.323	3	-13.743	1	-.184	1	-.126	2	-.037	3
1379		5	max	0	3	0	3	0	11	0	11	0	11	0	11
1380			min	0	4	0	4	0	1	0	1	0	1	0	1
1381	M140	1	max	0	2	.015	2	0	5	0	2	0	2	0	11
1382			min	0	1	-.001	9	-.006	4	0	9	0	1	0	1
1383		2	max	146.874	1	162.595	2	144.306	6	.075	1	.104	4	.353	5
1384			min	-620.564	6	-402.956	5	-25.439	1	-.152	2	-.111	3	-.108	2
1385		3	max	-140.424	10	102.216	2	21.42	3	.013	3	.079	8	.047	8
1386			min	-839.777	6	-107.155	1	-20.462	4	-.012	4	-.03	3	-.015	3
1387		4	max	74.575	4	398.922	8	-9.593	2	.193	3	.059	3	.378	8
1388			min	-603.962	7	-131.427	3	-129.356	5	-.132	4	-.07	4	-.103	3
1389		5	max	0	1	0	8	.003	3	0	8	0	3	0	2
1390			min	0	2	-.006	2	0	1	0	2	0	4	0	1
1391	M141	1	max	0	1	.017	1	.002	3	0	1	0	2	0	2
1392			min	0	2	0	10	-.001	1	0	7	0	1	0	1
1393		2	max	68.338	3	145.084	4	136.584	5	.098	3	.061	3	.345	7
1394			min	-581.277	8	-394.158	7	-.36	2	-.172	4	-.068	4	-.106	4
1395		3	max	-138.021	9	98.306	1	23.178	4	.018	4	.078	7	.046	7
1396			min	-813.898	8	-104.49	2	-22.187	3	-.016	3	-.018	4	-.014	4
1397		4	max	106.033	1	387.198	5	21.188	1	.186	4	.034	2	.369	5
1398			min	-605.55	6	-135.814	2	-130.923	6	-.127	3	-.042	1	-.102	2
1399		5	max	0	1	0	9	.001	1	0	11	0	2	0	11
1400			min	0	2	-.006	2	-.001	3	0	2	0	1	0	2
1401	M142	1	max	236.771	1	148.466	2	-86.604	1	.522	7	.075	2	.172	2
1402			min	-362.152	2	-289.684	1	-448.938	6	-.121	4	-.111	1	-.203	1
1403		2	max	236.771	1	148.466	2	-86.604	1	.522	7	.063	2	.163	2
1404			min	-362.152	2	-289.684	1	-448.938	6	-.121	4	-.116	1	-.185	1
1405		3	max	236.771	1	148.466	2	-86.604	1	.522	7	.051	2	.154	2
1406			min	-362.152	2	-289.684	1	-448.938	6	-.121	4	-.136	5	-.167	1
1407		4	max	236.771	1	148.466	2	-86.604	1	.522	7	.039	2	.144	2
1408			min	-362.152	2	-289.684	1	-448.938	6	-.121	4	-.162	5	-.149	1
1409		5	max	236.771	1	148.466	2	-86.604	1	.522	7	.027	2	.135	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 Mome...	LC
1410			min	-362.152	2	-289.684	1	-448.938	6	-.121	4	-.188	5	-.131	1
1411	M143	1	max	3.83	2	439.241	6	169.871	4	.636	3	.084	2	.192	2
1412			min	-165.728	8	10.225	1	-338.02	7	-.413	4	-.058	1	-.199	1
1413		2	max	3.83	2	439.241	6	169.871	4	.636	3	.072	2	.176	2
1414			min	-165.728	8	10.225	1	-338.02	7	-.413	4	-.057	1	-.2	1
1415		3	max	3.83	2	439.241	6	169.871	4	.636	3	.06	2	.161	2
1416			min	-165.728	8	10.225	1	-338.02	7	-.413	4	-.055	1	-.2	1
1417		4	max	3.83	2	439.241	6	169.871	4	.636	3	.048	2	.145	2
1418			min	-165.728	8	10.225	1	-338.02	7	-.413	4	-.054	1	-.201	1
1419		5	max	3.83	2	439.241	6	169.871	4	.636	3	.046	4	.13	2
1420			min	-165.728	8	10.225	1	-338.02	7	-.413	4	-.062	3	-.202	1
1421	M144	1	max	9.01	4	417.253	6	354.676	8	.403	3	.056	1	.179	2
1422			min	-170.937	7	-7.638	1	-152.804	3	-.639	4	-.096	2	-.208	1
1423		2	max	9.01	4	417.253	6	354.676	8	.403	3	.056	1	.163	2
1424			min	-170.937	7	-7.638	1	-152.804	3	-.639	4	-.085	2	-.207	1
1425		3	max	9.01	4	417.253	6	354.676	8	.403	3	.057	1	.148	2
1426			min	-170.937	7	-7.638	1	-152.804	3	-.639	4	-.074	2	-.207	1
1427		4	max	9.01	4	417.253	6	354.676	8	.403	3	.057	1	.132	2
1428			min	-170.937	7	-7.638	1	-152.804	3	-.639	4	-.063	2	-.206	1
1429		5	max	9.01	4	417.253	6	354.676	8	.403	3	.058	1	.117	2
1430			min	-170.937	7	-7.638	1	-152.804	3	-.639	4	-.052	2	-.206	1
1431	M145	1	max	59.738	1	19.693	2	330.732	8	.095	3	.099	1	-.003	4
1432			min	-137.085	6	-377.9	5	8.889	3	-.464	8	-.095	2	-.152	7
1433		2	max	59.738	1	19.693	2	330.732	8	.095	3	.101	1	0	4
1434			min	-137.085	6	-377.9	5	8.889	3	-.464	8	-.086	2	-.129	7
1435		3	max	59.738	1	19.693	2	330.732	8	.095	3	.104	1	.004	4
1436			min	-137.085	6	-377.9	5	8.889	3	-.464	8	-.076	2	-.107	7
1437		4	max	59.738	1	19.693	2	330.732	8	.095	3	.106	1	.007	4
1438			min	-137.085	6	-377.9	5	8.889	3	-.464	8	-.066	2	-.084	7
1439		5	max	59.738	1	19.693	2	330.732	8	.095	3	.109	1	.011	4
1440			min	-137.085	6	-377.9	5	8.889	3	-.464	8	-.056	2	-.062	7
1441	M146	1	max	168.252	4	203.28	3	-42.627	4	.506	5	.085	1	.158	3
1442			min	-305.3	3	-340.67	4	-431.038	5	-.165	2	-.097	2	-.219	4
1443		2	max	168.252	4	203.28	3	-42.627	4	.506	5	.075	1	.145	3
1444			min	-305.3	3	-340.67	4	-431.038	5	-.165	2	-.104	2	-.198	4
1445		3	max	168.252	4	203.28	3	-42.627	4	.506	5	.065	1	.132	3
1446			min	-305.3	3	-340.67	4	-431.038	5	-.165	2	-.11	2	-.176	4
1447		4	max	168.252	4	203.28	3	-42.627	4	.506	5	.055	1	.119	3
1448			min	-305.3	3	-340.67	4	-431.038	5	-.165	2	-.118	6	-.155	4
1449		5	max	168.252	4	203.28	3	-42.627	4	.506	5	.045	1	.107	3
1450			min	-305.3	3	-340.67	4	-431.038	5	-.165	2	-.143	6	-.134	4
1451	M147	1	max	32.972	1	413.902	5	206.569	2	.658	1	.068	3	.171	3
1452			min	-137.312	6	-17.535	2	-360.227	1	-.453	2	-.037	4	-.144	4
1453		2	max	32.972	1	413.902	5	206.569	2	.658	1	.069	3	.16	3
1454			min	-137.312	6	-17.535	2	-360.227	1	-.453	2	-.047	4	-.149	4
1455		3	max	32.972	1	413.902	5	206.569	2	.658	1	.069	3	.15	3
1456			min	-137.312	6	-17.535	2	-360.227	1	-.453	2	-.057	4	-.153	4
1457		4	max	32.972	1	413.902	5	206.569	2	.658	1	.07	3	.139	3
1458			min	-137.312	6	-17.535	2	-360.227	1	-.453	2	-.067	4	-.157	4
1459		5	max	32.972	1	413.902	5	206.569	2	.658	1	.07	3	.128	3
1460			min	-137.312	6	-17.535	2	-360.227	1	-.453	2	-.078	4	-.161	4
1461	M148	1	max	-9.592	2	412.577	7	333.721	7	.339	4	.053	4	.217	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 Mome...	LC
1462			min	-140.774	8	-67.563	4	-113.379	4	-.561	3	-.099	3	-.213	4
1463		2	max	-9.592	2	412.577	7	333.721	7	.339	4	.045	4	.199	3
1464			min	-140.774	8	-67.563	4	-113.379	4	-.561	3	-.081	3	-.209	4
1465		3	max	-9.592	2	412.577	7	333.721	7	.339	4	.038	4	.18	3
1466			min	-140.774	8	-67.563	4	-113.379	4	-.561	3	-.063	3	-.205	4
1467		4	max	-9.592	2	412.577	7	333.721	7	.339	4	.031	4	.162	3
1468			min	-140.774	8	-67.563	4	-113.379	4	-.561	3	-.046	3	-.201	4
1469		5	max	-9.592	2	412.577	7	333.721	7	.339	4	.042	2	.143	3
1470			min	-140.774	8	-67.563	4	-113.379	4	-.561	3	-.045	1	-.196	4
1471	M149	1	max	21.563	4	-13.259	3	327.798	7	.117	4	.098	4	-.024	3
1472			min	-161.569	7	-360.636	8	-21.51	4	-.445	7	-.106	3	-.206	8
1473		2	max	21.563	4	-13.259	3	327.798	7	.117	4	.096	4	-.023	3
1474			min	-161.569	7	-360.636	8	-21.51	4	-.445	7	-.093	3	-.183	8
1475		3	max	21.563	4	-13.259	3	327.798	7	.117	4	.095	4	-.022	3
1476			min	-161.569	7	-360.636	8	-21.51	4	-.445	7	-.08	3	-.161	8
1477		4	max	21.563	4	-13.259	3	327.798	7	.117	4	.094	4	-.021	3
1478			min	-161.569	7	-360.636	8	-21.51	4	-.445	7	-.067	3	-.138	8
1479		5	max	21.563	4	-13.259	3	327.798	7	.117	4	.092	4	-.02	3
1480			min	-161.569	7	-360.636	8	-21.51	4	-.445	7	-.054	3	-.116	8
1481	M150	1	max	152.418	3	100.01	1	-85.9	10	.511	6	.095	4	.126	4
1482			min	-291.133	4	-271.387	6	-441.247	8	-.137	1	-.107	3	-.193	3
1483		2	max	152.418	3	100.01	1	-85.9	10	.511	6	.084	4	.124	4
1484			min	-291.133	4	-271.387	6	-441.247	8	-.137	1	-.114	3	-.182	3
1485		3	max	152.418	3	100.01	1	-85.9	10	.511	6	.074	4	.122	4
1486			min	-291.133	4	-271.387	6	-441.247	8	-.137	1	-.12	3	-.172	3
1487		4	max	152.418	3	100.01	1	-85.9	10	.511	6	.064	4	.12	4
1488			min	-291.133	4	-271.387	6	-441.247	8	-.137	1	-.127	3	-.161	3
1489		5	max	152.418	3	100.01	1	-85.9	10	.511	6	.054	4	.118	4
1490			min	-291.133	4	-271.387	6	-441.247	8	-.137	1	-.151	7	-.15	3
1491	M151	1	max	37.77	4	431.119	8	176.281	3	.575	4	.081	4	.221	4
1492			min	-136.793	7	-45.169	3	-340.802	4	-.356	3	-.047	3	-.196	3
1493		2	max	37.77	4	431.119	8	176.281	3	.575	4	.059	4	.203	4
1494			min	-136.793	7	-45.169	3	-340.802	4	-.356	3	-.036	3	-.193	3
1495		3	max	37.77	4	431.119	8	176.281	3	.575	4	.042	1	.185	4
1496			min	-136.793	7	-45.169	3	-340.802	4	-.356	3	-.029	2	-.19	3
1497		4	max	37.77	4	431.119	8	176.281	3	.575	4	.049	1	.166	4
1498			min	-136.793	7	-45.169	3	-340.802	4	-.356	3	-.046	2	-.187	3
1499		5	max	37.77	4	431.119	8	176.281	3	.575	4	.056	1	.148	4
1500			min	-136.793	7	-45.169	3	-340.802	4	-.356	3	-.064	2	-.184	3
1501	M152	1	max	29.153	1	414.745	5	352.709	1	.463	2	.033	3	.171	1
1502			min	-145.663	6	-46.566	2	-184.673	2	-.682	1	-.081	8	-.168	2
1503		2	max	29.153	1	414.745	5	352.709	1	.463	2	.04	3	.154	1
1504			min	-145.663	6	-46.566	2	-184.673	2	-.682	1	-.074	4	-.165	2
1505		3	max	29.153	1	414.745	5	352.709	1	.463	2	.047	3	.136	1
1506			min	-145.663	6	-46.566	2	-184.673	2	-.682	1	-.07	4	-.162	2
1507		4	max	29.153	1	414.745	5	352.709	1	.463	2	.054	3	.119	1
1508			min	-145.663	6	-46.566	2	-184.673	2	-.682	1	-.067	4	-.159	2
1509		5	max	29.153	1	414.745	5	352.709	1	.463	2	.061	3	.102	1
1510			min	-145.663	6	-46.566	2	-184.673	2	-.682	1	-.063	4	-.157	2
1511	M153	1	max	28.015	3	34.817	4	337.365	5	.155	2	.08	2	-.009	1
1512			min	-159.265	8	-391.936	7	-34.007	2	-.466	5	-.087	1	-.214	6
1513		2	max	28.015	3	34.817	4	337.365	5	.155	2	.077	2	-.007	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1514			min	-159.265	8	-391.936	7	-34.007	2	-.466	5	-.074	1	-.191	6
1515		3	max	28.015	3	34.817	4	337.365	5	.155	2	.077	3	-.005	1
1516			min	-159.265	8	-391.936	7	-34.007	2	-.466	5	-.061	4	-.168	6
1517		4	max	28.015	3	34.817	4	337.365	5	.155	2	.083	3	-.003	1
1518			min	-159.265	8	-391.936	7	-34.007	2	-.466	5	-.055	4	-.144	6
1519		5	max	28.015	3	34.817	4	337.365	5	.155	2	.088	3	0	1
1520			min	-159.265	8	-391.936	7	-34.007	2	-.466	5	-.048	4	-.121	6
1521	MP1C	1	max	0	11	.012	4	.016	5	0	11	0	11	0	11
1522			min	0	1	-.012	3	-.013	2	0	1	0	1	0	1
1523		2	max	2.452	3	137.795	4	36.515	1	.098	4	.053	7	.036	1
1524			min	-275.627	8	-149.233	3	-367.44	6	-.106	3	-.015	4	-.032	2
1525		3	max	-24.76	10	176.687	3	139.871	2	0	11	.199	1	.236	3
1526			min	-111.159	5	-176.693	4	-139.895	1	0	1	-.199	2	-.236	4
1527		4	max	-8.33	10	29.641	3	29.651	2	0	11	.03	1	.03	3
1528			min	-26.32	5	-29.647	4	-29.675	1	0	1	-.03	2	-.03	4
1529		5	max	0	11	.039	3	.049	2	0	11	0	11	0	11
1530			min	0	1	-.079	8	-.222	5	0	1	0	1	0	1
1531	M154	1	max	13.717	2	364.561	4	321.604	3	.004	3	0	11	.457	4
1532			min	-381.574	5	-316.702	3	-359.661	4	-.005	4	0	1	-.581	3
1533		2	max	13.717	2	362.11	4	321.604	3	.004	3	.007	1	.244	4
1534			min	-381.574	5	-319.152	3	-359.661	4	-.005	4	-.005	2	-.392	3
1535		3	max	13.717	2	359.66	4	321.604	3	.004	3	.009	1	.032	4
1536			min	-381.574	5	-321.603	3	-359.661	4	-.005	4	-.006	2	-.279	7
1537		4	max	13.717	2	357.209	4	321.604	3	.004	3	.007	1	-.013	3
1538			min	-381.574	5	-324.053	3	-359.661	4	-.005	4	-.005	2	-.322	8
1539		5	max	13.717	2	354.759	4	321.604	3	.004	3	0	11	.177	3
1540			min	-381.574	5	-326.504	3	-359.661	4	-.005	4	0	1	-.398	8
1541	M155	1	max	112.312	1	370.248	2	312.379	1	.003	4	0	11	.466	2
1542			min	-404.799	6	-313.97	1	-358.855	2	-.003	3	0	1	-.573	1
1543		2	max	117.935	1	367.798	2	315.626	1	.003	4	.005	4	.251	2
1544			min	-406.272	6	-316.42	1	-362.102	2	-.003	3	-.003	3	-.387	1
1545		3	max	123.558	1	365.347	2	318.872	1	.003	4	.007	4	.036	2
1546			min	-407.744	6	-318.871	1	-365.348	2	-.003	3	-.004	3	-.267	5
1547		4	max	129.181	1	362.897	2	322.118	1	.003	4	.005	4	.003	4
1548			min	-409.217	6	-321.321	1	-368.595	2	-.003	3	-.003	3	-.322	6
1549		5	max	134.804	1	360.446	2	325.365	1	.003	4	0	11	.179	1
1550			min	-410.689	6	-323.772	1	-371.841	2	-.003	3	0	1	-.406	6
1551	M156	1	max	89.695	4	278.21	3	239.927	2	.004	2	0	11	.389	3
1552			min	-396.385	7	-234.024	4	-273.047	1	-.005	1	0	1	-.503	4
1553		2	max	95.318	4	275.76	3	236.68	2	.004	2	.005	3	.232	3
1554			min	-397.857	7	-236.474	4	-269.801	1	-.005	1	-.003	4	-.368	4
1555		3	max	100.941	4	273.309	3	238.926	4	.004	2	.007	3	.072	3
1556			min	-399.33	7	-238.925	4	-273.31	3	-.005	1	-.004	4	-.27	8
1557		4	max	106.564	4	270.859	3	248.665	4	.004	2	.005	3	-.012	2
1558			min	-400.803	7	-241.375	4	-283.05	3	-.005	1	-.003	4	-.292	5
1559		5	max	112.187	4	268.408	3	258.405	4	.004	2	0	11	.125	2
1560			min	-402.275	7	-243.826	4	-292.789	3	-.005	1	0	1	-.351	5

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Ch...	Loc...	Dir	LC	phi*Pn...	phi*Pn...	phi*Mn...	phi*Mn.....	Eqn
1	M45	PL3/8x4	.786	.565	1	.116	0	y	1	44539...	48600	.38	3.978	1...H1-1b
2	M34	PL3/8x4	.721	0	1	.155	.225	y	2	47933...	48600	.38	4.048	1...H1-1b
3	M41	PL3/8x4	.715	.565	3	.090	.565	y	3	44539...	48600	.38	4.05	1...H1-1b
4	M4	PL3/8x4	.632	0	3	.147	.225	y	3	47933...	48600	.38	4.05	1...H1-1b
5	M2	PL3/8x4	.624	1.992	8	.192	3.542	y	8	48392...	48600	.38	4.05	2...H1-1b
6	M3	PL3/8x4	.614	1.992	6	.185	3.542	y	7	48392...	48600	.38	4.05	2...H1-1b
7	M5	PL3/8x4	.612	2.258	5	.188	3.542	y	5	48392...	48600	.38	4.05	2...H1-1b
8	M43	PL3/8x4	.533	.565	4	.082	0	y	4	44539...	48600	.38	4.05	1...H1-1b
9	M37	PL3/8x4	.506	0	4	.108	.225	y	3	47933...	48600	.38	4.05	1...H1-1b
10	MP2B	PIPE 2.0	.478	3.75	1	.109	3.75		1	14916...	32130	1.872	1.872	4...H1-1b
11	M117	HSS4X4X4	.470	0	6	.131	0	z	1	10384...	139518	16.181	16.181	2...H1-1b
12	MP2C	PIPE 2.0	.459	3.75	3	.121	3.75		3	14916...	32130	1.872	1.872	2...H1-1b
13	M13	HSS4X4X4	.452	0	5	.168	0	z	4	10384...	139518	16.181	16.181	2...H1-1b
14	M6	L2x2x4	.450	0	1	.027	2.916	y	2	25500...	30585.6	.691	1.577	2...H2-1
15	M118	HSS4X4X4	.447	0	6	.115	0	y	2	10384...	139518	16.181	16.181	2...H1-1b
16	M40	PL3/8x4	.446	.225	2	.158	.225	y	2	47933...	48600	.38	4.05	1...H1-1b
17	MP2A	PIPE 2.0	.445	3.75	4	.096	3.75		2	14916...	32130	1.872	1.872	3...H1-1b
18	M42	PL3/8x4	.441	.225	4	.158	.225	y	4	47933...	48600	.38	4.05	1...H1-1b
19	MP3C	PIPE 2.0	.439	3.75	1	.093	3.75		1	14916...	32130	1.872	1.872	4...H1-1b
20	MP3A	PIPE 2.0	.423	3.75	3	.087	3.75		2	14916...	32130	1.872	1.872	3...H1-1b
21	MP3B	PIPE 2.0	.412	3.75	4	.106	3.75		4	14916...	32130	1.872	1.872	3...H1-1b
22	M10	L2x2x4	.408	0	3	.022	2.916	y	3	25500...	30585.6	.691	1.577	2...H2-1
23	MP4A	PIPE 2.5	.400	3.865	2	.069	3.792		1	33961...	50715	3.596	3.596	2...H1-1b
24	M11	L2x2x4	.396	0	2	.027	2.916	y	6	25500...	30585.6	.691	1.577	2...H2-1
25	M9	L2x2x4	.371	0	4	.026	2.916	y	5	25500...	30585.6	.691	1.577	2...H2-1
26	MP4C	PIPE 2.5	.347	3.865	3	.066	3.792		4	33961...	50715	3.596	3.596	2...H1-1b
27	MP4B	PIPE 2.5	.347	3.865	4	.070	3.792		4	33961...	50715	3.596	3.596	2...H1-1b
28	MP1B	PIPE 2.0	.338	3.75	5	.089	3.75		1	14916...	32130	1.872	1.872	4...H1-1b
29	MP1A	PIPE 2.0	.335	3.75	8	.078	.833		2	14916...	32130	1.872	1.872	3...H1-1b
30	MP1C	PIPE 2.0	.329	3.75	6	.097	3.75		3	14916...	32130	1.872	1.872	4...H1-1b
31	M8	L2x2x4	.323	0	4	.021	2.916	y	3	25500...	30585.6	.691	1.577	2...H2-1
32	M44	PL3/8x4	.313	.225	1	.124	.225	y	1	47933...	48600	.38	4.05	1...H1-1b
33	M139	PIPE 2.0	.311	1.432	2	.138	3.385		1	6295.4...	32130	1.872	1.872	1...H1-1b
34	M140	PIPE 2.0	.304	11.068	4	.131	9.115		3	6295.4...	32130	1.872	1.872	2...H1-1b
35	M141	PIPE 2.0	.286	12.24	5	.125	9.115		4	6295.4...	32130	1.872	1.872	1...H1-1b
36	M7	L2x2x4	.253	0	3	.027	2.916	y	7	25500...	30585.6	.691	1.577	2...H2-1
37	M28	PIPE 3.0	.245	2.131	2	.227	2.131		6	53085...	65205	5.749	5.749	2...H1-1b
38	M12	PIPE 3.0	.222	2.131	3	.228	2.131		7	53085...	65205	5.749	5.749	1...H1-1b
39	M23	PIPE 3.0	.216	2.131	4	.225	2.131		8	53085...	65205	5.749	5.749	2...H1-1b
40	M1	PIPE 3.0	.214	4.067	4	.184	1.162		2	53085...	65205	5.749	5.749	2...H1-1b
41	M22	PIPE 3.0	.206	4.067	2	.167	4.067		6	53085...	65205	5.749	5.749	2...H1-1b
42	M27	PIPE 3.0	.196	4.067	1	.172	4.067		7	53085...	65205	5.749	5.749	2...H1-1b
43	M154	L3X3X4	.156	0	3	.046	0	y	4	43870...	46656	1.688	3.756	2...H2-1
44	M155	L3X3X4	.155	0	1	.035	1.667	z	2	43870...	46656	1.688	3.756	2...H2-1
45	M156	L3X3X4	.136	0	4	.039	0	z	1	43870...	46656	1.688	3.756	1...H2-1

EXHIBIT 9

Radio Frequency Exposure Analysis Report

July 6, 2022

Centerline on behalf of T-Mobile
Centerline Communications Project Number: N/A

T-Mobile Site Name: Rt2 / Colchester-Bozrah
Site Number: CT11472A

Site Address: 29 Mahoney Road, Colchester, CT 06415

Site Compliance Summary

T-Mobile Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	24.61752 µW/cm^2
Cumulative General Population % MPE (Ground Level):	2.4618199999999999%

750 West Center Street | Suite 301 | West Bridgewater | MA | 02379

July 6, 2022

Centerline
Attn: Jessica Meyer, Project Coordinator
750 W Center St, Suite 301
West Bridgewater, MA 02379

RF Exposure Analysis for Site: **Rt2 / Colchester-Bozrah**

Centerline Communications, LLC ("Centerline") was contracted to analyze the proposed T-Mobile facility at **29 Mahoney Road, Colchester, CT 06415** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

All information used in this report was analyzed as a percentage of the Maximum Permissible Exposure (% MPE) limits as detailed in 47 CFR § 1.1310 as well as Federal Communications Commission (FCC) OET Bulletin 65 Edition 97-01. The FCC MPE limits are typically expressed in units of milliwatts per square centimeter (mW/cm^2) or microwatts per square centimeter ($\mu W/cm^2$). The exposure limits vary depending upon the frequencies being utilized. The General Population/Uncontrolled MPE limit (in mW/cm^2) for frequencies between 300 and 1500 is defined as frequency (in MHz) divided by 1500 ($f_{MHz}/1500$). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of 1 mW/cm^2 (1000 $\mu W/cm^2$). The calculated power density at each sample point divided by the limit at each calculated frequency provides a result in % MPE. Summing the calculated % MPE from all contributors provides a cumulative % MPE at a particular sample point. Wireless carriers use different frequency bands with varying MPE limits; therefore, it is useful to report results in terms of % MPE as opposed to power density.

All results were compared to the FCC radio frequency exposure rules as detailed in 47 CFR § 1.1307(b) to determine compliance with the 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.

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, 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.

Calculation Methodology

Centerline Communications, LLC has performed theoretical modeling of the site using a software tool, RoofMaster®, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.

Data & Results

The following table details the antennas and operating parameters for the T-Mobile antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at the ground.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table. The cumulative power density and cumulative % MPE are displayed at the bottom of the table.

Maximum Calculated Cumulative Power Density (Location: approximately 500' northeast of site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (μW/cm²)	General Population MPE Limit (μW/cm²)	General Population % MPE
T-Mobile A 1	COMMSCOPE VV-65A-R1	1900	15.77	177.00	2.00	140.00	10572.02	0.00009	1000.00	0.00001
T-Mobile A 1	COMMSCOPE VV-65A-R1	2100	16.47	177.00	2.00	140.00	12421.04	0.00008	1000.00	0.00001
T-Mobile A 1	COMMSCOPE VV-65A-R1	1900	15.77	177.00	1.00	15.00	566.36	0.00001	1000.00	0.00000
T-Mobile A 2	ERICSSON AIR6419	2500	22.05	177.00	2.00	80.00	25651.93	11.99176	1000.00	1.19918
T-Mobile A 2	ERICSSON AIR6419	2500	22.05	177.00	2.00	80.00	25651.93	11.99176	1000.00	1.19918
T-Mobile A 3	RFS APXVAALL24 43-U-NA20	700	13.65	177.00	4.00	40.00	3707.83	0.00004	466.67	0.00001
T-Mobile A 3	RFS APXVAALL24 43-U-NA20	600	12.95	177.00	2.00	40.00	1577.94	0.00002	400.00	0.00001
T-Mobile A 3	RFS APXVAALL24 43-U-NA20	600	12.95	177.00	2.00	30.00	1183.45	0.00002	400.00	0.00000
T-Mobile B 4	COMMSCOPE VV-65A-R1	1900	15.77	177.00	2.00	140.00	10572.02	0.00000	1000.00	0.00000
T-Mobile B 4	COMMSCOPE VV-65A-R1	2100	16.47	177.00	2.00	140.00	12421.04	0.00000	1000.00	0.00000
T-Mobile B 4	COMMSCOPE VV-65A-R1	1900	15.77	177.00	1.00	15.00	566.36	0.00000	1000.00	0.00000
T-Mobile B 5	ERICSSON AIR6419	2500	22.05	177.00	2.00	80.00	25651.93	0.05726	1000.00	0.00573
T-Mobile B 5	ERICSSON AIR6419	2500	22.05	177.00	2.00	80.00	25651.93	0.05726	1000.00	0.00573
T-Mobile B 6	RFS APXVAALL24 43-U-NA20	700	13.65	177.00	4.00	40.00	3707.83	0.00000	466.67	0.00000
T-Mobile B 6	RFS APXVAALL24 43-U-NA20	600	12.95	177.00	2.00	40.00	1577.94	0.00000	400.00	0.00000
T-Mobile B 6	RFS APXVAALL24 43-U-NA20	600	12.95	177.00	2.00	30.00	1183.45	0.00000	400.00	0.00000
T-Mobile C 7	COMMSCOPE VV-65A-R1	1900	15.77	177.00	2.00	140.00	10572.02	0.00000	1000.00	0.00000
T-Mobile C 7	COMMSCOPE VV-65A-R1	2100	16.47	177.00	2.00	140.00	12421.04	0.00000	1000.00	0.00000
T-Mobile C 7	COMMSCOPE VV-65A-R1	1900	15.77	177.00	1.00	15.00	566.36	0.00000	1000.00	0.00000
T-Mobile C 8	ERICSSON AIR6419	2500	22.05	177.00	2.00	80.00	25651.93	0.25875	1000.00	0.02588
T-Mobile C 8	ERICSSON AIR6419	2500	22.05	177.00	2.00	80.00	25651.93	0.25875	1000.00	0.02588
T-Mobile C 9	RFS APXVAALL24 43-U-NA20	700	13.65	177.00	4.00	40.00	3707.83	0.00000	466.67	0.00000
T-Mobile C 9	RFS APXVAALL24 43-U-NA20	600	12.95	177.00	2.00	40.00	1577.94	0.00000	400.00	0.00000
T-Mobile C 9	RFS APXVAALL24 43-U-NA20	600	12.95	177.00	2.00	30.00	1183.45	0.00000	400.00	0.00000
Verizon A 10	ANTEL BXA-70063-6CF	850	14.50	167.00	7.00	20.00	3945.74	0.00004	566.67	0.00001
Verizon A 11	JMA MX06FRO660-03	700	12.05	167.00	2.00	40.00	1282.60	0.00004	466.67	0.00001
Verizon A 11	JMA MX06FRO660-03	850	12.05	167.00	2.00	40.00	1282.60	0.00005	566.67	0.00001
Verizon A 11	JMA MX06FRO660-03	1900	15.75	167.00	4.00	40.00	6013.40	0.00006	1000.00	0.00001
Verizon A 12	JMA MX06FRO660-03	700	12.05	167.00	2.00	40.00	1282.60	0.00004	466.67	0.00001
Verizon A 12	JMA MX06FRO660-03	850	12.05	167.00	2.00	40.00	1282.60	0.00005	566.67	0.00001
Verizon A 12	JMA MX06FRO660-03	2100	15.95	167.00	4.00	40.00	6296.80	0.00007	1000.00	0.00001
Verizon A 13	SAMSUNG MT6407	3700	23.35	167.00	4.00	50.00	43254.37	0.00072	1000.00	0.00007
Verizon B 14	ANTEL BXA-70063-6CF	850	14.50	167.00	7.00	20.00	3945.74	0.00000	566.67	0.00000
Verizon B 15	JMA MX06FRO660-03	700	12.05	167.00	2.00	40.00	1282.60	0.00000	466.67	0.00000
Verizon B 15	JMA MX06FRO660-03	850	12.05	167.00	2.00	40.00	1282.60	0.00000	566.67	0.00000

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (μW/cm²)	General Population MPE Limit (μW/cm²)	General Population % MPE
Verizon B 15	JMA MX06FRO660-03	1900	15.75	167.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Verizon B 16	JMA MX06FRO660-03	700	12.05	167.00	2.00	40.00	1282.60	0.00000	466.67	0.00000
Verizon B 16	JMA MX06FRO660-03	850	12.05	167.00	2.00	40.00	1282.60	0.00000	566.67	0.00000
Verizon B 16	JMA MX06FRO660-03	2100	15.95	167.00	4.00	40.00	6296.80	0.00000	1000.00	0.00000
Verizon B 17	SAMSUNG MT6407	3700	23.35	167.00	4.00	50.00	43254.37	0.00002	1000.00	0.00000
Verizon C 18	ANTEL BXA-70063-6CF	850	14.50	167.00	7.00	20.00	3945.74	0.00000	566.67	0.00000
Verizon C 19	JMA MX06FRO660-03	700	12.05	167.00	2.00	40.00	1282.60	0.00000	466.67	0.00000
Verizon C 19	JMA MX06FRO660-03	850	12.05	167.00	2.00	40.00	1282.60	0.00000	566.67	0.00000
Verizon C 19	JMA MX06FRO660-03	1900	15.75	167.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Verizon C 20	JMA MX06FRO660-03	700	12.05	167.00	2.00	40.00	1282.60	0.00000	466.67	0.00000
Verizon C 20	JMA MX06FRO660-03	850	12.05	167.00	2.00	40.00	1282.60	0.00000	566.67	0.00000
Verizon C 20	JMA MX06FRO660-03	2100	15.95	167.00	4.00	40.00	6296.80	0.00000	1000.00	0.00000
Verizon C 21	SAMSUNG MT6407	3700	23.35	167.00	4.00	50.00	43254.37	0.00002	1000.00	0.00000
AT&T A 22	POWERWAVE 7770 00	850	11.35	160.00	1.00	40.00	545.83	0.00001	566.67	0.00000
AT&T A 23	CCI HPA-65R-BUU-H8-	1900	14.75	160.00	4.00	40.00	4776.61	0.00005	1000.00	0.00001
AT&T A 23	CCI HPA-65R-BUU-H8-	2100	15.25	160.00	4.00	40.00	5359.45	0.00005	1000.00	0.00001
AT&T A 24	CCI DMP65R-BU8D	700	12.25	160.00	4.00	40.00	2686.09	0.00006	466.67	0.00001
AT&T A 24	CCI DMP65R-BU8D	850	12.55	160.00	4.00	40.00	2878.19	0.00006	566.67	0.00001
AT&T A 24	CCI DMP65R-BU8D	2300	14.25	160.00	4.00	25.00	2660.73	0.00004	1000.00	0.00000
AT&T B 25	POWERWAVE 7770 00	850	11.35	160.00	1.00	40.00	545.83	0.00000	566.67	0.00000
AT&T B 26	CCI HPA-65R-BUU-H8-	1900	14.75	160.00	4.00	40.00	4776.61	0.00000	1000.00	0.00000
AT&T B 26	CCI HPA-65R-BUU-H8-	2100	15.25	160.00	4.00	40.00	5359.45	0.00000	1000.00	0.00000
AT&T B 27	CCI DMP65R-BU8D	700	12.25	160.00	4.00	40.00	2686.09	0.00000	466.67	0.00000
AT&T B 27	CCI DMP65R-BU8D	850	12.55	160.00	4.00	40.00	2878.19	0.00000	566.67	0.00000
AT&T B 27	CCI DMP65R-BU8D	2300	14.25	160.00	4.00	25.00	2660.73	0.00000	1000.00	0.00000
AT&T C 28	POWERWAVE 7770 00	850	11.35	160.00	1.00	40.00	545.83	0.00000	566.67	0.00000
AT&T C 29	CCI HPA-65R-BUU-H8-	1900	14.75	160.00	4.00	40.00	4776.61	0.00000	1000.00	0.00000
AT&T C 29	CCI HPA-65R-BUU-H8-	2100	15.25	160.00	4.00	40.00	5359.45	0.00000	1000.00	0.00000
AT&T C 30	CCI DMP65R-BU8D	700	12.25	160.00	4.00	40.00	2686.09	0.00000	466.67	0.00000
AT&T C 30	CCI DMP65R-BU8D	850	12.55	160.00	4.00	40.00	2878.19	0.00000	566.67	0.00000
AT&T C 30	CCI DMP65R-BU8D	2300	14.25	160.00	4.00	25.00	2660.73	0.00000	1000.00	0.00000
Dish A 31	JMA MX08FRO665-21	600	11.35	150.00	4.00	40.00	2183.33	0.00008	400.00	0.00002
Dish A 31	JMA MX08FRO665-21	700	12.05	150.00	4.00	40.00	2565.19	0.00010	466.67	0.00002
Dish A 31	JMA MX08FRO665-21	2007	15.75	150.00	4.00	40.00	6013.40	0.00008	1000.00	0.00001
Dish A 31	JMA MX08FRO665-21	2100	16.75	150.00	4.00	40.00	7570.42	0.00008	1000.00	0.00001
Dish 0 32	JMA MX08FRO665-21	600	11.35	150.00	4.00	40.00	2183.33	0.00000	400.00	0.00000

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu W/cm^2$)	General Population MPE Limit ($\mu W/cm^2$)	General Population % MPE
Dish 0 32	JMA MX08FRO665-21	700	12.05	150.00	4.00	40.00	2565.19	0.00000	466.67	0.00000
Dish 0 32	JMA MX08FRO665-21	2007	15.75	150.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish 0 32	JMA MX08FRO665-21	2100	16.75	150.00	4.00	40.00	7570.42	0.00000	1000.00	0.00000
Dish 0 33	JMA MX08FRO665-21	600	11.35	150.00	4.00	40.00	2183.33	0.00000	400.00	0.00000
Dish 0 33	JMA MX08FRO665-21	700	12.05	150.00	4.00	40.00	2565.19	0.00000	466.67	0.00000
Dish 0 33	JMA MX08FRO665-21	2007	15.75	150.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish 0 33	JMA MX08FRO665-21	2100	16.75	150.00	4.00	40.00	7570.42	0.00000	1000.00	0.00000
							Cumulative Power Density:	**24.61752 $\mu W/cm^2$**	**Cumulative % MPE:**	**2.46182%**

Summary

The theoretical calculations performed for this analysis yielded cumulative power density totals in all areas at ground that are within the allowable federal limits for public exposure to RF energy. Therefore, the site is **Compliant** with FCC rules and regulations.

Katrina Styx
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