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

May 25, 2021

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

RE: Notice of Exempt Modification
160 Witch Meadow Road, Salem CT
Latitude: 41.502828
Longitude: -72.297052
T-Mobile Site #: CTHA101F_L600

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 175-foot level of the existing 195-foot Monopole Tower at 160 Witch Meadow Road, Salem, CT. The 195-foot tower is owned by SBA Properties, LLC. The property is owned by Ronald Renz. T-Mobile now intends to replace three (3) existing antennas with three (3) new 600/700MHz antennas.

- **The new antennas would support 5G services and would be installed at the 175-foot level of the tower**.

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

Planned Modifications:

TOWER

Remove:
- N/A

Remove and Replace:
- (3) RRUS11 B12 (remove) – (3) Ericsson Radio 4449 B71+B85 RRU (replace)
- (1) 1-1/4" Hybrid (remove) – (1) 1.9" Fiber (replace)

- (3) Commscope LNX-6515DS-A1M Panel (Remove) -- (3) RFS APXVAARR24_43-U-NA20 – Panel 600/700 MHz (Replace)

Install New:

- (3) Ericsson RRUS11 B4
- (1) Support rail with end connection Kit (MSHRECP-35)

Existing Equipment to Remain:

- (3) RFS APX16DWV-16DWVS-E-A20 – Panel 1900/2100 MHz
- (6) Ericsson RRUS11 B2
- (1) low profile platform
- (2) 1-5/8" hybrid

Entitlements Only:

- (3) Ericsson RRUS11 B2
- (3) Commscope LNX-6515DS-A1M – Panel

GROUND

Install New:

- BB6630 to be installed inside existing 6102 equipment cabinet

Remain:

- Existing 6' 1" x 11' concrete pad
- Existing Fiber Cabinet
- Existing PPC
- (1) ½" coax for GPS

This facility was approved by the Town of Salem's Planning and Zoning Commission on February 3, 2000. Approval was given for a galvanized steel pole located on the east side of the access road to 160 With Meadow Road (Phillips property) with the following conditions: 1. Extra silt fencing will be kept on site during construction and the anti-tracking pad will be in place prior to construction; 2. Utilities will be below ground; 3. Street name should read: "Witch Meadow Road"; 4. The pole shall be galvanized steel; 5. If the facility is not in use for 12 consecutive months, it shall be removed at Owner's expense and shall occur within 90-days of the end of such 12-month period. There were no post construction stipulations set. Please see attached.

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

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

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

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

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

Sincerely,

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

Attachments:

cc: Kevin T. Lyden, First Selectman / with attachments
Town of Salem, 270 Hartford Road, Salem, CT 06420
Matt Allen, Wetlands/Zoning Enforcement officer / with attachments
Town of Salem, 270 Hartford Road, Salem, CT 06420
Ronald Renz / with attachments
c/o Renz Construction Company, 44 Mustang Drive Monroe CT 06468 (SBA Overnight address on file)
PO Box 2100, Salem, CT 06420 (Town address on file)

EXHIBIT LIST

Exhibit 1	Check Copy	To be invoiced at a later date 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 Salem's P&Z Commission 2/3/00
Exhibit 6	Construction Drawings	Chappell 3/18/21
Exhibit 7	Modification Drawings	TES 7/30/19
Exhibit 8	Structural Analysis	TESS 5/10/21
Exhibit 9	Post-Mod Mount Analysis	TESS 4/13/21
Exhibit 10	EME Report	EBI Consulting 5/24/21

EXHIBIT 1

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

EXHIBIT 2

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

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

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EXHIBIT 3

Town of Salem, CT

Property Listing Report

Map Block Lot **10-044-000** Account **659**

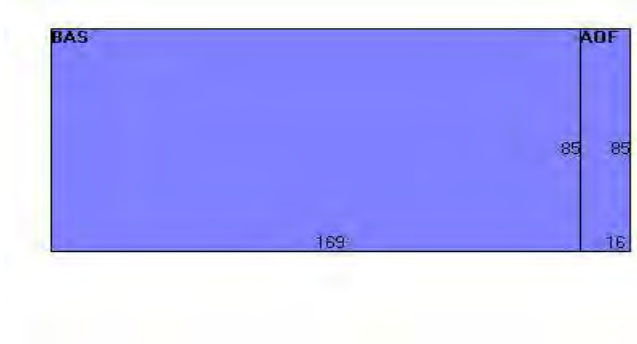
Property Information

Property Location	160 WITCH MEADOW RD
Owner	RENZ RONALD R
Co-Owner	
Mailing Address	PO BOX 2100 SALEM CT 06420-0000
Land Use	3222 Comm Bldg
Land Class	C
Zoning Code	I
Census Tract	7151

Neighborhood	C075
Acreage	100.8
Utilities	
Lot Setting/Desc	
Additional Info	

Photo

Sketch



Primary Construction Details

Year Built	1990
Stories	1
Building Style	Pre Engrd Gar
Building Use	Indus/Comm
Building Condition	03
Floors	Concrete
Total Rooms	

Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	Gable Or Hip
Roof Cover	Metal Or Tin

Exterior Walls	Wood Frame
Interior Walls	Wall Brd/Wood
Heating Type	None
Heating Fuel	None
AC Type	None/Partial
Gross Bldg Area	15725
Total Living Area	15725

Report Created On 6/18/2019

Town of Salem, CT

Property Listing Report | Map Block Lot **10-044-000** | Account **659**

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	358200	250700
Extras	3000	2100
Improvements	361200	252800
Outbuildings	0	0
Land	848100	372780
Total	1209300	625580

Outbuilding and Extra Items

Type	Description
Forced air heat	1360 S.F

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	15725	15725

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
RENZ RONALD R	0133/0303	11/5/2001	0
NATIONWIDE 1031	127/ 439	1/12/2001	1167000
PHILLIPS ROGER L & LINDA F	35/ 609	12/26/1984	80500

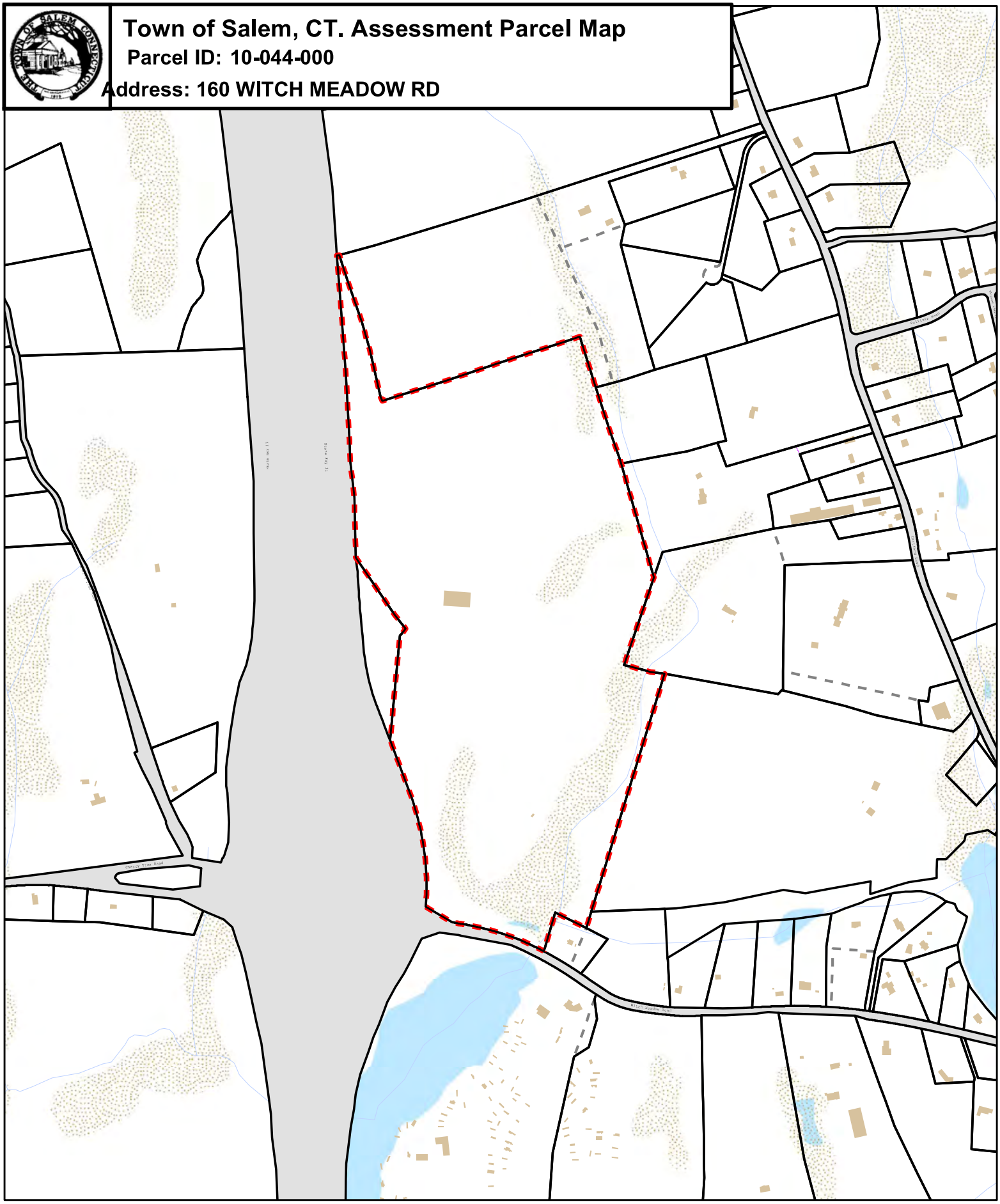
Report Created On 6/18/2019

EXHIBIT 4

Town of Salem, CT. Assessment Parcel Map

Parcel ID: 10-044-000

Address: 160 WITCH MEADOW RD



300 0 300 600 900 1,200

Feet

Map Produced: December 2018

EXHIBIT 5

LEGAL NOTICE
SALEM PLANNING AND ZONING COMMISSION

At a meeting of the Salem Planning and Zoning Commission held on Thursday, February 3, 2000, the Commission took the following action:

1. Approved, with conditions, the Special Exception application of SBA/Sprint for the construction of a telecommunications tower on the east side of the access road to 160 Witch Meadow Road (Phillips property).

Lawrence Stevens, Chairman

270 HARTFORD ROAD • SALEM, CONNECTICUT 06420-3809

M/S/C (Duncan/Asafaylo) to approve the Special Exception application of SBA/Sprint for the construction of a telecommunications tower on the east side of the access road to 160 Witch Meadow Road (Phillips property) with the following conditions:

1) It is stated in the Erosion & Sedimentation Control Narrative that extra silt fencing will be kept on site during construction and the anti-tracking pad will be in place prior to construction.
2) In the project summary box on drawing number T-1, the third paragraph shall be changed to state that the utilities will be <u>below</u> ground.
3) In the address box on drawing number T-1, the street name shall be corrected. It should read: "Witch Meadow Road".
4) Delete "or as otherwise shown on the contract drawings" under note #2 for access.
5) The pole shall be galvanized steel.
6) The site plan shall state that if the facility is not in use for 12 consecutive months, it shall be removed by the facility owner at his or her expense. The removal shall occur within 90 days of the end of such 12 month period.

Vote: approved unanimously.

EXHIBIT 6

CTHA101F

160 WITCH MEADOW ROAD
SALEM, CT 06420
NEW LONDON COUNTY

SITE NO.: CTHA101F

SITE TYPE: 195'± MONOPOLE

RF DESIGN GUIDELINE: 67D07C 6102 MUAC

APPROVALS

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

T-MOBILE TECHNICIAN SITE SAFETY NOTES

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

SITE NOTES

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

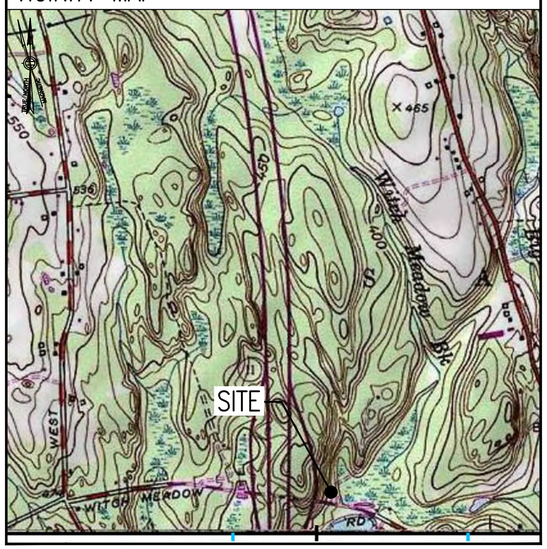
GENERAL NOTES

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

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

VICINITY MAP

SCALE: 1" = 1000'-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.

SHEET INDEX

SHEET NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	2
GN-1	GENERAL NOTES	2
A-1	COMPOUND & EQUIPMENT PLAN	2
A-2	TOWER ELEVATIONS & ANTENNA PLAN	2
A-3	SITE DETAILS	2
A-4	ANTENNA & FEEDLINE CHARTS	2
E-1	ELECTRIC & GROUNDING DETAILS	2

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).

PROJECT SUMMARY

SITE NUMBER:	CTHA101F
SBA SITE NUMBER:	CT01916-S
SBA SITE NAME:	NORTH SALEM
SITE ADDRESS:	160 WITCH MEADOW ROAD SALEM, CT 06420
PROPERTY OWNER:	RENZ RONALD R 44 MUSTANG DRIVE MONROE, CT 06468
TOWER OWNER:	SBA PROPERTIES, LLC. 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	NEW LONDON COUNTY
ZONING DISTRICT:	I, INDUSTRIAL DISTRICT
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	195'
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
SBA RSM:	STEPHEN ROTH PHONE: 860-539-4920 EMAIL: SRoth@sbasite.com
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: N.41.502830° (41°-30'-10.19") LONGITUDE W.-72.297100° (72°-17'-49.56")

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
3/19/2021

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	03/18/21	CONSTRUCTION REVISED	CMC
1	07/19/19	ISSUED FOR CONSTRUCTION	CMC
0	06/13/19	ISSUED FOR REVIEW	BDJ

SITE NUMBER:
CTHA101F

SITE ADDRESS:
160 WITCH MEADOW ROAD
SALEM, CT 06420

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

1815.107

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 (400PSI) 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. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
3/19/2021

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	03/18/21	CONSTRUCTION REVISED	CMC
1	07/19/19	ISSUED FOR CONSTRUCTION	CMC
0	06/13/19	ISSUED FOR REVIEW	BDJ

SITE NUMBER:
CTHA101F

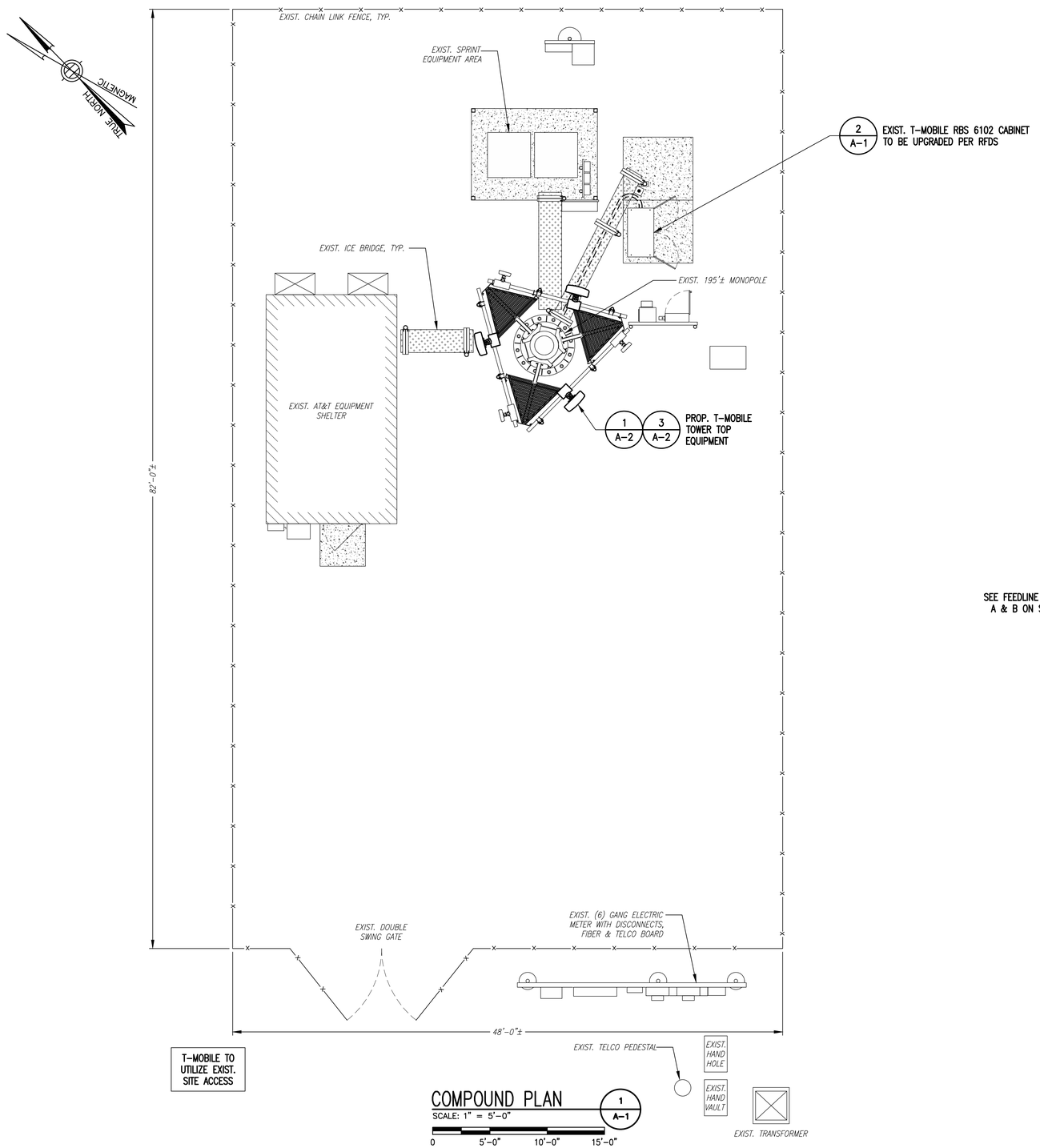
SITE ADDRESS:
160 WITCH MEADOW ROAD
SALEM, CT 06420

SHEET TITLE
GENERAL NOTES

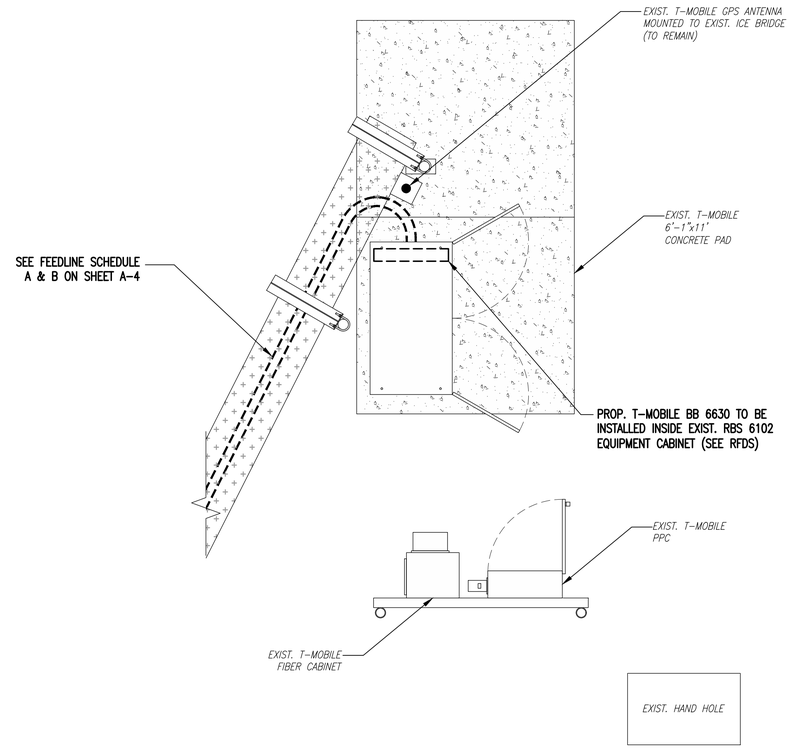
SHEET NUMBER
GN-1

1815.107

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



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



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

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SITE NUMBER:
CTHA101F

SITE ADDRESS:
160 WITCH MEADOW ROAD
SALEM, CT 06420

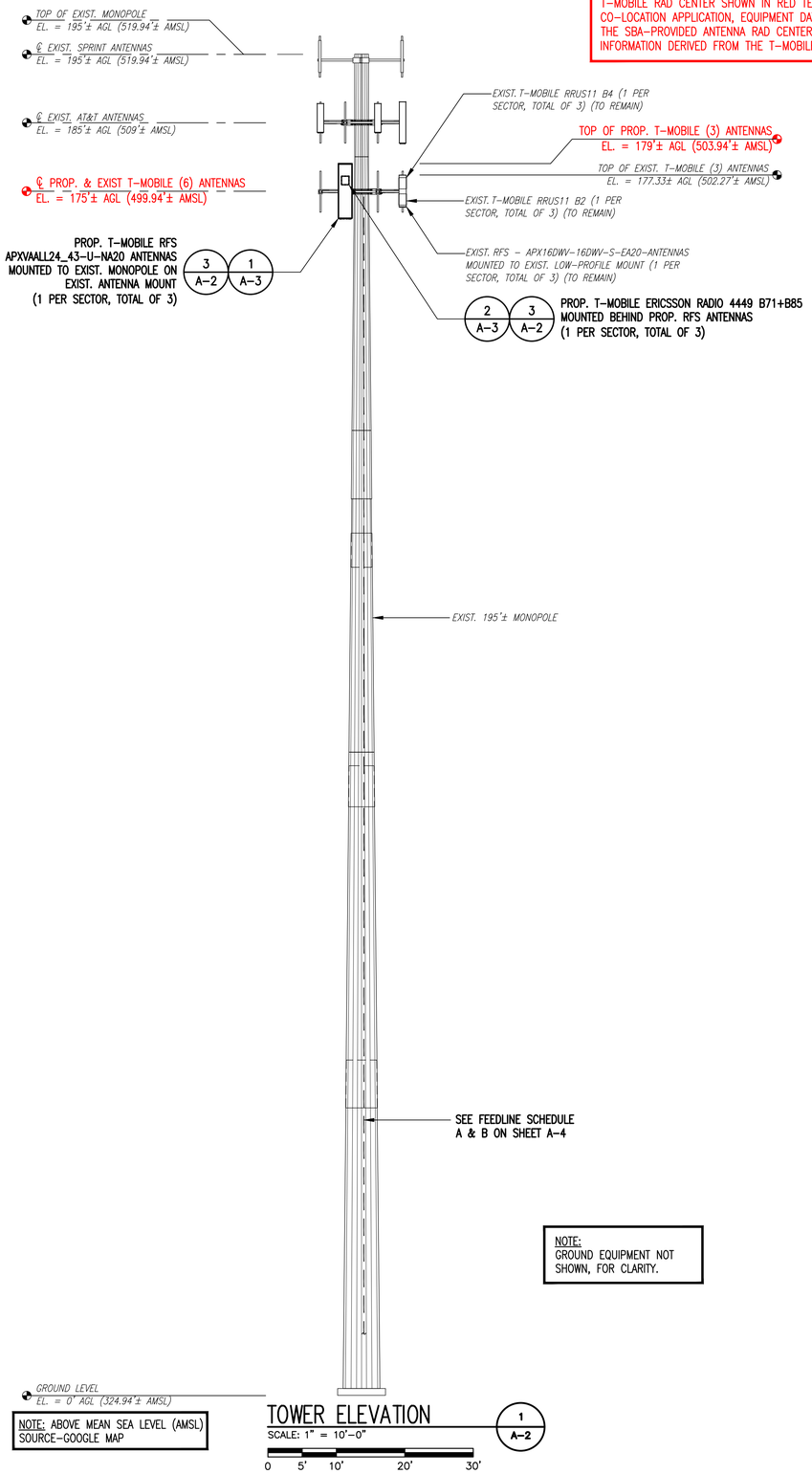
SHEET TITLE
COMPOUND & EQUIPMENT PLAN

SHEET NUMBER
A-1

1815.107

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

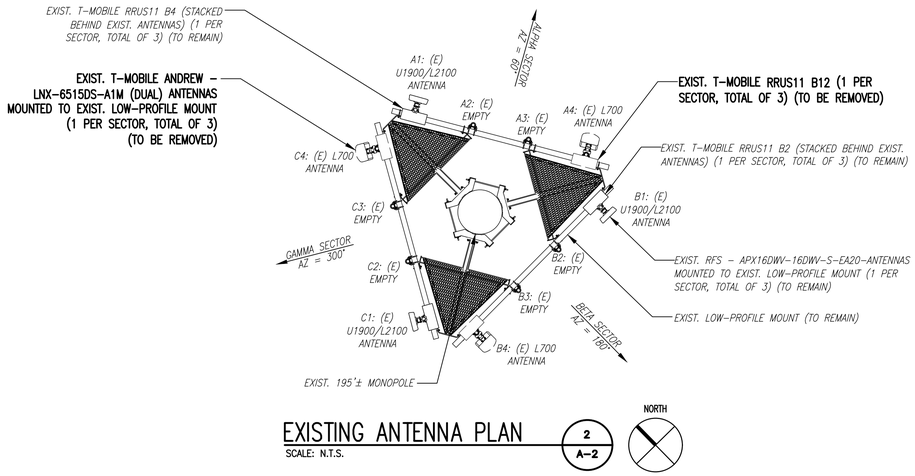
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY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



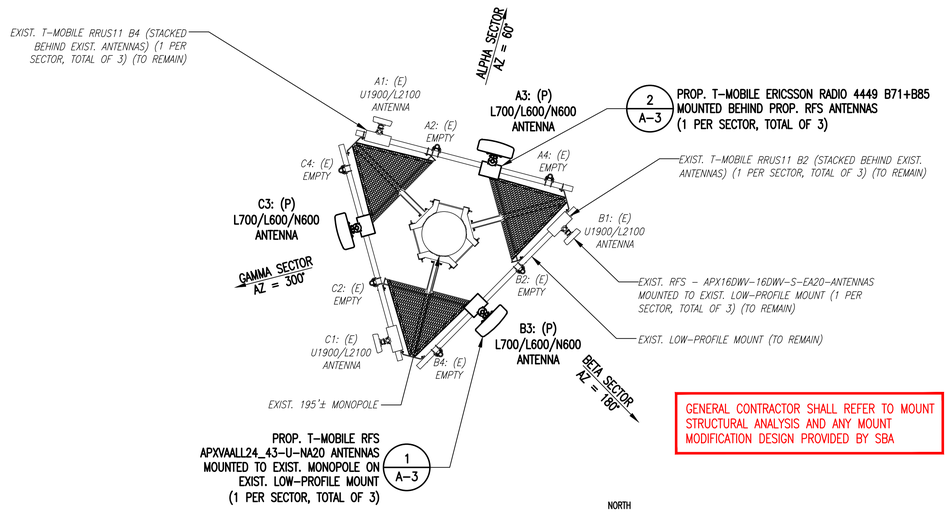
NOTE: ABOVE MEAN SEA LEVEL (AMSL) SOURCE-GOOGLE MAP

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

NOTE:
GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.



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



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

GENERAL CONTRACTOR SHALL REFER TO MOUNT STRUCTURAL ANALYSIS AND ANY MOUNT MODIFICATION DESIGN PROVIDED BY SBA

ANTENNA LEGEND:
EMPTY - EMPTY PIPE
(E) - EXISTING
(P) - INSTALL

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

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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
3/18/2021

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	03/18/21	CONSTRUCTION REVISED	CMC
1	07/19/19	ISSUED FOR CONSTRUCTION	CMC
0	06/13/19	ISSUED FOR REVIEW	BDJ

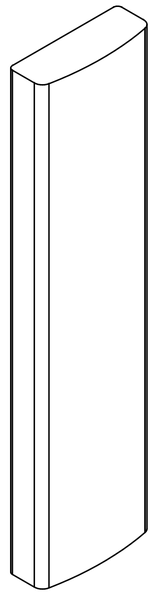
SITE NUMBER:
CTHA101F

SITE ADDRESS:
160 WITCH MEADOW ROAD
SALEM, CT 06420

SHEET TITLE
TOWER ELEVATIONS & ANTENNA PLAN

SHEET NUMBER
A-2

1815.107



RFS APXVAALL24_43-U-NA20 ANTENNA

DIMENSIONS: 95.9"H x 24.0"W x 8.5"D
WEIGHT: 122.8 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

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

ERICSSON RADIO 4449 B71+B85

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

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

T-MOBILE
NORTHEAST LLC

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

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

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SHEET TITLE
SITE DETAILS

SHEET NUMBER
A-3

1815.107

FINAL ANTENNA CONFIGURATION

SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	CABLES
ALPHA	A1 *RFS APX16DWV-16DWV-S-EA20*	*175'± AGL*	*60°*	*0°*	*2°*	*U1900*	*ERICSSON RRUS11 B2*	EXIST. (2) 1-⅝" (6x12) HCS FIBER CABLES PROP. (1) 2" (6x24) HCS FIBER CABLE
					2°	*L2100*	*ERICSSON RRUS11 B4*	
	A2 *EMPTY PIPE*	–	–	–	–	–	–	
	A3 **RFS APXVAALL24_43-U-NA20**	**175'± AGL**	**60°**	**0°**	**2°**	**L700/L600/N600**	**ERICSSON RADIO 4449 B71+B85**	
	A4 *EMPTY PIPE*	–	–	–	–	–	–	
BETA	B1 *RFS APX16DWV-16DWV-S-EA20*	*175'± AGL*	*180°*	*0°*	*2°*	*U1900*	*ERICSSON RRUS11 B2*	
					2°	*L2100*	*ERICSSON RRUS11 B4*	
	B2 *EMPTY PIPE*	–	–	–	–	–	–	
	B3 **RFS APXVAALL24_43-U-NA20**	**175'± AGL**	**180°**	**0°**	**2°**	**L700/L600/N600**	**ERICSSON RADIO 4449 B71+B85**	
	B4 *EMPTY PIPE*	–	–	–	–	–	–	
GAMMA	C1 *RFS APX16DWV-16DWV-S-EA20*	*175'± AGL*	*300°*	*0°*	*2°*	*U1900*	*ERICSSON RRUS11 B2*	
					2°	*L2100*	*ERICSSON RRUS11 B4*	
	C2 *EMPTY PIPE*	–	–	–	–	–	–	
	C3 **RFS APXVAALL24_43-U-NA20**	**175'± AGL**	**300°**	**0°**	**2°**	**L700/L600/N600**	**ERICSSON RADIO 4449 B71+B85**	
	C4 *EMPTY PIPE*	–	–	–	–	–	–	

CABLE NOTE: SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV4 – 01/21/21

FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES		LOCATION
A	*EXISTING TO REMAIN:*	*(1) ⅞" COAX FOR GPS ANTENNA* *(2) 1-⅝" (6x12) HCS FIBER CABLES*	ROUTED PER STRUCTURAL ANALYSIS
	EXISTING TO BE REMOVED:	*NONE*	
B	**PROPOSED:**	**(1) 2" (6x24) HCS FIBER CABLE**	

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

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
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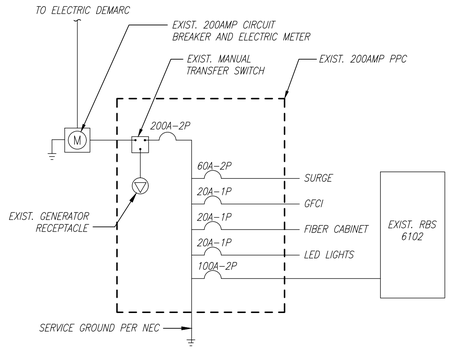
CTHA101F

SITE ADDRESS:
160 WITCH MEADOW ROAD
SALEM, CT 06420

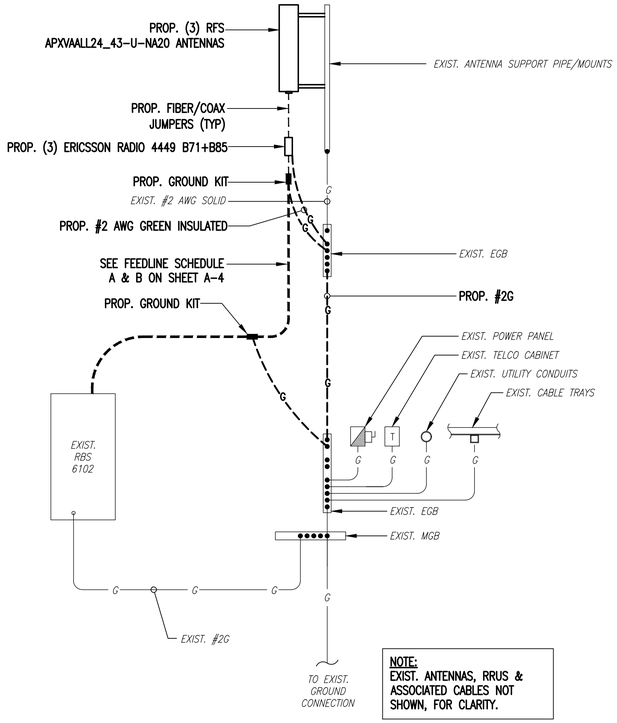
SHEET TITLE
ANTENNA & FEEDLINE CHARTS

SHEET NUMBER
A-4

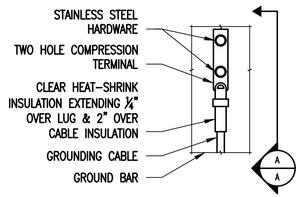
1815.107



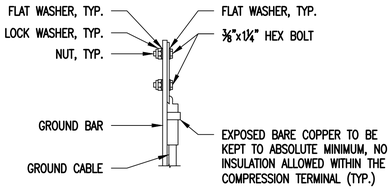
ONE LINE DIAGRAM (1 / E-1)
SCALE: NOT TO SCALE



GROUNDING RISER DIAGRAM (2 / E-1)
SCALE: NOT TO SCALE



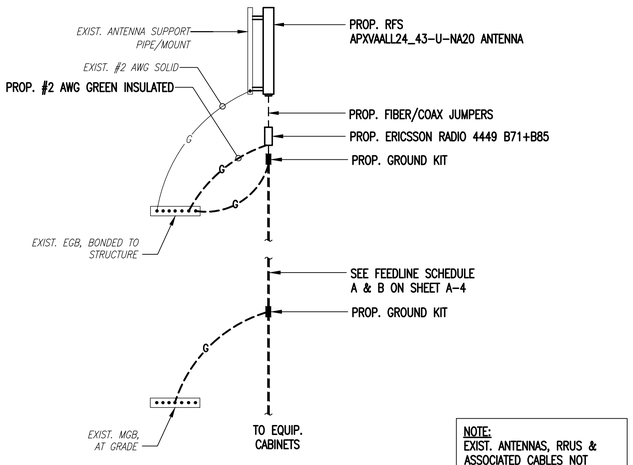
ELEVATION



SECTION A-A

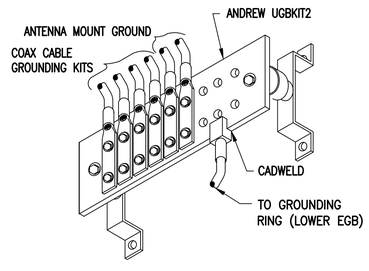
NOTES:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELL DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

TYPICAL GROUND BAR CONNECTIONS DETAIL (3 / E-1)
SCALE: NOT TO SCALE



L700/L600/N600

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



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

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SITE NUMBER:
CTHA101F

SITE ADDRESS:
160 WITCH MEADOW ROAD
SALEM, CT 06420

SHEET TITLE
ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER
E-1

1815.107

EXHIBIT 7

MODIFICATION AND DESIGN DRAWINGS FOR EXISTING ANTENNA MOUNTS 1 195' MONOPOLE TOWER

PROPOSED CARRIER: T-MOBILE

TOWER OWNER: SBA / TOWER OWNER SITE #: CT01916-S

CARRIER SITE #/NAME: CTHA101F / NORTH SALEM

COORDINATES (LATITUDE: 41.502828°, LONGITUDE: -72.297052°)

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

SHEET	SHEET TITLE	REV
T-1	TITLE SHEET	1
BOM	BILL OF MATERIALS	0
GN-1	GENERAL NOTES	0
A-1	ANTENNA MOUNT MODIFICATION DETAILS	1
A-2	ANTENNA MOUNT PHOTOS	0
MS-HRECP-35	METROSITE SUPPORT RAIL WITH END CONNECTION KIT	

NOTE:

1. THE MODIFICATION DRAWINGS ARE BASED ON THE TES PROJECT NO. 77890, DATED 06/04/2019.

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

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

TES JOB NO: 78293

CUSTOMER SITE NO: CT01916-S-SBA

CUSTOMER SITE NAME: NORTH SALEM

160 WITCH MEADOW ROAD
SALEM, CT 06420

STATE OF CONNECTICUT
JAIME REYES
No. 17534
LICENSED PROFESSIONAL ENGINEER
7/30/19

DRAWN BY: GA | CHECKED BY: SS/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	06/24/19
1	REVISED	GA	07/30/19

SHEET TITLE: TITLE SHEET

SHEET NUMBER: T-1 | REV #: 1

BILL OF MATERIALS

QUANTITY COUNTED	QUANTITY PROVIDED	PART NUMBER	DESCRIPTIONS	SHEET LIST	PIECE WEIGHT (LBS)	WEIGHT (LB)	NOTES
			MATERIAL & HARDWARE				
1	1	MS-HRECP-35	METROSITE SUPPORT RAIL WITH END CONNECTION KIT	A-1, MS-HRECP-35	514.0	514.0	Galvanized
			FOLLOWING ITEMS ARE "CUSTOM" PARTS				
			ALL METROSITE PARTS ARE AVAILABLE FROM METROSITE, LLC. **180 IND PARK BLVD COMMERCE, GA 30529** **OFFICE: (706) 335-7045** **FAX: (706) 335-7056**				
			NOTE: ALL MATERIALS, WHICH WEREN'T LISTED IN THIS SHEET, ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.				
				TOTAL WEIGHT (LBS) =		**514.0**	

TES

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IRVING, TX 75038
PH: (972) 483-0607

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

TES JOB NO:
78293

CUSTOMER SITE NO:
CT01916-S-SBA
CUSTOMER SITE NAME:
NORTH SALEM
160 WITCH MEADOW ROAD
SALEM, CT 06420

DRAWN BY: GA | CHECKED BY: SS/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	06/24/19

SHEET TITLE:
BILL OF MATERIALS

SHEET NUMBER: BOM
REV #: 0

GENERAL NOTES

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

FABRICATION

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

WELDING

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

BOLTED ASSEMBLIES AND TIGHTENING OF CONNECTIONS

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

VERIFICATION AND INSPECTION

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

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

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

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

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

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

[d] BEVELED WASHER NOT USED.

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

INSTALLATION TORQUE REQUIRED FOR HOLLO BOLTS AND AJAX BOLTS:

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

FIELD HOT WORK PLAN NOTES:

FOLLOWING GUIDELINES SHALL BE COMPLIED WITH:

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

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

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

TES JOB NO:
78293

CUSTOMER SITE NO:
CT01916-S-SBA
CUSTOMER SITE NAME:
NORTH SALEM
160 WITCH MEADOW ROAD
SALEM, CT 06420

DRAWN BY: GA | CHECKED BY: SS/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	06/24/19

SHEET TITLE:
GENERAL NOTES

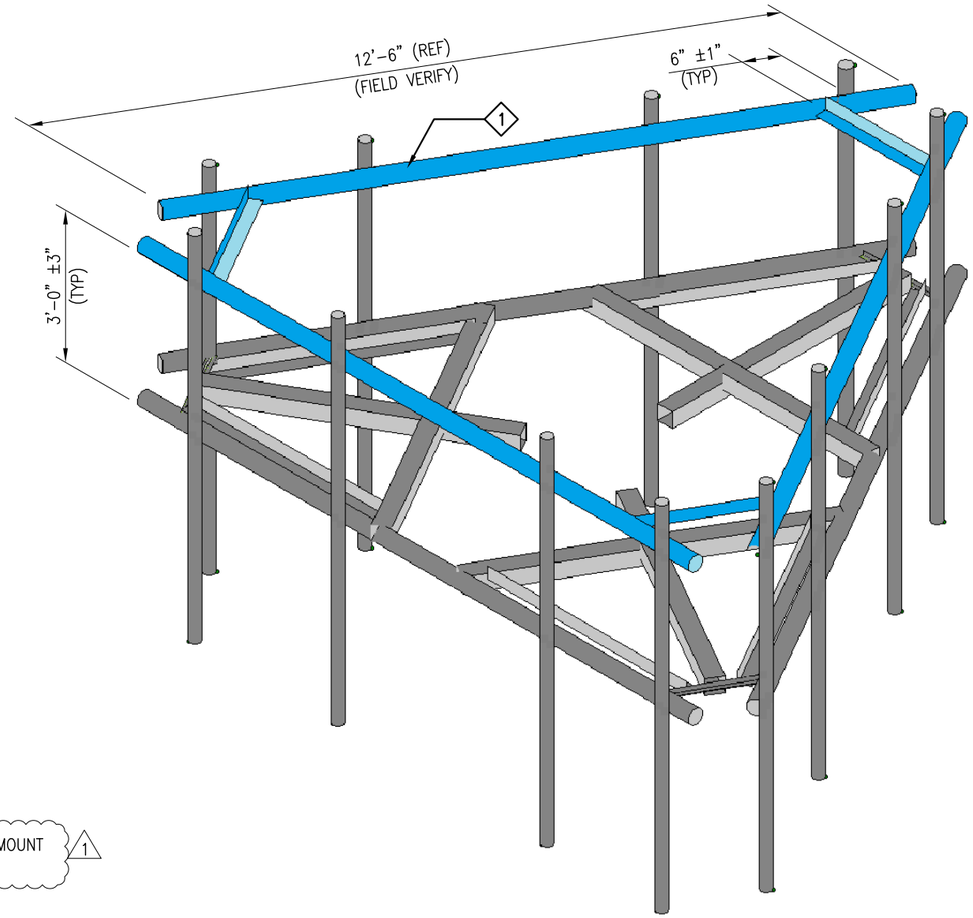
SHEET NUMBER: GN-1
REV #: 0

SCOPE OF WORK

1. INSTALL NEW SUPPORT RAIL WITH END CONNECTION KIT. SEE SHEET MS-HRECP-35 FOR DETAILS

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP, REMOVAL AND DISPOSAL OF EXCESS MATERIALS USED AND REMOVED FROM THE STRUCTURE AT THE COMPLETION OF THE PROJECT.

PHOTO 1



ISOMETRIC VIEW
EXISTING ANTENNA MOUNT @ 175' ELEV. 1

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

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

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	MS-HRECP-35	METROSITE SUPPORT RAIL WITH END CONNECTION K

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

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

TES JOB NO:
78293

CUSTOMER SITE NO:
CT01916-S-SBA
CUSTOMER SITE NAME:
NORTH SALEM
160 WITCH MEADOW ROAD
SALEM, CT 06420

DRAWN BY: GA | CHECKED BY: SS/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	06/24/19
1	REVISED	GA	07/30/19

SHEET TITLE:
ANTENNA MOUNT MODIFICATION DETAILS

SHEET NUMBER: A-1
REV #: 1

PHOTO 1

EXISTING EQUIPMENT MUST BE RELOCATED UP OR DOWN ALONG THE MEMBER TO ACCOMMODATE INSTALLATION OF MOUNT MODIFICATION

PHOTO 2

PHOTO 3

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

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

TES JOB NO:
78293

CUSTOMER SITE NO:
CT01916-S-SBA

CUSTOMER SITE NAME:
NORTH SALEM

160 WITCH MEADOW ROAD
SALEM, CT 06420

DRAWN BY: GA | CHECKED BY: SS/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	06/24/19

SHEET TITLE:

ANTENNA MOUNT PHOTOS

SHEET NUMBER: A-2

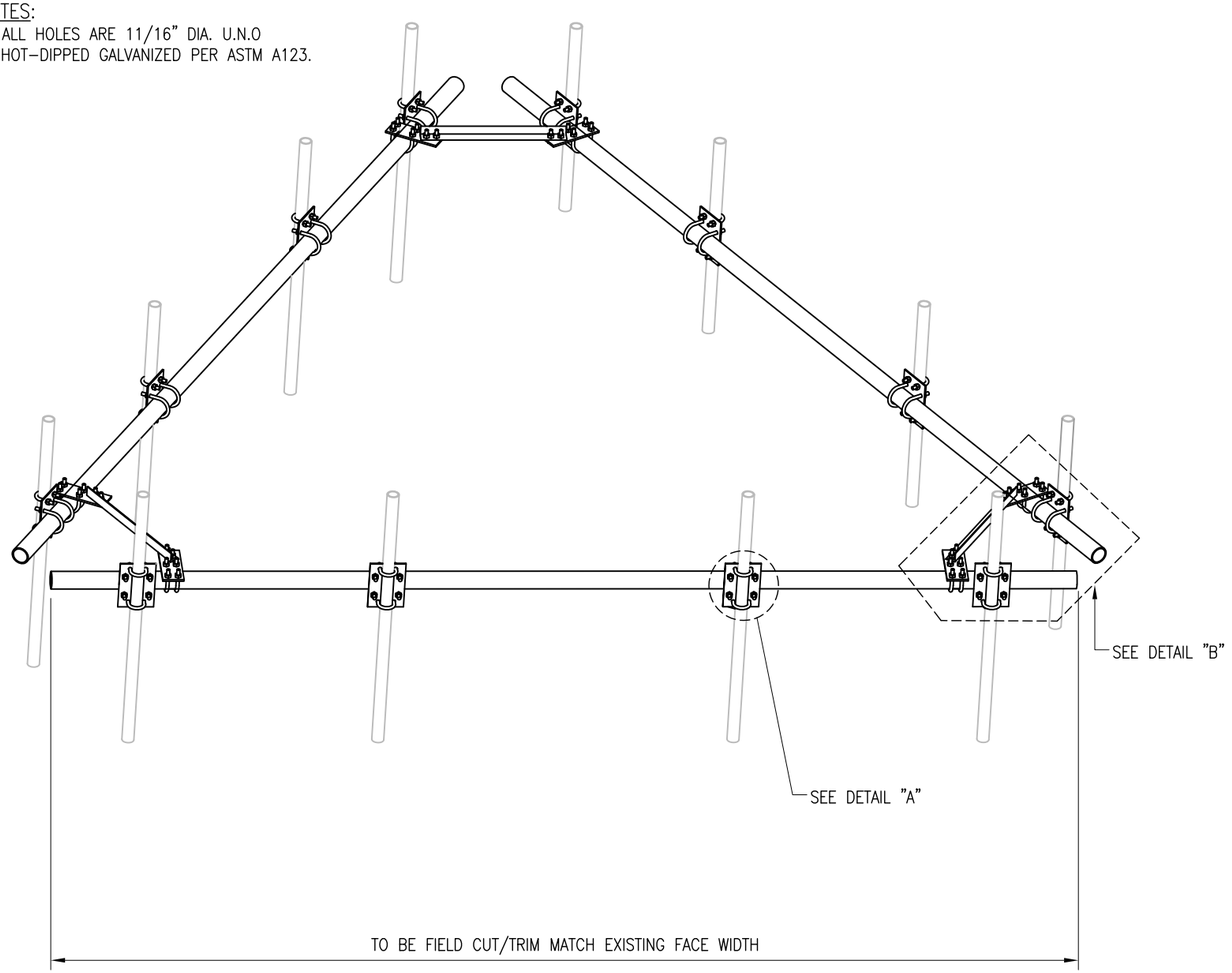
REV #: 0

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

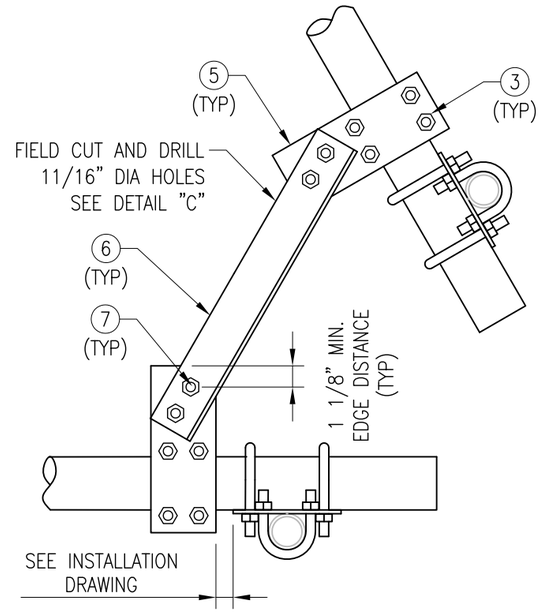
NOTES:
1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT-DIPPED GALVANIZED PER ASTM A123.

MS-HRECP-35

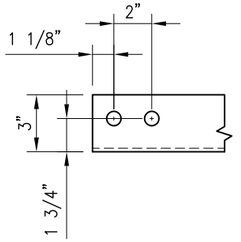
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	3	3PST-140	3" PST (3.50" O.D X .216" THICK) X 14'-0"	A53 GR-B	TAF-1	337.2
2	12	PL375-10	PL 3/8" X 7 1/8" X 10"	A36	TAF-1	92.4
3	36	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
4	24	MS02-625-250-400	RU-BOLT 5/8" X 2 1/2" I.W. X 4" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
5	6	PL375-11	PL 3/8" X 4 1/4" X 0'-11"	A36	TAF-1	30.2
6	3	AL-33C	L 3" X 3" X 1/4" X 3'-6"	A36	ECP-1	54.0
7	12	--	BOLT 5/8" X 2" A325 W/ HHN & LKW	A325	--	--
				GALVANIZED WT		514



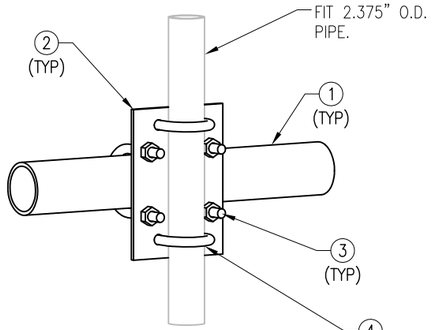
ELEVATION VIEW



DETAIL "B"



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



DETAIL "A"

THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

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

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

TITLE
MS-HRECP-35
SUPPORT RAIL WITH END CONNECTION KIT

SIZE	DWG NO	REV
B	MS-HRECP-35	1

SCALE: -
SHEET 1 OF 1

EXHIBIT 8

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

Structural Analysis Report

Existing 195 ft Nudd Corporation Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT01916-S

Customer Site Name: North Salem

Carrier Name: T-Mobile (App#: 117038, V2)

Carrier Site ID / Name: CTHA101F / North Salem

Site Location: 160 Witch Meadow Road

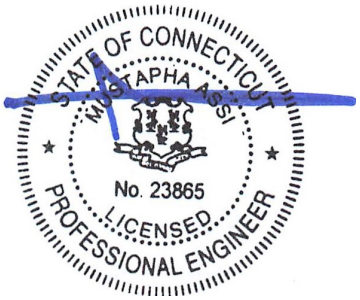
Salem, Connecticut

New London County

Latitude: 41.502828

Longitude: -72.297052

Exp.10/31/2021



05/10/2021

Analysis Result:

Max Structural Usage: 99.8% [Pass]

Max Foundation Usage: 40.0% [Pass]

Additional Usage Caused by Mount Modification : +0.9%

Report Prepared By : Linfeng Chen

Introduction

The purpose of this report is to summarize the analysis results on the 195 ft Nudd Corporation Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Nudd Corporation, Project #7014 dated February 2, 2000
Foundation Drawing	Nudd Corporation, Project #7014 dated February 2, 2000
Geotechnical Report	FDH Engineering, Project #1207124EG1 dated August 10, 2012
Modification Drawings	Semaan Engineering, Project #CT-01916 dated May 6, 2002 FDH Engineering, Inc., Project #13SBAH1400 dated September 25, 2013 TES, PCI, Job# 93520, Dated 06/29/20
Mount Analysis	TES Job # 104493, Dated 04/16/21

Analysis Criteria

The comprehensive analysis was performed in accordance with the requirements and stipulations of the TIA-222-H**.** 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:	135.0 mph (3-Sec. Gust) (Ultimate wind speed)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Service Load Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-H / 2018 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.206, S_1 = 0.055

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	195.0	3	RFS APXVTM14-C-I20 - Panel	Platform w/ Hand Rail Site Pro Modification Kits: (1) HRK-14 (1) PRK-SFS-H-L (1) PRK-1245L	(4) 1-1/4" Fiber	Sprint Nextel
2		3	Commscope NNVV-65B-R4 - Panel			
3		3	ALU 1900 Mhz - RRU			
4		6	ALU 800 Mhz - RRU			
5		3	ALU TD-RRH8x20-25 - RRU			
6	185.0	3	Powerwave 7770 - Panel	Modified (3) Sector Frame (3) SitePro 1 SFS-L with handrail kit (3) SitePro 1 HRK14-3HD (3) SitePro 1 PRK-SFS-L (3) Horizontal Pipe (6) Pipe Mast	{(2) 3/4" DC Power & (1) 1/2" Fiber inside (1) 2" Conduit} (12) 1 1/4" Coax {(4) 3/4" Fiber inside (2) 2" Conduit} (1) 1/2" Coax {(1) 1/2" Fiber inside (1) 2" Conduit}	AT&T
7		3	Ericsson 4449 B5/B12 RRU			
8		6	Powerwave LGP21401 TMA			
9		6	Powerwave LGP21903 Diplexer			
10		6	Cci DMP65R-BU8DA - Panel			
11		3	Ericsson RRUS 4478 B14 RRU			
12		3	Ericsson RRUS 8843 B2 B66A RRU			
13		1	Raycap DC6-48-60-18-8F SP			
14		1	Raycap DC6-48-60-18-8C SP			
15		1	Raycap DC6-48-60-0-8C-EV SP			
-	175.0	3	RFS APX16DWV-16DWVS-E-A20 - Panel	Low Profile Platform	(2) 1 5/8" Hybrid (1) 1-1/4" Hybrid	T-Mobile
-		3	Commscope LNX-6515DS-A1M - Panel			
-		9	RRUS11			
-		3	96"x15.6"x9" Panel			
-		3	15" x 14" x 7.5" RRU			

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
16	175.0	3	RFS APX16DWV-16DWVS-E-A20 - Panel	Modified Low Profile Platform w/ Add Support Rail with End Connection Kit (MS-HRECP-35)	(2) 1 5/8" Hybrid (1) 1.9" Fiber	T-Mobile
17		3	RFS APXVAALL24_43-U-NA20 - Panel			
18		3	Ericsson 4449 B71 + B85			
19		6	Ericsson RRUS11 B2			
20		3	Ericsson RRUS11 B4			
21		3	Commscope LNX-6515DS-A1M - Panel			

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

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate	Flange
Max. Usage:	**95.7%**	**65.0%**	**99.8%**	**62.0%**
Pass/Fail	**Pass**	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)
Analysis Reactions	6214.8	43.7

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 1.6522 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.

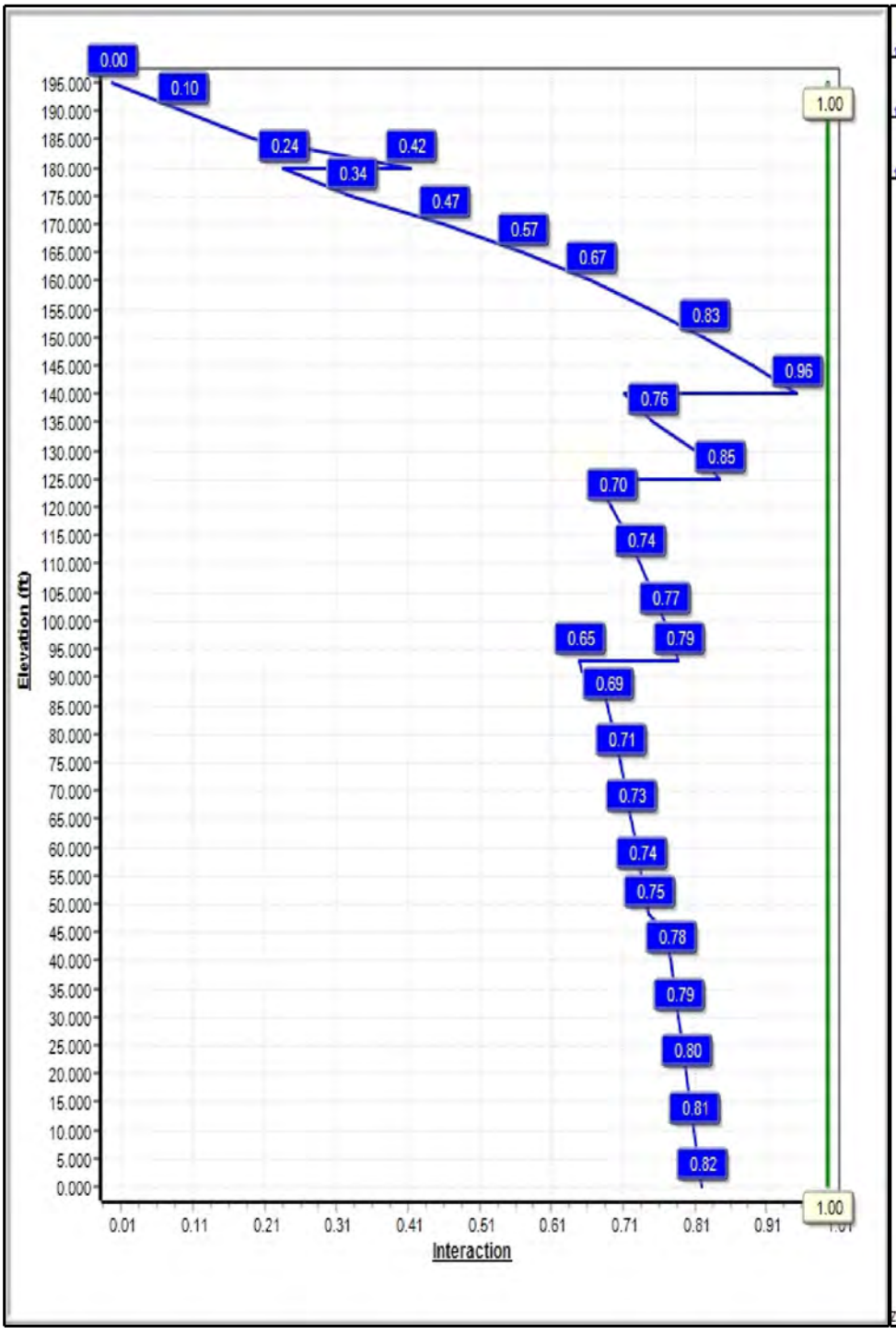
Usage Diagram - Max Ratio 95.66% at 140.0ft

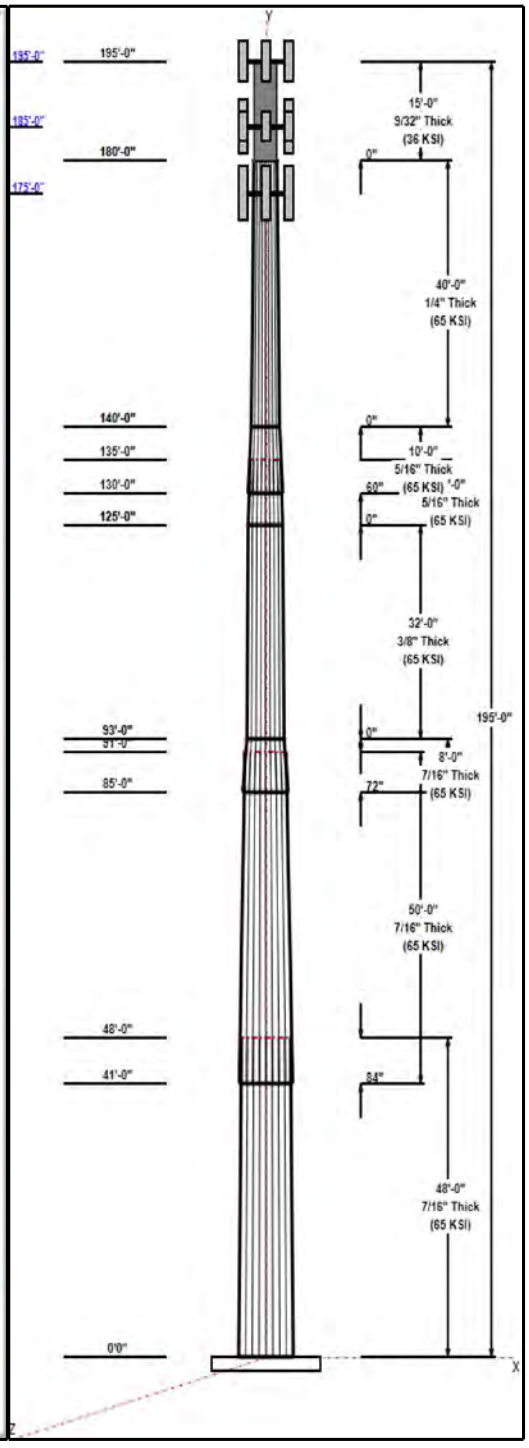
Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021
Site Name:	North Salem	**Exposure:**	B	
Height:	195.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

Tower Engineering Solutions

Dead Load Factor:	1.20	**Iterations:**	25
Wind Load Factor:	1.00		

Load Case : 1.2D + 1.0W 135 mph Wind





Structure: CT01916-S-SBA

Type: Custom
Site Name: North Salem
Height: 195.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23819

5/11/2021

Tower Engineering Solutions

Shaft Properties

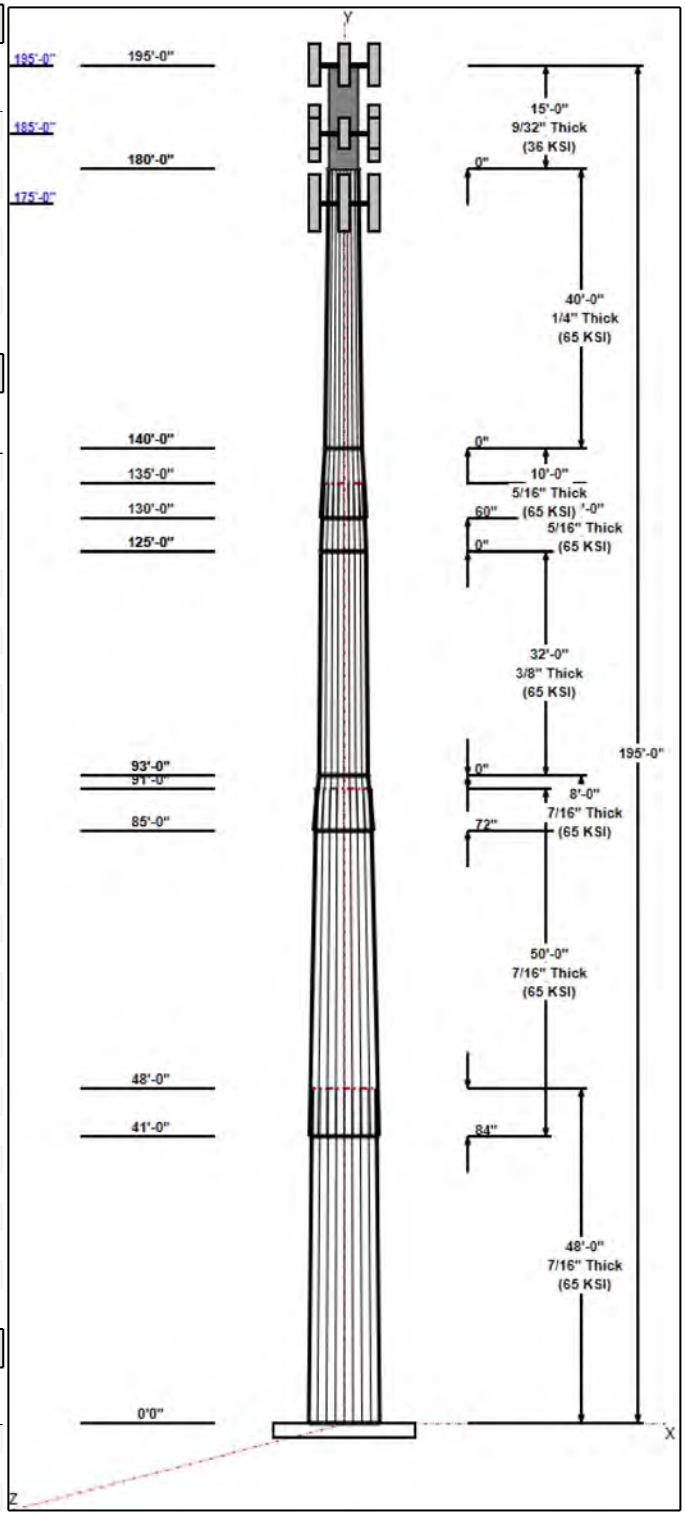
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	53.07	64.50	0.438		0.23819	65
2	50.00	43.70	55.61	0.438	Slip	0.23819	65
3	8.00	44.10	46.00	0.438	Slip	0.23819	65
4	32.00	36.48	44.10	0.375	Butt	0.23819	65
5	10.00	34.09	36.48	0.313	Butt	0.23819	65
6	10.00	33.53	35.91	0.313	Slip	0.23819	65
7	40.00	24.00	33.53	0.250	Butt	0.23819	65
8	15.00	24.00	24.00	0.281	Butt	0.00000	36

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
195.00	195.00	1	Low Profile	Sprint Nextel
195.00	195.00	1	PRK-1245 (kicker kit)	Sprint Nextel
195.00	195.00	1	(3) SFS-H-L (V-Braces)	Sprint Nextel
195.00	195.00	1	HRK12 (Handrail Kit)	Sprint Nextel
195.00	195.00	3	APXVTM14-C-I20	Sprint Nextel
195.00	195.00	3	NNVV-65B-R4	Sprint Nextel
195.00	195.00	3	1900MHz RRH (65MHz)	Sprint Nextel
195.00	195.00	6	800 MHz RRH	Sprint Nextel
195.00	195.00	3	TD-RRH8x20-25	Sprint Nextel
185.00	185.00	6	Cci DMP65R-BU8DA	AT&T
185.00	185.00	1	(3) SitePro 1 PRK-SFS-L &	AT&T
185.00	185.00	1	(3) SitePro 1 SFS-L with	AT&T
185.00	185.00	1	(3) SitePro 1 HRK14-3HD	AT&T
185.00	185.00	3	Ericsson RRUS 4478 B14	AT&T
185.00	185.00	3	Ericsson RRUS 8843 B2	AT&T
185.00	185.00	1	Raycap DC6-48-60-18-8F	AT&T
185.00	185.00	1	Raycap DC6-48-60-18-8C	AT&T
185.00	185.00	1	Raycap	AT&T
185.00	185.00	3	Powerwave 7770	AT&T
185.00	185.00	3	Ericsson 4449 B5/B12	AT&T
185.00	185.00	6	Powerwave LGP21401	AT&T
185.00	185.00	6	Powerwave LGP21903	AT&T
185.00	185.00	1	Sector Frames	AT&T
175.00	175.00	3	RFS	T-Mobile
175.00	175.00	3	RFS	T-Mobile
175.00	175.00	3	Commscope	T-Mobile
175.00	175.00	1	Platform w/ Hand Rail	T-Mobile
175.00	175.00	6	Ericsson RRUS11 B2	T-Mobile
175.00	175.00	3	Ericsson RRUS11 B4	T-Mobile
175.00	175.00	3	Ericsson 4449 B71 + B85	T-Mobile

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	195.00	Inside	1-1/4" Fiber	Sprint
0.00	185.00	Inside	1 1/4" Coax	AT&T
0.00	185.00	Inside	1/2" Coax	AT&T
0.00	185.00	Inside	2" Conduit	AT&T
177.75	182.25	Outside	(3) Bypass Stiffeners	
0.00	175.00	Inside	1 5/8" Hybrid	T-Mobile
0.00	175.00	Inside	1.9" Fiber	T-Mobile
0.00	143.00	Outside	(4) C6x10.5	



0.00	55.00	Outside	(4) C5x9

Anchor Bolts

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

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.5000	64.5	50.0	Round

Reactions

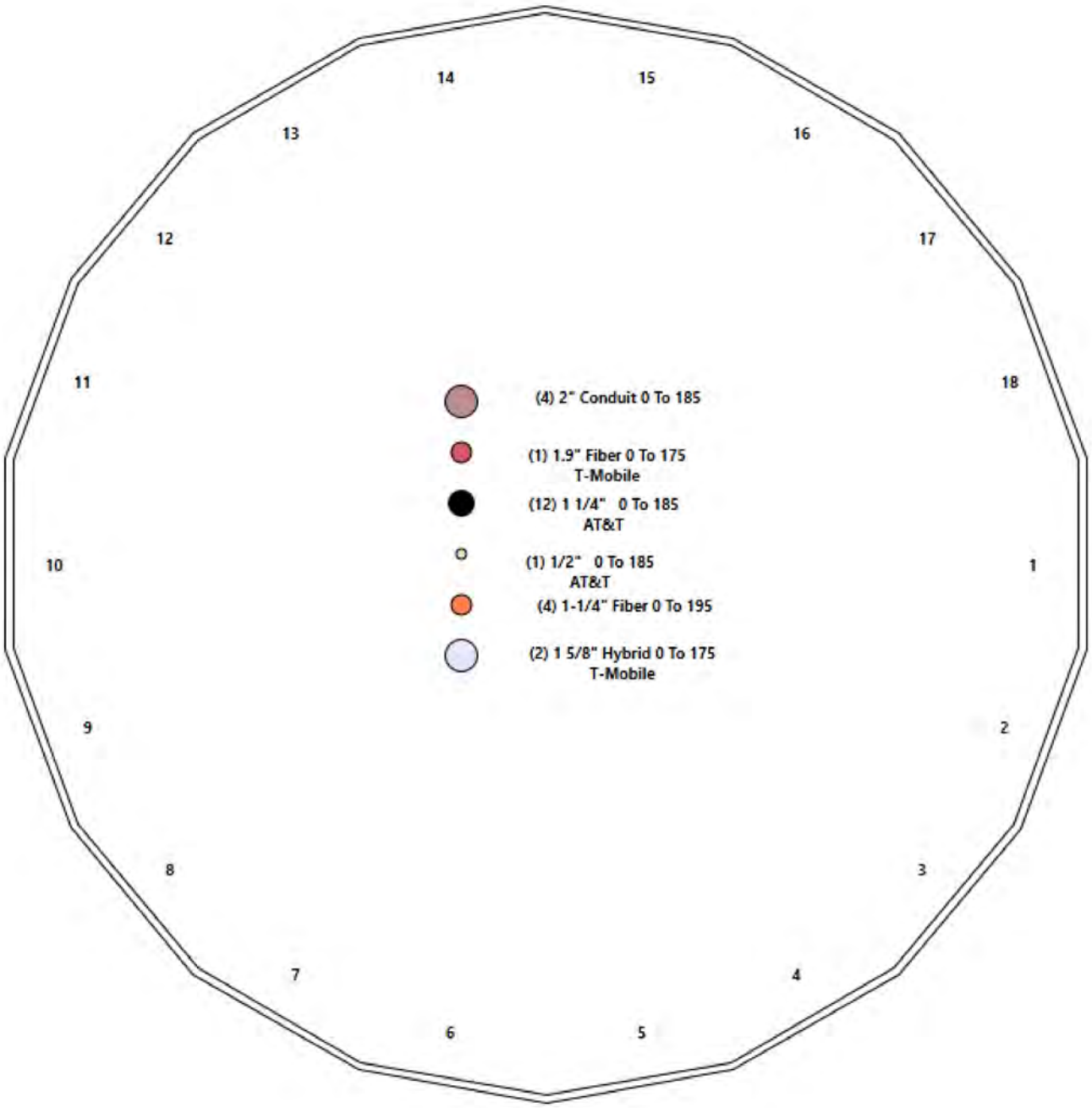
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 135 mph Wind	6214.8	43.7	63.6
0.9D + 1.0W 135 mph Wind	6121.5	43.7	47.7
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1292.9	9.2	85.6
1.2D + 1.0Ev + 1.0Eh	152.7	0.8	66.1
0.9D + 1.0Ev + 1.0Eh	150.5	0.8	50.1
1.0D + 1.0W 60 mph Wind	1091.1	7.7	53.1

Structure: CT01916-S-SBA - Coax Line Placement

Type: Monopole
Site Name: North Salem
Height: 195.00 (ft)

5/11/2021

Tower Engineering Solutions



Shaft Properties

Structure:	CT01916-S-SBA		**Code:**	EIA/TIA-222-H	5/11/2021
Site Name:	North Salem		**Exposure:**	B	
Height:	195.00 (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

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.4375	65		0.00	13,233
2	18	50.000	0.4375	65	Slip	84.00	11,627
3	18	8.000	0.4375	65	Slip	72.00	1,686
4	18	32.000	0.3750	65	Flange	0.00	5,173
5	18	10.000	0.3125	65	Flange	0.00	1,180
6	18	10.000	0.3125	65	Slip	60.00	1,161
7	18	40.000	0.2500	65	Flange	0.00	3,080
8	R	15.000	0.2810	36	Flange	0.00	1,069
					Total Shaft Weight:		**38,209**

	Bottom						Top						
Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	64.50	0.00	88.96	46124.76	24.59	147.43	53.07	48.00	73.08	25574.1	19.98	121.3	0.238194
2	55.61	41.00	76.61	29462.36	21.00	127.11	43.70	91.00	60.07	14204.8	16.20	99.88	0.238194
3	46.00	85.00	63.27	16597.56	17.13	105.15	44.10	93.00	60.63	14601.1	16.36	100.8	0.238194
4	44.10	93.00	52.04	12569.07	19.32	117.59	36.48	125.00	42.97	7074.93	15.74	97.27	0.238194
5	36.48	125.0	35.87	5926.45	19.17	116.72	34.09	135.00	33.51	4830.83	17.83	109.1	0.238194
6	35.91	130.0	35.31	5652.53	18.85	114.91	33.53	140.00	32.94	4592.07	17.51	107.2	0.238194
7	33.53	140.0	26.40	3694.43	22.24	134.11	24.00	180.00	18.84	1343.00	15.52	96.00	0.238194
8	24.00	180.0	20.94	1473.63	0.00	85.41	24.00	195.00	20.94	1473.63	0.00	85.41	0.000000

Load Summary

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

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	195.00	Low Profile Platform-Round	1	1800.00	26.00	1.00	2874.97	40.285	1.00	0.00	0.00
2	195.00	PRK-1245 (kicker kit)	1	464.91	9.50	1.00	687.03	16.308	1.00	0.00	0.00
3	195.00	(3) SFS-H-L (V-Braces)	1	230.00	6.70	1.00	449.77	11.502	1.00	0.00	0.00
4	195.00	HRK12 (Handrail Kit)	1	261.72	6.75	1.00	474.29	11.265	1.00	0.00	0.00
5	195.00	APXVTM14-C-I20	3	56.20	6.34	0.78	159.07	7.086	0.81	0.00	0.00
6	195.00	NNVV-65B-R4	3	77.40	12.27	0.73	272.83	13.267	0.76	0.00	0.00
7	195.00	1900MHz RRH (65MHz)	3	60.00	2.77	0.67	117.10	3.638	0.67	0.00	0.00
8	195.00	800 MHz RRH	6	53.00	2.49	0.67	103.62	3.273	0.67	0.00	0.00
9	195.00	TD-RRH8x20-25	3	70.00	4.05	0.67	140.71	4.592	0.67	0.00	0.00
10	185.00	Cci DMP65R-BU8DA	6	96.00	17.87	0.73	341.43	19.094	0.73	0.00	0.00
11	185.00	(3) SitePro 1 PRK-SFS-L & (6) Pipe	1	230.00	6.70	1.00	448.62	11.476	1.00	0.00	0.00
12	185.00	(3) SitePro 1 SFS-L with handrail kit	1	514.00	10.00	1.00	929.28	16.654	1.00	0.00	0.00
13	185.00	(3) SitePro 1 HRK14-3HD & (3)	1	406.61	9.75	1.00	735.12	16.237	1.00	0.00	0.00
14	185.00	Ericsson RRUS 4478 B14 RRU	3	59.90	1.84	0.67	91.90	2.199	0.67	0.00	0.00
15	185.00	Ericsson RRUS 8843 B2 B66A	3	72.00	1.64	0.67	103.89	1.978	0.67	0.00	0.00
16	185.00	Raycap DC6-48-60-18-8F	1	31.80	0.92	1.00	73.89	1.218	1.00	0.00	0.00
17	185.00	Raycap DC6-48-60-18-8C	1	20.00	1.26	1.00	55.92	1.709	1.00	0.00	0.00
18	185.00	Raycap DC6-48-60-0-8C-EV	1	16.00	4.78	1.00	100.24	5.382	1.00	0.00	0.00
19	185.00	Powerwave 7770	3	35.00	5.50	0.73	120.43	6.210	0.73	0.00	0.00
20	185.00	Ericsson 4449 B5/B12 RRU	3	71.00	1.97	0.67	107.34	2.343	0.67	0.00	0.00
21	185.00	Powerwave LGP21401 TMA	6	14.10	1.29	0.67	31.12	1.859	0.67	0.00	0.00
22	185.00	Powerwave LGP21903 Diplexer	6	5.50	0.27	0.67	11.24	0.541	0.67	0.00	0.00
23	185.00	Sector Frames	1	1500.00	22.00	1.00	2391.10	34.024	1.00	0.00	0.00
24	175.00	RFS APX16DWV-16DWVS-E-A20	3	40.70	6.46	0.62	126.71	7.198	0.62	0.00	0.00
25	175.00	RFS APXVAALL24_43-U-NA20	3	122.80	20.24	0.70	394.22	21.511	0.70	0.00	0.00
26	175.00	Commscope LNX-6515DS-A1M	3	49.80	11.47	0.80	205.21	13.682	0.80	0.00	0.00
27	175.00	Platform w/ Hand Rail	1	1600.00	32.00	1.00	3021.64	50.905	1.00	0.00	0.00
28	175.00	Ericsson RRUS11 B2	6	50.60	2.52	0.71	104.61	3.229	0.72	0.00	0.00
29	175.00	Ericsson RRUS11 B4	3	50.60	2.52	0.71	104.61	3.229	0.72	0.00	0.00
30	175.00	Ericsson 4449 B71 + B85	3	71.00	1.97	0.67	107.14	2.341	0.67	0.00	0.00
		Totals:	**81**	**10,899.44**			**21,947.44**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	195.00	(4) 1-1/4" Fiber	0.00	Inside
0.00	185.00	(12) 1 1/4" Coax	0.00	Inside
0.00	185.00	(1) 1/2" Coax	0.00	Inside
0.00	185.00	(4) 2" Conduit	0.00	Inside
177.7	182.25	(3) (3) Bypass Stiffeners	12.60	Outside
0.00	175.00	(2) 1 5/8" Hybrid	0.00	Inside
0.00	175.00	(1) 1.9" Fiber	0.00	Inside
0.00	143.00	(4) (4) C6x10.5	4.00	Outside
0.00	55.00	(4) (4) C5x9	3.78	Outside

Shaft Section Properties

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.4375	64.500	88.956	46124.8	24.59	147.43	72.5	1408.	0.0
5.00		0.4375	63.309	87.302	43599.8	24.11	144.71	73.0	1356.	1499.4
10.00		0.4375	62.118	85.648	41168.7	23.63	141.98	73.6	1305.	1471.3
15.00		0.4375	60.927	83.994	38829.7	23.15	139.26	74.2	1255.	1443.1
20.00		0.4375	59.736	82.341	36581.0	22.67	136.54	74.7	1206.	1415.0
25.00		0.4375	58.545	80.687	34420.9	22.19	133.82	75.3	1158.	1386.9
30.00		0.4375	57.354	79.033	32347.5	21.71	131.10	75.9	1110.	1358.7
35.00		0.4375	56.163	77.379	30359.1	21.23	128.37	76.4	1064.	1330.6
40.00		0.4375	54.972	75.726	28453.9	20.75	125.65	77.0	1019.	1302.5
41.00	Bot - Section 2	0.4375	54.734	75.395	28082.7	20.65	125.11	77.1	1010.	257.1
45.00		0.4375	53.781	74.072	26630.1	20.27	122.93	77.6	975.3	2050.9
48.00	Top - Section 1	0.4375	53.942	74.295	26871.1	20.33	123.30	0.0	0.0	1514.6
50.00		0.4375	53.465	73.633	26159.7	20.14	122.21	77.7	963.7	503.4
55.00		0.4375	52.274	71.979	24436.4	19.66	119.48	78.3	920.7	1238.7
60.00		0.4375	51.083	70.326	22790.5	19.18	116.76	78.8	878.7	1210.6
65.00		0.4375	49.892	68.672	21220.2	18.70	114.04	79.4	837.7	1182.4
70.00		0.4375	48.701	67.018	19723.7	18.22	111.32	80.0	797.7	1154.3
75.00		0.4375	47.510	65.364	18299.4	17.74	108.60	80.5	758.6	1126.2
80.00		0.4375	46.319	63.711	16945.2	17.26	105.87	81.1	720.6	1098.0
85.00	Bot - Section 3	0.4375	45.128	62.057	15659.6	16.78	103.15	81.7	683.5	1069.9
90.00		0.4375	43.938	60.403	14440.8	16.30	100.43	82.2	647.3	2104.2
91.00	Top - Section 2	0.4375	44.574	61.287	15084.3	16.55	101.88	0.0	0.0	414.1
93.00	Top - Section 3	0.4375	44.098	60.626	14601.1	16.36	100.80	82.2	652.2	414.8
93.00	Bot - Section 4	0.3750	44.098	52.039	12569.1	19.09	117.59	78.7	561.4	
95.00		0.3750	43.622	51.472	12162.7	19.10	116.32	78.9	549.2	352.2
100.00		0.3750	42.431	50.055	11185.3	18.54	113.15	79.6	519.2	863.7
105.00		0.3750	41.240	48.637	10261.6	17.98	109.97	80.3	490.1	839.6
110.00		0.3750	40.049	47.220	9390.3	17.42	106.80	80.9	461.8	815.5
115.00		0.3750	38.858	45.802	8569.8	16.86	103.62	81.6	434.4	791.3
120.00		0.3750	37.667	44.385	7798.5	16.30	100.44	82.2	407.8	767.2
125.00	Top - Section 4	0.3750	36.476	42.967	7074.9	15.74	97.27	82.5	382.0	743.1
125.00	Bot - Section 5	0.3125	36.476	35.868	5926.5	18.89	116.72	78.9	320.0	
130.00	Bot - Section 6	0.3125	35.285	34.687	5360.0	18.50	112.91	79.6	299.2	600.2
135.00	Top - Section 5	0.3125	34.719	34.125	5104.0	18.18	111.10	0.0	0.0	1170.8
140.00	Top - Section 6	0.3125	33.528	32.944	4592.1	17.51	107.29	80.8	269.8	570.6
140.00	Bot - Section 7	0.2500	33.528	26.405	3694.4	21.88	134.11	75.2	217.0	
145.00		0.2500	32.337	25.460	3311.8	21.40	129.35	76.2	201.7	441.2
150.00		0.2500	31.146	24.515	2956.5	20.56	124.58	77.2	187.0	425.1
155.00		0.2500	29.955	23.570	2627.6	19.72	119.82	78.2	172.8	409.1
160.00		0.2500	28.764	22.625	2324.1	18.88	115.06	79.2	159.1	393.0
165.00		0.2500	27.573	21.680	2044.9	18.04	110.29	80.2	146.1	376.9
170.00		0.2500	26.382	20.735	1789.0	17.20	105.53	81.2	133.6	360.8
175.00		0.2500	25.191	19.790	1555.3	16.36	100.76	82.2	121.6	344.7
180.00	Top - Section 7	0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	328.7
180.00	Bot - Section 8	0.2810	24.000	20.939	1473.6	13.80	85.41	36.0	122.8	
185.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36.0	122.8	356.3
190.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36.0	122.8	356.3
195.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36.0	122.8	356.3
										38209.1

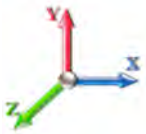
Wind Loading - Shaft

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

Load Case: 1.2D + 1.0W 135 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	0.70	30.666	33.73	612.88	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	30.666	33.73	601.57	0.774 *	0.000	5.00	27.038	20.92	705.5	0.0	1799.3
10.00		1.00	0.70	30.666	33.73	590.25	0.779 *	0.000	5.00	26.534	20.66	696.9	0.0	1765.5
15.00		1.00	0.70	30.666	33.73	578.93	0.784 *	0.000	5.00	26.030	20.40	688.2	0.0	1731.8
20.00		1.00	0.70	30.666	33.73	567.62	0.789 *	0.000	5.00	25.526	20.14	679.5	0.0	1698.0
25.00		1.00	0.70	30.666	33.73	556.30	0.795 *	0.000	5.00	25.022	19.89	670.8	0.0	1664.2
30.00		1.00	0.70	30.692	33.76	545.21	0.801 *	0.000	5.00	24.518	19.63	662.7	0.0	1630.5
35.00		1.00	0.73	32.074	35.28	545.78	0.807 *	0.000	5.00	24.014	19.37	683.4	0.0	1596.7
40.00		1.00	0.76	33.322	36.65	544.49	0.813 *	0.000	5.00	23.510	19.11	700.6	0.0	1562.9
41.00	Bot - Section 2	1.00	0.77	33.558	36.91	544.05	0.817 *	0.000	1.00	4.642	3.79	140.0	0.0	308.5
45.00		1.00	0.79	34.462	37.91	541.74	0.820 *	0.000	4.00	18.661	15.31	580.3	0.0	2461.1
48.00	Top - Section 1	1.00	0.80	35.103	38.61	539.49	0.825 *	0.000	3.00	13.784	11.37	439.2	0.0	1817.5
50.00		1.00	0.81	35.515	39.07	546.72	0.823 *	0.000	2.00	9.089	7.48	292.4	0.0	604.0
55.00		1.00	0.83	36.496	40.15	541.87	0.828 *	0.000	5.00	22.369	18.53	743.9	0.0	1486.5
60.00		1.00	0.85	37.414	41.16	536.15	0.730	0.000	5.00	21.865	15.96	656.9	0.0	1452.7
65.00		1.00	0.87	38.280	42.11	529.67	0.730	0.000	5.00	21.361	15.59	656.6	0.0	1418.9
70.00		1.00	0.89	39.099	43.01	522.53	0.730	0.000	5.00	20.857	15.23	654.8	0.0	1385.2
75.00		1.00	0.91	39.877	43.87	514.80	0.730	0.000	5.00	20.353	14.86	651.7	0.0	1351.4
80.00		1.00	0.93	40.620	44.68	506.54	0.730	0.000	5.00	19.849	14.49	647.4	0.0	1317.6
85.00	Bot - Section 3	1.00	0.94	41.329	45.46	497.81	0.730	0.000	5.00	19.346	14.12	642.0	0.0	1283.9
90.00		1.00	0.96	42.010	46.21	488.65	0.730	0.000	5.00	19.212	14.02	648.1	0.0	2525.0
91.00	Top - Section 2	1.00	0.96	42.143	46.36	486.77	0.730	0.000	1.00	3.782	2.76	128.0	0.0	496.9
93.00	Top - Section 3	1.00	0.97	42.405	46.65	492.73	0.730	0.000	2.00	7.503	5.48	255.5	0.0	497.8
95.00		1.00	0.97	42.664	46.93	488.90	0.730	0.000	2.00	7.423	5.42	254.3	0.0	422.7
100.00		1.00	0.99	43.294	47.62	479.04	0.730	0.000	5.00	18.204	13.29	632.9	0.0	1036.4
105.00		1.00	1.00	43.901	48.29	468.86	0.730	0.000	5.00	17.700	12.92	624.0	0.0	1007.5
110.00		1.00	1.02	44.489	48.94	458.35	0.730	0.000	5.00	17.196	12.55	614.3	0.0	978.5
115.00		1.00	1.03	45.057	49.56	447.55	0.730	0.000	5.00	16.692	12.19	603.9	0.0	949.6
120.00		1.00	1.04	45.609	50.17	436.48	0.736 *	0.000	5.00	16.189	11.92	598.1	0.0	920.7
125.00	Top - Section 4	1.00	1.05	46.144	50.76	425.15	0.744 *	0.000	5.00	15.685	11.66	592.1	0.0	891.7
130.00	Bot - Section 6	1.00	1.07	46.664	51.33	413.58	0.751 *	0.000	5.00	15.181	11.41	585.5	0.0	720.2
135.00	Top - Section 5	1.00	1.08	47.170	51.89	401.78	0.760 *	0.000	5.00	14.941	11.35	589.0	0.0	1404.9
140.00	Top - Section 6	1.00	1.09	47.662	52.43	397.17	0.764 *	0.000	5.00	14.437	11.03	578.2	0.0	684.7
145.00		1.00	1.10	48.143	52.96	384.99	0.730	0.000	5.00	13.933	10.17	538.6	0.0	529.5
150.00		1.00	1.11	48.611	53.47	372.61	0.730	0.000	5.00	13.430	9.80	524.2	0.0	510.2
155.00		1.00	1.12	49.069	53.98	360.04	0.730	0.000	5.00	12.926	9.44	509.3	0.0	490.9
160.00		1.00	1.13	49.516	54.47	347.30	0.730	0.000	5.00	12.422	9.07	493.9	0.0	471.6
165.00		1.00	1.14	49.953	54.95	334.39	0.730	0.000	5.00	11.918	8.70	478.1	0.0	452.3
170.00		1.00	1.15	50.381	55.42	321.31	0.730	0.000	5.00	11.414	8.33	461.8	0.0	433.0
175.00	Appurtenance(s)	1.00	1.16	50.800	55.88	308.08	0.730	0.000	5.00	10.910	7.96	445.0	0.0	413.7
180.00	Top - Section 7	1.00	1.17	51.210	56.33	294.70	1.200 *	0.000	5.00	10.406	12.49	703.4	0.0	394.4
185.00	Appurtenance(s)	1.00	1.18	51.613	56.77	291.36	1.200 *	0.000	5.00	10.000	12.00	681.3	0.0	427.5
190.00		1.00	1.19	52.008	57.21	292.47	0.600	0.000	5.00	10.000	6.00	343.3	0.0	427.5
195.00	Appurtenance(s)	1.00	1.20	52.395	57.63	293.56	0.600	0.000	5.00	10.000	6.00	345.8	0.0	427.5
								Totals:	**195.00**			**23,821.3**		**45,850.9**

* Cf Adjusted by Linear Load Ra Effect

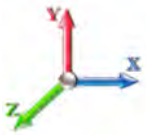
Discrete Appurtenance Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

Load Case: 1.2D + 1.0W 135 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	195.00	HRK12 (Handrail Kit)	1	52.395	57.635	1.00	1.00	6.75	314.06	0.000	0.000	389.03	0.00	0.00
2	195.00	Low Profile	1	52.395	57.635	1.00	1.00	26.00	2160.00	0.000	0.000	1498.50	0.00	0.00
3	195.00	PRK-1245 (kicker kit)	1	52.395	57.635	1.00	1.00	9.50	557.89	0.000	0.000	547.53	0.00	0.00
4	195.00	(3) SFS-H-L (V-Braces)	1	52.395	57.635	1.00	1.00	6.70	276.00	0.000	0.000	386.15	0.00	0.00
5	195.00	TD-RRH8x20-25	3	52.395	57.635	0.60	0.90	7.33	252.00	0.000	0.000	422.26	0.00	0.00
6	195.00	APXVTM14-C-I20	3	52.395	57.635	0.70	0.90	13.35	202.32	0.000	0.000	769.54	0.00	0.00
7	195.00	NNVV-65B-R4	3	52.395	57.635	0.66	0.90	24.18	278.64	0.000	0.000	1393.85	0.00	0.00
8	195.00	1900MHz RRH (65MHz)	3	52.395	57.635	0.60	0.90	5.01	216.00	0.000	0.000	288.80	0.00	0.00
9	195.00	800 MHz RRH	6	52.395	57.635	0.60	0.90	9.01	381.60	0.000	0.000	519.22	0.00	0.00
10	185.00	Sector Frames	1	51.613	56.774	1.00	1.00	22.00	1800.00	0.000	0.000	1249.03	0.00	0.00
11	185.00	Powerwave LGP21903	6	51.613	56.774	0.50	0.75	0.81	39.60	0.000	0.000	46.22	0.00	0.00
12	185.00	Powerwave LGP21401	6	51.613	56.774	0.50	0.75	3.89	101.52	0.000	0.000	220.81	0.00	0.00
13	185.00	Ericsson 4449 B5/B12	3	51.613	56.774	0.50	0.75	2.97	255.60	0.000	0.000	168.61	0.00	0.00
14	185.00	Powerwave 7770	3	51.613	56.774	0.58	0.80	9.64	126.00	0.000	0.000	547.08	0.00	0.00
15	185.00	Raycap	1	51.613	56.774	0.75	0.75	3.58	19.20	0.000	0.000	203.54	0.00	0.00
16	185.00	Raycap DC6-48-60-18-8C	1	51.613	56.774	0.75	0.75	0.95	24.00	0.000	0.000	53.65	0.00	0.00
17	185.00	(3) SitePro 1 SFS-L with	1	51.613	56.774	0.75	0.75	7.50	616.80	0.000	0.000	425.81	0.00	0.00
18	185.00	Cci DMP65R-BU8DA	6	51.613	56.774	0.55	0.75	58.70	691.20	0.000	0.000	3332.81	0.00	0.00
19	185.00	(3) SitePro 1 PRK-SFS-L	1	51.613	56.774	0.75	0.75	5.03	276.00	0.000	0.000	285.29	0.00	0.00
20	185.00	Raycap DC6-48-60-18-8F	1	51.613	56.774	0.75	0.75	0.69	38.16	0.000	0.000	39.17	0.00	0.00
21	185.00	(3) SitePro 1 HRK14-3HD	1	51.613	56.774	0.75	0.75	7.31	487.93	0.000	0.000	415.16	0.00	0.00
22	185.00	Ericsson RRUS 4478 B14	3	51.613	56.774	0.50	0.75	2.77	215.64	0.000	0.000	157.48	0.00	0.00
23	185.00	Ericsson RRUS 8843 B2	3	51.613	56.774	0.50	0.75	2.47	259.20	0.000	0.000	140.36	0.00	0.00
24	175.00	Ericsson 4449 B71 + B85	3	50.800	55.880	0.50	0.75	2.97	255.60	0.000	0.000	165.95	0.00	0.00
25	175.00	Ericsson RRUS11 B4	3	50.800	55.880	0.53	0.75	4.03	182.16	0.000	0.000	224.96	0.00	0.00
26	175.00	Ericsson RRUS11 B2	6	50.800	55.880	0.53	0.75	8.05	364.32	0.000	0.000	449.91	0.00	0.00
27	175.00	Platform w/ Hand Rail	1	50.800	55.880	1.00	1.00	32.00	1920.00	0.000	0.000	1788.16	0.00	0.00
28	175.00	Commscope	3	50.800	55.880	0.64	0.80	22.02	179.28	0.000	0.000	1230.61	0.00	0.00
29	175.00	RFS	3	50.800	55.880	0.52	0.75	31.88	442.08	0.000	0.000	1781.34	0.00	0.00
30	175.00	RFS	3	50.800	55.880	0.46	0.75	9.01	146.52	0.000	0.000	503.57	0.00	0.00
							Totals:		**13,079.33**			**19,644.41**		

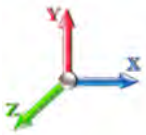
Total Applied Force Summary

Structure:	CT01916-S-SBA		**Code:**	EIA/TIA-222-H	5/11/2021
Site Name:	North Salem		**Exposure:**	B	
Height:	195.00 (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

Load Case: 1.2D + 1.0W 135 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		705.54	1928.23	0.00	0.00
10.00		696.86	1894.47	0.00	0.00
15.00		688.17	1860.71	0.00	0.00
20.00		679.49	1826.94	0.00	0.00
25.00		670.80	1793.18	0.00	0.00
30.00		662.67	1759.41	0.00	0.00
35.00		683.43	1725.65	0.00	0.00
40.00		700.57	1691.89	0.00	0.00
41.00		139.96	334.33	0.00	0.00
45.00		580.25	2564.28	0.00	0.00
48.00		439.16	1894.85	0.00	0.00
50.00		292.38	655.61	0.00	0.00
55.00		743.88	1615.40	0.00	0.00
60.00		656.91	1581.64	0.00	0.00
65.00		656.61	1547.87	0.00	0.00
70.00		654.84	1514.11	0.00	0.00
75.00		651.75	1480.34	0.00	0.00
80.00		647.44	1446.58	0.00	0.00
85.00		642.03	1412.81	0.00	0.00
90.00		648.09	2653.97	0.00	0.00
91.00		127.98	522.69	0.00	0.00
93.00		255.50	549.39	0.00	0.00
95.00		254.30	474.25	0.00	0.00
100.00		632.86	1165.36	0.00	0.00
105.00		623.98	1136.42	0.00	0.00
110.00		614.33	1107.48	0.00	0.00
115.00		603.95	1078.54	0.00	0.00
120.00		598.14	1049.60	0.00	0.00
125.00		592.08	1020.66	0.00	0.00
130.00		585.54	849.19	0.00	0.00
135.00		588.95	1533.86	0.00	0.00
140.00		578.15	813.61	0.00	0.00
145.00		538.65	658.39	0.00	0.00
150.00		524.22	639.10	0.00	0.00
155.00		509.30	619.81	0.00	0.00
160.00		493.91	600.51	0.00	0.00
165.00		478.05	581.22	0.00	0.00
170.00		461.76	561.93	0.00	0.00
175.00	(22) attachments	6589.55	4032.59	0.00	0.00
180.00		783.29	504.41	0.00	0.00
185.00	(37) attachments	8046.79	5488.37	0.00	0.00
190.00		343.25	450.40	0.00	0.00
195.00	(22) attachments	6560.69	5088.91	0.00	0.00
	Totals:	**43,626.05**	**63,708.96**	**0.00**	**0.00**

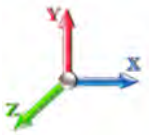
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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 + 1.0W 135 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	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.120	1.060	30.666	0.00	0.00
5.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.120	1.060	30.666	0.00	0.00
10.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.122	1.067	30.666	0.00	0.00
10.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.122	1.067	30.666	0.00	0.00
15.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.125	1.074	30.666	0.00	0.00
15.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.125	1.074	30.666	0.00	0.00
20.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.127	1.081	30.666	0.00	0.00
20.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.127	1.081	30.666	0.00	0.00
25.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.130	1.089	30.666	0.00	0.00
25.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.130	1.089	30.666	0.00	0.00
30.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.132	1.097	30.692	0.00	0.00
30.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.132	1.097	30.692	0.00	0.00
35.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.135	1.105	32.074	0.00	0.00
35.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.135	1.105	32.074	0.00	0.00
40.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.138	1.114	33.322	0.00	0.00
40.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.138	1.114	33.322	0.00	0.00
41.00	(4) C6x10.5	Yes	1.00	0.000	4.00	0.33	0.00	0.140	1.119	33.558	0.00	0.00
41.00	(4) C5x9	Yes	1.00	0.000	3.78	0.32	0.00	0.140	1.119	33.558	0.00	0.00
45.00	(4) C6x10.5	Yes	4.00	0.000	4.00	1.33	0.00	0.141	1.124	34.462	0.00	0.00
45.00	(4) C5x9	Yes	4.00	0.000	3.78	1.26	0.00	0.141	1.124	34.462	0.00	0.00
48.00	(4) C6x10.5	Yes	3.00	0.000	4.00	1.00	0.00	0.143	1.130	35.103	0.00	0.00
48.00	(4) C5x9	Yes	3.00	0.000	3.78	0.94	0.00	0.143	1.130	35.103	0.00	0.00
50.00	(4) C6x10.5	Yes	2.00	0.000	4.00	0.67	0.00	0.143	1.128	35.515	0.00	0.00
50.00	(4) C5x9	Yes	2.00	0.000	3.78	0.63	0.00	0.143	1.128	35.515	0.00	0.00
55.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.145	1.135	36.496	0.00	0.00
55.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.145	1.135	36.496	0.00	0.00
60.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.076	0.000	37.414	0.00	0.00
65.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.078	0.000	38.280	0.00	0.00
70.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.080	0.000	39.099	0.00	0.00
75.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.082	0.000	39.877	0.00	0.00
80.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.084	0.000	40.620	0.00	0.00
85.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.086	0.000	41.329	0.00	0.00
90.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.088	0.000	42.010	0.00	0.00
91.00	(4) C6x10.5	Yes	1.00	0.000	4.00	0.33	0.00	0.090	0.000	42.143	0.00	0.00
93.00	(4) C6x10.5	Yes	2.00	0.000	4.00	0.67	0.00	0.089	0.000	42.405	0.00	0.00
95.00	(4) C6x10.5	Yes	2.00	0.000	4.00	0.67	0.00	0.090	0.000	42.664	0.00	0.00
100.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.092	0.000	43.294	0.00	0.00
105.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.094	0.000	43.901	0.00	0.00
110.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.097	0.000	44.489	0.00	0.00
115.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.100	0.000	45.057	0.00	0.00
120.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.103	1.009	45.609	0.00	0.00
125.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.106	1.019	46.144	0.00	0.00
130.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.110	1.029	46.664	0.00	0.00
135.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.114	1.041	47.170	0.00	0.00
140.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.115	1.046	47.662	0.00	0.00
145.00	(4) C6x10.5	Yes	3.00	0.000	4.00	1.00	0.00	0.072	0.000	48.143	0.00	0.00
180.00	(3) Bypass Stiffeners	Yes	2.25	0.600	12.60	2.36	1.42	0.227	0.000	51.210	79.85	0.00

Linear Appurtenance Segment Forces (Factored)

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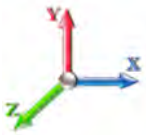
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 1.2D + 1.0W 135 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)
185.00	(3) Bypass Stiffeners	Yes	2.25	0.600	12.60	2.36	1.42	0.236	0.000	51.613	80.48	0.00
										Totals:	**160.3**	**0.0**

Calculated Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (ft)	**Crest Height:**	0.00		
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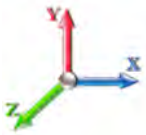
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Load Case: 1.2D + 1.0W 135 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	-63.64	-43.73	0.00	-6214.8	0.00	6214.80	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.823
5.00	-61.56	-43.23	0.00	-5996.1	0.00	5996.14	5739.58	1532.15	7992.25	7431.48	0.10	-0.188	0.000	0.818
10.00	-59.53	-42.72	0.00	-5780.0	0.00	5780.01	5674.37	1503.12	7692.32	7206.92	0.40	-0.380	0.000	0.813
15.00	-57.53	-42.22	0.00	-5566.3	0.00	5566.39	5607.48	1474.10	7398.13	6983.48	0.91	-0.576	0.000	0.808
20.00	-55.56	-41.71	0.00	-5355.3	0.00	5355.30	5538.91	1445.08	7109.68	6761.30	1.62	-0.776	0.000	0.803
25.00	-53.63	-41.21	0.00	-5146.7	0.00	5146.74	5468.67	1416.05	6826.96	6540.49	2.54	-0.981	0.000	0.798
30.00	-51.74	-40.70	0.00	-4940.6	0.00	4940.69	5396.74	1387.03	6549.98	6321.18	3.68	-1.189	0.000	0.792
35.00	-49.88	-40.17	0.00	-4737.1	0.00	4737.18	5323.13	1358.01	6278.73	6103.50	5.04	-1.402	0.000	0.786
40.00	-48.11	-39.53	0.00	-4536.3	0.00	4536.34	5247.84	1328.98	6013.22	5887.58	6.62	-1.619	0.000	0.781
41.00	-47.71	-39.48	0.00	-4496.8	0.00	4496.80	5232.58	1323.18	5960.81	5844.61	6.97	-1.664	0.000	0.779
45.00	-45.05	-38.94	0.00	-4338.8	0.00	4338.89	5170.87	1299.96	5753.45	5673.52	8.44	-1.843	0.000	0.774
48.00	-43.10	-38.53	0.00	-4222.0	0.00	4222.07	5181.33	1303.87	5788.10	5702.24	9.64	-1.981	0.000	0.750
50.00	-42.35	-38.33	0.00	-4145.0	0.00	4145.01	5150.16	1292.26	5685.49	5617.06	10.49	-2.074	0.000	0.747
55.00	-40.62	-37.68	0.00	-3953.3	0.00	3953.37	5071.07	1263.24	5432.97	5405.56	12.78	-2.294	0.000	0.740
60.00	-38.92	-37.11	0.00	-3764.9	0.00	3764.96	4990.29	1234.21	5186.19	5196.21	15.30	-2.518	0.000	0.733
65.00	-37.25	-36.54	0.00	-3579.3	0.00	3579.39	4907.83	1205.19	4945.14	4989.15	18.06	-2.748	0.000	0.726
70.00	-35.63	-35.96	0.00	-3396.7	0.00	3396.71	4823.69	1176.17	4709.83	4784.49	21.06	-2.982	0.000	0.718
75.00	-34.03	-35.37	0.00	-3216.9	0.00	3216.93	4737.87	1147.14	4480.26	4582.37	24.31	-3.220	0.000	0.710
80.00	-32.48	-34.78	0.00	-3040.1	0.00	3040.10	4650.37	1118.12	4256.42	4382.90	27.81	-3.463	0.000	0.702
85.00	-30.96	-34.18	0.00	-2866.2	0.00	2866.22	4561.19	1089.10	4038.32	4186.21	31.57	-3.711	0.000	0.692
90.00	-28.27	-33.43	0.00	-2695.3	0.00	2695.31	4470.33	1060.07	3825.95	3992.42	35.59	-3.964	0.000	0.682
91.00	-27.71	-33.31	0.00	-2661.8	0.00	2661.87	4519.12	1075.59	3938.79	4095.67	36.42	-4.016	0.000	0.657
93.00	-27.12	-33.06	0.00	-2595.2	0.00	2595.26	4482.67	1063.98	3854.22	4018.35	38.13	-4.122	0.000	0.653
93.00	-27.12	-33.06	0.00	-2595.2	0.00	2595.26	3684.61	913.29	3313.08	3312.42	38.13	-4.122	0.000	0.792
95.00	-26.55	-32.86	0.00	-2529.1	0.00	2529.14	3656.67	903.34	3241.28	3251.18	39.88	-4.222	0.000	0.786
100.00	-25.28	-32.27	0.00	-2364.8	0.00	2364.82	3585.64	878.46	3065.22	3099.48	44.45	-4.508	0.000	0.771
105.00	-24.03	-31.68	0.00	-2203.4	0.00	2203.46	3512.93	853.58	2894.07	2949.87	49.32	-4.798	0.000	0.755
110.00	-22.82	-31.09	0.00	-2045.0	0.00	2045.05	3438.54	828.71	2727.83	2802.49	54.49	-5.093	0.000	0.738
115.00	-21.65	-30.51	0.00	-1889.5	0.00	1889.59	3362.47	803.83	2566.52	2657.45	59.98	-5.391	0.000	0.719
120.00	-20.50	-29.92	0.00	-1737.0	0.00	1737.06	3284.72	778.95	2410.12	2514.88	65.78	-5.692	0.000	0.698
125.00	-19.39	-29.33	0.00	-1587.4	0.00	1587.47	3192.26	754.08	2258.63	2365.26	71.89	-5.995	0.000	0.679
125.00	-19.39	-29.33	0.00	-1587.4	0.00	1587.47	2545.46	629.48	1888.72	1892.56	71.89	-5.995	0.000	0.849
130.00	-18.44	-28.76	0.00	-1440.8	0.00	1440.83	2486.30	608.75	1766.36	1787.17	78.32	-6.299	0.000	0.816
135.00	-16.81	-28.11	0.00	-1297.0	0.00	1297.02	2457.60	598.90	1709.65	1737.70	85.10	-6.663	0.000	0.755
140.00	-15.90	-27.54	0.00	-1156.4	0.00	1156.46	2395.97	578.17	1593.34	1634.95	92.26	-7.024	0.000	0.716
140.00	-15.90	-27.54	0.00	-1156.4	0.00	1156.46	1788.19	463.41	1279.47	1224.81	92.26	-7.024	0.000	0.957
145.00	-15.14	-27.02	0.00	-1018.7	0.00	1018.77	1746.83	446.82	1189.53	1153.35	99.78	-7.361	0.000	0.896
150.00	-14.39	-26.52	0.00	-883.67	0.00	883.67	1703.79	430.24	1102.87	1082.85	107.69	-7.770	0.000	0.828
155.00	-13.67	-26.02	0.00	-751.08	0.00	751.08	1659.07	413.65	1019.48	1013.46	116.01	-8.163	0.000	0.753
160.00	-12.99	-25.53	0.00	-620.98	0.00	620.98	1612.67	397.07	939.37	945.29	124.73	-8.534	0.000	0.669
165.00	-12.35	-25.04	0.00	-493.35	0.00	493.35	1564.59	380.48	862.54	878.47	133.83	-8.875	0.000	0.574
170.00	-11.75	-24.55	0.00	-368.18	0.00	368.18	1514.83	363.90	788.98	813.12	143.25	-9.175	0.000	0.465
175.00	-8.77	-17.42	0.00	-245.44	0.00	245.44	1463.38	347.31	718.70	749.37	152.96	-9.419	0.000	0.336
180.00	-8.36	-16.59	0.00	-158.32	0.00	158.32	1400.09	330.73	651.70	682.38	162.88	-9.603	0.000	0.241
180.00	-8.36	-16.59	0.00	-158.32	0.00	158.32	678.42	203.53	25205.7	396.30	162.88	-9.603	0.000	0.418
185.00	-4.29	-7.74	0.00	-75.37	0.00	75.37	678.42	203.53	25205.7	396.30	172.96	-9.727	0.000	0.198
190.00	-3.90	-7.33	0.00	-36.65	0.00	36.65	678.42	203.53	25205.7	396.30	183.13	-9.781	0.000	0.100
195.00	0.00	-6.56	0.00	0.00	0.00	0.00	678.42	203.53	25205.7	396.30	193.34	-9.799	0.000	0.001

Calculated Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

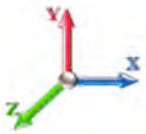
Wind Loading - Shaft

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

Load Case: 0.9D + 1.0W 135 mph Wind

Dead Load Factor 0.90

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	0.70	30.666	33.73	612.88	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	30.666	33.73	601.57	0.774 *	0.000	5.00	27.038	20.92	705.5	0.0	1349.5
10.00		1.00	0.70	30.666	33.73	590.25	0.779 *	0.000	5.00	26.534	20.66	696.9	0.0	1324.1
15.00		1.00	0.70	30.666	33.73	578.93	0.784 *	0.000	5.00	26.030	20.40	688.2	0.0	1298.8
20.00		1.00	0.70	30.666	33.73	567.62	0.789 *	0.000	5.00	25.526	20.14	679.5	0.0	1273.5
25.00		1.00	0.70	30.666	33.73	556.30	0.795 *	0.000	5.00	25.022	19.89	670.8	0.0	1248.2
30.00		1.00	0.70	30.692	33.76	545.21	0.801 *	0.000	5.00	24.518	19.63	662.7	0.0	1222.9
35.00		1.00	0.73	32.074	35.28	545.78	0.807 *	0.000	5.00	24.014	19.37	683.4	0.0	1197.5
40.00		1.00	0.76	33.322	36.65	544.49	0.813 *	0.000	5.00	23.510	19.11	700.6	0.0	1172.2
41.00	Bot - Section 2	1.00	0.77	33.558	36.91	544.05	0.817 *	0.000	1.00	4.642	3.79	140.0	0.0	231.4
45.00		1.00	0.79	34.462	37.91	541.74	0.820 *	0.000	4.00	18.661	15.31	580.3	0.0	1845.8
48.00	Top - Section 1	1.00	0.80	35.103	38.61	539.49	0.825 *	0.000	3.00	13.784	11.37	439.2	0.0	1363.1
50.00		1.00	0.81	35.515	39.07	546.72	0.823 *	0.000	2.00	9.089	7.48	292.4	0.0	453.0
55.00		1.00	0.83	36.496	40.15	541.87	0.828 *	0.000	5.00	22.369	18.53	743.9	0.0	1114.8
60.00		1.00	0.85	37.414	41.16	536.15	0.730	0.000	5.00	21.865	15.96	656.9	0.0	1089.5
65.00		1.00	0.87	38.280	42.11	529.67	0.730	0.000	5.00	21.361	15.59	656.6	0.0	1064.2
70.00		1.00	0.89	39.099	43.01	522.53	0.730	0.000	5.00	20.857	15.23	654.8	0.0	1038.9
75.00		1.00	0.91	39.877	43.87	514.80	0.730	0.000	5.00	20.353	14.86	651.7	0.0	1013.6
80.00		1.00	0.93	40.620	44.68	506.54	0.730	0.000	5.00	19.849	14.49	647.4	0.0	988.2
85.00	Bot - Section 3	1.00	0.94	41.329	45.46	497.81	0.730	0.000	5.00	19.346	14.12	642.0	0.0	962.9
90.00		1.00	0.96	42.010	46.21	488.65	0.730	0.000	5.00	19.212	14.02	648.1	0.0	1893.8
91.00	Top - Section 2	1.00	0.96	42.143	46.36	486.77	0.730	0.000	1.00	3.782	2.76	128.0	0.0	372.7
93.00	Top - Section 3	1.00	0.97	42.405	46.65	492.73	0.730	0.000	2.00	7.503	5.48	255.5	0.0	373.4
95.00		1.00	0.97	42.664	46.93	488.90	0.730	0.000	2.00	7.423	5.42	254.3	0.0	317.0
100.00		1.00	0.99	43.294	47.62	479.04	0.730	0.000	5.00	18.204	13.29	632.9	0.0	777.3
105.00		1.00	1.00	43.901	48.29	468.86	0.730	0.000	5.00	17.700	12.92	624.0	0.0	755.6
110.00		1.00	1.02	44.489	48.94	458.35	0.730	0.000	5.00	17.196	12.55	614.3	0.0	733.9
115.00		1.00	1.03	45.057	49.56	447.55	0.730	0.000	5.00	16.692	12.19	603.9	0.0	712.2
120.00		1.00	1.04	45.609	50.17	436.48	0.736 *	0.000	5.00	16.189	11.92	598.1	0.0	690.5
125.00	Top - Section 4	1.00	1.05	46.144	50.76	425.15	0.744 *	0.000	5.00	15.685	11.66	592.1	0.0	668.8
130.00	Bot - Section 6	1.00	1.07	46.664	51.33	413.58	0.751 *	0.000	5.00	15.181	11.41	585.5	0.0	540.2
135.00	Top - Section 5	1.00	1.08	47.170	51.89	401.78	0.760 *	0.000	5.00	14.941	11.35	589.0	0.0	1053.7
140.00	Top - Section 6	1.00	1.09	47.662	52.43	397.17	0.764 *	0.000	5.00	14.437	11.03	578.2	0.0	513.5
145.00		1.00	1.10	48.143	52.96	384.99	0.730	0.000	5.00	13.933	10.17	538.6	0.0	397.1
150.00		1.00	1.11	48.611	53.47	372.61	0.730	0.000	5.00	13.430	9.80	524.2	0.0	382.6
155.00		1.00	1.12	49.069	53.98	360.04	0.730	0.000	5.00	12.926	9.44	509.3	0.0	368.2
160.00		1.00	1.13	49.516	54.47	347.30	0.730	0.000	5.00	12.422	9.07	493.9	0.0	353.7
165.00		1.00	1.14	49.953	54.95	334.39	0.730	0.000	5.00	11.918	8.70	478.1	0.0	339.2
170.00		1.00	1.15	50.381	55.42	321.31	0.730	0.000	5.00	11.414	8.33	461.8	0.0	324.7
175.00	Appurtenance(s)	1.00	1.16	50.800	55.88	308.08	0.730	0.000	5.00	10.910	7.96	445.0	0.0	310.3
180.00	Top - Section 7	1.00	1.17	51.210	56.33	294.70	1.200 *	0.000	5.00	10.406	12.49	703.4	0.0	295.8
185.00	Appurtenance(s)	1.00	1.18	51.613	56.77	291.36	1.200 *	0.000	5.00	10.000	12.00	681.3	0.0	320.6
190.00		1.00	1.19	52.008	57.21	292.47	0.600	0.000	5.00	10.000	6.00	343.3	0.0	320.6
195.00	Appurtenance(s)	1.00	1.20	52.395	57.63	293.56	0.600	0.000	5.00	10.000	6.00	345.8	0.0	320.6
								Totals:	**195.00**			**23,821.3**		**34,388.2**

* Cf Adjusted by Linear Load Ra Effect

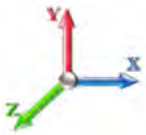
Discrete Appurtenance Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

Load Case: 0.9D + 1.0W 135 mph Wind

Dead Load Factor 0.90

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	195.00	HRK12 (Handrail Kit)	1	52.395	57.635	1.00	1.00	6.75	235.55	0.000	0.000	389.03	0.00	0.00
2	195.00	Low Profile	1	52.395	57.635	1.00	1.00	26.00	1620.00	0.000	0.000	1498.50	0.00	0.00
3	195.00	PRK-1245 (kicker kit)	1	52.395	57.635	1.00	1.00	9.50	418.42	0.000	0.000	547.53	0.00	0.00
4	195.00	(3) SFS-H-L (V-Braces)	1	52.395	57.635	1.00	1.00	6.70	207.00	0.000	0.000	386.15	0.00	0.00
5	195.00	TD-RRH8x20-25	3	52.395	57.635	0.60	0.90	7.33	189.00	0.000	0.000	422.26	0.00	0.00
6	195.00	APXVTM14-C-I20	3	52.395	57.635	0.70	0.90	13.35	151.74	0.000	0.000	769.54	0.00	0.00
7	195.00	NNVV-65B-R4	3	52.395	57.635	0.66	0.90	24.18	208.98	0.000	0.000	1393.85	0.00	0.00
8	195.00	1900MHz RRH (65MHz)	3	52.395	57.635	0.60	0.90	5.01	162.00	0.000	0.000	288.80	0.00	0.00
9	195.00	800 MHz RRH	6	52.395	57.635	0.60	0.90	9.01	286.20	0.000	0.000	519.22	0.00	0.00
10	185.00	Sector Frames	1	51.613	56.774	1.00	1.00	22.00	1350.00	0.000	0.000	1249.03	0.00	0.00
11	185.00	Powerwave LGP21903	6	51.613	56.774	0.50	0.75	0.81	29.70	0.000	0.000	46.22	0.00	0.00
12	185.00	Powerwave LGP21401	6	51.613	56.774	0.50	0.75	3.89	76.14	0.000	0.000	220.81	0.00	0.00
13	185.00	Ericsson 4449 B5/B12	3	51.613	56.774	0.50	0.75	2.97	191.70	0.000	0.000	168.61	0.00	0.00
14	185.00	Powerwave 7770	3	51.613	56.774	0.58	0.80	9.64	94.50	0.000	0.000	547.08	0.00	0.00
15	185.00	Raycap	1	51.613	56.774	0.75	0.75	3.58	14.40	0.000	0.000	203.54	0.00	0.00
16	185.00	Raycap DC6-48-60-18-8C	1	51.613	56.774	0.75	0.75	0.95	18.00	0.000	0.000	53.65	0.00	0.00
17	185.00	(3) SitePro 1 SFS-L with	1	51.613	56.774	0.75	0.75	7.50	462.60	0.000	0.000	425.81	0.00	0.00
18	185.00	Cci DMP65R-BU8DA	6	51.613	56.774	0.55	0.75	58.70	518.40	0.000	0.000	3332.81	0.00	0.00
19	185.00	(3) SitePro 1 PRK-SFS-L	1	51.613	56.774	0.75	0.75	5.03	207.00	0.000	0.000	285.29	0.00	0.00
20	185.00	Raycap DC6-48-60-18-8F	1	51.613	56.774	0.75	0.75	0.69	28.62	0.000	0.000	39.17	0.00	0.00
21	185.00	(3) SitePro 1 HRK14-3HD	1	51.613	56.774	0.75	0.75	7.31	365.95	0.000	0.000	415.16	0.00	0.00
22	185.00	Ericsson RRUS 4478 B14	3	51.613	56.774	0.50	0.75	2.77	161.73	0.000	0.000	157.48	0.00	0.00
23	185.00	Ericsson RRUS 8843 B2	3	51.613	56.774	0.50	0.75	2.47	194.40	0.000	0.000	140.36	0.00	0.00
24	175.00	Ericsson 4449 B71 + B85	3	50.800	55.880	0.50	0.75	2.97	191.70	0.000	0.000	165.95	0.00	0.00
25	175.00	Ericsson RRUS11 B4	3	50.800	55.880	0.53	0.75	4.03	136.62	0.000	0.000	224.96	0.00	0.00
26	175.00	Ericsson RRUS11 B2	6	50.800	55.880	0.53	0.75	8.05	273.24	0.000	0.000	449.91	0.00	0.00
27	175.00	Platform w/ Hand Rail	1	50.800	55.880	1.00	1.00	32.00	1440.00	0.000	0.000	1788.16	0.00	0.00
28	175.00	Commscope	3	50.800	55.880	0.64	0.80	22.02	134.46	0.000	0.000	1230.61	0.00	0.00
29	175.00	RFS	3	50.800	55.880	0.52	0.75	31.88	331.56	0.000	0.000	1781.34	0.00	0.00
30	175.00	RFS	3	50.800	55.880	0.46	0.75	9.01	109.89	0.000	0.000	503.57	0.00	0.00
							Totals:		**9,809.50**			**19,644.41**		

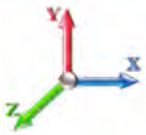
Total Applied Force Summary

Structure:	CT01916-S-SBA		**Code:**	EIA/TIA-222-H	5/11/2021
Site Name:	North Salem		**Exposure:**	B	
Height:	195.00 (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 + 1.0W 135 mph Wind

Dead Load Factor 0.90

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		705.54	1446.18	0.00	0.00
10.00		696.86	1420.85	0.00	0.00
15.00		688.17	1395.53	0.00	0.00
20.00		679.49	1370.21	0.00	0.00
25.00		670.80	1344.88	0.00	0.00
30.00		662.67	1319.56	0.00	0.00
35.00		683.43	1294.24	0.00	0.00
40.00		700.57	1268.91	0.00	0.00
41.00		139.96	250.74	0.00	0.00
45.00		580.25	1923.21	0.00	0.00
48.00		439.16	1421.14	0.00	0.00
50.00		292.38	491.71	0.00	0.00
55.00		743.88	1211.55	0.00	0.00
60.00		656.91	1186.23	0.00	0.00
65.00		656.61	1160.90	0.00	0.00
70.00		654.84	1135.58	0.00	0.00
75.00		651.75	1110.26	0.00	0.00
80.00		647.44	1084.93	0.00	0.00
85.00		642.03	1059.61	0.00	0.00
90.00		648.09	1990.48	0.00	0.00
91.00		127.98	392.02	0.00	0.00
93.00		255.50	412.04	0.00	0.00
95.00		254.30	355.69	0.00	0.00
100.00		632.86	874.02	0.00	0.00
105.00		623.98	852.32	0.00	0.00
110.00		614.33	830.61	0.00	0.00
115.00		603.95	808.91	0.00	0.00
120.00		598.14	787.20	0.00	0.00
125.00		592.08	765.49	0.00	0.00
130.00		585.54	636.89	0.00	0.00
135.00		588.95	1150.39	0.00	0.00
140.00		578.15	610.21	0.00	0.00
145.00		538.65	493.80	0.00	0.00
150.00		524.22	479.33	0.00	0.00
155.00		509.30	464.86	0.00	0.00
160.00		493.91	450.38	0.00	0.00
165.00		478.05	435.91	0.00	0.00
170.00		461.76	421.44	0.00	0.00
175.00	(22) attachments	6589.55	3024.44	0.00	0.00
180.00		783.29	378.31	0.00	0.00
185.00	(37) attachments	8046.79	4116.28	0.00	0.00
190.00		343.25	337.80	0.00	0.00
195.00	(22) attachments	6560.69	3816.68	0.00	0.00
	Totals:	**43,626.05**	**47,781.72**	**0.00**	**0.00**

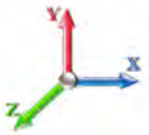
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

Load Case: 0.9D + 1.0W 135 mph Wind

Dead Load Factor 0.90

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	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.120	1.060	30.666	0.00	0.00
5.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.120	1.060	30.666	0.00	0.00
10.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.122	1.067	30.666	0.00	0.00
10.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.122	1.067	30.666	0.00	0.00
15.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.125	1.074	30.666	0.00	0.00
15.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.125	1.074	30.666	0.00	0.00
20.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.127	1.081	30.666	0.00	0.00
20.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.127	1.081	30.666	0.00	0.00
25.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.130	1.089	30.666	0.00	0.00
25.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.130	1.089	30.666	0.00	0.00
30.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.132	1.097	30.692	0.00	0.00
30.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.132	1.097	30.692	0.00	0.00
35.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.135	1.105	32.074	0.00	0.00
35.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.135	1.105	32.074	0.00	0.00
40.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.138	1.114	33.322	0.00	0.00
40.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.138	1.114	33.322	0.00	0.00
41.00	(4) C6x10.5	Yes	1.00	0.000	4.00	0.33	0.00	0.140	1.119	33.558	0.00	0.00
41.00	(4) C5x9	Yes	1.00	0.000	3.78	0.32	0.00	0.140	1.119	33.558	0.00	0.00
45.00	(4) C6x10.5	Yes	4.00	0.000	4.00	1.33	0.00	0.141	1.124	34.462	0.00	0.00
45.00	(4) C5x9	Yes	4.00	0.000	3.78	1.26	0.00	0.141	1.124	34.462	0.00	0.00
48.00	(4) C6x10.5	Yes	3.00	0.000	4.00	1.00	0.00	0.143	1.130	35.103	0.00	0.00
48.00	(4) C5x9	Yes	3.00	0.000	3.78	0.94	0.00	0.143	1.130	35.103	0.00	0.00
50.00	(4) C6x10.5	Yes	2.00	0.000	4.00	0.67	0.00	0.143	1.128	35.515	0.00	0.00
50.00	(4) C5x9	Yes	2.00	0.000	3.78	0.63	0.00	0.143	1.128	35.515	0.00	0.00
55.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.145	1.135	36.496	0.00	0.00
55.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.145	1.135	36.496	0.00	0.00
60.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.076	0.000	37.414	0.00	0.00
65.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.078	0.000	38.280	0.00	0.00
70.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.080	0.000	39.099	0.00	0.00
75.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.082	0.000	39.877	0.00	0.00
80.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.084	0.000	40.620	0.00	0.00
85.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.086	0.000	41.329	0.00	0.00
90.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.088	0.000	42.010	0.00	0.00
91.00	(4) C6x10.5	Yes	1.00	0.000	4.00	0.33	0.00	0.090	0.000	42.143	0.00	0.00
93.00	(4) C6x10.5	Yes	2.00	0.000	4.00	0.67	0.00	0.089	0.000	42.405	0.00	0.00
95.00	(4) C6x10.5	Yes	2.00	0.000	4.00	0.67	0.00	0.090	0.000	42.664	0.00	0.00
100.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.092	0.000	43.294	0.00	0.00
105.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.094	0.000	43.901	0.00	0.00
110.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.097	0.000	44.489	0.00	0.00
115.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.100	0.000	45.057	0.00	0.00
120.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.103	1.009	45.609	0.00	0.00
125.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.106	1.019	46.144	0.00	0.00
130.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.110	1.029	46.664	0.00	0.00
135.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.114	1.041	47.170	0.00	0.00
140.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.115	1.046	47.662	0.00	0.00
145.00	(4) C6x10.5	Yes	3.00	0.000	4.00	1.00	0.00	0.072	0.000	48.143	0.00	0.00
180.00	(3) Bypass Stiffeners	Yes	2.25	0.600	12.60	2.36	1.42	0.227	0.000	51.210	79.85	0.00

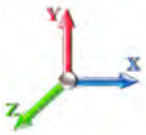
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

Load Case: 0.9D + 1.0W 135 mph Wind

Dead Load Factor 0.90

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)
185.00	(3) Bypass Stiffeners	Yes	2.25	0.600	12.60	2.36	1.42	0.236	0.000	51.613	80.48	0.00
										Totals:	**160.3**	**0.0**

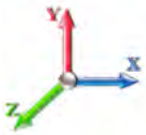
Calculated Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

Load Case: 0.9D + 1.0W 135 mph Wind

Dead Load Factor 0.90

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	-47.71	-43.70	0.00	-6121.5	0.00	6121.50	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.808
5.00	-46.12	-43.15	0.00	-5902.9	0.00	5902.98	5739.58	1532.15	7992.25	7431.48	0.10	-0.185	0.000	0.803
10.00	-44.56	-42.59	0.00	-5687.2	0.00	5687.25	5674.37	1503.12	7692.32	7206.92	0.40	-0.374	0.000	0.798
15.00	-43.03	-42.04	0.00	-5474.2	0.00	5474.29	5607.48	1474.10	7398.13	6983.48	0.89	-0.567	0.000	0.792
20.00	-41.53	-41.49	0.00	-5264.0	0.00	5264.09	5538.91	1445.08	7109.68	6761.30	1.59	-0.764	0.000	0.787
25.00	-40.05	-40.94	0.00	-5056.6	0.00	5056.66	5468.67	1416.05	6826.96	6540.49	2.50	-0.965	0.000	0.781
30.00	-38.59	-40.39	0.00	-4851.9	0.00	4851.97	5396.74	1387.03	6549.98	6321.18	3.62	-1.169	0.000	0.776
35.00	-37.17	-39.82	0.00	-4650.0	0.00	4650.01	5323.13	1358.01	6278.73	6103.50	4.96	-1.378	0.000	0.770
40.00	-35.83	-39.16	0.00	-4450.9	0.00	4450.93	5247.84	1328.98	6013.22	5887.58	6.51	-1.592	0.000	0.764
41.00	-35.51	-39.09	0.00	-4411.7	0.00	4411.77	5232.58	1323.18	5960.81	5844.61	6.85	-1.636	0.000	0.763
45.00	-33.50	-38.54	0.00	-4255.4	0.00	4255.43	5170.87	1299.96	5753.45	5673.52	8.30	-1.812	0.000	0.757
48.00	-32.02	-38.12	0.00	-4139.8	0.00	4139.82	5181.33	1303.87	5788.10	5702.24	9.48	-1.946	0.000	0.733
50.00	-31.44	-37.89	0.00	-4063.5	0.00	4063.59	5150.16	1292.26	5685.49	5617.06	10.31	-2.037	0.000	0.730
55.00	-30.11	-37.22	0.00	-3874.1	0.00	3874.14	5071.07	1263.24	5432.97	5405.56	12.56	-2.253	0.000	0.724
60.00	-28.81	-36.62	0.00	-3688.0	0.00	3688.06	4990.29	1234.21	5186.19	5196.21	15.04	-2.473	0.000	0.716
65.00	-27.54	-36.02	0.00	-3504.9	0.00	3504.94	4907.83	1205.19	4945.14	4989.15	17.75	-2.698	0.000	0.709
70.00	-26.29	-35.42	0.00	-3324.8	0.00	3324.82	4823.69	1176.17	4709.83	4784.49	20.70	-2.927	0.000	0.701
75.00	-25.08	-34.81	0.00	-3147.7	0.00	3147.72	4737.87	1147.14	4480.26	4582.37	23.89	-3.160	0.000	0.693
80.00	-23.89	-34.21	0.00	-2973.6	0.00	2973.65	4650.37	1118.12	4256.42	4382.90	27.32	-3.398	0.000	0.685
85.00	-22.73	-33.60	0.00	-2802.6	0.00	2802.62	4561.19	1089.10	4038.32	4186.21	31.01	-3.640	0.000	0.675
90.00	-20.70	-32.87	0.00	-2634.6	0.00	2634.63	4470.33	1060.07	3825.95	3992.42	34.95	-3.887	0.000	0.665
91.00	-20.27	-32.75	0.00	-2601.7	0.00	2601.75	4519.12	1075.59	3938.79	4095.67	35.77	-3.939	0.000	0.641
93.00	-19.82	-32.50	0.00	-2536.2	0.00	2536.26	4482.67	1063.98	3854.22	4018.35	37.44	-4.042	0.000	0.637
93.00	-19.82	-32.50	0.00	-2536.2	0.00	2536.26	3684.61	913.29	3313.08	3312.42	37.44	-4.042	0.000	0.772
95.00	-19.38	-32.28	0.00	-2471.2	0.00	2471.26	3656.67	903.34	3241.28	3251.18	39.15	-4.139	0.000	0.767
100.00	-18.40	-31.68	0.00	-2309.8	0.00	2309.84	3585.64	878.46	3065.22	3099.48	43.63	-4.419	0.000	0.752
105.00	-17.44	-31.08	0.00	-2151.4	0.00	2151.45	3512.93	853.58	2894.07	2949.87	48.41	-4.703	0.000	0.736
110.00	-16.51	-30.48	0.00	-1996.0	0.00	1996.08	3438.54	828.71	2727.83	2802.49	53.48	-4.990	0.000	0.718
115.00	-15.61	-29.88	0.00	-1843.6	0.00	1843.69	3362.47	803.83	2566.52	2657.45	58.86	-5.281	0.000	0.700
120.00	-14.73	-29.29	0.00	-1694.2	0.00	1694.27	3284.72	778.95	2410.12	2514.88	64.54	-5.575	0.000	0.680
125.00	-13.88	-28.70	0.00	-1547.8	0.00	1547.82	3192.26	754.08	2258.63	2365.26	70.53	-5.870	0.000	0.660
125.00	-13.88	-28.70	0.00	-1547.8	0.00	1547.82	2545.46	629.48	1888.72	1892.56	70.53	-5.870	0.000	0.825
130.00	-13.15	-28.12	0.00	-1404.3	0.00	1404.34	2486.30	608.75	1766.36	1787.17	76.82	-6.167	0.000	0.793
135.00	-11.90	-27.48	0.00	-1263.7	0.00	1263.73	2457.60	598.90	1709.65	1737.70	83.46	-6.521	0.000	0.734
140.00	-11.20	-26.91	0.00	-1126.3	0.00	1126.31	2395.97	578.17	1593.34	1634.95	90.46	-6.873	0.000	0.696
140.00	-11.20	-26.91	0.00	-1126.3	0.00	1126.31	1788.19	463.41	1279.47	1224.81	90.46	-6.873	0.000	0.929
145.00	-10.61	-26.38	0.00	-991.78	0.00	991.78	1746.83	446.82	1189.53	1153.35	97.82	-7.201	0.000	0.869
150.00	-10.03	-25.87	0.00	-859.89	0.00	859.89	1703.79	430.24	1102.87	1082.85	105.56	-7.599	0.000	0.804
155.00	-9.47	-25.36	0.00	-730.56	0.00	730.56	1659.07	413.65	1019.48	1013.46	113.70	-7.981	0.000	0.730
160.00	-8.95	-24.86	0.00	-603.76	0.00	603.76	1612.67	397.07	939.37	945.29	122.23	-8.343	0.000	0.648
165.00	-8.45	-24.37	0.00	-479.45	0.00	479.45	1564.59	380.48	862.54	878.47	131.12	-8.674	0.000	0.555
170.00	-8.00	-23.89	0.00	-357.59	0.00	357.59	1514.83	363.90	788.98	813.12	140.33	-8.965	0.000	0.449
175.00	-5.99	-16.92	0.00	-238.15	0.00	238.15	1463.38	347.31	718.70	749.37	149.81	-9.202	0.000	0.324
180.00	-5.70	-16.11	0.00	-153.53	0.00	153.53	1400.09	330.73	651.70	682.38	159.51	-9.381	0.000	0.231
180.00	-5.70	-16.11	0.00	-153.53	0.00	153.53	678.42	203.53	25205.7	396.30	159.51	-9.381	0.000	0.402
185.00	-2.95	-7.50	0.00	-73.00	0.00	73.00	678.42	203.53	25205.7	396.30	169.37	-9.501	0.000	0.190
190.00	-2.67	-7.10	0.00	-35.52	0.00	35.52	678.42	203.53	25205.7	396.30	179.30	-9.554	0.000	0.095
195.00	0.00	-6.56	0.00	0.00	0.00	0.00	678.42	203.53	25205.7	396.30	189.27	-9.571	0.000	0.001

Calculated Forces

Structure:	CT01916-S-SBA		**Code:**	EIA/TIA-222-H	5/11/2021
Site Name:	North Salem		**Exposure:**	B	
Height:	195.00 (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

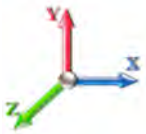
Wind Loading - Shaft

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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 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	0.70	4.207	4.63	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.207	4.63	0.00	1.272 *	0.828	5.00	27.728	35.26	163.2	329.4	2128.6
10.00		1.00	0.70	4.207	4.63	0.00	1.280 *	0.887	5.00	27.273	34.90	161.5	346.8	2112.3
15.00		1.00	0.70	4.207	4.63	0.00	1.288 *	0.924	5.00	26.800	34.53	159.8	354.5	2086.3
20.00		1.00	0.70	4.207	4.63	0.00	1.297 *	0.951	5.00	26.319	34.14	158.0	358.0	2056.0
25.00		1.00	0.70	4.207	4.63	0.00	1.306 *	0.973	5.00	25.833	33.75	156.2	359.0	2023.2
30.00		1.00	0.70	4.210	4.63	0.00	1.316 *	0.991	5.00	25.344	33.35	154.5	358.4	1988.9
35.00		1.00	0.73	4.400	4.84	0.00	1.326 *	1.006	5.00	24.853	32.95	159.5	356.6	1953.3
40.00		1.00	0.76	4.571	5.03	0.00	1.336 *	1.019	5.00	24.360	32.55	163.7	354.0	1916.9
41.00	Bot - Section 2	1.00	0.77	4.603	5.06	0.00	1.343 *	1.022	1.00	4.812	6.46	32.7	70.7	379.2
45.00		1.00	0.79	4.727	5.20	0.00	1.348 *	1.032	4.00	19.349	26.09	135.7	285.0	2746.1
48.00	Top - Section 1	1.00	0.80	4.815	5.30	0.00	1.356 *	1.038	3.00	14.303	19.40	102.8	212.4	2029.9
50.00		1.00	0.81	4.872	5.36	0.00	1.354 *	1.042	2.00	9.436	12.77	68.4	140.9	745.0
55.00		1.00	0.83	5.006	5.51	0.00	1.362 *	1.052	5.00	23.246	31.65	174.3	348.0	1834.5
60.00		1.00	0.85	5.132	5.65	0.00	1.200	1.062	5.00	22.750	27.30	154.1	343.3	1796.0
65.00		1.00	0.87	5.251	5.78	0.00	1.200	1.070	5.00	22.253	26.70	154.2	338.2	1757.1
70.00		1.00	0.89	5.363	5.90	0.00	1.200	1.078	5.00	21.756	26.11	154.0	332.8	1717.9
75.00		1.00	0.91	5.470	6.02	0.00	1.200	1.086	5.00	21.258	25.51	153.5	327.1	1678.5
80.00		1.00	0.93	5.572	6.13	0.00	1.200	1.093	5.00	20.760	24.91	152.7	321.2	1638.8
85.00	Bot - Section 3	1.00	0.94	5.669	6.24	0.00	1.200	1.099	5.00	20.262	24.31	151.6	315.1	1599.0
90.00		1.00	0.96	5.763	6.34	0.00	1.200	1.106	5.00	20.133	24.16	153.1	314.8	2839.8
91.00	Top - Section 2	1.00	0.96	5.781	6.36	0.00	1.200	1.107	1.00	3.966	4.76	30.3	62.7	559.6
93.00	Top - Section 3	1.00	0.97	5.817	6.40	0.00	1.200	1.109	2.00	7.873	9.45	60.5	124.4	622.2
95.00		1.00	0.97	5.852	6.44	0.00	1.200	1.112	2.00	7.793	9.35	60.2	123.3	546.0
100.00		1.00	0.99	5.939	6.53	0.00	1.200	1.117	5.00	19.135	22.96	150.0	301.7	1338.1
105.00		1.00	1.00	6.022	6.62	0.00	1.200	1.123	5.00	18.636	22.36	148.1	294.9	1302.4
110.00		1.00	1.02	6.103	6.71	0.00	1.200	1.128	5.00	18.136	21.76	146.1	288.0	1266.5
115.00		1.00	1.03	6.181	6.80	0.00	1.200	1.133	5.00	17.637	21.16	143.9	280.9	1230.5
120.00		1.00	1.04	6.256	6.88	0.00	1.211 *	1.138	5.00	17.137	20.75	142.8	273.7	1194.4
125.00	Top - Section 4	1.00	1.05	6.330	6.96	0.00	1.223 *	1.142	5.00	16.637	20.34	141.6	266.5	1158.2
130.00	Bot - Section 6	1.00	1.07	6.401	7.04	0.00	1.235 *	1.147	5.00	16.137	19.93	140.3	259.1	979.3
135.00	Top - Section 5	1.00	1.08	6.470	7.12	0.00	1.249 *	1.151	5.00	15.901	19.86	141.3	256.0	1661.0
140.00	Top - Section 6	1.00	1.09	6.538	7.19	0.00	1.256 *	1.155	5.00	15.400	19.34	139.1	248.5	933.1
145.00		1.00	1.10	6.604	7.26	0.00	1.200	1.160	5.00	14.900	17.88	129.9	240.8	770.2
150.00		1.00	1.11	6.668	7.34	0.00	1.200	1.163	5.00	14.399	17.28	126.7	233.0	743.2
155.00		1.00	1.12	6.731	7.40	0.00	1.200	1.167	5.00	13.898	16.68	123.5	225.2	716.1
160.00		1.00	1.13	6.792	7.47	0.00	1.200	1.171	5.00	13.398	16.08	120.1	217.3	688.9
165.00		1.00	1.14	6.852	7.54	0.00	1.200	1.175	5.00	12.897	15.48	116.7	209.3	661.6
170.00		1.00	1.15	6.911	7.60	0.00	1.200	1.178	5.00	12.396	14.87	113.1	201.3	634.3
175.00	Appurtenance(s)	1.00	1.16	6.968	7.67	0.00	1.200	1.182	5.00	11.895	14.27	109.4	193.2	606.8
180.00	Top - Section 7	1.00	1.17	7.025	7.73	0.00	1.200 *	1.185	5.00	11.394	13.67	105.6	185.0	579.4
185.00	Appurtenance(s)	1.00	1.18	7.080	7.79	0.00	1.200 *	1.188	5.00	10.990	13.19	102.7	182.8	610.3
190.00		1.00	1.19	7.134	7.85	0.00	1.200	1.191	5.00	10.993	13.19	103.5	183.3	610.8
195.00	Appurtenance(s)	1.00	1.20	7.187	7.91	0.00	1.200	1.194	5.00	10.995	13.19	104.3	183.8	611.3
								Totals:	**195.00**			**5,563.2**		**57,051.4**

* Cf Adjusted by Linear Load Ra Effect

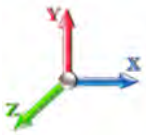
Discrete Appurtenance Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

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

Dead Load Factor 1.20

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	195.00	HRK12 (Handrail Kit)	1	7.187	7.906	1.00	1.00	11.26	788.35	0.000	0.000	89.06	0.00	0.00
2	195.00	Low Profile	1	7.187	7.906	1.00	1.00	40.29	3234.97	0.000	0.000	318.49	0.00	0.00
3	195.00	PRK-1245 (kicker kit)	1	7.187	7.906	1.00	1.00	16.31	684.92	0.000	0.000	128.93	0.00	0.00
4	195.00	(3) SFS-H-L (V-Braces)	1	7.187	7.906	1.00	1.00	11.50	394.77	0.000	0.000	90.93	0.00	0.00
5	195.00	TD-RRH8x20-25	3	7.187	7.906	0.60	0.90	8.31	464.14	0.000	0.000	65.68	0.00	0.00
6	195.00	APXVTM14-C-I20	3	7.187	7.906	0.73	0.90	15.50	510.93	0.000	0.000	122.53	0.00	0.00
7	195.00	NNVV-65B-R4	3	7.187	7.906	0.68	0.90	27.22	667.54	0.000	0.000	215.22	0.00	0.00
8	195.00	1900MHz RRH (65MHz)	3	7.187	7.906	0.60	0.90	6.58	315.61	0.000	0.000	52.03	0.00	0.00
9	195.00	800 MHz RRH	6	7.187	7.906	0.60	0.90	11.84	558.71	0.000	0.000	93.61	0.00	0.00
10	185.00	Sector Frames	1	7.080	7.788	1.00	1.00	34.02	2391.10	0.000	0.000	264.98	0.00	0.00
11	185.00	Powerwave LGP21903	6	7.080	7.788	0.50	0.75	1.63	59.63	0.000	0.000	12.70	0.00	0.00
12	185.00	Powerwave LGP21401	6	7.080	7.788	0.50	0.75	5.60	161.04	0.000	0.000	43.65	0.00	0.00
13	185.00	Ericsson 4449 B5/B12	3	7.080	7.788	0.50	0.75	3.53	323.82	0.000	0.000	27.50	0.00	0.00
14	185.00	Powerwave 7770	3	7.080	7.788	0.58	0.80	10.88	382.29	0.000	0.000	84.74	0.00	0.00
15	185.00	Raycap	1	7.080	7.788	0.75	0.75	4.04	73.64	0.000	0.000	31.44	0.00	0.00
16	185.00	Raycap DC6-48-60-18-8C	1	7.080	7.788	0.75	0.75	1.28	44.82	0.000	0.000	9.98	0.00	0.00
17	185.00	(3) SitePro 1 SFS-L with	1	7.080	7.788	0.75	0.75	12.49	1546.08	0.000	0.000	97.27	0.00	0.00
18	185.00	Cci DMP65R-BU8DA	6	7.080	7.788	0.55	0.75	62.72	2163.78	0.000	0.000	488.49	0.00	0.00
19	185.00	(3) SitePro 1 PRK-SFS-L	1	7.080	7.788	0.75	0.75	8.61	393.62	0.000	0.000	67.03	0.00	0.00
20	185.00	Raycap DC6-48-60-18-8F	1	7.080	7.788	0.75	0.75	0.91	62.55	0.000	0.000	7.12	0.00	0.00
21	185.00	(3) SitePro 1 HRK14-3HD	1	7.080	7.788	0.75	0.75	12.18	1223.06	0.000	0.000	94.84	0.00	0.00
22	185.00	Ericsson RRUS 4478 B14	3	7.080	7.788	0.50	0.75	3.31	276.53	0.000	0.000	25.81	0.00	0.00
23	185.00	Ericsson RRUS 8843 B2	3	7.080	7.788	0.50	0.75	2.98	318.87	0.000	0.000	23.23	0.00	0.00
24	175.00	Ericsson 4449 B71 + B85	3	6.968	7.665	0.50	0.75	3.53	323.22	0.000	0.000	27.05	0.00	0.00
25	175.00	Ericsson RRUS11 B4	3	6.968	7.665	0.54	0.75	5.23	344.18	0.000	0.000	40.10	0.00	0.00
26	175.00	Ericsson RRUS11 B2	6	6.968	7.665	0.54	0.75	10.46	688.36	0.000	0.000	80.21	0.00	0.00
27	175.00	Platform w/ Hand Rail	1	6.968	7.665	1.00	1.00	50.90	2741.64	0.000	0.000	390.20	0.00	0.00
28	175.00	Commscope	3	6.968	7.665	0.64	0.80	26.27	448.11	0.000	0.000	201.36	0.00	0.00
29	175.00	RFS	3	6.968	7.665	0.52	0.75	33.88	1256.34	0.000	0.000	259.70	0.00	0.00
30	175.00	RFS	3	6.968	7.665	0.46	0.75	10.04	404.56	0.000	0.000	76.97	0.00	0.00
							Totals:		**23,247.17**			**3,530.84**		

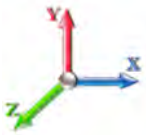
Total Applied Force Summary

Structure:	CT01916-S-SBA		**Code:**	EIA/TIA-222-H	5/11/2021
Site Name:	North Salem		**Exposure:**	B	
Height:	195.00 (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

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

Dead Load Factor 1.20

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		163.15	2284.67	0.00	0.00
10.00		161.52	2270.72	0.00	0.00
15.00		159.77	2246.21	0.00	0.00
20.00		157.98	2217.06	0.00	0.00
25.00		156.16	2185.24	0.00	0.00
30.00		154.46	2151.65	0.00	0.00
35.00		159.49	2116.79	0.00	0.00
40.00		163.68	2080.97	0.00	0.00
41.00		32.72	412.04	0.00	0.00
45.00		135.66	2877.78	0.00	0.00
48.00		102.76	2128.80	0.00	0.00
50.00		68.45	811.01	0.00	0.00
55.00		174.32	2000.01	0.00	0.00
60.00		154.12	1931.79	0.00	0.00
65.00		154.24	1893.05	0.00	0.00
70.00		154.02	1853.99	0.00	0.00
75.00		153.50	1814.66	0.00	0.00
80.00		152.69	1775.08	0.00	0.00
85.00		151.63	1735.28	0.00	0.00
90.00		153.15	2976.20	0.00	0.00
91.00		30.27	586.88	0.00	0.00
93.00		60.45	676.76	0.00	0.00
95.00		60.20	600.59	0.00	0.00
100.00		150.00	1474.66	0.00	0.00
105.00		148.14	1439.02	0.00	0.00
110.00		146.10	1403.23	0.00	0.00
115.00		143.89	1367.30	0.00	0.00
120.00		142.77	1331.26	0.00	0.00
125.00		141.61	1295.09	0.00	0.00
130.00		140.35	1116.29	0.00	0.00
135.00		141.33	1797.99	0.00	0.00
140.00		139.06	1070.22	0.00	0.00
145.00		129.88	904.12	0.00	0.00
150.00		126.74	872.15	0.00	0.00
155.00		123.49	845.02	0.00	0.00
160.00		120.12	817.82	0.00	0.00
165.00		116.65	790.54	0.00	0.00
170.00		113.08	763.20	0.00	0.00
175.00	(22) attachments	1184.99	6942.19	0.00	0.00
180.00		131.68	693.24	0.00	0.00
185.00	(37) attachments	1407.72	10145.04	0.00	0.00
190.00		103.52	633.72	0.00	0.00
195.00	(22) attachments	1280.81	8254.15	0.00	0.00
	Totals:	**9,146.31**	**85,583.48**	**0.00**	**0.00**

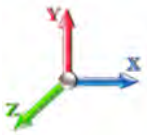
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

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

Dead Load Factor 1.20

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	(4) C6x10.5	Yes	5.00	0.000	4.00	2.36	0.00	0.120	1.060	4.207	0.00	4.19
5.00	(4) C5x9	Yes	5.00	0.000	3.78	2.27	0.00	0.120	1.060	4.207	0.00	22.90
10.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.41	0.00	0.122	1.067	4.207	0.00	4.81
10.00	(4) C5x9	Yes	5.00	0.000	3.78	2.31	0.00	0.122	1.067	4.207	0.00	24.68
15.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.44	0.00	0.125	1.074	4.207	0.00	5.22
15.00	(4) C5x9	Yes	5.00	0.000	3.78	2.35	0.00	0.125	1.074	4.207	0.00	25.80
20.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.46	0.00	0.127	1.081	4.207	0.00	5.53
20.00	(4) C5x9	Yes	5.00	0.000	3.78	2.37	0.00	0.127	1.081	4.207	0.00	26.63
25.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.48	0.00	0.130	1.089	4.207	0.00	5.78
25.00	(4) C5x9	Yes	5.00	0.000	3.78	2.39	0.00	0.130	1.089	4.207	0.00	27.30
30.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.49	0.00	0.132	1.097	4.210	0.00	5.99
30.00	(4) C5x9	Yes	5.00	0.000	3.78	2.40	0.00	0.132	1.097	4.210	0.00	27.86
35.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.50	0.00	0.135	1.105	4.400	0.00	6.18
35.00	(4) C5x9	Yes	5.00	0.000	3.78	2.41	0.00	0.135	1.105	4.400	0.00	28.35
40.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.52	0.00	0.138	1.114	4.571	0.00	6.35
40.00	(4) C5x9	Yes	5.00	0.000	3.78	2.42	0.00	0.138	1.114	4.571	0.00	28.78
41.00	(4) C6x10.5	Yes	1.00	0.000	4.00	0.50	0.00	0.140	1.119	4.603	0.00	1.28
41.00	(4) C5x9	Yes	1.00	0.000	3.78	0.49	0.00	0.140	1.119	4.603	0.00	5.77
45.00	(4) C6x10.5	Yes	4.00	0.000	4.00	2.02	0.00	0.141	1.124	4.727	0.00	5.20
45.00	(4) C5x9	Yes	4.00	0.000	3.78	1.95	0.00	0.141	1.124	4.727	0.00	23.33
48.00	(4) C6x10.5	Yes	3.00	0.000	4.00	1.52	0.00	0.143	1.130	4.815	0.00	3.95
48.00	(4) C5x9	Yes	3.00	0.000	3.78	1.46	0.00	0.143	1.130	4.815	0.00	17.63
50.00	(4) C6x10.5	Yes	2.00	0.000	4.00	1.01	0.00	0.143	1.128	4.872	0.00	2.66
50.00	(4) C5x9	Yes	2.00	0.000	3.78	0.98	0.00	0.143	1.128	4.872	0.00	11.81
55.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.54	0.00	0.145	1.135	5.006	0.00	6.77
55.00	(4) C5x9	Yes	5.00	0.000	3.78	2.45	0.00	0.145	1.135	5.006	0.00	29.84
60.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.55	0.00	0.076	0.000	5.132	0.00	6.88
65.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.56	0.00	0.078	0.000	5.251	0.00	7.00
70.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.57	0.00	0.080	0.000	5.363	0.00	7.10
75.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.57	0.00	0.082	0.000	5.470	0.00	7.20
80.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.58	0.00	0.084	0.000	5.572	0.00	7.29
85.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.58	0.00	0.086	0.000	5.669	0.00	7.38
90.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.59	0.00	0.088	0.000	5.763	0.00	7.47
91.00	(4) C6x10.5	Yes	1.00	0.000	4.00	0.52	0.00	0.090	0.000	5.781	0.00	1.50
93.00	(4) C6x10.5	Yes	2.00	0.000	4.00	1.04	0.00	0.089	0.000	5.817	0.00	3.01
95.00	(4) C6x10.5	Yes	2.00	0.000	4.00	1.04	0.00	0.090	0.000	5.852	0.00	3.02
100.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.60	0.00	0.092	0.000	5.939	0.00	7.63
105.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.60	0.00	0.094	0.000	6.022	0.00	7.70
110.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.61	0.00	0.097	0.000	6.103	0.00	7.77
115.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.61	0.00	0.100	0.000	6.181	0.00	7.84
120.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.61	0.00	0.103	1.009	6.256	0.00	7.91
125.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.62	0.00	0.106	1.019	6.330	0.00	7.97
130.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.62	0.00	0.110	1.029	6.401	0.00	8.04
135.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.63	0.00	0.114	1.041	6.470	0.00	8.10
140.00	(4) C6x10.5	Yes	5.00	0.000	4.00	2.63	0.00	0.115	1.046	6.538	0.00	8.16
145.00	(4) C6x10.5	Yes	3.00	0.000	4.00	1.58	0.00	0.072	0.000	6.604	0.00	4.93
180.00	(3) Bypass Stiffeners	Yes	2.25	1.200	12.60	2.81	3.37	0.227	0.000	7.025	26.03	3.86

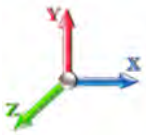
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

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

Dead Load Factor 1.20

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)
185.00	(3) Bypass Stiffeners	Yes	2.25	1.200	12.60	2.81	3.37	0.236	0.000	7.080	26.24	3.88
										Totals:	**52.3**	**506.2**

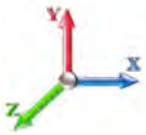
Calculated Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

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

Dead Load Factor 1.20

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	-85.58	-9.18	0.00	-1292.9	0.00	1292.94	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.184
5.00	-83.29	-9.07	0.00	-1247.0	0.00	1247.07	5739.58	1532.15	7992.25	7431.48	0.02	-0.039	0.000	0.182
10.00	-81.01	-8.96	0.00	-1201.7	0.00	1201.73	5674.37	1503.12	7692.32	7206.92	0.08	-0.079	0.000	0.181
15.00	-78.76	-8.86	0.00	-1156.9	0.00	1156.92	5607.48	1474.10	7398.13	6983.48	0.19	-0.120	0.000	0.180
20.00	-76.54	-8.75	0.00	-1112.6	0.00	1112.64	5538.91	1445.08	7109.68	6761.30	0.34	-0.161	0.000	0.178
25.00	-74.35	-8.64	0.00	-1068.9	0.00	1068.90	5468.67	1416.05	6826.96	6540.49	0.53	-0.204	0.000	0.177
30.00	-72.19	-8.53	0.00	-1025.7	0.00	1025.71	5396.74	1387.03	6549.98	6321.18	0.76	-0.247	0.000	0.176
35.00	-70.07	-8.42	0.00	-983.04	0.00	983.04	5323.13	1358.01	6278.73	6103.50	1.05	-0.291	0.000	0.174
40.00	-67.98	-8.27	0.00	-940.96	0.00	940.96	5247.84	1328.98	6013.22	5887.58	1.38	-0.336	0.000	0.173
41.00	-67.57	-8.27	0.00	-932.68	0.00	932.68	5232.58	1323.18	5960.81	5844.61	1.45	-0.346	0.000	0.173
45.00	-64.69	-8.15	0.00	-899.62	0.00	899.62	5170.87	1299.96	5753.45	5673.52	1.75	-0.383	0.000	0.171
48.00	-62.55	-8.06	0.00	-875.17	0.00	875.17	5181.33	1303.87	5788.10	5702.24	2.00	-0.411	0.000	0.166
50.00	-61.74	-8.02	0.00	-859.05	0.00	859.05	5150.16	1292.26	5685.49	5617.06	2.18	-0.431	0.000	0.165
55.00	-59.73	-7.88	0.00	-818.96	0.00	818.96	5071.07	1263.24	5432.97	5405.56	2.66	-0.476	0.000	0.163
60.00	-57.80	-7.75	0.00	-779.57	0.00	779.57	4990.29	1234.21	5186.19	5196.21	3.18	-0.523	0.000	0.162
65.00	-55.90	-7.63	0.00	-740.81	0.00	740.81	4907.83	1205.19	4945.14	4989.15	3.75	-0.570	0.000	0.160
70.00	-54.04	-7.50	0.00	-702.67	0.00	702.67	4823.69	1176.17	4709.83	4784.49	4.38	-0.619	0.000	0.158
75.00	-52.22	-7.37	0.00	-665.17	0.00	665.17	4737.87	1147.14	4480.26	4582.37	5.05	-0.668	0.000	0.156
80.00	-50.44	-7.24	0.00	-628.31	0.00	628.31	4650.37	1118.12	4256.42	4382.90	5.78	-0.718	0.000	0.154
85.00	-48.70	-7.11	0.00	-592.09	0.00	592.09	4561.19	1089.10	4038.32	4186.21	6.56	-0.769	0.000	0.152
90.00	-45.72	-6.94	0.00	-556.53	0.00	556.53	4470.33	1060.07	3825.95	3992.42	7.39	-0.822	0.000	0.150
91.00	-45.14	-6.92	0.00	-549.59	0.00	549.59	4519.12	1075.59	3938.79	4095.67	7.56	-0.832	0.000	0.144
93.00	-44.46	-6.86	0.00	-535.76	0.00	535.76	4482.67	1063.98	3854.22	4018.35	7.92	-0.854	0.000	0.143
93.00	-44.46	-6.86	0.00	-535.76	0.00	535.76	3684.61	913.29	3313.08	3312.42	7.92	-0.854	0.000	0.174
95.00	-43.85	-6.82	0.00	-522.03	0.00	522.03	3656.67	903.34	3241.28	3251.18	8.28	-0.875	0.000	0.173
100.00	-42.37	-6.70	0.00	-487.91	0.00	487.91	3585.64	878.46	3065.22	3099.48	9.23	-0.934	0.000	0.169
105.00	-40.93	-6.57	0.00	-454.43	0.00	454.43	3512.93	853.58	2894.07	2949.87	10.24	-0.994	0.000	0.166
110.00	-39.52	-6.44	0.00	-421.60	0.00	421.60	3438.54	828.71	2727.83	2802.49	11.31	-1.055	0.000	0.162
115.00	-38.15	-6.31	0.00	-389.41	0.00	389.41	3362.47	803.83	2566.52	2657.45	12.45	-1.116	0.000	0.158
120.00	-36.82	-6.18	0.00	-357.87	0.00	357.87	3284.72	778.95	2410.12	2514.88	13.65	-1.178	0.000	0.154
125.00	-35.52	-6.05	0.00	-326.97	0.00	326.97	3192.26	754.08	2258.63	2365.26	14.92	-1.240	0.000	0.149
125.00	-35.52	-6.05	0.00	-326.97	0.00	326.97	2545.46	629.48	1888.72	1892.56	14.92	-1.240	0.000	0.187
130.00	-34.40	-5.93	0.00	-296.73	0.00	296.73	2486.30	608.75	1766.36	1787.17	16.25	-1.303	0.000	0.180
135.00	-32.60	-5.78	0.00	-267.10	0.00	267.10	2457.60	598.90	1709.65	1737.70	17.65	-1.378	0.000	0.167
140.00	-31.52	-5.66	0.00	-238.18	0.00	238.18	2395.97	578.17	1593.34	1634.95	19.14	-1.452	0.000	0.159
140.00	-31.52	-5.66	0.00	-238.18	0.00	238.18	1788.19	463.41	1279.47	1224.81	19.14	-1.452	0.000	0.212
145.00	-30.62	-5.55	0.00	-209.89	0.00	209.89	1746.83	446.82	1189.53	1153.35	20.70	-1.522	0.000	0.200
150.00	-29.74	-5.44	0.00	-182.15	0.00	182.15	1703.79	430.24	1102.87	1082.85	22.34	-1.606	0.000	0.186
155.00	-28.89	-5.33	0.00	-154.96	0.00	154.96	1659.07	413.65	1019.48	1013.46	24.06	-1.687	0.000	0.170
160.00	-28.07	-5.22	0.00	-128.30	0.00	128.30	1612.67	397.07	939.37	945.29	25.87	-1.764	0.000	0.153
165.00	-27.28	-5.11	0.00	-102.19	0.00	102.19	1564.59	380.48	862.54	878.47	27.76	-1.834	0.000	0.134
170.00	-26.52	-5.00	0.00	-76.62	0.00	76.62	1514.83	363.90	788.98	813.12	29.71	-1.896	0.000	0.112
175.00	-19.61	-3.60	0.00	-51.61	0.00	51.61	1463.38	347.31	718.70	749.37	31.73	-1.947	0.000	0.082
180.00	-18.92	-3.46	0.00	-33.62	0.00	33.62	1400.09	330.73	651.70	682.38	33.79	-1.986	0.000	0.063
180.00	-18.92	-3.46	0.00	-33.62	0.00	33.62	678.42	203.53	25205.7	396.30	33.79	-1.986	0.000	0.113
185.00	-8.83	-1.70	0.00	-16.34	0.00	16.34	678.42	203.53	25205.7	396.30	35.88	-2.013	0.000	0.054
190.00	-8.20	-1.57	0.00	-7.86	0.00	7.86	678.42	203.53	25205.7	396.30	38.00	-2.025	0.000	0.032
195.00	0.00	-1.28	0.00	0.00	0.00	0.00	678.42	203.53	25205.7	396.30	40.12	-2.028	0.000	0.000

Calculated Forces

Structure:	CT01916-S-SBA		**Code:**	EIA/TIA-222-H	5/11/2021
Site Name:	North Salem		**Exposure:**	B	
Height:	195.00 (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

Seismic Segment Forces (Factored)

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

Load Case: 1.2D + 1.0Ev + 1.0Eh

Gust Response Factor	1.10			**Sds**	0.22	**Iterations**	22
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.09	**Ss**	0.21
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28	**SA**	0.02	**S1**	0.06
						Seismic Importance Factor	1.00

Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	
5.00		1628.3	2.50	71.56	0.01	
10.00		1600.2	7.50	70.32	0.06	
15.00		1572.0	12.50	69.09	0.16	
20.00		1543.9	17.50	67.85	0.30	
25.00		1515.8	22.50	66.61	0.47	
30.00		1487.6	27.50	65.38	0.68	
35.00		1459.5	32.50	64.14	0.92	
40.00		1431.3	37.50	62.91	1.17	
41.00	Bot - Section 2	282.90	40.50	12.43	0.05	
45.00		2154.1	43.00	94.67	3.50	
48.00	Top - Section 1	1591.9	46.50	69.96	2.23	
50.00		554.94	49.00	24.39	0.30	
55.00		1367.6	52.50	60.10	2.10	
60.00		1339.5	57.50	58.87	2.42	
65.00		1311.3	62.50	57.63	2.74	
70.00		1283.2	67.50	56.39	3.06	
75.00		1255.1	72.50	55.16	3.37	
80.00		1226.9	77.50	53.92	3.68	
85.00	Bot - Section 3	1198.8	82.50	52.68	3.99	
90.00		2233.1	87.50	98.14	15.56	
91.00	Top - Section 2	439.87	90.50	19.33	0.65	
93.00	Top - Section 3	466.42	92.00	20.50	0.75	
95.00		403.80	94.00	17.75	0.59	
100.00		992.63	97.50	43.62	3.82	
105.00		968.51	102.50	42.56	4.02	
110.00		944.39	107.50	41.50	4.20	
115.00		920.27	112.50	40.44	4.37	
120.00		896.16	117.50	39.38	4.52	
125.00	Top - Section 4	872.04	122.50	38.32	4.65	
130.00	Bot - Section 6	729.15	127.50	32.04	3.52	
135.00	Top - Section 5	1299.7	132.50	57.12	12.08	
140.00	Top - Section 6	699.50	137.50	30.74	3.77	
145.00		570.15	142.50	25.06	2.69	
150.00		554.07	147.50	24.35	2.72	
155.00		538.00	152.50	23.64	2.74	
160.00		521.92	157.50	22.94	2.75	
165.00		505.84	162.50	22.23	2.75	
170.00		489.76	167.50	21.52	2.74	
175.00	Appurtenance(s)	3381.9	172.50	148.63	138.69	
180.00	Top - Section 7	438.68	177.50	19.28	2.47	
185.00	Appurtenance(s)	4591.9	182.50	201.80	286.19	
190.00		379.15	187.50	16.66	2.06	
195.00	Appurtenance(s)	4244.5	192.50	186.54	272.05	
	Totals:	**53,887.3**		**2,368.2**	**811.6**	**Total Wind:** **43,626.1**

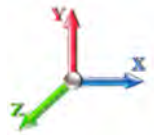
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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: 1.2D + 1.0Ev + 1.0Eh



Gust Response Factor	1.10			**Sds**	0.22	**Iterations**	22		
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.09	**Ss**	0.21		
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28	**SA**	0.02	**S1**	0.06	**Seismic Importance Factor**	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-66.08	-0.81	0.00	-152.71	0.00	152.71	5803.10	1561.17	8297.91	7657.05		0.00	0.00	0.031
5.00	-64.08	-0.82	0.00	-148.64	0.00	148.64	5739.58	1532.15	7992.25	7431.48		0.00	0.00	0.031
10.00	-62.11	-0.82	0.00	-144.55	0.00	144.55	5674.37	1503.12	7692.32	7206.92		0.01	-0.01	0.031
15.00	-60.18	-0.83	0.00	-140.43	0.00	140.43	5607.48	1474.10	7398.13	6983.48		0.02	-0.01	0.031
20.00	-58.29	-0.83	0.00	-136.29	0.00	136.29	5538.91	1445.08	7109.68	6761.30		0.04	-0.02	0.031
25.00	-56.43	-0.84	0.00	-132.13	0.00	132.13	5468.67	1416.05	6826.96	6540.49		0.06	-0.02	0.031
30.00	-54.60	-0.84	0.00	-127.94	0.00	127.94	5396.74	1387.03	6549.98	6321.18		0.09	-0.03	0.030
35.00	-52.81	-0.84	0.00	-123.74	0.00	123.74	5323.13	1358.01	6278.73	6103.50		0.13	-0.04	0.030
40.00	-51.06	-0.84	0.00	-119.52	0.00	119.52	5247.84	1328.98	6013.22	5887.58		0.17	-0.04	0.030
41.00	-50.71	-0.85	0.00	-118.68	0.00	118.68	5232.58	1323.18	5960.81	5844.61		0.18	-0.04	0.030
45.00	-48.05	-0.84	0.00	-115.29	0.00	115.29	5170.87	1299.96	5753.45	5673.52		0.21	-0.05	0.030
48.00	-46.09	-0.84	0.00	-112.76	0.00	112.76	5181.33	1303.87	5788.10	5702.24		0.24	-0.05	0.029
50.00	-45.41	-0.85	0.00	-111.07	0.00	111.07	5150.16	1292.26	5685.49	5617.06		0.27	-0.05	0.029
55.00	-43.73	-0.85	0.00	-106.85	0.00	106.85	5071.07	1263.24	5432.97	5405.56		0.32	-0.06	0.028
60.00	-42.09	-0.85	0.00	-102.62	0.00	102.62	4990.29	1234.21	5186.19	5196.21		0.39	-0.07	0.028
65.00	-40.49	-0.85	0.00	-98.38	0.00	98.38	4907.83	1205.19	4945.14	4989.15		0.46	-0.07	0.028
70.00	-38.92	-0.85	0.00	-94.15	0.00	94.15	4823.69	1176.17	4709.83	4784.49		0.54	-0.08	0.028
75.00	-37.38	-0.84	0.00	-89.92	0.00	89.92	4737.87	1147.14	4480.26	4582.37		0.63	-0.08	0.028
80.00	-35.88	-0.84	0.00	-85.70	0.00	85.70	4650.37	1118.12	4256.42	4382.90		0.72	-0.09	0.027
85.00	-34.41	-0.84	0.00	-81.48	0.00	81.48	4561.19	1089.10	4038.32	4186.21		0.82	-0.10	0.027
90.00	-31.66	-0.82	0.00	-77.28	0.00	77.28	4470.33	1060.07	3825.95	3992.42		0.92	-0.11	0.026
91.00	-31.12	-0.82	0.00	-76.46	0.00	76.46	4519.12	1075.59	3938.79	4095.67		0.95	-0.11	0.026
93.00	-30.55	-0.82	0.00	-74.81	0.00	74.81	4482.67	1063.98	3854.22	4018.35		0.99	-0.11	0.025
93.00	-30.55	-0.82	0.00	-74.81	0.00	74.81	3684.61	913.29	3313.08	3312.42		0.99	-0.11	0.031
95.00	-30.06	-0.82	0.00	-73.17	0.00	73.17	3656.67	903.34	3241.28	3251.18		1.04	-0.11	0.031
100.00	-28.85	-0.82	0.00	-69.05	0.00	69.05	3585.64	878.46	3065.22	3099.48		1.16	-0.12	0.030
105.00	-27.67	-0.82	0.00	-64.94	0.00	64.94	3512.93	853.58	2894.07	2949.87		1.29	-0.13	0.030
110.00	-26.52	-0.82	0.00	-60.85	0.00	60.85	3438.54	828.71	2727.83	2802.49		1.43	-0.14	0.029
115.00	-25.40	-0.81	0.00	-56.76	0.00	56.76	3362.47	803.83	2566.52	2657.45		1.59	-0.15	0.029
120.00	-24.31	-0.81	0.00	-52.70	0.00	52.70	3284.72	778.95	2410.12	2514.88		1.74	-0.16	0.028
125.00	-23.25	-0.81	0.00	-48.65	0.00	48.65	3192.26	754.08	2258.63	2365.26		1.91	-0.17	0.028
125.00	-23.25	-0.81	0.00	-48.65	0.00	48.65	2545.46	629.48	1888.72	1892.56		1.91	-0.17	0.035
130.00	-22.37	-0.80	0.00	-44.62	0.00	44.62	2486.30	608.75	1766.36	1787.17		2.09	-0.18	0.034
135.00	-20.78	-0.79	0.00	-40.60	0.00	40.60	2457.60	598.90	1709.65	1737.70		2.28	-0.19	0.032
140.00	-19.94	-0.79	0.00	-36.65	0.00	36.65	2395.97	578.17	1593.34	1634.95		2.48	-0.20	0.031
140.00	-19.94	-0.79	0.00	-36.65	0.00	36.65	1788.19	463.41	1279.47	1224.81		2.48	-0.20	0.041
145.00	-19.25	-0.79	0.00	-32.71	0.00	32.71	1746.83	446.82	1189.53	1153.35		2.70	-0.21	0.039
150.00	-18.59	-0.79	0.00	-28.77	0.00	28.77	1703.79	430.24	1102.87	1082.85		2.92	-0.22	0.037
155.00	-17.94	-0.78	0.00	-24.84	0.00	24.84	1659.07	413.65	1019.48	1013.46		3.16	-0.23	0.035
160.00	-17.32	-0.78	0.00	-20.92	0.00	20.92	1612.67	397.07	939.37	945.29		3.42	-0.25	0.033
165.00	-16.72	-0.78	0.00	-17.00	0.00	17.00	1564.59	380.48	862.54	878.47		3.68	-0.26	0.030
170.00	-16.13	-0.78	0.00	-13.10	0.00	13.10	1514.83	363.90	788.98	813.12		3.96	-0.27	0.027
175.00	-11.95	-0.62	0.00	-9.20	0.00	9.20	1463.38	347.31	718.70	749.37		4.24	-0.28	0.020
180.00	-11.43	-0.62	0.00	-6.10	0.00	6.10	1400.09	330.73	651.70	682.38		4.54	-0.29	0.017
180.00	-11.43	-0.62	0.00	-6.10	0.00	6.10	678.42	203.53	25205.7	396.30		4.54	-0.29	0.032
185.00	-5.74	-0.30	0.00	-3.01	0.00	3.01	678.42	203.53	25205.7	396.30		4.84	-0.29	0.016
190.00	-5.27	-0.30	0.00	-1.49	0.00	1.49	678.42	203.53	25205.7	396.30		5.15	-0.29	0.012

Calculated Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

195.00	0.00	-0.27	0.00	0.00	0.00	0.00	678.42	203.53	25205.7	396.30	5.45	-0.29	0.000

Seismic Segment Forces (Factored)

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

Load Case: 0.9D + 1.0Ev + 1.0Eh

Gust Response Factor	1.10			**Sds**	0.22	**Iterations**	22
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.09	**Ss**	0.21
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28	**SA**	0.02	**S1**	0.06
						Seismic Importance Factor	1.00

Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	
5.00		1596.1	2.50	70.14	0.01	
10.00		1567.9	7.50	68.91	0.06	
15.00		1539.8	12.50	67.67	0.15	
20.00		1511.7	17.50	66.43	0.29	
25.00		1483.5	22.50	65.20	0.46	
30.00		1455.4	27.50	63.96	0.66	
35.00		1427.3	32.50	62.72	0.89	
40.00		1399.1	37.50	61.49	1.14	
41.00	Bot - Section 2	276.46	40.50	12.15	0.05	
45.00		2128.3	43.00	93.53	3.47	
48.00	Top - Section 1	1572.6	46.50	69.11	2.22	
50.00		542.05	49.00	23.82	0.29	
55.00		1335.4	52.50	58.69	2.04	
60.00		1307.2	57.50	57.45	2.34	
65.00		1279.1	62.50	56.21	2.65	
70.00		1251.0	67.50	54.98	2.96	
75.00		1222.8	72.50	53.74	3.26	
80.00		1194.7	77.50	52.50	3.55	
85.00	Bot - Section 3	1166.6	82.50	51.27	3.84	
90.00		2200.8	87.50	96.72	15.38	
91.00	Top - Section 2	433.43	90.50	19.05	0.64	
93.00	Top - Section 3	453.52	92.00	19.93	0.72	
95.00		390.91	94.00	17.18	0.56	
100.00		960.39	97.50	42.21	3.64	
105.00		936.27	102.50	41.15	3.82	
110.00		912.16	107.50	40.09	3.99	
115.00		888.04	112.50	39.03	4.14	
120.00		863.92	117.50	37.97	4.27	
125.00	Top - Section 4	839.80	122.50	36.91	4.39	
130.00	Bot - Section 6	696.91	127.50	30.63	3.27	
135.00	Top - Section 5	1267.4	132.50	55.70	11.69	
140.00	Top - Section 6	667.26	137.50	29.32	3.49	
145.00		537.92	142.50	23.64	2.44	
150.00		521.84	147.50	22.93	2.46	
155.00		505.76	152.50	22.23	2.47	
160.00		489.68	157.50	21.52	2.47	
165.00		473.60	162.50	20.81	2.46	
170.00		457.53	167.50	20.11	2.44	
175.00	Appurtenance(s)	3349.7	172.50	147.21	138.45	
180.00	Top - Section 7	411.18	177.50	18.07	2.21	
185.00	Appurtenance(s)	4564.4	182.50	200.59	287.73	
190.00		373.42	187.50	16.41	2.03	
195.00	Appurtenance(s)	4238.8	192.50	186.28	276.08	
	Totals:	**52,692.6**		**2,315.7**	**811.6**	**Total Wind:** **43,626.1**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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: 0.9D + 1.0Ev + 1.0Eh

Iterations 22

Gust Response Factor	1.10			**Sds**	0.22			**Ss**	0.21
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.09			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28	**SA**	0.02			**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	-50.10	-0.81	0.00	-150.50	0.00	150.50	5803.10	1561.17	8297.91	7657.05		0.00	0.00	0.028
5.00	-48.58	-0.82	0.00	-146.44	0.00	146.44	5739.58	1532.15	7992.25	7431.48		0.00	0.00	0.028
10.00	-47.09	-0.82	0.00	-142.35	0.00	142.35	5674.37	1503.12	7692.32	7206.92		0.01	-0.01	0.028
15.00	-45.63	-0.82	0.00	-138.25	0.00	138.25	5607.48	1474.10	7398.13	6983.48		0.02	-0.01	0.028
20.00	-44.19	-0.83	0.00	-134.13	0.00	134.13	5538.91	1445.08	7109.68	6761.30		0.04	-0.02	0.028
25.00	-42.78	-0.83	0.00	-130.00	0.00	130.00	5468.67	1416.05	6826.96	6540.49		0.06	-0.02	0.028
30.00	-41.40	-0.83	0.00	-125.85	0.00	125.85	5396.74	1387.03	6549.98	6321.18		0.09	-0.03	0.028
35.00	-40.04	-0.83	0.00	-121.69	0.00	121.69	5323.13	1358.01	6278.73	6103.50		0.12	-0.03	0.027
40.00	-38.71	-0.83	0.00	-117.51	0.00	117.51	5247.84	1328.98	6013.22	5887.58		0.16	-0.04	0.027
41.00	-38.45	-0.84	0.00	-116.68	0.00	116.68	5232.58	1323.18	5960.81	5844.61		0.17	-0.04	0.027
45.00	-36.43	-0.83	0.00	-113.33	0.00	113.33	5170.87	1299.96	5753.45	5673.52		0.21	-0.05	0.027
48.00	-34.94	-0.83	0.00	-110.83	0.00	110.83	5181.33	1303.87	5788.10	5702.24		0.24	-0.05	0.026
50.00	-34.42	-0.83	0.00	-109.17	0.00	109.17	5150.16	1292.26	5685.49	5617.06		0.26	-0.05	0.026
55.00	-33.15	-0.83	0.00	-104.99	0.00	104.99	5071.07	1263.24	5432.97	5405.56		0.32	-0.06	0.026
60.00	-31.91	-0.83	0.00	-100.82	0.00	100.82	4990.29	1234.21	5186.19	5196.21		0.38	-0.06	0.026
65.00	-30.69	-0.83	0.00	-96.65	0.00	96.65	4907.83	1205.19	4945.14	4989.15		0.45	-0.07	0.026
70.00	-29.50	-0.83	0.00	-92.48	0.00	92.48	4823.69	1176.17	4709.83	4784.49		0.53	-0.08	0.025
75.00	-28.34	-0.83	0.00	-88.32	0.00	88.32	4737.87	1147.14	4480.26	4582.37		0.62	-0.08	0.025
80.00	-27.20	-0.83	0.00	-84.17	0.00	84.17	4650.37	1118.12	4256.42	4382.90		0.71	-0.09	0.025
85.00	-26.09	-0.83	0.00	-80.02	0.00	80.02	4561.19	1089.10	4038.32	4186.21		0.80	-0.10	0.025
90.00	-24.00	-0.81	0.00	-75.89	0.00	75.89	4470.33	1060.07	3825.95	3992.42		0.91	-0.10	0.024
91.00	-23.59	-0.81	0.00	-75.08	0.00	75.08	4519.12	1075.59	3938.79	4095.67		0.93	-0.11	0.024
93.00	-23.16	-0.81	0.00	-73.47	0.00	73.47	4482.67	1063.98	3854.22	4018.35		0.98	-0.11	0.023
93.00	-23.16	-0.81	0.00	-73.47	0.00	73.47	3684.61	913.29	3313.08	3312.42		0.98	-0.11	0.028
95.00	-22.79	-0.81	0.00	-71.85	0.00	71.85	3656.67	903.34	3241.28	3251.18		1.02	-0.11	0.028
100.00	-21.87	-0.81	0.00	-67.80	0.00	67.80	3585.64	878.46	3065.22	3099.48		1.14	-0.12	0.028
105.00	-20.98	-0.80	0.00	-63.77	0.00	63.77	3512.93	853.58	2894.07	2949.87		1.27	-0.13	0.028
110.00	-20.11	-0.80	0.00	-59.75	0.00	59.75	3438.54	828.71	2727.83	2802.49		1.41	-0.14	0.027
115.00	-19.26	-0.80	0.00	-55.74	0.00	55.74	3362.47	803.83	2566.52	2657.45		1.56	-0.15	0.027
120.00	-18.43	-0.79	0.00	-51.75	0.00	51.75	3284.72	778.95	2410.12	2514.88		1.72	-0.15	0.026
125.00	-17.63	-0.79	0.00	-47.78	0.00	47.78	3192.26	754.08	2258.63	2365.26		1.88	-0.16	0.026
125.00	-17.63	-0.79	0.00	-47.78	0.00	47.78	2545.46	629.48	1888.72	1892.56		1.88	-0.16	0.032
130.00	-16.96	-0.79	0.00	-43.83	0.00	43.83	2486.30	608.75	1766.36	1787.17		2.06	-0.17	0.031
135.00	-15.76	-0.78	0.00	-39.89	0.00	39.89	2457.60	598.90	1709.65	1737.70		2.24	-0.18	0.029
140.00	-15.12	-0.77	0.00	-36.00	0.00	36.00	2395.97	578.17	1593.34	1634.95		2.44	-0.19	0.028
140.00	-15.12	-0.77	0.00	-36.00	0.00	36.00	1788.19	463.41	1279.47	1224.81		2.44	-0.19	0.038
145.00	-14.60	-0.77	0.00	-32.14	0.00	32.14	1746.83	446.82	1189.53	1153.35		2.65	-0.21	0.036
150.00	-14.10	-0.77	0.00	-28.28	0.00	28.28	1703.79	430.24	1102.87	1082.85		2.87	-0.22	0.034
155.00	-13.61	-0.77	0.00	-24.42	0.00	24.42	1659.07	413.65	1019.48	1013.46		3.11	-0.23	0.032
160.00	-13.14	-0.77	0.00	-20.57	0.00	20.57	1612.67	397.07	939.37	945.29		3.36	-0.24	0.030
165.00	-12.68	-0.77	0.00	-16.73	0.00	16.73	1564.59	380.48	862.54	878.47		3.62	-0.25	0.027
170.00	-12.24	-0.76	0.00	-12.90	0.00	12.90	1514.83	363.90	788.98	813.12		3.89	-0.26	0.024
175.00	-9.07	-0.61	0.00	-9.08	0.00	9.08	1463.38	347.31	718.70	749.37		4.17	-0.27	0.018
180.00	-8.67	-0.61	0.00	-6.02	0.00	6.02	1400.09	330.73	651.70	682.38		4.46	-0.28	0.015
180.00	-8.67	-0.61	0.00	-6.02	0.00	6.02	678.42	203.53	25205.7	396.30		4.46	-0.28	0.028
185.00	-4.36	-0.30	0.00	-2.98	0.00	2.98	678.42	203.53	25205.7	396.30		4.76	-0.29	0.014
190.00	-4.00	-0.30	0.00	-1.48	0.00	1.48	678.42	203.53	25205.7	396.30		5.06	-0.29	0.010

Calculated Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

195.00	0.00	-0.28	0.00	0.00	0.00	0.00	678.42	203.53	25205.7	396.30	5.36	-0.29	0.000

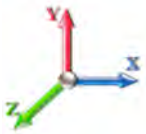
Wind Loading - Shaft

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 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	0.70	5.420	5.96	272.39	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	5.420	5.96	267.36	0.774 *	0.000	5.00	27.038	20.92	124.7	0.0	1499.4
10.00		1.00	0.70	5.420	5.96	262.33	0.779 *	0.000	5.00	26.534	20.66	123.2	0.0	1471.3
15.00		1.00	0.70	5.420	5.96	257.30	0.784 *	0.000	5.00	26.030	20.40	121.6	0.0	1443.1
20.00		1.00	0.70	5.420	5.96	252.27	0.789 *	0.000	5.00	25.526	20.14	120.1	0.0	1415.0
25.00		1.00	0.70	5.420	5.96	247.24	0.795 *	0.000	5.00	25.022	19.89	118.6	0.0	1386.9
30.00		1.00	0.70	5.425	5.97	242.32	0.801 *	0.000	5.00	24.518	19.63	117.1	0.0	1358.7
35.00		1.00	0.73	5.669	6.24	242.57	0.807 *	0.000	5.00	24.014	19.37	120.8	0.0	1330.6
40.00		1.00	0.76	5.889	6.48	242.00	0.813 *	0.000	5.00	23.510	19.11	123.8	0.0	1302.5
41.00	Bot - Section 2	1.00	0.77	5.931	6.52	241.80	0.817 *	0.000	1.00	4.642	3.79	24.7	0.0	257.1
45.00		1.00	0.79	6.091	6.70	240.77	0.820 *	0.000	4.00	18.661	15.31	102.6	0.0	2050.9
48.00	Top - Section 1	1.00	0.80	6.204	6.82	239.77	0.825 *	0.000	3.00	13.784	11.37	77.6	0.0	1514.6
50.00		1.00	0.81	6.277	6.90	242.99	0.823 *	0.000	2.00	9.089	7.48	51.7	0.0	503.4
55.00		1.00	0.83	6.450	7.10	240.83	0.828 *	0.000	5.00	22.369	18.53	131.5	0.0	1238.7
60.00		1.00	0.85	6.613	7.27	238.29	0.730	0.000	5.00	21.865	15.96	116.1	0.0	1210.6
65.00		1.00	0.87	6.766	7.44	235.41	0.730	0.000	5.00	21.361	15.59	116.0	0.0	1182.4
70.00		1.00	0.89	6.910	7.60	232.23	0.730	0.000	5.00	20.857	15.23	115.7	0.0	1154.3
75.00		1.00	0.91	7.048	7.75	228.80	0.730	0.000	5.00	20.353	14.86	115.2	0.0	1126.2
80.00		1.00	0.93	7.179	7.90	225.13	0.730	0.000	5.00	19.849	14.49	114.4	0.0	1098.0
85.00	Bot - Section 3	1.00	0.94	7.304	8.03	221.25	0.730	0.000	5.00	19.346	14.12	113.5	0.0	1069.9
90.00		1.00	0.96	7.425	8.17	217.18	0.730	0.000	5.00	19.212	14.02	114.5	0.0	2104.2
91.00	Top - Section 2	1.00	0.96	7.448	8.19	216.34	0.730	0.000	1.00	3.782	2.76	22.6	0.0	414.1
93.00	Top - Section 3	1.00	0.97	7.495	8.24	218.99	0.730	0.000	2.00	7.503	5.48	45.2	0.0	414.8
95.00		1.00	0.97	7.540	8.29	217.29	0.730	0.000	2.00	7.423	5.42	44.9	0.0	352.2
100.00		1.00	0.99	7.652	8.42	212.91	0.730	0.000	5.00	18.204	13.29	111.9	0.0	863.7
105.00		1.00	1.00	7.759	8.53	208.38	0.730	0.000	5.00	17.700	12.92	110.3	0.0	839.6
110.00		1.00	1.02	7.863	8.65	203.71	0.730	0.000	5.00	17.196	12.55	108.6	0.0	815.5
115.00		1.00	1.03	7.963	8.76	198.91	0.730	0.000	5.00	16.692	12.19	106.7	0.0	791.3
120.00		1.00	1.04	8.061	8.87	193.99	0.736 *	0.000	5.00	16.189	11.92	105.7	0.0	767.2
125.00	Top - Section 4	1.00	1.05	8.155	8.97	188.96	0.744 *	0.000	5.00	15.685	11.66	104.6	0.0	743.1
130.00	Bot - Section 6	1.00	1.07	8.247	9.07	183.81	0.751 *	0.000	5.00	15.181	11.41	103.5	0.0	600.2
135.00	Top - Section 5	1.00	1.08	8.337	9.17	178.57	0.760 *	0.000	5.00	14.941	11.35	104.1	0.0	1170.8
140.00	Top - Section 6	1.00	1.09	8.424	9.27	176.52	0.764 *	0.000	5.00	14.437	11.03	102.2	0.0	570.6
145.00		1.00	1.10	8.509	9.36	171.11	0.730	0.000	5.00	13.933	10.17	95.2	0.0	441.2
150.00		1.00	1.11	8.591	9.45	165.60	0.730	0.000	5.00	13.430	9.80	92.6	0.0	425.1
155.00		1.00	1.12	8.672	9.54	160.02	0.730	0.000	5.00	12.926	9.44	90.0	0.0	409.1
160.00		1.00	1.13	8.751	9.63	154.36	0.730	0.000	5.00	12.422	9.07	87.3	0.0	393.0
165.00		1.00	1.14	8.829	9.71	148.62	0.730	0.000	5.00	11.918	8.70	84.5	0.0	376.9
170.00		1.00	1.15	8.904	9.79	142.80	0.730	0.000	5.00	11.414	8.33	81.6	0.0	360.8
175.00	Appurtenance(s)	1.00	1.16	8.978	9.88	136.92	0.730	0.000	5.00	10.910	7.96	78.7	0.0	344.7
180.00	Top - Section 7	1.00	1.17	9.051	9.96	130.98	1.200 *	0.000	5.00	10.406	12.49	124.3	0.0	328.7
185.00	Appurtenance(s)	1.00	1.18	9.122	10.03	129.49	1.200 *	0.000	5.00	10.000	12.00	120.4	0.0	356.3
190.00		1.00	1.19	9.192	10.11	129.99	0.600	0.000	5.00	10.000	6.00	60.7	0.0	356.3
195.00	Appurtenance(s)	1.00	1.20	9.260	10.19	130.47	0.600	0.000	5.00	10.000	6.00	61.1	0.0	356.3
								Totals:	**195.00**			**4,210.1**		**38,209.1**

* Cf Adjusted by Linear Load Ra Effect

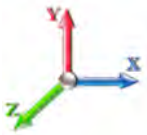
Discrete Appurtenance Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (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	

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	195.00	HRK12 (Handrail Kit)	1	9.260	10.186	1.00	1.00	6.75	261.72	0.000	0.000	68.76	0.00	0.00
2	195.00	Low Profile	1	9.260	10.186	1.00	1.00	26.00	1800.00	0.000	0.000	264.84	0.00	0.00
3	195.00	PRK-1245 (kicker kit)	1	9.260	10.186	1.00	1.00	9.50	464.91	0.000	0.000	96.77	0.00	0.00
4	195.00	(3) SFS-H-L (V-Braces)	1	9.260	10.186	1.00	1.00	6.70	230.00	0.000	0.000	68.25	0.00	0.00
5	195.00	TD-RRH8x20-25	3	9.260	10.186	0.60	0.90	7.33	210.00	0.000	0.000	74.63	0.00	0.00
6	195.00	APXVTM14-C-I20	3	9.260	10.186	0.70	0.90	13.35	168.60	0.000	0.000	136.01	0.00	0.00
7	195.00	NNVV-65B-R4	3	9.260	10.186	0.66	0.90	24.18	232.20	0.000	0.000	246.35	0.00	0.00
8	195.00	1900MHz RRH (65MHz)	3	9.260	10.186	0.60	0.90	5.01	180.00	0.000	0.000	51.04	0.00	0.00
9	195.00	800 MHz RRH	6	9.260	10.186	0.60	0.90	9.01	318.00	0.000	0.000	91.77	0.00	0.00
10	185.00	Sector Frames	1	9.122	10.034	1.00	1.00	22.00	1500.00	0.000	0.000	220.75	0.00	0.00
11	185.00	Powerwave LGP21903	6	9.122	10.034	0.50	0.75	0.81	33.00	0.000	0.000	8.17	0.00	0.00
12	185.00	Powerwave LGP21401	6	9.122	10.034	0.50	0.75	3.89	84.60	0.000	0.000	39.03	0.00	0.00
13	185.00	Ericsson 4449 B5/B12	3	9.122	10.034	0.50	0.75	2.97	213.00	0.000	0.000	29.80	0.00	0.00
14	185.00	Powerwave 7770	3	9.122	10.034	0.58	0.80	9.64	105.00	0.000	0.000	96.69	0.00	0.00
15	185.00	Raycap	1	9.122	10.034	0.75	0.75	3.58	16.00	0.000	0.000	35.97	0.00	0.00
16	185.00	Raycap DC6-48-60-18-8C	1	9.122	10.034	0.75	0.75	0.95	20.00	0.000	0.000	9.48	0.00	0.00
17	185.00	(3) SitePro 1 SFS-L with	1	9.122	10.034	0.75	0.75	7.50	514.00	0.000	0.000	75.26	0.00	0.00
18	185.00	Cci DMP65R-BU8DA	6	9.122	10.034	0.55	0.75	58.70	576.00	0.000	0.000	589.04	0.00	0.00
19	185.00	(3) SitePro 1 PRK-SFS-L	1	9.122	10.034	0.75	0.75	5.03	230.00	0.000	0.000	50.42	0.00	0.00
20	185.00	Raycap DC6-48-60-18-8F	1	9.122	10.034	0.75	0.75	0.69	31.80	0.000	0.000	6.92	0.00	0.00
21	185.00	(3) SitePro 1 HRK14-3HD	1	9.122	10.034	0.75	0.75	7.31	406.61	0.000	0.000	73.37	0.00	0.00
22	185.00	Ericsson RRUS 4478 B14	3	9.122	10.034	0.50	0.75	2.77	179.70	0.000	0.000	27.83	0.00	0.00
23	185.00	Ericsson RRUS 8843 B2	3	9.122	10.034	0.50	0.75	2.47	216.00	0.000	0.000	24.81	0.00	0.00
24	175.00	Ericsson 4449 B71 + B85	3	8.978	9.876	0.50	0.75	2.97	213.00	0.000	0.000	29.33	0.00	0.00
25	175.00	Ericsson RRUS11 B4	3	8.978	9.876	0.53	0.75	4.03	151.80	0.000	0.000	39.76	0.00	0.00
26	175.00	Ericsson RRUS11 B2	6	8.978	9.876	0.53	0.75	8.05	303.60	0.000	0.000	79.52	0.00	0.00
27	175.00	Platform w/ Hand Rail	1	8.978	9.876	1.00	1.00	32.00	1600.00	0.000	0.000	316.04	0.00	0.00
28	175.00	Commscope	3	8.978	9.876	0.64	0.80	22.02	149.40	0.000	0.000	217.50	0.00	0.00
29	175.00	RFS	3	8.978	9.876	0.52	0.75	31.88	368.40	0.000	0.000	314.83	0.00	0.00
30	175.00	RFS	3	8.978	9.876	0.46	0.75	9.01	122.10	0.000	0.000	89.00	0.00	0.00
							Totals:		**10,899.44**			**3,471.92**		

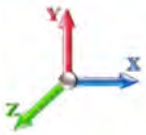
Total Applied Force Summary

Structure:	CT01916-S-SBA		**Code:**	EIA/TIA-222-H	5/11/2021
Site Name:	North Salem		**Exposure:**	B	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 37

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		124.70	1606.86	0.00	0.00
10.00		123.16	1578.73	0.00	0.00
15.00		121.63	1550.59	0.00	0.00
20.00		120.09	1522.45	0.00	0.00
25.00		118.56	1494.31	0.00	0.00
30.00		117.12	1466.18	0.00	0.00
35.00		120.79	1438.04	0.00	0.00
40.00		123.82	1409.90	0.00	0.00
41.00		24.74	278.60	0.00	0.00
45.00		102.55	2136.90	0.00	0.00
48.00		77.62	1579.04	0.00	0.00
50.00		51.67	546.34	0.00	0.00
55.00		131.47	1346.17	0.00	0.00
60.00		116.10	1318.03	0.00	0.00
65.00		116.05	1289.89	0.00	0.00
70.00		115.74	1261.76	0.00	0.00
75.00		115.19	1233.62	0.00	0.00
80.00		114.43	1205.48	0.00	0.00
85.00		113.47	1177.35	0.00	0.00
90.00		114.54	2211.64	0.00	0.00
91.00		22.62	435.57	0.00	0.00
93.00		45.16	457.82	0.00	0.00
95.00		44.94	395.21	0.00	0.00
100.00		111.85	971.14	0.00	0.00
105.00		110.28	947.02	0.00	0.00
110.00		108.58	922.90	0.00	0.00
115.00		106.74	898.78	0.00	0.00
120.00		105.71	874.67	0.00	0.00
125.00		104.64	850.55	0.00	0.00
130.00		103.49	707.66	0.00	0.00
135.00		104.09	1278.21	0.00	0.00
140.00		102.18	678.01	0.00	0.00
145.00		95.20	548.66	0.00	0.00
150.00		92.65	532.58	0.00	0.00
155.00		90.01	516.51	0.00	0.00
160.00		87.29	500.43	0.00	0.00
165.00		84.49	484.35	0.00	0.00
170.00		81.61	468.27	0.00	0.00
175.00	(22) attachments	1164.62	3360.49	0.00	0.00
180.00		138.44	420.34	0.00	0.00
185.00	(37) attachments	1422.18	4573.64	0.00	0.00
190.00		60.67	375.33	0.00	0.00
195.00	(22) attachments	1159.52	4240.76	0.00	0.00
	Totals:	**7,710.39**	**53,090.80**	**0.00**	**0.00**

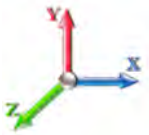
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 38	

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	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.120	1.060	5.420	0.00	0.00
5.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.120	1.060	5.420	0.00	0.00
10.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.122	1.067	5.420	0.00	0.00
10.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.122	1.067	5.420	0.00	0.00
15.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.125	1.074	5.420	0.00	0.00
15.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.125	1.074	5.420	0.00	0.00
20.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.127	1.081	5.420	0.00	0.00
20.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.127	1.081	5.420	0.00	0.00
25.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.130	1.089	5.420	0.00	0.00
25.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.130	1.089	5.420	0.00	0.00
30.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.132	1.097	5.425	0.00	0.00
30.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.132	1.097	5.425	0.00	0.00
35.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.135	1.105	5.669	0.00	0.00
35.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.135	1.105	5.669	0.00	0.00
40.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.138	1.114	5.889	0.00	0.00
40.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.138	1.114	5.889	0.00	0.00
41.00	(4) C6x10.5	Yes	1.00	0.000	4.00	0.33	0.00	0.140	1.119	5.931	0.00	0.00
41.00	(4) C5x9	Yes	1.00	0.000	3.78	0.32	0.00	0.140	1.119	5.931	0.00	0.00
45.00	(4) C6x10.5	Yes	4.00	0.000	4.00	1.33	0.00	0.141	1.124	6.091	0.00	0.00
45.00	(4) C5x9	Yes	4.00	0.000	3.78	1.26	0.00	0.141	1.124	6.091	0.00	0.00
48.00	(4) C6x10.5	Yes	3.00	0.000	4.00	1.00	0.00	0.143	1.130	6.204	0.00	0.00
48.00	(4) C5x9	Yes	3.00	0.000	3.78	0.94	0.00	0.143	1.130	6.204	0.00	0.00
50.00	(4) C6x10.5	Yes	2.00	0.000	4.00	0.67	0.00	0.143	1.128	6.277	0.00	0.00
50.00	(4) C5x9	Yes	2.00	0.000	3.78	0.63	0.00	0.143	1.128	6.277	0.00	0.00
55.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.145	1.135	6.450	0.00	0.00
55.00	(4) C5x9	Yes	5.00	0.000	3.78	1.57	0.00	0.145	1.135	6.450	0.00	0.00
60.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.076	0.000	6.613	0.00	0.00
65.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.078	0.000	6.766	0.00	0.00
70.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.080	0.000	6.910	0.00	0.00
75.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.082	0.000	7.048	0.00	0.00
80.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.084	0.000	7.179	0.00	0.00
85.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.086	0.000	7.304	0.00	0.00
90.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.088	0.000	7.425	0.00	0.00
91.00	(4) C6x10.5	Yes	1.00	0.000	4.00	0.33	0.00	0.090	0.000	7.448	0.00	0.00
93.00	(4) C6x10.5	Yes	2.00	0.000	4.00	0.67	0.00	0.089	0.000	7.495	0.00	0.00
95.00	(4) C6x10.5	Yes	2.00	0.000	4.00	0.67	0.00	0.090	0.000	7.540	0.00	0.00
100.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.092	0.000	7.652	0.00	0.00
105.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.094	0.000	7.759	0.00	0.00
110.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.097	0.000	7.863	0.00	0.00
115.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.100	0.000	7.963	0.00	0.00
120.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.103	1.009	8.061	0.00	0.00
125.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.106	1.019	8.155	0.00	0.00
130.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.110	1.029	8.247	0.00	0.00
135.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.114	1.041	8.337	0.00	0.00
140.00	(4) C6x10.5	Yes	5.00	0.000	4.00	1.67	0.00	0.115	1.046	8.424	0.00	0.00
145.00	(4) C6x10.5	Yes	3.00	0.000	4.00	1.00	0.00	0.072	0.000	8.509	0.00	0.00
180.00	(3) Bypass Stiffeners	Yes	2.25	0.600	12.60	2.36	1.42	0.227	0.000	9.051	14.11	0.00

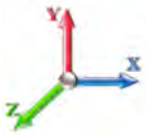
Linear Appurtenance Segment Forces (Factored)

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 39	

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)
185.00	(3) Bypass Stiffeners	Yes	2.25	0.600	12.60	2.36	1.42	0.236	0.000	9.122	14.22	0.00
										Totals:	**28.3**	**0.0**

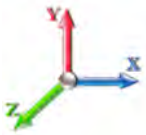
Calculated Forces

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 40	

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	-53.09	-7.73	0.00	-1091.0	0.00	1091.09	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.152
5.00	-51.48	-7.63	0.00	-1052.4	0.00	1052.47	5739.58	1532.15	7992.25	7431.48	0.02	-0.033	0.000	0.151
10.00	-49.89	-7.54	0.00	-1014.3	0.00	1014.31	5674.37	1503.12	7692.32	7206.92	0.07	-0.067	0.000	0.150
15.00	-48.34	-7.44	0.00	-976.64	0.00	976.64	5607.48	1474.10	7398.13	6983.48	0.16	-0.101	0.000	0.148
20.00	-46.81	-7.35	0.00	-939.43	0.00	939.43	5538.91	1445.08	7109.68	6761.30	0.28	-0.136	0.000	0.147
25.00	-45.31	-7.25	0.00	-902.70	0.00	902.70	5468.67	1416.05	6826.96	6540.49	0.45	-0.172	0.000	0.146
30.00	-43.84	-7.16	0.00	-866.44	0.00	866.44	5396.74	1387.03	6549.98	6321.18	0.65	-0.209	0.000	0.145
35.00	-42.40	-7.06	0.00	-830.64	0.00	830.64	5323.13	1358.01	6278.73	6103.50	0.88	-0.246	0.000	0.144
40.00	-40.99	-6.95	0.00	-795.34	0.00	795.34	5247.84	1328.98	6013.22	5887.58	1.16	-0.284	0.000	0.143
41.00	-40.71	-6.93	0.00	-788.40	0.00	788.40	5232.58	1323.18	5960.81	5844.61	1.22	-0.292	0.000	0.143
45.00	-38.57	-6.84	0.00	-760.66	0.00	760.66	5170.87	1299.96	5753.45	5673.52	1.48	-0.323	0.000	0.142
48.00	-36.99	-6.77	0.00	-740.14	0.00	740.14	5181.33	1303.87	5788.10	5702.24	1.69	-0.347	0.000	0.137
50.00	-36.44	-6.73	0.00	-726.61	0.00	726.61	5150.16	1292.26	5685.49	5617.06	1.84	-0.364	0.000	0.136
55.00	-35.09	-6.61	0.00	-692.98	0.00	692.98	5071.07	1263.24	5432.97	5405.56	2.24	-0.402	0.000	0.135
60.00	-33.77	-6.51	0.00	-659.92	0.00	659.92	4990.29	1234.21	5186.19	5196.21	2.68	-0.442	0.000	0.134
65.00	-32.47	-6.41	0.00	-627.38	0.00	627.38	4907.83	1205.19	4945.14	4989.15	3.17	-0.482	0.000	0.132
70.00	-31.21	-6.30	0.00	-595.36	0.00	595.36	4823.69	1176.17	4709.83	4784.49	3.70	-0.523	0.000	0.131
75.00	-29.97	-6.20	0.00	-563.85	0.00	563.85	4737.87	1147.14	4480.26	4582.37	4.27	-0.565	0.000	0.129
80.00	-28.76	-6.09	0.00	-532.87	0.00	532.87	4650.37	1118.12	4256.42	4382.90	4.88	-0.607	0.000	0.128
85.00	-27.58	-5.99	0.00	-502.42	0.00	502.42	4561.19	1089.10	4038.32	4186.21	5.54	-0.651	0.000	0.126
90.00	-25.37	-5.86	0.00	-472.49	0.00	472.49	4470.33	1060.07	3825.95	3992.42	6.24	-0.695	0.000	0.124
91.00	-24.93	-5.83	0.00	-466.64	0.00	466.64	4519.12	1075.59	3938.79	4095.67	6.39	-0.704	0.000	0.119
93.00	-24.47	-5.79	0.00	-454.97	0.00	454.97	4482.67	1063.98	3854.22	4018.35	6.69	-0.723	0.000	0.119
93.00	-24.47	-5.79	0.00	-454.97	0.00	454.97	3684.61	913.29	3313.08	3312.42	6.69	-0.723	0.000	0.144
95.00	-24.08	-5.76	0.00	-443.38	0.00	443.38	3656.67	903.34	3241.28	3251.18	7.00	-0.740	0.000	0.143
100.00	-23.10	-5.65	0.00	-414.60	0.00	414.60	3585.64	878.46	3065.22	3099.48	7.80	-0.790	0.000	0.140
105.00	-22.15	-5.55	0.00	-386.34	0.00	386.34	3512.93	853.58	2894.07	2949.87	8.65	-0.841	0.000	0.137
110.00	-21.22	-5.44	0.00	-358.61	0.00	358.61	3438.54	828.71	2727.83	2802.49	9.56	-0.893	0.000	0.134
115.00	-20.32	-5.34	0.00	-331.38	0.00	331.38	3362.47	803.83	2566.52	2657.45	10.53	-0.945	0.000	0.131
120.00	-19.45	-5.24	0.00	-304.67	0.00	304.67	3284.72	778.95	2410.12	2514.88	11.54	-0.998	0.000	0.127
125.00	-18.59	-5.14	0.00	-278.48	0.00	278.48	3192.26	754.08	2258.63	2365.26	12.62	-1.051	0.000	0.124
125.00	-18.59	-5.14	0.00	-278.48	0.00	278.48	2545.46	629.48	1888.72	1892.56	12.62	-1.051	0.000	0.155
130.00	-17.88	-5.04	0.00	-252.79	0.00	252.79	2486.30	608.75	1766.36	1787.17	13.75	-1.105	0.000	0.149
135.00	-16.60	-4.93	0.00	-227.60	0.00	227.60	2457.60	598.90	1709.65	1737.70	14.94	-1.168	0.000	0.138
140.00	-15.92	-4.83	0.00	-202.96	0.00	202.96	2395.97	578.17	1593.34	1634.95	16.20	-1.232	0.000	0.131
140.00	-15.92	-4.83	0.00	-202.96	0.00	202.96	1788.19	463.41	1279.47	1224.81	16.20	-1.232	0.000	0.175
145.00	-15.37	-4.74	0.00	-178.82	0.00	178.82	1746.83	446.82	1189.53	1153.35	17.52	-1.291	0.000	0.164
150.00	-14.83	-4.65	0.00	-155.13	0.00	155.13	1703.79	430.24	1102.87	1082.85	18.91	-1.363	0.000	0.152
155.00	-14.31	-4.57	0.00	-131.87	0.00	131.87	1659.07	413.65	1019.48	1013.46	20.37	-1.432	0.000	0.139
160.00	-13.81	-4.48	0.00	-109.04	0.00	109.04	1612.67	397.07	939.37	945.29	21.91	-1.497	0.000	0.124
165.00	-13.32	-4.40	0.00	-86.63	0.00	86.63	1564.59	380.48	862.54	878.47	23.51	-1.557	0.000	0.107
170.00	-12.85	-4.31	0.00	-64.65	0.00	64.65	1514.83	363.90	788.98	813.12	25.17	-1.609	0.000	0.088
175.00	-9.52	-3.06	0.00	-43.08	0.00	43.08	1463.38	347.31	718.70	749.37	26.88	-1.652	0.000	0.064
180.00	-9.11	-2.91	0.00	-27.78	0.00	27.78	1400.09	330.73	651.70	682.38	28.63	-1.685	0.000	0.047
180.00	-9.11	-2.91	0.00	-27.78	0.00	27.78	678.42	203.53	25205.7	396.30	28.63	-1.685	0.000	0.084
185.00	-4.58	-1.36	0.00	-13.22	0.00	13.22	678.42	203.53	25205.7	396.30	30.41	-1.706	0.000	0.040
190.00	-4.20	-1.29	0.00	-6.43	0.00	6.43	678.42	203.53	25205.7	396.30	32.20	-1.716	0.000	0.022
195.00	0.00	-1.16	0.00	0.00	0.00	0.00	678.42	203.53	25205.7	396.30	34.00	-1.719	0.000	0.000

Calculated Forces

Structure:	CT01916-S-SBA		**Code:**	EIA/TIA-222-H	5/11/2021
Site Name:	North Salem		**Exposure:**	B	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 41

Final Analysis Summary

Structure:	CT01916-S-SBA	**Code:**	EIA/TIA-222-H	5/11/2021	
Site Name:	North Salem	**Exposure:**	B		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 42	

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 + 1.0W 135 mph Wind	43.7	0.00	63.64	0.00	0.00	6214.80
0.9D + 1.0W 135 mph Wind	43.7	0.00	47.71	0.00	0.00	6121.50
1.2D + 1.0Di + 1.0Wi 50 mph Wind	9.2	0.00	85.58	0.00	0.00	1292.94
1.2D + 1.0Ev + 1.0Eh	0.8	0.00	66.08	0.00	0.00	152.71
0.9D + 1.0Ev + 1.0Eh	0.8	0.00	50.10	0.00	0.00	150.50
1.0D + 1.0W 60 mph Wind	7.7	0.00	53.09	0.00	0.00	1091.09

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 + 1.0W 135 mph Wind	-15.90	-27.54	0.00	-1156.4	0.00	-1156.4	2395.97	578.17	1593.34	1634.95	140.00	0.957
0.9D + 1.0W 135 mph Wind	-11.20	-26.91	0.00	-1126.3	0.00	-1126.3	2395.97	578.17	1593.34	1634.95	140.00	0.929
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-31.52	-5.66	0.00	-238.18	0.00	-238.18	2395.97	578.17	1593.34	1634.95	140.00	0.212
1.2D + 1.0Ev + 1.0Eh	-19.94	-0.79	0.00	-36.65	0.00	-36.65	2395.97	578.17	1593.34	1634.95	140.00	0.041
0.9D + 1.0Ev + 1.0Eh	-15.12	-0.77	0.00	-36.00	0.00	-36.00	2395.97	578.17	1593.34	1634.95	140.00	0.038
1.0D + 1.0W 60 mph Wind	-15.92	-4.83	0.00	-202.96	0.00	-202.96	2395.97	578.17	1593.34	1634.95	140.00	0.175

Monopole Mat Foundation Design

			Date
			5/11/2021
Customer Name:	T-Mobile	**EIA/TIA Standard:**	EIA-222-H
Site Name:		**Structure Height (Ft.):**	195
Site Number:	CT01916-S-SBA	**Engineer Name:**	H. You
Engr. Number:	106819	**Engineer Login ID:**	

Foundation Info Obtained from: Mapping Operation

Structure Type: Monopole

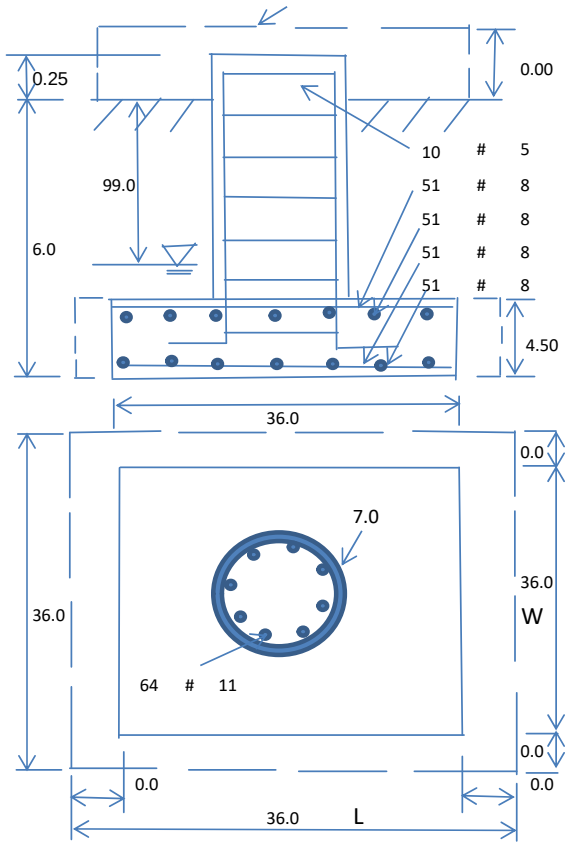
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	63.6	Shear Force (Kips):	43.7
Uplift Force (Kips):	0.0	Moment (Kips-ft):	6214.8
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	6.0
Pier Height A. G. (ft.):	0.25	Thickness of Pad (ft):	4.50
Length of Pad (ft.):	36	Width of Pad (ft.):	36
Final Length of pad (ft)	36.0	Final width of pad (ft):	36.0



Material Properties and Reabr Info:

Concrete Strength (psi):	3500	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	11	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	64	Tie Spacing (in):	8.0	
Pad Rebar Yield (Ksi):	60	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):	51	Qty. of Rebar in Pad (W):	51	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	51	Qty. of Rebar in Pad (W):	51	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	100.0	Soil Buoyant Weight:	50.0	Pcf		
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.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

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

Total Dry Soil Volume (cu. Ft.):	1886.27	Total Dry Soil Weight (Kips):	188.63
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	188.63	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	5899.35	Total Dry Concrete Weight (Kips):	884.90
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	884.90	Total Vertical Load on Base (Kips):	1137.13

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	1366	<	Allowable Factored Soil Bearing (psf):	22500	0.06	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	18536.0	>	Design Factored Momont (kips-ft):	6488	0.35	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	2.86	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90		Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	0.65		Wind Load Factor on Concrete Design:	1.00		
					Load/ Capacity Ratio	
(1) Concrete Pier:						
Vertical Steel Rebar Area (sq. in./each):	1.56		Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	15779.9	>	Design Factored Moment (Mu, Kips-F	6291.3	0.40	OK!
Calculated Shear Capacity (Kips):	804.3	>	Design Factored Shear (Kips):	43.7	0.05	OK!
Calculated Tension Capacity (Tn, Kips):	5391.4	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	8418.7	>	Design Factored Axial Load (Pu Kips):	63.6	0.01	OK!
Moment & Axial Strength Combination:	0.40	OK!	Check Tie Spacing (Design/Required):		0.6667	OK!
Pier Reinforcement Ratio:	0.018		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	1936.0	>	One-Way Factored Shear (L-D. Kips):	398.4	0.21	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1936.0	>	One-Way Factored Shear (W-D., Kips)	398.4	0.21	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1908.8	>	One-Way Factored Shear (C-C, Kips):	373.0	0.20	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0018	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0018		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	8985.4	>	Moment at Bottom (L-Dir. K-Ft):	3564.8	0.40	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	8985.4	>	Moment at Bottom (W-Dir. K-Ft):	3564.8	0.40	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	12668.8	>	Moment at Bottom (C-C Dir. K-Ft):	5041.3	0.40	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0018	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0018		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	8985.4	>	Moment at the top (L-Dir K-Ft):	1311.4	0.15	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	8985.4	>	Moment at the top (W-Dir K-Ft):	1311.4	0.15	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	12668.8	>	Moment at the top (C-C Dir. K-Ft):	1222.5	0.10	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	2485.9	k-ft.	Max. factored shear stress v_{u_CD}:		5.6	Psi
Max. factored shear stress v_{u_AB}:	9.9	Psi	Factored shear Strength ϕv_n:		177.5	Psi
Max. factored shear stress v_u:	9.9	Psi	Check Usage of Punching Shear Capacity:		0.06	OK!

EXHIBIT 9

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

Post-Mod Antenna Mount Analysis Report

Existing 195 ft Nudd Corporation Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT01916-S-SBA
Customer Site Name: North Salem
Carrier Name: T-Mobile (App#: 117038, V#2)
Carrier Site ID / Name: CTHA101F / North Salem
Site Location: 160 Witch Meadow Road
Salem, Connecticut
New London County
Latitude: 41.502828
Longitude: -72.297052

Analysis Result:

Max Structural Usage: 61.3% [Pass]

Report Prepared By: Saroj Dangol

Introduction

The purpose of this report is to summarize the analysis results on the (1) Platform w/ Propose Modification at 175.00' 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 done by Full Metal Tower Services, dated 4/29/19.
Antenna Loading	Antenna loading by SBA Application #: 117038, v2, dated 03/16/2021
Existing Modification	N/A
Proposed Modification	TES Project No. 78293 dated 07/30/2019

Analysis Criteria

Basic Wind Speed Used in the Analysis: V_{ULT} = 130 mph (3-Sec. Gust) / Equivalent to
V_{ASD} = 101 mph (3-Sec. Gust)
Basic Wind Speed with Ice: 50 mph (3-Sec. Gust) with 0.75" radial ice concurrent
Operational Wind Speed: 60 mph +0" Radial ice
Standard/Codes: ANSI/TIA/EIA 222-G 2015 IBC/ 2018 Connecticut State Building Code
Exposure Category: B
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/ Propose Modification at 175.00' elevation

Proposed Modifications

(1) Metrosite Support Rail w/ End connection: MS-HRCP-35

Final Antenna Configuration

3 RFS APXVAALL24_43-U-NA20
3 RFS APX16DWV-16DWVS-E-A20
3 Andrew LNX-6515DS-A1M
3 Ericsson 4449 B71 + B85
3 Ericsson RRUS11 B2
3 Ericsson RRUS11 B4

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 61.3%, which occurs in the mount pipe. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

Attachments

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

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 09:09


04 29 2019 09:32

Structure: CT01916-S-SBA - North Salem

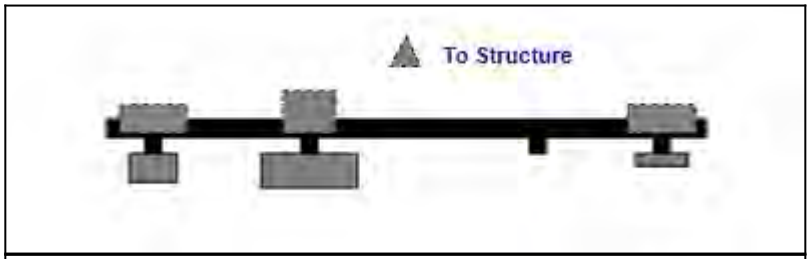
Sector: **A**

Structure Type: Monopole

Mount Elev: 175.00

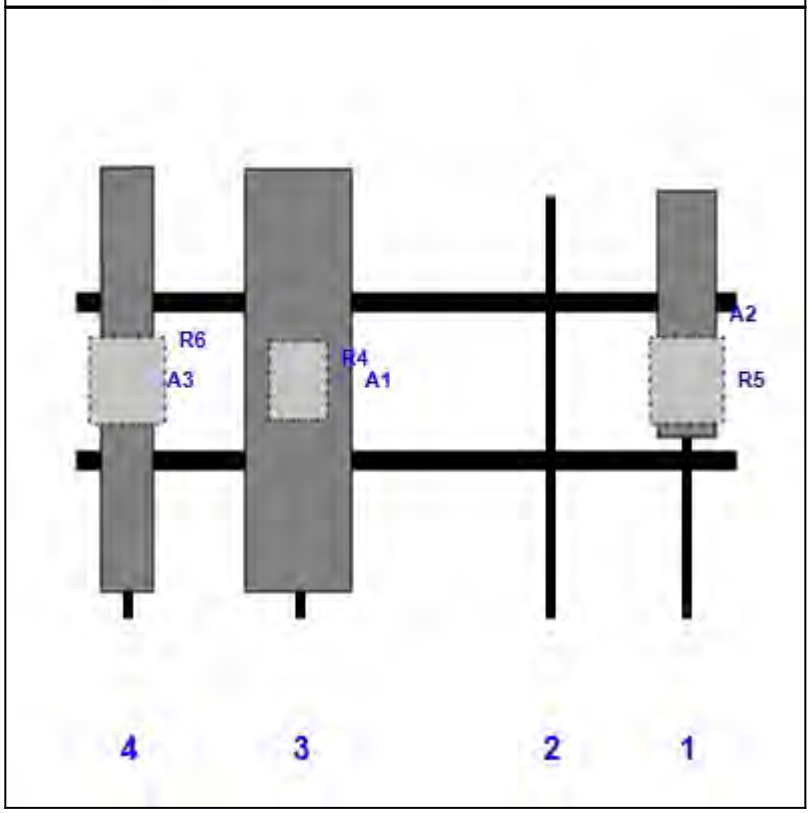
4/13/2021

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
A2	APX16DWV-16DWVS-E-A20	55.90	13.00	139.00	1	a	Front	27.00			
R5	RRUS11 B2	19.68	16.97	139.00	1	a	Behind	42.00			
A1	APXVAALL24_43-U-NA20	95.90	24.00	51.00	3	a	Front	42.00			
R4	4449 B71 + B85	17.90	13.10	51.00	3	a	Behind	42.00			
A3	LNX-6515DS-A1M	96.40	11.90	12.00	4	a	Front	42.00			
R6	RRUS11 B4	19.68	16.97	12.00	4	a	Behind	42.00			

Structure: CT01916-S-SBA - North Salem

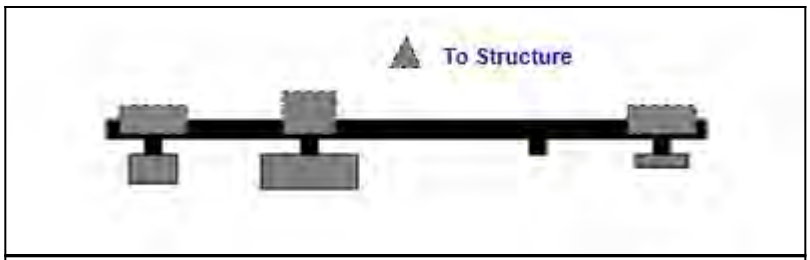
Sector: **B**

Structure Type: Monopole

Mount Elev: 175.00

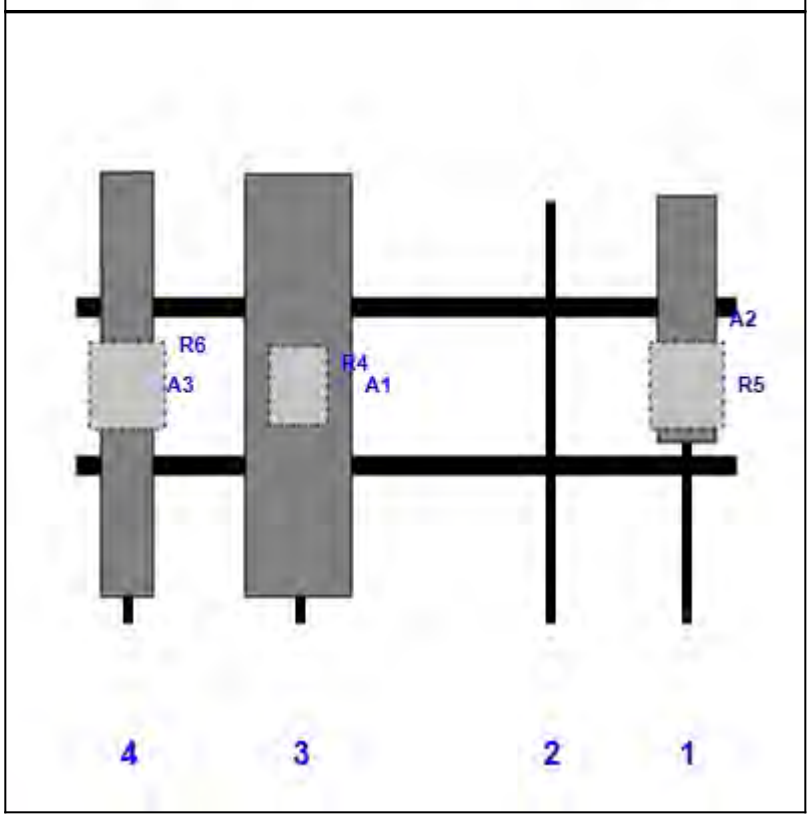
4/13/2021

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
A2	APX16DWV-16DWVS-E-A20	55.90	13.00	139.00	1	a	Front	27.00			
R5	RRUS11 B2	19.68	16.97	139.00	1	a	Behind	42.00			
A1	APXVAALL24_43-U-NA20	95.90	24.00	51.00	3	a	Front	42.00			
R4	4449 B71 + B85	17.90	13.10	51.00	3	a	Behind	42.00			
A3	LNX-6515DS-A1M	96.40	11.90	12.00	4	a	Front	42.00			
R6	RRUS11 B4	19.68	16.97	12.00	4	a	Behind	42.00			

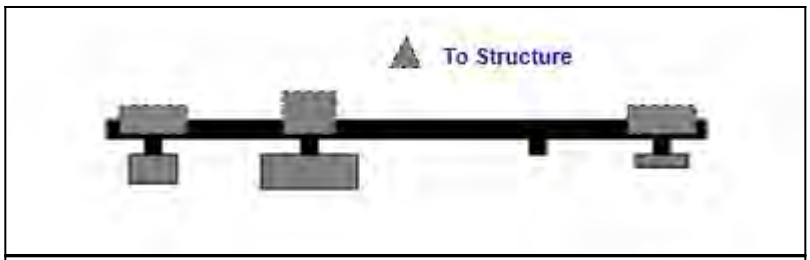
Structure: CT01916-S-SBA - North Salem

Sector: C
Structure Type: Monopole
Mount Elev: 175.00

4/13/2021

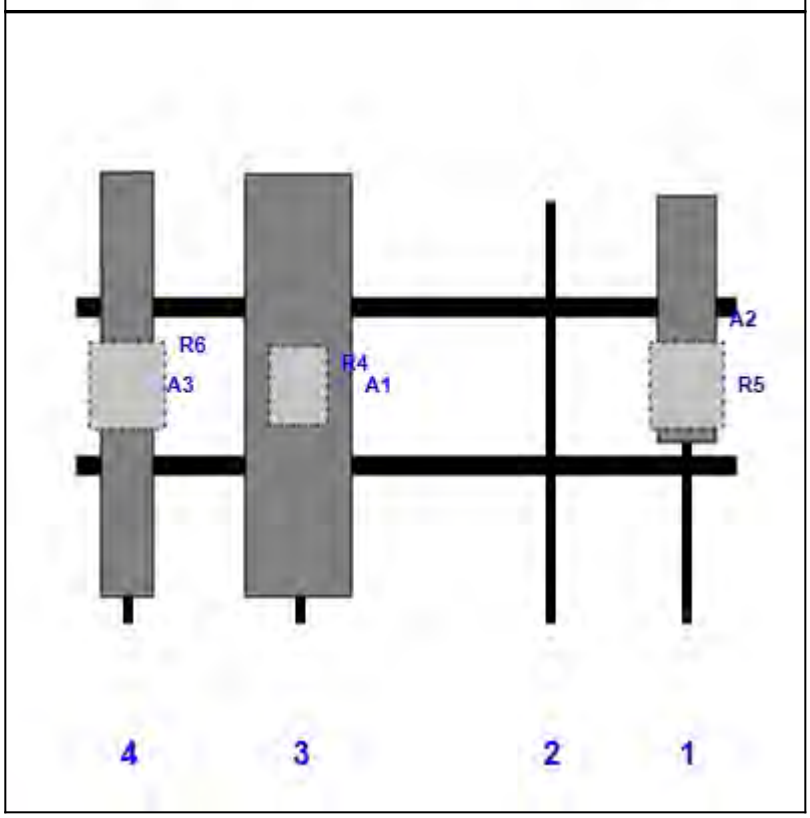
Tower Engineering Solutions

Plan View



Front View

Looking Toward Structure

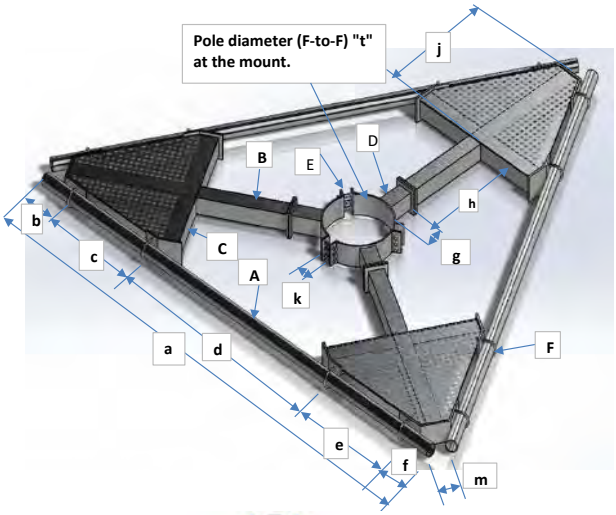


Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A2	APX16DWV-16DWVS-E-A20	55.90	13.00	139.00	1	a	Front	27.00			
R5	RRUS11 B2	19.68	16.97	139.00	1	a	Behind	42.00			
A1	APXVAALL24_43-U-NA20	95.90	24.00	51.00	3	a	Front	42.00			
R4	4449 B71 + B85	17.90	13.10	51.00	3	a	Behind	42.00			
A3	LNX-6515DS-A1M	96.40	11.90	12.00	4	a	Front	42.00			
R6	RRUS11 B4	19.68	16.97	12.00	4	a	Behind	42.00			

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

FCC # 1216456

Tower Owner:	SBA Communications	**Mapping Date:**	4/29/19
Site Name:	North Salem	**Structure Type:**	Monopole
Site Number or ID:	CT01916-S-SBA	**Structure Height (Ft.):**	199
Mapping Contractor:	Full Metal Tower Services	**Mount Height (Ft.):**	174.2



Geometries (Unit: inches)

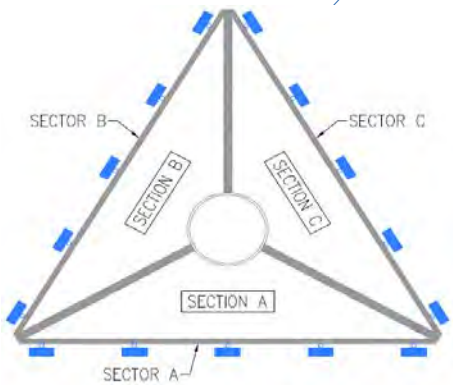
a	150	**e**	45	**j**	47	**o**	N/A	**s**	N/A
b	9	**f**	6	**k**	24	**p**	N/A	**t**	18.5
c	45	**g**	7	**m**	12	**q**	N/A	**u ***	45
d	45	**h**	18	**n**	N/A	**r**	N/A	**v ***	96

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

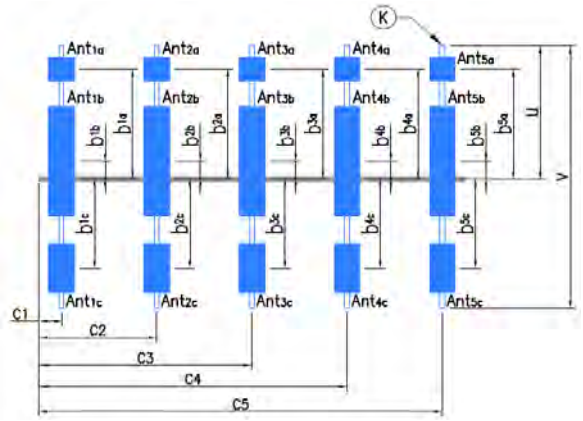
Items	Member	Lx (O.D.)	Ly (I.D.)	T	Items	Member	Lx (O.D.)	Ly (I.D.)	T
A	3.5 OD x 0.216 Pipe	3.5	3.068	0.216	**F**	1/2" U-Bolt		U-Bolt	
B	Tubing 4x4x1/4	4	4	0.25	**G**				
C	Tubing 4x4x1/4	4	4	0.25	**H**				
D	1/2" Thick. Plate	0	0	0.5	**J**				
E	3/4" Bolt	24			**K* (pipe)**	2.375 OD x 0.154 Pip	2.375	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.)	7.5'
Distance from top of main platform member to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.)	N/A

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



Climbing facility is Located at Section C, at 290° Degree Azimuth



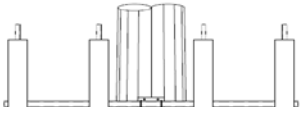
Antenna Layout

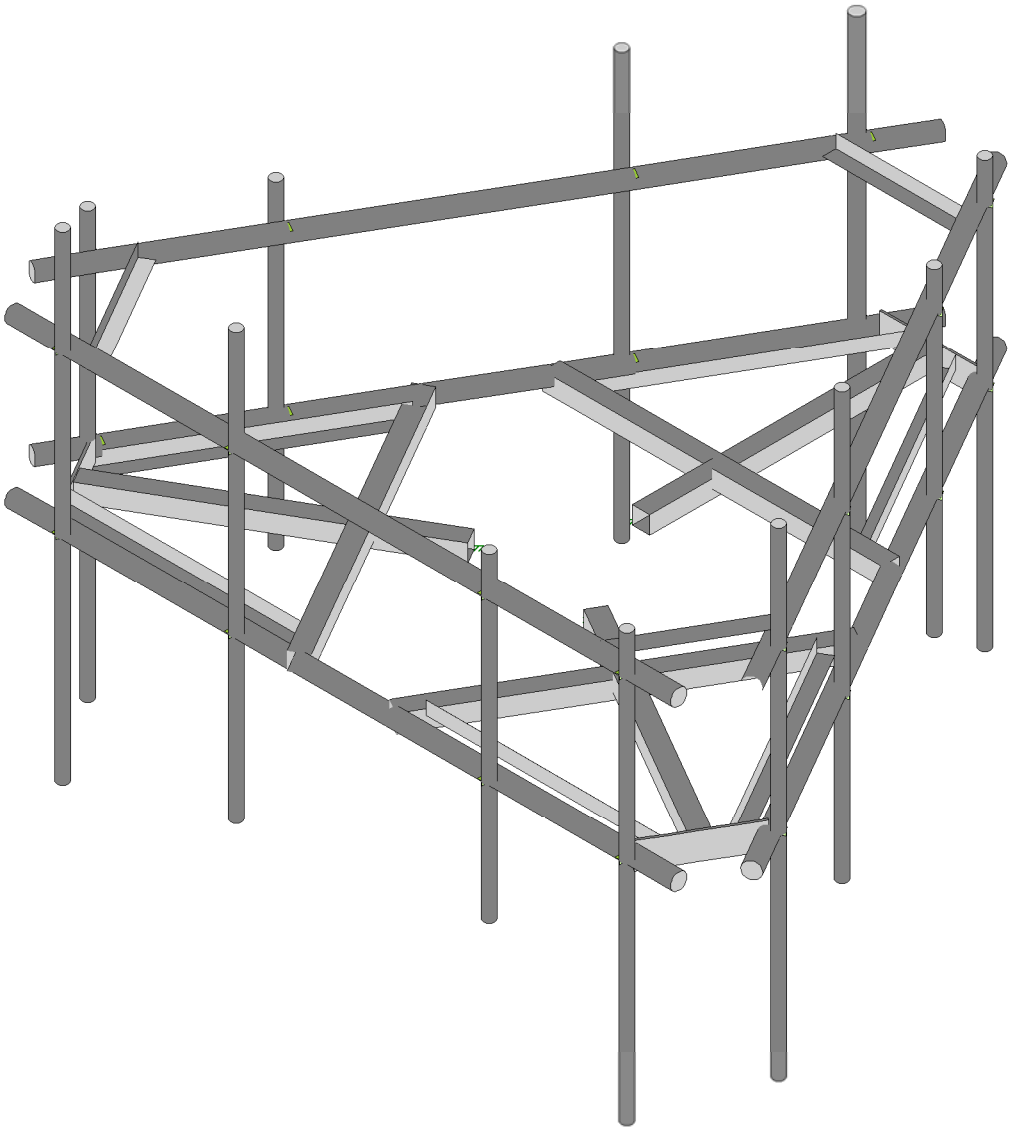
Ants. Items	Enter antenna model. If not labled, enter "Unknown". If no antenna at specified location, enter "N/A". If antennas and the locations are the same on all three sectors, only enter one sector.	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Mounting Locations (Unit: inches) Vertical 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.)	Photos of antennas Photo Numbers
	Sector A								
Ant_{1a}	RRH A	17	7	20	1/2" (2)	+22"	N/A	12	
Ant_{1b}	Antenna A	13	3.5	56	1/2" (4)	+17"	6	12	
Ant_{1c}	RRH A	17	7	20	1/2" (2)	-28"	N/A	12	
Ant_{2a}									
Ant_{2b}	Empty Mast	N/A	N/A	N/A	N/A	N/A	N/A	51	
Ant_{2c}									
Ant_{3a}									
Ant_{3b}	Empty Mast	N/A	N/A	N/A	N/A	N/A	N/A	108	
Ant_{3c}									
Ant_{4a}									
Ant_{4b}	Antenna B	12	7.5	96.5	1/2" (2)	+18"	7	139	
Ant_{4c}	RRH A	17	7	20	1/2" (2)	+26"	N/A	139	
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

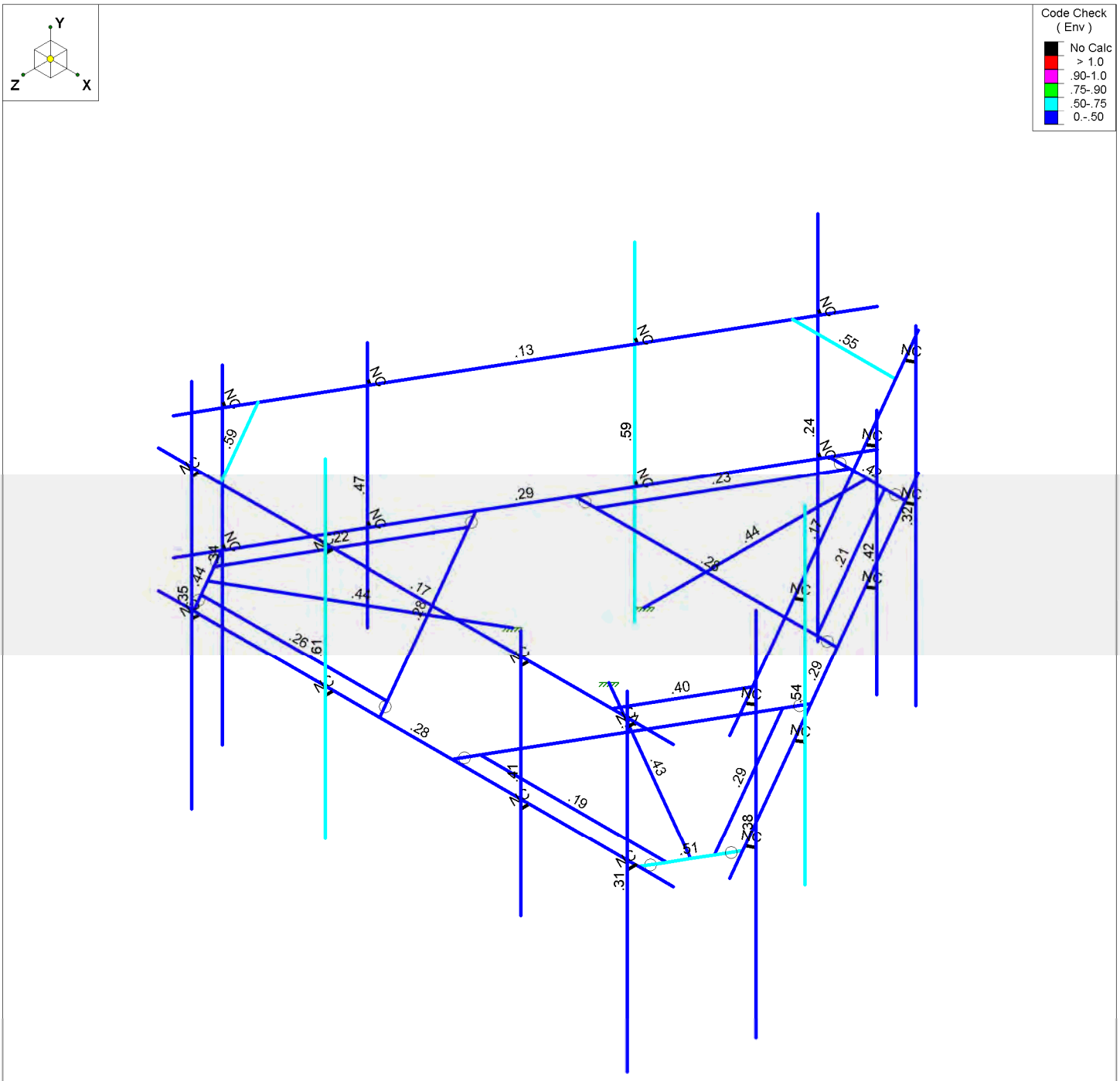
Sector A:	45°	Deg	
Sector B:	180°	Deg	
Sector C:	290°	Deg	
Climbing	290°	Deg	Located at Section C
Climbing Facility	Corrosion Type:		No corrosion observed
	Access:		Climbing path was unobstructed.
	Condition:		N/A

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





Tower Engineering Solutio...	CT01916-S-SBA_MT_LO_Loads Only_G	SK - 1
		Apr 13, 2021 at 9:26 AM
TES Project No. 104493		CT01916-S-SBA_104493_G_RISA_...



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

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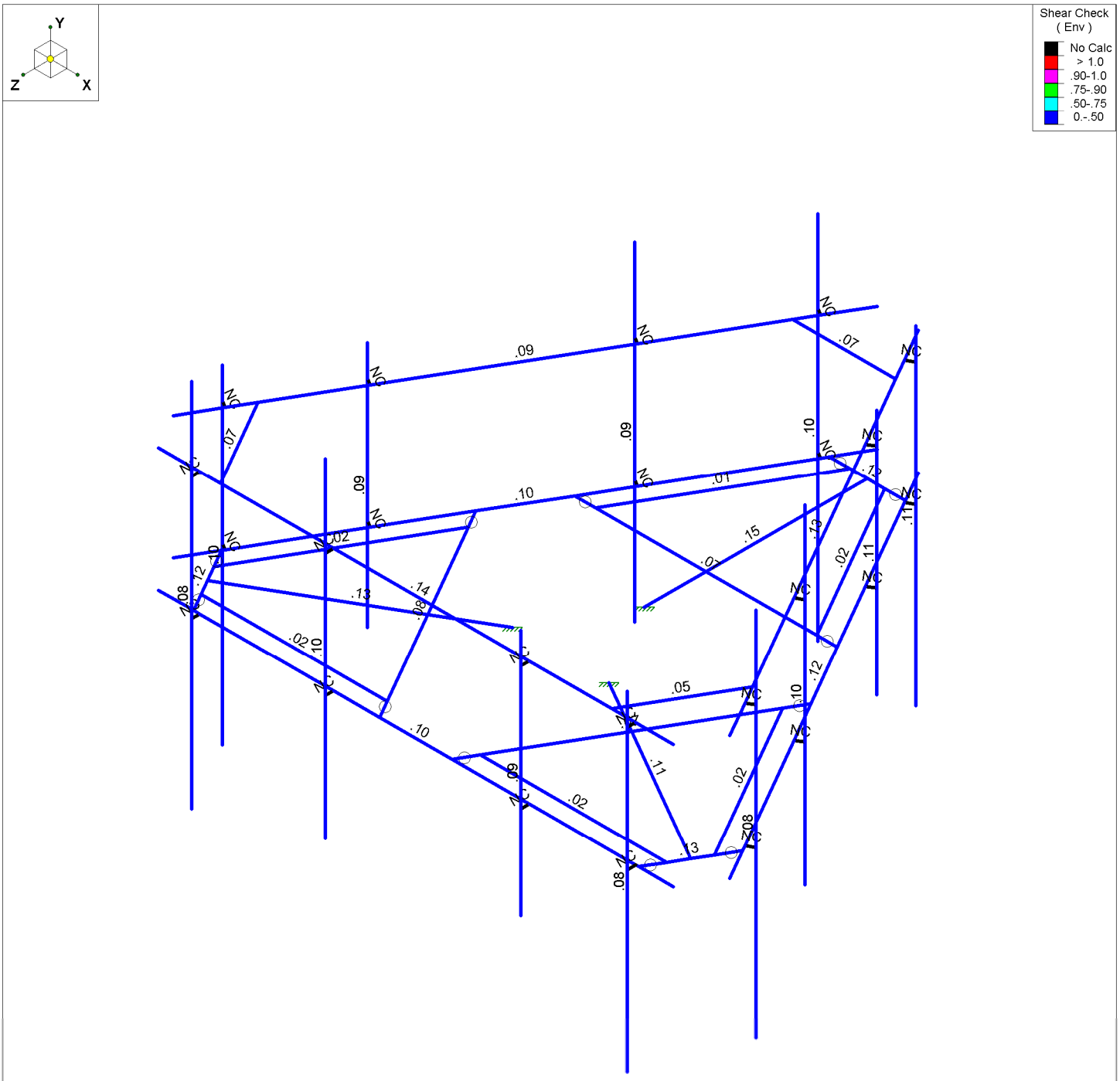
TES Project No. 104493		CT01916-S-SBA_104493_G_RISA_...



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

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		Apr 13, 2021 at 9:26 AM
TES Project No. 104493		CT01916-S-SBA_104493_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					27			
2	Antenna Di	None					27			
3	Antenna W Front	None					27			
4	Antenna Wi Front	None					27			
5	Antenna W Side	None					27			
6	Antenna Wi Side	None					27			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1					3	
10	Structure Di	None						36	3	
11	Structure W Front	None						36		
12	Structure Wi Front	None						36		
13	Structure W Side	None						36		
14	Structure Wi Side	None						36		
15	BLC 9 Transient Area...	None								
16	BLC 10 Transient Are...	None						102		

Load Combinations

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

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	-1.172743	0	0.677083	0	
2	N2	1.172743	0	0.677083	0	
3	N3	0	0	-1.354167	0	
4	N4	-6.25	0	4.185789	0	
5	N5	6.25	0	4.185789	0	
6	N6	6.75	0	3.319764	0	
7	N7	.5	0	-7.505553	0	
8	N8	-.5	0	-7.505553	0	
9	N9	-6.75	0	3.319764	0	
10	N10	-5.863714	0	3.385417	0	
11	N11	5.863714	0	3.385417	0	
12	N12	-2e-14	0	-6.770833	0	
13	N13	-5.401618	0	4.185789	0	
14	N14	-0.879041	0	4.185789	0	
15	N15	0.879041	0	4.185789	0	
16	N16	5.401618	0	4.185789	0	
17	N17	6.325809	0	2.585044	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
18	N18	4.064521	0	-1.331623	0	
19	N19	3.185479	0	-2.854167	0	
20	N20	0.924191	0	-6.770833	0	
21	N21	-0.924191	0	-6.770833	0	
22	N22	-3.185479	0	-2.854167	0	
23	N23	-4.064521	0	-1.331623	0	
24	N24	-6.325809	0	2.585044	0	
25	NP1	5.333333	3.75	4.385789	0	
26	NP2	5.333333	-4.25	4.385789	0	
27	NP3	2.75	3.75	4.385789	0	
28	NP4	2.75	-2.25	4.385789	0	
29	NP5	-2	5	4.385789	0	
30	NP6	-2	-3	4.385789	0	
31	NP7	-5.25	5	4.385789	0	
32	NP8	-5.25	-4	4.385789	0	
33	NP11	-6.464872	3.75	2.425907	0	
34	NP12	-6.464872	-4.25	2.425907	0	
35	NP13	-5.173205	3.75	0.188675	0	
36	NP14	-5.173205	-2.25	0.188675	0	
37	NP15	-2.798205	5	-3.924946	0	
38	NP16	-2.798205	-3	-3.924946	0	
39	NP17	-1.173205	5	-6.739528	0	
40	NP18	-1.173205	-4	-6.739528	0	
41	NP21	1.131538	3.75	-6.811697	0	
42	NP22	1.131538	-4.25	-6.811697	0	
43	NP23	2.423205	3.75	-4.574465	0	
44	NP24	2.423205	-2.25	-4.574465	0	
45	NP25	4.798205	5	-0.460844	0	
46	NP26	4.798205	-3	-0.460844	0	
47	NP27	6.423205	5	2.353739	0	
48	NP28	6.423205	-4	2.353739	0	
49	N49	5.333333	0	4.185789	0	
50	N50	2.75	0	4.185789	0	
51	N51	-2	0	4.185789	0	
52	N52	-5.25	0	4.185789	0	
53	N53	0.958333	0	-6.711697	0	
54	N54	2.25	0	-4.474465	0	
55	N55	4.625	0	-0.360844	0	
56	N56	6.25	0	2.453739	0	
57	N57	-6.291667	0	2.525907	0	
58	N58	-5	0	0.288675	0	
59	N59	-2.625	0	-3.824946	0	
60	N60	-1.	0	-6.639528	0	
61	N61	-2.471781	0	1.427083	0	
62	N62	2.471781	0	1.427083	0	
63	N63	-1e-14	0	-2.854167	0	
64	N64	-.5	3	-7.505553	0	
65	N65	-6.75	3	3.319764	0	
66	N66	-6.291667	3	2.525907	0	
67	N67	-5	3	0.288675	0	
68	N68	-2.625	3	-3.824946	0	
69	N69	-1.	3	-6.639528	0	
70	N70	-6.25	3	4.185789	0	
71	N71	6.25	3	4.185789	0	
72	N72	5.333333	3	4.185789	0	
73	N73	2.75	3	4.185789	0	
74	N74	-2	3	4.185789	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
75	N75	-5.25	3	4.185789	0	
76	N76	6.75	3	3.319764	0	
77	N77	0.5	3	-7.505553	0	
78	N78	0.958333	3	-6.711697	0	
79	N79	2.25	3	-4.474465	0	
80	N80	4.625	3	-0.360844	0	
81	N81	6.25	3	2.453739	0	
82	N82	-0.424191	0	-6.770833	0	
83	N83	-2.685479	0	-2.854167	0	
84	N84	0.424191	0	-6.770833	0	
85	N85	2.685479	0	-2.854167	0	
86	N86	-5.651618	0	3.752777	0	
87	N87	-1.129041	0	3.752777	0	
88	N88	-6.075809	0	3.018057	0	
89	N89	-3.814521	0	-0.89861	0	
90	N90	6.075809	0	3.018057	0	
91	N91	3.814521	0	-0.89861	0	
92	N92	5.651618	0	3.752777	0	
93	N93	1.129041	0	3.752777	0	
94	N94	-4.75	3	4.185789	0	
95	N95	4.75	3	4.185789	0	
96	N96	6	3	2.020726	0	
97	N97	1.25	3	-6.206515	0	
98	N98	-1.25	3	-6.206515	0	
99	N99	-6	3	2.020726	0	
100	N100	5.333333	0	4.385789	0	
101	N101	2.75	0	4.385789	0	
102	N102	-2	0	4.385789	0	
103	N103	-5.25	0	4.385789	0	
104	N104	5.333333	3	4.385789	0	
105	N105	2.75	3	4.385789	0	
106	N106	-2	3	4.385789	0	
107	N107	-5.25	3	4.385789	0	
108	N116	1.131538	0	-6.811697	0	
109	N117	2.423205	0	-4.574465	0	
110	N118	4.798205	0	-0.460844	0	
111	N119	6.423205	0	2.353739	0	
112	N120	1.131538	3	-6.811697	0	
113	N121	2.423205	3	-4.574465	0	
114	N122	4.798205	3	-0.460844	0	
115	N123	6.423205	3	2.353739	0	
116	N132	-6.464872	0	2.425907	0	
117	N133	-5.173205	0	0.188675	0	
118	N134	-2.798205	0	-3.924946	0	
119	N135	-1.173205	0	-6.739528	0	
120	N136	-6.464872	3	2.425907	0	
121	N137	-5.173205	3	0.188675	0	
122	N138	-2.798205	3	-3.924946	0	
123	N139	-1.173205	3	-6.739528	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	xxxxx	HSS16x0.438	Beam	None	A572 Gr.50	Typical	19.9	606	606	1210

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N4	N5			PIPE_3.0	Beam	Pipe	A53 Gr.B	DR1
2	M2	N6	N7			PIPE_3.0	Beam	Pipe	A53 Gr.B	DR1
3	M3	N8	N9			PIPE_3.0	Beam	Pipe	A53 Gr.B	DR1
4	M4	N1	N10			HSS4X4X4	Beam	None	A500 Gr.B...	DR1
5	M5	N2	N11			HSS4X4X4	Beam	None	A500 Gr.B...	DR1
6	M6	N3	N12			HSS4X4X4	Beam	None	A500 Gr.B...	DR1
7	M7	N23	N14			HSS4X4X4	Beam	None	A500 Gr.B...	DR1
8	M8	N15	N18			HSS4X4X4	Beam	None	A500 Gr.B...	DR1
9	M9	N19	N22			HSS4X4X4	Beam	None	A500 Gr.B...	DR1
10	M10	N24	N13			PL1/2x6	Beam	RECT	A36 Gr.36	DR1
11	M11	N16	N17			PL1/2x6	Beam	RECT	A36 Gr.36	DR1
12	M12	N20	N21			PL1/2x6	Beam	RECT	A36 Gr.36	DR1
13	MP1A	NP1	NP2			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
14	MP2A	NP3	NP4			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
15	MP3A	NP5	NP6			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
16	MP4A	NP7	NP8			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
17	MP1B	NP11	NP12		300	PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
18	MP2B	NP13	NP14		300	PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
19	MP3B	NP15	NP16		300	PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
20	MP4B	NP17	NP18		300	PIPE_2.5	Beam	Pipe	A53 Gr.B	DR1
21	MP1C	NP21	NP22		60	PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
22	MP2C	NP23	NP24		60	PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
23	MP3C	NP25	NP26		60	PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
24	MP4C	NP27	NP28		60	PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
25	M25	N64	N65			PIPE_3.0	Beam	None	A992	DR1_1
26	M26	N70	N71			PIPE_3.0	Beam	Pipe	A53 Gr.B	DR1
27	M27	N76	N77			PIPE_3.0	Beam	Pipe	A53 Gr.B	DR1
28	M28	N82	N83			L3X3X4	Beam	Single Angle	A36 Gr.36	Typical
29	M29	N84	N85			L3X3X4	Beam	Single Angle	A36 Gr.36	Typical
30	M30	N86	N87			L3X3X4	Beam	Single Angle	A36 Gr.36	Typical
31	M31	N88	N89			L3X3X4	Beam	Single Angle	A36 Gr.36	Typical
32	M32	N90	N91			L3X3X4	Beam	Single Angle	A36 Gr.36	Typical
33	M33	N92	N93			L3X3X4	Beam	Single Angle	A36 Gr.36	Typical
34	M34	N99	N94		270	L3X3X4	Beam	None	A36 Gr.36	DR1_2
35	M35	N98	N97			L3X3X4	Beam	None	A36 Gr.36	DR1_2
36	M36	N95	N96		270	L3X3X4	Beam	None	A36 Gr.36	DR1
37	M37	N75	N107			RIGID	Beam	None	RIGID	DR1
38	M38	N52	N103			RIGID	Beam	None	RIGID	DR1
39	M39	N74	N106			RIGID	Beam	None	RIGID	DR1
40	M40	N51	N102			RIGID	Beam	None	RIGID	DR1
41	M41	N73	N105			RIGID	Beam	None	RIGID	DR1
42	M42	N50	N101			RIGID	Beam	None	RIGID	DR1
43	M43	N72	N104			RIGID	Beam	None	RIGID	DR1
44	M44	N49	N100			RIGID	Beam	None	RIGID	DR1

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
45	M45	N81	N123			RIGID	Beam	None	RIGID	DR1
46	M46	N56	N119			RIGID	Beam	None	RIGID	DR1
47	M47	N80	N122			RIGID	Beam	None	RIGID	DR1
48	M48	N55	N118			RIGID	Beam	None	RIGID	DR1
49	M49	N79	N121			RIGID	Beam	None	RIGID	DR1
50	M50	N54	N117			RIGID	Beam	None	RIGID	DR1
51	M51	N78	N120			RIGID	Beam	None	RIGID	DR1
52	M52	N53	N116			RIGID	Beam	None	RIGID	DR1
53	M53	N69	N139			RIGID	Beam	None	RIGID	DR1
54	M54	N60	N135			RIGID	Beam	None	RIGID	DR1
55	M55	N68	N138			RIGID	Beam	None	RIGID	DR1
56	M56	N59	N134			RIGID	Beam	None	RIGID	DR1
57	M57	N67	N137			RIGID	Beam	None	RIGID	DR1
58	M58	N58	N133			RIGID	Beam	None	RIGID	DR1
59	M59	N66	N136			RIGID	Beam	None	RIGID	DR1
60	M60	N57	N132			RIGID	Beam	None	RIGID	DR1

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	BenPIN	BenPIN				Yes				None
8	M8	BenPIN	BenPIN				Yes				None
9	M9	BenPIN	BenPIN				Yes				None
10	M10	BenPIN	BenPIN				Yes				None
11	M11	BenPIN	BenPIN				Yes				None
12	M12	BenPIN	BenPIN				Yes				None
13	MP1A						Yes		-z		None
14	MP2A						Yes		-z		None
15	MP3A						Yes		-z		None
16	MP4A						Yes		-z		None
17	MP1B						Yes		+z		None
18	MP2B						Yes		+z		None
19	MP3B						Yes		+z		None
20	MP4B						Yes		+z		None
21	MP1C						Yes		+z		None
22	MP2C						Yes		+z		None
23	MP3C						Yes		+z		None
24	MP4C						Yes		+z		None
25	M25						Yes				None
26	M26						Yes				None
27	M27						Yes				None
28	M28						Yes				None
29	M29						Yes				None
30	M30						Yes				None
31	M31						Yes				None
32	M32						Yes				None
33	M33						Yes				None
34	M34						Yes				None
35	M35						Yes				None
36	M36						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...
37	M37						Yes				None
38	M38						Yes				None
39	M39						Yes				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				None
47	M47						Yes				None
48	M48						Yes				None
49	M49						Yes				None
50	M50						Yes				None
51	M51						Yes				None
52	M52						Yes				None
53	M53						Yes				None
54	M54						Yes				None
55	M55						Yes				None
56	M56						Yes				None
57	M57						Yes				None
58	M58						Yes				None
59	M59						Yes				None
60	M60						Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
1	M1	PIPE_3.0	12.5			Lbyy						Gravity
2	M2	PIPE_3.0	12.5			Lbyy						Gravity
3	M3	PIPE_3.0	12.5			Lbyy						Gravity
4	M4	HSS4X4X4	5.417			Lbyy						Gravity
5	M5	HSS4X4X4	5.417			Lbyy						Gravity
6	M6	HSS4X4X4	5.417			Lbyy						Gravity
7	M7	HSS4X4X4	6.371			Lbyy						Gravity
8	M8	HSS4X4X4	6.371			Lbyy						Gravity
9	M9	HSS4X4X4	6.371			Lbyy						Gravity
10	M10	PL1/2x6	1.848			Lbyy						Gravity
11	M11	PL1/2x6	1.848			Lbyy						Gravity
12	M12	PL1/2x6	1.848			Lbyy						Gravity
13	MP1A	PIPE_2.0	8			Lbyy						Gravity
14	MP2A	PIPE_2.0	6			Lbyy						Gravity
15	MP3A	PIPE_2.0	8			Lbyy						Gravity
16	MP4A	PIPE_2.0	9			Lbyy						Gravity
17	MP1B	PIPE_2.0	8			Lbyy						Gravity
18	MP2B	PIPE_2.0	6			Lbyy						Gravity
19	MP3B	PIPE_2.0	8			Lbyy						Gravity
20	MP4B	PIPE_2.5	9			Lbyy						Gravity
21	MP1C	PIPE_2.0	8			Lbyy						Gravity
22	MP2C	PIPE_2.0	6			Lbyy						Gravity
23	MP3C	PIPE_2.0	8			Lbyy						Gravity
24	MP4C	PIPE_2.0	9			Lbyy						Gravity
25	M25	PIPE_3.0	12.5			Lbyy						Lateral
26	M26	PIPE_3.0	12.5			Lbyy						Gravity
27	M27	PIPE_3.0	12.5			Lbyy						Gravity
28	M28	L3X3X4	4.523			Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
29	M29	L3X3X4	4.523			Lbyy						Lateral
30	M30	L3X3X4	4.523			Lbyy						Lateral
31	M31	L3X3X4	4.523			Lbyy						Lateral
32	M32	L3X3X4	4.523			Lbyy						Lateral
33	M33	L3X3X4	4.523			Lbyy						Lateral
34	M34	L3X3X4	2.5			Lbyy						Lateral
35	M35	L3X3X4	2.5			Lbyy						Lateral
36	M36	L3X3X4	2.5			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	N1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N2	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N3	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	N1	max	2434.576	4	3514.06	8	2970.558	1	.71	1	2.252	1	1.07	3
2		min	-2451.021	3	-12.13	3	-2967.724	2	-3.561	6	-2.245	2	-5.892	8
3	N2	max	3230.602	4	3502.019	7	2050.441	1	.566	1	1.738	2	6.085	7
4		min	-3220.498	3	-52.23	4	-2039.142	2	-3.301	6	-1.737	1	-1.253	4
5	N3	max	2811.086	4	3595.643	5	3451.081	1	7.094	5	3.232	3	1.006	3
6		min	-2804.742	3	-154.955	2	-3465.215	2	-1.501	2	-3.225	4	-1.113	4
7	Totals:	max	8476.263	4	9883.15	5	8472.08	1						
8		min	-8476.261	3	3241.911	2	-8472.08	2						

Envelope Member Section Forces

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
1	M1	1	max	0	11	0	11	0	11	0	11	0	11	0	11
2			min	0	1	-750	9	0	1	0	1	0	1	0	1
3		2	max	604.973	3	69.669	1	58.953	4	-.025	3	.336	1	.133	9
4			min	-411.238	4	-109.077	2	-70.043	3	-.174	6	-.313	2	-.232	7
5		3	max	1551.247	2	380.985	4	158.23	4	.213	1	.433	2	1.278	6
6			min	-1151.83	1	-551.977	3	-173.183	3	-.221	2	-.469	1	.035	10
7		4	max	455.379	4	204.59	4	65.347	4	.195	6	.103	1	.095	2
8			min	-271.891	3	-118.949	3	-56.516	3	.003	4	-.084	2	-.139	1
9		5	max	0	11	0	11	0	11	0	11	0	11	0	11
10			min	0	1	0	1	0	1	0	1	0	1	0	1
11	M2	1	max	0	11	.009	3	.005	4	0	11	0	11	0	11
12			min	0	1	0	5	0	6	0	1	0	1	0	1
13		2	max	679.214	4	94.353	4	60.634	4	-.013	4	.41	4	.064	3
14			min	-473.413	3	-139.969	3	-73.833	3	-.172	7	-.387	3	-.24	8
15		3	max	1237.439	3	310.744	2	381.408	3	.18	4	.349	3	1.27	7
16			min	-816.119	4	-497.067	1	-394.419	4	-.19	3	-.385	4	.285	2
17		4	max	531.836	2	288.287	3	29.499	4	.187	5	.096	2	.13	3
18			min	-342.574	1	-196.565	4	-20.153	3	.002	2	-.076	1	-.171	4
19		5	max	0	11	.001	7	0	5	0	11	0	11	0	11
20			min	0	1	-.012	1	-.004	3	0	1	0	1	0	1
21	M3	1	max	0	11	.012	1	.003	2	0	11	0	11	0	11
22			min	0	1	0	8	0	7	0	1	0	1	0	1
23		2	max	807.08	2	43.31	3	10.084	1	.017	4	.229	2	.143	1
24			min	-547.932	1	-112.433	8	-30.136	6	-.229	7	-.206	1	-.327	6

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
25		3	max	1620.559	4	327.183	1	521.321	3	.078	3	.377	4	1.288	8
26			min	-1187.526	3	-504.212	2	-537.634	4	-.095	4	-.413	3	.25	3
27		4	max	536.226	3	275.914	1	28.51	1	.193	8	.205	3	.092	1
28			min	-333.615	4	-173.999	2	-17.785	2	-.02	3	-.186	4	-.124	2
29		5	max	0	11	.001	7	0	11	0	11	0	11	0	11
30			min	0	1	-.01	2	-.003	3	0	1	0	1	0	1
31	M4	1	max	2791.459	3	3512.392	8	2189.771	2	1.005	2	2.252	1	6.822	8
32			min	-2775.945	4	-13.429	3	-2187.29	1	-.953	1	-2.245	2	-.985	3
33		2	max	2771.667	3	3467.213	8	2155.489	2	1.005	2	.697	2	2.095	8
34			min	-2756.153	4	-33.47	3	-2153.009	1	-.953	1	-.687	1	-.953	3
35		3	max	2457.834	3	519.7	8	131.356	2	.537	2	.073	2	1.167	9
36			min	-2457.353	4	-198.927	3	-139.778	1	-.44	1	-.073	1	-.583	3
37		4	max	2438.042	3	459.678	9	97.075	2	.537	2	.228	2	.531	9
38			min	-2437.561	4	-218.969	3	-105.496	1	-.44	1	-.24	1	-.3	3
39		5	max	2418.25	3	439.636	9	73.079	3	.537	2	.336	2	.011	3
40			min	-2417.769	4	-239.01	3	-81.021	4	-.44	1	-.359	1	-.147	8
41	M5	1	max	3258.669	4	3500.11	7	1551.795	1	.859	1	1.738	2	6.861	7
42			min	-3244.194	3	-53.885	4	-1545.237	2	-.768	2	-1.737	1	-1.09	4
43		2	max	3238.877	4	3458.518	7	1517.514	1	.859	1	.596	3	2.15	7
44			min	-3224.401	3	-73.926	4	-1510.956	2	-.768	2	-.586	4	-1.003	4
45		3	max	2933.442	4	526.588	7	147.362	1	.397	3	.043	3	1.228	3
46			min	-2932.776	3	-213.071	4	-153.148	2	-.309	4	-.044	4	-.663	4
47		4	max	2913.65	4	471.904	3	113.08	1	.397	3	.189	1	.576	3
48			min	-2912.984	3	-233.112	4	-118.867	2	-.309	4	-.199	2	-.361	4
49		5	max	2893.857	4	451.863	3	78.799	1	.397	3	.319	1	.007	1
50			min	-2893.192	3	-253.154	4	-84.585	2	-.309	4	-.336	2	-.146	6
51	M6	1	max	3465.215	2	3593.469	5	2810.66	4	1.113	4	3.232	3	7.094	5
52			min	-3451.081	1	-157.336	2	-2805.183	3	-1.006	3	-3.225	4	-1.501	2
53		2	max	3465.215	2	3551.878	5	2764.952	4	1.113	4	.55	4	2.468	1
54			min	-3451.081	1	-177.377	2	-2759.475	3	-1.006	3	-.536	3	-1.274	2
55		3	max	3118.667	2	561.288	1	157.375	4	.452	4	.065	4	1.392	1
56			min	-3119.338	1	-265.875	2	-168.394	3	-.348	3	-.062	3	-.789	2
57		4	max	3118.667	2	541.247	1	111.666	4	.452	4	.247	4	.646	1
58			min	-3119.338	1	-285.917	2	-122.685	3	-.348	3	-.259	3	-.415	2
59		5	max	3118.667	2	521.205	1	65.957	4	.452	4	.367	4	-.009	4
60			min	-3119.338	1	-305.958	2	-76.976	3	-.348	3	-.395	3	-.151	7
61	M7	1	max	1374.693	4	42.156	3	1579.49	4	.396	1	0	11	0	11
62			min	-1289.778	3	-1240.588	8	-1571.047	3	-.703	2	0	1	0	1
63		2	max	677.122	2	-40.028	3	74.9	4	.324	1	.626	4	1.992	8
64			min	-594.998	1	-1403.367	8	-111.158	3	-.479	2	-.579	3	-.044	3
65		3	max	1360.206	1	741.775	2	115.221	4	.324	1	1.033	2	4.275	8
66			min	-1289.913	2	-1462.39	8	-219.248	2	-.479	2	-1.043	1	.254	3
67		4	max	1336.927	1	1363.787	8	184.002	1	.301	1	.695	2	1.923	8
68			min	-1266.634	2	55.594	3	-205.808	2	-.328	2	-.739	1	.146	3
69		5	max	644.473	4	1183.872	8	1805.866	1	.29	4	0	11	0	11
70			min	-587.793	3	55.281	3	-1781.196	2	-.194	3	0	1	0	1
71	M8	1	max	761.306	3	-58.696	4	1309.574	2	.178	4	0	11	0	11
72			min	-678.991	4	-1199.273	7	-1309.667	1	-.565	5	0	1	0	1
73		2	max	460.009	1	-100.976	4	97.867	2	.178	2	.524	2	1.93	6
74			min	-376.902	2	-1372.386	7	-133.109	1	-.321	1	-.479	1	.124	1
75		3	max	923.455	2	1439.008	7	240.552	4	.236	4	1.121	3	4.182	7
76			min	-852.462	1	-1420.679	6	-261.336	3	-.321	1	-1.128	4	.327	4
77		4	max	900.175	2	1376.702	7	200.23	4	.236	4	.737	3	1.94	7
78			min	-829.182	1	-33.265	4	-221.015	3	-.273	3	-.777	4	.052	4
79		5	max	852.323	3	1194.184	7	1981.303	4	.392	2	0	11	0	11
80			min	-793.585	4	6.156	4	-1966.401	3	-.311	1	0	1	0	1
81	M9	1	max	1241.439	1	25.398	2	1426.093	1	.363	3	0	11	0	11

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
82			min	-1153.868	2	-1246.154	5	-1405.512	2	-.658	4	0	1	0	1
83		2	max	969.182	4	-36.454	2	98.405	3	.307	3	.59	1	1.997	5
84			min	-889.507	3	-1411.415	5	-136.348	4	-.449	4	-.54	2	0	2
85		3	max	1655.868	3	1399.275	8	219.928	2	.39	3	.919	1	4.294	5
86			min	-1592.669	4	-1473.784	5	-243.055	1	-.449	4	-.929	2	.077	2
87		4	max	1655.868	3	1407.695	5	166.167	2	.39	3	.574	1	1.983	5
88			min	-1592.669	4	-19.88	2	-189.294	1	-.432	4	-.621	2	.061	2
89		5	max	967.086	1	1222.214	5	1604.802	2	.456	3	0	11	0	11
90			min	-929.362	2	2.22	2	-1574.235	1	-.373	4	0	1	0	1
91	M10	1	max	412.831	3	203.343	3	16.241	9	.03	4	0	11	0	11
92			min	-344.87	4	-232.2	4	-16.712	1	-.066	3	0	1	0	1
93		2	max	422.962	3	197.683	3	18.405	2	.03	4	.007	9	.109	4
94			min	-355	4	-237.86	4	-22.923	3	-.066	3	-.009	1	-.093	3
95		3	max	743.892	4	504.239	9	1719.736	1	.082	1	.407	4	.46	9
96			min	-663.655	3	-323.858	1	-1679.143	2	-.088	8	-.416	1	-.268	1
97		4	max	775.431	1	550.609	2	28.936	3	.084	2	.01	4	.253	2
98			min	-676.835	2	-403.197	1	-31.311	4	-.042	1	-.009	1	-.188	1
99		5	max	765.3	1	544.948	2	17.5	1	.084	2	0	11	0	11
100			min	-666.704	2	-408.857	1	-19.445	2	-.042	1	0	1	0	1
101	M11	1	max	517.665	1	224.037	1	19.605	3	.041	2	0	11	0	11
102			min	-443.287	2	-259.254	2	-24.238	4	-.078	1	0	1	0	1
103		2	max	527.796	1	218.376	1	37.152	3	.041	2	.013	3	.121	2
104			min	-453.418	2	-264.915	2	-41.786	4	-.078	1	-.015	4	-.102	1
105		3	max	777.813	3	487.615	3	1959.648	4	.074	4	.467	3	.414	3
106			min	-705.691	4	-323.292	4	-1928.926	3	-.09	7	-.477	4	-.279	4
107		4	max	600.787	4	561.901	3	36.96	4	.087	3	.013	3	.258	3
108			min	-512.809	3	-420.137	4	-37.727	3	-.046	4	-.013	4	-.195	4
109		5	max	590.656	4	556.24	3	19.413	4	.087	3	0	11	0	11
110			min	-502.679	3	-425.798	4	-20.18	3	-.046	4	0	1	0	1
111	M12	1	max	457.745	4	168.052	4	14.89	1	.047	3	0	11	0	11
112			min	-389.012	3	-198.415	3	-18.409	2	-.082	4	0	1	0	1
113		2	max	457.745	4	162.391	4	38.286	1	.047	3	.012	1	.093	3
114			min	-389.012	3	-204.076	3	-41.806	2	-.082	4	-.014	2	-.076	4
115		3	max	921.422	1	369.242	1	1606.337	2	.071	6	.382	1	.328	1
116			min	-832.407	2	-185.073	2	-1559.408	1	-.091	5	-.395	2	-.176	2
117		4	max	711.315	3	433.226	1	34.881	2	.088	5	.012	1	.199	1
118			min	-600.615	4	-263.243	2	-38.534	1	-.01	2	-.011	2	-.123	2
119		5	max	711.315	3	427.565	1	11.485	2	.088	5	0	11	0	11
120			min	-600.615	4	-268.904	2	-15.138	1	-.01	2	0	1	0	1
121	MP1A	1	max	94.015	6	54.506	4	167.495	1	0	7	0	1	0	11
122			min	24.42	1	-54.534	3	-167.487	2	0	4	0	2	0	1
123		2	max	318.886	2	346.699	4	120.654	7	.078	1	.113	4	.085	4
124			min	-466.911	1	-191.548	3	-19.648	4	-.09	2	-.086	3	-.042	3
125		3	max	-41.08	4	102.584	3	215.529	2	0	4	.18	1	.124	3
126			min	-146.596	7	-102.563	4	-215.513	1	0	7	-.18	2	-.124	4
127		4	max	-8.33	4	24.107	3	24.143	2	0	4	.024	1	.024	3
128			min	-26.291	7	-24.086	4	-24.128	1	0	7	-.024	2	-.024	4
129		5	max	0	11	.142	7	.138	6	0	4	0	11	0	11
130			min	0	7	-.036	4	-.078	1	0	7	0	1	0	1
131	MP2A	1	max	0	6	.003	4	.013	5	0	7	0	11	0	11
132			min	0	1	-.008	7	-.012	2	0	4	0	2	0	1
133		2	max	605.141	6	481.357	4	218.997	1	.087	1	.139	4	.367	4
134			min	83.023	1	-314.582	3	-174.776	2	-.1	2	-.087	3	-.274	3
135		3	max	624.859	6	499.394	4	237.034	1	.087	1	.321	1	.211	3
136			min	89.271	1	-332.619	3	-192.813	2	-.1	2	-.202	2	-.369	4
137		4	max	-6.247	1	18.053	3	18.066	2	0	4	.014	1	.014	3
138			min	-19.718	6	-18.046	4	-18.06	1	0	7	-.014	2	-.014	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
139		5	max	0	11	.043	7	.05	6	0	4	0	11	0	11
140			min	0	6	-.009	4	-.023	1	0	7	0	2	0	1
141	MP3A	1	max	291.275	5	221.514	4	513.81	1	0	3	0	1	0	11
142			min	73.68	2	-221.463	3	-513.774	2	0	8	0	2	0	1
143		2	max	753.59	6	294.263	4	537.86	1	.077	2	1.052	1	.491	4
144			min	82.01	4	-486.225	3	-537.823	2	-.07	1	-1.052	2	-.736	3
145		3	max	952.947	6	398.369	4	375.012	1	.077	2	.616	1	.3	3
146			min	139.17	1	-590.33	3	-314.773	2	-.07	1	-.491	2	-.162	4
147		4	max	-82.01	1	245.062	3	536.307	2	0	6	.536	1	.245	3
148			min	-317.566	6	-245.134	4	-536.23	1	0	1	-.536	2	-.245	4
149		5	max	0	1	.004	1	.542	5	0	6	0	11	0	11
150			min	0	6	-.473	6	-.129	2	0	1	0	1	0	1
151	MP4A	1	max	164.449	5	195.056	4	290.779	1	0	3	0	1	0	11
152			min	30.18	9	-195.023	3	-290.782	2	0	8	0	2	0	1
153		2	max	511.33	2	196.441	4	162.678	8	.102	2	.12	1	.24	4
154			min	-621.323	1	-341.699	3	-34.415	3	-.092	1	-.191	2	-.429	3
155		3	max	581.421	2	283.497	4	208.748	1	.102	2	.437	1	.43	3
156			min	-551.232	1	-428.755	3	-121.458	2	-.092	1	-.311	2	-.292	4
157		4	max	-39.551	1	221.871	3	317.391	2	0	7	.103	1	.079	3
158			min	-194.027	6	-221.889	4	-317.368	1	0	1	-.103	2	-.079	4
159		5	max	0	11	.009	1	.206	5	0	7	0	3	0	11
160			min	0	6	-.164	7	-.034	2	0	1	0	2	0	1
161	MP1B	1	max	94.016	8	71.668	2	120.597	4	0	6	0	4	0	11
162			min	24.42	3	-71.643	1	-120.604	3	0	1	0	3	0	1
163		2	max	306.65	1	215.607	2	47.357	1	.069	2	.115	2	.046	2
164			min	-445.559	2	-384.907	1	-126.531	6	-.08	1	-.143	1	-.09	1
165		3	max	-41.08	3	113.259	1	162.179	3	0	3	.144	4	.119	1
166			min	-146.596	8	-113.278	2	-162.197	4	0	8	-.144	3	-.119	2
167		4	max	-8.33	3	20.851	1	20.88	3	0	3	.021	4	.021	1
168			min	-26.291	8	-20.87	2	-20.898	4	0	8	-.021	3	-.021	2
169		5	max	0	11	.024	3	.077	2	0	3	0	11	0	11
170			min	0	8	-.13	8	-.146	5	0	8	0	1	0	1
171	MP2B	1	max	0	8	.007	8	.01	4	0	8	0	3	0	11
172			min	0	3	-.002	3	-.011	7	0	1	0	4	0	1
173		2	max	590.359	5	346.194	2	177.36	1	.068	3	.152	2	.297	2
174			min	83.572	3	-528.723	1	-221.97	2	-.083	4	-.204	1	-.4	1
175		3	max	610.076	5	361.815	2	186.378	1	.068	3	.098	4	.405	1
176			min	89.819	3	-544.343	1	-230.989	2	-.083	4	-.219	7	-.234	2
177		4	max	-6.247	3	15.626	1	15.637	3	0	3	.012	4	.012	1
178			min	-19.718	8	-15.633	2	-15.644	4	0	8	-.012	3	-.012	2
179		5	max	0	11	.006	3	.017	2	0	3	0	11	0	11
180			min	0	8	-.04	8	-.046	8	0	8	0	1	0	1
181	MP3B	1	max	291.275	6	254.957	2	381.749	4	0	2	0	4	0	11
182			min	73.68	1	-255.017	1	-381.772	3	0	5	0	3	0	1
183		2	max	788.645	8	410.97	2	402.576	4	.05	1	.784	4	.6	2
184			min	82.01	3	-275.845	1	-402.6	3	-.045	2	-.784	3	.101	10
185		3	max	988.001	8	486.993	2	325.833	4	.05	1	.341	4	.134	1
186			min	25.339	3	-303.881	1	-373.222	3	-.045	2	-.455	3	-.271	2
187		4	max	-82.01	2	275.35	1	401.4	3	0	8	.401	4	.275	1
188			min	-317.566	5	-275.271	2	-401.479	4	0	3	-.401	3	-.275	2
189		5	max	0	11	.547	8	.019	4	0	8	0	11	0	11
190			min	0	5	-.077	3	-.495	5	0	3	0	1	0	1
191	MP4B	1	max	164.45	5	189.602	2	231.082	4	0	2	0	4	0	11
192			min	30.18	2	-189.631	1	-231.074	3	0	5	0	3	0	1
193		2	max	365.032	1	440.847	4	49.818	4	.208	4	.193	1	.57	4
194			min	-471.477	2	-241.747	3	-195.36	7	-.186	3	-.121	2	-.314	3
195		3	max	440.544	1	513.519	4	175.689	4	.208	4	.347	4	.319	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
196			min	-395.965	2	-314.419	3	-281.984	3	-.186	3	-.513	3	-.51	2
197		4	max	-44.972	1	217.848	1	259.21	3	0	5	.09	4	.079	1
198			min	-201.883	6	-217.828	2	-259.233	4	0	2	-.09	3	-.079	2
199		5	max	0	5	.174	5	.062	3	0	5	0	2	0	11
200			min	0	2	-.046	2	-.212	8	0	2	0	1	0	1
201	MP1C	1	max	94.015	5	71.693	1	120.595	3	0	5	0	3	0	11
202			min	24.42	2	-71.663	2	-120.602	4	0	2	0	4	0	1
203		2	max	351.321	3	188.613	4	31.031	3	.093	4	.057	4	.049	4
204			min	-499.354	4	-349.543	3	-119.85	8	-.104	3	-.088	3	-.094	3
205		3	max	-41.08	2	113.273	2	162.22	4	0	2	.144	3	.119	2
206			min	-146.596	5	-113.296	1	-162.239	3	0	5	-.144	4	-.119	1
207		4	max	-8.33	2	20.865	2	20.921	4	0	2	.021	3	.021	2
208			min	-26.291	5	-20.888	1	-20.94	3	0	5	-.021	4	-.021	1
209		5	max	0	11	.037	2	.093	4	0	2	0	8	0	11
210			min	0	5	-.15	5	-.164	7	0	5	0	2	0	1
211	MP2C	1	max	0	5	.009	5	.011	3	0	5	0	11	0	11
212			min	0	2	-.003	2	-.012	8	0	2	0	2	0	1
213		2	max	611.463	7	270.799	4	229.299	3	.074	4	.117	4	.238	4
214			min	97.678	4	-441.971	3	-273.759	4	-.086	3	-.172	3	-.333	3
215		3	max	631.181	7	279.818	4	244.92	3	.074	4	.183	3	.336	3
216			min	103.925	4	-450.989	3	-289.379	4	-.086	3	-.305	4	-.175	4
217		4	max	-6.247	2	15.631	2	15.645	4	0	2	.012	3	.012	2
218			min	-19.718	5	-15.638	1	-15.652	3	0	5	-.012	4	-.012	1
219		5	max	0	11	.01	2	.024	4	0	2	0	11	0	11
220			min	0	5	-.045	5	-.053	7	0	5	0	2	0	1
221	MP3C	1	max	291.275	7	254.904	1	381.77	3	0	1	0	3	0	11
222			min	73.68	4	-254.953	2	-381.798	4	0	6	0	4	0	1
223		2	max	775.709	5	515.621	1	402.597	3	.079	3	.784	3	.757	1
224			min	82.01	2	-314.52	2	-402.626	4	-.073	4	-.784	4	-.452	4
225		3	max	975.065	5	591.644	1	237.263	3	.079	3	.336	3	.179	2
226			min	55.576	2	-390.542	2	-297.555	4	-.073	4	-.463	4	-.323	1
227		4	max	-82.01	4	275.313	2	401.368	4	0	5	.401	3	.275	2
228			min	-317.566	7	-275.242	1	-401.451	3	0	2	-.401	4	-.275	1
229		5	max	0	4	.496	5	.047	3	0	5	0	11	0	11
230			min	0	7	-.047	2	-.528	8	0	2	0	1	0	1
231	MP4C	1	max	164.45	7	189.567	1	231.122	3	0	1	0	3	0	11
232			min	30.18	4	-189.6	2	-231.115	4	0	6	0	4	0	1
233		2	max	553.516	3	390.8	1	65.976	1	.075	3	.202	3	.498	1
234			min	-663.162	4	-236.504	2	-162.734	6	-.067	4	-.14	4	-.297	2
235		3	max	623.607	3	464.589	1	108.578	1	.075	3	.179	3	.312	2
236			min	-593.071	4	-310.293	2	-192.267	2	-.067	4	-.302	4	-.458	1
237		4	max	-39.551	4	212.833	2	254.177	4	0	5	.084	3	.074	2
238			min	-194.027	7	-212.815	1	-254.204	3	0	2	-.084	4	-.074	1
239		5	max	0	11	.171	5	.027	9	0	5	0	11	0	11
240			min	0	7	-.016	2	-.215	8	0	2	0	1	0	1
241	M25	1	max	0	11	.019	1	.006	1	0	11	0	11	0	11
242			min	0	1	-.001	8	-.008	4	0	1	0	1	0	1
243		2	max	-54.289	2	293.5	3	91.943	2	.58	3	.392	3	.254	4
244			min	-425.446	5	-526.781	4	-129.809	1	-.493	4	-.389	4	-.157	3
245		3	max	-164.082	2	229.911	1	108.638	4	.328	4	.243	3	.27	1
246			min	-711.115	5	-234.839	2	-97.641	3	-.305	3	-.314	4	-.156	2
247		4	max	209.772	1	542.191	5	204.515	2	.392	1	.144	2	.531	5
248			min	-483.337	6	-166.583	2	-148.039	1	-.459	2	-.122	1	.021	3
249		5	max	0	11	.001	7	.006	1	0	11	0	11	0	11
250			min	0	1	-.011	2	-.008	4	0	1	0	1	0	1
251	M26	1	max	0	11	0	11	0	11	0	11	0	11	0	11
252			min	0	1	0	1	0	1	0	1	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
253		2	max	99.652	3	293.76	4	159.608	1	.691	1	.565	1	.333	2
254			min	-382.575	8	-515.614	3	-211.177	2	-.597	2	-.564	2	-.182	1
255		3	max	-101.729	10	228.026	4	143.424	2	.402	2	.429	1	.29	6
256			min	-670.196	6	-236.343	3	-131.676	1	-.384	1	-.513	2	-.133	1
257		4	max	197.831	4	532.564	8	192.783	3	.52	2	.203	3	.581	6
258			min	-450.865	7	-81.159	3	-135.355	4	-.592	1	-.193	4	-.018	1
259		5	max	0	11	0	11	0	11	0	11	0	11	0	11
260			min	0	1	0	1	0	1	0	1	0	1	0	1
261	M27	1	max	0	11	.014	3	.014	3	0	11	0	11	0	11
262			min	0	1	-.001	5	-.003	1	0	1	0	1	0	1
263		2	max	97.791	1	353.781	2	157.167	4	.544	4	.465	4	.282	5
264			min	-400.953	6	-584.518	1	-205.209	3	-.448	3	-.456	3	-.111	2
265		3	max	-80.936	4	202.469	2	105.253	3	.282	3	.383	4	.356	3
266			min	-703.821	7	-212.529	1	-92.998	4	-.263	4	-.458	3	-.202	4
267		4	max	59.639	3	547.745	7	138.28	1	.542	3	.12	4	.589	7
268			min	-449.634	5	-140.664	4	-81.405	2	-.612	4	-.1	3	.005	4
269		5	max	0	11	.002	7	.007	3	0	11	0	11	0	11
270			min	0	1	-.015	1	-.001	1	0	1	0	1	0	1
271	M28	1	max	1806.344	1	68.663	2	139.162	1	0	4	.157	2	.259	2
272			min	-1864.317	2	-77.042	1	-127.315	2	-.002	7	-.145	1	-.265	1
273		2	max	1793.95	1	62.015	2	146.318	1	0	4	.104	2	.137	3
274			min	-1851.923	2	-83.69	1	-134.471	2	-.002	7	-.095	1	-.122	4
275		3	max	1781.556	1	55.366	2	153.474	1	0	4	.041	2	.102	1
276			min	-1839.529	2	-90.338	1	-141.626	2	-.002	7	-.045	1	-.055	2
277		4	max	1769.162	1	48.718	2	160.629	1	0	4	.039	4	.303	1
278			min	-1827.135	2	-106.04	5	-148.782	2	-.002	7	-.066	3	-.213	2
279		5	max	1756.768	1	42.07	2	167.785	1	0	4	.101	4	.514	1
280			min	-1814.741	2	-132.661	5	-155.938	2	-.002	7	-.163	3	-.371	2
281	M29	1	max	1780.279	1	41.676	3	98.171	2	.002	5	.133	1	.278	1
282			min	-1725.09	2	-51.31	4	-82.085	1	0	2	-.137	2	-.262	2
283		2	max	1767.885	1	35.028	3	105.327	2	.002	5	.066	1	.208	1
284			min	-1712.696	2	-57.958	4	-89.241	1	0	2	-.07	2	-.166	2
285		3	max	1755.491	1	28.379	3	112.483	2	.002	5	.024	3	.137	1
286			min	-1700.302	2	-67.005	8	-96.397	1	0	2	-.038	4	-.059	2
287		4	max	1743.097	1	21.731	3	119.639	2	.002	5	.064	2	.223	8
288			min	-1687.908	2	-100.579	8	-103.553	1	0	2	-.1	1	-.075	3
289		5	max	1730.703	1	15.083	3	126.794	2	.002	5	.132	2	.355	8
290			min	-1675.514	2	-127.333	8	-110.708	1	0	2	-.2	1	-.165	3
291	M30	1	max	1960.938	2	70.177	1	105.422	2	0	2	.127	1	.33	1
292			min	-2009.253	1	-75.6	2	-93.917	1	-.002	5	-.12	2	-.331	2
293		2	max	1960.938	2	63.529	1	134.045	2	0	2	.094	1	.19	1
294			min	-2009.253	1	-82.248	2	-122.54	1	-.002	5	-.087	2	-.172	2
295		3	max	1960.938	2	56.88	1	162.668	2	0	2	.032	1	.111	4
296			min	-2009.253	1	-88.897	2	-151.163	1	-.002	5	-.037	2	-.063	3
297		4	max	1960.938	2	50.232	1	191.29	2	0	2	.031	2	.237	4
298			min	-2009.253	1	-100.599	6	-179.786	1	-.002	5	-.057	1	-.149	3
299		5	max	1960.938	2	43.584	1	219.913	2	0	2	.116	2	.473	2
300			min	-2009.253	1	-127.563	6	-208.408	1	-.002	5	-.175	1	-.335	1
301	M31	1	max	1924.882	4	31.833	1	92.753	3	.002	6	.135	4	.293	4
302			min	-1886.708	3	-41.837	2	-75.681	4	0	1	-.139	3	-.281	3
303		2	max	1912.488	4	25.185	1	114.22	3	.002	6	.084	4	.206	4
304			min	-1874.314	3	-48.485	2	-97.149	4	0	1	-.087	3	-.168	3
305		3	max	1900.094	4	18.536	1	135.687	3	.002	6	.021	1	.136	2
306			min	-1861.92	3	-66.242	6	-118.616	4	0	1	-.035	2	-.059	1
307		4	max	1887.7	4	11.888	1	157.155	3	.002	6	.052	3	.224	6
308			min	-1849.526	3	-98.704	6	-140.083	4	0	1	-.087	4	-.076	1
309		5	max	1875.306	4	5.24	1	178.622	3	.002	6	.14	3	.355	7

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
310			min	-1837.132	3	-125.839	6	-161.55	4	0	1	-.206	4	-.125	4
311	M32	1	max	2241.544	3	85.658	4	142.566	3	0	3	.16	4	.358	4
312			min	-2279.815	4	-89.611	3	-130.957	4	-.001	8	-.155	3	-.358	3
313		2	max	2229.15	3	79.01	4	164.034	3	0	3	.112	4	.178	4
314			min	-2267.421	4	-96.259	3	-152.424	4	-.001	8	-.107	3	-.161	3
315		3	max	2216.756	3	72.362	4	185.501	3	0	3	.042	4	.103	2
316			min	-2255.027	4	-102.907	3	-173.891	4	-.001	8	-.047	3	-.056	1
317		4	max	2204.362	3	65.713	4	206.968	3	0	3	.025	3	.3	3
318			min	-2242.632	4	-109.555	3	-195.359	4	-.001	8	-.05	4	-.215	4
319		5	max	2191.968	3	59.065	4	228.435	3	0	3	.109	3	.565	3
320			min	-2230.238	4	-130.288	7	-216.826	4	-.001	8	-.165	4	-.43	4
321	M33	1	max	1505.989	2	32.874	2	62.679	1	.002	7	.097	2	.226	2
322			min	-1477.035	1	-43.237	1	-44.966	2	0	4	-.101	1	-.218	1
323		2	max	1505.989	2	26.225	2	91.302	1	.002	7	.074	2	.159	3
324			min	-1477.035	1	-49.885	1	-73.589	2	0	4	-.077	1	-.122	4
325		3	max	1505.989	2	19.577	2	119.925	1	.002	7	.022	2	.146	3
326			min	-1477.035	1	-67.537	5	-102.212	2	0	4	-.035	1	-.071	4
327		4	max	1505.989	2	12.929	2	148.548	1	.002	7	.052	4	.219	5
328			min	-1477.035	1	-101.123	5	-130.834	2	0	4	-.087	3	-.04	2
329		5	max	1505.989	2	6.281	2	177.171	1	.002	7	.102	1	.364	5
330			min	-1477.035	1	-127.825	5	-159.457	2	0	4	-.167	2	-.164	2
331	M34	1	max	348.49	1	365.576	2	717.016	1	.005	1	.212	3	.825	2
332			min	-507.216	2	-350.072	1	-671.597	2	-.005	2	-.237	4	-.694	1
333		2	max	341.639	1	361.62	2	713.341	1	.005	1	.155	3	.367	2
334			min	-500.365	2	-346.116	1	-675.272	2	-.005	2	-.155	4	-.224	1
335		3	max	334.788	1	357.665	2	709.666	1	.005	1	.139	1	.266	5
336			min	-493.514	2	-342.161	1	-678.947	2	-.005	2	-.116	2	-.092	2
337		4	max	327.937	1	353.709	2	705.991	1	.005	1	.302	1	.706	1
338			min	-486.662	2	-338.205	1	-682.622	2	-.005	2	-.26	2	-.55	2
339		5	max	321.086	1	349.754	2	702.316	1	.005	1	.464	1	1.166	1
340			min	-479.811	2	-334.25	1	-686.297	2	-.005	2	-.407	2	-1.008	2
341	M35	1	max	222.928	2	714.282	4	306.927	3	.004	3	.432	3	.962	4
342			min	-378.529	1	-730.331	3	-328.451	4	-.004	4	-.37	4	-1.105	3
343		2	max	222.928	2	710.607	4	306.927	3	.004	3	.244	3	.502	4
344			min	-378.529	1	-734.006	3	-328.451	4	-.004	4	-.2	4	-.646	3
345		3	max	222.928	2	706.932	4	306.927	3	.004	3	.098	2	.044	4
346			min	-378.529	1	-737.681	3	-328.451	4	-.004	4	-.075	1	-.241	7
347		4	max	222.928	2	703.257	4	306.927	3	.004	3	.134	4	.278	3
348			min	-378.529	1	-741.356	3	-328.451	4	-.004	4	-.137	3	-.413	4
349		5	max	222.928	2	699.582	4	306.927	3	.004	3	.299	4	.742	3
350			min	-378.529	1	-745.031	3	-328.451	4	-.004	4	-.33	3	-.868	4
351	M36	1	max	366.906	4	332.378	3	567.511	2	.003	2	.337	1	.684	1
352			min	-519.886	3	-326.352	4	-527.325	1	-.004	1	-.345	2	-.561	2
353		2	max	360.054	4	320.512	3	563.836	2	.003	2	.202	1	.351	1
354			min	-513.034	3	-314.486	4	-531	1	-.004	1	-.193	2	-.213	2
355		3	max	353.203	4	308.645	3	560.161	2	.003	2	.148	4	.254	8
356			min	-506.183	3	-302.619	4	-534.675	1	-.004	1	-.124	3	-.036	3
357		4	max	346.352	4	296.778	3	556.486	2	.003	2	.212	4	.512	4
358			min	-499.332	3	-290.752	4	-538.35	1	-.004	1	-.177	3	-.357	3
359		5	max	339.501	4	284.912	3	552.811	2	.003	2	.279	4	.832	2
360			min	-492.481	3	-278.886	4	-542.025	1	-.004	1	-.237	3	-.673	3
361	M37	1	max	229.614	1	658.871	1	43.796	1	.929	3	.079	1	.272	2
362			min	-324.097	2	-474.632	2	-265.021	6	-.703	4	-.045	2	-.31	1
363		2	max	229.614	1	658.871	1	43.796	1	.929	3	.081	1	.296	2
364			min	-324.097	2	-474.632	2	-265.021	6	-.703	4	-.054	2	-.342	1
365		3	max	229.614	1	658.871	1	43.796	1	.929	3	.083	1	.32	2
366			min	-324.097	2	-474.632	2	-265.021	6	-.703	4	-.064	2	-.375	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
367		4	max	229.614	1	658.871	1	43.796	1	.929	3	.085	1	.343	2
368			min	-324.097	2	-474.632	2	-265.021	6	-.703	4	-.073	2	-.408	1
369		5	max	229.614	1	658.871	1	43.796	1	.929	3	.088	1	.367	2
370			min	-324.097	2	-474.632	2	-265.021	6	-.703	4	-.083	2	-.441	1
371	M38	1	max	556.953	1	628.876	2	678.604	3	.438	9	.155	4	-.016	1
372			min	-462.452	2	-503.531	1	-531.754	4	-.043	1	-.189	3	-.212	6
373		2	max	556.953	1	628.876	2	678.604	3	.438	9	.128	4	.009	1
374			min	-462.452	2	-503.531	1	-531.754	4	-.043	1	-.155	3	-.231	6
375		3	max	556.953	1	628.876	2	678.604	3	.438	9	.102	4	.034	1
376			min	-462.452	2	-503.531	1	-531.754	4	-.043	1	-.122	3	-.25	6
377		4	max	556.953	1	628.876	2	678.604	3	.438	9	.075	4	.059	1
378			min	-462.452	2	-503.531	1	-531.754	4	-.043	1	-.088	3	-.269	6
379		5	max	556.953	1	628.876	2	678.604	3	.438	9	.083	2	.084	1
380			min	-462.452	2	-503.531	1	-531.754	4	-.043	1	-.088	1	-.287	6
381	M39	1	max	236.206	1	38.865	4	48.686	4	1.203	3	.099	7	.998	2
382			min	-299.866	2	-436.282	6	-346.079	7	-.958	4	-.039	4	-1.075	1
383		2	max	236.206	1	38.865	4	48.686	4	1.203	3	.081	7	1.014	2
384			min	-299.866	2	-436.282	6	-346.079	7	-.958	4	-.036	4	-1.077	1
385		3	max	236.206	1	38.865	4	48.686	4	1.203	3	.075	1	1.029	2
386			min	-299.866	2	-436.282	6	-346.079	7	-.958	4	-.043	2	-1.079	1
387		4	max	236.206	1	38.865	4	48.686	4	1.203	3	.073	1	1.045	2
388			min	-299.866	2	-436.282	6	-346.079	7	-.958	4	-.051	2	-1.081	1
389		5	max	236.206	1	38.865	4	48.686	4	1.203	3	.072	1	1.061	2
390			min	-299.866	2	-436.282	6	-346.079	7	-.958	4	-.06	2	-1.083	1
391	M40	1	max	934.633	1	1296.83	7	857.214	3	.598	7	.223	4	.149	1
392			min	-870.96	2	227.72	1	-667.059	4	-.07	4	-.274	3	-.094	2
393		2	max	934.633	1	1296.83	7	857.214	3	.598	7	.19	4	.138	1
394			min	-870.96	2	227.72	1	-667.059	4	-.07	4	-.231	3	-.123	2
395		3	max	934.633	1	1296.83	7	857.214	3	.598	7	.157	4	.127	1
396			min	-870.96	2	227.72	1	-667.059	4	-.07	4	-.188	3	-.152	2
397		4	max	934.633	1	1296.83	7	857.214	3	.598	7	.123	4	.115	1
398			min	-870.96	2	227.72	1	-667.059	4	-.07	4	-.146	3	-.181	2
399		5	max	934.633	1	1296.83	7	857.214	3	.598	7	.09	4	.104	1
400			min	-870.96	2	227.72	1	-667.059	4	-.07	4	-.103	3	-.209	2
401	M41	1	max	154.282	2	-75.064	1	462.361	4	.51	3	.092	3	.142	4
402			min	-200.256	1	-585.444	6	-295.555	3	-.728	4	-.13	4	-.234	3
403		2	max	154.282	2	-75.064	1	462.361	4	.51	3	.077	3	.151	4
404			min	-200.256	1	-585.444	6	-295.555	3	-.728	4	-.106	4	-.225	3
405		3	max	154.282	2	-75.064	1	462.361	4	.51	3	.062	3	.16	4
406			min	-200.256	1	-585.444	6	-295.555	3	-.728	4	-.083	4	-.215	3
407		4	max	154.282	2	-75.064	1	462.361	4	.51	3	.071	2	.169	4
408			min	-200.256	1	-585.444	6	-295.555	3	-.728	4	-.083	1	-.206	3
409		5	max	154.282	2	-75.064	1	462.361	4	.51	3	.081	2	.178	4
410			min	-200.256	1	-585.444	6	-295.555	3	-.728	4	-.085	1	-.197	3
411	M42	1	max	272.408	1	664.32	6	367.687	3	.434	3	.151	4	.414	2
412			min	-226.425	2	100.417	1	-534.49	4	-.716	4	-.113	3	-.442	1
413		2	max	272.408	1	664.32	6	367.687	3	.434	3	.124	4	.398	2
414			min	-226.425	2	100.417	1	-534.49	4	-.716	4	-.095	3	-.447	1
415		3	max	272.408	1	664.32	6	367.687	3	.434	3	.098	4	.382	2
416			min	-226.425	2	100.417	1	-534.49	4	-.716	4	-.077	3	-.452	1
417		4	max	272.408	1	664.32	6	367.687	3	.434	3	.083	1	.367	2
418			min	-226.425	2	100.417	1	-534.49	4	-.716	4	-.071	2	-.457	1
419		5	max	272.408	1	664.32	6	367.687	3	.434	3	.085	1	.351	2
420			min	-226.425	2	100.417	1	-534.49	4	-.716	4	-.081	2	-.462	1
421	M43	1	max	123.718	1	498.93	1	291.106	8	.316	3	.034	2	.109	4
422			min	-199.066	2	-287.248	2	-114.194	3	-.553	4	-.069	1	-.108	3
423		2	max	123.718	1	498.93	1	291.106	8	.316	3	.044	2	.114	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
424			min	-199.066	2	-287.248	2	-114.194	3	-.553	4	-.071	1	-.123	3
425		3	max	123.718	1	498.93	1	291.106	8	.316	3	.053	2	.119	4
426			min	-199.066	2	-287.248	2	-114.194	3	-.553	4	-.072	1	-.138	3
427		4	max	123.718	1	498.93	1	291.106	8	.316	3	.062	2	.123	4
428			min	-199.066	2	-287.248	2	-114.194	3	-.553	4	-.074	1	-.154	3
429		5	max	123.718	1	498.93	1	291.106	8	.316	3	.072	2	.128	4
430			min	-199.066	2	-287.248	2	-114.194	3	-.553	4	-.075	1	-.169	3
431	M44	1	max	404.732	1	427.131	2	379.345	3	.177	3	.114	4	-.008	4
432			min	-329.407	2	-358.801	1	-532.489	4	-.423	8	-.08	3	-.215	7
433		2	max	404.732	1	427.131	2	379.345	3	.177	3	.088	4	-.02	4
434			min	-329.407	2	-358.801	1	-532.489	4	-.423	8	-.061	3	-.223	6
435		3	max	404.732	1	427.131	2	379.345	3	.177	3	.072	1	-.01	1
436			min	-329.407	2	-358.801	1	-532.489	4	-.423	8	-.053	2	-.232	6
437		4	max	404.732	1	427.131	2	379.345	3	.177	3	.074	1	.008	1
438			min	-329.407	2	-358.801	1	-532.489	4	-.423	8	-.062	2	-.241	6
439		5	max	404.732	1	427.131	2	379.345	3	.177	3	.075	1	.026	1
440			min	-329.407	2	-358.801	1	-532.489	4	-.423	8	-.072	2	-.25	6
441	M45	1	max	234.124	4	701.057	4	24.094	2	.995	1	.071	8	.328	1
442			min	-322.339	3	-516.298	3	-273.327	5	-.756	2	-.027	3	-.357	2
443		2	max	234.124	4	701.057	4	24.094	2	.995	1	.066	4	.327	1
444			min	-322.339	3	-516.298	3	-273.327	5	-.756	2	-.035	3	-.366	2
445		3	max	234.124	4	701.057	4	24.094	2	.995	1	.066	4	.326	1
446			min	-322.339	3	-516.298	3	-273.327	5	-.756	2	-.043	3	-.374	2
447		4	max	234.124	4	701.057	4	24.094	2	.995	1	.066	4	.325	1
448			min	-322.339	3	-516.298	3	-273.327	5	-.756	2	-.051	3	-.383	2
449		5	max	234.124	4	701.057	4	24.094	2	.995	1	.066	4	.325	1
450			min	-322.339	3	-516.298	3	-273.327	5	-.756	2	-.059	3	-.392	2
451	M46	1	max	418.644	4	671.466	3	700.417	1	.39	5	.14	3	.01	4
452			min	-330.446	3	-545.026	4	-547.219	2	-.006	2	-.179	4	-.21	7
453		2	max	418.644	4	671.466	3	700.417	1	.39	5	.129	3	.037	4
454			min	-330.446	3	-545.026	4	-547.219	2	-.006	2	-.16	4	-.229	7
455		3	max	418.644	4	671.466	3	700.417	1	.39	5	.118	3	.064	4
456			min	-330.446	3	-545.026	4	-547.219	2	-.006	2	-.141	4	-.248	7
457		4	max	418.644	4	671.466	3	700.417	1	.39	5	.107	3	.092	4
458			min	-330.446	3	-545.026	4	-547.219	2	-.006	2	-.122	4	-.267	7
459		5	max	418.644	4	671.466	3	700.417	1	.39	5	.096	3	.119	4
460			min	-330.446	3	-545.026	4	-547.219	2	-.006	2	-.104	4	-.286	7
461	M47	1	max	208.747	4	124.873	2	39.13	2	1.287	1	.103	8	.73	3
462			min	-269.58	3	-458.185	5	-357.425	5	-1.029	2	-.037	3	-.807	4
463		2	max	208.747	4	124.873	2	39.13	2	1.287	1	.088	4	.739	3
464			min	-269.58	3	-458.185	5	-357.425	5	-1.029	2	-.044	3	-.801	4
465		3	max	208.747	4	124.873	2	39.13	2	1.287	1	.085	4	.747	3
466			min	-269.58	3	-458.185	5	-357.425	5	-1.029	2	-.051	3	-.795	4
467		4	max	208.747	4	124.873	2	39.13	2	1.287	1	.082	4	.755	3
468			min	-269.58	3	-458.185	5	-357.425	5	-1.029	2	-.058	3	-.789	4
469		5	max	208.747	4	124.873	2	39.13	2	1.287	1	.079	4	.763	3
470			min	-269.58	3	-458.185	5	-357.425	5	-1.029	2	-.065	3	-.784	4
471	M48	1	max	717.988	4	1319.001	5	885.109	1	.608	5	.203	2	.162	1
472			min	-657.207	3	145.467	2	-686.951	2	-.019	2	-.256	1	-.107	2
473		2	max	717.988	4	1319.001	5	885.109	1	.608	5	.177	3	.137	4
474			min	-657.207	3	145.467	2	-686.951	2	-.019	2	-.221	4	-.123	3
475		3	max	717.988	4	1319.001	5	885.109	1	.608	5	.157	3	.118	4
476			min	-657.207	3	145.467	2	-686.951	2	-.019	2	-.192	4	-.144	3
477		4	max	717.988	4	1319.001	5	885.109	1	.608	5	.137	3	.099	4
478			min	-657.207	3	145.467	2	-686.951	2	-.019	2	-.162	4	-.166	3
479		5	max	717.988	4	1319.001	5	885.109	1	.608	5	.118	3	.08	4
480			min	-657.207	3	145.467	2	-686.951	2	-.019	2	-.132	4	-.196	6

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
481	M49	1	max	211.23	3	-89.505	4	432.45	3	.441	4	.099	1	.26	3
482			min	-257.363	4	-591.761	7	-261.197	4	-.665	3	-.138	2	-.35	4
483		2	max	211.23	3	-89.505	4	432.45	3	.441	4	.088	1	.274	3
484			min	-257.363	4	-591.761	7	-261.197	4	-.665	3	-.119	2	-.345	4
485		3	max	211.23	3	-89.505	4	432.45	3	.441	4	.078	1	.288	3
486			min	-257.363	4	-591.761	7	-261.197	4	-.665	3	-.1	2	-.341	4
487		4	max	211.23	3	-89.505	4	432.45	3	.441	4	.067	1	.302	3
488			min	-257.363	4	-591.761	7	-261.197	4	-.665	3	-.081	2	-.336	4
489		5	max	211.23	3	-89.505	4	432.45	3	.441	4	.057	1	.316	3
490			min	-257.363	4	-591.761	7	-261.197	4	-.665	3	-.062	2	-.332	4
491	M50	1	max	319.804	4	670.616	7	297.924	4	.371	4	.157	2	.435	3
492			min	-273.731	3	114.748	4	-467.893	3	-.661	3	-.118	1	-.464	4
493		2	max	319.804	4	670.616	7	297.924	4	.371	4	.135	2	.42	3
494			min	-273.731	3	114.748	4	-467.893	3	-.661	3	-.104	1	-.47	4
495		3	max	319.804	4	670.616	7	297.924	4	.371	4	.112	2	.405	3
496			min	-273.731	3	114.748	4	-467.893	3	-.661	3	-.09	1	-.476	4
497		4	max	319.804	4	670.616	7	297.924	4	.371	4	.09	2	.389	3
498			min	-273.731	3	114.748	4	-467.893	3	-.661	3	-.076	1	-.481	4
499		5	max	319.804	4	670.616	7	297.924	4	.371	4	.068	2	.374	3
500			min	-273.731	3	114.748	4	-467.893	3	-.661	3	-.063	1	-.487	4
501	M51	1	max	41.221	4	531.905	4	294.693	7	.334	4	.024	3	.117	3
502			min	-117.839	5	-319.089	3	-108.456	4	-.58	3	-.067	8	-.105	4
503		2	max	41.221	4	531.905	4	294.693	7	.334	4	.037	3	.133	3
504			min	-117.839	5	-319.089	3	-108.456	4	-.58	3	-.067	4	-.131	4
505		3	max	41.221	4	531.905	4	294.693	7	.334	4	.05	3	.148	3
506			min	-117.839	5	-319.089	3	-108.456	4	-.58	3	-.072	4	-.158	4
507		4	max	41.221	4	531.905	4	294.693	7	.334	4	.064	3	.164	3
508			min	-117.839	5	-319.089	3	-108.456	4	-.58	3	-.077	4	-.185	4
509		5	max	41.221	4	531.905	4	294.693	7	.334	4	.077	3	.18	3
510			min	-117.839	5	-319.089	3	-108.456	4	-.58	3	-.083	4	-.211	4
511	M52	1	max	380.534	4	459.478	3	352.344	4	.198	4	.131	2	-.022	2
512			min	-309.313	3	-391.313	4	-510.021	3	-.437	7	-.094	1	-.209	5
513		2	max	380.534	4	459.478	3	352.344	4	.198	4	.108	2	-.021	2
514			min	-309.313	3	-391.313	4	-510.021	3	-.437	7	-.078	1	-.215	5
515		3	max	380.534	4	459.478	3	352.344	4	.198	4	.084	2	-.021	2
516			min	-309.313	3	-391.313	4	-510.021	3	-.437	7	-.063	1	-.221	5
517		4	max	380.534	4	459.478	3	352.344	4	.198	4	.061	2	-.02	2
518			min	-309.313	3	-391.313	4	-510.021	3	-.437	7	-.048	1	-.229	7
519		5	max	380.534	4	459.478	3	352.344	4	.198	4	.059	4	-.007	4
520			min	-309.313	3	-391.313	4	-510.021	3	-.437	7	-.053	3	-.238	7
521	M53	1	max	112.969	2	516.038	2	93.141	3	.961	4	.157	3	.325	4
522			min	-220.843	1	-320.911	1	-360.471	8	-.656	3	-.115	4	-.363	3
523		2	max	112.969	2	516.038	2	93.141	3	.961	4	.161	3	.336	4
524			min	-220.843	1	-320.911	1	-360.471	8	-.656	3	-.129	4	-.383	3
525		3	max	112.969	2	516.038	2	93.141	3	.961	4	.166	3	.347	4
526			min	-220.843	1	-320.911	1	-360.471	8	-.656	3	-.144	4	-.404	3
527		4	max	112.969	2	516.038	2	93.141	3	.961	4	.171	3	.358	4
528			min	-220.843	1	-320.911	1	-360.471	8	-.656	3	-.158	4	-.424	3
529		5	max	112.969	2	516.038	2	93.141	3	.961	4	.175	3	.368	4
530			min	-220.843	1	-320.911	1	-360.471	8	-.656	3	-.173	4	-.445	3
531	M54	1	max	571.441	3	500.049	1	687.933	2	.531	8	.205	1	0	4
532			min	-461.384	4	-336.609	2	-485.941	1	-.138	3	-.249	2	-.269	7
533		2	max	571.441	3	500.049	1	687.933	2	.531	8	.181	1	-.02	4
534			min	-461.384	4	-336.609	2	-485.941	1	-.138	3	-.215	2	-.282	5
535		3	max	571.441	3	500.049	1	687.933	2	.531	8	.156	1	-.021	2
536			min	-461.384	4	-336.609	2	-485.941	1	-.138	3	-.18	2	-.3	5
537		4	max	571.441	3	500.049	1	687.933	2	.531	8	.132	1	-.004	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
538			min	-461.384	4	-336.609	2	-485.941	1	-.138	3	-.146	2	-.319	5
539		5	max	571.441	3	500.049	1	687.933	2	.531	8	.126	4	.013	2
540			min	-461.384	4	-336.609	2	-485.941	1	-.138	3	-.129	3	-.337	5
541	M55	1	max	131.036	3	153.695	3	-46.695	3	1.131	2	.094	6	.82	4
542			min	-183.637	4	-471.227	8	-308.332	8	-.901	1	-.036	1	-.886	3
543		2	max	131.036	3	153.695	3	-46.695	3	1.131	2	.079	6	.842	4
544			min	-183.637	4	-471.227	8	-308.332	8	-.901	1	-.038	1	-.893	3
545		3	max	131.036	3	153.695	3	-46.695	3	1.131	2	.072	2	.864	4
546			min	-183.637	4	-471.227	8	-308.332	8	-.901	1	-.041	1	-.901	3
547		4	max	131.036	3	153.695	3	-46.695	3	1.131	2	.065	2	.886	4
548			min	-183.637	4	-471.227	8	-308.332	8	-.901	1	-.043	1	-.909	3
549		5	max	131.036	3	153.695	3	-46.695	3	1.131	2	.059	2	.908	4
550			min	-183.637	4	-471.227	8	-308.332	8	-.901	1	-.046	1	-.916	3
551	M56	1	max	795.728	3	1331.574	8	781.236	2	.536	8	.23	1	.149	8
552			min	-743.128	4	113.511	3	-599.332	1	.102	3	-.279	2	-.053	1
553		2	max	795.728	3	1331.574	8	781.236	2	.536	8	.2	1	.107	2
554			min	-743.128	4	113.511	3	-599.332	1	.102	3	-.24	2	-.068	1
555		3	max	795.728	3	1331.574	8	781.236	2	.536	8	.17	1	.081	2
556			min	-743.128	4	113.511	3	-599.332	1	.102	3	-.201	2	-.083	1
557		4	max	795.728	3	1331.574	8	781.236	2	.536	8	.14	1	.055	2
558			min	-743.128	4	113.511	3	-599.332	1	.102	3	-.162	2	-.098	1
559		5	max	795.728	3	1331.574	8	781.236	2	.536	8	.11	1	.029	2
560			min	-743.128	4	113.511	3	-599.332	1	.102	3	-.123	2	-.145	7
561	M57	1	max	166.827	1	-76.678	3	511.951	1	.557	2	.095	4	.257	1
562			min	-212.404	2	-570.64	5	-330.03	2	-.797	1	-.135	3	-.347	2
563		2	max	166.827	1	-76.678	3	511.951	1	.557	2	.093	4	.27	1
564			min	-212.404	2	-570.64	5	-330.03	2	-.797	1	-.124	3	-.342	2
565		3	max	166.827	1	-76.678	3	511.951	1	.557	2	.091	4	.284	1
566			min	-212.404	2	-570.64	5	-330.03	2	-.797	1	-.113	3	-.337	2
567		4	max	166.827	1	-76.678	3	511.951	1	.557	2	.089	4	.297	1
568			min	-212.404	2	-570.64	5	-330.03	2	-.797	1	-.102	3	-.333	2
569		5	max	166.827	1	-76.678	3	511.951	1	.557	2	.087	4	.31	1
570			min	-212.404	2	-570.64	5	-330.03	2	-.797	1	-.091	3	-.328	2
571	M58	1	max	248.472	2	649.565	5	392.737	2	.481	2	.146	3	.282	1
572			min	-202.906	1	101.732	3	-574.173	1	-.789	1	-.105	4	-.312	2
573		2	max	248.472	2	649.565	5	392.737	2	.481	2	.133	3	.268	1
574			min	-202.906	1	101.732	3	-574.173	1	-.789	1	-.102	4	-.318	2
575		3	max	248.472	2	649.565	5	392.737	2	.481	2	.12	3	.253	1
576			min	-202.906	1	101.732	3	-574.173	1	-.789	1	-.098	4	-.324	2
577		4	max	248.472	2	649.565	5	392.737	2	.481	2	.107	3	.239	1
578			min	-202.906	1	101.732	3	-574.173	1	-.789	1	-.094	4	-.33	2
579		5	max	248.472	2	649.565	5	392.737	2	.481	2	.094	3	.224	1
580			min	-202.906	1	101.732	3	-574.173	1	-.789	1	-.09	4	-.336	2
581	M59	1	max	113.145	3	478.457	2	314.056	5	.364	2	.019	4	.149	1
582			min	-185.027	4	-273.914	1	-124.939	2	-.62	1	-.071	7	-.147	2
583		2	max	113.145	3	478.457	2	314.056	5	.364	2	.025	4	.162	1
584			min	-185.027	4	-273.914	1	-124.939	2	-.62	1	-.058	7	-.171	2
585		3	max	113.145	3	478.457	2	314.056	5	.364	2	.03	4	.176	1
586			min	-185.027	4	-273.914	1	-124.939	2	-.62	1	-.052	3	-.195	2
587		4	max	113.145	3	478.457	2	314.056	5	.364	2	.037	1	.19	1
588			min	-185.027	4	-273.914	1	-124.939	2	-.62	1	-.051	2	-.218	2
589		5	max	113.145	3	478.457	2	314.056	5	.364	2	.051	1	.203	1
590			min	-185.027	4	-273.914	1	-124.939	2	-.62	1	-.057	2	-.242	2
591	M60	1	max	308.596	3	416.013	1	402.015	2	.212	2	.132	3	-.005	1
592			min	-236.724	4	-336.379	2	-567.677	1	-.466	5	-.092	4	-.214	8
593		2	max	308.596	3	416.013	1	402.015	2	.212	2	.116	3	-.002	3
594			min	-236.724	4	-336.379	2	-567.677	1	-.466	5	-.085	4	-.222	8

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mom...	LC
595		3	max	308.596	3	416.013	1	402.015	2	.212	2	.101	3	.009	3
596			min	-236.724	4	-336.379	2	-567.677	1	-.466	5	-.078	4	-.231	8
597		4	max	308.596	3	416.013	1	402.015	2	.212	2	.085	3	.02	3
598			min	-236.724	4	-336.379	2	-567.677	1	-.466	5	-.071	4	-.239	8
599		5	max	308.596	3	416.013	1	402.015	2	.212	2	.07	3	.031	3
600			min	-236.724	4	-336.379	2	-567.677	1	-.466	5	-.064	4	-.248	8

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

	Member	Shape	Code Check	Loc...	LC	Shea...	Loc.....		LC	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn
1	MP3A	PIPE_2.0	.613	5	2	.103	5		2	14916...	32130	1.872	1.872	...	H1-1b
2	M34	L3X3X4	.593	2.5	1	.068	0	z	1	40623...	46656	1.688	3.756	...	H2-1
3	MP3B	PIPE_2.0	.587	5	4	.086	5		4	14916...	32130	1.872	1.872	...	H1-1b
4	M35	L3X3X4	.552	0	3	.070	2.5	y	3	40623...	46656	1.688	3.756	...	H2-1
5	MP3C	PIPE_2.0	.540	5	1	.097	5		3	14916...	32130	1.872	1.872	...	H1-1b
6	M11	PL1/2x6	.509	.924	3	.128	1.367	y	3	28929...	97200	1.012	12.15	...	H1-1b
7	MP2B	PIPE_2.0	.467	.75	1	.088	3.75		1	20866...	32130	1.872	1.872	...	H1-1b
8	M6	HSS4X4X4	.443	0	5	.155	0	z	4	12339...	139518	16.181	16.181	...	H1-1b
9	M10	PL1/2x6	.439	.924	2	.124	1.367	y	2	28929...	97200	1.012	12.15	...	H1-1b
10	M4	HSS4X4X4	.438	0	6	.131	0	z	2	12339...	139518	16.181	16.181	...	H1-1b
11	M5	HSS4X4X4	.434	0	7	.112	0	y	7	12339...	139518	16.181	16.181	...	H1-1b
12	M12	PL1/2x6	.420	.924	1	.124	1.367	y	5	28929...	97200	1.012	12.15	...	H1-1b
13	MP2C	PIPE_2.0	.419	3.75	3	.105	3.75		3	20866...	32130	1.872	1.872	...	H1-1b
14	MP2A	PIPE_2.0	.405	.75	4	.089	3.75		2	20866...	32130	1.872	1.872	...	H1-1b
15	M36	L3X3X4	.395	2.5	4	.053	0	z	2	40623...	46656	1.688	3.756	...	H2-1
16	MP4C	PIPE_2.0	.377	4.969	1	.081	4.969		1	12143...	32130	1.872	1.872	...	H1-1b
17	MP4A	PIPE_2.0	.351	5.063	2	.085	4.969		2	12143...	32130	1.872	1.872	...	H1-1b
18	MP1B	PIPE_2.0	.343	3.75	1	.096	3.75		1	14916...	32130	1.872	1.872	...	H1-1b
19	MP1C	PIPE_2.0	.320	3.75	3	.108	3.75		3	14916...	32130	1.872	1.872	...	H1-1b
20	MP1A	PIPE_2.0	.306	3.75	4	.077	3.75		2	14916...	32130	1.872	1.872	...	H1-1b
21	M3	PIPE_3.0	.290	7.031	8	.097	7.161		6	28250...	65205	5.749	5.749	...	H1-1b
22	M2	PIPE_3.0	.290	7.031	5	.119	7.161		4	28250...	65205	5.749	5.749	...	H1-1b
23	M32	L3X3X4	.289	4.523	3	.020	4.523	z	4	29657...	46656	1.688	3.756	...	H2-1
24	M1	PIPE_3.0	.283	7.031	7	.104	7.161		1	28250...	65205	5.749	5.749	...	H1-1b
25	M9	HSS4X4X4	.278	3.185	5	.073	.465	y	8	11772...	139518	16.181	16.181	...	H1-1b
26	M7	HSS4X4X4	.276	3.185	8	.076	.465	y	6	11772...	139518	16.181	16.181	...	H1-1b
27	M8	HSS4X4X4	.274	3.185	7	.072	.465	y	7	11772...	139518	16.181	16.181	...	H1-1b
28	M30	L3X3X4	.261	4.523	2	.020	4.523	z	1	29657...	46656	1.688	3.756	...	H2-1
29	MP4B	PIPE_2.5	.244	4.969	4	.102	4.969		4	26137...	50715	3.596	3.596	...	H1-1b
30	M28	L3X3X4	.230	4.523	1	.015	4.523	y	5	29657...	46656	1.688	3.756	...	H2-1
31	M31	L3X3X4	.223	0	4	.017	4.523	y	6	29657...	46656	1.688	3.756	...	H2-1
32	M29	L3X3X4	.214	0	1	.017	4.523	y	8	29657...	46656	1.688	3.698	...	H2-1
33	M33	L3X3X4	.193	4.523	2	.017	4.523	y	7	29657...	46656	1.688	3.756	...	H2-1
34	M27	PIPE_3.0	.174	4.297	3	.129	9.115		3	28250...	65205	5.749	5.749	...	H1-1b
35	M26	PIPE_3.0	.170	4.167	2	.145	1.563		1	28250...	65205	5.749	5.749	...	H1-1b
36	M25	PIPE_3.0	.131	1.432	4	.091	1.562		3	28615...	93150	8.213	8.213	...	H1-1b

EXHIBIT 10

EBI Consulting

environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CTHA101F

160 Witch Meadow Road
Salem, Connecticut 06420

May 24, 2021

EBI Project Number: 6221002667

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**6.28%**

May 24, 2021

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

Emissions Analysis for Site: CTHA101F

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **160 Witch Meadow Road** in **Salem, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

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

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

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

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

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 160 Witch Meadow Road in Salem, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

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

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

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

3) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

4) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

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

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

7) The antennas used in this modeling are the RFS APX16DWV-16DWV-S-E-A20 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s) in Sector A, the RFS APX16DWV-16DWV-S-E-A20 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s) in Sector B, the RFS APX16DWV-16DWV-S-E-A20 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

8) The antenna mounting height centerline of the proposed antennas is 175 feet above ground level (AGL).

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

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

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APX16DWV-16DWV-S-E-A20	Make / Model:	RFS APX16DWV-16DWV-S-E-A20	Make / Model:	RFS APX16DWV-16DWV-S-E-A20
Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz
Gain:	15.9 dBd / 15.9 dBd	Gain:	15.9 dBd / 15.9 dBd	Gain:	15.9 dBd / 15.9 dBd
Height (AGL):	175 feet	Height (AGL):	175 feet	Height (AGL):	175 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	180 Watts	Total TX Power (W):	180 Watts	Total TX Power (W):	180 Watts
ERP (W):	7,002.81	ERP (W):	7,002.81	ERP (W):	7,002.81
Antenna A1 MPE %:	**0.88%**	Antenna B1 MPE %:	**0.88%**	Antenna C1 MPE %:	**0.88%**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Frequency Bands:	600 MHz / 700 MHz	Frequency Bands:	600 MHz / 700 MHz	Frequency Bands:	600 MHz / 700 MHz
Gain:	12.95 dBd / 13.35 dBd	Gain:	12.95 dBd / 13.35 dBd	Gain:	12.95 dBd / 13.35 dBd
Height (AGL):	175 feet	Height (AGL):	175 feet	Height (AGL):	175 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts
ERP (W):	2,481.08	ERP (W):	2,481.08	ERP (W):	2,481.08
Antenna A2 MPE %:	**0.72%**	Antenna B2 MPE %:	**0.72%**	Antenna C2 MPE %:	**0.72%**

Site Composite MPE %	
Carrier	**MPE %**
T-Mobile (Max at Sector A):	1.60%
AT&T	3.14%
Sprint	1.54%
Site Total MPE % :	6.28%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	1.60%
T-Mobile Sector B Total:	1.60%
T-Mobile Sector C Total:	1.60%
Site Total MPE % :	6.28%

T-Mobile Maximum MPE Power Values (Sector A)

T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
T-Mobile 1900 MHz UMTS	2	1167.14	175.0	2.94	1900 MHz UMTS	1000	0.29%
T-Mobile 2100 MHz LTE	2	2334.27	175.0	5.88	2100 MHz LTE	1000	0.59%
T-Mobile 600 MHz LTE	2	591.73	175.0	1.49	600 MHz LTE	400	0.37%
T-Mobile 700 MHz LTE	2	648.82	175.0	1.63	700 MHz LTE	467	0.35%
						Total:	**1.60%**

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

Summary

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

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

T-Mobile Sector	Power Density Value (%)
Sector A:	1.60%
Sector B:	1.60%
Sector C:	1.60%
T-Mobile Maximum MPE % (Sector A):	1.60%
Site Total:	6.28%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **6.28%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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